ERICSSON GE

MAINTENANCE MANUAL
406-512 MHz RF ASSEMBLIES 19D417075G9-G38, 19B233690G1-G20 AND IF FILTER BOARDS 19C320523G2-G3, 19C331148G1-G2

TABLE OF CONTENTS

DESCRIPTION

The RF Assembly uses five tuned helical resonators to provide front end RF selectivity with no gain. A UHS pre-amplifier assembly is available that can be used with the receiver to improve sensitivity.

Mixer board A303 uses the RF signal from the RF Assembly and the mixer injection frequency from the oscillator multiplier board to generate the IF frequency.

CIRCUIT ANALYSIS

RF ASSEMBLY

Pre-Amplifier

The pre-amplifier is present only in UHS receivers, and uses a bi-polar transistor to provide approximately 10 dB gain.

RF from the antenna is link-coupled through helical resonator L2301 to the base of Class A pre-amplifier Q2301. L2301 matches the 50 ohm input to the base of Q2301. The amplified output is coupled through L2302, and connected through W2301 to J1 on Antenna Input Board A301. P2301 connects to J502 on the IF-Filter Board for regulated +10 Volt supply voltage.

Antenna Input A301A/A301B/A3O1C

An RF signal from the antenna or UHS pre-amplifier is applied to A301 which provides an AC ground between vehicle ground and receiver A-. Resistor R1 prevents a static charge from building up on the vehicle antenna. The output of A3O1 is coupled through five high Q helical resonators that provide the front end RF selectivity. The helicals are tuned to the in coming frequency by C301 through C305.

Mixer A304

The mixer uses a FET (Q1) as the active device. The FET mixer provides a high input impedance, high power gain and an output relatively free of harmonics (low in intermodulation products).

In the mixer stage, RF from the helical resonators is coupled through L1 and C2 which matches the RF output to the gate of mixer Q5O1. Injection voltage from the multiplier-selectivity stages is applied to the source of the mixer. The 11.2 MHz mixer IF output signal is coupled from the drain of Q1 through Cable W1 to J501 on the IF Filter board.

ERICSSON GE

Ericsson GE Mobile Communications Inc.
Mountain View Road • Lynchburg, Virginia 24502

Printed in U.S.A.

IF FILTER

Crystal Filter

The output of A303-Q1 is coupled through a tuned circuit (L507 & C515) which matches the out put to the input of the four-pole monolithic crystal filter. The highly-selective crystal filter (FL501 & FL502) provides the first portion of the receiver IF selectivity. The output of the filter is coupled through impedance matching network L503 and C511 to the IF amplifier.

Service Note: Variable capacitor C504 does not require adjustment when performing normal alignment. If the four-pole monolithic crystal filter is replaced, then adjustment of C504 is necessary for optimum IF response.

IF Amplifier

IF Amplifier Q501 is a dual-gate FET. The filter output is applied to Gate 1 of the amplifier, and the output is taken from the drain. The biasing on Gate 2 and the drain load determines the gain of the stage. The amplifier provides approximately 20 dB of IF gain. The output of Q501 is coupled through a network (L504 & C509) that matches the amplifier output to the crystal filter on the IFAS board. The output of the IF-Filter board is applied to the IFAS board through feed-through capacitor C325.

Supply voltage for the RF amplifier and IF-Filter board is supplied from the IFAS board through feed-through capacitor C326.

MODIFICATIONS

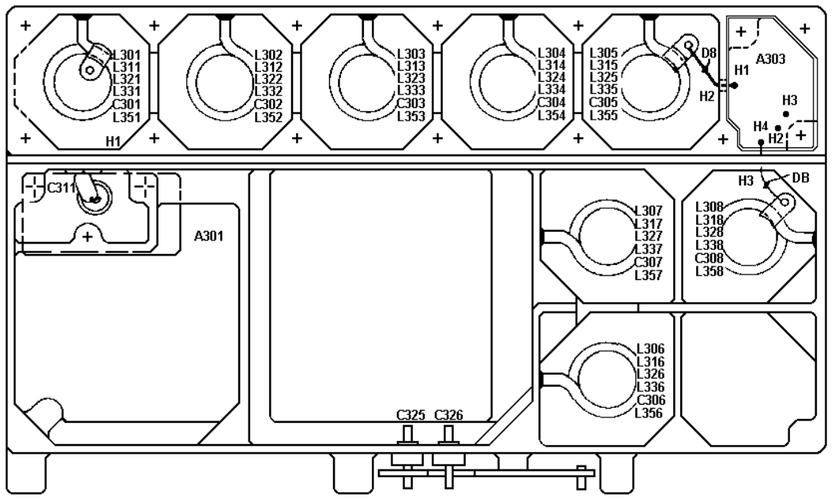
Some of the RF amplifier assemblies are not compatible with some of the IF-Filter boards without a modification to the RF assembly mixer board. Refer to the compatibility chart shown below.

RF ASSEMBLY	COMPATIBLE WITH IF-FILTER BOARD
19D417075G9-G18	19C320523G2
19B233690G1-G10	19C331148G1

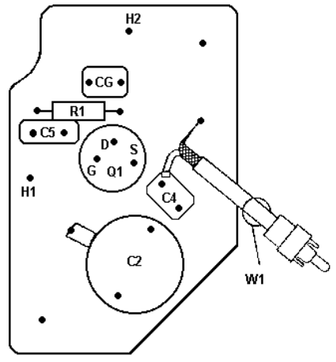
The following modifications are provided to permit field replacement using incompatible boards or assemblies. Refer to the applicable Outline Diagram for component location and printed wiring board layout.

- To modify RF assemblies 19D417075G9-G18 for operation with IF-Filter board 19C331148G1: add frequency select network Z1 from the drain of mixer FET Q1 to ground. Refer to the Parts List in this manual for the correct part number.
- To modify RF assemblies 19B233690G1-G10 for operation with IF-Filter board 19C320523G2: clip out and remove frequency select network Z1 on the mixer board.

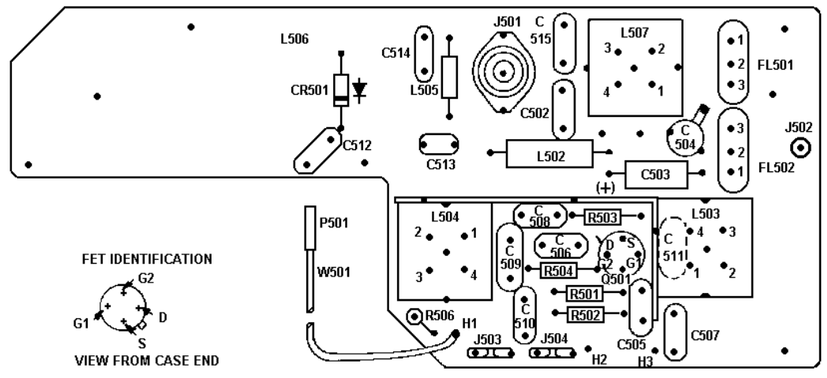
RF ASSEMBLY
BOTTOM VIEW



MIXER
A304



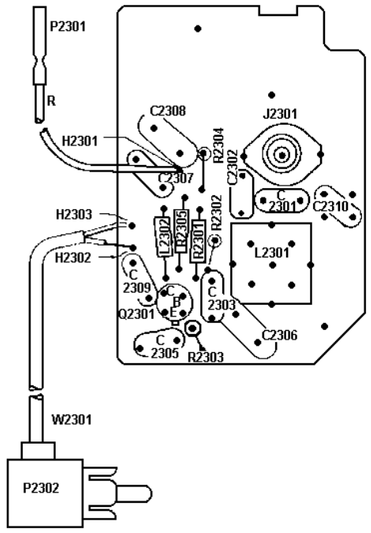
IF-FILTER BOARD
COMPONENT SIDE



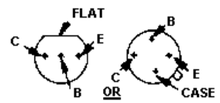
FET IDENTIFICATION

VIEW FROM CASE END

UHS PRE-AMPLIFIER



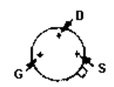
LEAD IDENTIFICATION
FOR Q2301



IN-LINE TRIANGULAR
VIEW FROM CASE END

NOTE: LEAD ARRANGEMENT, AND NOT CASE SHAPE, IS DETERMINING FACTOR FOR LEAD IDENTIFICATION. TAB INDICATES EMITTER LEAD.

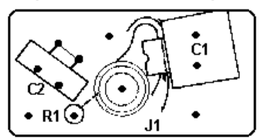
LEAD IDENTIFICATION
FOR Q1



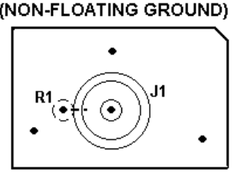
TRIANGULAR
VIEW FROM CASE END

NOTE: LEAD ARRANGEMENT, AND NOT CASE SHAPE, IS DETERMINING FACTOR FOR LEAD IDENTIFICATION. TAB INDICATES EMITTER LEAD.

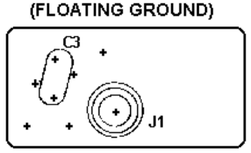
A301A
ANT INPUT
(FLOATING GROUND)



A301B
ANT INPUT
(NON-FLOATING GROUND)

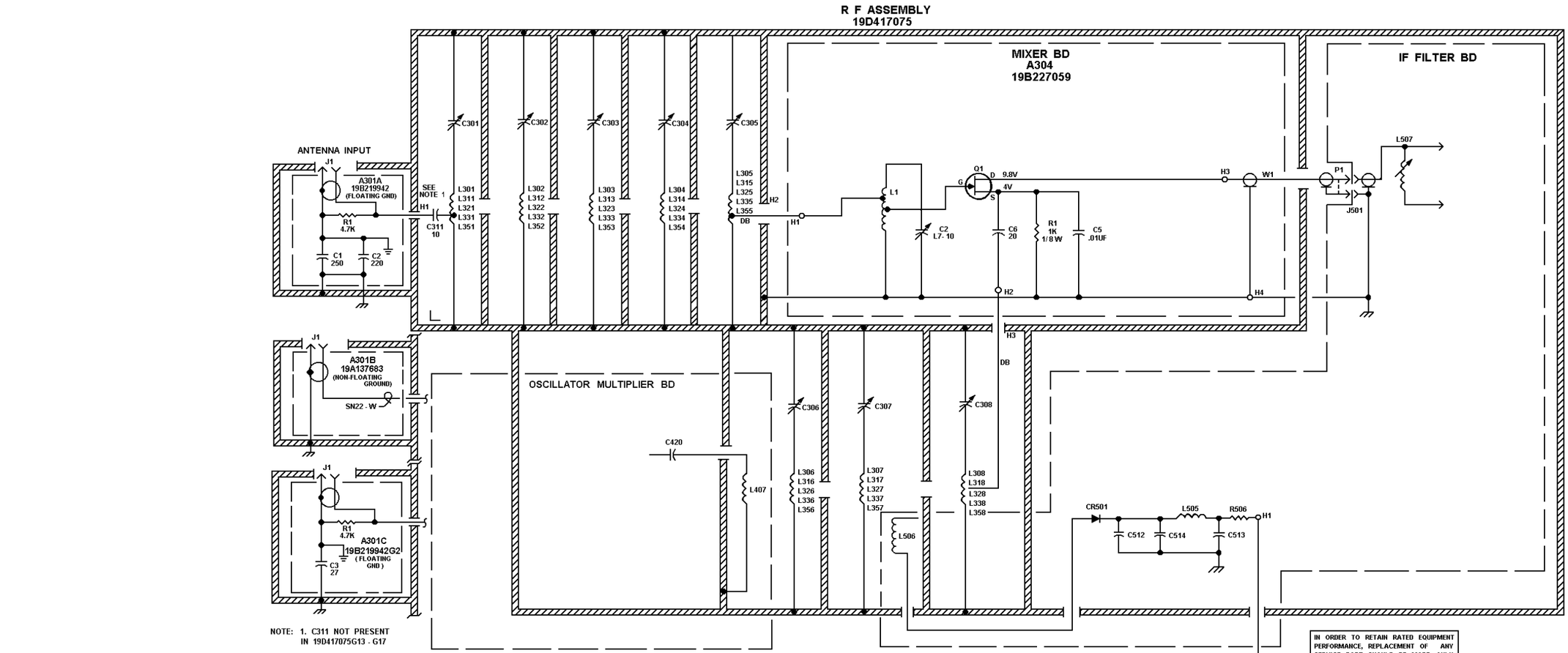


A301C
ANT INPUT
(FLOATING GROUND)



OUTLINE DIAGRAM
406-512 MHz, RF ASSEMBLY BOARD
19D417075G9-G18, IF FILTER BOARD
19C320523G2 AND MIXER 19B227059G2

(19D423794, Rev. 10)



MODEL NO.	REV. LTR.
19C320527G1	A
19C320527G2	A
19C320527G3	A
19C320527G4	A
19C320527G5	A

VOLTAGE READINGS

VOLTAGE READINGS ARE TYPICAL READINGS MEASURED TO SYSTEM NEGATIVE (P903-10) WITH TEST SET MODEL 4EX3A11 OR A 20,000 OHM-PER-VOLT METER.

ALL RESISTORS ARE 1/4 WATT UNLESS OTHERWISE SPECIFIED AND RESISTOR VALUES IN OHMS UNLESS FOLLOWED BY K = 1000 OHMS OR MEG = 1,000,000 OHMS. CAPACITOR VALUES IN PICOFARADS (EQUAL TO MICROMICROFARADS) UNLESS FOLLOWED BY UN = MICROFARADS. INDUCTANCE VALUES IN MICROHENRYS UNLESS FOLLOWED BY MH = MILLIHENRYS OR H = HENRYS.

INDICATES A-

INDICATES VEHICLE GROUND

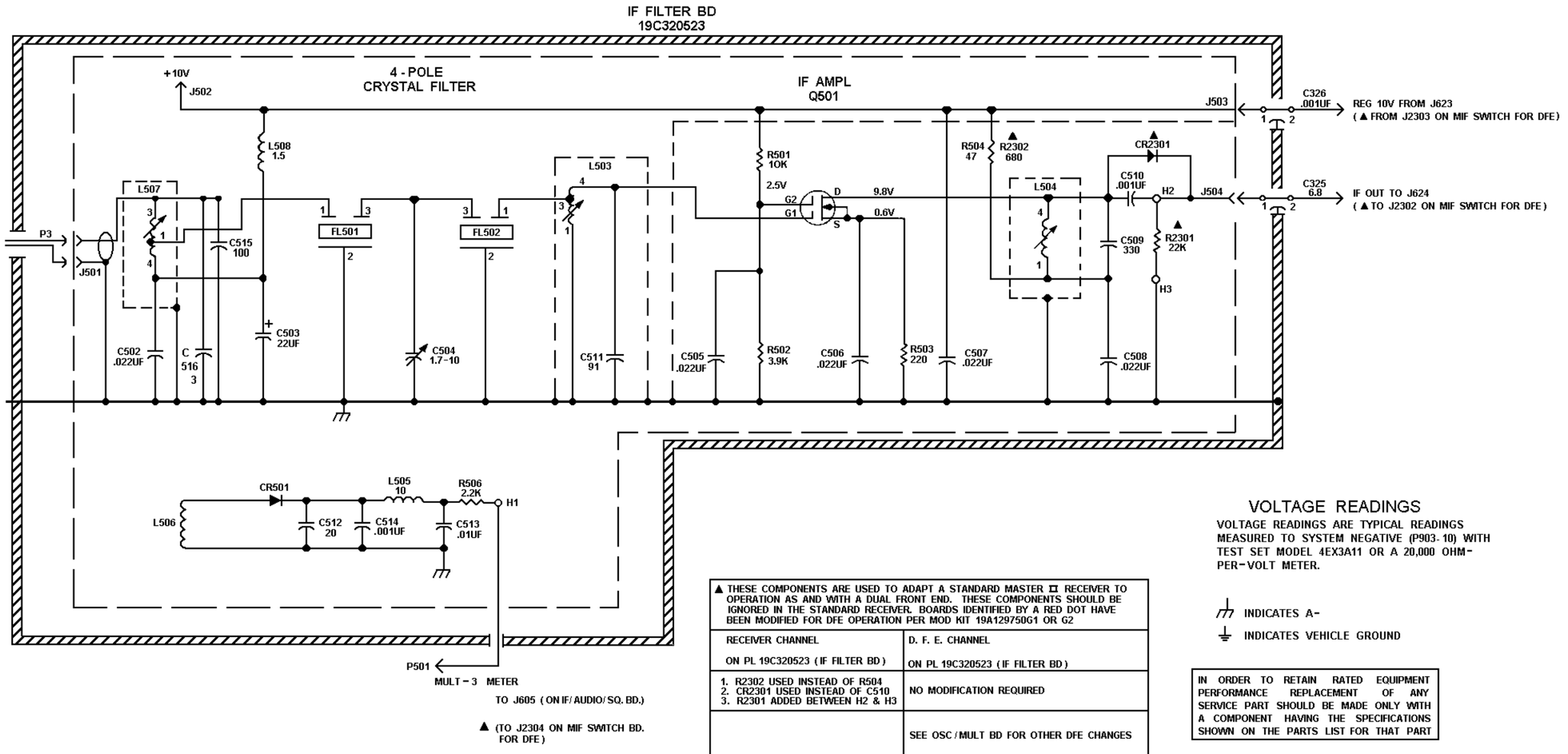
COMPONENT VALUE TABLE					
COMP DESIG	LL	LM	LL	M	H
RF FREQ (MHz)	406-420		450-470	470-494	494-512
L301-L308	X				
L311-L318			X		
L321-L328				X	
L331-L338					X
L351-L358		X			

IN ORDER TO RETAIN RATED EQUIPMENT PERFORMANCE, REPLACEMENT OF ANY SERVICE PART SHOULD BE MADE ONLY WITH A COMPONENT HAVING THE SPECIFICATIONS SHOWN ON THE PARTS LIST FOR THAT PART.

RF ASSEMBLY	REV LTR	MIXER	REV LTR	ANTENNA INPUT	REV LTR	FREQ. (MHz)
19D417075G9	D	19B227059G2	—	19B219942G2	—	406-420 (LL)
19D417075G10	C	19B227059G2	—	19B219942G1	—	450-470 (L)
19D417075G11	C	19B227059G2	—	19B219942G1	—	470-494 (M)
19D417075G12	C	19B227059G2	—	19B219942G1	—	494-512 (H)
19D417075G13	A	19B227059G2	—	19A137683G2	—	406-420 (LL)
19D417075G14	A	19B227059G2	—	19A137683G2	—	450-470 (L)
19D417075G15	A	19B227059G2	—	19A137683G2	—	470-494 (M)
19D417075G16	A	19B227059G2	—	19A137683G2	—	494-512 (H)
19D417075G17		19B227059G2	—	19A137683G2	—	420-450 (LM)
19D417075G18	—	19B227059G2	—	19B219942G1	—	420-450 (LM)

SCHEMATIC DIAGRAM 406-512 MHz, RF ASSEMBLY 19D417075G9-G18 AND UHS PRE-AMPLIFIER 19C320527G1-5

(19D423520, Rev. 8), (19B226008, Rev. 7)



▲ THESE COMPONENTS ARE USED TO ADAPT A STANDARD MASTER II RECEIVER TO OPERATION AS AND WITH A DUAL FRONT END. THESE COMPONENTS SHOULD BE IGNORED IN THE STANDARD RECEIVER. BOARDS IDENTIFIED BY A RED DOT HAVE BEEN MODIFIED FOR DFE OPERATION PER MOD KIT 19A129750G1 OR G2	
RECEIVER CHANNEL ON PL 19C320523 (IF FILTER BD)	D. F. E. CHANNEL ON PL 19C320523 (IF FILTER BD)
1. R2302 USED INSTEAD OF R504 2. CR2301 USED INSTEAD OF C510 3. R2301 ADDED BETWEEN H2 & H3	NO MODIFICATION REQUIRED
	SEE OSC/MULT BD FOR OTHER DFE CHANGES
THESE ITEMS ARE SUPPLIED IN MOD. KIT PL 19A129750G1	THESE ITEMS ARE SUPPLIED IN MOD. KIT PL 19A129750G2

	REV LETTER
IF FILTER BD	
19C320523G2	A

VOLTAGE READINGS

VOLTAGE READINGS ARE TYPICAL READINGS MEASURED TO SYSTEM NEGATIVE (P903-10) WITH TEST SET MODEL 4EX3A11 OR A 20,000 OHM-PER-VOLT METER.

⏚ INDICATES A-

⏚ INDICATES VEHICLE GROUND

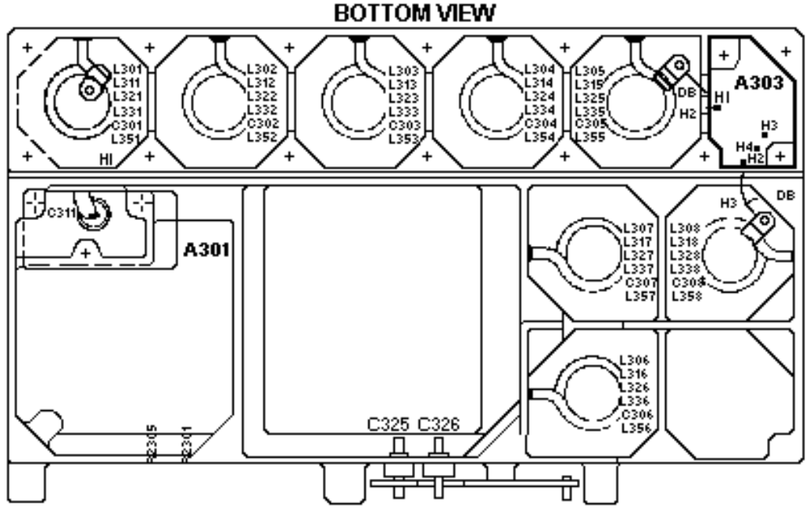
IN ORDER TO RETAIN RATED EQUIPMENT PERFORMANCE REPLACEMENT OF ANY SERVICE PART SHOULD BE MADE ONLY WITH A COMPONENT HAVING THE SPECIFICATIONS SHOWN ON THE PARTS LIST FOR THAT PART

ALL RESISTORS ARE 1/4 WATT UNLESS OTHERWISE SPECIFIED AND RESISTOR VALUES IN OHMS UNLESS FOLLOWED BY K=1000 OHMS OR MEG = 1,000,000 OHMS. CAPACITOR VALUES IN PICOFARADS (EQUAL TO MICROMICROFARADS) UNLESS FOLLOWED BY UF = MICROFARADS. INDUCTANCE VALUES IN MICROHENRYS UNLESS FOLLOWED BY MH = MILLIHENRYS OR H = HENRYS.

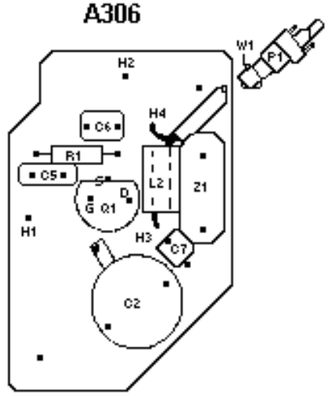
SCHEMATIC DIAGRAM
IF FILTER BOARD
19C320523G2

(19D423519, Rev. 2)

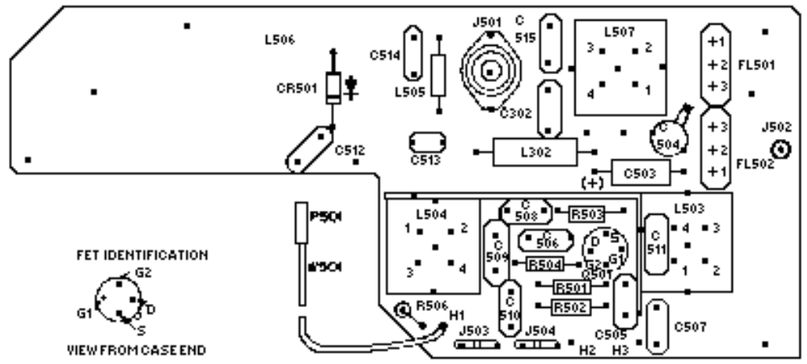
RF ASSEMBLY
BOTTOM VIEW



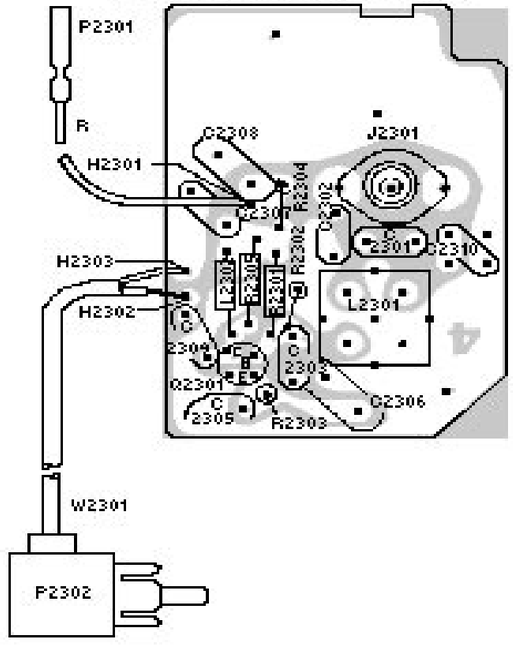
MIXER
A306

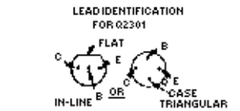


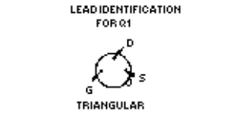
IF-FILTER BOARD
COMPONENT SIDE



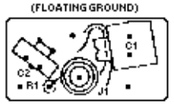
UHS PRE-AMPLIFIER



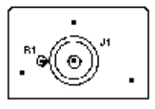




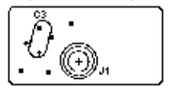
A301A
ANT INPUT
(FLOATING GROUND)



A301B
ANT INPUT
(NON-FLOATING GROUND)

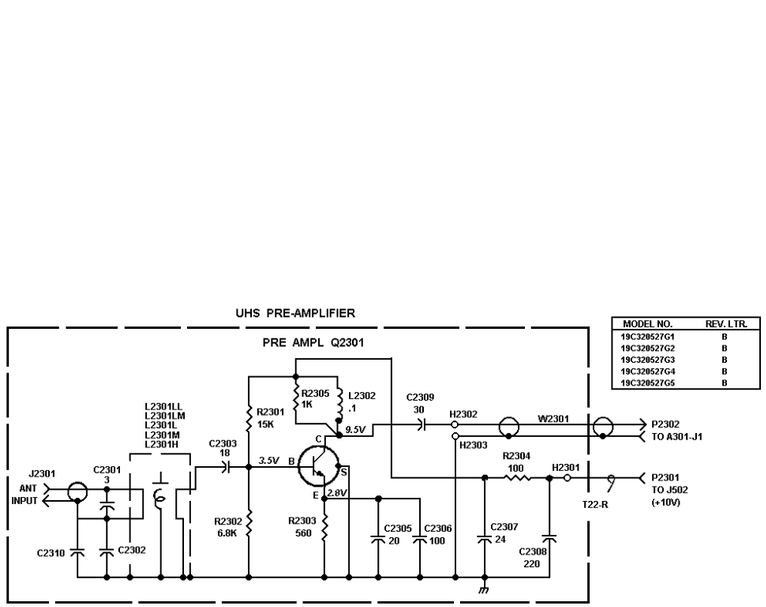


A301C
ANT INPUT
(FLOATING GROUND)



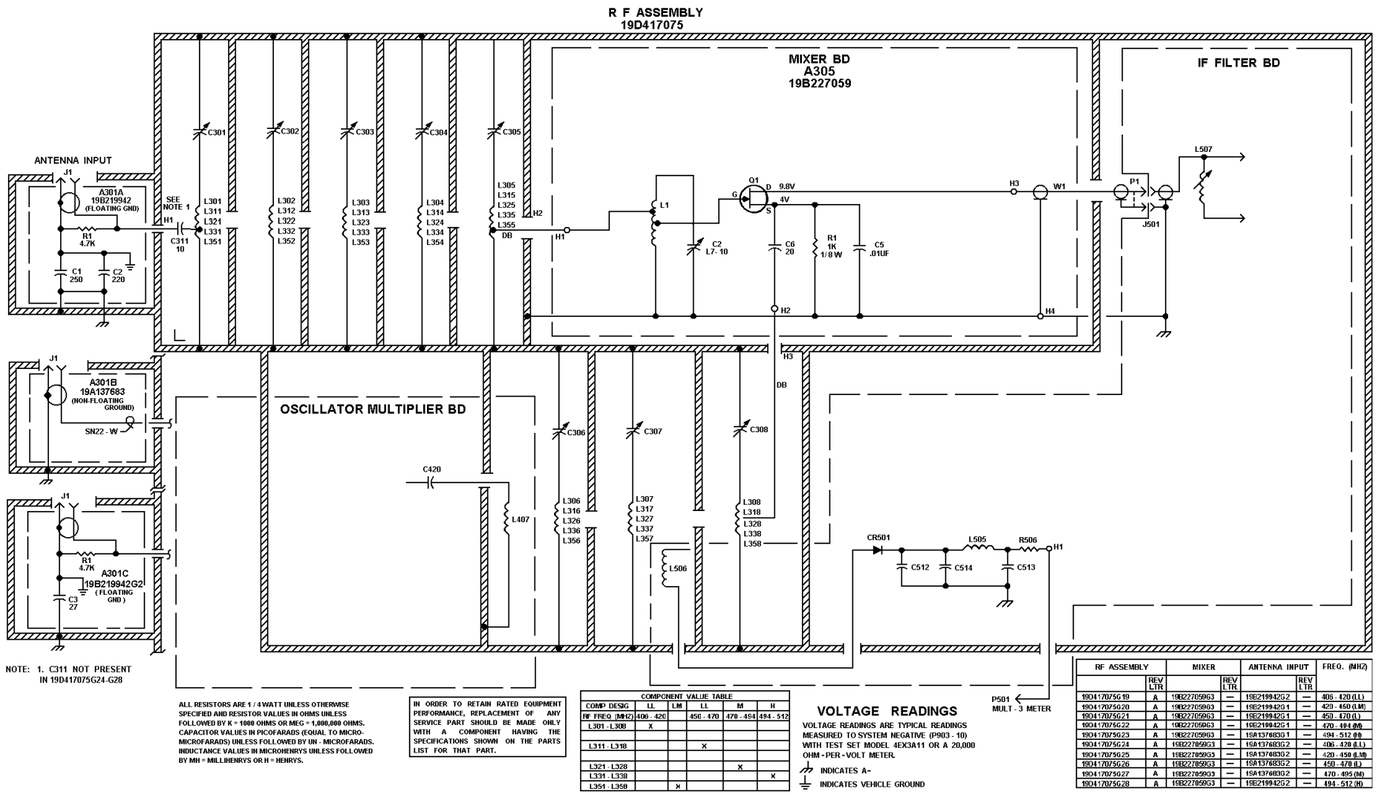
OUTLINE DIAGRAMS
406-512 MHz, RF ASSEMBLY
19D417075G19-G28, IF-FILTER BOARD
19C331148G1-G2 AND MIXER BOARD
19B227059G3

(19D433377, Rev. 0)



MODEL NO.	REV. LTR.
19C320527G1	B
19C320527G2	B
19C320527G3	B
19C320527G4	B
19C320527G5	B

ALL RESISTORS ARE 1 / 4 WATT UNLESS OTHERWISE SPECIFIED AND RESISTOR VALUES IN OHMS UNLESS FOLLOWED BY K = 1000 OHMS OR MEG = 1,000,000 OHMS. CAPACITOR VALUES IN PICOFARADS (EQUAL TO MICRO-MICROFARADS) UNLESS FOLLOWED BY UN - MICROFARADS. INDUCTANCE VALUES IN MICROHENRYS UNLESS FOLLOWED BY MH = MILLIHENRYS OR H = HENRYS.



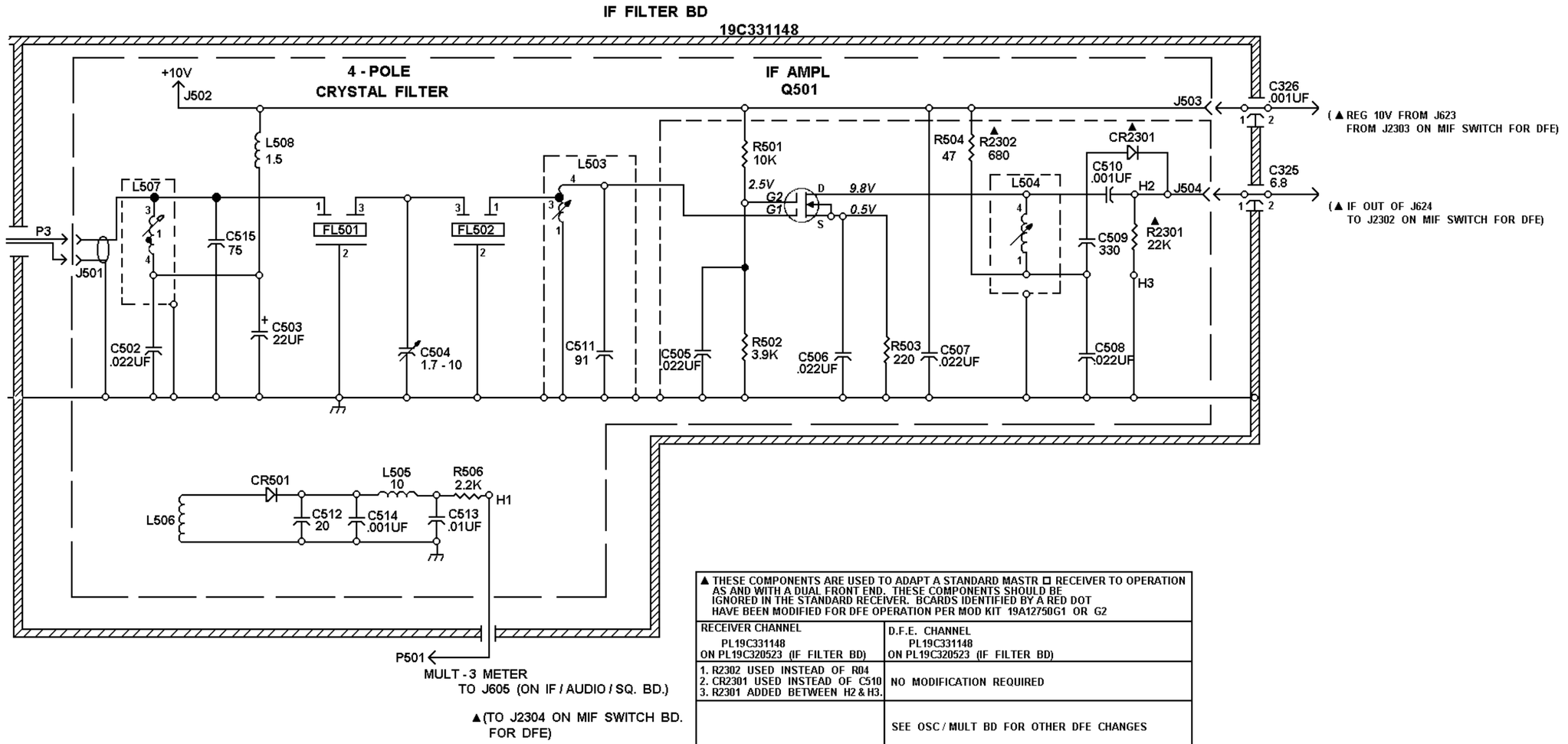
COMPONENT VALUE TABLE

COMP DESIG	LL	LM	LL	M	H
RF FREQ (MHZ)	406 - 420		450 - 470	470 - 494	494 - 512
L301 - L308	X				
L311 - L318			X		
L321 - L328				X	
L331 - L338					X
L351 - L358		X			

RF ASSEMBLY		MIXER		ANTENNA INPUT		FREQ. (MHZ)
	REV LTR		REV LTR		REV LTR	
19D417075G19	A	19B227059G3	—	19E219942G2	—	406 - 420 (LL)
19D417075G20	A	19B227059G3	—	19E219942G1	—	420 - 450 (LM)
19D417075G21	A	19B227059G3	—	19E219942G1	—	450 - 470 (LL)
19D417075G22	A	19B227059G3	—	19E219942G1	—	470 - 494 (M)
19D417075G23	A	19B227059G3	—	19A137683G1	—	494 - 512 (H)
19D417075G24	A	19B227059G3	—	19A137683G2	—	406 - 470 (LL)
19D417075G25	A	19B227059G3	—	19A137683G2	—	420 - 450 (LM)
19D417075G26	A	19B227059G3	—	19A137683G2	—	450 - 470 (LL)
19D417075G27	A	19B227059G3	—	19A137683G2	—	470 - 494 (M)
19D417075G28	A	19B227059G3	—	19E219942G2	—	494 - 512 (H)

SCHEMATIC DIAGRAMS
406-512 MHz, RF ASSEMBLY
19D417075G19-G28
WITH MIXER BOARD 19B227059G3 AND
UHS PRE-AMPLIFIER 19C320527G1-G5

(19D432485, Rev. 2), (19B226008, Rev. 8)



▲ THESE COMPONENTS ARE USED TO ADAPT A STANDARD MASTR ☐ RECEIVER TO OPERATION AS AND WITH A DUAL FRONT END. THESE COMPONENTS SHOULD BE IGNORED IN THE STANDARD RECEIVER. BCARDS IDENTIFIED BY A RED DOT HAVE BEEN MODIFIED FOR DFE OPERATION PER MOD KIT 19A12750G1 OR G2	
RECEIVER CHANNEL PL19C331148 ON PL19C320523 (IF FILTER BD)	D.F.E. CHANNEL PL19C331148 ON PL19C320523 (IF FILTER BD)
1. R2302 USED INSTEAD OF R04 2. CR2301 USED INSTEAD OF C510 3. R2301 ADDED BETWEEN H2 & H3.	NO MODIFICATION REQUIRED
	SEE OSC / MULT BD FOR OTHER DFE CHANGES
THESE ITEMS ARE SUPPLIED IN MOD. KIT PLA129750G1.	THESE ITEMS ARE SUPPLIED IN MOD. KIT PLA129750G2.

VOLTAGE READINGS

VOLTAGE READINGS ARE TYPICAL READINGS MEASURED TO SYSTEM NEGATIVE (P903 - 101) WITH TEST SET MODEL 4EX3A11 OR A 20,000 OHM - PER - VOLT METER.

⏚ INDICATES A -

⏚ INDICATES VEHICLE GROUND

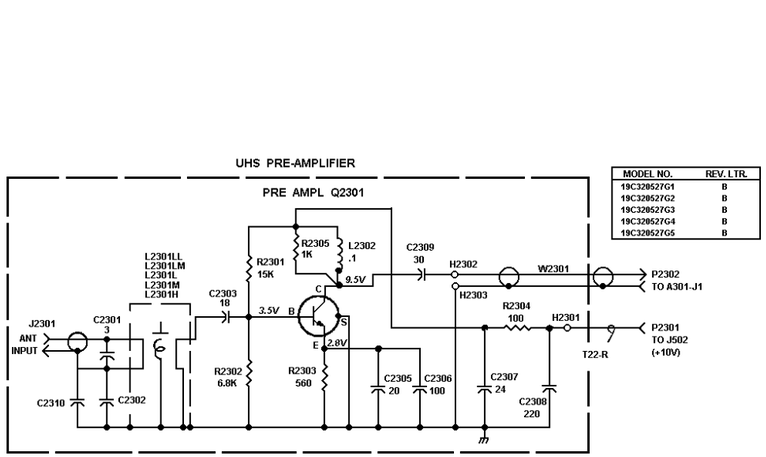
IN ORDER TO RETAIN RATED EQUIPMENT PERFORMANCE, REPLACEMENT OF ANY SERVICE PART SHOULD BE MADE ONLY WITH A COMPONENT HAVING THE SPECIFICATIONS SHOWN ON THE PARTS LIST FOR THAT PART.

ALL RESISTORS ARE 1/4 WATT UNLESS OTHERWISE SPECIFIED AND RESISTOR VALUES IN OHMS UNLESS FOLLOWED BY K = 1... OHMS OR MEG = 1,000,000 OHMS. CAPACITOR VALUES IN PICOFARADS (EQUAL TO MICROMICROFARADS) UNLESS FOLLOWED BY UF = MICROFARADS, INDUCTANCE VALUES IN MICROHENRYS UNLESS FOLLOWED BY MH = MILLIHENRYS OR H = HENRYS.

	REV LETTER
IF FILTER BD	
19C331148G1	A

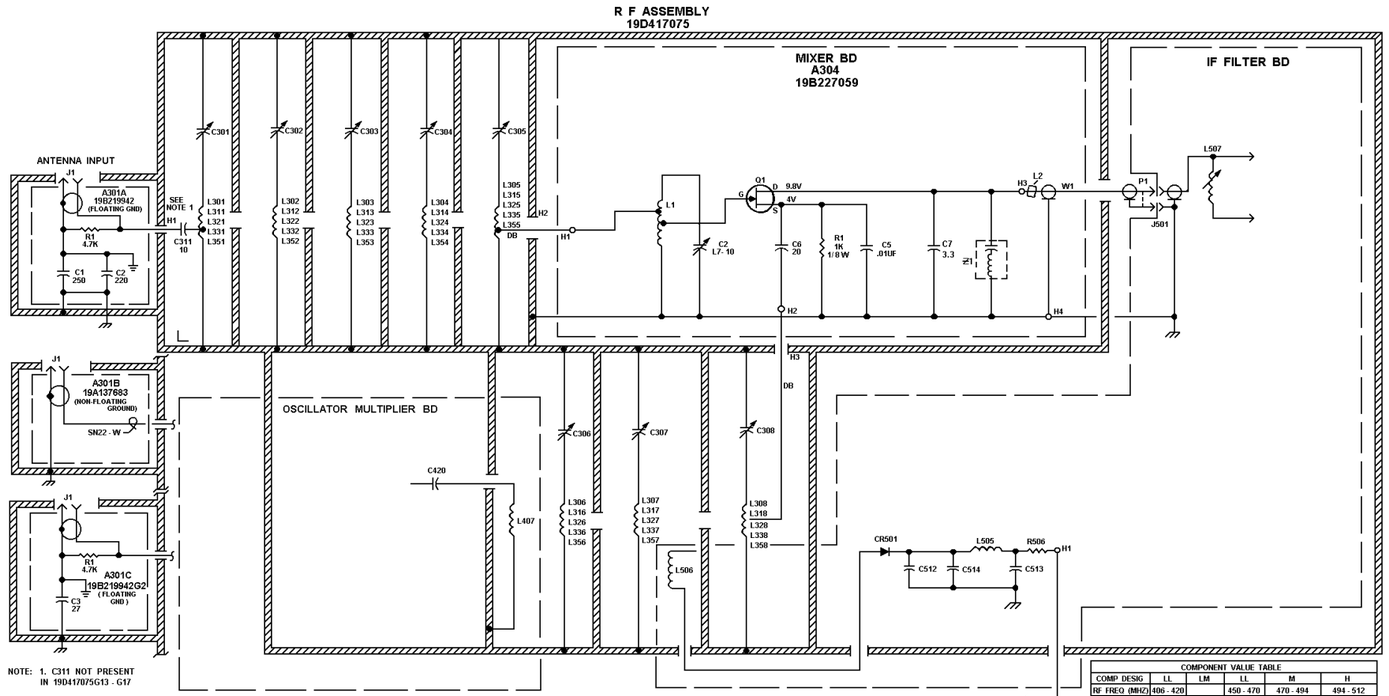
SCHEMATIC DIAGRAM
IF-FILTER BOARD
19C331148G1

(19D432484, Rev. 2)



MODEL NO.	REV. LTR.
19C320527G1	B
19C320527G2	B
19C320527G3	B
19C320527G4	B
19C320527G5	B

ALL RESISTORS ARE 1 / 4 WATT UNLESS OTHERWISE SPECIFIED AND RESISTOR VALUES IN OHMS UNLESS FOLLOWED BY K = 1000 OHMS OR MEG = 1,000,000 OHMS. CAPACITOR VALUES IN PICOFARADS (EQUAL TO MICRO-MICROFARADS) UNLESS FOLLOWED BY UN - MICROFARADS. INDUCTANCE VALUES IN MICROHENRYS UNLESS FOLLOWED BY MH = MILLIHENRYS OR H = HENRYS.



NOTE: 1. C311 NOT PRESENT IN 19D417075G13 - G17

VOLTAGE READINGS

VOLTAGE READINGS ARE TYPICAL READINGS MEASURED TO SYSTEM NEGATIVE (P903 - 10) WITH TEST SET MODEL 4EX3A11 OR A 20,000 OHM - PER - VOLT METER.

INDICATES A-

INDICATES VEHICLE GROUND

RF ASSEMBLY	REV LTR	MIXER	REV LTR	ANTENNA INPUT	REV LTR	FREQ. (MHZ)
19D417075G29		19B227950G4	—	19B219942G2	—	406 - 420 (LL)
19D417075G30		19B227950G4	—	19B219942G1	—	420 - 450 (LM)
19D417075G31		19B227959G4	—	19B219942G1	—	450 - 470 (L)
19D417075G32		19B227959G4	—	19B219942G1	—	470 - 494 (M)
19D417075G33		19B227959G4	—	19A137693G1	—	494 - 512 (H)
19D417075G34		19B227950G4	—	19A137683G2	—	406 - 420 (LL)
19D417075G35		19B227950G4	—	19A137683G2	—	420 - 450 (LM)
19D417075G36		19B227959G4	—	19A137683G2	—	450 - 470 (L)
19D417075G37		19B227959G4	—	19A137683G2	—	470 - 495 (M)
19D417075G38		19B227959G4	—	19B219942G2	—	494 - 512 (H)

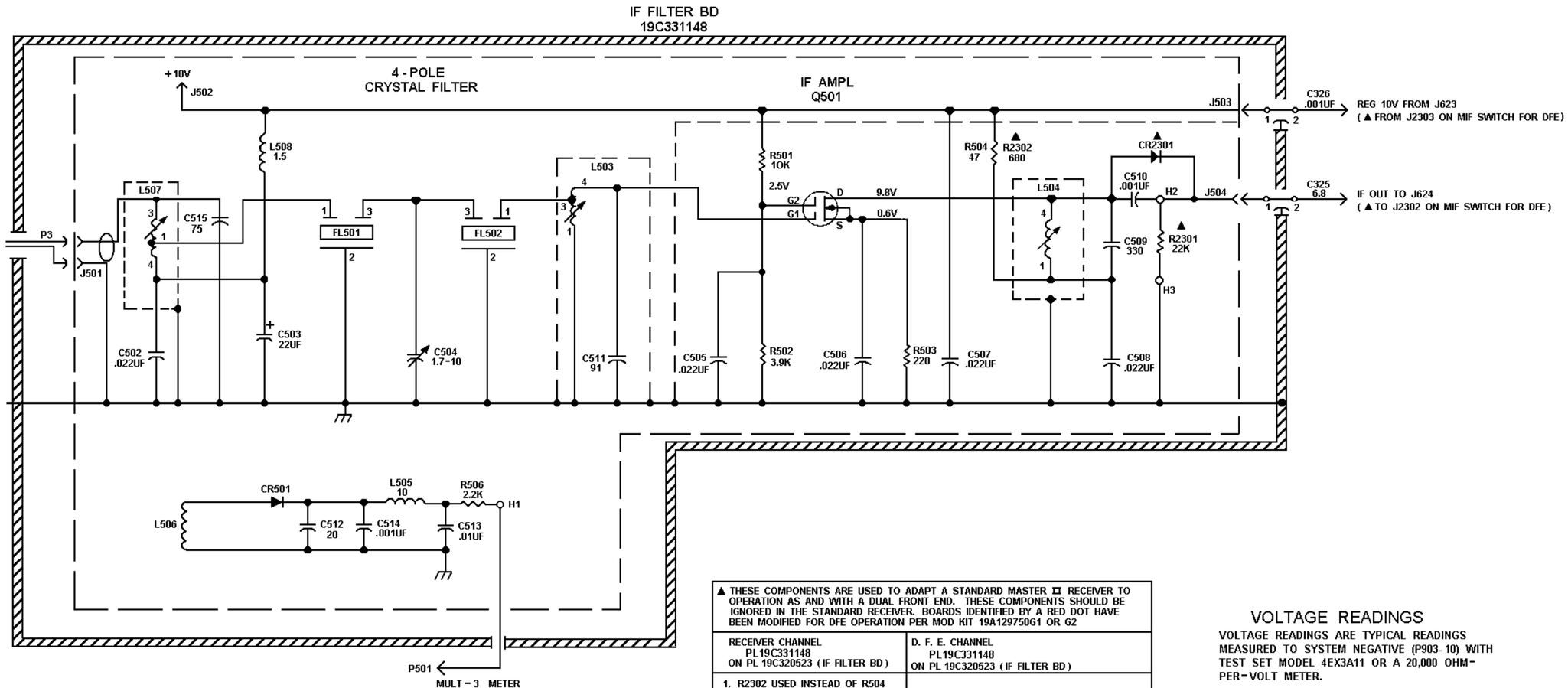
IN ORDER TO RETAIN RATED EQUIPMENT PERFORMANCE, REPLACEMENT OF ANY SERVICE PART SHOULD BE MADE ONLY WITH A COMPONENT HAVING THE SPECIFICATIONS SHOWN ON THE PARTS LIST FOR THAT PART.

ALL RESISTORS ARE 1 / 4 WATT UNLESS OTHERWISE SPECIFIED AND RESISTOR VALUES IN OHMS UNLESS FOLLOWED BY K = 1000 OHMS OR MEG = 1,000,000 OHMS. CAPACITOR VALUES IN PICOFARADS (EQUAL TO MICRO-MICROFARADS) UNLESS FOLLOWED BY UN - MICROFARADS. INDUCTANCE VALUES IN MICROHENRYS UNLESS FOLLOWED BY MH = MILLIHENRYS OR H = HENRYS.

COMPONENT VALUE TABLE					
COMP DESIG	LL	LM	L	M	H
RF FREQ (MHZ)	406 - 420		450 - 470	470 - 494	494 - 512
L301 - L308	X				
L311 - L318			X		
L321 - L328				X	
L331 - L338					X
L351 - L358		X			

SCHEMATIC DIAGRAMS
406-512 MHz, RF ASSEMBLY 19D417075G29-G38 WITH MIXER BOARD 19B227059G4 AND UHS PRE-AMPLIFIER 19C320527G1-G5

(19D433368, Rev. 0), (19B226008, Rev. 8)



▲ THESE COMPONENTS ARE USED TO ADAPT A STANDARD MASTER II RECEIVER TO OPERATION AS AND WITH A DUAL FRONT END. THESE COMPONENTS SHOULD BE IGNORED IN THE STANDARD RECEIVER. BOARDS IDENTIFIED BY A RED DOT HAVE BEEN MODIFIED FOR DFE OPERATION PER MOD KIT 19A129750G1 OR G2	
RECEIVER CHANNEL PL19C331148 ON PL 19C320523 (IF FILTER BD)	D. F. E. CHANNEL PL19C331148 ON PL 19C320523 (IF FILTER BD)
1. R2302 USED INSTEAD OF R504 2. CR2301 USED INSTEAD OF C510 3. R2301 ADDED BETWEEN H2 & H3	NO MODIFICATION REQUIRED
	SEE OSC/MULT BD FOR OTHER DFE CHANGES
THESE ITEMS ARE SUPPLIED IN MOD. KIT PL 19A129750G1	THESE ITEMS ARE SUPPLIED IN MOD. KIT PL 19A129750G2

VOLTAGE READINGS

VOLTAGE READINGS ARE TYPICAL READINGS MEASURED TO SYSTEM NEGATIVE (P903-10) WITH TEST SET MODEL 4EX3A11 OR A 20,000 OHM-PER-VOLT METER.

⏚ INDICATES A-

⏚ INDICATES VEHICLE GROUND

IN ORDER TO RETAIN RATED EQUIPMENT PERFORMANCE REPLACEMENT OF ANY SERVICE PART SHOULD BE MADE ONLY WITH A COMPONENT HAVING THE SPECIFICATIONS SHOWN ON THE PARTS LIST FOR THAT PART

ALL RESISTORS ARE 1/4 WATT UNLESS OTHERWISE SPECIFIED AND RESISTOR VALUES IN OHMS UNLESS FOLLOWED BY K=1000 OHMS OR MEG = 1,000,000 OHMS. CAPACITOR VALUES IN PICOFARADS (EQUAL TO MICROMICROFARADS) UNLESS FOLLOWED BY UF = MICROFARADS. INDUCTANCE VALUES IN MICROHENRYS UNLESS FOLLOWED BY MH = MILLIHENRYS OR H = HENRYS.

	REV LETTER
IF FILTER BD	
19C331148G2	

SCHEMATIC DIAGRAM
IF-FILTER BOARD
19C331148G2

(19D433378, Rev. 1)

PARTS LIST

LBI30032K

406-512 MHz RECEIVER RF ASSEMBLY
IF-FILTER BOARD ASSEMBLY
AND UHS PRE-AMPLIFIER

SYMBOL	PART NO.	DESCRIPTION
		RF ASSEMBLY 19D417075G9 406-420 MHz FLOATING GRD 19D417075G10 450-470 MHz FLOATING GRD 19D417075G11 470-494 MHz FLOATING GRD 19D417075G12 494-512 MHz FLOATING GRD 19D417075G13 406-420 MHz NON FLOATING GRD 19D417075G14 450-470 MHz NON FLOATING GRD 19D417075G15 470-494 MHz NON FLOATING GRD 19D417075G16 494-512 MHz NON FLOATING GRD 19D417075G17 420-450 MHz FLOATING GRD 19D417075G18 420-450 MHz FLOATING GRD 19D417075G19 406-420 MHz FLOATING GRD - REV. A 19D417075G20 450-470 MHz FLOATING GRD - REV. A 19D417075G21 470-494 MHz FLOATING GRD - REV. A
A301A* and A301C*		ANTENNA INPUT BOARD A301A 19B219942G1 450-512 MHz (Deleted in G9 by REV D). A301C 19B219942G2 406-420 MHz (Added to G9 by REV D).
		- - - - - - - - - - CAPACITORS - - - - - - - - - -
C1	7484398P3	Silver mica: 250 pF ±10%, 500 VDCW; sim to Underwood Type 71HF.
C2	19A116679P220K	Silver Mica: 220 pF ±10%, 250 VDCW.
C3	19A116656P27J0	Ceramic disc: 27 pF ±5%, 500 VDCW, temp coef 0 PPM.
		- - - - - - - - JACKS AND RECEPTACLES - - - - - - - -
J1	7104941P16	Jack, phono: coaxial; sim to National Tel Barrel Ceramic.
		- - - - - - - - - - RESISTORS - - - - - - - - - -
R1	19A700106P79	Composition: 4.7K ohms ±5%, 1/4 w.
A301B*		ANTENNA INPUT PLATE 19A137683G2 (Added to G13-G16 by REV. A)
		- - - - - - - - JACKS AND RECEPTACLES - - - - - - - -
J1	7104941P20	Jack, phono: coaxial.
A301B*		ANTENNA INPUT PLATE 19A137683G1 (Deleted in G13-G16 by REV A)
		- - - - - - - - JACKS AND RECEPTACLES - - - - - - - -
J1	7104941P20	Jack, phono: coaxial.
		- - - - - - - - - - RESISTORS - - - - - - - - - -
R1	19A700106P79	Composition: 4.7K ohms ±5%, 1/4 w.
A303*		MIXER BOARD 19B227059G1 (Deleted by REV. B)
		- - - - - - - - - - CAPACITORS - - - - - - - - - -
C1	19A116080P1G3	Polyester: 0.022 uF ±10%, 50 VDCW.
C2	19A700012P1	Variable, ceramic: 2 to 10 pF, 200 VDCW, temp coef -350+500 PPM; sim to Panasonic ECV-1ZW10X32.
C3	19A116656P20K0	Ceramic disc: 20 pF ±10%, 500 VDCW, temp coef 0 PPM.
C4*	19A700219P14	Ceramic: 3.3 pF ±5%, 100 VDCW, temp coef 0 PPM. Earlier than REV A:
	19A116656P3K0	Ceramic disc: 3 pF ±10%, 500 VDCW, temp coef 0 PPM.

*COMPONENTS ADDED, DELETED OR CHANGED BY PRODUCTION CHANGES

SYMBOL	PART NO.	DESCRIPTION
		- - - - - - - - - - INDUCTORS - - - - - - - - - -
L1		Part of Printed Wiring Board 19D423518P1.
		- - - - - - - - - - PLUGS - - - - - - - - - -
P1		Part of W1.
		- - - - - - - - - - TRANSISTORS - - - - - - - - - -
Q1	19A134093P1	N Type, field effect; sim to Type 2N4391.
		- - - - - - - - - - RESISTORS - - - - - - - - - -
R1	3R151P102K	Composition: 1K ohms ±10%, 1/8 w.
		- - - - - - - - - - CABLES - - - - - - - - - -
W1	5491689P114	RF: approx. 5-1/8 inches long.
A304*		MIXER BOARD 19B227059G2 (Added by REV. B)
		- - - - - - - - - - CAPACITORS - - - - - - - - - -
C2	19A700012P1	Variable, ceramic: 2 to 10 pF, 200 VDCW, temp coef -350+500 PPM; sim to Panasonic ECV-1ZW10X32.
C4*	19A700219P14	Ceramic: 3.3 pF ±5%, 100 VDCW, temp coef 0 PPM. Deleted in G9-G12 by REV C, in G13-G16 by REV A.
C5	19A116192P1	Ceramic: 0.01 uF ±20%, 50 VDCW; sim to Erie 8121 Special.
C6	19A700219P39	Ceramic: 20 pF ±5%, 100 VDCW, temp coef 0 PPM.
		- - - - - - - - - - INDUCTORS - - - - - - - - - -
L1		Part of Printed Board 19D429194P1.
		- - - - - - - - - - PLUGS - - - - - - - - - -
P1		Part of W1.
		- - - - - - - - - - TRANSISTORS - - - - - - - - - -
Q1	19A134093P1	N Type, field effect; sim to Type 2N4391.
		- - - - - - - - - - RESISTORS - - - - - - - - - -
R1	3R151P102J	Composition: 1K ohms ±5%, 1/8 w.
		- - - - - - - - - - CABLES - - - - - - - - - -
W1	5491689P114	RF: approx. 5-1/8 inches long. (Includes P1).
A305		MIXER BOARD 19B227059G3
		- - - - - - - - - - CAPACITORS - - - - - - - - - -
C2	19A700012P1	Variable, ceramic: 2 to 10 pF, 200 VDCW, temp coef -350+500 PPM; sim to Panasonic ECV-1ZW10X32.
C5	19A116192P1	Ceramic: 0.01 uF ±20%, 50 VDCW; sim to Erie 8121 Special.
C6	19A700219P39	Ceramic: 20 pF ±5%, 100 VDCW, temp coef 0 PPM.
C7	19A700219P14	Ceramic: 3.3 pF ±5%, 100 VDCW, temp coef 0 PPM.
		- - - - - - - - - - INDUCTORS - - - - - - - - - -
L1		Part of Printed Board 19D429194P1.
L2	19A700122P1	Toroidal core.
		- - - - - - - - - - PLUGS - - - - - - - - - -
P1		Part of W1.
		- - - - - - - - - - TRANSISTORS - - - - - - - - - -
Q1	19A134093P1	N Type, field effect; sim to Type 2N4391.
		- - - - - - - - - - RESISTORS - - - - - - - - - -
R1	3R151P102J	Composition: 1K ohms ±5%, 1/8 w.

SYMBOL	PART NO.	DESCRIPTION
		- - - - - - - - - - CABLES - - - - - - - - - -
W1	5491689P114	RF: approx. 5-1/8 inches long. (Includes P1).
		- - - - - - - - - - NETWORKS - - - - - - - - - -
Z1	19A134666P1	Frequency network: selective, 470-830 MHz res freq, 500 VDCW; sim to Dilectron TC501:NPO:240J:SLAC.
		- - - - - - - - - - CAPACITORS - - - - - - - - - -
C301 thru C305		Includes:
	19C328755P3	Screw.
	19A143476G2	Nut: thd. size No. 6-32.
C306 thru C308		Includes:
	19C328755P2	Screw.
	19A143476G2	Nut: thd. size No. 6-32.
C311*	5498218P241	Ceramic disc: 10 pF ±5%, 500 VDCW, temp coef +80 PPM. Deleted by G13-G16 by REV A.
C325	19B209488P1	Ceramic: 6.8 pF ±20%, 500 VDCW; sim to Allen Bradley Style FA5D.
C326	19B209488P2	Ceramic: 1000 pF -10+100%, 500 VDCW; sim Allen Bradley Style FA5D.
		- - - - - - - - - - INDUCTORS - - - - - - - - - -
L301	19B204938G37	Coil.
L302 thru L304	19B219944P1	Coil.
L305	19B204938G33	Coil.
L306 and L307	19B219944P5	Coil.
L308	19B204938G41	Coil.
L311	19B204938G38	Coil.
L312 thru L314	19B219944P2	Coil.
L315	19B204938G34	Coil.
L316 and L317	19B219944P6	Coil.
L318	19B204938G42	Coil.
L321	19B204938G39	Coil.
L322 thru L324	19B219944P3	Coil.
L325	19B204938G35	Coil.
L326 and L327	19B219944P7	Coil.
L328	19B204938G43	Coil.
L331	19B204938G40	Coil.
L332 thru L334	19B219944P4	Coil.
L335	19B204938G36	Coil.
L336 and L337	19B219944P8	Coil.
L338	19B204938G44	Coil.
L351	19B204938G47	Coil.
L352 thru L354	19B219944P9	Coil.
L355	19B204938G48	Coil.
L356 and L357	19B219944P10	Coil.
L358	19B204938G49	Coil.

SYMBOL	PART NO.	DESCRIPTION
		IF FILTER BOARD 19C320523G2, G3
		- - - - - - - - - - CAPACITORS - - - - - - - - - -
C502	19A700005P9	Polyester: 0.022 uF ±10%, 50 VDCW.
C503	5496267P10	Tantalum: 22 uF ±20%, 15 VDCW; sim to Sprague Type 150D.
C504	19A700012P1	Variable, ceramic: 2 to 10 pF, 200 VDCW, temp coef -350+500 PPM; sim to Panasonic ECV-1ZW10X32.
C505 thru C508	19A700005P9	Polyester: 0.022 uF ±20%, 50 VDCW.
C509	5490008P139	Silver mica: 330 pF ±10%, 500 VDCW, sim to Electro Motive Type DM-15.
C510	19A116655P19	Ceramic disc: 1000 pF ±20%, 1000 VDCW; sim to RMC Type JF Dimcap.
C511		(Part of L503).
C512	19A116656P20K0	Ceramic disc: 20 pF ±10%, 500 VDCW, temp coef 0 PPM.
C513	19A700005P7	Polyester: 0.01 uF ±10%, 50 VDCW.
C514	19A116655P20	Ceramic disc: 1000 pF ±10%, 1000 VDCW; sim to RMC Type JF Dimcap.
C515A	5490008P27	Silver mica: 100 pF ±5%, 500 VDCW, sim to Electro Motive Type DM-15.
C515B	5490008P24	Silver mica: 75 pF ±5%, 500 VDCW, sim to Electro Motive Type DM-15.
C516*	19A116656P3K0	Ceramic disc: 3 pF ±10%, 500 VDCW, temp coef 0 PPM. Added by REV A.
		- - - - - - - - DIODES AND RECTIFIERS - - - - - - - -
CR501	19A116052P1	Silicon, hot carrier: Fwd drop .350 volts max.
		- - - - - - - - - - FILTERS - - - - - - - - - -
FL501	19B219573G3	Crystal: Resonator A - 11,200.000; Resonator B - 11,196.024 kHz.
FL502		(Part of FL501).
		- - - - - - - - JACKS AND RECEPTACLES - - - - - - - -
J501	19A700049P2	Connector, receptacle: 500 VDCW maximum; sim to MTTF-1058.
J502	4033513P1	Contact, electrical: sim to Bead Chain L93-4.
J503 and J504	19A116975P1	Receptacle, wire spring.
		- - - - - - - - - - INDUCTORS - - - - - - - - - -
L502*	7488079P48	Coil, RF: 27 uH 10%, 1.4 ohms DC res max; sim. to Jeffers 4422-9. Deleted by REV A.
L503	19C320141G4	Coil. Includes:
	5493185P9	Tuning slug.
L504	19C320141G29	Coil. Includes:
	5493185P9	Tuning slug.
L505	19A700024P25	Coil, RF: 10.0 uH ±10%, 3.70 ohms DC res max.
L506		(Part of Printed Board 19C320522P1).
L507	19C321810G1	Coil.
L508	19A700000P114	Coil, RF: 1.5 uH ±10%; sim to Jeffers 4412-7K.
		- - - - - - - - - - PLUGS - - - - - - - - - -
P501		Part of W501.
		- - - - - - - - - - TRANSISTORS - - - - - - - - - -
Q501	19A116818P1	N Channel, field effect.
		- - - - - - - - - - RESISTORS - - - - - - - - - -
R501	19A700106P87	Composition: 10K ohms ±5%, 1/4 w.
R502	19A700106P77	Composition: 3.9K ohms ±5%, 1/4 w.

SYMBOL	PART NO.	DESCRIPTION
R503	19A700106P47	Composition: 220 ohms ±5%, 1/4 w.
R504	19A700106P31	Composition: 47 ohms ±5%, 1/4 w.
R506	19A700106P71	Composition: 2.2K ohms ±5%, 1/4 w.
		- - - - - - - - - - CABLES - - - - - - - - - -
W501	19A129947G7	Cable: orange, No. 22 stranded, approx. 7-1/2 inches. (Includes P501).
		CHS RF PRE-AMPLIFIER 19C320527G1 406-420 MHz (LL) 19C320527G2 420-470 MHz (L) 19C320527G3 470-494 MHz (M) 19C320527G4 494-512 MHz (H) 19C320527G5 420-450 MHz (LM)
		- - - - - - - - - - CAPACITORS - - - - - - - - - -
C2301	19A116656P3J8	Ceramic disc: 3 pF ±0.5 pF, 500 VDCW, temp coef -80 PPM.
C2302*	19A116679P220K	Silver Mica: 220 pF ±10%, 250 VDCW. Deleted by REV A.
C2302A*	19A134666P2	Frequency network: selective, 460-600 MHz res freq, 500 VDCW; sim to Dilectron TC501:NPO:270J:SLAC. Added by G1 & G5 by REV A.
C2302B*	19A134666P1	Frequency network: selective, 470-630 MHz res freq, 500 VDCW; sim to Dilectron TC501:NPO:240J:SLAC. Added to G2-G4 by REV A.
C2303	19A116656P18J8	Ceramic disc: 18 pF ±5%, 500 VDCW, temp coef -80 PPM.
C2305	19A116656P20K0	Ceramic disc: 20 pF ±10%, 500 VDCW, temp coef 0 PPM.
C2306*	5490008P127	Silver mica: 100 pF ±10%, 500 VDCW, sim to Electro Motive Type DM-15. Earlier than REV A:
	19A116679P100K	Silver Mica: 100 pF ±10%, 250 VDCW.
C2307*	19A116656P24J0	Ceramic disc: 24 pF ±5%, 500 VDCW, temp coef 0 PPM. Earlier than REV A:
	19A116679P220K	Silver Mica: 220 pF ±10%, 250 VDCW.
C2308*	5490008P135	Silver mica: 220 pF ±10%, 500 VDCW, sim to Electro Motive Type DM-15. Earlier than REV A:
	19A116679P100K	Silver Mica: 100 pF ±10%, 250 VDCW.
C2309	19A116656P30J8	Ceramic disc: 30 pF ±5%, 500 VDCW, temp coef -80 PPM.
C2310*	19A116656P20K0	Ceramic disc: 20 pF ±10%, 500 VDCW, temp coef 0 PPM. Deleted by REV A.
C2310A*	19A134666P2	Frequency network: selective, 460-700 MHz res freq, 500 VDCW; sim to Dilectron TC501:NPO:270J:SLAC. Added by REV B.
C2310B*	19A134666P1	Frequency network: selective, 470-630 MHz res freq, 500 VDCW; sim to Dilectron TC501:NPO:240J:SLAC. Added by REV B.
		- - - - - - - JACKS AND RECEPTACLES - - - - - - -
J2301	19A700049P2	Connector, receptacle: 500 VDCW maximum; sim to NTTF-1058.
		- - - - - - - - - - INDUCTORS - - - - - - - - - -
L2301LL	19D413078G3	Helical resonator.
L2301L	19D413078G5	Helical resonator.
L2301M	19D413078G6	Helical resonator.
L2301N	19D413078G7	Helical resonator.
L2301LM	19D413078G9	Helical resonator.
L2302*	19B209420P101	Coil, RF: .10 uH ±10%, 0.8 ohms DC res max; sim to Jeffers 4416-1K. Earlier than REV A:
	19A129716G4	Coil.
		- - - - - - - - - - PLUGS - - - - - - - - - -
P2301	19A702402P2	Contact, electrical; sim to AMP 42827-2.
P2302		(Part of W2301).

SYMBOL	PART NO.	DESCRIPTION
		- - - - - - - - - - TRANSISTORS - - - - - - - - - -
Q2301	19A116889P2	Silicon, NPN.
		- - - - - - - - - - RESISTORS - - - - - - - - - -
R2301	19A700106P91	Composition: 15K ohms ±5%, 1/4 w.
R2302*	19A700106P87	Composition: 10K ohms ±5%, 1/4 w. In REV A & earlier:
	19A700106P83	Composition: 6.8K ohms ±5%, 1/4 w.
R2303	19A700106P57	Composition: 560 ohms ±5%, 1/4 w.
R2304	19A700106P39	Composition: 100 ohms ±5%, 1/4 w.
R2305*	19A700106P63	Composition: 1K ohms ±5%, 1/4 w. In REV A:
	19A700106P61	Composition: 820 ohms ±5%, 1/4 w. Added by REV A.
		- - - - - - - - - - CABLES - - - - - - - - - -
W2301	5491689P94	RF: approx. 3 inches long. (Includes P2302).
		- - - - - - - - - MISCELLANEOUS - - - - - - - - -
	19E501121G1	Casting, RF Circuit.
	19B227101G1	Cover, RF Circuit.
	19B209209P308	Tap screw, Phillips POZIDRIVE: No. 6-32 x 3/8. (Secures RF Circuit Cover).
	19C328755P3	Screw. (Part of C301-C305).
	19C328755P2	Screw. (Part of C306-C308).
	19A143476G2	Nut: thd. size No. 6-32. (Part of C301-C308).
	4031594P1	Insulator. (Used with C504 on IF Filter Board).
	19B219470P2	Shield. (Used with IF Filter Board).
	19A129424G1	Can. (Used with L401-L403, L501, L503, L504).
	19A127660P2	Can. (Used with L2301).
	4035306P59	Washer, fiber. (Used with FL501, FL502).
	4035306P23	Washer, fiber. (Used with J501, J2301).
	19A701332P1	Insulator disk. (Used with Q2301).
	4035306P11	Washer, fiber: 1/8 dia. (Used with Q501).
	4035306P23	Washer, fiber. (Used with J501).

RF ASSEMBLY
19B233690G1-G20
ISSUE 4

SYMBOL	PART NO.	DESCRIPTION
		STANDARD 19B233690G1, 11 406-420 MHz 19B233690G2, 12 420-450 MHz 19B233690G3, 13 450-470 MHz 19B233690G4, 14 470-494 MHz 19B233690G5, 15 494-512 MHz
		NON FLOATING GROUND ONLY 19B233690G6, 16 406-420 MHz 19B233690G7, 17 420-450 MHz 19B233690G8, 18 450-470 MHz 19B233690G9, 19 470-494 MHz 19B233690G10, 20 494-512 MHz
		RF CIRCUIT 19D417075G19, 29 406-420 MHz FLOATING GRD 19D417075G20, 30 420-450 MHz FLOATING GRD 19D417075G21, 31 450-470 MHz FLOATING GRD 19D417075G22, 32 470-494 MHz FLOATING GRD 19D417075G23, 33 494-512 MHz FLOATING GRD 19D417075G24, 34 406-420 MHz NON FLOATING GRD 19D417075G25, 35 420-450 MHz NON FLOATING GRD 19D417075G26, 36 450-470 MHz NON FLOATING GRD 19D417075G27, 37 470-494 MHz NON FLOATING GRD 19D417075G28, 38 494-512 MHz NON FLOATING GRD
A301A and A301C		COMPONENT BOARD A301A 19B219942G1 A301C 19B219942G1
		- - - - - - - - - - CAPACITORS - - - - - - - - - -
C1	7484398P3	Silver mica: 250 pF ±10%, 500 VDCW; sim to Underwood Type 71HF.
C2	19A700015P37	Teflon/Mica: 220 pF ±5%, 250 VDCW.
C3	19A116656P27J0	Ceramic disc: 27 pF ±5%, 500 VDCW, temp coef 0 PPM.
		- - - - - - - - JACKS AND RECEPTACLES - - - - - - - -
J1	7104941P16	Jack, phono: coaxial.
		- - - - - - - - - - RESISTORS - - - - - - - - - -
R1	19A700106P79	Composition: 4.7K ohms ±5%, 1/4 w.
A301B		ANTENNA INPUT PLATE 19A137883G2
		- - - - - - - - JACKS AND RECEPTACLES - - - - - - - -
J1	7104941P20	Jack, phono: coaxial.
A305		MIXER BOARD 19B227059G3, G4
		- - - - - - - - - - CAPACITORS - - - - - - - - - -
C2	19A700012P1	Variable, ceramic: 2 to 10 pF, 200 VDCW, temp coef -350+500 PPM; sim to Panasonic ECV-12W10X32.
C5	19A116192P1	Ceramic: 0.01 uF ±20%, 50 VDCW; sim to Erie 8121 Special.
C6	19A700219P38	Ceramic: 20 pF ±5%, 100 VDCW, temp coef 0 PPM.
C7	19A700219P14	Ceramic: 3.3 pF ±5%, 100 VDCW, temp coef 0 PPM.
		- - - - - - - - - - INDUCTORS - - - - - - - - - -
L1		(Part of Printed Board 19D429194P1).
L2	19A700122P1	Torrid core.

*COMPONENTS ADDED, DELETED OR CHANGED BY PRODUCTION CHANGES

SYMBOL	PART NO.	DESCRIPTION
		- - - - - - - - - - PLUGS - - - - - - - - - -
P1		(Part of W1).
		- - - - - - - - - - TRANSISTORS - - - - - - - - - -
Q1	19A134093P1	N Type, field effect; sim to Type 2N4391. (Used in G3).
Q1	19A700060P2	N Type, field effect. (Used in G4).
		- - - - - - - - - - RESISTORS - - - - - - - - - -
R1	3R151P102J	Composition: 1K ohms ±5%, 1/8 w.
		- - - - - - - - - - CABLES - - - - - - - - - -
W1	4391689P114	Cable, RF: approx 5-1/2 inches long. (Includes P1).
		- - - - - - - - - - NETWORKS - - - - - - - - - -
Z1	19A134666P1	Frequency network: selective, 470-630 MHz res. freq, 500 VDCW; sim to Dilectron TC501:NPO:240J:SLAC.
		- - - - - - - - - - CAPACITORS - - - - - - - - - -
C301 thru C305	19C328755P3	Includes: Screw.
	19A143476G2	Nut: thd. size No. 6-32.
C306 thru C308	19C328755P2	Includes: Screw.
	19A143476G2	Nut: thd. size No. 6-32.
C311	5496218P241	Ceramic disc: 10 pF ±5%, 500 VDCW, temp coef -80 PPM.
C325	19B209488P1	Ceramic: 6.8 pF ±20%, 500 VDCW; sim to Allen Bradley Style FA5D.
C326	19B209488P2	Ceramic: 1000 pF -10+100%, 500 VDCW; sim Allen Bradley Style FA5D.
		- - - - - - - - - - INDUCTORS - - - - - - - - - -
L301	19B204938G37	Coil.
L302 thru L304	19B219844P1	Coil.
L305	19B204938G33	Coil.
L306 and L307	19B219944P5	Coil.
L308	19B204938G41	Coil.
L311	19B204938G38	Coil.
L312 thru L314	19B219844P2	Coil.
L315	19B204938G34	Coil.
L316 and L317	19B219944P6	Coil.
L318	19B204938G42	Coil.
L321	19B204938G39	Coil.
L322 thru L324	19B219944P3	Coil.
L325	19B204938G35	Coil.
L326 and L327	19B219944P7	Coil.
L328	19B204938G43	Coil.
L331	19B204938G40	Coil.
L332 thru L334	19B219944P4	Coil.

SYMBOL	PART NO.	DESCRIPTION
L335	19B204938G36	Coil.
L336 and L337	19B219944P8	Coil.
L338	19B204938G44	Coil.
L351	19B204938G47	Coil.
L352 thru L354	19B219944P9	Coil.
L355	19B204938P48	Coil.
L356 and L357	19B219944P10	Coil.
L358	19B204938P49	Coil.
		IF FILTER BOARD 19C331148G1 19C331148G2
		- - - - - - - - - - CAPACITORS - - - - - - - - - -
C502	T644ACP322K	Polyester: 0.022 uF ±10%, 50 VDCW.
C503	19A701534P8	Tantalum: 22 uF ±20%, 16 VDCW.
C504	19A700012P1	Variable, ceramic: 2 to 10 pF, 200 VDCW, temp coef -350+300 PPM; sim to Panasonic ECV-1ZW10X32
C505 thru C508	19A143477P17	Polyester: 0.22 uF ±20%, 50 VDCW.
C509	5490008P139	Silver Mica: 330 pF ±10%, 500 VDCW, sim to Electro Motive Type DM-15.
C510	19A700233P7	Ceramic: 1000 pF ±20%, 50 VDCW.
C511		(Part of L503).
C512	19A116656P20X0	Ceramic disc: 20 pF ±10%, 500 VDCW, temp coef 0 PPM.
C513	T644ACP310K	Polyester: .010 uF ±10%, 50 VDCW.
C514	19A700233P7	Ceramic: 1000 pF ±20%, 50 VDCW.
C515	5490008P24	Silver mica: 75 pF ±5%, 500 VDCW, sim to Electro Motive Type DM-15.
		- - - - - - - - DIODES AND RECTIFIERS - - - - - - - -
CR501	19A700047P1	Silicon, 100 mW continous dissapation.
		- - - - - - - - - - FILTERS - - - - - - - - - -
FL501	19B219573G3	Crystal: Resonator A - 11,200.000; Resonator B - 11,198.024 kHz.
FL502		(Part of FL501).
		- - - - - - - - JACKS AND RECEPTACLES - - - - - - - -
J501	19A700049P2	Connector, receptacle: 500 VDCW maximum; sim to NTTF-1058.
J502	4033513P1	Contact, electrical: sim to Bead Chain L93-4.
J503 and J504	19A116975P1	Contact, electrical.
		- - - - - - - - - - INDUCTORS - - - - - - - - - -
L503	19C320141G4	Coil. Includes:
	5493185P9	Tuning slug.
L504	19C320141G29	Coil. Includes:
	5493185P9	Tuning slug.
L505	19A700024P25	Coil, RF: 10.0 uH ±10%, 3.70 ohms DC res max.
L506		(Part of Printed Board 19C331147P1).
L507	19C321810G1	Coil.
L508	19A700000P114	Coil, RF: 1.5 uH ±10%; sim to Jeffers 4412-7K.
		- - - - - - - - - - PLUGS - - - - - - - - - -
P501		(Part of W501).

SYMBOL	PART NO.	DESCRIPTION
		- - - - - - - - - - TRANSISTORS - - - - - - - - - -
Q501	19A116818P1	N Channel, field effect.
		- - - - - - - - - - RESISTORS - - - - - - - - - -
R501	19A700106P87	Composition: 10K ohms ±5%, 1/4 w.
R502	19A700106P77	Composition: 3.9K ohms ±5%, 1/4 w.
R503	19A700106P47	Composition: 220 ohms ±5%, 1/4 w.
R504	19A700106P31	Composition: 47 ohms ±5%, 1/4 w.
R506	19A700106P71	Composition: 2.2K ohms ±5%, 1/4 w.
		- - - - - - - - - - CABLES - - - - - - - - - -
W501	19A129947G7	Cable: orange, No. 22 stranded, approx. 7-1/2 inches. (Includes P501).
		- - - - - - - - - MISCELLANEOUS - - - - - - - - -
	19E501121G1	Casting, RF Circuit.
	19B227101G1	Cover, RF Circuit.
	19B209209P306	Tap screw, Phillips POZIDRIVE: No. 6-32 x 3/8. (Secures RF Circuit Cover).
	19C328755P3	Screw. (Part of C301-C305).
	19C328755P2	Screw. (Part of C306-C308).
	19A143478G2	Nut: thd. size No. 6-32. (Part of C301-C308).
	4031594P1	Insulator. (Used with C504 on IF Filter Board).
	19B219470P2	Shield. (Used with IF Filter Board).
	19A129424G1	Can. (Used with L503, L504, L507).
	4035306P59	Washer, fiber. (Used with FL501, FL502).
	4035306P23	Washer, fiber. (Used with J501).
	4035306P11	Washer, fiber: 1/8 dia. (Used with Q501).
	19A129715G1	Adapter Board.

PRODUCTION CHANGES

Changes in the equipment to improve performance or to simplify circuits are identified by a "Revision Letter", which is stamped after all the model number of the unit. The revision stamped on the unit includes all previous revisions. Refer to the Parts List for descriptions of parts affected by these revisions.

REV. A - RF Assembly 19D417075G0-12

To improve receiver sensitivity. Changed C4.

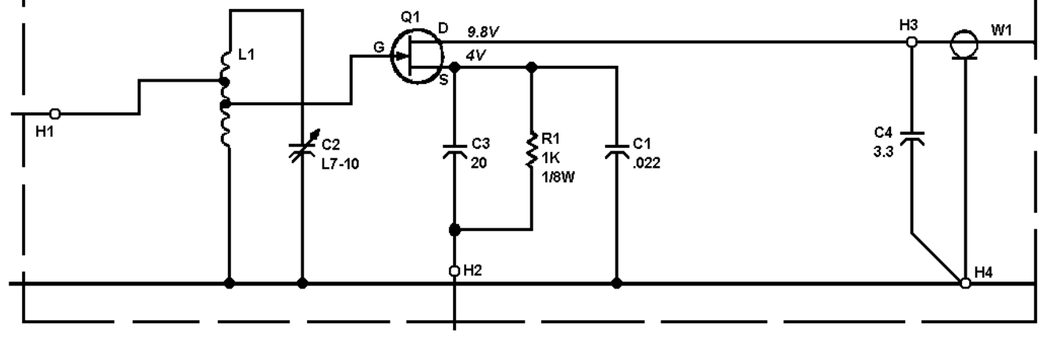
REV. B - RF Assembly 19D417075G0-12

To incorporate new mixer board. Replaced A303 (19B227059G1) with A304 (19B227059G2).

Schematic Diagram Was:

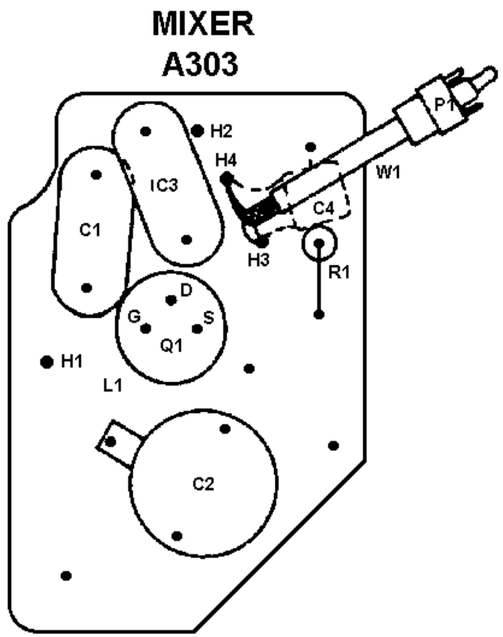
RF ASSEMBLY
19D417075

MIXER BD
A303
19B227059



PRODUCTION CHANGES - (Continuation)

Outline Diagram Was:



REV. A - IF - Filter Board 19C320523G2
To improve operation. Replaced L502 with L508, added C516.

REV. A - RF Assembly 19D417075G13-G16

REV. C - RF Assembly 19D417075G9-G12
To improve sensitivity. Deleted A304-C4.

REV. D - RF Assembly 19D417075G9
To improve receiver sensitivity in 406 to 420 MHz range.
Added A301C.

REV. A - UHS Pre-Amplifier
To incorporate new coil (L2302). Changed L2302, C2302, C2306, C2307 and C2308. Deleted C2310 and added R2305.

REV. B - UHS Pre-Amplifier
To improve receiver sensitivity. Changed R2302 and R2305.
Added C2310.

REV. A - RF Assembly 19D417075G19-G28
IF Filter Board 19C331148G1
To improve operation of UHF mixer circuit. Added C7 and L2.

REV. B - UHS Pre-Amplifier
To improve receiver sensitivity. Changed R2302 and R2305.
Added C2310.