



MOTOROLA

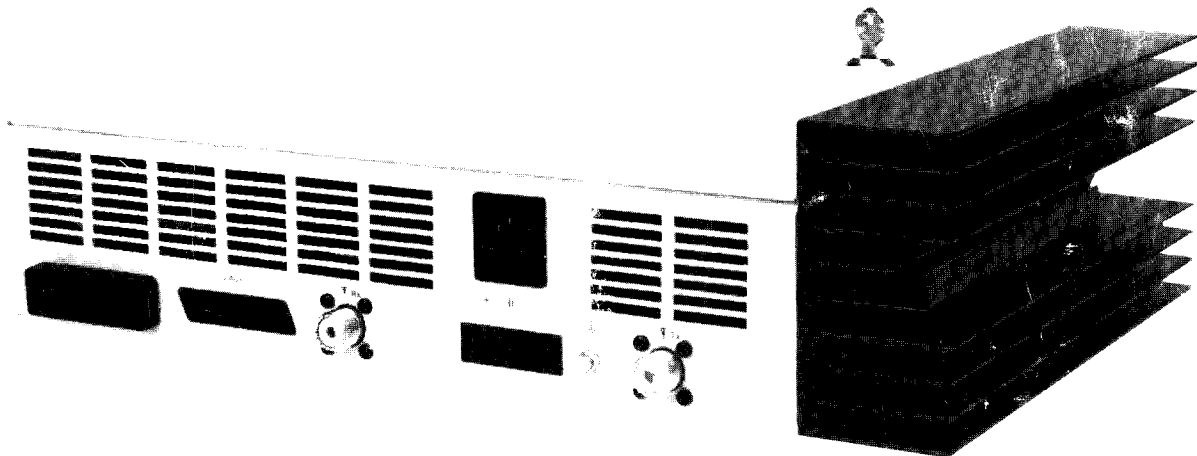
MC compact Base Station and Repeater

66 – 88/136 – 174/174 – 225/403 – 470 MHz
1 – 6/1 – 10/10 – 25 W adjustable, (174 – 225 MHz, 25 W)

NOTE: This manual was originally printed in Germany, on A4 size paper. Some formatting adjustments have been made to fit the images on US paper sizes.

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Although the MC Compact station is similar to the Motorola R-100 station, there are some significant differences between the two models.



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Theory/Maintenance Manual

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- Section 2 Description
- Section 3 Installation
- Section 4 Maintenance
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- Section 6 Parts Lists

S E C T I O N 1

MODEL & KIT STRUCTURE

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MODEL CHART FOR
66-88MHZ
MC COMPACT BASE
AND REPEATER STATIONS

● = 1 ITEM SUPPLIED
2 = 2 ITEMS SUPPLIED

| | | 6K612IA | 6K6162A | 6K6163A | 6L6047A | 6L6048A | 6L6049A | 6L6050A | 6L6051A | 6L6767A | 6L6768A | 6L6770A | 6L6808A | 6L6809A | 6L6810A | 6L6811A | 6L6812A | 6L6879A | 6L6880A | 6L6898A | 6L6899A | 6L6901A | 6L6906A | 6L6907A | 6P1C07A | 6P1C08A |
|----------------|--|---------------|----------------------|--------------------------|------------------------|-------------------------|--------------------|---------|---------|----------------------------------|-----------------------------------|--------------------|---------------------|----------------------------|-------------------------------|------------------------|----------------------|--------------------|----------------|----------------------------|-----------------------|------------------------|------------------------------|------------------------------|-------------------|-------------------|
| | | AC POWER CORD | CABLES, BASE STATION | CABLES, REPEATER STATION | BOARD, RF, 25KHZ, SPPM | BOARD, RF, 12.5KHZ SPPM | BOARD, TX RF, SPPM | 10W PA | 25W PA | 10W REMOTE CONTROL BOARD, 1 FREQ | 10W REMOTE CONTROL BOARD, OPTIONS | HARDWARE, REPEATER | RF CHASSIS HARDWARE | PL COMMAND BOARD, RECEIVER | PL COMMAND BOARD, TRANSMITTER | HARDWARE, BASE STATION | HARDWARE, WALL MOUNT | PROM, BASE STATION | PROM, REPEATER | DC INTERCONNECT BOARD, 10W | CURRENT LIMITER BOARD | RECEIVE COAX/CONNECTOR | FUSE, 220-240 VAC 10 WATT TX | FUSE, 220-240 VAC 25 WATT TX | POWER SUPPLY, 10W | POWER SUPPLY, 25W |
| MAL22EVM106A | I-6W, 25KHZ CHAN SP, PL SQUELCH, 1 FREQ, BASE | ● | ● | ● | | | | | | | | | | | | | | | | | | | | | | |
| MAL22EVM106AT | I-6W, 25KHZ CHAN SP, CARRIER SQUELCH, 1 FREQ, REPEATER | ● | ● | ● | | | | | | | | 2 | | | | | | | | | | | | | | |
| MAL22EVM306A | I-6W, 20KHZ CHAN SP, PL SQUELCH, 1 FREQ, BASE | ● | ● | ● | | | | | | | | | | | | | | | | 2 | | | | | | |
| MAL22EVM306AT | I-6W, 20KHZ CHAN SP, CARRIER SQUELCH, 1 FREQ, REPEATER | ● | ● | ● | | | | | | | | 2 | | | | | | | | 2 | | | | | | |
| MAL22EVM3106A | I-6W, 25KHZ CHAN SP, PL SQUELCH, 1 FREQ, BASE | ● | ● | ● | | | | | | | | | | | | | | | | | | | | | | |
| MAL22EVM3106AT | I-6W, 25KHZ CHAN SP, CARRIER SQUELCH, 1 FREQ, REPEATER | ● | ● | ● | | | | | | | | 2 | | | | | | | | 2 | | | | | | |
| MAL22EVM3306A | I-6W, 20KHZ CHAN SP, PL SQUELCH, 1 FREQ, BASE | ● | ● | ● | | | | | | | | | | | | | | | | | | | | | | |
| MAL22EVM3306AT | I-6W, 20KHZ CHAN SP, CARRIER SQUELCH, 1 FREQ, REPEATER | ● | ● | ● | | | | | | | | 2 | | | | | | | | 2 | | | | | | |
| MAL32EVM106A | I-10W, 25KHZ CHAN SP, CARRIER SQUELCH, 1 FREQ, BASE | ● | ● | ● | | | | | | | | | | | | | | | | | | | | | | |
| MAL32EVM106AT | I-10W, 25KHZ CHAN SP, CARRIER SQUELCH, 1 FREQ, REPEATER | ● | ● | ● | | | | | | | | 2 | | | | | | | | 2 | | | | | | |
| MAL32EVM206A | I-10W, 12.5KHZ CHAN SP, CARRIER SQUELCH, 1 FREQ, BASE | ● | ● | ● | | | | | | | | | | | | | | | | | | | | | | |
| MAL32EVM206AT | I-10W, 12.5KHZ CHAN SP, CARRIER SQUELCH, 1 FREQ, REPEATER | ● | ● | ● | | | | | | | | 2 | | | | | | | | 2 | | | | | | |
| MAL32EVM306A | I-10W, 20KHZ CHAN SP, CARRIER SQUELCH, 1 FREQ, BASE | ● | ● | ● | | | | | | | | | | | | | | | | | | | | | | |
| MAL32EVM306AT | I-10W, 20KHZ CHAN SP, CARRIER SQUELCH, 1 FREQ, REPEATER | ● | ● | ● | | | | | | | | 2 | | | | | | | | 2 | | | | | | |
| MAL32EVM3106A | I-10W, 25KHZ CHAN SP, PL SQUELCH, 1 FREQ, BASE | ● | ● | ● | | | | | | | | | | | | | | | | | | | | | | |
| MAL32EVM3106AT | I-10W, 25KHZ CHAN SP, PL SQUELCH, 1 FREQ, REPEATER | ● | ● | ● | | | | | | | | 2 | | | | | | | | 2 | | | | | | |
| MAL32EVM3206A | I-10W, 12.5KHZ CHAN SP, PL SQUELCH, 1 FREQ, BASE | ● | ● | ● | | | | | | | | | | | | | | | | | | | | | | |
| MAL32EVM3206AT | I-10W, 12.5KHZ CHAN SP, PL SQUELCH, 1 FREQ, REPEATER | ● | ● | ● | | | | | | | | 2 | | | | | | | | 2 | | | | | | |
| MAL32EVM3306A | I-10W, 20KHZ CHAN SP, PL SQUELCH, 1 FREQ, BASE | ● | ● | ● | | | | | | | | | | | | | | | | | | | | | | |
| MAL32EVM3306AT | I-10W, 20KHZ CHAN SP, PL SQUELCH, 1 FREQ, REPEATER | ● | ● | ● | | | | | | | | 2 | | | | | | | | 2 | | | | | | |
| MAL42EVM106A | I0-25W, 25KHZ CHAN SP, CARRIER SQUELCH, 1 FREQ, BASE | ● | ● | ● | | | | | | | | | | | | | | | | | | | | | | |
| MAL42EVM106AT | I0-25W, 25KHZ CHAN SP, CARRIER SQUELCH, 1 FREQ, REPEATER | ● | ● | ● | | | | | | | | 2 | | | | | | | | 2 | | | | | | |
| MAL42EVM206A | I0-25W, 12.5KHZ CHAN SP, CARRIER SQUELCH, 1 FREQ, BASE | ● | ● | ● | | | | | | | | | | | | | | | | | | | | | | |
| MAL42EVM206AT | I0-25W, 12.5KHZ CHAN SP, CARRIER SQUELCH, 1 FREQ, REPEATER | ● | ● | ● | | | | | | | | 2 | | | | | | | | 2 | | | | | | |
| MAL42EVM306A | I0-25W, 20KHZ CHAN SP, CARRIER SQUELCH, 1 FREQ, BASE | ● | ● | ● | | | | | | | | | | | | | | | | | | | | | | |
| MAL42EVM306AT | I0-25W, 20KHZ CHAN SP, CARRIER SQUELCH, 1 FREQ, REPEATER | ● | ● | ● | | | | | | | | 2 | | | | | | | | 2 | | | | | | |
| MAL42EVM3106A | I0-25W, 25KHZ CHAN SP, PL SQUELCH, 1 FREQ, BASE | ● | ● | ● | | | | | | | | | | | | | | | | | | | | | | |
| MAL42EVM3106AT | I0-25W, 25KHZ CHAN SP, PL SQUELCH, 1 FREQ, REPEATER | ● | ● | ● | | | | | | | | 2 | | | | | | | | 2 | | | | | | |
| MAL42EVM3206A | I0-25W, 12.5KHZ CHAN SP, PL SQUELCH, 1 FREQ, BASE | ● | ● | ● | | | | | | | | | | | | | | | | | | | | | | |
| MAL42EVM3206AT | I0-25W, 12.5KHZ CHAN SP, PL SQUELCH, 1 FREQ, REPEATER | ● | ● | ● | | | | | | | | 2 | | | | | | | | 2 | | | | | | |
| MAL42EVM3306A | I0-25W, 20KHZ CHAN SP, PL SQUELCH, 1 FREQ, BASE | ● | ● | ● | | | | | | | | | | | | | | | | | | | | | | |
| MAL42EVM3306AT | I0-25W, 20KHZ CHAN SP, PL SQUELCH, 1 FREQ, REPEATER | ● | ● | ● | | | | | | | | 2 | | | | | | | | 2 | | | | | | |

DEPS-43316-B

MODEL CHART FOR 136-174MHZ MC COMPACT BASE AND REPEATER STATIONS

● = 1 ITEM SUPPLIED
A = 2 ITEMS SUPPLIED

| | | K6N621A | K6N662A | K6N663A | GLD665A | GLD666A | GLD669A | GLD6670A | GLD6686A | GLD6679A | GLD6810A | GLD6815A | GLD68193A | GLN6767A | GLN6770A | GLN6808A | GLN6809A | GLN6810A | GLN6811A | GLN6812A | GLN6866A | GLN6879A | GLN6880A | GLN6889A | GLN6899A | GLN6906A | GLN6907A | GPN1007A | GPN1008A | |
|----------------|--|---------------|----------------------|--------------------------|--|--|--|--|---------------------|-------------------------------|-------------------------------|---------------------|-------------------------|----------------------------|-----------------------------------|--------------------------------------|-------------------------------------|--------------------------------------|----------------------------|-------------------------------|------------------------|----------------------|--------------------|--------------------|---------------------------|-------------------------|-----------------------------|-----------------------------|-------------------|-------------------|
| | | AC POWER CORD | CABLES, BASE STATION | CABLES, REPEATER STATION | BOARD, RF, 25KHZ CHAN SP, 4.5PPM, 136-162MHZ | BOARD, RF, 25KHZ CHAN SP, 4.5PPM, 146-174MHZ | BOARD, RF, 12.5KHZ CHAN SP, 4.5PPM, 136-162MHZ | BOARD, RF, 12.5KHZ CHAN SP, 4.5PPM, 146-174MHZ | 25W, 136-174MHZ, PA | BOARD, RF, 4.5PPM, 136-162MHZ | BOARD, RF, 4.5PPM, 146-174MHZ | 10W, 136-174MHZ, PA | RECEIVE LOW PASS FILTER | PL COMMAND BOARD, RECEIVER | TONE REMOTE CONTROL BOARD, 1 FREQ | TONE REMOTE CONTROL BOARD, 2 OPTIONS | TONE REMOTE CONTROL BOARD, REPEATER | RF CHASSIS HARDWARE 2 ON RPTR MODELS | PL COMMAND BOARD, RECEIVER | PL COMMAND BOARD, TRANSMITTER | HARDWARE, BASE STATION | HARDWARE, WALL MOUNT | PROM, BASE STATION | PROM, REPEATER (2) | LOW DC INTERCONNECT BOARD | 25W CURRENT LIMIT BOARD | FUSE, 220-240VAC 10 WATT TX | FUSE, 220-240VAC 25 WATT TX | POWER SUPPLY, 10W | POWER SUPPLY, 25W |
| MAL23EVM106A | I-6W, 25KHZ CHAN SP, CARRIER SQUELCH, 1 FREQ, BASE | ● | ● | ● | ● | ● | | | ● | | | ● | | | | | | | | | | | | | | | | | | |
| MAL23EVM106AT | I-6W, 25KHZ CHAN SP, CARRIER SQUELCH, 1 FREQ, REPEATER | ● | ● | ● | ● | ● | | | ● | | | ● | | | | | | | | | | | | | | | | | | |
| MAL23EVM306A | I-6W, 20KHZ CHAN SP, CARRIER SQUELCH, 1 FREQ, BASE | ● | ● | ● | ● | ● | | | ● | | | ● | | | | | | | | | | | | | | | | | | |
| MAL23EVM306AT | I-6W, 20KHZ CHAN SP, CARRIER SQUELCH, 1 FREQ, REPEATER | ● | ● | ● | ● | ● | | | ● | | | ● | | | | | | | | | | | | | | | | | | |
| MAL23EVM3106A | I-6W, 25KHZ CHAN SP, PL SQUELCH, 1 FREQ, BASE | ● | ● | ● | ● | ● | | | ● | | | ● | | | | | | | | | | | | | | | | | | |
| MAL23EVM3106AT | I-6W, 25KHZ CHAN SP, PL SQUELCH, 1 FREQ, REPEATER | ● | ● | ● | ● | ● | | | ● | | | ● | | | | | | | | | | | | | | | | | | |
| MAL23EVM3306A | I-6W, 20KHZ CHAN SP, PL SQUELCH, 1 FREQ, BASE | ● | ● | ● | ● | ● | | | ● | | | ● | | | | | | | | | | | | | | | | | | |
| MAL23EVM3306AT | I-6W, 20KHZ CHAN SP, PL SQUELCH, 1 FREQ, REPEATER | ● | ● | ● | ● | ● | | | ● | | | ● | | | | | | | | | | | | | | | | | | |
| MAL33EVM106A | I-10W, 25KHZ CHAN SP, CARRIER SQUELCH, 1 FREQ, BASE | ● | ● | ● | ● | ● | | | ● | | | ● | | | | | | | | | | | | | | | | | | |
| MAL33EVM106AT | I-10W, 25KHZ CHAN SP, CARRIER SQUELCH, 1 FREQ, REPEATER | ● | ● | ● | ● | ● | | | ● | | | ● | | | | | | | | | | | | | | | | | | |
| MAL33EVM206A | I-10W, 12.5KHZ CHAN SP, CARRIER SQUELCH, 1 FREQ, BASE | ● | ● | ● | ● | ● | | | ● | | | ● | | | | | | | | | | | | | | | | | | |
| MAL33EVM206AT | I-10W, 12.5KHZ CHAN SP, CARRIER SQUELCH, 1 FREQ, REPEATER | ● | ● | ● | ● | ● | | | ● | | | ● | | | | | | | | | | | | | | | | | | |
| MAL33EVM306A | I-10W, 20KHZ CHAN SP, CARRIER SQUELCH, 1 FREQ, BASE | ● | ● | ● | ● | ● | | | ● | | | ● | | | | | | | | | | | | | | | | | | |
| MAL33EVM306AT | I-10W, 20KHZ CHAN SP, CARRIER SQUELCH, 1 FREQ, REPEATER | ● | ● | ● | ● | ● | | | ● | | | ● | | | | | | | | | | | | | | | | | | |
| MAL33EVM3106A | I-10W, 25KHZ CHAN SP, PL SQUELCH, 1 FREQ, BASE | ● | ● | ● | ● | ● | | | ● | | | ● | | | | | | | | | | | | | | | | | | |
| MAL33EVM3106AT | I-10W, 25KHZ CHAN SP, PL SQUELCH, 1 FREQ, REPEATER | ● | ● | ● | ● | ● | | | ● | | | ● | | | | | | | | | | | | | | | | | | |
| MAL33EVM3206A | I-10W, 12.5KHZ CHAN SP, PL SQUELCH, 1 FREQ, BASE | ● | ● | ● | ● | ● | | | ● | | | ● | | | | | | | | | | | | | | | | | | |
| MAL33EVM3206AT | I-10W, 12.5KHZ CHAN SP, PL SQUELCH, 1 FREQ, REPEATER | ● | ● | ● | ● | ● | | | ● | | | ● | | | | | | | | | | | | | | | | | | |
| MAL33EVM3306A | I-10W, 20KHZ CHAN SP, PL SQUELCH, 1 FREQ, BASE | ● | ● | ● | ● | ● | | | ● | | | ● | | | | | | | | | | | | | | | | | | |
| MAL33EVM3306AT | I-10W, 20KHZ CHAN SP, PL SQUELCH, 1 FREQ, REPEATER | ● | ● | ● | ● | ● | | | ● | | | ● | | | | | | | | | | | | | | | | | | |
| MAL43EVM106A | I0-25W, 25KHZ CHAN SP, CARRIER SQUELCH, 1 FREQ, BASE | ● | ● | ● | ● | ● | | | ● | | | ● | | | | | | | | | | | | | | | | | | |
| MAL43EVM106AT | I0-25W, 25KHZ CHAN SP, CARRIER SQUELCH, 1 FREQ, REPEATER | ● | ● | ● | ● | ● | | | ● | | | ● | | | | | | | | | | | | | | | | | | |
| MAL43EVM206A | I0-25W, 12.5KHZ CHAN SP, CARRIER SQUELCH, 1 FREQ, BASE | ● | ● | ● | ● | ● | | | ● | | | ● | | | | | | | | | | | | | | | | | | |
| MAL43EVM206AT | I0-25W, 12.5KHZ CHAN SP, CARRIER SQUELCH, 1 FREQ, REPEATER | ● | ● | ● | ● | ● | | | ● | | | ● | | | | | | | | | | | | | | | | | | |
| MAL43EVM3106A | I0-25W, 25KHZ CHAN SP, PL SQUELCH, 1 FREQ, BASE | ● | ● | ● | ● | ● | | | ● | | | ● | | | | | | | | | | | | | | | | | | |
| MAL43EVM3106AT | I0-25W, 25KHZ CHAN SP, PL SQUELCH, 1 FREQ, REPEATER | ● | ● | ● | ● | ● | | | ● | | | ● | | | | | | | | | | | | | | | | | | |
| MAL43EVM3206A | I0-25W, 12.5KHZ CHAN SP, PL SQUELCH, 1 FREQ, BASE | ● | ● | ● | ● | ● | | | ● | | | ● | | | | | | | | | | | | | | | | | | |
| MAL43EVM3206AT | I0-25W, 12.5KHZ CHAN SP, PL SQUELCH, 1 FREQ, REPEATER | ● | ● | ● | ● | ● | | | ● | | | ● | | | | | | | | | | | | | | | | | | |

DEPS-43317-B

MODEL CHART FOR
BAND III
174-225MHZ
MC COMPACT BASE
AND REPEATER STATIONS

● = 1 ITEM SUPPLIED
2 = 2 ITEMS SUPPLIED

| | | 6KN612A | 6KN6162A | 6KN6163A | 6LD6171A | 6LD6172A | 6LD6177A | 6LD6183A | 6LD6190A | 6LD6194A | 6LN6767A | 6LN6768A | 6LN6770A | 6LN6808A | 6LN6809A | 6LN6810A | 6LN6811A | 6LN6812A | 6LN6861A | 6LN6879A | 6LN6880A | 6LN6899A | 6LN6907A | 6PNID08A |
|----------------|---|---------------|----------------------|--------------------------|--|--|-----------------|----------------------------|---------------------|-------------------------|-----------------------------------|------------------------------------|--------------------|---------------------|-------------------------------|------------------------------|-------------------------------|------------------------|----------------------|--------------------|----------------|---------------------------|--------------------------|-------------------|
| | | AC POWER CORD | CABLES, BASE STATION | CABLES, REPEATER STATION | BOARD, RF, 12.5KHZ CHAN SP, 5PPM, 174-201MHZ | BOARD, RF, 12.5KHZ CHAN SP, 5PPM, 199-225MHZ | RF BOX HARDWARE | BOARD, RF 5PPM, 174-225MHZ | 25W, 174-225MHZ, PA | RECEIVE LOW PASS FILTER | tone REMOTE CONTROL BOARD, 1 FREQ | tone REMOTE CONTROL BOARD, OPTIONS | HARDWARE, REPEATER | RF CHASSIS HARDWARE | PL COMMAND BOARD, TRANSCIEVER | PL COMMAND CHBOARD, RECEIVER | PL COMMAND BOARD, TRANSMITTER | HARDWARE, BASE STATION | HARDWARE, WALL MOUNT | PROM, BASE STATION | PROM, REPEATER | 25W CURRENT LIMITER BOARD | FUSE, 220-240VAC 25 WATT | POWER SUPPLY, 25W |
| MAL46EVM206A | 25W, 12.5KHZ CHAN SP, CARRIER SQUELCH, 1 FREQ, BASE | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| MAL46EVM206AT | 25W, 12.5KHZ CHAN SP, CARRIER SQUELCH, 1 FREQ, REPEATER | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | 2 | ● | ● | ● | ● | ● | 2 | ● | ● | ● | ● |
| MAL46EVM3206A | 25W, 12.5KHZ CHAN SP, PL SQUELCH, 1 FREQ, BASE | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| MAL46EVM3206AT | 25W, 12.5KHZ CHAN SP, PL SQUELCH, 1 FREQ, REPEATER | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | 2 | ● | ● | ● | ● | ● | ● | 2 | ● | ● | ● | ● |

CEPS-43318-B

MC compact Base/Repeater Station
Model Chart for 174-225MHz Range

OPTION BREAKDOWN CHART

for MC compact

| OPTION | ADD | DELETE | DESCRIPTION |
|--|----------|----------|---|
| MAL15AB Wild Card I | --- | --- | |
| MAL16AB Wild Card II | --- | --- | |
| MAL32AC Omit Power Supply (DC Only Operation) | GLN6900A | GPN1007A | 10W Power Supply Omit Power Supply Hardware |
| | | GKN6121A | European AC Line Cord |
| MAL32AD Omit Power Supply (DC Only Operation) | GLN6900A | GPN1008A | 25W Power Supply Omit Power Supply Hardware |
| | | GKN6121A | European AC Line Cord |
| *MAL63AB Transmit PL Disable | | | |
| *MAL66AB 4-Channel Capability | | | |
| *MAL75AB Omit Time-Out-Timer | | | |
| MAL84AA Omit Wireline Control | GLN6815A | GLN6767A | Tone Remote Control Board; 1-Frequency Omit Wireline Control Board |
| MAL84AB Omit Wireline Control | GLN6815A | GLN6768A | Tone Remote Control Board; Optioned Omit Wireline Control Board |
| *MAL91AB PL Decode Only | | | |
| MAL143AB Remote Repeater Control | | | |
| MAL144AA 4-Wire Audio | | | |
| MAL164AA Rack Mount, Without Slides | GLN6773A | | Rack Mount Hardware |
| | | GLN6861A | Wall Mount Hardware |
| MAL182-- External Duplexer | As Used | As Used | |
| MAL202AB ZVEI Guard Tone (2100 Hz) | | | |
| MAL203AB EEA/CCIR Guard Tone (2325 Hz) | | | |
| MAL206AF Battery Revert With Charging | GPN1009A | GPN1007A | 10 W Power Supply 10 W Reverting Power Supply |
| MAL206AG Battery Revert With Charging | GPN1010A | GPN1008A | 25 W Power Supply 25 W Reverting Power Supply |
| MAL301AB Service Handset | TMN6164A | | Handset |
| MAL306AD 2 ppm Frequency Stability (403-433 MHz) | GLE6174A | GLE6175A | TX Board; 5 ppm TX Board; 2 ppm |
| MAL306AE 2 ppm Frequency Stability (438-470 MHz) | GLE6176A | GLE6177A | TX Board; 5 ppm TX Board; 2 ppm |
| MAL306AJ 2 ppm Frequency Stability (403-433 MHz) | GLE6147A | GLE6141A | RF Board; 25 kHz; 5 ppm RF Board; 25 kHz; 2 ppm |
| MAL306AK 2 ppm Frequency Stability (438-470 MHz) | GLE6148A | GLE6142A | RF Board; 25 kHz; 5 ppm RF Board; 25 kHz; 2 ppm |
| MAL306AL 2 ppm Frequency Stability (T420-R438 MHz) | GLE6150A | GLE6145A | RF Board; 25 kHz; 5 ppm RF Board; 25 kHz; 2 ppm |
| MAL306AM 2 ppm Frequency Stability (T438-R420 MHz) | GLE6151A | GLE6144A | RF Board; 25 kHz; 5 ppm RF Board; 25 kHz; 2 ppm |
| MAL311AA Duplex Base Operation | | | |
| MAL317AB Line Continuity Check With Wireline Acknowledge | | | |
| *MAL349AA ZVEI Format | | | |
| *MAL350AC Modified ZVEI Format | | | |
| *MAL351AC CCIR Format | | | |
| *MAL352AC 70 ms CCIR Format | | | |
| *MAL353AC EEA Format | | | |
| *MAL395AB Non-Standard Time-Out-Timer | | | |
| *MAL404AB Extended First Tone (600 ms) | | | |
| *MAL405AB PL Encode Only | | | |
| *MAL463AB PL-Selectable Encode - Two Selectable | | | |
| *MAL576AA Single Tone Decode For Repeater Access Tone Decoder | | | |
| *MAL679AB 2-Channels | | | |
| MAL692AB Single United Kingdom AC Line Cord | GKN6153A | GKN6121A | European AC Line Cord United Kingdom AC Line Cord |
| MAL692AC Double United Kingdom AC Line Cord | GKN6153A | GKN6121A | European AC Line Cord; 2 Used U.K. AC Line Cord; 2 Used |
| MAL813AA Expanded Carrier Squelch Operation | GLN6768A | GLN6767A | Tone Remote Control Board; 1-Frequency Tone Remote Control Board; Optioned |
| *MAL853AB French ZVEI Format | | | |
| *MAL861AA Non-Standard Auto-Reset Time | | | |
| *MAL868AB Channel Slaved PL | | | |
| *MAL871AA Non-Standard Extended First Tone | | | |

OPTION BREAKDOWN CHART

for MC compact
(cont'd.)

| OPTION | ADD | DELETE | DESCRIPTION |
|--|----------|----------|---|
| MAL878AB Line-Fail Talk-Thru With Wireline Acknowledge | | | |
| MAL882AA Rack Mount With Slides | GLN6774A | | Rack Mount Hardware W/Slides |
| | | GLN6861A | Wall Mount Hardware |
| MAL882AB Rack Mount With Slides | GLN6774A | | Rack Mount Hardware W/Slides |
| | | GLN6861A | Wall Mount Hardware |
| | GLN6862A | | Fan |
| | GKN6121A | | European AC Line Cord |
| *MAL889AB Channel Slaved RF Power | | | |
| MAL895AC -6 dBm Line Level | | | |
| MAL899AB PL-Selectable Encode/Decode - Two Selectable | | | |
| *MAL908AA 2-Tone Sequential Format For Repeater Access Tone Decoder | | | |
| *MAL909AA X-Tone Sequential Format For Repeater Access Tone Decoder | | | |
| MAL923AA Squelch Monitor | | | |
| *MAL930AA Selectable PL Encode - Four Selectable | | | |
| *MAL931AA Selectable PL Encode/Decode - Four Selectable | | | |
| MAL932AA Repeater Access Tone Decoder | GLN6769A | | Repeater Access Tone Decoder |
| | GLN6881A | | Firmware PROM |
| MAL933AB Service Speaker | GSN6036A | | Speaker |
| MAL934AC Low Range VHF (136-162 MHz) 25 kHz Channel Spacing | | GLD6180A | TX Board; 146-174 MHz; 5 ppm |
| | | GLD6166A | RF Board; 146-174 MHz; 25 kHz; 5 ppm |
| | GLD6165A | | RF Board; 136-162 MHz; 25 kHz; 5 ppm |
| | GLD6179A | | TX Board; 136-162 MHz; 5 ppm |
| MAL934AD Low Range VHF (136-162 MHz) 12.5 kHz Channel Spacing | | GLD6180A | TX Board; 146-174 MHz; 5 ppm |
| | | GLD6170A | RF Board; 146-174 MHz; 12.5 kHz; 4.5 ppm |
| | GLD6169A | | RF Board; 136-162 MHz; 12.5 kHz; 4.5 ppm |
| | GLD6179A | | TX Board; 136-162 MHz; 5 ppm |
| MAL934AE Low Range VHF (136-162 MHz) Base 25 kHz Channel Spacing | GLD6165A | | RF Board; 136-162 MHz; 25 kHz; 5 ppm |
| | | GLD6166A | RF Board; 146-174 MHz; 25 kHz; 5 ppm |
| MAL934AF Low Range VHF (136-162 MHz) Base 12.5 kHz Channel Spacing | GLD6169A | | RF Board; 136-162 MHz; 12.5 kHz; 4.5 ppm |
| | | GLD6170A | RF Board; 146-174 MHz; 12.5 kHz; 4.5 ppm |
| MAL937AA Enhanced Tone Remote Control Operation | GLN6878A | | Enhanced Tone Remote Control Board |
| | GKN6164A | | Enhanced Tone Remote Control Base Station Cables |
| | | GKN6162A | Base Station Cables |
| MAL937AB Enhanced Tone Remote Control Operation | GLN6878A | | Enhanced Tone Remote Control Board |
| | GKN6164A | | Enhanced Tone Remote Control Base Station Cables |
| | | GKN6162A | Base Station Cables |
| | | GLN6767A | Tone Remote Control Board; 1-Frequency |
| | GLN6768A | | Tone Remote Control Board; Optioned |
| MAL937AC Enhanced Tone Remote Control Operation | GLN6878A | | Enhanced Tone Remote Control Board |
| | GKN6165A | | Enhanced Tone Remote Control Repeater Station Cables |
| | | GKN6163A | Repeater Station Cables |
| MAL937AD Enhanced Tone Remote Control Operation | GLN6878A | | Enhanced Tone Remote Control Board |
| | GKN6165A | | Enhanced Tone Remote Control Repeater Station Cables |
| | | GKN6163A | Repeater Station Cables |
| | | GLN6767A | Tone Remote Control Board; 1-Frequency |
| | GLN6768A | | Tone Remote Control Board; Optioned |

* Firmware (Code Plug Programming) change required.

(The next page is 2-1)

S E C T I O N 2

DESCRIPTION

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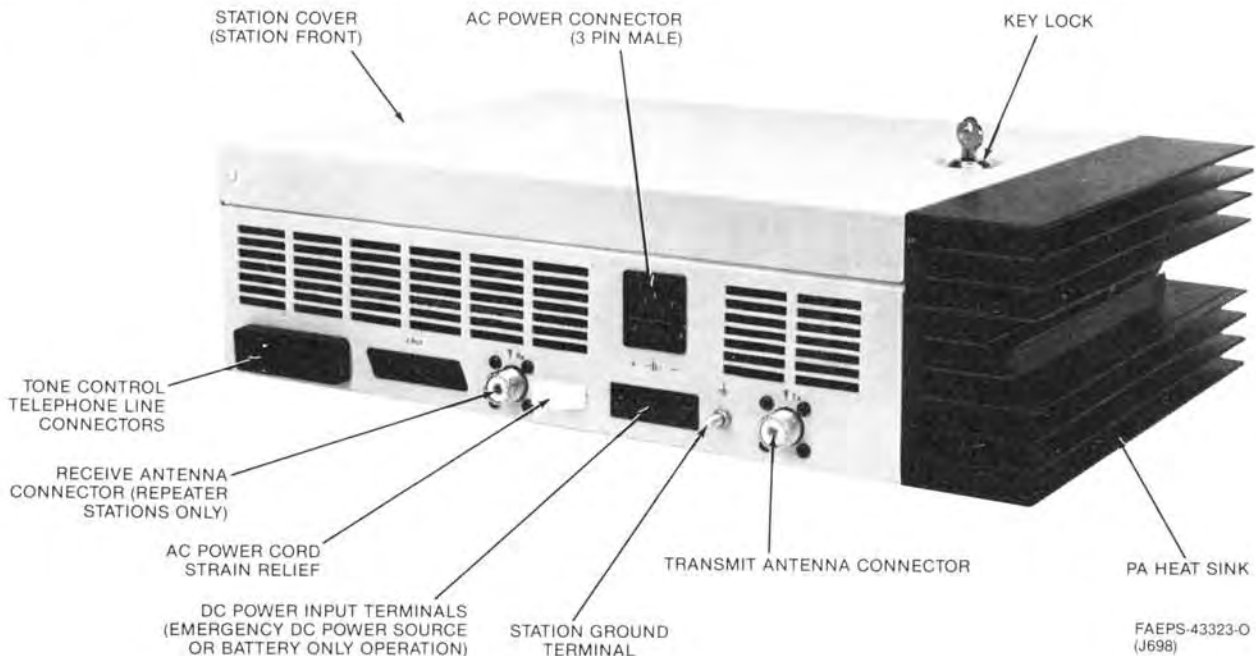


Figure 2-1
Overall Station View

2.1 GENERAL

The MC compact base and repeater stations are available in various rf power levels, operating frequencies, and squelch control (carrier squelch or "Private-Line" (PL) squelch). Many options are available for each base or repeater station to allow customizing the station operation for each user. All models are single-frequency, two-wire, tone remote controlled and may be optionally equipped for four-wire, multi-frequency, and in the case of repeater stations, optionally equipped for Select 5 or single tone sequence repeater access and omit wire line control.

The rf power output levels available vary according to model but fall into one of the following categories:

- 1 - 6 watt
- 1 - 10 watt
- 10 - 25 watt
- 25 watt only (174 - 225MHz)

The operating frequencies also vary according to model but fall into one of the following ranges:

- 66 - 88MHz (4m band)
- 136 - 174MHz (2m band)
- 174 - 225MHz (1.5m band)
- 403 - 470MHz (70cm band)

The model charts show the type of station, i.e. base or repeater, operating frequencies, type of squelch (carrier or Private Line squelch), and rf power output levels for each model. The cable kits and major assemblies are also shown in the model charts for each station model. All available options are shown in the option charts. Refer to Figures 2-1 and 2-2 for major component locations. The model number for the station contains much information regarding the station as shown in Table 2-1.

Table 2-1
Station Model Number Definitions

| | | | | | |
|-----|-----|-----|-----|-------|---------------------------|
| | 2 | 1 | | | |
| MAL | 2 3 | EVM | 1 2 | 0 6 A | BLANK |
| | 3 4 | | 3 3 | | T |
| | 4 6 | | | | BLANK = BASE |
| | | | | | T = REPEATER |
| | | | | | 1 = 25kHz CHANNEL SPACING |
| | | | | | 2 = 12.5kHz CS |
| | | | | | 3 = 20kHz CS |
| | | | | | 1 = CARRIER SQUELCH |
| | | | | | 3 = PL SQUELCH |
| | | | | | 2 = 66-88MHz |
| | | | | | 3 = 136-174MHz |
| | | | | | 4 = 403-470MHz |
| | | | | | 6 = 174-225MHz |
| | | | | | 2 = 1 - 6 WATTS |
| | | | | | 3 = 1 - 10 WATTS |
| | | | | | 4 = 25 WATTS |

2.2 MAJOR STATION COMPONENTS

The major components of any station consist of a frequency generation section for transmit rf and for receiver injection, a transmitter section, receiver section, control section, power supply section, and a housing and internal cabling. In repeater stations, a separate frequency generation section is provided for the transmitter as well as the receiver, the transmitter and receiver components are specially shielded, and separate antenna connections are provided to prevent desensitizing problems. These major components are described in the following. See Figure 2-2.

2.2.1 Transmitter Section

2.2.1.1 Frequency Synthesizer

In base stations, a common frequency synthesizer is used to provide the basic transmit operating frequency and the receiver injection signal. The synthesizer is part of the RF board that is mounted in the same "H" frame chassis as the receiver. The synthesizer contains two VCO circuits, one for transmit and the other for receive. A common reference oscillator is used for both transmit and receive frequency synthesis.

In repeater stations, two frequency synthesizers are employed. One is used to generate the transmit operating frequency and the other is used to generate the receive operating frequency. The transmit frequency synthesizer is located in a separate shielded rf box to prevent de-sense problems since both the transmitter and receiver are operating simultaneously in repeater stations. The receive frequency synthesizer is located in the same "H" frame chassis as the receiver.

2.2.1.2 Power Amplifier

Regardless of station model or operating frequency, the power amplifier is mounted to a large heat sink at one end of the station. The output of the transmit synthesizer drives the power amplifier directly. The number of components in the power amplifier vary depending on operating frequency, model, and power output. In repeater models, the rf output of the transmitter is routed to a separate antenna connector rather than to the antenna switchover relay to minimize de-sense problems.

2.2.2 Receiver Section

2.2.2.1 Receive Synthesizer

The receive synthesizer is located on the rf board mounted in the same "H" frame chassis as the receiver. The output of the receive synthesizer is routed directly to the first mixer in the receiver to produce the proper signal input to the first if amplifier.

2.2.2.2 Receiver

The receiver is located in the "H" frame chassis along with the receive synthesizer. In base station models, the receiver antenna input comes from the antenna relay. In repeater models, the receiver antenna input comes from a separate antenna connector. The audio output from the receiver is routed to the TRC board where it is routed to the optional RAT decoder board and to the 600 ohm line terminals for connection to the console controller. The wirelines are used to carry transmit audio from the console to the transmitter as well as the control tones from the console to select transmit or receive channels (if fitted with the multi-frequency option), squelch mode (carrier squelch monitor, ZVEI or CCIR squelch) etc.

2.2.3 Control Section

2.2.3.1 Tone Remote Control (TRC) Board

The Tone Remote Control Board contains the hardware necessary to operate the MC compact station. The board allows for remote station control via wire line through connector P1. Standard Motorola TRC tones are decoded on the board and used to select the proper operating mode of the station.

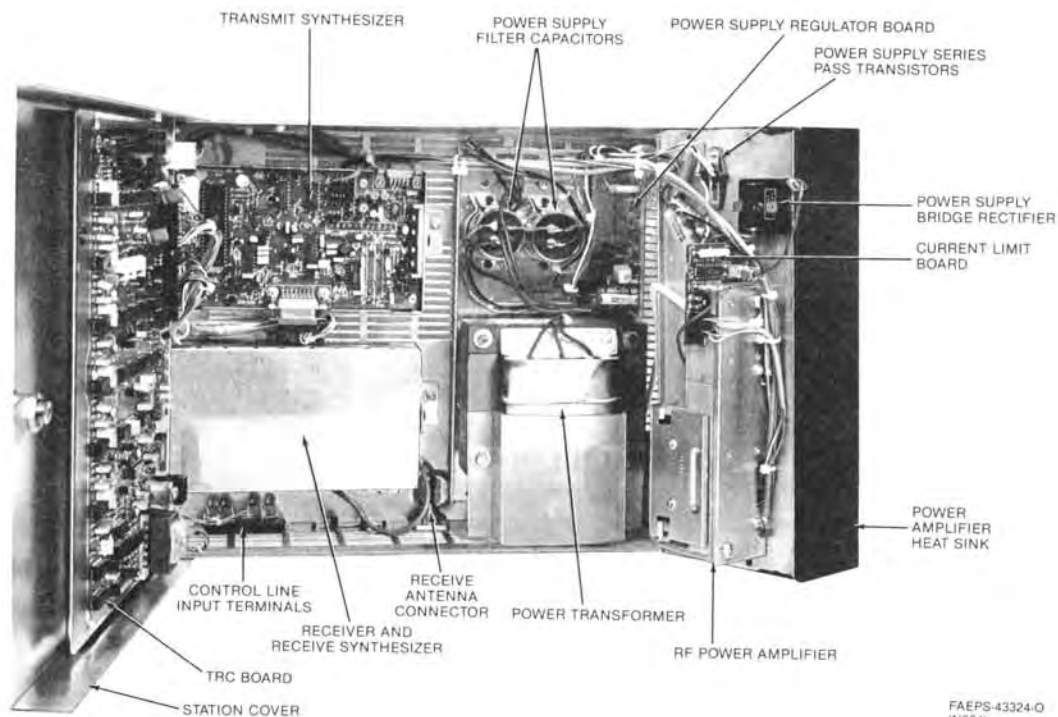


Figure 2-2
Major Station Components

The TRC board is capable of decoding six tones, which are:

- 2175Hz - Guard tone (may be 2100Hz or 2325Hz in some stations)
- 2050Hz - PL Monitor
- 1950Hz - Select or transmit on F1
- 1850Hz - Select or transmit on F2
- 1550Hz - Repeater knockdown or carrier squelch enable
- 1450Hz - Repeater setup or carrier squelch disable

The Tone Remote Control (TRC) board is mounted inside the top cover of the station. There are 3 models of this board with usage dependent upon the station type (base or repeater) or the option(s) ordered with the station. The circuit boards are identical except for their number of components.

The fully populated board (Model GLN 6768A) is used on all Private-Line squelch, tone control models and provides for 4-wire line audio and multi-frequency control of the station. The GLN6767A board is used in carrier squelch, single-frequency, 2-wire line stations and has four tone decoder PLL's removed: 2050Hz, 1850Hz, 1550Hz, and 1450Hz and the second wire line transformer removed.

The GLN6815 board is used in repeater stations only and contains no wire line circuitry or tone decoder PLL's, therefore, it contains the fewest number of components. The TRC board generally contains the guard tone decoders, function tone decoders, receiver squelch circuit, receiver audio circuits, and additional connectors to interface the Enhanced Tone Remote board (ETRC) and the Repeater Access Tone (RAT) board options.

2.2.3.2 Enhanced Tone Remote Control (ETRC) Board

The ETRC board provides four additional tone decoders, PTT and LPTT generation functions, PTT delay, acknowledge tone generation for the console, timing, line fail talk-through timer, line continuity check, and wild card relay driver circuits for two external relay-controlled functions. The four additional tone decoders are for tone frequencies of 1050Hz, 1150Hz, 1250Hz, and 1350Hz and may be used for 4-frequency capability or multiple PL operation. The ETRC board directly interfaces to the TRC board through connectors J10 and J11.

2.2.3.3 Repeater Access Tone Decoder (RAT) Board

The RAT board is used in repeater models only and is used to detect repeater access tones which will enable the repeater via an rf link. The RAT decoder decodes two to seven tone ZVEI, EEA, or CCIR signaling formats. The RAT board mounts on the TRC board and is electrically interfaced to the TRC board via an 11-pin connector, J6.

2.2.4 Power Supply Section

Two power supplies are used in the MC compact stations; one for transmitter output power levels up to 10 watts and the second for rf output power levels up to 25 watts. The two power supplies are identical except for the output current capability. When the 25W power

supply is used, a current limit board is used and mounted to the power amplifier housing. The same board is used, less the current limit circuits, on the 10 watt power amplifier for power distribution. The power supply transformer, regulator board, and filter capacitors are mounted on a common chassis while the bridge rectifier and series pass regulator transistors are mounted on the power amplifier heat sink.

2.3 OPTION DESCRIPTIONS

A short description for most of the options is contained in Table 2-2. Refer to the Option chart in section 1 of this manual for a complete listing of all options since Table 2-2 does not describe the obvious options such as adding a RAT board etc..

Table 2-2
Option Description Table

| Option | Description |
|--------|---|
| MAL | |
| 15 | The Wild Card I option provides remote control of a non-radio on/off function at or near the base station site. |
| 16 | The Wild Card II option provides remote control of a second non-radio on/off function at or near the base station site. |
| 32 | The Omit Power Supply option eliminates the power supply in the station and allows operating the console from a customer-supplied dc power source. |
| 63 | The Transmit PL Disable option allows the operator to disable transmission of any transmit PL tone. |
| 66 | The Four Channel Capacity option allows for multi-frequency control of a base station (up to four channels). The option provides individual selection of the desired transmit/receive frequency. |
| 84 | The Omit Wire Line Control option is applicable to repeater stations only. |
| 91 | The PL Decode Only option allows for decoding PL codes only and does not allow transmission of PL codes. |
| 143 | The Remote Repeater Control (Repeater Key) option allows the operator to enable or disable a wire line controlled repeater. This requires the inclusion of a 1450Hz and a 1550Hz tone decoder; 1450Hz for repeater set-up and 1550Hz for repeater knock down. |
| 144 | The 4-Wire Audio option adds 4-wire audio capability to the station. |
| 164 | The Rack Mount Without Slide Rails option allows the station to be hard mounted in a standard 19-inch relay rack |
| 182 | The External Duplexer option provides an external duplexer for use with the station to lessen the effects of de-sense in high rf environments. |

- 202 The 2100Hz Guard Tone option is available for use in stations using ZVEI coding formats.
- 203 The 2325Hz Guard Tone option is available for use in stations using CCIR/EEA coding formats.
- 317 The Line Continuity Check with Wireline Acknowledge option incorporates automatic acknowledge of wireline commands and line continuity check with operator alarm in case that the wire line has failed.
- 395 The Non-Standard Time-Out Timer option provides a PTT time-out timer with the time-out period as specified by the customer and not available in the standard time-out timer.
- 404 The Extended First Tone (600 ms) option provides a longer first tone time for those systems requiring more delay.
- 463 The PL Selectable Encode option allows for selecting two PL pairs for transmitting and receiving.
- 576 The Single Tone RAT Decoder Enable option allows for repeater access via a single tone, usually a Select 5 tone.
- 861 The Non-Standard Automatic Reset Time option provides for automatic reset times between 10ms and 5.46 minutes.
- 868 The Channel Slaved PL Encode/Decode option defines a PL code for each channel that is automatically invoked when a channel is selected.
- 871 The Non-Standard Extended First Tone option allows extending the first Select 5 tone to any duration between 10ms and 4000ms in 5ms steps.
- 878 The Line Fail Talk Through and Wireline Acknowledge option allows a repeater to automatically go to the repeat mode, set up, in the event of a wireline failure.
- 882 The Rack Mount With Slide Rail option allows the station to be mounted in a standard 19-inch rack on slide rails which allows the station to be extended from the rack on slide rails to facilitate servicing.
- 889 The Channel Slaved RF Power option defines an RF power output level for each channel that is automatically invoked when a channel is selected.
- 899 The PL Selectable Encode/Decode option allows for operator selection of two PL codes for encode and two PL codes for decode.
- 908 The Two-Tone Sequential RAT Decode option allows the use of two sequential tones (usually Select 5 tones) for repeater access.
- 909 The Multi-Tone Sequential RAT Decode option allows the use of two, three, four, five, six or seven ZVEI, CCIR, or EEA sequential tones for repeater access.
- 923 The Squelch Monitor option allows the operator to defeat the carrier squelch setting of the station to allow monitoring any activity on the channel.
- 930 The PL Selectable Encode option allows selection of up to four PL codes for transmission by the station.
- 931 The PL Selectable Encode/Decode option allows selection of up to four PL codes for transmission and four PL codes for reception.

SECTION 3

INSTALLATION

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3.1 INTRODUCTION

Carefully plan the installation before actual work is started. Location of the station in relation to power, control lines, antenna, and convenience and access for servicing should be considered. Figure 3-1 shows the size of the cabinet for space requirements. Make sure all equipment and facilities are available when the installation is begun.

Sufficient clearance must also be provided at the front of the unit to allow for opening of the door, servicing, and major component removal or replacement.

3.2 VENTILATION

3.2.1 Wall Mount

The radio equipment is operated without forced convection. The cabinet has vents which allow outside air to be drawn in and exhausted through louvered openings. It is essential that the openings be kept free of obstructions so the air flow will not be restricted. For proper cooling of the heatsink on the side of the unit the fins must be in a vertical plane and free from obstructions both on top and bottom. To maintain proper ventilation, the unit must be mounted such that there is no obstruction or another unit within 100mm of the sides and within 150mm top and bottom.

3.2.2 Rack Mount

The unit can be mounted in standard DIN or EIA mounting racks when ordered with the rack mount options. The low power units do not require any special ventilation considerations or forced convection. A fan is provided for the 25-watt transmitters as they require forced convection for proper ventilation.

3.2.3 Station Mounting Procedures

3.2.3.1 Wall Mount Units

Step 1. Refer to Figure 3-1 for cabinet dimensional details.

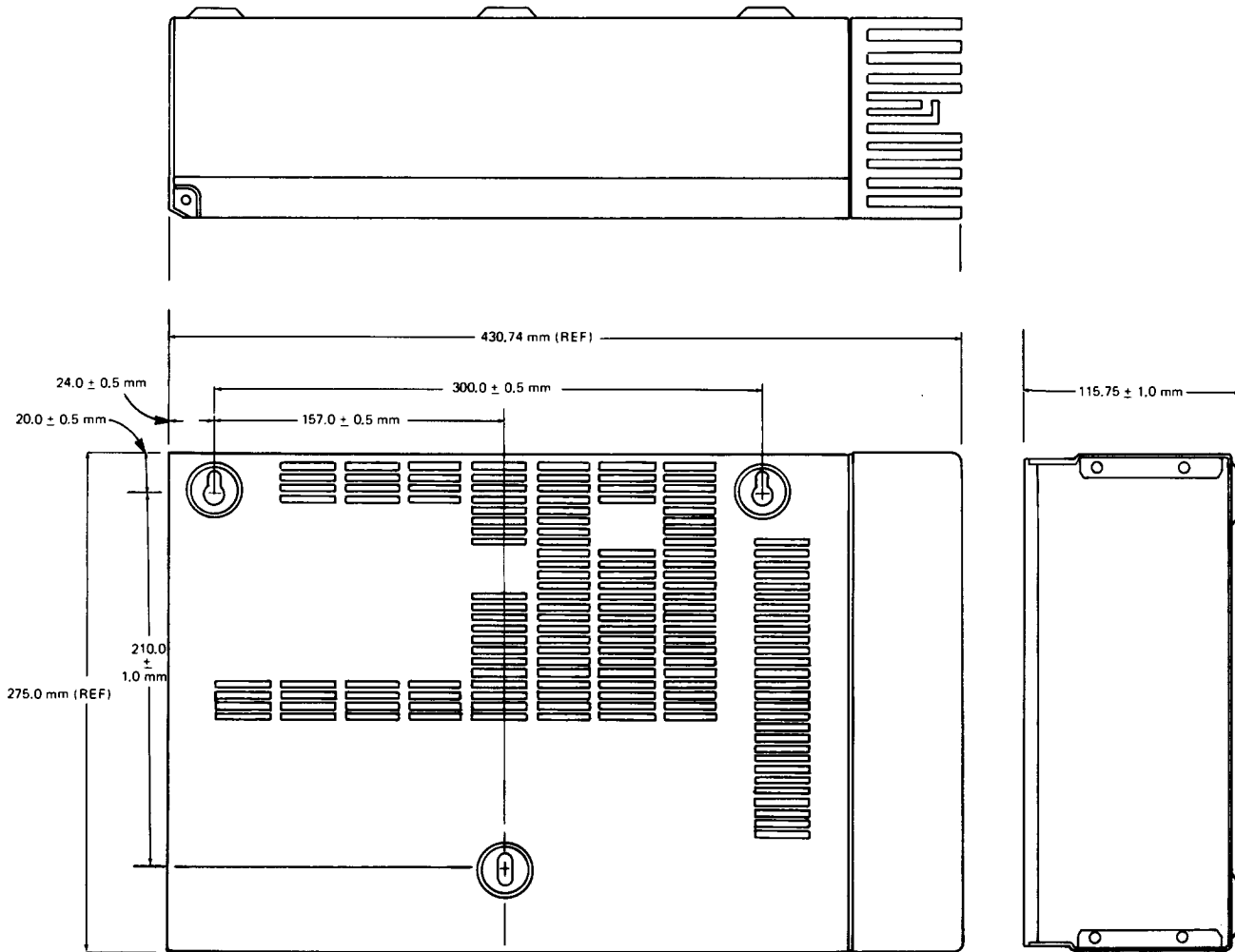


Figure 3-1
MC compact Mounting Dimensional Detail (Bottom View)

Step 2. The station should be located on a solid surface convenient to the power source and the rf transmission line, keeping in mind the ventilation requirements outlined above.

NOTE

The transmission line should be kept as short as possible to minimize line losses. Refer to the Lightning Protection Recommendations instruction sheet 68P81111E17, available separately, for additional antenna, rf transmission line, and control line installation considerations.

Step 3. Mount the station at the selected location using appropriate fasteners to securely hold the station in place. The 10W station weighs 12kg and the 25W station 13kg.

3.2.3.2 Rack Mount Units

Step 1. Refer to Figure 3-3 for cabinet dimensions. The rack mounted unit occupies three rack slices (133mm), the optional duplexers occupy an additional two rack slices (88mm).

Step 2. The rack mounted unit should be housed in a DIN rack or enclosure using hardware provided by the rack manufacturer, keeping in mind the ventilation requirements outlined above. Refer to Figure 3-4 at the end of this section for installation details of rack mounting with slides.

3.3 ANTENNA CONNECTIONS

The antennas and transmission lines are not part of the station. Therefore, antenna installation instructions are not included in this section. Follow the instructions shipped with the antenna for applicable information.

In its primary application, the station is used for communications with mobile radios. Thus, antennas with omni-directional characteristics are desirable. However, if the station is located at the outer perimeter of a communications area, or if it is to be used for communications with a fixed station, an antenna with specific directional characteristics may be more suitable. Local governments may also dictate the type of antenna to be used.

All antenna cables connect to UHF coaxial connectors on the bottom of the station. See Figure 3-2. For repeater stations without the optional external duplexer, two antennas are required; one for the transmitter and one for the receiver. Repeater stations with the optional duplexer require only one antenna.

NOTE

If an external duplexer is used, connect the receiver port of the duplexer to the RX connector and the transmit port of the duplexer to the TX connector on the bottom of the station and connect the antenna to the antenna port on the duplexer.

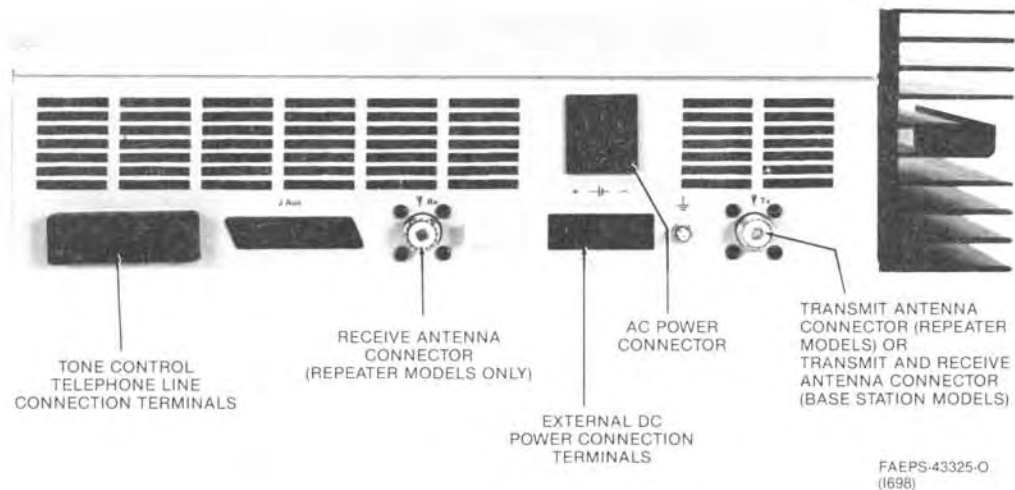
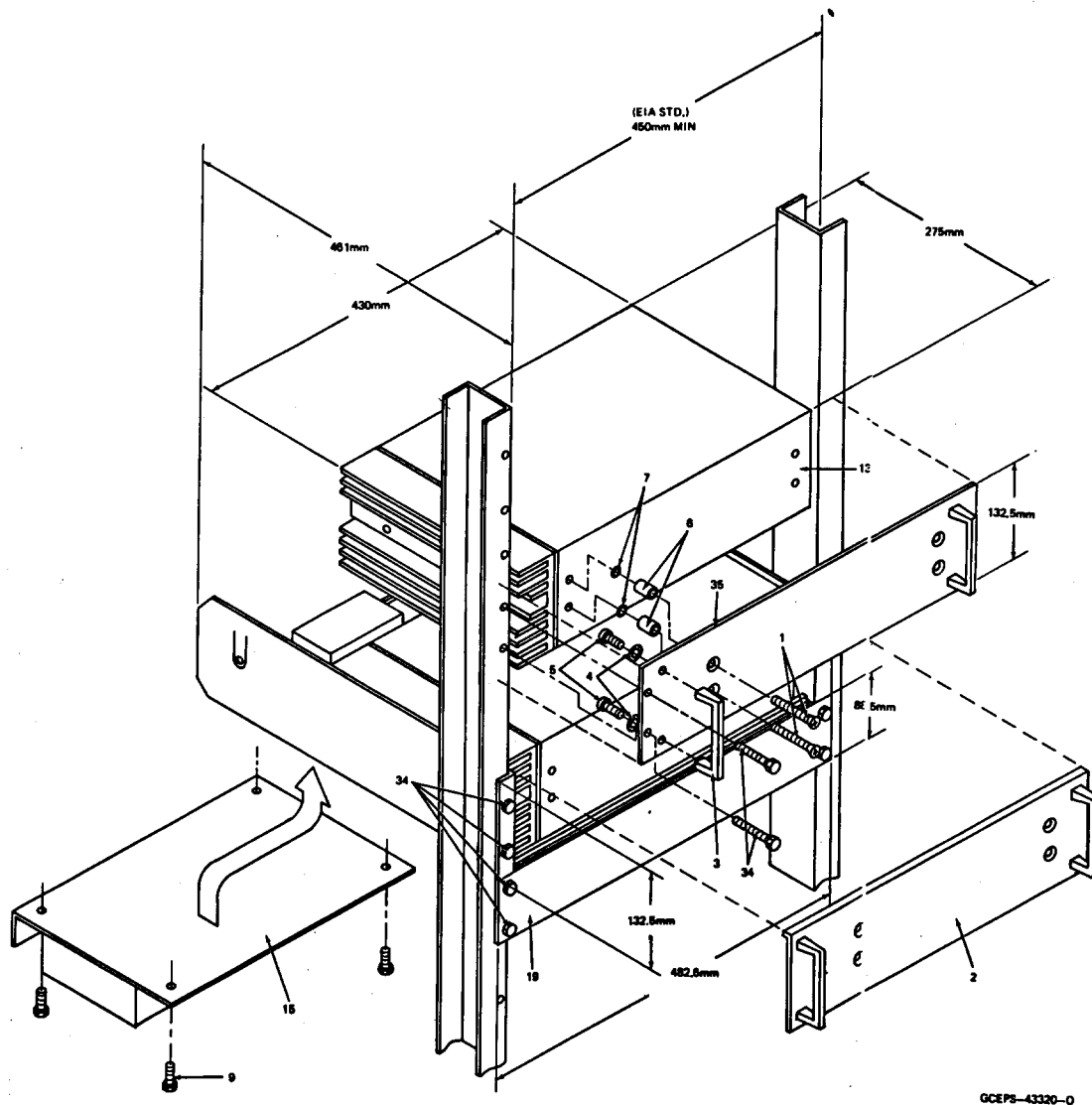


Figure 3-2
External Connection Detail



GCEPS-43320-0

Figure 3-3
Mounting Dimensional
Rack Mount Units

3.4 AC INPUT POWER AND GROUND CONNECTIONS

3.4.1 Introduction

All stations should have a separate power circuit of the proper current and voltage for station operation. The power lines should be installed in accordance with local electrical codes. A substantial earth ground must be provided as close to and in as straight a line as possible with the ground terminal provided on the station. Do NOT consider the electrical outlet box as a substantial ground.

The primary ac power line may be installed prior to installation of the cabinet and terminated near the location chosen for the station.

3.4.2 AC Input Power and Ground Connections

Step 1. Install the station as described in section 3.3.

Step 2. Connect the female plug of the ac line cord to the ac input power connector on the bottom of the station. See Figure 3-2.

ohms

Step 3. Connect the ground terminal on the station to a substantial earth ground located as close as possible to the station and in as straight a line as possible with the ground terminal.

NOTE

A power ON-OFF switch is not provided on the station, therefore the equipment is immediately operational when the power cord is plugged into a live ac outlet.

Step 4. Make sure that the main ac power source is of the proper voltage and frequency for the station. Then connect the male plug of the ac line cord to the main ac power source.

WARNING

Even if a three-wire grounded primary ac power source is available, the equipment must be grounded separately to prevent electrical shock hazards and provide lightning protection. Make sure to observe local regulations

3.4.3 Optional DC Input Connections

Connection of the optional dc input power to the terminal block on the bottom of the station (see figure 3-2) is customer-supplied.

CAUTION

Be sure to note polarity when making dc power connections to prevent damage to the equipment.

3.5 CONTROL LINE CONNECTIONS AND LEVEL SETTINGS

3.5.1 Introduction

The station can be controlled from a remote point over wireline circuits. In standard stations, simplex audio is used, meaning that the remote point can send audio to the station or receive audio from the station, but not both at the same time. Therefore, a single audio pair will suffice.

Four-wire audio operation, wherein transmitter audio and receiver audio are carried on separate wire pairs is possible in stations equipped with the 4-wire audio option. The 4-wire audio option uses one line pair for transmit audio and another line pair for receive audio.

3.5.2 Wireline Specifications

The audio wireline(s) must meet the following standards for acceptable radio communications. Verify the characteristics of leased telephone lines before installation.

Frequency response: 500 to 2500 Hz
Frequency translation error: + 5 Hz
Impedance: 600 or 900 ohms balanced line
Maximum line loss: 20 dB

3.5.3 Control Line Level Adjustment

3.5.3.1 General Information

Most telephone authorities limit the maximum signal amplitude which they allow on their lines. Check with the telephone authority for the maximum level to be used on your lines. Adjust the audio levels to the maximum permissible level which will give the best signal-to-noise ratio. For lines not subject to level restrictions, set the line level to + 11 dBm.

3.5.3.2 Line Level Adjustments

3.5.3.2.1 Tone Control Line Levels

The control tone levels for remote controlled functions are adjusted at the remote control console. No additional adjustments are required at the base station.

3.5.3.2.2 Transmit Audio Line Adjustments

The preferred method for adjusting transmit audio line levels is to utilize the remote control console as a signal source. This is necessitated by the variation in wireline attenuation. The transmit audio level should be adjusted per the following procedure.

Step 1. Send a 1 kHz tone from the console at the maximum level permitted on the line.

Step 2. Adjust potentiometer R1002 for 360 mV rms at test point 3 on the TRC board.

3.5.3.2.3 Receive Audio Line Level Adjustment

The receive audio line level should be adjusted as follows:

Step 1. Connect an rf signal generator to the base station antenna port (RX if a repeater station; TX if a base station). See figure 3-2.

Step 2. Connect an HP 3552 (or equivalent) transmission test set across the console wireline port and select the REC TERM function with 600 ohms impedance selected. If a transmission test set is not available, connect a 600 ohms + 1 % resistor across the wireline and use a high impedance ac voltmeter to make the measurements.

NOTE

To PL disable the station receiver, if required, place the PL DISABLE switch on the TRC board to PL DISABLE. The yellow LED should light on the TRC board indicating PL disable mode.

Step 3. Input an on-channel frequency signal at a level of 1 mV rms. On 2-frequency stations, local channel selection may be accomplished by placing the LINE DISABLE switch on the TRC board to LINE DISABLE and then setting the FREQUENCY SELECT switch to F1 or F2. For 4-frequency stations, switches S1 through S4 on the Enhanced Tone Remote Control (ETRC) board are used for frequency selection. Refer to Table 3-1 for details.

Table 3-1
Frequency vs ETRC Board Frequency
Select Switch Chart

| Frequency | ETRC Switch No. |
|-----------|-----------------|
| 1 | 1 |
| 2 | 2 |
| 3 | 3 |
| 4 | 4 |

Step 4. Modulate the on-channel frequency signal with a 1 kHz sine wave at 100 % full system deviation, per Table 3-2.

Table 3-2
Full System Deviation (FSD)
vs Channel Spacing

| Channel Spacing | FSD |
|-----------------|-----------|
| 25 kHz | + 5 kHz |
| 20 kHz | + 4 kHz |
| 12.5 kHz | + 2.5 kHz |

Step 5. Adjust potentiometer R831 on the TRC board for maximum wireline output level allowed on the telephone line (or + 11 dBm).

3.6 JUMPERING INFORMATION

The following sections provide tabular jumper information required to determine desired system operation. Refer to these tables upon installation for proper jumper configuration selectable options.

3.6.1 Tone Remote Control Board Jumpers

Table 3-3
Tone Remote Control Board Jumpers

| Ref. Symbol | Installation | Description |
|-------------|---|-------------|
| R832 | OUT Normally IN For Option MAL895, -6 dBm Maximum Wireline Level. | |
| JU1 | IN For 600 ohms Wireline Impedance. OUT For 900 ohms Wireline Impedance. | |
| JU2 | IN For 900 ohms Wireline Impedance. OUT For 600 ohms Wireline Impedance. | |
| JU3 | IN For 2-wire Audio. OUT For Option MALL44 4-wire Audio. | |
| JU4 | IN For Option MALL44 4-wire Audio. OUT For 2-wire Audio. | |
| JU5 | IN For 2-wire Audio. OUT For Option MALL44 4-wire Audio. | |
| JU6 | IN Normally. OUT For SP Use. | |
| JU7 | IN Normally. OUT For SP Use. | |

JU8 IN For 2175 Hz Guard Tone, Option MAL202 (ZVE1), (2100 Hz Guard Tone).
 OUT For Option 2100 Hz Guard Tone, or MAL203 (2325 Hz Guard Tone).

JU9 & JU10 IN Normally.
 OUT SP Use.

JU11 IN SP Use.
 OUT Normally.

JU12 For REPEATER stations only "AT" suffix models). Variable repeater Drop-Out-Delay is determined by use of JU12 and 3 resistors. Field Service personnel must configure each station to customer requirements per the following table.

| Repeater Drop-Out Delay (Seconds) | Repeater Drop-Out Delay | | | |
|-----------------------------------|-------------------------|------|------|------|
| | JU12 | R922 | R923 | R924 |
| 0 | IN | IN | IN | IN |
| 1 | OUT | IN | IN | IN |
| 2 | OUT | OUT | OUT | IN |
| 3 | OUT | IN | IN | OUT |
| 4 | OUT | OUT | IN | OUT |
| 7 | OUT | IN | OUT | OUT |

JU14 IN SP Use.
 OUT Normally

JU15 IN For One-Frequency Models (GLN6767A or GLN6815A).
 OUT For Option MAL66 4-Channel Capacity, or Option MAL679 Two-Channel Capacity (GLN6768A).

JU16 IN SP Use.
 OUT Normally.

JU17 IN SP Use.
 OUT Normally.

JU18 IN For BASE Stations ("A" Suffix Models).
 OUT For REPEATER Stations ("AT" Suffix Models).

JU19 IN Normally.
 OUT For Option MAL923 Squelch Monitor.

JU20 IN Normally.
 OUT For Option MAL66 4-Channel Capacity, Option MAL15 Wild Card I, Option MAL16 Wild Card II, Option MAL878 Line Fail Talk Through or Option MAL317 Line Continuity Check (requires ETRC Board).

JU21 IN Normally.
 OUT For Option MAL66 4-Channel Capacity, Option MAL15 Wild Card I, Option MAL16 Wild Card II, Option MAL878 Line Fail Talk Through or Option MAL317 Line Continuity Check (requires ETRC Board).

JU22 IN Normally.
OUT For MAL143 and MAL878.

JU23 IN For 2175 Hz Guard Tone Std Models, MAL351 (CCIR 2325 Hz Guard Tone), MAL352 (70 ms CCIR 2325 Hz Guard Tone, or MAL353 (EEA 2175 Hz Guard Tone).
OUT For MAL349 (ZVEI), or MAL350 (modified ZVEI) 2100 Hz Guard Tones.

JU24 IN Normally.
OUT SP Use.

JU25 IN SP Use.
OUT Normally.

JU26 IN Normally.
OUT SP Use.

JU27 IN For MAL923.
OUT Normally.

JU28 IN Normally.
OUT For MAL143 Remote Repeater Control.

JU29 IN For MAL206 Battery Revert/Charging.
OUT Normally.

JU30 IN SP Use.
OUT Normally.

JU31 IN Normally.
OUT For MAL311.

JU32 IN For BASE Stations ("A" Suffix).
OUT For REPEATERS ("AT" Suffix Models).

JU33 IN For BASE Stations ("A" Suffix).
OUT For REPEATERS ("AT" Suffix Models).

3.6.2 ETRC Board Jumpers

Table 3-4
Enhanced Tone Remote Control Board Jumpers

| Ref. | Symbol | Installation | Description |
|------|--------|---|-------------|
| R81 | IN | For MAL317 Line Continuity, or MAL878 Line Fail Talk Through (Acknowledge Tone ENABLE). | |
| | OUT | Normally. | |
| R98 | IN | For MAL878 Line Fail Talk Through ENABLE. | |
| | OUT | Normally. | |
| JU1 | IN | For MAL15 Wild Card I, MAL16 Wild Card II, MAL66 Four-Channel Capacity, MAL317 Line Continuity, or MAL878 Line Fail Talk Through. | |
| | OUT | For MAL463 Two-Selectable PL Encode, MAL899 Two-Selectable PL ENC/DEC, MAL930 Four-Selectable PL Encode, or MAL931 Four-Selectable PL ENC/DEC (1900 Hz Select Frequency 1 Command). | |
| JU2 | IN | For MAL463 Two-Selectable PL Encode, MAL899 Two-Selectable PL ENC/DEC, MAL930 Four-Selectable PL Encode, or MAL931 Four-Selectable PL ENC/DEC (1350 Hz Select PL-A Command). | |
| | OUT | Normally. | |

JU3 IN For MAL66 Four-Channel Capacity or MAL679 Two-Channel Capacity (1850 Hz Select Frequency 2 Command).
OUT Normally.

JU4 IN For MAL463 2-Selectable PL Encode, MAL899 2-Selectable PL ENC/DEC, MAL930 4-Selectable PL Encode, or MAL931 4-Selectable PL ENC/DEC.
OUT Normally.

JU5 IN For MAL66 4-Channel Capacity (1350Hz Select Frequency 3 Command).
OUT Normally.

JU6 IN For MAL930 4-Selectable PL Encode or MAL931 4-Selectable PL ENC/DEC (1150 Hz Select PL-C Command).
OUT Normally.

JU7 IN For MAL66 4-Channel Capacity (1250Hz Select Frequency 4 Command).
OUT Normally.

JU8 IN For MAL930 4-Selectable PL Encode, or MAL931 4-Selectable PL ENC/DEC (1050 Hz Select PL-D Command).
OUT Normally.

JU9 IN Always (1959 Hz used As Tx In Frequency 1 Function Tone).

JU10 IN For MAL66 Four-Channel Capacity, or MAL679 Two-Channel Capacity (1850 Hz Used As A Tx Function Tone).
OUT Normally.

JU11 IN SP Use.
OUT Normally.

JU12 IN SP Use.
OUT Normally.

JU13 IN For MAL66 Four-Channel Capacitor (1350 Hz Used As A Tx Function Tone).
OUT Normally.

JU14 IN For MAL66 Four-Channel Capacitor (1250 Hz Used As A Tx Function Tone).
OUT Normally.

JU15 IN SP Use.
OUT Normally.

JU16 IN SP Use.
OUT Normally.

JU17 Undefined.

JU18 Undefined.

JU19 IN For MAL15 Wild Card I (1350 Hz Wild Card I Output SET).
OUT Normally.

JU20 IN SP Use.
OUT Normally.

JU21 IN For MAL15 Wild Card I (1350 Hz Wild Card I Output RESET).
OUT Normally.

JU22 IN SP Use.
OUT Normally.

JU23 IN For MAL16 Wild Card II (1150Hz Wild Card II Output Set).
OUT Normally.

JU24 IN SP Use.
OUT Normally.

JU25 IN For MAL16 Wild Card II (1050Hz Wild Card II Output RESET).
OUT Normally.

JU26 IN SP Use.
OUT Normally.

JU27 Undefined.

JU28 IN Normally.
OUT SP Use.

JU29 IN Normally.
OUT SP Use.

JU30 IN Normally.
OUT SP Use.

JU703 IN For MAL66 Four Channel Capacity, MAL463 2-Selectable PL Encode, MAL899 2-Selectable PL ENC/DEC, MAL930 4-Selectable PL Encode, or MAL931 4-Selectable PL ENC/DEC.
OUT Normally.

JU704 IN Normally.
OUT For MAL66 Four Channel Capacity, MAL463 2-Selectable PL Encode, MAL899 2-Selectable PL ENC/DEC, MAL930 4-Selectable PL Encode, or MAL931 4-Selectable PL ENC/DEC.

JU705 IN SP Use.
OUT Normally.

JU706 IN SP Use.
OUT Normally.

JU707 IN Always

JU712 IN Always.

JU717 IN Always.

JU802 IN Always.

3.6.3 Command Board Jumpers

An MC compact station can be configured as a BASE station ("A" suffix models) or as a REPEATER station ("AT" suffix models). A BASE station has GLN6809A Transceiver Command Board installed. A REPEATER station has two separate command boards installed. The Rx chassis has GLN6810A Receive Only Command Board installed. The Tx chassis has the GLN6811A Transmit Only Command Board installed.

The following jumpers labeled JQxxx, are jumpers installed between collector and emitter holes of removed transistors and are always IN.

JQ404 IN Always.

JQ551 IN Always.

JQ707 IN Always.

JQ712 IN Always.

3.6.3.1 GLN6809A Transceiver Command Board

Table 3-5
GLN6809A Transceiver Command Board Jumpers

| Ref. Symbol | Installation Description |
|-----------------|--|
| JU404 IN | Always. |
| JU501 IN | Always. |
| JU551 IN OUT | SP Use. Normally. |
| JU552 IN OUT | Normally (de-emphasized Rx Audio). SP Use. |
| JU601 IN OUT | SP Use. Normally. |
| JU602 IN OUT | Normally (pre-emphasized Tx Audio). SP Use. |
| JU701 IN OUT | For MAL66 Four Channel Capacity, MAL463 2-Selectable PL Encode, MAL899 2-Selectable PL ENC/DEC, MAL930 4-Selectable PL Encode, or MAL931 4-Selectable PL ENC/DEC. Normally. |
| JU702 IN OUT | Normally. For MAL66 Four Channel Capacity, MAL463 2-Selectable PL Encode, MAL899 2-Selectable PL ENC/DEC, MAL930 4-Selectable PL Encode, or MAL931 4-Selectable PL ENC/DEC. |

3.6.3.2 GLN6810A Receiver Command Board

Table 3-6
GLN6810A Receiver Command Board Jumpers

| Ref. Symbol | Installation | Description |
|-----------------|--|-------------|
| JU404 IN | Always. | |
| JU501 IN | Always. | |
| JU551 IN OUT | SP Use. Normally. | |
| JU552 IN OUT | Normally, (For Deemphasized Receiver Audio). DP Use. | |
| JU701 IN OUT | For MAL66 Four Channel Capacity, MAL463 2-Selectable PL Encode, MAL899 2-Selectable PL ENC/DEC, MAL930 4-Selectable PL Encode, or MAL931 4-Selectable PL ENC/DEC. Normally. | |
| JU702 IN OUT | Normally. For MAL66 Four Channel Capacity, MAL463 2-Selectable PL Encode, MAL899 2-Selectable PL ENC/DEC, MAL930 4-Selectable PL Encode, or MAL931 4-Selectable PL ENC/DEC. | |

JU703 IN For MAL66 Four Channel Capacity,
MAL463 2-Selectable PL Encode,
MAL899 2-Selectable PL ENC/DEC,
MAL930 4-Selectable PL Encode, or
MAL931 4-Selectable PL ENC/DEC.
OUT Normally.

JU704 IN Normally.
OUT For MAL66 Four Channel Capacity,
MAL463 2-Selectable PL Encode,
MAL899 2-Selectable PL ENC/DEC,
MAL930 4-Selectable PL Encode, or
MAL931 4-Selectable PL ENC/DEC.

JU705 IN SP Use.
OUT Normally.

JU706 IN SP Use.
OUT Normally.

JU707 IN Always.

JU712 IN Always.

JU717 IN Always.

JU802 IN Always

The following jumpers labeled JQxxx, are jumpers installed between collector and emitter holes of removed transistors and are always IN.

JQ404 IN Always.

JQ551 IN Always.

JQ707 IN Always.

JQ712 IN Always.

3.6.3.3 GLN6811A Transmitter Command Board

Table 3-7
GLN6811A Transmitter Command Board Jumpers

| Ref. Symbol | Installation Description |
|-----------------|--|
| JU404 IN | Always. |
| JU601 IN OUT | SP Use. Normally. |
| JU602 IN | Always (For Preemphasized TX Audio). |
| JU701 IN OUT | For MAL66 Four Channel Capacity, MAL463 2-Selectable PL Encode, MAL899 2-Selectable PL ENC/DEC, MAL930 4-Selectable PL Encode, or MAL931 4-Selectable PL ENC/DEC. Normally. |
| JU702 IN OUT | Normally. For MAL66 Four Channel Capacity, MAL463 2-Selectable PL Encode, MAL899 2-Selectable PL ENC/DEC, MAL930 4-Selectable PL Encode, or MAL931 4-Selectable PL ENC/DEC. |
| JU703 IN OUT | For MAL66 Four Channel Capacity, MAL463 2-Selectable PL Encode, MAL899 2-Selectable PL ENC/DEC, MAL930 4-Selectable PL Encode, or MAL931 4-Selectable PL ENC/DEC. Normally. |

JU704 IN Normally.
OUT For MAL66 Four Channel Capacity,
MAL463 2-Selectable PL Encode,
MAL899 2-Selectable PL ENC/DEC,
MAL930 4-Selectable PL Encode, or
MAL931 4-Selectable PL ENC/DEC.

JU705 IN SP Use.
OUT Normally.

JU706 IN SP Use.
OUT Normally.

JU707 IN Always.

JU717 IN Always.

JU720 IN Always.

The following jumpers labeled JQxxx, are jumpers installed between collector and emitter holes of removed transistors and are always IN.

JQ404 IN Always.

JQ707 IN Always.

JQ712 IN Always.

JQ720 IN Always.

3.6.4 GLN6769A Repeater Access Tone (RAT) Decoder Board Jumpers

The transceiver command board has 9 jumpers. Seven jumpers are always installed, and two jumpers are employed for special customer applications. Refer to Table 3-8 for details.

Table 3-8
GLN6769A RAT Decoder Board Jumpers

| Ref. Symbol | Installation Description |
|--|--------------------------|
| JU401 IN | Always. |
| JU702 IN | Always. |
| JU704 IN | Always. |
| JU705 IN OUT | SP Use. Normally. |
| JU706 IN OUT | SP Use. Normally. |
| JU707 IN | Always. |
| JU712 IN | Always. |
| JU717 IN | Always. |
| JU801 IN | Always. |
| The following jumpers labeled JQxxx, are jumpers installed between collector and emitter holes of removed transistors and are always IN. | |
| JQ401 IN | Always. |
| JQ707 IN | Always. |
| JQ712 IN | Always. |

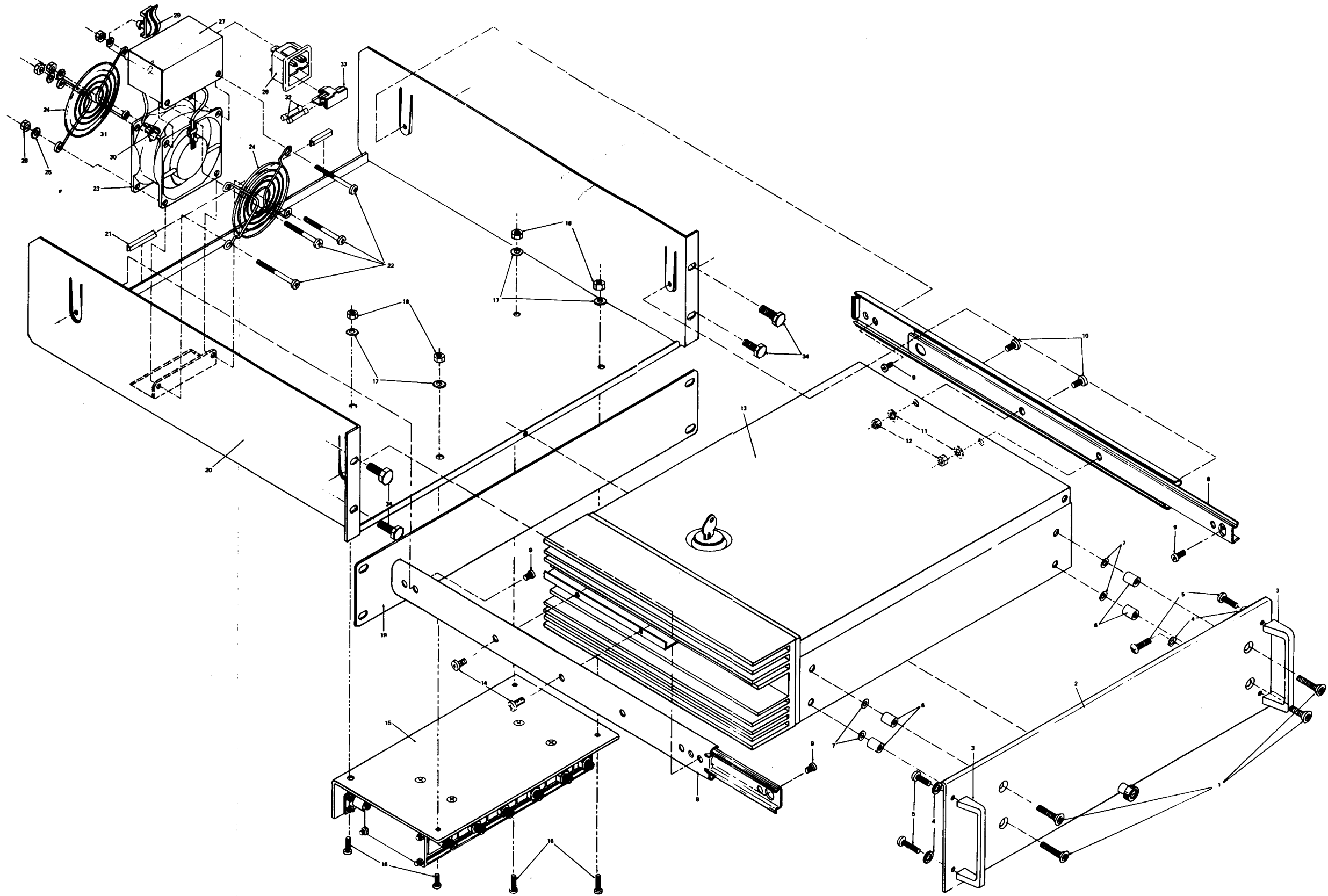


Figure 3-4
Rack Mount With Slides, Exploded View

EXPLODED VIEW PARTS LISTS

GLN6774A

Rackmount with Slides

PL-10180-B

| Reference Symbol | Motorola Part Number | Description | |
|------------------|----------------------|-----------------------|------------|
| 1 | 0380269H15 | SCREW tapping: M5x20 | 4 used |
| 2 | 6403447A01 | PANEL drawer | |
| 3 | 5503451A01 | HANDLE | 2 used |
| 4 | 0484718C18 | WASHER lock | 4 used |
| 5 | 0384723C19 | SCREW M5x12 | 4 used |
| 6 | 4384723A06 | BUSHING | 4 used |
| 7 | 0402470B02 | WASHER captive | 4 used |
| 8 | 4503450A01 | SLIDE | 2 used |
| 9 | 0380269H12 | SCREW | 4 used |
| 10 | 0380165J07 | SCREW machine: M4x10 | 2 used |
| 11 | 0484718C02 | WASHER lock | 2 used |
| 12 | 0284784B02 | NUT hex | 2 used |
| 13 | MAL EVM A | RADIO MC compact | |
| 14 | 0380269H05 | SCREW tapping: M4x0.7 | 2 used |
| 15 | MAL182 | DUPLEXER external | (optional) |
| 16 | 0380165J07 | SCREW machine: M4x10 | 4 used |
| 17 | 0484718C02 | WASHER lock: M4 | 4 used |
| 18 | 0284784B02 | NUT M4 | 4 used |
| 19 | 6484585P02 | PANEL blank | (optional) |
| 20 | 0703448A01 | TRAY EIA mounting | |
| 21 | 0503470A02 | GROMMET edge | |

GLN6773A

Rackmount Without Slide Hardware

PL-10181-B

| Reference Symbol | Motorola Part Number | Description | |
|------------------|----------------------|------------------------------------|--------|
| 1 | 0380269H15 | SCREW tapping: M5x20 | 4 used |
| 3 | 5503451A01 | HANDLE | 2 used |
| 4 | 0484718C18 | WASHER lock | 4 used |
| 5 | 0384723C19 | SCREW M5x12 | 4 used |
| 6 | 4384723A06 | BUSHING | 4 used |
| 7 | 0402470B02 | WASHER captive | 4 used |
| 13 | MAL EVM A | RADIO MC compact | |
| 34 | -- | BOLTS customer supplied | 4 used |
| 35 | 6403453A01 | PANEL fixed | |
| | 3803460A01 | NON-REFERENCE ITEM: BUTTON plug | 2 used |

GLN6862A

Fan For Rackmount With Slides

PL-10182-B

| Reference Symbol | Motorola Part Number | Description | |
|------------------|----------------------|------------------------------|--------|
| 22 | 0380165J09 | SCREW machine: M4x7 | 4 used |
| 23 | 5903467A02 | FAN cooling; 220 V | |
| 24 | 3503468A01 | GRILLE fan | |
| 25 | 0484718C02 | WASHER lock | 4 used |
| 26 | 0284784B02 | NUT hex | 4 used |
| 27 | 1503466A01 | HOUSING junction | |
| 28 | 2802138M04 | RECEPTACLE ac w/fuse housing | |
| 29 | 4203459A01 | CLIP | |
| 30 | 0380269H13 | SCREW machine: M4x0.7 | 4 used |
| 31 | 2984770A06 | LUG terminal | |
| 32 | 6584711C09 | FUSE 2 amp; 250 V | |
| 33 | (p/o 28) | HOLDER fuse | |
| 34 | -- | BOLTS customer supplied | 4 used |

(The next page is 4-1)

S E C T I O N 4

M A I N T E N A N C E

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Table 4-1
TRC Board Local Control Switch Functions

4.1 INTRODUCTION

This section details procedures required in the overall maintenance of the rf and remote control portions of the station.

The first part of this section consists of the procedures required to locally operate the station during servicing. This allows service personnel to operate all functions of the station without an operator present at the control site.

The second part contains the remote control alignment procedure for transmit and receive audio, guard tone filters, and phase lock loop decoders. These adjustments have all been made in the factory, but may need to be performed again in the field if any repairs are made.

The third section contains the alignment procedures for the rf section of the radio. The last part explains how to disassemble the radio and contains the station mechanical parts identification diagram.

4.2 LOCAL OPERATION

The cover on the station housing must be opened in order to access the local control switches located on the tone remote control (TRC) and enhanced tone remote control (ETRC) boards. Additionally, the ETRC and repeater access tone (RAT) decoder boards must be removed to access several of the adjustments located on the TRC board. Refer to figures 3-1 and 3-2 for local control switch and adjustment locations

WARNING

The transmitter can be keyed remotely. To prevent unexpected transmitter keying while servicing the station, be sure the LINE DISABLE switch and REPEATER DISABLE switch (repeater models only) on the TRC board are actuated.

The optional service microphone plugs into connector J3 on the TRC board to transmit locally with modulation. The optional handset can also be plugged into J3 to either transmit locally with modulation or provide an intercom between the serviceman and the console operator (refer to the intercom switch operation paragraph). The optional service speaker can be plugged into connector P2 in order to listen to received audio.

Reprogramming of the MC compact radio is accomplished by connecting the 8 pin modular connector on the field programmer interface cable to connector J8 (receiver or transmitter) or J9 (transmitter) on the TRC board.

There are six switches on the station TRC board that permit local operation. Refer to Figure 4-1 for switch locations. Table 4-1 lists each switch along with its functions.

| Switch | Position | Functional Description |
|----------------------------|----------|---|
| Repeater disable | OFF | Normal repeater operation. |
| | ON | Disables repeater operation during servicing. |
| Line disable | OFF | Normal station operation. |
| | ON | Disables remote control from the console during servicing. |
| Local PTT | | This is a momentary switch. When depressed, the station will transmit on whatever frequency has been selected on the local F1/F2 select switch with no modulation. The unit stops transmitting when the switch is no longer depressed to prevent the serviceman from leaving the station in a transmit mode. Plug the optional service handset or microphone into modular connector J3, on the logic board to modulate the transmitter. |
| F1/F2 select | | Transmit on or select frequency 1 after the local PTT button SW3, is depressed. |
| | F2 | Transmit on or select frequency 2 after the Local PTT button, SW3, is depressed. |
| PL disable (GLN6768A only) | OFF | Receiver PL circuit is enabled. |
| | ON | Receiver PL circuit is disabled |
| Intercom INTERCOM | | Selects intercom mode. This mode permits the serviceman to communicate with the console operator while he is servicing the station. The intercom mode inhibits transmitter keying when the handset or MIC PTT button is depressed. The serviceman's audio is instead routed down the line to the console. |

INTERCOM/PTT Normal station operation.

There are four momentary switches on the station ETRC board that permit local frequency selection. The F1/F2 switch on the TRC board is inoperative when the ETRC board is used. Refer to figure 3-2 for switch locations. Table 3-2 lists each switch along with its functions.

Table 4-2
ETRC Board Local Control Switch Functions

| Switch | Channel |
|--------|---------|
| SW1 | F1 |
| SW2 | F2 |
| SW3 | F3 |
| SW4 | F4 |

4.3 TEST EQUIPMENT REQUIRED

| | |
|----------|---|
| R2001D | Communications System Analyzer, or |
| R2200B | Service Monitor |
| PFT4053A | Psophometric Filter |
| FTP3005B | Select 5 Test Unit (not required with R2001D) |
| R1037A | Digital Multimeter, or |
| R1024B | Digital Multimeter |
| HP8903 | Audio Analyzer |
| HP3552 | Transmission Test Set |

4.4 TONE REMOTE CONTROL (TRC) BOARD ALIGNMENT

The following sections contain the tone remote control board alignment procedures for transmit and receive audio, guard tone filters, and phase lock loop decoders. These adjustments have all been made in the factory, but may need to be performed again in the field if any repairs are made. All adjustments and test points referenced are located on the TRC board. Refer to Figure 1 for adjustment locations.

4.4.1 Detected Audio Level Adjustment

Step 1. Apply an on-channel signal at 1 mV rms with 1 kHz modulation at 60 % of full system deviation to the antenna connector labeled TX (base stations) or RX (repeaters).

Step 2. If the radio has PL, activate the PL disable switch on the TRC board.

Step 3. Monitor the voltage at TP1 and adjust potentiometer R820 for 160 mV rms.

4.4.2 Receiver Notch Filter Adjustment

Step 1. Apply an on-channel signal at 1 mV rms with 1 kHz modulation at 60 % of full system deviation to the antenna connector labeled TX (base stations) or RX (repeaters).

Step 2. If the radio has PL, activate the PL disable switch on the TRC board.

Step 3. Monitor the LINE 1 output and set a reference using 1 kHz modulation.

Step 4. Change the modulating frequency to the guard tone frequency (2175 Hz standard, 2100 Hz if MAL202, and 2325 Hz if MAL203).

Step 5. Adjust potentiometer R963 for a minimum voltage at LINE 1. This level should be at least 25 dB below the reference.

4.4.3 Transmitter Notch Filter Adjustment

Step 1. Apply an 1 kHz tone to LINE 1 (LINE 2 if option MAL144 is used) and adjust its level for 360 mV rms at TP3 on the TRC board.

Step 2. Measure the voltage at TP4 and use this level to set a reference.

Step 3. Change the modulating frequency to the guard tone frequency (2175 Hz standard, 2100 Hz if MAL202, and 2325 Hz if MAL203).

Step 4. Adjust potentiometer R931 for a minimum voltage at TP4. This level should be at least 25 dB below the reference.

4.4.4 Transmitter Bandpass Filter Adjustment

Step 1. Apply an 1 kHz tone to LINE 1 (LINE 2 if option MAL144 is used) and adjust its level for 360 mV rms at TP3 on the TRC board.

Step 2. Change the modulating frequency to the guard tone frequency (2175 Hz standard, 2100 Hz if MAL202, and 2325 Hz if MAL203).

Step 3. Monitor the voltage at TP40 and adjust potentiometer R968 for a peak. Monitor the voltage at TP5 and adjust R972 for a peak.

Step 4. Repeat step 3 once. A level of at least 1.0 V rms at TP5 should be obtained.

4.4.5 Guard Tone Decoder Adjustment

Step 1. Monitor the frequency at TP8 while shorting the two pins at TP7 together.

Step 2. Adjust potentiometer R868 for the guard tone frequency (2175 Hz standard, 2100 Hz if MAL202, and 2325 Hz if MAL203).

4.4.6 PL Disable Decoder Adjustment

Step 1. Monitor the frequency at TP11 while shorting the two pins at TP10 together.

Step 2. Adjust potentiometer R868 for a frequency of 2050 Hz \pm 2 Hz at TP11.

4.4.7 PL Disable Decoder Adjustment

Step 1. Monitor the frequency at TP14 while shorting the two pins at TP13 together.

Step 2. Adjust potentiometer R899 for a frequency of 1950 Hz \pm 2 Hz at TP11.

4.4.8 F2 Frequency Select Decoder Adjustment

Step 1. Monitor the frequency at TP17 while shorting the two pins at TP16 together.

Step 2. Adjust potentiometer R903 for a frequency of 1850 Hz \pm 2 Hz at TP17.

4.4.9 Repeater Knockdown/Carrier Squelch Select Decoder Adjustment

Step 1. Monitor the frequency at TP20 while shorting the two pins at TP19 together.

Step 2. Adjust potentiometer R908 for a frequency of 1550 Hz \pm 2 Hz at TP17.

4.4.10 Repeater Setup or Squelch Defeat Select Decoder Adjustment

Step 1. Monitor the frequency at TP23 while shorting the two pins at TP22 together.

Step 2. Adjust potentiometer R913 for a frequency of 1450 Hz \pm 2 Hz at TP23.

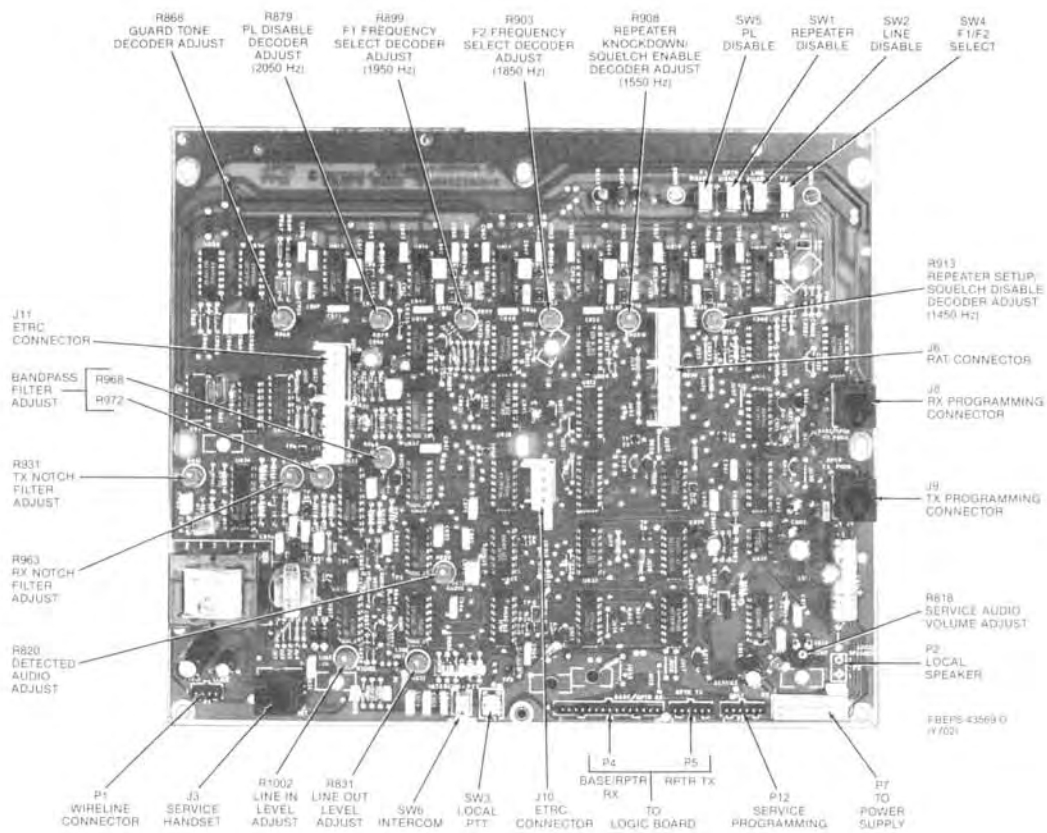


Figure 4-1
Tone Remote Control Adjustment Locations

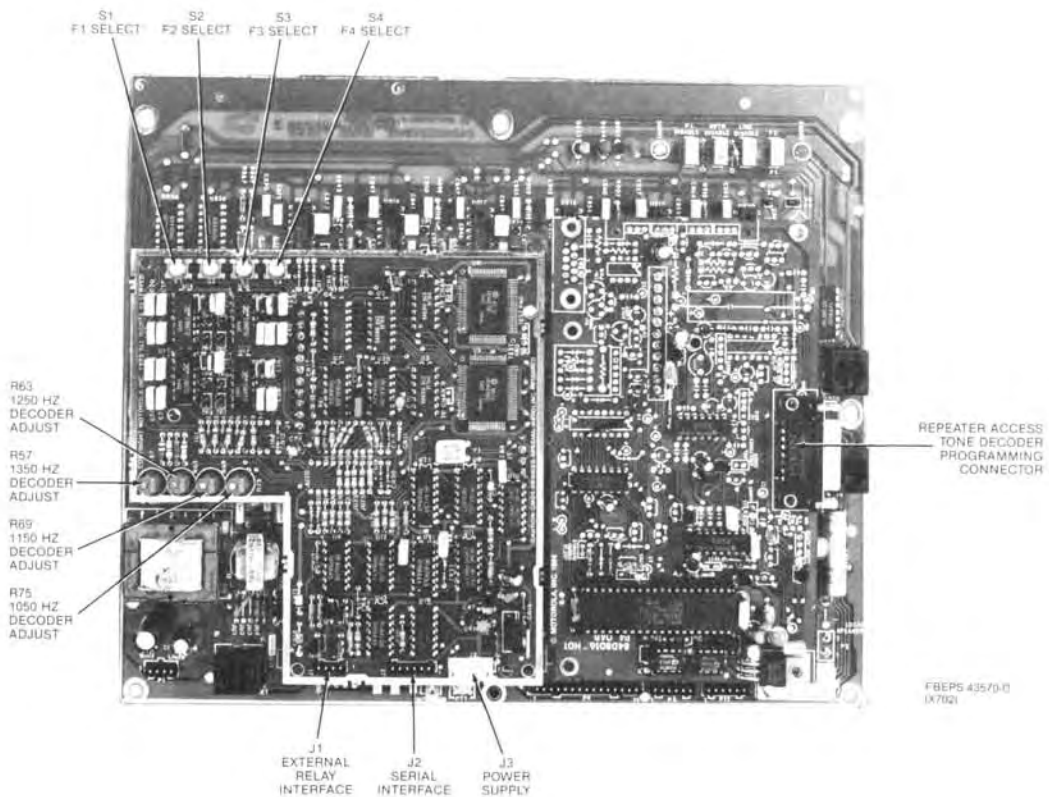


Figure 4-2
Enhanced Tone Remote Control Board Adjustment Locations

4.5 ENHANCED TONE REMOTE CONTROL (ETRC) BOARD ALIGNMENT

The following sections contain the alignment procedures for the PLL decoders located on the enhanced tone remote control board. These adjustments have all been made in the factory, but may need to be performed again in the field if any repairs are made. All adjustments and test points referenced are located on the ETRC board. Refer to figure 4-2 for adjustment locations.

4.5.1 1350Hz Decoder Alignment

Step 1. Monitor the frequency at TP2 while shorting the pins at TP1 together.

Step 2. Adjust potentiometer R57 for a frequency of 1350Hz \pm 2Hz at TP2.

4.5.2 1250Hz Decoder Alignment

Step 1. Monitor the frequency at TP4 while shorting the pins at TP3 together.

Step 2. Adjust potentiometer R63 for a frequency of 1250Hz \pm 2Hz at TP4.

4.5.3 1150Hz Decoder Alignment

Step 1. Monitor the frequency at TP6 while shorting the pins at TP5 together.

Step 2. Adjust potentiometer R69 for a frequency of 1150Hz \pm 2Hz at TP6.

4.5.4 1050Hz Decoder Alignment

Step 1. Monitor the frequency at TP8 while shorting the pins at TP7 together.

Step 2. Adjust potentiometer R75 for a frequency of 1050Hz \pm 2Hz at TP8.

4.6 RF ADJUSTMENTS

Refer to figures 4-3, 4-4, and 4-5 for adjustment locations

4.6.1 Preliminary

The rf adjustment procedures contained in the following sections require that the following conditions be met prior to alignment:

-- All references to clockwise (CW) or counter-clockwise (CCW) adjustment of controls assume that adjustments are made from the component side of the circuit board.

-- Prior to performing adjustments the radio must be completely assembled except for the synthesizer compartment top cover and chassis cover.

In a base station model, the receiver and transmitter are in the same radio chassis whose antenna connector is labeled TX on the bottom of the station chassis. In a repeater model, the transmitter and receiver are in

separate radio chassis and have separate antenna connectors on the bottom of the station labeled TX and RX respectively. In this case, whenever a transmitter adjustment is called for, it should be performed on the transmitter radio chassis. When a receiver adjustment is required, it should be performed on the receiver radio chassis.

For two-frequency units (Option MAL679) first place the line disable switch on the TRC board to the "1" position and then use the frequency select switch on the TRC board to change frequencies. F1 is the "0" position and F2 the "1" position. For four frequency units (Option MAL66, depress the momentary switches, SW1, SW2, SW3, and SW4 on the ETRC board to change frequencies per the following table:

| Frequency | Switch No. |
|-----------|------------|
| 1 | 1 |
| 2 | 2 |
| 3 | 3 |
| 4 | 4 |

To PL disable the receiver, actuate the LINE DISABLE switch and the PL DISABLE switch on the TRC board. The yellow LED on the TRC board should now be lit indicating the PL disable mode. To transmit push the momentary local PTT switch.

4.6.2 Transmitter Adjustments

IMPORTANT

Adjust potentiometer R477 on the power amplifier current limiter board fully CW before beginning transmitter alignment.

4.6.2.1 VCO Adjustment (All Models)

Step 1. Preset the potentiometers on the transceiver (base) or transmitter (repeater) command board as follows:

| Reference Designator | Function | Setting |
|----------------------|----------------|-----------|
| R463 | Voltage limit | Fully CW |
| R453 | High power set | Fully CCW |
| R455 | Low power set | Fully CCW |

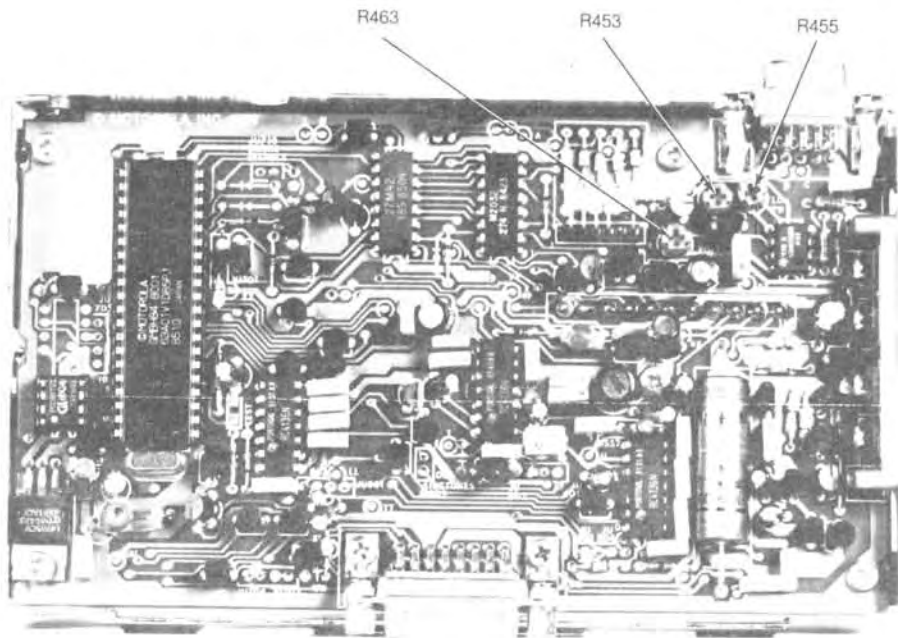
Step 2. Select the channel having the highest transmit frequency.

Step 3. Connect the transmitter antenna connector to an accurate rf power meter that provides a 50 ohm load.

Step 4. Connect a dc voltmeter from the steering line test point (SL) to ground. Meter impedance should be 11 megohms or greater.

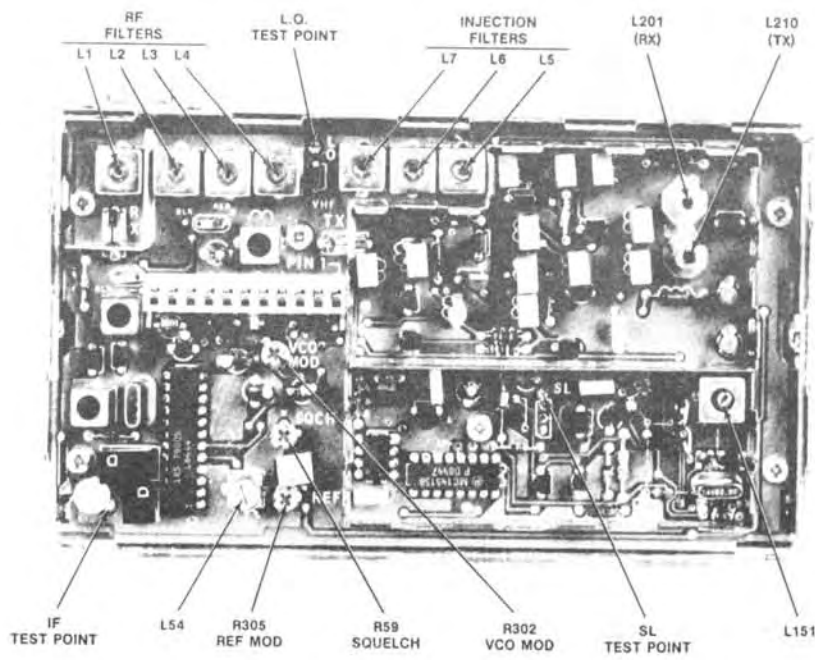
Step 5. Key the radio and adjust the transmit VCO frequency (L210 in radios between 66 and 225MHz, or C221 in 403-470MHz radios) for a reading of 7.0V dc (6.0V for 403-470MHz). Dekey the radio.

Step 6. Select the channel having the lowest transmit frequency. Key the radio and verify that the dc voltage is at least 2.5V dc (3.0V dc for 403-470MHz).



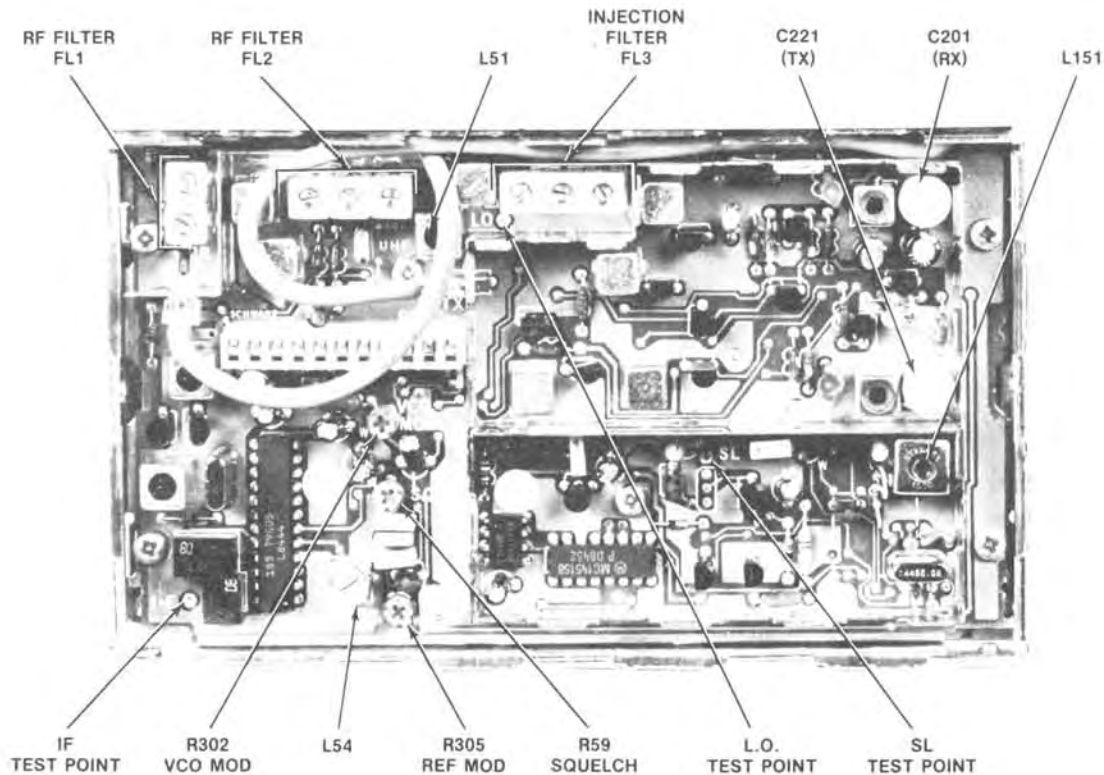
GBW-2101-0

Figure 4-3
Command Board Adjustment Locations



GBW-2102

Figure 4-4
Adjustment Locations for all radios between 66 and 225MHz



GBW-2299-0

Figure 4-5
403-470MHz RF Board Adjustment Locations

4.6.2.2 Output Power Adjustment

NOTE

Key radio only while making adjustments or measurements.

Step 1. Select any transmit channel. If MAL889 slaved rf power option is ordered, select any high-power transmit channel.

Step 2. Key the radio and adjust R453 (high power adjust) for approximately:

| Model No. Prefix | Power Setting |
|---------------------|---------------|
| MAL2xxxx | 6.0 Watts |
| MAL3xxxx | 10.0 Watts |
| MAL4xxxx | 25.0 Watts |

Step 3. Switch through all channels (all high-power channels with MAL889). On each channel, key the radio and note the power output. Record the channel which gives the minimum power output for MAL3xxxx and MAL4xxxx models. Record the channel which gives the maximum power output for MAL2xxxx models. If more than one channel gives the same maximum voltage, choose any one of those channels.

Step 4. Switch through all transmit channels (all high power channels with MAL889). On each channel, key the radio and observe the dc voltage at connector P6, pin 4 or at test point CV on the command board. Record the channel number which gives the greatest voltage, and record the voltage. If this voltage exceeds 10.0V dc, go to step 7. If not, continue with step 5. If more than one channel gives the same maximum voltage, choose any one of those channels.

Step 5. On the channel with the highest dc voltage as determined in step 4, turn voltage limit potentiometer R463 fully CCW. Turn high power adjust potentiometer R453 fully CW.

Step 6. Key the radio. Adjust voltage limit potentiometer R463 for a dc voltage which is 2.0 volts higher than the voltage level recorded in step 4, as measured at P6, pin 4 or at test point CV.

Step 7. Adjust the high power set potentiometer (R453) fully CCW.

Step 8. On any channel key the transmitter and observe the dc voltage at TP476, located on the current limit board. Adjust R477 (current limit adjust) for 7.5V \pm 0.05V.

Step 9. Set the channel selector to the channel which was determined in step 3. Key the radio and adjust the high power potentiometer R453 for:

| Model No. Prefix | Power Setting |
|---------------------|---------------|
| MAL2xxxx | 5.6 Watts |
| MAL3xxxx | 10.7 Watts |
| MAL4xxxx | 26.8 Watts |

Step 10. Verify that all channels (or all high power channels with MAL889) produce at least 1.0, 10.0, or 25.0 watts, as appropriate, for MAL3xxxx and MAL4xxxx models. Verify that no channel produces more than 6.0 watts for MAL2xxxx models.

Step 11. If option MAL889 slaved rf power level is ordered, select any low power channel.

Key the radio and adjust low power set potentiometer R455 for an output power of 1.0 watt (or other customer-specified power setting) for MAL2xxxx or MAL3xxxx models. Verify that the rf power output on all low-power channels is between 0.7 and 1.4 watts. Readjust R455 slightly if necessary.

4.6.2.3 Reference Oscillator Adjustment

Step 1. Connect the transmitter antenna connector to an accurate frequency counter through a suitable attenuator.

Step 2. Select any transmit channel.

Step 3. Key the radio and adjust L151 (all models except those with 2 ppm stability) or R163 (2 ppm models) until the transmit frequency (+100Hz) is displayed. De-key the radio.

Step 4. Check all channels for correct frequency programming. De-key when changing channels.

4.6.2.4 Deviation Adjustment

Step 1. Connect the transmitter antenna connector to a modulation analyzer or test receiver through a suitable attenuator.

Step 2. Connect an audio oscillator to the microphone audio input via a 47 uF coupling capacitor (+ toward radio). Connect a 560 ohm resistor from the microphone audio input to ground. Set the oscillator frequency to 1kHz and the output level to 800mV rms.

Step 3. Preset potentiometers R302 (VCO mod) and R305 (reference mod) fully CCW.

NOTE

For 66-88MHz 25kHz channel spacing models only, preset R305 (REF MOD) fully CW.

Step 4. Set the channel selector to channel 1. For PL models select the lowest channel number which transmits PL.

Step 5. Key the radio and turn VCO MOD potentiometer R302 for the following deviation level:

| 10th Character of Model No. | Channel Spacing | Deviation Setting |
|-----------------------------|-----------------|-------------------|
| 1 | 25kHz | +4.6kHz |
| 3 | 20kHz | +3.7kHz |
| 2 | 12.5kHz | +2.3kHz |

NOTE

If plus and minus deviation readings differ, observe only the higher reading.

Step 7. For 66-88MHz 25kHz channel spacing models, the procedure is complete. For others, continue with step 8.

Step 8. Change the oscillator frequency to 200Hz. Maintain the output level at 800 mV rms.

Step 9. Key the radio and observe the waveform on an oscilloscope, dc coupled to the demodulated output of a test receiver which should be non-deemphasized. Adjust potentiometer R305 (REF MOD) for the flattest square wave response with minimum tilt.

Step 10. Return the audio oscillator to 1kHz, 800mV rms, and repeat step 6.

4.6.3 Receiver Adjustments

4.6.3.1 VCO Adjustment (all models)

NOTE

Adjust the transmitter VCO and reference oscillator before aligning the receiver.

Step 1. Select the channel having the highest receive frequency.

Step 2. Connect a dc voltmeter from the steering line test point SL to ground. The meter impedance should be 11 megohms or greater.

Step 3. Adjust the RX VCO (L201 in radios between 66 and 225MHz, or C201 in 403-470MHz radios) for a reading of 7.0V dc (6.0V dc for 403-470MHz radios) on the voltmeter.

Step 4. Switch to the channel having the lowest receive frequency and verify that the dc voltage is at least 2.5V dc (3.0V for 403-470MHz).

4.6.3.2 RF and I-F Alignment

Step 1. Determine the tune-up frequency F(tune) as follows:

A. On single-channel radios, or on multi-channel radios with a single receive frequency:

$$F(\text{tune}) = F(\text{receive})$$

B. On multi-channel radios where the total receive bandwidth is less than or equals 2MHz:

$$F(\text{tune}) = \text{lowest frequency channel} \\ (66-88\text{MHz radios only})$$

$$F(\text{tune}) = \text{highest frequency channel} \\ (\text{all other radios})$$

C. On multi-channel radios where the total receive bandwidth is greater than 2MHz but less than or equal to 4MHz (66-88MHz, 136-174MHz and 403-470MHz) or 5MHz (174-225MHz radios), find F(mid), where:

$$F(\text{mid}) = [F(\text{highest}) + F(\text{lowest})]/2 \\ (66-88 / 136-174 / 403-470\text{MHz radios})$$

$$F(\text{mid}) = [F(\text{highest}) + F(\text{lowest})]/2 + 0.7\text{MHz} \\ (174-225\text{MHz})$$

If a customer channel frequency falls within 500kHz of F(mid) (66-88/136-174/403-470MHz) or 100kHz of F(mid) (174-225MHz radios) perform tune-up on that channel. If not, a tune-up PROM, programmed to F(mid) is required.

Step 2. Set the channel selector switch to the channel of the tune-up frequency as determined in step 1 above. If a tune-up PROM is used, the tune-up frequency is programmed as channel 1.

Step 3. Connect a 4 ohms load resistor across P2 on the TRC board. Receiver audio output is monitored across this resistor.

Step 4. Preset the slugs or screws of the front end coils or helicals as follows:

**Band
(MHz) Coils or Helicals Preset Position**

66-88 L1 - L7 incl. Flush with PC board.
136-174 L1 - L7 incl. Flush with PC board.

For 174-225 MHz models, preset coils L1 through L5 and L8, L9 and L10 as follows:

| RF Board Kit No. | Range of Rx Frequencies (MHz) | Preset Position |
|------------------|-------------------------------|----------------------|
| GLD6171A | 174 - 188 | Flush with PC board. |
| GLD6171A | 188 - 201 | Flush top of can. |
| GLD6172A | 199 - 212 | Flush with PC board. |
| GLD6172A | 212 - 225 | Flush top of can. |

For 403 - 470 MHz radios, preset the screws of helical filters FL1, FL2 and FL3 according to the following chart:

| RF Board Kit No. | Range of Rx Frequencies (MHz) | Preset Position |
|------------------|-------------------------------|------------------------|
| GLE6141A | 403 - 418 | 2 mm below top of can. |
| GLE6141A | 418 - 433 | 2 mm above top of can. |
| GLE6142A | 438 - 455 | 2 mm below top of can. |
| GLE6142A | 455 - 470 | 2 mm above top of can. |
| GLE6144A | 418 - 433 | 2 mm above top of can. |
| GLE6145A | 438 - 455 | 2 mm below top of can. |
| GLE6147A | 403 - 418 | 2 mm below top of can. |
| GLE6147A | 418 - 433 | 2 mm above top of can. |
| GLE6148A | 438 - 455 | 2 mm below top of can. |
| GLE6148A | 455 - 470 | 2 mm above top of can. |
| GLE6150A | 438 - 455 | 2 mm below top of can. |
| GLE6151A | 418 - 433 | 2 mm above top of can. |
| GLE6153A | 403 - 418 | 2 mm below top of can. |
| GLE6153A | 418 - 433 | 2 mm above top of can. |
| GLE6156A | 438 - 455 | 2 mm below top of can. |
| GLE6157A | 418 - 433 | 2 mm above top of can. |

Step 5. For radios between 66 and 225 MHz only:

Connect a dc voltmeter from the local oscillator test point L0 to ground. Peak the injection filter coils L6, L5, L7 (for 66 - 88 and 135 - 174 MHz) or L9, L10, L8 (for 174 - 225 MHz), in the order listed, for a maximum dc voltage, typically between 2.5 and 3.5 V dc. Repeat until no further increase is obtained.

Step 6. For radios between 403 and 470MHz only:

Connect a dc voltmeter from the local oscillator test point L0 to ground. Starting with the center screw, peak the three cells of injection filter helical F13 for a maximum dc voltage, typically between 2.5 and 3.5 V dc. Repeat until no further increase is obtained.

Step 7. PL disable the receiver (in PL models only) by actuating the PL DISABLE switch on the TRC board. Connect an rf signal generator to the receiver antenna connector. Set the generator frequency to the tune-up frequency F(tune) as determined previously in step 1. The generator should be unmodulated. Adjust the generator rf output level to produce a signal strong enough to quit the radio.

Step 8. Connect an ac voltmeter having at least a 500 kHz bandwidth (HP331A Distortion Analyzer is suitable) from the i-f test point to ground. Increase the rf generator level until an indication of approximately 30 mV rms is obtained on the voltmeter. Adjust the following coils, in the order listed, for a maximum indication on the voltmeter, while reducing the generator rf level as required to keep the voltmeter indication approximately 30 mV rms. Repeat until no further increase is obtained.

| Range (MHz) | Coils |
|-------------|---------------------|
| 66 - 88 | L1, L2, L3, L4. |
| 136 - 174 | L1, L2, L3, L4. |
| 174 - 225 | L1, L2, L3, L4, L5. |
| 403 - 470 | FL1, FL2, L51. |

Step 9. After completing the alignment of FL1, FL2, and FL3 (403 - 470 MHz models only) the adjusting screws should be secured with paint to prevent detuning.

Step 10. Set the rf generator output level to 1 mV. Modulate with a 1 kHz tone at 60% of full system deviation.

NOTE

Full system deviation (FSD) is:

- + 5 kHz for 25 kHz channel spacing,
- + 4 kHz for 20 kHz channel spacing, and
- + 2.5 kHz for 12.5 kHz channel spacing.

Adjust the volume control for approximately 1 V rms audio level across the 4-ohms load. Slowly peak the quad coil L54 (L52 in 174 - 225 MHz models) for maximum audio level.

4.6.3.3 Squelch Adjustment

Step 1. Preset the squelch potentiometer R59 fully CCW.

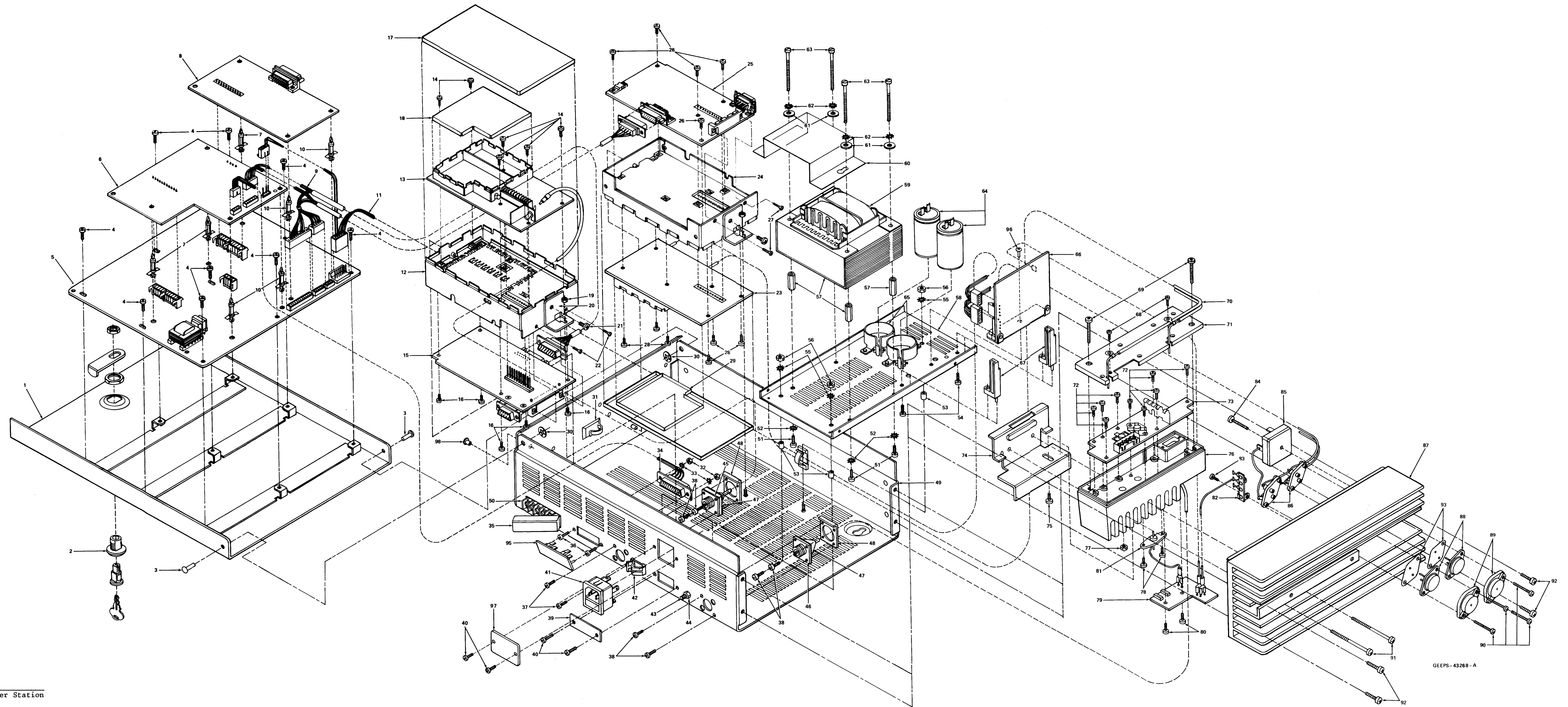
Step 2. Apply an on-channel rf signal at a level of 1 mV rms. Modulate with a 1 kHz tone at 60% FSD.

Step 3. Reduce the rf level until a 10 dB CCITT weighted SINAD (8 dB CCITT weighted SINAD for 174 - 225 MHz radios only) is obtained at the LINE 1 output (terminated with 600 ohms).

| | |
|---------------------|------------------|
| Limits: 66 - 88 MHz | 9 - 11 dB SINAD. |
| 136 - 174 MHz | 9 - 11 dB SINAD. |
| 174 - 225 MHz | 7 - 9 dB SINAD. |
| 403 - 470 MHz | 9 - 11 dB SINAD. |

4.7 DISASSEMBLY AND SERVICE ACCESS

The exploded view drawing (Figure 4-6) illustrates how the radio is disassembled and identifies all mechanical parts.



GEEPS-43268-A

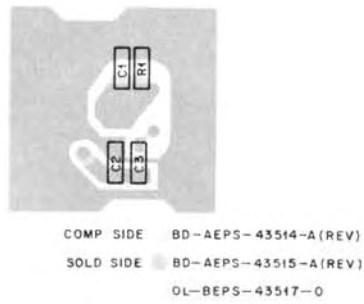
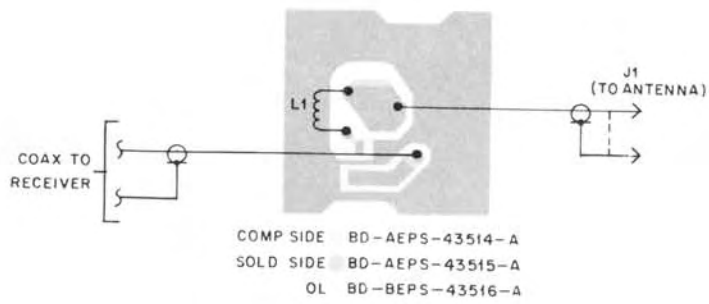
MC compact Base and Repeater Station
 Figure 4-6
 Exploded View

| Ref. Symbol | Motorola Part No. | Description | Ref. Symbol | Motorola Part No. | Description |
|----------------|----------------------|-------------------------------|----------------|----------------------|-------------------------------|
| 1 | 1582121R01 | Door | 50 | 3184145N03 | Terminal, block |
| 2 | 5503454A01 | Lock assembly w/ cam and nuts | 51 | 0380165J07 | Screw, machine: M4x10; 4 used |
| 3 | 0503465A01 | Pivot, pin | 52 | 0484718C02 | Washer, ext lock (M4); 4 used |
| 4 | 0380269H08 | Screw tpng M3x8 (BLK); 9 used | 53 | 0484717C24 | Washer, spacer; 3 used |
| 5 | -- | TRC, control board | 54 | 0382069H08 | Screw, tpng: M3x8; 2 used |
| 6 | -- | ETRC, board | 55 | 0484718C04 | Washer, starlock (M3); 3 used |
| 7 | 4303463A01 | Stand off; 3 used | 56 | 0284784B05 | Nut, M3; 3 used |
| 8 | -- | RAT decoder, board | 57 | 0384893D02 | Screw, distance; 4 used |
| 9 | 3003469A04 | Cable, assembly | 58 | 2782118R01 | Chassis, power supply |
| 10 | 4303462A01 | Standoff, PC flex; 4 used | 59 | 2582169R01 | Transformer |
| 11 | -- | Cable, TRC power (DC output) | 60 | 1403440A01 | Insulator, A/C |
| 12 | 2780174H01 | Chassis, MC micro | 61 | 0484717C01 | Washer, flat: M4; 4 used |
| 13 | -- | Receiver, RF board | 62 | 0484718C02 | Washer, external lock; 4 used |
| 14 | 0302607B02 | Screw, tpng: M3x6; 6 used | 63 | 0381065J09 | Screw, machine: M4x50; 4 used |
| 15 | -- | Receiver, command board | 64 | 0884700C01 | Capacitor; 2 used |
| 16 | 0302607B02 | Screw, tpng: M3x6; 5 used | 65 | 4202211B01 | Bracket, capacitor; 2 used |
| 17 | 1580129J01 | Cover, chassis; 2 used | 66 | -- | Regulator, board |
| 18 | 1580136J01 | Cover, RF shield | 67 | 4684203E01 | Card guide; 2 used |
| 19 | 0284784B05 | Nut, M3 | 68 | 0302607B02 | Screw, tpng: M3x6; 2 used |
| 20 | 0782406R01 | Bracket, MC micro; 2 used | 69 | 0380269H09 | Screw, tpng: M5x20; 2 used |
| 21 | 0380165J06 | Screw, machine: M5x8; 2 used | 70 | 3080116K06 | Cable, coaxial; 2 used |
| 22 | 0380269H02 | Screw, tpng: M2.5x8; 2 used | 71 | 1503424A01 | Cover, PA |
| 23 | -- | Transmitter, RF board | 72 | 0302607B01 | Screw, tpng: M3x8; 9 used |
| 24 | 2780174H01 | Chassis, MC micro | 73 | -- | PA board |
| 25 | -- | Transmitter, command board | 74 | 4282405R01 | Clamp, PA |
| 26 | 0302607B02 | Screw, tpng: M3x6; 5 used | 75 | 0380165J07 | Screw, machine; M4x10 |
| 27 | 0380269H02 | Screw, tpng: M2.5x8; 2 used | 76 | 2680176H08 | Heat Sink, PA |
| 28 | 0302607B02 | Screw, tpng: M3x6; 6 used | 77 | 0200007003 | Nut, 8-32 |
| 29 | 1580136J01 | Cover, RF shield | 78 | 0302607B02 | Screw, tpng: M3x6; 2 used |
| 30 | 0203455A01 | Nut, push-on; 2 used | 79 | -- | Current limit board |
| 31 | 4210347A03 | Clamp, cable; 2 used | 80 | 0302607B01 | Screw, tpng: M3x8; 2 used |
| 32 | 0284784B05 | Nut, M3; 2 used | 81 | 0980038K02 | Connector, power |
| 33 | 0484718C04 | Washer, starlock M3; 2 used | 82 | 3100122068 | Terminal, strip |
| 34 | 2884506E08 | Connector | 83 | 0380269H08 | Screw, tpng: M3x8 |
| 35 | 1503441A01 | Cover, telephone line | 84 | 0380269H07 | Screw, tpng: M4x20 |
| 36 | 0380269H08 | Screw tpng M3x8 (BLK); 2 used | 85 | 4802081M06 | Bridge, rectifier |
| 37 | 0380269H06 | Screw, tpng: M3x16; 2 used | 86 | 0902088M01 | Socket, transistor; 2 used |
| 38 | 0382069H08 | Screw, tpng: 3x8; 6 used | 87 | 2682152R01 | Heat Sink, main |
| 39 | 1503426A01 | Cover, battery option | 88 | 4802081B29 | Transistor, power; 2 used |
| 40 | 0380269H08 | Screw, tpng: M3x8; 4 used | 89 | 1402309M01 | Cover, transistor; 2 used |
| 41 | 2802138M04 | Connector, A/C with fuse | 90 | 0384723C16 | Screw, machine: M3x25; 4 used |
| 42 | 4203459A01 | Clip, strain relief | 91 | 0380165J08 | Screw, machine: M4x60; 2 used |
| 43 | 0308634B25 | Screw, machine: M5x16 | 92 | 0380269H07 | Screw, tpng: M4x20; 4 used |
| 44 | 0284719C01 | Nut, M5 | 93 | 1402161M01 | Insulator, transistor; 2 used |
| 45 | 1503473A01 | Housing, RX LPF | 94 | Not Used | |
| 46 | 0982442E01 | Connector, UHF | 95 | 3883665N01 | Cap |
| 47 | 1500483599 | Hood, connector; 2 used | 96 | 0384723C29 | Screw, machine: M3x4 |
| 48 | 0703432A01 | Bracket UHF connector; 2 used | 97 | 1503475A01 | Cover, AC connector |
| 49 | 1582120R01 | Housing, radio | 98 | 3803460A01 | Plug, button; 9 used |

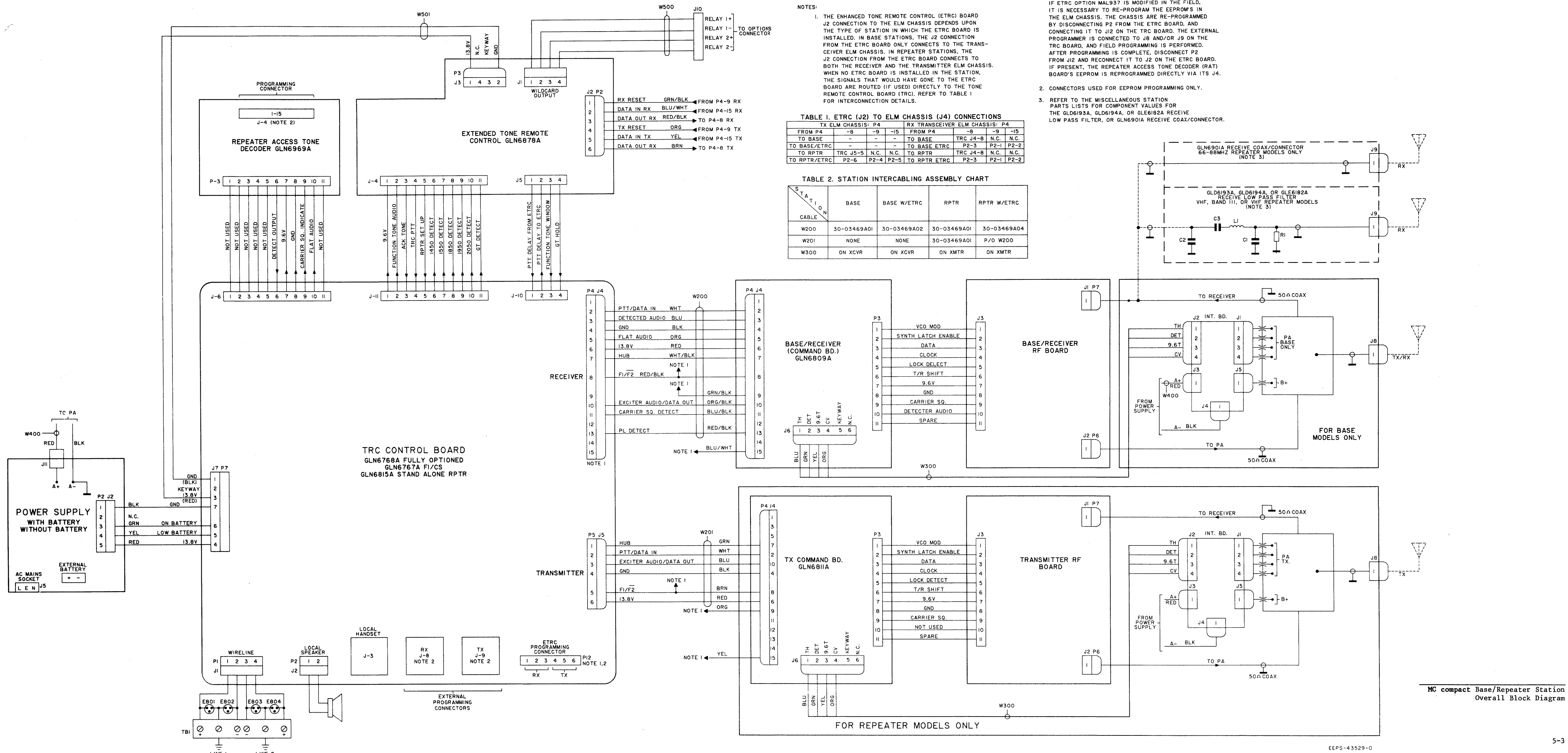
SECTION 5

SCHEMATICS & CIRCUIT BOARD DETAILS

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MC compact Base/Repeater Station
GLD6193A, GLD6194A & GLE6182A
RF Input Filter
Circuit Board Details



NOTES:

- THE ENHANCED TONE REMOTE CONTROL (ETRC) BOARD J2 CONNECTION TO THE ELM CHASSIS DEPENDS UPON THE TYPE OF STATION IN WHICH THE ETRC BOARD IS INSTALLED. IN BASE STATIONS, THE J2 CONNECTION FROM THE ETRC BOARD ONLY CONNECTS TO THE TRANSMITTER ELM CHASSIS. IN REPEATER STATIONS, THE J2 CONNECTION FROM THE ETRC BOARD CONNECTS TO BOTH THE RECEIVER AND THE TRANSMITTER ELM CHASSIS. WHEN NO ETRC BOARD IS INSTALLED IN THE STATION, THE SIGNALS THAT WOULD HAVE GONE TO THE ETRC BOARD ARE ROUTED (IF USED) DIRECTLY TO THE TONE REMOTE CONTROL BOARD (TRC). REFER TO TABLE 1 FOR INTERCONNECTION DETAILS.

TABLE 1. ETRC (J2) TO ELM CHASSIS (J4) CONNECTIONS

| TX ELM CHASSIS: P4 | | | | RX TRANSMITTER ELM CHASSIS: P4 | | | |
|--------------------|----------|------|------|--------------------------------|----------|------|------|
| FROM P4 | -8 | -9 | -15 | FROM P4 | -8 | -9 | -15 |
| TO BASE | - | - | - | TO BASE | TRC J4-8 | N.C. | N.C. |
| TO BASE/ETRC | - | - | - | TO BASE ETRC | P2-3 | P2-1 | P2-2 |
| TO RPTR | TRC J5-5 | N.C. | N.C. | TO RPTR | TRC J4-8 | N.C. | N.C. |
| TO RPTR/ETRC | P2-6 | P2-4 | P2-5 | TO RPTR ETRC | P2-3 | P2-1 | P2-2 |

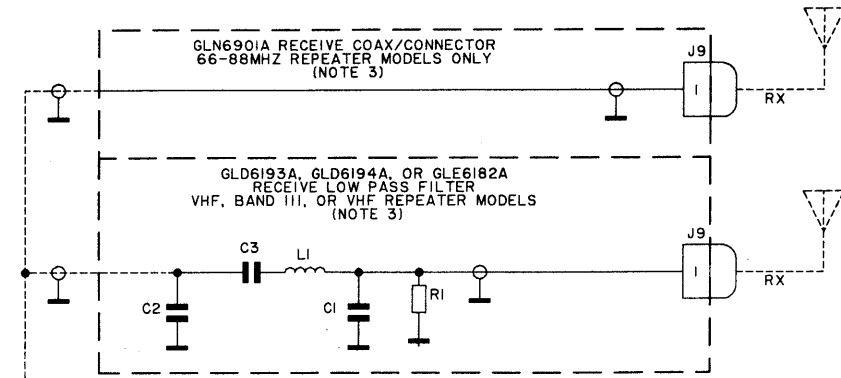
TABLE 2. STATION INTERCABLING ASSEMBLY CHART

| STATION CABLE | BASE | BASE W/ETRC | RPTR | RPTR W/ETRC |
|---------------|---------|-------------|-------------|-------------|
| | W200 | 30-03469A01 | 30-03469A02 | 30-03469A01 |
| W201 | NONE | NONE | 30-03469A01 | P/O W200 |
| W300 | ON XCVR | ON XCVR | ON XMTR | ON XMTR |

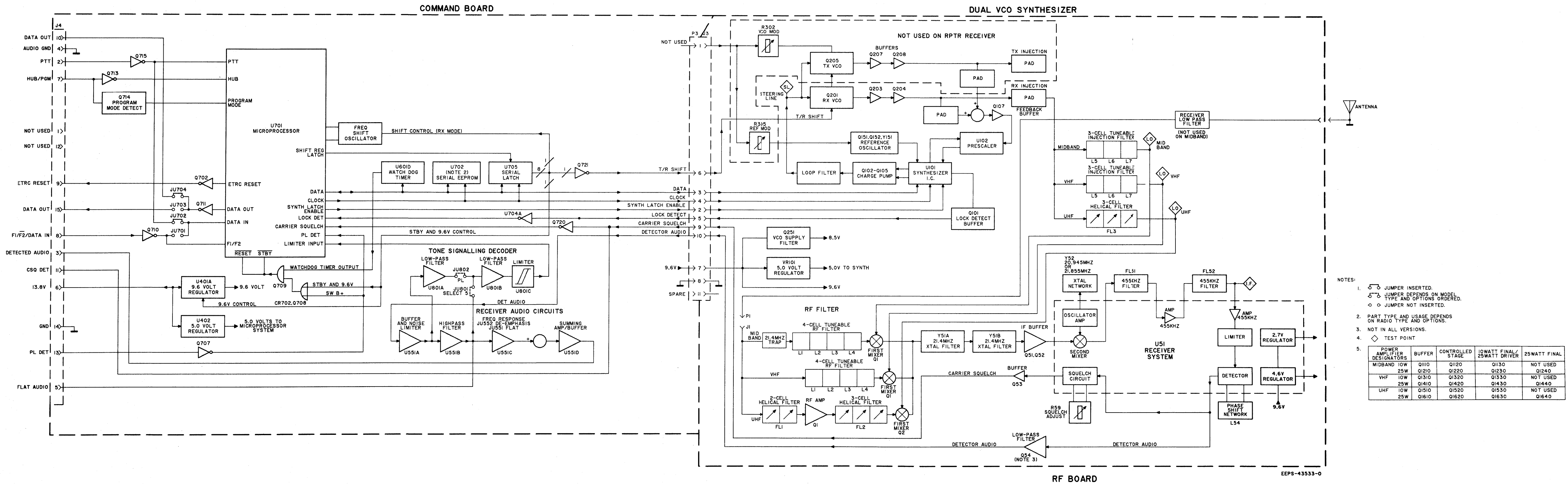
IF ETRC OPTION MAL937 IS MODIFIED IN THE FIELD, IT IS NECESSARY TO RE-PROGRAM THE EEPROMS IN THE ELM CHASSIS. THE CHASSIS ARE RE-PROGRAMMED BY DISCONNECTING P2 FROM THE ETRC BOARD, AND CONNECTING IT TO J12 ON THE TRC BOARD. THE EXTERNAL PROGRAMMER IS CONNECTED TO J8 AND/OR J9 ON THE TRC BOARD, AND FIELD PROGRAMMING IS PERFORMED. AFTER PROGRAMMING IS COMPLETE, DISCONNECT P2 FROM J12 AND RECONNECT IT TO J2 ON THE ETRC BOARD. IF PRESENT, THE REPEATER ACCESS TONE DECODER (RAT) BOARD'S EEPROM IS REPROGRAMMED DIRECTLY VIA ITS J4.

2. CONNECTORS USED FOR EEPROM PROGRAMMING ONLY.

3. REFER TO THE MISCELLANEOUS STATION PARTS LISTS FOR COMPONENT VALUES FOR THE GLD6193A, GLD6194A, OR GLE6182A RECEIVE LOW PASS FILTER, OR GLN6901A RECEIVE COAX/CONNECTOR.



MC compact Base/Repeater Station Overall Block Diagram



NOTES:

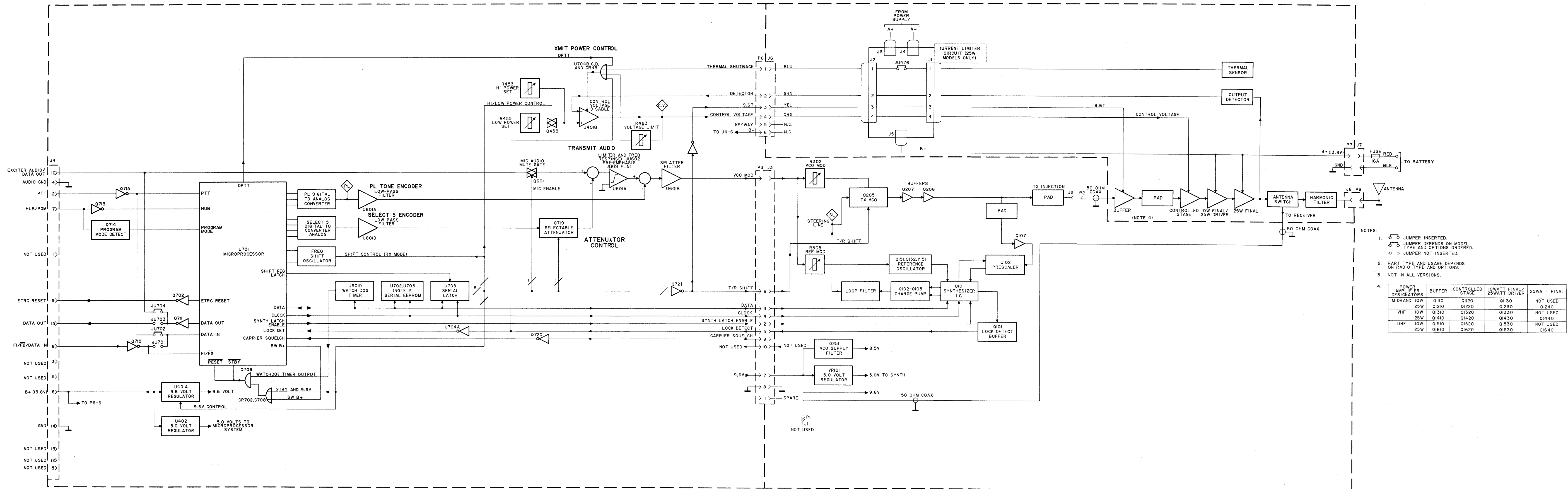
- JUMPER INSERTED.
- JUMPER DEPENDS ON MODEL TYPE AND OPTIONS ORDERED.
- JUMPER NOT INSERTED.
- PART TYPE AND USAGE DEPENDS ON RADIO TYPE AND OPTIONS.
- NOT IN ALL VERSIONS.
- TEST POINT

| POWER AMPLIFIER DESIGNATORS | BUFFER | CONTROLLED STAGE | 10WATT FINAL/ 25WATT DRIVER | 25WATT FINAL |
|-----------------------------|--------|------------------|-----------------------------|--------------|
| MIDBAND 10W | Q110 | Q120 | Q130 | NOT USED |
| 25W | Q120 | Q120 | Q1230 | Q1240 |
| VHF 10W | Q130 | Q1320 | Q1330 | NOT USED |
| 25W | Q140 | Q1420 | Q1430 | Q1440 |
| UHF 10W | Q150 | Q1520 | Q1530 | NOT USED |
| 25W | Q160 | Q1620 | Q1630 | Q1640 |

MC compact Base/Repeater Station
Repeater Receive Block Diagram

COMMAND BOARD

RF POWER AMPLIFIER BOARD



- NOTES:
- ◁ ▷ JUMPER INSERTED.
 - ◁ ▷ JUMPER DEPENDS ON MODEL TYPE AND OPTIONS ORDERED.
 - ○ JUMPER NOT INSERTED.
 - PART TYPE AND USAGE DEPENDS ON RADIO TYPE AND OPTIONS.
 - NOT IN ALL VERSIONS.

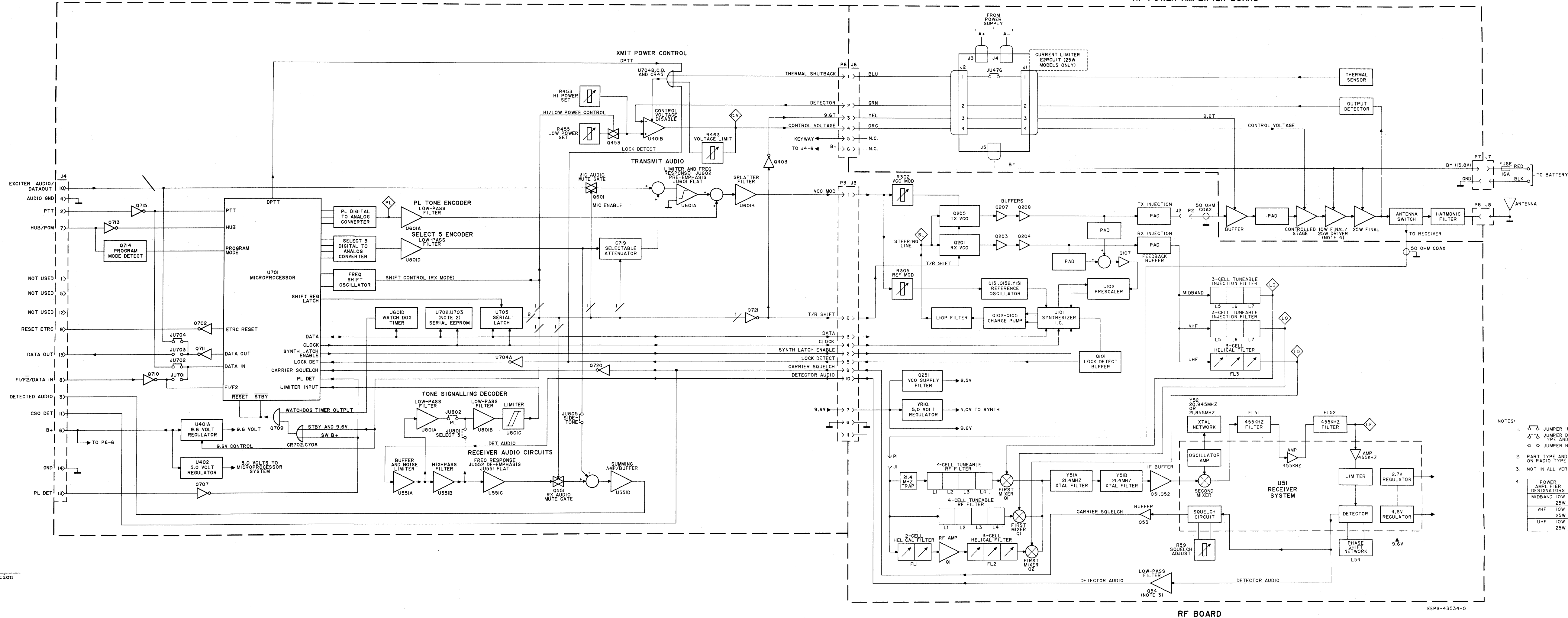
| POWER AMPLIFIER DESIGNATORS | BUFFER | CONTROLLED STAGE | 10WATT FINAL/25WATT DRIVER | 25WATT FINAL |
|-----------------------------|--------|------------------|----------------------------|--------------|
| MIDBAND 10W | Q110 | Q120 | Q130 | NOT USED |
| 25W | Q120 | Q1220 | Q1230 | Q1240 |
| VHF 10W | Q130 | Q1320 | Q1330 | NOT USED |
| 25W | Q1410 | Q1420 | Q1430 | Q1440 |
| UHF 10W | Q1510 | Q1520 | Q1530 | NOT USED |
| 25W | Q1610 | Q1620 | Q1630 | Q1640 |

RF BOARD

EEPS-43532-0

COMMAND BOARD

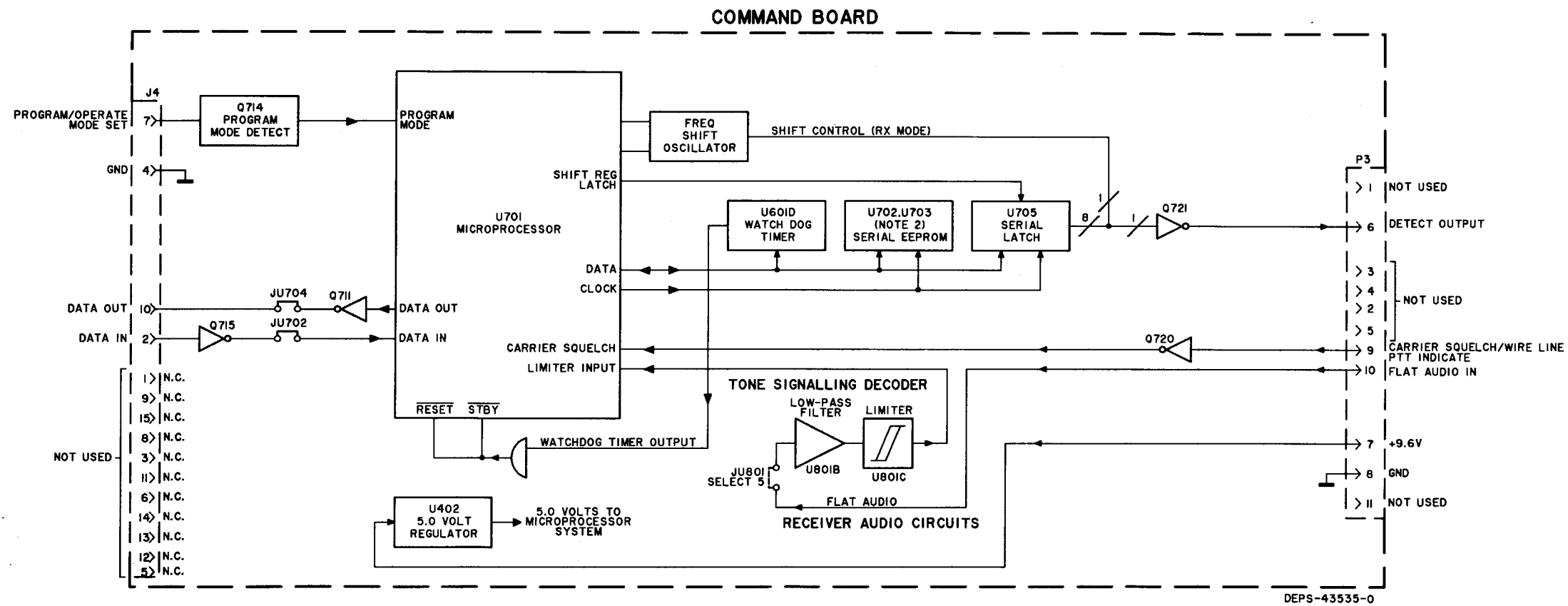
RF POWER AMPLIFIER BOARD



- NOTES:
- JUMPER INSERTED.
 JUMPER DEPENDS ON MODEL TYPE AND OPTIONS ORDERED.
 JUMPER NOT INSERTED.
 - PART TYPE AND USAGE DEPENDS ON RADIO TYPE AND OPTIONS.
 - NOT IN ALL VERSIONS.

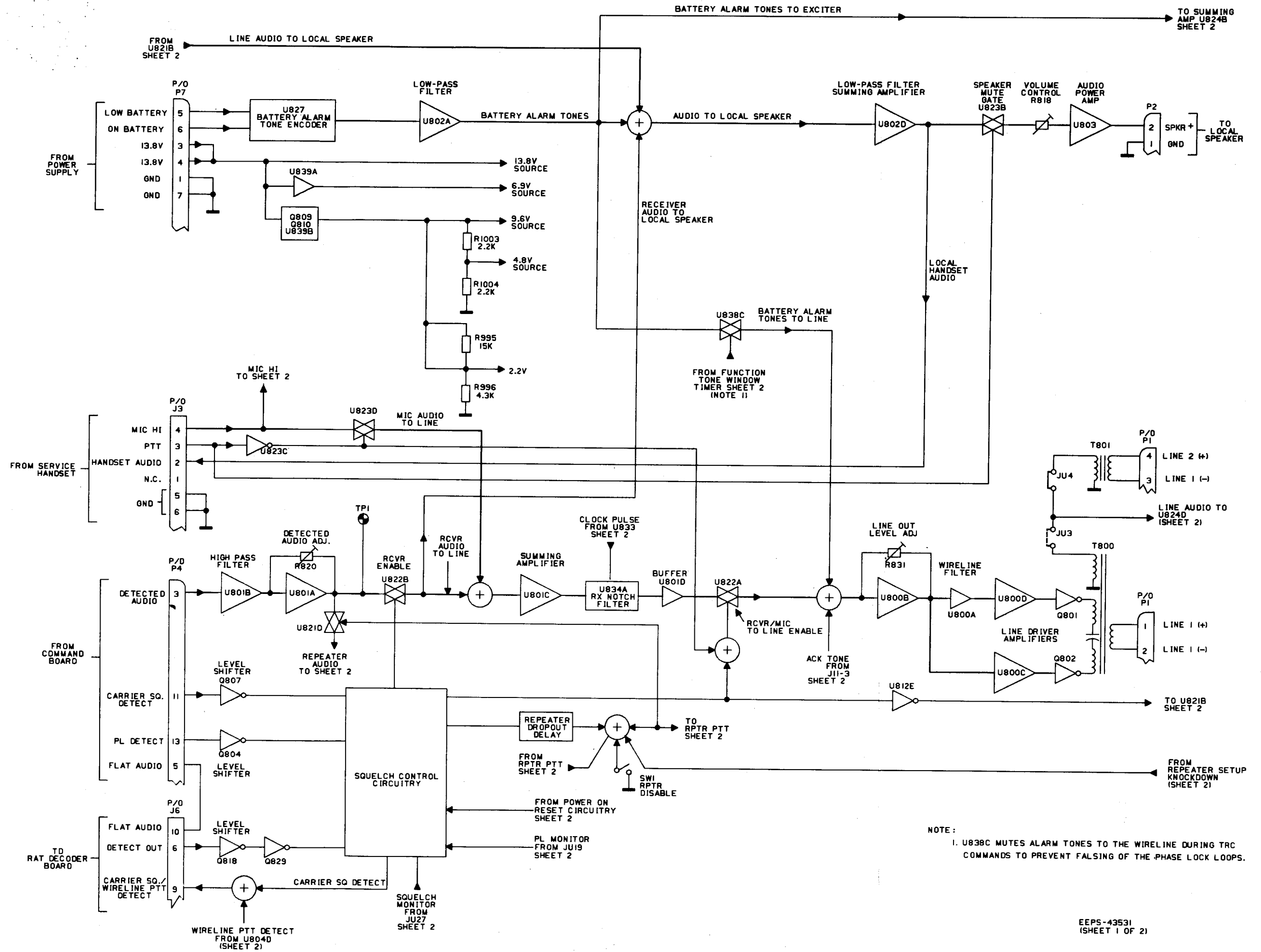
| POWER AMPLIFIER DESIGNATORS | BUFFER | CONTROLLED STAGE | 10WATT FINAL/25WATT DRIVER | 25WATT FINAL |
|-----------------------------|--------|------------------|----------------------------|--------------|
| MIDBAND 10W | Q110 | Q120 | Q130 | NOT USED |
| 25W | Q120 | Q120 | Q130 | NOT USED |
| VHF 10W | Q130 | Q130 | Q130 | NOT USED |
| 25W | Q140 | Q140 | Q140 | NOT USED |
| UHF 10W | Q150 | Q150 | Q150 | NOT USED |
| 25W | Q160 | Q160 | Q160 | NOT USED |

MC compact Base/Repeater Station Transceiver Block Diagram



NOTES:

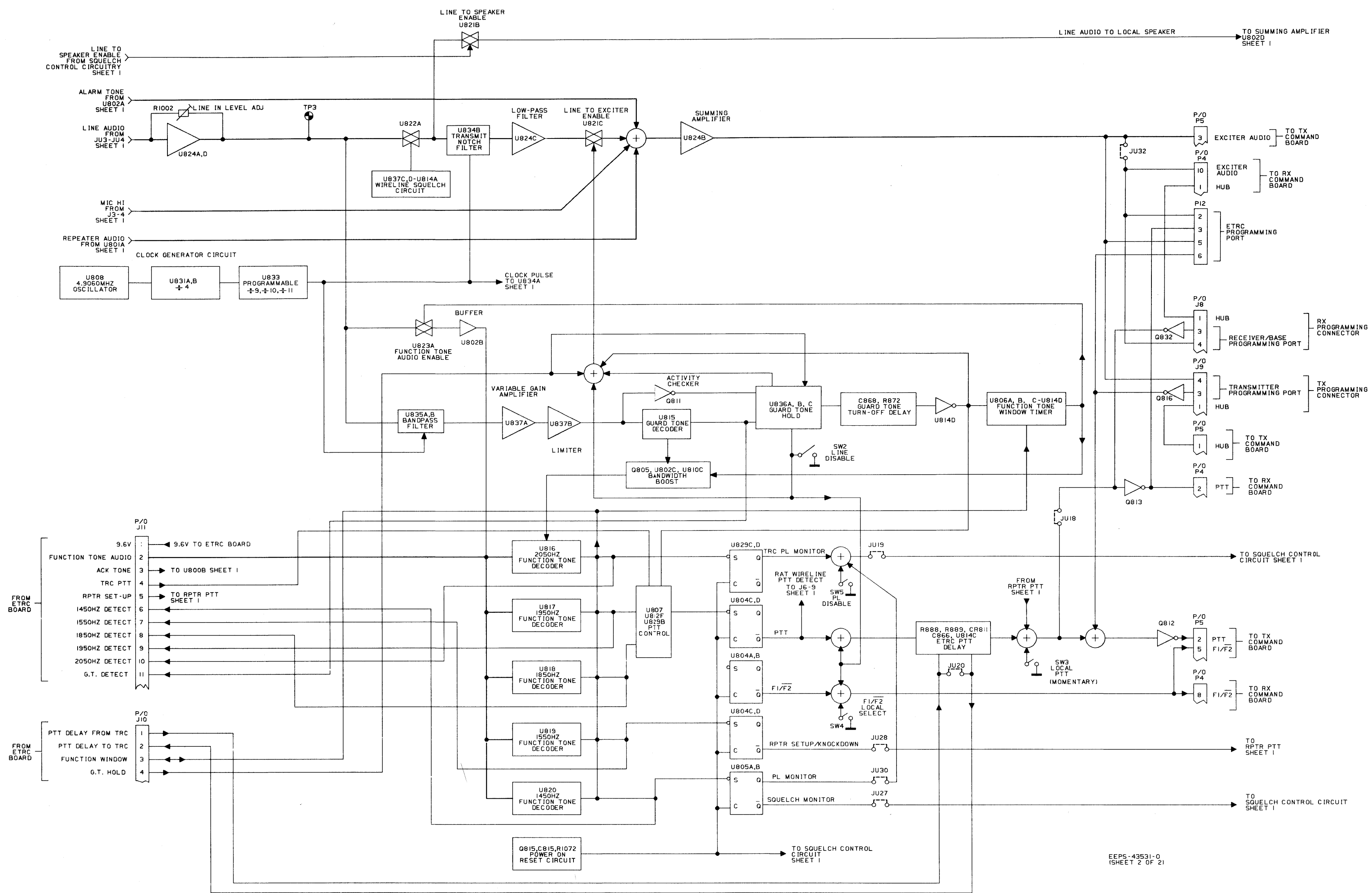
1. JUMPER INSERTED.
 2. JUMPER DEPENDS ON MODEL TYPE AND OPTIONS ORDERED.
 3. JUMPER NOT INSERTED.
2. PART TYPE AND USAGE DEPENDS ON RADIO TYPE AND OPTIONS.
 3. NOT IN ALL VERSIONS.



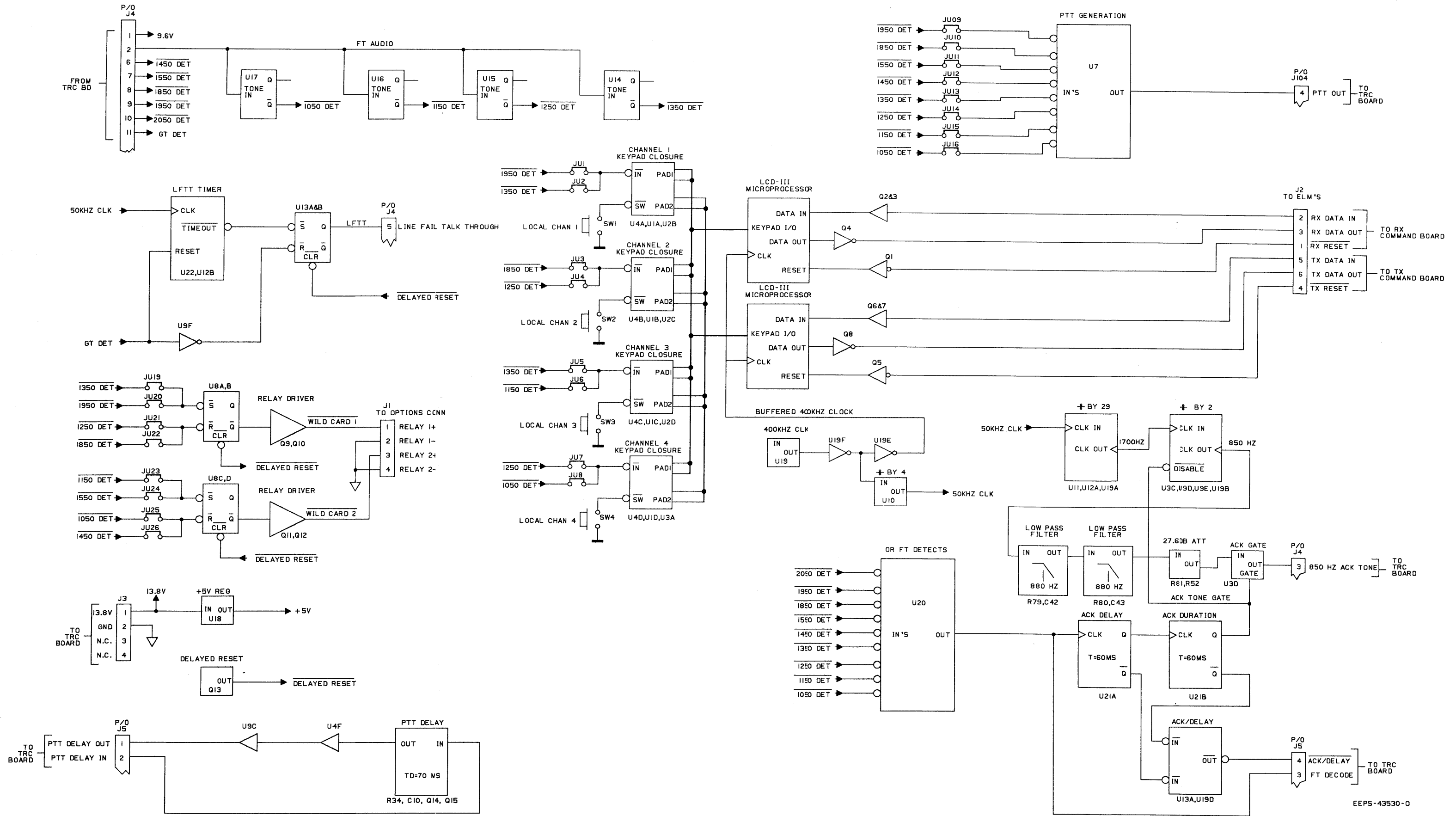
NOTE:
 1. U838C MUTES ALARM TONES TO THE WIRELINE DURING TRC COMMANDS TO PREVENT FALSING OF THE PHASE LOCK LOOPS.

5-8

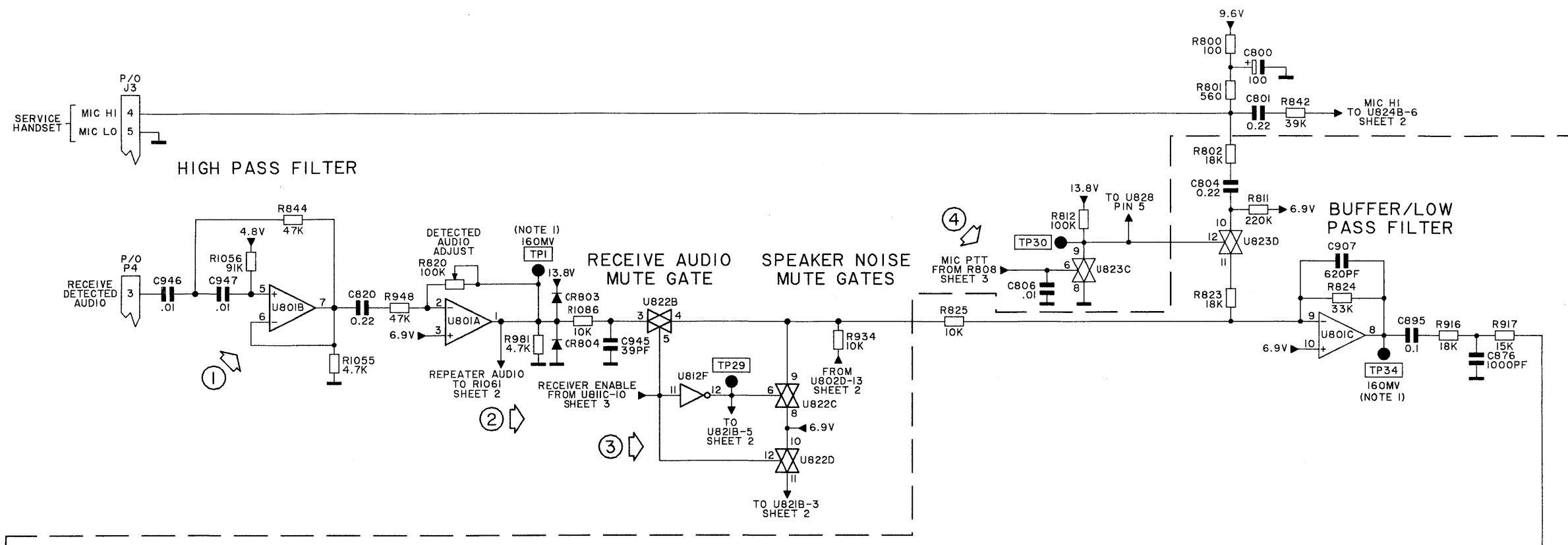
MC compact Base/Repeater Station
 Tone Remote Control (TRC) Board
 Block Diagram
 (Sheet 1 of 2)



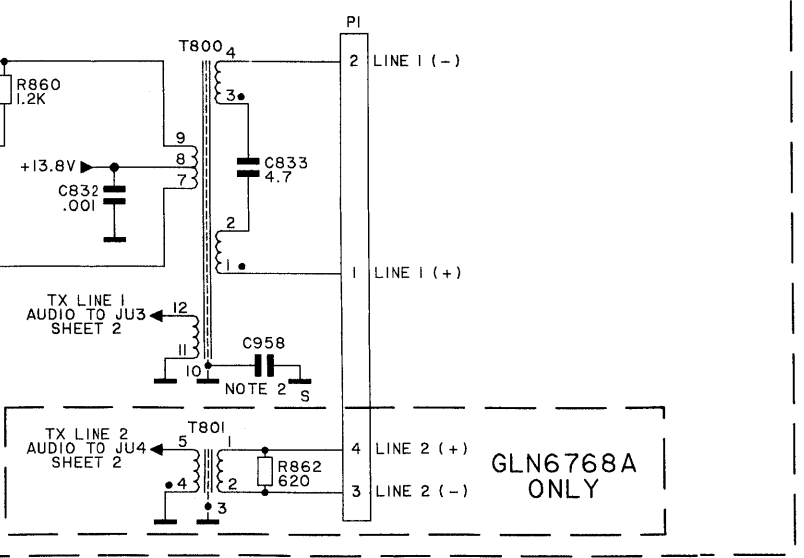
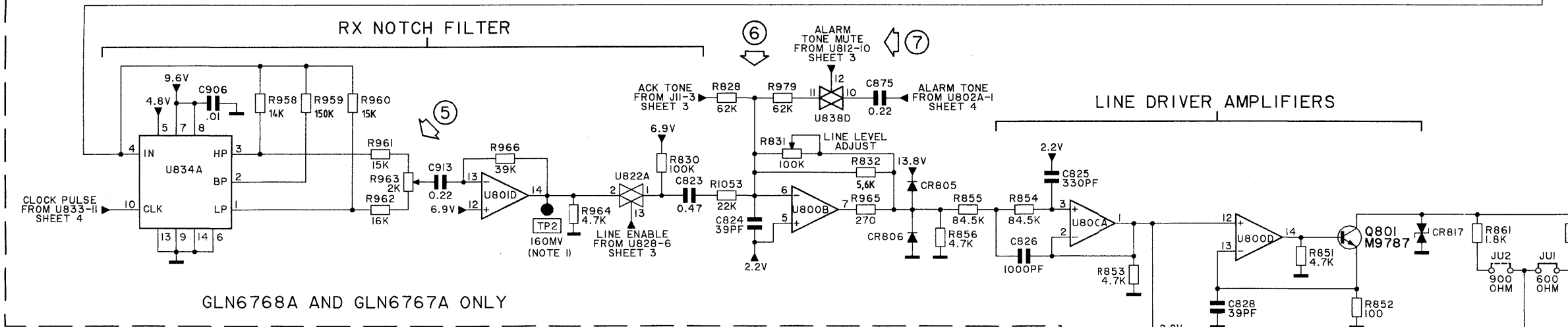
EEPS-43531-0
(SHEET 2 OF 2)



MC compact Base/Repeater Station
Enhanced Tone Remote Control
(ETRC) Board Block Diagram



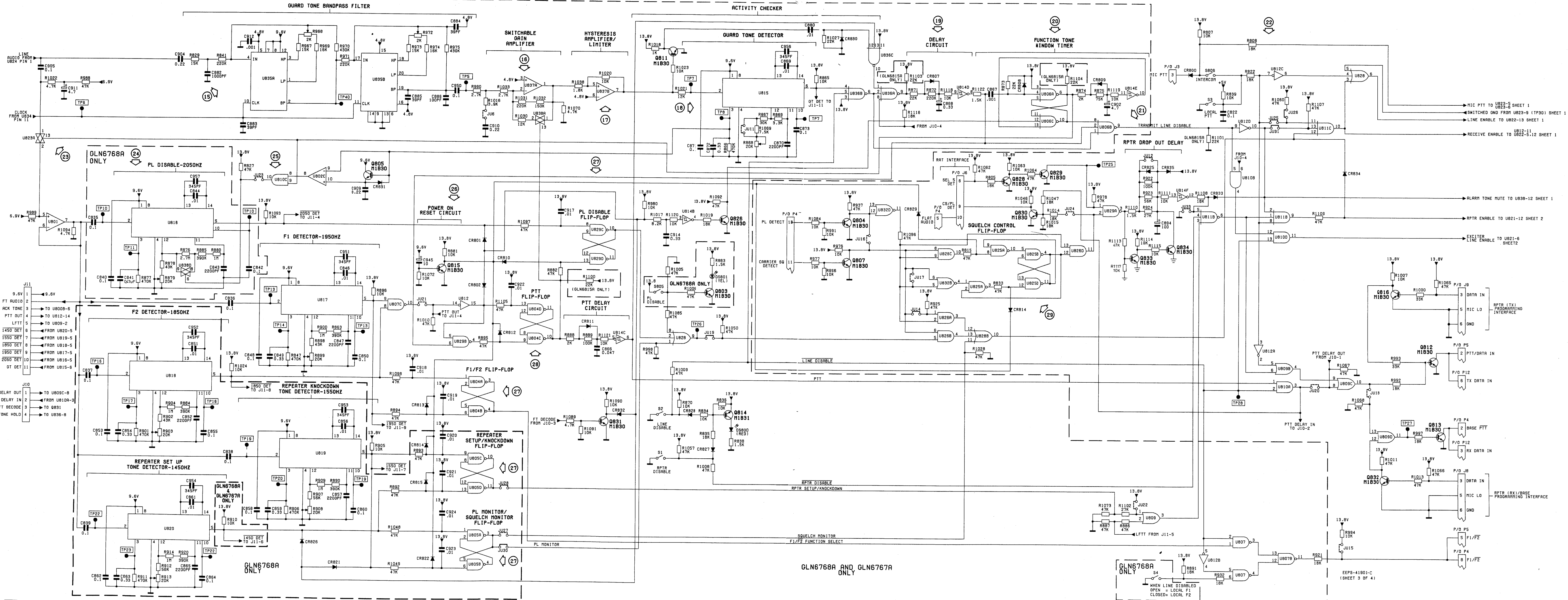
| REFERENCE DESIGNATION | +13.8V (PIN) | +9.6V (PIN) | LOGIC GND (PIN) | AUDIO GND (PIN) | DESCRIPTION |
|-----------------------|--------------|-------------|-----------------|-----------------|----------------------------------|
| U800 | 4 | - | - | II | QUAD OP AMP |
| U801 | 4 | - | - | II | QUAD OP AMP |
| U802 | 4 | - | - | II | QUAD OP AMP |
| U803 | 14 | - | - | 7 | AUDIO POWER AMPLIFIER |
| U804 | 14 | - | - | 7 | QUAD NAND GATE |
| U805 | 14 | - | - | 7 | QUAD NAND GATE |
| U806 | 14 | - | - | 7 | TRIPLE 3-INPUT NAND GATE |
| U807 | 14 | - | - | 7 | QUAD NAND GATE |
| U808 | - | 14 | 7 | - | QUAD NAND GATE |
| U809 | 14 | - | - | 7 | QUAD OR GATE |
| U810 | 14 | - | - | 7 | QUAD AND GATE |
| U811 | 14 | - | - | 7 | TRIPLE 3-INPUT AND GATE |
| U812 | I | - | - | 8 | HEX INVERTER |
| U814 | 14 | - | - | 7 | SCHMITT HEX INVERTER |
| U815 | - | I | - | 4 | PLL |
| U816 | - | I | - | 4 | PLL |
| U817 | - | I | - | 4 | PLL |
| U818 | - | I | - | 4 | PLL |
| U819 | - | I | - | 4 | PLL |
| U820 | - | I | - | 4 | PLL |
| U821 | 14 | - | - | 7 | QUAD ANALOG SWITCH |
| U822 | 14 | - | - | 7 | QUAD ANALOG SWITCH |
| U823 | 14 | - | - | 7 | QUAD ANALOG SWITCH |
| U824 | 4 | - | - | II | QUAD OP AMP |
| U825 | 14 | - | - | 7 | QUAD NAND GATE |
| U826 | 14 | - | - | 7 | QUAD AND GATE |
| U827 | 14 | - | - | 7 | DUAL TIMER |
| U829 | 14 | - | - | 7 | QUAD NAND GATE |
| U831 | - | 16 | 8 | - | DUAL J-K FLIP-FLOP |
| U832 | 14 | - | - | 7 | QUAD NOR GATE |
| U833 | - | 16 | 8 | - | SYNCHRONOUS 4-BIT BINARY COUNTER |
| U834 | - | 7,8 | 13,14 | - | DUAL SWITCHED CAPACITOR FILTER |
| U835 | - | 7,8 | 13,14 | - | DUAL SWITCHED CAPACITOR FILTER |
| U836 | 14 | - | - | 7 | TRIPLE 3-INPUT NAND GATE |
| U837 | - | 4 | - | II | QUAD OP AMP |
| U838 | 14 | - | - | 7 | QUAD ANALOG SWITCH |
| U839 | 8 | - | - | 4 | DUAL OP AMP |



NOTES:

- IN RX-MODE WITH ON-CHANNEL SIGNAL, KHZ MODULATION AT 60% FSD.
- REFER TO PARTS LIST FOR VALUE.

EEPS-41901-B (SHEET 1 OF 4)

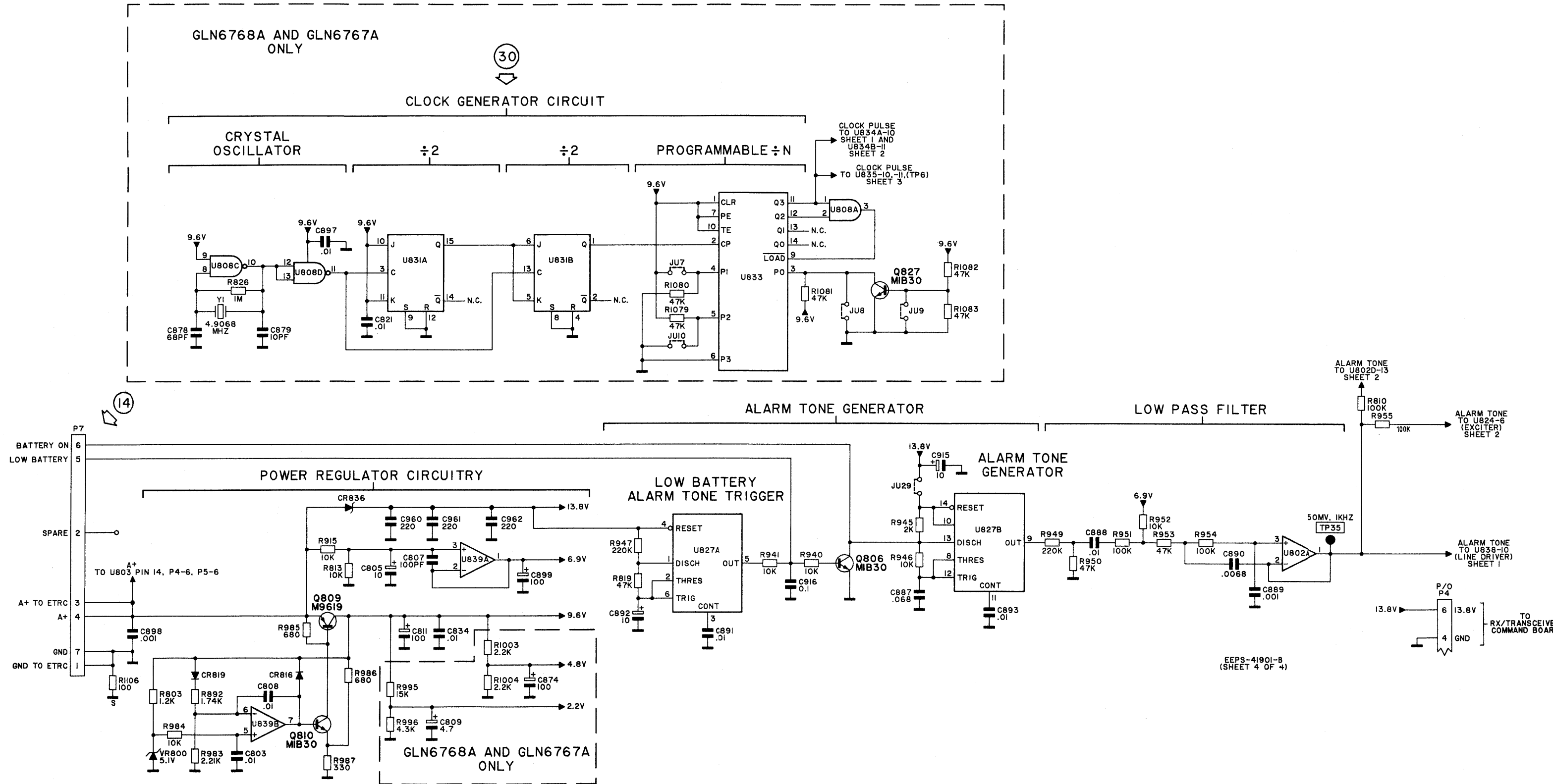


GLN6768A AND GLN6767A ONLY

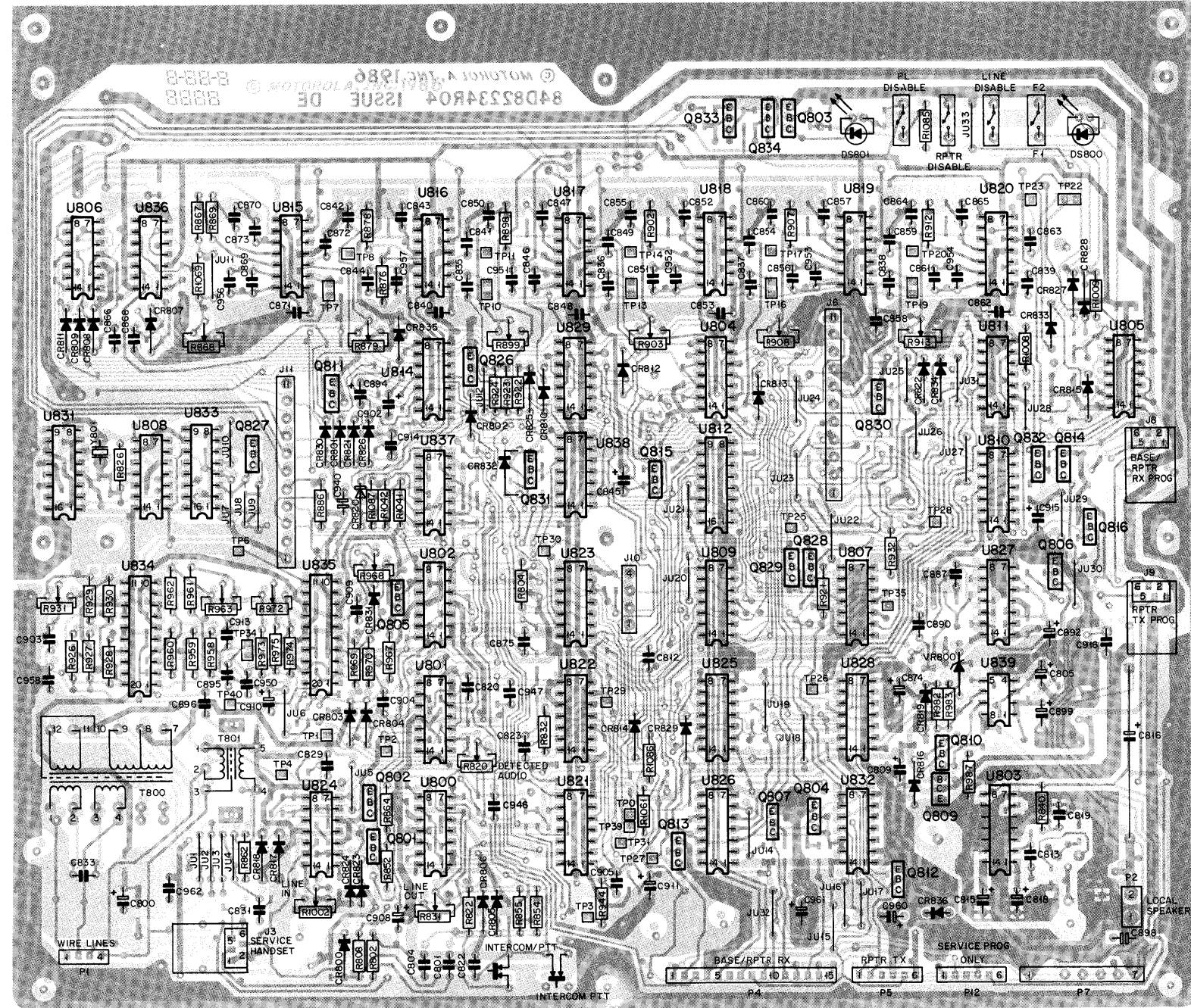
GLN6768A ONLY

EEPS-41901-C
(SHEET 3 OF 4)

MC compact Base/Repeater Station
GLN6767A, GLN6768A & GLN6815A
TRC Board Schematic Diagram
Control Logic
(Sheet 3 of 4)



- Note 1. High pass input amplifier U801B passes audio frequencies above 300Hz.
- Note 2. RECEIVER ENABLE input from U811C-10 goes high upon one of the following conditions, depending upon options and jumper status: PL "AND" carrier squelch detect, PL squelch detect, or squelch monitor input from the control console.
- Note 3. Speaker noise mute gates U822C and U822D provide additional attenuation to the RECEIVE DETECTED AUDIO to prevent receiver noise from being heard in the station speaker under squelch conditions.
- Note 4. MIC PTT goes low upon activating the service handset microphone PTT. This action enables U822A and disables U823C which, in turn, enables U823D allowing service handset microphone audio to be sent to the line driver circuits and to the exciter.
- Note 5. The RX Notch Filter circuit, U834A and U801D, attenuates the guard tone frequency while allowing all others to pass.
- Note 6. ACK TONE/ALARM TONE/RECEIVE AUDIO summing point.
- Note 7. Mute gate U838D mutes alarm tones when guard tone is present.
- Note 8. Wireline Squelch Circuit (U837D, U837C, and U814A) senses voice audio from the wireline to enable U821A to pass wireline audio to the exciter. Wireline levels below -55dBm will be muted.
- Note 9. Speaker summing amplifier U802D amplifies receive audio, line audio, and/or alarm tone audio depending upon the condition of gates U822C, U822D, U821A, and U821B.
- Note 10. Speaker amplifier mute gate U823 mutes speaker audio during MIC PTT (also local PTT if the intercom switch is in the "ON" position).
- Note 11. The TX Notch Filter (U834B and U824C) notches out the guard tone frequency to prevent transmission of guard tone.
- Note 12. LINE TO EXCITER ENABLE is normally high. When guard tone is present this audio path is muted.
- Note 13. RPTR AUDIO ENABLE is high if P4-11 (CARRIER SQUELCH DETECT) AND P4-13 (PL DETECT) are unmuted and the following conditions exist: The REPEATER DISABLE switch is not in the DISABLE position, U811-3 is high, and guard tone is not present. This allows U821D to pass DETECTED AUDIO from the receiver to the exciter.
- Note 14. P7-6 is normally low; P7-5 is normally floating. During battery operation, both P7-5 and P7-6 will float and an intermittent tone will be generated. If the battery voltage drops below 10.8 volts, P7-5 will go low and the tone will become constant.
- Note 15. Guard Tone Bandpass Filter U835A, U835B is a two stage filter with a Q of 45 and a 0.5dB bandwidth of 28Hz at 2175Hz. This filter allows only guard tone frequencies to be passed to the guard tone detect PLL in order to prevent PLL falsing.
- Note 16. The gain of U837A is controlled by U838A. When U838A-13 is low, the gain of U837A is increased by +30dB. This allows positive detection of low level guard tone which is 30dB below high level guard tone.
- Note 17. Hysteresis Amplifier/Limiter, U837B, acts as an amplifier/hard limiter to input signals above its dead band threshold. Normally the input signal is 8dB above the dead band threshold which allows a 6dB day to day change in telephone line levels between the control console and the station while maintaining proper operation.
- Note 18. Guard Tone Detector U815 produces a high at its Q output (U815-6) upon detection of guard tone and stays so until guard tone ceases.
- Note 19. The Delay Circuit (CR807 and U814D) compensates for slight interruptions in the output of the guard tone detector, eliminates chatter during logic level transitions, and reduces function tone decoder falsing by switching transients between high level guard tone and function tone. Turn on delay is approx. 5ms and turn off delay is approximately 75ms.
- Note 20. The Function Tone Window Timer flip-flop (U806A, U806C, and U814F) is set by the low output of U814D. This causes U806-6 to go high, charging the capacitor of delay circuit R875-C902 (350ms delay). When the threshold of U814E is reached, U814-10 goes low, resetting the function tone window.
- Note 21. The output of U806B is normally low and goes high if any of its three inputs go low. With the LINE DISABLE switch (S2) off, a low from U836B-4 (guard tone detect), a low from delay circuit U814D-8, or a low from function tone timer flip-flop U806A-U806C, causes the output at U806B-9 (TRANSMIT LINE DISABLE) to go high.
- Note 22. If either the LOCAL PTT switch is depressed or if MIC PTT occurs while the INTERCOM switch is in the ON position, the LINE ENABLE output at U828-6 goes high. Similarly, the RECEIVE ENABLE output at U811C-10 goes low and will remain low until the PTT signal ceases.
- Note 23. Gate U823 is enabled for 350ms by the Function Tone Window Timer to allow line audio to pass to the function tone decoders.
- Note 24. Function Tone Decoders, U816 through U820 produce a low on their output (pin 5) upon detection of their respective function tone. The low output sets a corresponding flip-flop.
- Note 25. Bandwidth boost circuit (U810C and U838D) is used only when guard tone is 2100Hz (special applications only). When used, gate U838 widens the 2050Hz decoder bandwidth from +25Hz to +75Hz to assure positive 2050Hz function tone detect.
- Note 26. The Power On Reset circuit produces a low output pulse upon power turn-on. The low output sets all the bistable flip-flops to assure proper operation.
- Note 27. The function tone decoder flip-flops are set and reset by a low input. For example upon power-up, a low from Q815 through CR810 resets PL Disable Flip-Flop U829C-U829D producing a low output at U829C-10. When a 2050Hz function tone is detected, U816-5 goes low, setting U829C-U829D, and forcing U829C-10 high. The flip-flop is reset by the presence of guard tone and either U817-5 or U818-5 going low.
- Note 28. PTT Flip-Flop U840D-U840C is set whenever F1 or F2 function tone is detected. It is reset by U829-4 upon the loss guard tone detect.
- Note 29. Squelch control flip-flop U825B-U825D is set (U825-4 high) by a high at U825A-1 and reset (U825-4 low) by a high at U825C-8.
- Note 30. The Clock Generator Circuit (U808, U831, and U833) generates the clock frequency for the switched capacitor filters per the following table:
- | CLOCK FREQUENCY | GUARD TONE FREQUENCY |
|-----------------|----------------------|
| 111.50kHz | 2100/2175Hz |
| 122.65kHz | 2325/2432Hz |
| 136.28kHz | 2700/2800Hz |



COMPONENT SIDE
 SOLDER SIDE

- TO RAT BOARD J6
- 11 NOT USED
 - 10 RX FLAT AUDIO
 - 9 SQUELCH MODE
 - 8 GND
 - 7 9.6V
 - 6 RAT SQUELCH FLAG
 - 5 NOT USED
 - 4 NOT USED
 - 3 NOT USED
 - 2 NOT USED
 - 1 NOT USED

- SERVICE HANDSET J3
- 5 ANALOG GND
 - 4 MIC HI
 - 3 MIC PTT
 - 2 HANDSET AUDIO
 - 1 NOT USED

- TO POWER SUPPLY P7
- 1 GND
 - 2 N.C.
 - 3 13.8V
 - 4 13.8V
 - 5 LOW BATTERY
 - 6 ON BATTERY
 - 7 GND

- WIRE LINE CONNECTOR P1
- 1 LINE 1 (+)
 - 2 LINE 1 (-)
 - 3 LINE 2 (-)
 - 4 LINE 2 (+)

- LOCAL SPEAKER P2
- 1 SPKR +
 - 2 SPKR -

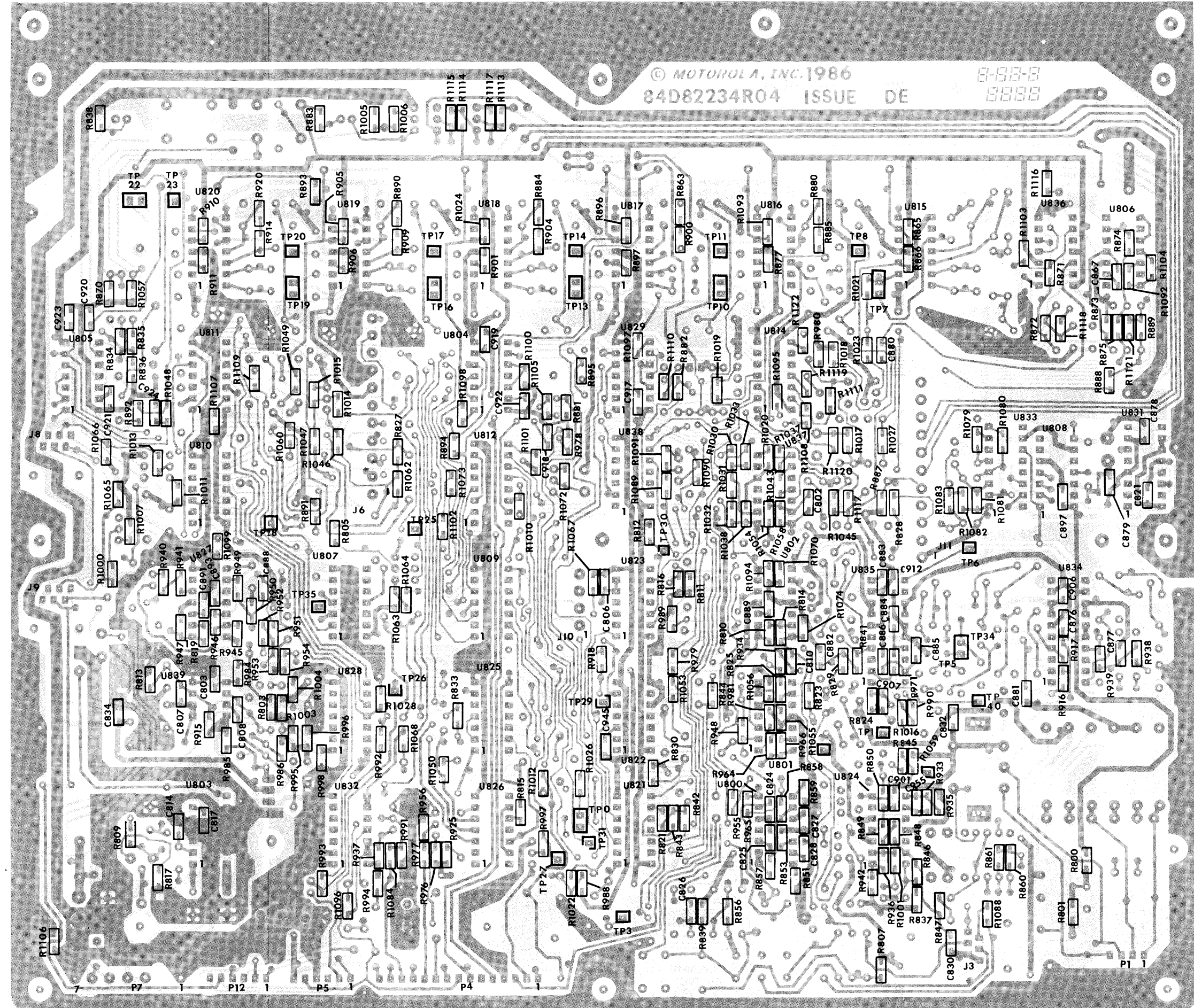
- TO ETRC BOARD J11
- 11 GT DETECT
 - 10 2050 HZ DETECT
 - 9 1950 HZ DETECT
 - 8 1850 HZ DETECT
 - 7 1950 HZ DETECT
 - 6 1450 HZ DETECT
 - 5 RPTR SET-UP
 - 4 PTT (FROM ETRC)
 - 3 ACK TONE
 - 2 NOT USED
 - 1 9.6V

- BASE DETAIL TOP VIEW ALL TRANSISTORS
- C B E

- TO ETRC BOARD J10
- 4 GT HOLD
 - 3 FT WINDOW
 - 2 PTT DELAY TO ETRC
 - 1 PTT DELAY FROM ETRC

- RPTR TX CONNECTOR P5
- 1 HUB
 - 2 PTT/DATA IN
 - 3 EXCITER AUDIO OUT/DATA OUT
 - 4 GND
 - 5 F1/F2 SELECT
 - 6 13.8V

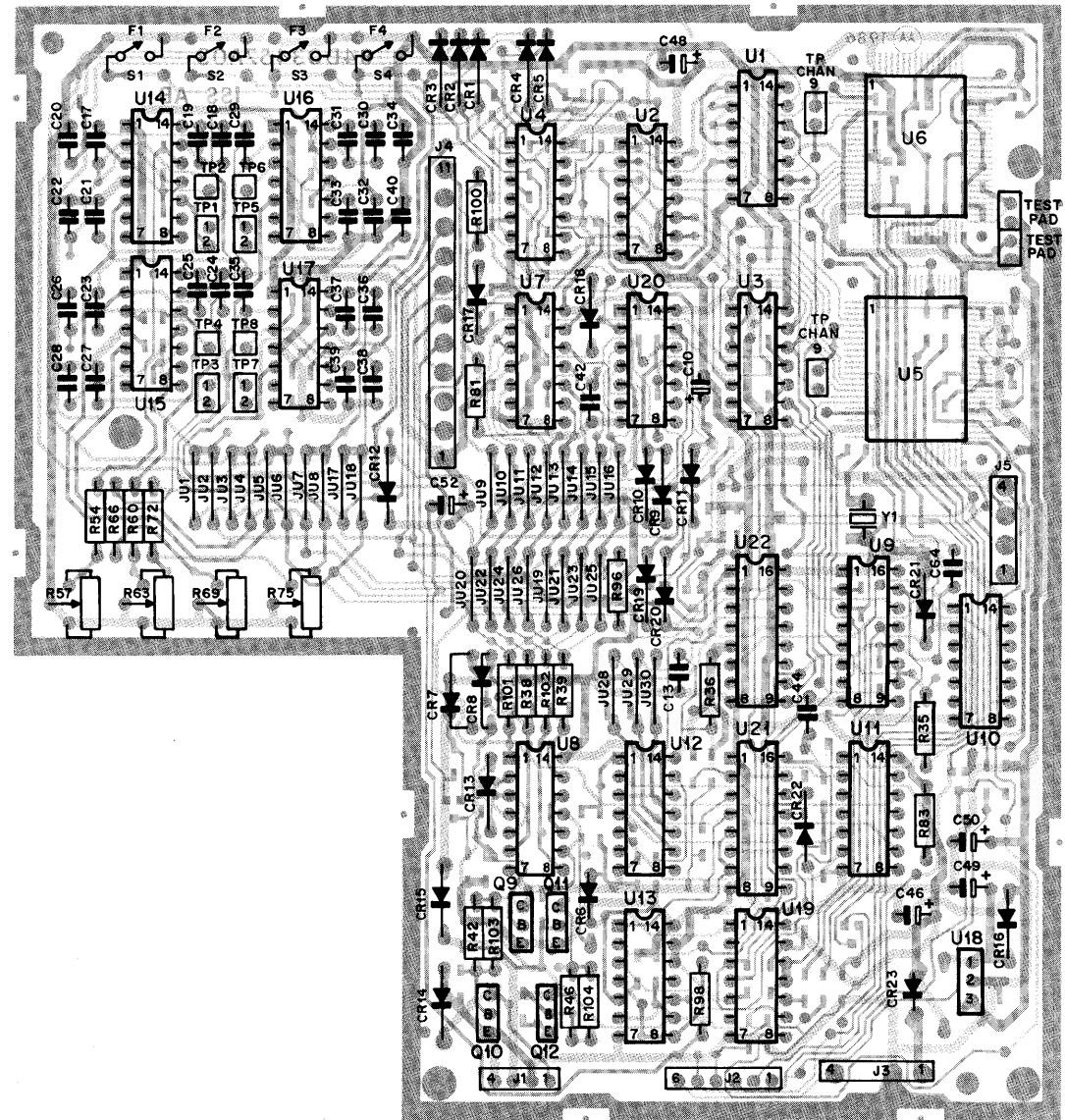
- BASE/RPTR RX CONNECTOR P4
- | BASE | P4 | RPTR |
|--------------------------|----|--------------------------|
| NOT USED | 1 | NOT USED |
| PTT/DATA IN | 2 | NOT USED |
| RX DETECTED AUDIO | 3 | RX DETECTED AUDIO |
| GND | 4 | GND |
| NOT USED | 5 | RX FLAT AUDIO |
| 13.8V | 6 | 13.8V |
| HUB | 7 | HUB |
| F1/F2 SELECT | 8 | F1/F2 SELECT |
| NOT USED | 9 | NOT USED |
| EXCITER AUDIO | 10 | NOT USED |
| CARRIER SQUELCH INDICATE | 11 | CARRIER SQUELCH INDICATE |
| NOT USED | 12 | NOT USED |
| PL INDICATE | 13 | PL INDICATE |
| NOT USED | 14 | NOT USED |
| NOT USED | 15 | NOT USED |



COMPONENT SIDE
 SOLDER SIDE

MOTOROLA, INC. 1986
 84D82234R04 ISSUE DE

MC compact Base/Repeater Station
 GLN6767A, GLN6768A & GLN6815A
 Tone Remote Control (TRC) Board
 Circuit Board Details



COMPONENT SIDE 8D-CEPS-43544-0
 SOLDER SIDE 8D-CEPS-43545-0 SHOWN FROM COMPONENT SIDE
 OL-DEPS-43546-0

TO TRC BOARD
 BOARD J4

- 11 GT DETECT
- 10 2050 HZ DETECT
- 9 1950 HZ DETECT
- 8 1850 HZ DETECT
- 7 1550 HZ DETECT
- 6 1450 HZ DETECT
- 5 RPTR SET-UP
- 4 PTT
- 3 ACK TONE
- 2 FUNCTION TONE AUDIO
- 1 9.6 V

J2

- 6 RX DATA OUT
- 5 TX DATA IN
- 4 TX RESET
- 3 RX DATA OUT
- 2 RX DATA IN
- 1 RX RESET

TO TRC BOARD
 BOARD J10

- 4 GT HOLD
- 3 FT WINDOW
- 2 PTT DELAY TO ETRC
- 1 PTT DELAY FROM ETRC

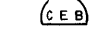
OPTIONS CONNECTOR
 J1

- 4 RELAY 1+
- 3 RELAY 1-
- 2 RELAY 2+
- 1 RELAY 2-

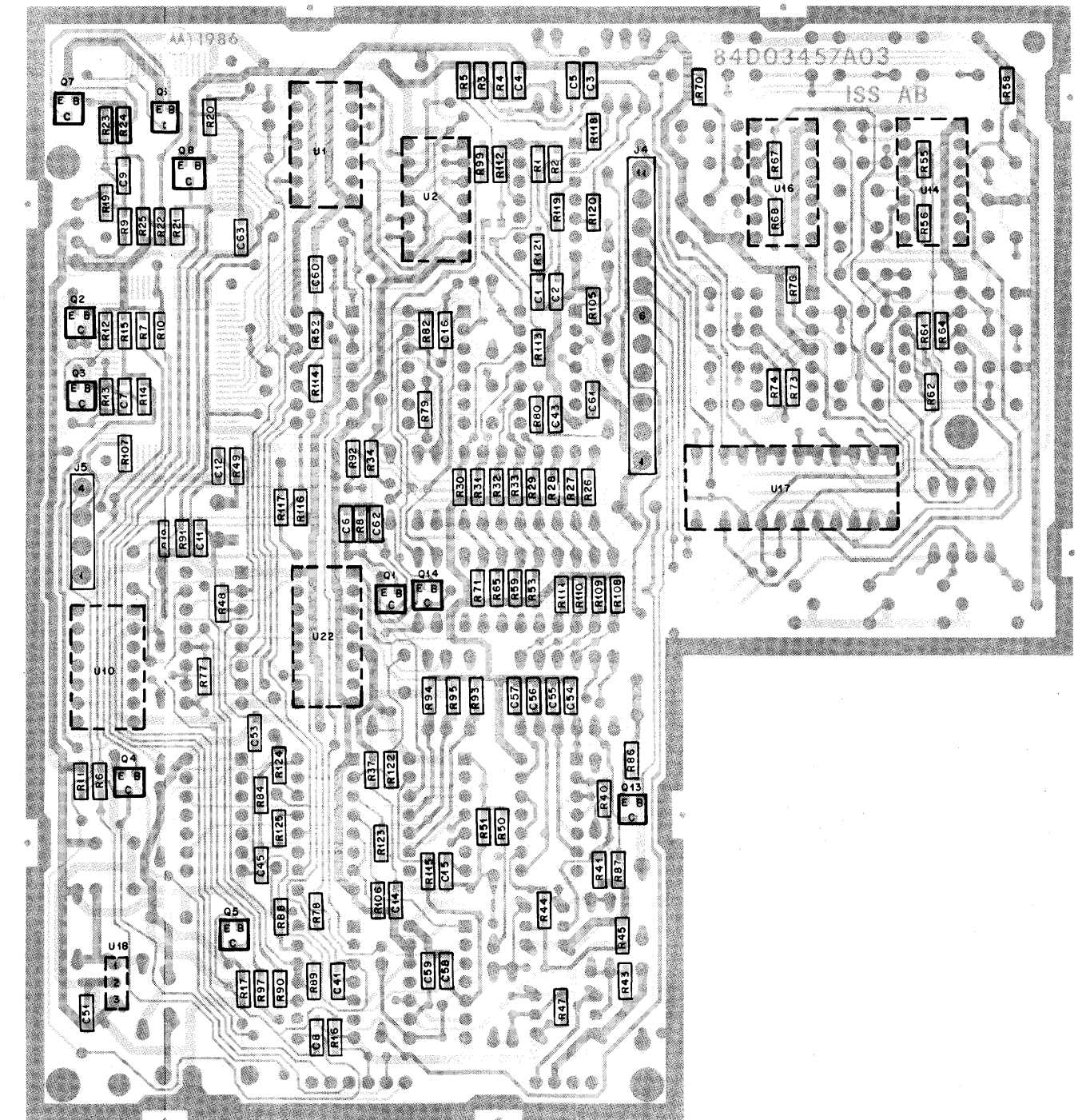
POWER SUPPLY CONNECTOR
 J3

- 1 13.8 V
- 2 GND
- 3 KEYWAY
- 4 N.C.

BASE DETAIL
 TOP VIEW



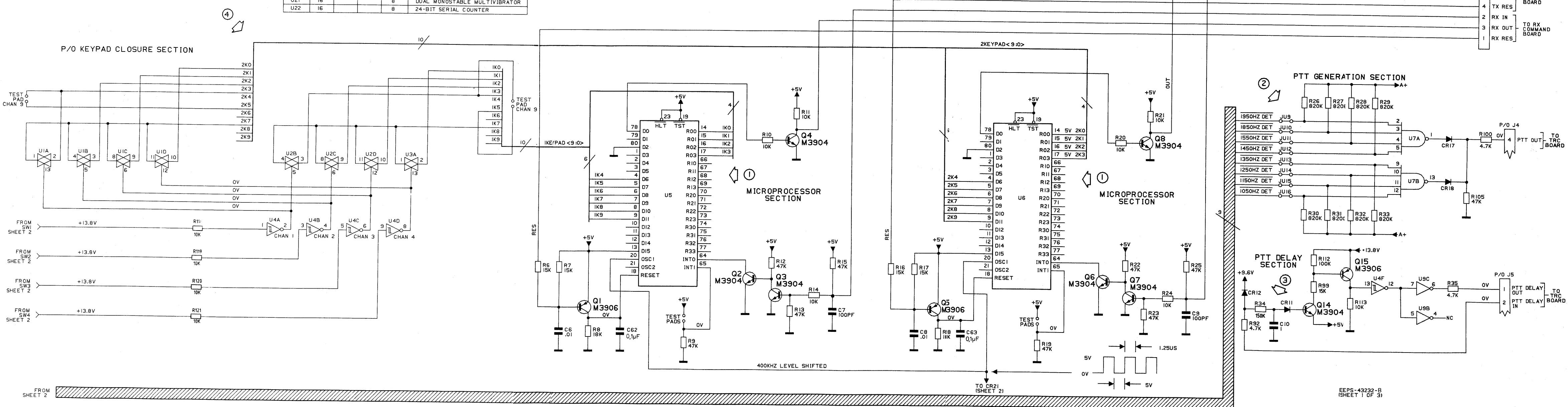
ALL TRANSISTORS



COMPONENT SIDE 8D-CEPS-43544-0 (REV)
 SOLDER SIDE 8D-CEPS-43545-0 (REV)
 OL-CEPS-43547-0

INTEGRATED CIRCUIT DATA CHART

| REF. DESIG | +13.8V (PIN) | +9.6V (PIN) | +5V (PIN) | GND (PIN) | DESCRIPTION |
|------------|--------------|-------------|-----------|-----------|-------------------------------|
| U1 | 14 | | | 7 | QUAD BILATERAL SWITCH |
| U2 | 14 | | | 7 | QUAD BILATERAL SWITCH |
| U3 | 14 | | | 7 | QUAD BILATERAL SWITCH |
| U4 | 14 | | | 7 | HEX SCHMITT TRIGGER INVERTER |
| U5 | | | 22 | 63 | LCD-III MICROPROCESSOR |
| U6 | | | 22 | 63 | LCD-III MICROPROCESSOR |
| U7 | 14 | | | 7 | DUAL 4-INPUT NAND GATE |
| U8 | 14 | | | 7 | QUAD 2-INPUT NAND GATE |
| U9 | 1 | | | 8 | HEX INVERTER |
| U10 | 14 | | | 7 | 8-BIT SERIAL COUNTER |
| U11 | 14 | | | 7 | 8-BIT SERIAL COUNTER |
| U12 | 14 | | | 7 | DUAL 4-INPUT NAND GATE |
| U13 | 14 | | | 7 | QUAD 4-INPUT NAND GATE |
| U14 | | 1 | | 4 | PHASED LOCKED LOOP |
| U15 | | 1 | | 4 | PHASED LOCKED LOOP |
| U16 | | 1 | | 4 | PHASED LOCKED LOOP |
| U17 | | 1 | | 4 | PHASED LOCKED LOOP |
| U18 | 1 | | 3 | 2 | +5V REGULATOR |
| U19 | 14 | | | 7 | HEX SCHMITT TRIGGER INVERTER |
| U20 | 14 | | | 7 | DUAL 4-INPUT NAND GATE |
| U21 | 16 | | | 8 | DUAL MONOSTABLE MULTIVIBRATOR |
| U22 | 16 | | | 8 | 24-BIT SERIAL COUNTER |



EEPS-43232-B (SHEET 1 OF 3)

1. The microprocessor section consists of two LCD-III microprocessors (U5 and U6) and associated components. The ETRC board accesses the microprocessors through the keypad lines R00-R03 and D6-D11. The ETRC board "closes" the appropriate keys to cause the microprocessors to change the transmit and receive rf sections of the radio to the desired mode of operation. The microprocessors interface to the rf sections serially via Q1 through Q8. The test pads allow the microprocessors to be placed into the test mode. The reset signal allows the rf sections to reset the LCD-III microprocessors.

2. The PTT generation section generates the PTT OUT signal which drives the logic on the TRC board, by OR'ing the function tone detector outputs via U7A and U7B. Jumpers JU9 thru JU16 determine which of the function tones are defined as transmit function tones in each radio.

3. In the PTT Delay section R34, C10, and Q14 provide the delay of the PTT signal during its transition from low to high. Dekeying is not delayed. Q15 buffers the PTT signal back to the A+ level. U4F is a buffer circuit and U9C inverts the signal back to an active high logic state.

4. The keypad closure section contains circuitry to interpret function tone detections and generate the appropriate "key closures" for the LCD-III microprocessors. Transmission gates U1A-D, U2A-D, and U3A-B perform the actual "closures". Each pair of gates is driven by a monostable consisting of Schmitt triggers U4A-E, R1-R5, C1-C5, and CR1-CR5. The five key closure circuits are driven by the base key signals B1-B5. The first four base key signals (B1-B4) can be driven by one of two function tone detectors outputs which are selectable by jumpers JU1-JU8. JU1, JU3, JU5, and JU7 correspond to 1950Hz, 1850Hz, 1350Hz, and 1250Hz, respectively, and are IN for 4-frequency operation. JU2, JU4, JU6, and JU8 correspond to 1350Hz, 1250Hz, 1150Hz and 1050Hz, respectively, and are IN for 4-PL operation. Switches SW1-SW4 allow local selection of modes 1-4 for servicing. A pair of test pads allow selection of channel 9 for calibration.

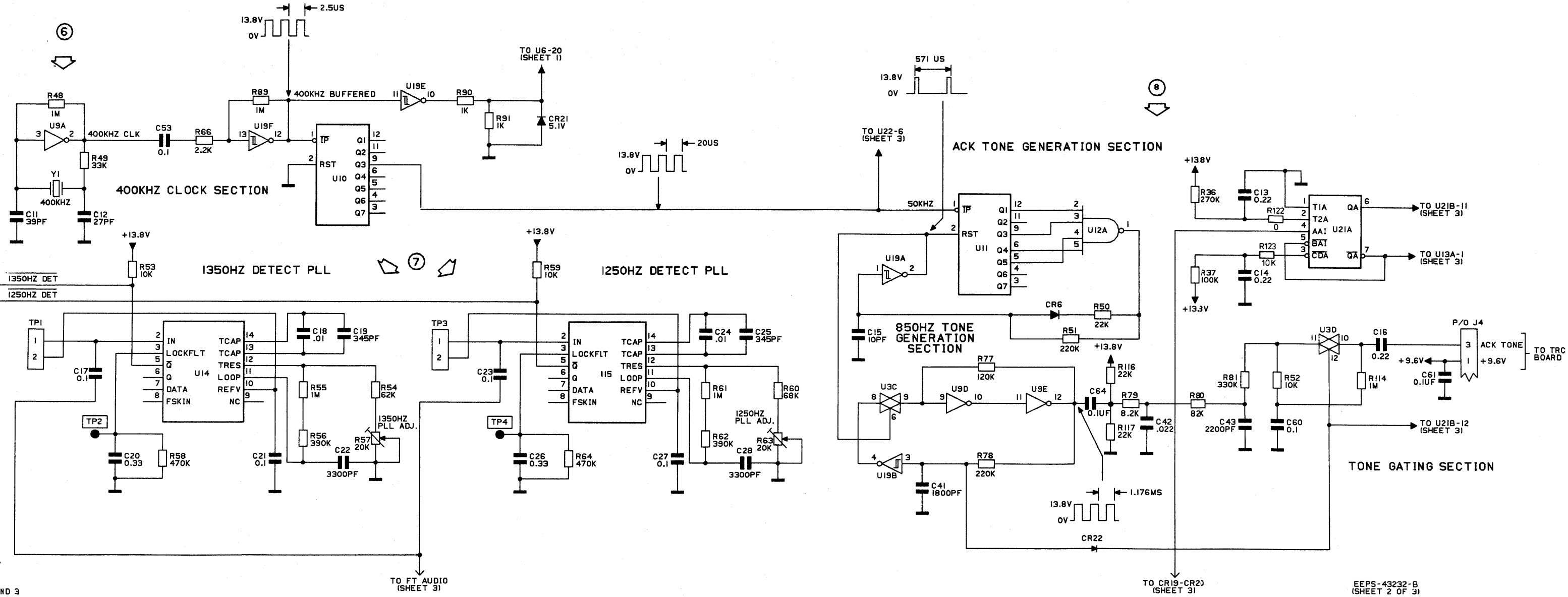
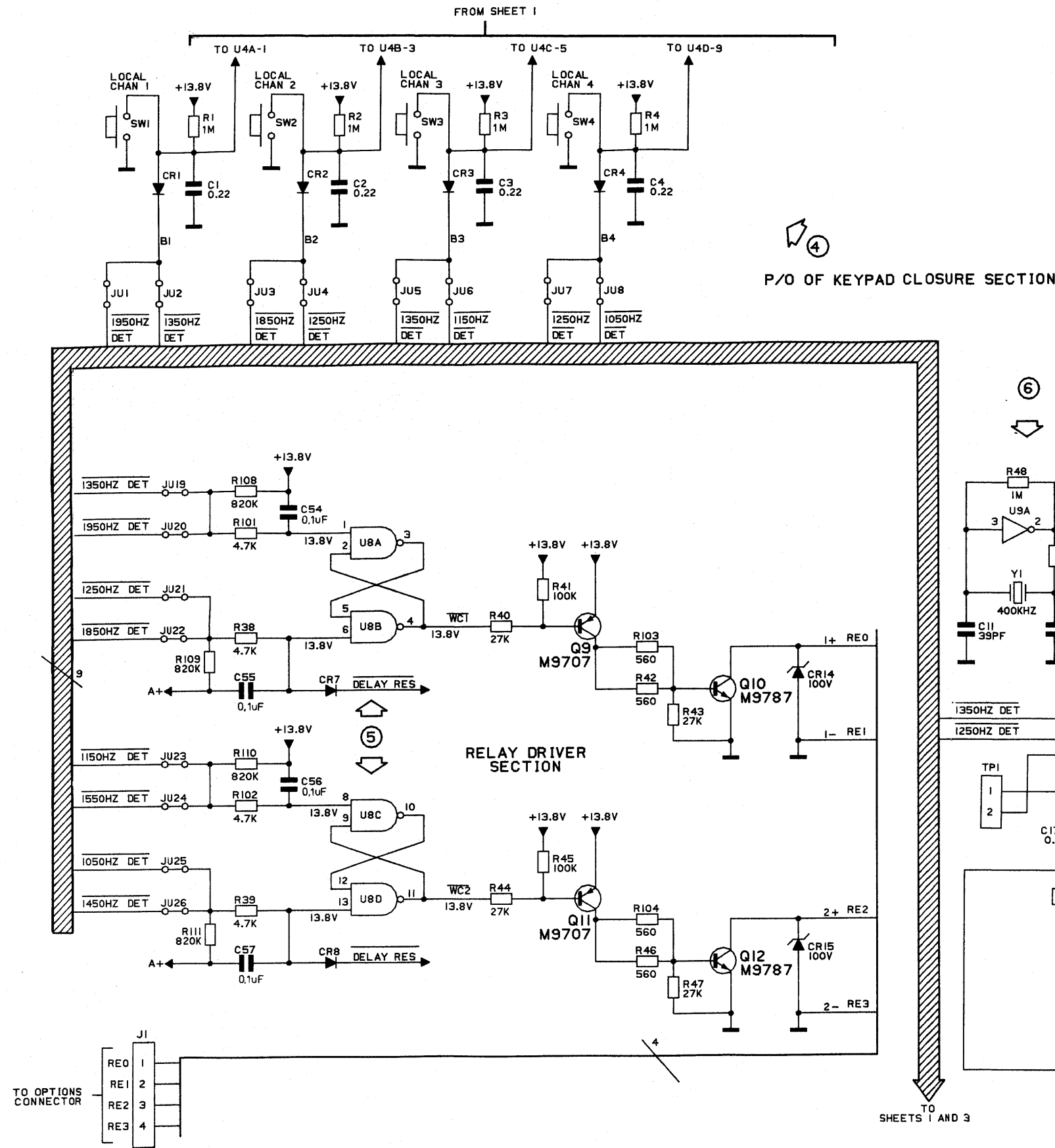
5. U8A-B and U8C-D are configured as flip-flops which generate wild card signals WC1 and WC2. The set and reset inputs of each flip flop are controlled by a pair of function tone detectors which are selectable by jumpers JU19-JU26. Each relay driver consists of a darlington transistor (Q9 and Q11) driving a high voltage transistor (Q10 and Q12) which are capable of controlling up to 500 mA. The transistors are protected against reverse voltage transients by CR14 and CR15.

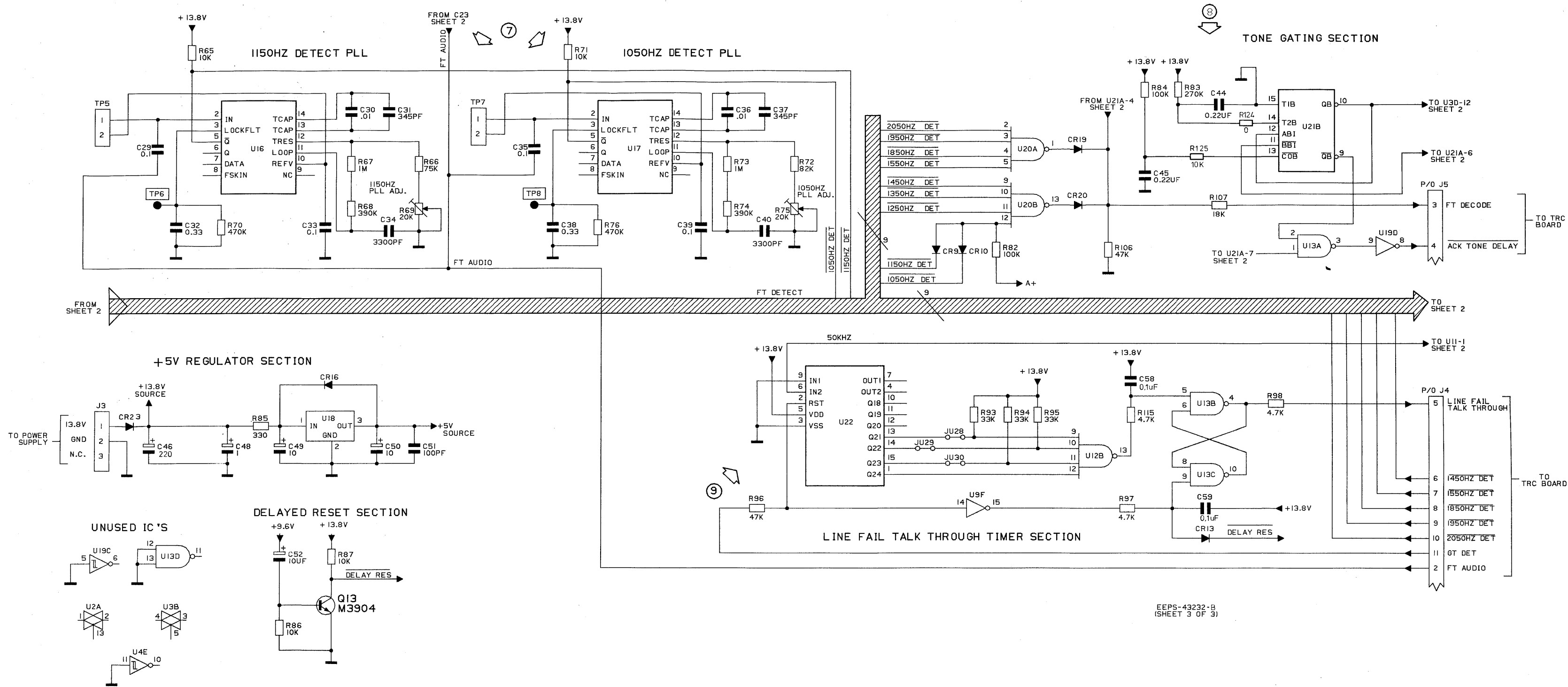
6. Y1 and U9 generate the 400kHz clock for the microprocessor. U10 divides the clock frequency down to 50kHz for the LFTT timer and Acknowledge (ACK) tone generation circuit.

7. U14-U17 are phased locked loops which provide detection of function tones 1350Hz, 1250Hz, 1150Hz, and 1050Hz, respectively.

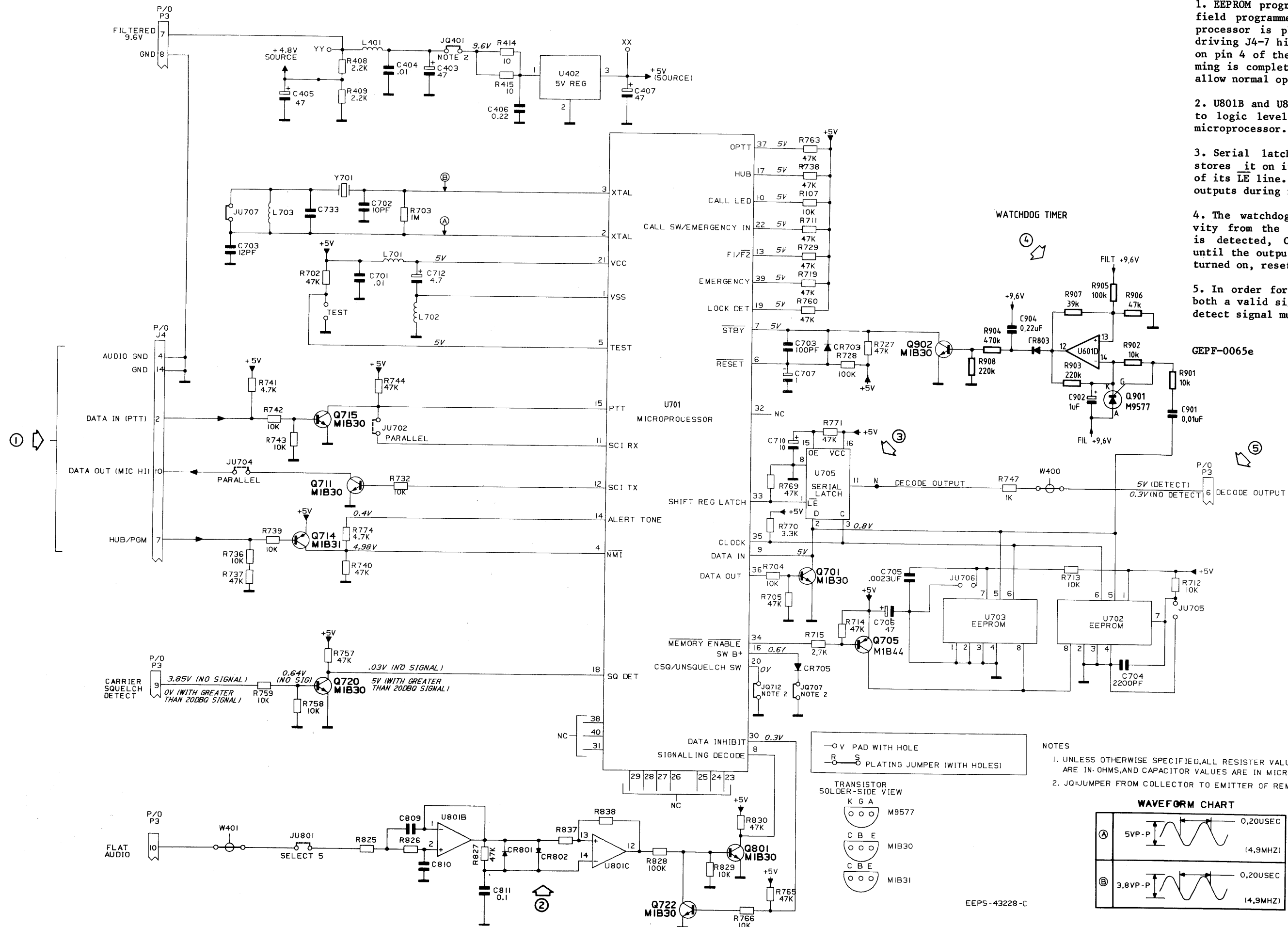
8. The acknowledge (ACK) tone generation section contains the circuitry to send a 60ms 850Hz tone 60ms after the detection of a valid function tone. U11, U12A, and U19A divide the 50kHz clock down to 1700Hz. U3C, U9D, U9E, and U19B divide the 1700Hz tone in half to 850Hz. U20A-B detects a valid function tone decode and triggers monostable U21A, which provides a 60ms delay. U21A then triggers monostable U21B which opens audio gate U3D for 60ms R79-80 and C42-43 form a 2-pole low pass filter and R52 and R81 form a voltage divider to set the tone level.

9. The LFTT timer section contains a timer consisting of U22 and U12B which monitors the time since the last guard tone detect by counting pulses of the 50kHz clock. U13B and U13C form a flip-flop which is set by the timer and reset by guard tone detect (GT DET) through U9F, which also resets the timer. The LFTT signal from U13B-4 is active high. Jumpers JU28-JU30 select the various time-out timer lengths.





EEPS-43232-B
(SHEET 3 OF 3)



1. EEPROM programming is done by connecting a field programmer to connector J4. The microprocessor is placed into the program mode by driving J4-7 high, causing ground to be placed on pin 4 of the microprocessor. After programming is completed, J4-7 is returned to +5 V to allow normal operation.

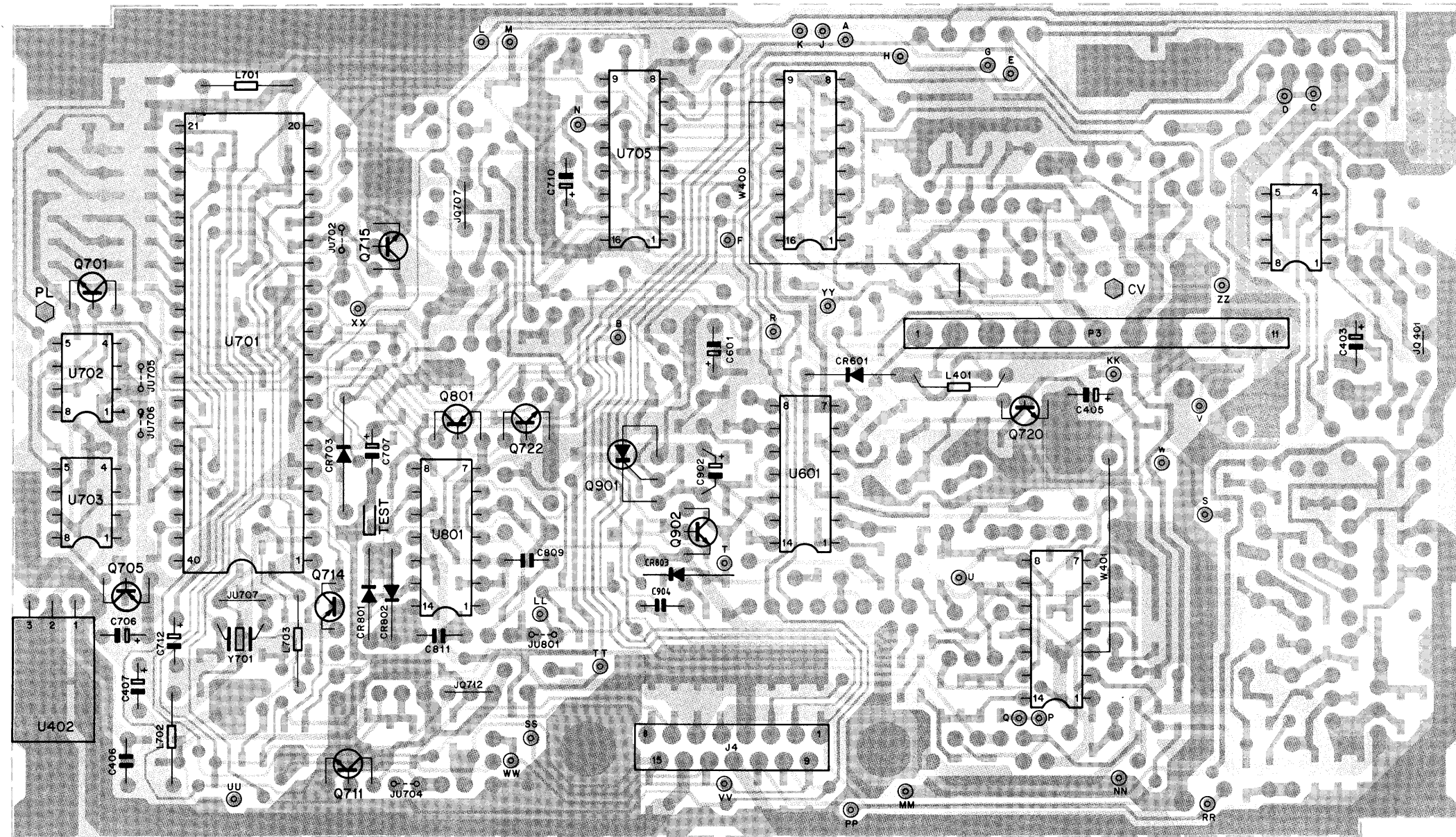
2. U801B and U801C convert function tone audio to logic levels which can be decoded by the microprocessor.

3. Serial latch U705 takes serial data and stores it on its outputs during a rising edge of its LE line. R764 and C707 disable the latch outputs during initial power-up.

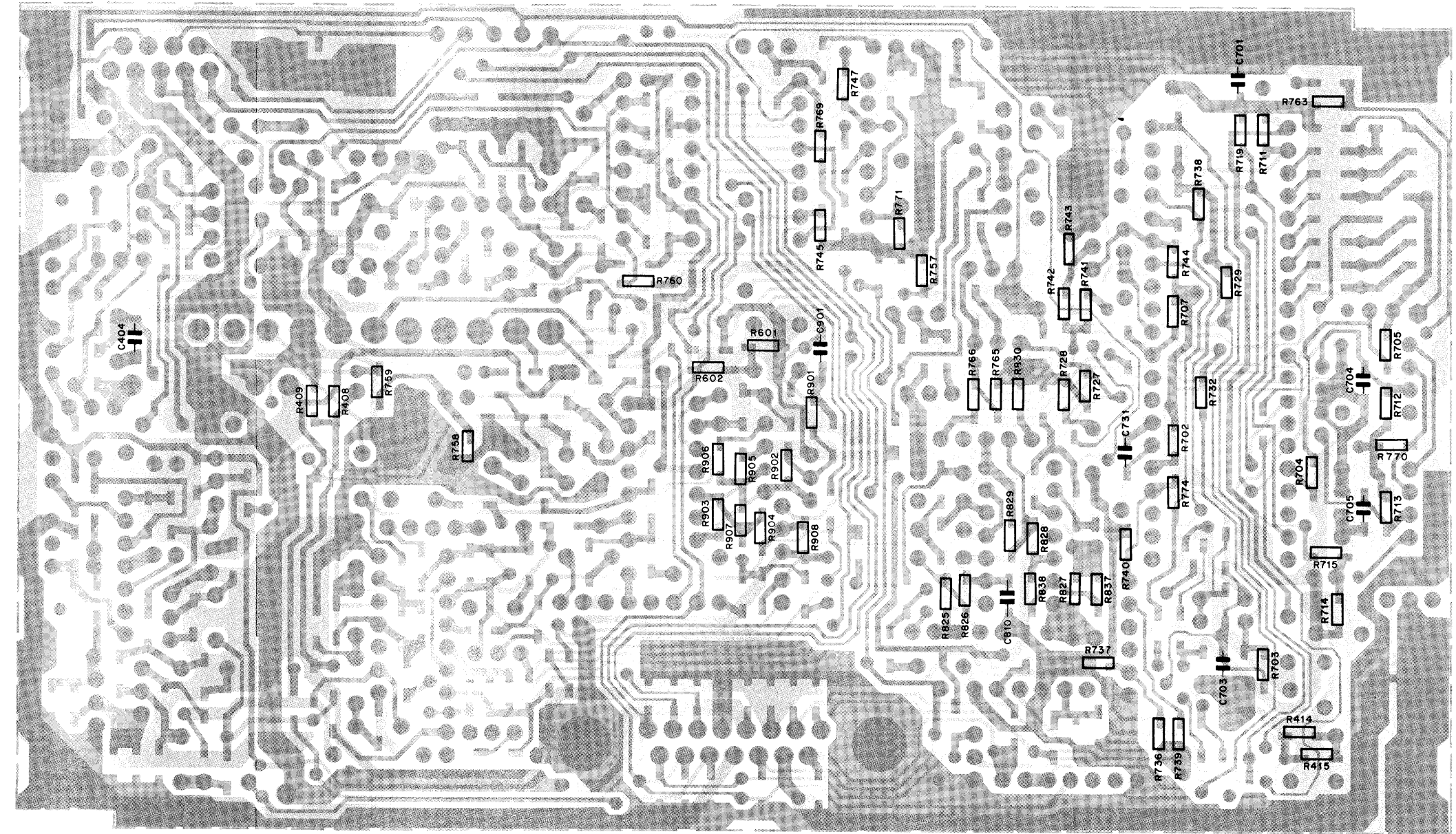
4. The watchdog timer circuit monitors activity from the microprocessor. If no activity is detected, C902 will charge through R903 until the output of U601D switches and Q902 is turned on, resetting the microprocessor.

5. In order for the decode output to go high, both a valid signal code and a carrier squelch detect signal must be present.

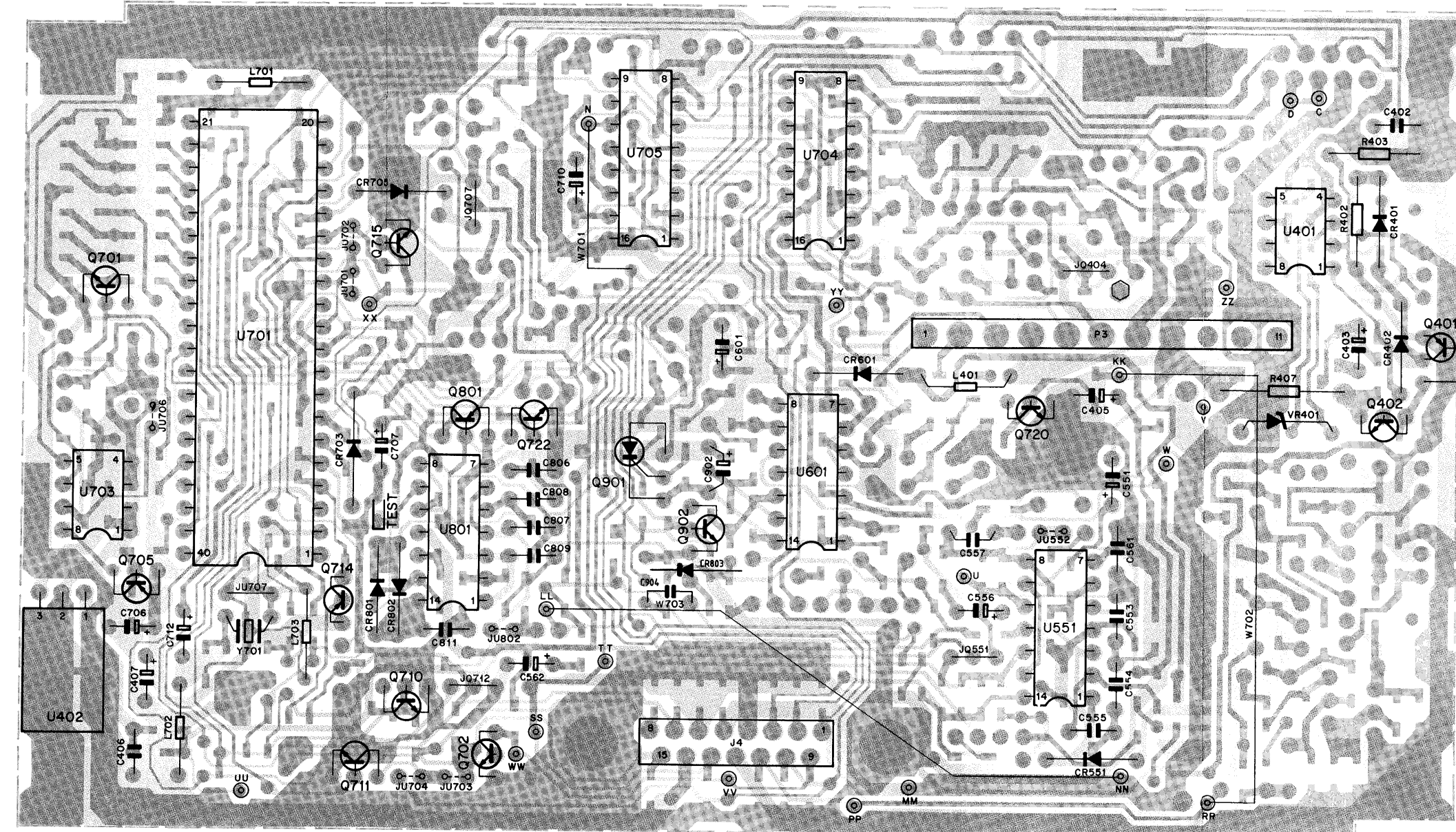
MC compact Base/Repeater Station
GLN6769A RAT Decoder Board
Schematic Diagram



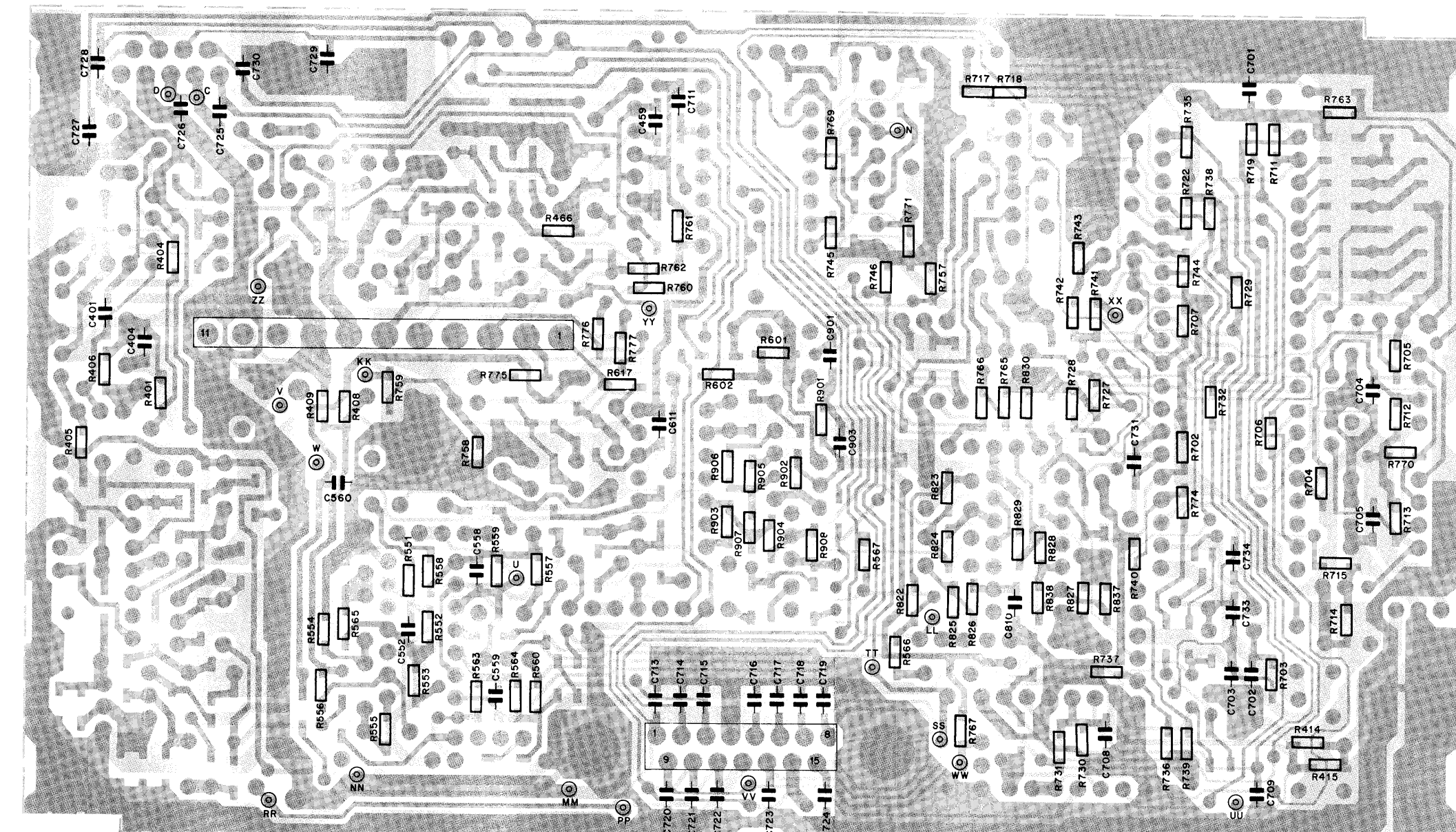
COMPONENT SIDE ● DEPS-43329-A
 SOLDER SIDE ● DEPS-43330-A
 COMPONENT OVERLAY ● DEPS-43337-A



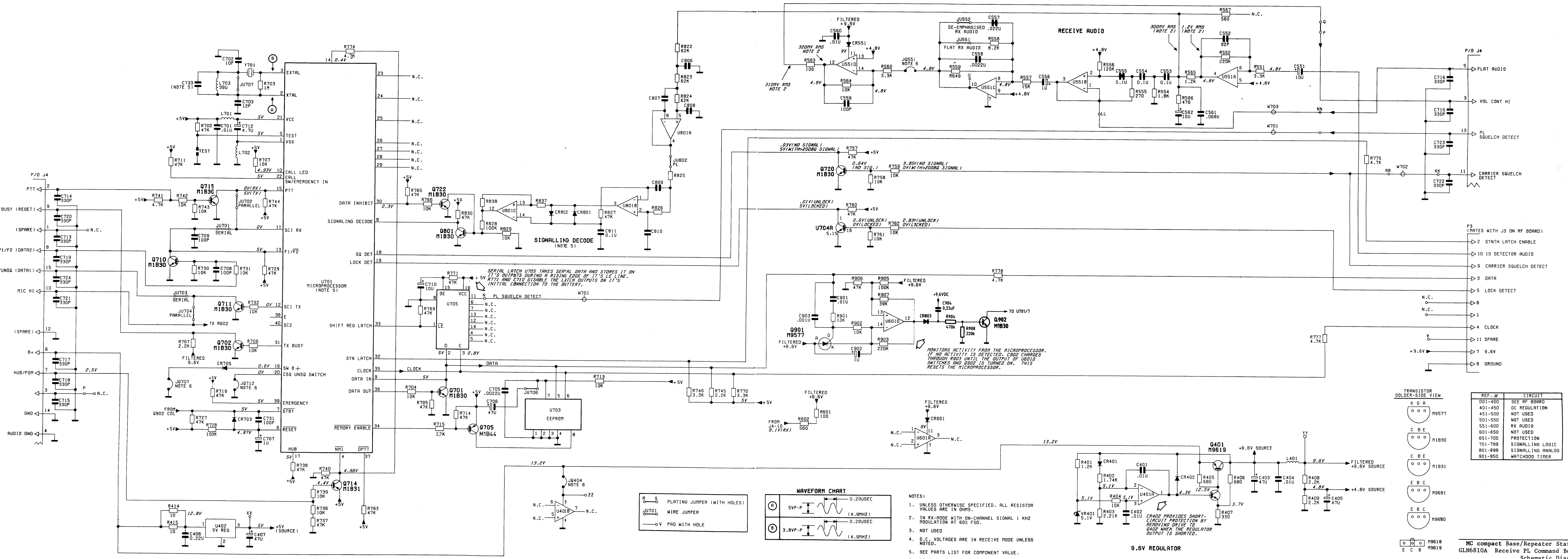
COMPONENT SIDE ● DEPS-43329-A (REV)
 SOLDER SIDE ● DEPS-43330-A (REV)
 CHIP COMPONENT OVERLAY ● DEPS-43338

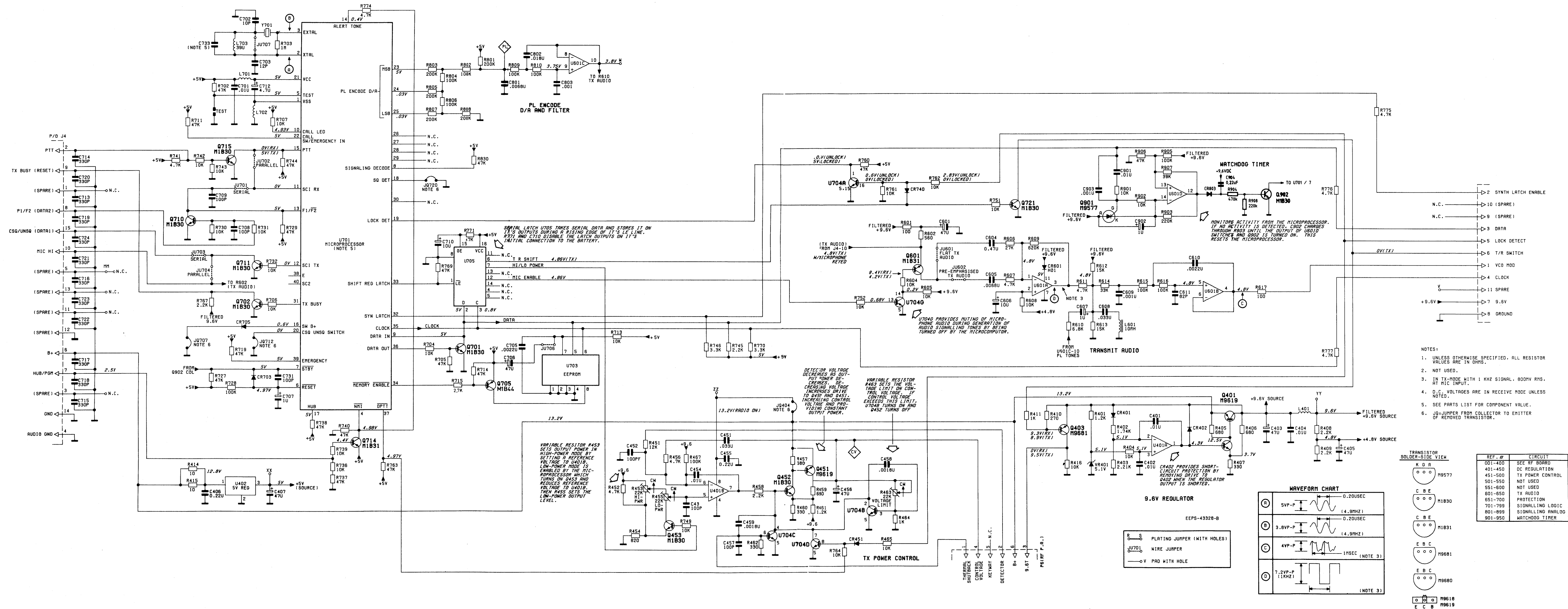


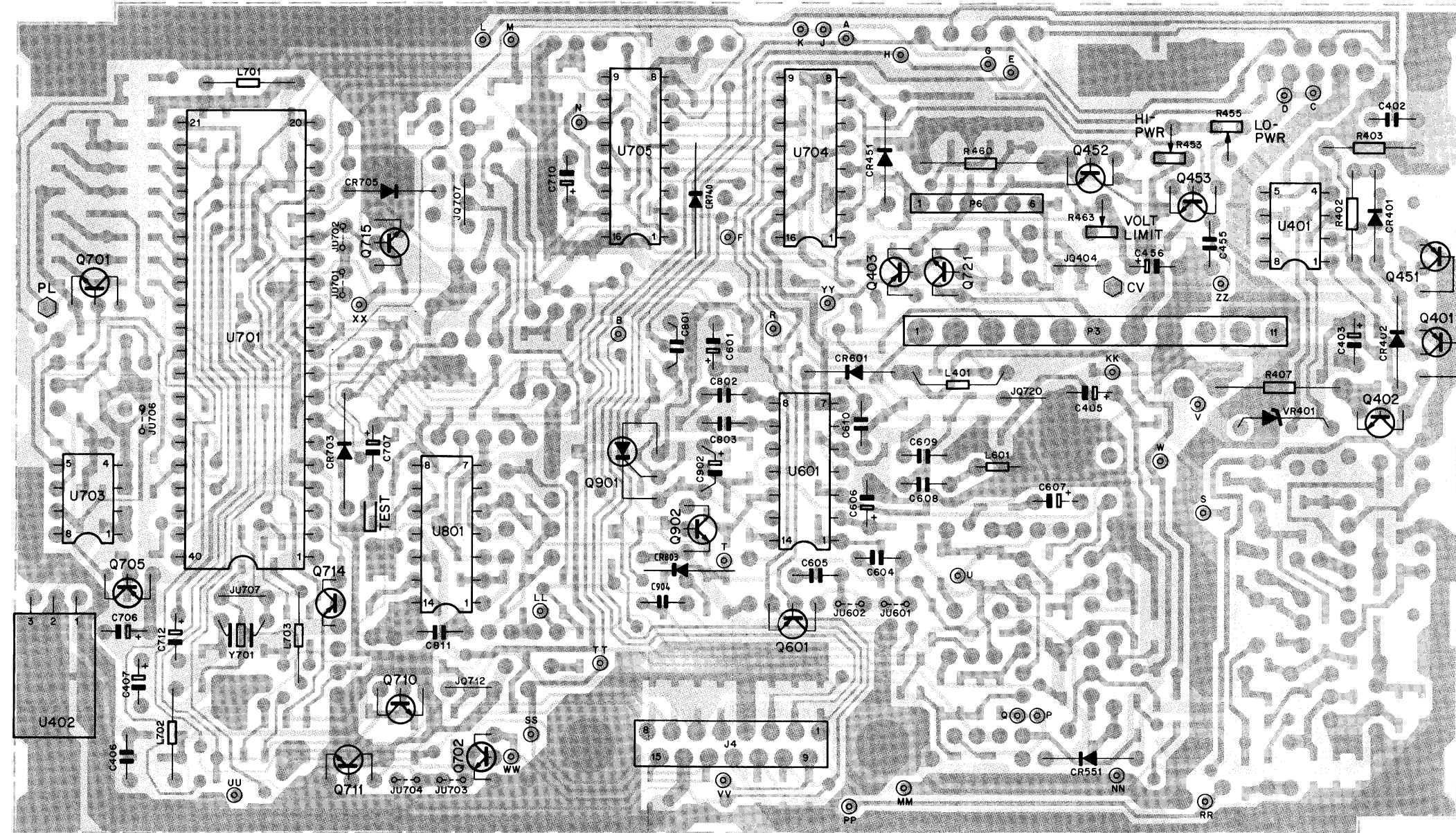
COMPONENT SIDE DEPS-43329-A
 SOLDER SIDE DEPS-43330-A
 COMPONENT OVERLAY DEPS-43333-A



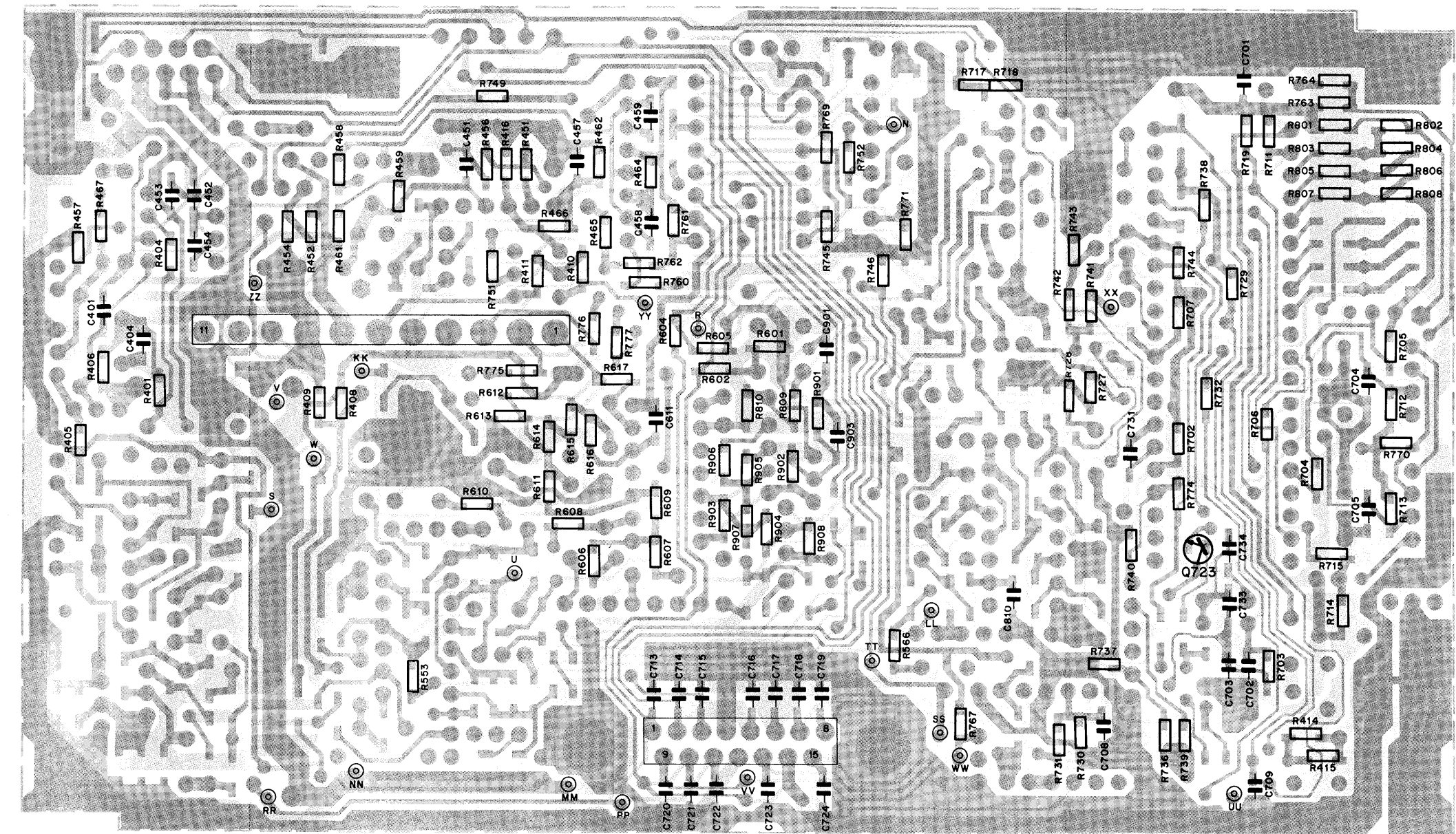
COMPONENT SIDE DEPS-43329-A (REV 1)
 SOLDER SIDE DEPS-43330-A (REV 1)
 CHIP COMPONENT OVERLAY DEPS-43334



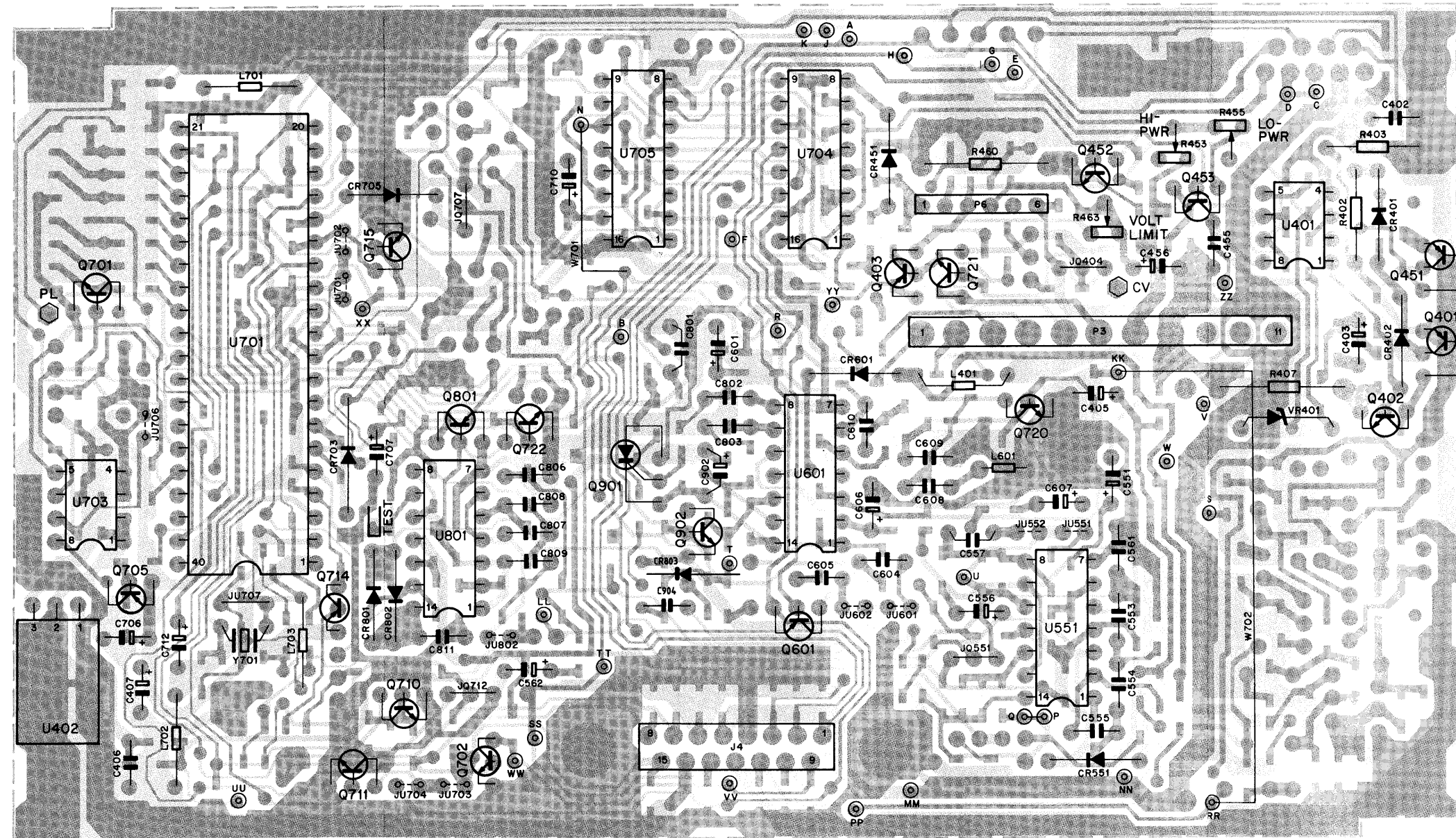




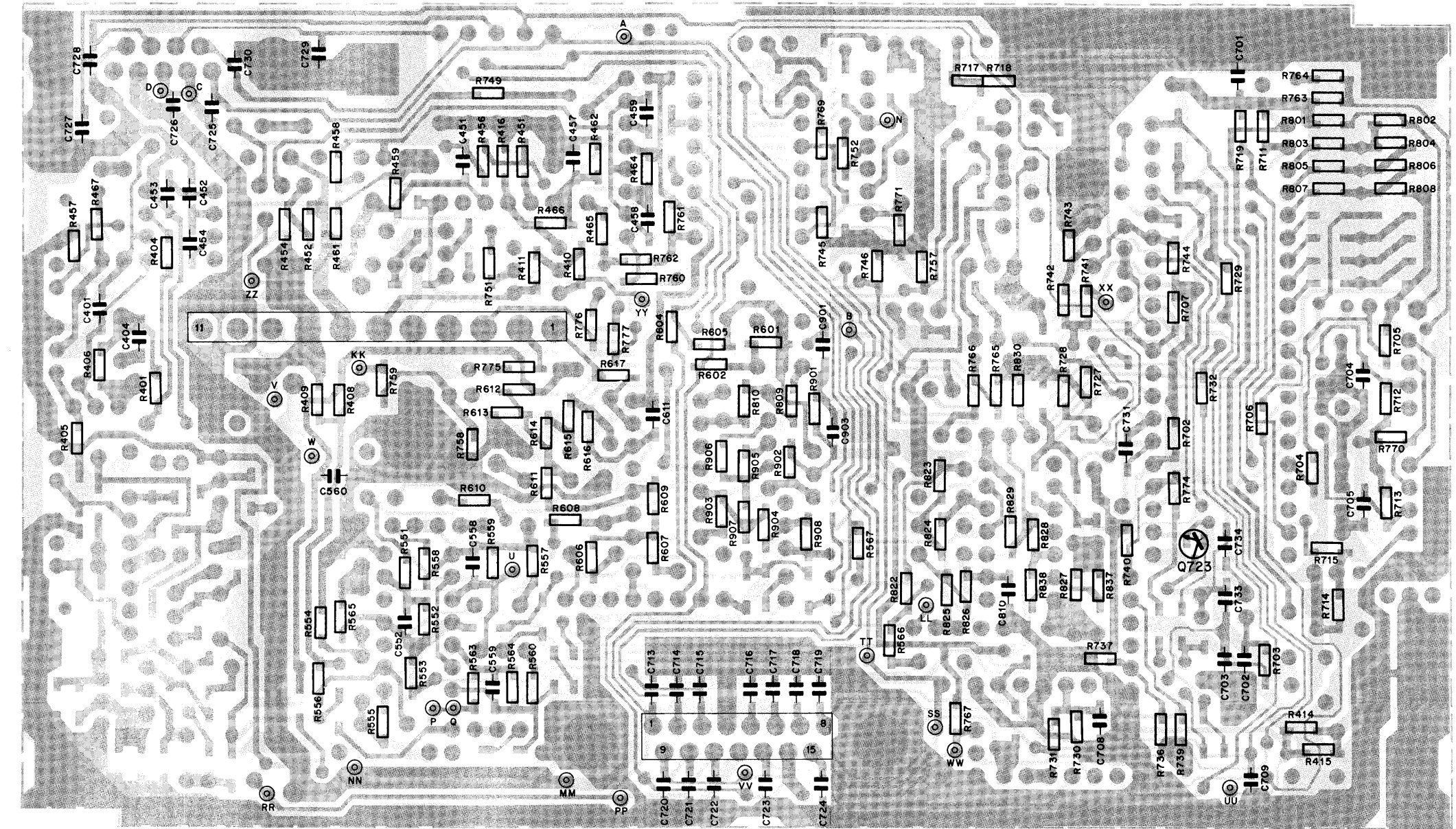
COMPONENT SIDE DEPS-43329-A
 SOLDER SIDE DEPS-43330-A
 COMPONENT OVERLAY DEPS-43335-A



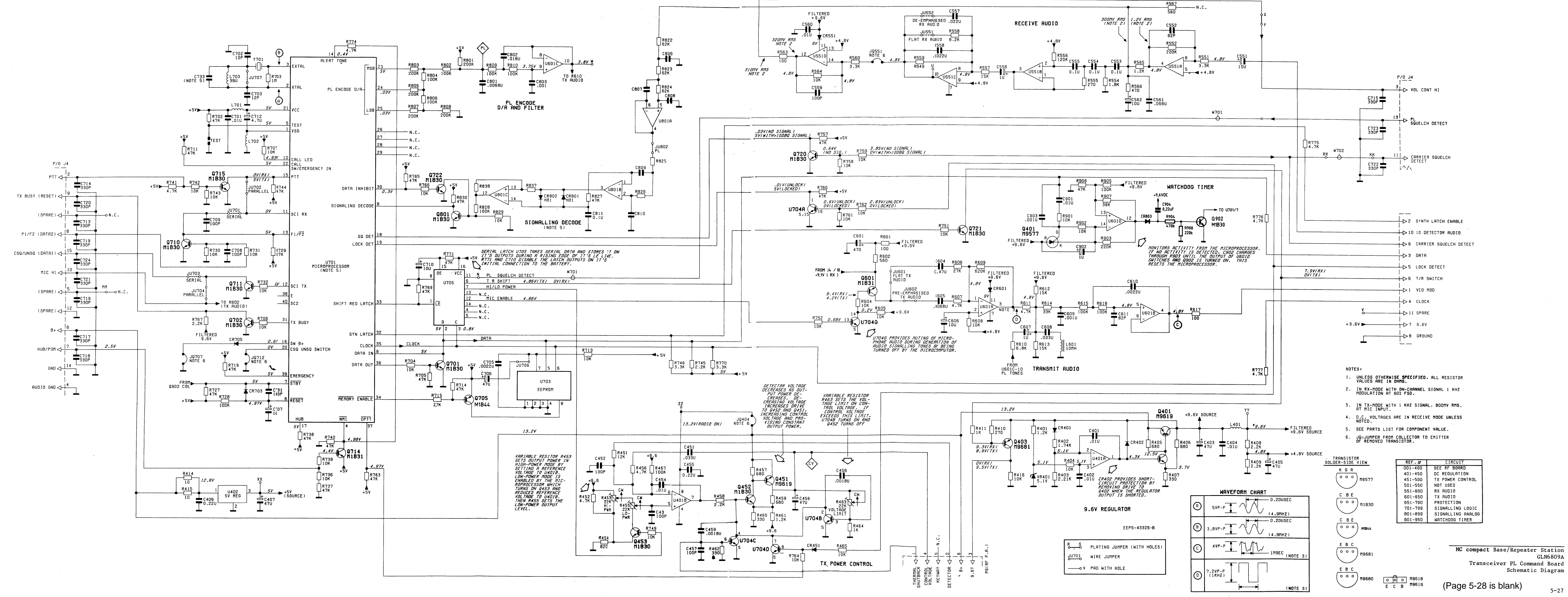
COMPONENT SIDE DEPS-43329-A (REV)
 SOLDER SIDE DEPS-43330-A (REV)
 CHIP COMPONENT OVERLAY DEPS-43336



COMPONENT SIDE DEPS-43329-A
 SOLDER SIDE DEPS-43330-A
 COMPONENT OVERLAY DEPS-43331-A



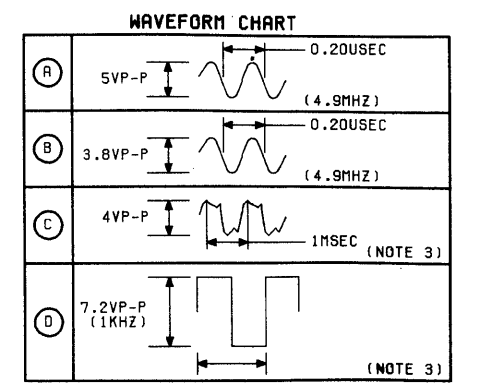
COMPONENT SIDE DEPS-43329-A (REV)
 SOLDER SIDE DEPS-43330-A (REV)
 CHIP COMPONENT OVERLAY DEPS-43332



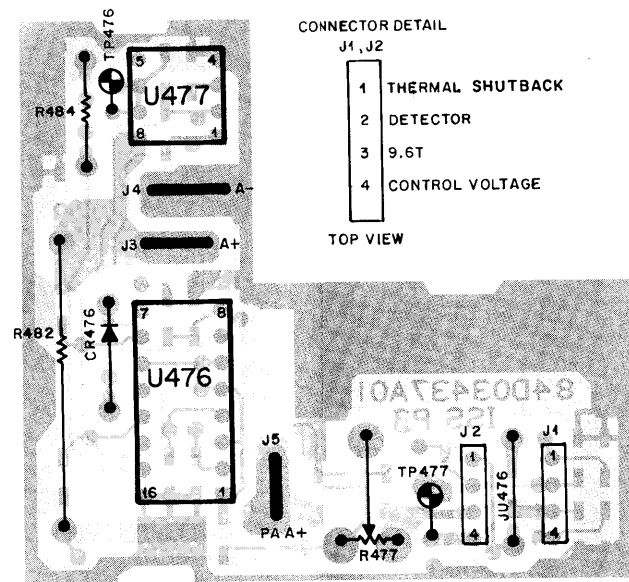
- NOTES:
- UNLESS OTHERWISE SPECIFIED, ALL RESISTOR VALUES ARE IN OHMS.
 - IN RX-MODE WITH ON-CHANNEL SIGNAL 1 KHZ MODULATION AT 60X FSD.
 - IN TX-MODE WITH 1 KHZ SIGNAL, 800MV RMS, AT MIC INPUT.
 - D.C. VOLTAGES ARE IN RECEIVE MODE UNLESS NOTED.
 - SEE PARTS LIST FOR COMPONENT VALUE.
 - JD=JUMPER FROM COLLECTOR TO EMITTER OF REMOVED TRANSISTOR.

TRANSISTOR SOLDER-SIDE VIEW

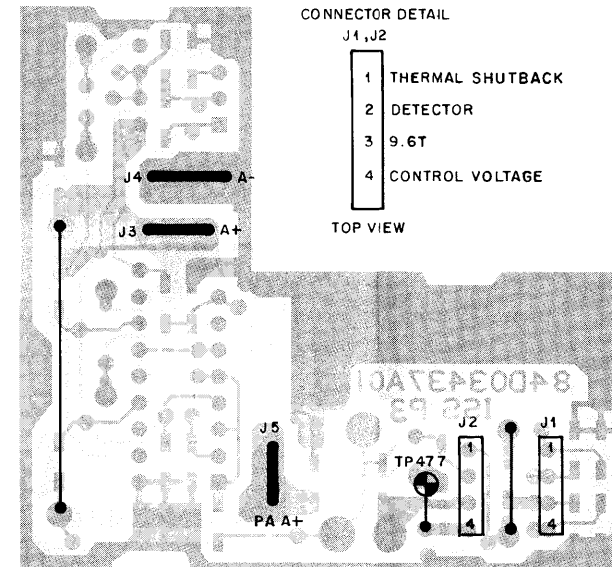
| REF. # | CIRCUIT |
|---------|------------------|
| 001-400 | SEE RF BOARD |
| 401-450 | DC REGULATION |
| 451-500 | TX POWER CONTROL |
| 501-550 | NOT USED |
| 551-600 | RX AUDIO |
| 601-650 | TX AUDIO |
| 651-700 | PROTECTION |
| 701-799 | SIGNALING LOGIC |
| 801-899 | SIGNALING ANALOG |
| 901-950 | WATCHDOG TIMER |



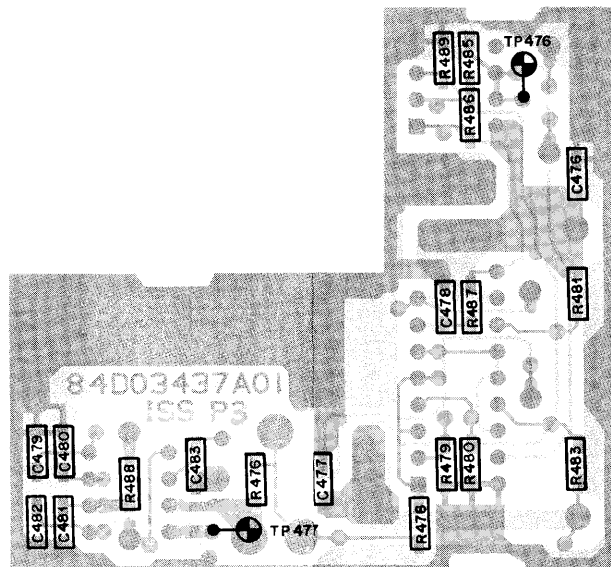
PLATING JUMPER (WITH HOLES)
WIRE JUMPER
PAD WITH HOLE



COMPONENT SIDE BD-BEPS-43509-0
 SOLDER SIDE BD-BEPS-43510-0
 OL-BEPS-43511-0



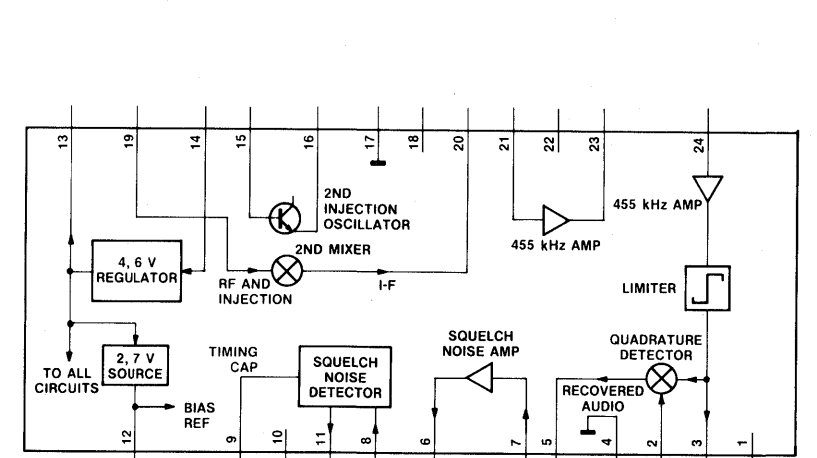
COMPONENT SIDE BD-BEPS-43509-0
 SOLDER SIDE BD-BEPS-43510-0
 OL-BEPS-43513-0



MC compact Base/Repeater Station
 GLN6898A 10W DC Interconnect Board
 GLN6899A 25W Current Limiter Board
 Circuit Board Details

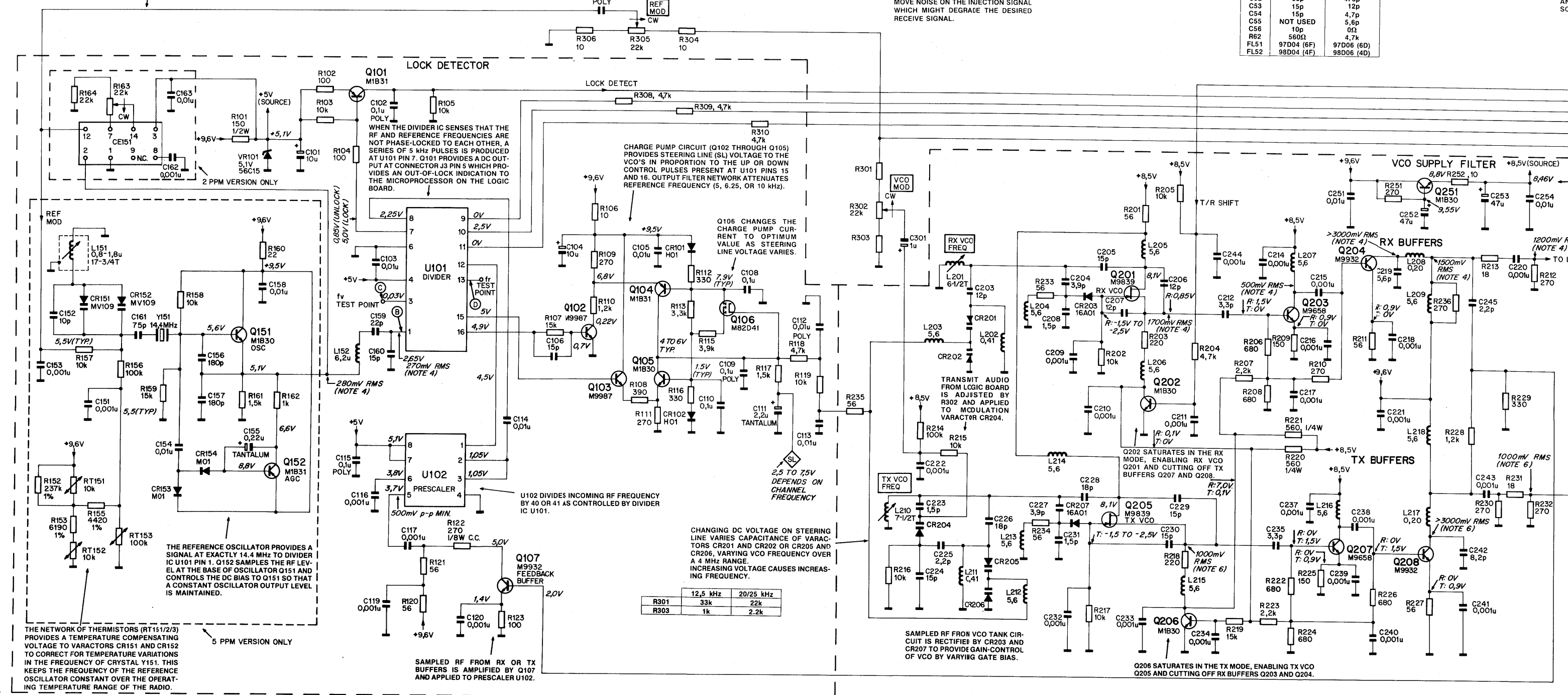
NOTES

- UNLESS OTHERWISE STATED, RESISTOR VALUES ARE IN OHMS AND INDUCTORS ARE IN uH.
- REFER TO TABLES IF COMPONENT VALUE IS NOT SHOWN.
- VOLTAGE DESIGNATIONS: R = RECEIVE MODE, T = TRANSMIT MODE. IF NOT SPECIFIED, VOLTAGES ARE IN THE RECEIVE MODE.
- MEASURED IN THE RECEIVE MODE WITH A HIGH-IMPEDANCE RF MILLIVOLTMETER.
- SAME AS 4, EXCEPT WITH AN ON-CHANNEL SIGNAL APPLIED AT A LEVEL OF -75 dbm.
- MEASURED IN THE TRANSMIT MODE WITH A HIGH-IMPEDANCE RF MILLIVOLTMETER.
- ZERO OHM CHIP SHORT (P/N 0611024R23) MAY BE USED IN PLACE OF RESISTOR OR CAPACITOR.
- REPLACE Y52 WITH SAME TYPE AS ORIGINALLY SUPPLIED. AT RECEIVE FREQUENCIES BETWEEN 83.765 AND 83.795 MHz Y52 REQUIRES THE 21.855 MHz CRYSTAL (P/N 4805488004). AT RECEIVE FREQUENCIES BETWEEN 87.405 AND 87.435 MHz Y52 REQUIRES THE 20.945 MHz CRYSTAL (P/N 4805488003).

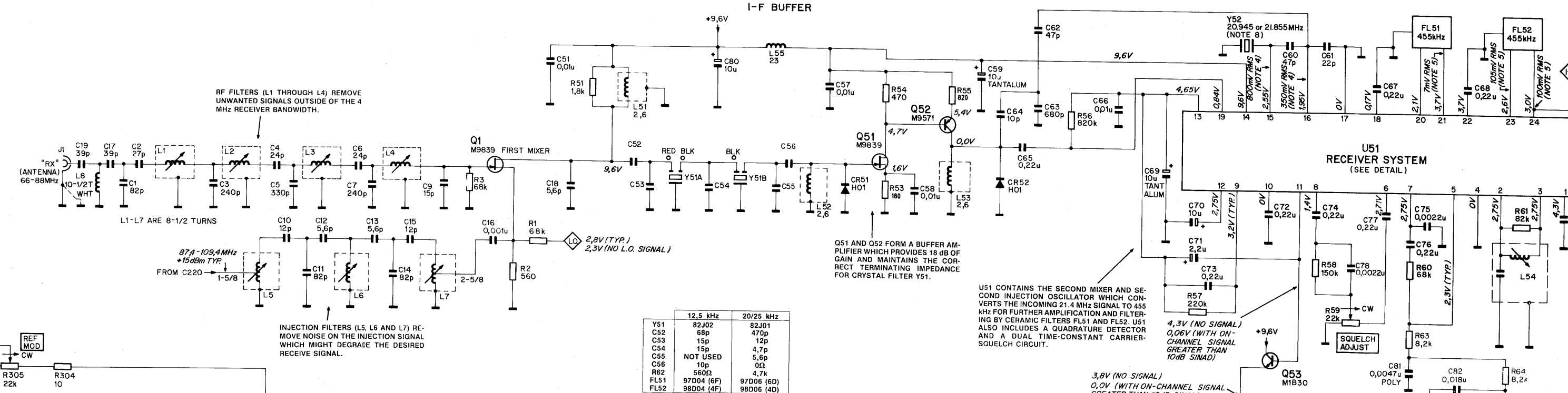


U51 INTERNAL BLOCK DIAGRAM

TRANSMIT AUDIO MODULATES REFERENCE OSCILLATOR FREQUENCY TO PREVENT THE SYNTHESIZER LOOP FROM CANCELLING LOW-FREQUENCY MODULATION APPLIED TO THE VCO.

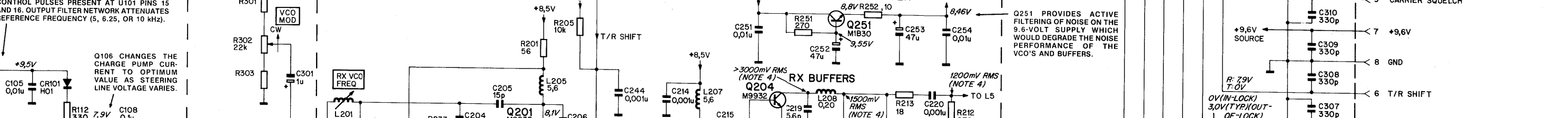


MC compact Base/Repeater Station
 GLC6047A RF Board 66-88MHz, 20/25kHz CS
 GLC6048A RF Board 66-88MHz, 12.5kHz CS
 Schematic Diagram

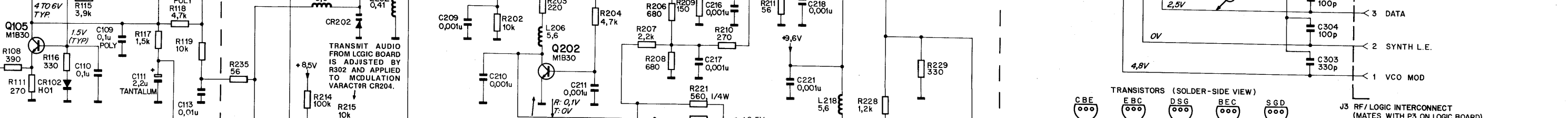


I-F BUFFER

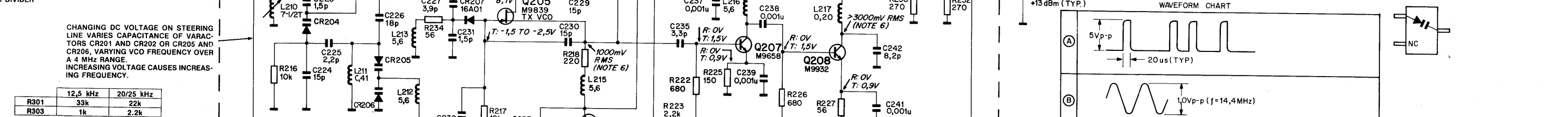
RF FILTERS (L1 THROUGH L4) REMOVE UNWANTED SIGNALS OUTSIDE OF THE 4 MHz RECEIVER BANDWIDTH. L1-L7 ARE 8-1/2 TURNS. INJECTION FILTERS (L5, L6 AND L7) REMOVE NOISE ON THE INJECTION SIGNAL WHICH MIGHT DEGRADE THE DESIRED RECEIVE SIGNAL.



LOCK DETECTOR
 WHEN THE DIVIDER IC SENSES THAT THE RF AND REFERENCE FREQUENCIES ARE NOT PHASE-LOCKED TO EACH OTHER, A SERIES OF 5 kHz PULSES IS PRODUCED AT U101 PIN 7. Q101 PROVIDES A DC OUTPUT AT CONNECTOR J3 PINS 5 WHICH PROVIDES AN OUT-OF-LOCK INDICATION TO THE MICROPROCESSOR ON THE LOGIC BOARD.

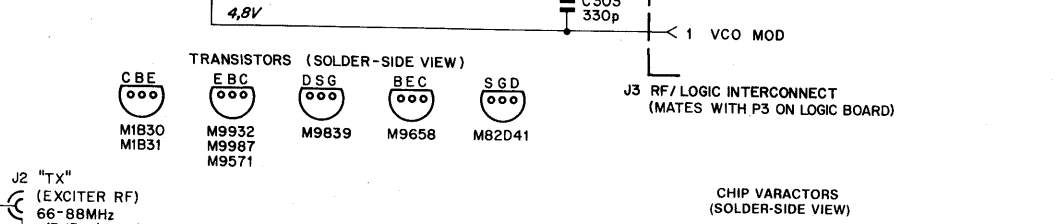


VCO SUPPLY FILTER
 Q251 PROVIDES ACTIVE FILTERING OF NOISE ON THE 9.6-VOLT SUPPLY WHICH WOULD DEGRADE THE NOISE PERFORMANCE OF THE VCO'S AND BUFFERS.



RX BUFFERS
 Q201 SATURATES IN THE RX MODE, ENABLING RX VCO Q201 AND CUTTING OFF TX BUFFERS Q207 AND Q208.

TX BUFFERS
 Q206 SATURATES IN THE TX MODE, ENABLING TX VCO Q205 AND CUTTING OFF RX BUFFERS Q203 AND Q204.

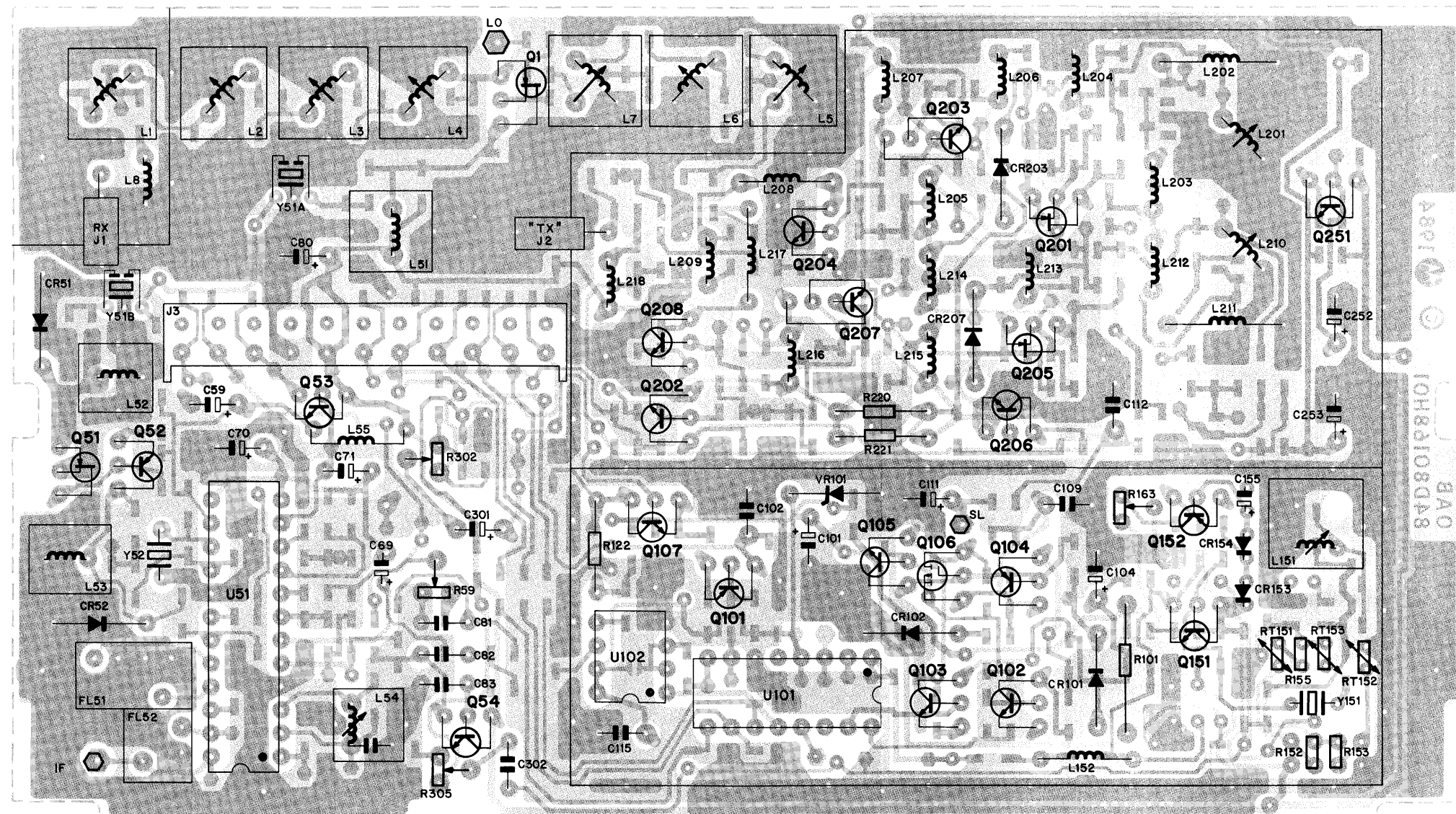


TRANSISTORS (SOLDER-SIDE VIEW)

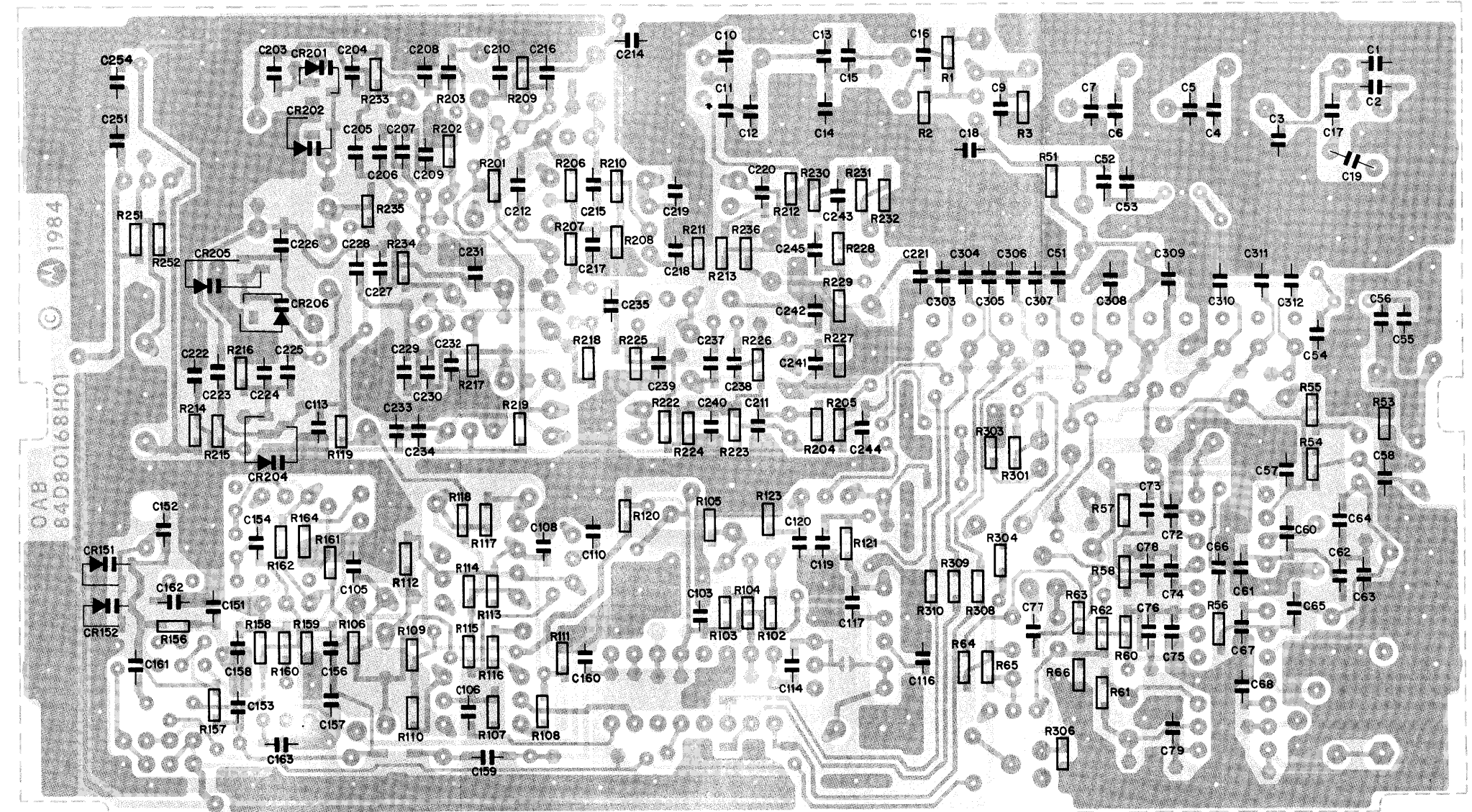
CBE MIB31 M9932 M9987 M9571 M9839 M9658 M82041

CHIP VARIATORS (SOLDER-SIDE VIEW)

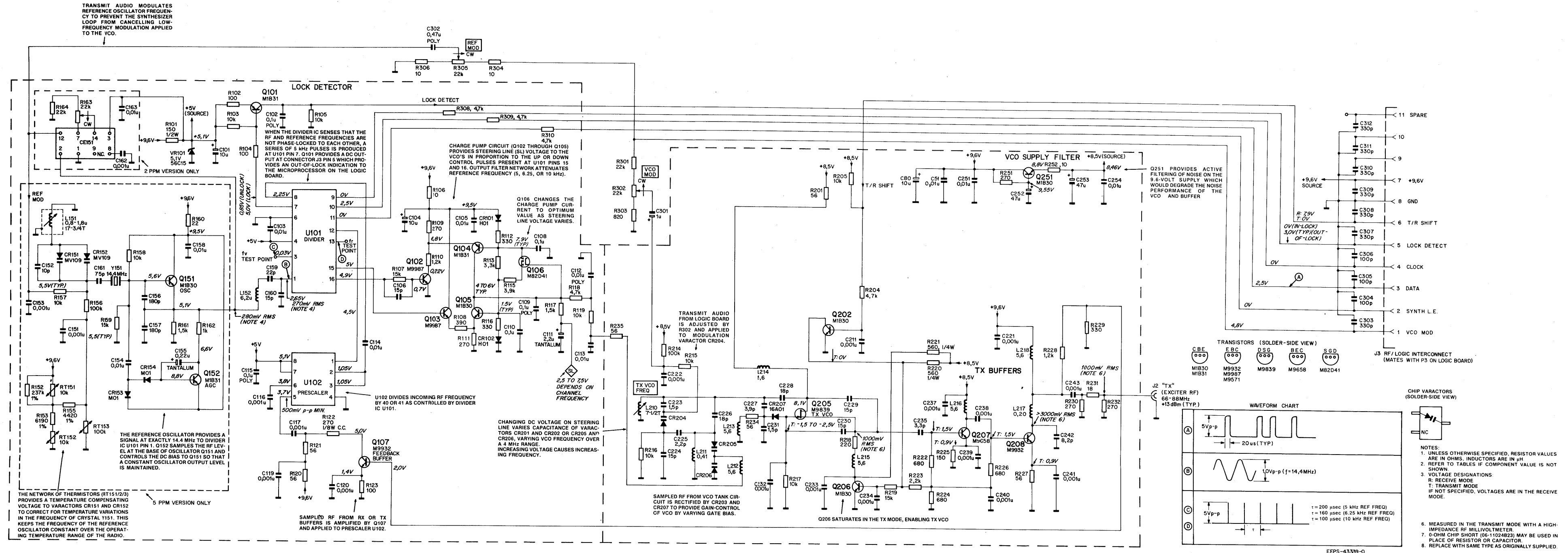
J3 RF/LOGIC INTERCONNECT (MATES WITH P3 ON LOGIC BOARD)

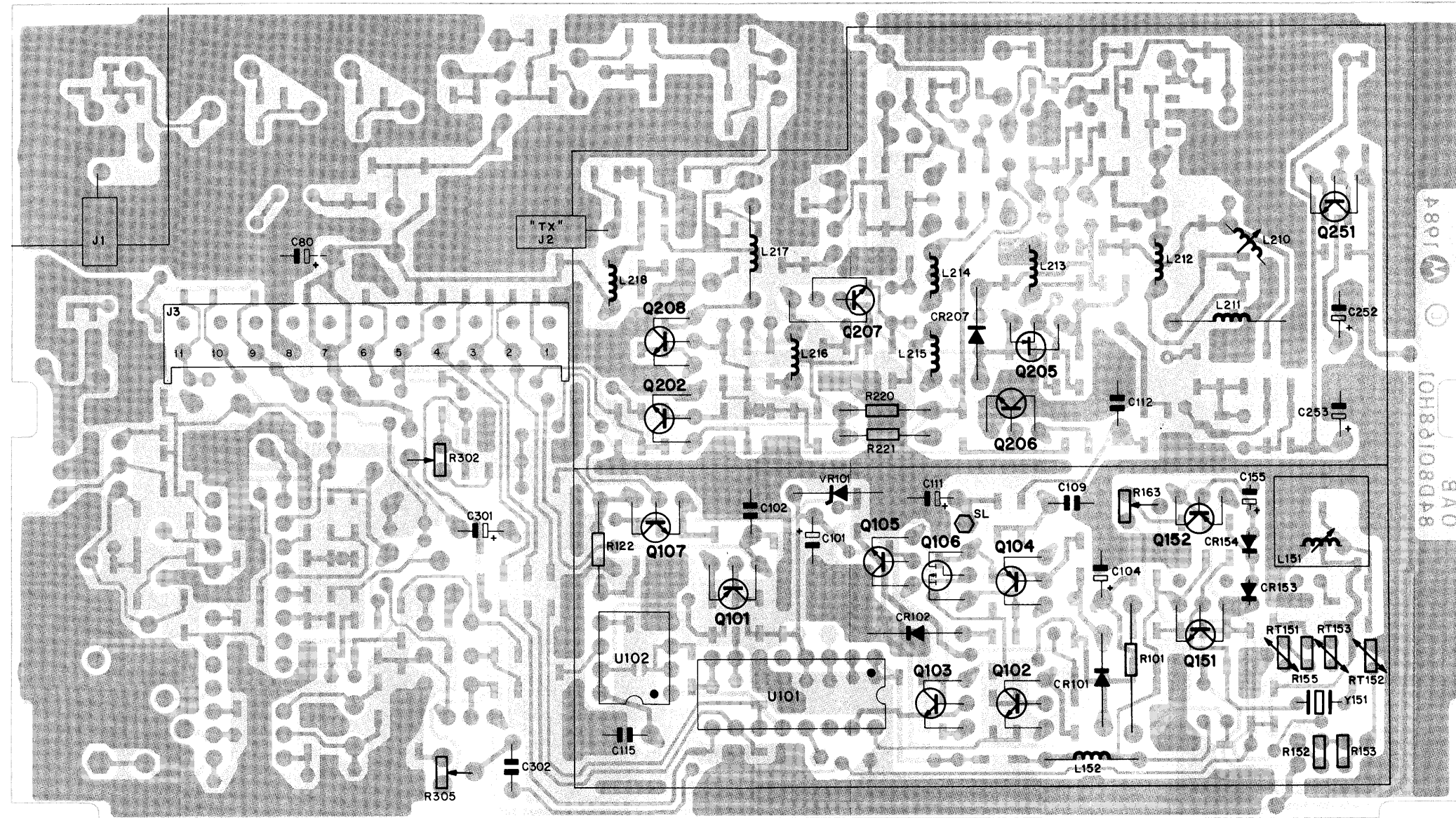


SOLDER SIDE ● GDW-1510-A
 COMPONENT SIDE ● GDW-1509-A
 OVERLAY — GDW-1511-A

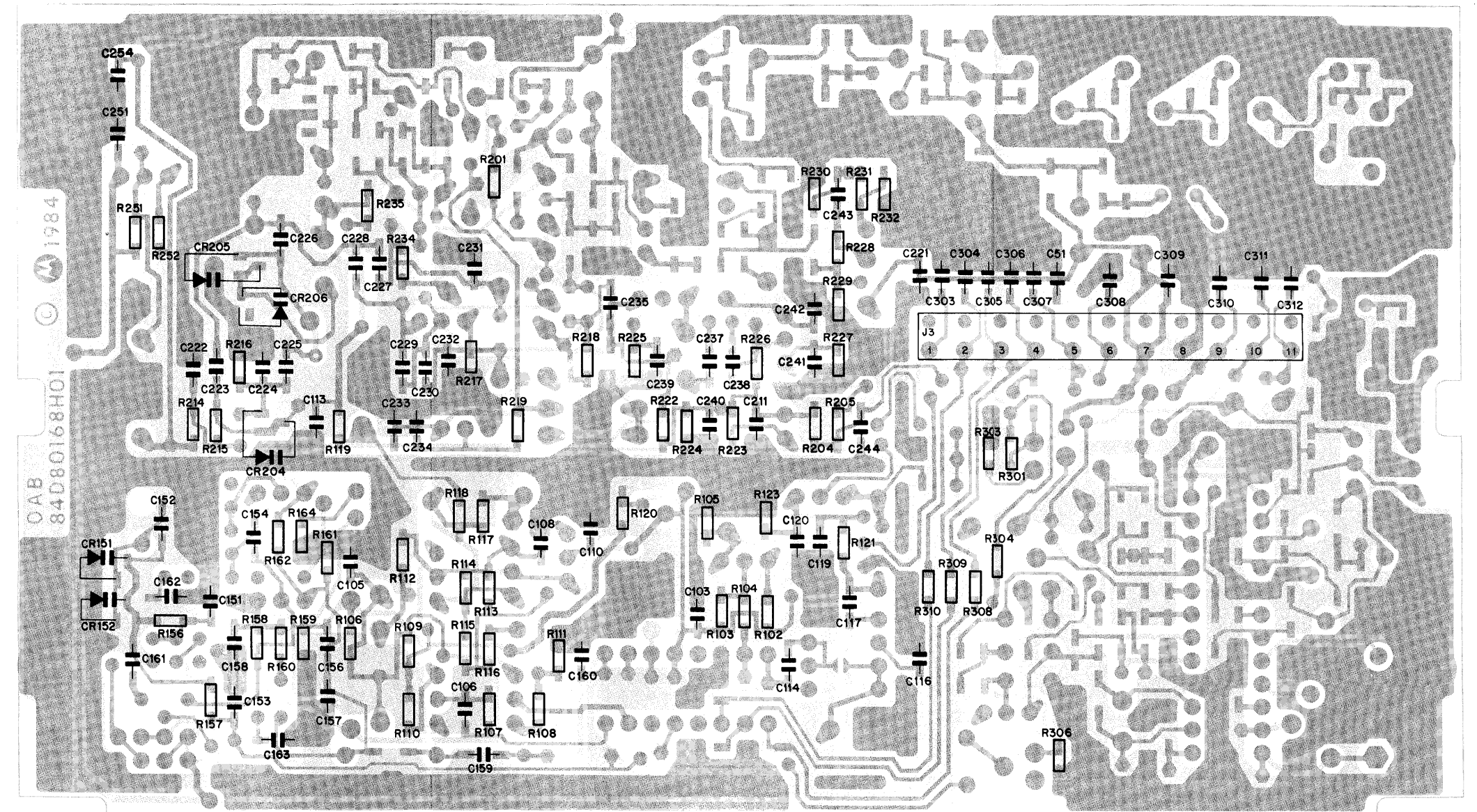


SOLDER SIDE ● GDW-1510-A (REV)
 COMPONENT SIDE ● GDW-1509-A (REV)
 OVERLAY — GDW-1512-A

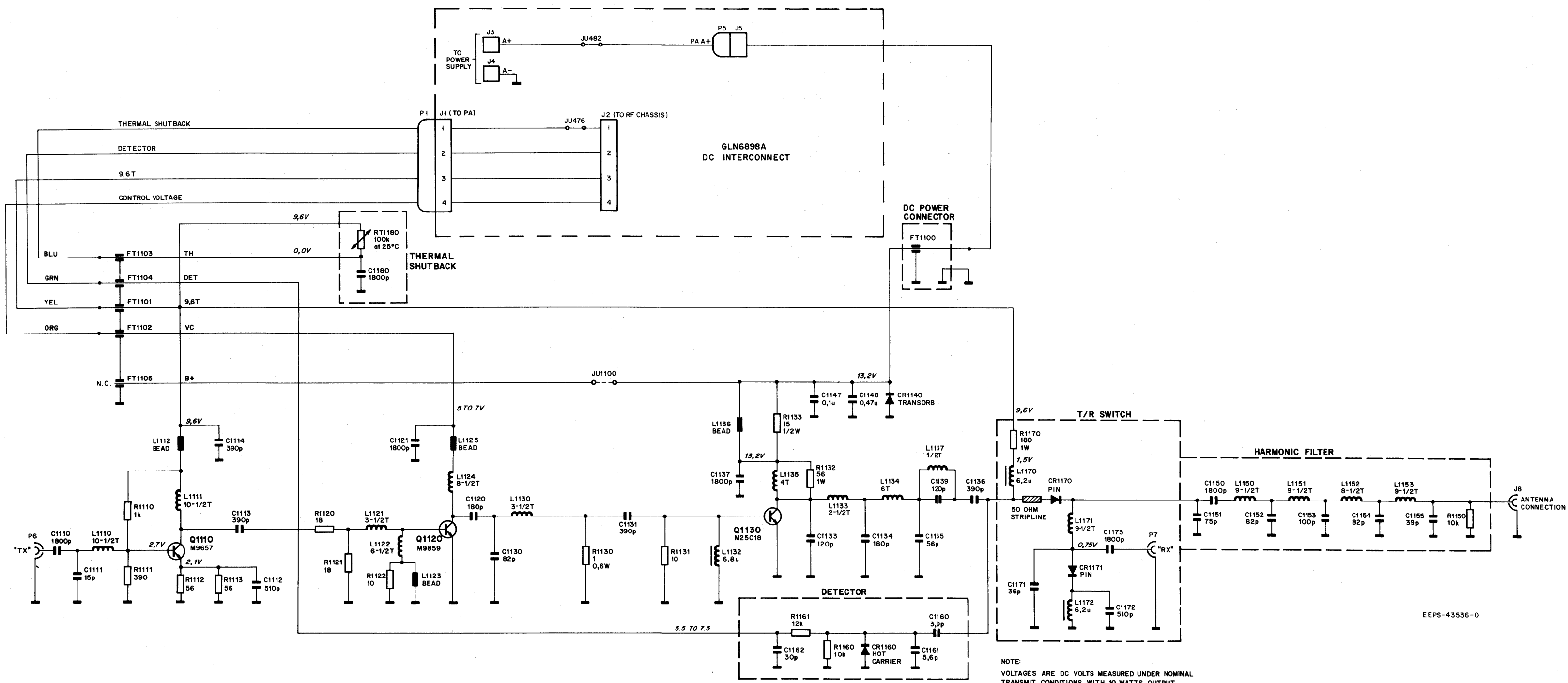




SOLDER SIDE ● BD-DEPS-43500-0
 COMPONENT SIDE ○ BD-DEPS-43501-0
 OVERLAY ○L-DEPS-43502-0



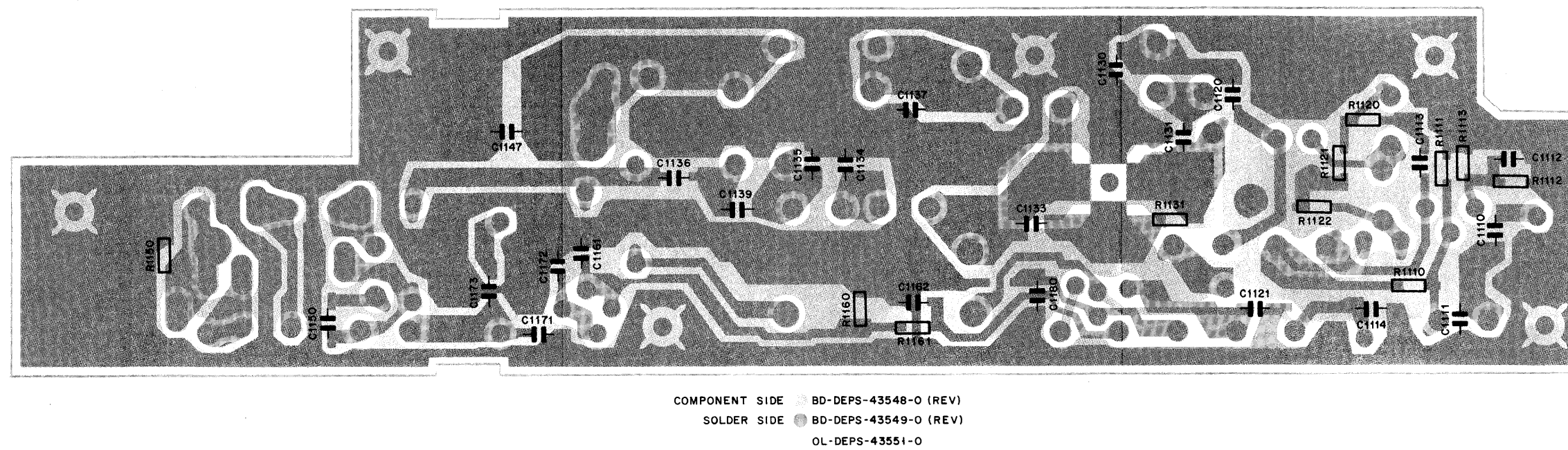
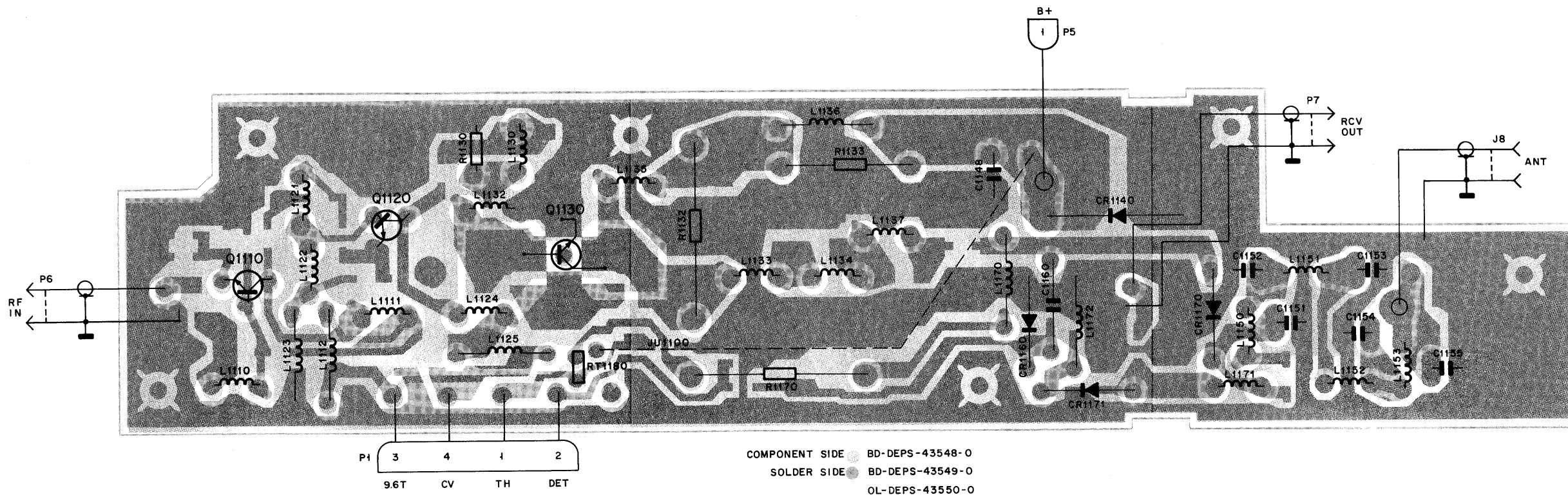
SOLDER SIDE ● BD-DEPS-43500 (REV)
 COMPONENT SIDE ○ BD-DEPS-43501 (REV)
 OVERLAY ○L-DEPS-43503-0

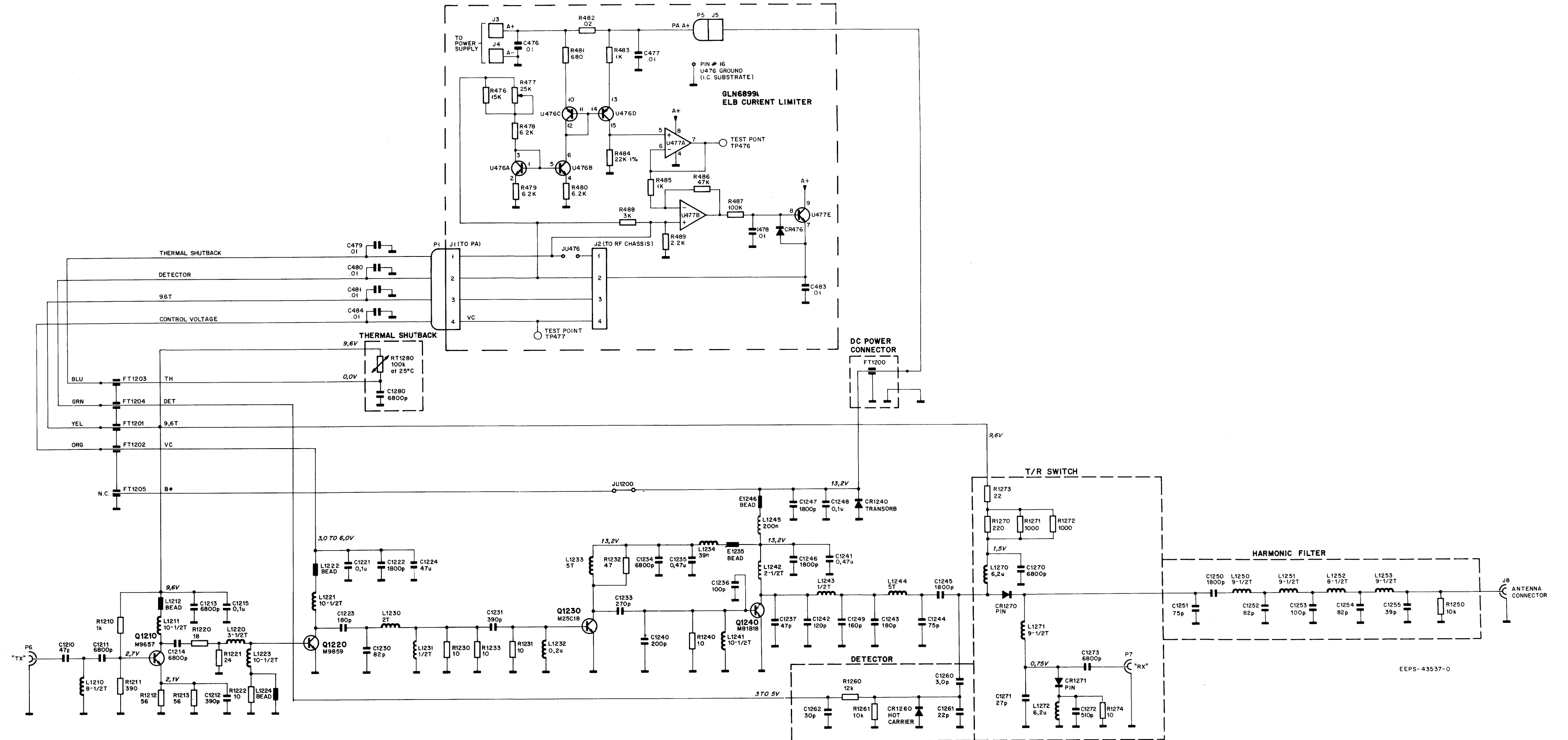


NOTE:
VOLTAGES ARE DC VOLTS MEASURED UNDER NOMINAL TRANSMIT CONDITIONS WITH 10 WATTS OUTPUT.

EEPS-43536-0

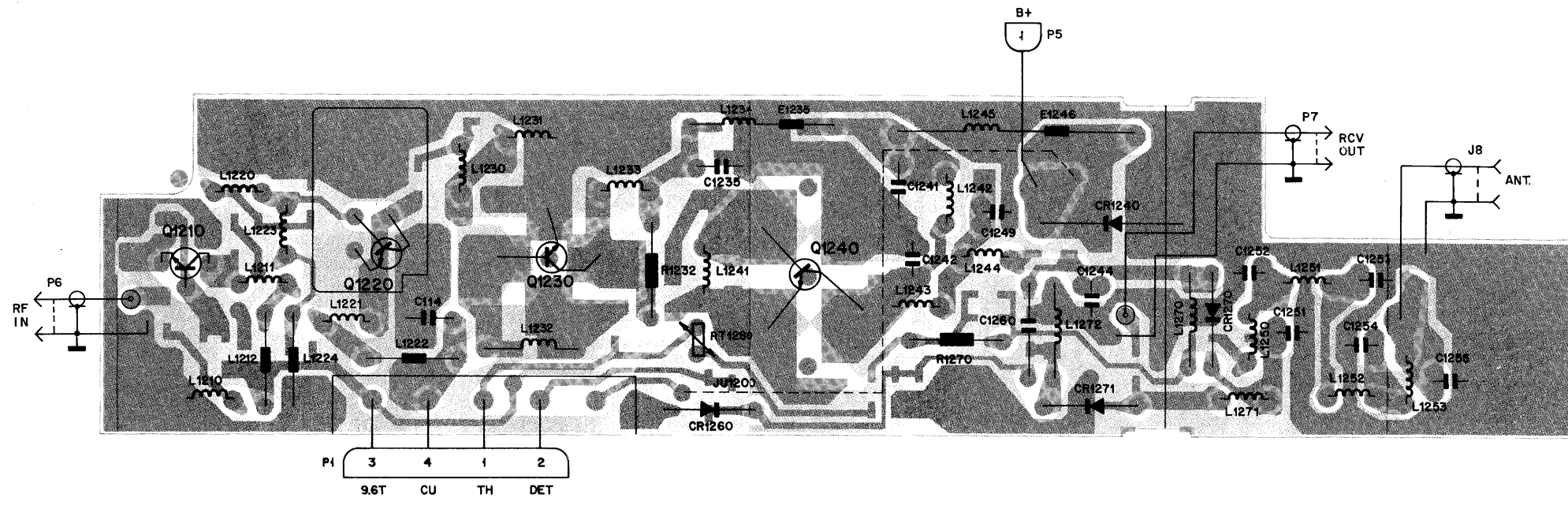
MC compact Base/Repeater Station
GLC6050A
10W Power Amplifier (66 - 88 MHz)
Schematic Diagram



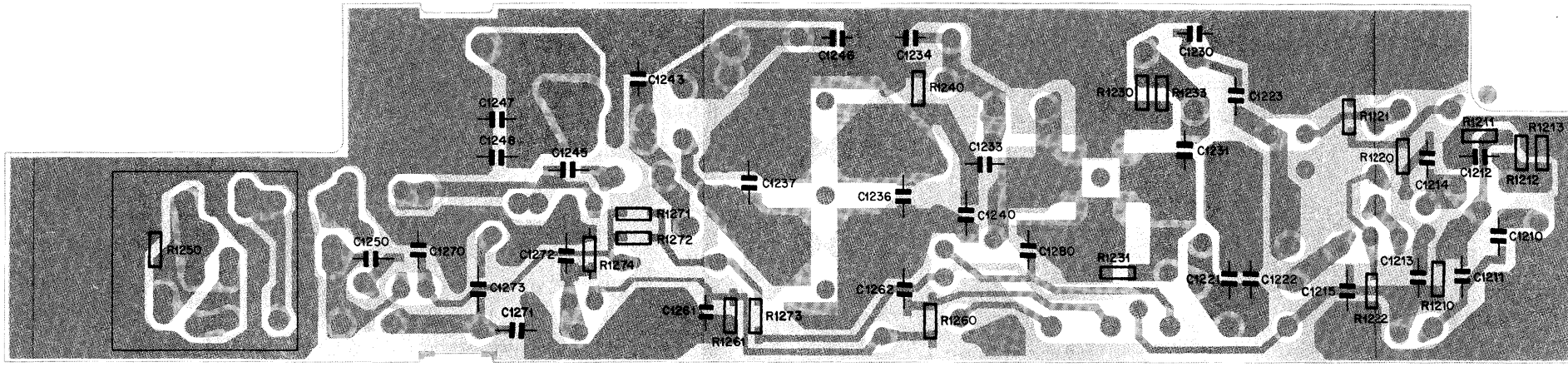


NOTE:
VOLTAGES ARE DC VOLTS MEASURED UNDER NOMINAL TRANSMIT CONDITIONS WITH 25 WATTS OUTPUT.

MC compact Base/Repeater Station
GLC6051A
25W Power Amplifier (66 - 88 MHz)
Schematic Diagram

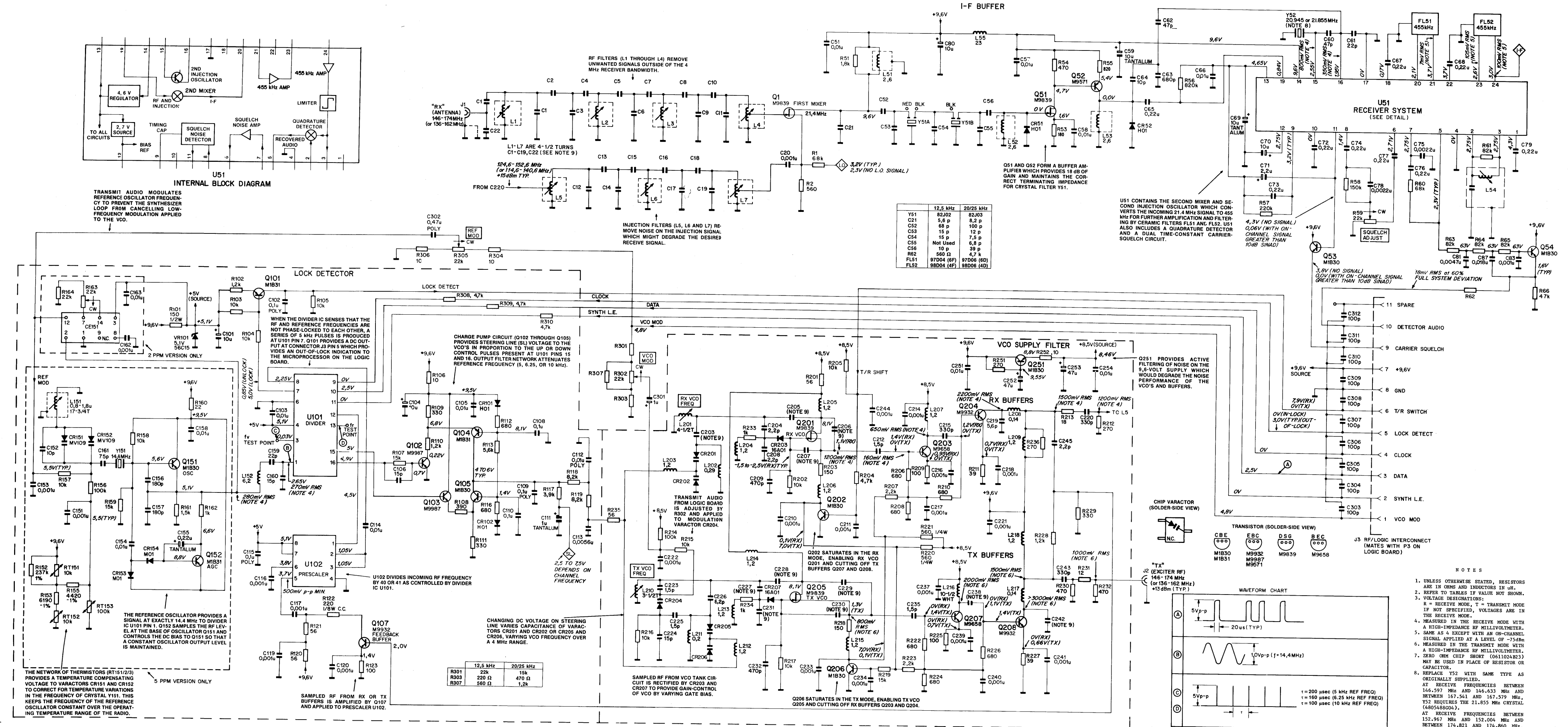


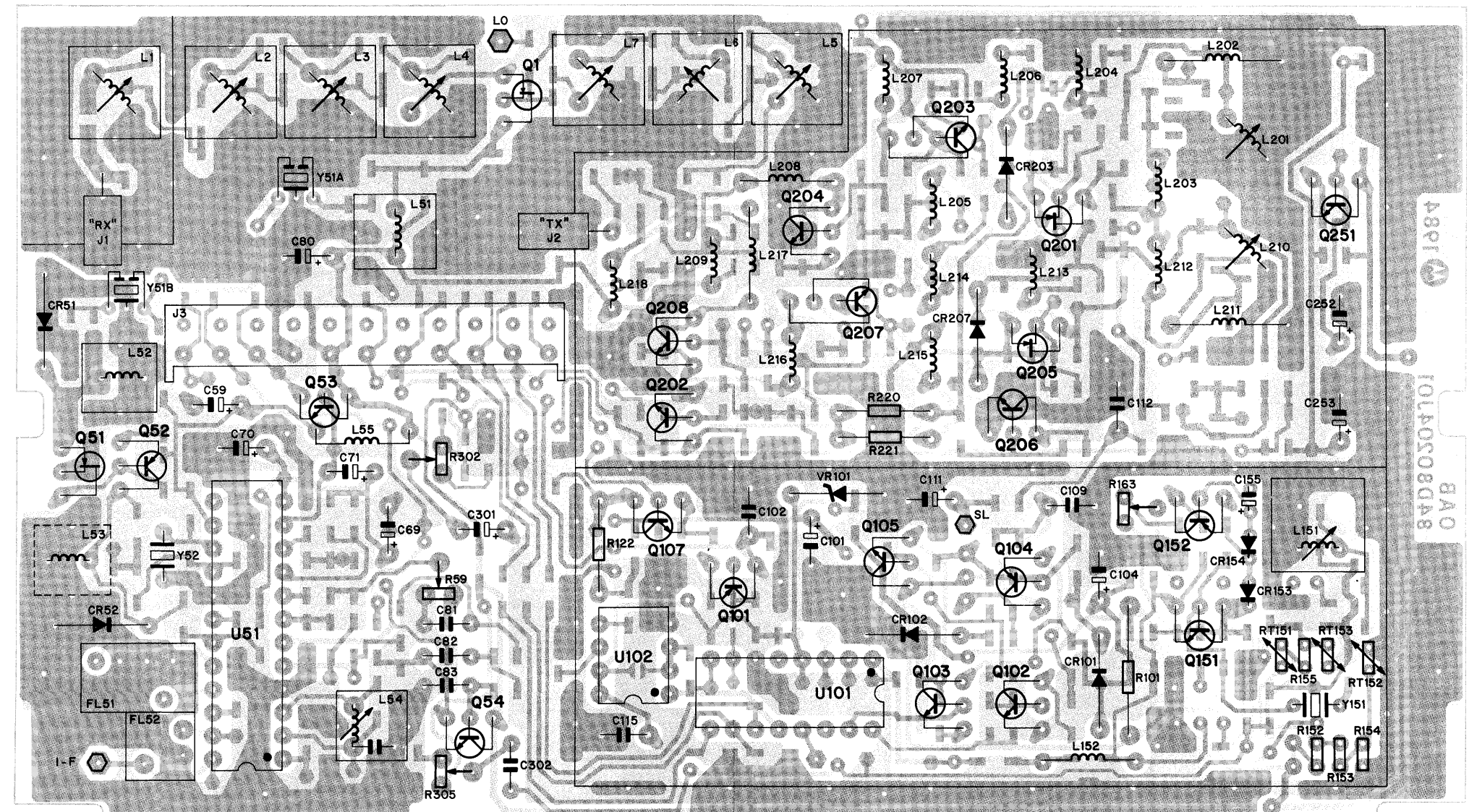
SOLDER SIDE ● BD-DEPS-43552-0
 COMPONENT SIDE ● BD-DEPS-43553-0
 OL-DEPS-43554-0



SOLDER SIDE ● BD-DEPS-43552-0 (REV)
 COMPONENT SIDE ● BD-DEPS-43553-0 (REV)
 OL-DEPS-43555-0

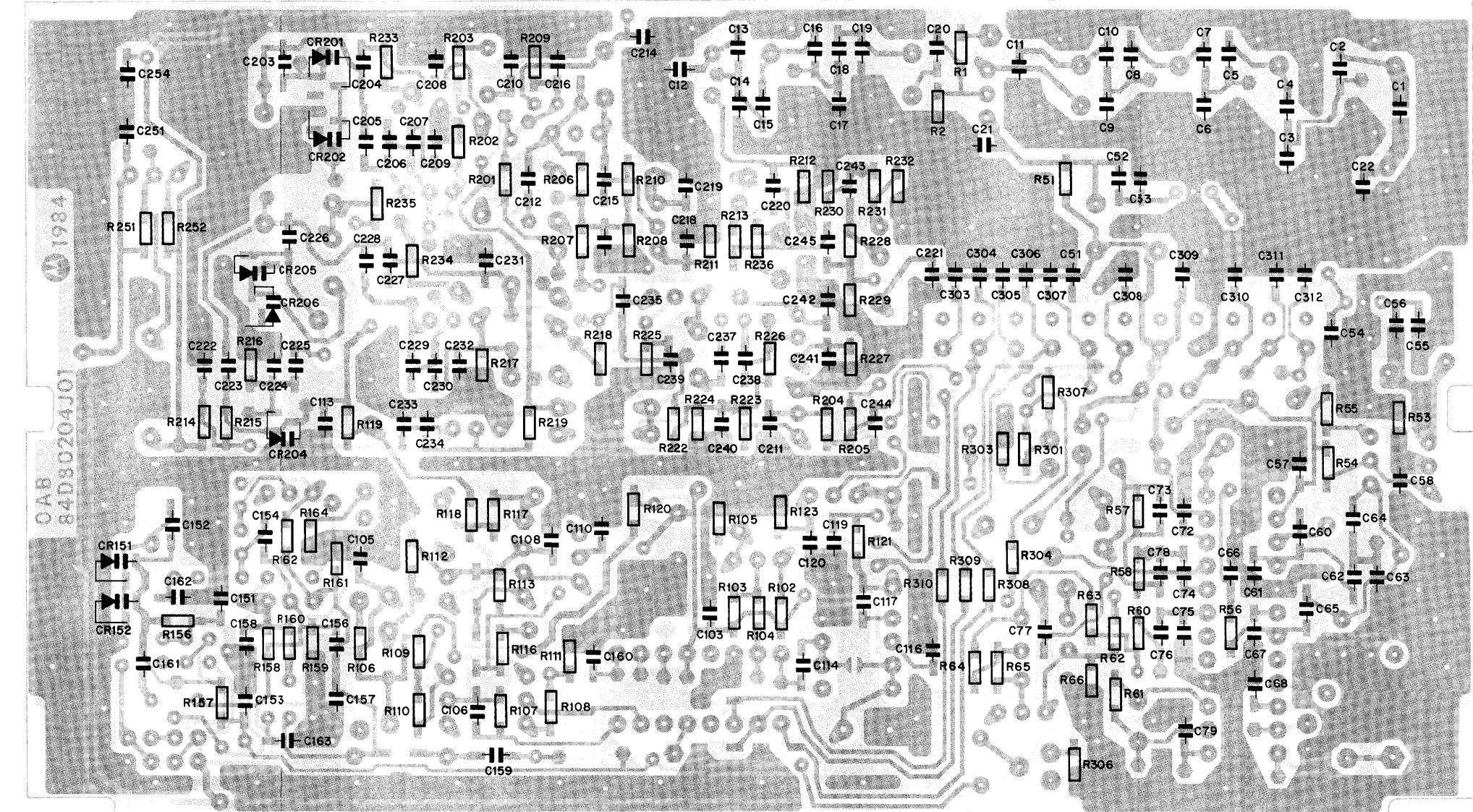
MC compact Base/Repeater Station
 GLC6051A
 25W Power Amplifier (66 - 88 MHz)
 Circuit Board Details





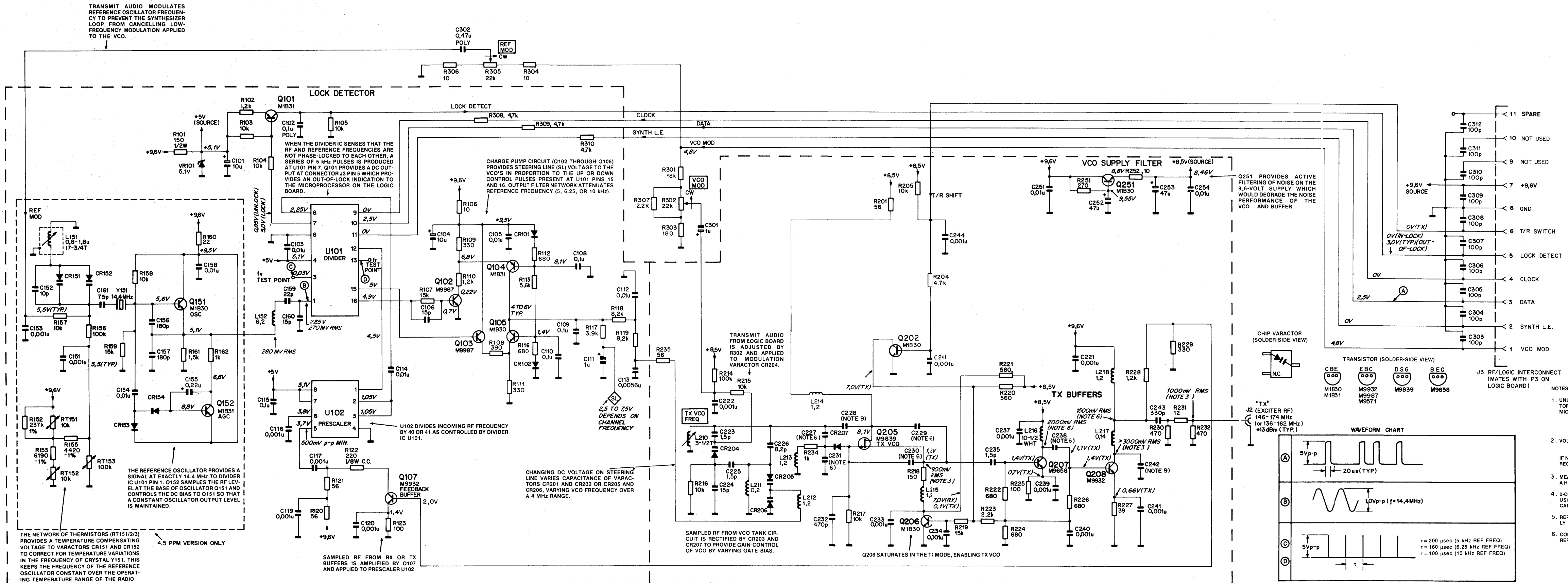
SOLDER SIDE ● GDW-1514-A
 COMPONENT SIDE ○ GDW-1513-A
 OVERLAY — GDW-1515-A

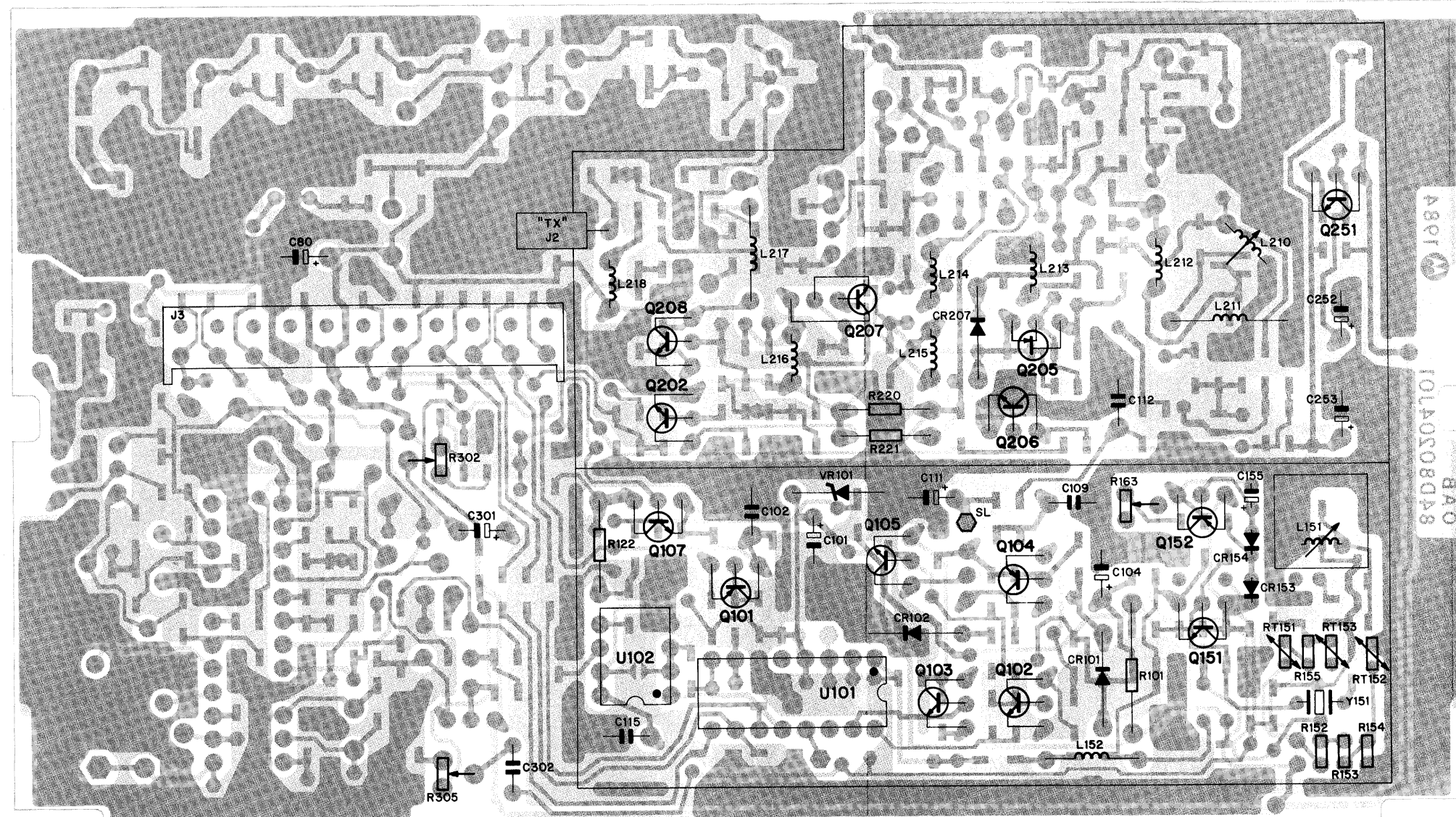
84D8030204J01
 1984
 1084
 1084
 1084



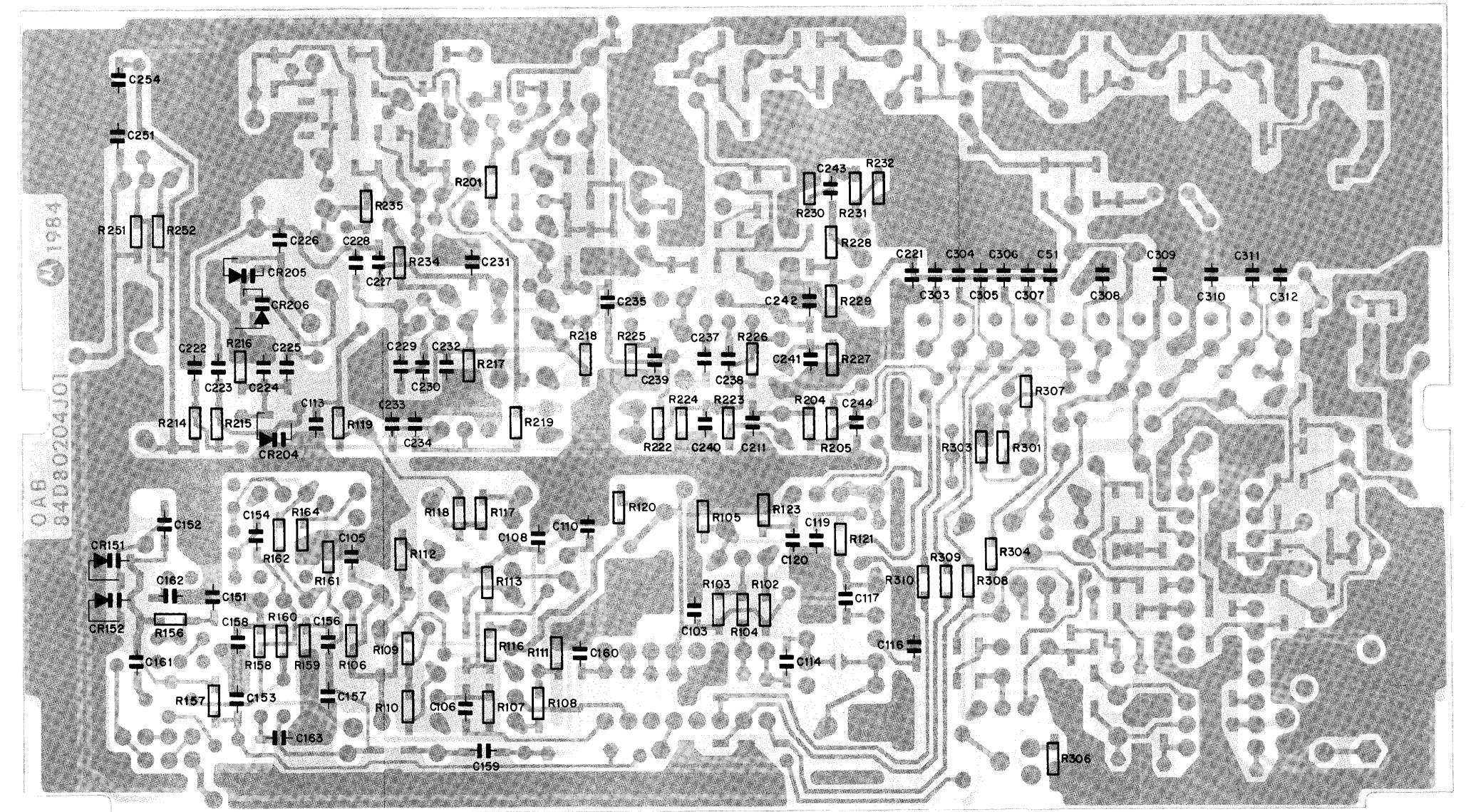
SOLDER SIDE ● GDW-1514-A (REV)
 COMPONENT SIDE ○ GDW-1513-A (REV)
 OVERLAY — GDW-1515-A

84D8030204J01
 1984
 1084
 1084
 1084

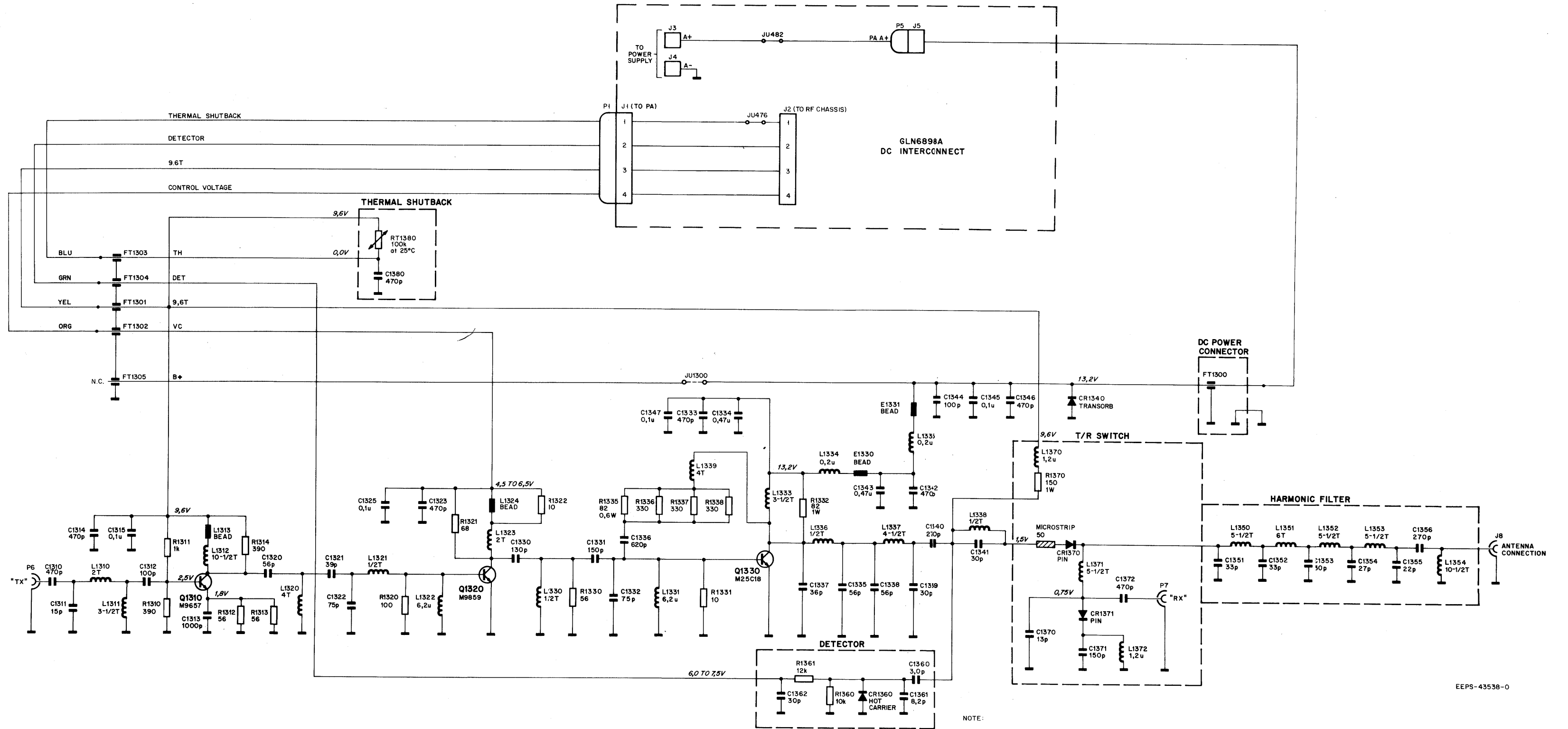




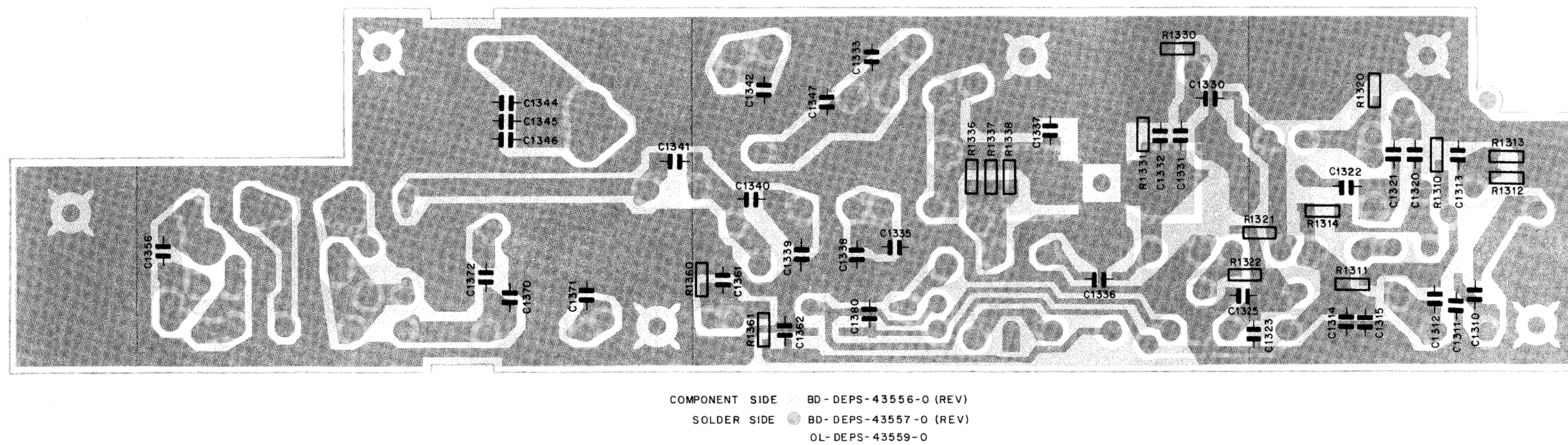
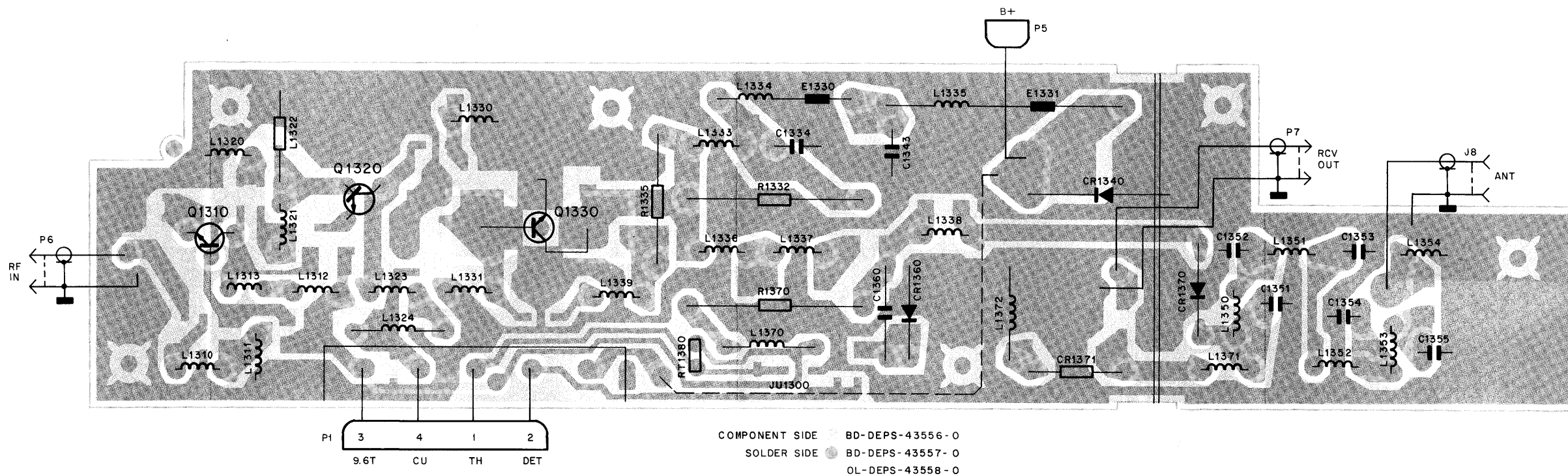
SOLDER SIDE ● DEPS-43312-0
 COMPONENT SIDE ◌ DEPS-43313-0
 OVERLAY ◌ DEPS-43314-0



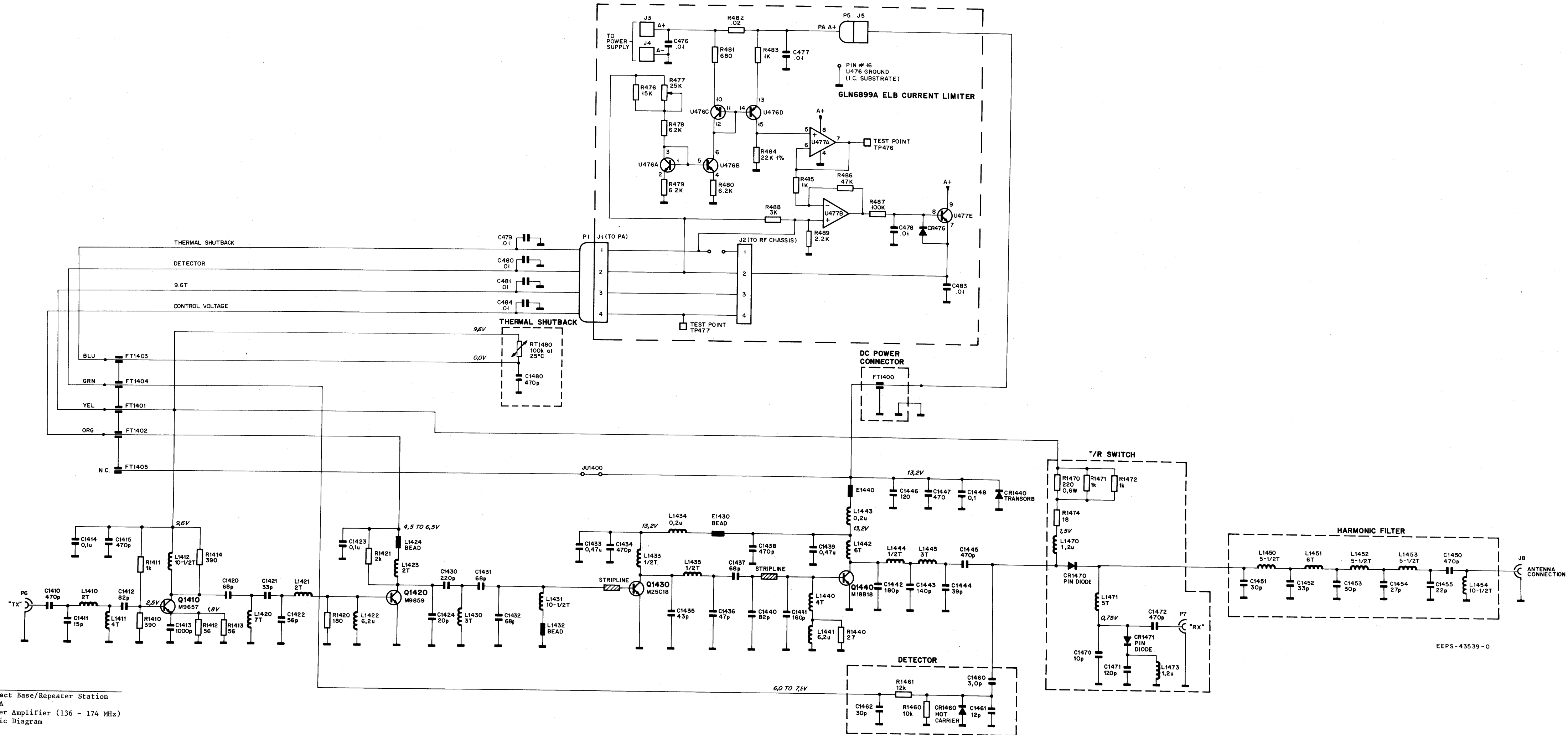
SOLDER SIDE ● DEPS-43312-0 (REVERSED)
 COMPONENT SIDE ◌ DEPS-43313-0 (REVERSED)
 OVERLAY ◌ DEPS-43315-0



MC compact Base/Repeater Station
GLD6185A
10W Power Amplifier (136 - 174 MHz)
Schematic Diagram



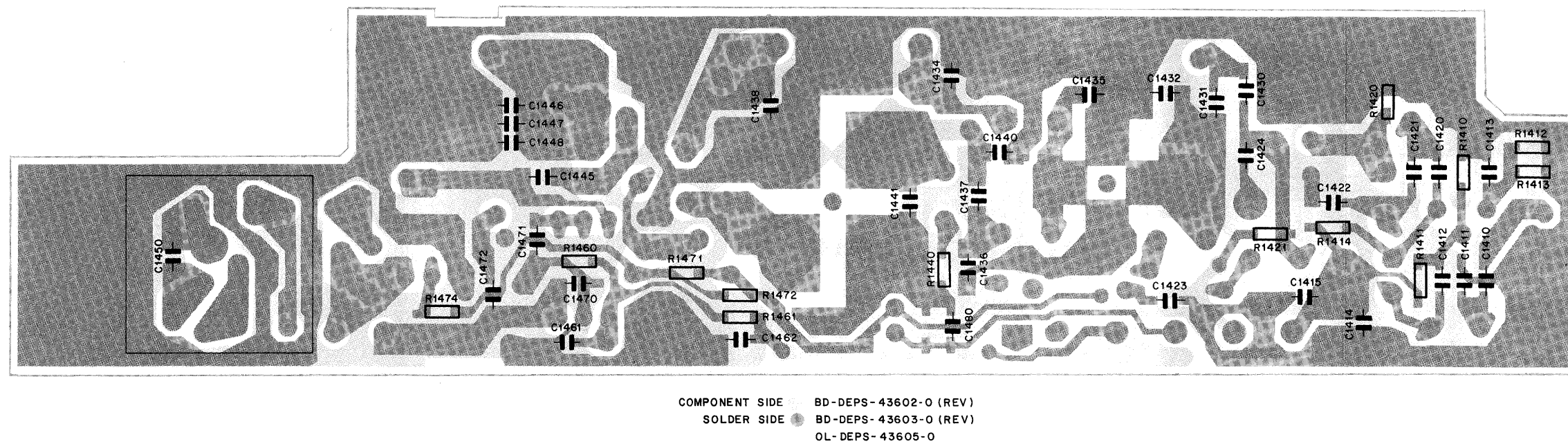
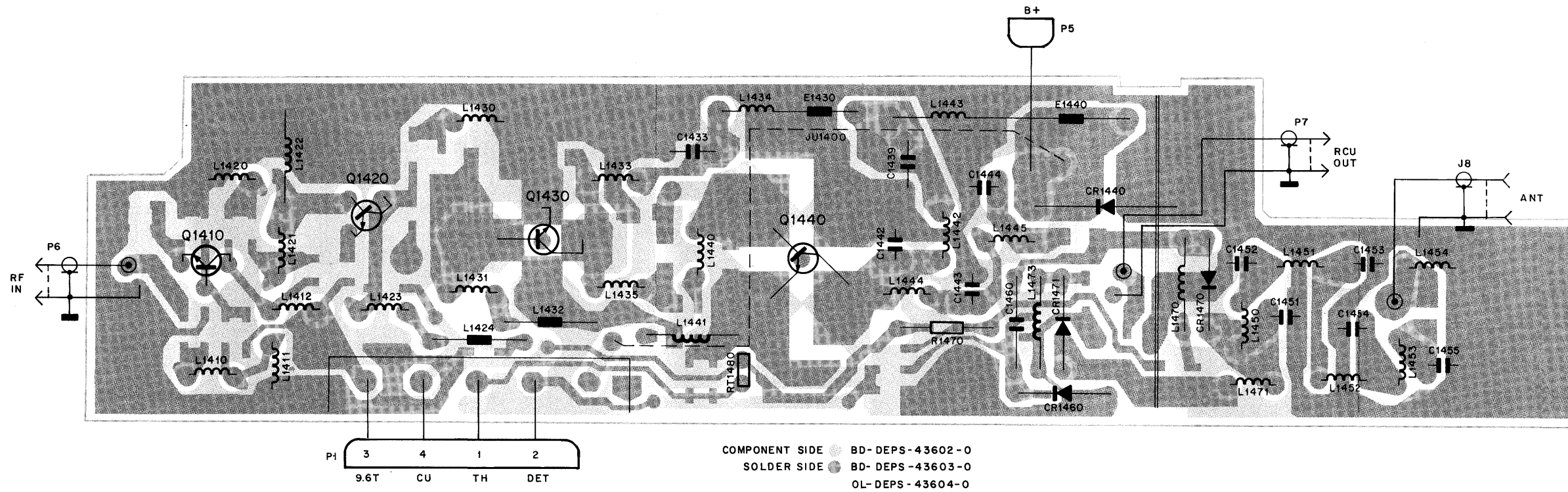
MC compact Base/Repeater Station
GLD6185A
10W Power Amplifier (136 - 174 MHz)
Circuit Board Details



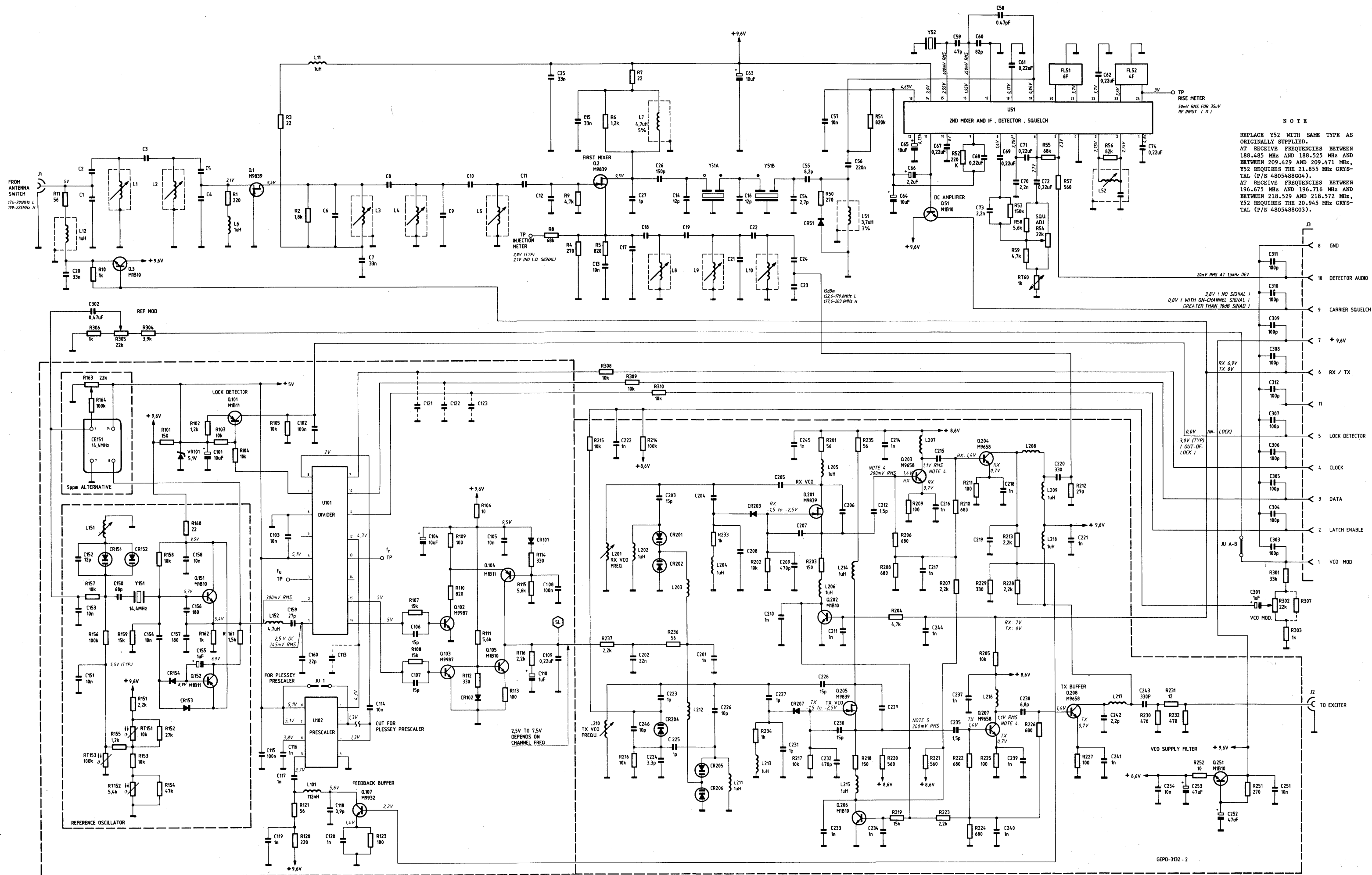
MC compact Base/Repeater Station
GLD6186A
25W Power Amplifier (136 - 174 MHz)
Schematic Diagram

NOTE:
VOLTAGES ARE DC VOLTS MEASURED UNDER
NOMINAL TRANSMIT CONDITIONS WITH
25 WATTS OUTPUT.

EEPS-43539-0

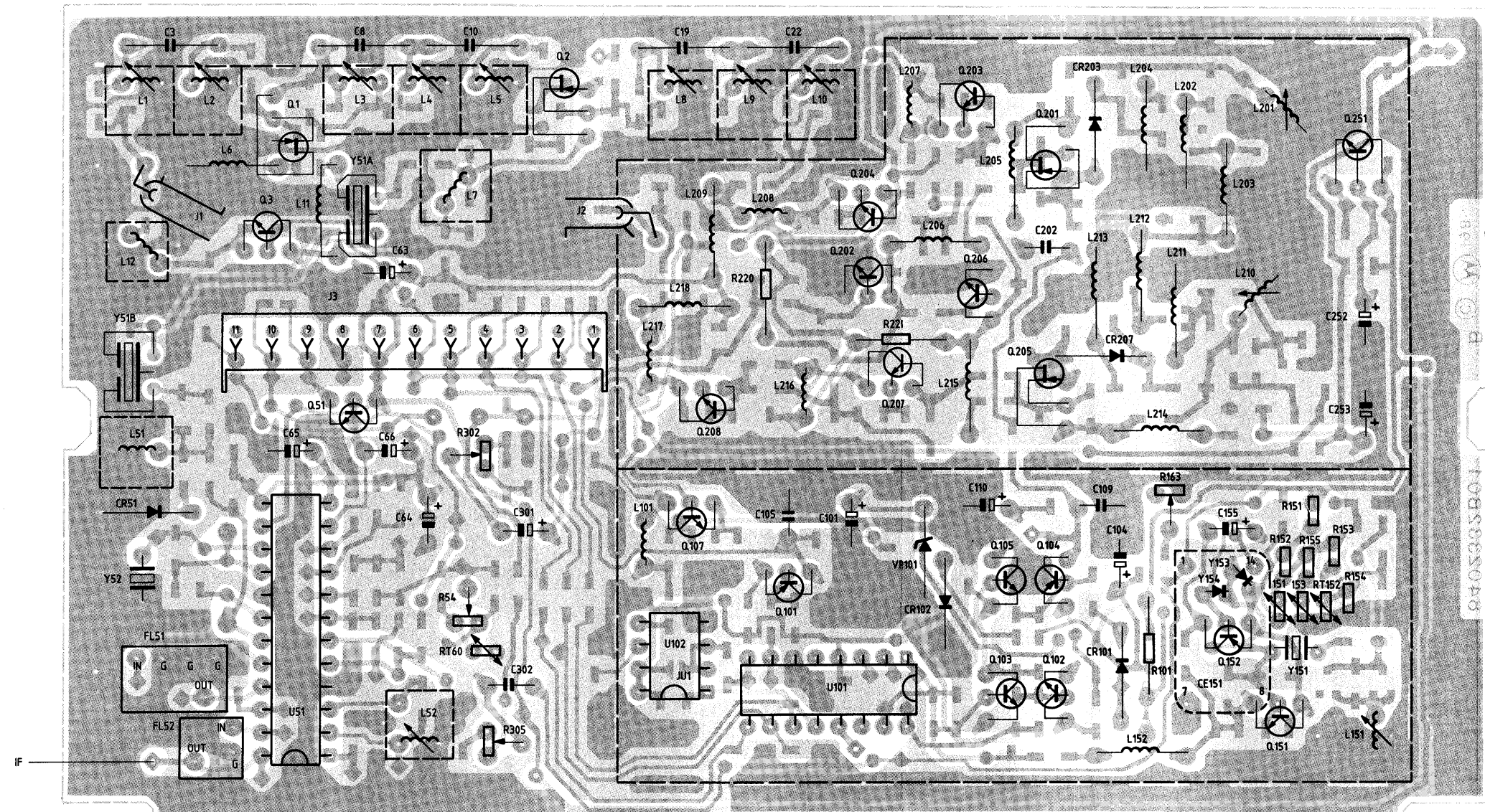


MC compact Base/Repeater Station
 GLD6186A
 25W Power Amplifier (136 - 174 MHz)
 Circuit Board Details

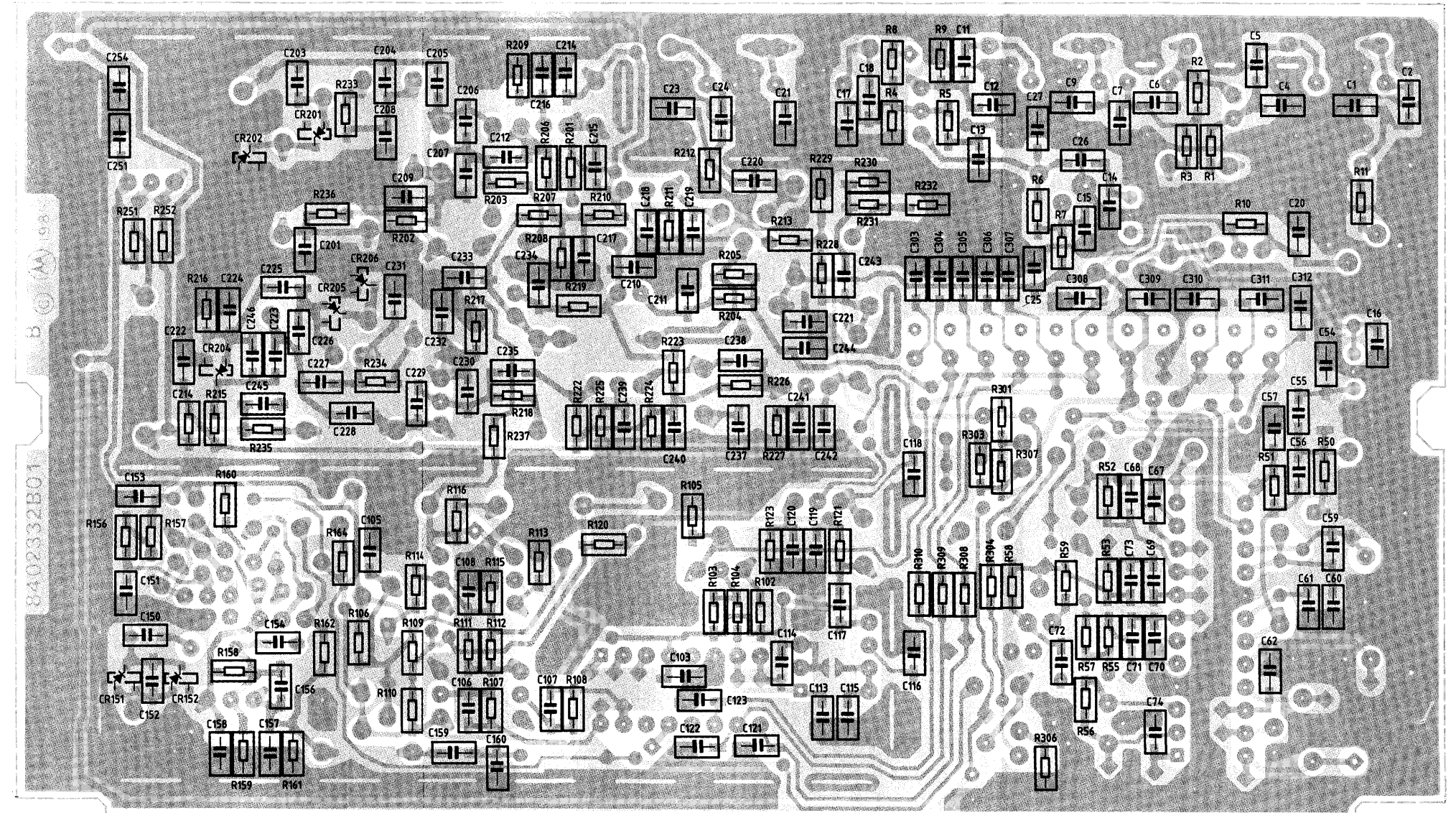


NOTE
 REPLACE Y52 WITH SAME TYPE AS ORIGINALLY SUPPLIED.
 AT RECEIVE FREQUENCIES BETWEEN 188.485 MHz AND 198.525 MHz AND BETWEEN 209.429 AND 209.471 MHz, Y52 REQUIRES THE 21.855 MHz CRYSTAL (P/N 4805488004).
 AT RECEIVE FREQUENCIES BETWEEN 196.675 MHz AND 196.716 MHz AND BETWEEN 218.529 AND 218.572 MHz, Y52 REQUIRES THE 20.945 MHz CRYSTAL (P/N 4805488003).

MC compact Base/Repeater Station
 GLD6171A & GLD6172A
 RF Board (174 - 225 MHz)
 Schematic Diagram

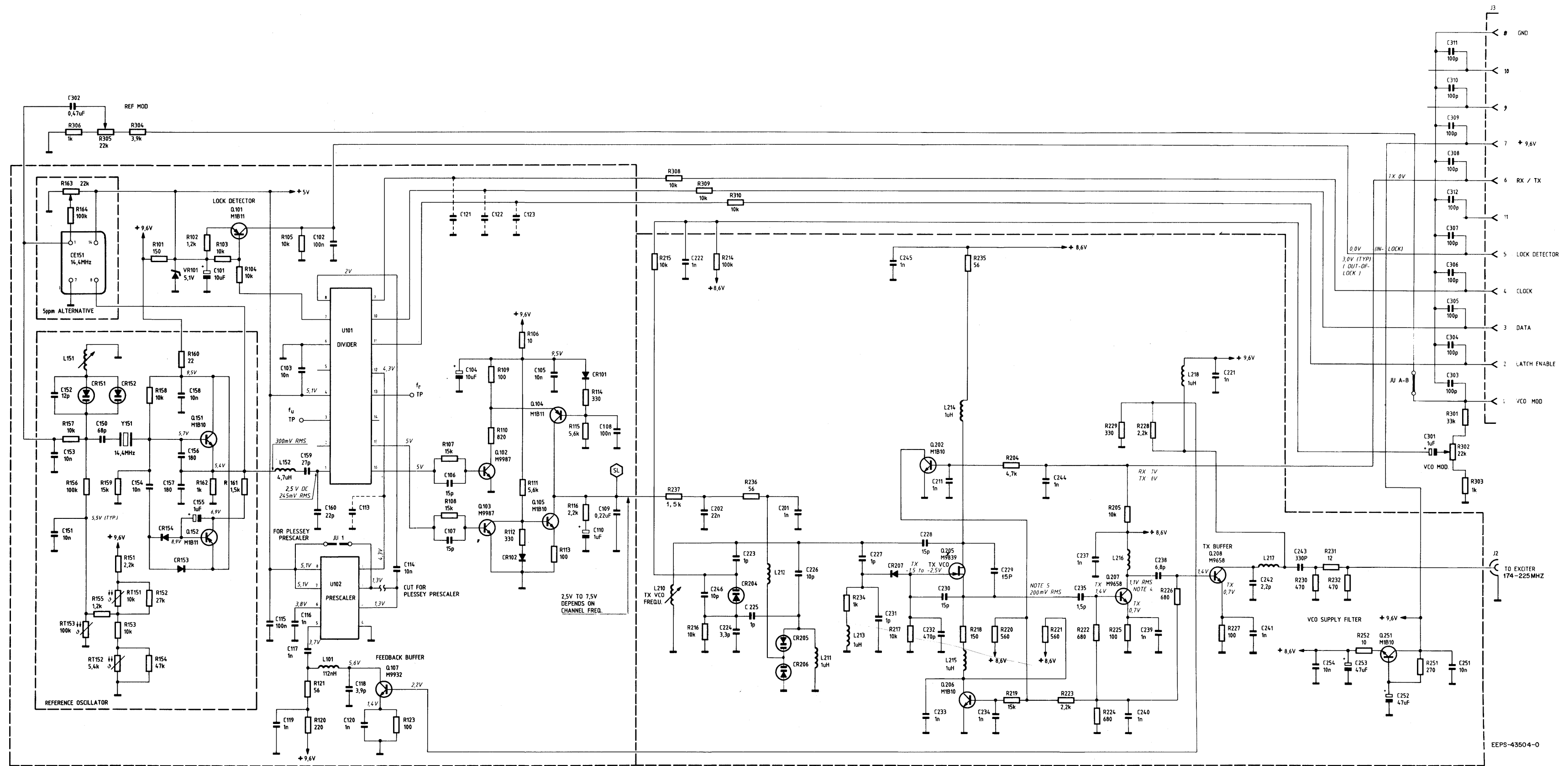


- SOLDER SIDE GEPD-3297
- COMPONENT SIDE GEPD-3296
- COMPONENT OVERLAY GEPD-3299

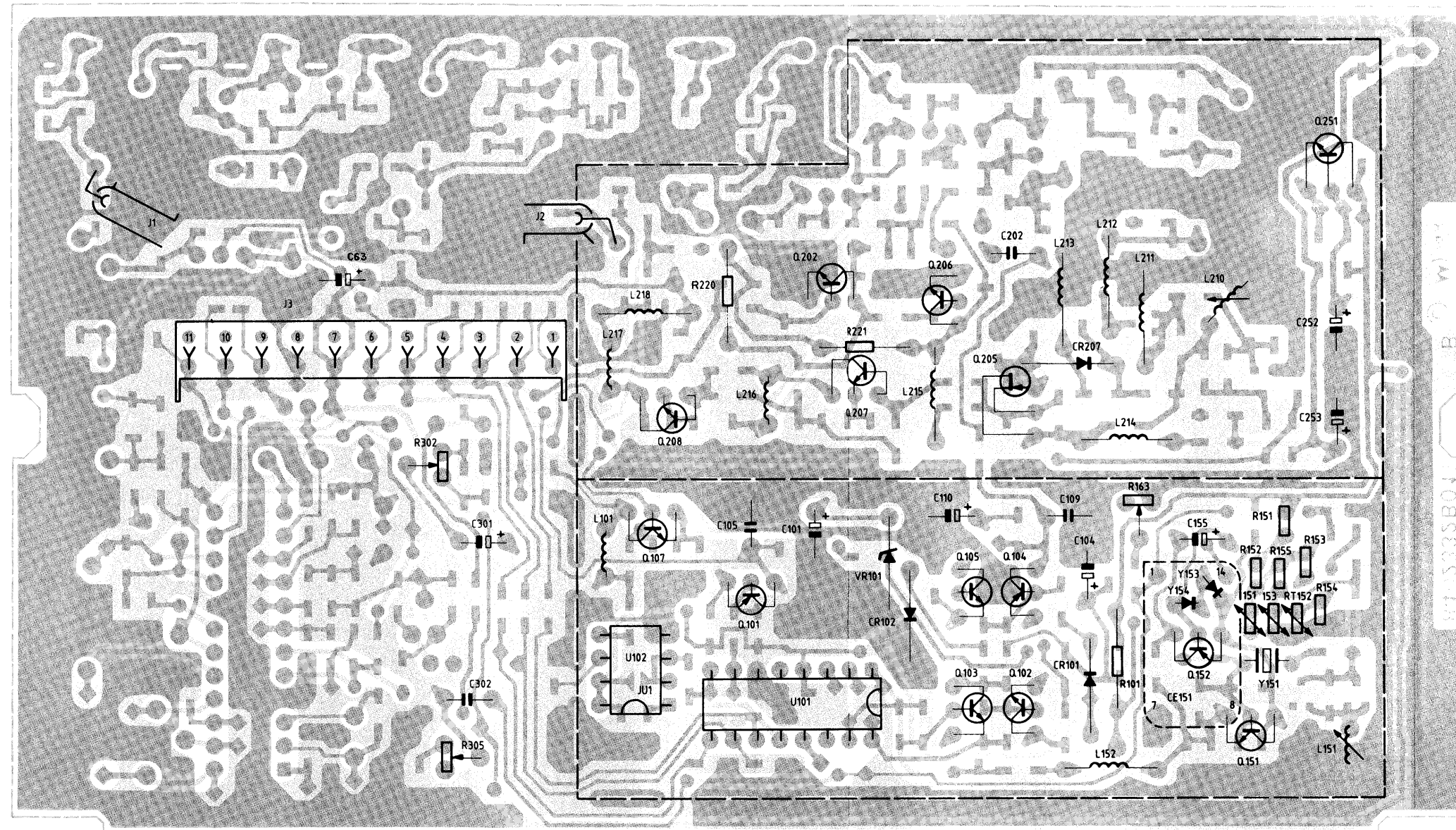


- SOLDER SIDE GEPD-3297 (REV)
- COMPONENT SIDE GEPD-3296 (REV)
- CHIP COMPONENT OVERLAY GEPD-3298

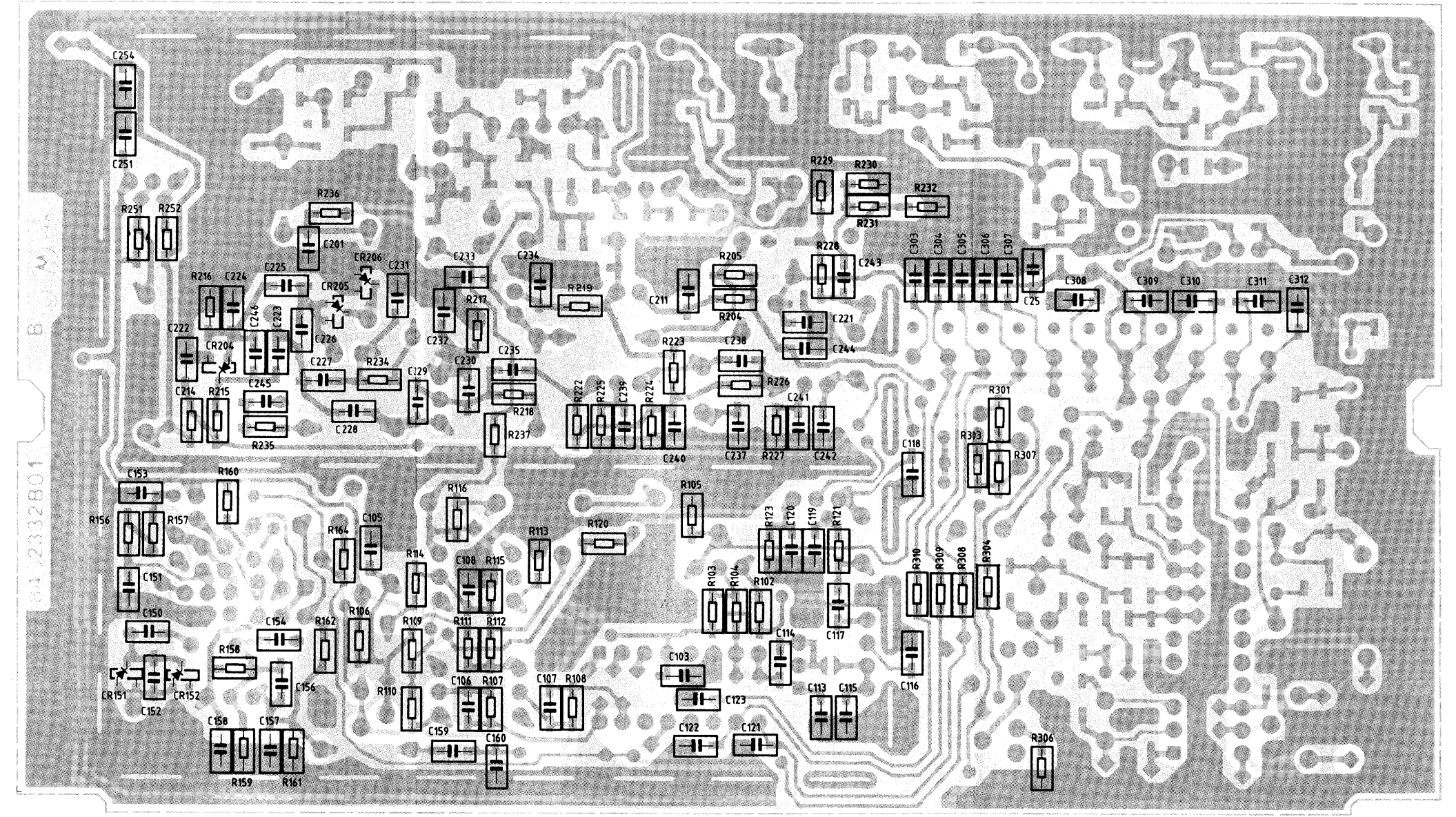
MC compact Base/Repeater Station
 GLD6171A & GLD6172A
 RF Board (174 - 225 MHz)
 Circuit Board Details



MC compact Base/Repeater Station
GLD6183A
Transmitter Board (174 - 225 MHz)
Schematic Diagram



SOLDER SIDE ● BD-DEPS-43505-0
 COMPONENT SIDE ● BD-DEPS-43506-0
 OVERLAY ● OL-DEPS-43507-0

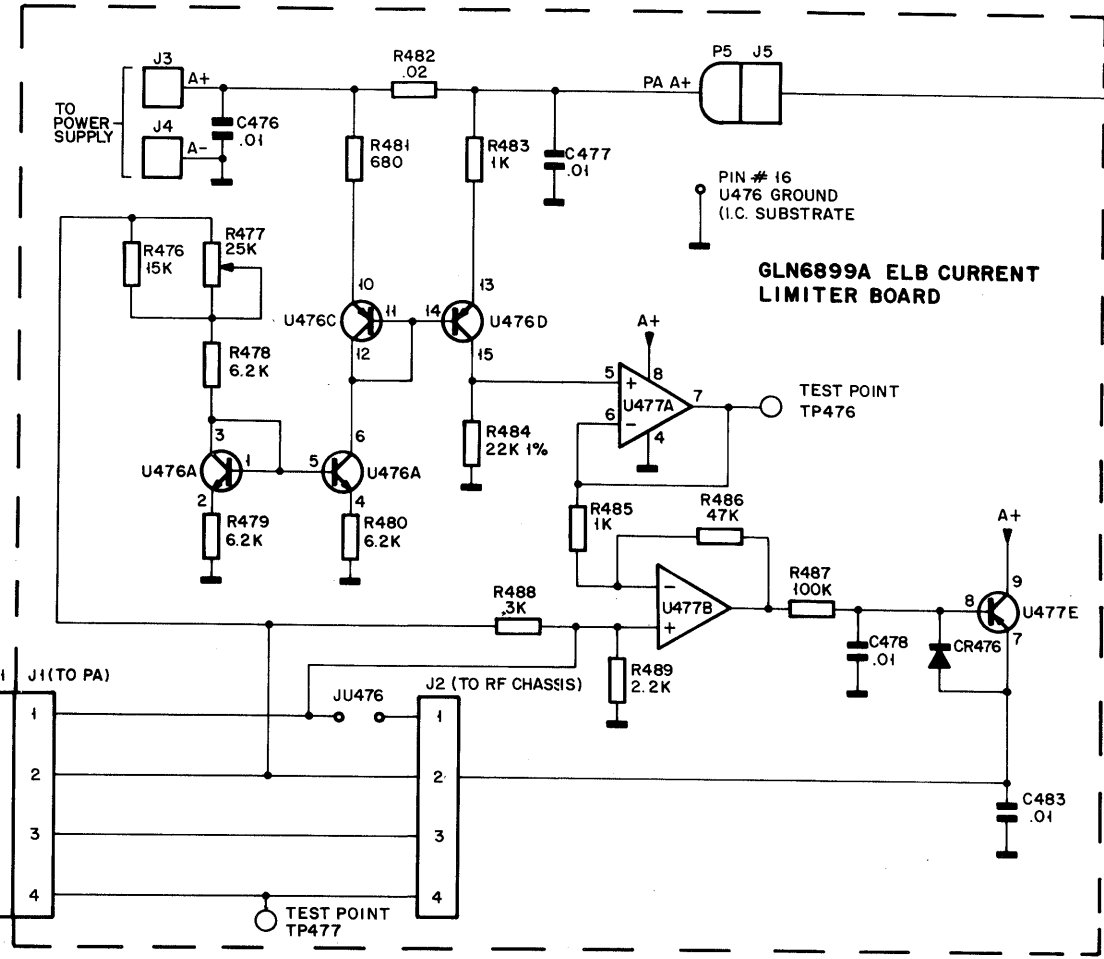
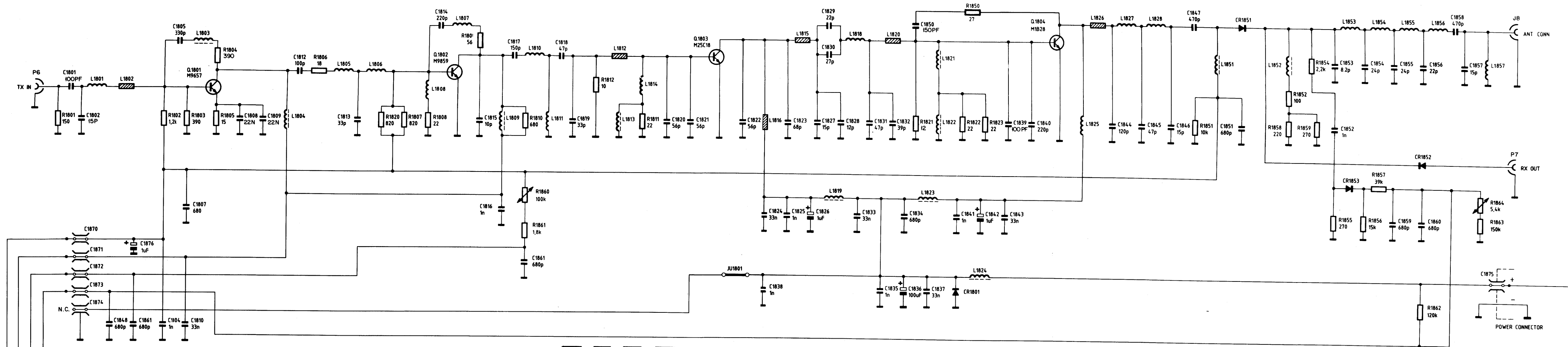


SOLDER SIDE ● BD-DEPS-43505-0 (REV)
 COMPONENT SIDE ● BD-DEPS-43506-0 (REV)
 CHIP COMPONENT OVERLAY ● OL-DEPS-43508-0

HIGH LEVEL EXCITER

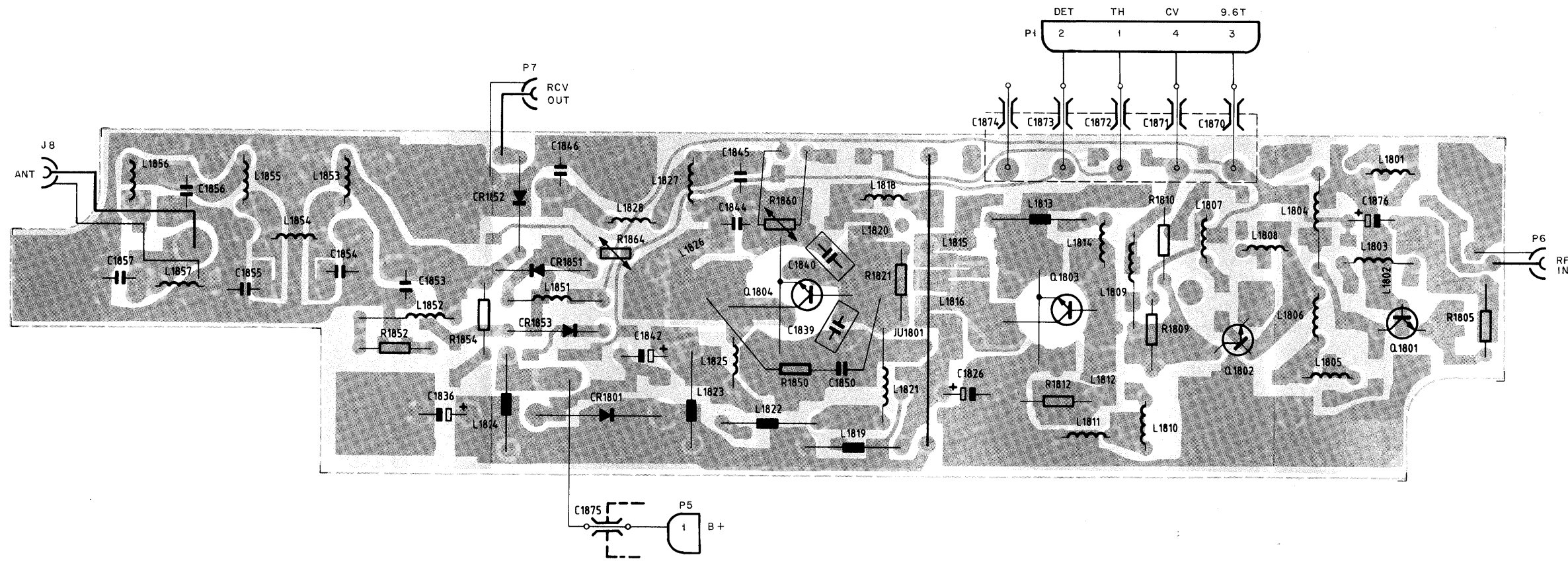
DRIVER

POWER AMPLIFIER

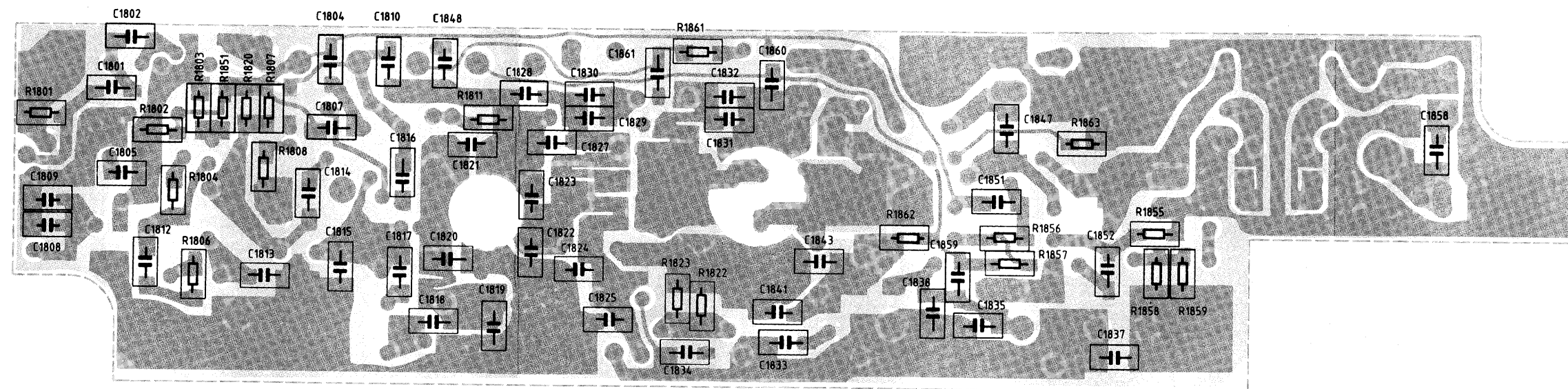


EEPS-43541-0

MC compact Base/Repeater Station
GLD6190A
25W Power Amplifier (174 - 225 MHz)
Schematic Diagram

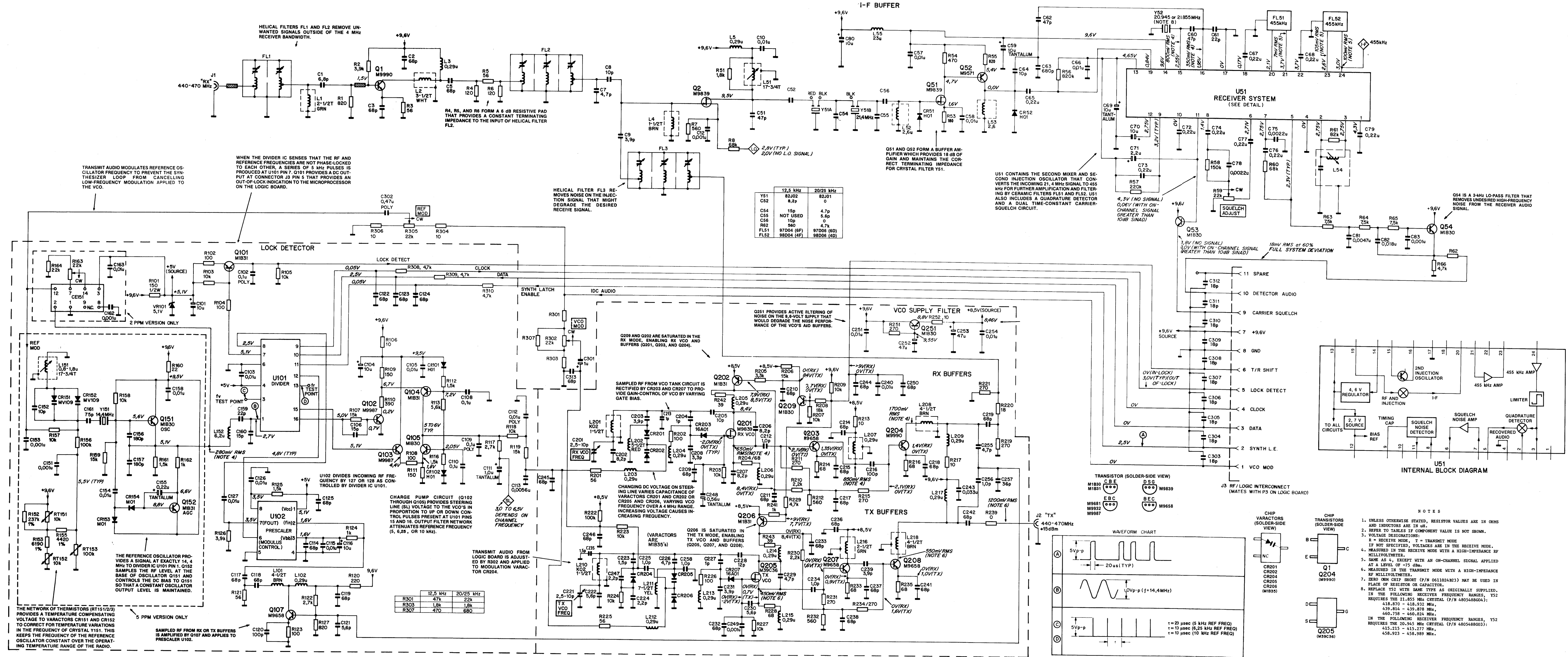


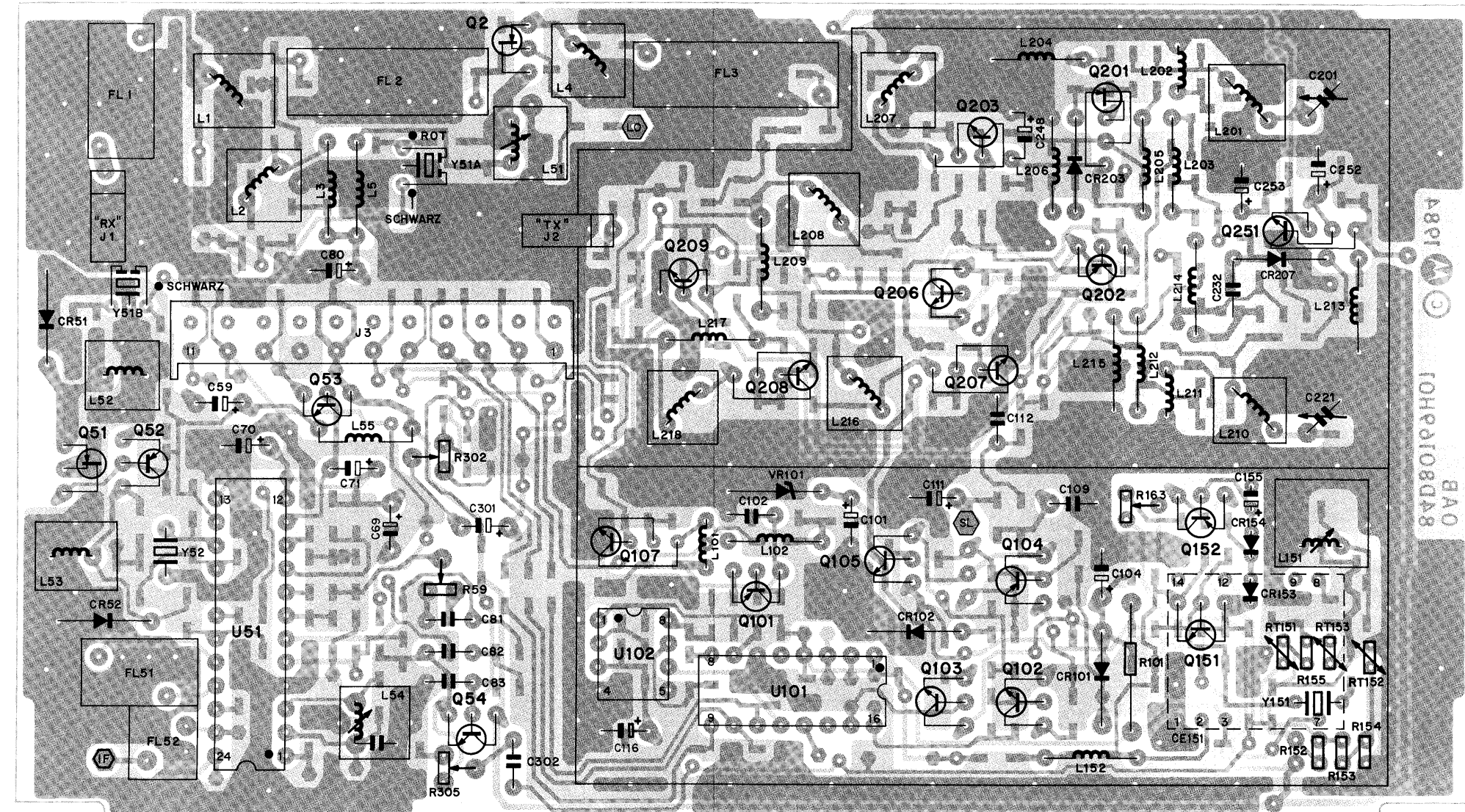
SOLDER SIDE ● BD-DEPS-43606-0
 COMPONENT SIDE ● BD-DEPS-43607-0
 ○L-DEPS-43608-0



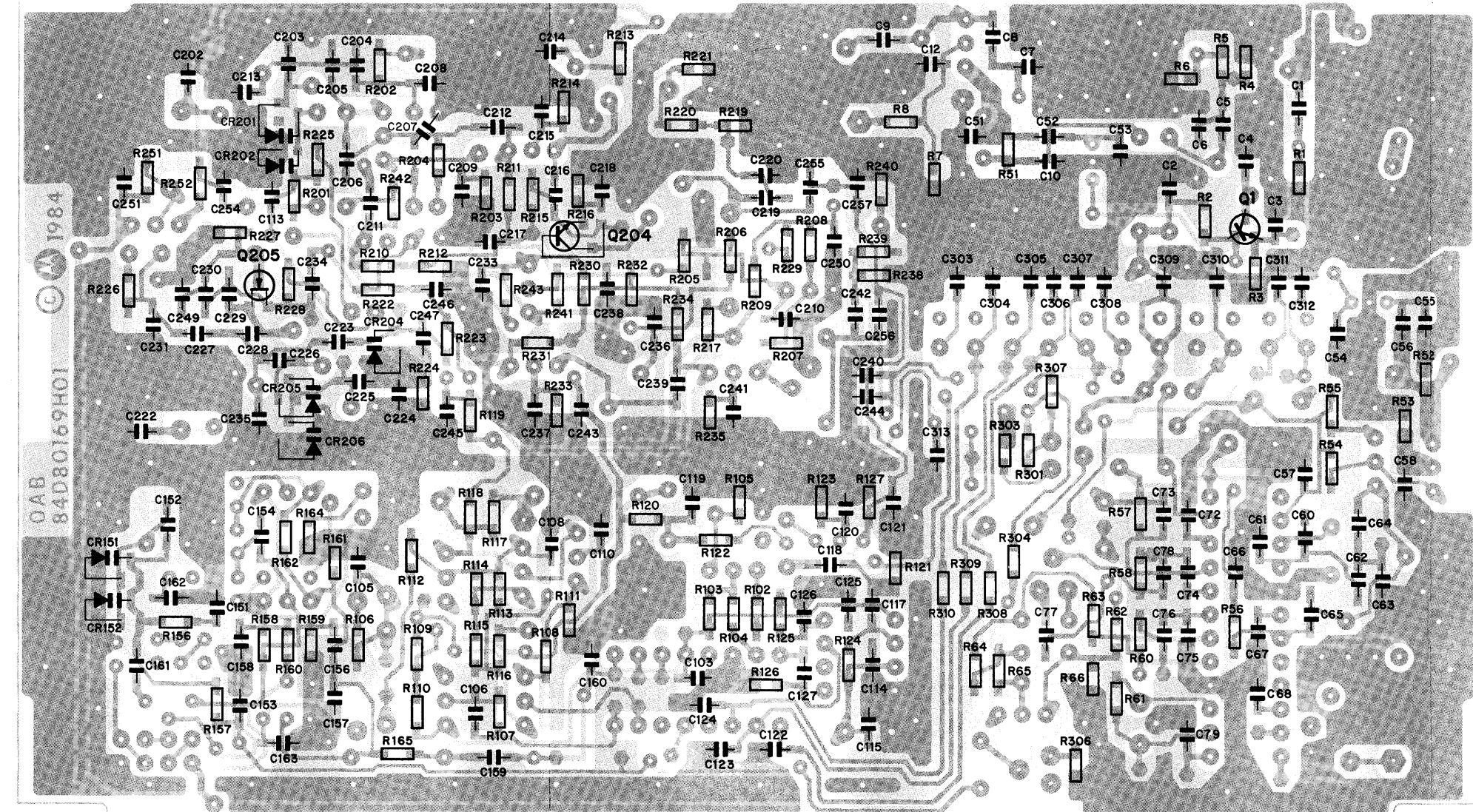
SOLDER SIDE ● BD-DEPS-43606-0 (REV)
 COMPONENT SIDE ● BD-DEPS-43607-0 (REV)
 ○L-DEPS-43609-0

MC compact Base/Repeater Station
 GLD6190A
 25W Power Amplifier (174 - 225 MHz)
 Circuit Board Details

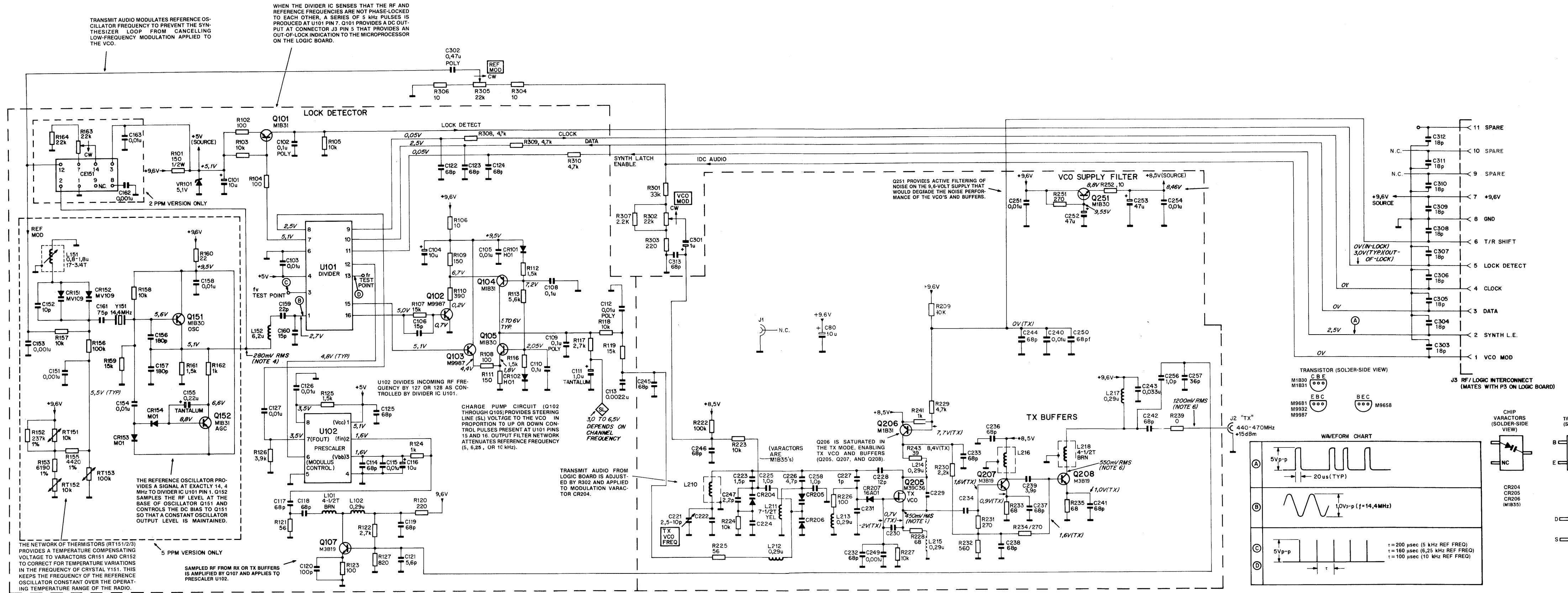




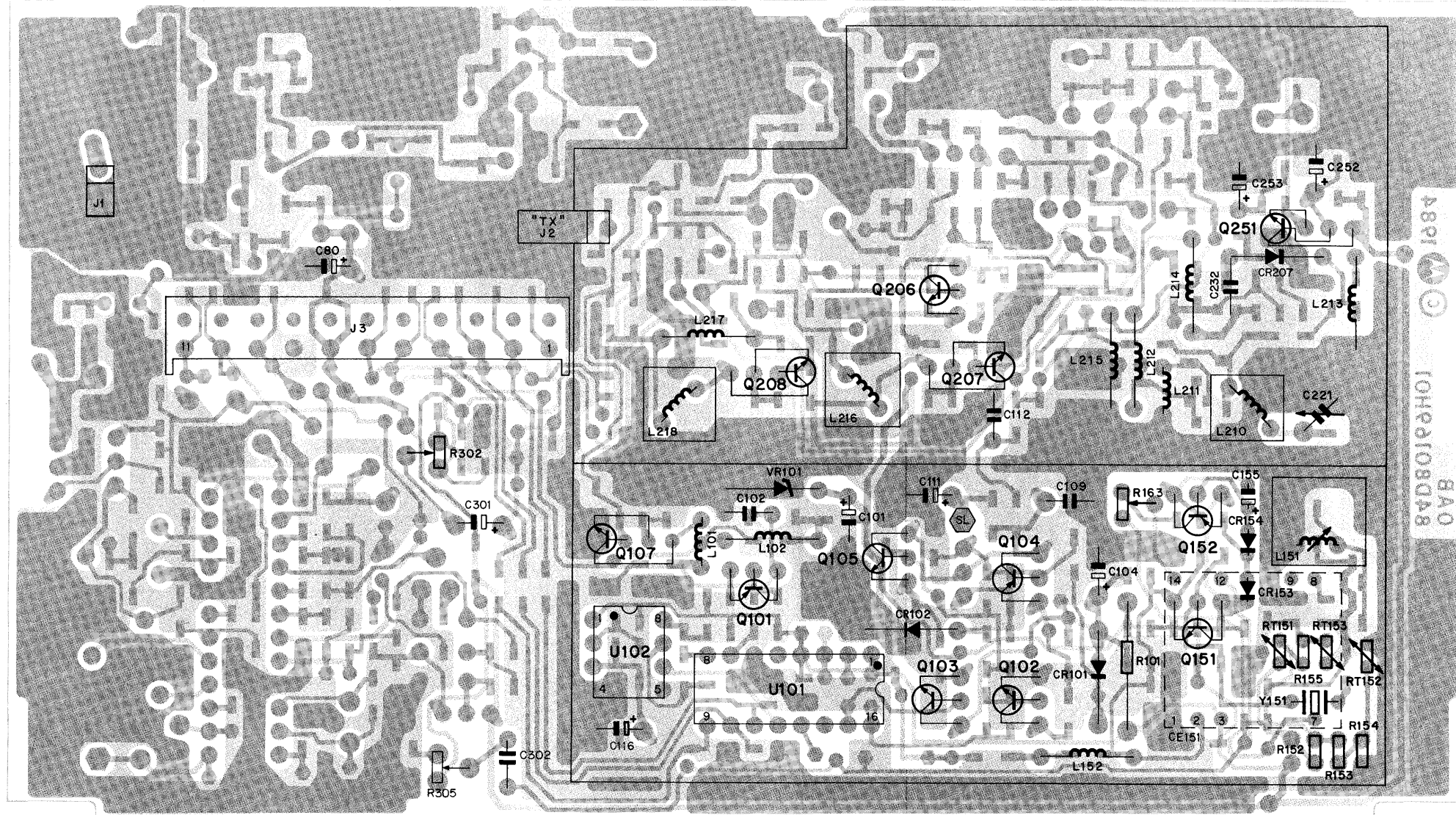
SOLDER SIDE ● GDW-1542-A
 COMPONENT SIDE ● GDW-1541-A
 OVERLAY — GDW-1543-A



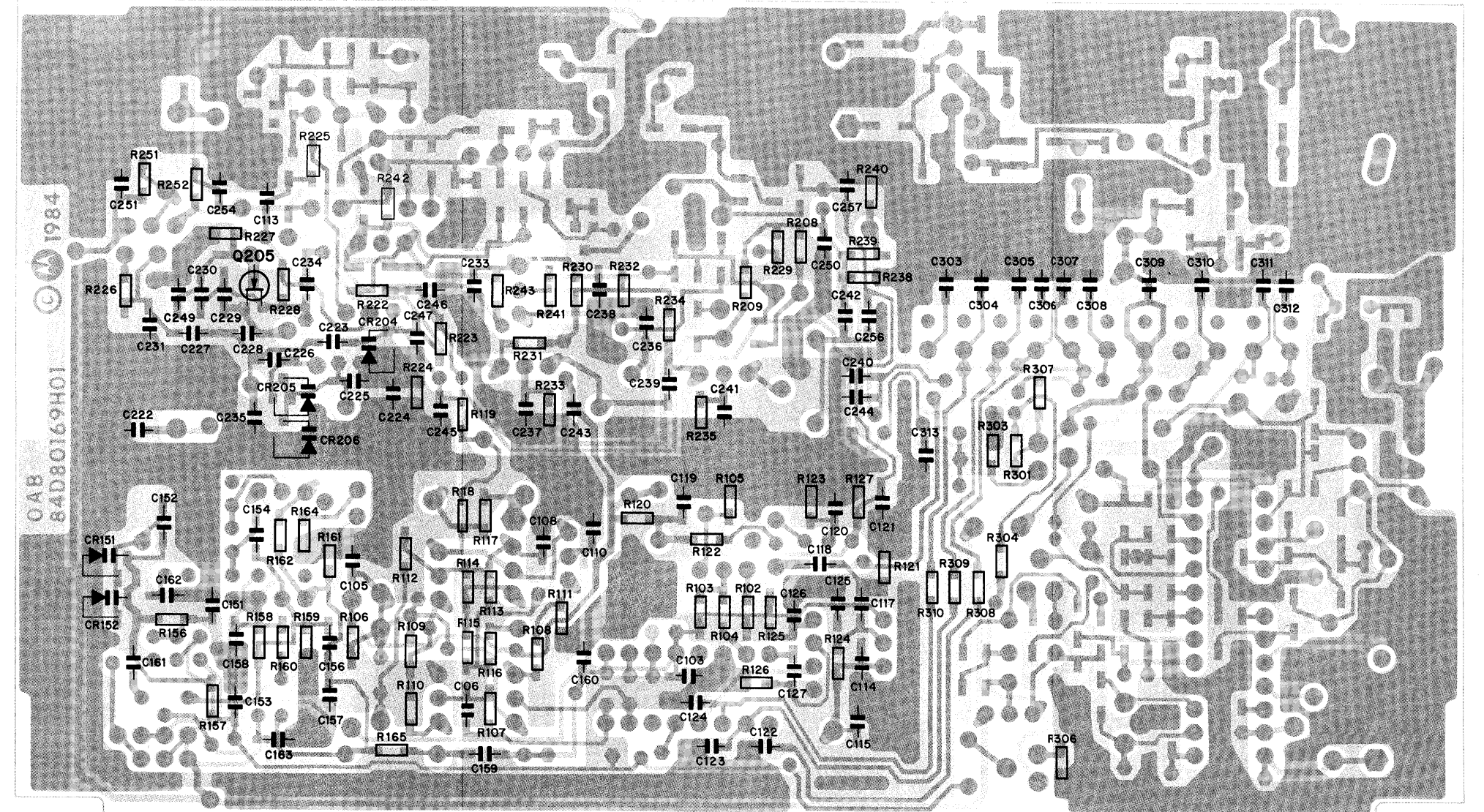
SOLDER SIDE ● GDW-1542-A (REV)
 COMPONENT SIDE ● GDW-1541-A (REV)
 OVERLAY — GDW-1544-A



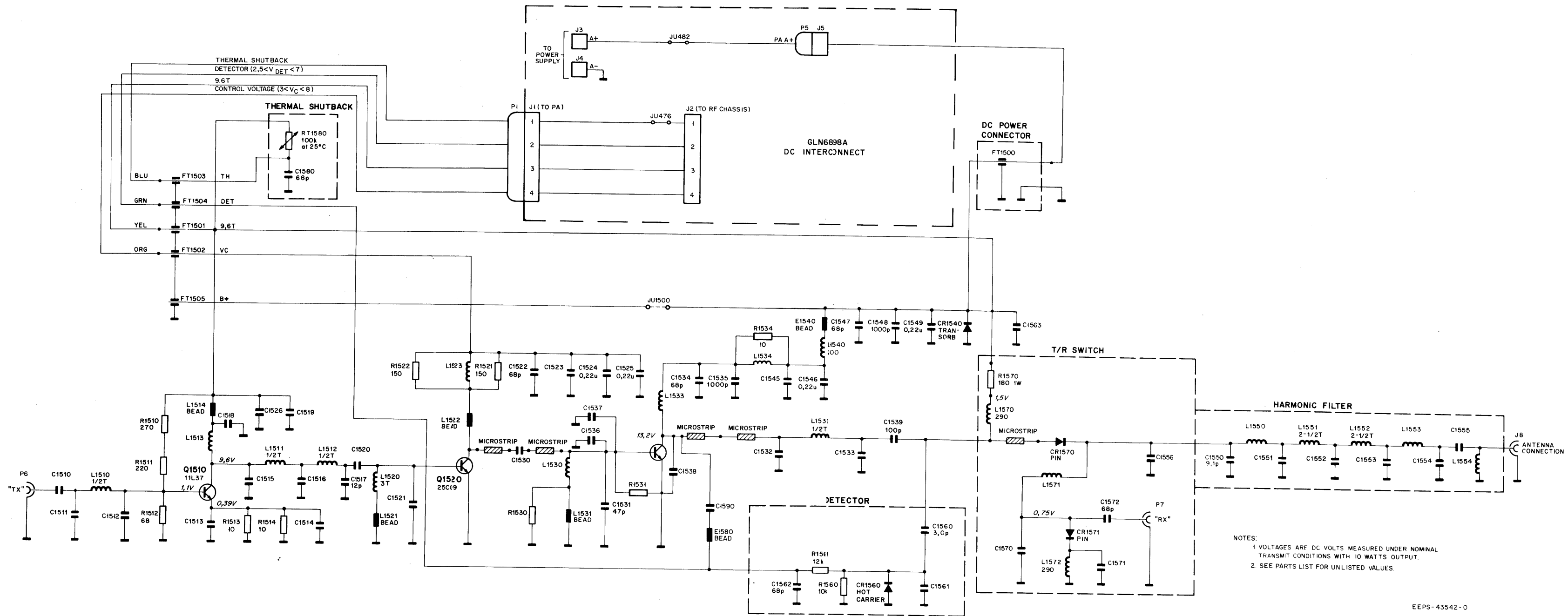
MC compact Base/Repeater Station
GLE6174A, GLE6175A, GLE6176A &
GLE6177A TX RF Board (403-470 MHz)
Schematic Diagram



SOLDER SIDE ● BD-DEPS-43525-0
 COMPONENT SIDE ○ BD-DEPS-43526-0
 OL-DEPS-43527-0



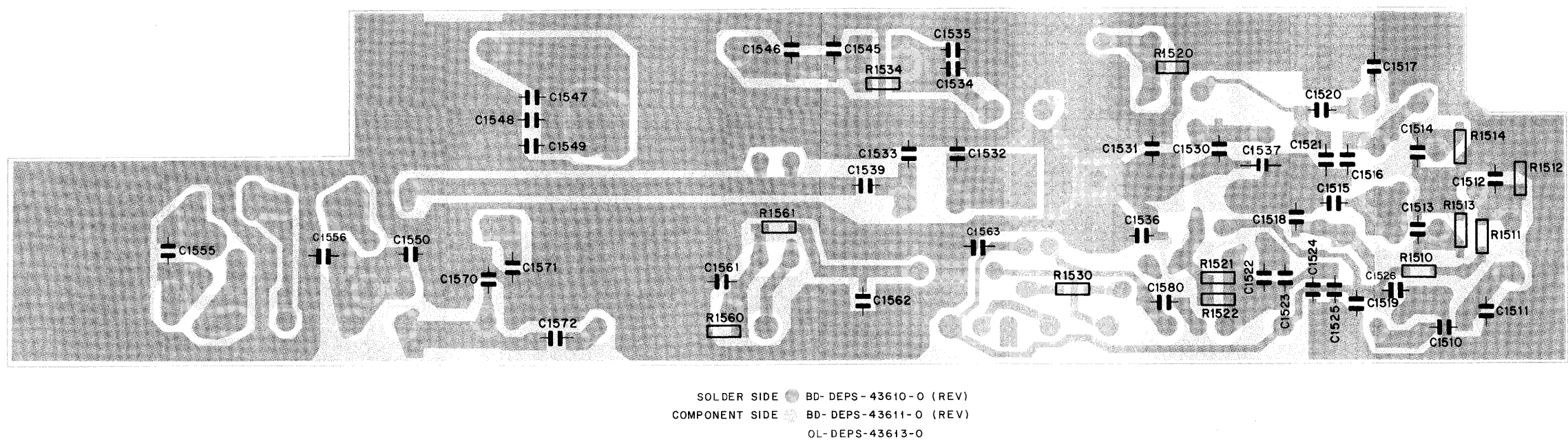
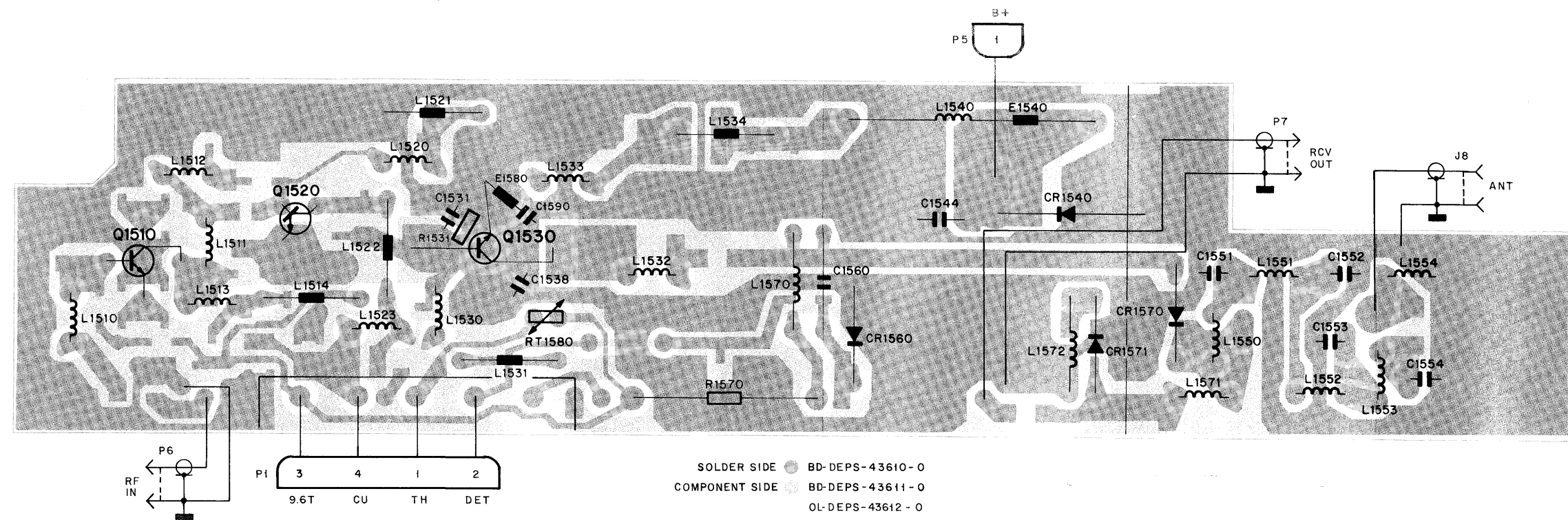
SOLDER SIDE ● BD-DEPS-43525-0 (REV)
 COMPONENT SIDE ○ BD-DEPS-43526-0 (REV)
 OL-DEPS-43528-0

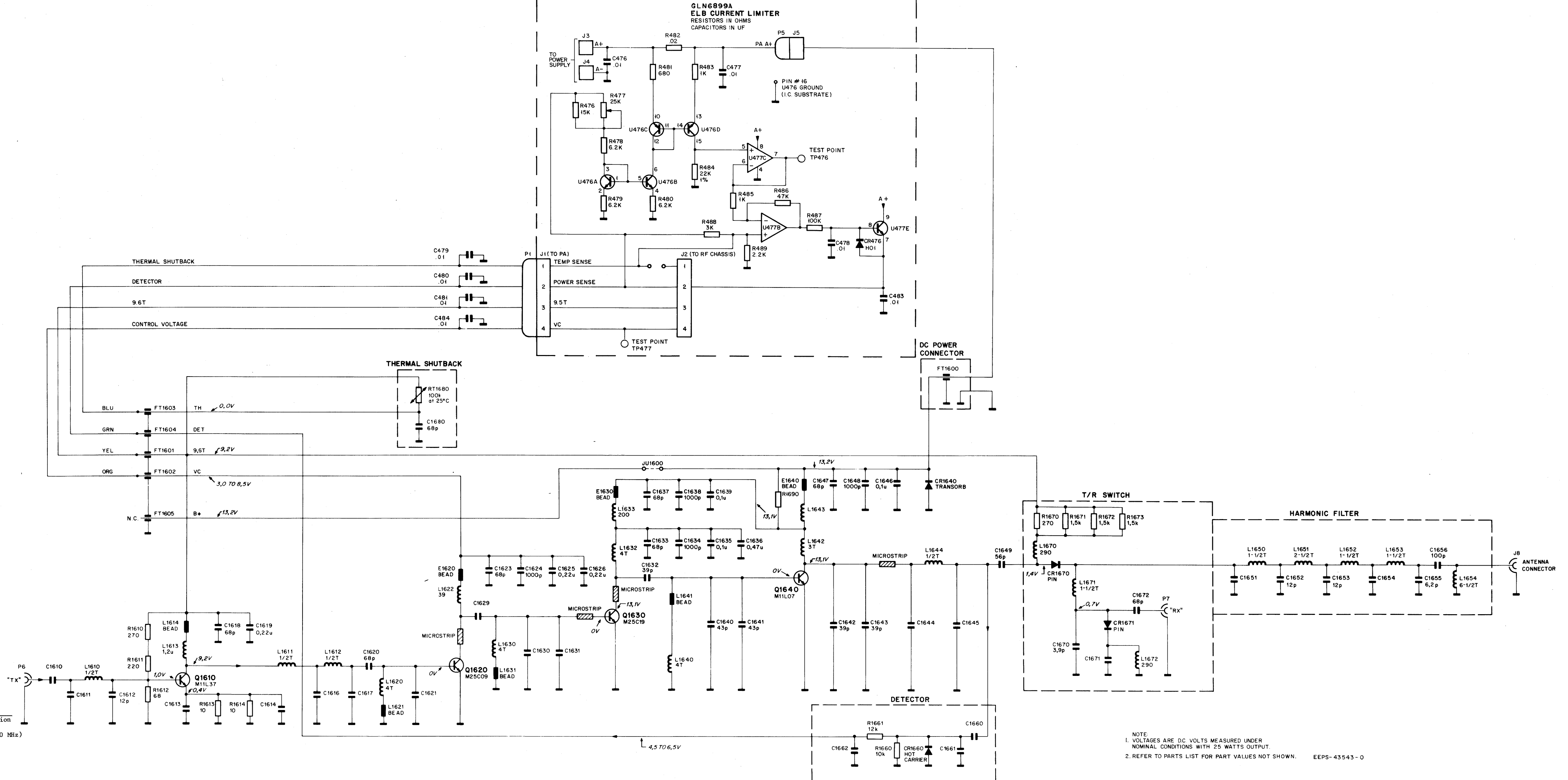


NOTES:
 1. VOLTAGES ARE DC VOLTS MEASURED UNDER NOMINAL TRANSMIT CONDITIONS WITH 10 WATTS OUTPUT.
 2. SEE PARTS LIST FOR UNLISTED VALUES.

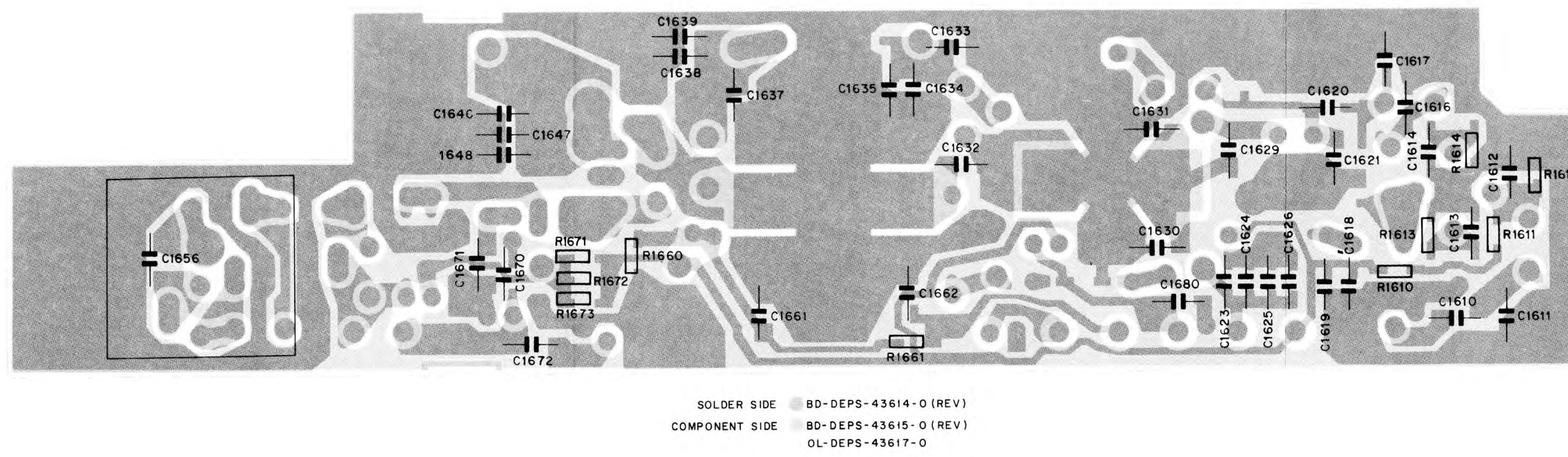
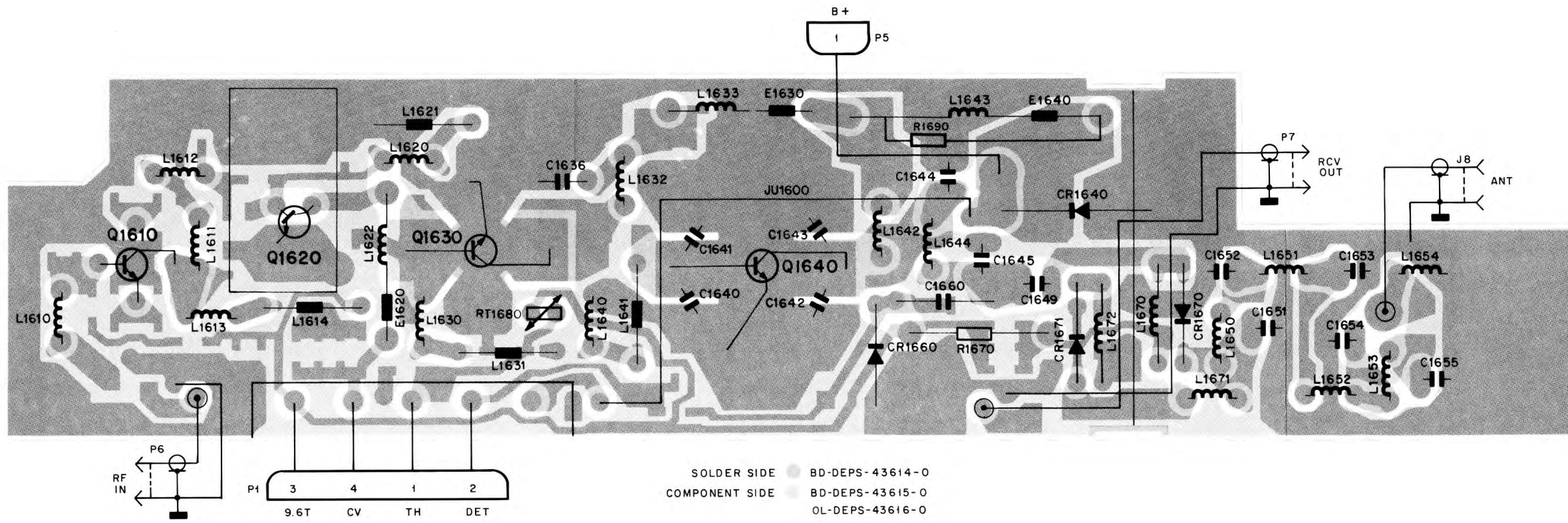
EEPS-43542-0

MC compact Base/Repeater Station
 GLE6178A & GLE6180A
 10W Power Amplifier (403 - 470 MHz)
 Schematic Diagram

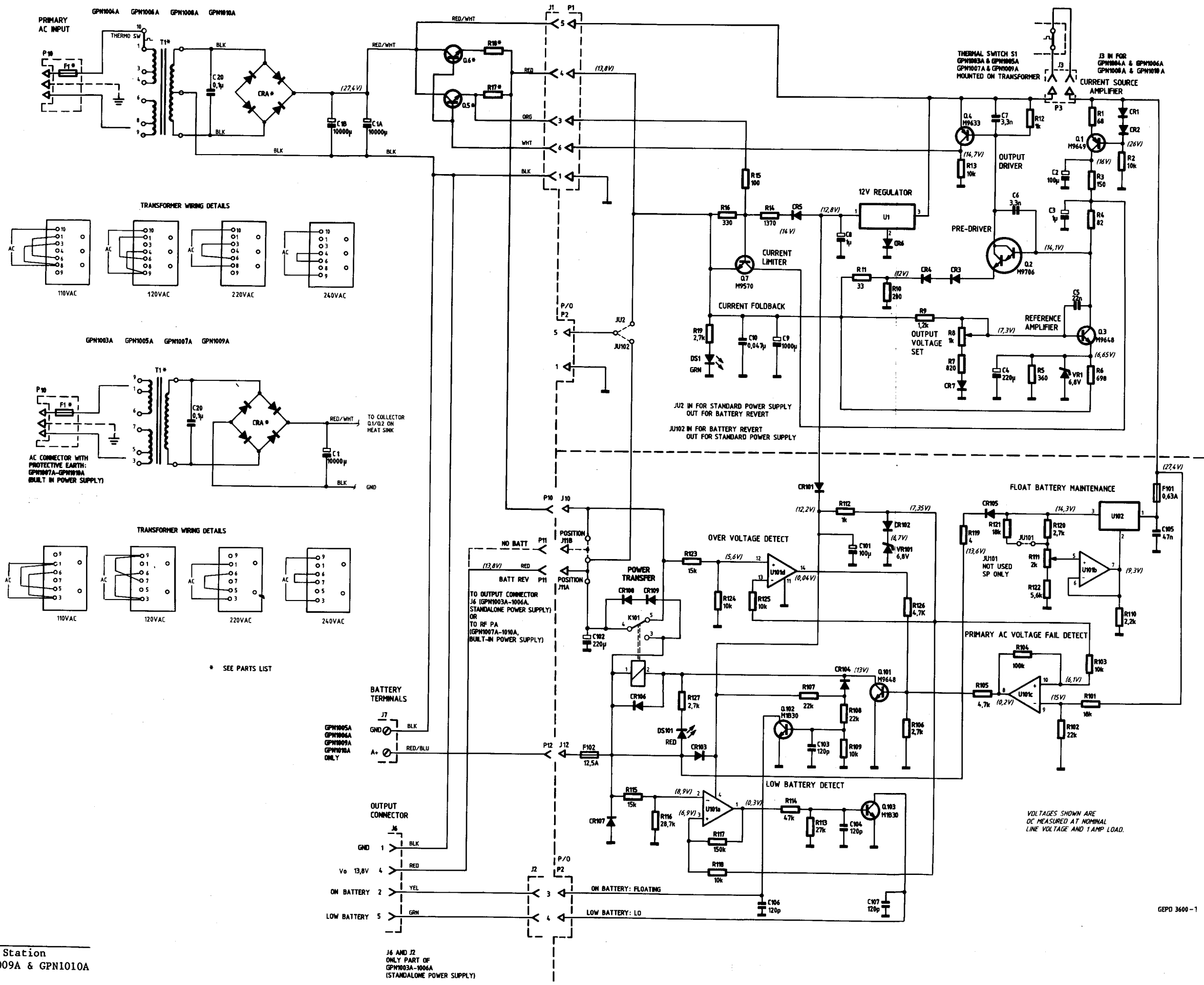




NOTE:
 1. VOLTAGES ARE DC VOLTS MEASURED UNDER NOMINAL CONDITIONS WITH 25 WATTS OUTPUT.
 2. REFER TO PARTS LIST FOR PART VALUES NOT SHOWN. EEPS-43543-0



5-59



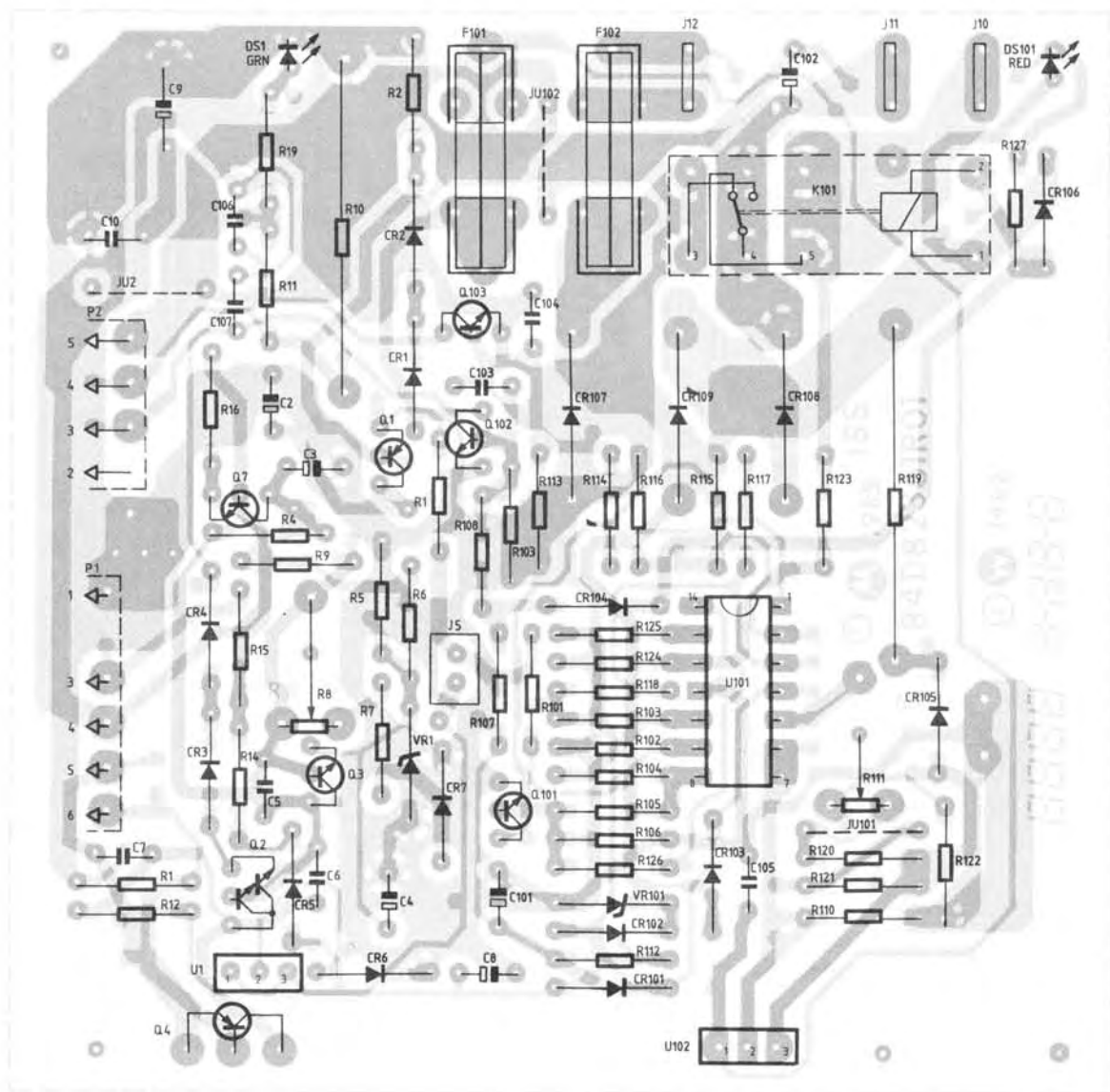
GPN1005A & GPN1006A
GPN1009A & GPN1010A
(BATTERY REVERT)
ONLY

VOLTAGES SHOWN ARE
DC MEASURED AT NOMINAL
LINE VOLTAGE AND 1 AMP LOAD.

GEPO 3600-1

5-60

MC compact Base/Repeater Station
GPN1007A, GPN1008A, GPN1009A & GPN1010A
Power Supplies
Schematic Diagram



● OVERLAY GEPD 3603-1

MC compact Base/Repeater Station
 GPN1007A, GPN1008A, GPN1009A & GPN1010A
 Power Supplies
 Regulator Boards (GLN6779A & GLN6780A)

(The next page is 6-1)

SECTION 6

PARTS LISTS

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| GKN6165A | Cable, ETRC Repeater Station | 6-2 |
| GKN6180A | Cable, AC Power 110/120 V 3-wire | 6-2 |
| GKN6181A | Cable, AC Power 110/120 V 2-wire | 6-2 |
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| GLC6051A | Power Amplifier 25 W 66-88 MHz..... | 6-8 |
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| GLD6172A | RF Board 199-225 MHz | 6-15 |
| GLD6177A | RF Hardware Box | 6-17 |
| GLD6179A | Transmitter RF Board 136-162 MHz | 6-17 |
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| GLD6183A | Transmitter RF Board 174-225 MHz | 6-19 |
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| GLE6144A | RF Board 25 kHz Tx: 438-450 MHz, Rx: 420-433 MHz 5ppm | 6-29 |
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| GLE6147A | RF Board 25 kHz 403-433 MHz 2ppm | 6-32 |
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| GLE6151A | RF Board 25 kHz Tx: 438-450 MHz, Rx: 420-433 MHz 2ppm | 6-38 |
| GLE6153A | RF Board 12.5 kHz 403-433 MHz 2 ppm | 6-40 |
| GLE6154A | RF Board 12.5 kHz 438-470 MHz 2 ppm | 6-42 |
| GLE6156A | RF Board 12.5 kHz Tx: 420-433 MHz, Rx: 438-450 MHz 2ppm | 6-44 |
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| GLE6175A | Transmitter RF Board 403-433 MHz 5 ppm | 6-49 |
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| GLN6881A | RAT Decoder Code Plug | 6-66 |
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| GSN6036A | Speaker 3W 4 Ohms | 6-68 |

GKN6153A Cable, AC Power w/ U.K. Plug

| SYMBOL | PART NO. | DESCRIPTION |
|--------|------------|---------------|
| | 3002695B05 | PLUG, UK type |

GKN6164A Cable, ETRC Base Station
GKN6165A Cable, ETRC Repeater Station

| SYMBOL | PART NO. | DESCRIPTION |
|--------|----------|-------------|
|--------|----------|-------------|

SPARK GAP:

| | | |
|---------------|------------|---------|
| E801- E804 | 8083029H01 | 230V DC |
|---------------|------------|---------|

| | | |
|-----|------------|---|
| J10 | 2884506E08 | <u>CONNECTOR, receptacle:</u> Male, 25-contact |
|-----|------------|---|

CONNECTOR, plug:

| | | |
|-----|------------|---------------------------|
| P1 | 1582694R03 | Housing, 4-position |
| P2 | 1582694R03 | Housing, 4-position |
| | 3982693R02 | receptacle, crimp, 4 used |
| P3 | 2802098M03 | Female, (p/o PA) |
| P3 | 1583498F41 | Hsng, 4-posn (p/o ETRC) |
| | 2983499F01 | terminal, 4 used |
| P6 | 1580151J01 | Housing, connector |
| | 0980257H01 | female, crimp-on, 4 used |
| P11 | 2802098M03 | Female, single contact |

| | | |
|-----|------------|--------------------------------------|
| TB1 | 3184145N03 | <u>TERMINAL BOARD:</u> 6-position |
|-----|------------|--------------------------------------|

CABLE:

| | | |
|------|------------|----------------------------------|
| W200 | 3003469A02 | 15-cond, incl P4 (GKN6164A only) |
| | 3003469A04 | 24-cond, incl P4 (GKN6165A only) |
| W500 | SEE NOTE | Assy ETRC relay output, incl P1 |
| W501 | SEE NOTE | Assy ETRC DC power, includes P3 |

MECHANICAL PARTS:

| | | |
|--|------------|---------------------------------|
| | 4303462A01 | STANDOFF, flexible, 2 used |
| | 4303463A01 | STANDOFF, circuit board, 2 used |
| | 4210217A02 | STRAP, tie: 1l used |
| | 2280172J01 | PIN, polarizing |
| | 3082724C01 | CABLE, battery #14 red |
| | 0284784B05 | NUT, M3 hex, 2 used |
| | 0384723C18 | SCREW, M3x8, 2 used |
| | 0484718C04 | LOCKWASHER, A3.2, 2 used |
| | 4384798F01 | INSERT, polarizing |

GKN6180A Cable, AC Power 110/120V 3-wire

| SYMBOL | PART NO. | DESCRIPTION |
|--------|------------|--------------|
| | 3002695B10 | PLUG, 3-wire |

GKN6181A Cable, AC Power 110/120V 2-wire

| SYMBOL | PART NO. | DESCRIPTION |
|--------|------------|--------------|
| | 3002695B09 | PLUG, 2-wire |

GLC6047A
RF Board 66-88 MHz, 20 & 25kHz Channel Spacing

| SYMBOL | PART NO. | DESCRIPTION |
|--------|----------|-------------|
|--------|----------|-------------|

CAPACITOR: pF 5% 50V
unless otherwise stated

| | | |
|------|------------|------------------|
| C 1 | 2111031A27 | 33 (chip) |
| C 2 | 2111031A25 | 27 (chip) |
| C 3 | 2111031A48 | 240 (chip) |
| C 4 | 2111031A24 | 24 (chip) |
| C 5 | 2111031A51 | 330 (chip) |
| C 6 | 2111031A24 | 24 (chip) |
| C 7 | 2111031A48 | 240 (chip) |
| C 9 | 2111031A19 | 15 (chip) |
| C 10 | 2111031A17 | 12 (chip) |
| C 11 | 2111031A37 | 82 (chip) |
| C 12 | 2111031A10 | 5.6 0.5pF (chip) |
| C 13 | 2111031A10 | 5.6 0.5pF (chip) |

| | | |
|-------|------------|-----------------------|
| C 14 | 2111031A37 | 82 (chip) |
| C 15 | 2111031A17 | 12 (chip) |
| C 16 | 2111031A09 | 1000 (chip) |
| C 17 | 2111031A31 | 47 (chip) |
| C 18 | 2111031A10 | 5.6 0.5pF (chip) |
| C 51 | 2111032A21 | 0.01uF 10% (chip) |
| C 52 | 2111031A55 | 470 (chip) |
| C 53 | 2111031A17 | 12 (chip) |
| C 54 | 2111031A09 | 4.7 0.25pF (chip) |
| C 55 | 2111031A10 | 5.6 0.5pF (chip) |
| C 56 | 0611024B23 | Jumper |
| C 57 | 2111032A21 | 0.01uF 10% (chip) |
| C 58 | 2111032A21 | 0.01uF 10% (chip) |
| C 59 | 2384538G05 | 10uF 20% |
| C 60 | 2111031A31 | 47 (chip) |
| C 61 | 2111031A23 | 22 (chip) |
| C 62 | 2111031A31 | 47 (chip) |
| C 63 | 2111031A59 | 680 (chip) |
| C 64 | 2111031A15 | 10 0.5pF (chip) |
| C 65 | 2111032B15 | 0.22uF +80-20% (chip) |
| C 66 | 2111032A21 | 0.01uF 10% (chip) |
| C 67 | 2111032B15 | 0.22uF +80-20% (chip) |
| C 68 | 2111032B15 | 0.22uF +80-20% (chip) |
| C 69 | 2384538G05 | 10uF 20% |
| C 70 | 2311048B13 | 10uF 20% 16V |
| C 71 | 2311048B06 | 2.2uF 20% |
| C 72 | 2111032B15 | 0.22uF +80-20% (chip) |
| C 73 | 2111032B15 | 0.22uF +80-20% (chip) |
| C 74 | 2111032B15 | 0.22uF +80-20% (chip) |
| C 75 | 2111032A13 | 2200pF 10% (chip) |
| C 76 | 2111032B15 | 0.22uF +80-20% (chip) |
| C 77 | 2111032B15 | 0.22uF +80-20% (chip) |
| C 78 | 2111032A13 | 2200pF 10% (chip) |
| C 79 | 2111032B15 | 0.22uF +80-20% (chip) |
| C 80 | 2311048B13 | 10uF 20% 16V |
| C101 | 2311048B13 | 10uF 20% 16V |
| C102 | 0811051A13 | 0.1uF 5% 63V |
| C103 | 2111032A21 | 0.01uF 10% (chip) |
| C104 | 2311048B13 | 10uF 20% 16V |
| C105 | 2111032A21 | 0.01uF 10% (chip) |
| C106 | 2111031A19 | 15 (chip) |
| C108 | 2111032B13 | 0.1uF +80-20% (chip) |
| C109 | 0811051A15 | 0.22uF 63V |
| C110 | 2111032B13 | 0.1uF +80-20% (chip) |
| C111 | 2384538G08 | 2.2uF 20% 20V |
| C112 | 0811051A09 | 0.022uF 63V |
| C113 | 2111032A21 | 0.01uF 10% (chip) |
| C114 | 2111032A21 | 0.01uF 10% (chip) |
| C115 | 0811051A13 | 0.1uF 63V |
| C116 | 2111032A09 | 1000pF 10% (chip) |
| C117 | 2111032A09 | 1000pF 10% (chip) |
| C119 | 2111032A09 | 1000pF 10% (chip) |
| C120 | 2111032A09 | 1000pF 10% (chip) |
| C151 | 2111032A09 | 1000pF 10% (chip) |
| C152 | 2111031A15 | 10 (chip) |
| C153 | 2111032A09 | 1000pF 10% (chip) |
| C154 | 2111032A21 | 0.01uF 10% (chip) |
| C155 | 2302057B09 | 0.22uF 20% 35V |
| C156 | 2111031A45 | 180 (chip) |
| C157 | 2111031A45 | 180 (chip) |
| C158 | 2111032A21 | 0.01uF 10% (chip) |
| C159 | 2111031A23 | 22 (chip) |
| C160 | 2111031A19 | 15 (chip) |
| C161 | 2111031A36 | 75 (chip) |
| C203 | 2111031A17 | 12 (chip) |
| C204 | 2111031A08 | 3.9 0.25pF (chip) |
| C205 | 2111031A19 | 15 (chip) |
| C206 | 2111031A17 | 12 (chip) |
| C207 | 2111031A17 | 12 (chip) |
| C208 | 2111031A03 | 1.5 0.25pF (chip) |
| C209 | 2111031A09 | 0.001uF 10% (chip) |
| C210 | 2111032A09 | 0.001uF 10% (chip) |
| C211 | 2111032A09 | 0.001uF 10% (chip) |
| C212 | 2111031A07 | 3.3 0.25pF (chip) |
| C214- | 2111032A09 | 0.001uF 10% (chip) |
| C218 | 2111032A09 | 0.001uF 10% (chip) |
| C219 | 2111031A10 | 5.6 0.5pF (chip) |
| C220 | 2111032A09 | 0.001uF 10% (chip) |
| C221 | 2111032A09 | 0.001uF 10% (chip) |
| C222 | 2111032A09 | 0.001uF 10% (chip) |
| C223 | 2111031A03 | 1.5 0.25pF (chip) |
| C224 | 2111031A19 | 15 (chip) |
| C225 | 2111031A05 | 2.2 0.25pF (chip) |
| C226 | 2111031A21 | 18 0.5pF (chip) |

C227 2111031A08 32.9F 0.25pF (chip)
 C228 2111031A21 18 (chip)
 C229 2111031A19 15 (chip)
 C230 2111031A19 15 (chip)
 C231 2111031A03 1.5 0.25pF (chip)
 C232 2111032A09 0.001uF 10% (chip)
 C233 2111032A09 0.001uF 10% (chip)
 C234 2111032A09 0.001uF 10% (chip)
 C235 2111031A07 3.3 0.25pF (chip)
 C237-
 C241 2111032A09 0.001uF 10% (chip)
 C242 2111031A13 8.2 0.5pF (chip)
 C243 2111032A09 0.001uF 10% (chip)
 C245 2111031A05 2.2 0.5pF (chip)
 C251 2111032A21 0.01uF 10% (chip)
 C252 2311048B19 47uF 20% 16V
 C253 2311048B19 47uF 20% 16V
 C254 2111032A21 0.01uF 10% (chip)
 C301 2311048B05 1uF 20%
 C302 0811051A17 0.47uF 63V
 C303 2111031A51 330 (chip)
 C304 2111031A39 100 (chip)
 C305 2111031A39 100 (chip)
 C306 2111031A39 100 (chip)
 C307-
 C312 2111031A51 330 (chip)

DIODE: (SEE NOTE)

CR 51 4883654H01 Silicon
 CR 52 4883654H01 Silicon
 CR101 4883654H01 Silicon
 CR102 4883654H01 Silicon
 CR151 4882190H54 Varactor (chip)
 CR152 4882190H54 Varactor (chip)
 CR153 4884399M01 Silicon
 CR154 4884399M01 Silicon
 CR201 4882190H54 Varactor (chip)
 CR202 4882190H54 Varactor (chip)
 CR203 4884616A01 Hot Carrier
 CR204 4882190H54 Silicon (chip)
 CR205 4882190H54 Silicon (chip)
 CR206 4882190H54 Silicon (chip)
 CR207 4884616A01 Hot Carrier

FILTER:

FL51 9180097D06 Filter 6D 455kHz
 FL52 9180098D06 Filter 4D 455kHz

CONNECTOR:

J 1 0980168K01 Coax
 J 2 0980168K01 Coax
 J 3 0980179H01 11 Pin

COIL:

L1-L4 2480079J04 8.5 turns
 L 5 2480079J05 tapped 8.5 turns
 L 6 2480079J08 8.5 turns
 L 7 2480079J11 tapped 8.5 turns
 L 8 2411939B15 white 10.5 turns
 L 51-
 L 53 2482835G03 red-blu-gld 2.6uH
 L 54 2580000E01 Quad 455kHz
 L 55 2482723H35 red 23uH
 L151 2480299D01 orange 17.75 turns
 L152 2482723H37 blue 6.2uH
 L201 2480164J03 6.5 turns
 L202 2482723H36 yellow 0.41uH
 L203 2480044F09 5.6uH
 L204 2480044F09 5.6uH
 L205 2480044F09 5.6uH
 L206 2480044F09 5.6uH
 L207 2480044F09 5.6uH
 L208 2482723H46 blu-grn 0.2uH
 L209 2480044F09 5.6uH
 L210 2480164J05 7.5 turns
 L211 2482723H36 yellow 1.41uH
 L212-
 L216 2480044F09 5.6uH
 L217 2482723H46 blu-grn 0.2uH
 L218 2480044F09 5.6uH

TRANSISTOR:

Q 1 4811043B12 FET M3B12 (alt: M9839)
 Q 51 4811043B12 FET M3B12 (alt: M9839)

Q 52 4811043B03 M3B03 (alt: M9571)
 Q 53 4802081B30 M1B30 (alt: M1B10)
 Q101 4802081B31 M1B31 (alt: M1B11)
 Q102 4800869987 M9987
 Q103 4800869987 M9987
 Q104 4802081B31 M1B31 (alt: M1B11)
 Q105 4802081B30 M1B30 (alt: M1B10)
 Q106 4880182D41 MOSFET M2D41
 Q107 4811043B16 M3B16 (alt: M9932)
 Q151 4802081B30 M1B30 (alt: M1B10)
 Q152 4802081B31 M1B31 (alt: M1B11)
 Q201 4811043B12 FET M3B12 (alt: M9839)
 Q202 4802081B30 M1B30 (alt: M1B10)
 Q203 4811043B19 M3B19 (alt: M9658)
 Q204 4811043B16 M3B16 (alt: M9932)
 Q205 4811043B12 FET M3B12 (alt: M9839)
 Q206 4802081B30 M1B30 (alt: M1B10)
 Q207 4811043B19 M3B19 (alt: M9658)
 Q208 4811043B16 M3B16 (alt: M9932)
 Q251 4802081B30 M1B30 (alt: M1B10)

THERMISTOR:

RT151 0683600K06 10k
 RT152 0683600K06 10k
 RT153 0683600K05 100k

RESISTOR: 5% 1/8W

unless otherwise stated
 R 1 0611024A93 68k (chip)
 R 2 0611024A43 560 (chip)
 R 3 0611024A93 68k (chip)
 R 51 0611024A55 1.8k (chip)
 R 53 0611024A29 150 (chip)
 R 54 0611024A41 470 (chip)
 R 55 0611024A49 1k (chip)
 R 56 0611024B20 820k (chip)
 R 57 0611024B06 220k (chip)
 R 58 0611024B02 150k (chip)
 R 59 1805500L08 22k variable
 R 60 0611024A93 68k (chip)
 R 61 0611024A95 82k (chip)
 R 62 0611024A65 4.7k (chip)
 R101 0602438B15 150 0.5W
 R102 0611024A51 1.2k (chip)
 R103 0611024A73 10k (chip)
 R104 0611024A73 10k (chip)
 R105 0611024A73 10k (chip)
 R106 0611024A01 10 (chip)
 R107 0611024A77 15k (chip)
 R108 0611024A77 15k (chip)
 R109 0611024A35 270 (chip)
 R110 0611024A47 820 (chip)
 R111 0611024A35 270 (chip)
 R112 0611024A37 330 (chip)
 R113 0611024A61 3.3k (chip)
 R115 0611024A63 3.9k (chip)
 R116 0611024A37 330 (chip)
 R117 0611024A53 1.5k (chip)
 R118 0611024A69 6.8k (chip)
 R119 0611024A73 10k (chip)
 R120 0611024A19 56 (chip)
 R121 0611024A19 56 (chip)
 R122 0600185A35 270 5% 0.25W
 R123 0611024A25 100 (chip)
 R152 0610621E20 210k 1% 0.25W
 R153 0610621C71 6.19k 1% 0.25W
 R155 0610621C59 4.640 1% 0.25W
 R156 0611024A97 100k (chip)
 R157 0611024A73 10k (chip)
 R158 0611024A73 10k (chip)
 R159 0611024A77 15k (chip)
 R160 0611024A09 22 (chip)
 R161 0611024A53 1.5k (chip)
 R162 0611024A49 1k (chip)
 R201 0611024A19 56 (chip)
 R202 0611024A73 10k (chip)
 R203 0611024A33 220 (chip)
 R204 0611024A65 4.7k (chip)
 R205 0611024A73 10k (chip)
 R206 0611024A45 680 (chip)
 R207 0611024A57 2.2k (chip)
 R208 0611024A45 680 (chip)
 R209 0611024A29 150 (chip)
 R210 0611024A35 270 (chip)

| | | | | | |
|------|------------|--------------|------|------------|-----------------------|
| R211 | 0611024A19 | 56 (chip) | C 53 | 2111031A19 | 15 (chip) |
| R212 | 0611024A35 | 270 (chip) | C 54 | 2111031A19 | 15 0.25pF (chip) |
| R213 | 0611024A07 | 18 (chip) | C 55 | 2111031A10 | 5.6 0.5pF (chip) |
| R214 | 0611024A97 | 100k (chip) | C 56 | 2111031A15 | 10 (chip) |
| R215 | 0611024A73 | 10k (chip) | C 57 | 2111032A21 | 0.01uF 10% (chip) |
| R216 | 0611024A73 | 10k (chip) | C 58 | 2111032A21 | 0.01uF 10% (chip) |
| R217 | 0611024A73 | 10k (chip) | C 59 | 2384538G05 | 10uF 20% |
| R218 | 0611024A33 | 220 (chip) | C 60 | 2111031A31 | 47 (chip) |
| R219 | 0611024A77 | 15k (chip) | C 61 | 2111031A23 | 22 (chip) |
| R220 | 0684764A22 | 560 0.25W | C 62 | 2111031A31 | 47 (chip) |
| R221 | 0684764A22 | 560 0.25W | C 63 | 2111031A59 | 680 (chip) |
| R222 | 0611024A45 | 680 (chip) | C 64 | 2111031A15 | 10 0.5pF (chip) |
| R223 | 0611024A57 | 2.2k (chip) | C 65 | 2111032B15 | 0.22uF +80-20% (chip) |
| R224 | 0611024A45 | 680 (chip) | C 66 | 2111032A21 | 0.01uF 10% (chip) |
| R225 | 0611024A29 | 150 (chip) | C 67 | 2111032B15 | 0.22uF +80-20% (chip) |
| R226 | 0611024A45 | 680 (chip) | C 68 | 2111032B15 | 0.22uF +80-20% (chip) |
| R227 | 0611024A19 | 56 (chip) | C 69 | 2384538G05 | 10uF 20% |
| R228 | 0611024A51 | 1.2k (chip) | C 70 | 2311048B13 | 10uF 20% 16V |
| R229 | 0611024A37 | 330 (chip) | C 71 | 2311048B06 | 2.2uF 20% |
| R230 | 0611024A35 | 270 (chip) | C 72 | 2111032B15 | 0.22uF +80-20% (chip) |
| R231 | 0611024A07 | 18 (chip) | C 73 | 2111032B15 | 0.22uF +80-20% (chip) |
| R232 | 0611024A35 | 270 (chip) | C 74 | 2111032B15 | 0.22uF +80-20% (chip) |
| R233 | 0611024A19 | 56 (chip) | C 75 | 2111032A13 | 2200 10% (chip) |
| R234 | 0611024A19 | 56 (chip) | C 76 | 2111032B15 | 0.22uF +80-20% (chip) |
| R235 | 0611024A19 | 56 (chip) | C 77 | 2111032B15 | 0.22uF +80-20% (chip) |
| R236 | 0611024A35 | 270 (chip) | C 78 | 2111032A13 | 2200 10% (chip) |
| R251 | 0611024A35 | 270 (chip) | C 79 | 2111032B15 | 0.22uF +80-20% (chip) |
| R252 | 0611024A01 | 10 (chip) | C 80 | 2311048B13 | 10uF 20% 16V |
| R301 | 0611024A81 | 22k (chip) | C101 | 2311048B13 | 10uF 20% 16V |
| R302 | 1880080J01 | 22k variable | C102 | 0811051A13 | 0.1uF 5% 63V |
| R303 | 0611024A57 | 2.2k (chip) | C103 | 2111032A21 | 0.01uF 10% (chip) |
| R304 | 0611024A01 | 10 (chip) | C104 | 2311048B13 | 10uF 20% 16V |
| R305 | 1880080J01 | 22k variable | C105 | 2111032A21 | 0.01uF 10% (chip) |
| R306 | 0611024A01 | 10 (chip) | C106 | 2111031A19 | 15 (chip) |
| R308 | 0611024A65 | 4.7k (chip) | C108 | 2111032B13 | 0.1uF +80-20% (chip) |
| R309 | 0611024A65 | 4.7k (chip) | C109 | 0811051A15 | 0.22uF 63V |
| R310 | 0611024A65 | 4.7k (chip) | C110 | 2111032B13 | 0.1uF +80-20% (chip) |

INTEGRATED CIRCUIT: (SEE NOTE)

| | | |
|------|------------|-----------|
| U 51 | 5105479G05 | Nucleus |
| U101 | 5183548N19 | Divider |
| U102 | 5180135C06 | Prescaler |

ZENER DIODE: (SEE NOTE)

| | | |
|-------|------------|---------|
| VR101 | 4882256C15 | 5.1V 5% |
|-------|------------|---------|

CRYSTAL:

| | | |
|------|------------|----------------------------------|
| Y 51 | 9180082J01 | Filter 21.4MHz Matched pair A/B |
| Y 52 | 4805488G03 | 20.945MHz Replace with part as |
| or | 4805488G04 | 21.855MHz originally supplied |
| Y151 | 4802443B21 | Crystal 14.4MHz |

NON-REFERENCE ITEMS:

| | |
|------------|---------------|
| 2680138J01 | Shield |
| 2680153J01 | Shield 3 used |
| 2680210K01 | Shield Coil |

GLC6048A
RF Board 66-88 MHz, 12.5kHz Channel Spacing

SYMBOL PART NO. DESCRIPTION

CAPACITOR: pF 5% 50V
unless otherwise stated

| | | | | | |
|------|------------|-------------------|-------|------------|---------------------|
| C 1 | 2111031A27 | 33 (chip) | C203 | 2111031A17 | 12 (chip) |
| C 2 | 2111031A25 | 27 (chip) | C204 | 2111031A08 | 3.9 0.25pF (chip) |
| C 3 | 2111031A48 | 240 (chip) | C205 | 2111031A19 | 15 (chip) |
| C 4 | 2111031A24 | 24 (chip) | C206 | 2111031A17 | 12 (chip) |
| C 5 | 2111031A51 | 330 (chip) | C207 | 2111031A17 | 12 (chip) |
| C 6 | 2111031A24 | 24 (chip) | C208 | 2111031A03 | 1.5 0.25pF (chip) |
| C 7 | 2111031A48 | 240 (chip) | C209 | 2111031A09 | 0.001uF 10% (chip) |
| C 9 | 2111031A19 | 15 (chip) | C210 | 2111032A09 | 0.001uF 10% (chip) |
| C 10 | 2111031A17 | 12 (chip) | C211 | 2111032A09 | 0.001uF 10% (chip) |
| C 11 | 2111031A37 | 82 (chip) | C212 | 2111031A07 | 3.3 0.25pF (chip) |
| C 12 | 2111031A10 | 5.6 0.5pF (chip) | C214- | | |
| C 13 | 2111031A10 | 5.6 0.5pF (chip) | C218 | 2111032A09 | 0.001uF 10% (chip) |
| C 14 | 2111031A37 | 82 (chip) | C219 | 2111031A10 | 5.6 0.5pF (chip) |
| C 15 | 2111031A17 | 12 (chip) | C220- | | |
| C 16 | 2111031A09 | 1000 (chip) | C222 | 2111032A09 | 0.001uF 10% (chip) |
| C 17 | 2111031A31 | 47 (chip) | C223 | 2111031A03 | 1.5 0.25pF (chip) |
| C 18 | 2111031A10 | 5.6 0.5pF (chip) | C224 | 2111031A19 | 15 (chip) |
| C 51 | 2111032A21 | 0.01uF 10% (chip) | C225 | 2111031A05 | 2.2 0.25pF (chip) |
| C 52 | 2111031A35 | 68 (chip) | C226 | 2111031A21 | 18 0.5pF (chip) |
| | | | C227 | 2111031A08 | 32.9F 0.25pF (chip) |
| | | | C228 | 2111031A21 | 18 (chip) |
| | | | C229 | 2111031A19 | 15 (chip) |
| | | | C230 | 2111031A19 | 15 (chip) |
| | | | C231 | 2111031A03 | 1.5 0.25pF (chip) |
| | | | C232- | | |
| | | | C234 | 2111032A09 | 0.001uF 10% (chip) |
| | | | C235 | 2111031A07 | 3.3 0.25pF (chip) |

C237-
 C241 2111032A09 0.001uF 10% (chip)
 C242 2111031A13 8.2 0.5pF (chip)
 C243 2111032A09 0.001uF 10% (chip)
 C245 2111031A05 2.2 0.5 (chip)
 C251 2111032A21 0.01uF 10% (chip)
 C252 2311048B19 47uF 20% 16V
 C253 2311048B19 47uF 20% 16V
 C254 2111032A21 0.01uF 10% (chip)
 C301 2311048B05 1uF 20%
 C302 0811051A17 0.47uF 63V
 C303 2111031A51 330 (chip)
 C304 2111031A39 100 (chip)
 C305 2111031A39 100 (chip)
 C306 2111031A39 100 (chip)
 C307-
 C312 2111031A51 330 (chip)

DIODE: (SEE NOTE)

CR 51 4883654H01 Silicon
 CR 52 4883654H01 Silicon
 CR101 4883654H01 Silicon
 CR102 4883654H01 Silicon
 CR151 4882190H54 Varactor (chip)
 CR152 4882190H54 Varactor (chip)
 CR153 4884399M01 Silicon
 CR154 4884399M01 Silicon
 CR201 4882190H54 Varactor (chip)
 CR202 4882190H54 Varactor (chip)
 CR203 4884616A01 Hot Carrier
 CR204 4882190H54 Silicon (chip)
 CR205 4882190H54 Silicon (chip)
 CR206 4882190H54 Silicon (chip)
 CR207 4884616A01 Hot Carrier

FILTER:

FL51 9180097D04 Filter 6F 455kHz
 FL52 9180098D04 Filter 4F 455kHz

CONNECTOR:

J 1 0980168K01 Connector Coax
 J 2 0980168K01 Connector Coax
 J 3 0980179H01 Connector

COIL:

L1-L4 2480079J04 8.5 turns
 L 5 2480079J05 tapped 8.5 turns
 L 6 2480079J08 8.5 turns
 L 7 2480079J11 tapped 8.5 turns
 L 8 2411939B15 white 10.5 turns
 L 51 2482835G03 red-blu-gld 2.6uH
 L 52 2482835G03 red-blu-gld 2.6uH
 L 53 2482835G03 red-blu-gld 2.6uH
 L 54 2580000E01 Quad coil 455kHz
 L 55 2482723H35 red 23uH
 L151 2480299D01 orange 11.75 turns
 L152 2482723H37 blue 6.2uH
 L201 2480164J03 6.5 turns
 L202 2482723H36 yellow 0.41uH
 L203-
 L207 2480044F09 5.6uH
 L208 2482723H46 blu-grn 0.2uH
 L209 2480044F09 5.6uH
 L210 2480164J05 7.5 turns
 L211 2482723H36 yellow 0.41uH
 L212-
 L216 2480044F09 5.6uH
 L217 2482723H46 blu-grn 0.2uH
 L218 2480044F09 5.6uH

TRANSISTOR: (SEE NOTE)

Q 1 4811043B12 FET M3B12 (alt: M9839)
 Q 51 4811043B12 FET M3B12 (alt: M9839)
 Q 52 4811043B03 M3B03 (alt: M9571)
 Q 53 4802081B30 M1B30 (alt: M1B10)
 Q101 4802081B31 M1B31 (alt: M1B11)
 Q102 4800869987 M9987
 Q103 4800869987 M9987
 Q104 4802081B31 M1B31 (alt: M1B11)
 Q105 4802081B30 M1B30 (alt: M1B10)
 Q106 4880182D41 MOSFET M2D41
 Q107 4811043B16 M3B16 (alt: M9932)
 Q151 4802081B30 M1B30 (alt: M1B10)
 Q152 4802081B31 M1B31 (alt: M1B11)

Q201 4811043B12 FET M3B12 (alt: M9839)
 Q202 4802081B30 M1B30 (alt: M1B10)
 Q203 4811043B19 M3B19 (alt: M9658)
 Q204 4811043B16 M3B16 (alt: M9932)
 Q205 4811043B12 FET M3B12 (alt: M9839)
 Q206 4802081B30 M1B30 (alt: M1B10)
 Q207 4811043B19 M3B19 (alt: M9658)
 Q208 4811043B16 M3B16 (alt: M9932)
 Q251 4802081B30 M1B30 (alt: M1B10)

THERMISTOR:

RT151 0683600K06 10k
 RT152 0683600K06 10k
 RT153 0683600K05 100k

RESISTOR: 5% 1/8W

unless otherwise stated

R 1 0611024A93 68k (chip)
 R 2 0611024A43 560 (chip)
 R 3 0611024A93 68k (chip)
 R 51 0611024A55 1.8k (chip)
 R 53 0611024A29 150 (chip)
 R 54 0611024A41 470 (chip)
 R 55 0611024A49 1k (chip)
 R 56 0611024B20 820k (chip)
 R 57 0611024B06 220k (chip)
 R 58 0611024B02 150k (chip)
 R 59 1805500L08 22k variable
 R 60 0611024A93 68k (chip)
 R 61 0611024A95 82k (chip)
 R 62 0611024A43 560 (chip)
 R101 0602438B15 150 0.5W
 R102 0611024A51 1.2k (chip)
 R103 0611024A73 10k (chip)
 R104 0611024A73 10k (chip)
 R105 0611024A73 10k (chip)
 R106 0611024A01 10 (chip)
 R107 0611024A77 15k (chip)
 R108 0611024A77 15k (chip)
 R109 0611024A35 270 (chip)
 R110 0611024A47 820 (chip)
 R111 0611024A35 270 (chip)
 R112 0611024A37 330 (chip)
 R113 0611024A61 3.3k (chip)
 R115 0611024A63 3.9k (chip)
 R116 0611024A37 330 (chip)
 R117 0611024A53 1.5k (chip)
 R118 0611024A69 6.8k (chip)
 R119 0611024A73 10k (chip)
 R120 0611024A19 56 (chip)
 R121 0611024A19 56 (chip)
 R122 0600185A35 270 0.25W
 R123 0611024A25 100 (chip)
 R152 0610621E20 210k 1% 0.25W
 R153 0610621C71 6.19k 1% 0.25W
 R155 0610621C59 4.640 1% 0.25W
 R156 0611024A97 100k (chip)
 R157 0611024A73 10k (chip)
 R158 0611024A73 10k (chip)
 R159 0611024A77 15k (chip)
 R160 0611024A09 22 (chip)
 R161 0611024A53 1.5k (chip)
 R162 0611024A49 1k (chip)
 R201 0611024A19 56 (chip)
 R202 0611024A73 10k (chip)
 R203 0611024A33 220 (chip)
 R204 0611024A65 4.7k (chip)
 R205 0611024A73 10k (chip)
 R206 0611024A45 680 (chip)
 R207 0611024A57 2.2k (chip)
 R208 0611024A45 680 (chip)
 R209 0611024A29 150 (chip)
 R210 0611024A35 270 (chip)
 R211 0611024A19 56 (chip)
 R212 0611024A35 270 (chip)
 R213 0611024A07 18 (chip)
 R214 0611024A97 100k (chip)
 R215-
 R217 0611024A73 10k (chip)
 R218 0611024A33 220 (chip)
 R219 0611024A77 15k (chip)
 R220 0684764A22 560 0.25W
 R221 0684764A22 560 0.25W
 R222 0611024A45 680 (chip)

| | | | | | |
|-------|------------|--------------|-------|------------|---------------------|
| R223 | 0611024A57 | 2.2k (chip) | C221 | 2111032A09 | 0.001 10% (chip) |
| R224 | 0611024A45 | 680 (chip) | C222 | 2111032A09 | 0.001 10% (chip) |
| R225 | 0611024A29 | 150 (chip) | C223 | 2111031A03 | 1.5pF 0.25pF (chip) |
| R226 | 0611024A45 | 680 (chip) | C224 | 2111031A19 | 15pF 5% (chip) |
| R227 | 0611024A19 | 56 (chip) | C225 | 2111031A05 | 2.2pF 0.25pF (chip) |
| R228 | 0611024A51 | 1.2k (chip) | C226 | 2111031A21 | 18pF 5% (chip) |
| R229 | 0611024A37 | 330 (chip) | C227 | 2111031A08 | 3.9pF 0.25pF (chip) |
| R230 | 0611024A35 | 270 (chip) | C228 | 2111031A21 | 18pF 5% (chip) |
| R231 | 0611024A07 | 18 (chip) | C229 | 2111031A19 | 15pF 5% (chip) |
| R232 | 0611024A35 | 270 (chip) | C230 | 2111031A19 | 15pF 5% (chip) |
| R233 | 0611024A19 | 56 (chip) | C231 | 2111031A03 | 1.5 0.25pF (chip) |
| R234 | 0611024A19 | 56 (chip) | C232 | 2111032A09 | 0.001 10% (chip) |
| R235 | 0611024A19 | 56 (chip) | C233 | 2111032A09 | 0.001 10% (chip) |
| R236 | 0611024A35 | 270 (chip) | C234 | 2111032A09 | 0.001 10% (chip) |
| R251 | 0611024A35 | 270 (chip) | C235 | 2111031A07 | 3.3pF 0.25pF (chip) |
| R252 | 0611024A01 | 10 (chip) | C237 | 2111032A09 | 0.001 10% (chip) |
| R301 | 0611024A85 | 33k (chip) | C238- | | |
| R302 | 1880080J01 | 22k variable | C241 | 2111032A09 | 0.001 10% (chip) |
| R303 | 0611024A49 | 1k (chip) | C242 | 2111031A13 | 8.2pF 0.5pF (chip) |
| R304 | 0611024A01 | 10 (chip) | C243 | 2111032A09 | 0.001 10% (chip) |
| R305 | 1880080J01 | 22k variable | C244 | 2111032A09 | 0.001 10% (chip) |
| R306 | 0611024A01 | 10 (chip) | C251- | | |
| R308- | | | C254 | 2111032A21 | 0.01 10% (chip) |
| R310 | 0611024A65 | 4.7k (chip) | C301 | 2311048B05 | 1 20% |

INTEGRATED CIRCUIT: (SEE NOTE)

| | | | | | |
|------|------------|-----------|-------|------------|-----------------|
| U 51 | 5105479G05 | Nucleus | C302 | 0811051A17 | 0.047 5% 63V |
| U101 | 5183548N19 | Divider | C303 | 2111031A51 | 330pF 5% (chip) |
| U102 | 5180135C06 | Prescaler | C304- | | |

ZENER DIODE: (SEE NOTE)

| | | | | | |
|-------|------------|---------|------|------------|-----------------|
| VR101 | 4882256C15 | 5.1V 5% | C306 | 2111031A39 | 100pF 5% (chip) |
|-------|------------|---------|------|------------|-----------------|

FILTER:

| | | | | | |
|------|------------|----------------------------------|-------|------------|-----------------|
| Y 51 | 9180082J02 | Filter 21.4MHz Matched pair A/B | C307 | 2111031A51 | 330pF 5% (chip) |
| Y 52 | 4805488G03 | 20.945MHz Replace with part as | C308 | 2111031A51 | 330pF 5% (chip) |
| or | 4805488G04 | 21.855MHz originally supplied | C310- | | |
| Y151 | 4802443B21 | Crystal 14.4MHz | C312 | 2111031A51 | 330pF 5% (chip) |

NON-REFERENCED ITEMS:

| | |
|------------|---------------|
| 2680138J01 | Shield |
| 2680153J01 | Shield 3 used |
| 2680210K01 | Shield Coil |

DIODE: (SEE NOTE)

| | | |
|-------|------------|----------------------|
| CR101 | 4883654H01 | Silicon |
| CR102 | 4883654H01 | Silicon |
| CR151 | 4882190H54 | Silicon, varactor |
| CR152 | 4882190H54 | Silicon, varactor |
| CR153 | 4884399M01 | Silicon |
| CR154 | 4884399M01 | Silicon |
| CR204 | 4882190H54 | Silicon, varactor |
| CR205 | 4882190H54 | Silicon, varactor |
| CR206 | 4882190H54 | Silicon, varactor |
| CR207 | 4884616A01 | Silicon, hot carrier |

GLC6049A Transmitter RF Board 66-88MHz

SYMBOL PART NO. DESCRIPTION

| | | |
|------|------------|---------------------------------|
| | | <u>CAPACITOR, fixed:</u> uF 50V |
| | | unless otherwise stated |
| C9 | 2111031A51 | 330pF 5% (chip) |
| C51 | 2111032A21 | 0.01 10% (chip) |
| C80 | 2311048B13 | 10 20% 16V |
| C101 | 2311048B13 | 10 20% 16V |
| C102 | 0811051A13 | 0.1 5% 63V |
| C103 | 2111032A21 | 0.01 10% (chip) |
| C104 | 2311048B13 | 10 20% 16V |
| C105 | 2111032A21 | 0.01 10% (chip) |
| C106 | 2111031A19 | 15pF 5% (chip) |
| C108 | 2111032B13 | 0.10 +80-20% (chip) |
| C109 | 0811051A13 | 0.1 5% 63V |
| C110 | 2111032B13 | 0.10 +80-20% (chip) |
| C111 | 2384538G08 | 2.2 20% 20V |
| C112 | 0811051A07 | 0.01 5% 63V |
| C113 | 2111032A21 | 0.01 10% (chip) |
| C114 | 2111032A21 | 0.01 10% (chip) |
| C115 | 0811051A13 | 0.1 5% 63V |
| C116 | 2111032A09 | 0.001 10% (chip) |
| C117 | 2111032A09 | 0.001 10% (chip) |
| C119 | 2111032A09 | 0.001 10% (chip) |
| C120 | 2111032A09 | 0.001 10% (chip) |
| C151 | 2111032A09 | 0.001 10% (chip) |
| C152 | 2111031A15 | 10pF 0.5pF (chip) |
| C153 | 2111032A09 | 0.001 10% (chip) |
| C154 | 2111032A21 | 0.01 10% (chip) |
| C155 | 2302057B09 | 0.22 20% 35V |
| C156 | 2111031A45 | 180pF 5% (chip) |
| C157 | 2111031A45 | 180pF 5% (chip) |
| C158 | 2111032A21 | 0.01 10% (chip) |
| C159 | 2111031A23 | 22pF 5% (chip) |
| C160 | 2111031A19 | 15pF 5% (chip) |
| C161 | 2111031A36 | 75pF 5% (chip) |
| C211 | 2111032A09 | 0.001 10% (chip) |

J1, J2 0980168K01 CONNECTOR, receptacle:
Female, coaxial type

COIL, rf:

| | | |
|-------|------------|----------------------|
| L151 | 2480299D01 | 17.75 turns (orange) |
| L152 | 2482723H37 | 6.2uH (blue) |
| L210 | 2480164J05 | variable |
| L211 | 2482723H36 | 0.41uF (yellow) |
| L212- | | |
| L216 | 2480044F09 | choke 5.6uF |
| L217 | 2482723H46 | 0.2uF (blue-green) |
| L218 | 2480044F09 | choke 5.6uH |

TRANSISTOR: (SEE NOTE)

| | | |
|------|------------|------------------------|
| Q101 | 4802081B31 | M1B31 (alt: M1B11) |
| Q102 | 4800869987 | M9987 |
| Q103 | 4800869987 | M9987 |
| Q104 | 4802081B31 | M1B31 (alt: M1B11) |
| Q105 | 4802081B30 | M1B30 (alt: M1B10) |
| Q106 | 4880182D41 | BS170 |
| Q107 | 4811043B16 | M3B16 (alt: M9932) |
| Q151 | 4802081B30 | M1B30 (alt: M1B10) |
| Q152 | 4802081B31 | M1B31 (alt: M1B11) |
| Q202 | 4802081B30 | M1B30 (alt: M1B10) |
| Q205 | 4811043B12 | FET M3B12 (alt: M9839) |
| Q206 | 4802081B30 | M1B30 (alt: M1B10) |
| Q207 | 4811043B19 | M3B19 (alt: M9658) |
| Q208 | 4811043B16 | M3B16 (alt: M9932) |
| Q251 | 4802081B30 | M1B30 (alt: M1B10) |

RESISTOR, fixed: chip 5% 0.125W
unless otherwise stated

| | | |
|------|------------|----------|
| R101 | 0602438B15 | 150 0.5W |
| R102 | 0611024A25 | 100 |
| R103 | 0611024A73 | 10k |
| R104 | 0611024A25 | 100 |
| R105 | 0611024A73 | 10k |
| R106 | 0611024A01 | 10 |
| R107 | 0611024A77 | 15k |

GLC6050A Power Amplifier 10W 66-88MHz

| | | |
|---------------------------------------|-----------------------|------------------|
| R108 | 0611024A39 | 390 |
| R109 | 0611024A35 | 270 |
| R110 | 0611024A51 | 1200 |
| R111 | 0611024A35 | 270 |
| R112 | 0611024A37 | 330 |
| R113 | 0611024A61 | 3300 |
| R115 | 0611024A63 | 3900 |
| R116 | 0611024A37 | 330 |
| R117 | 0611024A53 | 1500 |
| R118 | 0611024A65 | 4700 |
| R119 | 0611024A73 | 10k |
| R120 | 0611024A19 | 56 |
| R121 | 0611024A19 | 56 |
| R122 | 0600185A35 | 270 |
| R123 | 0611024A25 | 100 |
| R152 | 0610621E25 | 237k 1% 0.25W |
| R153 | 0610621C71 | 6190 1% 0.25W |
| R155 | 0610621C57 | 4420 1% 0.25W |
| R156 | 0611024A97 | 100k |
| R157 | 0611024A73 | 10k |
| R158 | 0611024A73 | 10k |
| R159 | 0611024A77 | 15k |
| R160 | 0611024A09 | 22 |
| R161 | 0611024A53 | 1500 |
| R162 | 0611024A49 | 1000 |
| R201 | 0611024A19 | 56 |
| R204 | 0611024A65 | 4700 |
| R205 | 0611024A73 | 10k |
| R214 | 0611024A97 | 100k |
| R215- | | |
| R217 | 0611024A73 | 10k |
| R218 | 0611024A33 | 220 |
| R219 | 0611024A77 | 15k |
| R220 | 0684764A22 | 560 0.25W |
| R221 | 0684764A22 | 560 0.25W |
| R222 | 0611024A45 | 680 |
| R223 | 0611024A57 | 2200 |
| R224 | 0611024A45 | 680 |
| R225 | 0611024A29 | 150 |
| R226 | 0611024A45 | 680 |
| R227 | 0611024A19 | 56 |
| R228 | 0611024A51 | 1200 |
| R229 | 0611024A37 | 330 |
| R230 | 0611024A35 | 270 |
| R231 | 0611024A07 | 18 |
| R232 | 0611024A35 | 270 |
| R234 | 0611024A19 | 56 |
| R235 | 0611024A19 | 56 |
| R251 | 0611024A35 | 270 |
| R252 | 0611024A01 | 10 |
| R301 | 0611024A81 | 22k |
| R302 | 1805500L08 | variable 22k 20% |
| R303 | 0611024A47 | 820 |
| R304 | 0611024A01 | 10 |
| R305 | 1805500L08 | variable 22k 20% |
| R306 | 0611024A01 | 10 |
| R308 | 0611024A65 | 4700 |
| R309 | 0611024A65 | 4700 |
| R310 | 0611024A65 | 4700 |
| <u>THERMISTOR:</u> | | |
| RT151 | 0683699K06 | 10k |
| RT152 | 0683699K06 | 10k |
| RT153 | 0683600K05 | 100k |
| <u>INTEGRATED CIRCUIT: (SEE NOTE)</u> | | |
| U101 | 5183548N19 | Synthesizer |
| U102 | 5180135C06 | prescaler |
| <u>ZENER DIODE: (SEE NOTE)</u> | | |
| VR101 | 4882256C15 | 5.1V |
| <u>CRYSTAL:</u> | | |
| Y151 | 4802443B21 | 14.4 MHz |
| <u>NON-REFERENCED ITEMS:</u> | | |
| 2680210K01 | SHIELD, coil can | |
| 6680329A63 | TOOL, alignment | |
| 7505295B01 | PAD, crystal base | |
| 2602484M01 | SHIELD | |
| 0980179H01 | CONNECTOR, receptacle | |
| 2680182H01 | SHIELD, rf | |

| SYMBOL | PART NO. | DESCRIPTION |
|-------------------------------|------------|--|
| | | <u>CAPACITOR, fixed: pF 5% 50V</u> (chip) unless otherwise stated |
| C1110 | 2111031A65 | 1800 |
| C1111 | 2111031A19 | 15 |
| C1112 | 2111031A56 | 510 |
| C1113 | 2111031A53 | 390 |
| C1114 | 2111031A53 | 390 |
| C1120 | 2111031A45 | 180 |
| C1121 | 2111031A65 | 1800 |
| C1130 | 2111031A37 | 82 |
| C1131 | 2111031A53 | 390 |
| C1133 | 2111033B39 | 120 100V |
| C1134 | 2111033B43 | 180 100V |
| C1135 | 2111031A33 | 56 |
| C1136 | 2111031A53 | 390 |
| C1137 | 2111031A65 | 1800 |
| C1139 | 2111033B39 | 120 100V |
| C1147 | 2111032B13 | 0.1uF +80-20% |
| C1148 | 0811051A17 | 0.47uF 63V |
| C1150 | 2111031A65 | 1800 |
| C1151 | 2180240G45 | 75 |
| C1152 | 2180240G46 | 82 |
| C1153 | 2180240G48 | 100 |
| C1154 | 2180240G46 | 82 |
| C1155 | 2180240G03 | 39 |
| C1160 | 2182450B11 | 3.0 500V |
| C1161 | 2111031A10 | 5.6 |
| C1162 | 2111031A26 | 30 |
| C1171 | 2111031A28 | 36 |
| C1172 | 2111031A56 | 510 |
| C1173 | 2111031A65 | 1800 |
| C1180 | 2111031A65 | 1800 |
| <u>DIODE: (SEE NOTE)</u> | | |
| CR1140 | 4880236E07 | Zener 28V |
| CR1160 | 4884616A01 | Hot carrier |
| CR1170 | 4883510F04 | Silicon pin |
| CR1171 | 4883510F04 | Silicon pin |
| <u>CONNECTOR:</u> | | |
| J8 | 0102716B69 | Assy coax includes: |
| | 0982442E01 | female, single contact |
| | 1500483599 | hood, receptacle |
| | 3083794C01 | cable, coaxial |
| | 4303423A01 | bushing, coaxial |
| <u>COIL, RF:</u> | | |
| L1110 | 2411030B15 | 10.5 turns white |
| L1111 | 2411030B15 | 10.5 turns white |
| L1112 | 2480036A01 | Ferrite bead |
| L1121 | 2411030B07 | 3.5 turn, white |
| L1122 | 2411030B11 | 6.5 turns orange |
| L1123 | 2480036A01 | Ferrite bead; 1/2 turn |
| L1124 | 2411030B13 | 8.5 turns, green |
| L1125 | 2480036A01 | Ferrite bead; 1/2 turns |
| L1130 | 2411030B07 | 3.5 turns, white |
| L1132 | 2480044F10 | choke, 6.8uH |
| L1133 | 2411030A06 | 2.5 turns, blue |
| L1134 | 2411030A04 | 6 turns, blue |
| L1135 | 2411030A03 | 4 turns, yellow |
| L1136 | 2480036A01 | Ferrite bead; 1/2 turn |
| L1137 | 2411030E07 | green |
| L1150 | 2411030B14 | 9.5 turns, blue |
| L1151 | 2411030B14 | 9.5 turns, blue |
| L1152 | 2411030B13 | 8.5 turns, green |
| L1153 | 2411030B14 | 9.5 turns, blue |
| L1170 | 2482723H37 | choke, 6.2uH |
| L1171 | 2411030B14 | 9.5 turns, blue |
| L1172 | 2482723H37 | choke, 6.2uH |
| <u>CONNECTOR, plug:</u> | | |
| P1 | 1582694R03 | Housing, receptacle |
| | 3982693R02 | Contact, receptacle; 4 used |
| P5 | 2802098M02 | Male, single contact |
| P6, P7 | 3080116K06 | Cable, coaxial includes plug |
| <u>TRANSISTOR: (SEE NOTE)</u> | | |
| Q1110 | 4800869657 | M9857 |
| Q1120 | 4800869859 | M9859 |
| Q1130 | 4880225C18 | M5C18 |

RESISTOR, fixed: 5% 1/8W chip;
unless otherwise stated

R1110 0611024A49 1k
R1111 0611024A39 390
R1112 0611024A19 56
R1113 0611024A19 56
R1120 0611024A07 18
R1121 0611024A07 18
R1122 0611024A01 10
R1130 0602369M01 1 6 W
R1131 0611024A01 10
R1132 0600126A19 56 1W
R1133 0600125A05 15 1/2W
R1150 0611024A73 10k
R1160 0611024A73 10k
R1161 0611024A75 12k
R1170 1782036G10 180 10% 2 W

THERMISTOR:
100k @ 25°C

RT1180 0683600K05

NON-REFERENCED ITEMS:

0780200J01 BRACKET, feed thru
9187511C01 FILTER, RFI; 5 used
2680222H01 HEAT SINK, copper
1484836A01 INSULATOR
0200007003 NUT 8-32 x 5/16 x 1/8"
0200007018 NUT 3/8-32 x 1/2 x 3/32"
0302607B01 SCREW M3 x 8; 7 used
0302607B02 SCREW M3 x 6; 4 used
0380165J07 SCREW, machine: M4 x 10
0380269H09 SCREW M5 x .8; 2 used
0400007691 LOCKWASHER, 3/8" internal
0703432A01 BRACKET, connector UHF
0980038K02 CONNECTOR feed-thru
1503424A01 COVER, PA
2680092K01 SHIELD
2680176H08 HEAT SINK
2900005318 LUG, soldering; 2 used
4282405R01 CLIP, PA
1500483599 HOOD, receptacle
4303423A01 BUSHING, coaxial
4210217A02 STRAP .091 x 3.62"; 2 used

GLC6051A 25W PA (66-88 MHz)

SYMBOL PART NO. DESCRIPTION

CAPACITOR, fixed: uF chip 50V
unless otherwise stated

C1210 2111031A31 47pF 5%
C1211 2111032A19 0.0068 10%
C1212 2111031A53 390pF 5%
C1213 2111032A19 0.0068 10%
C1214 2111032A19 0.0068 10%
C1215 2111032B13 0.01 +80-20%
C1221 2111032B13 0.10 +80-20%
C1222 2111031A65 1800pF 5%
C1223 2111031A45 180pF 5%
C1224 2384538G06 47 20% 20V
C1230 2111031A37 32pF 5%
C1231 2111031A53 290pF 5%
C1233 2111031A49 270pF 5%
C1234 2111032A19 0.0068 10%
C1235 0811051A17 0.47 5% 63V
C1236 2111033B37 100pF 5% 100V
C1237 2111033B29 47pF 5% 100V
C1240 2111033B44 200pF 5% 100V
C1241 0811051A17 0.47 5% 63V
C1242 2180240G50 120pF
C1243 2111033B43 180 5% 100V
C1244 2180240G45 75pF
C1245 2111031A65 1800pF 5%
C1246 2111031A65 1800pF 5%
C1247 2111031A65 1800pF 5%
C1248 2111032B13 0.10 +80-20%
C1249 2180240G54 160pF
C1250 2111031A65 1800pF 5%
C1251 2180240G45 75pF
C1252 2180240G46 82pF
C1253 2180240G48 100pF
C1254 2180240G46 82pF

C1255 2180240G03 39pF
C1260 2182450B11 3pF 5% 500V
C1261 2111031A23 22pF 5%
C1262 2111031A26 30pF 5%
C1270 2111032A19 0.0068 10%
C1271 2111031A25 27pF 5%
C1272 2111031A56 510pF 5%
C1273 2111032A19 0.0068 10%
C1280 2111032A19 0.0068 10%

DIODE: (SEE NOTE)

CR1240 4880236E07 Silicon
CR1260 4884616A01 Silicon
CR1270 4883510F04 Silicon
CR1271 4883510F04 Silicon

BEAD:

E1235 7683960B01 Ferrite
E1246 7683960B01 Ferrite

CONNECTOR:

J8 102716B69 Assy coax includes: plug
0982442E01 Female single contact
1500483599 Hood, receptacle
3083794C01 Cable, coaxial
0430323A01 Bushing

COIL, RF:

L1210 2411030B13 8.5 turns (green)
L1211 2411030B15 10.5 turns (white)
L1212 2480036A01 Choke, ferrite 0.5 turn
L1220 2411030B07 3.5 turns (white)
L1121 2411030B15 10.5 turns (white)
L1222 2480036A01 Choke, ferrite 0.5 turn
L1223 2411030B15 10.5 turns (white)
L1224 2480036A01 Choke, ferrite 0.5 turn
L1230 2411030A01 2 turns (red)
L1231 2411030E05 green
L1232 2482723H46 0.2uH (blue/green)
L1233 2411030A04 5 turns (green)
L1234 2482723H44 0.039uH (blue-yellow)
L1241 2411030B15 10.5 turns (white)
L1242 2411030B06 2.5 turns (blue)
L1243 2411030E03 orange
L1244 2411030A04 5 turns (green)
L1245 2484346A02 Choke, 0.23uH
L1250 2411030B14 9.5 turns (blue)
L1251 2411030B14 9.5 turns (blue)
L1252 2411030B13 8.5 turns (green)
L1253 2411030B14 9.5 turns (blue)
L1270 2482723H37 6.2uH (blue)
L1271 2411030B14 9.5 turns (blue)
L1272 2482723H37 6.2uH (blue)

CONNECTOR, plug:

P1 1582694R03 Housing, receptacle, and:
3982693R02 Contact, receptacle, 4 used
P5 2802098M02 Male, single contact
P6 3080116K06 Cable, coax, incl plug
P7 3080116K06 Cable, coax, incl plug

TRANSISTOR: (SEE NOTE)

Q1210 4800869657 M9657
Q1230 4880225C18 M5C18
Q1240 4802081B18 M1B18
Q1220 4800869859 M9659

RESISTOR, fixed: chip 5% 1/8W
unless otherwise stated

R1210 0611024A49 1000
R1211 0611024A39 390
R1212 0611024A19 56
R1213 0611024A19 56
R1220 0611024A07 18
R1221 0611024A10 24
R1222 0611024A01 10
R1230 0611024A01 10
R1231 0611024A01 10
R1232 0602369M21 47 0.6W
R1233 0611024A01 10
R1240 0611024A01 10
R1250 0611024A73 10k
R1260 0611024A75 12k
R1261 0611024A73 10k

R1270 0602369M29 220 0.6W
 R1271 0611024A49 1k
 R1272 0611024A49 1k
 R1273 0611024A09 22
 R1274 0611024A01 10

THERMISTOR:
 100k (black)

RT1280 0682600K05

NON-REFERENCED ITEMS:

0383794C01 CABLE, coax (white)
 4303423A01 BUSHING, coax
 0780200J01 BRACKET
 9187511C01 FILTER RFI
 1484836A01 INSULATOR
 2680199J01 SHIELD, harmonic filter
 2980014A01 CLIP, coax term
 3080116K06 COAX, cable assy, 2 used
 4280201J01 CLIP, ground, 2 used
 4282405R01 CLIP PA
 2680222H01 HEAT SINK, copper
 1500483599 HOOD, receptacle
 4210217A02 STRAP, tie (white)
 0200007003 NUT, 8-32x5/16x1/8
 0200007018 NUT, 3/8-32x0.5x3/32
 0302607B01 SCREW, M3x8 9 used
 0302607B02 SCREW, M3x6, 4 used
 0380165J07 SCREW, machine M4x10
 0380269H09 SCREW, M5x0.8, 2 used
 0400007691 LOCKWASHER, 3/8"
 0703432A01 BRACKET, conn UHF
 0980038K02 CONNECTOR, power
 1503424A01 COVER, PA
 2680092K01 SHIELD, antenna connector
 2680176H08 HEAT SINK, 25W milled

GLD6165A RF Board, 25kHz (136-162MHz) L (low)
 GLD6166A RF Board, 25kHz (146-174MHz) H (high)

SYMBOL PART NO. DESCRIPTION

CAPACITOR: fixed, pF 5% 50V
 unless otherwise stated

C 1H 2111031A10 5.6 0.5pF
 C 1L 2111031A11 6.8 0.5pF
 C 2H 2111031A10 5.6 0.5pF
 C 2L 2111031A11 6.8 0.5pF
 C 3H 2111031A31 47
 C 3L 2111031A33 55
 C 4H 2111031A10 5.6 0.5pF
 C 4L 2111031A11 6.8 0.5pF
 C 5H 2111031A10 5.6 0.5pF
 C 5L 2111031A11 6.8 0.5pF
 C 6H 2111031A35 68
 C 6L 2111031A37 82
 C 7H 2111031A10 5.6 0.5pF
 C 7L 2111031A11 6.8 0.5pF
 C 8H 2111031A10 5.6 0.5pF
 C 8L 2111031A11 6.8 0.5pF
 C 9H 2111031A31 47
 C 9L 2111031A33 56
 C 10H 2111031A10 5.6 0.5pF
 C 10L 2111031A11 6.8 0.5pF
 C 11L 2111031A03 1.5 0.25pF (GLD6165A only)
 C 12H 2111031A11 6.8 0.5pF
 C 12L 2111031A14 9.1 0.5pF
 C 13H 2111031A11 6.8 0.5pF
 C 13L 2111031A13 8.2 0.5pF
 C 14H 2111031A35 68
 C 14L 2111031A37 82
 C 15H 2111031A12 7.5 0.5pF
 C 15L 2111031A14 9.1 0.5pF
 C 16H 2111031A12 7.5 0.5pF
 C 16L 2111031A14 9.1 0.5pF
 C 17H 2111031A35 68
 C 17L 2111031A37 82
 C 18H 2111031A11 6.8 0.5pF
 C 18L 2111031A13 8.2 0.5pF
 C 19H 2111031A11 6.8 0.5pF
 C 19L 2111031A13 8.2 0.5pF
 C 20 2111032A09 0.001uF 10%
 C 21 2111031A13 8.2 0.5pF
 C 21L 2111031A23 22

C 22H 2111031A22 20
 C 22L 2111031A23 22
 C 51 2111032A21 0.01uF 10%
 C 52 2111031A39 100
 C 53 2111031A17 12
 C 54 2111031A12 7.5 0.5pF
 C 55 2111031A11 6.8 0.5pF
 C 56 2111031A29 39
 C 57 2111032A21 0.01uF 10%
 C 58 2111032A21 0.01uF 10%
 C 59 2384538G05 10uF 20% 15V
 C 60 2111031A31 47
 C 61 2111031A23 22
 C 62 2111031A31 47
 C 63 2111031A59 680
 C 64 2111031A15 10 0.5pF
 C 65 2111032B15 0.22uF +80-20%
 C 66 2111032A21 0.01uF 10%
 C 67 2111032B15 0.22uF +80-20%
 C 68 2111032B15 0.22uF +80-20%
 C 69 2384538G05 10uF 20% 15V
 C 70 2311048B13 10uF 20% 16V
 C 71 2311048B06 2.2uF 20%
 C 72 2111032B15 0.22uF +80-20%
 C 73 2111032B15 0.22uF +80-20%
 C 74 2111032B15 0.22uF +80-20%
 C 75 2111032A13 0.0022uF 10%
 C 76 2111032B15 0.22uF +80-20%
 C 77 2111032B15 0.22uF +80-20%
 C 78 2111032A13 0.0022uF 10%
 C 79 2111032B15 0.22uF +80-20%
 C 80 2311048B13 10uF 20% 16V
 C 81 0811051A05 0.0047uF 63V
 C 82 0811044A34 0.018uF 63V
 C 83 0811051A01 0.001uF 63V
 C101 2311048B13 10uF 20%, 16V
 C102 0811051A13 0.1uF 63V
 C103 2111032A21 0.01uF 10%
 C104 2311047B13 10uF 20%, 16V
 C105 2111032A21 0.01uF 10%
 C106 2111031A19 15
 C108 2111032B13 0.1uF+80-20%
 C109 0811051A13 0.1uF 63V
 C110 2111032B13 0.1uF+80-20%
 C111 2384538G14 1uF 10%, 35V
 C112 0811051A07 0.1uF 63V
 C113 2111032A18 0.0056uF 10%
 C114 2111032A21 0.01uF 10%
 C115 0811051A13 0.1uF 63V
 C116 2111032A09 0.001uF 10%
 C117 2111032A09 0.001uF 10%
 C119 2111032A09 0.001uF 10%
 C120 2111032A09 0.001uF 10%
 C151 2111032A09 0.001uF 10%
 C152 2111031A15 10 0.5pF
 C153 2111032A09 0.001uF 10%
 C154 2111032A21 0.01uF 10%
 C155 2302057B09 0.22uF 20% 35V
 C156 2111031A45 180
 C157 2111031A45 180
 C158 2111032A21 0.01uF 10%
 C159 2111031A23 22
 C161 2111031A36 75
 C203H 2111031A11 6.8 0.5pF
 C203L 2111031A13 8.2 0.5pF
 C204 2111031A05 2.2 0.25pF
 C205H 2111031A17 12
 C205L 2111031A22 20
 C206H 2111031A15 10 0.5pF
 C206L 2111031A21 18
 C207H 2111031A15 10 0.5pF
 C207L 2111031A21 18
 C208 2111031A05 2.2 0.25pF
 C209 2111032A05 470 10%
 C210 2111032A09 0.001uF 10%
 C211 2111032A09 0.001uF 10%
 C212 2111031A03 1.5 0.25pF
 C214 2111032A09 0.001uF 10%
 C215L 2111031A51 330
 C216 2111032A09 0.001uF 10%
 C217 2111032A09 0.001uF 10%
 C218 2111032A09 0.001uF 10%
 C219 2111031A10 5.6 0.5pF
 C220 2111031A51 330

C221 2111032A09 0.001uF 10%
 C222 2111032A09 0.001uF 10%
 C223 2111031A03 1.5 0.25pF
 C224 2111031A19 15
 C225 2111031A03 1.5 0.25pF
 C226 2111031A13 8.2 0.5pF
 C227L 2111031A05 2.2 0.25pF
 C228H 2111031A13 8.2 0.5pF
 C228L 2111031A17 12
 C229H 2111032A09 8.2 0.5pF
 C229L 2111031A21 18
 C230H 2111031A13 8.2 0.5pF
 C230L 2111031A21 18
 C231H 2111031A03 1.5 0.25pF
 C231L 2111031A05 2.2 0.25pF
 C232 2111032A05 470 10%
 C233 2111032A09 0.001uF 10%
 C234 2111032A09 0.001uF 10%
 C235 2111031A03 1.5 0.25pF
 C237 2111032A09 0.001uF 10%
 C238H 2111031A12 7.5 0.5pF
 C238L 2111031A13 8.2 0.5pF
 C239 2111032A09 0.001uF 10%
 C240 2111032A09 0.001uF 10%
 C241 2111032A09 0.001uF 10%
 C242H 2111031A05 2.2 0.25pF
 C242L 2111031A08 3.9 0.25pF
 C243 2111031A51 330
 C244 2111032A09 0.001uF 10%
 C245 2111031A05 2.2 0.25pF
 C251 2111032A21 0.01uF 10%
 C252 2311048B19 0.47uF 20% 16V
 C253 2311048B19 0.47uF 20% 16V
 C254 2111032A21 0.01uF 10%
 C301 2311048B05 1uF 20%
 C302 0811051A17 0.47uF 67V
 C303 2111031A39 100
 C304 2111031A39 100
 C305 2111031A39 100
 C306 2111031A39 100
 C307 2111031A39 100
 C308 2111031A39 100
 C309 2111031A39 100
 C310 2111031A39 100
 C311 2111031A39 100
 C312 2111031A39 100

DIODE: (SEE NOTE)

CR51 4883654H01 Silicon
 CR52 4883654H01 Silicon
 CR101 4883654H01 Silicon
 CR102 4883654H01 Silicon
 CR151 4882190H54 Silicon varactor
 CR152 4882190H54 Silicon varactor
 CR153 4884399M01 Silicon
 CR154 4884399M01 Silicon
 CR201 4882190H54 Silicon varactor
 CR202 4882190H54 Silicon varactor
 CR203 4884616A01 Hot carrier
 CR204 4882190H54 Silicon varactor
 CR205 4882190H54 Silicon varactor
 CR206 4882190H54 Silicon varactor
 CR207 4884616A01 Hot carrier

FILTER:

FL51 9180097D06 455 kHz 6D
 FL52 9180098D06 455 kHz 4D

CONNECTOR:

J 1 0980168K01 coaxial
 J 2 0980168K01 coaxial
 J 3 0980179H01 11-pin socket

COIL:

L 1 2480079J01 4.5 turns
 L 2 2480079J01 4.5 turns
 L 3 2480079J01 4.5 turns
 L 4 2480079J10 4.5 turns tapped 3 5/8 turns
 L 5 2480079J02 4.5 turns tapped 7/8 turns
 L 6 2480079J09 4.5 turns
 L 7 2480079J02 4.5 turns tapped 7/8 turns
 L 51 2482835G03 2.6uH red-blue-gold
 L 52 2482835G03 2.6uH red-blue-gold
 L 53 2482835G03 2.6uH red-blue-gold

L 54 2480000E01 Quad detector with capacitor
 L 55 2482723H35 23uH red
 L151 2480299D01 17.75 turns orange
 L152 2482723H37 6.2uH blue
 L201 2480164J01 4.5 turns
 L202 2482723H28 0.29uH yellow
 L203-
 L207 2480044F04 1.2uH
 L208 2482723H41 0.14uH yellow-brown
 L209 2480044F04 41.2uH
 L210 2480164J02 3.5 turns
 L211 2482723H46 0.2uH blue-green
 L212-
 L215 2480044F04 1.2uH
 L216 2411030B15 10.5 turns white
 L217 2482723H41 0.14uH yellow-brown
 L218 2480044F04 1.2uH

TRANSISTOR: (SEE NOTE:)

Q 1 4811043B12 FET M3B12 (alt: M9839)
 Q 05 4811043B12 FET M3B12 (alt: M9839)
 Q 52 4800859571 M3B03 (alt: M9571)
 Q 53 4802081B30 M1B30 (alt: M1B10)
 Q 54 4802081B30 M1B30 (alt: M1B10)
 Q101 4802081B31 M1B31 (alt: M1B11)
 Q102 4802081B31 M1B31 (alt: M1B11)
 Q103 4802081B31 M1B31 (alt: M1B11)
 Q104 4802081B31 M1B31 (alt: M1B11)
 Q105 4802081B30 M1B30 (alt: M1B10)
 Q107 4811043B16 M3B16 (alt: M9932)
 Q151 4802081B30 M1B30 (alt: M1B10)
 Q152 4802081B31 M1B31 (alt: M1B11)
 Q201 4811043B12 FET M3B12 (alt: M9839)
 Q202 4802081B30 M1B30 (alt: M1B10)
 Q203 4811043B19 M3B19 (alt: M9658)
 Q204 4811043B16 M3B16 (alt: M9932)
 Q205 4811043B12 FET M3B12 (alt: M9839)
 Q206 4802081B30 M1B30 (alt: M1B10)
 Q207 4811043B19 M3B19 (alt: M9658)
 Q208 4811043B16 M3B16 (alt: M9932)
 Q251 4802081B30 M1B30 (alt: M1B10)

RESISTOR, fixed: 5% 1/8W unless otherwise stated

R 1 0611024A93 68k
 R 2 0611024A43 560
 R 51 0611024A55 1.8k
 R 53 0611024A29 150
 R 54 0611024A41 470
 R 55 0611024A49 1k
 R 56 0611024B20 820k
 R 57 0611024B06 220k
 R 58 0611024B02 150k
 R 59 1805500L08 22k, variable
 R 60 0611024A93 68k
 R 61 0611024A95 82k
 R 62 0611024A65 4.7k
 R 63 0611024A71 8.2k
 R 64 0611024A71 8.2k
 R 65 0611024A71 8.2k
 R 66 0611024A65 4.7k
 R101 0611038B15 150 1/2W
 R102 0611024A51 1.2k
 R103 0611024A73 10k
 R104 0611024A73 10k
 R105 0611024A73 10k
 R106 0611024A01 10
 R107 0611024A77 15k
 R108 0611024A39 390
 R109 0611024A37 330
 R110 0611024A51 1.2k
 R111 0611024A37 330
 R112 0611024A45 680
 R113 0611024A67 5.6k
 R116 0611024A45 680
 R117 0611024A63 3.9k
 R118 0611024A71 8.2k
 R119 0611024A71 8.2k
 R120 0611024A19 56
 R121 0611024A19 56
 R122 0600185A33 220
 R123 0611024A25 100
 R152 0610621E25 237k 1% 1/4W
 R153 0610621C71 6.19k 1% 1/4W

R155 0610621C57 4.42k 1% 1/W
R156 0611024A97 100k
R157 0611024A73 10k
R158 0611024A73 10k
R159 0611024A77 15k
R160 0611024A09 22
R161 0611024A53 1.5k
R162 0611024A49 1k
R201 0611024A19 56
R202 0611024A73 10k
R203 0611024A29 150
R204 0611024A65 4.7k
R205 0611024A73 10k
R206 0611024A45 680
R207 0611024A57 2.2k
R208 0611024A45 680
R209 0611024A25 100
R210 0611024A45 680
R211 0611024A15 39
R212 0611024A35 270
R213 0611024A07 18
R214 0611024A97 100k
R215 0611024A73 10k
R216 0611024A73 10k
R217 0611024A73 10k
R218 0611024A29 150
R219 0611024A77 15k
R220 0684764A22 560 1/4W
R221 0684764A22 560 1/4W
R222 0611024A45 680
R223 0611024A57 2.2k
R224 0611024A45 680
R225 0611024A25 100
R226 0611024A45 680
R227 0611024A15 39
R228 0611024A51 1.2k
R229 0611024A37 330
R230 0611024A41 470
R231 0611024A03 12
R232 0611024A41 470
R233 0611024A49 1k
R234 0611024A49 1k
R235 0611024A19 56
R236 0611024A35 270
R251 0611024A35 270
R252 0611024A01 10
R301 0611024A77 15k
R302 1805500L08 22k variable
R303 0611024A41 470
R304 0611024A01 10
R305 1805500L08 22k variable
R306 0611024A01 10
R307 0611024A51 1.2k
R308 0611024A65 4.7k
R309 0611024A65 4.7k
R310 0611024A65 4.7k

THERMISTOR:

RT151 0683600K06 10k
RT152 0683600K06 10k
RT153 0683600K05 100k

INTEGRATED CIRCUIT: (SEE NOTE)

U 51 5105479G05 Nucleus
U101 5183548N19 Divider
U102 5180135C06 Prescaler

ZENER DIODE: (SEE NOTE)

VR101 4882256D15 5.1V 5%

CRYSTAL: (SEE NOTE)

Y 51 9180082J03 Filter 21.4MHz Matched pair A/B
Y 52 4805488G03 20.945MHz | Replace with part as
or 4805488G04 21.855MHz | originally supplied
Y151 4802443B21 14.4MHz

NON-REFERENCED ITEMS:

2680139J01 Shield
2680182H01 RF shield
2680153J01 Coil shield
2680210K01 Coil shield

GLD6169A RF Board 12.5kHz (136-162MHz) L (low)
GLD6170A RF Board 12.5kHz (146-174MHz) H (high)

SYMBOL PART NO. DESCRIPTION

CAPACITOR: fixed, pF 5% 50V unless stated
C 1H 2111031A10 5.6 0.5pF (chip)
C 1L 2111031A11 6.8 0.5pF (chip)
C 2H 2111031A09 4.7 0.25pF (chip)
C 2L 2111031A11 6.8 0.5pF (chip)
C 3H 2111031A29 39 (chip)
C 3L 2111031A35 68 (chip)
C 4H 2111031A10 5.6 0.5pF (chip)
C 4L 2111031A12 7.5 0.5pF (chip)
C 5H 2111031A10 5.6 0.5pF (chip)
C 5L 2111031A11 6.8 0.5pF (chip)
C 6H 2111031A33 56 (chip)
C 6L 2111031A36 75 (chip)
C 7H 2111031A10 5.6 0.25pF (chip)
C 7L 2111031A11 6.8 0.5pF (chip)
C 8H 2111031A10 5.6 0.5pF (chip)
C 8L 2111031A11 6.8 0.5pF (chip)
C 9H 2111031A29 39 (chip)
C 9L 2111031A35 68 (chip)
C 10H 2111031A09 4.7 0.25pF (chip)
C 10L 2111031A11 6.8 0.5pF (chip)
C 11H 2111031A07 3.3 0.5pF (chip)
C 11L 2111031A05 2.2 0.25pF (chip)
C 12H 2111031A11 6.8 0.5pF (chip)
C 12L 2111031A12 7.5 0.5pF (chip)
C 13H 2111031A11 6.8 0.5pF (chip)
C 13L 2111031A13 8.2 0.5pF (chip)
C 14H 2111031A35 68 (chip)
C 14L 2111031A37 82 (chip)
C 15H 2111031A12 7.5 0.5pF (chip)
C 15L 2111031A14 9.1 0.5pF (chip)
C 16H 2111031A12 7.5 0.5pF (chip)
C 16L 2111031A14 9.1 0.5pF (chip)
C 17H 2111031A35 68 (chip)
C 17L 2111031A37 82 (chip)
C 18H 2111031A11 6.8 0.5pF (chip)
C 18L 2111031A13 8.2 0.5pF (chip)
C 19H 2111031A11 6.8 0.5pF (chip)
C 19L 2111031A14 9.1 0.5pF (chip)
C 20 2111031A09 0.001uF 10% (chip)
C 21 2111031A10 5.6 0.5pF (chip)
C 51 2111031A21 18 (chip)
C 52 2111031A35 68 (chip)
C 53 2111031A19 15 (chip)
C 54 2111031A19 15 (chip)
C 56 2111031A15 10 0.5pF (chip)
C 57 2111032A21 0.01uF 10%
C 58 2111032A21 0.01uF 10%
C 59 2384538G05 10uF 20% 15V
C 60 2111031A31 47 (chip)
C 61 2111031A23 22 (chip)
C 62 2111031A31 47 (chip)
C 63 2111031A59 680 (chip)
C 64 2111031A15 10 0.5pF (chip)
C 65 2111032B15 0.22uF +80-20%
C 66 2111032A21 0.01uF 10%
C 67 2111032B15 0.22uF +80-20%
C 68 2111032B15 0.22uF +80-20%
C 69 2384538G05 10uF 20% 15V
C 70 2311048B13 10uF 20% 16V
C 71 2311048B06 2.2uF 20%
C 72 2111032B15 0.22uF +80-20%
C 73 2111032B15 0.22uF +80-20%
C 74 2111032B15 0.22uF +80-20%
C 75 2111032A13 0.0022uF 10%
C 76 2111032B15 0.22uF +80-20%
C 77 2111032B15 0.22uF +80-20%
C 78 2111032A13 0.0022uF 10%
C 79 2111032A15 0.22uF +80-20%
C 80 2311048B13 10uF 20% 16V
C101 2311048B13 10uF 20% 16V
C102 0811051A13 0.1uF 63V
C103 2111032A21 0.01uF 10%
C104 2311048B13 10uF 20% 16V
C105 2111032A21 0.01uF 10%
C106 2111031A19 15 (chip)
C108 2111032B13 0.1uF +80-20%
C109 0811051A13 0.1uF 63V

C110 2111032B13 0.1uF +80-20%
 C111 2384538G14 1uF 10% 35V
 C112 0811051A07 0.01uF 63V
 C113 2111032A18 0.0056uF 10%
 C114 2111032A21 0.01uF 10%
 C115 0811051A13 0.1uF 63V
 C116 2111032A09 0.001uF 10%
 C117 2111032A09 0.001uF 10%
 C119 2111032A09 0.001uF 10%
 C120 2111032A09 0.001uF 10%
 C151 2111032A09 0.001uF 10%
 C152 2111031A15 10uF 0.5pF (chip)
 C153 2111032A09 0.001uF 10%
 C154 2111032A21 0.01uF 10%
 C155 2302057B09 0.22uF 20% 35V
 C156 2111031A45 180 10% (chip)
 C157 2111031A45 180 10% (chip)
 C158 2111032A21 0.01uF 10%
 C159 2111031A23 22 (chip)
 C160 2111031A19 15 (chip)
 C161 2111031A36 75uF 5% (chip)
 C203H 2111031A11 6.8 0.5pF (chip)
 C203L 2111031A13 8.2 0.5pF (chip)
 C204 2111031A05 2.2 0.25pF (chip)
 C205H 2111031A17 12 (chip)
 C205L 2111031A21 18 (chip)
 C206H 2111031A15 10 0.5pF (chip)
 C206L 2111031A21 18 (chip)
 C207H 2111031A15 10 0.5pF (chip)
 C207L 2111031A21 18 (chip)
 C208 2111031A05 2.2 0.25pF (chip)
 C209 2111032A05 470 10%
 C210 2111032A09 0.001pF 10%
 C211 2111032A09 0.001pF 10%
 C212 2111031A03 1.5 0.25pF (chip)
 C214 2111032A09 0.001uF 10%
 C215 2111031A51 330 (chip)
 C216-
 C218 2111032A09 0.001uF 10%
 C219 2111031A10 5.6 0.5pF (chip)
 C220 2111031A51 330 (chip)
 C221 2111032A09 0.001uF 10%
 C222 2111032A09 0.001uF 10%
 C223 2111031A03 1.5 0.25pF (chip)
 C224 2111031A19 15 (chip)
 C225 2111031A03 1.5 0.25pF (chip)
 C226 2111031A13 8.2 0.5pF (chip)
 C227H 2111031A03 1.5 0.5pF (chip)
 C227L 2111031A05 2.2 0.25pF (chip)
 C228H 2111031A13 8.2 0.5pF (chip)
 C228L 2111031A19 15 (chip)
 C229H 2111031A13 8.2 0.5pF (chip)
 C229L 2111031A21 18 (chip)
 C230H 2111031A13 8.2 0.5pF (chip)
 C230L 2111031A21 18 (chip)
 C231H 2111031A03 1.5 0.25pF (chip)
 C231L 2111031A05 2.2 0.25pF (chip)
 C232 2111032A05 470 10%
 C233 2111032A09 0.001pF 10%
 C234 2111032A09 0.001pF 10%
 C235 2111031A03 1.5 0.25pF (chip)
 C237 2111031A09 0.001pF 10% (chip)
 C238H 2111031A12 7.5 0.5pF (chip)
 C238L 2111031A13 8.2 0.5pF (chip)
 C239-
 C241 2111032A09 0.001pF 10%
 C242H 2111031A05 2.2 0.25pF (chip)
 C242L 2111031A08 3.9 0.25pF (chip)
 C243 2111031A51 330 (chip)
 C244 2111032A09 0.001pF 10%
 C245 2111032A05 470 10%
 C251 2111032A21 0.01uF 10%
 C252 2311048B19 47pF 20% 16V
 C253 2311048B19 47pF 20% 16V
 C254 2111032A21 0.01uF 10%
 C301 2311048B05 1uF 20%
 C302 0811051A17 0.47uF 63V
 C303-
 C312 2111031A39 100 (chip)

DIODE: (SEE NOTE)

CR 51 4883654H01 Silicon
 CR 52 4883654H01 Silicon
 CR101 4883654H01 Silicon

CR102 4883654H01 Silicon
 CR151 4882190H54 Silicon varactor
 CR152 4882190H54 Silicon varactor
 CR153 4884399M01 Silicon
 CR154 4884399M01 Silicon
 CR201 4882190H54 Silicon varactor
 CR202 4882190H54 Silicon varactor
 CR203 4884616A01 Hot carrier
 CR204 4882190H54 Silicon varactor
 CR205 4882190H54 Silicon varactor
 CR206 4882190H54 Silicon varactor
 CR207 4884616A01 Hot carrier

FILTER:

FL 51 9180097D04 Filter 6D 455kHz
 FL 52 9180098D04 Filter 4D 455kHz

CONNECTOR:

J 1 0980168K01 Coax
 J 2 0980168K01 Coax
 J 3 0980179H01 11-pin socket

COIL:

L 1H 2480079J07 4.5 turns
 L 1L 2480079J02 4.5 turns
 L 2 2480079J01 4.5 turns
 L 3 2480079J01 4.5 turns
 L 4H 2480079J06 4.5 turns
 L 4L 2480079J10 4.5 turns
 L 5 2480079J02 4.5 turns
 L 6 2480079J01 4.5 turns
 L 7 2480079J02 4.5 turns
 L 51 2482835G03 2.6uH
 L 52 2482835G03 2.6uH
 L 53 2482835G03 2.6uH
 L 54 2580000E01 Quad Coil 455kHz
 L 55 2482723H35 red 23uH
 L151 2480299D01 orange 17.75 turns
 L152 2482723H37 blue 6.2uH
 L201 2480164J01 4.5 turns
 L202 2482723H28 yellow 0.29uH
 L203 2480044F04 1.2uH
 L204 2480044F04 1.2uH
 L205 2480044F04 1.2uH
 L206 2480044F04 1.2uH
 L207 2480044F04 1.2uH
 L208 2482723H41 yel-brn 0.14uH
 L209 2480044F04 1.2uH
 L210 2480164J02 3.5 turns
 L211 2482723H46 blu-grn 0.2uH
 L212 2480044F04 1.2uH
 L213 2480044F04 1.2uH
 L214 2480044F04 1.2uH
 L215 2480044F04 1.2uH
 L216 2411030B15 white 10.5 turns
 L217 2482723H41 yel-brn 0.14uH
 L218 2480044F04 1.2uH

TRANSISTOR: (SEE NOTE)

Q 1 4811043B12 FET M3B12 (alt: M9839)
 Q 51 4811043B12 FET M3B12 (alt: M9839)
 Q 52 4811043B03 M3B03 (alt: M9571)
 Q 53 4802081B30 M1B30 (alt: M1B10)
 Q101 4802081B31 M1B31 (alt: M1B11)
 Q102 4800869987 M9987
 Q103 4800869987 M9987
 Q104 4802081B31 M1B31 (alt: M1B11)
 Q105 4802081B30 M1B30 (alt: M1B10)
 Q107 4811043B16 M1B16 (alt: M9932)
 Q151 4802081B30 M1B30 (alt: M1B10)
 Q152 4802081B31 M1B31 (alt: M1B11)
 Q201 4811043B12 FET M3B12 (alt: M9839)
 Q202 4802081B30 M1B30 (alt: M1B10)
 Q203 4811043B19 M1B19 (alt: M9658)
 Q204 4811043B16 M1B16 (alt: M9932)
 Q205 4811043B12 FET M3B12 (alt: M9839)
 Q206 4802081B30 M1B30 (alt: M1B10)
 Q207 4811043B19 M1B19 (alt: M9658)
 Q208 4811043B16 M1B16 (alt: M9932)
 Q251 4802081B30 M1B30 (alt: M1B10)

RESISTOR: 5% 1/8W
unless otherwise stated

| | | |
|-------|------------|---------------|
| R 1 | 0611024A93 | 68k |
| R 2 | 0611024A43 | 560 |
| R 51 | 0611024A55 | 1.8k |
| R 53 | 0611024A29 | 150 |
| R 54 | 0611024A41 | 470 |
| R 55 | 0611024A49 | 1k |
| R 56 | 0611024B20 | 820k |
| R 57 | 0611024B06 | 220k |
| R 58 | 0611024B02 | 150k |
| R 59 | 1805500L08 | 22k variable |
| R 60 | 0611024A93 | 68k |
| R 61 | 0611024A95 | 82k |
| R 62 | 0611024A43 | 560 |
| R101 | 0602438B15 | 150 1/2W |
| R102 | 0611024A51 | 1.2k |
| R103 | 0611024A73 | 10k |
| R104 | 0611024A73 | 10k |
| R105 | 0611024A73 | 10k |
| R106 | 0611024A01 | 10 |
| R107 | 0611024A77 | 15k |
| R108 | 0611024A77 | 15k |
| R109 | 0611024A37 | 330 |
| R110 | 0611024A47 | 820 |
| R111 | 0611024A37 | 330 |
| R112 | 0611024A45 | 680 |
| R113 | 0611024A67 | 5.6k |
| R116 | 0611024A45 | 680 |
| R117 | 0611024A63 | 3.9k |
| R118 | 0611024A71 | 8.2k |
| R119 | 0611024A71 | 8.2k |
| R120 | 0611024A19 | 56 |
| R121 | 0611024A19 | 56 |
| R122 | 0600185A33 | 220 |
| R123 | 0611024A25 | 100 |
| R152 | 0610621E20 | 210k 1% 1/4W |
| R153 | 0610621C71 | 6.19k 1% 1/4W |
| R155 | 0610621C59 | 4.64k 1% 1/4W |
| R156 | 0611024A97 | 100k |
| R157 | 0611024A73 | 10k |
| R158 | 0611024A73 | 10k |
| R159 | 0611024A77 | 15k |
| R160 | 0611024A09 | 22 |
| R161 | 0611024A53 | 1.5k |
| R162 | 0611024A49 | 1k |
| R201 | 0611024A19 | 56 |
| R202 | 0611024A73 | 10k |
| R203 | 0611024A29 | 150 |
| R204 | 0611024A65 | 4.7k |
| R205 | 0611024A73 | 10k |
| R206 | 0611024A45 | 680 |
| R207 | 0611024A57 | 2.2k |
| R208 | 0611024A45 | 680 |
| R209 | 0611024A25 | 100 |
| R210 | 0611024A45 | 680 |
| R211 | 0611024A15 | 39 |
| R212 | 0611024A35 | 270 |
| R213 | 0611024A07 | 18 |
| R214 | 0611024A97 | 100k |
| R215- | | |
| R217 | 0611024A73 | 10k |
| R218 | 0611024A29 | 150 |
| R219 | 0611024A77 | 15k |
| R220 | 0684764A22 | 560 1/4W |
| R221 | 0684764A22 | 560 1/4W |
| R222 | 0611024A45 | 680 |
| R223 | 0611024A57 | 2.2k |
| R224 | 0611024A45 | 680 |
| R225 | 0611024A25 | 100 |
| R226 | 0611024A45 | 680 |
| R227 | 0611024A15 | 39 |
| R228 | 0611024A51 | 1.2k |
| R229 | 0611024A37 | 330 |
| R230 | 0611024A41 | 470 |
| R231 | 0611024A03 | 12 |
| R232 | 0611024A41 | 470 |
| R233 | 0611024A49 | 1k |
| R234 | 0611024A49 | 1k |
| R235 | 0611024A19 | 56 |
| R236 | 0611024A35 | 270 |
| R251 | 0611024A35 | 270 |
| R252 | 0611024A01 | 10 |
| R301 | 0611024A81 | 22k |

| | | |
|-------|------------|--------------|
| R302 | 1805500L08 | 22k variable |
| R303 | 0611024A33 | 220 |
| R304 | 0611024A01 | 10 |
| R305 | 1805500L08 | 22k variable |
| R306 | 0611024A01 | 10 |
| R307 | 0611024A43 | 560 |
| R308- | | |
| R310 | 0611024B23 | 4.7k |
| R311 | 0611024B23 | Jumper |
| R312 | 0611024B23 | Jumper |

THERMISTOR:

| | | |
|-------|------------|------|
| RT151 | 0683600K06 | 10k |
| RT152 | 0683600K06 | 10k |
| RT153 | 0683600K05 | 100k |

INTEGRATED CIRCUIT: (SEE NOTE)

| | | |
|------|------------|-----------|
| U 51 | 5105479G05 | Nucleus |
| U101 | 5183548N19 | Divider |
| U102 | 5180135C06 | Prescaler |

ZENER DIODE: (SEE NOTE)

| | | |
|-------|------------|---------|
| VR101 | 4882256C15 | 5.1V 5% |
|-------|------------|---------|

CRYSTAL: (SEE NOTE)

| | | |
|------|------------|----------------------------------|
| Y 51 | 9180082J03 | Matched pair A/B |
| Y 52 | 4805488G03 | 20.945MHZ Replace with part as |
| or | 4805488G04 | 21.855MHZ originally supplied |
| Y151 | 4882309N01 | 14.4MHz |

NON-REFERENCED ITEMS:

| | |
|------------|-------------|
| 2680139J01 | Shield |
| 2680182H01 | RF shield |
| 2680153J01 | Coil shield |
| 2680210K01 | Coil shield |

GLD6171A RF Board 174-201 MHz

SYMBOL PART NO. DESCRIPTION

CAPACITOR: pF 5% 50V
unless otherwise stated

| | | |
|------|------------|-----------------------|
| C 1 | 2111031A29 | 39 (chip) |
| C 2 | 2111031A19 | 15 (chip) |
| C 3 | 2182450B08 | 1.2 500V |
| C 4 | 2111031A27 | 33 (chip) |
| C 5 | 2111031A19 | 15 (chip) |
| C 6 | 2111031A13 | 8.2 0.5pF (chip) |
| C 7 | 2111032A27 | 0.033uF 10% (chip) |
| C 8 | 2184716A14 | 0.62 |
| C 9 | 2111031A15 | 10 0.5pF (chip) |
| C 10 | 2184716A14 | 0.62 |
| C 11 | 2111031A35 | 68 (chip) |
| C 12 | 2111031A10 | 5.6 0.5pF (chip) |
| C 13 | 2111032A21 | 0.01uF 10% (chip) |
| C 14 | 2111031A17 | 12 (chip) |
| C 15 | 2111032A27 | 0.033uF 10% (chip) |
| C 16 | 2111031A17 | 12 (chip) |
| C 17 | 2111031A35 | 68 (chip) |
| C 18 | 2111031A21 | 18 (chip) |
| C 19 | 2182450B44 | 0.82 500V |
| C 20 | 2111032A27 | 0.033uF 10% (chip) |
| C 21 | 2111031A19 | 15 (chip) |
| C 22 | 2182450B44 | 0.82 500V |
| C 23 | 2111031A35 | 68 (chip) |
| C 24 | 2111031A21 | 18 (chip) |
| C 25 | 2111032A27 | 0.033uF 10% (chip) |
| C 26 | 2111031A43 | 150 (chip) |
| C 27 | 2111031A01 | 1 0.25pF (chip) |
| C 54 | 2111031A06 | 2.7 0.25pF (chip) |
| C 55 | 2111031A13 | 8.2 0.5pF (chip) |
| C 56 | 2111032B15 | 0.22uF +80-20% (chip) |
| C 57 | 2111032A21 | 0.01uF 10% (chip) |
| C 58 | 2182450B37 | 0.47 500V |
| C 59 | 2111031A31 | 47 (chip) |
| C 60 | 2111031A37 | 82 (chip) |
| C 61 | 2111032B15 | 0.22uF +80-20% (chip) |
| C 62 | 2111032B15 | 0.22uF +80-20% (chip) |
| C 63 | 2311048B13 | 10uF 20% 16V |
| C 64 | 2311048B13 | 10uF 20% 16V |
| C 65 | 2311048B13 | 10uF 20% 16V |
| C 66 | 2311048B06 | 2.2uF 20% |
| C 67 | 2111032B15 | 0.22uF +80-20% (chip) |

C 68 2111032B15 0.22uF +80-20% (chip)
 C 69 2111032B15 0.22uF +80-20% (chip)
 C 70 2111032A13 2200 10% (chip)
 C 71 2111032B15 0.22uF +80-20% (chip)
 C 72 2111032B15 0.22uF +80-20% (chip)
 C 73 2111032A13 2200 10% (chip)
 C 74 2111032B15 0.22uF +80-20% (chip)
 C101 2311048B13 10uF 20% 16V
 C102 0811051A13 0.1uF 5% 63V
 C103 2111032A21 0.01uF 10% (chip)
 C104 2311048B13 10uF 20% 16V
 C105 2111032A21 0.01uF 10% (chip)
 C106 2111031A19 15 (chip)
 C107 2111031A19 15 (chip)
 C108 2111032B13 0.1uF +80-20% (chip)
 C109 0811051A15 0.22uF 5% 63V
 C110 2384538G14 1uF 10% 35V
 C114 2111032A21 0.01uF 10% (chip)
 C115 2111032B13 0.1uF +80-20% (chip)
 C116 2111032A09 0.001uF 10% (chip)
 C117 2111032A09 0.001uF 10% (chip)
 C118 2111031A08 3.9 0.25pF (chip)
 C119 2111032A09 0.001uF 10% (chip)
 C120 2111032A09 0.001uF 10% (chip)
 C150 2111031A35 68 (chip)
 C151 2111032A21 0.01uF 10% (chip)
 C152 2111031A17 12 (chip)
 C153 2111032A21 0.01uF 10% (chip)
 C154 2111032A21 0.01uF 10% (chip)
 C155 2311048B05 1uF 20%
 C156 2111031A45 180 (chip)
 C157 2111031A45 180 (chip)
 C158 2111032A21 0.01uF 10% (chip)
 C159 2111031A25 27 (chip)
 C160 2111031A23 22 (chip)
 C201 2111032A09 0.001uF 10% (chip)
 C202 0811051A09 0.022uF 5% 63V
 C203 2111031A19 15 (chip)
 C204 2111031A07 3.3 0.25pF (chip)
 C205-
 C207 2111031A21 18 (chip)
 C208 2111031A15 10 0.5pF (chip)
 C209 2111031A55 470 (chip)
 C210 2111032A09 0.001uF 10% (chip)
 C211 2111032A09 0.001uF 10% (chip)
 C212 2111031A03 1.5 0.25pF (chip)
 C214 2111032A09 0.001uF 10% (chip)
 C215 2111031A19 15 (chip)
 C216-
 C218 2111032A09 0.001uF 10% (chip)
 C219 2111031A08 3.9 0.25pF (chip)
 C220 2111031A51 330 (chip)
 C221 2111032A09 0.001uF 10% (chip)
 C222 2111032A09 0.001uF 10% (chip)
 C223 2111031A01 1 0.25pF (chip)
 C224 2111031A07 3.3 0.25pF (chip)
 C225 2111031A01 1 0.25pF (chip)
 C226 2111031A15 10 0.5pF (chip)
 C227 2111031A01 1 0.25pF (chip)
 C228-
 C230 2111031A19 15 (chip)
 C231 2111031A01 1 0.25pF (chip)
 C232 2111031A55 470 (chip)
 C233 2111032A09 0.001uF 10% (chip)
 C234 2111032A09 0.001uF 10% (chip)
 C235 2111031A03 1.5 0.25pF (chip)
 C237 2111032A09 0.001uF 10% (chip)
 C238 2111031A11 6.8 0.5pF (chip)
 C239 2111032A09 0.001uF 10% (chip)
 C240 2111032A09 0.001uF 10% (chip)
 C241 2111032A09 0.001uF 10% (chip)
 C242 2111031A05 2.2 0.25pF (chip)
 C243 2111031A51 330 (chip)
 C244 2111032A09 0.001uF 10% (chip)
 C245 2111032A09 0.001uF 10% (chip)
 C246 2111031A15 10 0.5pF (chip)
 C251 2111032A21 0.01uF 10% (chip)
 C252 2311048B19 47uF 20% 16V
 C253 2311048B19 47uF 20% 16V
 C254 2111032A21 0.01uF 10% (chip)
 C301 2311048B05 1uF 20%
 C302 0811051A17 0.47uF 5% 63V
 C303-
 C312 2111031A39 100 (chip)

DIODE: (SEE NOTE)
 CR 51 4883654H01 Silicon
 CR101 4883654H01 Silicon
 CR102 4883654H01 Silicon
 CR151 4882190H54 Silicon (chip)
 CR152 4882190H54 Silicon (chip)
 CR153 4883654H01 Silicon
 CR154 4883654H01 Silicon
 CR201 4882190H54 Silicon (chip)
 CR202 4882190H54 Silicon (chip)
 CR203 4884616A01 Hot Carrier
 CR204 4882190H54 Silicon (chip)
 CR205 4882190H54 Silicon (chip)
 CR206 4882190H54 Silicon (chip)
 CR207 4884616A01 Hot Carrier

FILTER:
 FL51 9180097D04 Filter 455kHz
 FL52 9180098D04 Filter 455kHz

CONNECTOR:
 J 1 0980179H01 Coax
 J 2 0980179H01 Coax
 J 3 Connector

COIL:
 L 1 2402337M01 3.75 turns
 L 2 2402337M01 3.75 turns
 L 3 2402337M01 3.75 turns
 L 4 2402337M01 3.75 turns
 L 5 2402337M01 3.75 turns
 L 6 2402130M01 Choke 1uH
 L 7 2402130M18 Choke 4.7uH
 L 8 2402337M01 3.75 turns
 L 9 2402337M01 3.75 turns
 L 10 2402337M01 3.75 turns
 L 11 2402130M01 Choke 1uH
 L 12 2402130M01 Choke 1uH
 L 51 2482356G21 vio-gld 3.7uH
 L 52 2580000E01 455kHz
 L101 2411030B14 blue 9.5 turns
 L151 2480299D01 orange 17.75 turns
 L152 2402130M18 Choke 4.7uH
 L201 2480164J06 RF
 L202-
 L206 2402130M01 Choke 1uH
 L207 2411030B15 white 10.5 turns
 L208 2411030A06 violet 7 turns
 L209 2402130M01 Choke 1uH
 L210 2480164J06 RF
 L211-
 L215 2402130M01 Choke 1uH
 L216 2411030B14 blue 9.5 turns
 L217 2411030A06 violet 7 turns
 L218 2402130M01 Choke 1uH

TRANSISTOR: (SEE NOTE)
 Q 1 4811043B12 FET M3B12 (alt: M9839)
 Q 2 4811043B12 FET M3B12 (alt: M9839)
 Q 3 4802081B30 M1B30 (alt: M1B10)
 Q 51 4802081B30 M1B30 (alt: M1B10)
 Q101 4802081B31 M1B31 (alt: M1B11)
 Q102 4800869987 M9987
 Q103 4800869987 M9987
 Q104 4802081B31 M1B31 (alt: M1B11)
 Q105 4802081B30 M1B30 (alt: M1B10)
 Q107 4811043B16 M3B16 (alt: M9932)
 Q151 4802081B30 M1B30 (alt: M1B10)
 Q152 4802081B31 M1B31 (alt: M1B11)
 Q201 4811043B12 FET M3B12 (alt: M9839)
 Q202 4802081B30 M1B30 (alt: M1B10)
 Q203 4811043B19 M3B19 (alt: M9658)
 Q204 4811043B19 M3B19 (alt: M9658)
 Q205 4811043B12 FET M3B12 (alt: M9839)
 Q206 4802081B30 M1B30 (alt: M1B10)
 Q207 4811043B19 M3B19 (alt: M9658)
 Q208 4811043B19 M3B19 (alt: M9658)
 Q251 4802081B30 M1B30 (alt: M1B10)

RESISTOR: fixed 5% 1/8W unless otherwise stated
 R 1 0611024A33 220 (chip)
 R 2 0611024A55 1.8k (chip)
 R 3 0611024A09 22 (chip)

| | | |
|-------|------------|---------------|
| 4 | 0611024A35 | 270 (chip) |
| R 5 | 0611024A47 | 820 (chip) |
| R 6 | 0611024A51 | 1.2k (chip) |
| R 7 | 0611024A09 | 22 (chip) |
| R 8 | 0611024A93 | 68k (chip) |
| R 9 | 0611024A65 | 4.7k (chip) |
| R 10 | 0611024A49 | 1k (chip) |
| R 11 | 0611024A19 | 56 (chip) |
| R 50 | 0611024A35 | 270 (chip) |
| R 51 | 0611024B20 | 820k (chip) |
| R 52 | 0611024B06 | 220k (chip) |
| R 53 | 0611024B02 | 150k (chip) |
| R 54 | 1805500L08 | 22k variable |
| R 55 | 0611024A93 | 68k (chip) |
| R 56 | 0611024A95 | 82k (chip) |
| R 57 | 0611024A43 | 560 (chip) |
| R 58 | 0611024A67 | 5.6k (chip) |
| R 59 | 0611024A65 | 4.7k (chip) |
| R101 | 0602438B15 | 150 5% 0.5W |
| R102 | 0611024A51 | 1.2k (chip) |
| R103- | | |
| R105 | 0611024A73 | 10k (chip) |
| R106 | 0611024A01 | 10 (chip) |
| R107 | 0611024A77 | 15k (chip) |
| R108 | 0611024A77 | 15k (chip) |
| R109 | 0611024A25 | 100 (chip) |
| R110 | 0611024A47 | 820 (chip) |
| R111 | 0611024A67 | 5.6k (chip) |
| R112 | 0611024A37 | 330 (chip) |
| R113 | 0611024A25 | 100 (chip) |
| R114 | 0611024A37 | 330 (chip) |
| R115 | 0611024A67 | 5.6k (chip) |
| R116 | 0611024A57 | 2.2k (chip) |
| R120 | 0611024A33 | 220 (chip) |
| R121 | 0611024A19 | 56 (chip) |
| R123 | 0611024A25 | 100 (chip) |
| R151 | 0602366M57 | 2.2k 1% 0.39W |
| R152 | 0602366M83 | 27k 1% 0.39W |
| R153 | 0602366M73 | 10k 1% 0.39W |
| R154 | 0602366M89 | 47k 1% 0.39W |
| R155 | 0602366M51 | 1.2k 1% 0.39W |
| R156 | 0611024A97 | 100k (chip) |
| R157 | 0611024A73 | 10k (chip) |
| R158 | 0611024A73 | 10k (chip) |
| R159 | 0611024A77 | 15k (chip) |
| R160 | 0611024A09 | 22 (chip) |
| R161 | 0611024A53 | 1.5k (chip) |
| R162 | 0611024A49 | 1k (chip) |
| R201 | 0611024A19 | 56 (chip) |
| R202 | 0611024A73 | 10k (chip) |
| R203 | 0611024A29 | 150 (chip) |
| R204 | 0611024A65 | 4.7k (chip) |
| R205 | 0611024A73 | 10k (chip) |
| R206 | 0611024A45 | 680 (chip) |
| R207 | 0611024A57 | 2.2k (chip) |
| R208 | 0611024A45 | 680 (chip) |
| R209 | 0611024A25 | 100 (chip) |
| R210 | 0611024A45 | 680 (chip) |
| R211 | 0611024A25 | 100 (chip) |
| R212 | 0611024A35 | 270 (chip) |
| R213 | 0611024A57 | 2.2k (chip) |
| R214 | 0611024A97 | 100k (chip) |
| R215- | | |
| R217 | 0611024A73 | 10k (chip) |
| R218 | 0611024A29 | 150 (chip) |
| R219 | 0611024A77 | 15k (chip) |
| R220 | 0684764A22 | 560 5% 0.25W |
| R221 | 0684764A22 | 560 5% 0.25W |
| R222 | 0611024A45 | 680 (chip) |
| R223 | 0611024A57 | 2.2k (chip) |
| R224 | 0611024A45 | 680 (chip) |
| R225 | 0611024A25 | 100 (chip) |
| R226 | 0611024A45 | 680 (chip) |
| R227 | 0611024A25 | 100 (chip) |
| R228 | 0611024A57 | 2.2k (chip) |
| R229 | 0611024A37 | 330 (chip) |
| R230 | 0611024A41 | 470 (chip) |
| R231 | 0611024A03 | 12 (chip) |
| R232 | 0611024A41 | 470 (chip) |
| R233 | 0611024A49 | 1k (chip) |
| R234 | 0611024A49 | 1k (chip) |
| R235 | 0611024A19 | 56 (chip) |
| R236 | 0611024A19 | 56 (chip) |
| R237 | 0611024A53 | 1.5k (chip) |

| | | |
|------|------------|--------------|
| R251 | 0611024A35 | 270 (chip) |
| R252 | 0611024A01 | 10 (chip) |
| R301 | 0611024A85 | 33k (chip) |
| R302 | 1805500L08 | 22k variable |
| R303 | 0611024A49 | 1k (chip) |
| R304 | 0611024A63 | 3.9k (chip) |
| R305 | 1805500L08 | 22k variable |
| R306 | 0611024A49 | 1k (chip) |
| R308 | 0611024A73 | 10k (chip) |
| R309 | 0611024A73 | 10k (chip) |
| R310 | 0611024A73 | 10k (chip) |

THERMISTOR:

| | | |
|-------|------------|-----------------|
| RT 60 | 0683600K02 | 1k |
| RT151 | 0683600K06 | 10k 5% |
| RT152 | 0680176D04 | 5.4k @ 25°C NTC |
| RT153 | 0683600K05 | 100k |

INTEGRATED CIRCUIT: (SEE NOTE)

| | | |
|------|------------|-----------|
| U 51 | 5105479G05 | Nucleus |
| U101 | 5183548N19 | Divider |
| U102 | 5184810F66 | Prescaler |

ZENER DIODE: (SEE NOTE)

| | | |
|-------|------------|------------|
| VR101 | 4883461E40 | Zener 5.1V |
|-------|------------|------------|

CRYSTAL:

| | | |
|------|------------|---------------------------------|
| Y 51 | 9180082J02 | Filter 21.4MHz Matched pair A/B |
| Y 52 | 4805488G03 | Crystal 20.945MHz |
| Y151 | 4802443B21 | Crystal 14.4MHz |

NON-REFERENCED ITEMS:

| | |
|------------|------------------|
| 2602338M01 | Shield RF |
| 2680153J02 | Shield Can |
| 2680182B01 | Shield RF |
| 7505295B03 | Pad Crystal Base |
| 7505295B07 | Pad Crystal Base |

GLD6172A RF Board 199-225MHz

| SYMBOL | PART NO. | DESCRIPTION |
|-----------------------------|------------|-----------------------|
| <u>CAPACITOR: pF 5% 50V</u> | | |
| unless otherwise stated | | |
| C 1 | 2111031A27 | 33 (chip) |
| C 2 | 2111031A15 | 10 0.5pF (chip) |
| C 3 | 2182450B44 | 0.82 500V |
| C 4 | 2111031A25 | 27 (chip) |
| C 5 | 2111031A15 | 10 0.5pF (chip) |
| C 6 | 2111031A10 | 5.6 0.5pF (chip) |
| C 7 | 2111032A27 | 0.033uF 10% (chip) |
| C 8 | 2182450B37 | 0.47 500V |
| C 9 | 2111031A13 | 8.2 0.5pF (chip) |
| C 10 | 2182450B37 | 0.47 500V |
| C 11 | 2111031A37 | 82 (chip) |
| C 12 | 2111031A01 | 1 0.25pF (chip) |
| C 13 | 2111032A21 | 0.01uF 10% (chip) |
| C 14 | 2111031A17 | 12 (chip) |
| C 15 | 2111032A27 | 0.033uF 10% (chip) |
| C 16 | 2111031A17 | 12 (chip) |
| C 17 | 2111031A33 | 56 (chip) |
| C 18 | 2111031A17 | 12 (chip) |
| C 19 | 2182450B33 | 0.56 500V |
| C 20 | 2111032A27 | 0.033uF 10% (chip) |
| C 21 | 2111031A15 | 10 0.5pF (chip) |
| C 22 | 2182450B33 | 0.56 500V |
| C 23 | 2111031A33 | 56 (chip) |
| C 24 | 2111031A17 | 12 (chip) |
| C 25 | 2111032A27 | 0.033uF 10% (chip) |
| C 26 | 2111031A43 | 150 (chip) |
| C 27 | 2111031A01 | 1 0.25pF (chip) |
| C 54 | 2111031A06 | 2.7 0.25pF (chip) |
| C 55 | 2111031A13 | 8.2 0.5pF (chip) |
| C 56 | 2111032B15 | 0.22uF +80-20% (chip) |
| C 57 | 2111032A21 | 0.01uF 10% (chip) |
| C 58 | 2182450B37 | 0.47 500V |
| C 59 | 2111031A31 | 47 (chip) |
| C 60 | 2111031A37 | 82 (chip) |
| C 61 | 2111032B15 | 0.22uF +80-20% (chip) |
| C 62 | 2111032B15 | 0.22uF +80-20% (chip) |
| C 63- | | |
| C 65 | 2311048B13 | 10uF 20% 16V |
| C 66 | 2311048B06 | 2.2uF 20% |

C 67-

C 69 2111032B15 0.22uF +80-20% (chip)
 C 70 2111032A13 2200 10% (chip)
 C 71 2111032B15 0.22uF +80-20% (chip)
 C 72 2111032B15 0.22uF +80-20% (chip)
 C 73 2111032A13 2200 10% (chip)
 C 74 2111032B15 0.22uF +80-20% (chip)
 C101 2311048B13 10uF 20% 16V
 C102 0811051A13 0.1uF 5% 63V
 C103 2111032A21 0.01uF 10% (chip)
 C104 2311048B13 10uF 20% 16V
 C105 2111032A21 0.01uF 10% (chip)
 C106 2111031A19 15 (chip)
 C107 2111031A19 15 (chip)
 C108 2111032B13 0.1uF +80-20% (chip)
 C109 0811051A15 0.22uF 5% 63V
 C110 2311049A14 1uF 10% 35V
 C114 2111032A21 0.01uF 10% (chip)
 C115 2111032B13 0.1uF +80-20% (chip)
 C116 2111032A09 0.001uF 10% (chip)
 C117 2111032A09 0.001uF 10% (chip)
 C118 2111031A08 3.9 0.25pF (chip)
 C119 2111032A09 0.001uF 10% (chip)
 C120 2111032A09 0.001uF 10% (chip)
 C150 2111031A35 68 (chip)
 C151 2111032A21 0.01uF 10% (chip)
 C152 2111031A17 12 (chip)
 C153 2111032A21 0.01uF 10% (chip)
 C154 2111032A21 0.01uF 10% (chip)
 C155 2311048B05 1uF 20%
 C156 2111031A45 180 (chip)
 C157 2111031A45 180 (chip)
 C158 2111032A21 0.01uF 10% (chip)
 C159 2111031A25 27 (chip)
 C160 2111031A23 22 (chip)
 C201 2111032A09 0.001uF 10% (chip)
 C202 0811051A09 0.022uF 5% 63V
 C203 2111031A15 10 0.5pF (chip)
 C204 2111031A01 1 0.25pF (chip)
 C205 2111031A17 12 (chip)
 C206 2111031A19 15 (chip)
 C207 2111031A19 15 (chip)
 C208 2111031A01 1 0.25pF (chip)
 C210 2111032A09 0.001uF 10% (chip)
 C211 2111032A09 0.001uF 10% (chip)
 C212 2111031A03 1.5 0.25pF (chip)
 C214 2111032A09 0.001uF 10% (chip)
 C215 2111031A15 10 0.5pF (chip)
 C216 2111032A09 0.001uF 10% (chip)
 C218 2111032A09 0.001uF 10% (chip)
 C219 2111031A05 2.2 0.25pF (chip)
 C220 2111031A51 330 (chip)
 C221 2111032A09 0.001uF 10% (chip)
 C222 2111032A09 0.001uF 10% (chip)
 C223 2111031A01 1 0.25pF (chip)
 C224 2111031A07 3.3 0.25pF (chip)
 C225 2111031A01 1 0.25pF (chip)
 C226 2111031A15 10 0.5pF (chip)
 C227 2111031A01 1 0.25pF (chip)
 C228-
 C230 2111031A19 15 (chip)
 C231 2111031A01 1 0.25pF (chip)
 C232 2111031A55 470 (chip)
 C233 2111032A09 0.001uF 10% (chip)
 C234 2111032A09 0.001uF 10% (chip)
 C235 2111031A03 1.5 0.25pF (chip)
 C237 2111032A09 0.001uF 10% (chip)
 C238 2111031A11 6.8 0.5pF (chip)
 C239-
 C241 2111032A09 0.001uF 10% (chip)
 C242 2111031A05 2.2 0.25pF (chip)
 C243 2111031A51 330 (chip)
 C244 2111032A09 0.001uF 10% (chip)
 C245 2111032A09 0.001uF 10% (chip)
 C246 2111031A15 10 0.5pF (chip)
 C251 2111032A21 0.01uF 10% (chip)
 C252 2311048B19 47uF 20% 16V
 C253 2311048B19 47uF 20% 16V
 C254 2111032A21 0.01uF 10% (chip)
 C271 2111032A09 0.001uF 10% (chip)
 C301 2311048B05 1uF 20%
 C302 0811051A17 0.47uF 5% 63V
 C303-
 C312 2111031A39 100 (chip)

CR 51 4883654H01 Silicon
 CR101 4883654H01 Silicon
 CR102 4883654H01 Silicon
 CR151 4882190H54 Silicon (chip)
 CR152 4882190H54 Silicon (chip)
 CR153 4883654H01 Silicon
 CR154 4883654H01 Silicon
 CR201 4882190H54 Silicon (chip)
 CR202 4882190H54 Silicon (chip)
 CR203 4884616A01 Hot Carrier
 CR204-
 CR206 4882190H54 Silicon (chip)
 CR207 4884616A01 Hot Carrier

DIODE: (SEE NOTE)

Silicon

Silicon

Silicon

Silicon (chip)

Silicon (chip)

Silicon

Silicon

Silicon (chip)

Silicon (chip)

Hot Carrier

Silicon (chip)

Hot Carrier

FILTER:

FL51 9180097D04 Filter 455kHz
 FL52 9180098D04 Filter 455kHz

CONNECTOR:

J 1 0980179H01 Coax
 J 2 0980179H01 Coax

COIL:

L 1-
 L 5 2402337M01 3.75 turns
 L 6 2402130M01 Choke 1uH
 L 7 2402130M18 Choke 4.7uH
 L 8-
 L 10 2402337M01 3.75 turns
 L 11 2402130M01 Choke 1uH
 L 12 2402130M01 Choke 1uH
 L 51 2482356G21 vio-gld 3.7uH
 L 52 2580000E01 455kHz
 L101 2411030B14 blue 9.5 turns
 L151 2480299D01 orange 17.75 turns
 L152 2402130M18 Choke 4.7uH
 L201 2480164J06 RF
 L202-
 L206 2402130M01 Choke 1uH
 L207 2411030B15 white 10.5 turns
 L208 2411030A06 violet 7 turns
 L209 2402130M01 Choke 1uH
 L210 2480164J06 RF
 L211-
 L215 2402130M01 Choke 1uH
 L216 2411030B14 blue 9.5 turns
 L217 2411030A06 violet 7 turns
 L218 2402130M01 Choke 1uH

TRANSISTOR: (SEE NOTE)

Q1,Q2 4811043B12 FET M3B12 (alt: M9839)
 Q 3 4802081B30 M1B30 (alt: M1B10)
 Q 51 4802081B30 M1B30 (alt: M1B10)
 Q101 4802081B31 M1B31 (alt: M1B11)
 Q102 4800869987 M9987
 Q103 4800869987 M9987
 Q104 4802081B31 M1B31 (alt: M1B11)
 Q105 4802081B30 M1B30 (alt: M1B10)
 Q107 4811043B16 M3B16 (alt: M9932)
 Q151 4802081B30 M1B30 (alt: M1B10)
 Q152 4802081B31 M1B31 (alt: M1B11)
 Q201 4811043B12 FET M3B12 (alt: M9839)
 Q202 4802081B30 M1B30 (alt: M1B10)
 Q203 4811043B19 M3B19 (alt: M9658)
 Q204 4811043B19 M3B19 (alt: M9658)
 Q205 4811043B12 FET M3B12 (alt: M9839)
 Q206 4802081B30 M1B30 (alt: M1B10)
 Q207 4811043B19 M3B19 (alt: M9658)
 Q208 4811043B19 M3B19 (alt: M9658)
 Q251 4802081B30 M1B30 (alt: M1B10)

RESISTOR:

R 1 0611024A33 220 (chip)
 R 2 0611024A55 1.8k (chip)
 R 3 0611024A09 22 (chip)
 R 4 0611024A35 270 (chip)
 R 5 0611024A47 820 (chip)
 R 6 0611024A51 1.2k (chip)
 R 7 0611024A09 22 (chip)
 R 8 0611024A93 68k (chip)
 R 9 0611024A65 4.7k (chip)
 R 10 0611024A49 1k (chip)
 R 11 0611024A19 56 (chip)

R 50 0611024A35 270 (chip)
R 51 0611024B20 820k (chip)
R 52 0611024B06 220k (chip)
R 53 0611024B02 150k (chip)
R 54 1805500L08 22k variable
R 55 0611024A93 68k (chip)
R 56 0611024A95 82k (chip)
R 57 0611024A43 560 (chip)
R 58 0611024A67 5.6k (chip)
R 59 0611024A65 4.7k (chip)
R101 0602438B15 150 5% 0.5W
R102 0611024A51 1.2k (chip)
R103-
R105 0611024A73 10k (chip)
R106 0611024A01 10 (chip)
R107 0611024A77 15k (chip)
R108 0611024A77 15k (chip)
R109 0611024A25 100 (chip)
R110 0611024A47 820 (chip)
R111 0611024A67 5.6k (chip)
R112 0611024A37 330 (chip)
R113 0611024A25 100 (chip)
R114 0611024A37 330 (chip)
R115 0611024A67 5.6k (chip)
R116 0611024A57 2.2k (chip)
R120 0611024A33 220 (chip)
R121 0611024A19 56 (chip)
R123 0611024A25 100 (chip)
R151 0602366M57 2.2k 1% 0.39W
R152 0602366M83 27k 1% 0.39W
R153 0602366M73 10k 1% 0.39W
R154 0602366M89 47k 1% 0.39W
R155 0602366M51 1.2k 1% 0.39W
R156 0611024A97 100k (chip)
R157 0611024A73 10k (chip)
R158 0611024A73 10k (chip)
R159 0611024A77 15k (chip)
R160 0611024A09 22 (chip)
R161 0611024A53 1.5k (chip)
R162 0611031A49 1k (chip)
R201 0611024A19 56 (chip)
R202 0611024A73 10k (chip)
R203 0611024A29 150 (chip)
R204 0611024A65 4.7k (chip)
R205 0611024A73 10k (chip)
R206 0611024A45 680 (chip)
R207 0611024A57 2.2k (chip)
R208 0611024A45 680 (chip)
R209 0611024A25 100 (chip)
R210 0611024A45 680 (chip)
R211 0611024A25 100 (chip)
R212 0611024A35 270 (chip)
R213 0611024A57 2.2k (chip)
R214 0611024A97 100k (chip)
R215-
R217 0611024A73 10k (chip)
R218 0611024A29 150 (chip)
R219 0611024A77 15k (chip)
R220 0684764A22 560 5% 0.25W
R221 0684764A22 560 5% 0.25W
R222 0611024A45 680 (chip)
R223 0611024A57 2.2k (chip)
R224 0611024A45 680 (chip)
R225 0611024A25 100 (chip)
R226 0611024A45 680 (chip)
R227 0611024A25 100 (chip)
R228 0611024A57 2.2k (chip)
R229 0611024A37 330 (chip)
R230 0611024A41 470 (chip)
R231 0611024A03 12 (chip)
R232 0611024A41 470 (chip)
R233 0611031A49 1k (chip)
R234 0611031A49 1k (chip)
R235 0611024A19 56 (chip)
R236 0611024A19 56 (chip)
R237 0611024A53 1.5k (chip)
R251 0611024A35 270 (chip)
R252 0611024A01 10 (chip)
R301 0611024A85 33k (chip)
R302 1805500L08 22k variable
R304 0611024A63 3.9k (chip)
R305 1805500L08 22k variable
R308-
R310 0611024A73 10k (chip)

THERMISTOR:
RT 60 0683600K02 1k
RT151 0683600K06 10k 5%
RT152 0680176D04 5.4k @ 25°C NTC
RT153 0683600K05 100k

INTEGRATED CIRCUIT: (SEE NOTE)
U 51 5105479G05 Nucleus
U101 5183548N19 Divider
U102 5184810F66 Prescaler

ZENER DIODE: (SEE NOTE)
VR101 4883461E40 Zener 5.1V

CRYSTAL:
Y 51 9180082J02 Filter 21.4MHz Matched pair A/B
Y 52 4805488G03 Crystal 20.945MHz
Y151 4802443B21 Crystal 14.4MHz

NON-REFERENCED ITEMS:
2602338M01 Shield RF
2680153J02 Shield Can
2680182B01 Shield RF
7505295B03 Pad Crystal Base
7505295B07 Pad Crystal Base

GLD6177A RF Hardware Box

| SYMBOL | PART NO. | DESCRIPTION |
|--------|------------|--------------------|
| | 3902339M01 | RF CONTACT, spring |

GLD6179A Transmitter RF Board (136-162MHz)
GLD6180A Transmitter RF Board (146-174MHz)

| SYMBOL | PART NO. | DESCRIPTION |
|--------|------------|---|
| | | <u>CAPACITOR, fixed uF 10% 50V unless otherwise stated</u> |
| C51 | 2111032A21 | 0.01 (chip) |
| C80 | 2311048B13 | 10 20% 16V |
| C101 | 2311048B13 | 10 20% 16V |
| C102 | 0811051A13 | 0.1 5% 63V |
| C103 | 2111032A21 | 0.01 (chip) |
| C104 | 2311048B13 | 10 20% 16V |
| C105 | 2111032A21 | 0.01 (chip) |
| C106 | 2111031A19 | 15 5% (chip) |
| C108 | 2111032B13 | 0.10 +80-20% (chip) |
| C109 | 0811051A13 | 0.1 5% 63V |
| C110 | 2111032B13 | 0.1 +80-20% (chip) |
| C111 | 2384538G14 | 1 10% 35V |
| C112 | 0811051A07 | 0.01 5% 63V |
| C113 | 2111032A18 | 0.0056 (chip) |
| C114 | 2111032A21 | 0.01 (chip) |
| C115 | 0811051A13 | 0.1 5% 63V |
| C116 | 2111032A09 | 0.001 (chip) |
| C117 | 2111032A09 | 0.001 (chip) |
| C119 | 2111032A09 | 0.001 (chip) |
| C120 | 2111032A09 | 0.001 (chip) |
| C151 | 2111032A09 | 0.001 (chip) |
| C152 | 2111031A15 | 10pF 0.5pF (chip) |
| C153 | 2111032A09 | 0.001 (chip) |
| C154 | 2111032A21 | 0.01 (chip) |
| C155 | 2302057B09 | 0.22 20% 35V |
| C156 | 2111031A45 | 180pF 5% (chip) |
| C157 | 2111031A45 | 180pF 5% (chip) |
| C158 | 2111032A21 | 0.01 (chip) |
| C159 | 2111031A23 | 22pF (chip) |
| C160 | 2111031A19 | 15pF 5% (chip) |
| C161 | 2111031A36 | 75pF 5% (chip) |
| C211 | 2111032A09 | 0.001 (chip) |
| C221 | 2111032A09 | 0.001 (chip) |
| C222 | 2111032A09 | 0.001 (chip) |
| C223 | 2111031A03 | 1.5pF 0.25pF (chip) |
| C224 | 2111031A19 | 15pF 5% (chip) |
| C225 | 2111031A03 | 1.5pF 0.25pF (chip) |
| C226 | 2111031A13 | 8.2pF 0.5pF (chip) |
| C227 | 2111031A05 | 2.2pF 0.25pF (chip) (GLD6179A) or 2111031A03 1.5pF 0.25pF (chip) (GLD6180A) |

C228 2111031A17 12pF 5% (GLD6179A)
or
2111031A13 8.2pF 0.5pF (chip) (GLD6180A)
C229 2111031A21 8pF 5% (chip) (GLD6179A)
or
2111031A13 8.2pF 0.5pF (chip) (GLD6180A)
2111031A21 8pF 5% (chip) (GLD6179A)
or
2111031A13 8.2pF 0.5pF (chip) (GLD6180A)
C231 2111031A05 2.2pF 0.25pF (chip) (GLD6179A)
or
2111031A03 1.5pF 0.25pF (chip) (GLD6180A)
C232 2111032A05 0.00047 (chip)
C233 2111032A09 0.001 (chip)
C234 2111032A09 0.001 (chip)
C235 2111031A03 1.5pF 0.25pF (chip)
C237 2111032A09 0.001 (chip)
C238 2111031A13 8.2pF 0.5pF (chip) (GLD6179A)
or
2111031A12 7.5pF 0.5pF (chip) (GLD6180A)
C239-
C241 2111032A09 0.001 (chip)
C242 2111031A08 3.9pF 0.25pF (chip) (GLD6179A)
or
2111031A05 2.2pF 0.25pF (chip) (GLD6180A)
C243 2111031A51 330 5% (chip)
C244 2111032A09 0.001 (chip)
C251 2111032A21 0.01 (chip)
C252 2311048B19 47 20% 16V
C253 2311048B19 47 20% 16V
C254 2111032A21 0.01 (chip)
C301 2311048B05 1 20%
C302 0811051A17 0.47 5% 63V
C303-
C312 2111031A39 100 5% (chip)

CR101 4883654H01 DIODE: (SEE NOTE)
Silicon
CR102 4883654H01 Silicon
CR151 4882190H54 Silicon varactor
CR152 4882190H54 Silicon varactor
CR153 4884399M01 Silicon
CR154 4884399M01 Silicon
CR204-
C206 4882190H54 Silicon varactor
C207 4884616A01 Hot carrier

J1, 2 0980168K01 CONNECTOR: receptacle
Female, coaxial type
J3 0980179H01 Female, 11-contact

L151 2480299D01 COIL:
17.75 turns (orange)
L152 2482723H37 6.2uH (blue)
L210 2480164J02 3.5 turns
L211 2482723H46 0.2uH (blue-green)
L212-
L215 2480044F04 Choke, 1.2uH
L216 2411030B15 10.5 turns (white)
L217 2482723H41 0.14uH (yellow-brown)
L218 2480044F04 1.2uH

Q101 4802081B31 TRANSISTOR: (SEE NOTE)
M1B31 (alt: M1B11)
Q102 4800869987 M9987
Q103 4800869987 M9987
Q104 4802081B31 M1B31 (alt: M1B11)
Q105 4802081B30 M1B30 (alt: M1B10)
Q107 4811043B16 M3B16 (alt: M9932)
Q151 4802081B30 M1B30 (alt: M1B10)
Q152 4802081B31 M1B31 (alt: M1B11)
Q202 4802081B30 M1B30 (alt: M1B10)
Q205 4811043B12 FET M3B12 (alt: M9839)
Q206 4802081B30 M1B30 (alt: M1B10)
Q207 4811043B19 M3B19 (alt: M9658)
Q208 4811043B16 M3B16 (alt: M9932)
Q251 4802081B30 M1B30 (alt: M1B10)

R101 0602438B15 RESISTOR, fixed: 5% 1/8 W
unless otherwise stated
R102 0611024A25 1.2k (chip)
R103-
R105 0611024A73 10k (chip)

R106 0611024A01 10 (chip)
R107 0611024A77 15k (chip)
R108 0611024A39 390 (chip)
R109 0611024A37 330 (chip)
R110 0611024A51 1200 (chip)
R111 0611024A37 330 (chip)
R112 0611024A45 680 (chip)
R113 0611024A67 5600 (chip)
R116 0611024A45 680 (chip)
R117 0611024A63 3900 (chip)
R118 0611024A71 8200 (chip)
R119 0611024A71 8200 (chip)
R120 0611024A19 56 (chip)
R121 0611024A19 56 (chip)
R122 0600185A33 220
R123 0611024A25 100 (chip)
R152 0610621E25 237k 1% 0.25W
R153 0610621C71 6190 1% 0.25W
R155 0610621C57 4420 1% 0.25W
R156 0611024A97 100k (chip)
R157-
R158 0611024A73 10k (chip)
R159 0611024A77 15k (chip)
R160 0611024A09 22 (chip)
R161 0611024A53 1500 (chip)
R162 0611024A49 1000 (chip)
R201 0611024A19 56 (chip)
R204 0611024A65 4700 (chip)
R205 0611024A73 10k (chip)
R214 0611024A97 100k (chip)
R215-
R217 0611024A73 10k (chip)
R218 0611024A29 150 (chip)
R219 0611024A77 15k (chip)
R220 0684764A22 560 0.25W
R221 0684764A22 560 0.25W
R222 0611024A45 680 (chip)
R223 0611024A57 220 (chip)
R224 0611024A45 680 (chip)
R225 0611024A25 100 (chip)
R226 0611024A45 680 (chip)
R227 0611024A15 39 (chip)
R228 0611024A51 1200 (chip)
R229 0611024A37 330 (chip)
R230 0611024A41 470 (chip)
R231 0611024A03 12 (chip)
R232 0611024A41 470 (chip)
R234 0611024A49 1000 (chip)
R235 0611024A19 56 (chip)
R251 0611024A35 270 (chip)
R252 0611024A01 10 (chip)
R301 0611024A79 18k (chip)
R302 1805500L08 variable 22k 20% 100V
R303 0611024A31 180 (chip)
R304 0611024A01 10 (chip)
R305 1805500L08 variable 22k 20% 100V
R306 0611024A01 10 (chip)
R307 0611024A57 2200 (chip)
R308 0611024A65 4700 (chip)
R309 0611024A65 4700 (chip)
R310 0611024A65 4700 (chip)

RT151 0683600K06 THERMISTOR:
10k 5%
RT152 0683600K06 10k 5%
RT153 0683600K05 100k (black)

U101 5183548N19 INTEGRATED CIRCUIT: (SEE NOTE)
Synthesizer
U102 5180135C05 Divider

VR101 4882256C15 ZENER DIODE: (SEE NOTE)
Zener, 5.1V

Y151 4802443B21 CRYSTAL:
14.4 MHZ

2680210K01 NON-REFERENCED ITEMS:
SHLD COIL CAN
2602484M01 SHIELD
2680182H01 SHLD RF
6680229A63 TOOL ALIGN
7505295B01 PAD XTAL BASE

| SYMBOL | PART NO. | DESCRIPTION | | | |
|--------|------------|--|---|--|--|
| | | <u>CAPACITOR, fixed:</u> uF 50V unless otherwise stated | | | |
| C25 | 2111032A27 | 0.033 10% (chip) | | | |
| C63 | 2311048B13 | 10 20% 16V | | | |
| C101 | 2311048B13 | 10 20% 16V | | | |
| C102 | 0811051A13 | 0.01 5% 63V | | | |
| C103 | 2111032A21 | 0.01 10% (chip) | | | |
| C104 | 2311048B13 | 10 20% 16V | | | |
| C105 | 2111032A21 | 0.01 10% (chip) | | | |
| C106 | 2111031A19 | 15pF 5% (chip) | | | |
| C107 | 2111031A19 | 15pF 5% (chip) | | | |
| C103 | 2111032B13 | 0.10 +80-20% (chip) | | | |
| C109 | 0811051A15 | 0.22 5% 63V | | | |
| C110 | 2384538G14 | 1 10% 35V | | | |
| C114 | 2111032A21 | 0.01 10% (chip) | | | |
| C115 | 2111032B13 | 0.10 +80-20% (chip) | | | |
| C116 | 2111032A09 | 0.001 10% (chip) | | | |
| C117 | 2111032A09 | 0.001 10% (chip) | | | |
| C118 | 2111031A08 | 3.9pF 0.25pF (chip) | | | |
| C119 | 2111032A09 | 0.001 10% (chip) | | | |
| C120 | 2111032A09 | 0.001 10% (chip) | | | |
| C150 | 2111031A35 | 68pF 5% (chip) | | | |
| C151 | 2111032A21 | 0.01 10% (chip) | | | |
| C152 | 2111031A17 | 12pF 5% (chip) | | | |
| C153 | 2111032A21 | 0.01 10% (chip) | | | |
| C154 | 2111032A21 | 0.01 10% (chip) | | | |
| C155 | 2311048B05 | 1 20% | | | |
| C156 | 2111031A45 | 180 5% (chip) | | | |
| C157 | 2111031A45 | 180 5% (chip) | | | |
| C158 | 2111032A21 | 0.01 10% (chip) | | | |
| C159 | 2111031A25 | 27pF 5% (chip) | | | |
| C160 | 2111031A23 | 22pF 5% (chip) | | | |
| C201 | 2111032A09 | 0.001 10% (chip) | | | |
| C202 | 0811051A09 | 0.022 5% 63V | | | |
| C211- | | | | | |
| C222 | 2111032A09 | 0.001 10% (chip) | | | |
| C223 | 2111031A01 | 1.0pF 0.25pF (chip) | | | |
| C224 | 2111031A07 | 3.3pF 0.25pF (chip) | | | |
| C225 | 2111031A01 | 1.0pF 0.25pF (chip) | | | |
| C226 | 2111031A15 | 10pF 0.5pF (chip) | | | |
| C227 | 2111031A01 | 1.0pF 0.25pF (chip) | | | |
| C228- | | | | | |
| C230 | 2111031A19 | 15pF 5% (chip) | | | |
| C231 | 2111031A01 | 1.0pF 0.25pF (chip) | | | |
| C232 | 2111031A55 | 470pF 5% (chip) | | | |
| C233 | 2111032A09 | 0.001 10% (chip) | | | |
| C234 | 2111032A09 | 0.001 10% (chip) | | | |
| C235 | 2111031A03 | 1.5pF 0.25pF (chip) | | | |
| C237 | 2111032A09 | 0.001 10% (chip) | | | |
| C238 | 2111031A11 | 6.8pF 0.5pF (chip) | | | |
| C239- | | | | | |
| C241 | 2111032A09 | 0.001 10% (chip) | | | |
| C242 | 2111031A05 | 2.2pF 0.25pF (chip) | | | |
| C243 | 2111031A51 | 330pF 5% (chip) | | | |
| C244 | 2111032A09 | 0.001 10% (chip) | | | |
| C245 | 2111032A09 | 0.001 10% (chip) | | | |
| C246 | 2111031A15 | 10pF 0.5pF (chip) | | | |
| C251 | 2111032A21 | 0.01 10% (chip) | | | |
| C252 | 2311048B19 | 47 20% 16V | | | |
| C253 | 2311048B19 | 47 20% 16V | | | |
| C254 | 2111032A21 | 0.01 10% (chip) | | | |
| C301 | 2311048B05 | 1 20% | | | |
| C302 | 0811051A17 | 0.47 5% 63V | | | |
| C303- | | | | | |
| C312 | 2111031A39 | 100pF 5% (chip) | | | |
| | | <u>DIODE:</u> (SEE NOTE) | | | |
| GR101 | 4883654H01 | Silicon | | | |
| CR102 | 4883654H01 | Silicon | | | |
| GR151 | 4882190H54 | Silicon, varactor | | | |
| CR152 | 4882190H54 | Silicon, varactor | | | |
| CR153 | 4883654H01 | Silicon | | | |
| CR154 | 4883654H01 | Silicon | | | |
| CR204- | | | | | |
| CR206 | 4882190H54 | Silicon, varactor | | | |
| CR207 | 4884616A01 | Silicon, hot carrier | | | |
| | | <u>CONNECTOR, receptacle:</u> | | | |
| J1, J2 | 0980168K01 | Female, coaxial type | | | |
| J3 | 0980179H01 | Female, 11-contact | | | |
| | | | <u>COIL, RF:</u> | | |
| L101 | 2411030B14 | 9.5 turns (blue) | | | |
| L151 | 2480299D01 | 17.5 turns (orange) | | | |
| L152 | 2402130M18 | Choke, 4.7uH | | | |
| L210 | 2480164J06 | 2.5 turns | | | |
| L211- | | | | | |
| L215 | 2402130M01 | Choke, 1uH | | | |
| L216 | 2411030B14 | 9.5 turns (blue) | | | |
| L217 | 2411Q30A06 | 7 turns (violet) | | | |
| L218 | 2402130M01 | Choke 1uH | | | |
| | | | <u>TRANSISTOR:</u> (SEE NOTE) | | |
| Q101 | 4802081B31 | M1B31 (alt: M1B11) | | | |
| Q102 | 4800869987 | M9987 | | | |
| Q103 | 4800869987 | M9987 | | | |
| Q104 | 4802081B31 | M1B31 (alt: M1B11) | | | |
| Q105 | 4802081B30 | M1B30 (alt: M1B10) | | | |
| Q107 | 4811043B16 | M3B16 (alt: M9932) | | | |
| Q151 | 4802081B30 | M1B30 (alt: M1B10) | | | |
| Q152 | 4802081B31 | M1B31 (alt: M1B11) | | | |
| Q202 | 4802081B30 | M1B30 (alt: M1B10) | | | |
| Q205 | 4811043B12 | FET M3B12 (alt: M9839) | | | |
| Q206 | 4802081B30 | M1B30 (alt: M1B10) | | | |
| Q207 | 4811043B19 | M3B19 (alt: M9658) | | | |
| Q208 | 4811043B19 | M3B19 (alt: M9658) | | | |
| Q251 | 4802081B30 | M1B30 (alt: M1B10) | | | |
| | | | <u>RESISTOR, fixed:</u> chip 5% 0.125W unless otherwise stated | | |
| R101 | 0602438B15 | 150 0.5W (GLD6183A) | | | |
| | 0602369M27 | 150 0.6W (GLD6184A) | | | |
| R102 | 0611024A51 | 1.2k | | | |
| R103- | | | | | |
| R105 | 0611024A73 | 10k | | | |
| R106 | 0611024A01 | 10 | | | |
| R107 | 0611024A77 | 15k | | | |
| R108 | 0611024A77 | 15k | | | |
| R109 | 0611024A25 | 100 | | | |
| R110 | 0611024A47 | 820 | | | |
| R111 | 0611024A67 | 5.6k | | | |
| R112 | 0611024A37 | 330 | | | |
| R113 | 0611024A25 | 100 | | | |
| R114 | 0611024A37 | 330 | | | |
| R115 | 0611024A67 | 5.6k | | | |
| R116 | 0611024A57 | 2.2k | | | |
| R120 | 0611024A33 | 220 | | | |
| R121 | 0611024A19 | 56 | | | |
| R123 | 0611024A25 | 100 | | | |
| R151 | 0602366M57 | 2.2k 1% 0.39W | | | |
| R152 | 0602366M83 | 27k 1% 0.39W | | | |
| R153 | 0602366M73 | 10k 1% 0.39W | | | |
| R154 | 0602366M89 | 47k 1% 0.39W | | | |
| R155 | 0602366M51 | 1.2k 1% 0.39W | | | |
| R156 | 0611024A97 | 100k | | | |
| R157 | 0611024A73 | 10k | | | |
| R158 | 0611024A73 | 10k | | | |
| R159 | 0611024A77 | 15k | | | |
| R160 | 0611024A09 | 22 | | | |
| R161 | 0611024A53 | 1.5k | | | |
| R162 | 0611024A49 | 1k | | | |
| R204 | 0611024A65 | 4.7k | | | |
| R205 | 0611024A73 | 10k | | | |
| R214 | 0611024A97 | 100k | | | |
| R215- | | | | | |
| R217 | 0611024A73 | 10k | | | |
| R218 | 0611024A29 | 150 | | | |
| R219 | 0611024A77 | 15k | | | |
| R220 | 0684764A22 | 560 0.25W | | | |
| R221 | 0684764A22 | 560 0.25W | | | |
| R222 | 0611024A45 | 680 | | | |
| R223 | 0611024A57 | 2.2k | | | |
| R224 | 0611024A45 | 680 | | | |
| R225 | 0611024A25 | 100 | | | |
| R226 | 0611024A45 | 680 | | | |
| R227 | 0611024A25 | 100 | | | |
| R228 | 0611024A57 | 2.2k | | | |
| R229 | 0611024A37 | 330 | | | |
| R230 | 0611024A41 | 470 | | | |
| R231 | 0611024A03 | 12 | | | |
| R232 | 0611024A41 | 470 | | | |
| R234 | 0611024A49 | 1k | | | |
| R235 | 0611024A19 | 56 | | | |
| R236 | 0611024A19 | 56 | | | |
| R237 | 0611024A53 | 1.5k | | | |

R251 0611024A35 270
 R252 0611024A01 10
 R301 0611024A85 33k
 R302 1805500L08 variable 22k 20%
 R303 0611024A49 1000
 R304 0611024A63 3900
 R305 1805500L08 variable 22k 20%
 R306 0611024A49 1000
 R308-
 R310 0611024A73 10k

THERMISTOR:

RT151 0683600K06 10k
 RT152 0680176D04 5.4k
 RT153 0683600K05 100k

INTEGRATED CIRCUIT: (SEE NOTE)

U101 5183548N19 Synthesizer
 U102 5184810F66 Divider

ZENER DIODE: (SEE NOTE)

VR101 4883461E40 5.1V

CRYSTAL:

Y151 4802443B21 14.4 MHz

NON-REFERENCED ITEMS:

7505295B01 PAD, crystal base, 2 used
 6602420M01 TOOL, trimming
 6680329A63 TOOL, alignment
 2602338M01 SHIELD, rf board
 2680182H01 SHIELD, rf
 2680153J02 SHIELD, coil can

GLD6185A

Power Amplifier 136-174MHz 10W

SYMBOL PART NO. DESCRIPTION

CAPACITOR, fixed: pF 5% 50V
 unless otherwise stated

C1310 2111031A55 470
 C1311 2111031A19 15
 C1312 2111031A39 100
 C1313 2111031A61 1000
 C1314 2111031A55 470
 C1315 2111032B13 0.1uF +80-20%
 C1320 2111031A33 56
 C1321 2111031A29 39
 C1322 2111031A36 75
 C1323 2111031A55 470
 C1325 2111032B13 0.1uF +80-20%
 C1330 2111031A42 130
 C1331 2111031A43 150
 C1332 2111031A36 75
 C1333 2111031A55 470
 C1334 0811051A17 0.47uF 5% 63V
 C1335 2111033B31 56 100V
 C1336 2111031A58 620
 C1337 2111033B26 36 100V
 C1338 2111033B31 56 100V
 C1339 2111033B24 30 100V
 C1340 2111031A49 270
 C1341 2111033B24 30 100V
 C1342 2111031A55 470
 C1343 0811051A17 0.47uF 5% 63V
 C1344 2111031A39 100
 C1345 2111032B13 0.1uF +80-20%
 C1346 2111031A55 470
 C1347 2111032B13 0.1uF +80-20%
 C1351 2180240G02 33 250V
 C1352 2180240G02 33 250V
 C1353 2180240G01 30 250V
 C1354 2180240G40 27 250V
 C1355 2180240G38 22 25V
 C1356 2111031A49 270
 C1360 2182450B11 3.0 5% 500V
 C1361 2111031A13 8.2 0.5%
 C1362 2111031A26 30
 C1370 2111031A18 13 5%
 C1371 2111031A43 150
 C1372 2111031A55 470
 C1380 2111031A55 470

DIODE: (SEE NOTE)
 CR1340 4880236E07 Silicon
 CR1360 4884616A01 Hot carrier
 CR1370 4883510F04 Pin
 CR1371 4883510F04 Pin

FERRITE:

E1330 7683960B01 Bead
 E1331 7683960B01 Bead

FILTER:

FT1300 p/o P5 Feedthru
 FT1301-
 FT1305 9187511C01 Feedthru

CONNECTOR; receptacle:

J8 0102716B69 Assy coax cable, includes:
 0982442E01 Female, single contact
 1500483599 Hood, receptacle
 3083794C01 Cable, coaxial
 4303423A01 Bushing
 0380269H08 Screw M3x0.5, 2 used
 0703432A01 Bracket, connector

COIL, RF:

L1310 2411030A01 2 turns (red)
 L1311 2411030B07 3.5 turns (white)
 L1312 2411030B15 10.5 turns (white)
 L1313 2480036A01 0.5 turns
 L1320 2411030A03 4 turns (yellow)
 L1321 2411030E07 0.5 turns (gray)
 L1322 2482723H37 Choke 6.2uH (blue)
 L1323 2411030A01 2 turns (red)
 L1324 2480036A01 Choke bead, ferrite
 L1330 2411030E02 1/2 turn (red)
 L1331 2482723H37 Choke 6.2uH (blue)
 L1333 2411030B07 3.5 turns (white)
 L1334 2482723H46 Choke 0.2uH (blue/green)
 L1335 2484346A02 Choke 0.23uH
 L1336 2411030E01 0.5 turn (brown)
 L1337 2411030B08 4 1/2 turns (brown)
 L1338 2411030E05 1/2 turn (green)
 L1339 2411030A03 4 turns (yellow)
 L1350 2411030B10 5 1/2 turns (red)
 L1351 2411030A05 6 turns (blue)
 L1352 2411030B10 5 1/2 turns (red)
 L1353 2411030B10 5 1/2 turns (red)
 L1354 2411030B15 10 1/2 turns (white)
 L1370 2482723H49 Choke 1.2uH blue/black
 L1371 2411030B10 5 1/2 turns (red)
 L1372 2482723H49 Choke 1.2uH

CONNECTOR, plug:

P1 1582694R03 Housing, receptacle 4-contact
 3982693R02 Contact, crimp, 4 used
 P5 0980038K02 Female single contact
 P6, P7 3080116K06 Assy, plug and RF cable coaxial

TRANSISTOR: (SEE NOTE)

Q1310 4800869657 M9657
 Q1320 4800869859 M9859
 Q1330 4880225C18 M5C18

RESISTOR, fixed: 5% 1/8W (chip)
 unless otherwise stated

R1310 0611024A39 390
 R1311 0611024A49 1k
 R1312 0611024A19 56
 R1313 0611024A19 56
 R1314 0611024A39 390
 R1320 0611024A25 100
 R1321 0611024A21 68
 R1322 0611024A01 10
 R1330 0611024A19 56
 R1331 0611024A01 10
 R1332 0600126A23 82 1W
 R1335 0602369M24 82 0.6W
 R1336-
 R1338 0611024A37 330
 R1360 0611024A73 10k
 R1361 0611024A75 12k
 R1370 0600126A29 150 1W

RT1380 0683600K05 THERMISTOR:
100k @ 25°C

NON-REFERENCED ITEMS:

0200007003 NUT 8-32x5/16x1/8"
0200007018 NUT 3/8x32x1/2x3/32"
0302607B01 SCREW M3x8 7 used
0302607B02 SCREW M3x6 4 used
0380269H09 SCREW M5x0.8 2 used
0384723C17 SCREW M4x8
0400007691 LOCKWASHER 3/8" internal
0484717C02 WASHER 3.2 4 used
0484718C04 LOCKWASHER A3.2 2 used
0484718C19 LOCKWASHER J4.3mm
0780200J01 BRACKET feedthru
1484836A01 INSULATOR
1503424A01 COVER PA
2680092K01 SHIELD antenna
2680176H08 HEAT SINK
2680199J01 SHIELD harmonic filter
2680222H01 HEAT SINK
2900005318 LUG 2 used
2980014A01 CLIP terminal coax 2 used
3282796H04 GASKET
4210217A02 STRAP tie 2 used
4282405R01 CLIP P.A.

GLD6186A
Power Amplifier 136-174MHz 25W

SYMBOL PART NO. DESCRIPTION

CAPACITOR, fixed: pF 5% 50V
unless otherwise stated

C1410 2111031A55 470 (chip)
C1411 2111031A19 15 (chip)
C1412 2111031A37 82 (chip)
C1413 2111031A61 1000 (chip)
C1414 2111032B13 0.1uF +80-20%
C1415 2111031A55 470 (chip)
C1420 2111031A35 68 (chip)
C1421 2111031A27 33 (chip)
C1422 2111031A33 56 (chip)
C1423 2111032B13 0.1uF +80-20%
C1424 2111031A22 20 (chip)
C1430 2111031A47 220 (chip)
C1431 2111031A35 68 (chip)
C1432 2111031A35 68 (chip)
C1433 0811051A17 0.47uF 63V
C1434 2111031A55 470 (chip)
C1435 2111033B28 43 100V (chip)
C1436 2111033B29 47 100V (chip)
C1437 2111033B33 68 100V (chip)
C1438 2111031A55 470 (chip)
C1439 0811051A17 0.47uF 63V
C1440 2111033B35 82 100V (chip)
C1441 2111033B42 160 100V (chip)
C1442 2180240G55 180 250V
C1443 2180240G52 140 250V
C1444 2180240G03 39 250V
C1445 2111034A55 470 (chip)
C1446 2111031A41 120 (chip)
C1447 2111031A55 470 (chip)
C1448 2111032B13 0.1uF +80-20%
C1450 2111031A55 470 (chip)
C1451 2180240G01 30 250V
C1452 2180240G02 33 250V
C1453 2180240G01 30 250V
C1454 2180240G40 27 250V
C1455 2180240G38 22 250V
C1460 2182450B11 3.0 500V
C1461 2111031A17 12 (chip)
C1462 2111031A26 30 (chip)
C1470 2111031A15 10 0.5% (chip)
C1471 2111031A41 120 (chip)
C1472 2111031A55 470 (chip)
C1480 2111031A55 470 (chip)

DIODE: (SEE NOTE)

CR1440 4880236E07 Transorb
CR1460 4884616A01 Hot carrier
CR1470 4883510F04 Pin
CR1471 4883510F04 Pin

E1430 7683960B01 FERRITE:
E1440 7683960B01 Bead

FT1400 p/o P5 FILTER:
FT1401- Feedthru
FT1405 9187511C01 Feedthru

J8 0102716B69 CONNECTOR, receptacle:
0982442E01 Assy coax cable, includes:
1500483599 Female, single contact
3083794C01 Hood, receptacle
4303423C01 Cable, coaxial
0380269H08 Bushing
0703432A01 Screw, tapt M3x0.5, 2 used
Bracket, connector

L1410 2411030A01 COIL:
L1411 2411030A03 2 turns (red)
L1412 2411030B15 4 turns (yellow)
L1420 2411030A06 10 1/2 turns (white)
L1421 2411030A06 7 turns (violet)
L1422 2411030A01 2 turns (red)
L1423 2482723H37 Choke, 6.2uH (blue)
L1424 2411030A01 2 turns (red)
L1424 2480036A01 Ferrite bead
L1430 2411030A02 3 turns (orange)
L1431 2411030B15 10 1/2 turns (white)
L1432 2480036A01 Ferrite bead
L1433 2411030E01 1/2 turn (brown)
L1434 2482723H46 Choke 0.2uH (blue-green)
L1435 2411030E01 1/2 turn (brown)
L1440 2411030A03 4 turns (yellow)
L1441 2482723H37 Choke, 6.2uH (blue)
L1442 2411030A05 6 turns (blue)
L1443 2484346A02 Choke 0.23uH
L1444 2411030E01 1/2 turn (brown)
L1445 2411030A02 3 turns (orange)
L1450 2411030B10 5 1/2 turns (red)
L1451 2411030A05 6 turns (blue)
L1452 2411030B10 5 1/2 turns (red)
L1453 2411030B10 5 1/2 turns (red)
L1454 2411030B15 10 1/2 turns (white)
L1470 2482723H49 Choke, 1.2uH (blue-black)
L1471 2411030A04 5 turns (green)
L1473 2482723H49 Choke, 1.2uH (blue-black)

P1 1582694R03 CONNECTOR, plug:
3982693R02 Housing, 4-contact
P5 0980038K02 Contact crimp snap, 4 used
P6, P7 3080116K06 Female single contact
Assy cable coaxial incl plug

Q1410 4800869657 TRANSISTOR: (SEE NOTE)
Q1420 4800869859 M9657
Q1430 4880225G18 M9859
Q1440 4802081B18 M5C18
M1B18

R1410 0611024A39 RESISTOR, fixed: 5% 1/8W (chip)
R1411 0611024A49 unless otherwise stated
R1412 0611024A19 390
R1413 0611024A19 1k
R1414 0611024A39 56
R1420 0611024A31 56
R1421 0611024A56 390
R1440 0611024A11 180
R1460 0611024A73 2k
R1462 0611024A75 27
R1470 0602369M29 10k
R1471 0611024A49 12k
R1472 0611024A49 220 0.6W
R1474 0611024A07 1k
18

RT1480 0683600K05 THERMISTOR:
100k @ 250C

NON-REFERENCED ITEMS:
0200007018 NUT 3/8-32x1/2x3/32"
0302607B01 SCREW M3x8 10 used
0302607B02 SCREW M3x6 4 used

0380269H09 SCREW M5x8 2 used
 0384723C17 SCREW M4x8
 0400007691 LOCKWASHER 3/8" int'1
 0484717C02 WASHER 3.2 4 used
 0484718C04 LOCKWASHER A3.2 2 used
 0484718C19 LOCKWASHER J4.3
 0780200J01 BRACKET feedthru
 1484836A01 INSULATOR (Q1410)
 1503424A01 COVER PA
 2680092K01 SHIELD antenna
 2680176H08 HEAT SINK
 2680199J01 SHIELD filter
 2680222H01 HEAT SINK
 2802098M02 CONTACT female
 2900005318 LUG
 2980014A01 CLIP coax terminal 2 used
 3282796H04 GASKET
 4210217A02 STRAP 0.091x3.62" 2 used
 4280201J01 CLIP ground 2 used
 4282405R01 CLIP P.A.

C1870-
 C1874 9187511C01 Feedthru
 C1875 p/o P5 Feedthru
 C1876 2311048B05 luF 20Z

FILTER:

CR1801 4880236E07 DIODE: (SEE NOTE)
 Zener type 28V
 CR1851 4883510F04 Pin
 CR1852 4802506B03 Pin
 CR1853 4884616A01 Hot carrier

CONNECTOR, receptacle:

J8 0102716B69 Assy, coax cable, includes:
 0982442E01 Female single contact
 1500483599 Hood, receptacle
 3083794C01 Cable, coaxial
 4303423A01 Bushing
 0380269H08 Screw, tapt M3x0.5, 2 used
 0703432A01 Bracket, connector

COIL:

L1801 2411030A01 RF
 L1803 2482723H05 0.41uH (yellow)
 L1804 2482723H44 0.039uH (blue-yellow)
 L1805 2411030E06 RF
 L1806 2411030B03 1.5 turns (orange)
 L1807 2411030A04 5 turns (brown)
 L1808 2411030A04 5 turns (brown)
 L1809 2482723H44 0.039nH (blue-yellow)
 L1810 2411030A05 18.6nH (green)
 L1811 2411030A03 4 turns (yellow)
 L1813 2480036A01 Choke, 1/2 turn ferrite bead
 L1814 2411030B15 10.5 turns (white)
 L1818 2411030E03 RF (orange)
 L1819 2480036A01 1/2 turn
 L1821 2482723H28 0.29uH (yellow)
 L1822 2480036A01 1/2 turn
 L1823 2480036A01 1/2 turn
 L1824 2480036A01 1/2 turn
 L1825 2411030A04 5 turns (green)
 L1827 2411030E05 18.6nH (green)
 L1828 2411030A03 4 turns (yellow)
 L1851 2482723H49 1.2uH (blue-black)
 L1852 2482723H49 1.2uH (blue-black)
 L1853 2411030A04 5 turns (green)
 L1854 2411030A04 5 turns (green)
 L1855 2411030A04 5 turns (green)
 L1856 2411030A04 5 turns (green)
 L1857 2411030B15 10 1/2 turns (white)

CONNECTOR, plug:

P1 1582694R01 Hsg, receptacle 4-contact
 3982693R02 Contact, crimp snap, 4 used
 P5 0980038K02 Female single contact
 P6 3080116K06 Assy, RF plug & cable
 P7 3080116K06 Assy, RF plug & cable

TRANSISTOR (SEE NOTE)

Q1801 4800869657 M9657
 Q1802 4800869859 M9859
 Q1803 4880225C18 M5C18
 Q1804 4802081B28 M1B28

RESISTOR, fixed: 5% 1/8W (chip)
 unless otherwise stated

R1801 0611024A29 150
 R1802 0611024A51 1.2k
 R1803 0611024A39 390
 R1804 0611024A39 390
 R1805 0602329M03 15 0.52W
 R1806 0611024A07 18
 R1807 0611024A47 820
 R1808 0611024A09 22
 R1809 0602329M10 56 0.52W
 R1810 0602329M23 680 0.52W
 R1811 0611024A09 22
 R1812 0602329M01 10 0.52W
 R1820 0611024A47 820
 R1821 0602329M02 12 0.52W
 R1822 0611024A09 22
 R1823 0611024A09 22
 R1850 0602391M18 27 1.5W
 R1851 0611024A73 10k

GLD6190A Power Amplifier 174-225MHz 25W

| SYMBOL | PART NO. | DESCRIPTION |
|--------|------------|---|
| | | <u>CAPACITOR, fixed: pF 5% 50V unless otherwise stated</u> |
| C1801 | 2111031A39 | 100 (chip) |
| C1802 | 2111031A19 | 15 (chip) |
| C1804 | 2111031A61 | 1000 (chip) |
| C1805 | 2111031A51 | 330 (chip) |
| C1807 | 2111031A59 | 680 (chip) |
| C1808 | 2111032A25 | 0.22uF 10% (chip) |
| C1809 | 2111032A25 | 0.22uF 10% (chip) |
| C1810 | 2111032A27 | 0.033uF 10% (chip) |
| C1812 | 2111031A39 | 100 (chip) |
| C1813 | 2111031A27 | 33 (chip) |
| C1814 | 2111031A47 | 220 (chip) |
| C1815 | 2111031A15 | 10 0.5% (chip) |
| C1816 | 2111031A61 | 1000 (chip) |
| C1817 | 2111031A43 | 150 (chip) |
| C1818 | 2111031A31 | 47 (chip) |
| C1819 | 2111031A27 | 33 (chip) |
| C1820- | | |
| C1822 | 2111031A33 | 56 (chip) |
| C1823 | 2111031A35 | 68 (chip) |
| C1824 | 2111032A27 | 0.033uF 10% (chip) |
| C1825 | 2111031A61 | 1000 (chip) |
| C1826 | 2311048B05 | luF 20Z |
| C1827 | 2111031A19 | 15 (chip) |
| C1828 | 2111031A17 | 12 (chip) |
| C1829 | 2111031A23 | 22 (chip) |
| C1830 | 2111031A25 | 27 (chip) |
| C1831 | 2111031A31 | 47 (chip) |
| C1832 | 2111031A29 | 39 (chip) |
| C1833 | 2111032A27 | 0.033uF 10% (chip) |
| C1834 | 2111031A59 | 680 (chip) |
| C1835 | 2111031A61 | 1000 (chip) |
| C1836 | 2302200B02 | 100uF 25V |
| C1837 | 2111032A27 | 0.33uF 10% (chip) |
| C1838 | 2111031A61 | 1000 (chip) |
| C1839 | 2111033B37 | 100 100V (chip) |
| C1840 | 2111033B45 | 220 100V (chip) |
| C1841 | 2111031A61 | 1000 (chip) |
| C1842 | 2311048B05 | luF 20Z |
| C1843 | 2111032A27 | 0.33uF 10% (chip) |
| C1844 | 2180240G50 | 120 250V |
| C1845 | 2180240G43 | 47 250V |
| C1846 | 2180240G35 | 15 250V |
| C1847 | 2111033B53 | 470 100V (chip) |
| C1848 | 2111031A59 | 680 (chip) |
| C1850 | 2184494B07 | 150 500V |
| C1851 | 2111031A59 | 680 (chip) |
| C1852 | 2111031A61 | 1000 (chip) |
| C1853 | 2180240G14 | 8.2 250V |
| C1854 | 2180240G39 | 24 250V |
| C1855 | 2180240G39 | 24 250V |
| C1856 | 2180240G38 | 22 250V |
| C1857 | 2180240G35 | 15 250V |
| C1858 | 2111033B53 | 470 100V (chip) |
| C1859 | 2111031A59 | 680 (chip) |
| C1860 | 2111031A59 | 680 (chip) |
| C1861 | 2111031A59 | 680 (chip) |

R1852 0602329M13 100 0.52W
 R1854 0602329M29 2.2k 0.52W
 R1855 0611024A35 270
 R1856 0611024A77 15k
 R1857 0611024A87 39k
 R1858 0611024A33 220
 R1859 0611024A35 270
 R1861 0611024A55 1.8k
 R1862 0611024A99 120k
 R1863 0611024B02 150k

1500843599 HOOD receptacle
 1503473A01 HOUSING filter
 2980014A01 CLIP coaxial terminal
 3080116K05 CABLE coaxial

GLE6141A RF Board, 25kHz (403-433MHz) 5ppm

| SYMBOL | PART NO. | DESCRIPTION |
|--------|------------|--|
| | | <u>CAPACITOR, fixed:</u> pf 5% 50V unless otherwise stated |
| C 1 | 2111031A13 | 8.2 0.25pF |
| C 2 | 2111031A35 | 68 |
| C 3 | 2111031A35 | 68 |
| C 5 | 2111031A35 | 68 |
| C 8 | 2111032A09 | 1000 |
| C 9 | 2111031A08 | 3.9 0.25pF |
| C 10 | 2111032A21 | 0.01uF 10% |
| C 12 | 2111032A09 | 0.001uF 10% |
| C 51 | 2111031A31 | 47 |
| C 52 | 0611024B23 | Jumper |
| C 54 | 2111031A09 | 4.7 0.25pF |
| C 55 | 2111031A10 | 5.6 0.25pF |
| C 56 | 0611024B23 | Jumper |
| C 57 | 2111031A21 | 0.01uF 10% |
| C 58 | 2111031A21 | 0.01uF 10% |
| C 59 | 2384538G05 | 0.10uF 20% 15V |
| C 60 | 2111031A31 | 47 |
| C 61 | 2111031A23 | 22 |
| C 62 | 2111031A31 | 47 |
| C 63 | 2111031A59 | 680 |
| C 64 | 2111031A15 | 10 |
| C 65 | 2111032B15 | 0.22uF 80-20% |
| C 66 | 2111032A21 | 0.01uF 10% |
| C 67 | 2111032B15 | 0.22uF 80-20% |
| C 68 | 2111032B15 | 0.22uF 80-20% |
| C 69 | 2384538G05 | 10uF 20% 15V |
| C 70 | 2311048B13 | 10uF 20% 16V |
| C 71 | 2311048B06 | 2.2uF 20% |
| C 72 | 2111032B15 | 0.22uF 80-20% |
| C 73- | | |
| C 77 | 2111032B15 | 0.22uF 80-20% |
| C 78 | 2111032A13 | 0.0022uF 10% |
| C 79 | 2111032B15 | 0.22uF 80-20% |
| C 80 | 2311048B13 | 10uF 20% 16V |
| C 81 | 0811051A05 | 0.0047uF 63V |
| C 82 | 0811044A34 | 0.018uF 63V |
| C 83 | 0811051A01 | 0.001uF 63V |
| C101 | 2311048B13 | 10uF 20% 16V |
| C102 | 0811051A13 | 0.1uF 63V |
| C103 | 2111032A21 | 0.01uF 10% |
| C104 | 2311048B13 | 10uF 20% 16V |
| C105 | 2111032A21 | 0.01uF 10% |
| C106 | 2111031A19 | 15 |
| C108 | 2111032B13 | 0.1uF 80-20% |
| C109 | 0811051A13 | 0.1uF 63V |
| C110 | 2111032B13 | 0.1uF 80-20% |
| C111 | 2302057B02 | 1uF 20% 35V |
| C112 | 0811051A07 | 0.1uF 63V |
| C113 | 2111032A18 | 0.0056uF 10% |
| C114 | 2111031A35 | 68 |
| C115 | 2111032A21 | 0.01uF 10% 50V |
| C116 | 2311048B13 | 10uF 20% 16V |
| C117 | 2111031A35 | 68 |
| C118 | 2111031A35 | 68 |
| C119 | 2111031A35 | 68 |
| C120 | 2111031A39 | 100 |
| C121 | 2111031A10 | 5.6 0.25pF |
| C122 | 2111031A35 | 68 |
| C123 | 2111031A35 | 68 |
| C124 | 2111031A35 | 68 |
| C125 | 2111031A35 | 68 |
| C126 | 2111032A21 | 0.01uF 10% |
| C127 | 2111032A21 | 0.01uF 10% |
| C151 | 2111032A09 | 0.001uF 10% |
| C152 | 2111031A15 | 10 |
| C153 | 2111032A09 | 0.001uF 10% |
| C154 | 2111032A21 | 0.01uF 10% |
| C155 | 2302057B09 | 0.22 20% 35V |
| C156 | 2111031A45 | 180 |
| C157 | 2111031A45 | 180 |
| C158 | 2111032A21 | 0.01uF 10% |
| C159 | 2111031A23 | 22 |

THERMISTOR:

RT1860 0683600K05 100k @ 25°C
 RT1864 0680176D04 5.4k

NON-REFERENCED ITEMS:

0200007003 NUT 8-32x5/16x1/8" 2 used
 0200007018 NUT 3/8-32x1/2x3/32"
 0302607B01 SCREW taptite M3x8 8 used
 0302607B02 SCREW taptite M3x6 4 used
 0380269H09 SCREW tapt M5x0.8 2 used
 0384723C17 SCREW M4x8
 0400007691 LOCKWASHER 3/8" internal
 0484717C02 WASHER 3.2 4 used
 0484718C04 WASHER A3.2 2 used
 0780200J01 BRACKET feedthru P.A.
 1484836A01 INSULATOR (Q1801)
 1503424A01 COVER P.A.
 2680092K01 SHIELD antenna connector
 2680176H07 HEAT SINK
 2680222H01 HEAT SINK (Q1802)
 2900005318 LUG 2 used
 2980014A01 CLIP terminal coax 2 used
 3282796H04 GASKET
 4210217A02 STRAP 0.091x3.62" 2 used
 4282405R01 CLIP P.A.

GLD6193A Low-pass Filter 146-174MHz Receiver

| SYMBOL | PART NO. | DESCRIPTION |
|------------|------------|------------------------------|
| | | <u>CAPACITOR, fixed:</u> |
| C1, C2 | 2111031A26 | 30pF 5% 50V (chip) |
| C3 | 2111031A55 | 470pF 5% 50V (chip) |
| | | <u>CONNECTOR:</u> |
| J1 | 0982442E01 | Female, single contact |
| | | <u>COIL, RF:</u> |
| L1 | 2411030A04 | 5 turns green |
| | | <u>RESISTOR, fixed:</u> |
| R1 | 0611024A73 | 10k 5% 1/8W (chip) |
| | | <u>NON-REFERENCED ITEMS:</u> |
| 0380269H06 | | SCREW M3x0.5, 2 used |
| 0703432A01 | | BRACKET |
| 1500843599 | | HOOD receptacle |
| 1503473A01 | | HOUSING filter |
| 2980014A01 | | CLIP coaxial terminal |
| 3080116K05 | | CABLE coaxial |

GLD6194A Low-pass Filter 174-225MHz Receiver

| SYMBOL | PART NO. | DESCRIPTION |
|------------|------------|------------------------------|
| | | <u>CAPACITOR, fixed:</u> |
| C1, C2 | 2111031A23 | 22pF 5% 50V (chip) |
| C3 | 2111031A55 | 470pF 5% 50V (chip) |
| | | <u>CONNECTOR:</u> |
| J1 | 0982442E01 | Female, single contact |
| | | <u>COIL, rf:</u> |
| L1 | 2411030A03 | 4 turns yellow |
| | | <u>RESISTOR, fixed:</u> |
| R1 | 0611024A73 | 10k 5% 1/8W (chip) |
| | | <u>NON-REFERENCED ITEMS:</u> |
| 0380269H02 | | SCREW M3x0.5, 2 used |
| 0703432A01 | | BRACKET |

C160 2111031A19 15
 C161 2111031A36 75
 C201 2002473M01 2.5-10 variable
 C202 2111031A08 3.9 0.25pF
 C203 2111031A07 3.3 0.25pF
 C204 2111031A01 1.0 0.25pF
 C205 2111031A13 8.2 0.25pF
 C206 2111031A11 6.8 0.25pF
 C207 2111031A10 5.6 0.25pF
 C208 2111031A11 6.8 0.25pF
 C209 2111031A35 68
 C210 2111031A35 68
 C211 2111031A35 68
 C212 2111031A07 3.3 0.25pF
 C214-
 C215 2111031A35 68
 C216 2111031A11 6.8 0.25pF
 C217-
 C219 2111031A35 68
 C221 2002473M01 2.5-10 variable
 C222 2111031A05 2.2 0.25pF
 C223 2111031A03 1.5 0.25pF
 C224 2111031A03 1.5 0.25pF
 C225 2111031A01 1.0 0.25pF
 C226 2111031A09 4.7 0.25pF
 C227 2111031A01 1.0 0.25pF
 C228 2111031A17 12
 C229 2111031A10 5.6 0.25pF
 C230 2111031A11 6.8 0.25pF
 C231 2111031A10 5.6 0.25pF
 C232 2111031A35 68
 C233 2111031A35 68
 C234 2111031A03 1.5 0.25pF
 C236-
 C238 2111031A35 68
 C239 2111031A10 5.6 0.25pF
 C240 2111032A21 0.01uF 10%
 C241-
 C242 2111031A35 68
 C243 2111032A27 0.033uF 10%
 C244-
 C246 2111031A35 68
 C247 2111031A05 2.2 0.25pF
 C248 2384538G31 0.56uF 10% 35V
 C249 2111032A09 0.001uF 10%
 C250 2111031A35 68
 C251 2111032A21 0.01uF 10%
 C252 2311048B19 47uF 20% 16V
 C253 2311048B19 47uF 20% 16V
 C254 2111032A21 0.1uF 10%
 C255 2111031A05 2.2 0.25pF
 C256 2111031A01 1.0 0.25pF
 C257 2111031A28 36
 C258 2111031A01 1.0 0.25pF
 C301 2311048B05 1uF 20%
 C302 0811051A17 0.47uF 63V
 C303-
 C312 2111031A21 18
 C313 2111031A35 68

DIODE: (SEE NOTE)

CR 51 4883654H01 Silicon
 CR 52 4883654H01 Silicon
 CR101 4883654H01 Silicon
 CR102 4883654H01 Silicon
 CR151 4882190H54 Silicon varactor
 CR152 4882190H54 Silicon varactor
 CR153 4884399M01 Silicon
 CR154 4884399M01 Silicon
 CR201 4802081B35 Silicon varactor
 CR202 4802081B35 Silicon varactor
 CR203 4884616A01 Hot carrier
 CR204-
 CR206 4802081B35 Silicon varactor
 CR207 4884616A01 Hot carrier

HELICAL FILTER:

FL1 9180081J04 2-cell
 FL2 9180081J05 3-cell
 FL3 9180081J06 3-cell

CERAMIC FILTER:

FL51 9180097D06 455 kHz 6-pole
 FL52 9180098D06 455 kHz 4-pole

J1, J2 0980168K01 CONNECTOR:
 J 3 0980179H01 Coaxial
 11-pin socket

COIL:

L 1 2411030B05 2.5 turns (green)
 L 2 2411030B08 4.5 turns (brown)
 L 3 2482723H28 0.29uH (yellow)
 L 4 2411030B02 1.5 turns (red)
 L 5 2482723H28 0.29uH (yellow)
 L 51 2480299D01 17.75 turns (orange)
 L 52 2482835G03 2.6uH (red-blue-gold)
 L 53 2482835G03 2.6uH (red-blue-gold)
 L 54 2480000E01 455kHz quad det with capacitor
 L 55 2482723H35 23uH (red)
 L101 2411030B08 4.5 turns (brown)
 L102 2482723H28 0.29uH (yellow)
 L151 2480299D01 17.75 turns (orange)
 L152 2482723H37 6.2uH (blue)
 L201 2480117K03 Coil
 L202 2411030B11 6.5 turns (orange)
 L203-
 L206 2482723H28 0.29uH (yellow)
 L207 2411030B05 2.5 turns (green)
 L208 2411030B08 4.5 turns (brown)
 L209 2482723H28 0.29uH (yellow)
 L210 2480117K03 Coil
 L211 2411030B12 7.5 turns (yellow)
 L212-
 L215 2482723H28 0.29uH (yellow)
 L216 2411030B06 2.5 turns
 L217 2482723H28 0.29uH (yellow)
 L218 2411030B08 4.5 turns (brown)

TRANSISTOR: (SEE NOTE)

Q 1 4800869990 M9990
 Q2, Q51 4811043B12 FET M3B12 (alt: M9839)
 Q 52 4811043B03 M3B03 (alt: M9571)
 Q 53 4802081B30 M1B30 (alt: M1B10)
 Q 54 4802081B30 M1B30 (alt: M1B10)
 Q101 4802081B31 M1B31 (alt: M1B11)
 Q102 4800869987 M9987
 Q103 4800869987 M9987
 Q104 4802081B31 M1B31 (alt: M1B11)
 Q105 4802081B30 M1B30 (alt: M1B10)
 Q107 4811043B19 M3B19 (alt: M9658)
 Q151 4802081B30 M1B30 (alt: M1B10)
 Q152 4802081B31 M1B31 (alt: M1B11)
 Q201 4811043B12 FET M3B12 (alt: M9839)
 Q202 4802081B31 M1B31 (alt: M1B11)
 Q203 4811043B19 M3B19 (alt: M9658)
 Q204 4800869990 M9990
 Q205 4884939C36 FET M9C36
 Q206 4802081B31 M1B31 (alt: M1B11)
 Q207 4811043B19 M3B19 (alt: M9658)
 Q208 4811043B19 M3B19 (alt: M9658)
 Q209 4802081B30 M1B30 (alt: M1B10)
 Q251 4802081B30 M1B30 (alt: M1B10)

RESISTOR: fixed 5% 1/8W

R 1 0611024A47 820
 R 2 0611024A63 3.9k
 R 3 0611024A19 56
 R 4 0611024A27 120
 R 5 0611024A19 56
 R 6 0611024A27 120
 R 7 0611024A43 560
 R 8 0611024A93 68k
 R 51 0611024A55 1.8k
 R 53 0611024A29 150
 R 54 0611024A41 470
 R 55 0611024A49 1k
 R 56 0611024B20 820k
 R 57 0611024B06 220k
 R 58 0611024B02 150k
 R 59 1805500L08 22k variable
 R 60 0611024A93 68k
 R 61 0611024A95 82k
 R 62 0611024A65 4.7k
 R 63-
 R 65 0611024A71 8.2k
 R 66 0611024A65 4.7k
 R101 0602438B15 150 0.5W
 R102 0611024A25 100

| | | |
|-------|------------|---------------|
| R103 | 0611024A73 | 10k |
| R104 | 0611024A24 | 100 |
| R105 | 0611024A73 | 10k |
| R106 | 0611024A01 | 10 |
| R107 | 0611024A77 | 15k |
| R108 | 0611024A25 | 100 |
| R109 | 0611024A29 | 150 |
| R110 | 0611024A39 | 390 |
| R111 | 0611024A29 | 150 |
| R112 | 0611024A53 | 1.5k |
| R113 | 0611024A67 | 5.6k |
| R116 | 0611024A53 | 1.5k |
| R117 | 0611024A59 | 2.7k |
| R118 | 0611024A73 | 10k |
| R119 | 0611024A77 | 15k |
| R120 | 0611024A33 | 220 |
| R121 | 0611024A19 | 56 |
| R122 | 0611024A59 | 2.7k |
| R123 | 0611024A25 | 100 |
| R124 | 0611024A49 | 1k |
| R125 | 0611024A53 | 1.5k |
| R126 | 0611024A63 | 3.9k |
| R127 | 0611024A47 | 820 |
| R152 | 0610621E25 | 237k 1% 1/4W |
| R153 | 0610621C71 | 6.19k 1% 1/4W |
| R155 | 0610621C57 | 4.42k 1% 1/4W |
| R156 | 0611024A97 | 100k |
| R157 | 0611024A73 | 10k |
| R158 | 0611024A73 | 10k |
| R159 | 0611024A77 | 15k |
| R160 | 0611024A09 | 22 |
| R161 | 0611024A53 | 1.5k |
| R162 | 0611024A49 | 1k |
| R201 | 0611024A19 | 56 |
| R202 | 0611024A25 | 100 |
| R203 | 0611024A73 | 10k |
| R204 | 0611024A21 | 68 |
| R205 | 0611024A61 | 3.3k |
| R206 | 0611024A77 | 15k |
| R207 | 0611024A73 | 10k |
| R208 | 0611024A79 | 18k |
| R209 | 0611024A73 | 10k |
| R210 | 0611024A57 | 2.2k |
| R211 | 0611024A35 | 270 |
| R212 | 0611024A43 | 560 |
| R213 | 0611024A01 | 10 |
| R214 | 0611024A21 | 68 |
| R215 | 0611024A35 | 270 |
| R216 | 0611024A21 | 68 |
| R217 | 0611024A01 | 10 |
| R219 | 0611024A35 | 270 |
| R220 | 0611024A07 | 18 |
| R221 | 0611024A35 | 270 |
| R222 | 0611024A97 | 100k |
| R223 | 0611024A73 | 10k |
| R224 | 0611024A73 | 10k |
| R225 | 0611024A19 | 56 |
| R226 | 0611024A25 | 100 |
| R227 | 0611024A73 | 10k |
| R228 | 0611024A21 | 68 |
| R229 | 0611024A65 | 4.7k |
| R230 | 0611024A57 | 2.2k |
| R231 | 0611024A35 | 270 |
| R232 | 0611024A43 | 560 |
| R233 | 0611024A21 | 68 |
| R234 | 0611024A35 | 270 |
| R235 | 0611024A21 | 68 |
| R238 | 0611024A35 | 270 |
| R239 | 0611024A07 | 18 |
| R240 | 0611024A35 | 270 |
| R241 | 0611024A49 | 1k |
| R242 | 0611024A15 | 39 |
| R243 | 0611024A15 | 39 |
| R251 | 0611024A35 | 270 |
| R252 | 0611024A01 | 10 |
| R301 | 0611024A71 | 8.2k |
| R302 | 1805500L08 | 22k variable |
| R303 | 0611024A35 | 270 |
| R304 | 0611024A01 | 10 |
| R305 | 1805500L08 | 22k variable |
| R306 | 0611024A01 | 10 |
| R307 | 0611024A57 | 2.2k |
| R308- | | |
| R310 | 0611024A65 | 4.7k |

| | | |
|-------|------------|---------------------------------------|
| | | <u>THERMISTOR:</u> |
| RT151 | 0683600K06 | 10k |
| RT152 | 0683600K06 | 10k |
| RT153 | 0683600K05 | 100k |
| | | <u>INTEGRATED CIRCUIT: (SEE NOTE)</u> |
| U 51 | 5105479G05 | Linear receiver system |
| U101 | 5183548N19 | Divider |
| U102 | 5183977M45 | Prescaler |
| | | <u>ZENER DIODE: (SEE NOTE)</u> |
| VR101 | 4882256C15 | 5.1V 5% |
| | | <u>CRYSTAL:</u> |
| Y 51 | 9180082J01 | Filter (matched pair Y51A/B) |
| Y 52 | 4805488G03 | 20.945MHz Replace with part as |
| or | 4805488G04 | 21.855MHz originally supplied |
| Y151 | 4802443B21 | 14.4MHz |
| | | <u>NON-REFERENCED ITEMS:</u> |
| | 2680138J01 | Shield |
| | 2680182H01 | RF shield |
| | 2680153J01 | Coil shield, 3 used |
| | 2680210K01 | Coil shield |

GLE6142A RF Board, 25kHz (438-470MHz) 5ppm

| SYMBOL | PART NO. | DESCRIPTION |
|--------|------------|---|
| | | <u>CAPACITOR, fixed:</u> pf 5% 50V unless otherwise stated |
| C 1 | 2111031A11 | 6.8 0.5pF |
| C 2 | 2111031A35 | 68 |
| C 3 | 2111031A35 | 68 |
| C 5 | 2111031A35 | 68 |
| C 7 | 2111031A09 | 4.7 0.25pF |
| C 8 | 2111031A15 | 10 |
| C 9 | 2111031A08 | 3.9 0.25pF |
| C 10 | 2111032A21 | 0.01uF 10% |
| C 12 | 2111032A09 | 0.001uF 10% |
| C 51 | 2111031A31 | 47 |
| C 52 | 0611024B23 | Jumper |
| C 54 | 2111031A09 | 4.7 0.25pF |
| C 55 | 2111031A10 | 5.6 0.25pF |
| C 56 | 0611024B23 | Jumper |
| C 57 | 2111031A21 | 0.01uF 10% |
| C 58 | 2111031A21 | 0.01uF 10% |
| C 59 | 2384538G05 | 0.10uF 20% 15V |
| C 60 | 2111031A31 | 47 |
| C 61 | 2111031A23 | 22 |
| C 62 | 2111031A31 | 47 |
| C 63 | 2111031A59 | 680 |
| C 64 | 2111031A15 | 10 |
| C 65 | 2111032B15 | 0.22uF 80-20% |
| C 66 | 2111032A21 | 0.01uF 10% |
| C 67 | 2111032B15 | 0.22uF 80-20% |
| C 68 | 2111032B15 | 0.22uF 80-20% |
| C 69 | 2384538G05 | 10uF 20% 15V |
| C 70 | 2311048B13 | 10uF 20% 16V |
| C 71 | 2311048B06 | 2.2uF 20% |
| C 72- | | |
| C 77 | 2111032B15 | 0.22uF 80-20% |
| C 78 | 2111032A13 | 0.0022uF 10% |
| C 79 | 2111032B15 | 0.22uF 80-20% |
| C 80 | 2311048B13 | 10uF 20% 16V |
| C 81 | 0811051A05 | 0.0047uF 63V |
| C 82 | 0811044A34 | 0.018uF 63V |
| C 83 | 0811051A01 | 0.001uF 63V |
| C101 | 2311048B13 | 10uF 20% 16V |
| C102 | 0811051A13 | 0.1uF 63V |
| C103 | 2111032A21 | 0.01uF 10% |
| C104 | 2311048B13 | 10uF 20% 16V |
| C105 | 2111032A21 | 0.01uF 10% |
| C106 | 2111031A19 | 15 |
| C108 | 2111032B13 | 0.1uF 80-20% |
| C109 | 0811051A13 | 0.1uF 63V |
| C110 | 2111032B13 | 0.1uF 80-20% |
| C111 | 2302057B02 | 1uF 20% 35V |
| C112 | 0811051A07 | 0.1uF 63V |
| C113 | 2111032A18 | 0.0056uF 10% |
| C114 | 2111031A35 | 68 |
| C115 | 2111032A21 | 0.01uF 10% 50V |
| C116 | 2311048B13 | 10uF 20% 16V |

| | | |
|-------|------------|-----------------|
| C117 | 2111031A35 | 68 |
| C118 | 2111031A35 | 68 |
| C119 | 2111031A35 | 68 |
| C120 | 2111031A39 | 100 |
| C121 | 2111031A10 | 5.6 0.25pF |
| C122 | 2111031A35 | 68 |
| C123 | 2111031A35 | 68 |
| C124 | 2111031A35 | 68 |
| C125 | 2111031A35 | 68 |
| C126 | 2111032A21 | 0.01uF 10% |
| C127 | 2111032A21 | 0.01uF 10% |
| C151 | 2111032A09 | 0.001uF 10% |
| C152 | 2111031A15 | 10 |
| C153 | 2111032A09 | 0.001uF 10% |
| C154 | 2111032A21 | 0.01uF 10% |
| C155 | 2302057B09 | 0.22 20% 35V |
| C156 | 2111031A45 | 180 |
| C157 | 2111031A45 | 180 |
| C158 | 2111032A21 | 0.01uF 10% |
| C159 | 2111031A23 | 22 |
| C160 | 2111031A19 | 15 |
| C161 | 2111031A36 | 75 |
| C201 | 2002473M01 | 2.5-10 variable |
| C202 | 2111031A13 | 8.2 0.25pF |
| C203 | 2111031A07 | 3.3 0.25pF |
| C204 | 2111031A01 | 1.0 0.25pF |
| C205 | 2111031A15 | 10 |
| C206 | 2111031A11 | 6.8 0.25pF |
| C207 | 2111031A10 | 5.6 0.25pF |
| C208 | 2111031A07 | 3.3 0.25pF |
| C209 | 2111031A35 | 68 |
| C210 | 2111031A35 | 68 |
| C211 | 2111031A35 | 68 |
| C212 | 2111031A01 | 1.0 0.25pF |
| C213 | 2111031A01 | 1.0 0.25pF |
| C214 | 2111031A35 | 68 |
| C215 | 2111031A35 | 68 |
| C216 | 2111031A11 | 6.8 0.25pF |
| C217 | 2111031A35 | 68 |
| C218 | 2111031A35 | 68 |
| C219 | 2111031A35 | 68 |
| C221 | 2002473M01 | 2.5-10 variable |
| C222 | 2111031A10 | 5.6 0.25pF |
| C223 | 2111031A03 | 1.5 0.25pF |
| C224 | 2111031A05 | 2.2 0.25pF |
| C225 | 2111031A01 | 1.0 0.25pF |
| C226 | 2111031A09 | 4.7 0.25pF |
| C227 | 2111031A01 | 1.0 0.25pF |
| C228 | 2111031A17 | 12 |
| C229 | 2111031A09 | 4.7 0.25pF |
| C230 | 2111031A10 | 5.6 0.25pF |
| C231 | 2111031A08 | 3.9 0.25pF |
| C232 | 2111031A35 | 68 |
| C233 | 2111031A35 | 68 |
| C234 | 2111031A01 | 1.0 0.25pF |
| C235 | 2111031A03 | 1.5 0.25pF |
| C236 | 2111031A35 | 68 |
| C237 | 2111031A35 | 68 |
| C238 | 2111031A35 | 68 |
| C239 | 2111031A08 | 3.9 0.25pF |
| C240 | 2111032A21 | 0.01uF 10% |
| C241 | 2111031A35 | 68 |
| C242 | 2111031A35 | 68 |
| C243 | 2111032A27 | 0.033uF 10% |
| C244 | 2111031A35 | 68 |
| C245 | 2111031A35 | 68 |
| C246 | 2111031A35 | 68 |
| C247 | 2111031A05 | 2.2 0.25pF |
| C248 | 2384538G31 | 0.56uF 10% 35V |
| C249 | 2111032A09 | 0.001uF 10% |
| C250 | 2111031A35 | 68 |
| C251 | 2111032A21 | 0.01uF 10% |
| C252 | 2311048B19 | 47uF 20% 16V |
| C253 | 2311048B19 | 47uF 20% 16V |
| C254 | 2111032A21 | 0.1uF 10% |
| C255 | 2111031A05 | 2.2 0.25pF |
| C256 | 2111031A01 | 1.0 0.25pF |
| C257 | 2111031A28 | 36 |
| C258 | 2111031A01 | 1.0 0.25pF |
| C301 | 2311048B05 | 1uF 20% |
| C302 | 0811051A17 | 0.47uF 63V |
| C303- | | |
| C312 | 2111031A21 | 18 |
| C313 | 2111031A35 | 68 |

| | | | |
|--------|------------|-------------------------|-------------------------------|
| | | | <u>DIODE: (SEE NOTE)</u> |
| CR 51 | 4883654H01 | Silicon | |
| CR 52 | 4883654H01 | Silicon | |
| CR101 | 4883654H01 | Silicon | |
| CR102 | 4883654H01 | Silicon | |
| CR151 | 4882190H54 | Silicon varactor | |
| CR152 | 4882190H54 | Silicon varactor | |
| CR153 | 4884399M01 | Silicon | |
| CR154 | 4884399M01 | Silicon | |
| CR201 | 4802081B35 | Silicon varactor | |
| CR202 | 4802081B35 | Silicon varactor | |
| CR203 | 4884616A01 | Hot carrier | |
| CR204- | | | |
| CR206 | 4802081B35 | Silicon varactor | |
| CR207 | 4884616A01 | Hot carrier | |
| | | | <u>HELICAL FILTER:</u> |
| FL1 | 9180081J01 | 2-cell | |
| FL2 | 9180081J02 | 3-cell | |
| FL3 | 9180081J03 | 3-cell | |
| | | | <u>CERAMIC FILTER:</u> |
| FL51 | 9180097D06 | 455 kHz 6-pole | |
| FL52 | 9180098D06 | 455 kHz 4-pole | |
| | | | <u>CONNECTOR:</u> |
| J1,J2 | 0980168K01 | Coaxial | |
| J 3 | 0980179H01 | 11-pin socket | |
| | | | <u>COIL:</u> |
| L 1 | 2411030B05 | 2.5 turns (green) | |
| L 2 | 2411030B07 | 3.5 turns white | |
| L 3 | 2482723H28 | 0.29uH (yellow) | |
| L 4 | 2411030B01 | 1.5 turns (brown) | |
| L 5 | 2482723H28 | 0.29uH (yellow) | |
| L 51 | 2480299D01 | 17.75 turns (orange) | |
| L 52 | 2482835G03 | 2.6uH (red-blue-gold) | |
| L 53 | 2482835G03 | 2.6uH (red-blue-gold) | |
| L 54 | 2480000E01 | Quad det with capacitor | |
| L 55 | 2482723H35 | 23uH (red) | |
| L101 | 2411030B08 | 4.5 turns (brown) | |
| L102 | 2482723H28 | 0.29uH (yellow) | |
| L151 | 2480299D01 | 17.75 turns (orange) | |
| L152 | 2482723H37 | 6.2uH (blue) | |
| L201 | 2480117K02 | Coil | |
| L202 | 2411030B10 | 5.5 turns (red) | |
| L203- | | | |
| L206 | 2482723H28 | 0.29uH (yellow) | |
| L207 | 2411030B05 | 2.5 turns (green) | |
| L208 | 2411030B08 | 4.5 turns (brown) | |
| L209 | 2482723H28 | 0.29uH (yellow) | |
| L210 | 2480117K02 | Coil | |
| L211 | 2411030B12 | 7.5 turns (yellow) | |
| L212- | | | |
| L215 | 2482723H28 | 0.29uH (yellow) | |
| L216 | 2411030B05 | 2.5 turns | |
| L217 | 2482723H28 | 0.29uH (yellow) | |
| L218 | 2411030B08 | 4.5 turns (brown) | |
| | | | <u>TRANSISTOR: (SEE NOTE)</u> |
| Q 1 | 4800869990 | M9990 | |
| Q 2 | 4811043B12 | FET M3B12 (alt: M9839) | |
| Q 51 | 4811043B12 | FET M3B12 (alt: M9839) | |
| Q 52 | 4811043B03 | M3B03 (alt: M9571) | |
| Q 53 | 4802081B30 | M1B30 (alt: M1B10) | |
| Q 54 | 4802081B30 | M1B30 (alt: M1B10) | |
| Q101 | 4802081B31 | M1B31 (alt: M1B11) | |
| Q102 | 4800869987 | M9987 | |
| Q103 | 4800869987 | M9987 | |
| Q104 | 4802081B31 | M1B31 (alt: M1B11) | |
| Q105 | 4802081B30 | M1B30 (alt: M1B10) | |
| Q107 | 4811043B19 | M3B19 (alt: M9658) | |
| Q151 | 4802081B30 | M1B30 (alt: M1B10) | |
| Q152 | 4802081B31 | M1B31 (alt: M1B11) | |
| Q201 | 4811043B12 | FET M3B12 (alt: M9839) | |
| Q202 | 4802081B31 | M1B31 (alt: M1B11) | |
| Q203 | 4811043B19 | M3B19 (alt: M9658) | |
| Q204 | 4800869990 | M9990 | |
| Q205 | 4884939C36 | FET M9C36 | |
| Q206 | 4802081B31 | M1B31 (alt: M1B11) | |
| Q207 | 4811043B19 | M3B19 (alt: M9658) | |
| Q208 | 4811043B19 | M3B19 (alt: M9658) | |
| Q209 | 4802081B30 | M1B30 (alt: M1B10) | |
| Q251 | 4802081B30 | M1B30 (alt: M1B10) | |

RESISTOR: fixed 5% 1/8W

| | | | |
|-------|------------|---------------|------|
| R 1 | 0611024A47 | 820 | |
| R 2 | 0611024A63 | 3.9k | |
| R 3 | 0611024A19 | 56 | |
| R 4 | 0611024A27 | 120 | |
| R 5 | 0611024A19 | 56 | |
| R 6 | 0611024A27 | 120 | |
| R 7 | 0611024A43 | 560 | |
| R 8 | 0611024A93 | 68k | |
| R 51 | 0611024A55 | 1.8k | |
| R 53 | 0611024A29 | 150 | |
| R 54 | 0611024A41 | 470 | |
| R 55 | 0611024A49 | 1k | |
| R 56 | 0611024B20 | 820k | |
| R 57 | 0611024B06 | 220k | |
| R 58 | 0611024B02 | 150k | |
| R 59 | 1805500L08 | 22k variable | |
| R 60 | 0611024A93 | 68k | |
| R 61 | 0611024A95 | 82k | |
| R 62 | 0611024A65 | 4.7k | |
| R 63- | | | |
| R 65 | 0611024A71 | 8.2k | |
| R 66 | 0611024A65 | 4.7k | |
| R101 | 0602438B15 | 150 | 0.5W |
| R102 | 0611024A25 | 100 | |
| R103 | 0611024A73 | 10k | |
| R104 | 0611024A24 | 100 | |
| R105 | 0611024A73 | 10k | |
| R106 | 0611024A01 | 10 | |
| R107 | 0611024A77 | 15k | |
| R108 | 0611024A25 | 100 | |
| R109 | 0611024A29 | 150 | |
| R110 | 0611024A39 | 390 | |
| R111 | 0611024A29 | 150 | |
| R112 | 0611024A53 | 1.5k | |
| R113 | 0611024A67 | 5.6k | |
| R116 | 0611024A53 | 1.5k | |
| R117 | 0611024A59 | 2.7k | |
| R118 | 0611024A73 | 10k | |
| R119 | 0611024A77 | 15k | |
| R120 | 0611024A33 | 220 | |
| R121 | 0611024A19 | 56 | |
| R122 | 0611024A59 | 2.7k | |
| R123 | 0611024A25 | 100 | |
| R124 | 0611024A49 | 1k | |
| R125 | 0611024A53 | 1.5k | |
| R126 | 0611024A63 | 3.9k | |
| R127 | 0611024A47 | 820 | |
| R152 | 0610621E25 | 237k 1% 1/4W | |
| R153 | 0610621C71 | 6.19k 1% 1/4W | |
| R155 | 0610621C57 | 4.42k 1% 1/4W | |
| R156 | 0611024A97 | 100k | |
| R157 | 0611024A73 | 10k | |
| R158 | 0611024A73 | 10k | |
| R159 | 0611024A77 | 15k | |
| R160 | 0611024A09 | 22 | |
| R161 | 0611024A53 | 1.5k | |
| R162 | 0611024A49 | 1k | |
| R201 | 0611024A19 | 56 | |
| R202 | 0611024A25 | 100 | |
| R203 | 0611024A73 | 10k | |
| R204 | 0611024A21 | 68 | |
| R205 | 0611024A61 | 3.3k | |
| R206 | 0611024A77 | 15k | |
| R207 | 0611024A73 | 10k | |
| R208 | 0611024A79 | 18k | |
| R209 | 0611024A73 | 10k | |
| R210 | 0611024A57 | 2.2k | |
| R211 | 0611024A35 | 270 | |
| R212 | 0611024A43 | 560 | |
| R213 | 0611024A01 | 10 | |
| R214 | 0611024A21 | 68 | |
| R215 | 0611024A35 | 270 | |
| R216 | 0611024A21 | 68 | |
| R217 | 0611024A01 | 10 | |
| R219 | 0611024A35 | 270 | |
| R220 | 0611024A07 | 18 | |
| R221 | 0611024A35 | 270 | |
| R222 | 0611024A97 | 100k | |
| R223 | 0611024A73 | 10k | |
| R224 | 0611024A73 | 10k | |
| R225 | 0611024A19 | 56 | |
| R226 | 0611024A25 | 100 | |
| R227 | 0611024A73 | 10k | |

| | | |
|-------|------------|--------------|
| R228 | 0611024A21 | 68 |
| R229 | 0611024A65 | 4.7k |
| R230 | 0611024A57 | 2.2k |
| R231 | 0611024A35 | 270 |
| R232 | 0611024A43 | 560 |
| R233 | 0611024A21 | 68 |
| R234 | 0611024A35 | 270 |
| R235 | 0611024A21 | 68 |
| R239 | 0611024B23 | Jumper |
| R241 | 0611024A49 | 1k |
| R242 | 0611024A15 | 39 |
| R243 | 0611024A15 | 39 |
| R251 | 0611024A35 | 270 |
| R252 | 0611024A01 | 10 |
| R301 | 0611024A85 | 33k |
| R302 | 1805500L08 | 22k variable |
| R303 | 0611024A45 | 680 |
| R304 | 0611024A01 | 10 |
| R305 | 1805500L08 | 22k variable |
| R306 | 0611024A01 | 10 |
| R307 | 0611024A55 | 1.8k |
| R308- | | |
| R310 | 0611024A65 | 4.7k |

THERMISTOR:

| | | |
|-------|------------|------|
| RT151 | 0683600K06 | 10k |
| RT152 | 0683600K06 | 10k |
| RT153 | 0683600K05 | 100k |

INTEGRATED CIRCUIT: (SEE NOTE)

| | | |
|------|------------|------------------------|
| U 51 | 5105479G05 | Linear receiver system |
| U101 | 5183548N19 | Divider |
| U102 | 5183977M45 | Prescaler |

ZENER DIODE: (SEE NOTE)

| | | |
|-------|------------|---------|
| VR101 | 4882256C15 | 5.1V 5% |
|-------|------------|---------|

CRYSTAL:

| | | |
|------|------------|----------------------------------|
| Y 51 | 9180082J01 | Filter (matched pair Y51A/B) |
| Y 52 | 4805488G03 | 20.945MHz Replace with part as |
| or | 4805488G04 | 21.855MHz originally supplied |
| Y151 | 4802443B21 | 14.4MHz |

NON-REFERENCED ITEMS:

| | |
|------------|---------------------|
| 2680138J01 | Shield |
| 2680182H01 | RF shield |
| 2680153J01 | Coil shield, 3 used |
| 2680210K01 | Coil shield |

GLE6144A RF Board, 25kHz
(Tx: 438-450MHz; Rx: 420-433MHz) 5ppm

SYMBOL PART NO. DESCRIPTION

CAPACITOR, fixed: pf 5% 50V unless otherwise stated

| | | |
|------|------------|----------------|
| C 1 | 2111031A13 | 8.2 0.25pF |
| C 2 | 2111031A35 | 68 |
| C 3 | 2111031A35 | 68 |
| C 5 | 2111031A35 | 68 |
| C 8 | 2111031A09 | 4.7 |
| C 9 | 2111031A08 | 3.9 0.25pF |
| C 10 | 2111032A21 | 0.01uF 10% |
| C 12 | 2111032A09 | 0.001uF 10% |
| C 51 | 2111031A31 | 47 |
| C 52 | 0611024B23 | Jumper |
| C 54 | 2111031A09 | 4.7 0.25pF |
| C 55 | 2111031A10 | 6.8 0.25pF |
| C 56 | 0611024B23 | Jumper |
| C 57 | 2111031A21 | 0.01uF 10% |
| C 58 | 2111031A21 | 0.01uF 10% |
| C 59 | 2384538G05 | 0.10uF 20% 15V |
| C 60 | 2111031A31 | 47 |
| C 61 | 2111031A23 | 22 |
| C 62 | 2111031A31 | 47 |
| C 63 | 2111031A59 | 680 |
| C 64 | 2111031A15 | 10 |
| C 65 | 2111032B15 | 0.22uF 80-20% |
| C 66 | 2111032A21 | 0.01uF 10% |
| C 67 | 2111032B15 | 0.22uF 80-20% |
| C 68 | 2111032B15 | 0.22uF 80-20% |
| C 69 | 2384538G05 | 10uF 20% 15V |
| C 70 | 2311048B13 | 10uF 20% 16V |

| | | |
|-------|------------|------------------|
| C 71 | 2311048B06 | 2.2uF 20% |
| C 72 | 2111032B15 | 0.22uF 80-20% |
| C 73 | 2111032B15 | 0.22uF 80-20% |
| C 74 | 2111032B15 | 0.22uF 80-20% |
| C 75 | 2111032A13 | 0.22uF 80-20% |
| C 76 | 2111032B15 | 0.22uF 80-20% |
| C 77 | 2111032B15 | 0.22uF 80-20% |
| C 78 | 2111032A13 | 0.0022uF 10% |
| C 79 | 2111032B15 | 0.22uF 80-20% |
| C 80 | 2311048B13 | 10uF 20% 16V |
| C 81 | 0811051A05 | 0.0047uF 63V |
| C 82 | 0811044A34 | 0.018uF 63V |
| C 83 | 0811051A01 | 0.001uF 63V |
| C101 | 2311048B13 | 10uF 20% 16V |
| C102 | 0811051A13 | 0.1uF 63V |
| C103 | 2111032A21 | 0.01uF 10% |
| C104 | 2311048B13 | 10uF 20% 16V |
| C105 | 2111032A21 | 0.01uF 10% |
| C106 | 2111031A19 | 15 |
| C108 | 2111032B13 | 0.1uF 80-20% |
| C109 | 0811051A13 | 0.1uF 63V |
| C110 | 2111032B13 | 0.1uF 80-20% |
| C111 | 2302057B02 | 1uF 20% 35V |
| C112 | 0811051A07 | 0.1uF 63V |
| C113 | 2111032A18 | 0.0056uF 10% |
| C114 | 2111031A35 | 68 |
| C115 | 2111032A21 | 0.01uF 10% 50V |
| C116 | 2311048B13 | 10uF 20% 16V |
| C117 | 2111031A35 | 68 |
| C118 | 2111031A35 | 68 |
| C119 | 2111031A35 | 68 |
| C120 | 2111031A39 | 100 |
| C121 | 2111031A10 | 5.6 0.25pF |
| C122 | 2111031A35 | 68 |
| C123 | 2111031A35 | 68 |
| C124 | 2111031A35 | 68 |
| C125 | 2111031A35 | 68 |
| C126 | 2111032A21 | 0.01uF 10% |
| C127 | 2111032A21 | 0.01uF 10% |
| C151 | 2111032A09 | 0.001uF 10% |
| C152 | 2111031A15 | 10 |
| C153 | 2111032A09 | 0.001uF 10% |
| C154 | 2111032A21 | 0.01uF 10% |
| C155 | 2302057B09 | 0.22 20% 35V |
| C156 | 2111031A45 | 180 |
| C157 | 2111031A45 | 180 |
| C158 | 2111032A21 | 0.01uF 10% |
| C159 | 2111031A23 | 22 |
| C160 | 2111031A19 | 15 |
| C161 | 2111031A36 | 75 |
| C201 | 2002473M01 | 2.5-10 variable |
| C202 | 2111031A08 | 3.9 0.25pF |
| C203 | 2111031A07 | 3.3 0.25pF |
| C204 | 2111031A01 | 1.0 0.25pF |
| C205 | 2111031A13 | 8.2 0.25pF |
| C206 | 2111031A11 | 6.8 0.25pF |
| C207 | 2111031A10 | 5.6 0.25pF |
| C208 | 2111031A11 | 6.8 0.25pF |
| C209 | 2111031A35 | 68 |
| C210 | 2111031A35 | 68 |
| C211 | 2111031A35 | 68 |
| C212 | 2111031A01 | 3.3 0.25pF |
| C214- | | |
| C215 | 2111031A35 | 68 |
| C216 | 2111031A11 | 6.8 0.25pF |
| C217- | | |
| C219 | 2111031A35 | 68 |
| C221 | 2002473M01 | 2.5-10, variable |
| C222 | 2111031A10 | 5.6 0.25pF |
| C223 | 2111031A03 | 1.5 0.25pF |
| C224 | 2111031A05 | 2.2 0.25pF |
| C225 | 2111031A01 | 1.0 0.25pF |
| C226 | 2111031A09 | 4.7 0.25pF |
| C227 | 2111031A01 | 1.0 0.25pF |
| C228 | 2111031A17 | 12 |
| C229 | 2111031A09 | 4.7 0.25pF |
| C230 | 2111031A10 | 5.6 0.25pF |
| C231 | 2111031A08 | 3.9 0.25pF |
| C232 | 2111031A35 | 68 |
| C233 | 2111031A35 | 68 |
| C234 | 2111031A01 | 1.0 0.25pF |
| C235 | 2111031A03 | 1.5 0.25pF |
| C236- | | |
| C238 | 2111031A35 | 68 |

| | | |
|-------|------------|----------------|
| C239 | 2111031A08 | 3.9 0.25pF |
| C240 | 2111032A21 | 0.01uF 10% |
| C241- | | |
| C242 | 2111031A35 | 68 |
| C243 | 2111032A27 | 0.033uF 10% |
| C244- | | |
| C246 | 2111031A35 | 68 |
| C247 | 2111031A05 | 2.2 0.25pF |
| C248 | 2384538G31 | 0.56uF 10% 35V |
| C249 | 2111032A09 | 0.001uF 10% |
| C250 | 2111031A35 | 68 |
| C251 | 2111032A21 | 0.01uF 10% |
| C252 | 2311048B19 | 47uF 20% 16V |
| C253 | 2311048B19 | 47uF 20% 16V |
| C254 | 2111032A21 | 0.1uF 10% |
| C255 | 2111031A05 | 2.2 0.25pF |
| C256 | 2111031A01 | 1.0 0.25pF |
| C257 | 2111031A28 | 36 |
| C258 | 2111031A01 | 1.0 0.25pF |
| C301 | 2311048B05 | 1uF 20% |
| C302 | 0811051A17 | 0.47uF 63V |
| C303- | | |
| C312 | 2111031A21 | 18 |
| C313 | 2111031A35 | 68 |

DIODE: (SEE NOTE)

| | | |
|--------|------------|------------------|
| CR 51 | 4883654H01 | Silicon |
| CR 52 | 4883654H01 | Silicon |
| CR101 | 4883654H01 | Silicon |
| CR102 | 4883654H01 | Silicon |
| CR151 | 4882190H54 | Silicon varactor |
| CR152 | 4882190H54 | Silicon varactor |
| CR153 | 4884399M01 | Silicon |
| CR154 | 4884399M01 | Silicon |
| CR201 | 4802081B35 | Silicon varactor |
| CR202 | 4802081B35 | Silicon varactor |
| CR203 | 4884616A01 | Hot carrier |
| CR204- | | |
| CR206 | 4802081B35 | Silicon varactor |
| CR207 | 4884616A01 | Hot carrier |

HELICAL FILTER:

| | | |
|-----|------------|--------|
| FL1 | 9180081J04 | 2-cell |
| FL2 | 9180081J05 | 3-cell |
| FL3 | 9180081J06 | 3-cell |

CERAMIC FILTER:

| | | |
|------|------------|-----------------|
| FL51 | 9180097D06 | 455 kHz, 6-pole |
| FL52 | 9180098D06 | 455 kHz, 4-pole |

CONNECTOR:

| | | |
|-----|------------|---------------|
| J 1 | 0980168K01 | Coaxial |
| J 2 | 0980168K01 | Coaxial |
| J 3 | 0980179H01 | 11-pin socket |

COIL:

| | | |
|-------|------------|-------------------------|
| L 1 | 2411030B05 | 2.5 turns (green) |
| L 2 | 2411030B08 | 4.5 turns (brown) |
| L 3 | 2482723H28 | 0.29uH (yellow) |
| L 4 | 2411030B02 | 1.5 turns (red) |
| L 5 | 2482723H28 | 0.29uH (yellow) |
| L 51 | 2480299D01 | 17.75 turns (orange) |
| L 52 | 2482835G03 | 2.6uH (red-blue-gold) |
| L 53 | 2482835G03 | 2.6uH (red-blue-gold) |
| L 54 | 2480000E01 | Quad det with capacitor |
| L 55 | 2482723H35 | 23uH (red) |
| L101 | 2411030B08 | 4.5 turns (brown) |
| L102 | 2482723H28 | 0.29uH (yellow) |
| L151 | 2480299D01 | 17.75 turns (orange) |
| L152 | 2482723H37 | 6.2uH (blue) |
| L201 | 2480117K03 | Coil |
| L202 | 2411030B11 | 6.5 turns (orange) |
| L203- | | |
| L206 | 2482723H28 | 0.29uH (yellow) |
| L207 | 2411030B05 | 2.5 turns (green) |
| L208 | 2411030B08 | 4.5 turns (brown) |
| L209 | 2482723H28 | 0.29uH (yellow) |
| L210 | 2480117K02 | Coil |
| L211 | 2411030B12 | 7.5 turns (yellow) |
| L212- | | |
| L215 | 2482723H28 | 0.29uH (yellow) |
| L216 | 2411030B05 | 2.5 turns |
| L217 | 2482723H28 | 0.29uH (yellow) |
| L218 | 2411030B08 | 4.5 turns (brown) |

TRANSISTOR: (SEE NOTE)

| | | |
|------|------------|------------------------|
| Q 1 | 4800869990 | M9990 |
| Q 2 | 4811043B12 | FET M3B12 (alt: M9839) |
| Q 51 | 4811043B12 | FET M3B12 (alt: M9839) |
| Q 52 | 4811043B03 | M3B03 (alt: M9571) |
| Q 53 | 4802081B30 | M1B30 (alt: M1B10) |
| Q 54 | 4802081B30 | M1B30 (alt: M1B10) |
| Q101 | 4802081B31 | M1B31 (alt: M1B11) |
| Q102 | 4800869987 | M9987 |
| Q103 | 4800869987 | M9987 |
| Q104 | 4802081B31 | M1B31 (alt: M1B11) |
| Q105 | 4802081B30 | M1B30 (alt: M1B10) |
| Q107 | 4811043B19 | M3B19 (alt: M9658) |
| Q151 | 4802081B30 | M1B30 (alt: M1B10) |
| Q152 | 4802081B31 | M1B31 (alt: M1B11) |
| Q201 | 4811043B12 | FET M3B12 (alt: M9839) |
| Q202 | 4802081B31 | M1B31 (alt: M1B11) |
| Q203 | 4811043B19 | M3B19 (alt: M9658) |
| Q204 | 4800869990 | M9990 |
| Q205 | 4884939C36 | FET M9C36 |
| Q206 | 4802081B31 | M1B31 (alt: M1B11) |
| Q207 | 4811043B19 | M3B19 (alt: M9658) |
| Q208 | 4811043B19 | M3B19 (alt: M9658) |
| Q209 | 4802081B30 | M1B30 (alt: M1B10) |
| Q251 | 4802081B30 | M1B30 (alt: M1B10) |

RESISTOR: fixed 5% 1/8W

| | | |
|------|------------|---------------|
| R 1 | 0611024A47 | 820 |
| R 2 | 0611024A63 | 3.9k |
| R 3 | 0611024A19 | 56 |
| R 4 | 0611024A27 | 120 |
| R 5 | 0611024A19 | 56 |
| R 6 | 0611024A27 | 120 |
| R 7 | 0611024A43 | 560 |
| R 8 | 0611024A93 | 68k |
| R 51 | 0611024A55 | 1.8k |
| R 53 | 0611024A29 | 150 |
| R 54 | 0611024A41 | 470 |
| R 55 | 0611024A49 | 1k |
| R 56 | 0611024B20 | 820k |
| R 57 | 0611024B06 | 220k |
| R 58 | 0611024B02 | 150k |
| R 59 | 1805500L08 | 22k variable |
| R 60 | 0611024A93 | 68k |
| R 61 | 0611024A95 | 82k |
| R 62 | 0611024A65 | 4.7k |
| R 63 | 0611024A71 | 8.2k |
| R 64 | 0611024A71 | 8.2k |
| R 65 | 0611024A71 | 8.2k |
| R 66 | 0611024A65 | 4.7k |
| R101 | 0602438B15 | 150 0.5W |
| R102 | 0611024A25 | 100 |
| R103 | 0611024A73 | 10k |
| R104 | 0611024A24 | 100 |
| R105 | 0611024A73 | 10k |
| R106 | 0611024A01 | 10 |
| R107 | 0611024A77 | 15k |
| R108 | 0611024A25 | 100 |
| R109 | 0611024A29 | 150 |
| R110 | 0611024A39 | 390 |
| R111 | 0611024A29 | 150 |
| R112 | 0611024A53 | 1.5k |
| R113 | 0611024A67 | 5.6k |
| R116 | 0611024A53 | 1.5k |
| R117 | 0611024A59 | 2.7k |
| R118 | 0611024A73 | 10k |
| R119 | 0611024A77 | 15k |
| R120 | 0611024A33 | 220 |
| R121 | 0611024A19 | 56 |
| R122 | 0611024A59 | 2.7k |
| R123 | 0611024A25 | 100 |
| R124 | 0611024A49 | 1k |
| R125 | 0611024A53 | 1.5k |
| R126 | 0611024A63 | 3.9k |
| R127 | 0611024A47 | 820 |
| R152 | 0610621E25 | 237k 1% 1/4W |
| R153 | 0610621C71 | 6.19k 1% 1/4W |
| R155 | 0610621C57 | 4.42k 1% 1/4W |
| R156 | 0611024A97 | 100k |
| R157 | 0611024A73 | 10k |
| R158 | 0611024A73 | 10k |
| R159 | 0611024A77 | 15k |
| R160 | 0611024A09 | 22 |
| R161 | 0611024A53 | 1.5k |

| | | |
|------|------------|--------------|
| R162 | 0611024A49 | 1k |
| R201 | 0611024A19 | 56 |
| R202 | 0611024A25 | 100 |
| R203 | 0611024A73 | 10k |
| R204 | 0611024A21 | 68 |
| R205 | 0611024A61 | 3.3k |
| R206 | 0611024A77 | 15k |
| R207 | 0611024A73 | 10k |
| R208 | 0611024A79 | 18k |
| R209 | 0611024A73 | 10k |
| R210 | 0611024A57 | 2.2k |
| R211 | 0611024A35 | 270 |
| R212 | 0611024A43 | 560 |
| R213 | 0611024A01 | 10 |
| R214 | 0611024A21 | 68 |
| R215 | 0611024A35 | 270 |
| R216 | 0611024A21 | 68 |
| R217 | 0611024A01 | 10 |
| R219 | 0611024A35 | 270 |
| R220 | 0611024A07 | 18 |
| R221 | 0611024A35 | 270 |
| R222 | 0611024A97 | 100k |
| R223 | 0611024A73 | 10k |
| R224 | 0611024A73 | 10k |
| R225 | 0611024A19 | 56 |
| R226 | 0611024A25 | 100 |
| R227 | 0611024A73 | 10k |
| R228 | 0611024A21 | 68 |
| R229 | 0611024A65 | 4.7k |
| R230 | 0611024A57 | 2.2k |
| R231 | 0611024A35 | 270 |
| R232 | 0611024A43 | 560 |
| R233 | 0611024A21 | 68 |
| R234 | 0611024A35 | 270 |
| R235 | 0611024A21 | 68 |
| R239 | 0611024B23 | Jumper |
| R241 | 0611024A49 | 1k |
| R242 | 0611024A15 | 39 |
| R243 | 0611024A15 | 39 |
| R251 | 0611024A35 | 270 |
| R252 | 0611024A01 | 10 |
| R301 | 0611024A85 | 33k |
| R302 | 1805500L08 | 22k variable |
| R303 | 0611024A41 | 470 |
| R304 | 0611024A01 | 10 |
| R305 | 1805500L08 | 22k variable |
| R306 | 0611024A01 | 10 |
| R307 | 0611024A55 | 1.8k |
| R308 | 0611024A65 | 4.7k |
| R309 | 0611024A65 | 4.7k |
| R310 | 0611024A65 | 4.7k |

THERMISTOR:

| | | |
|-------|------------|------|
| RT151 | 0683600K06 | 10k |
| RT152 | 0683600K06 | 10k |
| RT153 | 0683600K05 | 100k |

INTEGRATED CIRCUIT: (SEE NOTE)

| | | |
|------|------------|-----------|
| U 51 | 5105479G05 | Nucleus |
| U101 | 5183548N19 | Divider |
| U102 | 5183977M45 | Prescaler |

ZENER DIODE: (SEE NOTE)

| | | |
|-------|------------|---------|
| VR101 | 4882256C15 | 5.1V 5% |
|-------|------------|---------|

CRYSTAL:

| | | |
|------|------------|----------------------------------|
| Y 51 | 9180082J01 | Filter (matched pair Y51A/B) |
| Y 52 | 4805488G03 | 20.945MHz Replace with part as |
| or | 4805488G04 | 21.855MHz originally supplied |
| Y151 | 4802443B21 | 14.4MHz |

NON-REFERENCED ITEMS:

| | |
|------------|---------------------|
| 2680138J01 | Shield |
| 2680182H01 | RF shield |
| 2680153J01 | Coil shield, 3 used |
| 2680210K01 | Coil shield |

NOTE

For optimum performance, diodes, transistors, integrated circuits and crystals must be ordered by Motorola part numbers.

GLE6145A RF Board, 25kHz
(Tx: 420-433MHz; Rx: 438-450MHz) 5ppm

SYMBOL PART NO. DESCRIPTION

CAPACITOR, fixed: pF 5% 50V
unless otherwise stated

| | | |
|-------|------------|-----------------|
| C 1 | 2111031A11 | 6.8 0.25pF |
| C 2 | 2111031A35 | 68 |
| C 3 | 2111031A35 | 68 |
| C 5 | 2111031A35 | 68 |
| C 7 | 2111031A09 | 4.7 0.25pF |
| C 8 | 2111031A15 | 10 |
| C 9 | 2111031A08 | 3.9 0.25pF |
| C 10 | 2111032A21 | 0.01uF 10% |
| C 12 | 2111032A09 | 0.001uF 10% |
| C 51 | 2111031A31 | 47 |
| C 52 | 0611024B23 | Jumper |
| C 54 | 2111031A09 | 4.7 0.25pF |
| C 55 | 2111031A10 | 5.6 0.25pF |
| C 56 | 0611024B23 | Jumper |
| C 57 | 2111031A21 | 0.01uF 10% |
| C 58 | 2111031A21 | 0.01uF 10% |
| C 59 | 2384538G05 | 0.1uF 20% 15V |
| C 60 | 2111031A31 | 47 |
| C 61 | 2111031A23 | 22 |
| C 62 | 2111031A31 | 47 |
| C 63 | 2111031A59 | 680 |
| C 64 | 2111031A15 | 10 |
| C 65 | 2111032B15 | 0.22uF +80-20% |
| C 66 | 2111032A21 | 0.01uF 10% |
| C 67 | 2111032B15 | 0.22uF +80-20% |
| C 68 | 2111032B15 | 0.22uF +80-20% |
| C 69 | 2384538G05 | 10uF 20% 15V |
| C 70 | 2311048B13 | 10uF 20% 16V |
| C 71 | 2311048B06 | 2.2uF 20% |
| C 72- | | |
| C 77 | 2111032B15 | 0.22uF +80-20% |
| C 78 | 2111032A13 | 0.0022uF 10% |
| C 79 | 2111032B15 | 0.22uF +80-20% |
| C 80 | 2311048B13 | 10uF 20% 16V |
| C 81 | 0811051A05 | 0.0047uF 63V |
| C 82 | 0811044A34 | 0.018uF 63V |
| C 83 | 0811051A01 | 0.001uF 63V |
| C101 | 2311048B13 | 10uF 20% 16V |
| C102 | 0811051A13 | 0.1uF 63V |
| C103 | 2111032A21 | 0.01uF 10% |
| C104 | 2311048B13 | 10uF 20% 16V |
| C105 | 2111032A21 | 0.01uF 10% |
| C106 | 2111031A19 | 15 |
| C108 | 2111032B13 | 0.1uF +80-20% |
| C109 | 0811051A13 | 0.1uF 63V |
| C110 | 2111032B13 | 0.1uF +80-20% |
| C111 | 2302057B02 | 1uF 20% 35V |
| C112 | 0811051A07 | 0.1uF 63V |
| C113 | 2111032A18 | 0.0056uF 10% |
| C114 | 2111031A35 | 68 |
| C115 | 2111032A21 | 0.01uF 10% 50V |
| C116 | 2311048B13 | 10uF 20% 16V |
| C117- | | |
| C119 | 2111031A35 | 68 |
| C120 | 2111031A39 | 100 |
| C121 | 2111031A10 | 5.6 0.25pF |
| C122- | | |
| C125 | 2111031A35 | 68 |
| C126 | 2111032A21 | 0.01uF 10% |
| C127 | 2111032A21 | 0.01uF 10% |
| C151 | 2111032A09 | 0.001uF 10% |
| C152 | 2111031A15 | 10 |
| C153 | 2111032A09 | 0.001uF 10% |
| C154 | 2111032A21 | 0.01uF 10% |
| C155 | 2302057B09 | 0.22 20% 35V |
| C156 | 2111031A45 | 180 |
| C157 | 2111031A45 | 180 |
| C158 | 2111032A21 | 0.01uF 10% |
| C159 | 2111031A23 | 22 |
| C160 | 2111031A19 | 15 |
| C161 | 2111031A36 | 75 |
| C201 | 2002473M01 | 2.5-10 variable |
| C202 | 2111031A13 | 8.2 0.25pF |
| C203 | 2111031A07 | 3.3 0.25pF |
| C204 | 2111031A01 | 1.0 0.25pF |
| C205 | 2111031A15 | 10 |
| C206 | 2111031A11 | 6.8 0.25pF |

| | | |
|-------|------------|-----------------|
| C207 | 2111031A10 | 5.6 0.25pF |
| C208 | 2111031A07 | 3.3 0.25pF |
| C209 | 2111031A35 | 68 |
| C210 | 2111031A35 | 68 |
| C211 | 2111031A35 | 68 |
| C212 | 2111031A01 | 1.0 0.25pF |
| C213 | 2111031A01 | 1.0 0.25pF |
| C214 | 2111031A35 | 68 |
| C215 | 2111031A35 | 68 |
| C216 | 2111031A11 | 6.8 0.25pF |
| C217 | 2111031A35 | 68 |
| C218 | 2111031A35 | 68 |
| C219 | 2111031A35 | 68 |
| C221 | 2002473M01 | 2.5-10 variable |
| C222 | 2111031A05 | 2.2 0.25pF |
| C223 | 2111031A03 | 1.5 0.25pF |
| C224 | 2111031A03 | 1.5 0.25pF |
| C225 | 2111031A01 | 1.0 0.25pF |
| C226 | 2111031A09 | 4.7 0.25pF |
| C227 | 2111031A01 | 1.0 0.25pF |
| C228 | 2111031A17 | 12 |
| C229 | 2111031A10 | 5.6 0.25pF |
| C230 | 2111031A05 | 2.2 0.25pF |
| C231 | 2111031A10 | 5.6 0.25pF |
| C232 | 2111031A35 | 68 |
| C233 | 2111031A35 | 68 |
| C234 | 2111031A03 | 1.5 0.25pF |
| C236- | | |
| C238 | 2111031A35 | 68 |
| C239 | 2111031A10 | 5.6 0.25pF |
| C240 | 2111032A21 | 0.01uF 10% |
| C241- | | |
| C242 | 2111031A35 | 68 |
| C243 | 2111032A27 | 0.033uF 10% |
| C244- | | |
| C246 | 2111031A35 | 68 |
| C247 | 2111031A05 | 2.2 0.25pF |
| C248 | 2384538G31 | 0.56uF 10% 35V |
| C249 | 2111032A09 | 0.001uF 10% |
| C250 | 2111031A35 | 68 |
| C251 | 2111032A21 | 0.01uF 10% |
| C252 | 2311048B19 | 47uF 20% 16V |
| C253 | 2311048B19 | 47uF 20% 16V |
| C254 | 2111032A21 | 0.1uF 10% |
| C255 | 2111031A05 | 2.2 0.25pF |
| C256 | 2111031A01 | 1.0 0.25pF |
| C257 | 2111031A28 | 36 |
| C258 | 2111031A01 | 1.0 0.25pF |
| C301 | 2311048B05 | 1uF 20% |
| C302 | 0811051A17 | 0.47uF 63V |
| C303- | | |
| C312 | 2111031A21 | 18 |
| C313 | 2111031A35 | 68 |

DIODE: (SEE NOTE)

| | | |
|-------|------------|------------------|
| CR 51 | 4883654H01 | Silicon |
| CR 52 | 4883654H01 | Silicon |
| CR101 | 4883654H01 | Silicon |
| CR102 | 4883654H01 | Silicon |
| CR151 | 4882190H54 | Silicon varactor |
| CR152 | 4882190H54 | Silicon varactor |
| CR153 | 4884399M01 | Silicon |
| CR154 | 4884399M01 | Silicon |
| CR201 | 4802081B35 | Silicon varactor |
| CR202 | 4802081B35 | Silicon varactor |
| CR203 | 4884616A01 | Hot carrier |
| CR204 | 4802081B35 | Silicon varactor |
| CR205 | 4802081B35 | Silicon varactor |
| CR206 | 4802081B35 | Silicon varactor |
| CR207 | 4884616A01 | Hot carrier |

HELICAL FILTER:

| | | |
|-----|------------|--------|
| FL1 | 9180081J01 | 2-cell |
| FL2 | 9180081J02 | 3-cell |
| FL3 | 9180081J03 | 3-cell |

CERAMIC FILTER:

| | | |
|------|------------|-----------------|
| FL51 | 9180097D06 | 455 kHz, 6-pole |
| FL52 | 9180098D06 | 455 kHz, 4-pole |

CONNECTOR:

| | | |
|-----|------------|---------------|
| J 1 | 0980168K01 | Coaxial |
| J 2 | 0980168K01 | Coaxial |
| J 3 | 0980179H01 | 11-pin socket |

COLL:

| | | |
|-------|------------|-------------------------|
| L 1 | 2411030B05 | 2.5 turns (green) |
| L 2 | 2411030B07 | 3.5 turns (white) |
| L 3 | 2482723H28 | 0.29uH (yellow) |
| L 4 | 2411030B01 | 1.5 turns (red) |
| L 5 | 2482723H28 | 0.29uH (yellow) |
| L 51 | 2480299D01 | 17.75 turns (orange) |
| L 52 | 2482835G03 | 2.6uH (red-blue-gold) |
| L 53 | 2482835G03 | 2.6uH (red-blue-gold) |
| L 54 | 2480000E01 | Quad det with capacitor |
| L 55 | 2482723H35 | 23uH (red) |
| L101 | 2411030B08 | 4.5 turns (brown) |
| L102 | 2482723H28 | 0.29uH (yellow) |
| L151 | 2480299D01 | 17.75 turns (orange) |
| L152 | 2482723H37 | 6.2uH (blue) |
| L201 | 2480117K02 | Coil |
| L202 | 2411030B10 | 5.5 turns (red) |
| L203- | | |
| L206 | 2482723H28 | 0.29uH (yellow) |
| L207 | 2411030B05 | 2.5 turns (green) |
| L208 | 2411030B08 | 4.5 turns (brown) |
| L209 | 2482723H28 | 0.29uH (yellow) |
| L210 | 2480117K03 | Coil |
| L211 | 2411030B12 | 7.5 turns (yellow) |
| L212- | | |
| L215 | 2482723H28 | 0.29uH (yellow) |
| L216 | 2411030B06 | 2.5 turns |
| L217 | 2482723H28 | 0.29uH (yellow) |
| L218 | 2411030B08 | 4.5 turns (brown) |

TRANSISTOR: (SEE NOTE)

| | | |
|------|------------|------------------------|
| Q 1 | 4800869990 | M9990 |
| Q 2 | 4811043B12 | FET M3B12 (alt: M9839) |
| Q 51 | 4811043B12 | FET M3B12 (alt: M9839) |
| Q 52 | 4811043B03 | M3B03 (alt: M9571) |
| Q 53 | 4802081B30 | M1B30 (alt: M1B10) |
| Q 54 | 4802081B30 | M1B30 (alt: M1B10) |
| Q101 | 4802081B31 | M1B31 (alt: M1B11) |
| Q102 | 4800869987 | M9987 |
| Q103 | 4800869987 | M9987 |
| Q104 | 4802081B31 | M1B31 (alt: M1B11) |
| Q105 | 4802081B30 | M1B30 (alt: M1B10) |
| Q107 | 4811043B19 | M3B19 (alt: M9658) |
| Q151 | 4802081B30 | M1B30 (alt: M1B10) |
| Q152 | 4802081B31 | M1B31 (alt: M1B11) |
| Q201 | 4811043B12 | FET M3B12 (alt: M9839) |
| Q202 | 4802081B31 | M1B31 (alt: M1B11) |
| Q203 | 4811043B19 | M3B19 (alt: M9658) |
| Q204 | 4800869990 | M9990 |
| Q205 | 4884939C36 | FET M9C36 |
| Q206 | 4802081B31 | M1B31 (alt: M1B11) |
| Q207 | 4811043B19 | M3B19 (alt: M9658) |
| Q208 | 4811043B19 | M3B19 (alt: M9658) |
| Q209 | 4802081B30 | M1B30 (alt: M1B10) |
| Q251 | 4802081B30 | M1B30 (alt: M1B10) |

RESISTOR: fixed 5% 1/8W

| | | |
|------|------------|--------------|
| R 1 | 0611024A47 | 820 |
| R 2 | 0611024A63 | 3.9k |
| R 3 | 0611024A19 | 56 |
| R 4 | 0611024A27 | 120 |
| R 5 | 0611024A19 | 56 |
| R 6 | 0611024A27 | 120 |
| R 7 | 0611024A43 | 560 |
| R 8 | 0611024A93 | 68k |
| R 51 | 0611024A55 | 1.8k |
| R 53 | 0611024A29 | 150 |
| R 54 | 0611024A41 | 470 |
| R 55 | 0611024A49 | 1k |
| R 56 | 0611024B20 | 820k |
| R 57 | 0611024B06 | 220k |
| R 58 | 0611024B02 | 150k |
| R 59 | 1805500L08 | 22k variable |
| R 60 | 0611024A93 | 68k |
| R 61 | 0611024A95 | 82k |
| R 62 | 0611024A65 | 4.7k |
| R 63 | 0611024A71 | 8.2k |
| R 64 | 0611024A71 | 8.2k |
| R 65 | 0611024A71 | 8.2k |
| R 66 | 0611024A65 | 4.7k |
| R101 | 0602438B15 | 150 0.5W |
| R102 | 0611024A25 | 100 |
| R103 | 0611024A73 | 10k |

| | | |
|------|------------|---------------|
| R104 | 0611024A24 | 100 |
| R105 | 0611024A73 | 10k |
| R106 | 0611024A01 | 10 |
| R107 | 0611024A77 | 15k |
| R108 | 0611024A25 | 100 |
| R109 | 0611024A29 | 150 |
| R110 | 0611024A39 | 390 |
| R111 | 0611024A29 | 150 |
| R112 | 0611024A53 | 1.5k |
| R113 | 0611024A67 | 5.6k |
| R116 | 0611024A53 | 1.5k |
| R117 | 0611024A59 | 2.7k |
| R118 | 0611024A73 | 10k |
| R119 | 0611024A77 | 15k |
| R120 | 0611024A33 | 220 |
| R121 | 0611024A19 | 56 |
| R122 | 0611024A59 | 2.7k |
| R123 | 0611024A25 | 100 |
| R124 | 0611024A49 | 1k |
| R125 | 0611024A53 | 1.5k |
| R126 | 0611024A63 | 3.9k |
| R127 | 0611024A47 | 820 |
| R152 | 0610621E25 | 237k 1% 1/4W |
| R153 | 0610621C71 | 6.19k 1% 1/4W |
| R155 | 0610621C57 | 4.42k 1% 1/4W |
| R156 | 0611024A97 | 100k |
| R157 | 0611024A73 | 10k |
| R158 | 0611024A73 | 10k |
| R159 | 0611024A77 | 15k |
| R160 | 0611024A09 | 22 |
| R161 | 0611024A53 | 1.5k |
| R162 | 0611024A49 | 1k |
| R201 | 0611024A19 | 56 |
| R202 | 0611024A25 | 100 |
| R203 | 0611024A73 | 10k |
| R204 | 0611024A21 | 68 |
| R205 | 0611024A61 | 3.3k |
| R206 | 0611024A77 | 15k |
| R207 | 0611024A73 | 10k |
| R208 | 0611024A79 | 18k |
| R209 | 0611024A73 | 10k |
| R210 | 0611024A57 | 2.2k |
| R211 | 0611024A35 | 270 |
| R212 | 0611024A43 | 560 |
| R213 | 0611024A01 | 10 |
| R214 | 0611024A21 | 68 |
| R215 | 0611024A35 | 270 |
| R216 | 0611024A21 | 68 |
| R217 | 0611024A01 | 10 |
| R219 | 0611024A35 | 270 |
| R220 | 0611024A07 | 18 |
| R221 | 0611024A35 | 270 |
| R222 | 0611024A97 | 100k |
| R223 | 0611024A73 | 10k |
| R224 | 0611024A73 | 10k |
| R225 | 0611024A19 | 56 |
| R226 | 0611024A25 | 100 |
| R227 | 0611024A73 | 10k |
| R228 | 0611024A21 | 68 |
| R229 | 0611024A65 | 4.7k |
| R230 | 0611024A57 | 2.2k |
| R231 | 0611024A35 | 270 |
| R232 | 0611024A43 | 560 |
| R233 | 0611024A21 | 68 |
| R234 | 0611024A35 | 270 |
| R235 | 0611024A21 | 68 |
| R238 | 0611024A35 | 270 |
| R239 | 0611024B07 | 18 |
| R240 | 0611024A35 | 270 |
| R241 | 0611024A49 | 1k |
| R242 | 0611024A15 | 39 |
| R243 | 0611024A15 | 39 |
| R251 | 0611024A35 | 270 |
| R252 | 0611024A01 | 10 |
| R301 | 0611024A81 | 22k |
| R302 | 1805500L08 | 22k variable |
| R303 | 0611024A41 | 470 |
| R304 | 0611024A01 | 10 |
| R305 | 1805500L08 | 22k variable |
| R306 | 0611024A01 | 10 |
| R307 | 0611024A55 | 1.8k |
| R308 | 0611024A65 | 4.7k |
| R309 | 0611024A65 | 4.7k |
| R310 | 0611024A65 | 4.7k |

RT151 0683600K06
 RT152 0683600K06
 RT153 0683600K05

THERMISTOR:
 10k
 10k
 100k

U 51 5105479G05
 U101 5183548N19
 U102 5183977M45

INTEGRATED CIRCUIT: (SEE NOTE)
 Nucleus
 Divider
 Prescaler

VR101 4882256C15

ZENER DIODE: (SEE NOTE)
 5.1V 5%

Y 51 9180082J01
 Y 52 4805488G03
 or 4805488G04
 Y151 4802443B21

CRYSTAL:
 Filter (matched pair Y51A/B)
 20.945MHz | Replace with part as
 21.855MHz | originally supplied
 14.4MHz

NON-REFERENCED ITEMS:
 2680138J01 Shield
 2680182H01 RF shield
 2680153J01 Coil shield, 3 used
 2680210K01 Coil shield

GLE6147A RF Board, 25kHz (403-433MHz) 2ppm

SYMBOL PART NO. DESCRIPTION

CAPACITOR, fixed: pF 5% 50V
 unless otherwise stated

C 1 2111031A13 8.2 0.25pF
 C 2 2111031A35 68
 C 3 2111031A35 68
 C 5 2111031A35 68
 C 8 2111032A09 0.001uF 10%
 C 9 2111031A08 3.9 0.25pF
 C 10 2111032A21 0.01uF 10%
 C 12 2111032A09 0.001uF 10%
 C 51 2111031A31 47
 C 52 0611024B23 Jumper
 C 54 2111031A09 4.7 0.25pF
 C 55 2111031A10 5.6 0.25pF
 C 56 0611024B23 Jumper
 C 57 2111031A21 0.01uF 10%
 C 58 2111031A21 0.01uF 10%
 C 59 2384538G05 0.1uF 20% 15V
 C 60 2111031A31 47
 C 61 2111031A23 22
 C 62 2111031A31 47
 C 63 2111031A59 680
 C 64 2111031A15 10
 C 65 2111032B15 0.22uF +80-20%
 C 66 2111032A21 0.01uF 10%
 C 67 2111032B15 0.22uF +80-20%
 C 68 2111032B15 0.22uF +80-20%
 C 69 2384538G05 10uF 20% 15V
 C 70 2311048B13 10uF 20% 16V
 C 71 2311048B06 2.2uF 20%
 C 72-
 C 77 2111032B15 0.22uF +80-20%
 C 78 2111032A13 0.0022uF 10%
 C 79 2111032B15 0.22uF +80-20%
 C 80 2311048B13 10uF 20% 16V
 C 81 0811051A05 0.0047uF 63V
 C 82 0811044A34 0.018uF 63V
 C 83 0811051A01 0.001uF 63V
 C101 2311048B13 10uF 20% 16V
 C102 0811051A13 0.1uF 63V
 C103 2111032A21 0.01uF 10%
 C104 2311048B13 10uF 20% 16V
 C105 2111032A21 0.01uF 10%
 C106 2111031A19 15
 C108 2111032B13 0.1uF +80-20%
 C109 0811051A13 0.1uF 63V
 C110 2111032B13 0.1uF +80-20%
 C111 2302057B02 1uF 20% 35V
 C112 0811051A07 0.1uF 63V
 C113 2111032A18 0.0056uF 10%
 C114 2111031A35 68
 C115 2111032A21 0.01uF 10% 50V
 C116 2311048B13 10uF 20% 16V
 C117 2111031A35 68

C118 2111031A35 68
 C119 2111031A35 68
 C120 2111031A39 100
 C121 2111031A10 5.6 0.25pF
 C122-
 C125 2111031A35 68
 C126 2111032A21 0.01uF 10%
 C127 2111032A21 0.01uF 10%
 C159 2111031A23 22
 C160 2111031A19 15
 C162 2111032A09 0.001uF 10%
 C163 2111032A21 0.01uF 10%
 C201 2002473M01 2.5-10 variable
 C202 2111031A08 3.9 0.25pF
 C203 2111031A07 3.3 0.25pF
 C204 2111031A01 1.0 0.25pF
 C205 2111031A13 8.2 0.25pF
 C206 2111031A11 6.8 0.25pF
 C207 2111031A10 5.6 0.25pF
 C208 2111031A11 6.8 0.25pF
 C209-
 C211 2111031A35 68
 C212 2111031A07 3.3 0.25pF
 C214 2111031A35 68
 C215 2111031A35 68
 C216 2111031A11 6.8 0.25pF
 C217-
 C219 2111031A35 68
 C221 2002473M01 2.5-10 variable
 C222 2111031A05 2.2 0.25pF
 C223 2111031A03 1.5 0.25pF
 C224 2111031A03 1.5 0.25pF
 C225 2111031A01 1.0 0.25pF
 C226 2111031A09 4.7 0.25pF
 C227 2111031A01 1.0 0.25pF
 C228 2111031A17 12
 C229 2111031A10 5.6 0.25pF
 C230 2111031A11 6.8 0.25pF
 C231 2111031A10 5.6 0.25pF
 C232 2111031A35 68
 C233 2111031A35 68
 C234 2111031A03 1.5 0.25pF
 C236-
 C238 2111031A35 68
 C239 2111031A10 5.6 0.25pF
 C240 2111032A21 0.01uF 10%
 C241 2111031A35 68
 C242 2111031A35 68
 C243 2111032A27 0.033uF 10%
 C244-
 C246 2111031A35 68
 C247 2111031A05 2.2 0.25pF
 C248 2384538G31 0.56uF 10% 35V
 C249 2111032A09 0.001uF 10%
 C250 2111031A35 68
 C251 2111032A21 0.01uF 10%
 C252 2311048B19 47uF 20% 16V
 C253 2311048B19 47uF 20% 16V
 C254 2111032A21 0.1uF 10%
 C255 2111031A05 2.2 0.25pF
 C256 2111031A01 1.0 0.25pF
 C257 2111031A28 36
 C258 2111031A01 1.0 0.25pF
 C301 2311048B05 1uF 20%
 C302 0811051A17 0.47uF 63V
 C303-
 C312 2111031A21 18
 C313 2111031A35 68

CHANNEL ELEMENT:
 Reference oscillator (14.4MHz)

DIODE: (SEE NOTE)
 CR 51 4883654H01 Silicon
 CR 52 4883654H01 Silicon
 CR101 4883654H01 Silicon
 CR102 4883654H01 Silicon
 CR201 4802081B35 Silicon varactor
 CR202 4802081B35 Silicon varactor
 CR203 4884616A01 Hot carrier
 CR204 4802081B35 Silicon varactor
 CR205 4802081B35 Silicon varactor
 CR206 4802081B35 Silicon varactor
 CR207 4884616A01 Hot carrier

FL1 9180081J04 2-cell
 FL2 9180081J05 3-cell
 FL3 9180081J06 3-cell

CERAMIC FILTER:

FL51 9180097D06 455 kHz 6-pole
 FL52 9180098D06 455 kHz 4-pole

CONNECTOR:

J1,J2 0980168K01 Coaxial
 J 3 0980179H01 11-pin socket

COIL:

L 1 2411030B05 2.5 turns (green)
 L 2 2411030B08 4.5 turns (brown)
 L 3 2482723H28 0.29uH (yellow)
 L 4 2411030B02 1.5 turns (red)
 L 5 2482723H28 0.29uH (yellow)
 L 51 2480299D01 17.75 turns (orange)
 L 52 2482835G03 2.6uH (red-blue-gold)
 L 53 2482835G03 2.6uH (red-blue-gold)
 L 54 2480000E01 Quad det with capacitor
 L 55 2482723H35 23uH (red)
 L101 2411030B08 4.5 turns (brown)
 L102 2482723H28 0.29uH (yellow)
 L152 2482723H37 6.2uH (blue)
 L201 2480117K03 Coil
 L202 2411030B11 6.5 turns (orange)
 L203-
 L206 2482723H28 0.29uH (yellow)
 L207 2411030B05 2.5 turns (green)
 L208 2411030B08 4.5 turns (brown)
 L209 2482723H28 0.29uH (yellow)
 L210 2480117K03 Coil
 L211 2411030B12 7.5 turns (yellow)
 L212-
 L215 2482723H28 0.29uH (yellow)
 L216 2411030B06 2.5 turns
 L217 2482723H28 0.29uH (yellow)
 L218 2411030B08 4.5 turns (brown)

TRANSISTOR: (SEE NOTE)

Q 1 4800869990 M9990
 Q 2 4811043B12 FET M3B12 (alt: M9839)
 Q 51 4811043B12 FET M3B12 (alt: M9839)
 Q 52 4811043B03 M3B03 (alt: M9571)
 Q 53 4802081B30 M1B30 (alt: M1B10)
 Q 54 4802081B30 M1B30 (alt: M1B10)
 Q101 4802081B31 M1B31 (alt: M1B11)
 Q102 4800869987 M9987
 Q103 4800869987 M9987
 Q104 4802081B31 M1B31 (alt: M1B11)
 Q105 4802081B30 M1B30 (alt: M1B10)
 Q107 4811043B19 M3B19 (alt: M9658)
 Q201 4811043B12 FET M3B12 (alt: M9839)
 Q202 4802081B31 M1B31 (alt: M1B11)
 Q203 4811043B19 M3B19 (alt: M9658)
 Q204 4800869990 M9990
 Q205 4884939C36 FET M9C36
 Q206 4802081B31 M1B31 (alt: M1B11)
 Q207 4811043B19 M3B19 (alt: M9658)
 Q208 4811043B19 M3B19 (alt: M9658)
 Q209 4802081B30 M1B30 (alt: M1B10)
 Q251 4802081B30 M1B30 (alt: M1B10)

RESISTOR: fixed 5% 1/8W unless otherwise stated

R 1 0611024A47 820
 R 2 0611024A63 3.9k
 R 3 0611024A19 56
 R 4 0611024A27 120
 R 5 0611024A19 56
 R 6 0611024A27 120
 R 7 0611024A43 560
 R 8 0611024A93 68k
 R 51 0611024A55 1.8k
 R 53 0611024A29 150
 R 54 0611024A41 470
 R 55 0611024A49 1k
 R 56 0611024B20 820k
 R 57 0611024B06 220k
 R 58 0611024B02 150k
 R 59 1805500L08 22k variable

R 60 0611024A93 68k
 R 61 0611024A95 82k
 R 62 0611024A65 4.7k
 R 63-
 R 65 0611024A71 8.2k
 R 66 0611024A65 4.7k
 R101 0602438B15 150 0.5W
 R102 0611024A25 100
 R103 0611024A73 10k
 R104 0611024A24 100
 R105 0611024A73 10k
 R106 0611024A01 10
 R107 0611024A77 15k
 R108 0611024A25 100
 R109 0611024A29 150
 R110 0611024A39 390
 R111 0611024A29 150
 R112 0611024A53 1.5k
 R113 0611024A67 5.6k
 R116 0611024A53 1.5k
 R117 0611024A59 2.7k
 R118 0611024A73 10k
 R119 0611024A77 15k
 R120 0611024A33 220
 R121 0611024A19 56
 R122 0611024A59 2.7k
 R123 0611024A25 100
 R124 0611024A49 1k
 R125 0611024A53 1.5k
 R126 0611024A63 3.9k
 R127 0611024A47 820
 R163 1805500L08 22k variable 22% 100V
 R164 0611024A81 22k
 R201 0611024A19 56
 R202 0611024A25 100
 R203 0611024A73 10k
 R204 0611024A21 68
 R205 0611024A61 3.3k
 R206 0611024A77 15k
 R207 0611024A73 10k
 R208 0611024A79 18k
 R209 0611024A73 10k
 R210 0611024A57 2.2k
 R211 0611024A35 270
 R212 0611024A43 560
 R213 0611024A01 10
 R214 0611024A21 68
 R215 0611024A35 270
 R216 0611024A21 68
 R217 0611024A01 10
 R219 0611024A35 270
 R220 0611024A07 18
 R221 0611024A35 270
 R222 0611024A97 100k
 R223 0611024A73 10k
 R224 0611024A73 10k
 R225 0611024A19 56
 R226 0611024A25 100
 R227 0611024A73 10k
 R228 0611024A21 68
 R229 0611024A65 4.7k
 R230 0611024A57 2.2k
 R231 0611024A35 270
 R232 0611024A43 560
 R233 0611024A21 68
 R234 0611024A35 270
 R235 0611024A21 68
 R238 0611024A35 270
 R239 0611024B07 18
 R240 0611024A35 270
 R241 0611024A49 1k
 R242 0611024A15 39
 R243 0611024A15 39
 R251 0611024A35 270
 R252 0611024A01 10
 R301 0611024A71 8.2k
 R302 1805500L08 22k variable
 R303 0611024A35 270
 R304 0611024A01 10
 R305 1805500L08 22k variable
 R306 0611024A01 10
 R307 0611024A57 2.2k
 R308-
 R310 0611024A65 4.7k

INTEGRATED CIRCUIT:

U 51 5105479G05 Nucleus
 U101 5183548N19 Divider
 U102 5183977M45 Prescaler

ZENER DIODE:

VR101 4882256C15 5.1V 5%

CRYSTAL:

Y 51 9180082J01 Filter (matched pair Y51A/B)
 Y 52 4805488G03 20.945MHz | Replace with part as
 or 4805488G04 21.855MHz | originally supplied

NON-REFERENCED ITEMS:

2680138J01 Shield
 2680182H01 RF shield
 2680153J01 Coil shield, 3 used
 2680210K01 Coil shield

GLE6148A RF Board, 25kHz (438-470MHz) 2ppm

SYMBOL PART NO. DESCRIPTION

CAPACITOR, fixed: pf 5% 50V
unless otherwise stated

C 1 2111031A11 6.8 0.25pF
 C2, C3 2111031A35 68
 C 5 2111031A35 68
 C 7 2111031A09 4.7 0.25pF
 C 8 2111031A15 10
 C 9 2111031A08 3.9 0.25pF
 C 10 2111032A21 0.01uF 10%
 C 12 2111032A09 0.001uF 10%
 C 51 2111031A31 47
 C 52 0611024B23 Jumper
 C 54 2111031A09 4.7 0.25pF
 C 55 2111031A10 5.6 0.25pF
 C 56 0611024B23 Jumper
 C 57 2111031A21 0.01uF 10%
 C 58 2111031A21 0.01uF 10%
 C 59 2384538G05 0.1uF 20% 15V
 C 60 2111031A31 47
 C 61 2111031A23 22
 C 62 2111031A31 47
 C 63 2111031A59 680
 C 64 2111031A15 10
 C 65 2111032B15 0.22uF +80-20%
 C 66 2111032A21 0.01uF 10%
 C 67 2111032B15 0.22uF +80-20%
 C 68 2111032B15 0.22uF +80-20%
 C 69 2384538G05 10uF 20% 15V
 C 70 2311048B13 10uF 20% 16V
 C 71 2311048B06 2.2uF 20%
 C 72-
 C 77 2111032B15 0.22uF +80-20%
 C 78 2111032A13 0.0022uF 10%
 C 79 2111032B15 0.22uF +80-20%
 C 80 2311048B13 10uF 20% 16V
 C 81 0811051A05 0.0047uF 63V
 C 82 0811044A34 0.018uF 63V
 C 83 0811051A01 0.001uF 63V
 C101 2311048B13 10uF 20% 16V
 C102 0811051A13 0.1uF 63V
 C103 2111032A21 0.01uF 10%
 C104 2311048B13 10uF 20% 16V
 C105 2111032A21 0.01uF 10%
 C106 2111031A19 15
 C108 2111032B13 0.1uF +80-20%
 C109 0811051A13 0.1uF 63V
 C110 2111032B13 0.1uF +80-20%
 C111 2302057B02 1uF 20% 35V
 C112 0811051A07 0.1uF 63V
 C113 2111032A18 0.0056uF 10%
 C114 2111031A35 68
 C115 2111032A21 0.01uF 10% 50V
 C116 2311048B13 10uF 20% 16V
 C117-
 C119 2111031A35 68
 C120 2111031A39 100
 C121 2111031A10 5.6 0.25pF
 C122-
 C125 2111031A35 68

C126 2111032A21 0.01uF 10%
 C127 2111032A21 0.01uF 10%
 C159 2111031A23 22
 C160 2111031A19 15
 C162 2111032A09 0.001uF 10%
 C163 2111032A21 0.01uF 10%
 C201 2002473M01 2.5-10 variable
 C202 2111031A13 8.2 0.25pF
 C203 2111031A07 3.3 0.25pF
 C204 2111031A01 1.0 0.25pF
 C205 2111031A15 10
 C206 2111031A11 6.8 0.25pF
 C207 2111031A10 5.6 0.25pF
 C208 2111031A07 3.3 0.25pF
 C209-
 C211 2111031A35 68
 C212 2111031A01 1.0 0.25pF
 C213 2111031A01 1.0 0.25pF
 C214 2111031A35 68
 C215 2111031A35 68
 C216 2111031A11 6.8 0.25pF
 C217-
 C219 2111031A35 68
 C221 2002473M01 2.5-10 variable
 C222 2111031A10 5.6 0.25pF
 C223 2111031A03 1.5 0.25pF
 C224 2111031A05 2.2 0.25pF
 C225 2111031A01 1.0 0.25pF
 C226 2111031A09 4.7 0.25pF
 C227 2111031A01 1.0 0.25pF
 C228 2111031A17 12
 C229 2111031A09 4.7 0.25pF
 C230 2111031A10 5.6 0.25pF
 C231 2111031A08 3.9 0.25pF
 C232 2111031A35 68
 C233 2111031A35 68
 C234 2111031A01 1.0 0.25pF
 C235 2111031A03 1.5 0.25pF
 C236-
 C238 2111031A35 68
 C239 2111031A08 3.9 0.25pF
 C240 2111032A21 0.01uF 10%
 C241 2111031A35 68
 C242 2111031A35 68
 C243 2111032A27 0.033uF 10%
 C244-
 C246 2111031A35 68
 C247 2111031A05 2.2 0.25pF
 C248 2384538G31 0.56uF 10% 35V
 C249 2111032A09 0.001uF 10%
 C250 2111031A35 68
 C251 2111032A21 0.01uF 10%
 C252 2311048B19 47uF 20% 16V
 C253 2311048B19 47uF 20% 16V
 C254 2111032A21 0.1uF 10%
 C255 2111031A05 2.2 0.25pF
 C256 2111031A01 1.0 0.25pF
 C257 2111031A28 36
 C258 2111031A01 1.0 0.25pF
 C301 2311048B05 1uF 20%
 C302 0811051A17 0.47uF 63V
 C303-
 C312 2111031A21 18
 C313 2111031A35 68

CHANNEL ELEMENT:

CE151 KXN1123A Reference oscillator (14.4MHz)

DIODE: (SEE NOTE)

CR 51 4883654H01 Silicon
 CR 52 4883654H01 Silicon
 CR101 4883654H01 Silicon
 CR102 4883654H01 Silicon
 CR201 4802081B35 Silicon varactor
 CR202 4802081B35 Silicon varactor
 CR203 4884616A01 Hot carrier
 CR204-
 CR206 4802081B35 Silicon varactor
 CR207 4884616A01 Hot carrier

HELICAL FILTER:

FL1 9180081J01 2-cell
 FL2 9180081J02 3-cell
 FL3 9180081J03 3-cell

FL51 9180097D06 CERAMIC FILTER:
 FL52 9180098D06 455 kHz 6-pole
 455 kHz 4-pole

J 1 0980168K01 COAXIAL CONNECTOR:
 J 2 0980168K01 Coaxial
 J 3 0980179H01 11-pin socket

L 1 2411030B05 COIL:
 L 2 2411030B07 2.5 turns (green)
 L 3 2482723H28 3.5 turns (white)
 L 4 2411030B01 0.29uH (yellow)
 L 5 2482723H28 1.5 turns (brown)
 L 51 2480299D01 0.29uH (yellow)
 L 52 2482835G03 17.75 turns (orange)
 L 53 2482835G03 2.6uH (red-blue-gold)
 L 54 2480000E01 2.6uH (red-blue-gold)
 L 55 2482723H35 Quad det with capacitor
 L101 2411030B08 23uH (red)
 L102 2482723H28 4.5 turns (brown)
 L152 2482723H37 0.29uH (yellow)
 L201 2480117K02 6.2uH (blue)
 L202 2411030B10 Coil
 L203- 2411030B10 5.5 turns (red)
 L206 2482723H28 0.29uH (yellow)
 L207 2411030B05 2.5 turns (green)
 L208 2411030B08 4.5 turns (brown)
 L209 2482723H28 0.29uH (yellow)
 L210 2480117K02 Coil
 L211 2411030B12 7.5 turns (yellow)
 L212-
 L215 2482723H28 0.29uH (yellow)
 L216 2411030B05 2.5 turns
 L217 2482723H28 0.29uH (yellow)
 L218 2411030B08 4.5 turns (brown)

Q 1 4800869990 TRANSISTOR: (SEE NOTE)
 Q 2 4811043B12 M9990
 Q 51 4811043B12 FET M3B12 (alt: M9839)
 Q 52 4811043B03 FET M3B12 (alt: M9839)
 Q 53 4811043B03 M3B03 (alt: M9571)
 Q 54 4802081B30 M1B30 (alt: M1B10)
 Q101 4802081B31 M1B30 (alt: M1B10)
 Q102 4802081B31 M1B31 (alt: M1B11)
 Q103 4800869987 M9987
 Q104 4800869987 M9987
 Q105 4802081B31 M1B31 (alt: M1B11)
 Q107 4802081B30 M1B30 (alt: M1B10)
 Q108 4811043B19 M3B19 (alt: M9658)
 Q201 4811043B12 FET M3B12 (alt: M9839)
 Q202 4802081B31 M1B31 (alt: M1B11)
 Q203 4811043B19 M3B19 (alt: M9658)
 Q204 4800869990 M9990
 Q205 4884939C36 FET M9C36
 Q206 4802081B31 M1B31 (alt: M1B11)
 Q207 4811043B19 M3B19 (alt: M9658)
 Q208 4811043B19 M3B19 (alt: M9658)
 Q209 4802081B30 M1B30 (alt: M1B10)
 Q251 4802081B30 M1B30 (alt: M1B10)

R 1 0611024A47 RESISTOR: fixed 5% 1/8W
 R 2 0611024A63 820
 R 3 0611024A19 3.9k
 R 4 0611024A27 56
 R 5 0611024A27 120
 R 6 0611024A19 56
 R 7 0611024A27 120
 R 8 0611024A43 560
 R 8 0611024A93 68k
 R 51 0611024A55 1.8k
 R 53 0611024A29 150
 R 54 0611024A41 470
 R 55 0611024A49 1k
 R 56 0611024B20 820k
 R 57 0611024B06 220k
 R 58 0611024B02 150k
 R 59 1805500L08 22k variable
 R 60 0611024A93 68k
 R 61 0611024A95 82k
 R 62 0611024A65 4.7k
 R 63 0611024A71 8.2k
 R 64 0611024A71 8.2k

R 65 0611024A71 8.2k
 R 66 0611024A65 4.7k
 R101 0602438B15 150 0.5W
 R102 0611024A25 100
 R103 0611024A73 10k
 R104 0611024A24 100
 R105 0611024A73 10k
 R106 0611024A01 10
 R107 0611024A77 15k
 R108 0611024A25 100
 R109 0611024A29 150
 R110 0611024A39 390
 R111 0611024A29 150
 R112 0611024A53 1.5k
 R113 0611024A67 5.6k
 R116 0611024A53 1.5k
 R117 0611024A59 2.7k
 R118 0611024A73 10k
 R119 0611024A77 15k
 R120 0611024A33 220
 R121 0611024A19 56
 R122 0611024A59 2.7k
 R123 0611024A25 100
 R124 0611024A49 1k
 R125 0611024A53 1.5k
 R126 0611024A63 3.9k
 R127 0611024A47 820
 R163 1805500L08 22k variable 20%
 R164 0611024A81 22k
 R201 0611024A19 56
 R202 0611024A25 100
 R203 0611024A73 10k
 R204 0611024A21 68
 R205 0611024A61 3.3k
 R206 0611024A77 15k
 R207 0611024A73 10k
 R208 0611024A79 18k
 R209 0611024A73 10k
 R210 0611024A57 2.2k
 R211 0611024A35 270
 R212 0611024A43 560
 R213 0611024A01 10
 R214 0611024A21 68
 R215 0611024A35 270
 R216 0611024A21 68
 R217 0611024A01 10
 R219 0611024A35 270
 R220 0611024A07 18
 R221 0611024A35 270
 R222 0611024A97 100k
 R223 0611024A73 10k
 R224 0611024A73 10k
 R225 0611024A19 56
 R226 0611024A25 100
 R227 0611024A73 10k
 R228 0611024A21 68
 R229 0611024A65 4.7k
 R230 0611024A57 2.2k
 R231 0611024A35 270
 R232 0611024A43 560
 R233 0611024A21 68
 R234 0611024A35 270
 R235 0611024A21 68
 R239 0611024B23 Jumper
 R241 0611024A49 1k
 R242 0611024A15 39
 R243 0611024A15 39
 R251 0611024A35 270
 R252 0611024A01 10
 R301 0611024A85 33k
 R302 1805500L08 22k variable
 R303 0611024A45 680
 R304 0611024A01 10
 R305 1805500L08 22k variable
 R306 0611024A01 10
 R307 0611024A55 1.8k
 R308 0611024A65 4.7k
 R309 0611024A65 4.7k
 R310 0611024A65 4.7k

U 51 5105479G05 INTEGRATED CIRCUIT:
 U101 5183548N19 Nucleus
 U102 5183977M45 Divider
 Prescaler

VR101 4882256C15 ZENER DIODE
5.1V 5%

CRYSTAL
Y 51 9180082J01 Filter (matched pair Y51A/B)
Y 52 4805488G03 20.945MHz | Replace with part as
or 4805488G04 21.855MHz | originally supplied

NON-REFERENCED ITEMS:
2680138J01 Shield
2680182H01 RF shield
2680153J01 Coil shield, 3 used
2680210K01 Coil shield

GLE6150A RF Board, 25kHz
(Tx: 420-433MHz; Rx: 438-450MHz) 2ppm

SYMBOL PART NO. DESCRIPTION

CAPACITOR, fixed: pF 5% 50V
unless otherwise stated

| | | |
|-------|------------|----------------|
| C 1 | 2111031A11 | 6.8 0.25pF |
| C 2 | 2111031A35 | 68 |
| C 3 | 2111031A35 | 68 |
| C 5 | 2111031A35 | 68 |
| C 7 | 2111031A09 | 4.7 0.25pF |
| C 8 | 2111031A15 | 10 |
| C 9 | 2111031A08 | 3.9 0.25pF |
| C 10 | 2111032A21 | 0.01uF 10% |
| C 12 | 2111032A09 | 0.001uF 10% |
| C 51 | 2111031A31 | 47 |
| C 52 | 0611024B23 | Jumper |
| C 54 | 2111031A09 | 4.7 0.25pF |
| C 55 | 2111031A10 | 5.6 0.25pF |
| C 56 | 0611024B23 | Jumper |
| C 57 | 2111031A21 | 0.01uF 10% |
| C 58 | 2111031A21 | 0.01uF 10% |
| C 59 | 2384538G05 | 0.1uF 20% 15V |
| C 60 | 2111031A31 | 47 |
| C 61 | 2111031A23 | 22 |
| C 62 | 2111031A31 | 47 |
| C 63 | 2111031A59 | 680 |
| C 64 | 2111031A15 | 10 |
| C 65 | 2111032B15 | 0.22uF +80-20% |
| C 66 | 2111032A21 | 0.01uF 10% |
| C 67 | 2111032B15 | 0.22uF +80-20% |
| C 68 | 2111032B15 | 0.22uF +80-20% |
| C 69 | 2384538G05 | 10uF 20% 15V |
| C 70 | 2311048B13 | 10uF 20% 16V |
| C 71 | 2311048B06 | 2.2uF 20% |
| C 72- | | |
| C 77 | 2111032B15 | 0.22uF +80-20% |
| C 78 | 2111032A13 | 0.0022uF 10% |
| C 79 | 2111032B15 | 0.22uF +80-20% |
| C 80 | 2311048B13 | 10uF 20% 16V |
| C 81 | 0811051A05 | 0.0047uF 63V |
| C 82 | 0811044A34 | 0.018uF 63V |
| C 83 | 0811051A01 | 0.001uF 63V |
| C101 | 2311048B13 | 10uF 20% 16V |
| C102 | 0811051A13 | 0.1uF 63V |
| C103 | 2111032A21 | 0.01uF 10% |
| C104 | 2311048B13 | 10uF 20% 16V |
| C105 | 2111032A21 | 0.01uF 10% |
| C106 | 2111031A19 | 15 |
| C108 | 2111032B13 | 0.1uF +80-20% |
| C109 | 0811051A13 | 0.1uF 63V |
| C110 | 2111032B13 | 0.1uF +80-20% |
| C111 | 2302057B02 | 1uF 20% 35V |
| C112 | 0811051A07 | 0.1uF 63V |
| C113 | 2111032A18 | 0.0056uF 10% |
| C114 | 2111031A35 | 68 |
| C115 | 2111032A21 | 0.01uF 10% 50V |
| C116 | 2311048B13 | 10uF 20% 16V |
| C117 | 2111031A35 | 68 |
| C118 | 2111031A35 | 68 |
| C119 | 2111031A35 | 68 |
| C120 | 2111031A39 | 100 |
| C121 | 2111031A10 | 5.6 0.25pF |
| C122- | | |
| C125 | 2111031A35 | 68 |
| C126 | 2111032A21 | 0.01uF 10% |
| C127 | 2111032A21 | 0.01uF 10% |
| C159 | 2111031A23 | 22 |

| | | |
|-------|------------|-----------------|
| C160 | 2111031A19 | 15 |
| C162 | 2111032A09 | 0.001 10% |
| C163 | 2111032A21 | 0.01 10% |
| C201 | 2002473M01 | 2.5-10 variable |
| C202 | 2111031A13 | 8.2 0.25pF |
| C203 | 2111031A07 | 3.3 0.25pF |
| C204 | 2111031A01 | 1.0 0.25pF |
| C205 | 2111031A15 | 10 |
| C206 | 2111031A11 | 6.8 0.25pF |
| C207 | 2111031A10 | 5.6 0.25pF |
| C208 | 2111031A07 | 3.3 0.25pF |
| C209- | | |
| C211 | 2111031A35 | 68 |
| C212 | 2111031A01 | 1.0 0.25pF |
| C213 | 2111031A01 | 1.0 0.25pF |
| C214 | 2111031A35 | 68 |
| C215 | 2111031A35 | 68 |
| C216 | 2111031A11 | 6.8 0.5pF |
| C217- | | |
| C219 | 2111031A35 | 68 |
| C221 | 2002473M01 | 2.5-10 variable |
| C222 | 2111031A05 | 2.2 0.25pF |
| C223 | 2111031A03 | 1.5 0.25pF |
| C224 | 2111031A03 | 1.5 0.25pF |
| C225 | 2111031A01 | 1.0 0.25pF |
| C226 | 2111031A09 | 4.7 0.25pF |
| C227 | 2111031A01 | 1.0 0.25pF |
| C228 | 2111031A17 | 12 |
| C229 | 2111031A10 | 5.6 0.25pF |
| C230 | 2111031A05 | 2.2 0.25pF |
| C231 | 2111031A10 | 5.6 0.25pF |
| C232 | 2111031A35 | 68 |
| C233 | 2111031A35 | 68 |
| C234 | 2111031A03 | 1.5 0.25pF |
| C236- | | |
| C238 | 2111031A35 | 68 |
| C239 | 2111031A10 | 5.6 0.25pF |
| C240 | 2111032A21 | 0.01uF 10% |
| C241 | 2111031A35 | 68 |
| C242 | 2111031A35 | 68 |
| C243 | 2111032A27 | 0.033uF 10% |
| C244- | | |
| C246 | 2111031A35 | 68 |
| C247 | 2111031A05 | 2.2 0.25pF |
| C248 | 2384538G31 | 0.56uF 10% 35V |
| C249 | 2111032A09 | 0.001uF 10% |
| C250 | 2111031A35 | 68 |
| C251 | 2111032A21 | 0.01uF 10% |
| C252 | 2311048B19 | 47uF 20% 16V |
| C253 | 2311048B19 | 47uF 20% 16V |
| C254 | 2111032A21 | 0.1uF 10% |
| C255 | 2111031A05 | 2.2 0.25pF |
| C256 | 2111031A01 | 1.0 0.25pF |
| C257 | 2111031A28 | 36 |
| C258 | 2111031A01 | 1.0 0.25pF |
| C301 | 2311048B05 | 1uF 20% |
| C302 | 0811051A17 | 0.47uF 63V |
| C303- | | |
| C312 | 2111031A21 | 18 |
| C313 | 2111031A35 | 68 |

CHANNEL ELEMENT:

CE151 KXN1123A Reference oscillator (14.4MHz)

DIODE: (SEE NOTE)

| | | |
|--------|------------|------------------|
| CR 51 | 4883654H01 | Silicon |
| CR 52 | 4883654H01 | Silicon |
| CR101 | 4883654H01 | Silicon |
| CR102 | 4883654H01 | Silicon |
| CR201 | 4802081B35 | Silicon varactor |
| CR202 | 4802081B35 | Silicon varactor |
| CR203 | 4884616A01 | Hot carrier |
| CR204- | | |
| CR206 | 4802081B35 | Silicon varactor |
| CR207 | 4884616A01 | Hot carrier |

HELICAL FILTER:

| | | |
|-----|------------|--------|
| FL1 | 9180081J01 | 2-cell |
| FL2 | 9180081J02 | 3-cell |
| FL3 | 9180081J03 | 3-cell |

CERAMIC FILTER:

| | | |
|------|------------|-----------------|
| FL51 | 9180097D06 | 455 kHz, 6-pole |
| FL52 | 9180098D06 | 455 kHz, 4-pole |

CONNECTOR:
 J 1 0980168K01 Coaxial
 J 2 0980168K01 Coaxial
 J 3 0980179H01 11-pin socket

COIL:
 L 1 2411030B05 2.5 turns (green)
 L 2 2411030B07 3.5 turns (white)
 L 3 2482723H28 0.29uH (yellow)
 L 4 2411030B01 1.5 turns (brown)
 L 5 2482723H28 0.29uH (yellow)
 L 51 2480299D01 17.75 turns (orange)
 L 52 2482835G03 2.6uH (red-blue-gold)
 L 53 2482835G03 2.6uH (red-blue-gold)
 L 54 2480000E01 Quad det with capacitor
 L 55 2482723H35 23uH (red)
 L101 2411030B08 4.5 turns (brown)
 L102 2482723H28 0.29uH (yellow)
 L152 2482723H37 6.2uH (blue)
 L201 2480117K02 Coil
 L202 2411030B10 5.5 turns (red)
 L203-
 L206 2482723H28 0.29uH (yellow)
 L207 2411030B05 2.5 turns (green)
 L208 2411030B08 4.5 turns (brown)
 L209 2482723H28 0.29uH (yellow)
 L210 2480117K02 Coil
 L211 2411030B12 7.5 turns (yellow)
 L212-
 L215 2482723H28 0.29uH (yellow)
 L216 2411030B06 2.5 turns
 L217 2482723H28 0.29uH (yellow)
 L218 2411030B08 4.5 turns (brown)

TRANSISTOR: (SEE NOTE)
 Q 1 4800869990 M9990
 Q 2 4811043B12 FET M3B12 (alt: M9839)
 Q 51 4811043B12 FET M3B12 (alt: M9839)
 Q 52 4811043B03 M3B03 (alt: M9571)
 Q 53 4802081B30 M1B30 (alt: M1B10)
 Q 54 4802081B30 M1B30 (alt: M1B10)
 Q101 4802081B31 M1B31 (alt: M1B11)
 Q102 4800869987 M9987
 Q103 4800869987 M9987
 Q104 4802081B31 M1B31 (alt: M1B11)
 Q105 4802081B30 M1B30 (alt: M1B10)
 Q107 4811043B19 M3B19 (alt: M9658)
 Q201 4811043B12 FET M3B12 (alt: M9839)
 Q202 4802081B31 M1B31 (alt: M1B11)
 Q203 4811043B19 M3B19 (alt: M9658)
 Q204 4800869990 M9990
 Q205 4884939C36 FET M9C36
 Q206 4802081B31 M1B31 (alt: M1B11)
 Q207 4811043B19 M3B19 (alt: M9658)
 Q208 4811043B19 M3B19 (alt: M9658)
 Q209 4802081B30 M1B30 (alt: M1B10)
 Q251 4802081B30 M1B30 (alt: M1B10)

RESISTOR fixed: 5% 1/8W
 unless otherwise stated
 R 1 0611024A47 820
 R 2 0611024A63 3.9k
 R 3 0611024A19 56
 R 4 0611024A27 120
 R 5 0611024A19 56
 R 6 0611024A27 120
 R 7 0611024A43 560
 R 8 0611024A93 68k
 R 51 0611024A55 1.8k
 R 53 0611024A29 150
 R 54 0611024A41 470
 R 55 0611024A49 1k
 R 56 0611024B20 820k
 R 57 0611024B06 220k
 R 58 0611024B02 150k
 R 59 1805500L08 22k variable
 R 60 0611024A93 68k
 R 61 0611024A95 82k
 R 62 0611024A65 4.7k
 R 63-
 R 65 0611024A71 8.2k
 R 66 0611024A65 4.7k
 R101 0602438B15 150, 0.5W
 R102 0611024A25 100

R103 0611024A73 10k
 R104 0611024A24 100
 R105 0611024A73 10k
 R106 0611024A01 10
 R107 0611024A77 15k
 R108 0611024A25 100
 R109 0611024A29 150
 R110 0611024A39 390
 R111 0611024A29 150
 R112 0611024A53 1.5k
 R113 0611024A67 5.6k
 R116 0611024A53 1.5k
 R117 0611024A59 2.7k
 R118 0611024A73 10k
 R119 0611024A77 15k
 R120 0611024A33 220
 R121 0611024A19 56
 R122 0611024A59 2.7k
 R123 0611024A25 100
 R124 0611024A49 1k
 R125 0611024A53 1.5k
 R126 0611024A63 3.9k
 R127 0611024A47 820
 R163 1805500L08 22k variable 20%
 R164 0611024A81 22k
 R201 0611024A19 56
 R202 0611024A25 100
 R203 0611024A73 10k
 R204 0611024A21 68
 R205 0611024A61 3.3k
 R206 0611024A77 15k
 R207 0611024A73 10k
 R208 0611024A79 18k
 R209 0611024A73 10k
 R210 0611024A57 2.2k
 R211 0611024A35 270
 R212 0611024A43 560
 R213 0611024A01 10
 R214 0611024A21 68
 R215 0611024A35 270
 R216 0611024A21 68
 R217 0611024A01 10
 R219 0611024A35 270
 R220 0611024A07 18
 R221 0611024A35 270
 R222 0611024A97 100k
 R223 0611024A73 10k
 R224 0611024A73 10k
 R225 0611024A19 56
 R226 0611024A25 100
 R227 0611024A73 10k
 R228 0611024A21 68
 R229 0611024A65 4.7k
 R230 0611024A57 2.2k
 R231 0611024A35 270
 R232 0611024A43 560
 R233 0611024A21 68
 R234 0611024A35 270
 R235 0611024A21 68
 R238 0611024A35 270
 R239 0611024A07 18
 R240 0611024A35 270
 R241 0611024A49 1k
 R242 0611024A15 39
 R243 0611024A15 39
 R251 0611024A35 270
 R252 0611024A01 10
 R301 0611024A71 8.2k
 R302 1805500L08 22k variable
 R303 0611024A35 270
 R304 0611024A01 10
 R305 1805500L08 22k variable
 R306 0611024A01 10
 R307 0611024A57 2.2k
 R308-
 R310 0611024A65 4.7k

INTEGRATED CIRCUIT:
 U 51 5105479G05 Nucleus
 U101 5183548N19 Divider
 U102 5183977M45 Prescaler

ZENER DIODE:
 VR101 4882256C15 5.1V 5%

CRYSTAL:
 Y 51 9180082J01 Filter (matched pair Y51A/B)
 Y 52 4805488G03 20.945MHz | Replace with part as
 or 4805488G04 21.855MHz | originally supplied

NON-REFERENCED ITEMS:
 2680138J01 Shield
 2680182H01 RF shield
 2680153J01 Coil shield, 3 used
 2680210K01 Coil shield

GLE6151A RF Board, 25kHz
 (Tx: 438-450MHz; Rx: 420-433MHz) 2 ppm

SYMBOL PART NO. DESCRIPTION

CAPACITOR, fixed: pf 5% 50V
 unless otherwise stated

| | | |
|-------|------------|----------------|
| C 1 | 2111031A13 | 8.2 0.25pF |
| C 2 | 2111031A35 | 68 |
| C 3 | 2111031A35 | 68 |
| C 5 | 2111031A35 | 68 |
| C 8 | 2111032A09 | 0.001uF 10% |
| C 9 | 2111031A08 | 3.9 0.25pF |
| C 10 | 2111032A21 | 0.01uF 10% |
| C 12 | 2111032A09 | 0.001uF 10% |
| C 51 | 2111031A31 | 47 |
| C 52 | 2111031B23 | Jumper |
| C 54 | 2111031A09 | 4.7 0.25pF |
| C 55 | 2111031A10 | 5.6 0.25pF |
| C 56 | 2111031B23 | Jumper |
| C 57 | 2111031A21 | 0.01uF 10% |
| C 58 | 2111031A21 | 0.01uF 10% |
| C 59 | 2384538G05 | 0.1uF 20% 15V |
| C 60 | 2111031A31 | 47 |
| C 61 | 2111031A23 | 22 |
| C 62 | 2111031A31 | 47 |
| C 63 | 2111031A59 | 680 |
| C 64 | 2111031A15 | 10 |
| C 65 | 2111032B15 | 0.22uF +80-20% |
| C 66 | 2111032A21 | 0.01uF 10% |
| C 67 | 2111032B15 | 0.22uF +80-20% |
| C 68 | 2111032B15 | 0.22uF +80-20% |
| C 69 | 2384538G05 | 10uF 20% 15V |
| C 70 | 2311048B13 | 10uF 20% 16V |
| C 71 | 2311048B06 | 2.2uF 20% |
| C 72- | | |
| C 74 | 2111032B15 | 0.22uF +80-20% |
| C 75 | 2111032A13 | 0.0022uF 10% |
| C 76 | 2111032B15 | 0.22uF +80-20% |
| C 77 | 2111032B15 | 0.22uF +80-20% |
| C 78 | 2111032A13 | 0.0022uF 10% |
| C 79 | 2111032B15 | 0.22uF +80-20% |
| C 80 | 2311048B13 | 10uF 20% 16V |
| C 81 | 0811051A05 | 0.0047uF 63V |
| C 82 | 0811044A34 | 0.018uF 63V |
| C 83 | 0811051A01 | 0.001uF 63V |
| C101 | 2311048B13 | 10uF 20% 16V |
| C102 | 0811051A13 | 0.1uF 63V |
| C103 | 2111032A21 | 0.01uF 10% |
| C104 | 2311048B13 | 10uF 20% 16V |
| C105 | 2111032A21 | 0.01uF 10% |
| C106 | 2111031A19 | 15 |
| C108 | 2111032B13 | 0.1uF +80-20% |
| C109 | 0811051A13 | 0.1uF 63V |
| C110 | 2111032B13 | 0.1uF +80-20% |
| C111 | 2302057B02 | 1uF 20% 35V |
| C112 | 0811051A07 | 0.1uF 63V |
| C113 | 2111032A18 | 0.0056uF 10 |
| C114 | 2111031A35 | 68 |
| C115 | 2111032A21 | 0.01uF 10% 50V |
| C116 | 2311048B13 | 10uF 20% 16V |
| C117- | | |
| C119 | 2111031A35 | 68 |
| C120 | 2111031A39 | 100 |
| C121 | 2111031A10 | 5.6 0.25pF |
| C122- | | |
| C125 | 2111031A35 | 68 |
| C126 | 2111032A21 | 0.01uF 10% |
| C127 | 2111032A21 | 0.01uF 10% |
| C159 | 2111031A23 | 22 |
| C160 | 2111031A19 | 15 |
| C162 | 2111032A09 | 0.001uF 10% |

| | | |
|-------|------------|-----------------|
| C163 | 2111032A21 | 0.01uF 10% |
| C201 | 2002473M01 | 2.5-10 variable |
| C202 | 2111031A06 | 3.9 0.25pF |
| C203 | 2111031A07 | 3.3 0.25pF |
| C204 | 2111031A01 | 1.0 0.25pF |
| C205 | 2111031A13 | 8.2 0.25pF |
| C206 | 2111031A11 | 6.8 0.25pF |
| C207 | 2111031A10 | 5.6 0.25pF |
| C208 | 2111031A11 | 6.8 0.25pF |
| C209- | | |
| C211 | 2111031A35 | 68 |
| C212 | 2111031A07 | 3.3 0.25pF |
| C214 | 2111031A35 | 68 |
| C215 | 2111031A35 | 68 |
| C216 | 2111031A11 | 6.8 0.25pF |
| C217- | | |
| C219 | 2111031A35 | 68 |
| C221 | 2002473M01 | 2.5-10 variable |
| C222 | 2111031A10 | 5.6 0.25pF |
| C223 | 2111031A03 | 1.5 0.25pF |
| C224 | 2111031A05 | 2.2 0.25pF |
| C225 | 2111031A01 | 1.0 0.25pF |
| C226 | 2111031A09 | 4.7 0.25pF |
| C227 | 2111031A01 | 1.0 0.25pF |
| C228 | 2111031A17 | 12 |
| C229 | 2111031A09 | 4.7 0.25pF |
| C230 | 2111031A10 | 5.6 0.25pF |
| C231 | 2111031A08 | 3.9 0.25pF |
| C232 | 2111031A35 | 68 |
| C233 | 2111031A35 | 68 |
| C234 | 2111031A01 | 1.0 0.25pF |
| C235 | 2111031A03 | 1.5 0.25pF |
| C236- | | |
| C238 | 2111031A35 | 68 |
| C239 | 2111031A08 | 3.9 0.25pF |
| C240 | 2111032A21 | 0.01uF 10% |
| C241 | 2111031A35 | 68 |
| C242 | 2111031A35 | 68 |
| C243 | 2111032A27 | 0.033uF 10% |
| C244 | 2111031A35 | 68 |
| C245 | 2111031A35 | 68 |
| C246 | 2111031A35 | 68 |
| C247 | 2111031A05 | 2.2 0.25pF |
| C248 | 2384538G31 | 0.56uF 10% 35V |
| C249 | 2111032A09 | 0.001uF 10% |
| C250 | 2111031A35 | 68 |
| C251 | 2111032A21 | 0.01uF 10% |
| C252 | 2311048B19 | 47uF 20% 16V |
| C253 | 2311048B19 | 47uF 20% 16V |
| C254 | 2111032A21 | 0.1uF 10% |
| C255 | 2111031A05 | 2.2 0.25pF |
| C256 | 2111031A01 | 1.0 0.25pF |
| C257 | 2111031A28 | 36 |
| C258 | 2111031A01 | 1.0 0.25pF |
| C301 | 2311048B05 | 1uF 20% |
| C302 | 0811051A17 | 0.47uF 63V |
| C303- | | |
| C312 | 2111031A21 | 18 |
| C313 | 2111031A35 | 68 |

CHANNEL ELEMENT:
 Reference oscillator (14.4MHz)

CE151 KKN1123A

DIODE: (SEE NOTE)

| | | |
|-------|------------|------------------|
| CR 51 | 4883654H01 | Silicon |
| CR 52 | 4883654H01 | Silicon |
| CR101 | 4883654H01 | Silicon |
| CR102 | 4883654H01 | Silicon |
| CR201 | 4802081B35 | Silicon varactor |
| CR202 | 4802081B35 | Silicon varactor |
| CR203 | 4884616A01 | Hot carrier |
| CR204 | 4802081B35 | Silicon varactor |
| CR205 | 4802081B35 | Silicon varactor |
| CR206 | 4802081B35 | Silicon varactor |
| CR207 | 4884616A01 | Hot carrier |

HELICAL FILTER:

| | | |
|-----|------------|--------|
| FL1 | 9180081J04 | 2-cell |
| FL2 | 9180081J05 | 3-cell |
| FL3 | 9180081J06 | 3-cell |

CERAMIC FILTER:

| | | |
|------|------------|-----------------|
| FL51 | 9180097D04 | 455 kHz, 6-pole |
| FL52 | 9180098D04 | 455 kHz, 4-pole |

CONNECTOR RECEPTACLE:
 J 1 0980168K01 Coaxial
 J 2 0980168K01 Coaxial
 J 3 0980179H01 11-pin socket

COIL:
 L 1 2411030B05 2.5 turns (green)
 L 2 2411030B08 4.5 turns (brown)
 L 3 2482723H28 0.29uH (yellow)
 L 4 2411030B02 1.5 turns (red)
 L 5 2482723H28 0.29uH (yellow)
 L 51 2480299D01 17.75 turns (orange)
 L 52 2482835G03 2.6uH (red-blue-gold)
 L 53 2482835G03 2.6uH (red-blue-gold)
 L 54 2480000E01 quad detector, with capacitor
 L 55 2482723H35 23uH (red)
 L101 2411030B08 4.5 turns (brown)
 L102 2482723H28 0.29uH (yellow)
 L152 2482723H37 6.2uH (blue)
 L201 2480117K03 Coil
 L202 2411030B11 6.5 turns (orange)
 L203 2482723H28 0.29uH (yellow)
 L204 2482723H28 0.29uH (yellow)
 L205 2482723H28 0.29uH (yellow)
 L206 2482723H28 0.29uH (yellow)
 L207 2411030B05 2.5 turns (green)
 L208 2411030B08 4.5 turns (brown)
 L209 2482723H28 0.29uH (yellow)
 L210 2480117K02 Coil
 L211 2411030B12 7.5 turns (yellow)
 L212-
 L215 2482723H28 0.29uH (yellow)
 L216 2411030B05 2.5 turns
 L217 2482723H28 0.29uH (yellow)
 L218 2411030B08 4.5 turns (brown)

TRANSISTOR: (SEE NOTE)
 Q 1 4800869990 M9990
 Q 2 4811043B12 FET M3B12 (alt: M9839)
 Q 51 4811043B12 FET M3B12 (alt: M9839)
 Q 52 4811043B03 M3B03 (alt: M9571)
 Q 53 4802081B30 M1B30 (alt: M1B10)
 Q 54 4802081B30 M1B30 (alt: M1B10)
 Q101 4802081B31 M1B31 (alt: M1B11)
 Q102 4800869987 M9987
 Q103 4800869987 M9987
 Q104 4802081B31 M1B31 (alt: M1B11)
 Q105 4802081B30 M1B30 (alt: M1B10)
 Q107 4811043B19 M3B19 (alt: M9658)
 Q201 4811043B12 FET M3B12 (alt: M9839)
 Q202 4802081B31 M1B31 (alt: M1B11)
 Q203 4811043B19 M3B19 (alt: M9658)
 Q204 4800869990 M9990
 Q205 4884939C36 FET M9C36
 Q206 4802081B31 M1B31 (alt: M1B11)
 Q207 4811043B19 M3B19 (alt: M9658)
 Q208 4811043B16 M3B16 (alt: M9932)
 Q209 4802081B30 M1B30 (alt: M1B10)
 Q251 4802081B30 M1B30 (alt: M1B10)

RESISTOR, fixed: 5% 1/8W
 R 1 0611024A47 820
 R 2 0611024A63 3.9k
 R 3 0611024A19 56
 R 4 0611024A27 120
 R 5 0611024A19 56
 R 6 0611024A27 120
 R 7 0611024A43 560
 R 8 0611024A93 68k
 R 51 0611024A55 1.8k
 R 53 0611024A29 150
 R 54 0611024A41 470
 R 55 0611024A49 1k
 R 56 0611024B20 820k
 R 57 0611024B06 220k
 R 58 0611024B02 150k
 R 59 1805500L08 22k variable
 R 60 0611024A93 68k
 R 61 0611024A95 82k
 R 62 0611024A65 4.7k
 R 63 0611024A71 8.2k
 R 64 0611024A71 8.2k
 R 65 0611024A71 8.2k
 R 66 0611024A65 4.7k

R101 0602438B15 150 0.5W
 R102 0611024A25 100
 R103 0611024A73 10k
 R104 0611024A24 100
 R105 0611024A73 10k
 R106 0611024A01 10
 R107 0611024A77 15k
 R108 0611024A25 100
 R109 0611024A29 150
 R110 0611024A39 390
 R111 0611024A29 150
 R112 0611024A53 1.5k
 R113 0611024A67 5.6k
 R116 0611024A53 1.5k
 R117 0611024A59 2.7k
 R118 0611024A73 10k
 R119 0611024A77 15k
 R120 0611024A33 220
 R121 0611024A19 56
 R122 0611024A59 2.7k
 R123 0611024A25 100
 R124 0611024A49 1k
 R125 0611024A53 1.5k
 R126 0611024A63 3.9k
 R127 0611024A47 820
 R163 1805500L08 22k variable 20%
 R164 0611024A81 22k
 R201 0611024A19 56
 R202 0611024A25 100
 R203 0611024A73 10k
 R204 0611024A21 68
 R205 0611024A61 3.3k
 R206 0611024A77 15k
 R207 0611024A73 10k
 R208 0611024A79 18k
 R209 0611024A73 10k
 R210 0611024A57 2.2k
 R211 0611024A35 270
 R212 0611024A43 560
 R213 0611024A01 10
 R214 0611024A21 68
 R215 0611024A35 270
 R216 0611024A21 68
 R217 0611024A01 10
 R219 0611024A35 270
 R220 0611024A07 18
 R221 0611024A35 270
 R222 0611024A97 100k
 R223 0611024A73 10k
 R224 0611024A73 10k
 R225 0611024A19 56
 R226 0611024A77 15k
 R227 0611024A73 10k
 R228 0611024A21 68
 R229 0611024A65 4.7k
 R230 0611024A57 2.2k
 R231 0611024A35 270
 R232 0611024A43 560
 R233 0611024A21 68
 R234 0611024A35 270
 R235 0611024A21 68
 R239 0611024B23 Jumper
 R241 0611024A49 1k
 R242 0611024A15 39
 R243 0611024A15 39
 R251 0611024A35 270k
 R252 0611024A01 10
 R301 0611024A85 33k
 R302 1805500L08 22k variable
 R303 0611024A45 680
 R304 0611024A01 10
 R305 1805500L08 22k variable
 R306 0611024A01 10
 R307 0611024A55 1.8k
 R308-
 R310 0611024A65 4.7k

INTEGRATED CIRCUIT: (SEE NOTE)
 U 51 5105479G05 Nucleus
 U101 5183548N19 Divider
 U102 5183977M45 Prescaler

ZENER DIODE: (SEE NOTE)
 VR101 4882256C15 5.1V 5%

Y 51 9180082J01 CRYSTAL: (SEE NOTE)
 4805488G03 Filter (matched pair, Y51A/B)
 or 4805488G04 20.945MHz | Replace with part as
 21.855MHz | originally supplied

NON-REFERENCED ITEMS:
 2680138J01 Shield
 2680182H01 RF shield
 2680153J01 Coil shield, 3 used
 2680210K01 Coil shield

GLE6153A RF Board, 12.5kHz (403-433MHz) 2 ppm

| SYMBOL | PART NO. | DESCRIPTION |
|---|------------|-----------------|
| <u>CAPACITOR, fixed: pF 5% 50V</u> unless otherwise stated | | |
| C 1 | 2111031A13 | 8.2 0.25pF |
| C 2 | 2111031A35 | 68 |
| C 3 | 2111031A35 | 68 |
| C 5 | 2111031A35 | 68 |
| C 8 | 2111032A09 | 0.001uF 10% |
| C 9 | 2111031A08 | 3.9 0.25pF |
| C 10 | 2111032A21 | 0.01uF 10% |
| C 12 | 2111032A09 | 0.001uF 10% |
| C 51 | 2111031A31 | 47 |
| C 52 | 2111031A13 | 8.2 0.25pF |
| C 54 | 2111031A19 | 15 |
| C 56 | 2111031A15 | 10 |
| C 57 | 2111031A21 | 0.01uF 10% |
| C 58 | 2111031A21 | 0.01uF 10% |
| C 59 | 2384538G05 | 0.1uF 20% 15V |
| C 60 | 2111031A31 | 47 |
| C 61 | 2111031A23 | 22 |
| C 62 | 2111031A31 | 47 |
| C 63 | 2111031A59 | 680 |
| C 64 | 2111031A15 | 10 |
| C 65 | 2111032B15 | 0.22uF +80-20% |
| C 66 | 2111032A21 | 0.01uF 10% |
| C 67 | 2111032B15 | 0.22uF +80-20% |
| C 68 | 2111032B15 | 0.22uF +80-20% |
| C 69 | 2384538G05 | 10uF 20% 15V |
| C 70 | 2311048B13 | 10uF 20% 16V |
| C 71 | 2311048B06 | 2.2uF 20% |
| C 72- | | |
| C 74 | 2111032B15 | 0.22uF +80-20% |
| C 75 | 2111032A13 | 0.0022uF 10% |
| C 76 | 2111032B15 | 0.22uF +80-20% |
| C 77 | 2111032B15 | 0.22uF +80-20% |
| C 78 | 2111032A13 | 0.0022uF 10% |
| C 79 | 2111032B15 | 0.22uF +80-20% |
| C 80 | 2311048B13 | 10uF 20% 16V |
| C 81 | 0811051A05 | 0.0047uF 63V |
| C 82 | 0811044A34 | 0.018uF 63V |
| C 83 | 0811051A01 | 0.001uF 63V |
| C101 | 2311048B13 | 10uF 20% 16V |
| C102 | 0811051A13 | 0.1uF 63V |
| C103 | 2111032A21 | 0.01uF 10% |
| C104 | 2311048B13 | 10uF 20% 16V |
| C105 | 2111032A21 | 0.01uF 10% |
| C106 | 2111031A19 | 15 |
| C108 | 2111032B13 | 0.1uF +80-20% |
| C109 | 0811051A13 | 0.1uF 63V |
| C110 | 2111032B13 | 0.1uF +80-20% |
| C111 | 2302057B02 | 1uF 20% 35V |
| C112 | 0811051A07 | 0.1uF 63V |
| C113 | 2111032A18 | 0.0056uF 10 |
| C114 | 2111031A35 | 68 |
| C115 | 2111032A21 | 0.01uF 10% 50V |
| C116 | 2311048B13 | 10uF 20% 16V |
| C117- | | |
| C119 | 2111031A35 | 68 |
| C120 | 2111031A39 | 100 |
| C121 | 2111031A10 | 5.6 0.25pF |
| C122- | | |
| C125 | 2111031A35 | 68 |
| C126 | 2111032A21 | 0.01uF 10% |
| C127 | 2111032A21 | 0.01uF 10% |
| C159 | 2111031A23 | 22 |
| C160 | 2111031A19 | 15 |
| C162 | 2111032A09 | 0.001uF 10% |
| C163 | 2111032A21 | 0.01uF 10% |
| C201 | 2002473MD1 | 2.5-10 variable |

| | | |
|-------|------------|-----------------|
| C202 | 2111031A08 | 3.9 0.24pF |
| C203 | 2111031A07 | 3.3 0.25pF |
| C204 | 2111031A01 | 1.0 0.25pF |
| C205 | 2111031A13 | 8.2 0.25pF |
| C206 | 2111031A11 | 6.8 0.25pF |
| C207 | 2111031A10 | 5.6 0.25pF |
| C208 | 2111031A11 | 6.8 0.25pF |
| C209- | | |
| C211 | 2111031A35 | 68 |
| C212 | 2111031A07 | 3.3 0.25pF |
| C214 | 2111031A35 | 68 |
| C215 | 2111031A35 | 68 |
| C216 | 2111031A11 | 6.8 0.25pF |
| C217- | | |
| C219 | 2111031A35 | 68 |
| C221 | 2002473MD1 | 2.5-10 variable |
| C222 | 2111031A05 | 2.2 0.25pF |
| C223 | 2111031A03 | 1.5 0.25pF |
| C224 | 2111031A05 | 1.5 0.25pF |
| C225 | 2111031A01 | 1.0 0.25pF |
| C226 | 2111031A09 | 4.7 0.25pF |
| C227 | 2111031A01 | 1.0 0.25pF |
| C228 | 2111031A17 | 12 |
| C229 | 2111031A10 | 5.6 0.25pF |
| C230 | 2111031A11 | 6.8 0.25pF |
| C231 | 2111031A10 | 5.6 0.25pF |
| C232 | 2111031A35 | 68 |
| C233 | 2111031A35 | 68 |
| C234 | 2111031A03 | 1.5 0.25pF |
| C236- | | |
| C238 | 2111031A35 | 68 |
| C239 | 2111031A10 | 5.6 0.25pF |
| C240 | 2111032A21 | 0.01uF 10% |
| C241 | 2111031A35 | 68 |
| C242 | 2111031A35 | 68 |
| C243 | 2111032A27 | 0.033uF 10% |
| C244- | | |
| C246 | 2111031A35 | 68 |
| C247 | 2111031A05 | 2.2 0.25pF |
| C248 | 2384538G31 | 0.56uF 10% 35V |
| C249 | 2111032A09 | 0.001uF 10% |
| C250 | 2111031A35 | 68 |
| C251 | 2111032A21 | 0.01uF 10% |
| C252 | 2311048B19 | 47uF 20% 16V |
| C253 | 2311048B19 | 47uF 20% 16V |
| C254 | 2111032A21 | 0.1uF 10% |
| C255 | 2111031A05 | 2.2 0.25pF |
| C256 | 2111031A01 | 1.0 0.25pF |
| C257 | 2111031A28 | 36 |
| C258 | 2111031A01 | 1.0 0.25pF |
| C301 | 2311048B05 | 1uF 20% |
| C302 | 0811051A17 | 0.47uF 63V |
| C303- | | |
| C312 | 2111031A21 | 18 |
| C313 | 2111031A35 | 68 |

CE151 KKN1123A CHANNEL ELEMENT:
Reference oscillator (14.4MHz)

| | | <u>DIODE: (SEE NOTE)</u> |
|-------|------------|--------------------------|
| CR 51 | 4883654H01 | Silicon |
| CR 52 | 4883654H01 | Silicon |
| CR101 | 4883654H01 | Silicon |
| CR102 | 4883654H01 | Silicon |
| CR201 | 4802081B35 | Silicon varactor |
| CR202 | 4802081B35 | Silicon varactor |
| CR203 | 4884616A01 | Hot carrier |
| CR204 | 4802081B35 | Silicon varactor |
| CR205 | 4802081B35 | Silicon varactor |
| CR206 | 4802081B35 | Silicon varactor |
| CR207 | 4884616A01 | Hot carrier |

| | | <u>HELICAL FILTER:</u> |
|-----|------------|------------------------|
| FL1 | 9180081J04 | 2-cell |
| FL2 | 9180081J05 | 3-cell |
| FL3 | 9180081J06 | 3-cell |

| | | <u>CERAMIC FILTER:</u> |
|------|------------|------------------------|
| FL51 | 9180097D04 | 455 kHz 6-pole |
| FL52 | 9180098D04 | 455 kHz 4-pole |

| | | <u>CONNECTOR:</u> |
|-------|------------|-------------------|
| J1,J2 | 0980168K01 | Coaxial |
| J 3 | 0980179H01 | 11-pin socket |

COIL:

| | | |
|----------|------------|-------------------------------|
| L 1 | 2411030B05 | 2.5 turns (green) |
| L 2 | 2411030B08 | 4.5 turns (brown) |
| L 3 | 2482723H28 | 0.29uH (yellow) |
| L 4 | 2411030B02 | 1.5 turns (red) |
| L 5 | 2482723H28 | 0.29uH (yellow) |
| L 51 | 2480299D01 | 17.75 turns (orange) |
| L52, L53 | 2482835G03 | 2.6uH (red-blue-gold) |
| L 54 | 2480000E01 | Quad detector, with capacitor |
| L 55 | 2482723H35 | 23uH (red) |
| L101 | 2411030B08 | 4.5 turns (brown) |
| L102 | 2482723H28 | 0.29uH (yellow) |
| L152 | 2482723H37 | 6.2uH (blue) |
| L201 | 2480117K03 | Coil |
| L202 | 2411030B11 | 6.5 turns (orange) |
| L203- | | |
| L206 | 2482723H28 | 0.29uH (yellow) |
| L207 | 2411030B05 | 2.5 turns (green) |
| L208 | 2411030B08 | 4.5 turns (brown) |
| L209 | 2482723H28 | 0.29uH (yellow) |
| L210 | 2480117K03 | Coil |
| L211 | 2411030B12 | 7.5 turns (yellow) |
| L212- | | |
| L215 | 2482723H28 | 0.29uH (yellow) |
| L216 | 2411030B06 | 2.5 turns |
| L217 | 2482723H28 | 0.29uH (yellow) |
| L218 | 2411030B08 | 4.5 turns (brown) |

TRANSISTOR: (SEE NOTE)

| | | |
|------|------------|------------------------|
| Q 1 | 4800869990 | M9990 |
| Q 2 | 4811043B12 | FET M3B12 (alt: M9839) |
| Q 51 | 4811043B12 | FET M3B12 (alt: M9839) |
| Q 52 | 4811043B03 | M3B03 (alt: M9571) |
| Q 53 | 4802081B30 | M1B30 (alt: M1B10) |
| Q 54 | 4802081B30 | M1B30 (alt: M1B10) |
| Q101 | 4802081B31 | M1B31 (alt: M1B11) |
| Q102 | 4800869987 | M9987 |
| Q103 | 4800869987 | M9987 |
| Q104 | 4802081B31 | M1B31 (alt: M1B11) |
| Q105 | 4802081B30 | M1B30 (alt: M1B10) |
| Q107 | 4811043B19 | M3B19 (alt: M9658) |
| Q201 | 4811043B12 | FET M3B12 (alt: M9839) |
| Q202 | 4802081B31 | M1B31 (alt: M1B11) |
| Q203 | 4811043B19 | M3B19 (alt: M9658) |
| Q204 | 4800869990 | M9990 |
| Q205 | 4884939C36 | FET M9C36 |
| Q206 | 4802081B31 | M1B31 (alt: M1B11) |
| Q207 | 4811043B19 | M3B19 (alt: M9658) |
| Q208 | 4811043B16 | M3B16 (alt: M9932) |
| Q209 | 4802081B30 | M1B30 (alt: M1B10) |
| Q251 | 4802081B30 | M1B30 (alt: M1B10) |

RESISTOR, fixed: 5% 1/8W
unless otherwise stated

| | | |
|------|------------|--------------|
| R 1 | 0611024A47 | 820 |
| R 2 | 0611024A63 | 3.9k |
| R 3 | 0611024A19 | 56 |
| R 4 | 0611024A27 | 120 |
| R 5 | 0611024A19 | 56 |
| R 6 | 0611024A27 | 120 |
| R 7 | 0611024A43 | 560 |
| R 8 | 0611024A93 | 68k |
| R 51 | 0611024A55 | 1.8k |
| R 53 | 0611024A29 | 150 |
| R 54 | 0611024A41 | 470 |
| R 55 | 0611024A49 | 1k |
| R 56 | 0611024B20 | 820k |
| R 57 | 0611024B06 | 220k |
| R 58 | 0611024B02 | 150k |
| R 59 | 1805500L08 | 22k variable |
| R 60 | 0611024A93 | 68k |
| R 61 | 0611024A95 | 82k |
| R 62 | 0611024A43 | 560 |
| R 63 | 0611024A71 | 8.2k |
| R 64 | 0611024A71 | 8.2k |
| R 65 | 0611024A71 | 8.2k |
| R 66 | 0611024A65 | 4.7k |
| R101 | 0602438B15 | 150 0.5W |
| R102 | 0611024A25 | 100 |
| R103 | 0611024A73 | 10k |
| R104 | 0611024A24 | 100 |
| R105 | 0611024A73 | 10k |
| R106 | 0611024A01 | 10 |
| R107 | 0611024A77 | 15k |

| | | |
|-------|------------|------------------|
| R108 | 0611024A25 | 100 |
| R109 | 0611024A29 | 150 |
| R110 | 0611024A39 | 390 |
| R111 | 0611024A29 | 150 |
| R112 | 0611024A53 | 1.5k |
| R113 | 0611024A67 | 5.6k |
| R116 | 0611024A53 | 1.5k |
| R117 | 0611024A59 | 2.7k |
| R118 | 0611024A73 | 10k |
| R119 | 0611024A77 | 15k |
| R120 | 0611024A33 | 220 |
| R121 | 0611024A19 | 56 |
| R122 | 0611024A59 | 2.7k |
| R123 | 0611024A25 | 100 |
| R124 | 0611024A49 | 1k |
| R125 | 0611024A53 | 1.5k |
| R126 | 0611024A63 | 3.9k |
| R127 | 0611024A47 | 820 |
| R163 | 1805500L08 | 22k variable 20% |
| R164 | 0611024A81 | 22k |
| R201 | 0611024A19 | 56 |
| R202 | 0611024A25 | 100 |
| R203 | 0611024A73 | 10k |
| R204 | 0611024A21 | 68 |
| R205 | 0611024A61 | 3.3k |
| R206 | 0611024A77 | 15k |
| R207 | 0611024A73 | 10k |
| R208 | 0611024A79 | 18k |
| R209 | 0611024A73 | 10k |
| R210 | 0611024A57 | 2.2k |
| R211 | 0611024A35 | 270 |
| R212 | 0611024A43 | 560 |
| R213 | 0611024A01 | 10 |
| R214 | 0611024A21 | 68 |
| R215 | 0611024A35 | 270 |
| R216 | 0611024A21 | 68 |
| R217 | 0611024A01 | 10 |
| R219 | 0611024A35 | 270 |
| R220 | 0611024A07 | 18 |
| R221 | 0611024A35 | 270 |
| R222 | 0611024A97 | 100k |
| R223 | 0611024A73 | 10k |
| R224 | 0611024A73 | 10k |
| R225 | 0611024A19 | 56 |
| R226 | 0611024A77 | 15k |
| R227 | 0611024A73 | 10k |
| R228 | 0611024A21 | 68 |
| R229 | 0611024A65 | 4.7k |
| R230 | 0611024A57 | 2.2k |
| R231 | 0611024A35 | 270 |
| R232 | 0611024A43 | 560 |
| R233 | 0611024A21 | 68 |
| R234 | 0611024A35 | 270 |
| R235 | 0611024A21 | 68 |
| R238 | 0611024A35 | 270 |
| R239 | 0611024A07 | 18 |
| R240 | 0611024A35 | 270 |
| R241 | 0611024A49 | 1k |
| R242 | 0611024A15 | 39 |
| R243 | 0611024A15 | 39 |
| R251 | 0611024A35 | 270k |
| R252 | 0611024A01 | 10 |
| R301 | 0611024A81 | 22k |
| R302 | 1805500L08 | 22k variable |
| R303 | 0611024A35 | 270 |
| R304 | 0611024A01 | 10 |
| R305 | 1805500L08 | 22k variable |
| R306 | 0611024A01 | 10 |
| R307 | 0611024A57 | 2.2k |
| R308- | | |
| R310 | 0611024A65 | 4.7k |

INTEGRATED CIRCUIT: (SEE NOTE)

| | | |
|------|------------|-----------|
| U 51 | 5105479G05 | Nucleus |
| U101 | 5183548N19 | Divider |
| U102 | 5183977M45 | Prescaler |

ZENER DIODE: (SEE NOTE)

| | | |
|-------|------------|---------|
| VR101 | 4882256C15 | 5.1V 5% |
|-------|------------|---------|

CRYSTAL: (SEE NOTE)

| | | |
|------|------------|----------------------------------|
| Y 51 | 9180082J02 | Filter (matched pair, Y51A/B) |
| Y 52 | 4805488G03 | 20.945MHz Replace with part as |
| or | 4805488G04 | 21.855MHz originally supplied |

2680138J01 Shield
 2680182H01 RF shield
 2680153J01 Coil shield, 3 used
 2680210K01 Coil shield

NON-REFERENCED ITEMS:

GLE6154A RF Board, 12.5kHz (438-470MHz) 2 ppm

SYMBOL PART NO. DESCRIPTION

CAPACITOR, fixed: pF 5% 50V
 unless otherwise stated

| | | |
|-------|------------|-----------------|
| C 1 | 2111031A11 | 6.8 0.25pF |
| C 2 | 2111031A35 | 68 |
| C 3 | 2111031A35 | 68 |
| C 5 | 2111031A35 | 68 |
| C 7 | 2111031A09 | 4.7 0.25pF |
| C 8 | 2111031A15 | 10 |
| C 9 | 2111031A08 | 3.9 0.25pF |
| C 10 | 2111032A21 | 0.01uF 10% |
| C 12 | 2111032A09 | 0.001uF 10% |
| C 51 | 2111031A31 | 47 |
| C 52 | 2111031A13 | 8.2 0.25pF |
| C 54 | 2111031A19 | 15 |
| C 56 | 2111031A15 | 10 |
| C 57 | 2111031A21 | 0.01uF 10% |
| C 58 | 2111031A21 | 0.01uF 10% |
| C 59 | 2384538G05 | 0.1uF 20% 15V |
| C 60 | 2111031A31 | 47 |
| C 61 | 2111031A23 | 22 |
| C 62 | 2111031A31 | 47 |
| C 63 | 2111031A59 | 680 |
| C 64 | 2111031A15 | 10 |
| C 65 | 2111032B15 | 0.22uF +80-20% |
| C 66 | 2111032A21 | 0.01uF 10% |
| C 67 | 2111032B15 | 0.22uF +80-20% |
| C 68 | 2111032B15 | 0.22uF +80-20% |
| C 69 | 2384538G05 | 10uF 20% 15V |
| C 70 | 2311048B13 | 10uF 20% 16V |
| C 71 | 2311048B06 | 2.2uF 20% |
| C 72- | | |
| C 74 | 2111032B15 | 0.22uF +80-20% |
| C 75 | 2111032A13 | 0.0022uF 10% |
| C 76 | 2111032B15 | 0.22uF +80-20% |
| C 77 | 2111032B15 | 0.22uF +80-20% |
| C 78 | 2111032A13 | 0.0022uF 10% |
| C 79 | 2111032B15 | 0.22uF +80-20% |
| C 80 | 2311048B13 | 10uF 20% 16V |
| C 81 | 0811051A05 | 0.0047uF 63V |
| C 82 | 0811044A34 | 0.018uF 63V |
| C 83 | 0811051A01 | 0.001uF 63V |
| C101 | 2311048B13 | 10uF 20% 16V |
| C102 | 0811051A13 | 0.1uF 63V |
| C103 | 2111032A21 | 0.01uF 10% |
| C104 | 2311048B13 | 10uF 20% 16V |
| C105 | 2111032A21 | 0.01uF 10% |
| C106 | 2111031A19 | 15 |
| C108 | 2111032B13 | 0.1uF +80-20% |
| C109 | 0811051A13 | 0.1uF 63V |
| C110 | 2111032B13 | 0.1uF +80-20% |
| C111 | 2302057B02 | 1uF 20% 35V |
| C112 | 0811051A07 | 0.1uF 63V |
| C113 | 2111032A18 | 0.0056uF 10 |
| C114 | 2111031A35 | 68 |
| C115 | 2111032A21 | 0.01uF 10% 50V |
| C116 | 2311048B13 | 10uF 20% 16V |
| C117- | | |
| C119 | 2111031A35 | 68 |
| C120 | 2111031A39 | 100 |
| C121 | 2111031A10 | 5.6 0.25pF |
| C122- | | |
| C125 | 2111031A35 | 68 |
| C126 | 2111032A21 | 0.01uF 10% |
| C127 | 2111032A21 | 0.01uF 10% |
| C159 | 2111031A23 | 22 |
| C160 | 2111031A19 | 15 |
| C162 | 2111032A09 | 0.001uF 10% |
| C163 | 2111032A21 | 0.01uF 10% |
| C201 | 2002473M01 | 2.5-10 variable |
| C202 | 2111031A13 | 8.2 0.25pF |
| C203 | 2111031A07 | 3.3 0.25pF |
| C204 | 2111031A01 | 1.0 0.25pF |
| C205 | 2111031A15 | 10 |

| | | |
|-------|------------|-----------------|
| C206 | 2111031A11 | 6.8 0.25pF |
| C207 | 2111031A10 | 5.6 0.25pF |
| C208 | 2111031A07 | 3.3 0.25pF |
| C209- | | |
| C211 | 2111031A35 | 68 |
| C212 | 2111031A01 | 1.0 0.25pF |
| C213 | 2111031A01 | 1.0 0.25pF |
| C214 | 2111031A35 | 68 |
| C215 | 2111031A35 | 68 |
| C216 | 2111031A11 | 6.8 0.25pF |
| C217- | | |
| C219 | 2111031A35 | 68 |
| C221 | 2002473M01 | 2.5-10 variable |
| C222 | 2111031A10 | 5.6 0.25pF |
| C223 | 2111031A03 | 1.5 0.25pF |
| C224 | 2111031A05 | 2.2 0.25pF |
| C225 | 2111031A01 | 1.0 0.25pF |
| C226 | 2111031A09 | 4.7 0.25pF |
| C227 | 2111031A01 | 1.0 0.25pF |
| C228 | 2111031A17 | 12 |
| C229 | 2111031A09 | 4.7 0.25pF |
| C230 | 2111031A10 | 5.6 0.25pF |
| C231 | 2111031A08 | 3.9 0.25pF |
| C232 | 2111031A35 | 68 |
| C233 | 2111031A35 | 68 |
| C234 | 2111031A01 | 1.0 0.25pF |
| C235 | 2111031A03 | 1.5 0.25pF |
| C236- | | |
| C238 | 2111031A35 | 68 |
| C239 | 2111031A08 | 3.9 0.25pF |
| C240 | 2111032A21 | 0.01uF 10% |
| C241 | 2111031A35 | 68 |
| C242 | 2111031A35 | 68 |
| C243 | 2111032A27 | 0.033uF 10% |
| C244 | 2111031A35 | 68 |
| C245 | 2111031A35 | 68 |
| C246 | 2111031A35 | 68 |
| C247 | 2111031A05 | 2.2 0.25pF |
| C248 | 2384538G31 | 0.56uF 10% 35V |
| C249 | 2111032A09 | 0.001uF 10% |
| C250 | 2111031A35 | 68 |
| C251 | 2111032A21 | 0.01uF 10% |
| C252 | 2311048B19 | 47uF 20% 16V |
| C253 | 2311048B19 | 47uF 20% 16V |
| C254 | 2111032A21 | 0.1uF 10% |
| C255 | 2111031A05 | 2.2 0.25pF |
| C256 | 2111031A01 | 1.0 0.25pF |
| C257 | 2111031A28 | 36 |
| C258 | 2111031A01 | 1.0 0.25pF |
| C301 | 2311048B05 | 1uF 20% |
| C302 | 0811051A17 | 0.47uF 63V |
| C303- | | |
| C312 | 2111031A21 | 18 |
| C313 | 2111031A35 | 68 |

CHANNEL ELEMENT:
 Reference oscillator (14.4MHz)

CE151

KXN1123A

HELICAL FILTER:

| | | |
|-----|------------|--------|
| FL1 | 9180081J01 | 2-cell |
| FL2 | 9180081J02 | 3-cell |
| FL3 | 9180081J03 | 3-cell |

DIODE: (SEE NOTE)

| | | |
|-------|------------|------------------|
| CR 51 | 4883654H01 | Silicon |
| CR 52 | 4883654H01 | Silicon |
| CR101 | 4883654H01 | Silicon |
| CR102 | 4883654H01 | Silicon |
| CR201 | 4802081B35 | Silicon varactor |
| CR202 | 4802081B35 | Silicon varactor |
| CR203 | 4884616A01 | Hot carrier |
| CR204 | 4802081B35 | Silicon varactor |
| CR205 | 4802081B35 | Silicon varactor |
| CR206 | 4802081B35 | Silicon varactor |
| CR207 | 4884616A01 | Hot carrier |

CERAMIC FILTER:

| | | |
|------|------------|-----------------|
| FL51 | 9180097D04 | 455 kHz, 6-pole |
| FL52 | 9180098D04 | 455 kHz, 4-pole |

CONNECTOR:

| | | |
|-----|------------|---------------|
| J 1 | 0980168K01 | Coaxial |
| J 2 | 0980168K01 | Coaxial |
| J 3 | 0980179H01 | 11-pin socket |

| <u>COIL:</u> | |
|--------------|--|
| L 1 | 2411030B05 2.5 turns (green) |
| L 2 | 2411030B07 3.5 turns (white) |
| L 3 | 2482723H28 0.29uH (yellow) |
| L 4 | 2411030B01 1.5 turns (brown) |
| L 5 | 2482723H28 0.29uH (yellow) |
| L 51 | 2480299D01 17.75 turns (orange) |
| L 52 | 2482835G03 2.6uH (red-blue-gold) |
| L 53 | 2482835G03 2.6uH (red-blue-gold) |
| L 54 | 2480000E01 Quad detector, with capacitor |
| L 55 | 2482723H35 23uH (red) |
| L101 | 2411030B08 4.5 turns (brown) |
| L102 | 2482723H28 0.29uH (yellow) |
| L152 | 2482723H37 6.2uH (blue) |
| L201 | 2480117K02 Coil |
| L202 | 2411030B10 5.5 turns (red) |
| L203- | |
| L206 | 2482723H28 0.29uH (yellow) |
| L207 | 2411030B05 2.5 turns (green) |
| L208 | 2411030B08 4.5 turns (brown) |
| L209 | 2482723H28 0.29uH (yellow) |
| L210 | 2480117K02 Coil |
| L211 | 2411030B12 7.5 turns (yellow) |
| L212- | |
| L215 | 2482723H28 0.29uH (yellow) |
| L216 | 2411030B05 2.5 turns |
| L217 | 2482723H28 0.29uH (yellow) |
| L218 | 2411030B08 4.5 turns (brown) |

| <u>TRANSISTOR: (SEE NOTE)</u> | |
|-------------------------------|-----------------------------------|
| Q 1 | 4800869990 M9990 |
| Q 2 | 4811043B12 FET M3B12 (alt: M9839) |
| Q 51 | 4811043B12 FET M3B12 (alt: M9839) |
| Q 52 | 4811043B03 M3B03 (alt: M9571) |
| Q 53 | 4802081B30 M1B30 (alt: M1B10) |
| Q 54 | 4802081B30 M1B30 (alt: M1B10) |
| Q101 | 4802081B31 M1B31 (alt: M1B11) |
| Q102 | 4800869987 M9987 |
| Q103 | 4800869987 M9987 |
| Q104 | 4802081B31 M1B31 (alt: M1B11) |
| Q105 | 4802081B30 M1B30 (alt: M1B10) |
| Q107 | 4811043B19 M3B19 (alt: M9658) |
| Q201 | 4811043B12 FET M3B12 (alt: M9839) |
| Q202 | 4802081B31 M1B31 (alt: M1B11) |
| Q203 | 4811043B19 M3B19 (alt: M9658) |
| Q204 | 4800869990 M9990 |
| Q205 | 4884939C36 FET M9C36 |
| Q206 | 4802081B31 M1B31 (alt: M1B11) |
| Q207 | 4811043B19 M3B19 (alt: M9658) |
| Q208 | 4811043B16 M3B16 (alt: M9932) |
| Q209 | 4802081B30 M1B30 (alt: M1B10) |
| Q251 | 4802081B30 M1B30 (alt: M1B10) |

| <u>RESISTOR, fixed: 5% 1/8W</u> unless otherwise stated | |
|--|-------------------------|
| R 1 | 0611024A47 820 |
| R 2 | 0611024A63 3.9k |
| R 3 | 0611024A19 56 |
| R 4 | 0611024A27 120 |
| R 5 | 0611024A19 56 |
| R 6 | 0611024A27 120 |
| R 7 | 0611024A43 560 |
| R 8 | 0611024A93 68k |
| R 51 | 0611024A55 1.8k |
| R 53 | 0611024A29 150 |
| R 54 | 0611024A41 470 |
| R 55 | 0611024A49 1k |
| R 56 | 0611024B20 820k |
| R 57 | 0611024B06 220k |
| R 58 | 0611024B02 150k |
| R 59 | 1805500L08 22k variable |
| R 60 | 0611024A93 68k |
| R 61 | 0611024A95 82k |
| R 62 | 0611024A43 560 |
| R 63 | 0611024A71 8.2k |
| R 64 | 0611024A71 8.2k |
| R 65 | 0611024A71 8.2k |
| R 66 | 0611024A65 4.7k |
| R101 | 0602438B15 150 0.5W |
| R102 | 0611024A25 100 |
| R103 | 0611024A73 10k |
| R104 | 0611024A24 100 |
| R105 | 0611024A73 10k |
| R106 | 0611024A01 10 |

| | |
|------|-----------------------------|
| R107 | 0611024A77 15k |
| R108 | 0611024A25 100 |
| R109 | 0611024A29 150 |
| R110 | 0611024A39 390 |
| R111 | 0611024A29 150 |
| R112 | 0611024A53 1.5k |
| R113 | 0611024A67 5.6k |
| R116 | 0611024A53 1.5k |
| R117 | 0611024A59 2.7k |
| R118 | 0611024A73 10k |
| R119 | 0611024A77 15k |
| R120 | 0611024A33 220 |
| R121 | 0611024A19 56 |
| R122 | 0611024A59 2.7k |
| R123 | 0611024A25 100 |
| R124 | 0611024A49 1k |
| R125 | 0611024A53 1.5k |
| R126 | 0611024A63 3.9k |
| R127 | 0611024A47 820 |
| R163 | 1805500L08 22k variable 20X |
| R164 | 0611024A81 22k |
| R201 | 0611024A19 56 |
| R202 | 0611024A25 100 |
| R203 | 0611024A73 10k |
| R204 | 0611024A21 68 |
| R205 | 0611024A61 3.3k |
| R206 | 0611024A77 15k |
| R207 | 0611024A73 10k |
| R208 | 0611024A79 18k |
| R209 | 0611024A73 10k |
| R210 | 0611024A57 2.2k |
| R211 | 0611024A35 270 |
| R212 | 0611024A43 560 |
| R213 | 0611024A01 10 |
| R214 | 0611024A21 68 |
| R215 | 0611024A35 270 |
| R216 | 0611024A21 68 |
| R217 | 0611024A01 10 |
| R219 | 0611024A35 270 |
| R220 | 0611024A07 18 |
| R221 | 0611024A35 270 |
| R222 | 0611024A97 100k |
| R223 | 0611024A73 10k |
| R224 | 0611024A73 10k |
| R225 | 0611024A19 56 |
| R226 | 0611024A77 15k |
| R227 | 0611024A73 10k |
| R228 | 0611024A21 68 |
| R229 | 0611024A65 4.7k |
| R230 | 0611024A57 2.2k |
| R231 | 0611024A35 270 |
| R232 | 0611024A43 560 |
| R233 | 0611024A21 68 |
| R234 | 0611024A35 270 |
| R235 | 0611024A21 68 |
| R239 | 0611024B23 Jumper |
| R241 | 0611024A49 1k |
| R242 | 0611024A15 39 |
| R243 | 0611024A15 39 |
| R251 | 0611024A35 270k |
| R252 | 0611024A01 10 |
| R301 | 0611024A89 4.7k |
| R302 | 1805500L08 22k variable |
| R303 | 0611024A41 470 |
| R304 | 0611024A01 10 |
| R305 | 1805500L08 22k variable |
| R306 | 0611024A01 10 |
| R307 | 0611024A55 1.8k |
| R308 | 0611024A65 4.7k |
| R309 | 0611024A65 4.7k |
| R310 | 0611024A65 4.7k |

| <u>INTEGRATED CIRCUIT: (SEE NOTE)</u> | |
|---------------------------------------|----------------------|
| U 51 | 5105479G05 Nucleus |
| U101 | 5183548N19 Divider |
| U102 | 5183977M45 Prescaler |

| <u>ZENER DIODE: (SEE NOTE)</u> | |
|--------------------------------|--------------------|
| VR101 | 4882256C15 5.1V 5% |

| <u>CRYSTAL: (SEE NOTE)</u> | |
|----------------------------|---|
| Y 51 | 9180082J02 Filter (matched pair, Y51A/B) |
| Y 52 | 4805488G03 20.945MHz Replace with part as |
| or | 4805488G04 21.855MHz originally supplied |

| NON-REFERENCED ITEMS: | |
|-----------------------|---------------------|
| 2680138J01 | Shield |
| 2680182H01 | RF shield |
| 2680153J01 | Coil shield, 3 used |
| 2680210K01 | Coil shield |

GLE6156A RF Board, 12.5kHz
(Tx: 420-433MHz; Rx: 438-450MHz) 2 ppm

SYMBOL PART NO. DESCRIPTION

CAPACITOR, fixed: pf 5% 50V
unless otherwise stated

| | | |
|-------|------------|-----------------|
| C 1 | 2111031A11 | 6.8 0.25pF |
| C 2 | 2111031A35 | 68 |
| C 3 | 2111031A35 | 68 |
| C 5 | 2111031A35 | 68 |
| C 7 | 2111031A09 | 4.7 0.25pF |
| C 8 | 2111031A15 | 10 |
| C 9 | 2111031A08 | 3.9 0.25pF |
| C 10 | 2111032A21 | 0.01uF 10% |
| C 12 | 2111032A09 | 0.001uF 10% |
| C 51 | 2111031A31 | 47 |
| C 52 | 2111031A13 | 8.2 0.25pF |
| C 54 | 2111031A19 | 15 |
| C 56 | 2111031A15 | 10 |
| C 57 | 2111031A21 | 0.01uF 10% |
| C 58 | 2111031A21 | 0.01uF 10% |
| C 59 | 2384538G05 | 0.1uF 20% 15V |
| C 60 | 2111031A31 | 47 |
| C 61 | 2111031A23 | 22 |
| C 62 | 2111031A31 | 47 |
| C 63 | 2111031A59 | 680 |
| C 64 | 2111031A15 | 10 |
| C 65 | 2111032B15 | 0.22uF +80-20% |
| C 66 | 2111032A21 | 0.01uF 10% |
| C 67 | 2111032B15 | 0.22uF +80-20% |
| C 68 | 2111032B15 | 0.22uF +80-20% |
| C 69 | 2384538G05 | 10uF 20% 15V |
| C 70 | 2311048B13 | 10uF 20% 16V |
| C 71 | 2311048B06 | 2.2uF 20% |
| C 72- | | |
| C 74 | 2111032B15 | 0.22uF +80-20% |
| C 75 | 2111032A13 | 0.0022uF 10% |
| C 76 | 2111032B15 | 0.22uF +80-20% |
| C 77 | 2111032B15 | 0.22uF +80-20% |
| C 78 | 2111032A13 | 0.0022uF 10% |
| C 79 | 2111032B15 | 0.22uF +80-20% |
| C 80 | 2311048B13 | 10uF 20% 16V |
| C 81 | 0811051A05 | 0.0047uF 63V |
| C 82 | 0811044A34 | 0.018uF 63V |
| C 83 | 0811051A01 | 0.001uF 63V |
| C101 | 2311048B13 | 10uF 20% 16V |
| C102 | 0811051A13 | 0.1uF 63V |
| C103 | 2111032A21 | 0.01uF 10% |
| C104 | 2311048B13 | 10uF 20% 16V |
| C105 | 2111032A21 | 0.01uF 10% |
| C106 | 2111031A19 | 15 |
| C108 | 2111032B13 | 0.1uF +80-20% |
| C109 | 0811051A13 | 0.1uF 63V |
| C110 | 2111032B13 | 0.1uF +80-20% |
| C111 | 2302057B02 | 1uF 20% 35V |
| C112 | 0811051A07 | 0.1uF 63V |
| C113 | 2111032A18 | 0.0056uF 10 |
| C114 | 2111031A35 | 68 |
| C115 | 2111032A21 | 0.01uF 10% 50V |
| C116 | 2311048B13 | 10uF 20% 16V |
| C117- | | |
| C119 | 2111031A35 | 68 |
| C120 | 2111031A39 | 100 |
| C121 | 2111031A10 | 5.6 0.25pF |
| C122- | | |
| C125 | 2111031A35 | 68 |
| C126 | 2111032A21 | 0.01uF 10% |
| C127 | 2111032A21 | 0.01uF 10% |
| C159 | 2111031A23 | 22 |
| C160 | 2111031A19 | 15 |
| C162 | 2111032A09 | 0.001uF 10% |
| C163 | 2111032A21 | 0.01uF 10% |
| C201 | 2002473M01 | 2.5-10 variable |
| C202 | 2111031A13 | 8.2 0.25pF |
| C203 | 2111031A07 | 3.3 0.25pF |
| C204 | 2111031A01 | 1 0.25pF |

| | | |
|-------|------------|-----------------|
| C205 | 2111031A15 | 10 |
| C206 | 2111031A11 | 6.8 0.25pF |
| C207 | 2111031A10 | 5.6 0.25pF |
| C208 | 2111031A07 | 3.3 0.25pF |
| C209- | | |
| C211 | 2111031A35 | 68 |
| C212 | 2111031A01 | 1.0 0.25pF |
| C213 | 2111031A01 | 1.0 0.25pF |
| C214 | 2111031A35 | 68 |
| C215 | 2111031A35 | 68 |
| C216 | 2111031A11 | 6.8 0.25pF |
| C217- | | |
| C219 | 2111031A35 | 68 |
| C221 | 2002473M01 | 2.5-10 variable |
| C222 | 2111031A15 | 10 |
| C223 | 2111031A03 | 1.5 0.25pF |
| C224 | 2111031A03 | 1.5 0.25pF |
| C225 | 2111031A01 | 1.0 0.25pF |
| C226 | 2111031A09 | 4.7 0.25pF |
| C227 | 2111031A01 | 1.0 0.25pF |
| C228 | 2111031A17 | 12 |
| C229 | 2111031A10 | 5.6 0.25pF |
| C230 | 2111031A05 | 10 |
| C231 | 2111031A10 | 5.6 0.25pF |
| C232 | 2111031A35 | 68 |
| C233 | 2111031A35 | 68 |
| C234 | 2111031A03 | 1.5 0.25pF |
| C236 | 2111031A35 | 68 |
| C237 | 2111031A35 | 68 |
| C238 | 2111031A35 | 68 |
| C239 | 2111031A10 | 5.6 0.25pF |
| C240 | 2111032A21 | 0.01uF 10% |
| C241 | 2111031A35 | 68 |
| C242 | 2111031A35 | 68 |
| C243 | 2111032A27 | 0.033uF 10% |
| C244- | | |
| C246 | 2111031A35 | 68 |
| C247 | 2111031A05 | 2.2 0.25pF |
| C248 | 2384538G31 | 0.56uF 10% 35V |
| C249 | 2111032A09 | 0.001uF 10% |
| C250 | 2111031A35 | 68 |
| C251 | 2111032A21 | 0.01uF 10% |
| C252 | 2311048B19 | 47uF 20% 16V |
| C253 | 2311048B19 | 47uF 20% 16V |
| C254 | 2111032A21 | 0.1uF 10% |
| C255 | 2111031A05 | 2.2 0.25pF |
| C256 | 2111031A01 | 1.0 0.25pF |
| C257 | 2111031A28 | 36 |
| C258 | 2111031A01 | 1.0 0.25pF |
| C301 | 2311048B05 | 1uF 20% |
| C302 | 0811051A17 | 0.47uF 63V |
| C303- | | |
| C312 | 2111031A21 | 18 |
| C313 | 2111031A35 | 68 |

CHANNEL ELEMENT:

CE151 KXN1123A Reference oscillator (14.4MHz)

DIODE: (SEE NOTE)

| | | |
|-------|------------|------------------|
| CR 51 | 4883654H01 | Silicon |
| CR 52 | 4883654H01 | Silicon |
| CR101 | 4883654H01 | Silicon |
| CR102 | 4883654H01 | Silicon |
| CR201 | 4802081B35 | Silicon varactor |
| CR202 | 4802081B35 | Silicon varactor |
| CR203 | 4884616A01 | Hot carrier |
| CR204 | 4802081B35 | Silicon varactor |
| CR205 | 4802081B35 | Silicon varactor |
| CR206 | 4802081B35 | Silicon varactor |
| CR207 | 4884616A01 | Hot carrier |

HELICAL FILTER:

| | | |
|-----|------------|--------|
| FL1 | 9180081J01 | 2-cell |
| FL2 | 9180081J02 | 3-cell |
| FL3 | 9180081J03 | 3-cell |

CERAMIC FILTER:

| | | |
|------|------------|----------------|
| FL51 | 9180097D04 | 455 kHz 6-pole |
| FL52 | 9180098D04 | 455 kHz 4-pole |

CONNECTOR:

| | | |
|-----|------------|---------------|
| J 1 | 0980168K01 | Coaxial |
| J 2 | 0980168K01 | Coaxial |
| J 3 | 0980179H01 | 11-pin socket |

COIL:

| | | |
|-------|------------|-------------------------------|
| L 1 | 2411030B05 | 2.5 turns (green) |
| L 2 | 2411030B07 | 3.5 turns (white) |
| L 3 | 2482723H28 | 0.29uH (yellow) |
| L 4 | 2411030B01 | 1.5 turns (brown) |
| L 5 | 2482723H28 | 0.29uH (yellow) |
| L 51 | 2480299D01 | 17.75 turns (orange) |
| L 52 | 2482835G03 | 2.6uH (red-blue-gold) |
| L 53 | 2482835G03 | 2.6uH (red-blue-gold) |
| L 54 | 2480000E01 | Quad detector, with capacitor |
| L 55 | 2482723H35 | 23uH (red) |
| L101 | 2411030B08 | 4.5 turns (brown) |
| L102 | 2482723H28 | 0.29uH (yellow) |
| L152 | 2482723H37 | 6.2uH (blue) |
| L201 | 2480117K02 | Coil |
| L202 | 2411030B10 | 5.5 turns (red) |
| L203- | | |
| L206 | 2482723H28 | 0.29uH (yellow) |
| L207 | 2411030B05 | 2.5 turns (green) |
| L208 | 2411030B08 | 4.5 turns (brown) |
| L209 | 2482723H28 | 0.29uH (yellow) |
| L210 | 2480117K03 | Coil |
| L211 | 2411030B12 | 7.5 turns (yellow) |
| L212- | | |
| L215 | 2482723H28 | 0.29uH (yellow) |
| L216 | 2411030B06 | 2.5 turns |
| L217 | 2482723H28 | 0.29uH (yellow) |
| L218 | 2411030B08 | 4.5 turns (brown) |

TRANSISTOR: (SEE NOTE)

| | | |
|------|------------|------------------------|
| Q 1 | 4800869990 | M9990 |
| Q 2 | 4811043B12 | FET M3B12 (alt: M9839) |
| Q 51 | 4811043B12 | FET M3B12 (alt: M9839) |
| Q 52 | 4811043B03 | M3B03 (alt: M9571) |
| Q 53 | 4802081B30 | M1B30 (alt: M1B10) |
| Q 54 | 4802081B30 | M1B30 (alt: M1B10) |
| Q101 | 4802081B31 | M1B31 (alt: M1B11) |
| Q102 | 4800869987 | M9987 |
| Q103 | 4800869987 | M9987 |
| Q104 | 4802081B31 | M1B31 (alt: M1B11) |
| Q105 | 4802081B30 | M1B30 (alt: M1B10) |
| Q107 | 4811043B19 | M3B19 (alt: M9658) |
| Q201 | 4811043B12 | FET M3B12 (alt: M9839) |
| Q202 | 4802081B31 | M1B31 (alt: M1B11) |
| Q203 | 4811043B19 | M3B19 (alt: M9658) |
| Q204 | 4800869990 | M9990 |
| Q205 | 4884939C36 | FET M9C36 |
| Q206 | 4802081B31 | M1B31 (alt: M1B11) |
| Q207 | 4811043B19 | M3B19 (alt: M9658) |
| Q208 | 4811043B16 | M3B16 (alt: M9932) |
| Q209 | 4802081B30 | M1B30 (alt: M1B10) |
| Q251 | 4802081B30 | M1B30 (alt: M1B10) |

RESISTOR: fixed 5% 1/8W unless otherwise stated

| | | |
|-------|------------|--------------|
| R 1 | 0611024A47 | 820 |
| R 2 | 0611024A63 | 3.9k |
| R 3 | 0611024A19 | 56 |
| R 4 | 0611024A27 | 120 |
| R 5 | 0611024A19 | 56 |
| R 6 | 0611024A27 | 120 |
| R 7 | 0611024A43 | 560 |
| R 8 | 0611024A93 | 68k |
| R 51 | 0611024A55 | 1.8k |
| R 53 | 0611024A29 | 150 |
| R 54 | 0611024A41 | 470 |
| R 55 | 0611024A49 | 1k |
| R 56 | 0611024B20 | 820k |
| R 57 | 0611024B06 | 220k |
| R 58 | 0611024B02 | 150k |
| R 59 | 1805500L08 | 22k variable |
| R 60 | 0611024A93 | 68k |
| R 61 | 0611024A95 | 82k |
| R 62 | 0611024A43 | 560 |
| R 63- | | |
| R 65 | 0611024A71 | 8.2k |
| R 66 | 0611024A65 | 4.7k |
| R101 | 0602438B15 | 150 0.5W |
| R102 | 0611024A25 | 100 |
| R103 | 0611024A73 | 10k |
| R104 | 0611024A24 | 100 |
| R105 | 0611024A73 | 10k |
| R106 | 0611024A01 | 10 |
| R107 | 0611024A77 | 15k |

| | | |
|-------|------------|------------------|
| R108 | 0611024A25 | 100 |
| R109 | 0611024A29 | 150 |
| R110 | 0611024A39 | 390 |
| R111 | 0611024A29 | 150 |
| R112 | 0611024A53 | 1.5k |
| R113 | 0611024A67 | 5.6k |
| R116 | 0611024A53 | 1.5k |
| R117 | 0611024A59 | 2.7k |
| R118 | 0611024A73 | 10k |
| R119 | 0611024A77 | 15k |
| R120 | 0611024A33 | 220 |
| R121 | 0611024A19 | 56 |
| R122 | 0611024A59 | 2.7k |
| R123 | 0611024A25 | 100 |
| R124 | 0611024A49 | 1k |
| R125 | 0611024A53 | 1.5k |
| R126 | 0611024A63 | 3.9k |
| R127 | 0611024A47 | 820 |
| R163 | 1805500L08 | 22k variable 20% |
| R164 | 0611024A81 | 22k |
| R201 | 0611024A19 | 56 |
| R202 | 0611024A25 | 100 |
| R203 | 0611024A73 | 10k |
| R204 | 0611024A21 | 68 |
| R205 | 0611024A61 | 3.3k |
| R206 | 0611024A77 | 15k |
| R207 | 0611024A73 | 10k |
| R208 | 0611024A79 | 18k |
| R209 | 0611024A73 | 10k |
| R210 | 0611024A57 | 2.2k |
| R211 | 0611024A35 | 270 |
| R212 | 0611024A43 | 560 |
| R213 | 0611024A01 | 10 |
| R214 | 0611024A21 | 68 |
| R215 | 0611024A35 | 270 |
| R216 | 0611024A21 | 68 |
| R217 | 0611024A01 | 10 |
| R219 | 0611024A35 | 270 |
| R220 | 0611024A07 | 18 |
| R221 | 0611024A35 | 270 |
| R222 | 0611024A97 | 100k |
| R223 | 0611024A73 | 10k |
| R224 | 0611024A73 | 10k |
| R225 | 0611024A19 | 56 |
| R226 | 0611024A77 | 15k |
| R227 | 0611024A73 | 10k |
| R228 | 0611024A21 | 68 |
| R229 | 0611024A65 | 4.7k |
| R230 | 0611024A57 | 2.2k |
| R231 | 0611024A35 | 270 |
| R232 | 0611024A43 | 560 |
| R233 | 0611024A21 | 68 |
| R234 | 0611024A35 | 270 |
| R235 | 0611024A21 | 68 |
| R238 | 0611024A35 | 270 |
| R239 | 0611024A07 | 18 |
| R240 | 0611024A35 | 270 |
| R241 | 0611024A49 | 1k |
| R242 | 0611024A15 | 39 |
| R243 | 0611024A15 | 39 |
| R251 | 0611024A35 | 270k |
| R252 | 0611024A01 | 10 |
| R301 | 0611024A81 | 22k |
| R302 | 1805500L08 | 22k variable |
| R303 | 0611024A35 | 270 |
| R304 | 0611024A01 | 10 |
| R305 | 1805500L08 | 22k variable |
| R306 | 0611024A01 | 10 |
| R307 | 0611024A57 | 2.2k |
| R308- | | |
| R310 | 0611024A65 | 4.7k |

INTEGRATED CIRCUIT: (SEE NOTE)

| | | |
|------|------------|-----------|
| U 51 | 5105479G05 | Nucleus |
| U101 | 5183548N19 | Divider |
| U102 | 5183977M45 | Prescaler |

ZENER DIODE: (SEE NOTE)

| | | |
|-------|------------|---------|
| VR101 | 4882256C15 | 5.1V 5% |
|-------|------------|---------|

CRYSTAL: (SEE NOTE)

| | | |
|------|------------|----------------------------------|
| Y 51 | 9180082J02 | Filter (matched pair, Y51A/B) |
| Y 52 | 4805488G03 | 20.945MHz Replace with part as |
| or | 4805488G04 | 21.855MHz originally supplied |

2680138J01 Shield
 2680182H01 RF shield
 2680153J01 Coil shield, 3 used
 2680210K01 Coil shield

NON-REFERENCED ITEMS:

GLE6157A RF Board, 12.5kHz
 (Tx: 438-450MHz; Rx: 420-433MHz) 2 ppm

SYMBOL PART NO. DESCRIPTION

CAPACITOR, fixed: pf 5% 50V
 unless otherwise stated

C 1 2111031A13 2.2 0.25pF
 C 2 2111031A35 68
 C 3 2111031A35 68
 C 5 2111031A35 68
 C 8 2111032A09 0.001uF 10%
 C 9 2111031A08 3.9 0.25pF
 C 10 2111032A21 0.01uF 10%
 C 12 2111032A09 0.001uF 10%
 C 51 2111031A31 47
 C 52 2111031A13 8.2 0.25pF
 C 54 2111031A19 15
 C 56 2111031A15 10
 C 57 2111031A21 0.01uF 10%
 C 58 2111031A21 0.01uF 10%
 C 59 2384538G05 0.1uF 20% 15V
 C 60 2111031A31 47
 C 61 2111031A23 22
 C 62 2111031A31 47
 C 63 2111031A59 680
 C 64 2111031A15 10
 C 65 2111032B15 0.22uF +80-20%
 C 66 2111032A21 0.01uF 10%
 C 67 2111032B15 0.22uF +80-20%
 C 68 2111032B15 0.22uF +80-20%
 C 69 2384538G05 10uF 20% 15V
 C 70 2311048B13 10uF 20% 16V
 C 71 2311048B06 2.2uF 20%
 C 72-
 C 74 2111032B15 0.22uF +80-20%
 C 75 2111032A13 0.0022uF 10%
 C 76 2111032B15 0.22uF +80-20%
 C 77 2111032B15 0.22uF +80-20%
 C 78 2111032A13 0.0022uF 10%
 C 79 2111032B15 0.22uF +80-20%
 C 80 2311048B13 10uF 20% 16V
 C 81 0811051A05 0.0047uF 63V
 C 82 0811044A34 0.018uF 63V
 C 83 0811051A01 0.001uF 63V
 C101 2311048B13 10uF 20% 16V
 C102 0811051A13 0.1uF 63V
 C103 2111032A21 0.01uF 10%
 C104 2311048B13 10uF 20% 16V
 C105 2111032A21 0.01uF 10%
 C106 2111031A19 15
 C108 2111032B13 0.1uF +80-20%
 C109 0811051A13 0.1uF 63V
 C110 2111032B13 0.1uF +80-20%
 C111 2302057B02 1uF 20% 35V
 C112 0811051A07 0.1uF 63V
 C113 2111032A18 0.0056uF 10
 C114 2111031A35 68
 C115 2111032A21 0.01uF 10% 50V
 C116 2311048B13 10uF 20% 16V
 C117-
 C119 2111031A35 68
 C120 2111031A39 100
 C121 2111031A10 5.6 0.25pF
 C122-
 C125 2111031A35 68
 C126 2111032A21 0.01uF 10%
 C127 2111032A21 0.01uF 10%
 C159 2111031A23 22
 C160 2111031A19 15
 C162 2111032A09 0.001uF 10%
 C163 2111032A21 0.01uF 10%
 C201 2002473M01 2.5-10 variable
 C202 2111031A08 3.9 0.25pF
 C203 2111031A07 3.3 0.25pF
 C204 2111031A01 1.0 0.25pF
 C205 2111031A13 8.2 0.25pF

C206 2111031A11 6.8 0.25pF
 C207 2111031A10 5.6 0.25pF
 C208 2111031A11 6.8 0.25pF
 C209-
 C211 2111031A35 68
 C212 2111031A07 3.3 0.25pF
 C214 2111031A35 68
 C215 2111031A35 68
 C216 2111031A11 6.8 0.25pF
 C217-
 C219 2111031A35 68
 C221 2002473M01 2.5-10 variable
 C222 2111031A10 5.6 0.25pF
 C223 2111031A03 1.5 0.25pF
 C224 2111031A05 2.2 0.25pF
 C225 2111031A01 1.0 0.25pF
 C226 2111031A09 4.7 0.25pF
 C227 2111031A01 1.0 0.25pF
 C228 2111031A17 12
 C229 2111031A09 4.7 0.25pF
 C230 2111031A10 5.6 0.25pF
 C231 2111031A08 3.9 0.25pF
 C232 2111031A35 68
 C233 2111031A35 68
 C234 2111031A01 1.0 0.25pF
 C235 2111031A03 1.5 0.25pF
 C236 2111031A35 68
 C237 2111031A35 68
 C238 2111031A35 68
 C239 2111031A08 3.9 0.25pF
 C240 2111032A21 0.01uF 10%
 C241 2111031A35 68
 C242 2111031A35 68
 C243 2111032A27 0.033uF 10%
 C244 2111031A35 68
 C245 2111031A35 68
 C246 2111031A35 68
 C247 2111031A05 2.2 0.25pF
 C248 2384538G31 0.56uF 10% 35V
 C249 2111032A09 0.001uF 10%
 C250 2111031A35 68
 C251 2111032A21 0.01uF 10%
 C252 2311048B19 47uF 20% 16V
 C253 2311048B19 47uF 20% 16V
 C254 2111032A21 0.1uF 10%
 C255 2111031A05 2.2 0.25pF
 C256 2111031A01 1.0 0.25pF
 C257 2111031A28 36
 C258 2111031A01 1.0 0.25pF
 C301 2311048B05 1uF 20%
 C302 0811051A17 0.47uF 63V
 C303-
 C312 2111031A21 18
 C313 2111031A35 68

CHANNEL ELEMENT:

CE151 KXN1123A Reference oscillator (14.4MHz)

DIODE: (SEE NOTE)

CR 51 4883654H01 Silicon
 CR 52 4883654H01 Silicon
 CR101 4883654H01 Silicon
 CR102 4883654H01 Silicon
 CR201 4802081B35 Silicon varactor
 CR202 4802081B35 Silicon varactor
 CR203 4884616A01 Hot carrier
 CR204 4802081B35 Silicon varactor
 CR205 4802081B35 Silicon varactor
 CR206 4802081B35 Silicon varactor
 CR207 4884616A01 Hot carrier

HELICAL FILTER:

FL1 9180081J04 2-cell
 FL2 9180081J05 3-cell
 FL3 9180081J06 3-cell

CERAMIC FILTER:

FL51 9180097D04 455 kHz 6-pole
 FL52 9180098D04 455 kHz 4-pole

CONNECTOR:

J 1 0980168K01 Coaxial
 J 2 0980168K01 Coaxial
 J 3 0980179H01 11-pin socket

COIL:

| | | |
|-------|------------|-------------------------------|
| L 1 | 2411030B05 | 2.5 turns (green) |
| L 2 | 2411030B08 | 4.5 turns (brown) |
| L 3 | 2482723H28 | 0.29uH (yellow) |
| L 4 | 2411030B02 | 1.5 turns (red) |
| L 5 | 2482723H28 | 0.29uH (yellow) |
| L 51 | 2480299D01 | 17.75 turns (orange) |
| L 52 | 2482835G03 | 2.6uH (red-blue-gold) |
| L 53 | 2482835G03 | 2.6uH (red-blue-gold) |
| L 54 | 2480000E01 | Quad detector, with capacitor |
| L 55 | 2482723H35 | 23uH (red) |
| L101 | 2411030B08 | 4.5 turns (brown) |
| L102 | 2482723H28 | 0.29uH (yellow) |
| L152 | 2482723H37 | 6.2uH (blue) |
| L201 | 2480117K03 | Coil |
| L202 | 2411030B11 | 6.5 turns (orange) |
| L203 | 2482723H28 | 0.29uH (yellow) |
| L204 | 2482723H28 | 0.29uH (yellow) |
| L205 | 2482723H28 | 0.29uH (yellow) |
| L206 | 2482723H28 | 0.29uH (yellow) |
| L207 | 2411030B05 | 2.5 turns (green) |
| L208 | 2411030B08 | 4.5 turns (brown) |
| L209 | 2482723H28 | 0.29uH (yellow) |
| L210 | 2480117K02 | Coil |
| L211 | 2411030B12 | 7.5 turns (yellow) |
| L212- | | |
| L215 | 2482723H28 | 0.29uH (yellow) |
| L216 | 2411030B05 | 2.5 turns |
| L217 | 2482723H28 | 0.29uH (yellow) |
| L218 | 2411030B08 | 4.5 turns (brown) |

TRANSISTOR: (SEE NOTE)

| | | |
|------|------------|------------------------|
| Q 1 | 4800869990 | M9990 |
| Q 2 | 4811043B12 | FET M3B12 (alt: M9839) |
| Q 51 | 4811043B12 | FET M3B12 (alt: M9839) |
| Q 52 | 4811043B03 | M3B03 (alt: M9571) |
| Q 53 | 4802081B30 | M1B30 (alt: M1B10) |
| Q 54 | 4802081B30 | M1B30 (alt: M1B10) |
| Q101 | 4802081B31 | M1B31 (alt: M1B11) |
| Q102 | 4800869987 | M9987 |
| Q103 | 4800869987 | M9987 |
| Q104 | 4802081B31 | M1B31 (alt: M1B11) |
| Q105 | 4802081B30 | M1B30 (alt: M1B10) |
| Q107 | 4811043B19 | M3B19 (alt: M9658) |
| Q201 | 4811043B12 | FET M3B12 (alt: M9839) |
| Q202 | 4802081B31 | M1B31 (alt: M1B11) |
| Q203 | 4811043B19 | M3B19 (alt: M9658) |
| Q204 | 4800869990 | M9990 |
| Q205 | 4884939C36 | FET M9C36 |
| Q206 | 4802081B31 | M1B31 (alt: M1B11) |
| Q207 | 4811043B19 | M3B19 (alt: M9658) |
| Q208 | 4811043B16 | M3B16 (alt: M9932) |
| Q209 | 4802081B30 | M1B30 (alt: M1B10) |
| Q251 | 4802081B30 | M1B30 (alt: M1B10) |

RESISTOR, fixed: 5% 1/8W

| | | |
|------|------------|--------------|
| R 1 | 0611024A47 | 820 |
| R 2 | 0611024A63 | 3.9k |
| R 3 | 0611024A19 | 56 |
| R 4 | 0611024A27 | 120 |
| R 5 | 0611024A19 | 56 |
| R 6 | 0611024A27 | 120 |
| R 7 | 0611024A43 | 560 |
| R 8 | 0611024A93 | 68k |
| R 51 | 0611024A55 | 1.8k |
| R 53 | 0611024A29 | 150 |
| R 54 | 0611024A41 | 470 |
| R 55 | 0611024A49 | 1k |
| R 56 | 0611024B20 | 820k |
| R 57 | 0611024B06 | 220k |
| R 58 | 0611024B02 | 150k |
| R 59 | 1805500L08 | 22k variable |
| R 60 | 0611024A93 | 68k |
| R 61 | 0611024A95 | 82k |
| R 62 | 0611024A43 | 560 |
| R 63 | 0611024A71 | 8.2k |
| R 64 | 0611024A71 | 8.2k |
| R 65 | 0611024A71 | 8.2k |
| R 66 | 0611024A65 | 4.7k |
| R101 | 0602438B15 | 150 0.5W |
| R102 | 0611024A25 | 100 |
| R103 | 0611024A73 | 10k |
| R104 | 0611024A24 | 100 |
| R105 | 0611024A73 | 10k |

| | | |
|-------|------------|------------------|
| R106 | 0611024A01 | 10 |
| R107 | 0611024A77 | 15k |
| R108 | 0611024A25 | 100 |
| R109 | 0611024A29 | 150 |
| R110 | 0611024A39 | 390 |
| R111 | 0611024A29 | 150 |
| R112 | 0611024A53 | 1.5k |
| R113 | 0611024A67 | 5.6k |
| R116 | 0611024A53 | 1.5k |
| R117 | 0611024A59 | 2.7k |
| R118 | 0611024A73 | 10k |
| R119 | 0611024A77 | 15k |
| R120 | 0611024A33 | 220 |
| R121 | 0611024A19 | 56 |
| R122 | 0611024A59 | 2.7k |
| R123 | 0611024A25 | 100 |
| R124 | 0611024A49 | 1k |
| R125 | 0611024A53 | 1.5k |
| R126 | 0611024A63 | 3.9k |
| R127 | 0611024A47 | 820 |
| R163 | 1805500L08 | 22k variable 20% |
| R164 | 0611024A81 | 22k |
| R201 | 0611024A19 | 56 |
| R202 | 0611024A25 | 100 |
| R203 | 0611024A73 | 10k |
| R204 | 0611024A21 | 68 |
| R205 | 0611024A61 | 3.3k |
| R206 | 0611024A77 | 15k |
| R207 | 0611024A73 | 10k |
| R208 | 0611024A79 | 18k |
| R209 | 0611024A73 | 10k |
| R210 | 0611024A57 | 2.2k |
| R211 | 0611024A35 | 270 |
| R212 | 0611024A43 | 560 |
| R213 | 0611024A01 | 10 |
| R214 | 0611024A21 | 68 |
| R215 | 0611024A35 | 270 |
| R216 | 0611024A21 | 68 |
| R217 | 0611024A01 | 10 |
| R219 | 0611024A35 | 270 |
| R220 | 0611024A07 | 18 |
| R221 | 0611024A35 | 270 |
| R222 | 0611024A97 | 100k |
| R223 | 0611024A73 | 10k |
| R224 | 0611024A73 | 10k |
| R225 | 0611024A19 | 56 |
| R226 | 0611024A77 | 15k |
| R227 | 0611024A73 | 10k |
| R228 | 0611024A21 | 68 |
| R229 | 0611024A65 | 4.7k |
| R230 | 0611024A57 | 2.2k |
| R231 | 0611024A35 | 270 |
| R232 | 0611024A43 | 560 |
| R233 | 0611024A21 | 68 |
| R234 | 0611024A35 | 270 |
| R235 | 0611024A21 | 68 |
| R239 | 0611024B23 | Jumper |
| R241 | 0611024A49 | 1k |
| R242 | 0611024A15 | 39 |
| R243 | 0611024A15 | 39 |
| R251 | 0611024A35 | 270k |
| R252 | 0611024A01 | 10 |
| R301 | 0611024A89 | 47k |
| R302 | 1805500L08 | 22k variable |
| R303 | 0611024A41 | 470 |
| R304 | 0611024A01 | 10 |
| R305 | 1805500L08 | 22k variable |
| R306 | 0611024A01 | 10 |
| R307 | 0611024A55 | 1.8k |
| R308- | | |
| R310 | 0611024A65 | 4.7k |

INTEGRATED CIRCUIT: (SEE NOTE)

| | | |
|------|------------|-----------|
| U 51 | 5105479G05 | Nucleus |
| U101 | 5183548N19 | Divider |
| U102 | 5183977M45 | Prescaler |

ZENER DIODE: (SEE NOTE)

| | | |
|-------|------------|---------|
| VR101 | 4882256C15 | 5.1V 5% |
|-------|------------|---------|

CRYSTAL: (SEE NOTE)

| | | |
|------|------------|----------------------------------|
| Y 51 | 9180082J02 | Filter (matched pair, Y51A/B) |
| Y 52 | 4805488G03 | 20.945MHz Replace with part as |
| or | 4805488G04 | 21.855MHz originally supplied |

2680138J01 Shield
 2680182H01 RF shield
 2680153J01 Coil shield, 3 used
 2680210K01 Coil shield

NON-REFERENCED ITEMS:

C302 0811051A17 0.47 63V
 C303-
 C312 2111031A21 18pF
 C313 2111031A35 68pF

GLE6174A Transmitter RF Board 403-433MHz 2ppm
 GLE6176A Transmitter RF Board 438-470MHz 2ppm

CR101 4883654H01 Silicon
 CR102 4883654H01 Silicon
 CR204-
 CR206 4802081B35 Silicon (varactor)
 CR207 4884616A01 Hot carrier

DIODE: (SEE NOTE)

SYMBOL PART NO. DESCRIPTION

CAPACITOR, fixed: uF 5% 50V
 unless otherwise stated

CONNECTOR:

C80 2311048B13 10 20% 16V
 C101 2311048B13 10 20% 16V
 C102 0811051A13 0.1 63V
 C103 2111032A21 0.01 10%
 C104 2311048B13 10 20% 16V
 C105 2111032A21 0.01 10%
 C106 2111031A19 15pF
 C107 0.1
 C108 2111032B13 0.01 +80-20%
 C109 0811051A13 0.1 63V
 C110 2111032B13 0.1 +80-20%
 C111 2302057B02 1.0 20% 35V
 C112 0811051A07 0.01 63V
 C113 2111032A13 0.0022 10%
 C114 2111031A35 68pF
 C115 2111031A21 0.01 10%
 C116 2311048B13 10 20% 16V
 C117-
 C119 2111031A35 68pF
 C120 2111031A39 100pF
 C121 2111031A10 5.6pF 0.5%
 C122-
 C125 2111031A35 68pF
 C126 2111031A21 0.01 10%
 C127 2111031A21 0.01 10%
 C159 2111031A23 22pF
 C160 2111031A19 15pF
 C162 2111032A09 0.00 10%
 C163 2111032A21 0.01 10%
 C221 2002473M01 3-10pF variable
 C222 2111031A05 2.2pF 0.25pF (GLE6174A)
 or 2111031A10 5.6pF 0.5% (GLE6176A)
 C223 2111031A03 1.5pF 0.25pF
 C224 2111031A03 1.5pF 0.25pF (GLE6174A)
 or 2111031A05 2.2pF 0.25pF (GLE6176A)
 C225 2111031A01 1.0pF 0.25pF
 C226 2111031A09 4.7pF 0.25pF
 C227 2111031A01 1pF 0.25pF
 C228 2111031A17 12pF
 C229 2111031A10 5.6pF 0.5% (GLE6174A)
 or 2111031A09 4.7pF 0.25pF (GLE6176A)
 C230 2111031A11 6.8pF 0.5% (GLE6174A)
 or 2111031A10 5.6pF 0.5% (GLE6176A)
 C231 2111031A10 5.6pF 0.5% (GLE6174A)
 or 2111031A08 3.9pF 0.25pF (GLE6176A)
 C232 2111031A35 68pF
 C233 2111031A35 68pF
 C234 2111031A03 1.5pF 0.25pF (GLE6174A)
 or 2111031A01 1.0pF 0.25pF (GLE6176A)
 C236-
 C238 2111031A35 68pF
 C239 2111031A10 5.6pF 0.5% (GLE6174A)
 or 2111031A08 3.9pF 0.25pF (GLE6176A)
 C240 2111032A21 0.01 10%
 C241 2111031A35 68pF
 C242 2111031A35 68pF
 C243 2111032A27 0.033uF 10%
 C244-
 C246 2111031A35 68pF
 C247 2111031A05 2.2pF 0.25pF
 C249 2111032A09 0.001 10%
 C250 2111031A35 68pF
 C251 2111032A21 0.01 10%
 C252 2311048B19 47 20% 16V
 C253 2311048B19 47 20% 16V
 C254 2111032A21 0.01 10%
 C256 2111031A01 1.0pF 0.25pF
 C257 2111031A28 26pF
 C258 2111031A01 1.0pF 0.25pF
 C301 2311048B05 1uF 20%

J1 0980168K01 Female single contact
 J2 0980168K01 Female single contact
 J3 0980179H01 Female 6-contact

COIL, RF:

L101 2411030B08 4.5 turns (brown)
 L102 2482723H28 Choke 0.29uH (yellow)
 L152 2482723H37 Choke 6.2uH (blue)
 L210 2480117K03 Choke 35nH (GLE6174A)
 or 2480117K02 Choke 20nH (GLE6176A)
 L211 2411030B12 7.5 turns (yellow)
 L212-
 L215 2482723H28 Choke 0.29uH (yellow)
 L216 2411030B06 2.5 turns (blue) (GLE6174A)
 or 2411030B05 2.5 turns (grn) (GLE6176A)
 L217 2482723H28 Choke 0.29uH
 L218 2411030B08 4.5 turns (brown)

TRANSISTOR: (SEE NOTE)

Q101 4802081B31 M1B31 (alt: M1B11)
 Q102 4800869987 M9987
 Q103 4800869987 M9987
 Q104 4802081B31 M1B31 (alt: M1B11)
 Q105 4802081B30 M1B30 (alt: M1B10)
 Q107 4811043B19 M3B19 (alt: M9658)
 Q205 4805128M66 FET M8M66 (alt: M1B38)
 Q206 4802081B31 M1B31 (alt: M1B11)
 Q207 4811043B19 M3B19 (alt: M9658)
 Q208 4811043B19 M3B19 (alt: M9658)
 Q251 4802081B30 M1B30 (alt: M1B10)

RESISTOR: fixed 5% 1/8 W
 unless otherwise stated

R101 0602369M27 150 0.6W
 R102 0611024A25 100
 R103 0611024A73 10k
 R104 0611024A25 100
 R105 0611024A73 10k
 R106 0611024A01 10
 R107 0611024A77 15k
 R108 0611024A25 100
 R109 0611024A29 150
 R110 0611024A39 390
 R111 0611024A29 150
 R112 0611024A53 1.5k
 R113 0611024A67 5.6k
 R116 0611024A53 1.5k
 R117 0611024A59 2.7k
 R118 0611024A73 10k
 R119 0611024A77 15k
 R120 0611024A33 220
 R121 0611024A19 56
 R122 0611024A59 2.7k
 R123 0611024A25 100
 R124 0611024A49 1k
 R125 0611024A53 1.5k
 R126 0611024A63 3.9k
 R127 0611024A47 820
 R163 1805500L08 variable 22k 20%
 R164 0611024A81 22k
 R209 0611024A73 10k
 R222 0611024A97 100k
 R223 0611024A73 10k
 R224 0611024A73 10k
 R225 0611024A19 56
 R226 0611024A25 100
 R227 0611024A73 10k
 R228 0611024A21 68
 R229 0611024A65 4.7k
 R230 0611024A57 2.2k
 R231 0611024A35 270

R232 0611024A43 560
 R233 0611024A21 68
 R234 0611024A35 270
 R235 0611024A21 68
 R239 0611024B23 Jumper
 R241 0611024A49 1k
 R243 0611024A15 39
 R251 0611024A35 270
 R252 0611024A01 10
 R301 0611024A71 8.2k (GLE6174A)
 or 0611024A85 33k (GLE6176A)
 R302 1805500L08 variable, 22k 20%
 R303 0611024A33 220
 R304 0611024A01 10
 R305 1805500L08 variable, 22k 20%
 R306 0611024A01 10
 R307 0611024A57 2.2k
 R308-
 R310 0611024A65 4.7k

INTEGRATED CIRCUIT: (SEE NOTE)

U101 5183548N19 Synthesizer
 U102 5183977M45 Prescaler

ZENER DIODE: (SEE NOTE)

VR101 4882256C15 Zener type 5.1V

CRYSTAL: (SEE NOTE)

Y151 KXN1123A Channel element

NON-REFERENCED ITEMS:

2680153J02 SHIELD, coil, 2 used
 2680182H01 SHIELD, rf
 6680329A63 TOOL, align

GLE6175A Transmitter RF Board 403-433MHz 5ppm
 GLE6177A Transmitter RF Board 438-470MHz 5ppm

SYMBOL PART NO. DESCRIPTION

CAPACITOR: fixed uF 50V
 unless otherwise stated

C 80 2311048B13 10 20% 16V
 C101 2311048B13 10 20% 16V
 C102 0811051A13 0.1 63V
 C103 2111032A21 0.01 10%
 C104 2311048B13 10 20% 16V
 C105 2111032A21 0.01 10%
 C106 2111031A19 15pF
 C107 0811051A13 0.1 63V
 C108 2111032B13 0.01 +80-20%
 C109 0811051A13 0.1 63V
 C110 2111032B13 0.1 +80-20%
 C111 2302057B02 1.0 20% 35V
 C112 0811051A07 0.01 63V
 C113 2111032A13 0.0022 10%
 C114 2111031A35 68pF
 C115 2111031A21 0.01 10%
 C116 2311048B13 10 20% 16V
 C117-
 C119 2111031A35 68pF
 C120 2111031A39 100pF
 C121 2111031A10 5.6pF 0.5%
 C122-
 C125 2111031A35 68pF
 C126 2111031A21 0.01 10%
 C127 2111031A21 0.01 10%
 C151 2111032A09 0.001 10%
 C152 2111031A15 10 0.5%
 C153 2111032A09 0.001 10%
 C154 2111032A21 0.01 10%
 C155 2302057B09 0.22 20% 35V
 C156 2111031A45 180pF
 C157 2111031A45 180pF
 C158 2111032A21 0.01 10%
 C159 2111031A23 22pF
 C160 2111031A19 15pF
 C161 2111032A21 75pF
 C162 2111032A09 0.001 10%
 C163 2111032A21 0.01 10%
 C221 2002473M01 variable, 3-10pF
 C222 2111031A05 2.2pF 0.25pF (GLE6175A)
 or 2111031A10 5.6pF 0.5% (GLE6177A)

C223 2111031A03 1.5pF 0.25pF
 C224 2111031A03 1.5pF 0.25pF (GLE6175A)
 or 2111031A05 2.2pF 0.25pF (GLE6177A)
 C225 2111031A01 1.0pF 0.25pF
 C226 2111031A09 4.7pF 0.25pF
 C227 2111031A01 1pF 0.25pF
 C228 2111031A17 12pF
 C229 2111031A10 5.6pF 0.5% (GLE6175A)
 or 2111031A09 4.7pF 0.25pF (GLE6177A)
 C230 2111031A11 6.8pF 0.5% (GLE6175A)
 or 2111031A10 5.6pF 0.5% (GLE6177A)
 C231 2111031A10 5.6pF 0.5% (GLE6175A)
 or 2111031A08 3.9pF 0.25pF (GLE6177A)
 C232 2111031A35 68pF
 C233 2111031A35 68pF
 C234 2111031A03 1.5pF 0.25pF (GLE6175A)
 or 2111031A01 1.0pF 0.25pF (GLE6177A)
 C236-
 C238 2111031A35 68pF
 C239 2111031A10 5.6pF 0.5% (GLE6175A)
 or 2111031A08 3.9pF 0.25pF (GLE6177A)
 C240 2111032A21 0.01 10%
 C241 2111031A35 68pF
 C242 2111031A35 68pF
 C243 2111032A27 0.033uF 10%
 C244-
 C246 2111031A35 68pF
 C247 2111031A05 2.2pF 0.25pF
 C249 2111032A09 0.001 10%
 C250 2111031A35 68pF
 C251 2111032A21 0.01 10%
 C252 2311048B19 47 20% 16V
 C253 2311048B19 47 20% 16V
 C254 2111032A21 0.01 10%
 C256 2111031A01 1.0pF 0.25pF
 C257 2111031A28 26pF
 C258 2111031A01 1.0pF 0.25pF
 C301 2311048B05 1uF 20%
 C302 0811051A17 0.47 63V
 C303-
 C312 2111031A21 18pF
 C313 2111031A35 68pF

DIODE: (SEE NOTE)

CR101 4883654H01 Silicon
 CR102 4883654H01 Silicon
 CR151 4882190H54 Silicon
 CR152 4882190H54 Silicon
 CR153 4884399M01 Silicon
 CR154 4884399M01 Silicon
 CR204-
 CR206 4802081B35 Silicon (varactor)
 CR207 4884616A01 Hot carrier

CONNECTOR:

J1, J2 0980168K01 Female single contact
 J3 0980179H01 Female 6-contact

COIL, RF:

L101 2411030B08 4.5 turns (brown)
 L102 2482723H28 Choke 0.29uH (yellow)
 L151 2480299D01 variable 0.8-1.8uH
 L152 2482723H37 Choke 6.2uH (blue)
 L210 2480117K03 Choke 35nH (GLE6175A)
 or 2480117K02 Choke 20nH (GLE6177A)
 L211 2411030B12 7.5 turns (yellow)
 L212 2482723H37 Choke 0.29uH (yellow)
 L212-
 L215 2482723H28 Choke 0.29uH (yellow)
 L216 2411030B06 2.5 turns (blue) (GLE6175A)
 or 2411030B05 2.5 turns (grn) (GLE6177A)
 L217 2482723H28 Choke 0.29uH
 L218 2411030B08 4.5 turns (brown)

TRANSISTOR: (SEE NOTE)

Q101 4802081B31 M1B31 (alt: M1B11)
 Q102 4800869987 M9987
 Q103 4800869987 M9987
 Q104 4802081B31 M1B31 (alt: M1B11)
 Q105 4802081B30 M1B30 (alt: M1B10)
 Q107 4811043B19 M3B19 (alt: M9658)
 Q151 4802081B30 M1B30 (alt: M1B10)
 Q152 4802081B31 M1B31 (alt: M1B11)
 Q205 4805128M66 FET M8M66 (alt: M1B38)

Q206 4802081B31 M1B31 (alt: M1B11)
 Q207 4811043B19 M3B19 (alt: M9658)
 Q208 4811043B19 M3B19 (alt: M9658)
 Q251 4802081B30 M1B30 (alt: M1B10)

Y151 4802443B2 CRYSTAL: (SEE NOTE)
 14.4MHz

RESISTOR: fixed 5% 1/8 W
 unless otherwise stated

2680153J02 NON-REFERENCED ITEMS:
 SHIELD, coil, 2 used
 2680182H01 SHIELD, rf
 6680329A63 TOOL, align

R101 0602369M27 150 0.6W
 R102 0611024A25 100
 R103 0611024A73 10k
 R104 0611024A25 100
 R105 0611024A73 10k
 R106 0611024A01 10
 R107 0611024A77 15k
 R108 0611024A25 100
 R109 0611024A29 150
 R110 0611024A39 390
 R111 0611024A29 150
 R112 0611024A53 1.5k
 R113 0611024A67 5.6k
 R116 0611024A53 1.5k
 R117 0611024A59 2.7k
 R118 0611024A73 10k
 R119 0611024A77 15k
 R120 0611024A33 220
 R121 0611024A19 56
 R122 0611024A59 2.7k
 R123 0611024A25 100
 R124 0611024A49 1k
 R125 0611024A53 1.5k
 R126 0611024A63 3.9k
 R127 0611024A47 820
 R152 0610621E25 237k 1% 0.25W
 R153 0610621C57 6190 1% 0.25W
 R155 0610621C57 4420 1% 0.25W
 R156 0611024A97 100k
 R157 0611024A73 10k
 R158 0611024A73 10k
 R159 0611024A77 15k
 R160 0611024A09 22
 R161 0611024A53 1.5k
 R162 0611024A49 1k
 R209 0611024A73 10k
 R222 0611024A97 100k
 R223 0611024A73 10k
 R224 0611024A73 10k
 R225 0611024A19 56
 R226 0611024A25 100
 R227 0611024A73 10k
 R228 0611024A21 68
 R229 0611024A65 4.7k
 R230 0611024A57 2.2k
 R231 0611024A35 270
 R232 0611024A43 560
 R233 0611024A21 68
 R234 0611024A35 270
 R235 0611024A21 68
 R239 0611024B23 Jumper
 R241 0611024A49 1k
 R243 0611024A15 39
 R251 0611024A35 270
 R252 0611024A01 10
 R301 0611024A85 33k
 R302 1805500L08 variable, 22k 20%
 R303 0611024A33 220
 R304 0611024A01 10
 R305 1805500L08 variable, 22k 20%
 R306 0611024A01 10
 R307 0611024A57 2.2k
 R308 0611024A65 4.7k
 R309 0611024A65 4.7k
 R310 0611024A65 4.7k

GLE6178A Power Amplifier 10W 403-433MHz

SYMBOL PART NO. DESCRIPTION

CAPACITOR: fixed pF 5% 50V
 (chip) unless otherwise stated

C1510 2111031A39 100
 C1511 2111031A21 18
 C1512 2111031A17 15
 C1513 2111031A39 100
 C1514 2111031A39 100
 C1516 2111031A11 6.8 0.5pF
 C1517 2111031A17 12
 C1519 2111031A65 1800
 C1520 2111031A39 100
 C1521 2111031A13 8.2 0.5pF
 C1522 2111031A35 68
 C1523 2111031A65 1800
 C1524 2111032B15 0.022uF +80-20%
 C1525 2111032B15 0.022uF +80-20%
 C1526 2111031A39 100
 C1530 2111031A31 47
 C1532 2111033B28 43
 C1533 2111033B12 9.1 0.5pF
 C1534 2111031A53 470
 C1536 2111031A25 27
 C1537 2111031A28 36
 C1538 2111033B11 8.2 0.5pF 100V
 C1539 2111033B37 100 100V
 C1544 0811051A17 0.47uF 63V
 C1545 2111032B15 0.22uF +80-20%
 C1546 2111032B15 0.22uF +80-20%
 C1550 2111033B12 9.1 0.5pF
 C1551 2180240G15 9.1
 C1552 2180240G17 12
 C1553 2180240G17 12
 C1554 2180240G09 5.1
 C1555 2111033B37 100 100V
 C1560 2182450B11 3 500V
 C1561 2111031A17 12
 C1562 2111031A35 68
 C1563 2111032B15 0.22uF +80-20%
 C1570 2111031A09 4.7 0.25pF
 C1571 2111033B22 24 100V
 C1572 2111031A35 68
 C1580 2111031A35 68

DIODE: (SEE NOTE)
 CR1540 4880236E07 Silicon
 CR1560 4884616A01 Hot carrier
 CR1570 4883510F04 Silicon
 CR1571 4883510F04 Silicon

BEAD:
 E1540 7683960B01 Ferrite bead 5 turns

CONNECTOR:
 J8 0102716B679 Assy coax, includes:
 0982442E01 Female single contact
 1500483599 Hood, receptacle
 3083794C01 Cable, coaxial
 4303423A01 Bushing

THERMISTOR:
 RT151 0683600K06 10k @ 25°C
 RT152 0683600K06 10k @ 25°C
 RT153 0683600K05 100k @ 25°C

COIL, RF:
 L1510-
 L1512 2411030E01 Brown
 L1513 2411030A06 7 turns (violet)
 L1514 2480036A01 Ferrite bead, 5 turns
 L1520 2411030A05 6 turns (blue)
 L1521 2480036A01 Ferrite bead, 5 turns
 L1522 2480036A01 Ferrite bead, 5 turns
 L1523 2411030A02 3 turns (orange)
 L1530 2410030A03 4 turns yellow
 L1531 2480036A01 Ferrite bead 0.5 turns
 L1532 2411030A05 green

INTEGRATED CIRCUIT: (SEE NOTE)
 U101 5183548N19 Synthesizer
 U102 5183977M45 Dual modules prescaler

ZENER DIODE: (SEE NOTE)
 VR101 4882256C15 Zener 5.1V

| | | | | | | |
|--------|------------|---------------------------------------|--------|------------|----------------|--------------------------|
| L1533 | 2411030A01 | brown | C1620 | 2111031A35 | 68pF | |
| L1534 | 2880036A01 | Ferrite bead 0.5 turn | C1621 | 2111031D15 | 10pF 0.5pF | (GLE6179A) |
| L1540 | 2484346A02 | Choke 0.23uH | | or | 2111031A10 | 5.6pF 0.5pF (GLE6181A) |
| L1550- | | | C1623 | 2111031A35 | 68pF | |
| L1552 | 2411030B05 | 2.5 turns (green) | C1624 | 2111032B01 | 1000pF +80-20% | |
| L1553 | 2411030A02 | 3 turns (orange) | C1625 | 2111032B15 | 0.22 +80-20% | |
| L1554 | 2411030B15 | 10.5 turns (white) | C1626 | 2111032B15 | 0.22 +80-20% | |
| L1570 | 2482723H40 | 0.29uH (yellow-black) | C1629 | 2111031A25 | 27pF | (GLE6179A) |
| L1571 | 2411030B05 | 2.5 turns (green) | | or | 2111031A27 | 33pF (GLE6181A) |
| L1572 | 2482723H40 | 0.25uH (yellow-black) | C1630 | 2111031A25 | 27pF | (GLE6179A) |
| | | | | or | 2111031A24 | 24pF (GLE6181A) |
| | | CONNECTOR, plug: | C1631 | 2111031A26 | 30pF | (GLE6179A) |
| P1 | 1582694R03 | Housing, receptacle | | or | 2111031A25 | 27pF (GLE6181A) |
| | 3982693R02 | Contact, crimp, 4 used | C1632 | 2111033B27 | 39pF 100V | |
| P5 | 2802098M02 | Contact, single | C1633 | 2111031A35 | 68pF | |
| P6, P7 | 3080116K06 | Cable, coaxial includes plug | C1634 | 2111032B01 | 1000pF +80-20% | |
| | | | C1635 | 2111032B13 | 0.1 +80-20% | |
| | | TRANSISTOR: (SEE NOTE) | C1636 | 0811051A17 | 0.47 63V | |
| Q1510 | 4884411L37 | M11L37 | C1637 | 2111031A35 | 68pF | |
| Q1520 | 4880225C09 | M25C09 | C1638 | 2111032B01 | 1000pF +80-20% | |
| Q1530 | 4880225C19 | M25C19 | C1639 | 2111032B13 | 0.1 +80-20% | |
| | | | C1640 | 2111033B28 | 43pF 100V | |
| | | RESISTOR: fixed 5% 1/8W (chip) | C1641 | 2111033B28 | 43pF 100V | |
| | | unless otherwise stated | C1642 | 2111033B27 | 39pF 100V | (GLE6181A) |
| R1510 | 0611024A35 | 270 | C1642 | 2111033B26 | 36pF 100V | (GLE6179A) |
| R1511 | 0611024A33 | 220 | C1643 | 2111033B27 | 39pF 100V | |
| R1512 | 0611024A21 | 68 | C1644 | 2180240G38 | 22pF | (GLE6179A) |
| R1513 | 0611024A01 | 10 | | or | 2180240G35 | 15pF (GLE6181A) |
| R1514 | 0611024A01 | 10 | C1645 | 2180240G11 | 6.2pF | (GLE6179A) |
| R1521 | 0611024A29 | 150 | | or | 2180240G13 | 7.5pF (GLE6181A) |
| R1522 | 0611024A29 | 150 | C1646 | 2111032B13 | 0.1 +80-20% | |
| R1530 | 0611024A01 | 10 | C1647 | 2111031A35 | 68pF | |
| R1531 | 0602369M15 | 10 0.6W | C1648 | 2111032B01 | 1000pF +80-20% | |
| R1534 | 0611024A01 | 10 | C1649 | 2180240G44 | 56pF | (GLE6179A) |
| R1560 | 0611024A73 | 10k | | or | 2180240G27 | 56pF 250V (GLE6181A) |
| R1561 | 0611024A75 | 12k | C1651 | 2180240G17 | 12pF | (GLE6179A) |
| R1570 | 0600126A31 | 180 1W | | or | 2180240G16 | 10pF (GLE6181A) |
| | | | C1652 | 2109024G18 | 12pF | |
| | | THERMISTOR: | C1653 | 2109024G18 | 12pF | |
| RT1580 | 0683600K05 | 100k @ 25°C | C1654 | 2182040G15 | 9.1pF | (GLE6179A) |
| | | | | or | 2180240G16 | 10pF (GLE6181A) |
| | | NON-REFERENCED ITEMS: | C1655 | 2180240G11 | 6.2pF | |
| | 0200007003 | NUT, 8-32x5/16x18" | C1656 | 2111033B37 | 100pF 100V | (GLE6179A) |
| | 0200007018 | NUT, 3/8-32x1/2x3/32" | C1660 | 2182450B11 | 3pF 500V | (GLE6179A) |
| | 0302607B01 | SCREW M3x8, 7 used | | or | 2182450B18 | 2pF 500V (GLE6181A) |
| | 0302607B02 | SCREW M3x6, 3 used | C1661 | 2111033B10 | 7.5pF 100V | (GLE6179A) |
| | 0380165J07 | SCREW M4x10 | | or | 2111033B11 | 8.2pF 100V (GLE6181A) |
| | 0380269H09 | SCREW M5x0.8, 2 used | C1662 | 2111031A37 | 82pF | (GLE6179A) |
| | 0400007691 | LOCKWASHER, 3/8" internal | | or | 2111031A35 | 68pF (GLE6181A) |
| | 0703432A01 | BRACKET, connector | C1670 | 2111031A08 | 3.9pF 0.25pF | |
| | 0980038K02 | CONNECTOR, feedthru | C1671 | 2111003B20 | 20pF 100V | (GLE6179A) |
| | 2680092K01 | SHIELD | | or | 2111033B18 | 16pF 100V (GLE6181A) |
| | 2680176H08 | HEAT SINK | C1672 | 2111031A35 | 68pF | (GLE6179A) |
| | 2900005318 | LUG, soldering, 2 used | C1680 | 2111031A35 | 68pF | (GLE6179A) |
| | 1503424A01 | COVER, PA | | | | |
| | 4282405R01 | CLIP, PA | | | | |
| | 4303423A01 | BUSHING, coax | CR1640 | 4882036E07 | Silicon | DIODE: (SEE NOTE) |
| | 4210217A02 | STRAP 0.091x362", 2 used | CR1660 | 4884616A01 | Hot carrier | |
| | 2680222H01 | HEAT SINK, copper | CR1670 | 4883510F04 | Silicon | |
| | 2680199J01 | SHIELD, harmonic filter | CR1671 | 4883510F04 | Silicon | |

GLE6179A Power Amplifier 25W (403-440MHz)
GLE6181A Power Amplifier 25W (438-470MHz)

SYMBOL PART NO. DESCRIPTION

| | | | | | |
|-------|------------|-----------------------------------|--|--|--|
| | | CAPACITOR: fixed uF 5% 50V | | | |
| | | unless otherwise stated | | | |
| C1610 | 2111031A40 | 110pF (GLE6179A) | | | |
| or | 2111031A35 | 68pF (GLE6181A) | | | |
| C1611 | 2111031A21 | 18pF (GLE6179A) | | | |
| or | 2111031A17 | 12pF (GLE6181A) | | | |
| C1612 | 2111031A17 | 12pF | | | |
| C1613 | 2111031A40 | 110pF (GLE6179A) | | | |
| or | 2111031A37 | 82pF (GLE6181A) | | | |
| C1614 | 2111031A40 | 110pF (GLE6179A) | | | |
| or | 2111031A37 | 82pF (GLE6181A) | | | |
| C1616 | 2111031A11 | 6.8pF (GLE6179A) | | | |
| or | 2111031A09 | 4.7pF 0.25pF (GLE6181A) | | | |
| C1617 | 2111031A21 | 18pF (GLE6179A) | | | |
| or | 2111031A10 | 5.6pF 0.5pF (GLE6181A) | | | |
| C1618 | 2111031A35 | 68pF | | | |
| C1619 | 2111032B15 | 0.22 +80-20% | | | |

| | | |
|-------|------------|--------------|
| E1620 | 7683960B01 | Ferrite bead |
| E1630 | 7683960B01 | Ferrite bead |
| E1640 | 7683960B01 | Ferrite bead |

FILTER:

| | | |
|---------|------------|-----------|
| FT1601- | | |
| FT1605 | 9187511C01 | Feed thru |

CONNECTOR:

| | | |
|----|------------|-------------------------|
| J8 | 0102716B69 | Assy coax, includes: |
| | 0982442E01 | Contact, single, female |
| | 1500483599 | Hood, receptacle |
| | 3083794C01 | Cable, coaxial |
| | 4303423A01 | Bushing, coaxial |

COIL, RF:

| | | |
|-------|------------|-----------------------------|
| L1610 | 2411030E01 | 1/2 turns (brown) |
| L1611 | 2411030E01 | 1/2 turns (brown) |
| L1612 | 2411030E02 | 1/2 turn (red) (GLE6179A) |
| or | 2411030E01 | 1/2 turn (brown) (GLE6181A) |
| L1613 | 2480044F04 | Choke 1.2uH |
| L1614 | 2480036A01 | Ferrite bead 1/2 turn |

L1620 2411030A03 4 turns (yellow)
 L1621 2480036A01 Ferrite bead 1/2 turn
 L1622 2482723H44 Choke 39uH (blue-yellow)
 L1630 2411030A03 4 turns (yellow)
 L1631 2480036A01 Ferrite bead,.5 turn
 L1632 2411030A03 4 turns (yellow)
 L1633 2482723H46 0.4uH (blue-green)
 L1640 2411030A03 4 turns (yellow)
 L1641 2480036A01 Ferrite bead,.5 turn
 L1642 2411030A02 3 turns (orange)
 L1643 2484346A02 Choke 0.23uH
 L1644 2411030E02 1/2 turn (red)
 L1650 2411030B03 1.5 turns (orange)
 L1651 2411030B05 2.5 turns (green)
 L1652 2411030B02 1.5 turns (red)
 L1653 2411030B03 1.5 turns (orange)
 L1654 2411030B11 6.5 turns (orange)
 L1670 2482723H40 Choke 0.29uH (yellow-black)
 L1671 2411030B02 1.5 turns (red)
 L1672 2482723H40 Choke 0.29uH (yellow-black)

CONNECTOR:
 P1 1582694R03 Housing, receptacle
 3982693R02 Contact, receptacle, 4 used
 P5 2802098M02 Male, single contact
 P6, P7 3080116K06 Cable, coax, incl plug

TRANSISTOR: (SEE NOTE)
 Q1610 4884411L37 M11L37
 Q1620 4880225C09 M25C09
 Q1630 4880225C19 M25C19
 Q1640 4884411L07 M11L07

RESISTOR: fixed 5% 0.125W
 R1610 0611024A35 270
 R1611 0611024A33 220
 R1612 0611024A21 68
 R1613-
 R1615 0611024A01 10
 R1660 0611024A73 10k
 R1661 0611024A75 12k
 R1670 0602369M29 270 0.6W
 R1671 0611024A53 1.5k
 R1672 0611024A53 1.5k
 R1773 0611024A53 1.5k

THERMISTOR:
 RT1680 0683600K05 100k @ 25°C

NON-REFERENCED ITEMS:
 0200007003 NUT, 8-32x5/16x1/8"
 0200007018 NUT, 3/8x32x1/2x3/32"
 0302607B01 SCREW, taptite M3x8, 9 used
 0302607B02 SCREW, taptite M3x6, 4 used
 0380165J07 SCREW, machine M4x10
 0380269H09 SCREW, tapt M5x0.8, 2 used
 0400007691 LOCKWASHER 3/8" internal
 0703432A01 BRACKET
 0980038K02 CONNECTOR, power
 0982442E01 CONNECTOR
 1500483599 HOOD, receptacle
 1503424A01 COVER, PA
 2680092K01 SHIELD, antenna
 2680176H08 HEAT SINK
 2680199J01 SHIELD, filter
 2680222H01 HEATSINK
 2900005318 LUG, solder cap, 2 used
 3080116K06 CABLE, coaxial
 3083794C01 CABLE, coaxial (white)
 3982693R02 CONTACT, contact crimp, 4 used
 4210217A02 STRAP, 0.091x3.62", 2 used
 4280201J01 CLIP, ground
 4282405R01 CLIP
 4303423A01 BUSH, coaxial

NOTE

For optimum performance, diodes, transistors, integrated circuits and crystals must be ordered by Motorola part numbers.

GLE6180A PA, 1-10W (438-470MHz)

SYMBOL PART NO. DESCRIPTION

CAPACITOR: fixed pF 5% 50V unless otherwise stated

| | | |
|--------|------------|-----------------|
| C1510 | 2111031A35 | 68 |
| C1511 | 2111031A18 | 13 |
| C1513 | 2111031A33 | 56 |
| C1514 | 2111031A33 | 56 |
| C1515 | 2111031A05 | 2.2 0.25pF |
| C1516 | 2111031A09 | 4.7 0.25pF |
| C1517 | 2111031A17 | 12 |
| C1518 | 2111031A33 | 56 |
| C1519 | 2111032B15 | 0.22uF +80-20% |
| C1520 | 2111031A35 | 68 |
| C1521 | 2111031A26 | 30 |
| C1522 | 2111031A35 | 68 |
| C1523- | | |
| C1525 | 2111032B15 | 0.22uF +80-20% |
| C1526 | 2111031A35 | 68 |
| C1530 | 2111031A23 | 22 |
| C1531 | 2111033B29 | 47 100V |
| C1532 | 2111033B23 | 27 100V |
| C1533 | 2111033B08 | 6.2 0.25pF 100V |
| C1534 | 2111031A35 | 68 |
| C1535 | 2111032B15 | 0.22uF +80-20% |
| C1539 | 2111033B37 | 100 100V |
| C1540 | 2111031A05 | 2.2 0.25pF |
| C1544 | 0811051A17 | 0.47uF 63V |
| C1545 | 2111031A35 | 68 |
| C1546 | 2111032B15 | 0.22uF +80-20% |
| C1547 | 2111031A35 | 68 |
| C1548 | 2111031A61 | 0.001uF |
| C1549 | 2111032B15 | 0.22uF +80-20% |
| C1550 | 2111033B12 | 9.1 0.5pF 100V |
| C1551 | 2180240G16 | 10 1pF 250V |
| C1552 | 2180240G13 | 7.5 0.25pF 250V |
| C1553 | 2180240G16 | 10 1pF 250V |
| C1554 | 2180240G15 | 9.1 0.25pF 250V |
| C1555 | 2111033B17 | 15 100V |
| C1556 | 2111033B05 | 4.7 0.25pF 100V |
| C1560 | 2182450B11 | 3 500V |
| C1561 | 2111031A14 | 9.1 0.5pF |
| C1562 | 2111031A35 | 68 |
| C1570 | 2111031A62 | 5.1 0.25pF |
| C1571 | 2111033B19 | 18 100V |
| C1572 | 2111031A35 | 68 |
| C1580 | 2111031A35 | 68 |
| C1590 | 2102288M04 | 0.0033uF 10% |

DIODE: (SEE NOTE)
 CR1540 4880236E07 28V Zener
 CR1560 4884616A01 Hot carrier
 CR1570 4883510F04 Pin
 CR1571 4883510F04 Pin

CONNECTOR, receptacle:
 J8 0102716B69 Assy coax xmit output includes:
 0982442E01 Female single contact
 1500483599 Hood, receptacle
 3083794C01 Cable, coaxial
 4303423M01 Bushing

COIL:
 E1540 7683960B01 Ferrite bead 0.5 turn
 L1510 2411030E01 (brown)
 L1511 2411030E01 (brown)
 L1512 2411030E02 (red)
 L1513 2411030B11 6.5 turns (orange)
 L1514 2480036A01 Ferrite bead 0.5 turn
 L1520 2411030A02 3 turns (orange)
 L1521 2480036A01 Ferrite bead 0.5 turn
 L1522 2480036A01 Ferrite bead 0.5 turn
 L1523 2411030A05 6 turns (blue)
 L1530 2411030A02 3 turns (orange)
 L1531 2480036A01 Ferrite bead 0.5 turn
 L1532 2411030E04 (yellow)
 L1533 2411030B05 2.5 turns (green)
 L1534 2411030B12 1.5 turns (yellow)
 L1540 2484346A02 0.23uH
 L1550 2411030B04 1.5 turns (yellow)
 L1551 2411030B05 2.5 turns (green)

L1552 2411030B05 2.5 turns (green)
 L1553 2411030B04 1.5 turns (yellow)
 L1554 2411030B07 3.5 turns (white)
 L1570 2482723H40 0.29uH (yellow-black)
 L1571 2411030B03 1.5 turns (orange)
 L1572 2482723H40 0.29uH (yellow-black)

GLN6767A TRC Board 1F
 GLN6768A TRC Board Fully Optioned

P1 1582694R03 CONNECTOR:
 Housing, receptacle
 3982693R02 Contact, recept crimp, 4 used
 P5 2802098M02 Contact, single male
 P6 3080116K06 Cable, coaxial includes plug
 P7 3080116K06 Cable, coaxial includes plug

Q1510 4884411L37 TRANSISTOR: (SEE NOTE)
 Q1520 4880225C09 MIL37
 Q1530 4880225C19 MSC09
 MSC19

R1510 0611024A35 270
 R1511 0611024A33 220
 R1512 0611024A21 68
 R1513 0611024A01 10
 R1514 0611024A01 10
 R1515 0611024A33 220
 R1521 0611024A29 150
 R1522 0611024A29 150
 R1530 0611024A01 10
 R1534 0611024A01 10
 R1560 0611024A73 10k
 R1561 0611024A75 12k
 R1570 0600126A31 180 1W

RESISTOR: fixed 5% 1/8W
 unless otherwise stated

NON-REFERENCED ITEMS:

0200007003 NUT, 8-32x5/16x1/8"
 0200007018 NUT, 3/8-32x1/2x3/32"
 0302607B01 SCREW, M3x8 7 used
 0302607B02 SCREW, M3x6, 4 used
 0380165J07 SCREW, M4x10
 0380269H09 SCREW, M5x.8 2used
 0400007691 LOCKWASHER, 3/8" int'1
 0703432A01 BRACKET, connector
 0980038K02 CONNECTOR, feed-thru
 2680092K01 SHIELD
 2680176H08 HEAT SINK
 2900005318 LUG, soldering, 2 used
 1503424A01 COVER, PA
 4282405R01 CLIP, PA
 4303423A01 BUSHING, coax
 4210217A02 STRAP, 0.091x362", 2 used
 2680222H01 HEAT SINK, copper
 2680199J01 SHIELD, harmonic filter
 2980014A01 CLIP, terminal

| SYMBOL | PART NO. | DESCRIPTION |
|--------|------------|--|
| | | <u>CAPACITOR:</u> fixed pF 5% 50V unless otherwise stated |
| C800 | 2311019A46 | 100uF 20% 25V |
| C801 | 0811051A15 | 0.22uF 63V |
| C802 | 2111031A41 | 120 (chip) |
| C803 | 2111032A21 | 0.01uF 10% (chip) |
| C804 | 0811051A15 | 0.22uF 63V |
| C805 | 2311048B11 | 10uF 20% 35V |
| C806 | 2111032A21 | 0.01uF 10% (chip) |
| C807 | 2111031A39 | 100 (chip) |
| C808 | 2111032A21 | 0.01uF 10% (chip) |
| C809 | 2311048B09 | 4.7uF 20% 35V |
| C810 | 2111031A55 | 470 (chip) |
| C811 | 2311019A46 | 100uF 20% 25V |
| C812 | 0811051A15 | 0.22uF 63V |
| C813 | 0811051A15 | 0.22uF 63V |
| C814 | 2111031A47 | 220 (chip) |
| C815 | 2311019A46 | 100uF 20% 25V |
| C816 | 2302308M01 | 1000uF +100-10% 20V |
| C817 | 2111031A47 | 220 (chip) |
| C818 | 2311048B09 | 4.7uF 20% 35V |
| C819 | 0811051A13 | 0.1uF 63V |
| C820 | 0811051A15 | 0.22uF 63V |
| C821 | 2111032A21 | 0.01uF 10% (chip) |
| C822 | 0811051A13 | 0.1uF 63V |
| C823 | 0811051A17 | 0.47uF 63V |
| C824 | 2111031A29 | 39 (chip) |
| C825 | 2111031A51 | 330 (chip) |
| C826 | 2111031A61 | 1000 (chip) |
| C827 | 2111031A29 | 39 (chip) |
| C828 | 2111031A29 | 39 (chip) |
| C829 | 0811051A15 | 0.22uF 63V |
| C830 | 2111031A29 | 39 (chip) |
| C831 | 0811051A13 | 0.1uF 63V |
| C832 | 2111031A61 | 0.001uF (chip) (GLN6767A only) |
| C833 | 2382028P07 | 4.7uF 20% 200V |
| C834 | 2111032A21 | 0.01uF 10% (chip) |
| C835 | 0811051A13 | 0.1uF 63V (GLN6768A only) |
| C836 | 0811051A13 | 0.01uF 63V |
| C837 | 0811051A13 | 0.1uF 63V (GLN6768A only) |
| C838 | 0811051A13 | 0.1uF 63V (GLN6768A only) |
| C839 | 0811051A13 | 0.1uF 63V (GLN6768A only) |
| C840 | 0811051A13 | 0.1uF 63V (GLN6768A only) |
| C841 | 0811051A17 | 0.47uF 63V (GLN6768A only) |
| C842 | 0811051A13 | 0.1uF 63V (GLN6768A only) |
| C843 | 0811051A03 | 0.0022uF 63V (GLN6768A only) |
| C844 | 2183162H36 | 0.01uF (GLN6768A only) |
| C845 | 2311048B11 | 10uF 20% 35V |
| C846 | 2183162H36 | 0.01uF |
| C847 | 0811051A03 | 0.0022uF 63V |
| C848 | 0811051A13 | 0.1uF 63V |
| C849 | 0811051A16 | 0.33uF 63V |
| C850 | 0811051A13 | 0.1uF 63V |
| C851 | 2183162H36 | 0.01uF (GLN6768A only) |
| C852 | 0811051A03 | 0.0022uF 63V (GLN6768A only) |
| C853 | 0811051A13 | 0.1uF 63V (GLN6768A only) |
| C854 | 0811051A16 | 0.33uF 63V (GLN6768A only) |
| C855 | 0811051A13 | 0.1uF 63V (GLN6768A only) |
| C856 | 2183162A36 | 0.01uF (GLN6768A only) |
| C857 | 0811051A03 | 0.0022uF 63V (GLN6768A only) |
| C858 | 0811051A13 | 0.1uF 63V (GLN6768A only) |
| C859 | 0811051A16 | 0.33uF 63V (GLN6768A only) |
| C860 | 0811051A13 | 0.1uF 63V (GLN6768A only) |
| C861 | 2183162A36 | 0.01uF (GLN6768A only) |
| C862 | 0811051A13 | 0.1uF 63V (GLN6768A only) |
| C863 | 0811051A16 | 0.33uF 63V (GLN6768A only) |
| C864 | 0811051A13 | 0.1uF 63V (GLN6768A only) |
| C865 | 0811051A03 | 0.0022uF 63V (GLN6768A only) |
| C866 | 0811051A11 | 0.047uF 63V |
| C867 | 2111031A61 | 0.001uF (chip) |
| C868 | 0811051A16 | 0.33uF 63V |
| C869 | 2183162A36 | 0.01uF |
| C870 | 0811051A03 | 0.0022uF 63V |
| C871 | 0811051A13 | 0.1uF 63V |
| C872 | 0811051A16 | 0.33uF 63V |
| C873 | 0811051A13 | 0.1uF 63V |
| C874 | 2311019A46 | 100uF 20% 25V |
| C875 | 0811051A15 | 0.22uF 63V |
| C876 | 2111031A61 | 1000 (chip) |

GLE6182A Filter UHF Receiver Low Pass

SYMBOL PART NO. DESCRIPTION

C1 2111003A12 CAPACITOR, fixed:
 7.5pF 5% 50V
 C2 2111003A12 7.5pF 5% 50V
 C3 2111031A23 22pF 5% 50V (chip)

J1 0982442E01 CONNECTOR:
 Female, single contact

L1 2411030A02 COIL, RF:
 3 turns orange

R1 0611024A73 RESISTOR:
 10k 5% 0.125W

NON-REFERENCED ITEMS:
 0380269H06 SCREW, mounting M3x0.5, 2 used
 0703432A01 BRACKET
 1500843599 HOOD, receptacle
 1503473A01 HOUSING, filter
 2980014A01 CLIP, coax terminal
 3080116K05 CABLE, coaxial

| | | | | | | | |
|-------|------------|-------------------|-----------------|----------|------------|--------------------------|-----------------|
| C877 | 2111031A61 | 1000 (chip) | | | | | |
| C878 | 2111031A35 | 68 (chip) | | J3 | 0980023J01 | Female; 6-contact | |
| C879 | 2111031A15 | 10 0.5% (chip) | | J4 | 2882984N04 | Male; 4-contact | |
| C880 | 2111032A21 | 0.01uF 10% (chip) | | J6, J11 | 0980179M03 | Female; 11-contact | |
| C881 | 2111031A61 | 0.001uF (chip) | | J8, J9 | 0980023J01 | Female; 6-contact | |
| C882 | 2111031A61 | 0.001uF (chip) | | J10 | 0980179H05 | Female | |
| C883- | | | | | | | |
| C885 | 2111031A29 | 39 (chip) | | | | | |
| C886 | 2111031A39 | 100 (chip) | | JU1, JU3 | 0611009D23 | Jumper | |
| C887 | 0881051A12 | 0.068uF 63V | | JU2, JU4 | 0611009D23 | Jumper | (GLN6768A only) |
| C888 | 2111032A21 | 0.01uF 10% (chip) | | JU5- | | | |
| C889 | 2111031A61 | 0.001uF (chip) | | JU12 | 0611009D23 | Jumper | |
| C890 | 0811051A06 | 0.0068uF 63V | | JU14 | 0611009D23 | Jumper | (GLN6768A only) |
| C891 | 2111032A21 | 0.01uF 10% (chip) | | JU15 | 0611009D23 | Jumper | |
| C892 | 2311048B11 | 10uF 20% 35V | | JU16- | | | |
| C893 | 2111032A21 | 0.01uF 10% (chip) | | JU18 | 0611009D23 | Jumper | (GLN6768A only) |
| C894 | 2311019A46 | 100uF 20% 25V | | JU20 | 0611009D23 | Jumper | (GLN6767A only) |
| C895 | 0811051A13 | 0.1uF 63V | | JU21 | 0611009D23 | Jumper | |
| C896 | 0811051A13 | 0.1uF 63V | | JU22 | 0611009D23 | Jumper | (GLN6768A only) |
| C897 | 2111032A21 | 0.01uF 10% (chip) | | JU23 | 0611009D23 | Jumper | (GLN6767A only) |
| C898 | 0811051A01 | 0.001uF 63V | | JU24 | 0611009D23 | Jumper | (GLN6767A only) |
| C899 | 2311019A46 | 100uF 20% 25V | | JU26 | 0611009D23 | Jumper | |
| C901 | 2111031A61 | 1000 (chip) | | JU27 | 0611009D23 | Jumper | (GLN6768A only) |
| C902 | 2311048B09 | 4.7uF 20% 35V | | JU28 | 0611009D23 | Jumper | (GLN6768A only) |
| C903 | 0811051A15 | 0.22uF 63V | | JU29 | 0611009D23 | Jumper | |
| C904 | 0811051A15 | 0.22uF 63V | | JU30- | | | |
| C905 | 0811051A13 | 0.1uF 63V | | JU37 | 0611009D23 | Jumper | (GLN6768A only) |
| C906 | 2111032A21 | 0.01uF 10% (chip) | | | | | |
| C907 | 2111031A58 | 620 (chip) | | | | | |
| C908 | 2311048B06 | 2.2uF 20% | | P1 | 2882697R03 | Male 4-contact | |
| C909 | 0811051A15 | 0.22uF 63V | (GLN6767A only) | P2A, P2B | 0905604C06 | Socket speaker 2-contact | |
| C910 | 0811051A15 | 0.22uF 63V | (GLN6767A only) | P4 | 2882697R14 | Male 15-contact | |
| C911 | 2311048B09 | 4.7uF 20% 35V | (GLN6767A only) | P5, P12 | 2882697R05 | Male 6-contact | |
| C912 | 2111031A61 | 1000 (chip) | | P7 | 2883441F08 | Male 7-contact | |
| C913 | 0811051A15 | 0.22uF 63V | | | | | |
| C914 | 0811051A16 | 0.33uF 63V | (GLN6767A only) | | | | |
| C915 | 2311048B11 | 10uF 20% 35V | (GLN6767A only) | | | | |
| C916 | 0811051A13 | 0.1uF 63V | (GLN6767A only) | | | | |
| C917- | | | | | | | |
| C924 | 2111032A21 | 0.01uF (chip) | (GLN6767A only) | Q801 | 4800869787 | M9787 | |
| C940 | 2311048B09 | 4.7uF 20% 35V | | Q802 | 4800869787 | M9787 | |
| C941 | 0811051A15 | 0.22uF 63V | | Q803 | 4802081B30 | M1B30 | (GLN6768A only) |
| C945 | 2111031A29 | 39 (chip) | | Q804- | | | |
| C946 | 0811051A07 | 0.01uF 63V | | Q807 | 4802081B30 | M1B30 (alt: M1B10) | |
| C947 | 0811051A07 | 0.01uF 63V | | Q809 | 4800869619 | M9619 | |
| C950 | 0811051A13 | 0.1uF 63V | | Q810- | | | |
| C951 | 2100861439 | 345 10% 75V | | Q813 | 4802081B30 | M1B30 (alt: M1B10) | |
| C952- | | | | Q814 | 4802081B31 | M1B31 (alt: M1B11) | |
| C954 | 2100861439 | 345 10% 75V | (GLN6768A only) | Q815 | 4802081B30 | M1B30 | (GLN6767A only) |
| C955 | 2111031A61 | 1000 (chip) | | Q816 | 4802081B30 | M1B30 (alt: M1B10) | |
| C956 | 2100861439 | 345 10% 75V | (GLN6767A only) | Q826- | | | |
| C957 | 2100861439 | 345 10% 75V | (GLN6767A only) | Q829 | 4802081B30 | M1B30 (alt: M1B10) | |
| C958 | 2102288M14 | | | Q830- | | | |
| C960 | 2360561B21 | 220uF 20% 25V | | Q832 | 4802081B30 | M1B30 | (GLN6767A only) |
| C961 | 2360561B21 | 220uF 20% 25V | | Q833 | 4802081B30 | M1B30 (alt: M1B10) | |
| C962 | 2360561B21 | 220uF 20% 25V | | Q834 | 4802081B30 | M1B30 (alt: M1B10) | |
| | | | | Q835 | 4802081B30 | M1B30 | (GLN6768A only) |

CONNECTOR:

Female; 6-contact
Male; 4-contact
Female; 11-contact
Female; 6-contact
Female

JUMPER:

Jumper
Jumper (GLN6768A only)

CONNECTOR:

Male 4-contact
Socket speaker 2-contact
Male 15-contact
Male 6-contact
Male 7-contact

TRANSISTOR: (SEE NOTE)

M9787
M9787
M1B30 (GLN6768A only)
M1B30 (alt: M1B10)
M9619
M1B30 (alt: M1B10)
M1B31 (alt: M1B11)
M1B30 (GLN6767A only)
M1B30 (alt: M1B10)
M1B30 (alt: M1B10)
M1B30 (GLN6767A only)
M1B30 (alt: M1B10)
M1B30 (alt: M1B10)
M1B30 (GLN6768A only)

RESISTOR: fixed 5% 1/8W unless otherwise stated

DIODE: (SEE NOTE)

| | | | | | | | |
|--------|------------|---------|-----------------|------|------------|---------------|--|
| CR800 | 4883654H01 | Silicon | | R800 | 0610024A25 | 100 | |
| CR801 | 4883654H01 | Silicon | (GLN6767A only) | R801 | 0611024A43 | 560 | |
| CR802 | 4883654H01 | Silicon | (GLN6767A only) | R802 | 0602369M52 | 18k 0.6W | |
| CR803- | | | | R803 | 0611024A51 | 1.2k | |
| CR814 | 4883654H01 | Silicon | | R804 | 0602369M52 | 18k 0.6W | |
| CR815 | 4883654H01 | Silicon | (GLN6768A only) | R805 | 0611024A79 | 18k | |
| CR816 | 4883654H01 | Silicon | | R807 | 0611024A73 | 10k | |
| CR817 | 4882022N05 | Silicon | | R808 | 0602369M52 | 18k 0.6W | |
| CR818 | 4882022N05 | Silicon | | R809 | 0611024A79 | 18k | |
| CR819- | | | | R810 | 0611024A97 | 100k | |
| CR821 | 4883654H01 | Silicon | | R811 | 0611024B06 | 220k | |
| CR822 | 4883654H01 | Silicon | (GLN6768A only) | R812 | 0611024A97 | 100k | |
| CR823 | 4883654H01 | Silicon | | R813 | 0611024A73 | 10k | |
| CR824 | 4883654H01 | Silicon | | R814 | 0611024A85 | 33k | |
| CR825 | 4883654H01 | Silicon | (GLN6767A only) | R815 | 0611024A89 | 47k | |
| CR826 | 4883654H01 | Silicon | (GLN6768A only) | R816 | 0611024A97 | 100k | |
| CR827 | 4883654H01 | Silicon | | R817 | 0611024A25 | 100 | |
| CR828 | 4883654H01 | Silicon | (GLN6768A only) | R818 | 1802099B02 | variable 20k | |
| CR829- | | | | R819 | 0611024A89 | 47k | |
| CR835 | 4883654H01 | Silicon | | R820 | 1803464A04 | variable 100k | |
| CR836 | 4884350P01 | Silicon | | R821 | 0611024A85 | 33k | |
| | | | | R822 | 0602369M52 | 18k 0.6W | |
| | | | | R823 | 0611024A79 | 18k | |
| | | | | R824 | 0611024A85 | 33k | |
| | | | | R825 | 0611024A73 | 10k | |
| | | | | R826 | 0602369M73 | 1M 0.6W | |
| | | | | R827 | 0611024A89 | 47k | |

LIGHT EMITTING DIODE: (SEE NOTE)

| | | | | | | | |
|-------|------------|--------|-----------------|--|--|--|--|
| DS800 | 4880058K01 | red | | | | | |
| DS801 | 4880058K03 | yellow | (GLN6768A only) | | | | |
| DS802 | 4880058K02 | green | (GLN6768A only) | | | | |

| | | | | | | | |
|------|------------|------------------------|-----------------|------|------------|-----------------------|-----------------|
| R828 | 0611024A81 | 22k | | R912 | 0602366M91 | 56k 1% 0.39W | (GLN6768A only) |
| R829 | 0611024A77 | 15k | | R913 | 1803464M03 | variable, 20k | (GLN6768A only) |
| R830 | 0611024A97 | 100k | | R914 | 0611024B22 | 1M 5% 0.25W | (GLN6768A only) |
| R831 | 1803464A04 | variable 100k | | R915 | 0611024A73 | 10k | |
| R832 | 0602369M46 | 5.6k | | R916 | 0611024A79 | 18k | |
| R833 | 0611024A89 | 47k | | R917 | 0611024A77 | 15k | |
| R834 | 0611024A73 | 10k | | R918 | 0611024A93 | 68k | |
| R835 | 0611024A79 | 18k | | R920 | 0611024B12 | 390k | |
| R836 | 0611024A73 | 10k | | R921 | 0602369M52 | 18k 0.6W | (GLN6768A only) |
| R837 | 0611024A65 | 4.7k | | R922 | 0602369M61 | 100k 0.6W | |
| R838 | 0611024A53 | 1.5k | | R923 | 0602369M58 | 56k 0.6W | |
| R839 | 0611024A73 | 10k | | R924 | 0602369M54 | 27k 0.6W | |
| R840 | 0602369M06 | 2.7 0.6W | | R925 | 0611024A89 | 47k | |
| R841 | 0611024B06 | 220k | | R926 | 0611049K04 | 11k 1% 0.39W | |
| R842 | 0611024A87 | 39k | | R927 | 0602366M94 | 70k 1% 0.39W | |
| R843 | 0611024A87 | 39k | | R928 | 0611049D06 | 13k 1% 0.39W | |
| R844 | 0611024A89 | 47k | | R929 | 0602366M77 | 15k 1% 0.39W | |
| R845 | 0611024B02 | 150k | | R930 | 0602366M78 | 16k 1% 0.39W | |
| R846 | 0611024A89 | 47k | | R931 | 1803464A01 | variable 2k 10% 0.5W | |
| R847 | 0611024A89 | 47k | | R932 | 0602369M52 | 18k 0.6W | |
| R848 | 0611024A65 | 4.7k | | R933 | 0611024A79 | 18k | |
| R849 | 0611024A63 | 3.9k | | R934 | 0611024A73 | 10k | |
| R850 | 0611024A61 | 3.3k | | R935 | 0611024A65 | 4.7k | |
| R851 | 0611024A65 | 4.7k | | R936 | 0611024B06 | 220k | |
| R852 | 0602369M25 | 100 | | R937 | 0611024A73 | 10k | (GLN6768A only) |
| R853 | 0611024A65 | 4.7k | | R938 | 0611024B79 | 18k | |
| R854 | 0611049D81 | 84.5k 1% 0.25W | | R939 | 0611024A77 | 15k | |
| R855 | 0611049D81 | 84.5k 1% 0.25W | | R940 | 0611024A73 | 10k | |
| R856 | 0611024A65 | 4.7k | | R941 | 0611024A73 | 10k | |
| R857 | 0611024A89 | 47k | | R942 | 0611024A65 | 4.7k | |
| R858 | 0611024A89 | 47k | | R943 | 0611024A97 | 100k | |
| R859 | 0611024A65 | 4.7k | | R944 | 0602369M45 | 10k 0.6W | |
| R860 | 0611024A51 | 1.2k | | R945 | 0611024A56 | 2k | |
| R861 | 0611024A55 | 1.8k | | R946 | 0611024A73 | 10k | |
| R862 | 0611009A44 | 620 0.25W | | R947 | 0611024B06 | 220k | |
| R863 | 0611024B12 | 390k | (GLN6767A only) | R948 | 0611024A89 | 47k | |
| R864 | 0602369M25 | 100 0.6W | | R949 | 0611024B06 | 220k | |
| R865 | 0611024A73 | 10k | | R950 | 0611024A89 | 47k | |
| R866 | 0611024B14 | 470k | | R951 | 0611024A97 | 100k | |
| R867 | 0602366M84 | 30k 1% 0.39W | | R952 | 0611024A73 | 10k | |
| R868 | 1803464A03 | variable 20k | | R953 | 0611024A89 | 47k | |
| R869 | 1702254M67 | 3.3M 125W | | R954 | 0611024A97 | 100k | |
| R870 | 0611024A73 | 10k | | R955 | 0611024A97 | 100k | |
| R871 | 0611024A81 | 22k | | R956 | 0611024A73 | 10k | |
| R872 | 0611024B06 | 220k | | R958 | 0611049D06 | 14k 1% 0.39W | |
| R873 | 0611024A81 | 22k | | R959 | 0602367M05 | 150k 1% 0.39W | |
| R874 | 0611024A56 | 2k | | R960 | 0602366M77 | 15k 1% 0.39W | |
| R875 | 0611024A94 | 75k | | R961 | 0602366M77 | 15k 1% 0.39W | |
| R876 | 1702254M66 | 2.7M 125W | | R962 | 0602366M78 | 16k 1% 0.39W | |
| R877 | 0611024B14 | 470k | (GLN6768A only) | R963 | 1803464A01 | variable, 2k 10% 0.5W | |
| R878 | 0602366M88 | 43k 1% 0.39W | | R964 | 0611024A65 | 4.7k | |
| R879 | 1883452F14 | variable 10k 10% 1/2W | | R965 | 0611024A35 | 270 | |
| R880 | 0600124B38 | 4.7M 0.25W | (GLN6768A only) | R966 | 0611024A89 | 39k | |
| R881 | 0611024A73 | 10k | | R967 | 0602366M77 | 15k 1% 0.39W | |
| R882 | 0611024A89 | 47k | | R968 | 1803464A01 | variable, 2k 10% 0.5W | |
| R883 | 0611024A53 | 1.5k | (GLN6768A only) | R969 | 0602366M78 | 16k 1% 0.39W | |
| R884 | 0611024B12 | 390k | | R970 | 0602367M16 | 430k 1% 0.39W | |
| R885 | 0611024B12 | 390k | | R971 | 0611024B06 | 220k | |
| R886 | 0602369M57 | 47k 0.6W | | R972 | 1803464A01 | variable, 2k 10% 0.5W | |
| R887 | 0611024A89 | 47k | | R973 | 0602366M77 | 15k 1% 0.39W | |
| R888 | 0611024A56 | 2k | | R974 | 0602366M78 | 16k 1% 0.39W | |
| R889 | 0611024A97 | 100k | | R975 | 0602367M16 | 430k 1% 0.39W | |
| R890 | 0611024B12 | 390k | (GLN6768A only) | R976 | 0611024A73 | 10k | |
| R891 | 0611024A79 | 18k | | R977 | 0611024A73 | 10k | |
| R892 | 0611024A89 | 47k | (GLN6768A only) | R978 | 0611024A89 | 47k | |
| R893 | 0611024A89 | 47k | (GLN6768A only) | R979 | 0611024A92 | 62k | |
| R894 | 0611024A89 | 47k | (GLN6768A only) | R980 | 0611024A73 | 10k | |
| R895 | 0611024A89 | 47k | | R981 | 0611024A65 | 4.7k | |
| R896 | 0611024A73 | 10k | | R982 | 0610621C18 | 1740 1% 0.25W | |
| R897 | 0611024B14 | 470k | | R983 | 0610621C28 | 2210 1% 0.25W | |
| R898 | 0602366M88 | 43k 1% 0.39W | | R984 | 0611024A73 | 10k | |
| R899 | 1803464A03 | variable, 20k 10% 0.5W | | R985 | 0611024A45 | 680 | |
| R900 | 0611024B22 | 1M | | R986 | 0611024A45 | 680 | |
| R901 | 0611024B14 | 470k | (GLN6768A only) | R987 | 0602379M31 | 330 0.6W | |
| R902 | 0602366M88 | 43k 1% 0.39W | (GLN6768A only) | R988 | 0611024A89 | 47k | |
| R903 | 1803464A03 | variable, 20k | (GLN6768A only) | R989 | 0611024A89 | 47k | |
| R904 | 0611024B22 | 1M 0.25W | (GLN6768A only) | R990 | 0611024A59 | 2.7k | |
| R905 | 0611024A73 | 10k | | R991 | 0611024A79 | 18k | |
| R906 | 0611024B14 | 470k | (GLN6768A only) | R992 | 0611024A79 | 18k | |
| R907 | 0602366M91 | 56k 1% 0.39W | (GLN6768A only) | R993 | 0611024A85 | 33k | |
| R908 | 1803464A03 | variable, 20k | (GLN6768A only) | R994 | 0611024A73 | 10k | |
| R909 | 0611024B22 | 1M 1/4 W | (GLN6768A only) | R995 | 0611024A77 | 15k | |
| R910 | 0611024A73 | 10k | | R996 | 0611024A64 | 4.3k | |
| R911 | 0611024B14 | 470k | (GLN6768A only) | R997 | 0611024A79 | 18k | |

| | | | |
|--------|------------|------------------------|-----------------|
| R 998 | 0611024A89 | 47k | |
| R1000 | 0611024A85 | 33k | |
| R1001 | 0611024A77 | 15k | |
| R1002 | 1803464A04 | variable 100k 10% 0.5W | |
| R1003 | 0611024A57 | 2.2k | |
| R1004 | 0611024A57 | 2.2k | |
| R1005 | 0611024A89 | 47k | |
| R1006 | 0611024A89 | 47k | (GLN6768A only) |
| R1007 | 0611024A73 | 10k | |
| R1008 | 0602369M57 | 47k 0.6W | |
| R1009 | 0602369M57 | 47k 0.6W | |
| R1010 | 0611024A89 | 47k | |
| R1011 | 0611024A89 | 47k | |
| R1012 | 0611024A53 | 1.5k | |
| R1013 | 0611024A89 | 47k | |
| R1014 | 0611024A79 | 18k | |
| R1015 | 0611024A79 | 18k | |
| R1016 | 0611024A63 | 3.9k | |
| R1017 | 0611024A71 | 8.2k | |
| R1018 | 0611024A49 | 1k | |
| R1019 | 0611024A79 | 18k | |
| R1020 | 0611024A73 | 10k | |
| R1021 | 0611024A75 | 12k | |
| R1022 | 0611024A65 | 4.7k | |
| R1023- | | | |
| R1025 | 0611024A73 | 10k | |
| R1026 | 0611024A89 | 47k | |
| R1027 | 0611024A81 | 22k | |
| R1028 | 0611024A89 | 47k | |
| R1029 | 0611024A89 | 47k | (GLN6768A only) |
| R1030 | 0611024A75 | 12k | |
| R1031 | 0611024B06 | 220k | |
| R1032 | 0611024B02 | 150k | |
| R1033 | 0611024A59 | 2.7k | |
| R1037 | 0611024A56 | 2k | |
| R1038 | 0611024A55 | 1.8k | |
| R1041 | 0602366M77 | 15k 1% 0.39W | |
| R1042 | 0602369M30 | 270 | |
| R1043 | 0611024A65 | 4.7k | |
| R1045 | 0611024B14 | 470k | (GLN6768A only) |
| R1046 | 0611024A73 | 10k | |
| R1047 | 0611024A79 | 18k | |
| R1048 | 0611024A89 | 47k | (GLN6768A only) |
| R1049 | 0611024A89 | 47k | (GLN6768A only) |
| R1050 | 0611024A89 | 47k | |
| R1051 | 0611024A89 | 47k | (GLN6768A only) |
| R1053 | 0611024A81 | 27k | |
| R1054 | 0611024A71 | 8.2k | |
| R1055 | 0611024A65 | 4.7 | |
| R1056 | 0611024A96 | 91k | |
| R1057 | 0611024A89 | 47k | |
| R1058 | 0611024B14 | 470k | |
| R1059 | 0611024A57 | 2.2k | |
| R1060 | 0611024A89 | 47k | |
| R1061 | 0602369M51 | 15k 0.6W | |
| R1062 | 0611024A89 | 47k | |
| R1063 | 0611024A73 | 10k | |
| R1064- | | | |
| R1068 | 0611024A89 | 47k | |
| R1069 | 0602366M70 | 7.5k 1% 0.39W | |
| R1070 | 0611024A65 | 4.7k | |
| R1072 | 0611024A73 | 10k | |
| R1073 | 0611024A89 | 47k | |
| R1074 | 0611024A65 | 4.7k | |
| R1079- | | | |
| R1083 | 0611024A89 | 47k | |
| R1084 | 0611024A73 | 10k | |
| R1085 | 0602369M57 | 47k 0.6W | |
| R1086 | 0602369M49 | 10k 0.6W | |
| R1087 | 0602366M77 | 15k 1% 0.39W | |
| R1088 | 0611024A25 | 100 | |
| R1089 | 0611024A65 | 4.7k | |
| R1090 | 0611024A73 | 10k | |
| R1091 | 0611024A73 | 10k | |
| R1092 | 0611024A89 | 47k | |
| R1093 | 0611024A73 | 10k | |
| R1094 | 0611024A65 | 4.7k | |
| R1095 | 0611024A81 | 22k | |
| R1096- | | | |
| R1098 | 0611024A89 | 47k | |
| R1099- | | | |
| R1104 | 0611024A81 | 22k | |
| R1105 | 0611024A89 | 47k | |
| R1106 | 0611024A25 | 100 | |

| | | |
|--------|------------|----------------|
| R1107 | 0611024A89 | 47k |
| R1108 | 0611024A81 | 22k |
| R1109 | 0611024A81 | 22k |
| R1110 | 0611024A53 | 1.5k |
| R1113 | 0611024A89 | 47k |
| R1114 | 0611024A73 | 10k |
| R1115 | 0611024A73 | 10k |
| R1116 | 0611024A79 | 18k |
| R1117 | 0611024A73 | 10k |
| R1118- | | |
| R1121 | 0611024A73 | 10k |
| R1122 | 0611024A53 | 1.5k |
| R1300 | 0611024A73 | 10k |
| R1301 | 0611024A73 | 10k |
| R1302 | 0611024A79 | 18k |
| R1310 | 0611049D04 | 13.3k 1% 0.25W |
| R1311 | 0611009A89 | 47k 1.4W |

SWITCH:

| | | |
|-------|------------|----------------------|
| S801 | 4003445A01 | Slide, 300mA 24V |
| S802 | 4003445A01 | Slide, 300mA 24V |
| S803 | 4003429A01 | Miniature, momentary |
| S804- | | |
| S806 | 4003445A01 | Slide, 300mA 24V |

TRANSFORMER:

| | | |
|------|------------|--|
| T800 | 2583036L01 | leads 1 & 2: 25 ohms; 3 & 4: 25 ohms leads 7 & 9: 250 ohms; 11 & 12: 250 ohms |
| T801 | 2584007C02 | pri: 10k , sec: 10k res. |

TEST POINTS:

| | | |
|---------|------------|----------------|
| TP00 | 2802002M16 | Plug connector |
| TP1- | | |
| TP4,TP6 | 2802002M15 | Plug connector |
| TP7 | 2802002M16 | Plug connector |
| TP8 | 2802002M15 | Plug connector |
| TP13 | 2802002M16 | Plug connector |
| TP14 | 2802002M15 | Plug connector |
| TP16- | | |
| TP19 | 2802002M15 | Plug connector |
| TP20 | 2802002M15 | Plug connector |
| TP22 | 2802002M15 | Plug connector |
| TP23 | 2802002M15 | Plug connector |
| TP25- | | |
| TP31 | 2802002M15 | Plug connector |
| TP35 | 2802002M15 | Plug connector |
| TP36 | 2802002M16 | Plug connector |
| TP40 | 2802002M15 | Plug connector |

INTEGRATED CIRCUIT: (SEE NOTE)

| | | |
|-------|------------|--------------------------------|
| U800- | | |
| U802 | 5183629M18 | Quad op amp |
| U803 | 5183629M22 | Op amp |
| U804 | 5182884L05 | Quad 2-input NAND gate |
| U806 | 5182884L06 | Triple 3-input NAND gate |
| U807 | 5182884L05 | Quad 2-input NAND gate |
| U808 | 5182884L05 | Quad 2-input NAND gate |
| U809 | 5184371K94 | Quad 2-input OR gate |
| U810 | 5182884L51 | Quad 2-input AND gate |
| U811 | 5184887K28 | Triple 3-input AND gate |
| U812 | 5182884L02 | Hex inverting buffer |
| U814 | 5183627M92 | Hex trigger Schmitt |
| U815 | 5183629M70 | PLL |
| U816 | 5183629M70 | PLL (GLN6768A only) |
| U817 | 5183629M70 | PLL |
| U818- | | |
| U820 | 5183629M70 | PLL (GLN6768A only) |
| U821- | | |
| U823 | 5182884L14 | Quad bilateral switch |
| U824 | 5183629M18 | Quad op amp |
| U825 | 5182884L05 | Quad 2-input NAND gate |
| U826 | 5182884L51 | Quad 2-input AND gate |
| U828 | 5182884L64 | Triple 3-input OR gate |
| U829 | 5182884L05 | Quad 2-input NAND gate |
| U831 | 5103386A03 | J-K flip flop |
| U832 | 5182884L04 | Quad 2-input NOR gate |
| U833 | 5103386A02 | Counter 4-bit binary w/clear |
| U834 | 5183629M76 | Dual switched capacitor filter |
| U835 | 5183629M76 | Dual switched capacitor filter |
| U836 | 5182884L06 | Quad 2-input NAND gate |
| U837 | 5183629M18 | Quad op amp |
| U838 | 5182884L14 | Quad bilateral switch |
| U839 | 5182609M33 | Dual op amp |

VR800 4883461E40 ZENER DIODE: (SEE NOTE)
5.1V

Y801 4882611M15 CRYSTAL: (SEE NOTE)
4.9068MHz

GLN6769A Repeater Access Tone Decoder

SYMBOL PART NO. DESCRIPTION

CAPACITOR: fixed uF 50V
unless otherwise stated

C403 2311048B19 47 20% 16V
C404 2111032A21 0.01 10% (chip)
C405 2311048B19 47 20% 16V
C406 0811051A15 0.22 63V
C407 2384538G29 47 20% 10V
C601 2384538G29 47 20% 10V
C701 2111032A21 0.01 10% (chip)
C702 2111032A15 10 0.5% (chip)
C703 2111031A17 12pF (chip)
C704 2111032A13 0.0022 10% (chip)
C705 2111032A13 0.0022 10% (chip)
C706 2311048B19 47 20% 16V
C707 2311048B05 1 20%
C710 2311048B13 10 20%
C712 2384538G02 4.7 20% 20V
C731 2111031A39 100pF (chip)
C733 2111031A21 18pF (chip)
C809 0811051A01 0.001 63V
C810 2111031A56 510pF (chip)
C811 0811051A13 0.1 63V
C901 2111032A21 0.01 10% (chip)
C902 2311048B05 1 20%
C904 9811951A15 0.22uF 5% 63V

DIODE: (SEE NOTE)

CR601 4883654H01 Silicon
CR703 4882178A06 Germanium
CR705 4883654H01 Silicon
CR801-
CR803 4883654H01 Silicon

CONNECTOR:

J4 0980060K01 Female 15-contact

JUMPER:

JU401 0611009F23 Jumper
JU702 0611009F23 Jumper
JU704 0611009F23 Jumper
JU707 0611009F23 Jumper
JU712 0611009F23 Jumper
JU717 0611009F23 Jumper

COIL, RF:

L401 2483961B02 Choke
L701 2483961B02 Choke
L702 2483961B02 Choke
L703 2411047C63 Choke 39uH

CONNECTOR:

P3 2880261H01 Male 11-contact
P7 2205306C01 Pin

TRANSISTOR: (SEE NOTE)

Q701 4802081B30 M1B30 (alt: M1B10)
Q705 4802081B31 M1B31 (alt: M1B11)
Q711 4802081B30 M1B30 (alt: M1B10)
Q714 4802081B31 M1B31 (alt: M1B11)
Q715 4802081B30 M1B30 (alt: M1B10)
Q720 4802081B30 M1B30 (alt: M1B10)
Q722 4802081B30 M1B30 (alt: M1B10)
Q801 4802081B30 M1B30 (alt: M1B10)
Q901 4880182D22 SCR type M2D22 (alt: M9577)
Q902 4802081B30 M1B30 (alt: M1B10)

RESISTOR: fixed 5% 1/8W
unless otherwise stated

R408 0611024A57 2.2k
R409 0611024A57 2.2k
R414 0611024A01 10
R415 0611024A01 10
R601 0611024A25 100

R602 0611024A47 560
R702 0611024A89 47k
R703 0611024E22 1M
R704 0611024A73 10k
R705 0611024A89 47k
R707 0611024A73 10k
R711 0611024A89 47k
R712 0611024A73 10k
R714 0611024A89 47k
R715 0611024A59 2.7k
R719 0611024A89 47k
R727 0611024A89 47k
R728 0611024A97 100k
R729 0611024A89 47k
R732 0611024A73 10k
R736 0611024A73 10k
R737 0611024A89 47k
R738 0611024A89 47k
R739 0611024A73 10k
R740 0611024A89 47k
R741 0611024A65 4.7k
R742 0611024A73 10k
R743 0611024A73 10k
R744 0611024A89 47k
R745 0611024A57 2.2k
R747 0611024A49 1k
R757 0611024A89 47k
R758 0611024A73 10k
R759 0611024A73 10k
R760 0611024A89 47k
R763 0611024A89 47k
R765 0611024A89 47k
R766 0611024A73 10k
R769 0611024A89 47k
R770 0611024A61 3.3k
R771 0611024A89 47k
R774 0611024A65 4.7k
R825 0611024A94 75k
R826 0611024A94 75k
R827 0611024A89 47k
R828 0611024A97 100k
R829 0611024A73 10k
R830 0611024A89 47k
R837 0611024A51 1.2k
R838 0611024A87 39k
R901 0611024A73 10k
R902 0611024A73 10k
R903 0611024B06 220k
R904 0611024B14 470k
R905 0611024A97 100k
R906 0611024A89 47k
R907 0611024A87 39k
R908 0611024B06 220k

INTEGRATED CIRCUIT: (SEE NOTE)

U402 5180068C06 5V regulator
U601 5183629M06 Quad op amp
U701 5197018C03 Microprocessor
U705 5183627M42 Serial latch
U801 5183629M06 Quad op amp

CRYSTAL: (SEE NOTE)

Y701 4880173D08 4.9248MHz

NON-REFERENCED ITEMS:

0980269B04 SOCKET, DIL (U701)
0980269B08 SOCKET, DIL (U702, 703)
4303462A01 STANDOFF, 3 used
7505295B01 PAD, crystal base
1480067K01 INSULATOR, connector
1482392E02 INSULATOR, cover

NOTE

For optimum performance, diodes, transistors, integrated circuits and crystals must be ordered by Motorola part numbers.

GLN6770A Repeater Hardware

| SYMBOL | PART NO. | DESCRIPTION |
|--------|------------|--------------------------|
| | 0203455A01 | NUT, lock, 2 used |
| | 0284784B04 | NUT, M3, hex, 2 used |
| | 0380165J06 | SCREW, M5x0.8x8, 2 used |
| | 0380165J08 | SCREW, M4x0.7, 2 used |
| | 0380269H06 | SCREW, M3x0.5, 2 used |
| | 0380269H08 | SCREW, M3x0.5, 15 used |
| | 0484718C05 | LOCKWASHER, A3.7, 2 used |
| | 0503470A01 | GROMMET |
| | 0782406R01 | BRACKET, PA, 2 used |
| | 1503441A01 | COVER, terminal block |
| | 1582121R01 | COVER, housing |
| | 3803460A01 | BUTTON, 3 used |
| | 4203459A01 | CLIP |
| | 4210347A01 | CLIP, cable, 2 used |
| | 4210347A04 | CLAMP, cable, 2 used |
| | 5402334M01 | LABEL |
| | 5402335M01 | LABEL, 3 used |
| | 5503454A01 | LOCK |

| | | |
|-------|------------|-------------|
| C707 | 2311048B05 | 1 20% |
| C708 | 2111031A39 | 100pF |
| C709 | 2111031A39 | 100pF |
| C710 | 2311048B13 | 10 20% 16V |
| C712 | 2384538G02 | 4.7 20% 20V |
| C713 | 2111031A51 | 330pF |
| C714- | | |
| C724 | 2111031A51 | 330pF |
| C731 | 2111031A39 | 100 |
| C733 | 2111031A21 | 18 |
| C801 | 0811051A06 | 0.0068 63V |
| C802 | 0811044A34 | 0.018 63V |
| C803 | 0811051A01 | 0.001 63V |
| C806 | 0811051A10 | 0.033 63V |
| C807 | 0811051A12 | 0.068 63V |
| C808 | 0811051A04 | 0.0033 63V |
| C809 | 0811051A13 | 0.1 63V |
| C810 | 2111031A63 | 1200pF |
| C811 | 0811051A13 | 0.1 63V |
| C901 | 2111032A21 | 0.01 10% |
| C902 | 2311048B05 | 1 20% |
| C903 | 2111031A61 | 1000pF |
| C904 | 0811051A15 | 0.22uF 63V |

GLN6808A Chassis Hardware

| SYMBOL | PART NO. | DESCRIPTION |
|--------|------------|---------------------|
| | 0302607B02 | SCREW M3x6, 11 used |
| | 1580129J01 | COVER |
| | 1580136J01 | COVER, rf shield |
| | 1580156J01 | COVER, chassis |
| | 2680198J01 | SHIELD, rf |

| | | DIODE: (SEE NOTE) |
|-------|------------|-------------------|
| CR401 | 4883654H02 | Silicon |
| CR402 | 4883654H01 | Silicon |
| CR451 | 4883654H01 | Silicon |
| CR551 | 4883654H01 | Silicon |
| CR601 | 4883654H01 | Silicon |
| CR703 | 4882178A06 | Germanium |
| CR705 | 4883654H01 | Silicon |
| CR801 | 4883654H01 | Silicon |
| CR802 | 4883654H01 | Silicon |
| CR803 | 4883654H01 | Silicon |

GLN6809A Transceiver Command Board

| SYMBOL | PART NO. | DESCRIPTION |
|--------|------------|--|
| | | <u>CAPACITOR:</u> fixed chip uF 5% 50V unless otherwise stated |
| C401 | 2111032A21 | 0.01 10% |
| C402 | 0811051A07 | 0.01 63V |
| C403 | 2311048B19 | 47 20% 16V |
| C404 | 2111032A21 | 0.01 10% |
| C405 | 2311048B19 | 47 20% 16V |
| C406 | 0811051A15 | 0.22 63V |
| C407 | 2384538G29 | 47 20% 10V |
| C451 | 2111032A27 | 0.033 10% |
| C452 | 2111031A39 | 100pF |
| C453 | 2111031A39 | 100pF |
| C454 | 2111032A21 | 0.01 10% |
| C455 | 0811051A15 | 0.22 63V |
| C456 | 2311048B19 | 47 20% 16V |
| C457 | 2111031A39 | 100pF |
| C458 | 2111031A65 | 1800pF |
| C459 | 2111031A65 | 1800pF |
| C551 | 2311048B13 | 10 20% 16V |
| C552 | 2111031A37 | 82pF |
| C553 | 0811051A13 | 0.1 63V |
| C554 | 0811051A13 | 0.1 63V |
| C555 | 0811051A13 | 0.1 63V |
| C556 | 2311048B05 | 1 20% 50V |
| C557 | 0811051A09 | 0.022 63V |
| C558 | 2111032A13 | 0.0022 10% |
| C559 | 2111031A39 | 100pF |
| C560 | 2111032A21 | 0.01 10% |
| C561 | 0811051A12 | 0.068 63V |
| C562 | 2311048B13 | 10 20% 16V |
| C601 | 2311048B19 | 47 20% 16V |
| C604 | 0811051A17 | 47 63V |
| C605 | 0811051A06 | 0.0068 63V |
| C606 | 2311048B13 | 10 20% 16V |
| C607 | 2311048B05 | 1 20% |
| C608 | 0811051A10 | 0.033 63V |
| C609 | 0811051A01 | 0.001 63V |
| C610 | 0811051A03 | 0.0022 63V |
| C611 | 2111031A37 | 82pF |
| C701 | 2111032A21 | 0.01 10% |
| C702 | 2111031A15 | 10pF 0.5pF |
| C703 | 2111031A17 | 12pF |
| C704 | 2111032A13 | 0.0022 10% |
| C705 | 2111032A13 | 0.0022 10% |
| C706 | 2311048B19 | 47 20% 16V |

| | | CONNECTOR: |
|-------|------------|--------------------|
| J4 | 0980060K01 | Female, 15-contact |
| | | <u>JUMPER:</u> |
| JU404 | 0611009F23 | Jumper |
| JU501 | 0611009F23 | Jumper |
| JU552 | 0611009F23 | Jumper |
| JU602 | 0611009F23 | Jumper |
| JU701 | 0611009F23 | Jumper |
| JU702 | 0611009F23 | Jumper |
| JU703 | 0611009F23 | Jumper |
| JU704 | 0611009F23 | Jumper |
| JU707 | 0611009F23 | Jumper |
| JU712 | 0611009F23 | Jumper |
| JU717 | 0611009F23 | Jumper |
| JU802 | 0611009F23 | Jumper |

| | | COIL, RF: |
|------|------------|---------------------|
| L401 | 2483961B02 | Choke (green) |
| L601 | 2482415N02 | Choke |
| L701 | 2483961B02 | Choke w/slv (green) |
| L702 | 2483961B02 | Choke w/slv (green) |
| L703 | 2411047C63 | Choke 39uH |

| | | CONNECTOR: |
|----|------------|------------------|
| P3 | 2880261H01 | Male, 11-contact |
| P6 | 2880260H01 | Male, 6-contact |

| | | TRANSISTOR: (SEE NOTE) |
|-------|------------|-----------------------------|
| Q401 | 4800869619 | M9619 |
| Q402 | 4802081B30 | M1B30 (alt: M1B10) |
| Q403 | 4811043B10 | M3B10 (alt: M9681) |
| Q451 | 4800869619 | M9619 |
| Q452 | 4802081B30 | M1B30 (alt: M1B10) |
| Q453 | 4802081B30 | M1B30 (alt: M1B10) |
| Q601 | 4802081B31 | M1B31 (alt: M1B11) |
| Q701 | 4802081B30 | M1B30 (alt: M1B10) |
| Q702 | 4802081B30 | M1B30 (alt: M1B10) |
| Q705 | 4802081B31 | M1B31 (alt: M1B11) |
| Q710 | 4802081B30 | M1B30 (alt: M1B10) |
| Q711 | 4802081B30 | M1B30 (alt: M1B10) |
| Q714 | 4802081B31 | M1B31 (alt: M1B11) |
| Q715 | 4802081B30 | M1B30 (alt: M1B10) |
| Q720- | 4802081B30 | M1B30 (alt: M1B10) |
| Q723 | 4802081B30 | M1B30 (alt: M1B10) |
| Q801 | 4802081B30 | M1B30 (alt: M1B10) |
| Q901 | 4880182D22 | SCR type M2D22 (alt: M9577) |
| Q902 | 4802081B30 | M1B30 (alt: M1B10) |

**RESISTOR: fixed chip 5% 1/8W
unless otherwise stated**

| | | |
|------|------------|------------------|
| R401 | 0611024A51 | 1.2k |
| R402 | 0610621C18 | 1740 1% 0.25W |
| R403 | 0610621C28 | 2210 1% 0.25W |
| R404 | 0611024A73 | 10k |
| R405 | 0611024A45 | 680 |
| R406 | 0611024A45 | 680 |
| R407 | 1702280M31 | 330 |
| R408 | 0611024A57 | 2.2k |
| R409 | 0611024A57 | 2.2k |
| R410 | 0611024A35 | 270 |
| R411 | 0611024A49 | 1k |
| R414 | 0611024A01 | 10 |
| R415 | 0611024A01 | 10 |
| R416 | 0611024A73 | 10k |
| R451 | 0611024A75 | 12k |
| R452 | 0611024A65 | 4.7k |
| R453 | 1805500L08 | variable 22k 20% |
| R454 | 0611024A47 | 820 |
| R455 | 1805500L08 | variable 22k 20% |
| R456 | 0611024A65 | 4.7k |
| R457 | 0611024A45 | 680 |
| R458 | 0611024A57 | 2.2k |
| R459 | 0611024A45 | 680 |
| R460 | 1702280M31 | 330 |
| R461 | 0611024A51 | 1.2k |
| R462 | 0611024A37 | 330 |
| R463 | 1805500L08 | variable 22k 20% |
| R464 | 0611024A49 | 1k |
| R465 | 0611024A73 | 10k |
| R467 | 0611024A97 | 100k |
| R551 | 0611024A61 | 3.3k |
| R552 | 0611024B06 | 220k |
| R554 | 0611024A55 | 1.8k |
| R555 | 0611024A35 | 270 |
| R556 | 0611024A99 | 120k |
| R557 | 0611024A77 | 15k |
| R558 | 0611024A71 | 8.2k |
| R559 | 0611024A89 | 47k |
| R560 | 0611024A61 | 3.3k |
| R563 | 0611024A25 | 100 |
| R564 | 0611024A73 | 10k |
| R565 | 0611024A51 | 1.2k |
| R566 | 0611024A41 | 470 |
| R567 | 0611024A43 | 560 |
| R601 | 0611024A25 | 100 |
| R602 | 0611024A43 | 560 |
| R604 | 0611024A73 | 10k |
| R605 | 0611024A73 | 10k |
| R606 | 0611024A83 | 27k |
| R607 | 0611024A65 | 4.7k |
| R608 | 0611024A73 | 10k |
| R609 | 0611024B17 | 620k |
| R610 | 0611024A69 | 6800 |
| R611 | 0611024A65 | 4.7k |
| R612 | 0611024A77 | 15k |
| R613 | 0611024A77 | 15k |
| R614 | 0611024A83 | 33k |
| R615 | 0611024A97 | 100k |
| R616 | 0611024A97 | 100k |
| R617 | 0611024A25 | 100 |
| R702 | 0611024A89 | 47k |
| R703 | 0611024B22 | 1M |
| R704 | 0611024A73 | 10k |
| R705 | 0611024A89 | 47k |
| R706 | 0611024A73 | 10k |
| R707 | 0611024A73 | 10k |
| R711 | 0611024A89 | 47k |
| R712 | 0611024A73 | 10k |
| R713 | 0611024A73 | 10k |
| R714 | 0611024A89 | 47k |
| R715 | 0611024A59 | 2.7k |
| R719 | 0611024A89 | 47k |
| R727 | 0611024A89 | 47k |
| R728 | 0611024A97 | 100k |
| R729 | 0611024A89 | 47k |
| R730 | 0611024A73 | 10k |
| R731 | 0611024A73 | 10k |
| R732 | 0611024A73 | 10k |
| R736 | 0611024A73 | 10k |
| R737 | 0611024A89 | 47k |
| R738 | 0611024A89 | 47k |
| R739 | 0611024A73 | 10k |

| | | |
|------|------------|---------|
| R740 | 0611024A89 | 47k |
| R741 | 0611024A65 | 4.7k |
| R742 | 0611024A73 | 10k |
| R743 | 0611024A73 | 10k |
| R744 | 0611024A89 | 47k |
| R745 | 0611024A57 | 2.2k |
| R746 | 0611024A61 | 3.3k |
| R749 | 0611024A73 | 10k |
| R751 | 0611024A73 | 10k |
| R752 | 0611024A73 | 10k |
| R757 | 0611024A89 | 47k |
| R758 | 0611024A73 | 10k |
| R759 | 0611024A73 | 10k |
| R760 | 0611024A89 | 47k |
| R761 | 0611024A73 | 10k |
| R762 | 0611024A73 | 10k |
| R763 | 0611024A89 | 47k |
| R764 | 0611024A73 | 10k |
| R765 | 0611024A89 | 47k |
| R766 | 0611024A73 | 10k |
| R767 | 0611024A57 | 2.2k |
| R769 | 0611024A89 | 47k |
| R770 | 0611024A61 | 3.3k |
| R771 | 0611024A89 | 47k |
| R774 | 0611024A65 | 4.7k |
| R775 | 0611024A65 | 4.7k |
| R776 | 0611024A65 | 4.7k |
| R777 | 0611024A65 | 4.7k |
| R801 | 0611024J18 | 220k 1% |
| R802 | 0611024H88 | 100k 1% |
| R803 | 0611024J18 | 200k 1% |
| R804 | 0611024H88 | 100k 1% |
| R805 | 0611024J18 | 200k 1% |
| R806 | 0611024H88 | 100k 1% |
| R807 | 0611024J18 | 200k 1% |
| R808 | 0611024J18 | 200k 1% |
| R809 | 0611024A97 | 100k |
| R810 | 0611024A97 | 100k |
| R822 | 0611024A92 | 62k |
| R823 | 0611024A92 | 62k |
| R824 | 0611024A92 | 62k |
| R825 | 0611024A92 | 62k |
| R826 | 0611024A92 | 62k |
| R827 | 0611024A89 | 47k |
| R828 | 0611024A97 | 100k |
| R829 | 0611024A73 | 10k |
| R830 | 0611024A89 | 47k |
| R837 | 0611024B23 | Jumper |
| R901 | 0611024A73 | 10k |
| R902 | 0611024A73 | 10k |
| R903 | 0611024B06 | 220k |
| R904 | 0611024B14 | 470k |
| R905 | 0611024A97 | 100k |
| R906 | 0611024A89 | 47k |
| R907 | 0611024A87 | 39k |
| R908 | 0611024B06 | 220k |

INTEGRATED CIRCUIT: (SEE NOTE)

| | | |
|------|------------|---------------------------|
| U401 | 5182609M33 | Dual op amp |
| U402 | 5180068C06 | 5V regulator |
| U551 | 5183629M06 | Quad op amp |
| U601 | 5183629M06 | Quad op amp |
| U701 | 5102080B49 | Microprocessor |
| U704 | 5184320A32 | 7 segment LED driver |
| U705 | 5183627M42 | 8 stage shift/storage reg |
| U801 | 5183629M06 | Quad op amp |

ZENER DIODE: (SEE NOTE)

| | | |
|-------|------------|------|
| VR401 | 4883461E40 | 5.1V |
|-------|------------|------|

CRYSTAL:

| | | |
|------|------------|-----------|
| Y701 | 4880173D08 | 4.9248MHz |
|------|------------|-----------|

NON-REFERENCED ITEMS:

| | |
|------------|----------------------------|
| 0380269H01 | SCREW, tapping 2.5mm |
| 0584899A01 | RIVET |
| 1480067E01 | INSULATOR, connector |
| 1482392E02 | INSULATOR, cover |
| 1480066E01 | INSULATOR, audio regulator |
| 7505295B01 | PAD, crystal base |
| 2680212H01 | HEAT SINK |
| 0980269B04 | SOCKET, DIL (U701) |
| 0980269B08 | SOCKET, DIL (U703) |

GLN6810A Receiver Command Board

CONNECTOR:

SYMBOL PART NO. DESCRIPTION

P3 2880261H01
P6 2880260H01

11-pin
6-pin

CAPACITOR: fixed uF 5% 50V
unless otherwise stated

TRANSISTOR: (SEE NOTE)

C401 2111032A21 0.01 10Z
C402 0811051A07 0.01 63V
C403 2311048B19 47 20% 16V
C404 2111032A21 0.01 10Z
C405 2311048B19 47 20% 16V
C406 0811051A15 0.22 63V
C407 2384538G29 47 20% 10V
C551 2311048B13 10 20% 16V
C552 2111031A37 82pF
C553 0811051A13 0.1 63V
C554 0811051A13 0.1 63V
C555 0811051A13 0.1 63V
C556 2311048B05 1 20Z
C557 0811051A09 0.022 63V
C558 2111032A13 0.0022 10Z
C559 2111031A39 100pF
C560 2111032A21 0.01 10Z
C561 0811051A12 0.068 63V
C562 2311048B13 10 20% 16V
C601 2311048B19 47 20% 16V
C701 2111032A21 0.01 10Z
C702 2111031A15 10pF 0.5pF
C703 2111031A17 12pF
C704 2111032A13 0.0022 10Z
C705 2111032A13 0.0022 10Z
C706 2311048B19 47 20, 16V
C707 2311048B05 1 20Z
C708 2111031A39 100pF
C709 2111031A39 100pF
C710 2311048B13 10 20% 16V
C712 2384538G02 4.7 20% 20V
C713-
C724 2111031A51 330pF
C731 2111031A39 100pF
C733 2111031A19 15pF
C806 0811051A10 0.033 63V
C807 0811051A12 0.068 63V
C808 0811051A04 0.0033 63V
C809 0811051A13 0.1 63V
C810 2111031A63 1200pF
C811 0811051A13 0.1 63V
C901 2111032A21 0.01 10Z
C902 2311048B05 1 20Z
C903 2111031A61 0.001
C904 0811051A15 0.22 63V

Q401 4800869619 M9619
Q402 4802081B30 M1B30 (alt: M1B10)
Q701 4802081B30 M1B30 (alt: M1B10)
Q702 4802081B30 M1B30 (alt: M1B10)
Q705 4802081B44 M1B44
Q707 4802081B30 M1B30 (alt: M1B10)
Q710 4802081B30 M1B30 (alt: M1B10)
Q711 4802081B30 M1B30 (alt: M1B10)
Q714 4802081B31 M1B31 (alt: M1B11)
Q715 4802081B30 M1B30 (alt: M1B10)
Q720 4202081B30 M1B30 (alt: M1B10)
Q721 4202081B30 M1B30 (alt: M1B10)
Q722 4202081B30 M1B30 (alt: M1B10)
Q801 4802081B30 M1B30 (alt: M1B10)
Q901 4808695477 SCR type M2D22 (alt: M9577)
Q902 4802081B30 M1B30 (alt: M1B10)

RESISTOR: fixed 5% 1/8W
unless otherwise stated

R401 0611024A51 1.2k
R402 0610621C18 1.74k 1% 0.25W
R403 0610621C28 2.21k 1% 0.25W
R404 0611024A73 10k
R405 0611024A45 680
R406 0611024A45 680
R407 1702280M31 330 1/2W
R408 0611024A57 2.2k
R409 0611024A57 2.2k
R414 0611024A01 10
R415 0611024A01 10
R551 0611024A61 3.3k
R552 0611024B06 220k
R554 0611024A55 1.8k
R555 0611024A35 270
R556 0611024A99 120k
R557 0611024A77 15k
R558 0611024A71 8.2k
R559 0611024A89 47k
R560 0611024A61 3.3k
R563 0611024A25 100
R564 0611024A73 10k
R565 0611024A51 1.2k
R566 0611024A41 470
R567 0611024A43 560
R608 0611024A73 10k
R609 0611024B17 620k
R702 0611024A89 47k
R703 0611024B22 1M
R704 0611024A73 10k
R705 0611024A89 47k
R706 0611024A73 10k
R707 0611024A73 10k
R711 0611024A89 47k
R712 0611024A73 10k
R713 0611024A73 10k
R714 0611024A89 47k
R715 0611024A59 2.7k
R719 0611024A89 47k
R722 0611024A89 47k
R727 0611024A89 47k
R728 0611024A97 100k
R729 0611024A89 47k
R730 0611024A73 10k
R731 0611024A73 10k
R732 0611024A73 10k
R736 0611024A73 10k
R737 0611024A89 47k
R738 0611024A89 47k
R739 0611024A73 10k
R740 0611024A89 47k
R741 0611024A65 4.7k
R742 0611024A73 10k
R743 0611024A73 10k
R744 0611024A89 47k
R745 0611024A57 2.2k
R746 0611024A61 3.3k
R757 0611024A89 47k
R758 0611024A73 10k
R759 0611024A73 10k

DIODE: (SEE NOTE)

CR401 4883654H02 Silicon
CR402 4883654H01 Silicon
CR403 4883654H01 Silicon
CR551 4883654H01 Silicon
CR601 4883654H01 Silicon
CR703 4882178A06 Germanium
CR705 4883654H01 Silicon
CR801 4883654H01 Silicon
CR802 4883654H01 Silicon
CR803 4883654H01 Silicon
J4 0980059K01 9-pin submin D connector
J5 0980060K01 15pin submin D connector

JUMPERS:

JU404 0611009F23 Jumper
JU501 0611009F23 Jumper
JU552 0611009F23 Jumper
JU701-
JU704 0611009F23 Jumper
JU707 0611009F23 Jumper
JU712 0611009F23 Jumper
JU717 0611009F23 Jumper
JU802 0611009F23 Jumper

COIL:

L401 2483961B02 5 turns (green)
L701 2483961B02 5 turns (green)
L702 2483961B02 5 turns (green)
L703 2411047C63 39uH

R760 0611024A89 47k
 R761 0611024A73 10k
 R762 0611024A73 10k
 R763 0611024A89 47k
 R765 0611024A89 47k
 R766 0611024A73 10k
 R767 0611024A57 2.2k
 R768 0611024A73 10k
 R769 0611024A89 47k
 R770 0611024A61 3.3k
 R771 0611024A89 47k
 R774-
 R777 0611024A65 4.7k
 R822 0611024A92 62k
 R823 0611024A92 62k
 R824 0611024A92 62k
 R825 0611024A92 62k
 R826 0611024A92 62k
 R827 0611024A89 47k
 R828 0611024A97 100k
 R829 0611024A73 10k
 R830 0611024A89 47k
 R837 0611024B23 Jumper
 R901 0611024A73 10k
 R902 0611024A73 10k
 R903 0611024B06 220k
 R904 0611024B14 470k
 R905 0611024A97 100k
 R906 0611024A89 47k
 R907 0611024A87 39k
 R908 0611024B06 220k

INTEGRATED CIRCUIT: (SEE NOTE)

U401 5182609M33 Dual op amp
 U402 5180068C06 5 V regulator
 U551 5183629M06 Quad op amp
 U601 5183629M06 Quad op amp
 U701 5102080B49 Microcomputer
 U704 5184320A32 Driver
 U705 5183627M42 Serial latch
 U801 5183629M06 Quad op amp

ZENER DIODE: (SEE NOTE)

VR 401 4883461E40 5.1V

CRYSTAL: (SEE NOTE)

Y701 4880173D08 4.9248MHz

NON-REFERENCED ITEMS:

0380269H01 SCREW, tap-tie (2.5mm), 4 used
 0980269B04 SOCKET, IC
 0980269B08 SOCKET IC, 2 used
 1480066K01 INSULATOR, audio regulator
 1480067K01 INSULATOR, connector
 2680212H01 HEAT SINK, power

GLN6811A Transmitter Command Board

SYMBOL PART NO. DESCRIPTION

CAPACITOR: fixed chip, uF 5%
 50V unless otherwise stated

C401 2111032A21 0.01 10%
 C402 0811051A07 0.01 63V
 C403 2311048B19 47 20% 16V
 C404 2111032A21 0.01 10%
 C405 2311048B19 47 20% 16V
 C406 0811051A15 0.22 63V
 C407 2384538G29 47 20% 10V
 C451 2111032A27 0.033 10%
 C452 2111031A39 100pF
 C453 2111031A39 100pF
 C454 2111032A21 0.01 10%
 C455 0811051A15 0.22 63V
 C456 2311048B19 47 20% 16V
 C457 2111031A39 100pF
 C458 2111031A65 1800pF
 C459 2111031A65 1800pF
 C601 2311048B19 47 20% 16V
 C604 0811051A17 47 63V
 C605 0811051A06 0.0068 63V

C606 2311048B13 10 20% 16V
 C607 2311048B05 1 20%
 C608 0811051A10 0.033 63V
 C609 0811051A01 0.001 63V
 C610 0811051A03 0.0022 63V
 C611 2111031A37 82pF
 C701 2111032A21 0.01 10%
 C702 2111031A15 10pF 0.5pF
 C703 2111031A17 12pF
 C704 2111032A13 0.0022 10%
 C705 2111032A13 0.0022 10%
 C706 2311048B19 47 20% 16V
 C707 2311048B05 1 20%
 C708 2111031A39 100pF
 C709 2111031A39 100pF
 C710 2311048B13 10 20% 16V
 C712 2384538G02 4.7 20% 20V
 C713-
 C724 2111031A51 330pF
 C731 2111031A39 100
 C733 2111031A21 18pF
 C801 0811051A06 0.0068 63V
 C802 0811044A34 0.018 63V
 C803 0811051A01 0.001 63V
 C901 2111032A21 0.01 10%
 C902 2311048B05 1 20%
 C903 2111031A61 1000pF
 C904 0811051A15 0.22uF 60V

DIODE: (SEE NOTE)

CR401 4883654H02 Silicon
 CR402 4883654H01 Silicon
 CR451 4883654H01 Silicon
 CR601 4883654H01 Silicon
 CR703 4882178A06 Germanium
 CR705 4883654H01 Silicon
 CR740 4882178A06 Germanium
 CR803 4883654H01 Silicon

CONNECTOR:

J4 0980060K01

Female, 15-contact

JUMPER:

JU404 0611009F23 Jumper
 JU602 0611009F23 Jumper
 JU701 0611009F23 Jumper
 JU702 0611009F23 Jumper
 JU703 0611009F23 Jumper
 JU704 0611009F23 Jumper
 JU707 0611009F23 Jumper
 JU712 0611009F23 Jumper
 JU717 0611009F23 Jumper
 JU720 0611009F23 Jumper

COIL, RF:

L401 2483961B02 Choke (green)
 L601 2482415N02 Choke
 L701 2483961B02 Choke w/slv (green)
 L702 2483961B02 Choke w/slv (green)
 L703 2411047C63 Choke 39uH

CONNECTOR, plug:

P3 2880261H01 Male, 11-contact
 P6 2880260H01 Male, 6-contact

TRANSISTOR: (SEE NOTE)

Q401 4800869619 M9619
 Q402 4802081B30 M1B30 (alt: M1B10)
 Q403 4811043B10 M3B10 (alt: M9681)
 Q451 4800869619 M9619
 Q452 4802081B30 M1B30 (alt: M1B10)
 Q453 4802081B30 M1B30 (alt: M1B10)
 Q601 4802081B31 M1B31 (alt: M1B11)
 Q701 4802081B30 M1B30 (alt: M1B10)
 Q702 4802081B30 M1B30 (alt: M1B10)
 Q705 4802081B44 M1B44
 Q710 4802081B30 M1B30 (alt: M1B10)
 Q711 4802081B30 M1B30 (alt: M1B10)
 Q714 4802081B31 M1B31 (alt: M1B11)
 Q715 4802081B30 M1B30 (alt: M1B10)
 Q721 4802081B30 M1B30 (alt: M1B10)
 Q901 4880182D22 SCR type M2D22 (alt: M9577)
 Q902 4802081B30 M1B30 (alt: M1B10)

RESISTOR: fixed chip 5% 1/8W
unless otherwise stated

| | | |
|-------|------------|------------------|
| R401 | 0611024A51 | 1.2k |
| R402 | 0610621C18 | 1740 1% 0.25W |
| R403 | 0610621C28 | 2210 1% 0.25W |
| R404 | 0611024A73 | 10k |
| R405 | 0611024A45 | 680 |
| R406 | 0611024A45 | 680 |
| R407 | 1702280M31 | 330 |
| R408 | 0611024A57 | 2.2k |
| R409 | 0611024A57 | 2.2k |
| R410 | 0611024A35 | 270 |
| R411 | 0611024A49 | 1k |
| R414 | 0611024A01 | 10 |
| R415 | 0611024A01 | 10 |
| R416 | 0611024A73 | 10k |
| R451 | 0611024A75 | 12k |
| R452 | 0611024A65 | 4.7k |
| R453 | 1805500L08 | variable 22k 20% |
| R454 | 0611024A47 | 820 |
| R455 | 1805500L08 | variable 22k 20% |
| R456 | 0611024A65 | 4.7k |
| R457 | 0611024A45 | 680 |
| R458 | 0611024A57 | 2.2k |
| R459 | 0611024A45 | 680 |
| R460 | 1702280M31 | 330 |
| R461 | 0611024A51 | 1.2k |
| R462 | 0611024A37 | 330 |
| R463 | 1805500L08 | variable 22k 20% |
| R464 | 0611024A49 | 1k |
| R465 | 0611024A73 | 10k |
| R467 | 0611024A97 | 100k |
| R601 | 0611024A25 | 100 |
| R602 | 0611024A43 | 560 |
| R604 | 0611024A73 | 10k |
| R605 | 0611024A73 | 10k |
| R606 | 0611024A83 | 27k |
| R607 | 0611024A65 | 4.7k |
| R608 | 0611024A73 | 10k |
| R609 | 0611024B17 | 620k |
| R610 | 0611024A69 | 6800 |
| R611 | 0611024A65 | 4.7k |
| R612 | 0611024A77 | 15k |
| R613 | 0611024A77 | 15k |
| R614 | 0611024A83 | 33k |
| R615 | 0611024A97 | 100k |
| R616 | 0611024A97 | 100k |
| R617 | 0611024A25 | 100 |
| R702 | 0611024A89 | 47k |
| R703 | 0611024B22 | 1M |
| R704 | 0611024A73 | 10k |
| R705 | 0611024A89 | 47k |
| R706 | 0611024A73 | 10k |
| R707 | 0611024A73 | 10k |
| R711 | 0611024A89 | 47k |
| R712 | 0611024A73 | 10k |
| R713 | 0611024A73 | 10k |
| R714 | 0611024A89 | 47k |
| R715 | 0611024A59 | 2.7k |
| R719 | 0611024A89 | 47k |
| R727 | 0611024A89 | 47k |
| R728 | 0611024A97 | 100k |
| R729 | 0611024A89 | 47k |
| R730- | | |
| R733 | 0611024A73 | 10k |
| R736 | 0611024A73 | 10k |
| R737 | 0611024A89 | 47k |
| R738 | 0611024A89 | 47k |
| R739 | 0611024A73 | 10k |
| R740 | 0611024A89 | 47k |
| R741 | 0611024A65 | 4.7k |
| R742 | 0611024A73 | 10k |
| R743 | 0611024A73 | 10k |
| R744 | 0611024A89 | 47k |
| R745 | 0611024A57 | 2.2k |
| R746 | 0611024A61 | 3.3k |
| R749 | 0611024A73 | 10k |
| R751 | 0611024A73 | 10k |
| R752 | 0611024A73 | 10k |
| R760 | 0611024A89 | 47k |
| R761 | 0611024A73 | 10k |
| R762 | 0611024A73 | 10k |
| R763 | 0611024A89 | 47k |
| R764 | 0611024A73 | 10k |

| | | |
|-------|------------|---------|
| R767 | 0611024A57 | 2.2k |
| R769 | 0611024A89 | 47k |
| R770 | 0611024A61 | 3.3k |
| R771 | 0611024A89 | 47k |
| R774- | | |
| R777 | 0611024A65 | 4.7k |
| R801 | 0611024J18 | 200k 1% |
| R802 | 0611024H88 | 100k 1% |
| R803 | 0611024J18 | 200k 1% |
| R804 | 0611024H88 | 100k 1% |
| R805 | 0611024J18 | 200k 1% |
| R806 | 0611024H88 | 100k 1% |
| R807 | 0611024J18 | 200k 1% |
| R808 | 0611024J18 | 200k 1% |
| R809 | 0611024A97 | 100k |
| R810 | 0611024A97 | 100k |
| R830 | 0611024A89 | 47k |
| R901 | 0611024A73 | 10k |
| R902 | 0611024A73 | 10k |
| R903 | 0611024B06 | 220k |
| R904 | 0611024B14 | 470k |
| R905 | 0611024A97 | 100k |
| R906 | 0611024A89 | 47k |
| R907 | 0611024A87 | 39k |
| R908 | 0611024B06 | 220k |

INTEGRATED CIRCUIT: (SEE NOTE)

| | | |
|------|------------|--------------------------------|
| U401 | 5182609M33 | Dual op amp |
| U402 | 5180068C06 | 5V regulator |
| U601 | 5183629M06 | Quad op amp |
| U701 | 5102080B49 | Microprocessor |
| U704 | 5184320A32 | 7 segment LED driver |
| U705 | 5183627M42 | 8 stage shift/storage register |

ZENER DIODE: (SEE NOTE)

VR401 4883461E40 5.1V

CRYSTAL:

Y701 4880173D08 4.9248MHZ

NON-REFERENCED ITEMS:

| | |
|------------|----------------------------|
| 0380269H01 | SCREW, tapping 2.5mm |
| 0380269H01 | SCREW, tapping 2.5mm |
| 0584899A01 | RIVET |
| 1480067K01 | INSULATOR, connector |
| 1482392E02 | INSULATOR, cover |
| 1480066K01 | INSULATOR, audio regulator |
| 7505295B01 | PAD, crystal base |
| 2680212H01 | HEAT SINK |
| 0980269B04 | SOCKET, DIL (U701) |
| 0980269B08 | SOCKET, DIL (U703) |

GLN6812A Base Station Hardware

| SYMBOL | PART NO. | DESCRIPTION |
|--------|------------|--------------------------------|
| | 0203455A01 | NUT, lock, 2 used |
| | 0284784B04 | NUT, M3, hex, 2 used |
| | 0380165J06 | SCREW, machine: M5x0.8x8mm |
| | 0380165J08 | SCREW, machine: M4x0.7, 2 used |
| | 0380269H08 | SCREW, tapt: M3x0.5, 15 used |
| | 0484718C05 | LOCKWASHER, A3.7, 2 used |
| | 0503470A01 | GROMMET |
| | 0782406R01 | BRACKET, PA, 2 used |
| | 1503441A01 | COVER, terminal block |
| | 1582121R01 | COVER, housing |
| | 3803460A01 | BUTTON, 3 used |
| | 3883666N01 | CAP, button |
| | 4203459A01 | CLIP |
| | 4210347A03 | CLIP, cable, 2 used |
| | 4210347A04 | CLAMP, cable, 2 used |
| | 5402334M01 | LABEL |
| | 5402335M01 | LABEL, 3 used |
| | 5503454A01 | LOCK |

NOTE

For optimum performance, diodes, transistors, integrated circuits and crystals must be ordered by Motorola part numbers.

GLN6815A Omit Wireline Control TRC Board

| SYMBOL | PART NO. | DESCRIPTION |
|--------|-------------|--|
| | | <u>CAPACITOR:</u> fixed pF 5% 50V unless otherwise stated |
| C800 | 2311019A46 | 100uF 20% 25V |
| C801 | 0811051A15 | 0.22uF 63V |
| C803 | 2111032A21 | 0.01uF 10% (chip) |
| C805 | 2311048B11 | 10uF 20% 35V |
| C806 | 2111032A21 | 0.01uF 10% (chip) |
| C807 | 2111031A39 | 100 (chip) |
| C808 | 2111032A21 | 0.01uF 10% (chip) |
| C810 | 2111031A55 | 470 (chip) |
| C811 | 2311019A46 | 100uF 20% 25V |
| C812 | 0811051A15 | 0.22uF 63V |
| C813 | 0811051A15 | 0.22uF 63V |
| C814 | 2111031A47 | 220 (chip) |
| C815 | 2311019A46 | 100uF 20% 25V |
| C816 | 2302308M01 | 1000uF +100-10% 20V |
| C817 | 2111031A47 | 220 (chip) |
| C818 | 2311048B09 | 4.7uF 20% 35V |
| C819 | 0811051A13 | 0.1uF 63V |
| C820 | 0811051A15 | 0.22uF 63V |
| C822 | 0811051A13 | 0.1uF 63V |
| C834 | 2111032A21 | 0.01uF 10% (chip) |
| C887 | 08811051A12 | 0.068uF 63V |
| C888 | 2111032A21 | 0.01uF 10% (chip) |
| C889 | 2111031A61 | 0.001uF (chip) |
| C890 | 0811051A06 | 0.0068uF 63V |
| C891 | 2111032A21 | 0.01uF 10% (chip) |
| C892 | 2311048B11 | 10uF 20% 35V |
| C893 | 2111032A21 | 0.01uF 10% (chip) |
| C894 | 2311019A46 | 100uF 20% 25V |
| C898 | 0811051A01 | 0.001uF 63V |
| C899 | 2311019A46 | 100uF 20% 25V |
| C908 | 2311048B06 | 2.2uF 20% |
| C915 | 2311048B11 | 10uF 20% 35 V (GLN6767A only) |
| C916 | 0811051A13 | 0.1uF 63V (GLN6767A only) |
| C945 | 2111031A29 | 39 (chip) |
| C946 | 0811051A07 | 0.01uF 63V |
| C947 | 0811051A07 | 0.01uF 63V |
| C960 | 2360561B21 | 220uF 20% 25V |
| C961 | 2360561B21 | 220uF 20% 25V |
| C962 | 2360561B21 | 220uF 20% 25V |
| | | <u>DIODE:</u> (SEE NOTE) |
| CR800 | 4883654H01 | Silicon |
| CR803 | 4883654H01 | Silicon |
| CR804 | 4883654H01 | Silicon |
| CR816 | 4883654H01 | Silicon |
| CR819 | 4883654H02 | Silicon |
| CR825 | 4883654H01 | Silicon (GLN6767A only) |
| CR827 | 4883654H01 | Silicon |
| CR829 | 4883654H01 | Silicon |
| CR832 | 4883654H01 | Silicon |
| CR834- | | |
| CR836 | 4884350P01 | Silicon |
| | | <u>LED:</u> (SEE NOTE) |
| DS800 | 4880058K01 | red |
| | | <u>CONNECTOR:</u> |
| J3 | 0980023J01 | Female 6-contact |
| J6 | 0980179H03 | Female 11-contact |
| J8, J9 | 0980023J01 | Female 6-contact |
| | | <u>JUMPER:</u> |
| JU12 | 0611009D23 | Jumper |
| JU22 | 0611009D23 | Jumper |
| JU26 | 0611009D23 | Jumper |
| JU29 | 0611009D23 | Jumper |
| | | <u>CONNECTOR:</u> |
| P2A,B | 0905604C06 | Socket speaker 2-contact |
| P4 | 2882697R14 | Male 15-contact |
| P5 | 2882697R05 | Male 6-contact |
| P7 | 2883441F08 | Male 7-contact |
| | | <u>TRANSISTOR:</u> (SEE NOTE) |
| Q804 | 4802081B30 | M1B30 (alt: M1B10) |
| Q806 | 4802081B30 | M1B30 (alt: M1B10) |
| Q807 | 4802081B30 | M1B30 (alt: M1B10) |
| Q809 | 4800869619 | M9619 |

| | | |
|-------|------------|--------------------|
| Q810 | 4802081B30 | M1B30 (alt: M1B10) |
| Q812 | 4802081B30 | M1B30 (alt: M1B10) |
| Q813 | 4802081B30 | M1B30 (alt: M1B10) |
| Q814 | 4802081B31 | M1B31 (alt: M1B11) |
| Q815 | 4802081B30 | M1B30 (alt: M1B10) |
| Q816 | 4802081B30 | M1B30 (alt: M1B10) |
| Q828 | 4802081B30 | M1B30 (alt: M1B10) |
| Q829 | 4802081B30 | M1B30 (alt: M1B10) |
| Q830 | 4802081B30 | M1B30 (alt: M1B10) |
| Q832- | | |
| Q834 | 4802081B30 | M1B30 (alt: M1B10) |

| | | <u>RESISTOR:</u> fixed 5% 1/8W unless otherwise stated |
|------|------------|---|
| R800 | 0610024A25 | 100 |
| R801 | 0611024A43 | 560 |
| R804 | 0602369M52 | 18k 0.6W |
| R805 | 0611024A79 | 18k |
| R807 | 0611024A73 | 10k |
| R808 | 0602369M52 | 18k 0.6W |
| R809 | 0611024A79 | 18k |
| R810 | 0611024A97 | 100k |
| R812 | 0611024A97 | 100k |
| R813 | 0611024A73 | 10k |
| R814 | 0611024A85 | 33k |
| R815 | 0611024A89 | 47k |
| R816 | 0611024A97 | 100k |
| R817 | 0611024A25 | 100 |
| R818 | 1802099B02 | variable 20k 10% 0.5W |
| R819 | 0611024A89 | 47k |
| R820 | 1803464A04 | variable 100k |
| R822 | 0602369M52 | 18k 0.6W |
| R824 | 0611024A85 | 33k |
| R825 | 0611024A73 | 10k |
| R833 | 0611024A89 | 47k |
| R835 | 0611024A79 | 18k |
| R836 | 0611024A73 | 10k |
| R838 | 0611024A53 | 1.5k |
| R839 | 0611024A73 | 10k |
| R840 | 0602369M06 | 2.7 0.6W |
| R842 | 0611024A87 | 39k |
| R843 | 0611024A87 | 39k |
| R844 | 0611024A89 | 47k |
| R845 | 0611024B02 | 150k |
| R870 | 0611024A73 | 10k |
| R871 | 0611024A81 | 22k |
| R872 | 0611024B06 | 220k |
| R874 | 0611024A56 | 2k |
| R875 | 0611024A94 | 75k |
| R881 | 0611024A73 | 10k |
| R882 | 0611024A89 | 47k |
| R888 | 0611024A56 | 2k |
| R889 | 0611024A97 | 100k |
| R915 | 0611024A73 | 10k |
| R922 | 0602369M61 | 100k 0.6W |
| R923 | 0602369M58 | 56k 0.6W |
| R924 | 0602369M54 | 27k 0.6W |
| R925 | 0611024A89 | 47k |
| R934 | 0611024A73 | 10k |
| R937 | 0611024A73 | 10k |
| R940 | 0611024A73 | 10k |
| R941 | 0611024A73 | 10k |
| R945 | 0611024A56 | 2k |
| R946 | 0611024A73 | 10k |
| R947 | 0611024B06 | 220k |
| R948 | 0611024A89 | 47k |
| R949 | 0611024B06 | 220k |
| R950 | 0611024A89 | 47k |
| R951 | 0611024A97 | 100k |
| R952 | 0611024A73 | 10k |
| R953 | 0611024A89 | 47k |
| R954 | 0611024A97 | 100k |
| R955 | 0611024A97 | 100k |
| R956 | 0611024A73 | 10k |
| R976 | 0611024A73 | 10k |
| R977 | 0611024A73 | 10k |
| R978 | 0611024A89 | 47k |
| R980 | 0611024A73 | 10k |
| R981 | 0611024A65 | 4.7k |
| R982 | 0610621C18 | 1740 1% 0.25W |
| R983 | 0610621C28 | 2.210k 1% 0.25W |
| R987 | 0602369M31 | 330 5% 0.6W |
| R984 | 0611024A73 | 10k |
| R985 | 0611024A45 | 820 |

| | | |
|--------|------------|----------|
| R986 | 0611024A45 | 820 |
| R991 | 0611024A79 | 18k |
| R992 | 0611024A79 | 18k |
| R993 | 0611024A85 | 33k |
| R994 | 0611024A73 | 10k |
| R997 | 0611024A79 | 18k |
| R998 | 0611024A89 | 47k |
| R1000 | 0611024A85 | 33k |
| R1005 | 0611024A89 | 47k |
| R1007 | 0611024A73 | 10k |
| R1008 | 0602369M57 | 47k 0.6W |
| R1009 | 0602369M57 | 47k 0.6W |
| R1010 | 0611024A89 | 47k |
| R1011 | 0611024A89 | 47k |
| R1012 | 0611024A53 | 1.5k |
| R1013 | 0611024A89 | 47k |
| R1014 | 0611024A79 | 18k |
| R1015 | 0611024A79 | 18k |
| R1017 | 0611024A71 | 8.2k |
| R1026 | 0611024A89 | 47k |
| R1028 | 0611024A89 | 47k |
| R1037 | 0611024A56 | 2k |
| R1045 | 0611024B14 | 470k |
| R1046 | 0611024A73 | 10k |
| R1050 | 0611024A89 | 47k |
| R1055 | 0611024A65 | 4.7k |
| R1056 | 0611024A96 | 91k |
| R1057 | 0611024A89 | 47k |
| R1059 | 0611024A57 | 2.2k |
| R1060 | 0611024A89 | 47k |
| R1061 | 0602369M51 | 15k 0.6W |
| R1062 | 0611024A89 | 47k |
| R1063 | 0611024A73 | 10k |
| R1064- | | |
| R1068 | 0611024A89 | 47k |
| R1072 | 0611024A73 | 10k |
| R1074 | 0611024A65 | 4.7k |
| R1084 | 0611024A73 | 10k |
| R1085 | 0602369M57 | 47k 0.6W |
| R1086 | 0602369M49 | 10k 0.6W |
| R1088 | 0611024A25 | 100 |
| R1093 | 0611024A73 | 10k |
| R1095 | 0611024A81 | 22k |
| R1096 | 0611024A89 | 47k |
| R1097 | 0611024A89 | 47k |
| R1099 | 0611024A81 | 22k |
| R1100 | 0611024A81 | 22k |
| R1101 | 0611024A81 | 22k |
| R1102 | 0611024A81 | 22k |
| R1103 | 0611024A81 | 22k |
| R1104 | 0611024A81 | 22k |
| R1106 | 0611024A25 | 100 |
| R1107 | 0611024A89 | 47k |
| R1108 | 0611024A81 | 22k |
| R1109 | 0611024A81 | 22k |
| R1110 | 0611024A53 | 1.8k |
| R1111 | 0611024A73 | 10k |
| R1113 | 0611024A79 | 18k |
| R1114 | 0611024A73 | 10k |
| R1115 | 0611024A73 | 10k |
| R1117- | | |
| R1121 | 0611024A73 | 10k |
| R1122 | 0611024A53 | 1.8k |

SWITCH:

| | | |
|------|------------|---------------------|
| S801 | 4003445A01 | Slide, 300mA 24V |
| S802 | 4003445A01 | Slide, 300mA 24V |
| S803 | 4003429A01 | Miniature momentary |
| S806 | 4003445A01 | Slide, 300mA 24V |

TEST POINTS:

| | | |
|------|------------|----------------|
| TP01 | 2802002M15 | Plug connector |
| GNP | 2802002M15 | Plug connector |

INTEGRATED CIRCUIT: (SEE NOTE)

| | | |
|-------|------------|-------------------------|
| U800- | | |
| U802 | 5183629M18 | Quad op amp |
| U803 | 5183629M22 | Op amp |
| U809 | 5184371K94 | Quad 2-input OR gate |
| U811 | 5184887K28 | Triple 3-input AND gate |
| U812 | 5182884L02 | Hex inverting buffer |
| U814 | 5183627M92 | Hex trigger |
| U821 | 5182884L14 | Quad bilateral switch |
| U822 | 5182884L14 | Quad bilateral switch |

| | | |
|------|------------|------------------------|
| U823 | 5182884L14 | Quad bilateral switch |
| U824 | 5183629M18 | Quad op amp |
| U825 | 5182884L05 | Quad 2-input NAND gate |
| U826 | 5182884L51 | Quad 2-input AND gate |
| U827 | 5184371K76 | Dual timer |
| U828 | 5182884L64 | Triple 3-input OR gate |
| U829 | 5182884L05 | Quad 2-input NAND gate |
| U832 | 5182884L04 | Quad 2-input NOR gate |
| U839 | 5182609M33 | Dual op amp |

ZENER DIODE: (SEE NOTE)

| | | |
|-------|------------|------------|
| VR800 | 3883461E40 | Zener type |
|-------|------------|------------|

GLN6861A Wall Mounting Hardware

| SYMBOL | PART NO. | DESCRIPTION |
|--------|------------|--------------------------------|
| | 0384724C02 | SCREW, tapping 4-8x38", 3 used |
| | 3803460A01 | BUTTON, plug, 6 used |

GLN6878A Enhanced TRC Board

| SYMBOL | PART NO. | DESCRIPTION |
|--------|----------|---|
| | | <u>CAPACITOR:</u> fixed uF 5% 50V unless otherwise stated |

| | | |
|--------|------------|---------------------|
| C1, C2 | 2111032B15 | 0.22 +80-20% (chip) |
| C3 | 2111032B15 | 0.22 +80-20% (chip) |
| C4 | 2111032B15 | 0.22 +80-20% (chip) |
| C6 | 2111032A21 | 0.01 10% (chip) |
| C7 | 2111031A39 | 100pF (chip) |
| C8 | 2111032A21 | 0.01 10% (chip) |
| C9 | 2111031A39 | 100pF (chip) |
| C10 | 2311013D01 | 1 10% 20V |
| C11 | 2111031A29 | 39pF (chip) |
| C12 | 2111031A25 | 27pF (chip) |
| C13 | 0811051A15 | 0.22 63V |
| C14 | 2111032B15 | 0.22 +80-20% (chip) |
| C15 | 2111031A15 | 10pF 0.5pF (chip) |
| C16 | 2111032B15 | 0.22 +80-20% (chip) |
| C17 | 0811051A13 | 0.1 63V |
| C18 | 2183162H36 | 0.01 |
| C19 | 2100861439 | 345pF 10% 75V |
| C20 | 0811051A15 | 0.22 63V |
| C21 | 0811051A13 | 0.1 63V |
| C22 | 0811051A04 | 0.0033 63V |
| C23 | 0811051A13 | 0.1 63V |
| C24 | 2183162H36 | 0.01 |
| C25 | 2100861439 | 345pF 10% 75V |
| C26 | 0811051A15 | 0.22 63V |
| C27 | 0811051A13 | 0.1 63V |
| C28 | 0811051A04 | 0.0033 63V |
| C29 | 0811051A13 | 0.1 63V |
| C30 | 2183162H36 | 0.01 |
| C31 | 2100861439 | 345pF 10% 75V |
| C32 | 0811051A15 | 0.22 63V |
| C33 | 0811051A13 | 0.1 63V |
| C34 | 0811051A04 | 0.0033 63V |
| C35 | 0811051A13 | 0.1 63V |
| C36 | 2183162H36 | 0.01 |
| C37 | 2100861439 | 345pF 10% 75V |
| C38 | 0811051A15 | 0.22 63V |
| C39 | 0811051A13 | 0.1 63V |
| C40 | 0811051A04 | 0.0033 63V |
| C41 | 2111031A65 | 1800pF (chip) |
| C42 | 0811051A09 | 0.022 63V |
| C43 | 2111032A13 | 0.0022 10% |
| C44 | 0811051A15 | 0.22 63V |
| C45 | 2111032B15 | 0.22 +80-20% (chip) |
| C46 | 2360561B21 | 220 20% 25V |
| C48 | 2311048B05 | 1 20% |
| C49 | 2311048B11 | 10 20% 35V |
| C50 | 2311048B11 | 10 20% 35V |
| C51 | 2111031A39 | 100pF (chip) |
| C52 | 2311048B11 | 10 20% 35V |
| C53- | | |
| C59 | 2111032B13 | 0.1 +80-20% (chip) |
| C60 | 2111032B13 | 0.1 +80-20% (chip) |
| C61 | 2111032B13 | 0.1 +80-20% (chip) |
| C62 | 2111032B13 | 0.1 +80-20% (chip) |
| C63 | 2111032B13 | 0.1 +80-20% (chip) |
| C64 | 0811051A13 | 0.1 63V |

DIODE: (SEE NOTE)
 CR1-CR4 4883654H01 Silicon
 CR6-
 CR13 4883654H01 Silicon
 CR16-
 CR20 4883654H01 Silicon
 CR22 4883654H01 Silicon
 CR23 4884350P01 Silicon

CONNECTOR:
 J1 2882697R03 Male 4-contact
 J2 2882697R05 Male 6-contact
 J3 2882984N04 Male 4-contact
 J4 2880261H01 Male 11-contact
 J5 2880261H03 Male 4-contact

JUMPER:
 JU1-
 JU10 0611009D23 Jumper
 JU13 0611009D23 Jumper
 JU14 0611009D23 Jumper
 JU19 0611009D23 Jumper
 JU21 0611009D23 Jumper
 JU23 0611009D23 Jumper
 JU25 0611009D23 Jumper
 JU28-
 JU30 0611009D23 Jumper

TRANSISTOR: (SEE NOTE)
 Q1 4880214G01 MMBT3906
 Q2-Q4 4880214G02 MMBT3904
 Q5 4880214G01 MMBT3906
 Q6-Q8 4880214G02 MMBT3904
 Q9,Q11 4800869707 M9707
 Q10,Q12 4800869787 M9787
 Q13,Q14 4880214G02 MMBT3904
 Q15 4880214G01 MMBT3906

RESISTOR: fixed 5% 1/8W (chip)
 unless otherwise stated
 R1-R4 0611024B22 1M
 R6, R7 0611024A77 15k
 R8 0611024A79 18k
 R9 0611024A89 47k
 R10 0611024A73 10k
 R11 0611024A73 10k
 R12 0611024A89 47k
 R13 0611024A89 47k
 R14 0611024A73 10k
 R15 0611024A89 47k
 R16 0611024A77 15k
 R17 0611024A77 15k
 R18 0611024A79 18k
 R19 0611024A89 47k
 R20 0611024A73 10k
 R21 0611024A73 10k
 R22 0611024A89 47k
 R23 0611024A89 47k
 R24 0611024A73 10k
 R25 0611024A89 47k
 R26-
 R33 0611024B20 820k
 R34 0611024B02 150k
 R35 0602369M45 4.7k 0.6W
 R36 0602369M66 270k 0.6W
 R37 0611024A97 100k
 R38 0602369M53 22k 0.6W
 R39 0602369M53 22k 0.6W
 R40 0611024A83 27k
 R41 0611024A97 100k
 R42 0602369M34 560 0.6W
 R43 0611024A83 27k
 R44 0611024A83 27k
 R45 0611024A97 100k
 R46 0602369M34 560 0.6W
 R47 0611024A83 27k
 R48 0611024B22 1M
 R49 0611024A85 33k
 R50 0611024A81 22k
 R51 0611024B06 220k
 R52, R53 0611024A73 10k
 R54 0602366M92 62k 1% 0.39W
 R55 0611024B22 1M
 R56 0611024B12 390k

R57 1803464A03 variable 20k 10%
 R58 0611024B14 470k
 R59 0611024A73 10k
 R60 0602366M93 68k 1% 0.39W
 R61 0611024B22 1M
 R62 0611024B12 390k
 R63 1803464A03 variable 20k 10%
 R64 0611024B14 470k
 R65 0611024A73 10k
 R66 0602366M94 75k 1% 0.39W
 R67 0611024B22 1M
 R68 0611024B12 390k
 R69 1803464A03 variable 20k 10%
 R70 0611024B14 470k
 R71 0611024A73 10k
 R72 0602366M95 82k 1% 0.39W
 R73 0611024B22 1M
 R74 0611024B12 390k
 R75 1803464A03 variable 20k 10%
 R76 0611024B14 470k
 R77 0611024A99 120k
 R78 0611024B06 220k
 R79 0611024A71 8.2k
 R80 0611024A95 82k
 R81 0602367M13 330k 1% 0.39W
 R82 0611024A97 100k
 R83 0602369M66 270k 0.6W
 R84 0611024A97 100k
 R85 0602369M31 330 0.6W
 R86 0611024A73 10k
 R87 0611024A73 10k
 R88 0611024A57 2.2k
 R89 0611024B22 1M
 R90 0611024A49 1k
 R91 0611024A49 1k
 R92 0611024A65 4.7k
 R93-
 R95 0611024A83 33k
 R96 0602369M57 47k 0.6W
 R97 0611024A81 22k
 R98 0602369M45 4.7k 0.6W
 R99 0611024A77 15k
 R100 0602369M45 4.7k 0.6W
 R101-
 R102 0602369M53 22k 0.6W
 R103 0602369M34 560 0.6W
 R104 0602369M34 560 0.6W
 R105 0611024A89 47k
 R106 0611024A89 47k
 R107 0611024A79 18k
 R108-
 R111 0611024B20 820k
 R112 0611024A97 100k
 R113 0611024A73 10k
 R114 0611024B22 1M
 R115-
 R117 0611024A81 22k
 R118-
 R121 0611024A73 10k
 R122 0611024B23 Jumper
 R123 0611024A73 10k
 R124 0611024B23 Jumper
 R125 0611024B73 10k

SWITCH:
 S1-S4 4003429A01 Momentary

TEST POINT:
 TP1 2802002M16 Plug connector
 TP2 2802002M15 Plug connector
 TP3 2802002M16 Plug connector
 TP4 2802002M15 Plug connector
 TP5 2802002M16 Plug connector
 TP6 2802002M15 Plug connector
 TP7 2802002M16 Plug connector
 TP8 2802002M15 Plug connector

INTEGRATED CIRCUIT: (SEE NOTE)
 U1-U3 5182884L14 Quad bilateral switch
 U4 5183627M92 Hex Schmitt trigger multivib
 U5, U6 5197020C01 LCD III microprocessor
 U7 5182884L08 Dual 4-input NAND gate
 U8 5182884L05 Quad 2-input NAND gate
 U9 5182884L02 Hex inverting buffer

U10,U11 5184887K34 7-stage binary counter
 U12 5182884L08 Dual 4-input NAND gate
 U13 5182884L05 Quad 2-input NAND gate
 U14-U17 5183629M70 Phase lock loop
 U18 5184621K96 +5 V voltage regulator
 U19 5183627M92 Hex Schmitt trigger multivib
 U20 5182884L08 Dual 4-input NAND gate
 U21 5184887K53 Dual monostable multivibrator
 U22 5182884L55 Frequency divider

ZENER DIODE: (SEE NOTE)
 VR14 4882256C30 100V
 VR15 4882256C30 100V
 VR21 4883461E40 5.1V

CRYSTAL:
 Y1 4805705G02 Resonator 400kHz

NON-REFERENCED ITEM:
 1305696M05 ESCUTCHEON

GLN6879A Base Station EEPROM Kit
 GLN6880A Repeater EEPROM Kit

SYMBOL PART NO. DESCRIPTION

INTEGRATED CIRCUIT: (SEE NOTE)
 U702 5197014B02 128 x 8 EEPROM

GLN6881A RAT Decoder Code Plug

SYMBOL PART NO. DESCRIPTION

INTEGRATED CIRCUIT: (SEE NOTE)
 U702 5197014B02 128x8 EEPROM
 U703 5197014B02 128x8 EEPROM

GLN6898A 10W DC Interconnect Board

SYMBOL PART NO. DESCRIPTION

CONNECTOR:
 J1, J2 2882697R03 Male, 4-contact
 J3-J5 2910231A10 Terminal, single contact

JUMPER:
 JU476 0611009D23 Jumper
 JU482 3010286A12 Wire #16

GLN6899A 25W Current Limiter Board

SYMBOL PART NO. DESCRIPTION

CAPACITOR: fixed uF 10% 50V
 C476-
 C483 2111032A21 0.01 (chip)

DIODE: (SEE NOTE)
 CR476 4883654H01 Silicon

CONNECTOR, receptacle:
 J1 2882697R03 Male, 4 position
 J2 2882697R03 Hdr plug
 J3-J5 2910231A10 Terminal

RESISTOR: fixed chip 5% 0.125W
 unless otherwise stated

R476 0611024A77 15k
 R477 1802099B02 variable 25k
 R478-
 R480 0611024A68 6.2k
 R481 0611024A45 680
 R482 1782620B03 0.02 3W
 R483 0611024A49 1k
 R484 0602366M81 22k 1% 0.39W
 R485 0611024A49 1k
 R486 0611024A89 47k
 R487 0611024A97 100k
 R488 0611024A60 3k
 R489 0611024A57 2.2k

TEST POINT:
 TP476 2802002M15 Male, single contact
 TP477 2802002M15 Male, single contact

INTEGRATED CIRCUIT: (SEE NOTE)
 U476 5184320A79 Amplifier diff/prec
 U477 5182609M33 Dual op amp

GLN6900A DC Power Only Hardware Kit

SYMBOL PART NO. DESCRIPTION

FUSE:
 F1 6584711C16 16A 250V

CONNECTOR:
 P7 1583498F15 Housing, 7-contact
 2983499F01 Terminal, 2 used

NON-REFERENCED ITEMS:
 0284719C01 NUT, hex 5, 3 used
 0308634B25 SCREW M5x16
 0380269H06 SCREW M3x0.5, 2 used
 0380269H07 SCREW M4x0.7, 4 used
 0380269H08 SCREW M3x0.5, 2 used
 0484718C18 LOCKWASHER, 2 used
 1503433A01 COVER, battery
 1503475A01 COVER, AC connector
 1582120R01 COVER, radio
 2682152R01 HEAT SINK
 5402335M01 LABEL
 4210217A02 STRAP, tie, 4 used
 4384798F01 INSERT, polarizing key
 2802098M02 FEMALE, contact, 2 used
 1484710C01 FUSEHOLDER, body
 2802098M03 FEMALE, contact, 2 used
 3102101M02 TERMINAL, strip
 4184707C01 SPRING

GLN6901A Coaxial Connector, Receiver

SYMBOL PART NO. DESCRIPTION

CONNECTOR:
 J9 0982442E01 Female, single contact

NON-REFERENCED ITEMS:
 0380269H08 SCREW, tapt M3x0.5, 2 used
 0703432A01 BRACKET, connector UHF
 1500483599 HOOD, receptacle
 3080116K05 CABLE, coaxial
 4203471A01 CLIP, ground

GLN6904A Fuse 110/120VAC, 10W Transmitter

SYMBOL PART NO. DESCRIPTION

6584711C21 FUSE, T3.16A

GLN6905A Fuse 110/120VAC, 25W Transmitter

SYMBOL PART NO. DESCRIPTION

6584711C11 FUSE

GLN6908A Fan 110/120V Operation

SYMBOL PART NO. DESCRIPTION

CONNECTOR, receptacle:
 J9 0982442E01 Female, single contact

NON-REFERENCED ITEMS:
 0284784B02 NUT, hex
 0390165J09 SCREW, machine
 0380269H13 SCREW, M3.5x0.6x10
 0384725C04 SCREW, M3.5x13
 0484718C02 LOCKWASHER A4.3
 1503466A01 HOUSING, junction

2802138M04 RECEPTACLE, ac
 2984770A06 LUG
 3503468A01 GRILLE, fan
 4203459A01 CLIP, nylon
 4210217A02 STRAP, tie
 5903467A01 FAN, cooling
 6584711C09 FUSE 250V TO.25A

J 1 1583498F37 CONNECTOR:
 J 1 2983499F01 Housing Connector 6 Postn; and:
 J 2 1583498F04 Terminal Female (5)
 J 2 2983499F01 Housing Connector and:
 J 3 0102716B38 Plug Therm Sw GPN1007A/1009A
 J 7 3102101M02 Term Strip Bat GPN1009A/1010A

GLN6909A Duplexer Hardware, Wall Mount

JU 2 0611009D23 JUMPER:
 JU101 0611009D23 Jumper
 JU102 0611009D23 Jumper

SYMBOL PART NO. DESCRIPTION

NON-REFERENCED ITEMS:

0380165J06 SCREW, M5x0.8x8 (black)
 0384723C38 SCREW, AM4
 0702543M01 BRACKET, mounting

K101 8002111M02 RELAY:
 12V 50mA GPN1009A/1010A

PLUG:

P 1 2882984N13 Plug 6 Pin
 P 2 2883441F04 Plug Red 4 Pin
 P 10-
 P 12 2802098M02 Term AMP up to 8 used

GLN6910A Duplexer Hardware, Rack Mount

SYMBOL PART NO. DESCRIPTION

NON-REFERENCED ITEMS:

0284784B02 NUT, hex
 0380165J07 SCREW, M4x10
 0484718C02 LOCKWASHER A4.3
 6584585P02 PANEL, structural

Q 1 4800869649 TRANSISTOR: (SEE NOTE)
 Q 2 4800869706 M9706
 Q 3 4800869648 M9648
 Q 4 4800869633 M9633
 Q 5 4800869639 M9639 GPN1008A/1010A
 Q 5 4802081B29 M1B29 GPN1007A/1009A
 Q 6 4800869639 M9639 GPN1008A/1010A
 Q 6 4802081B29 M1B29 GPN1007A/1009A
 Q 7 4800869570 M9570
 Q102 4802081B30 M1B30 GPN1009A/1010A
 Q103 4802081B30 M1B30 GPN1009A/1010A
 Q109 4800869648 M9648 GPN1009A/1010A

GPN1007A, GPN1008A, GPN1009A & GPN1010A Power Supplies

SYMBOL PART NO. DESCRIPTION

CAPACITOR:

C 1A 2384818A02 10000uF 40V GPN1008/1010A
 C 1B 2384818A02 10000uF 40V
 C 2 2311019A46 100uF 20% 25V
 C 3 2311048B05 1uF 20% 50V
 C 4 2360561B21 220uF 20% 25V
 C 5 2102288M11 0.022uF 10% X7R
 C 6 2102288M04 3300pF 10% X7R
 C 7 2102288M04 3300pF 10% X7R
 C 8 2311048B05 1uF 20% 50V
 C 9 2360561B25 1000uF 20% 25V
 C 10 2102288M13 0.047uF 10% X7R
 C 20 0884700C01 0.1uF 10% 250V
 C101 2311019A46 100uF 20% 25V GPN1008A/1010A
 C102 2360561B21 220uF 20% 25V GPN1008A/1010A
 C103 2102281M08 120pF 5% NPO GPN1008A/1010A
 C104 2102281M08 120pF 5% NPO GPN1008A/1010A
 C105 2102288M13 0.047uF 10% GPN1008A/1010A
 C106 2102281M08 120pF 5% NPO GPN1008A/1010A
 C107 2102281M08 120pF 5% NPO GPN1008A/1010A

R 1 0602369M23 RESISTOR:
 R 2 0602369M49 68 5% 0.6W
 R 3 0602369M27 10k 5% 0.6W
 R 4 0602369M24 82 5% 0.6W
 R 5 0602366M38 360 1% 0.39W
 R 6 0611049H79 698 1% 0.25W
 R 7 0602369M36 820 5% 0.6W
 R 8 1802099B11 1k 20% variable
 R 9 0602369M38 1.2k 5% 0.6W
 R 10 1784820A07 200 5% 5W
 R 11 0602369M19 33 5% 0.6W
 R 12 0602369M37 1k 5% 0.6W
 R 13 0602369M49 10k 5% 0.6W
 R 14 0611049J08 1370 1% 0.25W
 R 15 0602366M25 100 1% 0.39W
 R 16 0602366M37 330 1% 0.39W
 R 17 1784820A05 0.1 5% 7W GPN1008A/1010A
 R 17 1784820A06 0.2 5% 5W GPN1007A/1009A
 R 18 1784820A06 0.2 5% 5W
 R 19 0602369M42 2.7k 5% 0.6W
 R101 0602369M52 18k 5% 0.6W GPN1009A/1010A
 R102 0602369M53 22k 5% 0.6W GPN1009A/1010A
 R103 0602369M49 10k 5% 0.6W GPN1009A/1010A
 R104 0602369M61 100k 5% 0.6W GPN1009A/1010A
 R105 0602369M45 4.7k 5% 0.6W GPN1009A/1010A
 R106 0602369M42 2.7k 5% 0.6W GPN1009A/1010A
 R107 0602369M53 22k 5% 0.6W GPN1009A/1010A
 R108 0602369M53 22k 5% 0.6W GPN1009A/1010A
 R109 0602369M49 10k 5% 0.6W GPN1009A/1010A
 R110 0602369M41 2.2k 5% 0.6W GPN1009A/1010A
 R111 1802099B01 2k variable GPN1009A/1010A
 R112 0602369M37 1k 5% 0.6W GPN1009A/1010A
 R113 0602369M54 27k 5% 0.6W GPN1009A/1010A
 R114 0602369M57 47k 5% 0.6W GPN1009A/1010A
 R115 0602366M77 15k 1% 0.39W GPN1009A/1010A
 R116 0611049K36 28.7k 1% 0.25W GPN1009A/1010A
 R117 0602369M63 150k 5% 0.6W GPN1009A/1010A
 R118 0602369M49 10k 5% 0.6W GPN1009A/1010A
 R119 1782177B03 4 10% 5W GPN1009A/1010A
 R120 0602369M42 2.7k 5% 0.6W GPN1009A/1010A
 R121 0602369M52 18k 5% 0.6W GPN1009A/1010A
 R121 0602369M46 5.6k 5% 0.6W GPN1009A/1010A
 R123 0602369M51 15k 5% 0.6W GPN1009A/1010A
 R124 0602369M49 10k 5% 0.6W GPN1009A/1010A
 R125 0602369M49 10k 5% 0.6W GPN1009A/1010A
 R126 0602369M45 4.7k 5% 0.6W GPN1009A/1010A
 R127 0602369M42 2.7k 5% 0.6W GPN1009A/1010A

DIODE: (SEE NOTE)

CR1-
 CR7 4883654H01 Silicon
 CR101 4883654H01 Silicon GPN1009A/1010A
 CR102 4883654H01 Silicon GPN1009A/1010A
 CR103 4883654H01 Silicon GPN1009A/1010A
 CR104 4883654H01 Silicon GPN1009A/1010A
 CR105 4882466H13 Silicon GPN1009A/1010A
 CR106 4882466H13 Silicon GPN1009A/1010A
 CR107 4808085B01 MR751 GPN1009A/1010A
 CR108 4808085B01 MR751 GPN1009A/1010A
 CR109 4808085B01 MR751 GPN1009A/1010A
 CRA 4802081B06 Rectifier GPN1007A/1009A
 CRB 4802081B20 Rectifier GPN1008A/1010A

LED:

DS1 4880058K02 Green
 DS101 4880058K01 Red GPN1009A/1010A

FUSE:

F 1 6584711C11 3.1A(110/120V) GPN1007A/1009A
 F 1 6584711C10 1.6A(220/230/240V) "
 F 1 6584711C21 5A (110/120V) GPN1008A/1010A
 F 1 6584711C11 3.1A (220/230/240V) "
 F101 6584711C19 Fuse 0.63A
 F102 6584711C20 Fuse 12.5A

S 1 0102716B38 SWITCH:
Thermal GPN1007A/1009A

T 1 2502210B01 TRANSFORMER:
Power GPN1007A/1009A

T 1 2582169R01 Power GPN1008A/1010A

U 1 5183629M94 INTEGRATED CIRCUIT: (SEE NOTE)
Voltage Regulator

U101 5183629M18 Comparator GPN1009A/1010A

U102 5184621K96 5V Regulator GPN1009A/1010A

VR 1 4882256C47 ZENER DIODE:
6.8V 1%

VR101 4882256C47 6.8V 1% GPN1009A/1010A

GSN6036A Speaker, 3W 4 ohms

| SYMBOL | PART NO. | DESCRIPTION |
|--------|------------|----------------------|
| LS1 | 5002412B01 | Speaker & Bracket |
| P2 | 2880262H01 | Connector, 2-contact |

NON-REFERENCED ITEMS:
0300136756 SCREW, tpng, 10-16x5/8", 2 used
1580274H01 COVER, cable
2980273H01 TERMINAL, crimp
2980273H02 TERMINAL, crimp, 2 used
4280271H01 STRAIN RELIEF

NON-REFERENCED ITEMS:

| | | |
|------------|-------------------|-----------------|
| 0380165J07 | Screw M4x10 | (4) |
| 0380269H05 | Screw M4x12 | (2) |
| 0380269H07 | Screw M4x20 | |
| 0380269H08 | Screw M3x8 | (9) |
| 0384723C16 | Screw M3x25 | (4) |
| 0384723C29 | Screw M3x4 | |
| 0384893D08 | Standoff Xfmr | (4) |
| 0484717C01 | Washer M4 | (4) |
| 0484718C02 | Lockwasher | (8) |
| 0500131314 | Eyelet | |
| 0502157B07 | Rivet | Pop |
| 0703438A01 | Bracket | PCB |
| 0902088M01 | Socket Transistor | (2) |
| 0902263B01 | Fuseholder | (2) |
| 1382148R01 | Panel | Front |
| 1402019B02 | Insulator | M9806/M9807 |
| 1402091M01 | Insulator | |
| 1402161M01 | Insulator mica | TO-3 (2) |
| 1402309M01 | Cap Ins'g | TO-3 (2) |
| 1402662B01 | Insulator | Transformer |
| 1484277D25 | Housing | Connector |
| 1503433A01 | Cover Batt Con | GPN1009A/1010A |
| 1582413R01 | Cover | Housing |
| 2682150R01 | Heatsink | |
| 2782118R01 | Chassis | |
| 2984770A06 | Lug Gnd | |
| 3100122068 | Strip Terminal | |
| 3302373M39 | Label | |
| 4202211B01 | Bracket | |
| 4280276H01 | Retainer Cable | |
| 4384798F01 | Insert | Polarizing Key |
| 4684203E01 | Guide Card | (2) |
| 7505413D01 | Feet Bumper | (4) |
| 8482361R01 | Board | Printed Circuit |

NOTE

For optimum performance, diodes, transistors, integrated circuits and crystals must be ordered by Motorola part numbers.

SUBSTITUTION OF TRANSISTORS

| | | |
|------------|---|------------|
| 4800869571 | = | 4811043B03 |
| 4800869577 | = | 4880182D22 |
| 4800869658 | = | 4811043B19 |
| 4800869680 | = | 4811043B09 |
| 4800869681 | = | 4811043B10 |
| 4800869839 | = | 4811043B12 |
| 4800869932 | = | 4811043B16 |
| 4802081B10 | = | 4802081B30 |
| 4802081B11 | = | 4802081B31 |
| 4802081B30 | = | 4802081B10 |
| 4802081B31 | = | 4802081B11 |
| 4802081B38 | = | 4805128M66 |
| 4805128M66 | = | 4802081B38 |
| 4811043B03 | = | 4800869571 |
| 4811043B09 | = | 4800869680 |
| 4811043B10 | = | 4800869681 |
| 4811043B12 | = | 4800869839 |
| 4811043B16 | = | 4800869932 |
| 4811043B19 | = | 4800869658 |
| 4880182D22 | = | 4800869577 |

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