

# PHOTOFACT<sup>®</sup> with

# CIRCUITRACE<sup>®</sup>

For Supplier Address See PHOTOFACT Index

## NOTE

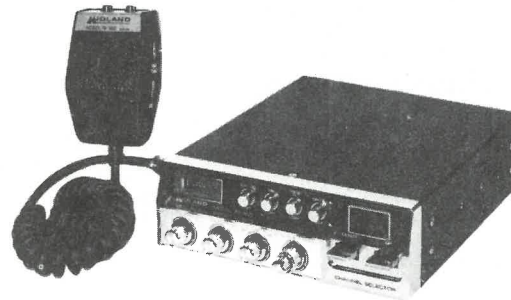
Repair or adjustment of transmitter circuits must be under supervision of a person with first-or second-class radiotelephone license.

(Refer to FCC Rules and Regulations Part 95, Subpart C & D.)

The frequency of the transmitter should be checked periodically with a secondary frequency standard to insure proper and legal operation.

Best results will be obtained when adjusting the final RF output circuit if the antenna normally used is connected and the chassis is as nearly in the cabinet as possible.

Connect either 50-ohm dummy load or the normally used antenna system.



MODEL 79-900

## MANUFACTURER'S SPECIFICATIONS

### GENERAL:

|                   |                                                                                                                                                                                                                                                                                                                                                                                                            |
|-------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Channels          | : 40 channels                                                                                                                                                                                                                                                                                                                                                                                              |
| Frequency Range   | : 26.965 MHz — 27.405 MHz                                                                                                                                                                                                                                                                                                                                                                                  |
| Semiconductors    | : 42 Transistors, 3 FET, 62 Diodes, 7 IC, 1 LED.                                                                                                                                                                                                                                                                                                                                                           |
| Microphone        | : 600 ohms Dynamic Type<br>with up/down type channel selector switch, remote volume control and fine tuning                                                                                                                                                                                                                                                                                                |
| Speaker           | : 8 ohms 3 watts                                                                                                                                                                                                                                                                                                                                                                                           |
| Antenna Connector | : M Type                                                                                                                                                                                                                                                                                                                                                                                                   |
| Meter             | : Indicate received signal strength and relative transmit power output.                                                                                                                                                                                                                                                                                                                                    |
| Size              | : 185mm(W) x 230mm(D) x 58mm(H)                                                                                                                                                                                                                                                                                                                                                                            |
| Weight            | : 2.4 kg (5.3 lbs)                                                                                                                                                                                                                                                                                                                                                                                         |
| Jacks & Connector | : EXT SP 3.5 $\phi$ , PA 3.5 $\phi$ , MIKE 6P(DIN), DC Power 3P                                                                                                                                                                                                                                                                                                                                            |
| Controls          | : Up/Down Channel Selector Switch on front panel and remote microphone.<br>Volume Control with Power ON/OFF switch on front panel.<br>Remote Volume Control on the microphone.<br>Fine Tuning Control on the microphone.<br>Model Selector (AM-USB-LSB).<br>Squelch Control with PA Switch.<br>RF Gain Control and Clarifier.<br>Noise Blanker Switch.<br>Tone(HI-LOW) Switch.<br>Dimmer(BRITE/DIM) Switch |
| Illumination      | : Channel Number Indication (LED)                                                                                                                                                                                                                                                                                                                                                                          |
| Accessories       | : DC Power Cable(Fuse built-in), Remote Control Microphone, Microphone Hanger, Fuse 4A, Mounting Bracket, Screws.                                                                                                                                                                                                                                                                                          |

MIDLAND MODEL 79-900

Courtesy of the Manufacturer

**HOWARD W. SAMS & CO., INC.** Indianapolis, Indiana 46206

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## ALIGNMENT INSTRUCTIONS

CAUTION: Use isolation transformer or observe polarity when connecting test equipment. Maintain line voltage at 120V AC. Allow a 15-minute warm-up period. Adjustments made with 13.8-volt DC input. Connect low sides of test equipment to ground unless specified otherwise. Connect 50-ohm dummy load or antenna before keying transmitter. Connect Microphone.

Suggested Alignment Tools:

GC Electronics:

L1 thru L11, L13, L14, L17 thru L20, L27 thru L31.....9440  
L33, L36, L39.....8728, 9091, 9089  
CT1 and CT4.....5000, 8276, 9089

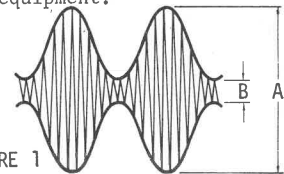


FIGURE 1

$$\text{Modulation Ratio} = \frac{A - B}{A + B} \times 100 (\%)$$

## SYNTHESIZER ALIGNMENT

| TEST EQUIPMENT                                  | TRANSCEIVER                                                         | ADJUST | REMARKS                                                                                                                               |
|-------------------------------------------------|---------------------------------------------------------------------|--------|---------------------------------------------------------------------------------------------------------------------------------------|
| Input of frequency counter to TP12 (IC2 Pin 8). | Ch. 19                                                              |        | Check for 10.240MHz.                                                                                                                  |
| Input of DC meter to TP9.                       | Ch. 1, AM                                                           | L13    | Adjust for 3.40 volts. Check for approximate 4.85 volts on channel 40.                                                                |
| Input of oscilloscope to TP10.                  | Ch. 19, AM                                                          | L18    | Adjust for maximum RF (840mV p-p typical).                                                                                            |
| Input of frequency counter to TP5.              | Ch. 19, AM<br>Clarifier Midrange<br>Remote Fine Tuning<br>Midrange  | L20    | Adjust for 33.3350MHz.                                                                                                                |
| Input of frequency counter to TP5.              | Ch. 19, USB<br>Clarifier Midrange<br>Remote Fine Tuning<br>Midrange | CT3    | Adjust for 33.3375MHz.                                                                                                                |
| Input of frequency counter to TP5.              | Ch. 19, LSB<br>Clarifier Midrange<br>Remote Fine Tuning<br>Midrange | L19    | Adjust for 33.3325MHz.                                                                                                                |
| Input of frequency counter to TP10.             | Ch. 1, AM<br>Clarifier Midrange<br>Remote Fine Tuning<br>Midrange   |        | Check for 1.430MHz. Check all channels. (See Truth Chart for correct frequencies.)                                                    |
| Input of oscilloscope to TP1.                   | Ch. 19, AM                                                          | L14    | Adjust for maximum RF (140mV p-p typical).                                                                                            |
| Input of frequency counter to TP1.              | Ch. 1, AM<br>Clarifier Midrange<br>Remote Fine Tuning<br>Midrange   |        | Check for 34.765MHz. If necessary readjust L20 for correct frequency. Check all channels. (See Truth Chart for correct frequencies.)  |
| Input of frequency counter to TP1.              | Ch. 1, USB<br>Clarifier Midrange<br>Remote Fine Tuning<br>Midrange  |        | Check for 34.7675MHz. If necessary readjust CT3 for correct frequency. Check all channels. (See Truth Chart for correct frequencies.) |
| Input of frequency counter to TP1.              | Ch. 1, LSB<br>Clarifier Midrange<br>Remote Fine Tuning<br>Midrange  |        | Check for 34.7625MHz. If necessary readjust L19 for correct frequency. Check all channels. (See Truth Chart for correct frequencies.) |
| Input of frequency counter to TP3.              | Ch. 19, AM XMT                                                      | L17    | Adjust for 7.8000MHz.                                                                                                                 |
| Input of frequency counter to TP3.              | Ch. 19, USB                                                         | CT1    | Adjust for 7.8025MHz.                                                                                                                 |
| Input of frequency counter to TP3.              | Ch. 19, LSB                                                         | CT2    | Adjust for 7.7975MHz.                                                                                                                 |
| Input of frequency counter to antenna input.    | Ch. 1, AM XMT                                                       | VR3    | Adjust for 26.965MHz. Check all channels. (See page 4 for channel frequencies.)                                                       |

## RECEIVER ALIGNMENT

Connect an AC VTVM or AF wattmeter across speaker voice coil.  
Adjust volume control to obtain a suitable indication. Set generator output low enough to prevent AGC limiting. Preset controls as follows, unless otherwise noted: RF Gain Maximum, Clarifier Midrange, Squelch MINIMUM, NB Off, Tone Hi, Ext. CB Off, Remote Fine Tuning Midrange Remote Volume Maximum.

| TEST EQUIPMENT                                                                                                                              | TRANSCEIVER | ADJUST                    | REMARKS                                                                                                                                                                                                    |
|---------------------------------------------------------------------------------------------------------------------------------------------|-------------|---------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Output of signal generator thru .01uF to TP1.<br>7.8MHz, 1000Hz @ 30% modulation                                                            | Ch. 19, AM  | L3, L4, L5,<br>L6, L7, L8 | Adjust for maximum output.                                                                                                                                                                                 |
| Output of signal generator thru .01uF to antenna input.<br>27.185MHz, 1000Hz @ 30% modulation.                                              | Ch. 19, AM  | L9, L10,<br>L11           | Adjust for maximum output.<br>Readjust L4 and L5 for maximum.                                                                                                                                              |
| Output of signal generator thru .01uF to antenna input.<br>27.185MHz, 1000Hz @ 30% modulation.<br>Input of oscilloscope to TP13 (TR6 base). | Ch. 19, AM  | L1, L2                    | Set generator output for 10db signal to noise plus noise ratio of receiver.<br>Inject a 100pps, 1uSec pulse width signal at antenna input. Switch NOISE BLANKER on and adjust for maximum pulse amplitude. |

## RECEIVER ADJUSTMENTS

Connect an AC VTVM or AF wattmeter across speaker voice coil.  
Adjust volume control to obtain a suitable indication.  
Preset controls as follows, unless otherwise noted: RF Gain Maximum, Clarifier Midrange, Squelch MINIMUM, NB Off, Tone Hi, Ext CB Off, Remote Fine Tuning Midrange, Remote Volume Maximum.

| TEST EQUIPMENT                                                                                                  | TRANSCEIVER | ADJUST | REMARKS                                          |
|-----------------------------------------------------------------------------------------------------------------|-------------|--------|--------------------------------------------------|
| Output of signal generator thru .01uF to antenna input.<br>27.185MHz, 1000Hz @ 30% modulation.<br>Output 500uV. | Ch. 19, AM  | VR2    | SQUELCH RANGE<br>Adjust so squelch just breaks.  |
| Output of signal generator thru .01uF to antenna input.<br>27.185MHz, 1000Hz @ 30% modulation.<br>Output 160uV. | Ch. 19, AM  | VR1    | SIG METER<br>Adjust for 9 on SIG scale of meter. |

MIDLAND MODEL 79-900

## TRANSMITTER ALIGNMENT

Connect a 50-ohm, 25-watt dummy load to antenna connector.  
NOTE: Be sure to check transmit frequency and power on all active channels after alignment of transmitter.  
See page 4 for channel frequencies.

| TEST EQUIPMENT                                                 | TRANSCEIVER | ADJUST                                          | REMARKS                                     |
|----------------------------------------------------------------|-------------|-------------------------------------------------|---------------------------------------------|
| Input of RF wattmeter to antenna input.                        | Ch. 19, AM  | L27, L28,<br>L29, L30,<br>L31, L33,<br>L36, L39 | Adjust for maximum RF output.               |
| Input of spectrum analyzer or harmonic meter to antenna input. | Ch. 19, AM  | L42                                             | Adjust for MINIMUM at 54MHz (2nd harmonic). |

## TRANSMITTER ADJUSTMENTS

Connect a 50-ohm, 25-watt dummy load to antenna connector.  
NOTE: Be sure to check transmit frequency and power on all active channels after adjustment of transmitter.  
See page 4 for channel frequencies.

| TEST EQUIPMENT                                                  | TRANSCEIVER | ADJUST   | REMARKS                                          |
|-----------------------------------------------------------------|-------------|----------|--------------------------------------------------|
| Input of RF wattmeter to antenna input.<br>No modulation input. | Ch. 19, LSB | VR5, VR4 | CARRIER BALANCE<br>Adjust for MINIMUM RF output. |
| Insert a 0-100mA DC meter at TP8.<br>No modulation input.       | Ch. 19, USB | VR8      | XMT DRIVER BIAS<br>Adjust for 45mA idle current. |
| Insert a 0-50mA DC meter at TP7.<br>No modulation input.        | Ch. 19, USB | VR9      | XMT FINAL BIAS<br>Adjust for 15mA idle current.  |

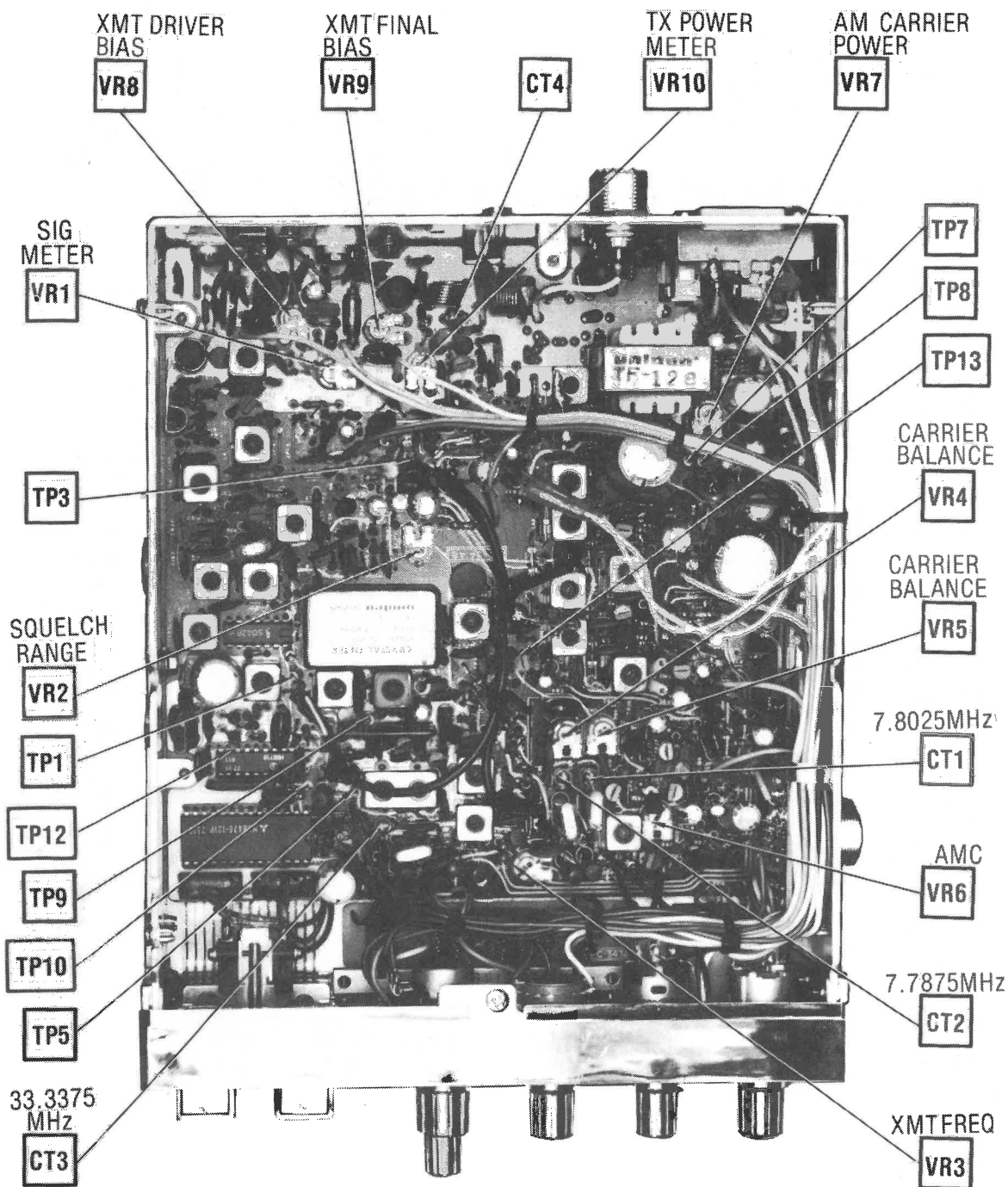
# **TRANSMITTER ADJUSTMENTS (Continued)**

| TEST EQUIPMENT                                                                                              | TRANSCEIVER | ADJUST | REMARKS                                                                                   |
|-------------------------------------------------------------------------------------------------------------|-------------|--------|-------------------------------------------------------------------------------------------|
| Input of RF wattmeter to antenna input. Inject a two-tone, 10mV audio signal at mic input.                  | Ch. 19, USB | CT4    | SSB ALC<br>Adjust for 11.5 watts PEP RF output maximum.                                   |
| Input of oscilloscope or modulation meter to antenna input. Inject a 1000Hz, 1mV audio signal at mic input. | Ch. 19, AM  | VR6    | AM AMC<br>Adjust for 50% modulation. (See Figure 1.)                                      |
| Input of RF wattmeter to antenna input. No modulation input.                                                | Ch. 19, AM  | VR7    | AM CARRIER POWER<br>Adjust for 4.0 watts RF output maximum.                               |
| Input of RF wattmeter to antenna input.                                                                     | Ch. 19, AM  | VR10   | TX POWER METER<br>At 4 watts RF output adjust so TX POWER meter agrees with RF wattmeter. |

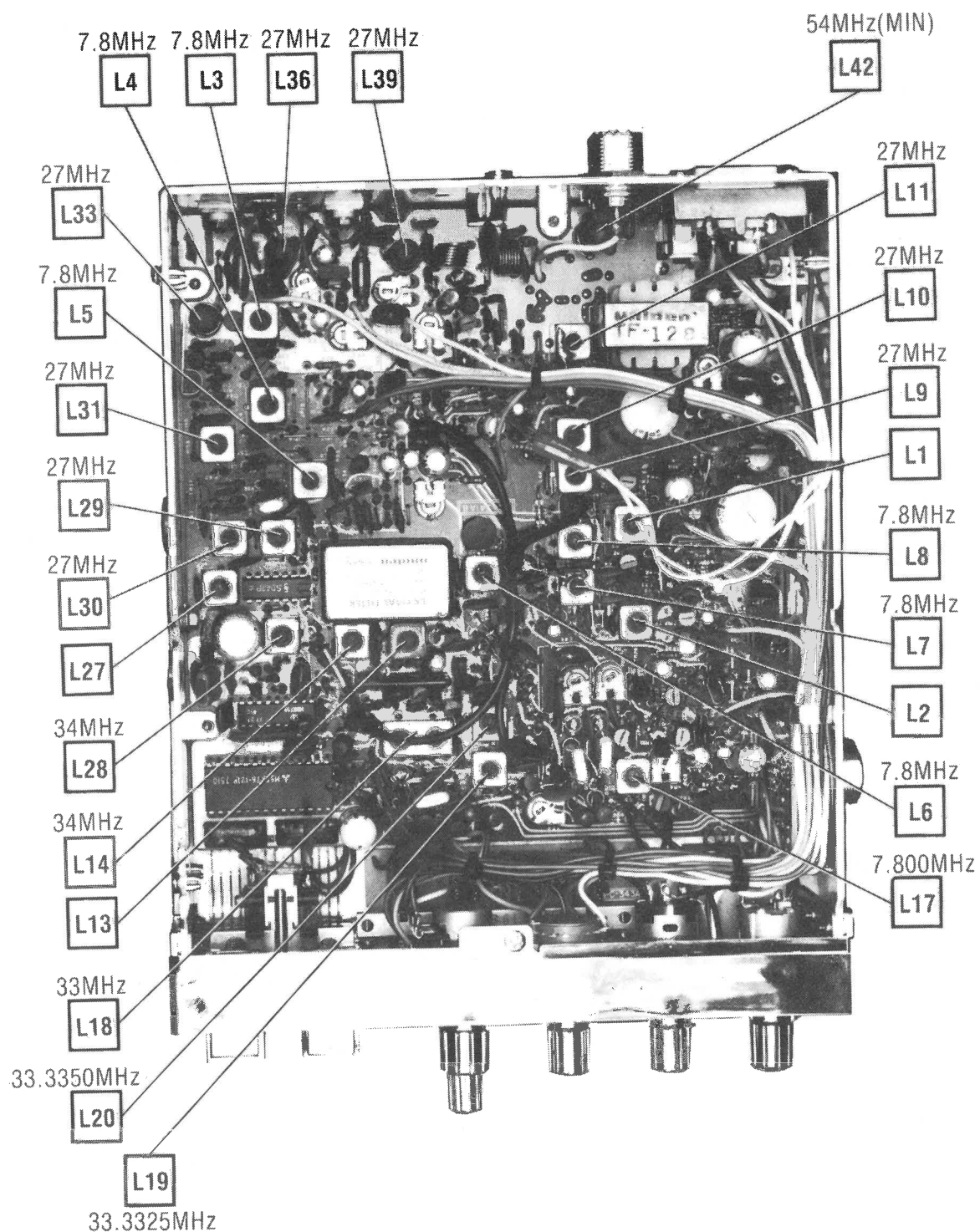
## **TRUTH CHART**

| TRUTH CHART |                                                                                       |    |    |    |    |    |  |  |                                       |                                                   |                                                    |                                                    |
|-------------|---------------------------------------------------------------------------------------|----|----|----|----|----|--|--|---------------------------------------|---------------------------------------------------|----------------------------------------------------|----------------------------------------------------|
| CHANNEL     | 1 = 7.90 Volts    0 = 0 to .25 Volts<br>CHANNEL INPUT CODES<br>PROGRAM DIVIDER<br>IC2 |    |    |    |    |    |  |  | DIVIDER<br>INPUT<br>IN MHz AT<br>TP10 | AM<br>Rec & XMT<br>VCO OUTPUT<br>IN MHz AT<br>TP1 | LSB<br>Rec & XMT<br>VCO OUTPUT<br>IN MHz AT<br>TP1 | LSB<br>Rec & XMT<br>VCO OUTPUT<br>IN MHz AT<br>TP1 |
|             | PINS                                                                                  |    |    |    |    |    |  |  |                                       |                                                   |                                                    |                                                    |
|             | 11                                                                                    | 12 | 13 | 14 | 15 | 16 |  |  |                                       |                                                   |                                                    |                                                    |
|             |                                                                                       |    |    |    |    |    |  |  |                                       |                                                   |                                                    |                                                    |
| 1           | 0                                                                                     | 0  | 1  | 1  | 1  | 1  |  |  | 1.430                                 | 34.765                                            | 34.7675                                            | 34.7625                                            |
| 2           | 0                                                                                     | 1  | 0  | 0  | 0  | 0  |  |  | 1.440                                 | 34.775                                            | 34.7775                                            | 34.7725                                            |
| 3           | 0                                                                                     | 1  | 0  | 0  | 0  | 1  |  |  | 1.450                                 | 34.785                                            | 34.7875                                            | 34.7825                                            |
| 4           | 0                                                                                     | 1  | 0  | 0  | 1  | 1  |  |  | 1.470                                 | 34.805                                            | 34.8075                                            | 34.8025                                            |
| 5           | 0                                                                                     | 1  | 0  | 1  | 0  | 0  |  |  | 1.480                                 | 34.815                                            | 34.8175                                            | 34.8125                                            |
| 6           | 0                                                                                     | 1  | 0  | 1  | 0  | 1  |  |  | 1.490                                 | 34.825                                            | 34.8275                                            | 34.8225                                            |
| 7           | 0                                                                                     | 1  | 0  | 1  | 1  | 0  |  |  | 1.500                                 | 34.835                                            | 34.8375                                            | 34.8325                                            |
| 8           | 0                                                                                     | 1  | 1  | 0  | 0  | 0  |  |  | 1.520                                 | 34.855                                            | 34.8575                                            | 34.8525                                            |
| 9           | 0                                                                                     | 1  | 1  | 0  | 0  | 1  |  |  | 1.530                                 | 34.865                                            | 34.8675                                            | 34.8625                                            |
| 10          | 0                                                                                     | 1  | 1  | 0  | 1  | 0  |  |  | 1.540                                 | 34.875                                            | 34.8775                                            | 34.8725                                            |
| 11          | 0                                                                                     | 1  | 1  | 0  | 1  | 1  |  |  | 1.550                                 | 34.885                                            | 34.8875                                            | 34.8825                                            |
| 12          | 0                                                                                     | 1  | 1  | 1  | 0  | 1  |  |  | 1.570                                 | 34.905                                            | 34.9075                                            | 34.9025                                            |
| 13          | 0                                                                                     | 1  | 1  | 1  | 1  | 0  |  |  | 1.580                                 | 34.915                                            | 34.9175                                            | 34.9125                                            |
| 14          | 0                                                                                     | 1  | 1  | 1  | 1  | 1  |  |  | 1.590                                 | 34.925                                            | 34.9275                                            | 34.9225                                            |
| 15          | 1                                                                                     | 0  | 0  | 0  | 0  | 0  |  |  | 1.600                                 | 34.935                                            | 34.9375                                            | 34.9325                                            |
| 16          | 1                                                                                     | 0  | 0  | 0  | 1  | 0  |  |  | 1.620                                 | 34.955                                            | 34.9575                                            | 34.9525                                            |
| 17          | 1                                                                                     | 0  | 0  | 0  | 1  | 1  |  |  | 1.630                                 | 34.965                                            | 34.9675                                            | 34.9625                                            |
| 18          | 1                                                                                     | 0  | 0  | 1  | 0  | 0  |  |  | 1.640                                 | 34.975                                            | 34.9775                                            | 34.9725                                            |
| 19          | 1                                                                                     | 0  | 0  | 1  | 0  | 1  |  |  | 1.650                                 | 34.985                                            | 34.9875                                            | 34.9825                                            |
| 20          | 1                                                                                     | 0  | 0  | 1  | 1  | 1  |  |  | 1.670                                 | 35.005                                            | 35.0075                                            | 35.0025                                            |
| 21          | 1                                                                                     | 0  | 1  | 0  | 0  | 0  |  |  | 1.680                                 | 35.015                                            | 35.0175                                            | 35.0125                                            |
| 22          | 1                                                                                     | 0  | 1  | 0  | 0  | 1  |  |  | 1.690                                 | 35.025                                            | 35.0275                                            | 35.0225                                            |
| 23          | 1                                                                                     | 0  | 1  | 1  | 0  | 0  |  |  | 1.720                                 | 35.055                                            | 35.0575                                            | 35.0525                                            |
| 24          | 1                                                                                     | 0  | 1  | 0  | 1  | 0  |  |  | 1.700                                 | 35.035                                            | 35.0375                                            | 35.0325                                            |
| 25          | 1                                                                                     | 0  | 1  | 0  | 1  | 1  |  |  | 1.710                                 | 35.045                                            | 35.0475                                            | 35.0425                                            |
| 26          | 1                                                                                     | 0  | 1  | 1  | 0  | 1  |  |  | 1.730                                 | 35.065                                            | 35.0675                                            | 35.0625                                            |
| 27          | 1                                                                                     | 0  | 1  | 1  | 1  | 0  |  |  | 1.740                                 | 35.075                                            | 35.0775                                            | 35.0725                                            |
| 28          | 1                                                                                     | 0  | 1  | 1  | 1  | 1  |  |  | 1.750                                 | 35.085                                            | 35.0875                                            | 35.0825                                            |
| 29          | 1                                                                                     | 1  | 0  | 0  | 0  | 0  |  |  | 1.760                                 | 35.095                                            | 35.0975                                            | 35.0925                                            |
| 30          | 1                                                                                     | 1  | 0  | 0  | 0  | 1  |  |  | 1.770                                 | 35.105                                            | 35.1075                                            | 35.1025                                            |
| 31          | 1                                                                                     | 1  | 0  | 0  | 1  | 0  |  |  | 1.780                                 | 35.115                                            | 35.1175                                            | 35.1125                                            |
| 32          | 1                                                                                     | 1  | 0  | 0  | 1  | 1  |  |  | 1.790                                 | 35.125                                            | 35.1275                                            | 35.1225                                            |
| 33          | 1                                                                                     | 1  | 0  | 1  | 0  | 0  |  |  | 1.800                                 | 35.135                                            | 35.1375                                            | 35.1325                                            |
| 34          | 1                                                                                     | 1  | 0  | 1  | 0  | 1  |  |  | 1.810                                 | 35.145                                            | 35.1475                                            | 35.1425                                            |
| 35          | 1                                                                                     | 1  | 0  | 1  | 1  | 0  |  |  | 1.820                                 | 35.155                                            | 35.1575                                            | 35.1525                                            |
| 36          | 1                                                                                     | 1  | 0  | 1  | 1  | 1  |  |  | 1.830                                 | 35.165                                            | 35.1675                                            | 35.1625                                            |
| 37          | 1                                                                                     | 1  | 1  | 0  | 0  | 0  |  |  | 1.840                                 | 35.175                                            | 35.1775                                            | 35.1725                                            |
| 38          | 1                                                                                     | 1  | 1  | 0  | 0  | 1  |  |  | 1.850                                 | 35.185                                            | 35.1875                                            | 35.1825                                            |
| 39          | 1                                                                                     | 1  | 1  | 0  | 1  | 0  |  |  | 1.860                                 | 35.195                                            | 35.1975                                            | 35.1925                                            |
| 40          | 1                                                                                     | 1  | 1  | 0  | 1  | 1  |  |  | 1.870                                 | 35.205                                            | 35.2075                                            | 35.2025                                            |

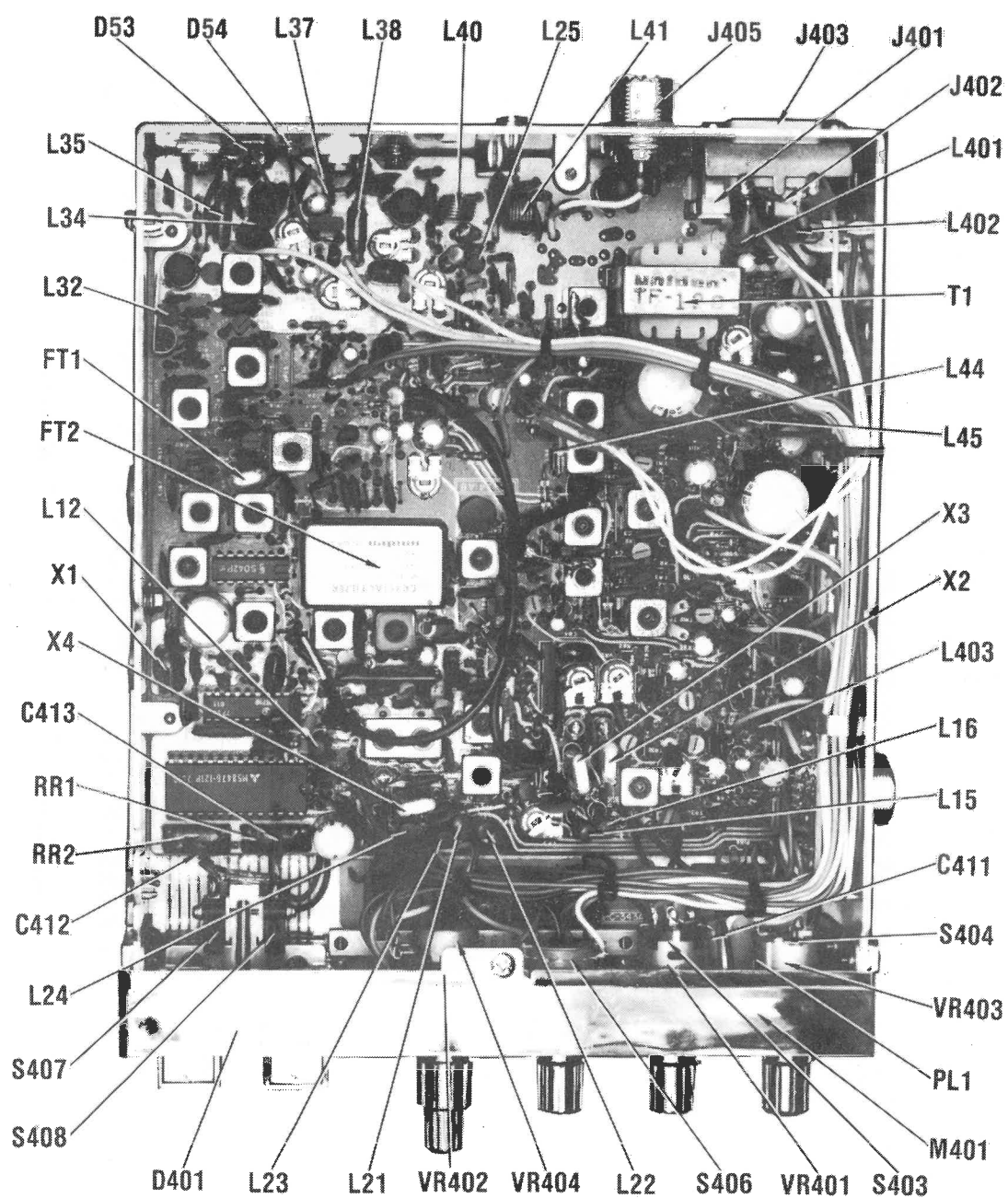




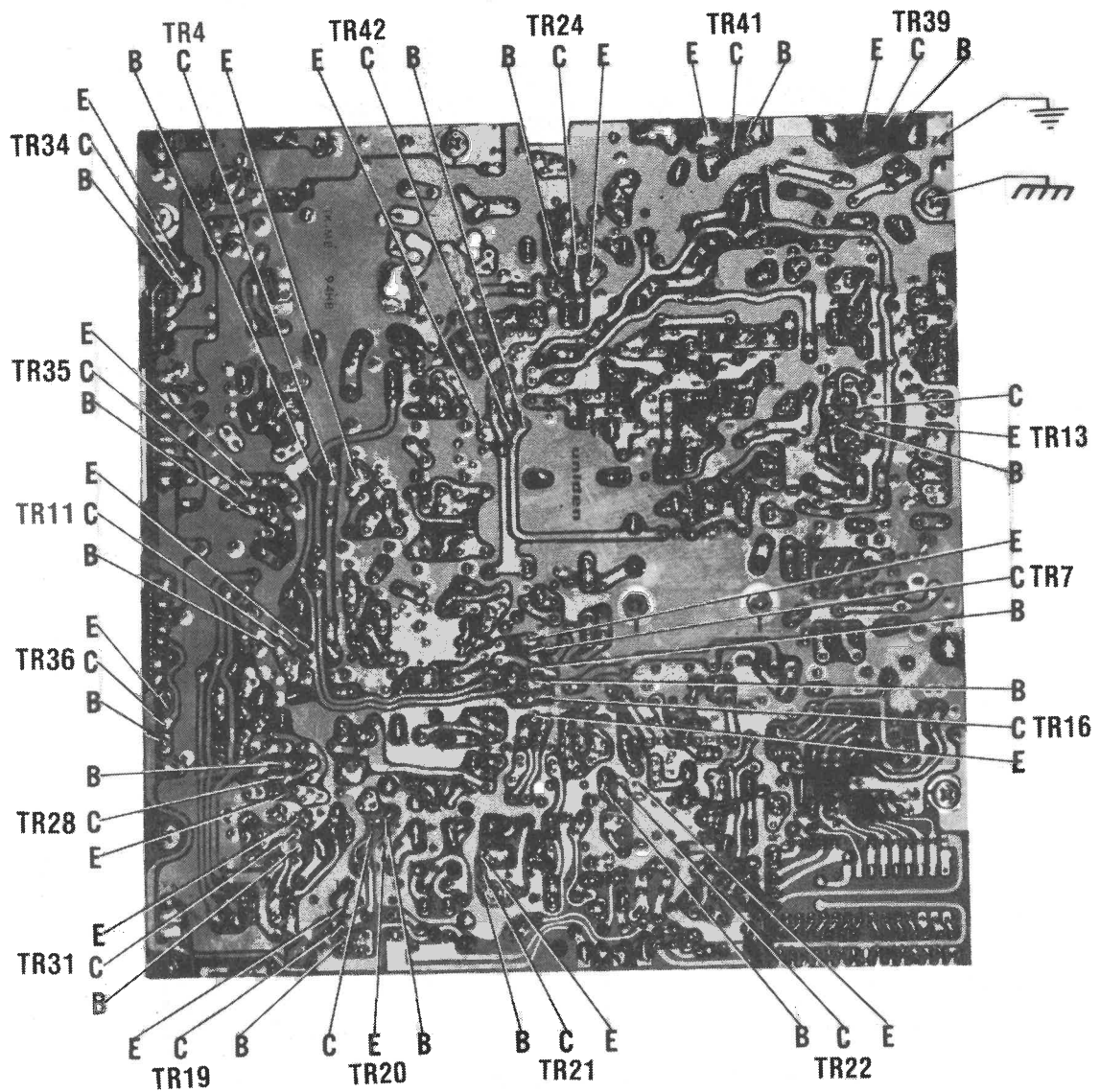
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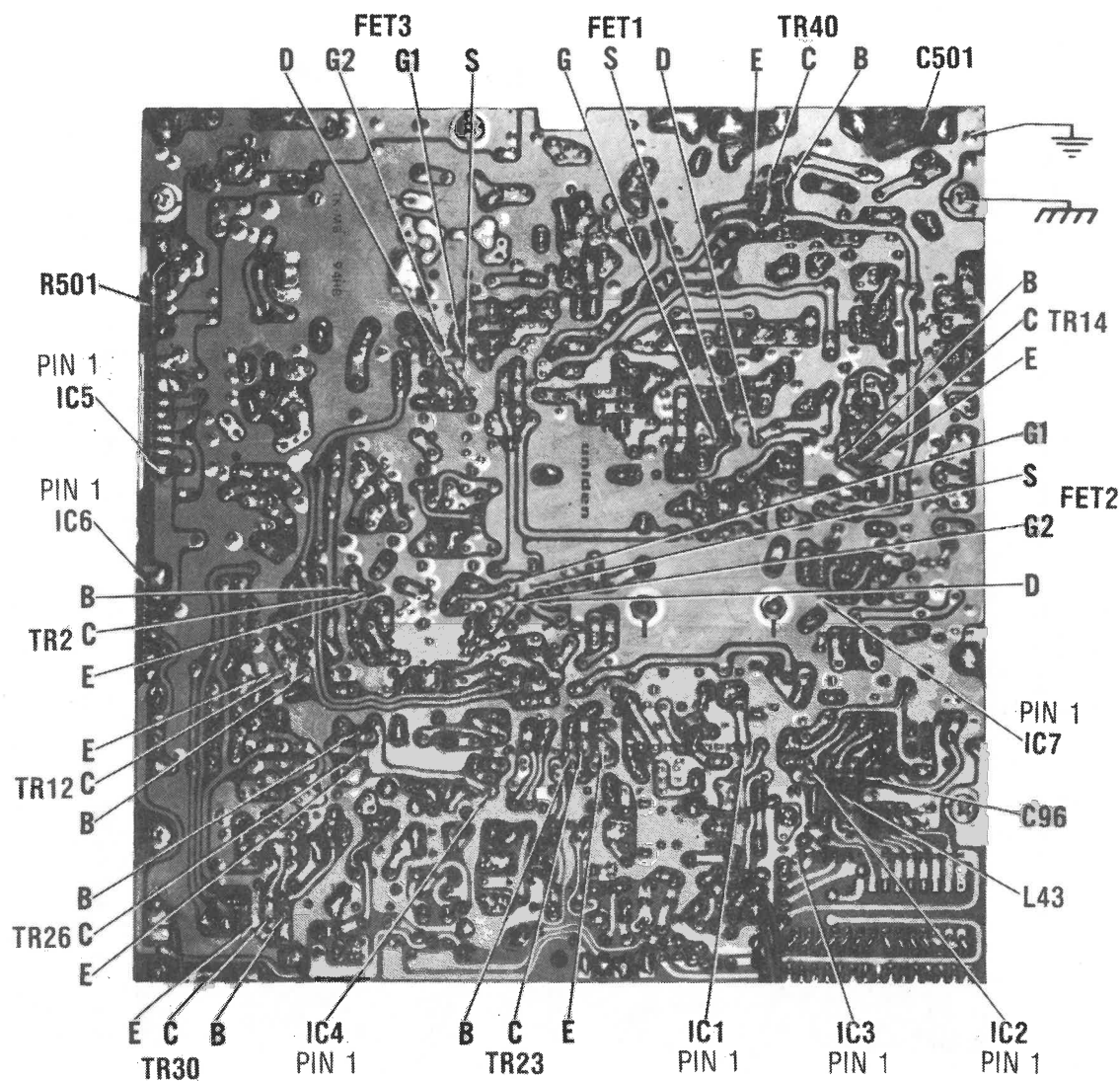
CHASSIS - BOTTOM



CHASSIS - BOTTOM



MAIN BOARD

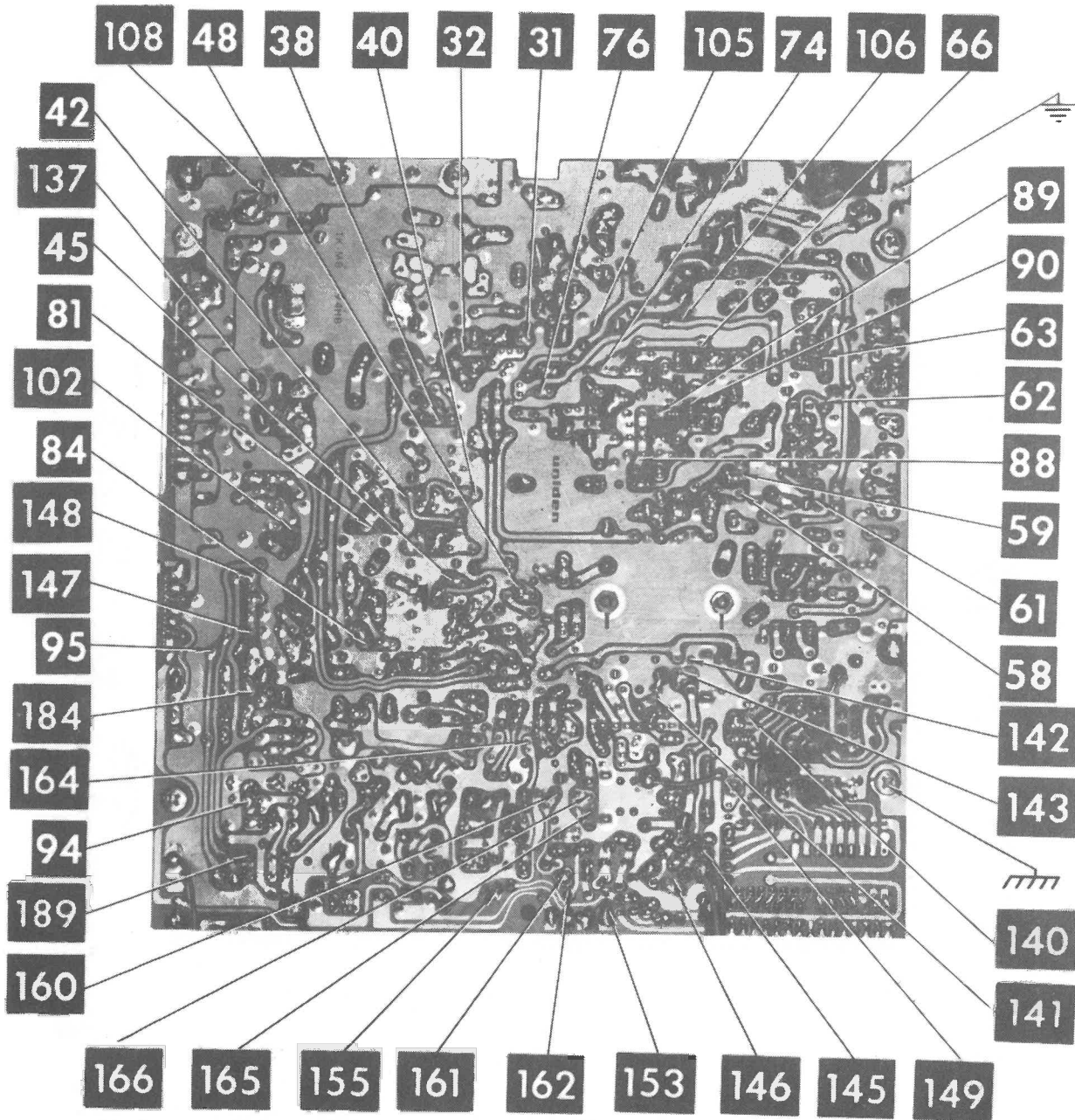


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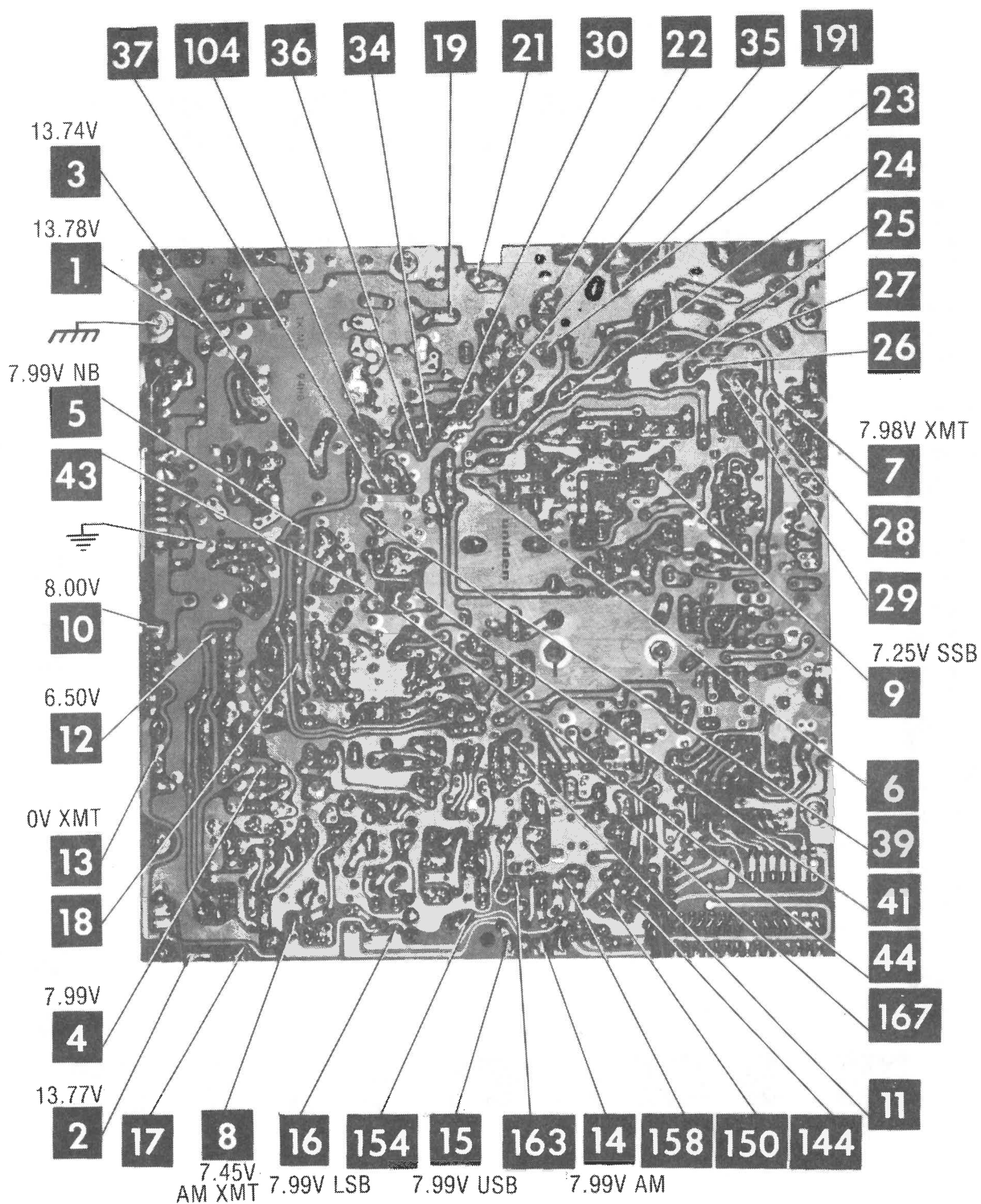




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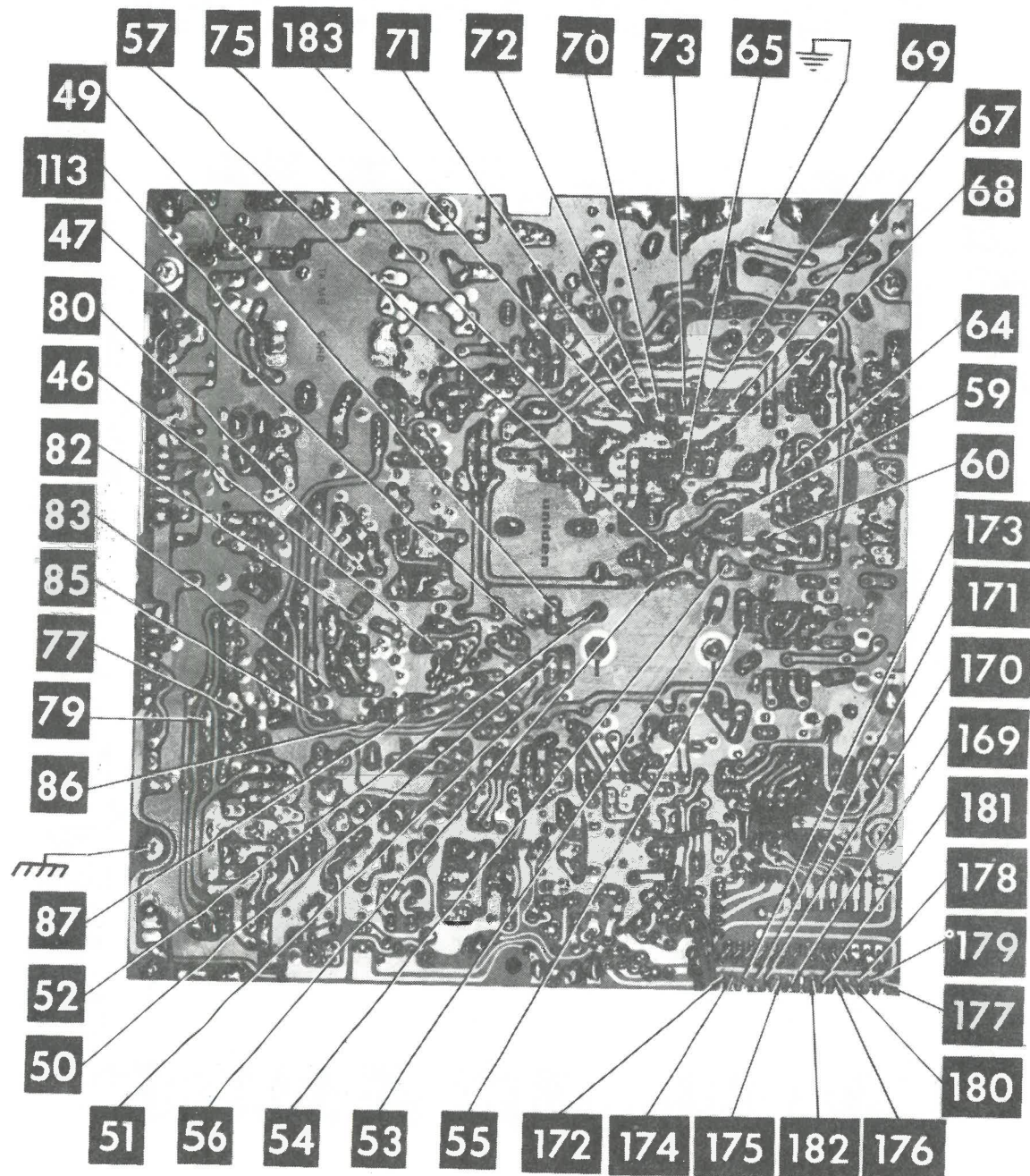


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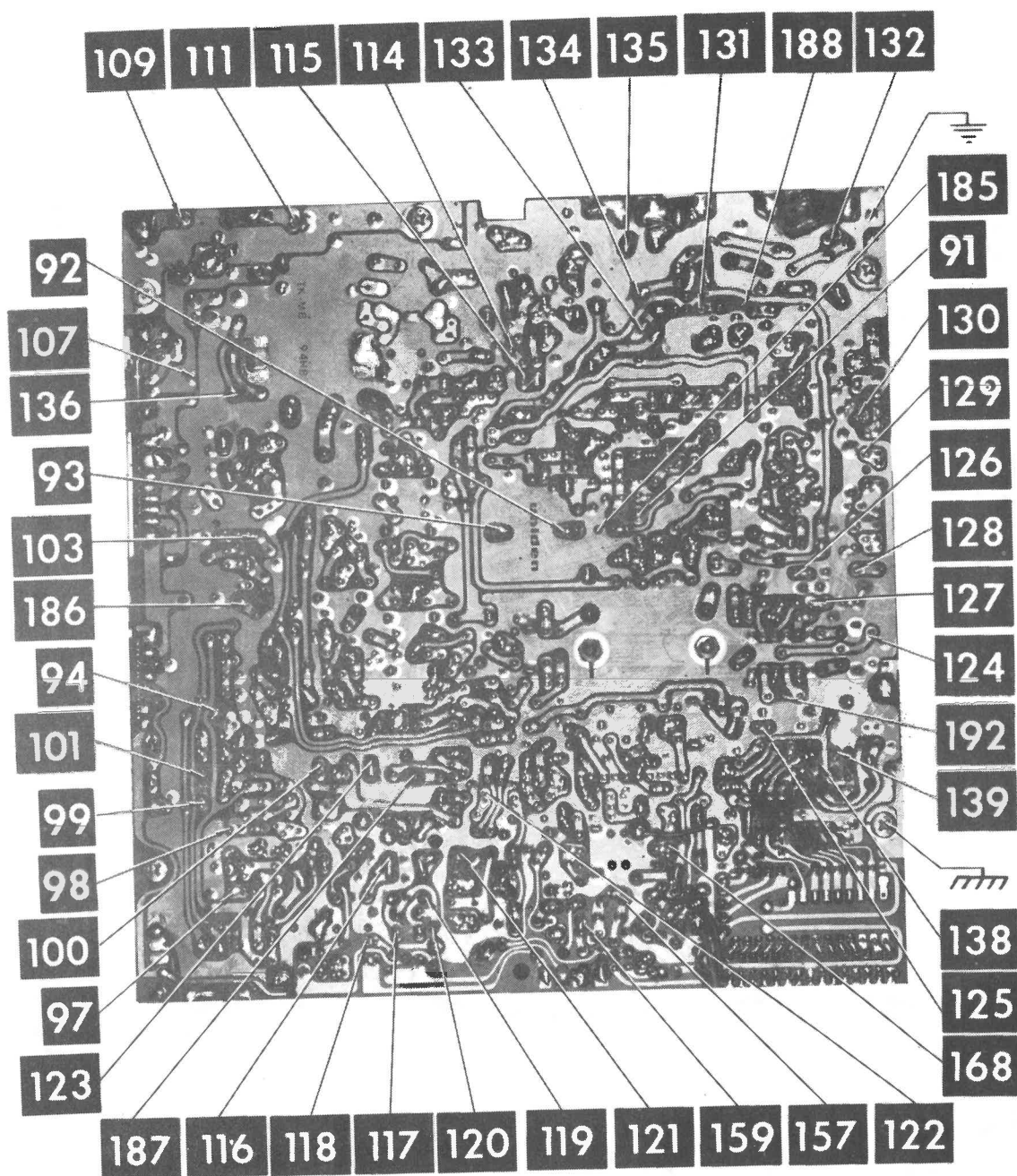
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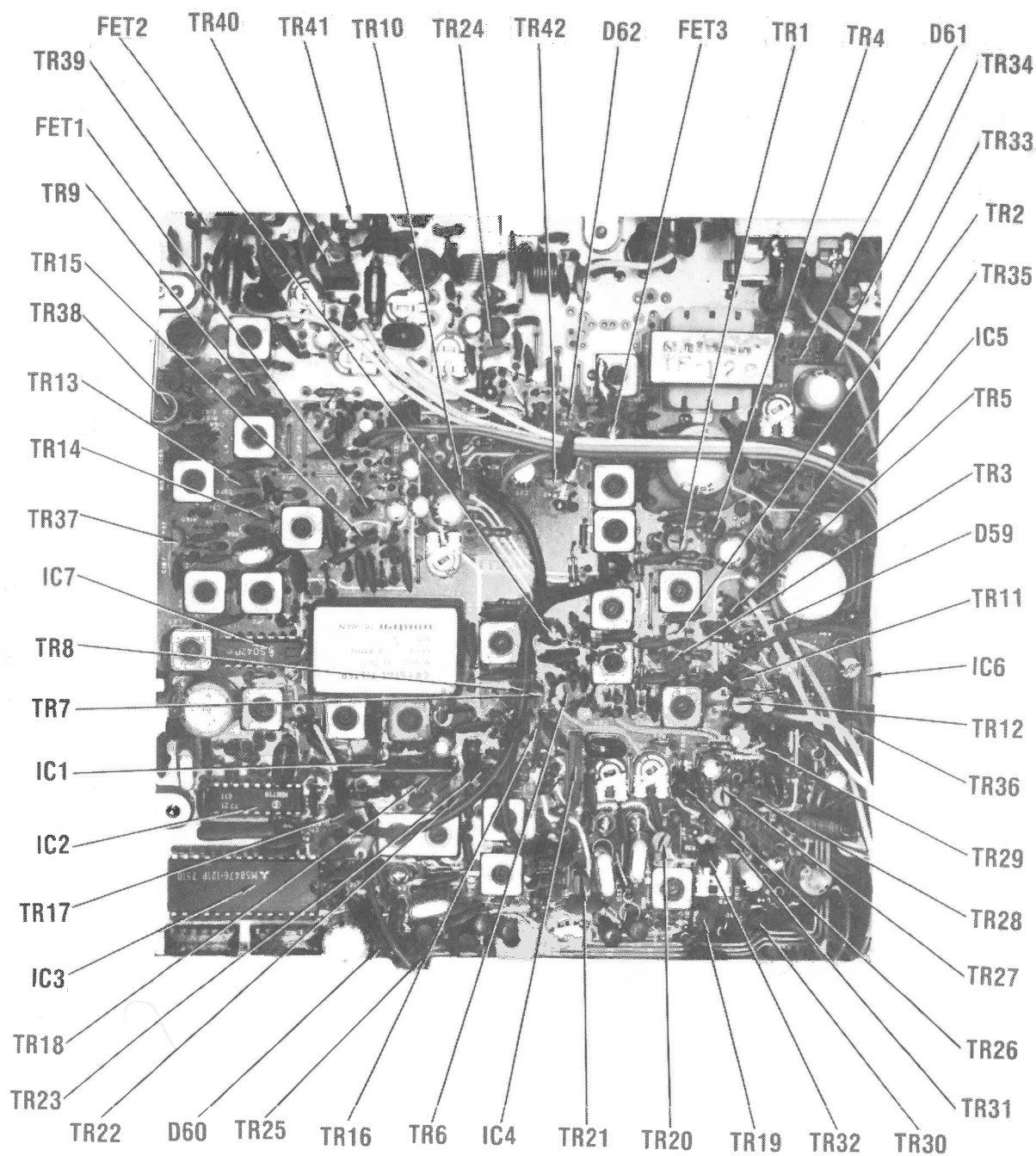


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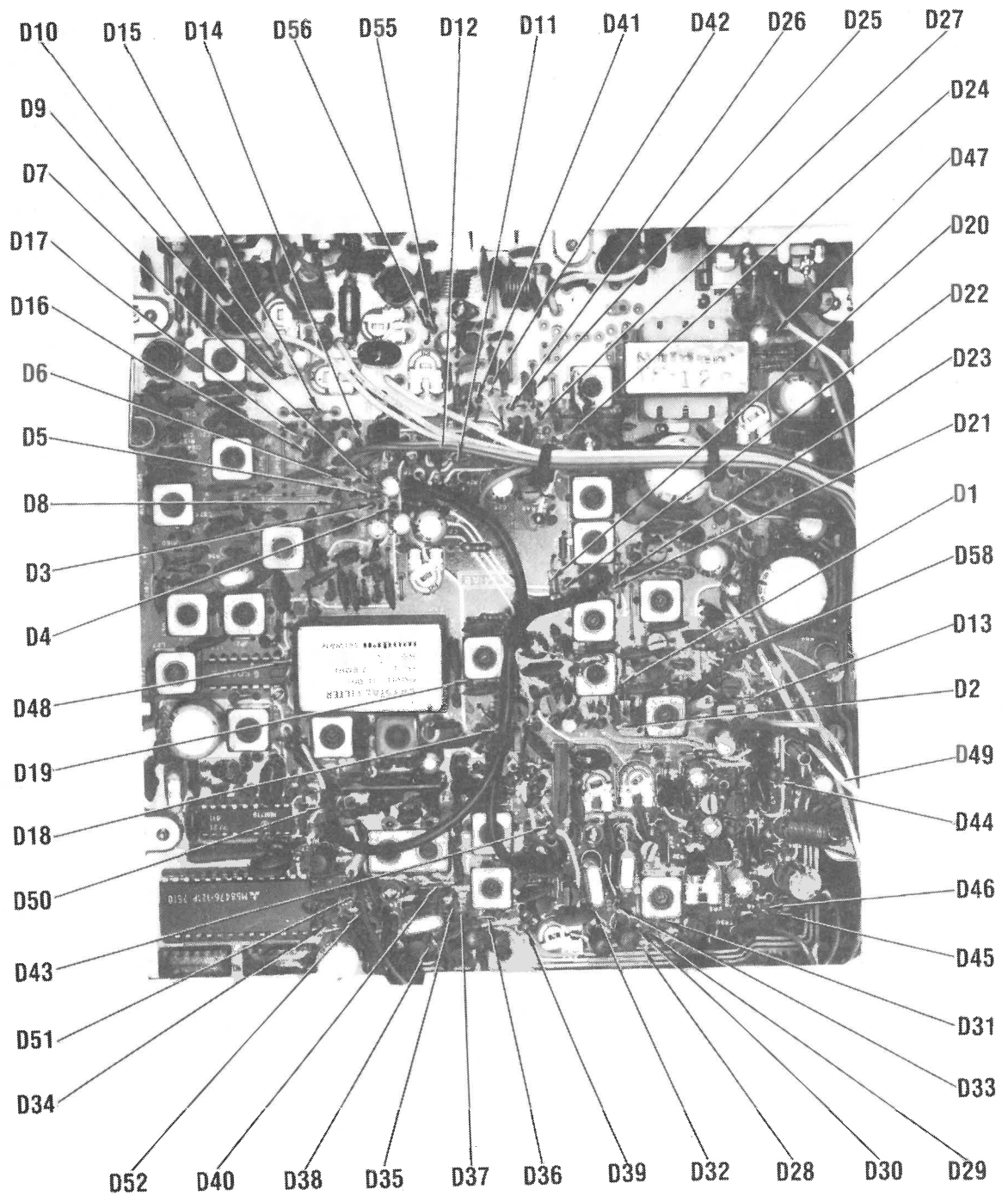


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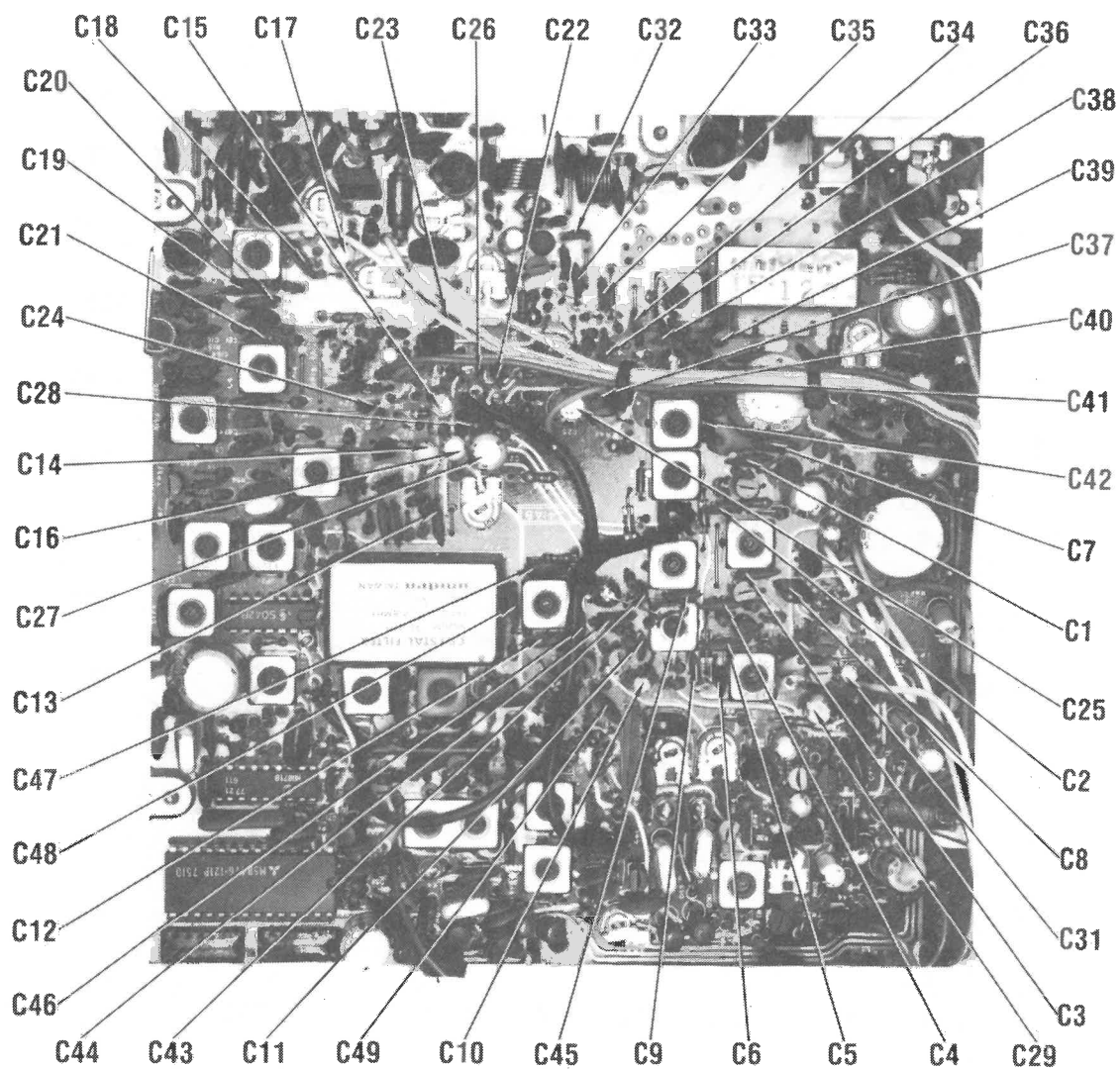


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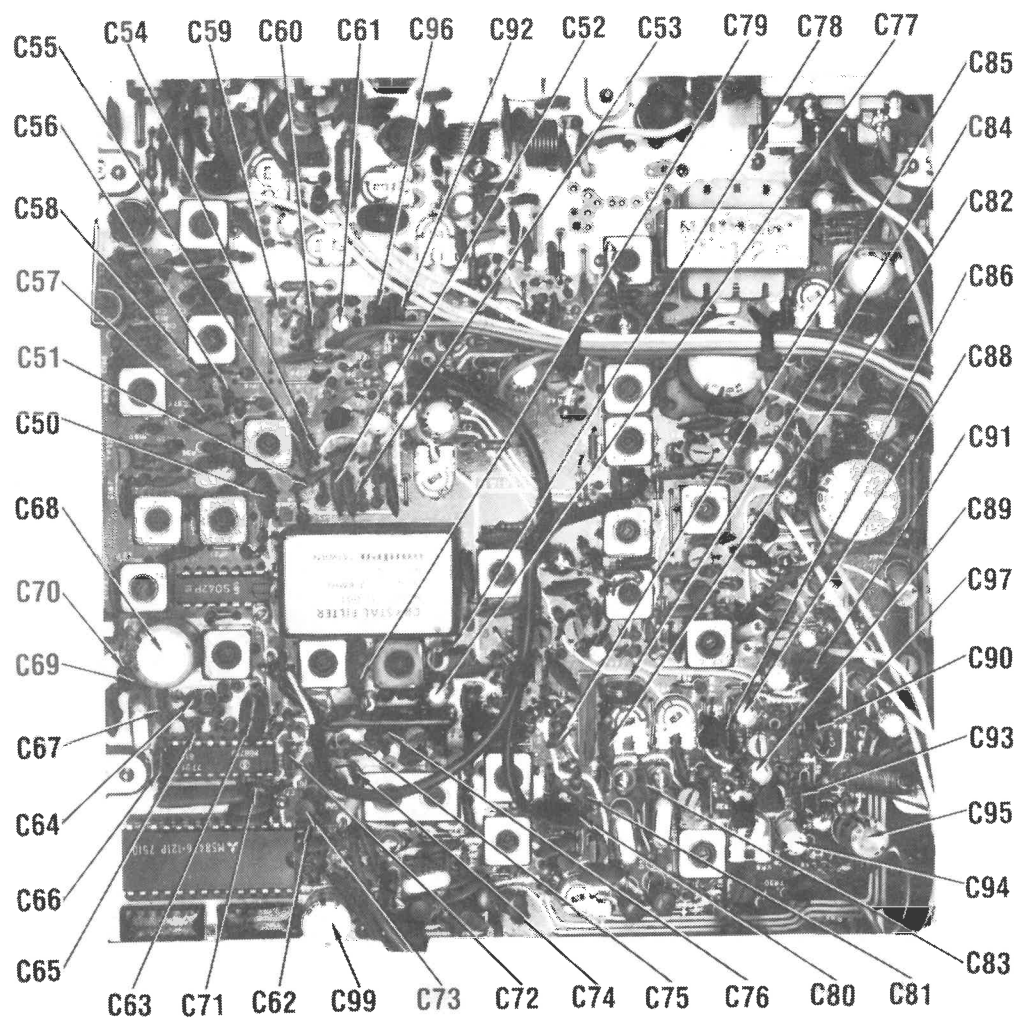


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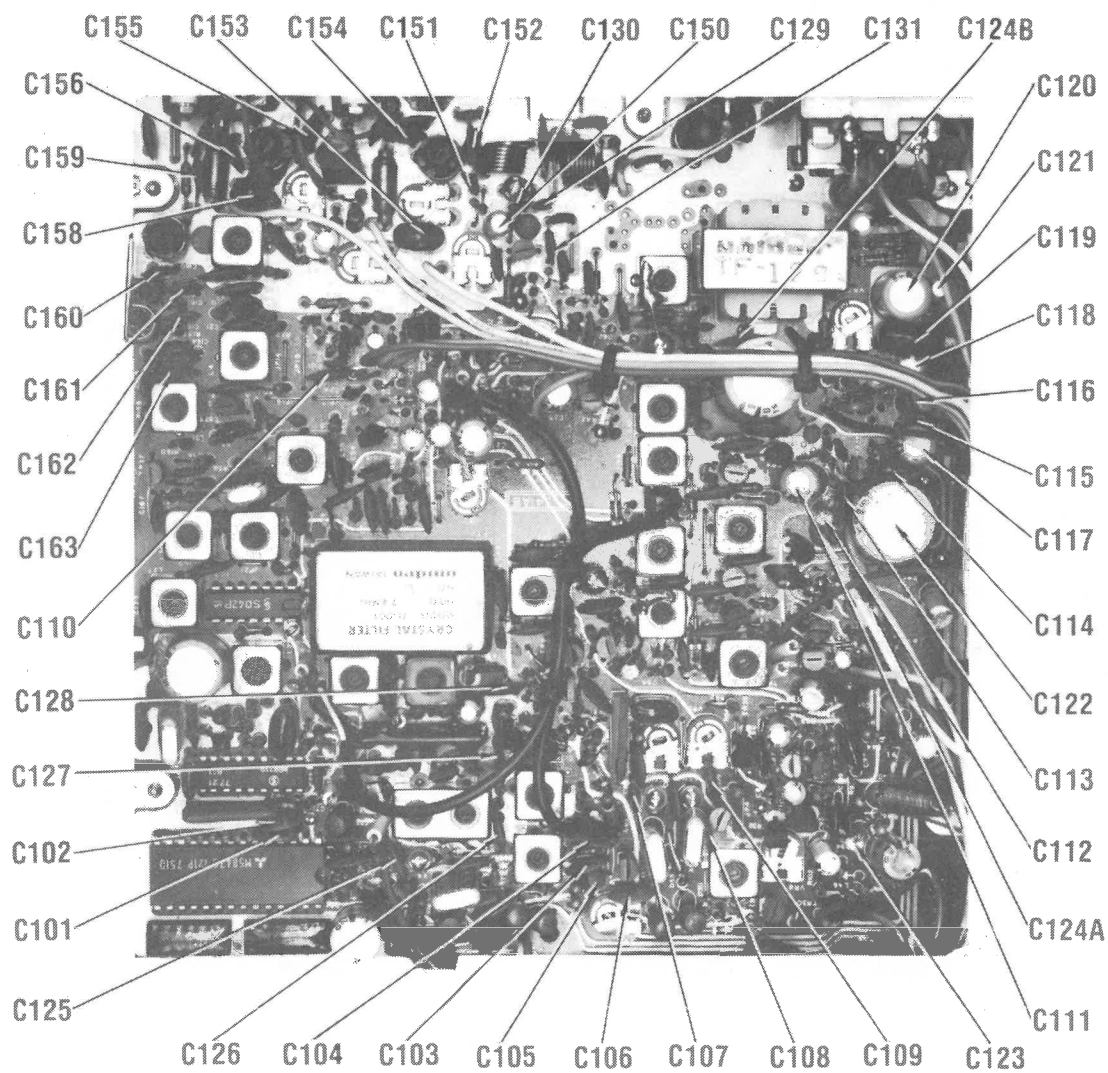


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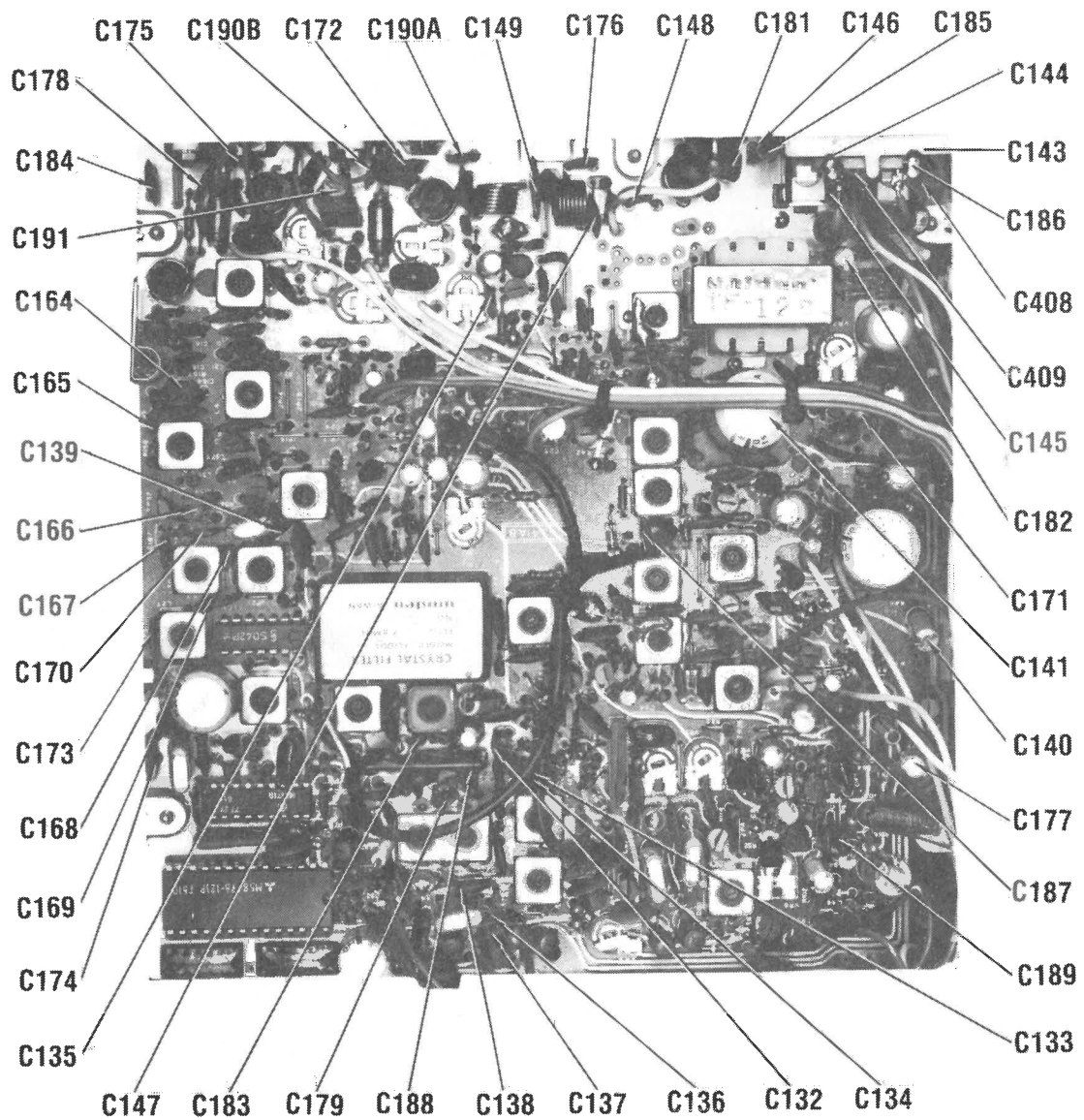




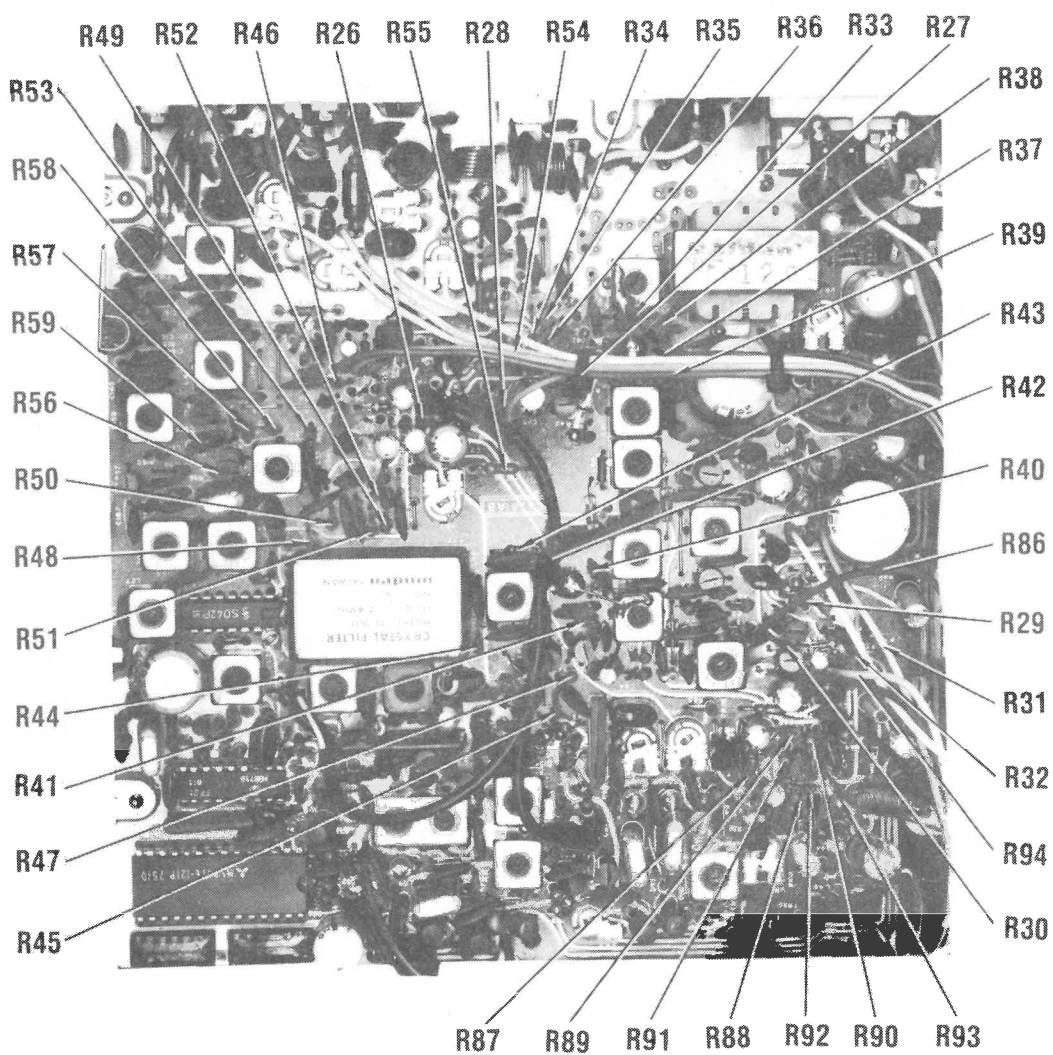
MAIN BOARD



MAIN BOARD



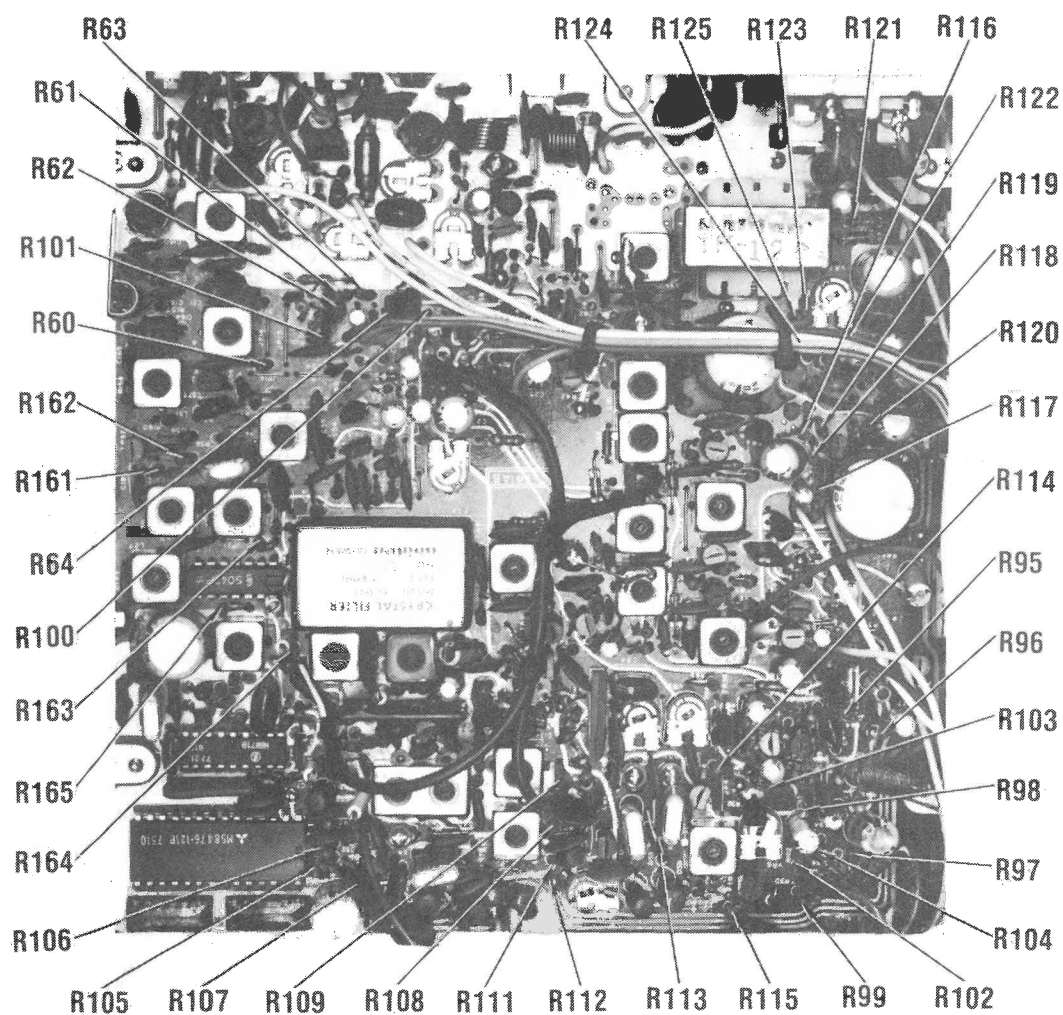
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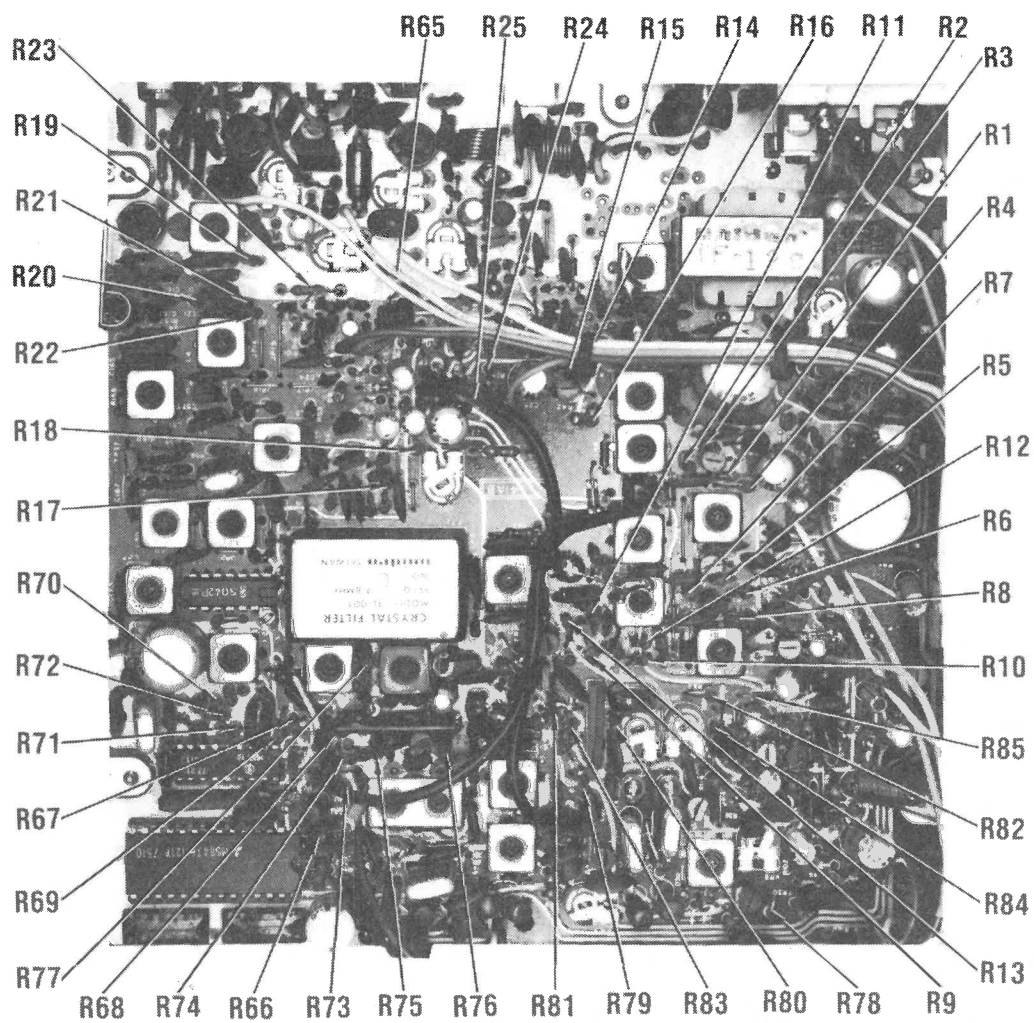
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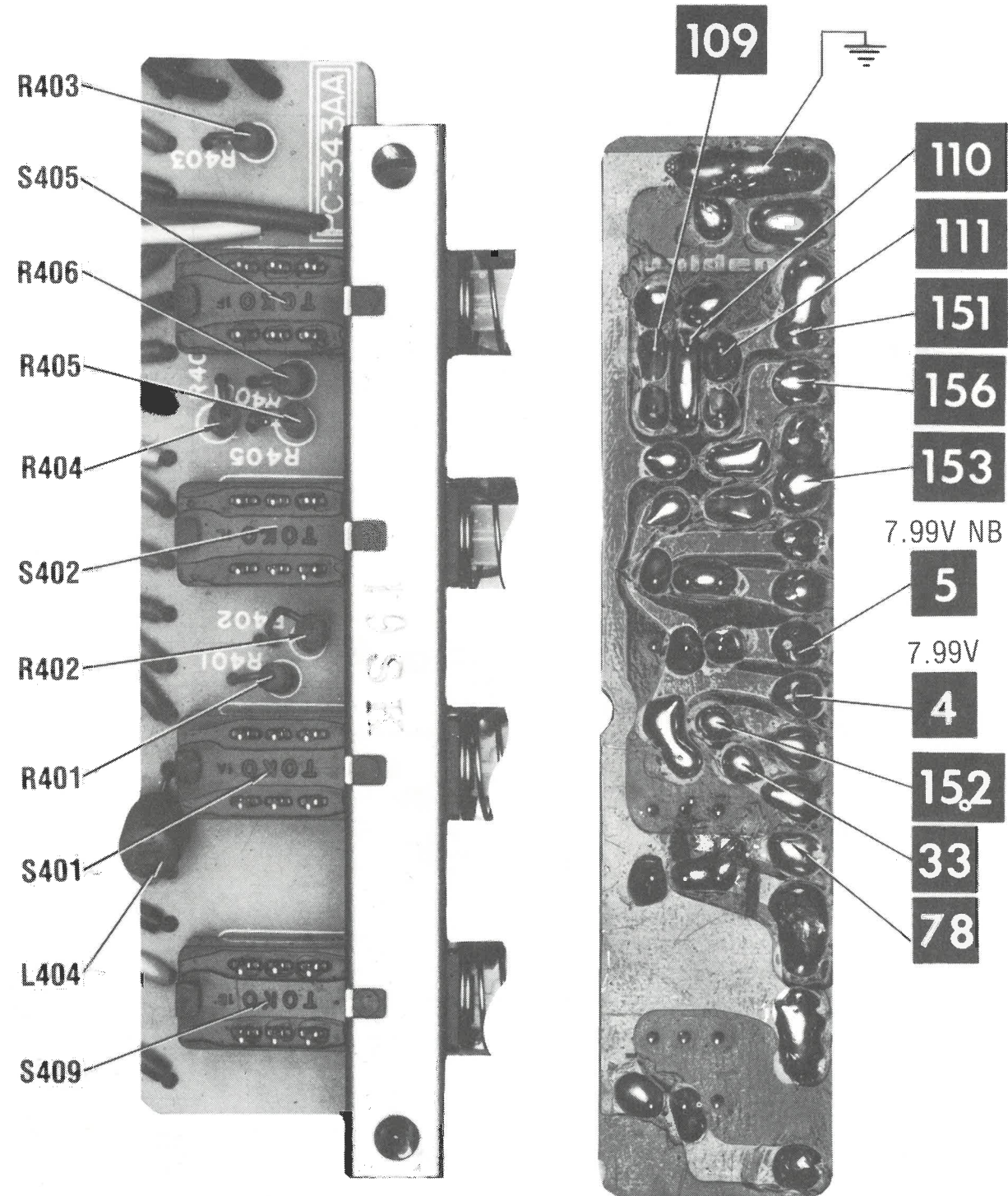


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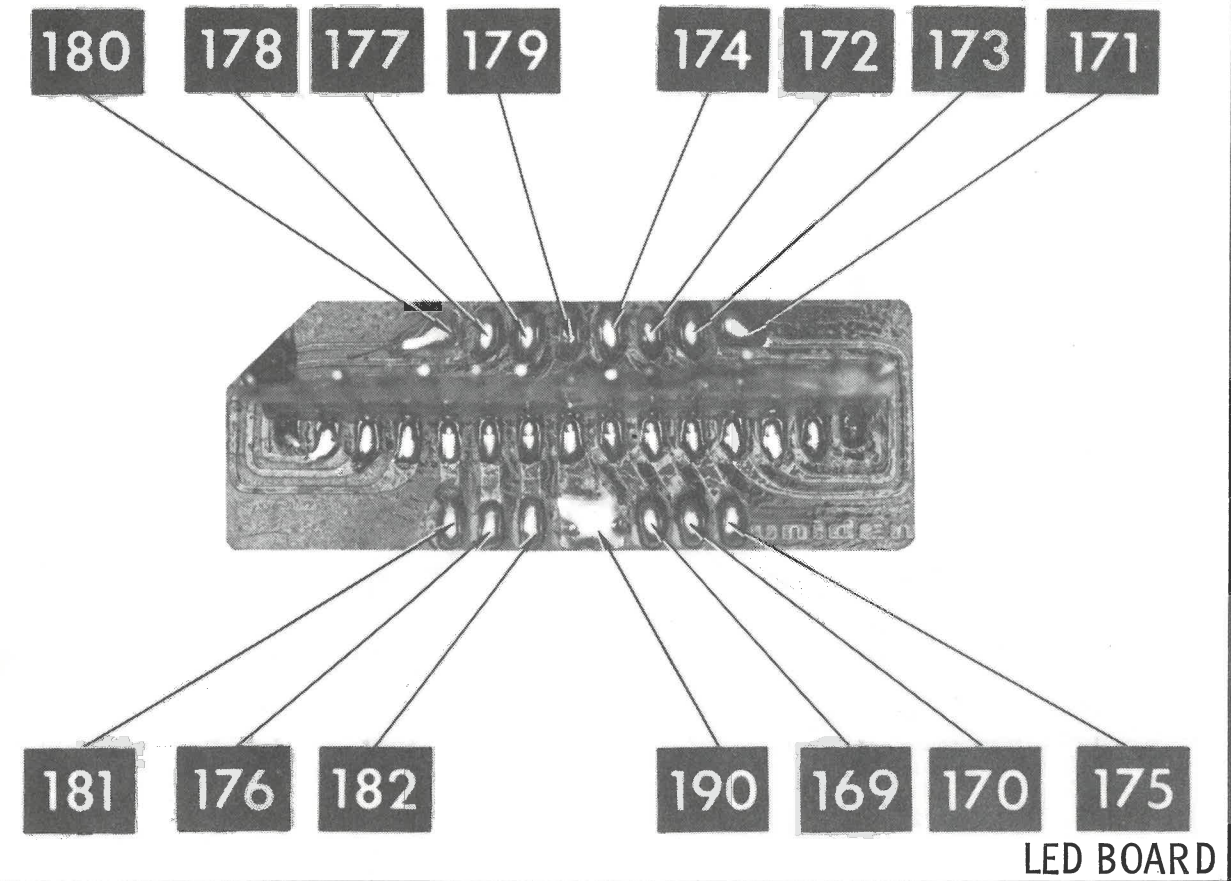


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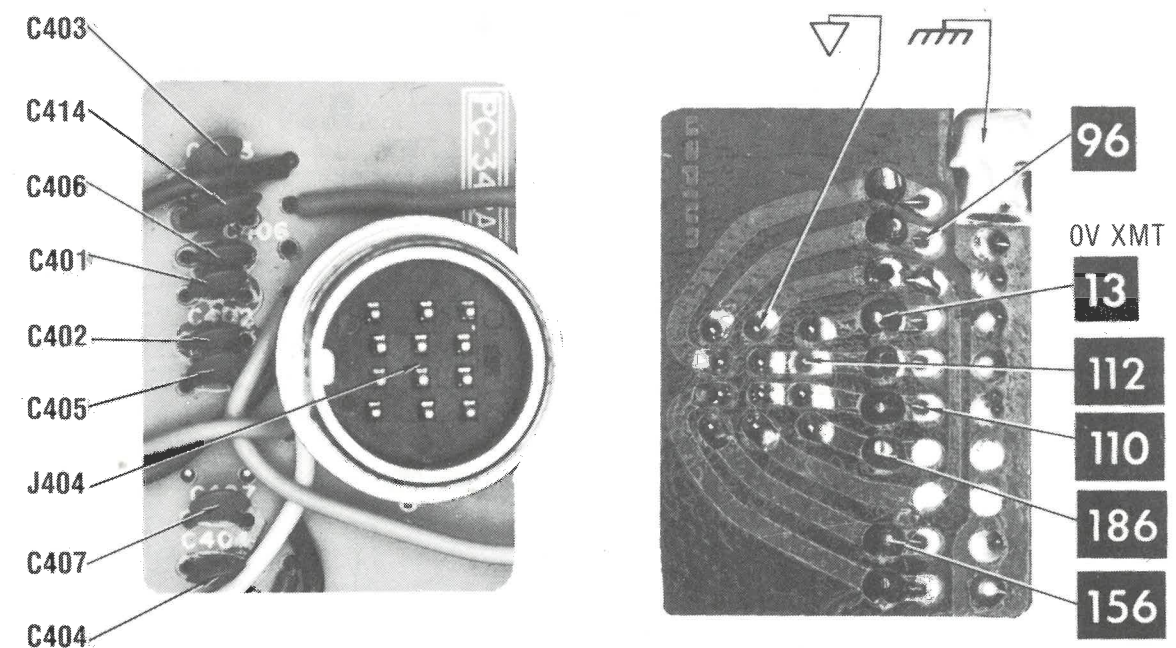




PUSH SWITCH BOARD



LED BOARD



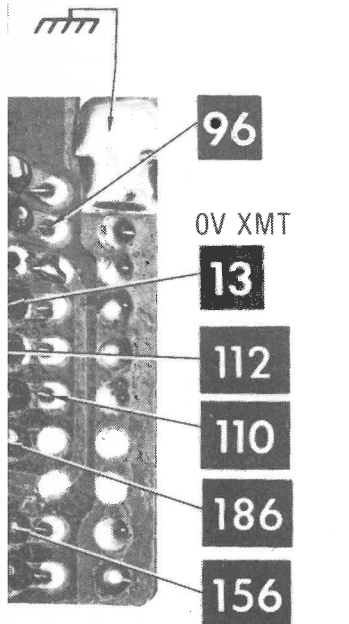
MIC JACK BOARD



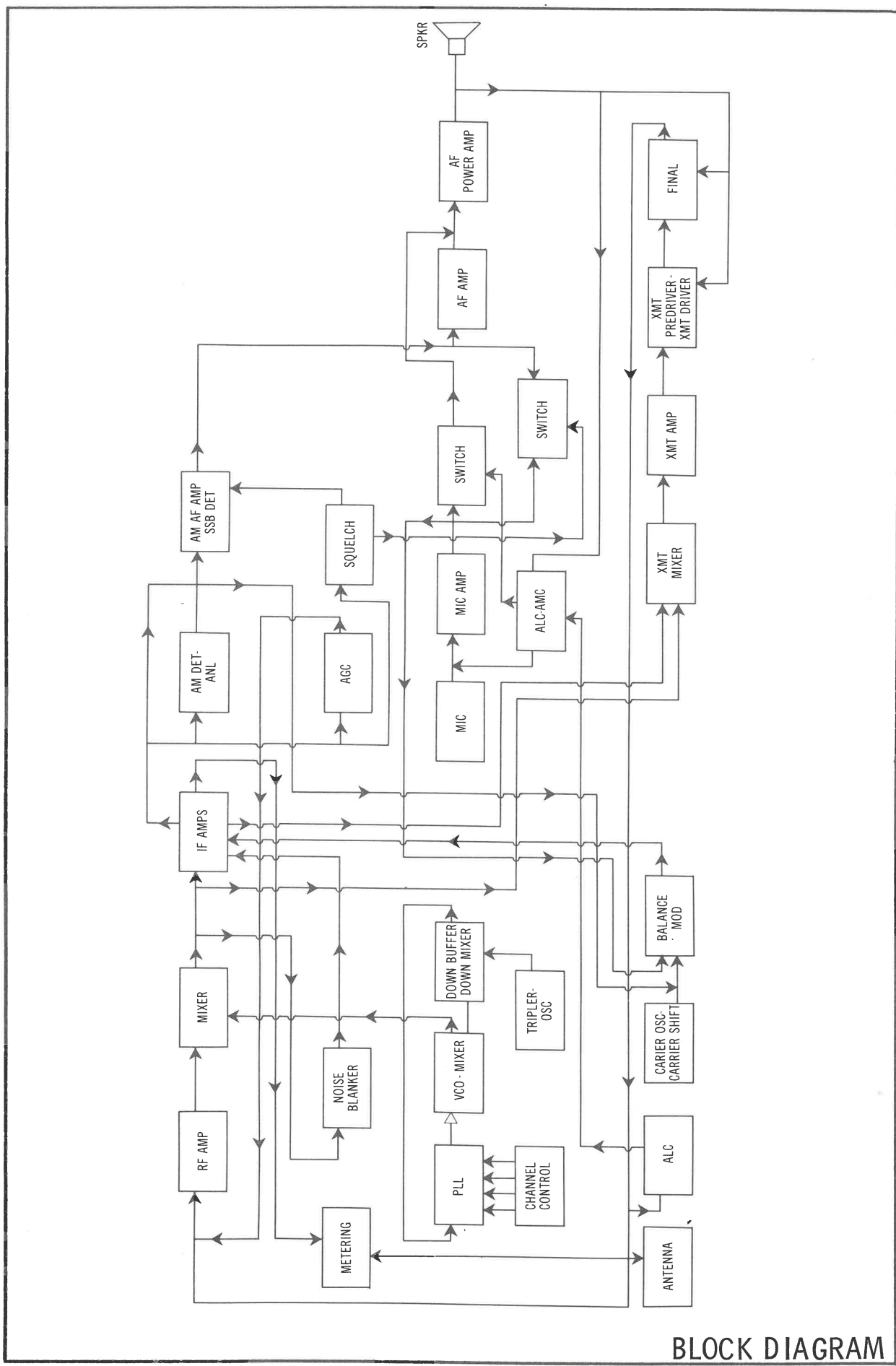
173

171

170 175  
LED BOARD



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## PARTS LIST AND DESCRIPTION

(When ordering parts, state Model, Part Number, and Description.)

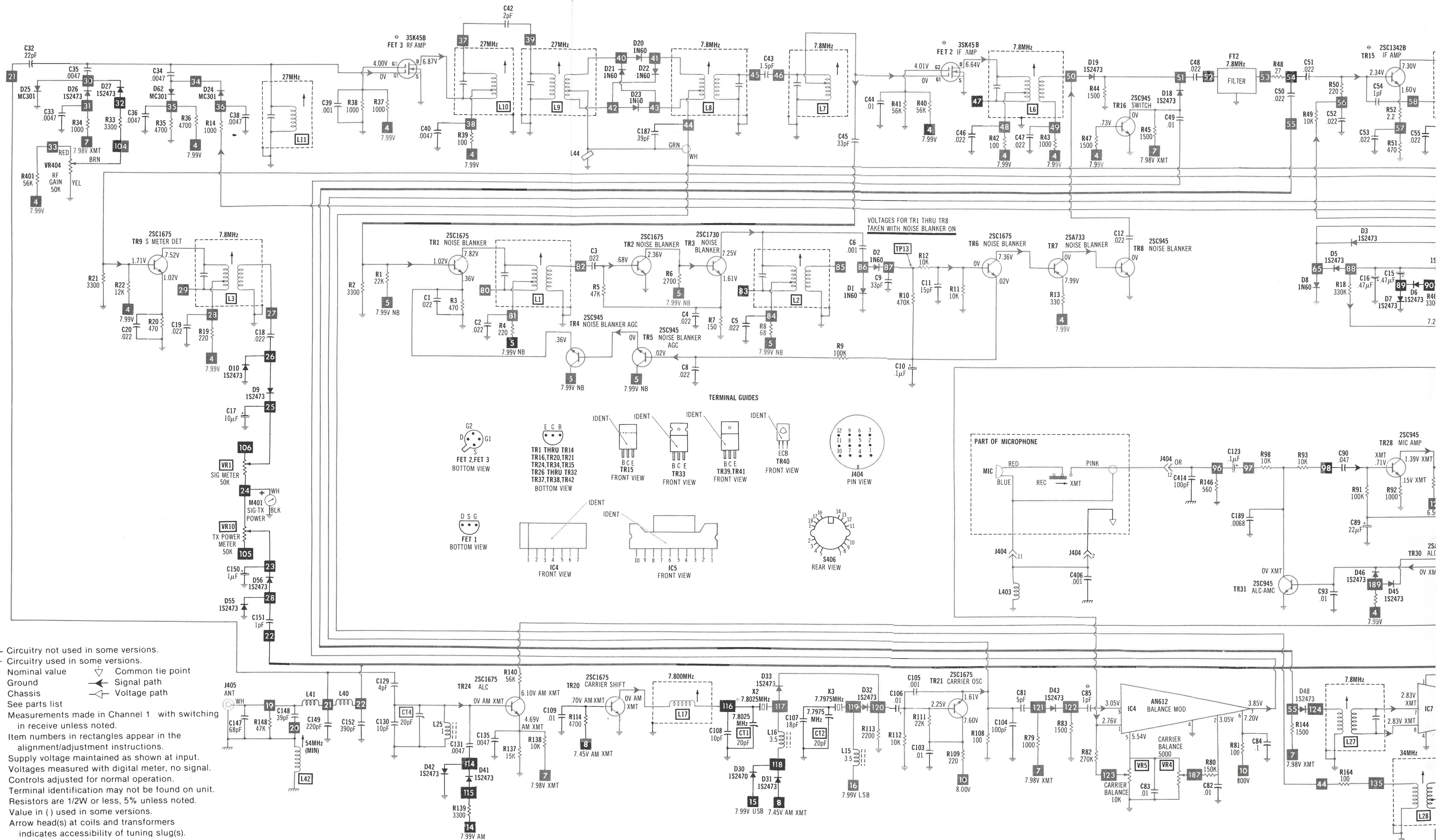
### WIRING DATA

|                                                  |                       |                                |                                                     |
|--------------------------------------------------|-----------------------|--------------------------------|-----------------------------------------------------|
| General-use Hook-up Wire (available in 5 colors) | BELDEN No. 8523       | Coiled Microphone Cable        |                                                     |
| Shielded Hook-up Wire (spiral wrapped)           | BELDEN No. 8421       | 3-conductor (1 shielded) 23AWG | BELDEN No. 9471 (5')                                |
| Speaker Cable (available in 4 colors)            | BELDEN No. 8401       |                                | BELDEN No. 8497 (6')                                |
| Bonding Strap                                    | BELDEN No. 8782       |                                | BELDEN No. 9472 (7-1/2')                            |
| AC Power Cord                                    | BELDEN No. 8672       |                                | 28AWG BELDEN No. 9466 (6')                          |
|                                                  | (6') BELDEN No. 17106 |                                | 31AWG BELDEN No. 9468 (10')                         |
|                                                  | (9') BELDEN No. 17109 |                                | 4-conductor (unshielded) 23AWG BELDEN No. 8415 (6') |
|                                                  |                       |                                | 5-conductor (1 shielded) 28AWG BELDEN No. 9467 (6') |
|                                                  |                       |                                | BELDEN No. 9465 (7-1/2')                            |

### SEMICONDUCTORS (Select replacement transistor for best results)

| ITEM No. | TYPE No.    | MFR. PART No. | REPLACEMENT DATA          |                  |                   |              |                  |                   |                     |                  |                 |  |
|----------|-------------|---------------|---------------------------|------------------|-------------------|--------------|------------------|-------------------|---------------------|------------------|-----------------|--|
|          |             |               | GENERAL ELECTRIC PART No. | MALLORY PART No. | RAYTHEON PART No. | RCA PART No. | SPRAGUE PART No. | SYLVANIA PART No. | THORDARSON PART No. | WORKMAN PART No. | ZENITH PART No. |  |
| D1       | 1N60        | 05-170060     | 1N60                      | PTC206           | REN 109           | SK3088       | RT-263           | ECG109            | TM109/**            | WEP134           | 103-Z9001       |  |
| D2       | 1N60        | 05-170060     | 1N60                      | PTC206           | REN 109           | SK3088       | RT-263           | ECG109            | TM109/**            | WEP134           | 103-Z9001       |  |
| D3       | 1S2473      | 05-182473     | GE-514                    | PTC214           | REN 177           | SK3100       | RT-218           | ECG519            | TM519               | WEP925           | 103-287         |  |
| D4       | 1S2473      | 05-182473     | GE-514                    | PTC214           | REN 177           | SK3100       | RT-218           | ECG519            | TM519               | WEP925           | 103-287         |  |
| D5       | 1S2473      | 05-182473     | GE-514                    | PTC214           | REN 177           | SK3100       | RT-218           | ECG519            | TM519               | WEP925           | 103-287         |  |
| D6       | 1S2473      | 05-182473     | GE-514                    | PTC214           | REN 177           | SK3100       | RT-218           | ECG519            | TM519               | WEP925           | 103-287         |  |
| D7       | 1S2473      | 05-182473     | GE-514                    | PTC214           | REN 177           | SK3100       | RT-218           | ECG519            | TM519               | WEP925           | 103-287         |  |
| D8       | 1N60        | 05-170060     | 1N60                      | PTC206           | REN 109           | SK3088       | RT-263           | ECG109            | TM109/**            | WEP134           | 103-Z9001       |  |
| D9       | 1S2473      | 05-182473     | GE-514                    | PTC214           | REN 177           | SK3100       | RT-218           | ECG519            | TM519               | WEP925           | 103-287         |  |
| D10      | 1S2473      | 05-182473     | GE-514                    | PTC214           | REN 177           | SK3100       | RT-218           | ECG519            | TM519               | WEP925           | 103-287         |  |
| D11      | 1S2473      | 05-182473     | GE-514                    | PTC214           | REN 177           | SK3100       | RT-218           | ECG519            | TM519               | WEP925           | 103-287         |  |
| D12      | 1S2473      | 05-182473     | GE-514                    | PTC214           | REN 177           | SK3100       | RT-218           | ECG519            | TM519               | WEP925           | 103-287         |  |
| D13      | 1S2473      | 05-182473     | GE-514                    | PTC214           | REN 177           | SK3100       | RT-218           | ECG519            | TM519               | WEP925           | 103-287         |  |
| D14      | 1S2473      | 05-182473     | GE-514                    | PTC214           | REN 177           | SK3100       | RT-218           | ECG519            | TM519               | WEP925           | 103-287         |  |
| D15      | 1N60        | 05-170060     | 1N60                      | PTC206           | REN 109           | SK3088       | RT-263           | ECG109            | TM109/**            | WEP134           | 103-Z9001       |  |
| D16      | 1S2473      | 05-182473     | GE-514                    | PTC214           | REN 177           | SK3100       | RT-218           | ECG519            | TM519               | WEP925           | 103-287         |  |
| D17      | 1N60        | 05-170060     | 1N60                      | PTC206           | REN 109           | SK3088       | RT-263           | ECG109            | TM109/**            | WEP134           | 103-Z9001       |  |
| D18      | 1S2473      | 05-182473     | GE-514                    | PTC214           | REN 177           | SK3100       | RT-218           | ECG519            | TM519               | WEP925           | 103-287         |  |
| D19      | 1S2473      | 05-182473     | GE-514                    | PTC214           | REN 177           | SK3100       | RT-218           | ECG519            | TM519               | WEP925           | 103-287         |  |
| D20      | 1N60        | 05-170060     | 1N60                      | PTC206           | REN 109           | SK3088       | RT-263           | ECG109            | TM109/**            | WEP134           | 103-Z9001       |  |
| D21      | 1N60        | 05-170060     | 1N60                      | PTC206           | REN 109           | SK3088       | RT-263           | ECG109            | TM109/**            | WEP134           | 103-Z9001       |  |
| D22      | 1N60        | 05-170060     | 1N60                      | PTC206           | REN 109           | SK3088       | RT-263           | ECG109            | TM109/**            | WEP134           | 103-Z9001       |  |
| D23      | MC301       | 05-320301     | GE-300                    | PTC214           | REN 177           | SK3100       | RT-218           | ECG177            | TM177               | WEP1062          | 103-131         |  |
| D24      | MC301       | 05-320301     | GE-300                    | PTC214           | REN 177           | SK3100       | RT-218           | ECG177            | TM177               | WEP1062          | 103-131         |  |
| D25      | MC301       | 05-320301     | GE-300                    | PTC214           | REN 177           | SK3100       | RT-218           | ECG177            | TM177               | WEP1062          | 103-131         |  |
| D26      | 1S2473      | 05-182473     | GE-514                    | PTC214           | REN 177           | SK3100       | RT-218           | ECG519            | TM519               | WEP925           | 103-287         |  |
| D27      | 1S2473      | 05-182473     | GE-514                    | PTC214           | REN 177           | SK3100       | RT-218           | ECG519            | TM519               | WEP925           | 103-287         |  |
| D28      | 1S2473      | 05-182473     | GE-514                    | PTC214           | REN 177           | SK3100       | RT-218           | ECG519            | TM519               | WEP925           | 103-287         |  |
| D29      | 1S2473      | 05-182473     | GE-514                    | PTC214           | REN 177           | SK3100       | RT-218           | ECG519            | TM519               | WEP925           | 103-287         |  |
| D30      | 1S2473      | 05-182473     | GE-514                    | PTC214           | REN 177           | SK3100       | RT-218           | ECG519            | TM519               | WEP925           | 103-287         |  |
| D31      | 1S2473      | 05-182473     | GE-514                    | PTC214           | REN 177           | SK3100       | RT-218           | ECG519            | TM519               | WEP925           | 103-287         |  |
| D32      | 1S2473      | 05-182473     | GE-514                    | PTC214           | REN 177           | SK3100       | RT-218           | ECG519            | TM519               | WEP925           | 103-287         |  |
| D33      | 1S2473      | 05-182473     | GE-514                    | PTC214           | REN 177           | SK3100       | RT-218           | ECG519            | TM519               | WEP925           | 103-287         |  |
| D34      | WZ-081      | 05-950081     | GEZD-8.2                  | ZB8.2B           | REN 5072          | SK3136       | RT-257           | ECG5072A          | TM5072/**           | WEP1108          | 103-287         |  |
| D35      | 1S2473      | 05-182473     | GE-514                    | PTC214           | REN 177           | SK3100       | RT-218           | ECG519            | TM519               | WEP925           | 103-287         |  |
| D36      | 1S2473      | 05-182473     | GE-514                    | PTC214           | REN 177           | SK3100       | RT-218           | ECG519            | TM519               | WEP925           | 103-287         |  |
| D37      | 1S2473      | 05-182473     | GE-514                    | PTC214           | REN 177           | SK3100       | RT-218           | ECG519            | TM519               | WEP925           | 103-287         |  |
| D38      | 1S2473      | 05-182473     | GE-514                    | PTC214           | REN 177           | SK3100       | RT-218           | ECG519            | TM519               | WEP925           | 103-287         |  |
| D39      | 1S2473      | 05-182473     | GE-514                    | PTC214           | REN 177           | SK3100       | RT-218           | ECG519            | TM519               | WEP925           | 103-287         |  |
| D40      | 1S2687D     | 05-182687     | GE-514                    | PTC214           | REN 177           | SK3100       | RT-218           | ECG519            | TM519               | WEP925           | 103-287         |  |
| D41      | 1S2473      | 05-182473     | GE-514                    | PTC214           | REN 177           | SK3100       | RT-218           | ECG519            | TM519               | WEP925           | 103-287         |  |
| D42      | 1S2473      | 05-182473     | GE-514                    | PTC214           | REN 177           | SK3100       | RT-218           | ECG519            | TM519               | WEP925           | 103-287         |  |
| D43      | 1S2473      | 05-182473     | GE-514                    | PTC214           | REN 177           | SK3100       | RT-218           | ECG519            | TM519               | WEP925           | 103-287         |  |
| D44      | 1S2473      | 05-182473     | GE-514                    | PTC214           | REN 177           | SK3100       | RT-218           | ECG519            | TM519               | WEP925           | 103-287         |  |
| D45      | 1S2473      | 05-182473     | GE-514                    | PTC214           | REN 177           | SK3100       | RT-218           | ECG519            | TM519               | WEP925           | 103-287         |  |
| D46      | 1S2473      | 05-182473     | GE-514                    | PTC214           | REN 177           | SK3100       | RT-218           | ECG519            | TM519               | WEP925           | 103-287         |  |
| D47      | SR1K-2      | 05-750002     | GE-504A                   | PTC201           | REN 116           | SK3311       | RT-213           | ECG116            | TM116               | WEP156           | 212-76-02       |  |
| D48      | 1S2473      | 05-182473     | GE-514                    | PTC214           | REN 177           | SK3100       | RT-218           | ECG519            | TM519               | WEP925           | 103-287         |  |
| D49      | 1S2473      | 05-182473     | GE-514                    | PTC214           | REN 177           | SK3100       | RT-218           | ECG519            | TM519               | WEP925           | 103-287         |  |
| D50      | 1S2473      | 05-182473     | GE-514                    | PTC214           | REN 177           | SK3100       | RT-218           | ECG519            | TM519               | WEP925           | 103-287         |  |
| D51      | 1S2473      | 05-182473     | GE-514                    | PTC214           | REN 177           | SK3100       | RT-218           | ECG519            | TM519               | WEP925           | 103-287         |  |
| D52      | 1S2473      | 05-182473     | GE-514                    | PTC214           | REN 177           | SK3100       | RT-218           | ECG519            | TM519               | WEP925           | 103-287         |  |
| D53      | MV-14       | 05-470001     | PTC302                    | PTC302           | REN 177           | SK3100       | RT-218           | ECG519            | TM519               | WEP925           | 103-287         |  |
| D54      | MV-13VH     | 05-470013     | PTC302                    | PTC302           | REN 177           | SK3100       | RT-218           | ECG519            | TM519               | WEP925           | 103-287         |  |
| D55      | 1S2473      | 05-182473     | GE-514                    | PTC214           | REN 177           | SK3100       | RT-218           | ECG519            | TM519               | WEP925           | 103-287         |  |
| D56      | 1S2473      | 05-182473     | GE-514                    | PTC214           | REN 177           | SK3100       | RT-218           | ECG519            | TM519               | WEP925           | 103-287         |  |
| D58      | 1S2473      | 05-182473     | GE-514                    | PTC214           | REN 177           | SK3100       | RT-218           | ECG519            | TM519               | WEP925           | 103-287         |  |
| D59      | 1S2473      | 05-182473     | GE-514                    | PTC214           | REN 177           | SK3100       | RT-218           | ECG519            | TM519               | WEP925           | 103-287         |  |
| D60      | SR1K-2      | 05-750002     | GE-504A                   | PTC201           | REN 116           | SK3311       | RT-213           | ECG116            | TM116               | WEP156           | 212-76-02       |  |
| D61      | 1N60        | 05-170060     | 1N60                      | PTC206           | REN 109           | SK3088       | RT-263           | ECG109            | TM109/**            | WEP134           | 103-Z9001       |  |
| D62      | MC301       | 05-320301     | GE-300                    | PTC214           | REN 177           | SK3100       | RT-218           | ECG177            | TM177               | WEP1062          | 103-131         |  |
| FET1     | JF1033      | 01-121033     | GE-FET-2                  | PTC161           | REN 132           | SK3448       | RT-175           | ECG312            | TM312               | WEP920           | 121-756         |  |
| FET2     | 3SK45B      | 01-080045     | GE-FET-4                  | PTC182           | REN 222           | SK3065       | RT-181           | ECG222            | TM222               | WEP905           | 121-826         |  |
| FET3     | 3SK45B      | 01-080045     | GE-FET-4                  | PTC182           | REN 222           | SK3065       | RT-181           | ECG222            | TM222               | WEP905           | 121-826         |  |
| IC1      | UHC-007     | 02-280007     | GE-FET-4                  | PTC182           | REN 222           | SK3065       | RT-181           | ECG222            | TM222               | WEP905           | 121-826         |  |
| IC2      | MB8719      | 02-178719     |                           |                  |                   |              |                  |                   |                     |                  |                 |  |
| IC3      | M58476-121P | 02-165847     |                           |                  |                   |              |                  |                   |                     |                  |                 |  |
| IC4      | AN612       | 02-010612     |                           |                  |                   |              |                  |                   |                     |                  |                 |  |
| IC5      | HA1366WR    | 02-091366     |                           |                  |                   |              |                  |                   |                     |                  |                 |  |
| IC6      | MB3756      | 02-173756     |                           |                  |                   |              |                  |                   |                     |                  |                 |  |
| IC7      | S042P       | 02-470042     |                           |                  |                   |              |                  |                   |                     |                  |                 |  |
| TR1      | 2SC1675     | 01-031675     | GE-213                    | PTC132*          | REN 229*          | SK3122       | RT-308           | ECG229*           | TM229*              | WEP773           | 121-Z9021       |  |
| TR2      | 2SC1675     | 01-031675     | GE-213                    | PTC132*          | REN 229*          | SK3122       | RT-308           | ECG229*           | TM229*              | WEP773           | 121-Z9021       |  |
| TR3      | 2SC1730     | 01-031730     | GE-17*                    | PTC136*          | REN 107           | SK3293*      | RT-107A          | ECG316*           | TM316*              | WEP335           | 121-972*        |  |
| TR4      | 2SC945      | 01-030945     | GE-212                    | PTC121*          | REN 199           | SK3124       | RT-107A          | ECG199            | TM199/**            | WEP1945          | 121-972         |  |
| TR5      | 2SC945      | 01-030945     | GE-212                    | PTC121*          | REN 199           | SK3124       | RT-107A          | ECG199            | TM199/**            | WEP1945          | 121-972         |  |
| TR6      | 2SC1675     | 01-031675     | GE-213                    | PTC132*          | REN 229*          | SK3122       | RT-308           | ECG229*           | TM229*              | WEP773           | 121-Z9021       |  |
| TR7      | 2SA733      | 01-010733     | GE-48                     | PTC127           | REN 294           | SK3114       | RT-303           | ECG294            | TM294/**            | WEP911           | 121-952         |  |
| TR8      | 2SC945      | 01-030945     | GE-212                    | PTC121*          | REN 199           | SK3124       | RT-107A          | ECG199            | TM199/**            | WEP1945          | 121-972         |  |

MIDLAND MODEL 79-900



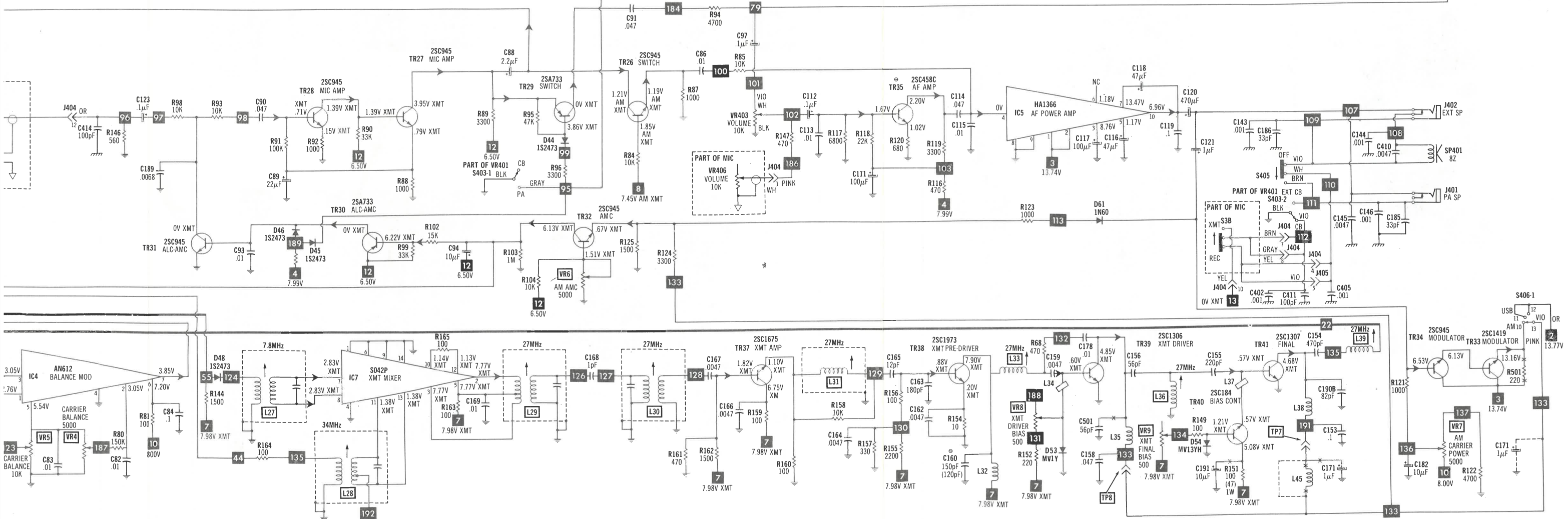
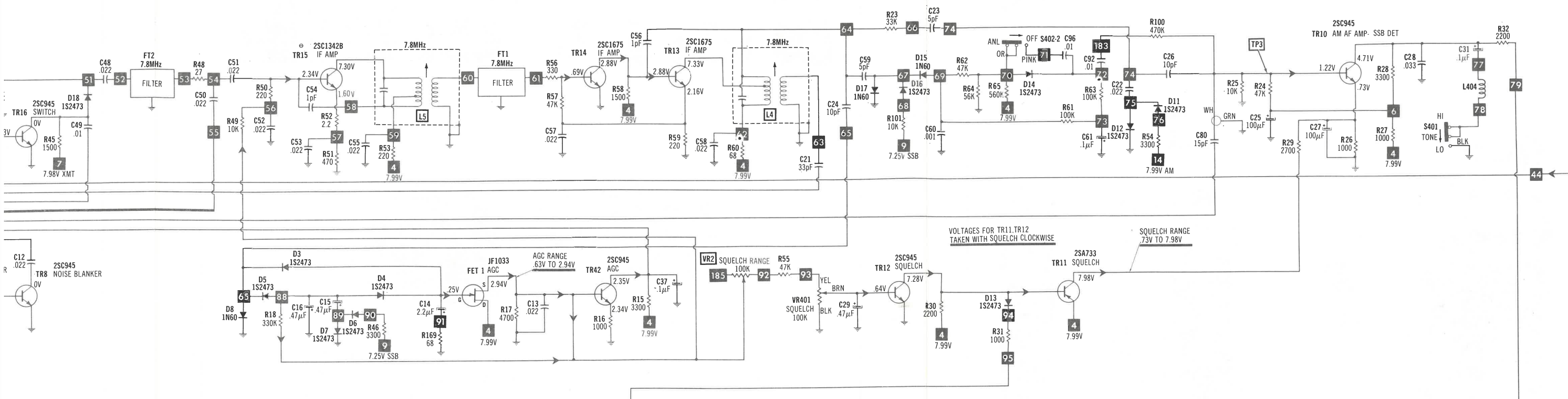
\* Circuitry not used in some versions.  
 --- Circuitry used in some versions.  
 ✖ Nominal value  
 ⚡ Ground  
 ⚡ Chassis  
 e See parts list  
 Measurements made in Channel 1, with switching in receive unless noted.  
 Item numbers in rectangles appear in the alignment/adjustment instructions.  
 Supply voltage maintained as shown at input.  
 Voltages measured with digital meter, no signal.  
 Controls adjusted for normal operation.  
 Terminal identification may not be found on unit.  
 Resistors are 1/2W or less, 5% unless noted.  
 Value in ( ) used in some versions.  
 Arrow head(s) at coils and transformers indicates accessibility of tuning slug(s).

A PHOTOFACT STANDARD NOTATION SCHEMATIC

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MAIN CB SCHEMATIC

MIDLAND MODEL 79-900

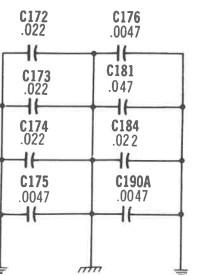
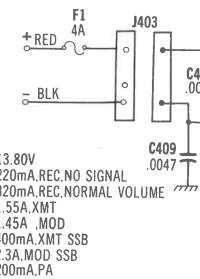
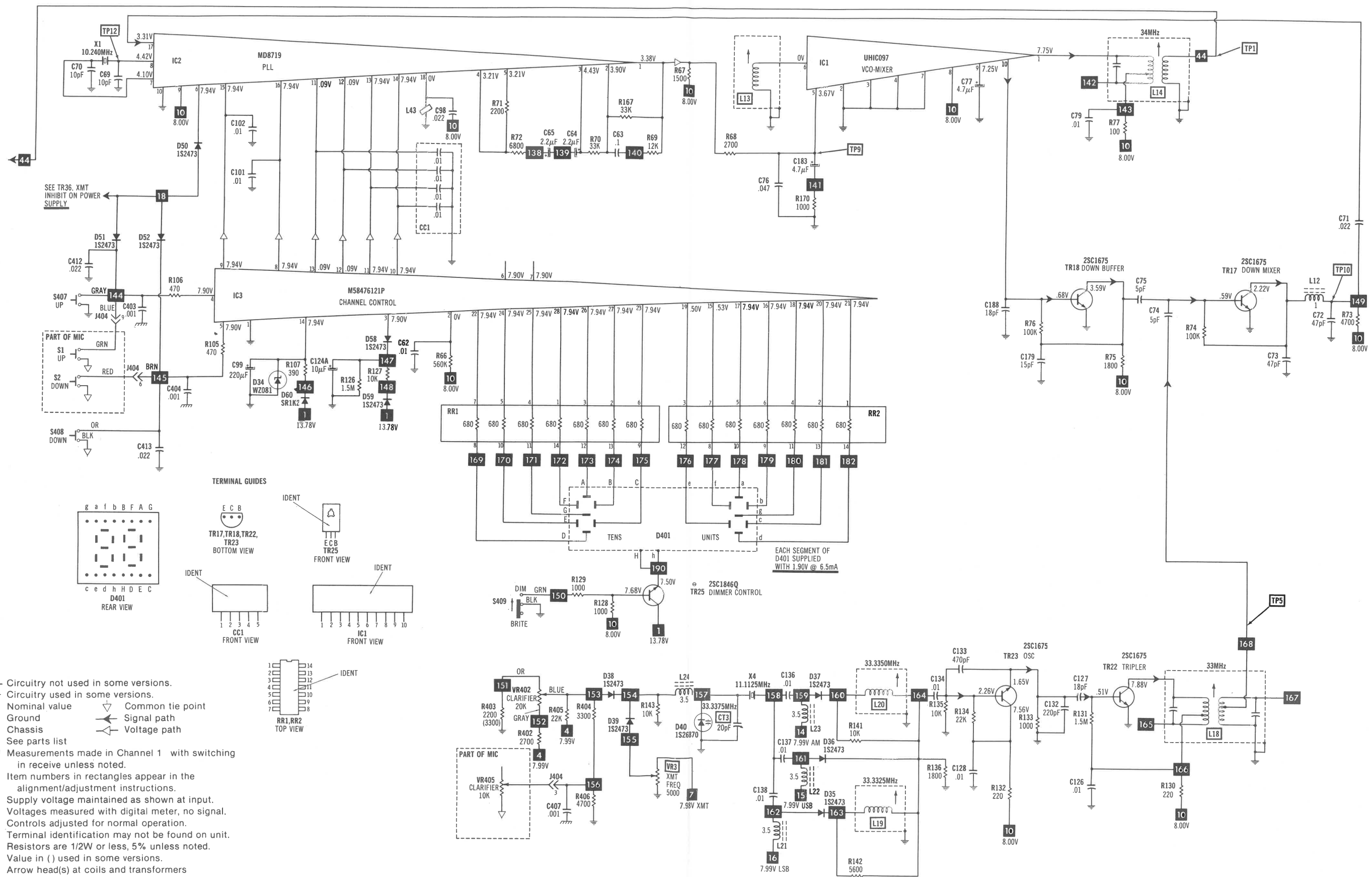
\* Circuitry not used in some versions.  
 - - - Circuitry used in some versions.  
 \* Nominal value  
 Ground  
 Chassis  
 See parts list  
 Measurements made in Channel 1 with switching in receive unless noted.  
 Item numbers in rectangles appear in the alignment/adjustment instructions.  
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 Voltages measured with digital meter, no signal.  
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 Arrow head(s) at coils and transformers indicates accessibility of tuning slug(s).

A PHOTOFACT STANDARD NOTATION SCHEMATIC

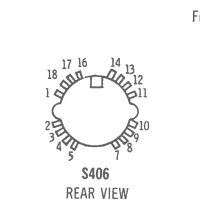
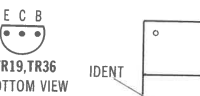
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## PLL/CHANNEL SELECTOR SCHEMATIC



TERMINAL GUIDES

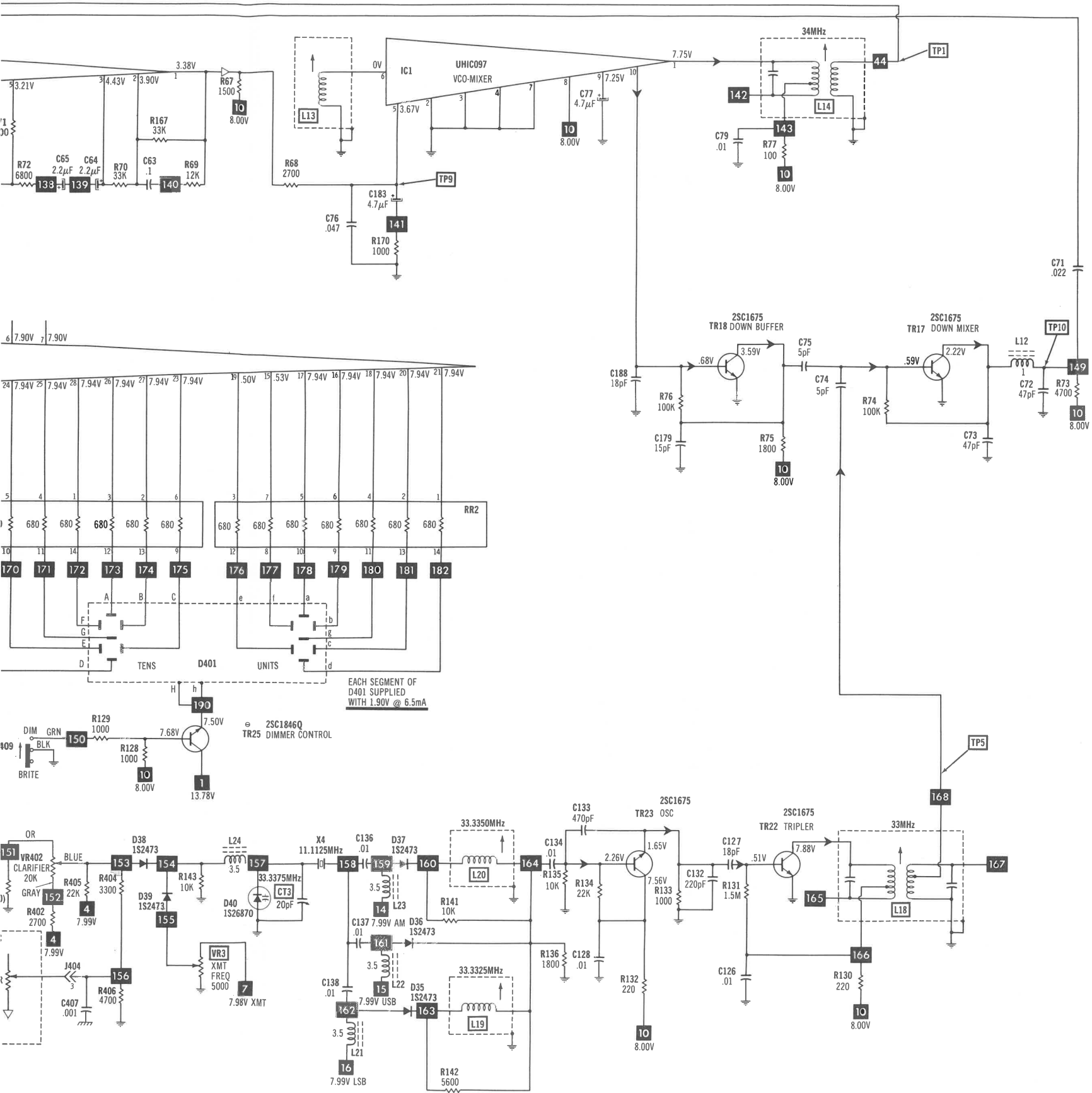


\* Circuitry not used in some versions.  
 - - - Circuitry used in some versions.  
 \* Nominal value  
 Ground  
 Chassis  
 See parts list  
 Measurements made in receive unless in receive unless  
 Item numbers in rectangles appear in the alignment/adjustment instructions.  
 Supply voltage maintained as shown at input.  
 Voltages measured with digital meter, no signal.  
 Controls adjusted for normal operation.  
 Terminal identification may not be found on unit.  
 Resistors are 1/2W or less, 5% unless noted.  
 Value in ( ) used in some versions.  
 Arrow head(s) at coils and transformers indicates accessibility of tuning slug(s).

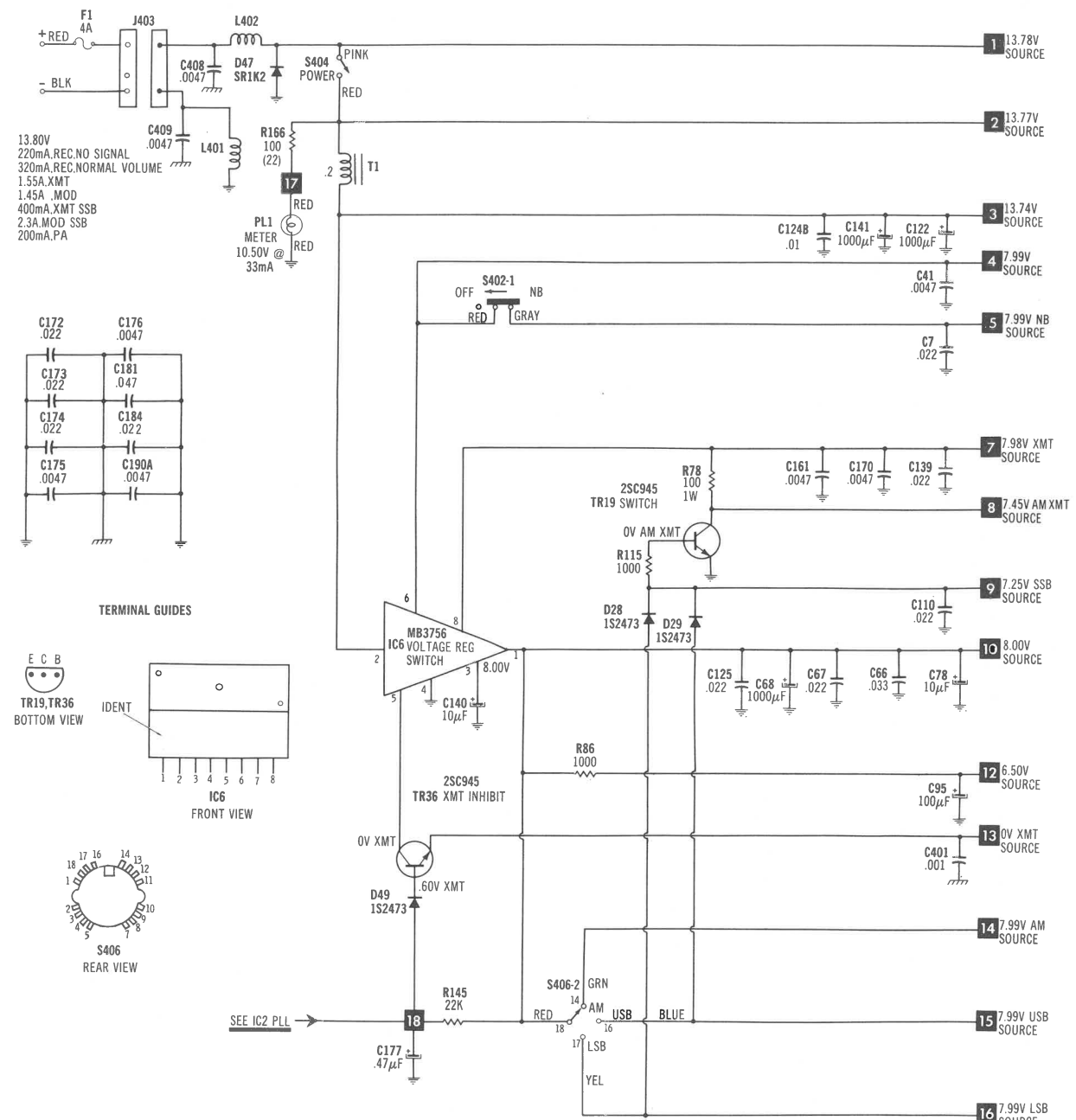
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## SCEHMATIC



- Circuitry not used in some versions.
- - - Circuitry used in some versions.
- ⊗ Nominal value
- ⊕ Ground
- ⊖ Chassis
- ⊙ See parts list
- Measurements made in Channel 1 with switching in receive unless noted.
- Item numbers in rectangles appear in the alignment/adjustment instructions.
- Supply voltage maintained as shown at input.
- Voltages measured with digital meter, no signal.
- Controls adjusted for normal operation.
- Terminal identification may not be found on unit.
- Resistors are 1/2W or less, 5% unless noted.
- Value in ( ) used in some versions.
- Arrow head(s) at coils and transformers indicates accessibility of tuning slug(s).

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## POWER SUPPLY SCHEMATIC MIDLAND MODEL 79-900

PARTS LIST AND DESCRIPTION (CONTINUED)

(When ordering parts, state Model, Part Number, and Description.)

SEMICONDUCTORS (Select replacement transistor for best results)

| ITEM No. | TYPE No. | MFR. PART No. | REPLACEMENT DATA          |                  |                   |              |                  |                   |                     |                  |                 |
|----------|----------|---------------|---------------------------|------------------|-------------------|--------------|------------------|-------------------|---------------------|------------------|-----------------|
|          |          |               | GENERAL ELECTRIC PART No. | MALLORY PART No. | RAYTHEON PART No. | RCA PART No. | SPRAGUE PART No. | SYLVANIA PART No. | THORDARSON PART No. | WORKMAN PART No. | ZENITH PART No. |
| TR9      | 2SC1675  | 01-031675     | GE-213                    | PTC132*          | REN 229*          | SK3122       | RT-308           | ECG229*           | TM229*              | WEP773           | 121-29021       |
| TR10     | 2SC945   | 01-030945     | GE-212                    | PTC121*          | REN 199           | SK3124       | RT-107A          | ECG199            | TM199/**            | WEP1945          | 121-972         |
| TR11     | 2SA733   | 01-010733     | GE-48                     | PTC127           | REN 294           | SK3114       | RT-303           | ECG294            | TM294/**            | WEP911           | 121-952         |
| TR12     | 2SC945   | 01-030945     | GE-212                    | PTC121*          | REN 199           | SK3124       | RT-107A          | ECG199            | TM199/**            | WEP1945          | 121-972         |
| TR13     | 2SC1675  | 01-031675     | GE-213                    | PTC132*          | REN 229*          | SK3122       | RT-308           | ECG229*           | TM229*              | WEP773           | 121-29021       |
| TR14     | 2SC1675  | 01-031675     | GE-213                    | PTC132*          | REN 229*          | SK3122       | RT-308           | ECG229*           | TM229*              | WEP773           | 121-29021       |
| TR15     | 2SC1342B | 01-031342     | GE-61*                    | PTC132           | REN 229*          | SK3124       | RT-108A*         | ECG229*           | TM229*              | WEP784           | 121-29021       |
|          | 2SC1342  | 01-031342     | GE-61*                    | PTC132           | REN 229*          | SK3124       | RT-108A*         | ECG229*           | TM229*              | WEP784           | 121-29021       |
| TR16     | 2SC945   | 01-030945     | GE-212                    | PTC121*          | REN 199           | SK3124       | RT-107A          | ECG199            | TM199/**            | WEP1945          | 121-972         |
| TR17     | 2SC1675  | 01-031675     | GE-213                    | PTC132*          | REN 229*          | SK3122       | RT-308           | ECG229*           | TM229*              | WEP773           | 121-29021       |
| TR18     | 2SC1675  | 01-031675     | GE-213                    | PTC132*          | REN 229*          | SK3122       | RT-308           | ECG229*           | TM229*              | WEP773           | 121-29021       |
| TR19     | 2SC945   | 01-030945     | GE-212                    | PTC121*          | REN 199           | SK3124       | RT-107A          | ECG199            | TM199/**            | WEP1945          | 121-972         |
| TR20     | 2SC1675  | 01-031675     | GE-213                    | PTC132*          | REN 229*          | SK3122       | RT-308           | ECG229*           | TM229*              | WEP773           | 121-29021       |
| TR21     | 2SC1675  | 01-031675     | GE-213                    | PTC132*          | REN 229*          | SK3122       | RT-308           | ECG229*           | TM229*              | WEP773           | 121-29021       |
| TR22     | 2SC1675  | 01-031675     | GE-213                    | PTC132*          | REN 229*          | SK3122       | RT-308           | ECG229*           | TM229*              | WEP773           | 121-29021       |
| TR23     | 2SC1675  | 01-031675     | GE-213                    | PTC132*          | REN 229*          | SK3122       | RT-308           | ECG229*           | TM229*              | WEP773           | 121-29021       |
| TR24     | 2SC1675  | 01-031675     | GE-213                    | PTC132*          | REN 229*          | SK3122       | RT-308           | ECG229*           | TM229*              | WEP773           | 121-29021       |
| TR25     | 2SC1846Q |               | GE-336                    | PTC904           | REN 295           | SK3253       |                  | ECG295            | TM295               | WEP913           | 121-880         |
|          | 2SC1846  | 01-031846     | GE-336                    | PTC904           | REN 295           | SK3253       |                  | ECG295            | TM295               | WEP913           | 121-880         |
| TR26     | 2SC945   | 01-030945     | GE-212                    | PTC121*          | REN 199           | SK3124       | RT-107A          | ECG199            | TM199/**            | WEP1945          | 121-972         |
| TR27     | 2SC945   | 01-030945     | GE-212                    | PTC121*          | REN 199           | SK3124       | RT-107A          | ECG199            | TM199/**            | WEP1945          | 121-972         |
| TR28     | 2SC945   | 01-030945     | GE-212                    | PTC121*          | REN 199           | SK3124       | RT-107A          | ECG199            | TM199/**            | WEP1945          | 121-972         |
| TR29     | 2SA733   | 01-010733     | GE-48                     | PTC127           | REN 294           | SK3114       | RT-303           | ECG294            | TM294/**            | WEP911           | 121-952         |
| TR30     | 2SA733   | 01-010733     | GE-48                     | PTC127           | REN 294           | SK3114       | RT-303           | ECG294            | TM294/**            | WEP911           | 121-952         |
| TR31     | 2SC945   | 01-030945     | GE-212                    | PTC121*          | REN 199           | SK3124       | RT-107A          | ECG199            | TM199/**            | WEP1945          | 121-972         |
| TR32     | 2SC945   | 01-030945     | GE-212                    | PTC121*          | REN 199           | SK3124       | RT-107A          | ECG199            | TM199/**            | WEP1945          | 121-972         |
| TR33     | 2SC1419  | 01-031419     | GE-66                     | PTC167           | REN 152           | SK3054       | RT-197           | ECG152            | TM152               | WEP745           | 121-987-02      |
| TR34     | 2SC945   | 01-030945     | GE-212                    | PTC121*          | REN 199           | SK3124       | RT-107A          | ECG199            | TM199/**            | WEP1945          | 121-972         |
| TR35     | 2SC458C  |               | GE-210                    | PTC121*          | REN 289           | SK3124       | RT-187           | ECG289            | TM289/**            | WEP458           | 121-29000A*     |
|          | 2SC458   | 01-030458     | GE-210                    | PTC121*          | REN 289           | SK3124       | RT-187           | ECG289            | TM289/**            | WEP458           | 121-29000A*     |
| TR36     | 2SC945   | 01-030945     | GE-212                    | PTC121*          | REN 199           | SK3124       | RT-107A          | ECG199            | TM199/**            | WEP1945          | 121-972         |
| TR37     | 2SC1675  | 01-031675     | GE-213                    | PTC132*          | REN 229*          | SK3122       | RT-308           | ECG229*           | TM229*              | WEP773           | 121-29021       |
| TR38     | 2SC1973  | 01-031973     | GE-285*                   | PTC143*          | REN 293           | SK3529*      | RT-146           | ECG293            | TM293               | WEP912           | 921-1008        |
| TR39     | 2SC1306  | 01-031306     | GE-215                    | PTC186           | REN 235           | SK3197       | RT-146           | ECG235            | TM235/**            | WEP785           | 121-29039       |
| TR40     | 2SC1846  | 01-031846     | GE-336                    | PTC904           | REN 295           | SK3253       |                  | ECG295            | TM295               | WEP913           | 121-880         |
| TR41     | 2SC1307  | 01-031307     | GE-216                    | PTC186           | REN 236           | SK3239       | RT-158           | ECG236            | TM236               | WEP840           | 121-29040       |

(11)±5% Tol. \* Lead configuration may vary from original.

/\*\* Also available as exact type replacement.

ELECTROLYTIC CAPACITORS

| ITEM No. | RATING   | REPLACEMENT DATA |                           |                  |                  |              |           |
|----------|----------|------------------|---------------------------|------------------|------------------|--------------|-----------|
|          |          | MFR. PART No.    | CORNELL-DUBILIER PART No. | MALLORY PART No. | SPRAGUE PART No. |              |           |
|          |          |                  |                           |                  | Q-LINE           | GENERAL LINE |           |
| C10      | .1 25V   | 03-007000        |                           | PC1-50           | VTR47A63         | QV1-3        | EV-1610   |
| C14      | 2.2 25V  | 00-132270        |                           | PC2-100          | VTT2R2A50        | QV1-21       | EV-1617.1 |
| C15      | .47 50V  | 00-132575        |                           | PC1-50           | VTR47A63         | QV1-3        | EV-1610   |
| C16      | .47 50V  | 00-132575        |                           | PC1-50           | VTR47A63         | QV1-3        | EV-1610   |
| C17      | 10 16V   | 00-132115        |                           | PC10-25          | VTT10B25         | QV1-41       | EV-1222   |
| C25      | 100 10V  | 00-132165        |                           | PC100-10         | VTT100E10        | QV1-93       | EV-1131   |
| C27      | 100 10V  | 00-132165        |                           | PC100-10         | VTT100E10        | QV1-93       | EV-1131   |
| C29      | .47 50V  | 00-132575        |                           | PC1-50           | VTR47A63         | QV1-3        | EV-1610   |
| C31      | .1 25V   | 03-007000        |                           | PC1-50           | VTR47A63         | QV1-3        | EV-1610   |
| C37      | .1 25V   | 03-007000        |                           | PC1-50           | VTR47A63         | QV1-3        | EV-1610   |
| C61      | .1 25V   | 03-007000        |                           | PC1-50           | VTR47A63         | QV1-3        | EV-1610   |
| C64      | 2.2 25V  | 03-003040        |                           |                  | TDC225M035FL     |              | SD35-2R29 |
| C65      | 2.2 25V  | 03-003040        |                           |                  | TDC225M035FL     |              | SD35-2R29 |
| C68      | 1000 10V | 00-132195        |                           | PC1000-16        | VTT1000L10       | QV1-179      | EV-1161   |
| C77      | 4.7 25V  | 00-132600        |                           | PC5-50           | VTT4R7B50        | QV1-31       | EV-1619.1 |
| C78      | 10 16V   | 00-132115        |                           | PC10-25          | VTT10B25         | QV1-41       | EV-1222   |
| C88      | 2.2 25V  | 00-132270        |                           | PC2-100          | VTT2R2A50        | QV1-21       | EV-1617.1 |
| C89      | 22 10V   | 00-132295        |                           | PC25-25          | VTT22B16         | QV1-55       | EV-1224   |
| C94      | 10 16V   | 00-132115        |                           | PC10-25          | VTT10B25         | QV1-41       | EV-1222   |
| C95      | 100 10V  | 00-132165        |                           | PC100-10         | VTT100E10        | QV1-93       | EV-1131   |
| C97      | .1 25V   | 03-007000        |                           | PC1-50           | VTR47A63         | QV1-3        | EV-1610   |
| C99      | 220 10V  | 00-132370        |                           | PC250-25         | VTT220H16        | QV1-117      | EV-1240   |
| C111     | 100 10V  | 00-132165        |                           | PC100-10         | VTT100E10        | QV1-93       | EV-1131   |
| C112     | .1 25V   | 03-007000        |                           | PC1-50           | VTR47A63         | QV1-3        | EV-1610   |
| C116     | 47 10V   | 00-132625        |                           | PC100-10         | VTT100E10        | QV1-93       | EV-1131   |
| C117     | 100 10V  | 00-132165        |                           | PC100-10         | VTT100E10        | QV1-93       | EV-1131   |
| C118     | 47 10V   | 00-132625        |                           | PC50-16          | VTT47D16         | QV1-73       | EV-1226   |
| C120     | 470 10V  | 00-132665        |                           | PC500-16         | VTT470K16        | QV1-151      | EV-1251   |
| C121     | 1 50V    | 00-132055        |                           | PC1-50           | VTT1A50          | QV1-11       | EV-1615   |
| C122     | 1000 16V | 00-132210        |                           | PC1000-16        | VTT1000L16       | QV1-183      | EV-1261   |
| C123     | .1 25V   | 03-007000        |                           | PC1-50           | VTR47A63         | QV1-3        | EV-1610   |
| C124A    | 10 16V   | 00-132115        |                           | PC10-25          | VTT10B25         | QV1-41       | EV-1222   |
| C140     | 10 16V   | 00-132115        |                           | PC10-25          | VTT10B25         | QV1-41       | EV-1222   |
| C141     | 1000 16V | 00-132210        |                           | PC1000-16        | VTT1000L16       | QV1-183      | EV-1261   |
| C150     | 1 50V    | 00-132055        |                           | PC1-50           | VTT1A50          | QV1-11       | EV-1615   |
| C171     | 1 50V    | 00-132055        |                           | PC1-50           | VTT1A50          | QV1-11       | EV-1615   |
| C177     | .47 50V  | 00-132575        |                           | PC1-50           | VTR47A63         | QV1-3        | EV-1610   |
| C182     | 10 16V   | 00-132115        |                           | PC10-25          | VTT10B25         | QV1-41       | EV-1222   |
| C183     | 4.7 10V  | 03-003045        |                           |                  | TDC475M010EL     | QDT1-48      | SD10-4R79 |
| C191     | 10 16V   | 00-132115        |                           | PC10-25          | VTT10B25         | QV1-41       | EV-1222   |

PARTS LIST AND DESCRIPTION (CONTINUED)

(When ordering parts, state Model, Part Number, and Description.)

CAPACITORS

| ITEM No. | RATING        | MFR. PART No. | REPLACEMENT DATA   |                           |                  |                  |              |    |
|----------|---------------|---------------|--------------------|---------------------------|------------------|------------------|--------------|----|
|          |               |               | CENTRALAB PART No. | CORNELL-DUBILIER PART No. | MALLORY PART No. | SPRAGUE PART No. |              |    |
|          |               |               |                    |                           |                  | Q-LINE           | GENERAL LINE |    |
| C1       | .022 50V      |               | DC-253             | MGPO25                    | TA125            |                  | TG-S25       |    |
| C2       | .022 50V      |               | DC-253             | MGPO25                    | TA125            |                  | TG-S25       |    |
| C3       | .022 50V      |               | DC-253             | MGPO25                    | TA125            |                  | TG-S25       |    |
| C4       | .022 50V      |               | DC-253             | MGPO25                    | TA125            |                  | TG-S25       |    |
| C5       | .022 50V      |               | DC-253             | MGPO25                    | TA125            |                  | TG-S25       |    |
| C6       | .001 50V 10%  |               |                    | DPMS6D1                   | EWFI A210        | QFT2-1           | 1FT-D10      |    |
| C7       | .022 50V      |               | DC-253             | MGPO25                    | TA125            |                  | TG-S25       |    |
| C8       | .022 50V      |               |                    | DPMS2S22                  | M192P2239R8      | QFT2-127         | 1FT-S22      |    |
| C9       | 33 NPO 50V 5% |               | DTZ-33             | NP033                     | CN0433           |                  | 10TCC-Q33    |    |
| C11      | 15 NPO 50V 5% |               | DTZ-15             | NP015                     | CN0415           |                  | 10TCC-Q15    |    |
| C12      | .022 50V      |               | DC-253             | MGPO25                    | TA125            |                  | TG-S25       |    |
| C13      | .022 50V      |               | DC-253             | MGPO25                    | TA125            |                  | TG-S25       |    |
| C18      | .022 50V      |               | DC-253             | MGPO25                    | TA125            |                  | TG-S25       |    |
| C19      | .022 50V      |               | DC-253             | MGPO25                    | TA125            |                  | TG-S25       |    |
| C20      | .022 50V      |               | DC-253             | MGPO25                    | TA125            |                  | TG-S25       |    |
| C21      | 33 NPO 50V 5% |               | DTZ-33             | NP033                     | CN0433           |                  | 10TCC-Q33    |    |
| C22      | .022 50V      |               | DC-253             | MGPO25                    | TA125            |                  | TG-S25       |    |
| C23      | 5 NPO 50V     |               | DTZ-6R8            | NP06P8                    | CN0568           |                  | 10TCC-V68    |    |
| C24      | 10 NPO 50V    |               | DTZ-10             | NP010                     | CN0410           |                  | 10TCC-Q10    |    |
| C26      | 10 NPO 50V    |               | DTZ-10             | NP010                     | CN0410           |                  | 10TCC-Q10    |    |
| C28      | .033 50V      |               |                    | DPMS6S33                  | M192P3339R8      | QFT2-149         | 1FT-S33      |    |
| C32      | 22 NPO 50V 5% |               | DTZ-22             | NP022                     | CN0422           |                  | 10TCC-Q22    |    |
| C33      | .0047 50V     |               | DD-472             | GP4700                    | GP247            |                  | 5GA-D47      |    |
| C34      | .0047 50V     |               | DD-472             | GP4700                    | GP247            |                  | 5GA-D47      |    |
| C35      | .0047 50V     |               | DD-472             | GP4700                    | GP247            |                  | 5GA-D47      |    |
| C36      | .0047 50V     |               | DD-472             | GP4700                    | GP247            |                  | 5GA-D47      |    |
| C38      | .0047 50V     |               | DD-472             | GP4700                    | GP247            |                  | 5GA-D47      |    |
| C39      | .001 50V      |               | DD-102             | GP210                     | GP210            |                  | 10TS-D10     |    |
| C40      | .0047 50V     |               | DD-472             | GP4700                    | GP247            |                  | 5GA-D47      |    |
| C41      | .0047 50V     |               | DD-472             | GP4700                    | GP247            |                  | 5GA-D47      |    |
| C42      | 2 NPO 50V     |               | DTZ-2R2            | NP02P2                    | CN0522           |                  | 10TCC-V22    |    |
| C43      | 1.5 NPO 50V   |               | DTZ-1R5            | NP01P5                    | CN0515           |                  | 10TCC-V15    |    |
| C44      | .01 50V       |               | UK50-103           |                           | MAG5011          |                  |              |    |
| C45      | 33 NPO 50V 5% |               | DTZ-33             | NP033                     | CN0433           |                  | 10TCC-Q33    |    |
| C46      | .022 50V      |               | DC-253             | MGPO25                    | TA125            |                  | TG-S25       |    |
| C47      | .022 50V      |               | DC-253             | MGPO25                    | TA125            |                  | TG-S25       |    |
| C48      | .022 50V      |               | DC-253             | MGPO25                    | TA125            |                  | TG-S25       |    |
| C49      | .01 50V       |               | UK50-103           |                           | MAG5011          |                  |              |    |
| C50      | .022 50V      |               | DC-253             | MGPO25                    | TA125            |                  | TG-S25       |    |
| C51      | .022 50V      |               | DC-253             | MGPO25                    | TA125            |                  | TG-S25       |    |
| C52      | .022 50V      |               | DC-253             | MGPO25                    | TA125            |                  | TG-S25       | </ |



(When ordering parts, state Model, Part Number, and Description.)

| ITEM No. | RATING        | MFRG. PART No. | REPLACEMENT DATA   |                           |                  |                  |              |
|----------|---------------|----------------|--------------------|---------------------------|------------------|------------------|--------------|
|          |               |                | CENTRALAB PART No. | CORNELL-DUBILIER PART No. | MALLORY PART No. | SPRAGUE PART No. |              |
|          |               |                |                    |                           |                  | Q-LINE           | GENERAL LINE |
| C1       | .022 50V      |                | DC-253             | MGP025                    | TA125            |                  | TG-S25       |
| C2       | .022 50V      |                | DC-253             | MGP025                    | TA125            |                  | TG-S25       |
| C3       | .022 50V      |                | DC-253             | MGP025                    | TA125            |                  | TG-S25       |
| C4       | .022 50V      |                | DC-253             | MGP025                    | TA125            |                  | TG-S25       |
| C5       | .022 50V      |                | DC-253             | MGP025                    | TA125            |                  | TG-S25       |
| C6       | .001 50V 10%  |                |                    | DPMS601                   | EWFA1210         | QFT2-1           | 1FT-D10      |
| C7       | .022 50V      |                |                    | MGP025                    | TA125            |                  | TG-S25       |
| C8       | .022 50V      |                | DC-253             | DPMS2S22                  | M192P2239R8      | QFT2-127         | 1FT-S22      |
| C9       | 33 NPO 50V 5% |                |                    | NP033                     | CN0433           |                  | 10TCC-Q33    |
| C11      | 15 NPO 50V 5% |                | DTZ-33             | NP015                     | CN0415           |                  | 10TCC-Q15    |
| C12      | .022 50V      |                | DTZ-15             | MGP025                    | TA125            |                  | TG-S25       |
| C12      | .022 50V      |                | DC-253             | MGP025                    | TA125            |                  | TG-S25       |
| C13      | .022 50V      |                | DC-253             | MGP025                    | TA125            |                  | TG-S25       |
| C18      | .022 50V      |                | DC-253             | MGP025                    | TA125            |                  | TG-S25       |
| C19      | .022 50V      |                | DC-253             | MGP025                    | TA125            |                  | TG-S25       |
| C20      | .022 50V      |                | DC-253             | MGP025                    | TA125            |                  | TG-S25       |
| C21      | 33 NPO 50V 5% |                | DTZ-33             | NP033                     | CN0433           |                  | 10TCC-Q33    |
| C22      | .022 50V      |                | DC-253             | MGP025                    | TA125            |                  | TG-S25       |
| C23      | 5 NPO 50V     |                | DTZ-6R8            | NP06P8                    | CN0568           |                  | 10TCC-V68    |
| C24      | 10 NPO 50V    |                | DTZ-10             | NP010                     | CN0410           |                  | 10TCC-Q10    |
| C26      | 10 NPO 50V    |                | DTZ-10             | NP010                     | CN0410           |                  | 10TCC-Q10    |
| C28      | .033 50V      |                |                    | DPMS6S33                  | M192P3339R8      | QFT2-149         | 1FT-S33      |
| C32      | 22 NPO 50V 5% |                | DTZ-22             | NP022                     | CN0422           |                  | 10TCC-Q22    |
| C33      | .0047 50V     |                | DD-472             | GP4700                    | GP247            |                  | 5GA-D47      |
| C34      | .0047 50V     |                | DD-472             | GP4700                    | GP247            |                  | 5GA-D47      |
| C35      | .0047 50V     |                | DD-472             | GP4700                    | GP247            |                  | 5GA-D47      |
| C36      | .0047 50V     |                | DD-472             | GP4700                    | GP247            |                  | 5GA-D47      |
| C38      | .0047 50V     |                | DD-472             | GP4700                    | GP247            |                  | 5GA-D47      |
| C39      | .001 50V      |                | DD-102             |                           | GP210            |                  | 10TS-D10     |
| C40      | .0047 50V     |                | DD-472             | GP4700                    | GP247            |                  | 5GA-D47      |
| C41      | .0047 50V     |                | DD-472             | GP4700                    | GP247            |                  | 5GA-D47      |
| C42      | 2 NPO 50V     |                | DTZ-2R2            | NP02P2                    | CN0522           |                  | 10TCC-V22    |
| C43      | 1.5 NPO 50V   |                | DTZ-1R5            | NP01P5                    | CN0515           |                  | 10TCC-V15    |
| C44      | .01 50V       |                | UK50-103           |                           | MAG5011          |                  |              |
| C45      | 33 NPO 50V 5% |                | DTZ-33             | NP033                     | CN0433           |                  | 10TCC-Q33    |
| C46      | .022 50V      |                | DC-253             | MGP025                    | TA125            |                  | TG-S25       |
| C47      | .022 50V      |                | DC-253             | MGP025                    | TA125            |                  | TG-S25       |
| C48      | .022 50V      |                | DC-253             | MGP025                    | TA125            |                  | TG-S25       |
| C49      | .01 50V       |                | UK50-103           |                           | MAG5011          |                  |              |
| C50      | .022 50V      |                | DC-253             | MGP025                    | TA125            |                  | TG-S25       |
| C51      | .022 50V      |                | DC-253             | MGP025                    | TA125            |                  | TG-S25       |
| C52      | .022 50V      |                | DC-253             | MGP025                    | TA125            |                  | TG-S25       |
| C53      | .022 50V      |                | DC-253             | MGP025                    | TA125            |                  | TG-S25       |
| C54      | 1 NPO 50V     |                |                    |                           | CN0510           |                  | 10TCC-V10    |
| C55      | .022 50V      |                | DC-253             | MGP025                    | TA125            |                  | TG-S25       |
| C56      | 1 NPO 50V     |                |                    |                           | CN0510           |                  | 10TCC-V10    |
| C57      | .022 50V      |                |                    | DPMS2S22                  | M192P2239R8      | QFT2-127         | 1FT-S22      |
| C58      | .022 50V      |                | DC-253             | MGP025                    | TA125            |                  | TG-S25       |
| C59      | 5 NPO 50V     |                | DTZ-6R8            | NP06P8                    | CN0568           | QFT2-1           | 10TCC-V68    |
| C60      | .001 50V      |                |                    | DPMS601                   | EWFA1210         |                  | 1FT-D10      |
| C62      | .01 50V       |                | UK50-103           |                           | MAG5011          |                  |              |
| C63      | .1 50V 10%    |                |                    | WMF05P1                   | EWFO5010         | QFT2-215         | 1FT-D10      |
| C66      | .033 50V      |                |                    | DPMS6S33                  | M192P3339R8      | QFT2-149         | 1FT-S33      |
| C67      | .022 50V      |                | DC-253             | MGP025                    | TA125            |                  | TG-S25       |
| C69      | 10 NPO 50V    |                | DTZ-10             | NP010                     | CN0410           |                  | 10TCC-Q10    |
| C70      | 18 NPO 50V    |                |                    |                           | CN0418           |                  | 10TCC-Q18    |
| C71      | .022 50V      |                |                    | DPMS2S22                  | M192P2239R8      | Q                |              |

(When ordering parts, state Model, Part Number, and Description.)

| ITEM No. | RATING           | MFR. PART No. | REPLACEMENT DATA     |                           |                  |                  |              |
|----------|------------------|---------------|----------------------|---------------------------|------------------|------------------|--------------|
|          |                  |               | CENTRAL LAB PART No. | CORNELL-DUBILIER PART No. | MALLORY PART No. | SPRAGUE PART No. |              |
|          |                  |               |                      |                           |                  | Q-LINE           | GENERAL LINE |
| C132     | 220 50V          |               | DD-221               |                           | GP322            |                  | 10TS-T22     |
| C133     | 470 50V          |               | DD-471               | GP470                     | GP347            |                  | 10TS-T47     |
| C134     | .01 50V          |               | UK50-103             |                           | MAG5011          |                  |              |
| C135     | .0047 50V        |               | DD-472               | GP4700                    | GP247            |                  | 5GA-D47      |
| C136     | .01 50V          |               | UK50-103             |                           | MAG5011          |                  |              |
| C137     | .01 50V          |               | UK50-103             |                           | MAG5011          |                  |              |
| C138     | .01 50V          |               | UK50-103             |                           | MAG5011          |                  |              |
| C139     | .022 50V         |               | DC-253               | MGP025                    | TA125            |                  | TG-S25       |
| C143     | .001 50V         |               | DD-102               |                           | GP210            |                  | 10TS-D10     |
| C144     | .001 50V         |               | DD-102               |                           | GP210            |                  | 10TS-D10     |
| C145     | .0047 50V        |               | DD-472               | GP4700                    | GP247            |                  | 5GA-D47      |
| C146     | .001 50V         |               | DD-102               |                           | GP210            |                  | 10TS-D10     |
| C147     | 68 50V           |               | DD-680               | GP68                      | GP468            |                  | 10TS-Q68     |
| C148     | 39 NPO 50V 5%    |               |                      |                           | CN0439           |                  | 10TCC-Q39    |
| C149     | 220 N220 50V 10% |               |                      |                           | *                |                  | 10TCR-T22    |
| C151     | 1 NPO 50V        |               |                      |                           | CN0510           |                  | 10TCC-V10    |
| C152     | 390 N750 50V 10% |               |                      |                           | *                |                  | 10TCU-T39    |
| C153     | .1 50V           |               |                      |                           |                  |                  | 1FT-P10      |
| C154     | 470 N750 50V 10% |               |                      | WMF05P1                   | EWFO5010         | QFT2-215         | 10TCU-T47    |
| C155     | 220 N220 50V 10% |               |                      |                           | *                |                  | 10TCR-T22    |
| C156     | 56 NPO 50V 5%    |               |                      |                           | CN0456           |                  | 10TCC-Q56    |
| C158     | .047 50V 10%     |               |                      | DPMS2547                  | EWFI1A147        | QFT2-171         | 1FT-S47      |
| C159     | .0047 50V        |               | DD-472               | GP4700                    | GP247            |                  | 5GA-D47      |
| C160     | 150 50V          |               | DD-151               |                           | GP315            |                  | 10TS-T15     |
|          | 120 50V          |               | DD-151               |                           | GP315            |                  | 10TS-T15     |
| C161     | .0047 50V        |               | DD-472               | GP4700                    | GP247            |                  | 5GA-D47      |
| C162     | .0047 50V        |               | DD-472               | GP4700                    | GP247            |                  | 5GA-D47      |
| C163     | 180 N220 50V 10% |               |                      |                           | *                |                  | 10TCR-T18    |
| C164     | .0047 50V        |               | DD-472               | GP4700                    | GP247            |                  | 5GA-D47      |
| C165     | 12 N220 50V 10%  |               |                      |                           | *                |                  | 10TCR-Q12    |
| C166     | .0047 50V        |               | DD-472               | GP4700                    | GP247            |                  | 5GA-D47      |
| C167     | .0047 50V        |               | DD-472               | GP4700                    | GP247            |                  | 5GA-D47      |
| C168     | 1 NPO 50V        |               |                      |                           | CN0510           |                  | 10TCC-V10    |
| C169     | .01 50V          |               | UK50-103             |                           | MAG5011          |                  |              |
| C170     | .0047 50V        |               | DD-472               | GP4700                    | GP247            |                  | 5GA-D47      |
| C172     | .022 50V         |               | DC-253               | MGP025                    | TA125            |                  | TG-S25       |
| C173     | .022 50V         |               | DC-253               | MGP025                    | TA125            |                  | TG-S25       |
| C174     | .022 50V         |               | DC-253               | MGP025                    | TA125            |                  | TG-S25       |
| C175     | .0047 50V        |               | DD-472               | GP4700                    | GP247            |                  | 5GA-D47      |
| C176     | .0047 50V        |               | DD-472               | GP4700                    | GP247            |                  | 5GA-D47      |
| C178     | .01 50V          |               | UK50-103             |                           | MAG5011          |                  |              |
| C179     | 15 NPO 50V 5%    |               | DTZ-15               | NPO15                     | CN0415           |                  | 10TCC-Q15    |
| C181     | .047 50V 10%     |               |                      | DPMS2547                  | EWFI1A147        | QFT2-171         | 1FT-S47      |
| C184     | .022 50V         |               | DC-253               | MGP025                    | TA125            |                  | TG-S25       |
| C185     | 33 NPO 50V 5%    |               | DTZ-33               | NPO33                     | CN0433           |                  | 10TCC-Q33    |
| C186     | 33 NPO 50V 5%    |               | DTZ-33               | NPO33                     | CN0433           |                  | 10TCC-Q33    |
| C187     | 39 NPO 50V 5%    |               |                      |                           | CN0439           |                  | 10TCC-Q39    |
| C188     | 18 NPO 50V 5%    |               |                      |                           | CN0418           |                  | 10TCC-Q18    |
| C189     | .0068 50V        |               |                      | WMF1D68                   | EWFI1A268        | QFT2-73          | 1FT-D68      |
| C190A    | .0047 50V        |               | DD-472               | GP4700                    | GP247</          |                  |              |

\* Not normally in distributor's stock. Available thru distributor on order to manufacturer.

| ITEM No. | FUNCTION             | RESIST-ANCE | REPLACEMENT DATA |                    |                  |              |
|----------|----------------------|-------------|------------------|--------------------|------------------|--------------|
|          |                      |             | MFGR. PART No.   | CENTRALAB PART No. | MALLORY PART No. | TRW PART No. |
| VR1      | SIG Meter            | 50K         | 77-164010        |                    |                  | U260R503B    |
| VR2      | Squelch Range        | 100K        | 79-164012        |                    |                  | U260R104B    |
| VR3      | XMT Frequency        | 5000        | 79-164013        |                    |                  | U260R502B    |
| VR4      | Carrier Balance      | 5000        | 79-164013        |                    |                  | U260R502B    |
| VR5      | Carrier Balance      | 10K         | 79-164015        |                    |                  | U260R103B    |
| VR6      | AM AMC               | 5000        | 79-164013        |                    |                  | U260R502B    |
| VR7      | AM Carrier Power     | 5000        | 79-164013        |                    |                  | U260R502B    |
| VR8      | XMT Driver Bias      | 500         | 79-164014        |                    |                  | U260R501B    |
| VR9      | XMT Final Bias       | 5000        | 79-164013        |                    |                  | U260R502B    |
| VR10     | TX Power Meter       | 50K         | 77-164010        |                    |                  | U260R503B    |
| VR401    | Squelch/Power Switch | 100K        | 79-166003        |                    |                  |              |
| VR402    | Clarify              | 20K         | 79-160003 (18)   |                    |                  |              |
| VR404    | RF Gain              | 50K         |                  |                    |                  |              |
| VR403    | Volume/Switch        | 10K         | 79-160004        |                    |                  |              |

(18) Includes VR402 and VR404.

## PARTS LIST AND DESCRIPTION (CONTINUED)

(When ordering parts, state Model, Part Number, and Description.)

### RESISTORS (Power and Special)

| ITEM No. | RATING         | REPLACEMENT DATA |                  | ITEM No. | RATING         | REPLACEMENT DATA |                  |
|----------|----------------|------------------|------------------|----------|----------------|------------------|------------------|
|          |                | MFGR. PART No.   | WORKMAN PART No. |          |                | MFGR. PART No.   | WORKMAN PART No. |
| RR1      | Resistor Array |                  | 79-140001 (1)    | RR2      | Resistor Array |                  | 79-140001 (1)    |

(1) Consists of seven 680 ohm resistors.

### COILS (RF-IF)

| ITEM No. | FUNCTION                 | REPLACEMENT DATA |                      |                 | REMARKS |
|----------|--------------------------|------------------|----------------------|-----------------|---------|
|          |                          | PART No.         | OTHER IDENTIFICATION | MILLER PART No. |         |
| L1       | Noise Blanker            | 79-176011        | LA038                | CBS512-7TC      |         |
| L2       | Noise Blanker (23.5MHz)  | 79-176012        | LA179                |                 |         |
| L3       | S Meter Det (7.8MHz)     | 79-176013        | LA215                |                 |         |
| L4       | IF (7.8MHz)              | 79-176011        | LA038                | CBS512-7TC      |         |
| L5       | IF (7.8MHz)              | 79-176014        | LA214                |                 |         |
| L6       | IF (7.8MHz)              | 79-176011        |                      |                 |         |
| L7       | IF (7.8MHz)              | 79-176015        | LA213                |                 |         |
| L8       | IF (7.8MHz)              | 79-176016        | LA212                |                 |         |
| L9       | RF Amp (27MHz)           | 79-176017        |                      |                 |         |
| L10      | RF Amp (27MHz)           | 79-176018        |                      |                 |         |
| L11      | Rec Antenna (27MHz)      | 79-176030        | LA209                |                 |         |
| L12      | Down Mixer (100uH)       | 13-178252        | L101                 | 9250-104        |         |
| L13      | VCO/Mixer                | 79-176019        |                      |                 |         |
| L14      | VCO/Mixer (34MHz)        | 79-176020        | LA195                |                 |         |
| L15      | Carrier Osc (470uH)      | 13-178254        | 471                  | 9250-474        |         |
| L16      | Carrier Shift (470uH)    | 13-178254        | 471                  | 9250-474        |         |
| L17      | Carrier Shift (7.8MHz)   | 79-170001        | LA223                |                 |         |
| L18      | Tripler (33MHz)          | 79-176021        | LA190                |                 |         |
| L19      | Osc (33.325MHz)          | 79-176022        | LA217                |                 |         |
| L20      | Osc (33.325MHz)          | 79-176023        | LA218                |                 |         |
| L21      | RF Choke (470uH)         | 13-178254        | 471                  | 9250-474        |         |
| L22      | RF Choke (470uH)         | 13-178254        | 471                  | 9250-474        |         |
| L23      | RF Choke (470uH)         | 13-178254        | 471                  | 9250-474        |         |
| L24      | Oscillator (470uH)       | 13-178254        | 471                  | 9250-474        |         |
| L25      | ALC (100uH)              | 13-178252        | 101                  | 9250-104        |         |
| L27      | XMT Mixer (7.8MHz)       | 79-176024        |                      |                 |         |
| L28      | XMT Mixer (34MHz)        | 79-176025        | LA160                |                 |         |
| L29      | XMT Mixer (27MHz)        | 79-176026        | LA220                |                 |         |
| L30      | XMT Mixer (27MHz)        | 79-176027        | LA221                |                 |         |
| L31      | XMT Amp (27MHz)          | 79-176028        | LA222                |                 |         |
| L32      | RF Choke (2.2uH)         | 79-178020        | 2R2                  | 70F226A1        |         |
| L33      | XMT Predriver (27MHz)    | 13-178242        |                      | CB305           |         |
| L35      | RF Choke                 | 79-178021        |                      |                 |         |
| L36      | XMT Driver (27MHz)       | 77-176042        |                      | CB304           |         |
| L38      | RF Choke                 | 79-178021        |                      |                 |         |
| L39      | Final (27MHz)            | 13-178242        |                      | CB305           |         |
| L40      | Pi Filter (27MHz)        | 79-176006        |                      |                 |         |
| L41      | Antenna Matching (27MHz) | 79-176006        |                      |                 |         |
| L42      | TVI Trap (54MHz)         | 77-176042        |                      | CB304           |         |
| L45      | RF Choke                 |                  |                      |                 |         |
| L401     | RF Choke                 | 79-176029        |                      |                 |         |
| L402     | RF Choke                 | 79-176029        |                      |                 |         |
| L403     | RF Choke                 | 79-176029        |                      |                 |         |
| L404     | RF Choke (470uH)         | 13-178254        | 471                  |                 |         |

MIDLAND MODEL 79-900

### FILTER CHOKE

| ITEM No. | RATINGS            |         |                              | REPLACEMENT DATA        |                     |                | NOTES               |
|----------|--------------------|---------|------------------------------|-------------------------|---------------------|----------------|---------------------|
|          | CURRENT (Measured) | DC RES. | INDUCTANCE (0 CURRENT 1000~) | MFGR. PART No.          | THORDARSON PART No. | TRIAD PART No. |                     |
| T1       | 2.3A               | .19     | 2.6mH                        | 79-178022<br>TF-128 (1) |                     |                | (1) Number on unit. |

### SPEAKER

| ITEM No. | TYPE             | REPLACEMENT DATA |               | NOTES |
|----------|------------------|------------------|---------------|-------|
|          |                  | MFGR. PART No.   | QUAM PART No. |       |
| SP401    | 3 1/2" PM 8 Ohms | 79-060002        | 3A05Z8        |       |

## PARTS LIST AND DESCRIPTION (CONTINUED)

(When ordering parts, state Model, Part Number, and Description.)

### FUSE DEVICES

| ITEM No. | DESCRIPTION     | REPLACEMENT DATA |        |               |        |                     |        |                  |
|----------|-----------------|------------------|--------|---------------|--------|---------------------|--------|------------------|
|          |                 | PART No.         |        | BUSS PART No. |        | LITTELFUSE PART No. |        | WORKMAN PART No. |
|          |                 | DEVICE           | HOLDER | DEVICE        | HOLDER | DEVICE              | HOLDER | DEVICE           |
| F1       | 4A Quick Acting | 79-204001        |        | AGC4          | HRK    | 311004              | 150145 |                  |

### MICROPHONE

MICROPHONE

| ITEM No. | REPLACEMENT DATA |             |                 |          | CONNECTION DATA |        |           |           |         |          |          |
|----------|------------------|-------------|-----------------|----------|-----------------|--------|-----------|-----------|---------|----------|----------|
|          | MFGR. PART No.   | GC PART No. | GC NOISE CANCEL | GC POWER | GC CONNECTOR    | GC Red | GC Shield | GC Yellow | GC Blue | GC White | GC Black |
| MIC      | 79-038003        |             |                 |          |                 |        |           |           |         |          |          |

Mic contains up/down channel switches, remote volume and remote fine tuning. Mic connector is 12 pin female.

### MISCELLANEOUS

| ITEM No. | PART NAME    | PART No.  | NOTES                                                   |
|----------|--------------|-----------|---------------------------------------------------------|
| D401     | LED          | 79-202001 | Tens & Units (Each segment supplied with 1.90V @ 6.5mA) |
| FT1      | Filter       | 79-179004 | (FL-046) 7.8MHz                                         |
| FT2      | Filter       | 79-179003 | (FL-001) 7.8MHz                                         |
| J401     | Jack         | 77-159026 | PA Speaker                                              |
| J402     | Jack         | 77-159026 | External Speaker                                        |
| J403     | Jack         | 13-159246 | DC Power                                                |
| J404     | Jack         | 77-038005 | Microphone                                              |
| J405     | Jack         | 13-159213 | Antenna                                                 |
| L34      | Ferrite Bead | 77-176041 | LD087                                                   |
| L37      | Ferrite Bead | 77-176041 | LD087                                                   |
| L43      | Ferrite Bead | 79-176010 | LD077                                                   |
| M401     | Meter        | 79-200002 | Signal - TX Power                                       |
| S1       | Switch       |           | Up                                                      |
| S2       | Switch       |           | Down                                                    |
| S3       | Switch       |           | XMT/Rec                                                 |
| S401     | Switch       | 79-183002 | Tone Hi/Lo                                              |
| S402     | Switch       | 79-183002 | NB/Off                                                  |
| S403     | Switch       | 79-183002 | PA/CB                                                   |
| S404     | Switch       |           | Power (Part of Volume Control)                          |
| S405     | Switch       | 79-183002 | External CB/Off                                         |
| S406     | Switch       | 79-180005 | AM/USB/LSB                                              |
| S407     | Switch       | 79-180006 | UP (Channel Select)                                     |
| S408     | Switch       | 79-180006 | Down (Channel Select)                                   |
| S409     | Switch       | 79-183002 | Dim/Brite                                               |
| X1       | Crystal      | 13-129104 | 10.24MHz                                                |
| X2       | Crystal      | 13-129008 | 7.8025MHz                                               |
| X3       | Crystal      | 79-128010 | 7.7975MHz                                               |
| X4       | Crystal      | 79-128011 | 11.1125MHz                                              |
|          | Connector    | 79-070001 | Ribbon 15 Conductors                                    |
|          | Cord         | 13-159264 | Power w/Plug                                            |
|          | P.C. Board   | 79-070002 | LED PC-344AA                                            |
|          | P.C. Board   | 79-075002 | Microphone w/Components (PC-342AA)                      |
|          | P.C. Board   | 79-075003 | Push Switch w/Components (PC-343AA)                     |

### CABINETS & CABINET PARTS (When ordering specify model, chassis & color)

| ITEM            | PART No.  | ITEM                        | PART No.  |
|-----------------|-----------|-----------------------------|-----------|
| Case, Bottom    | 79-013004 | Knob, External, CB/NB       | 79-115005 |
| Case, Front     | 79-010008 | Tone, Brite/Dim             |           |
| Case, Top       | 79-011003 | Knob, Volume, Squelch, Mode | 79-110002 |
| Knob, Clarifier | 79-110003 | Knob, RF                    | 13-110215 |