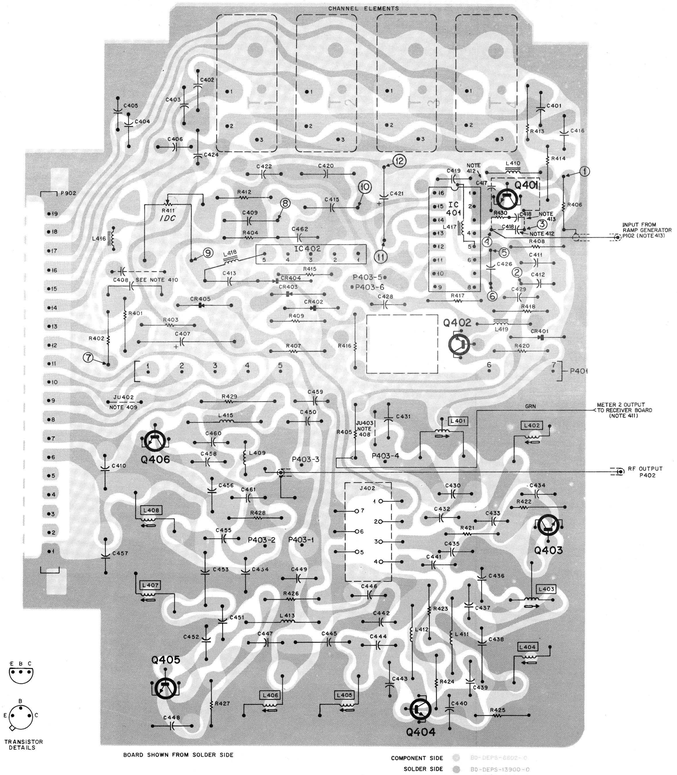
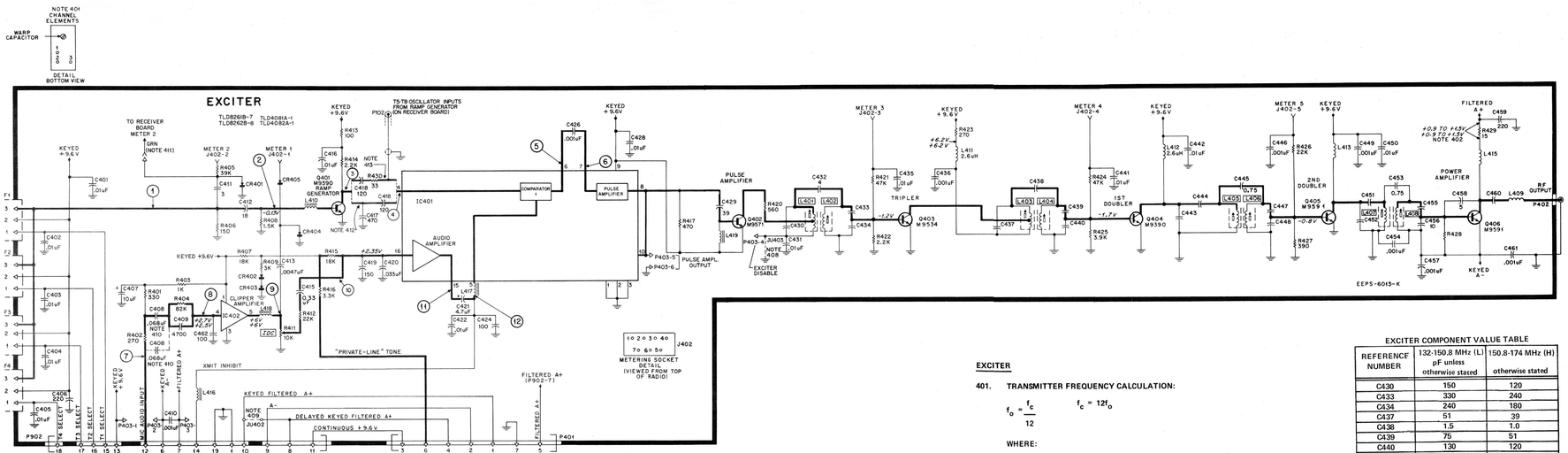
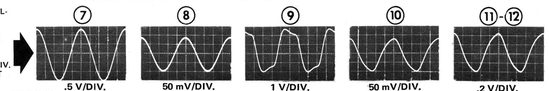




EXCITER AUDIO WAVEFORMS

ALL AUDIO WAVEFORMS TAKEN UNDER FOLLOWING CONDITIONS:

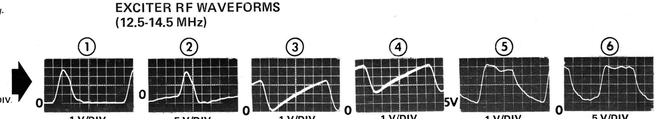
1. VERTICAL SENSITIVITY SHOWN UNDER EACH WAVEFORM.
2. VERTICAL INPUT = AC.
3. HORIZONTAL DEFLECTION = 0.2 msec/DIV.
4. 1000-Hz 1-VOLT rms (2.8 V P-P) AUDIO AT MICROPHONE INPUT.
5. "IDC" POT SET FOR ±5 kHz DEVIATION



EXCITER RF WAVEFORMS (12.5-14.5 MHz)

ALL RF WAVEFORMS TAKEN UNDER FOLLOWING CONDITIONS:

1. TO OBTAIN WAVEFORMS SIMILAR TO THOSE SHOWN, OSCILLOSCOPE MUST HAVE AT LEAST 50 MHz BANDWIDTH, 7 nanosec RISE TIME AMPLIFIER.
2. VERTICAL SENSITIVITY SHOWN UNDER EACH WAVEFORM.
3. VERTICAL INPUT = DC.
4. HORIZONTAL DEFLECTION = 10 nanosec/DIV.
5. TRANSMITTER KEYED.
6. NO MODULATION (REMOVE "VIBRASENDER" REED IN "PL" RADIO).



EXCITER AUDIO WAVEFORMS

LATER VERSION
TLD8261B-6
TLD8262B-7

CONNECTIONS TO EXTERNAL CIRCUITRY

P401. "PRIVATE-LINE" ENCODER ("PL" MODELS)
P402. BANDPASS FILTER (NARROW SPACED TRANSMITTER MODELS)
WIDE SPACED MULTIPLIER BOARD (WIDE SPACED TRANSMITTER MODELS).
P403. WIDE SPACED MULTIPLIER BOARD (WIDE SPACED TRANSMITTER MODELS).
P902. CONTROL BOARD
P102. RECEIVER RF & IF BOARD (5- TO 8-FREQUENCY MODELS).

EPS-7122-A

EXCITER

401. TRANSMITTER FREQUENCY CALCULATION:

$$f_o = \frac{f_c}{12} \qquad f_c = 12 f_o$$

WHERE:

f_o = CHANNEL ELEMENT FREQUENCY

f_c = CARRIER FREQUENCY

402. VOLTAGE MEASURED ACROSS R429.
403. WHERE ONLY ONE DC VOLTAGE READING IS SHOWN, USE ONLY A HIGH IMPEDANCE (11 MEGOHM) VOLTMETER, WHERE TWO READINGS ARE SHOWN THE TOP VALUE IS MEASURED WITH A HIGH IMPEDANCE VOLTMETER, THE BOTTOM VALUE IS MEASURED WITH A 20,000 OHM-PER-VOLT MULTIMETER.
404. UNLESS OTHERWISE STATED, VOLTAGES AND WAVEFORMS MEASURED IN RESPECT TO CHASSIS GROUND.
405. VOLTAGES WILL VARY SLIGHTLY IF +9.6 VOLT SOURCE IS ABOVE OR BELOW NOMINAL VALUE NORMAL VARIATION FROM RADIO TO RADIO IS 9.1 TO 10.1 VOLTS REGULATED.
406. UNLESS OTHERWISE STATED:
CAPACITOR VALUES ARE IN PICOFARADS.
RESISTOR VALUES ARE IN OHMS.
HEAVY LINES INDICATE SIGNAL FLOW.
407. P403 IS USED ONLY WHEN WIDE-$PACED MULTIPLIER IS INCORPORATED.
408. JU403 IS NOT USED WHEN WIDE-$PACED MULTIPLIER IS INCORPORATED.
409. JU402 REMOVED IN "PRIVATE-LINE" RADIOS.
410. CONNECT C408 AS SHOWN IN DASHED LINES FOR AUDIO SENSITIVITY OF 100 MILLIVOLTS FOR ±3.0 kHz DEVIATION.
411. FIVE- TO EIGHT-FREQUENCY MODELS ONLY.
412. ALTERNATE CIRCUIT FOR FOUR-FREQUENCY MODELS.
413. ALTERNATE CIRCUIT FOR FIVE-TO EIGHT-FREQUENCY MODELS.

EPS-6812-C

EXCITER COMPONENT VALUE TABLE

REFERENCE NUMBER	132-150.8 MHz (L) pF unless otherwise stated	150.8-174 MHz (H) otherwise stated
C430	150	120
C433	330	240
C434	240	180
C437	51	39
C438	1.5	1.0
C439	75	51
C440	130	120
C443	51	39
C444	40	34
C447	36	24
C448	57	43
C451	16	11
C452	20	18
C460	150	120
R428	22 OHM	39 OHM

EPS-6814-C

EIGHT-FREQUENCY AND "B" SUFFIX MODELS

PREVIOUS REVISIONS AND PARTS LIST SHOWN ON BACK OF THIS DIAGRAM

TLD4081A, TLD4082A, TLD8261B, and TLD8262B Exciter Schematic Diagram and Circuit Board Detail
Motorola No. 63P81012E13-M
10/14/76-UP