

# 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.



CHANNEL MASTER MODEL CB6834

MODEL CB6834

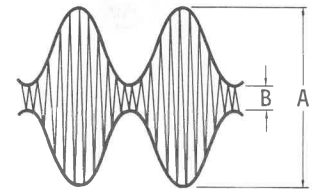
**HOWARD W. SAMS & CO., INC.** Indianapolis, Indiana 46206

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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:  
 L101, L102, T802, L901, L903 ..... 9440  
 T301 thru T304 ..... 5000, 5009, 8276, 8728, 8728A  
 T801, T803 thru T807 ..... 5000, 5009, 8276, 8728, 8728A  
 L905 ..... 9300, 9302, 0304  
 CT801 ..... 5000, 8276



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

FIGURE 1

## SYNTHESIZER ALIGNMENT

| TEST EQUIPMENT                                        | TRANSCEIVER | ADJUST                 | REMARKS                                                                                                                             |
|-------------------------------------------------------|-------------|------------------------|-------------------------------------------------------------------------------------------------------------------------------------|
| Input of oscilloscope to TP7 (T801 Secondary).        | Ch. 19      | T801                   | Adjust for maximum RF (370mV p-p typical).                                                                                          |
| Input of frequency counter to TP7 (T801 Secondary).   | Ch. 19      |                        | Check for 10.240MHz.                                                                                                                |
| Input of DC meter to TP2 (Junction of R815 and R816). | Ch. 1       | T802                   | Adjust for 1.50 volts. Check for approx. 3.70 volts on channel 40.                                                                  |
| Input of frequency counter to TP3 (IC802 Pin 16).     | Ch. 1       |                        | Check for 1.680MHz. Check all channels. (See Truth Chart for correct frequencies.)                                                  |
| Input of oscilloscope to TP4 (T803 Secondary).        | Ch. 1       | T803                   | Adjust for maximum RF (120mV p-p typical).                                                                                          |
| Input of frequency counter to TP4 (T803 Secondary).   | Ch. 1       | CT801                  | Adjust for 36.750MHz. Check all channels. (See Truth Chart for correct frequencies.)                                                |
| Input of oscilloscope to TP5 (T807 Secondary).        | Ch. 19, XMT | T804, T805, T806, T807 | Adjust for maximum RF (240mV p-p typical).                                                                                          |
| Input of frequency counter to TP5 (T807 Secondary).   | Ch. 1, XMT  |                        | Check for 26.965MHz. If necessary readjust CT801 for correct frequency. Check all channels. (See Truth Chart for correct channels.) |

## 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:  
 Delta Tune 0, Squelch MINIMUM, ANL Off

| TEST EQUIPMENT                                                                              | TRANSCEIVER | ADJUST                 | REMARKS                                                        |
|---------------------------------------------------------------------------------------------|-------------|------------------------|----------------------------------------------------------------|
| Output of signal generator thru .01uF to TP6 (Q301 Base). 455kHz, 1000Hz @ 30% modulation.  | Ch. 19      | T304, T303             | Adjust for maximum output.                                     |
| Output of signal generator thru .01uF to antenna input. 27.185MHz, 1000Hz @ 30% modulation. | Ch. 19      | T302, T301, L102, L101 | Adjust for maximum output. Readjust T303 and T304 for maximum. |

## 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:  
Delta Tune 0, Squelch MINIMUM, ANL Off

| TEST EQUIPMENT                                                                                                 | TRANSCEIVER               | ADJUST | REMARKS                                                      |
|----------------------------------------------------------------------------------------------------------------|---------------------------|--------|--------------------------------------------------------------|
| No signal input.<br>Input of DC meter to TP1.                                                                  | Ch. 19                    | VR1    | AGC<br>Adjust for 1.50 volts.                                |
| Output of signal generator thru .01uF to antenna input.<br>27.185MHz, 1000Hz @ 30% modulation<br>Output 200uV. | Ch. 19<br>Squelch Maximum | VR3    | 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 100uV. | Ch. 19                    | VR4    | RX SIGNAL METER<br>Adjust for 9 on RX signal scale of meter. |

## 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      | L901,L903 | Adjust for maximum RF output.               |
| Input of RF wattmeter to antenna input.                        | Ch. 19      | L905      | Adjust for 4.0 watts RF output maximum.     |
| Input of spectrum analyzer or harmonic meter to antenna input. | Ch. 19      | F901      | Adjust for MINIMUM at 54MHz (2nd harmonic). |

## TRANSMITTER ADJUSTMENTS

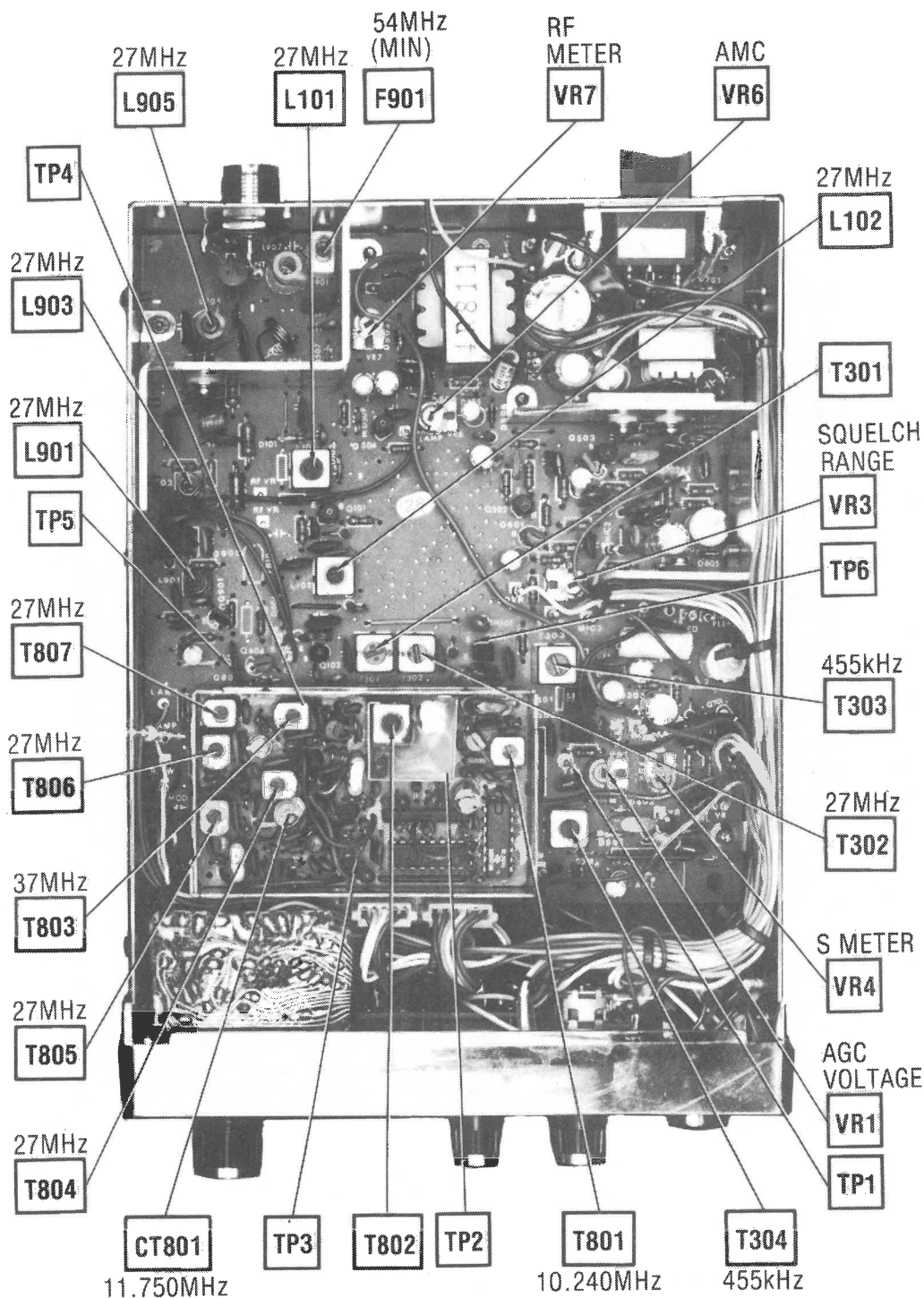
Connect a 50-ohm, 25-watt dummy load to antenna connector.  
NOTE: Be sure to check transmit frequency and power on all active channels after adjustment of transmitter.  
See page 4 for channel frequencies.

| TEST EQUIPMENT                                              | TRANSCEIVER | ADJUST | REMARKS                                                              |
|-------------------------------------------------------------|-------------|--------|----------------------------------------------------------------------|
| Input of oscilloscope or modulation meter to antenna input. | Ch. 19      | VR6    | AMC<br>Adjust for 95% 98% modulation maximum.<br>(See Figure 1.)     |
| Input of RF wattmeter to antenna input.                     | Ch. 19      | VR7    | TX POWER METER<br>Adjust so TX Power Meter agrees with RF wattmeter. |

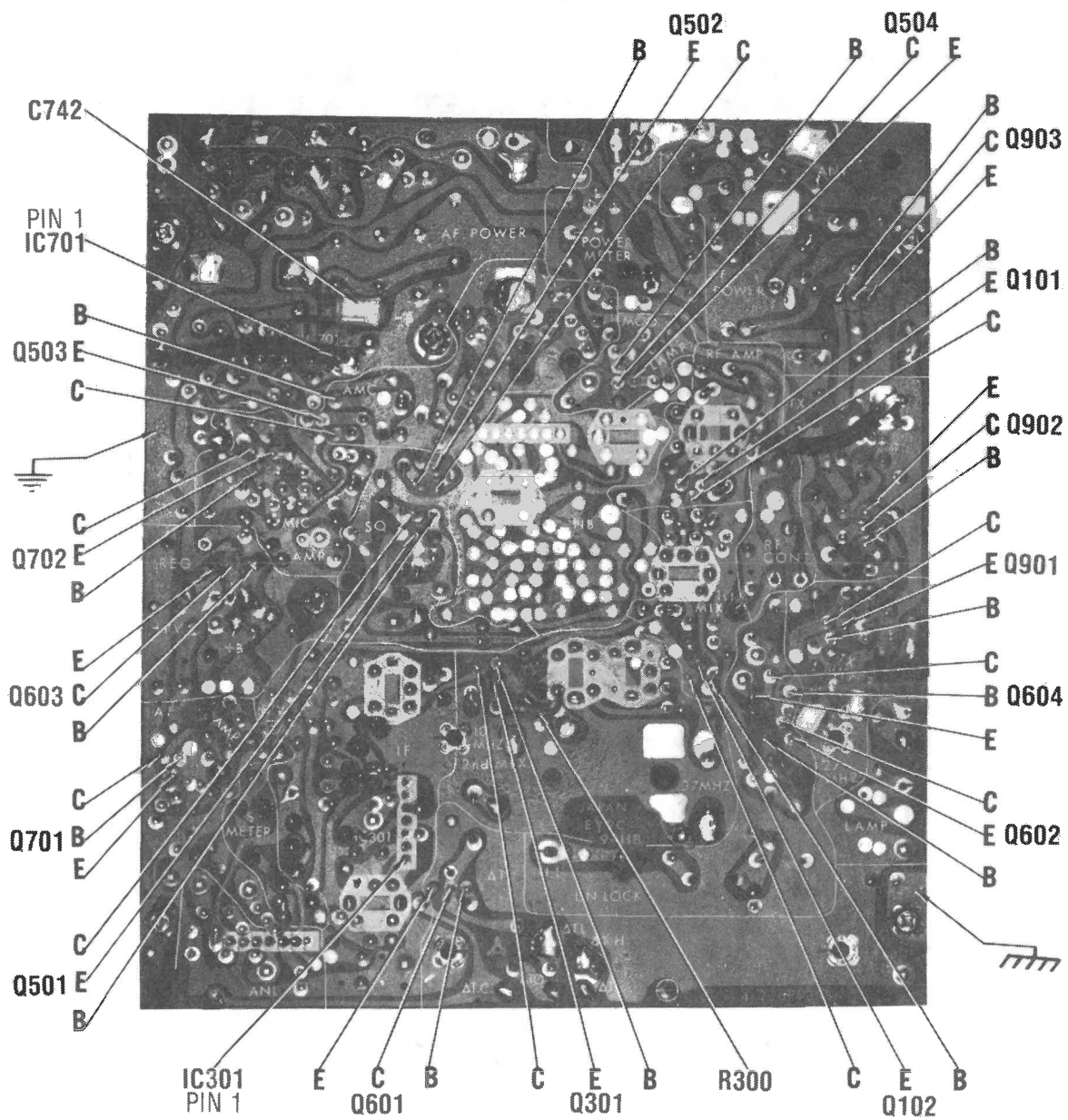
CHANNEL MASTER MODEL CB6834

# TRUTH CHART

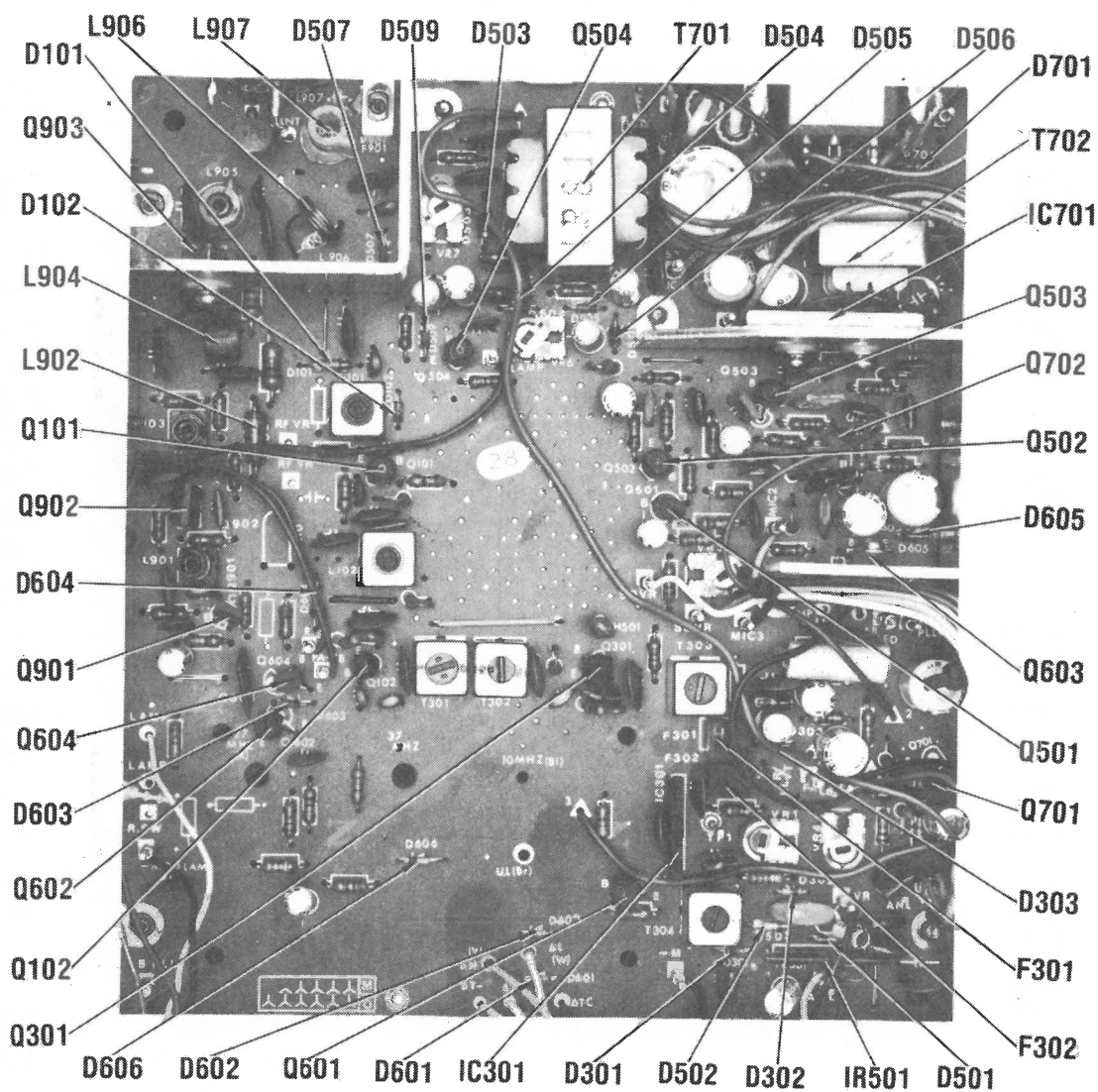
| C<br>H<br>A<br>N<br>N<br>E<br>L | 1 = 7.00 Volts                      0 = 0 Volts |   |   |   |   |   |   |  | DIVIDER<br>INPUT<br>IN MHz AT<br>TP3 | REC<br>VCO OUTPUT<br>IN MHz AT<br>TP4 | XMIT<br>SYNTHESIZER<br>OUTPUT<br>IN MHz AT<br>TP5 |
|---------------------------------|-------------------------------------------------|---|---|---|---|---|---|--|--------------------------------------|---------------------------------------|---------------------------------------------------|
|                                 | CHANNEL INPUT CODES<br>IC802                    |   |   |   |   |   |   |  |                                      |                                       |                                                   |
|                                 | PINS                                            |   |   |   |   |   |   |  |                                      |                                       |                                                   |
|                                 | 1                                               | 7 | 6 | 5 | 4 | 3 | 2 |  |                                      |                                       |                                                   |
| 1                               | 1                                               | 1 | 1 | 1 | 1 | 0 | 1 |  | 1.680                                | 36.750                                | 26.965                                            |
| 2                               | 1                                               | 1 | 1 | 1 | 1 | 0 | 0 |  | 1.690                                | 36.760                                | 26.975                                            |
| 3                               | 1                                               | 1 | 1 | 1 | 0 | 1 | 1 |  | 1.700                                | 36.770                                | 26.985                                            |
| 4                               | 1                                               | 1 | 1 | 1 | 0 | 0 | 1 |  | 1.720                                | 36.790                                | 27.005                                            |
| 5                               | 1                                               | 1 | 1 | 1 | 0 | 0 | 0 |  | 1.730                                | 36.800                                | 27.015                                            |
| 6                               | 1                                               | 1 | 1 | 0 | 1 | 1 | 1 |  | 1.740                                | 36.810                                | 27.025                                            |
| 7                               | 1                                               | 1 | 1 | 0 | 1 | 1 | 0 |  | 1.750                                | 36.820                                | 27.035                                            |
| 8                               | 1                                               | 1 | 1 | 0 | 1 | 0 | 0 |  | 1.770                                | 36.840                                | 27.055                                            |
| 9                               | 1                                               | 1 | 1 | 0 | 0 | 1 | 1 |  | 1.780                                | 36.850                                | 27.065                                            |
| 10                              | 1                                               | 1 | 1 | 0 | 0 | 1 | 0 |  | 1.790                                | 36.860                                | 27.075                                            |
| 11                              | 1                                               | 1 | 1 | 0 | 0 | 0 | 1 |  | 1.800                                | 36.870                                | 27.085                                            |
| 12                              | 1                                               | 1 | 0 | 1 | 1 | 1 | 1 |  | 1.820                                | 36.890                                | 27.105                                            |
| 13                              | 1                                               | 1 | 0 | 1 | 1 | 1 | 0 |  | 1.830                                | 36.900                                | 27.115                                            |
| 14                              | 1                                               | 1 | 0 | 1 | 1 | 0 | 1 |  | 1.840                                | 36.910                                | 27.125                                            |
| 15                              | 1                                               | 1 | 0 | 1 | 1 | 0 | 0 |  | 1.850                                | 36.920                                | 27.135                                            |
| 16                              | 1                                               | 1 | 0 | 1 | 0 | 1 | 0 |  | 1.870                                | 36.940                                | 27.155                                            |
| 17                              | 1                                               | 1 | 0 | 1 | 0 | 0 | 1 |  | 1.880                                | 36.950                                | 27.165                                            |
| 18                              | 1                                               | 1 | 0 | 1 | 0 | 0 | 0 |  | 1.890                                | 36.960                                | 27.175                                            |
| 19                              | 1                                               | 1 | 0 | 0 | 1 | 1 | 1 |  | 1.900                                | 36.970                                | 27.185                                            |
| 20                              | 1                                               | 1 | 0 | 0 | 1 | 0 | 1 |  | 1.920                                | 36.990                                | 27.205                                            |
| 21                              | 1                                               | 1 | 0 | 0 | 1 | 0 | 0 |  | 1.930                                | 37.000                                | 27.215                                            |
| 22                              | 1                                               | 1 | 0 | 0 | 0 | 1 | 1 |  | 1.940                                | 37.010                                | 27.225                                            |
| 23                              | 1                                               | 1 | 0 | 0 | 0 | 0 | 0 |  | 1.970                                | 37.040                                | 27.255                                            |
| 24                              | 1                                               | 1 | 0 | 0 | 0 | 1 | 0 |  | 1.950                                | 37.020                                | 27.235                                            |
| 25                              | 1                                               | 1 | 0 | 0 | 0 | 0 | 1 |  | 1.960                                | 37.030                                | 27.245                                            |
| 26                              | 1                                               | 0 | 1 | 1 | 1 | 1 | 1 |  | 1.980                                | 37.050                                | 27.265                                            |
| 27                              | 1                                               | 0 | 1 | 1 | 1 | 1 | 0 |  | 1.990                                | 37.060                                | 27.275                                            |
| 28                              | 1                                               | 0 | 1 | 1 | 1 | 0 | 1 |  | 2.000                                | 37.070                                | 27.285                                            |
| 29                              | 1                                               | 0 | 1 | 1 | 1 | 0 | 0 |  | 2.010                                | 37.080                                | 27.295                                            |
| 30                              | 1                                               | 0 | 1 | 1 | 0 | 1 | 1 |  | 2.020                                | 37.090                                | 27.305                                            |
| 31                              | 1                                               | 0 | 1 | 1 | 0 | 1 | 0 |  | 2.030                                | 37.100                                | 27.315                                            |
| 32                              | 1                                               | 0 | 1 | 1 | 0 | 0 | 1 |  | 2.040                                | 37.110                                | 27.325                                            |
| 33                              | 1                                               | 0 | 1 | 1 | 0 | 0 | 0 |  | 2.050                                | 37.120                                | 27.335                                            |
| 34                              | 1                                               | 0 | 1 | 0 | 1 | 1 | 1 |  | 2.060                                | 37.130                                | 27.345                                            |
| 35                              | 1                                               | 0 | 1 | 0 | 1 | 1 | 0 |  | 2.070                                | 37.140                                | 27.355                                            |
| 36                              | 1                                               | 0 | 1 | 0 | 1 | 0 | 1 |  | 2.080                                | 37.150                                | 27.365                                            |
| 37                              | 1                                               | 0 | 1 | 0 | 1 | 0 | 0 |  | 2.090                                | 37.160                                | 27.375                                            |
| 38                              | 1                                               | 0 | 1 | 0 | 0 | 1 | 1 |  | 2.100                                | 37.170                                | 27.385                                            |
| 39                              | 1                                               | 0 | 1 | 0 | 0 | 1 | 0 |  | 2.110                                | 37.180                                | 27.395                                            |
| 40                              | 1                                               | 0 | 1 | 0 | 0 | 0 | 1 |  | 2.120                                | 37.190                                | 27.405                                            |



CHASSIS - BOTTOM

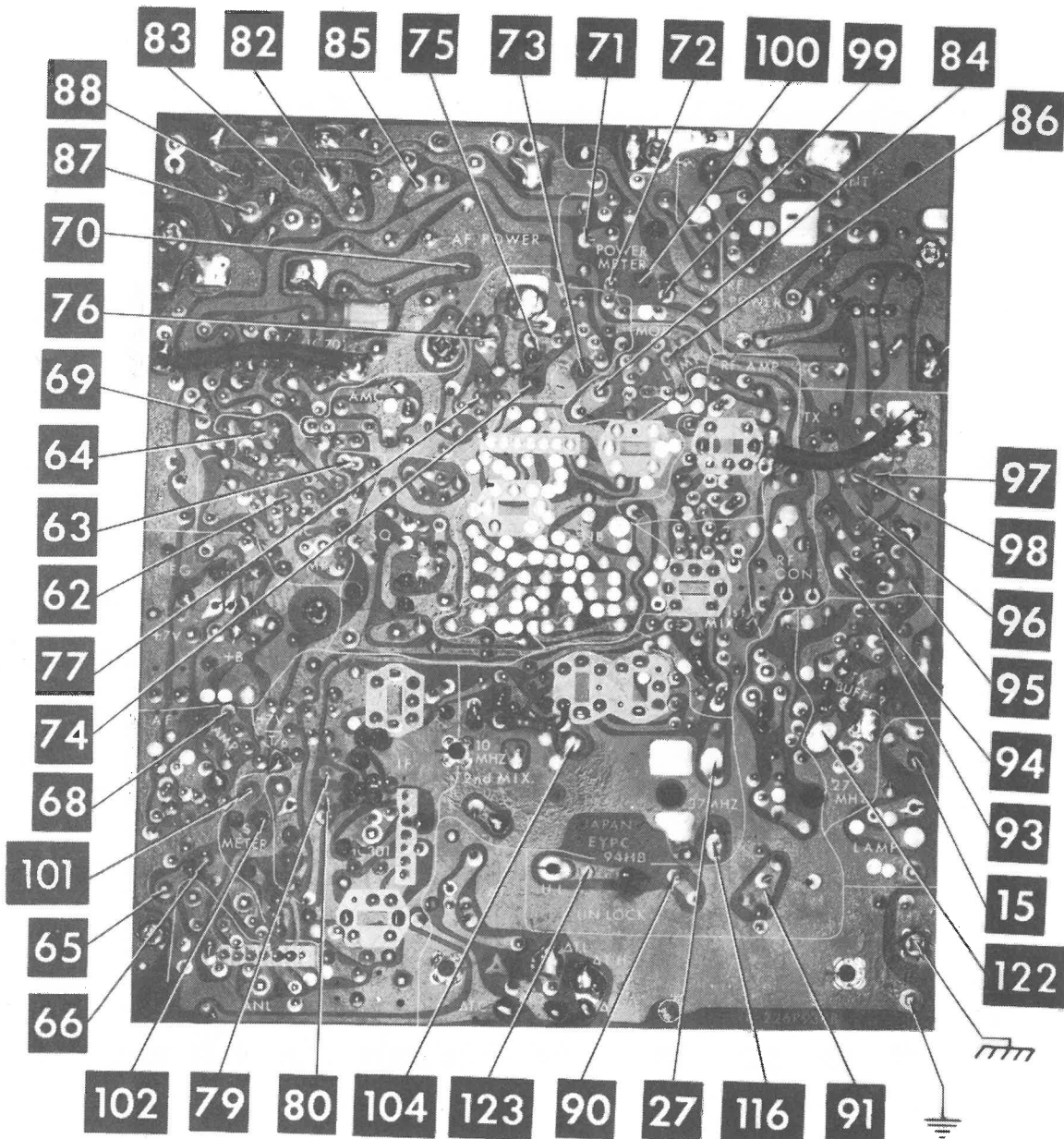


MAIN BOARD



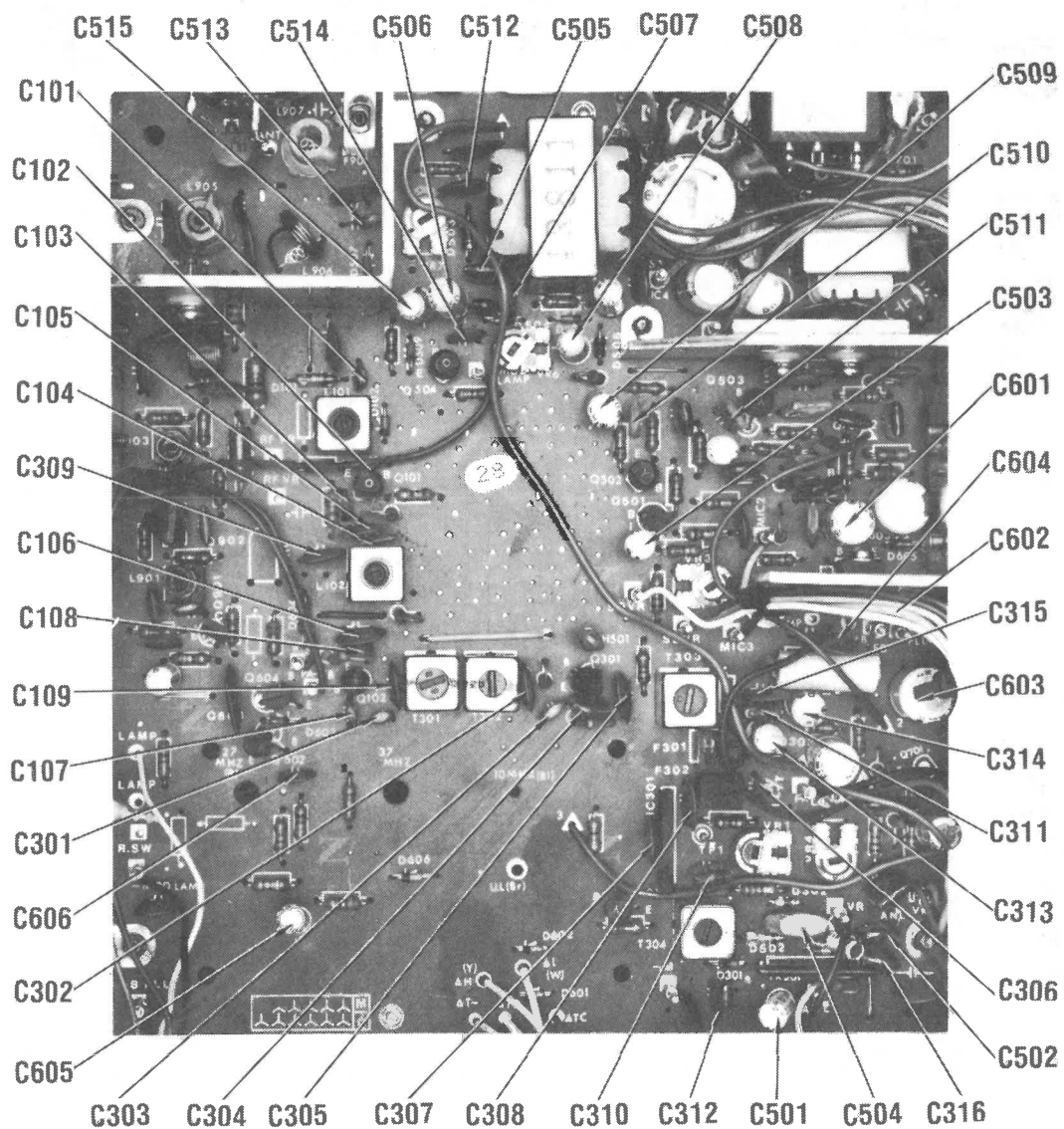
MAIN BOARD



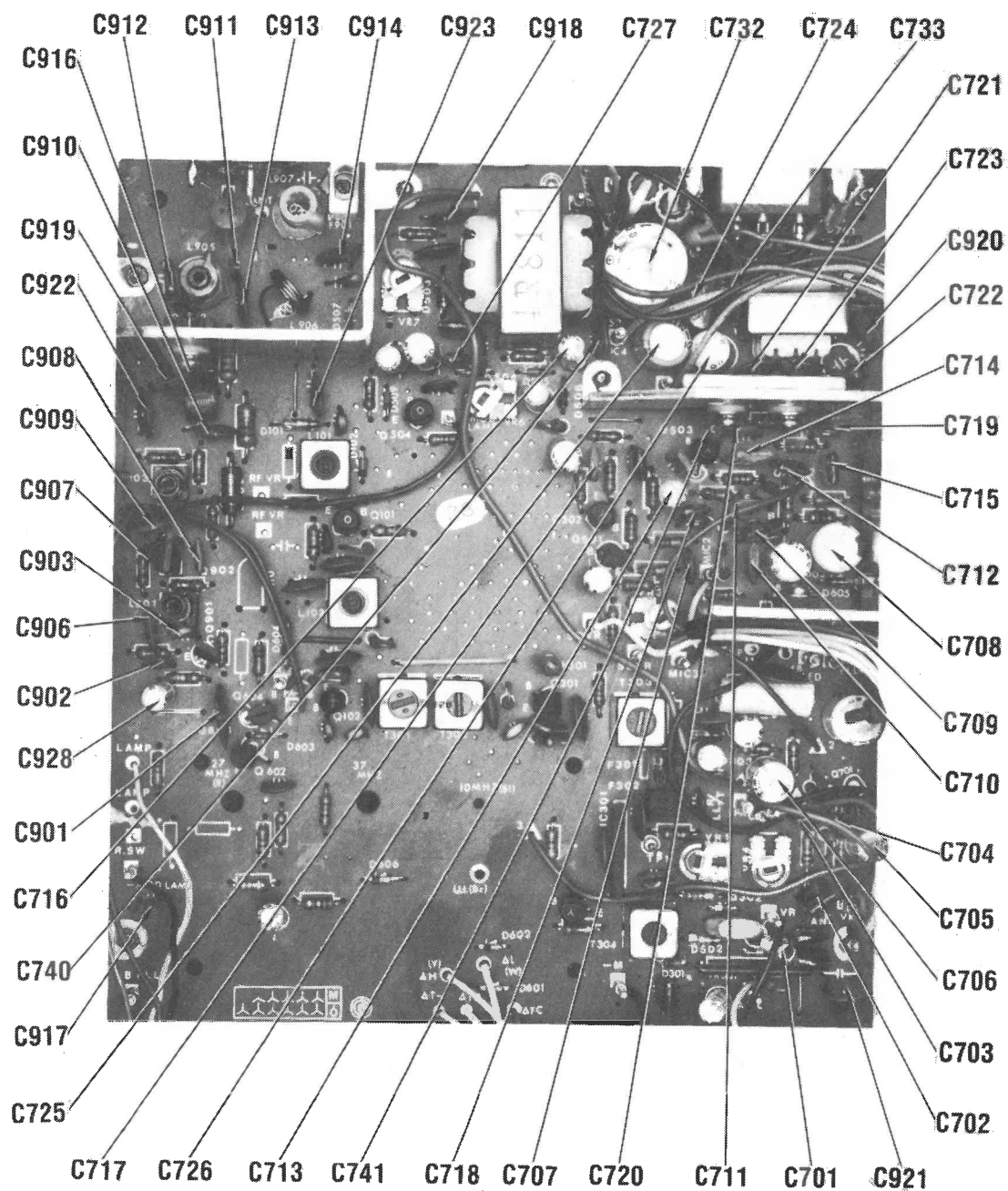


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MAIN BOARD



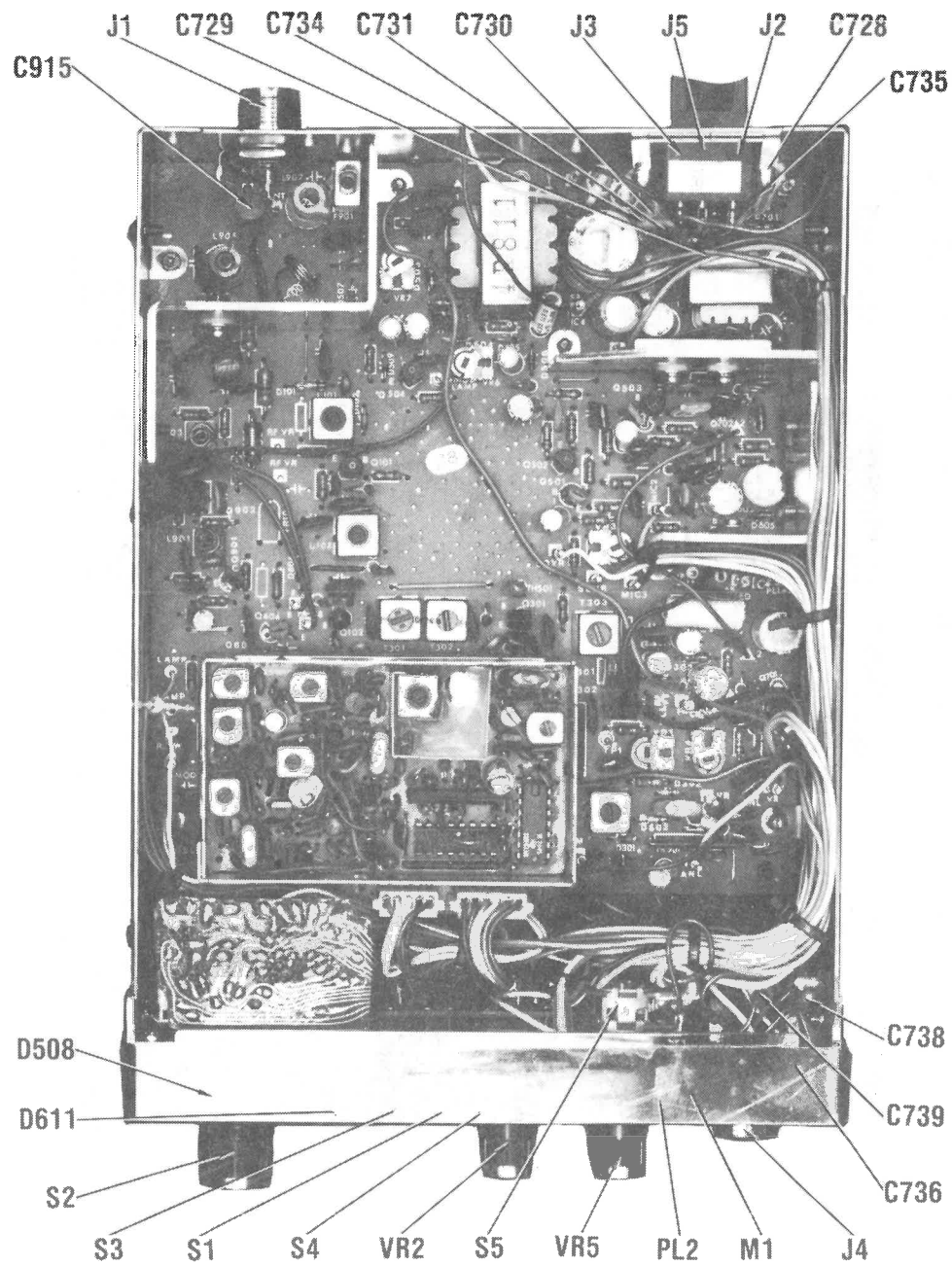
MAIN BOARD



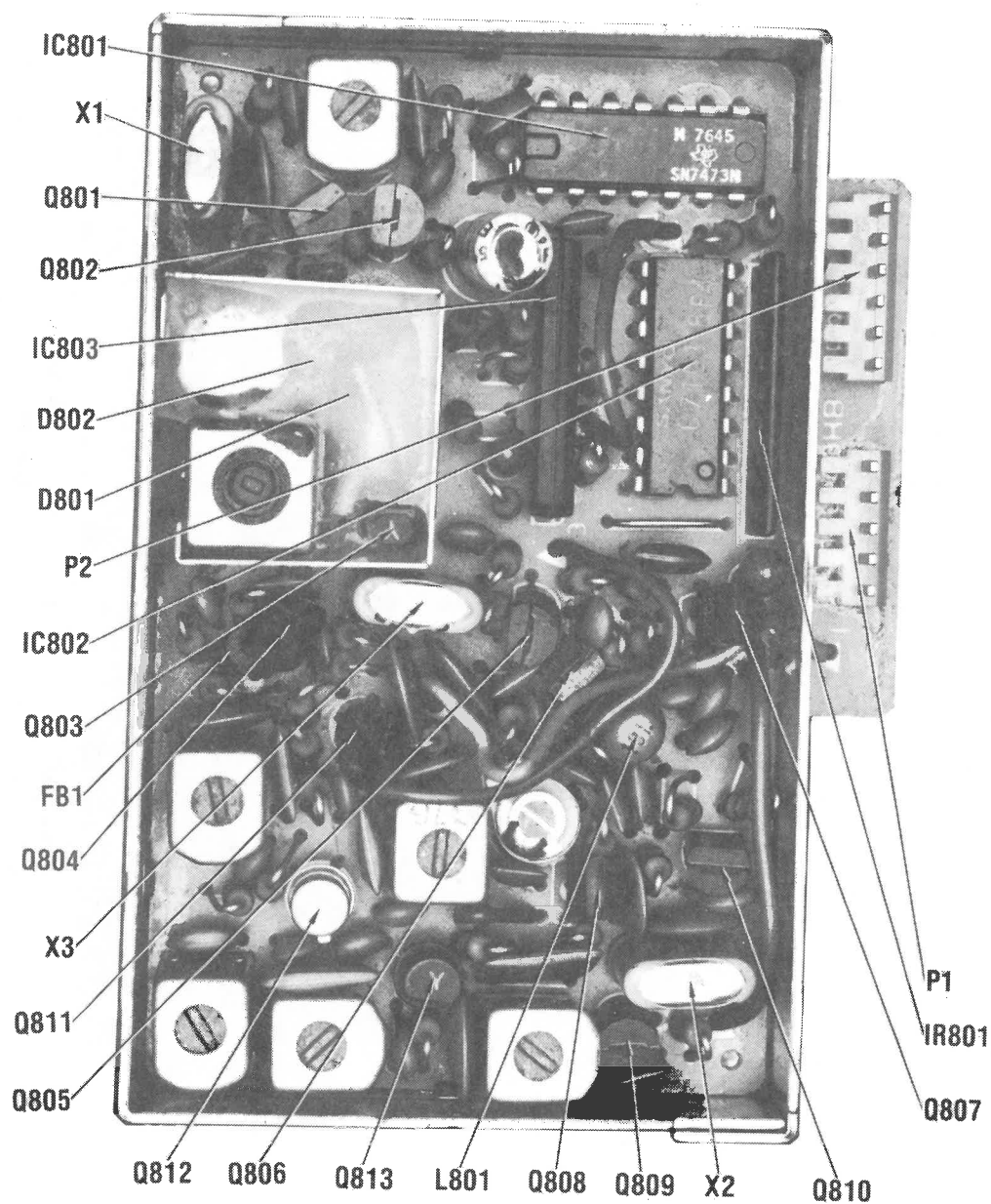
MAIN BOARD



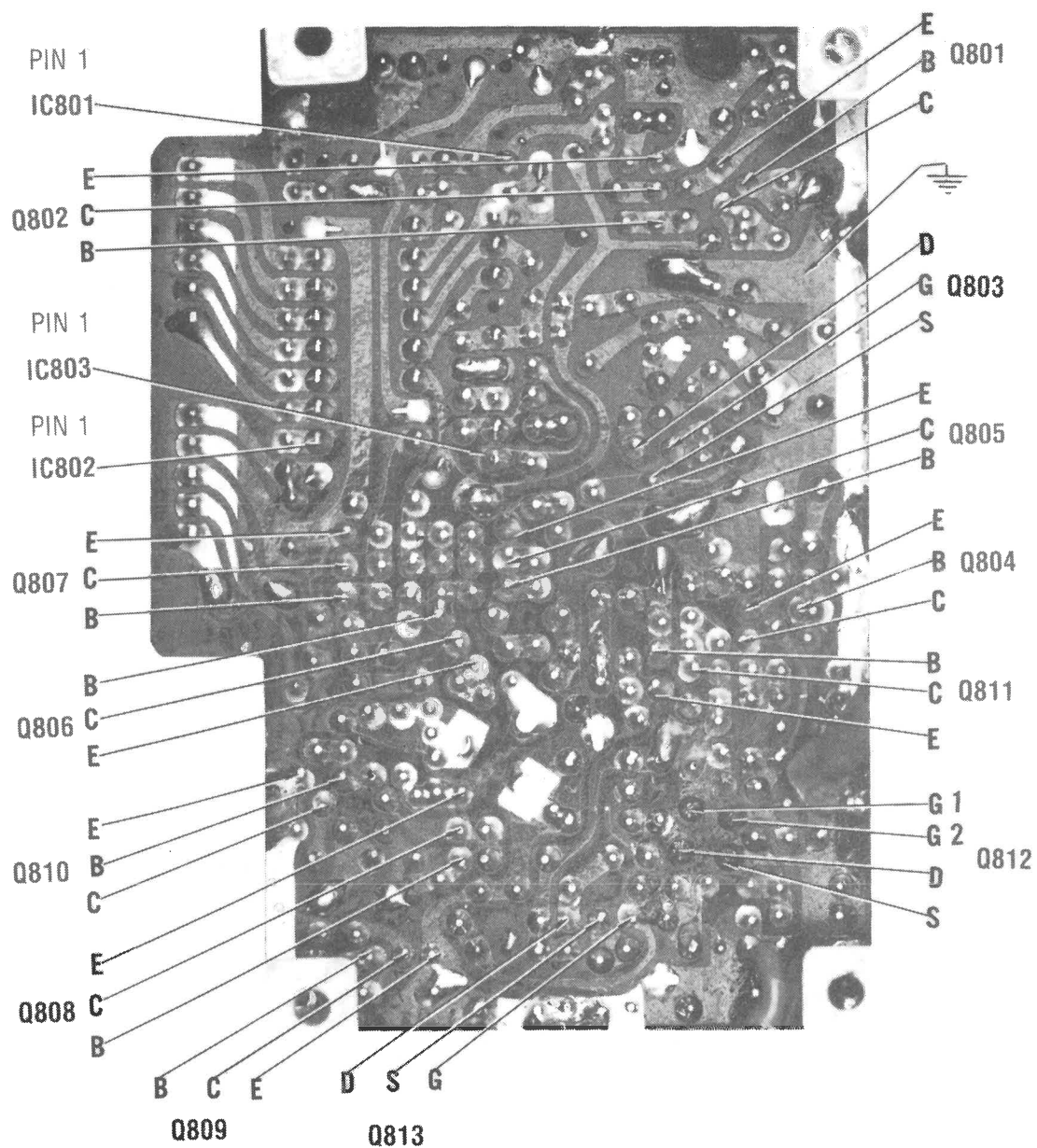




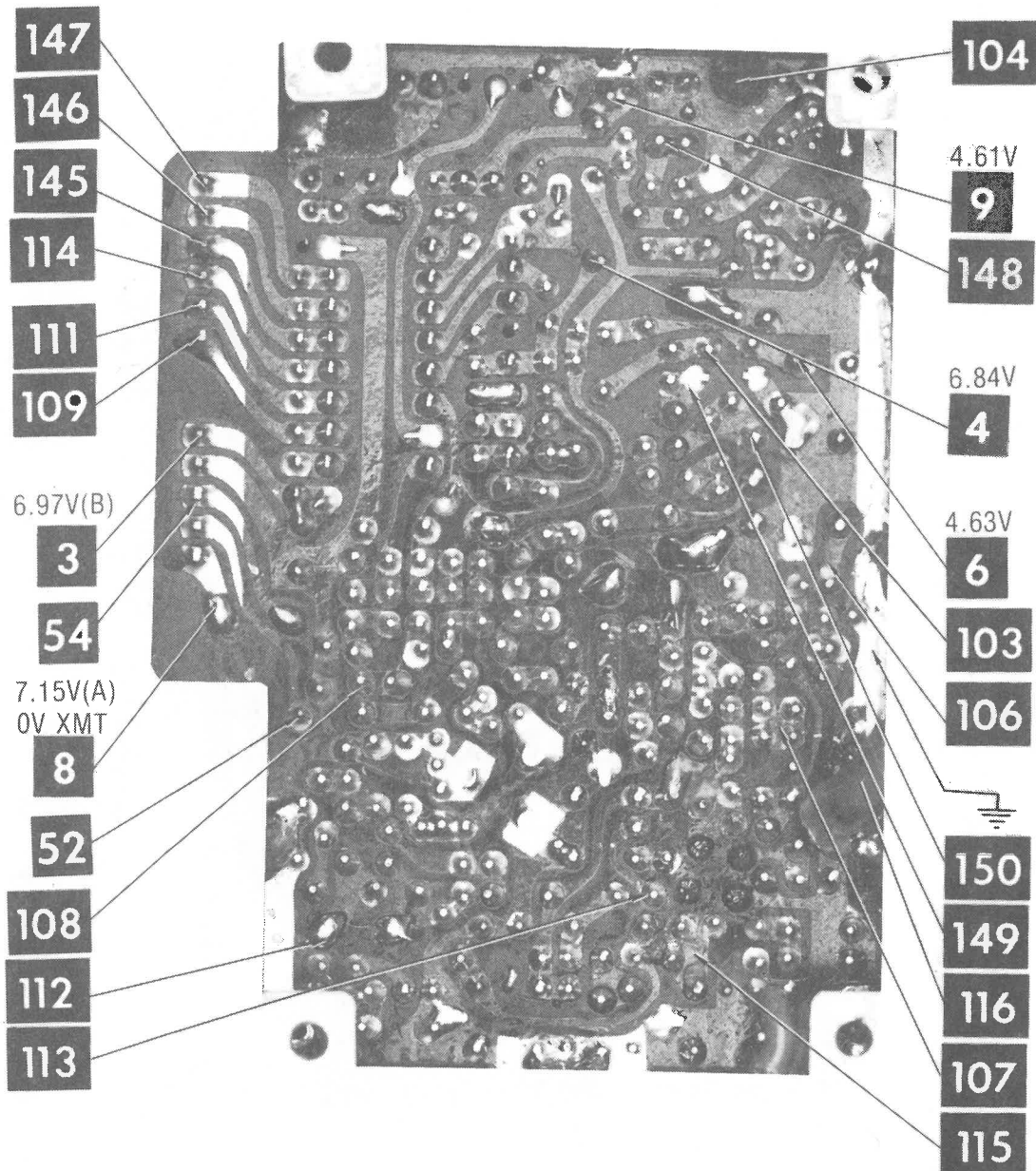
CHASSIS - BOTTOM



PLL BOARD

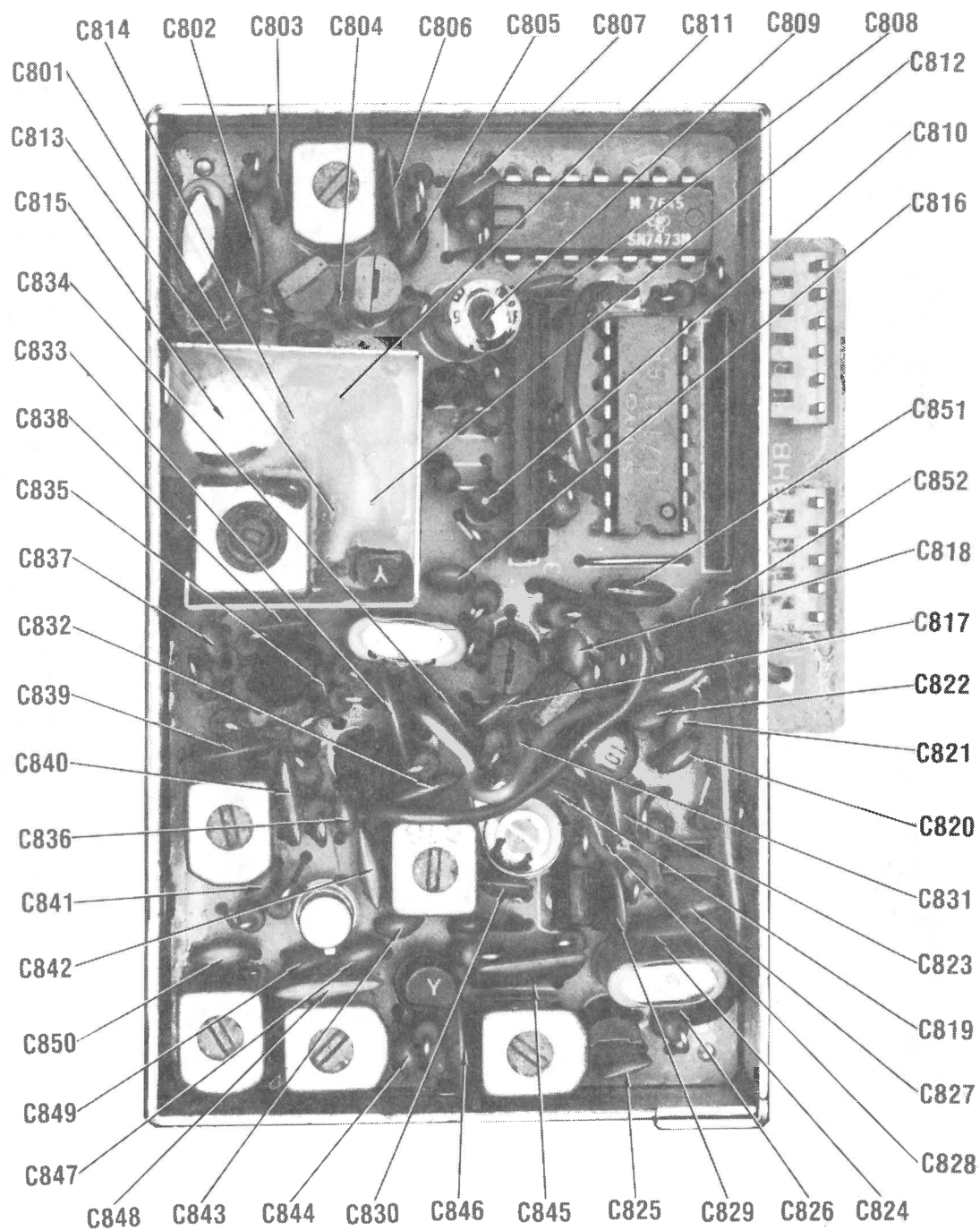


PLL BOARD

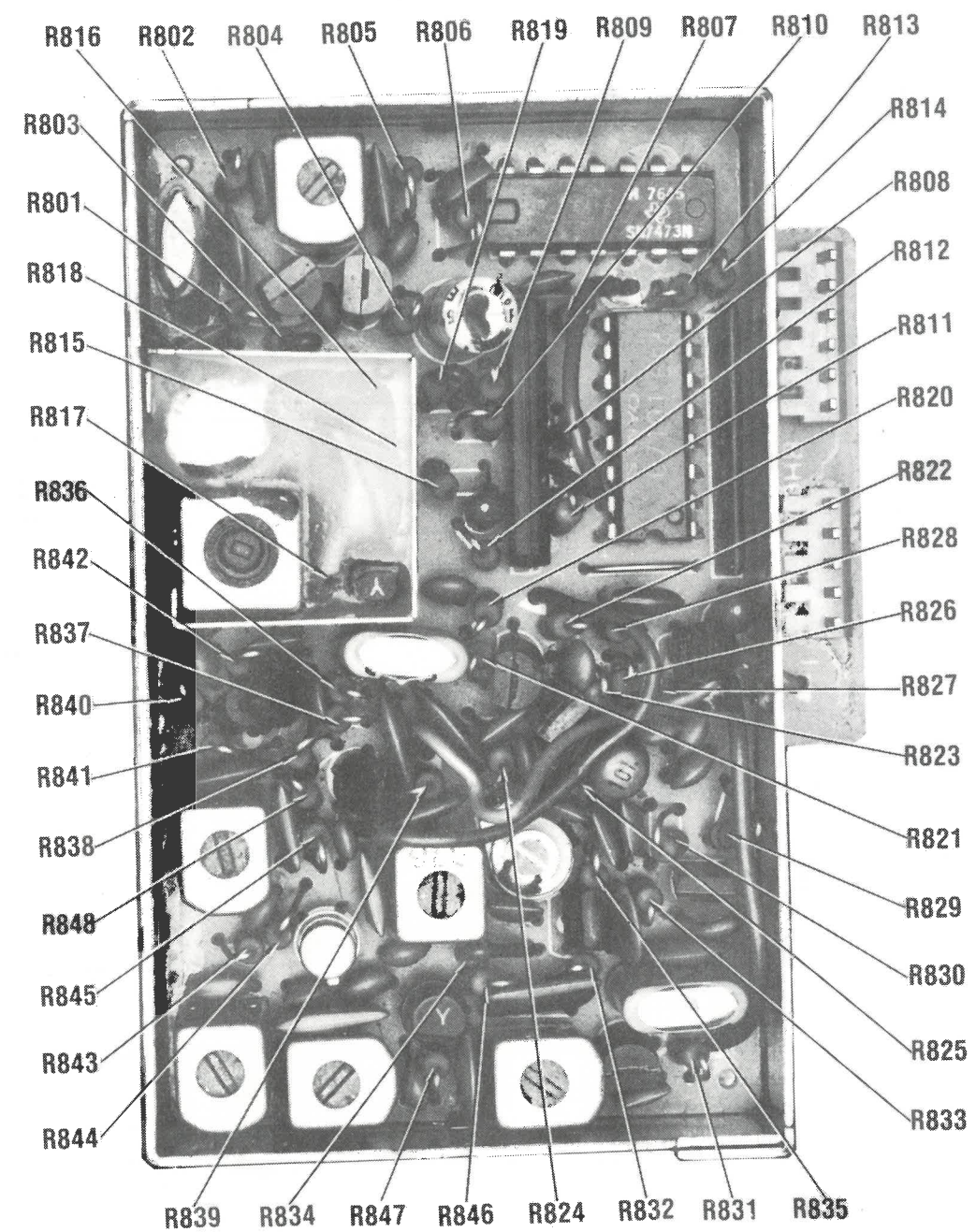


CHANNEL MASTER MODEL CB6834

PLL BOARD

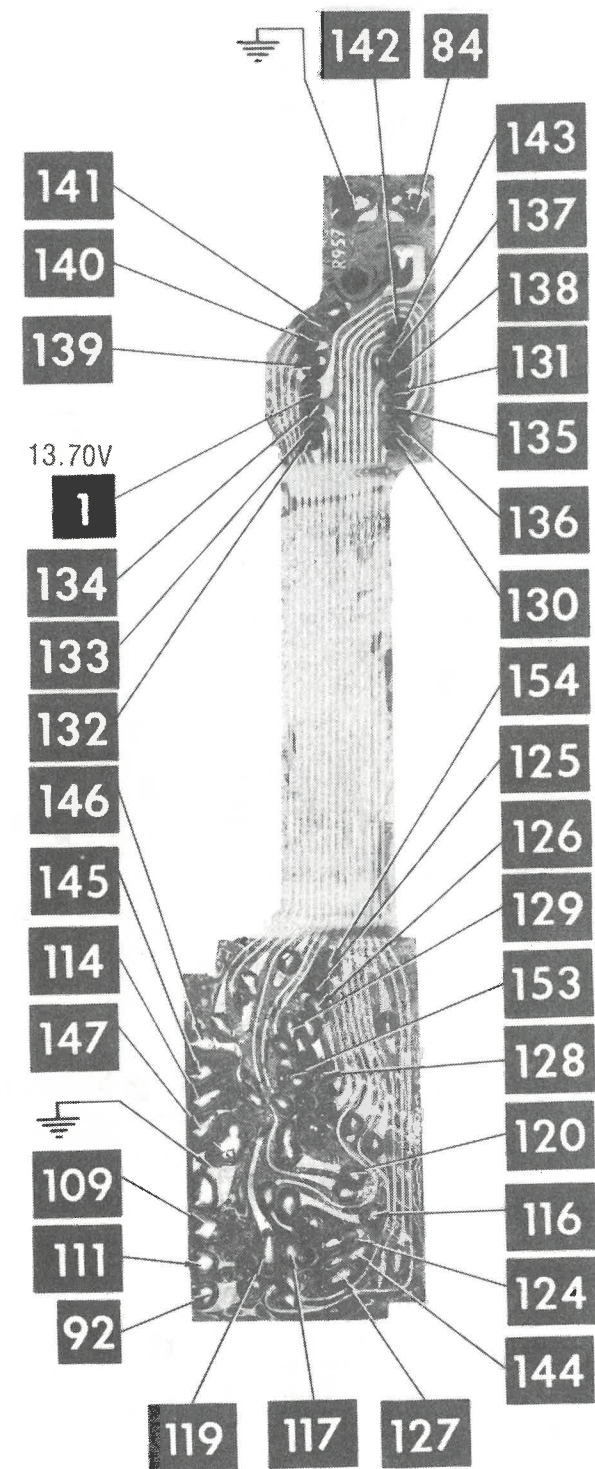


PLL BOARD



CHANNEL MASTER MODEL CB6834

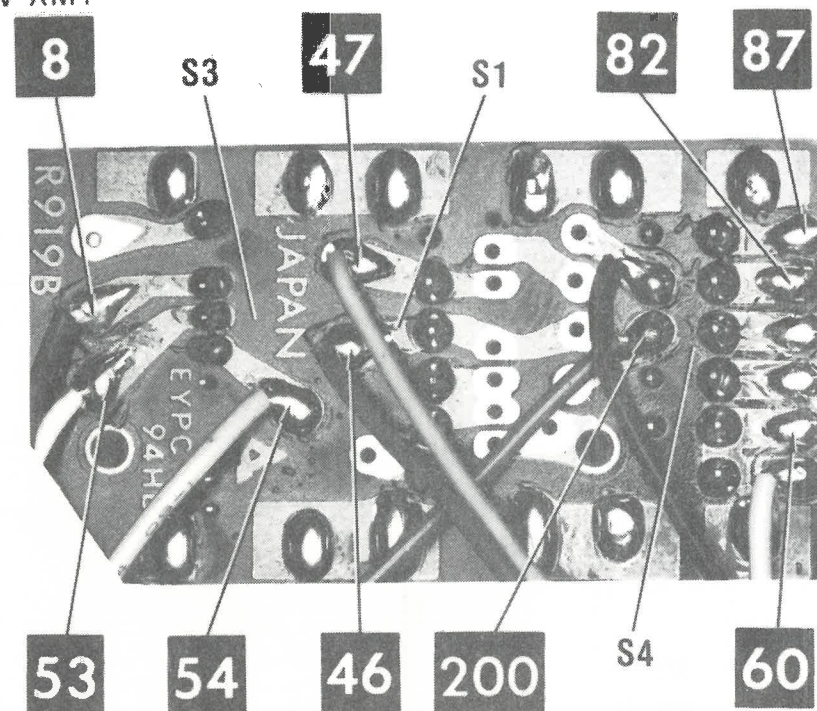
PLL BOARD



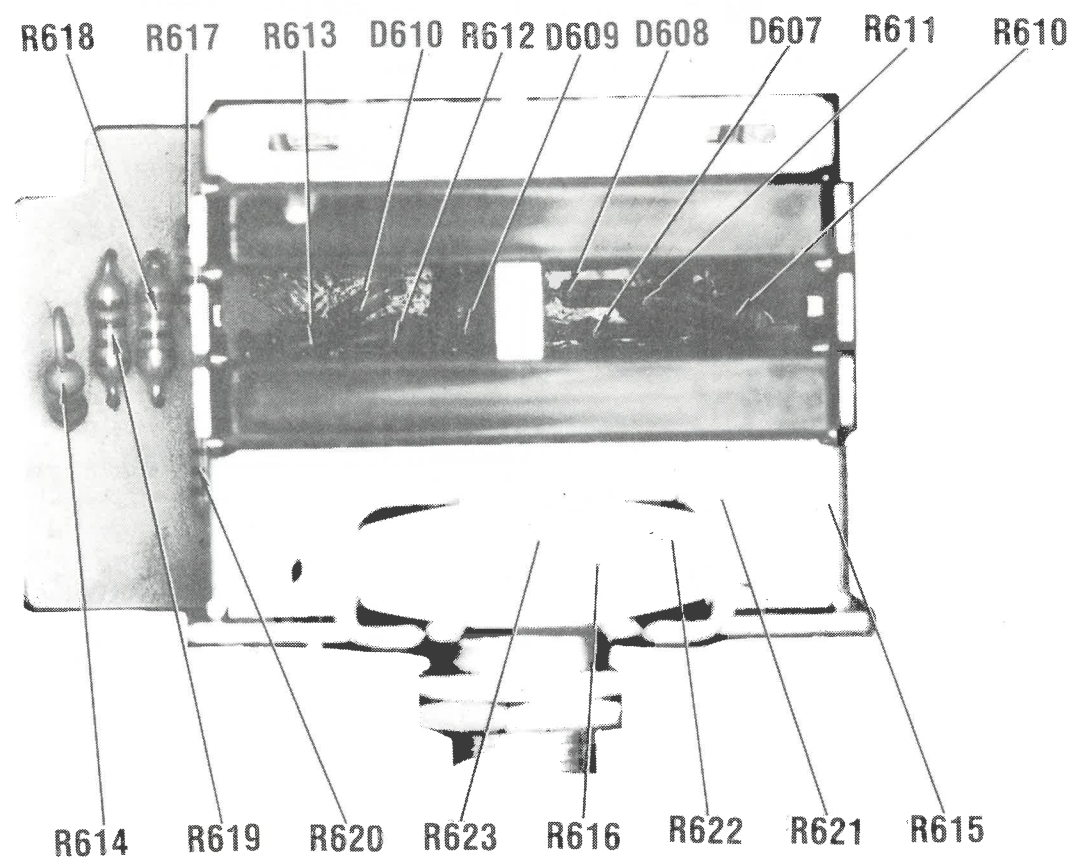
CH. SELECTOR & LED BOARD

7.15V (A)  
0V XMT

A Howard W. Sams CIRCUITRACE® Photo

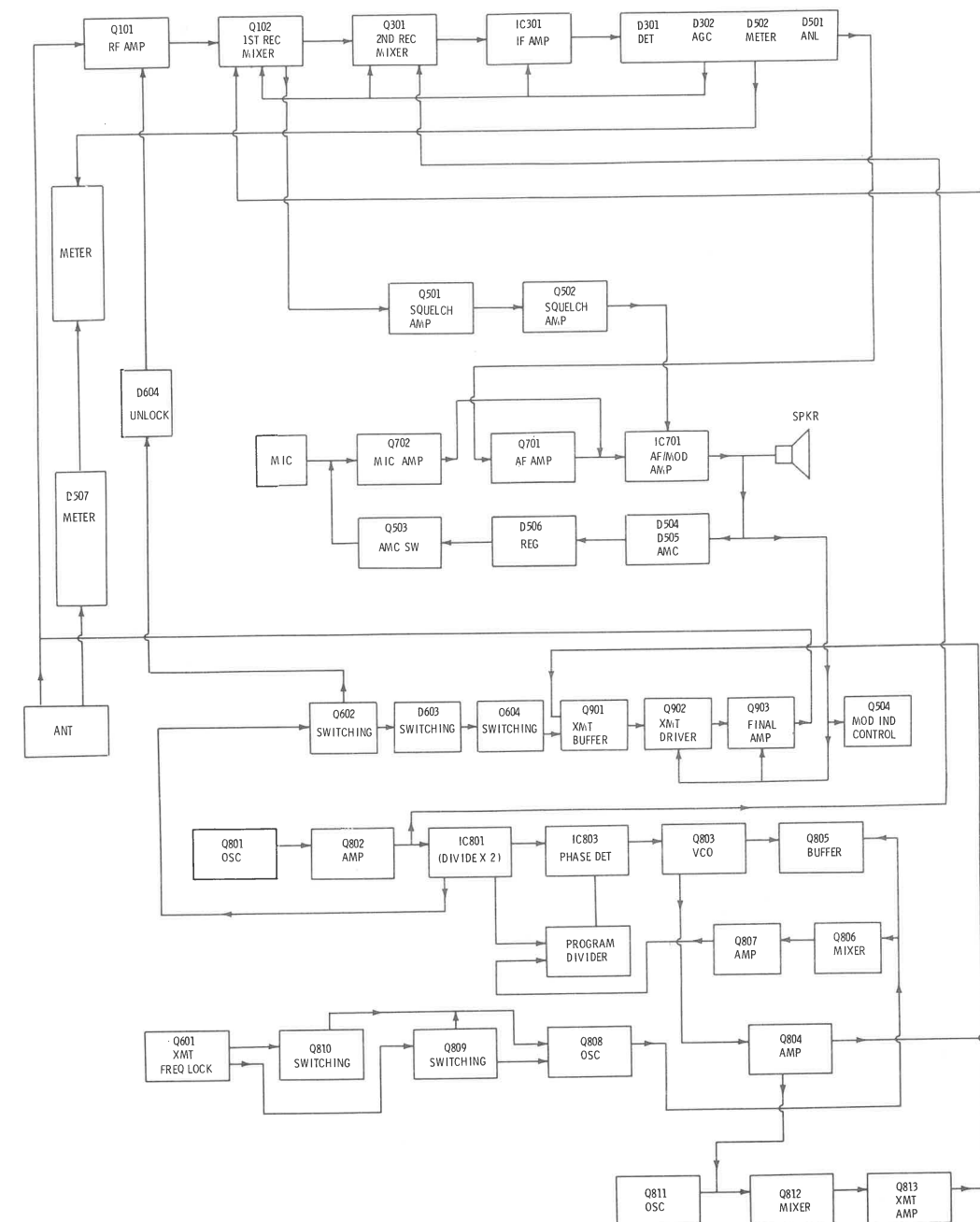


SWITCH BOARD



CH. SELECTOR & LED BOARD

CHANNEL MASTER MODEL CB6834



BLOCK DIAGRAM

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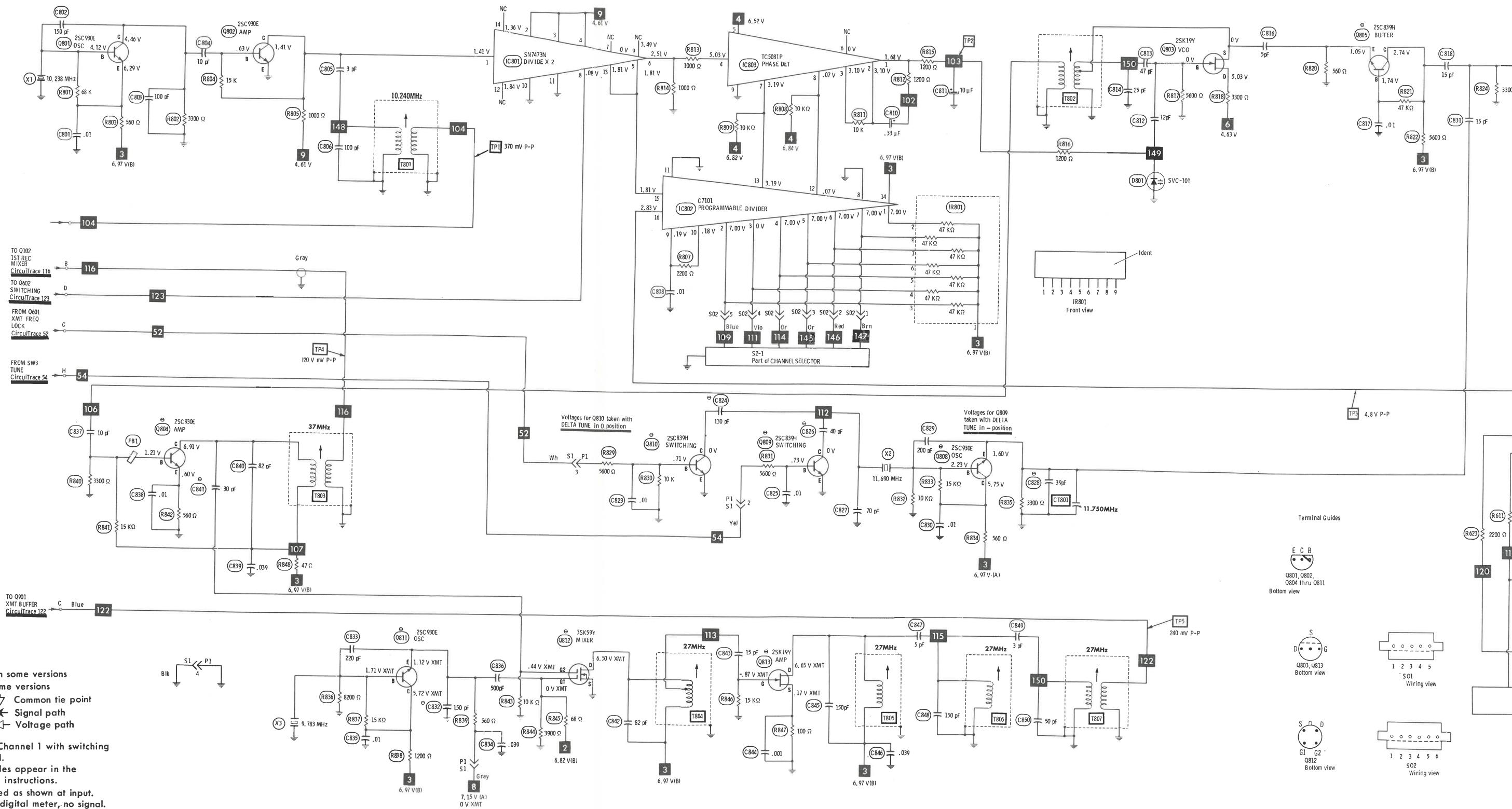




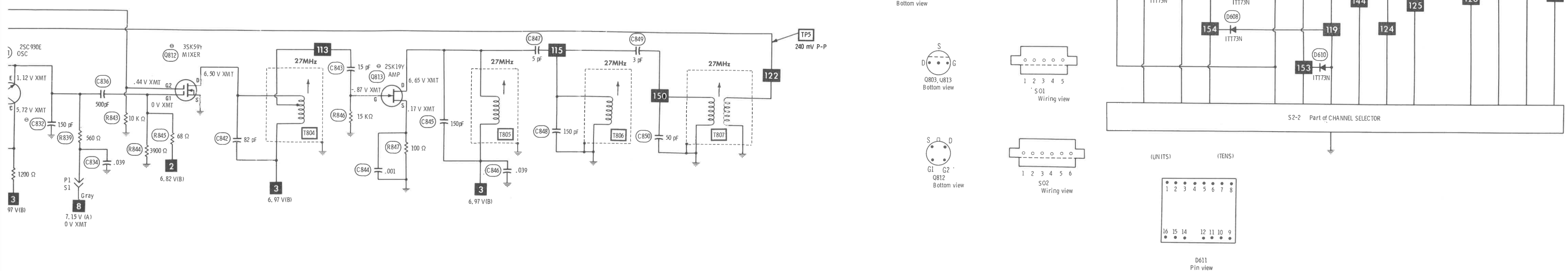
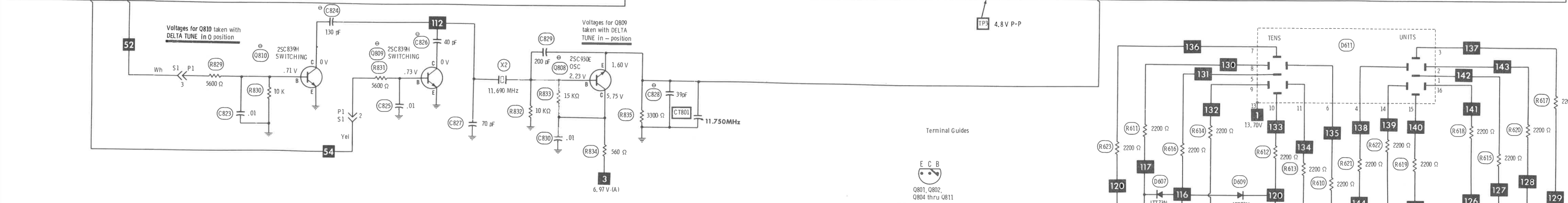
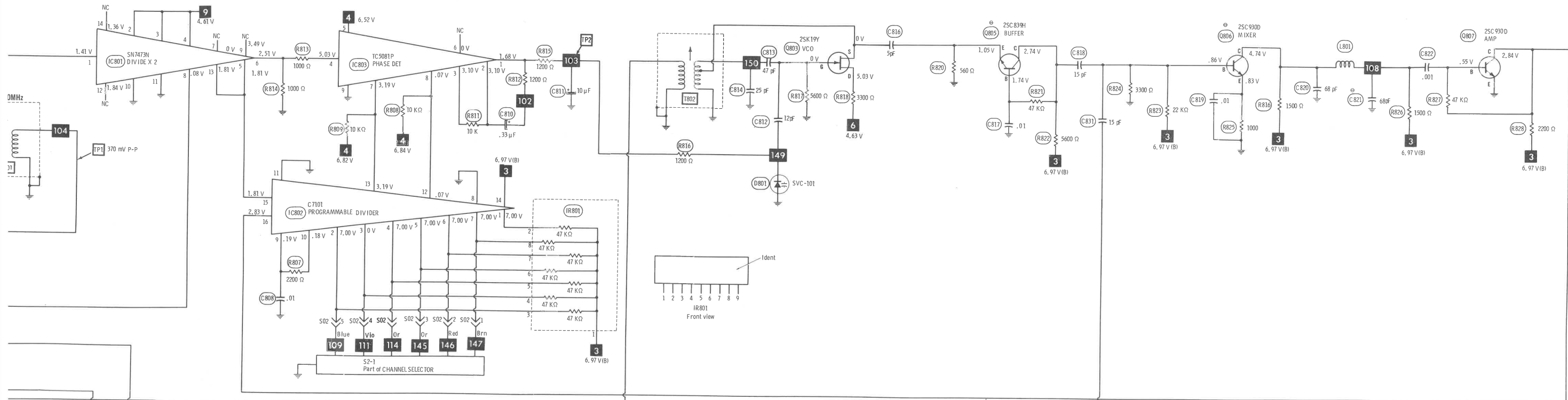
— Circuitry not used in some versions  
 --- Circuitry used in some versions  
 e See parts list  
 \* Nominal value  
 G Ground  
 Chassis  
 Measurements made in Channel 1 with switching as shown unless noted.  
 Item numbers in rectangles appear in the alignment/adjustment instructions.  
 Supply voltage maintained as shown at input.  
 Voltages measured with digital meter, no signal.  
 Controls adjusted for normal operation.  
 Arrow at control indicates direction of advance.  
 Terminal identification may not be found on unit.  
 Resistors are 1/2W or less, 5% unless noted.  
 Value in ( ) used in some versions.  
 A PHOTOFAC STANDARD NOTATION SCHEMATIC

WITH CIRCUITTRACE®

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## PLL & CH. SELECTOR SCHEMATIC



PLL & CH. SELECTOR SCHEMATIC

## PARTS LIST AND DESCRIPTION (CONTINUED)

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

## WIRING DATA

|                                                  |                  |                                                     |                          |
|--------------------------------------------------|------------------|-----------------------------------------------------|--------------------------|
| General-use Hook-up Wire (available in 5 colors) | BELDEN No. 8523  | Cofiled Microphone Cable                            | BELDEN No. 9471 (5')     |
| Shielded Hook-up Wire (spiral wrapped)           | BELDEN No. 8421  | 3-conductor (1 shielded) 23AWG                      | BELDEN No. 8497 (6')     |
| Speaker Cable (available in 4 colors)            | BELDEN No. 8401  | BELDEN No. 9472 (7-1/2')                            | BELDEN No. 9466 (6')     |
| Bonding Strap                                    | BELDEN No. 8672  | 28AWG BELDEN No. 9468 (10')                         | BELDEN No. 8415 (6')     |
| AC Power Cord                                    | BELDEN No. 17106 | 4-conductor (unshielded) 23AWG BELDEN No. 9467 (6') | BELDEN No. 9465 (7-1/2') |
|                                                  | BELDEN No. 17109 | 5-conductor (1 shielded) 23AWG 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. | MOTOROLA PART No. | RAYTHEON PART No. | RCA PART No. | SPRAGUE PART No. | SYLVANIA PART No. | THORDARSON PART No. | WORKMAN PART No. | ZENITH PART No. |
| D101     | 1S188    |               | 1N34AS                    | PTC207           | HEPR9134A         | REN 109           | SK3087       | RT-200           | ECG109            | TM109/**            | WEP134           | 103-Z9001       |
| D102     | 1S188FMA |               | 1N34AS                    | PTC207           | HEPR9134A         | REN 109           | SK3087       | RT-200           | ECG109            | TM109/**            | WEP134           | 103-Z9001       |
|          | 1T773N   |               | GE-514                    | PTC214           | HEPR9137          | REN 177           | SK3100       | RT-218           | ECG519            | TM519               | WEP925           | 103-287         |
| D301     | 1S1588   |               | GE-514                    | PTC214           | HEPR9137          | REN 177           | SK3100       | RT-218           | ECG519            | TM519               | WEP925           | 103-287         |
| D302     | 1T773N   |               | GE-514                    | PTC214           | HEPR9137          | REN 177           | SK3100       | RT-218           | ECG519            | TM519               | WEP925           | 103-287         |
| D303     | XZ-070   |               | GEZD-6.8                  | ZB6.8A           | HEP20409          | REN 5071          | SK3334       | RT-238           | ECG5071           | TM5071/**           | WEP1106          |                 |
| D501     | 1T773N   |               | GE-514                    | PTC214           | HEPR9137          | REN 177           | SK3100       | RT-218           | ECG519            | TM519               | WEP925           | 103-287         |
| D502     | 1S188    |               | 1N34AS                    | PTC207           | HEPR9134A         | REN 109           | SK3087       | RT-200           | ECG109            | TM109/**            | WEP134           | 103-Z9001       |
| D503     | 1S188FMA |               | 1N34AS                    | PTC207           | HEPR9134A         | REN 109           | SK3087       | RT-200           | ECG109            | TM109/**            | WEP134           | 103-Z9001       |
|          | DS-130   |               | GE-504A                   | PTC201           | HEPR0052          | REN 116           | SK3311       | RT-213           | ECG116            | TM116               | WEP156           | 212-76-02       |
| D504     | DS-130E  |               | GE-504A                   | PTC201           | HEPR0052          | REN 116           | SK3311       | RT-213           | ECG116            | TM116               | WEP156           | 212-76-02       |
|          | 1T773N   |               | GE-514                    | PTC214           | HEPR9137          | REN 177           | SK3100       | RT-218           | ECG519            | TM519               | WEP925           | 103-287         |
| D505     | 1T773N   |               | GE-514                    | PTC214           | HEPR9137          | REN 177           | SK3100       | RT-218           | ECG519            | TM519               | WEP925           | 103-287         |
| D506     | 1S1588   |               | GEZD-12                   | ZB12A            | HEP20415          | REN 142           | SK3062       | RT-243           | ECG142            | TM142/**            | WEP1112          | 103-Z9003       |
|          | XZ-122   |               | GE-514                    | PTC214           | HEPR9137          | REN 177           | SK3100       | RT-218           | ECG519            | TM519               | WEP925           | 103-287         |
| D507     | 1T773N   |               | GE-514                    | PTC214           | HEPR9137          | REN 177           | SK3100       | RT-218           | ECG519            | TM519               | WEP925           | 103-287         |
| D509     | 1S1588   |               | GE-514                    | PTC214           | HEPR9137          | REN 177           | SK3100       | RT-218           | ECG519            | TM519               | WEP925           | 103-287         |
|          | 1T773N   |               | GE-514                    | PTC214           | HEPR9137          | REN 177           | SK3100       | RT-218           | ECG519            | TM519               | WEP925           | 103-287         |
| D601     | 1S1588   |               | GE-514                    | PTC214           | HEPR9137          | REN 177           | SK3100       | RT-218           | ECG519            | TM519               | WEP925           | 103-287         |
| D602     | 1T773N   |               | GE-514                    | PTC214           | HEPR9137          | REN 177           | SK3100       | RT-218           | ECG519            | TM519               | WEP925           | 103-287         |
|          | 1S1588   |               | GE-514                    | PTC214           | HEPR9137          | REN 177           | SK3100       | RT-218           | ECG519            | TM519               | WEP925           | 103-287         |
| D603     | 1T773N   |               | GE-514                    | PTC214           | HEPR9137          | REN 177           | SK3100       | RT-218           | ECG519            | TM519               | WEP925           | 103-287         |
| D604     | 1S1588   |               | GE-514                    | PTC214           | HEPR9137          | REN 177           | SK3100       | RT-218           | ECG519            | TM519               | WEP925           | 103-287         |
|          | 1S188    |               | 1N34AS                    | PTC207           | HEPR9134A         | REN 109           | SK3087       | RT-200           | ECG109            | TM109/**            | WEP134           | 103-Z9001       |
| D605     | 1S188FMA |               | 1N34AS                    | PTC207           | HEPR9134A         | REN 109           | SK3087       | RT-200           | ECG109            | TM109/**            | WEP134           | 103-Z9001       |
|          | XZ-076   |               | GEZD-7.5                  | ZB7.5A           | HEP20410          | REN 138           | SK3059       | RT-239           | ECG138            | TM138/**            | WEP1107          | 103-Z9002       |
| D606     | 1T773N   |               | GE-514                    | PTC214           | HEPR9137          | REN 177           | SK3100       | RT-218           | ECG519            | TM519               | WEP925           | 103-287         |
| D607     | 1S1588   |               | GE-514                    | PTC214           | HEPR9137          | REN 177           | SK3100       | RT-218           | ECG519            | TM519               | WEP925           | 103-287         |
|          | 1T773N   |               | GE-514                    | PTC214           | HEPR9137          | REN 177           | SK3100       | RT-218           | ECG519            | TM519               | WEP925           | 103-287         |
| D608     | 1T773N   |               | GE-514                    | PTC214           | HEPR9137          | REN 177           | SK3100       | RT-218           | ECG519            | TM519               | WEP925           | 103-287         |
| D609     | 1S1588   |               | GE-514                    | PTC214           | HEPR9137          | REN 177           | SK3100       | RT-218           | ECG519            | TM519               | WEP925           | 103-287         |
|          | 1T773N   |               | GE-514                    | PTC214           | HEPR9137          | REN 177           | SK3100       | RT-218           | ECG519            | TM519               | WEP925           | 103-287         |
| D610     | 1S1588   |               | GE-514                    | PTC214           | HEPR9137          | REN 177           | SK3100       | RT-218           | ECG519            | TM519               | WEP925           | 103-287         |
|          | 1S188    |               | GE-514                    | PTC214           | HEPR9137          | REN 177           | SK3100       | RT-218           | ECG519            | TM519               | WEP925           | 103-287         |
| D701     | DS-130   |               | GE-504A                   | PTC201           | HEPR0052          | REN 116           | SK3311       | RT-213           | ECG116            | TM116               | WEP156           | 212-76-02       |
| D801     | DS-130E  |               | GE-504A                   | PTC201           | HEPR0052          | REN 116           | SK3311       | RT-213           | ECG116            | TM116               | WEP156           | 212-76-02       |
| D802     | SV101    |               | GE-90                     | HEPR2503         | REN 614           |                   |              | RT-262           | ECG614            |                     | WEP200           | 103-219         |
| IC301    | XZ-049   |               | GEZD-4.7                  | HEP20405         | REN 5069          |                   | SK3333       |                  | ECG5069           |                     | WEP1102          | 103-279-09      |
| IC701    | CA-075B  |               |                           |                  |                   |                   |              |                  | ECG1301           |                     |                  |                 |
| IC801    | LA4420   |               |                           |                  |                   |                   | SK3739       |                  | ECG1211           |                     | WEP2141          |                 |
|          | LA4400Y  |               |                           |                  |                   |                   | SK3739       |                  | ECG1211           |                     | WEP2141          |                 |
| IC802    | SN7473M  |               | GE-7473                   | HEPC7473P        | REN 7473          |                   | SK7473       |                  | ECG7473           |                     | WEP7473          |                 |
|          | SN7473   |               | GE-7473                   | HEPC7473P        | REN 7473          |                   | SK7473       |                  | ECG7473           |                     | WEP7473          |                 |
| IC803    | C7101    |               |                           |                  |                   |                   |              |                  | ECG7473           |                     |                  |                 |
| Q101     | TC5081P  |               |                           |                  |                   |                   | SK3712       |                  | ECG1208           |                     |                  |                 |
|          | TC5081   |               |                           |                  |                   |                   | SK3712       |                  | ECG1208           |                     |                  |                 |
| Q102     | 2SC784-0 |               | GE-60*                    | PTC132*          | HEPS0008*         | REN 229*          | SK3122       | RT-187           | ECG229*           | TM229*/**           | WEP784           | 121-Z9021       |
|          | 2SC784   |               | GE-60*                    | PTC132*          | HEPS0008*         | REN 229*          | SK3122       | RT-187           | ECG229*           | TM229*/**           | WEP784           | 121-Z9021       |
| Q103     | ED1502E  |               | GE-61*                    | PTC132*          | HEPS0015*         | REN 229*          | SK3018       | RT-107           | ECG229*           | TM229*/**           | WEP956           | 121-883*        |
|          | 2SC930   |               | GE-60*                    | PTC132*          | HEPS0016*         | REN 229*          | SK3018       | RT-308           | ECG229*           | TM229*/**           | WEP380           | 121-Z9021*      |
| Q301     | 2SC930E  |               | GE-60*                    | PTC132*          | HEPS0016*         | REN 229           | SK3018       | RT-308           | ECG229*           | TM229*/**           | WEP380           | 121-Z9021*      |
|          | 2SC930   |               | GE-60*                    | PTC132*          | HEPS0016*         | REN 229           | SK3018       | RT-308           | ECG229*           | TM229*/**           | WEP380           | 121-Z9021*      |
| Q501     | 2SA733Q  |               | GE-48                     | PTC109           | HEPS0019*         | REN 294           | SK3138       | RT-303           | ECG294            | TM294/**            | WEP911           | 121-952         |
|          | 2SA733   |               | GE-48                     | PTC127           | HEPS0019*         | REN 294           | SK3138       | RT-303           | ECG294            | TM294/**            | WEP911           | 121-952         |
| Q502     | 2SC372Y  |               | GE-61*                    | PTC121*          | HEPS0015*         | REN 199           | SK3444       | RT-308           | ECG123A*          | TM123A/**           | WEP372           | 121-Z9000A*     |
|          | 2SC536   |               | GE-212                    | PTC121*          | HEPS0016*         | REN 199           | SK3124       | RT-107A          | ECG199            | TM199               | WEP536           | 121-972         |
| Q503     | 2SC945Q  |               | GE-212                    | PTC121*          | HEPS0015*         | REN 199           | SK3124       | RT-107A          | ECG199            | TM199/**            | WEP1945          | 121-972         |
|          | 2SC372Y  |               | GE-61*                    | PTC121*          | HEPS0015*         | REN 123A*         | SK3444       | RT-308           | ECG123A*          | TM123A/**           | WEP372           | 121-Z9000A*     |
| Q504     | 2SC945   |               | GE-212                    | PTC121*          | HEPS0015*         | REN 199           | SK3124       | RT-107A          | ECG199            | TM199/**            | WEP1945          | 121-972         |
|          | 2SC945Q  |               | GE-212                    | PTC121*          | HEPS0015*         | REN 199           | SK3124       | RT-107A          | ECG199            | TM199/**            | WEP1945          | 121-972         |
| Q505     | 2SA495-0 |               | GE-221*                   | PTC103*          | HEPS0013*         | REN 159*          | SK3114       | RT-303           | ECG159*           | TM159/**            | WEP495           | 121-Z9003       |
|          | 2SA495   |               | GE-221*                   | PTC103*          | HEPS0013*         | REN 159*          | SK3114       | RT-303           | ECG159*           | TM159/**            | WEP495           | 121-Z9003       |
| Q601     | 2SC372Y  |               | GE-61*                    | PTC121*          | HEPS0015*         | REN 123A*         | SK3444       | RT-308           | ECG123A*          | TM123A/**           | WEP372           | 121-Z9000A*     |
|          | 2SC945Q  |               | GE-212                    | PTC121*          | HEPS0015*         | REN 199           | SK3124       | RT-107A          | ECG199            | TM199/**            | WEP1945          | 121-972         |
| Q602     | 2SC536   |               | GE-212                    | PTC121*          | HEPS0016*         | REN 199           | SK3124       | RT-107A          | ECG199            | TM199               | WEP536           | 121-972         |
|          | 9011     |               | GE-212                    | PTC123           | HEPS0014          | REN 229           | SK3018       | RT-172           | ECG229            | TM229               | WEP736           | 121-Z9000A*     |
| Q603     | 2SC536   |               | GE-212                    | PTC121*          | HEPS0016*         | REN 199           | SK3124       | RT-107A          | ECG199            | TM199               | WEP536           | 121-972         |
|          | 2SC945Q  |               | GE-212                    | PTC121*          | HEPS0015*         | REN 199           | SK3124       | RT-107A          | ECG199            | TM199/**            | WEP1945          | 121-972         |
| Q604     | MJE2008  |               | GE-57                     | PTC163           | HEPS5000          | REN 184           | SK3104       | RT-162           | ECG184            | TM184               | WEP880           | 121-Z9002       |
|          | MJE2008  |               | GE-57                     | PTC163           | HEPS5000          | REN 184           | SK3104       | RT-162           | ECG184            | TM184               | WEP880           | 121-Z9002       |
| Q605     | MJE200   |               | GE-57                     | PTC163           | HEPS5000          | REN 185           | SK3104       | RT-162           | ECG184            | TM184               | WEP880           | 121-Z9002       |
|          | 9011     |               | GE-61                     | PTC123           | HEPS0014          | REN 229           | SK3018       | RT-172           | ECG229            | TM229               | WEP736           | 121-Z9000A*     |
| Q701     | 2SC536   |               | GE-212                    | PTC121*          | HEPS0016*         | REN 199           | SK3124       | RT-107A          | ECG199            | TM199               | WEP536           | 121-972         |
|          | 2SC945Q  |               | GE-212                    | PTC121*          | HEPS0015*         | REN 199           | SK3124       | RT-107A          | ECG199            | TM199/**            | WEP1945          | 121-972         |
| Q702     | 2SC536E  |               | GE-212                    | PTC121*          | HEPS0016*         | REN 199           | SK3124       | RT-107A          | ECG199            | TM199               | WEP536           | 121-972         |
|          | 2SC536E  |               | GE-212                    | PTC121*          | HEPS0016*         | REN 199           | SK3124       | RT-107A          | ECG199            | TM199               | WEP536           | 121-972         |

PARTS LIST AND DESCRIPTION (CONTINUED)  
(When ordering parts, state Model, Part Number, and Description.)  
SEMICONDUCTORS (Select replacement transistor for best results) (cont)

| ITEM No. | TYPE No.  | MFRG. PART No. | REPLACEMENT DATA          |                  |                   |                   |              |                  |                   |                     |                  |                 |
|----------|-----------|----------------|---------------------------|------------------|-------------------|-------------------|--------------|------------------|-------------------|---------------------|------------------|-----------------|
|          |           |                | GENERAL ELECTRIC PART No. | MALLORY PART No. | MOTOROLA PART No. | RAYTHEON PART No. | RCA PART No. | SPRAGUE PART No. | SYLVANIA PART No. | THORDARSON PART No. | WORKMAN PART No. | ZENITH PART No. |
| Q801     | 2SC930E   |                | GE-60*                    | PTC132*          | HEPS0016*         | REN 229           | SK3018       | RT-308           | ECG229*           | TM229*/**           | WEP380           | 121-Z9021*      |
| Q802     | 2SC930    |                | GE-60*                    | PTC132*          | HEPS0016*         | REN 229           | SK3018       | RT-308           | ECG229*           | TM229*/**           | WEP380           | 121-Z9021*      |
|          | 2SC930E   |                | GE-60*                    | PTC132*          | HEPS0016*         | REN 229           | SK3018       | RT-308           | ECG229*           | TM229*/**           | WEP380           | 121-Z9021*      |
| Q803     | 2SC930    |                | GE-60*                    | PTC132*          | HEPS0016*         | REN 229           | SK3018       | RT-308           | ECG229*           | TM229*/**           | WEP380           | 121-Z9021*      |
|          | 2SK19Y    |                | GE-FET-2                  | PTC161           | HEPF0021          | REN 132           | SK3448       | RT-175           | ECG312            | TM312               | WEP920           | 121-756         |
| Q804     | 2SC930E   |                | GE-60*                    | PTC132*          | HEPS0016*         | REN 229           | SK3018       | RT-308           | ECG229*           | TM229*/**           | WEP380           | 121-Z9021*      |
|          | 2SC930    |                | GE-60*                    | PTC132*          | HEPS0016*         | REN 229           | SK3018       | RT-308           | ECG229*           | TM229*/**           | WEP380           | 121-Z9021*      |
| Q805     | 2SC839H   |                | GE-61*                    | PTC132*          | HEPS0015*         | REN 123A*         | SK3444       | RT-308           | ECG123A*          | TM123A*/**          | WEP1945          | 121-Z9000A*     |
|          | 2SC839    |                | GE-60*                    | PTC132*          | HEPS0016*         | REN 229           | SK3018       | RT-308           | ECG229*           | TM229*/**           | WEP380           | 121-Z9021*      |
| Q806     | 2SC930D   |                | GE-60*                    | PTC132*          | HEPS0016*         | REN 229           | SK3018       | RT-308           | ECG229*           | TM229*/**           | WEP380           | 121-Z9021*      |
|          | 2SC930    |                | GE-60*                    | PTC132*          | HEPS0016*         | REN 229           | SK3018       | RT-308           | ECG229*           | TM229*/**           | WEP380           | 121-Z9021*      |
| Q807     | 2SC930D   |                | GE-60*                    | PTC132*          | HEPS0016*         | REN 229           | SK3018       | RT-308           | ECG229*           | TM229*/**           | WEP380           | 121-Z9021*      |
|          | 2SC930    |                | GE-60*                    | PTC132*          | HEPS0016*         | REN 229           | SK3018       | RT-308           | ECG229*           | TM229*/**           | WEP380           | 121-Z9021*      |
| Q808     | 2SC930E   |                | GE-60*                    | PTC132*          | HEPS0016*         | REN 229           | SK3018       | RT-308           | ECG229*           | TM229*/**           | WEP380           | 121-Z9021*      |
|          | 2SC930    |                | GE-61*                    | PTC132*          | HEPS0015*         | REN 123A*         | SK3444       | RT-308           | ECG123A*          | TM123A*/**          | WEP1945          | 121-Z9000A*     |
| Q809     | 2SC839H   |                | GE-61*                    | PTC132*          | HEPS0015*         | REN 123A*         | SK3444       | RT-308           | ECG123A*          | TM123A*/**          | WEP1945          | 121-Z9000A*     |
|          | 2SC930    |                | GE-60*                    | PTC132*          | HEPS0016*         | REN 229           | SK3018       | RT-308           | ECG229*           | TM229*/**           | WEP380           | 121-Z9021*      |
| Q810     | 2SC839Y   |                | GE-61*                    | PTC132*          | HEPS0015*         | REN 123A*         | SK3444       | RT-308           | ECG123A*          | TM123A*/**          | WEP1945          | 121-Z9000A*     |
|          | 2SC839    |                | GE-60*                    | PTC132*          | HEPS0016*         | REN 229           | SK3018       | RT-308           | ECG229*           | TM229*/**           | WEP380           | 121-Z9021*      |
| Q811     | 2SC930    |                | GE-60*                    | PTC132*          | HEPS0016*         | REN 229           | SK3018       | RT-308           | ECG229*           | TM229*/**           | WEP380           | 121-Z9021*      |
|          | 2SC930E   |                | GE-60*                    | PTC132*          | HEPS0016*         | REN 229           | SK3018       | RT-308           | ECG229*           | TM229*/**           | WEP380           | 121-Z9021*      |
| Q812     | 2SC930    |                | GE-FET-4                  | PTC182           | HEPF2007          | REN 222           | SK3065       | RT-181           | ECG222            | TM222               | WEP905           | 121-826         |
|          | 3K559Y    |                | GE-FET-4                  | PTC182           | HEPF2007          | REN 222           | SK3065       | RT-181           | ECG222            | TM222               | WEP905           | 121-826         |
| Q813     | 2SK19Y    |                | GE-FET-2                  | PTC161           | HEPF0021          | REN 132           | SK3448       | RT-175           | ECG312            | TM312               | WEP920           | 121-756         |
|          | 2SK19     |                | GE-FET-2                  | PTC161           | HEPF0021          | REN 132           | SK3448       | RT-175           | ECG312            | TM312               | WEP920           | 121-756         |
| Q901     | 2SC1166-0 |                | GE-81*                    | PTC143           | HEPS026*          | REN 297           | SK3122       | RT-141           | ECG297            | TM297/**            | WEP910           | 121-Z9014       |
|          | 2SC1166   |                | GE-81*                    | PTC143           | HEPS026*          | REN 297           | SK3122       | RT-141           | ECG297            | TM297/**            | WEP910           | 121-Z9014       |
| Q902     | 2SC2028/2 |                | GE-270                    | PTC180           | HEPS3044          | REN 295           | SK3253       |                  | ECG295            | TM295               | WEP755*          | 121-880         |
|          | 2SC1957   |                | GE-270                    | PTC180           | HEPS3044          | REN 295           | SK3197       |                  | ECG295            | TM295               | WEP913           | 121-880         |
| Q903     | 2SC2029/3 |                | GE-333                    | PTC186           | HEPS3044          | REN 235           | SK3197       | RT-146           | ECG235            | TM235               | WEP785           | 121-Z9039       |
|          | 2SC2029   |                | GE-333                    | PTC186           | HEPS3044          | REN 235           | SK3197       | RT-146           | ECG235            | TM235               | WEP785           | 121-Z9039       |

\* Lead configuration may vary from original.  
/\*\* Also available as exact type replacement.

ELECTROLYTIC CAPACITORS

| ITEM No. | RATING   | REPLACEMENT DATA |                           |                  |                  |              |  |
|----------|----------|------------------|---------------------------|------------------|------------------|--------------|--|
|          |          | MFRG. PART No.   | CORNELL-DUBILIER PART No. | MALLORY PART No. | SPRAGUE PART No. |              |  |
|          |          |                  |                           |                  | Q-LINE           | GENERAL LINE |  |
| C313     | 10 10V   |                  | PC10-25                   | VTT10B25         | QV1-41           | EV-1222      |  |
| C314     | 33 10V   |                  | PC30-25                   | VTT13B10         | QV1-61           | EV-1125      |  |
| C501     | 1 50V    |                  | PC1-50                    | VTT1A50          | QV1-9            | EV-1315      |  |
| C503     | 3.3 25V  |                  | PC5-50                    | VTT3R3A50        | QV1-23           | EV-1318      |  |
| C506     | 3.3 25V  |                  | PC5-50                    | VTT3R3A50        | QV1-23           | EV-1318      |  |
| C508     | 4.7 25V  |                  | PC5-50                    | VTT4R7B50        | QV1-27           | EV-1319      |  |
| C509     | 33 10V   |                  | PC30-25                   | VTT33B10         | QV1-61           | EV-1125      |  |
| C515     | 4.7 25V  |                  | PC5-50                    | VTT4R7B50        | QV1-27           | EV-1319      |  |
| C601     | 100 10V  |                  | PC100-10                  | VTT100E10        | QV1-93           | EV-1130      |  |
| C603     | 220 10V  |                  | PC250-10                  | VTT220F10        | QV1-115          | EV-1140      |  |
| C605     | 1 10V    |                  | PC1-50                    | VTT1A50          | QV1-9            | EV-1315      |  |
| C701     | .1 10V   |                  |                           | TDC104M050EL     | QDT1-2           | S050-R109    |  |
| C705     | 33 6.3V  |                  | PC30-25                   | VTT33B10         | QV1-61           | EV-1125      |  |
| C706     | 100 10V  |                  | PC100-10                  | VTT100E10        | QV1-93           | EV-1130      |  |
| C708     | 100 16V  |                  | PC100-16                  | VTT100F16        | QV1-95           | EV-1230      |  |
| C713     | 10 10V   |                  | PC10-25                   | VTT10B25         | QV1-41           | EV-1222      |  |
| C716     | 4.7 10V  |                  | PC5-50                    | VTT4R7B50        | QV1-27           | EV-1319      |  |
| C722     | 10 10V   |                  |                           | TDC106M025FL     | QDT1-64          | S025-109     |  |
| C725     | 220 16V  |                  | PC250-25                  | VTT220H16        | QV1-117          | EV-1240      |  |
| C726     | 47 16V   |                  | PC50-16                   | VTT47D16         | QV1-73           | EV-1226      |  |
| C732     | 1000 16V |                  | PC1000-16                 | VTT1000L16       | QV1-183          | EV-1260      |  |
| C809     | 47 10V   |                  | PC50-16                   | VTT47D16         | QV1-73           | EV-1226      |  |
| C810     | .33 35V  |                  |                           | TDC334M050EL     | QDT1-14          | S050-R339    |  |
| C811     | 10 25V   |                  |                           | TDC106M025FL     | QDT1-64          | S025-109     |  |
| C815     | 100 6.3V |                  | PC100-10                  | VTT100E10        | QV1-93           | EV-1130      |  |
| C852     | 10 10V   |                  |                           | TDC106M025FL     | QDT1-64          | S025-109     |  |
| C928     | 10 10V   |                  | PC10-25                   | VTT10B25         | QV1-41           | EV-1222      |  |

CAPACITORS

| 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 |
| C101     | 27 N220    |                |                    |                           | *                |                  | 10TCR-Q27    |
| C102     | 22 N220    |                |                    |                           | *                |                  | 10TCR-Q22    |
| C103     | .01        |                | UK50-103           |                           | MAG5011          |                  |              |
| C104     | 62 N220 5% |                |                    |                           | *                |                  |              |
| C105     | .039       |                | DC-104             | MGP1                      | TA010            | QC2-233          | TG-P10       |
| C106     | .039       |                | DC-104             | MGP1                      | TA010            | QC2-233          | TG-P10       |
| C107     | 15 N220    |                |                    |                           | *                |                  | 10TCR-Q15    |
| C108     | .01        |                | UK50-103           |                           | MAG5011          |                  |              |
| C109     | .039       |                | DC-104             | MGP1                      | TA010            | QC2-233          | TG-P10       |
| C301     | 2 N220     |                |                    |                           | *                |                  |              |
| C302     | .039       |                | DC-104             | MGP1                      | TA010            | QC2-233          | TG-P10       |
| C303     | 47 N220 5% |                |                    |                           | *                |                  |              |
| C304     | .039 50V   |                |                    |                           | M192P3939R8      |                  |              |
| C305     | .039       |                | DC-104             | MGP1                      | TA010            | QC2-233          | TG-P10       |
| C306     | 68         |                | DTZ-68             | NP068                     | CN0468           |                  | 10TCR-Q68    |

PARTS LIST AND DESCRIPTION (CONTINUED)  
(When ordering parts, state Model, Part Number, and Description.)

CAPACITORS (cont)

| 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 |
| C307     | .039      |                | DC-104             | MGP1                      | TA010            | QC2-233          | TG-P10       |
| C308     | .039      |                | DC-104             | MGP1                      | TA010            | QC2-233          | TG-P10       |
| C309     | .039      |                | DC-104             | MGP1                      | TA010            | QC2-233          | TG-P10       |
| C310     | .039 50V  |                |                    |                           | M192P3939R8      |                  | 192P3939R8   |
| C311     | .039      |                | DC-104             | MGP1                      | TA010            | QC2-233          | TG-P10       |
| C312     | .022 50V  |                | DC-104             | MGP1                      | M192P2239R8      |                  | 192P2239R8   |
| C315     | .039      |                | DC-104             | MGP1                      | TA010            | QC2-233          | TG-P10       |
| C316     | .039 50V  |                |                    |                           | M192P3939R8      |                  | 192P3939R8   |
| C502     | .022 50V  |                |                    |                           | M192P2239R8      |                  | 192P2239R8   |
| C504     | .068 50V  |                |                    | WMF1S68                   | EWFA1A168        | QF1-195          | 1PB-S68      |
| C505     | .022 50V  |                |                    |                           | M192P2239R8      |                  | 192P2239R8   |
| C507     | 300 10%   |                | DD-301             | GP300                     | GP330            |                  | 10TS-T30     |
| C510     | .022 50V  |                |                    |                           | M192P2239R8      |                  | 192P2239R8   |
| C511     | .01 50V   |                |                    | WMF1S1                    | EWFA1A110        | QF1-91           | 1PB-S10      |
| C512     | .039      |                | DC-104             | MGP1                      | TA010            | QC2-233          | TG-P10       |
| C513     | 5 N220    |                |                    |                           | *                |                  | 10TCR-V50    |
| C514     | .0047 10% |                | DD-472             | GP4700                    | GP247            |                  | 56A-D47      |
| C602     | .039      |                | DC-104             | MGP1                      | TA010            | QC2-233          | TG-P10       |
| C604     | .01       |                | UK50-103           |                           | MAG5011          |                  |              |
| C606     | .0047 10% |                | DD-472             | GP4700                    | GP247            |                  | 56A-D47      |
| C702     | .039 50V  |                |                    |                           | M192P3939R8      |                  | 192P3939R8   |
| C703     | .01 50V   |                |                    | WMF1S1                    | EWFA1A110        | QF1-91           | 1PB-S10      |
| C704     | .0047 50V |                |                    |                           | M192P4729R8      |                  | 192P4729R8   |
| C707     | .0047 10% |                | DD-472             | GP4700                    | GP247            |                  | 56A-D47      |
| C709     | .022 50V  |                |                    |                           | M192P2239R8      |                  | 192P2239R8   |
| C710     | .01 50V   |                |                    | WMF1S1                    | EWFA1A110        | QF1-91           | 1PB-S10      |
| C711     | .01 50V   |                |                    | WMF1S1                    | EWFA1A110        | QF1-91           | 1PB-S10      |
| C712     | .022 50V  |                |                    |                           | M192P2239R8      |                  | 192P2239R8   |
| C714     | .033 50V  |                |                    |                           | M192P3339R8      |                  | 192P3339R8   |
| C715     | .022 50V  |                |                    |                           | M192P2239R8      |                  | 192P2239R8   |
| C717     | .01 50V   |                |                    | WMF1S1                    | EWFA1A110        | QF1-91           | 1PB-S10      |
| C718     | .022 50V  |                |                    |                           | M192P2239R8      |                  | 192P2239R8   |
| C719     | .0047 10% |                | DD-472             | GP4700                    | GP247            |                  | 56A-D47      |
| C720     | 82 5%     |                | DTZ-82             | NP082                     | CN0482           |                  | 10TCC-Q82    |
| C721     | 220 10%   |                | DTZ-220            |                           |                  |                  | 10TCC-T22    |
| C723     | .022 50V  |                |                    |                           | M192P2239R8      |                  | 192P2239R8   |
| C724     | .15 50V   |                |                    | WMF05P15                  | EWFO5015         | QF1-91           | 431P1549R5   |
| C727     | .01 50V   |                |                    | WMF1S1                    | EWFA1A110        |                  | 1PB-S10      |
| C728     | .001      |                | DD-102             |                           | GP210            |                  | 10TS-D10     |
| C729     | .001      |                | DD-102             |                           | GP210            |                  | 10TS-D10     |
| C730     | .001      |                | DD-102             |                           | GP210            |                  | 10TS-D10     |
| C731     | .001      |                | DD-102             |                           | GP210            |                  | 10TS-D10     |
| C733     | .1        |                | DC-104             | MGP1                      | TA010            | QC2-233          | TG-P10       |
| C734     | .001      |                | DD-102             |                           | GP210            |                  | 10TS-D10     |
| C735     | .001      |                | DD-102             |                           | GP210            |                  | 10TS-D10     |
| C736     | .001      |                | DD-102             |                           | GP210            |                  | 10TS-D10     |
| C738     | .001      |                | DD-102             |                           | GP210            |                  | 10TS-D10     |
| C739     | .001      |                | DD-102             |                           | GP210            |                  | 10TS-D10     |
| C740     | .039      |                | DC-104             | MGP1                      | TA010            | QC2-233          | TG-P10       |
| C741     | .001      |                | DD-102             |                           | GP210            |                  | 10TS-D10     |
| C742     | .01 50V   |                |                    | WMF1S1                    | EWFA1A110        | QF1-91           | 1PB-S10      |
| C801     | .01       |                | UK50-103           |                           | MAG5011          |                  |              |
| C802     | 150 10%   |                | DTZ-150            |                           | CN0315           |                  | 10TCC-T15    |
| C803     | 100 10%   |                | DTZ-100            | NP0100                    | CN0310           |                  | 10TCC-T10    |
| C804     | 10        |                | DTZ-10             | NP010                     | CN0410           |                  | 10TCC-Q10    |
| C805     | 3         |                | DTZ-3R3            | NP03P3                    | CN0533           |                  | 10TCC-V33    |
| C806     | 100 N220  |                |                    |                           | *                |                  | 10TCR-T10    |
| C807     | .01       |                | UK50-103           |                           | MAG5011          |                  |              |
| C808     | .01       |                | UK50-103           |                           | MAG5011          |                  |              |
| C812     | 12        |                |                    |                           | CN0412           |                  | 10TCC-Q12    |
| C813     | 47        |                | DTZ-47             | NP047                     | CN0447           |                  | 10TCC-Q47    |
| C814     | 25 N220   |                |                    |                           | *                |                  | 10TCR-Q25    |
| C816     | 5         |                | DTZ-4R7            | NP04P7                    | CN0547           |                  | 10TCC-V47    |
| C817     | .01       |                | UK50-103           |                           | MAG5011          |                  |              |
| C818     | 15        |                | DTZ-15             | NP015                     | CN0415           |                  | 10TCC-Q15    |
| C819     | .01       |                | UK50-103           |                           | MAG5011          |                  |              |
| C820     | 68        |                | DTZ-68             | NP068                     | CN0468           |                  | 10TCC-Q68    |
| C821     | 68        |                | DTZ-68             | NP068                     | CN0468           |                  | 10TCC-Q68    |
| C822     | .001      |                | DD-102             |                           | GP210            |                  | 10TS-D10     |
| C823     | .01       |                | UK50-103           |                           | MAG5011          |                  |              |
| C824     | 130 5%    |                |                    |                           |                  |                  |              |
| C825     | .01       |                | UK50-103           |                           | MAG5011          |                  |              |
| C826     | 40        |                |                    |                           | CN0439           |                  | 10TCC-Q39    |
| C827     | 70        |                | DTZ-68             | NP068                     | CN0468           |                  | 10TCC-Q68    |
| C828     | 39 5%     |                |                    |                           | CN0439           |                  | 10TCC-Q39    |
| C829     | 200 10%   |                | DTZ-200            |                           |                  |                  | 10TCC-T20    |
| C830     | .01       |                | UK50-103           |                           | MAG5011          |                  |              |
| C831     | 15        |                | DTZ-15             | NP015                     | CN0415           |                  | 10TCC-Q15    |
| C832     | 150 10%   |                | DTZ-150            |                           | CN0315           |                  | 10TCC-T15    |
| C833     | 220 10%   |                | DTZ-220            |                           |                  |                  | 10TCC-T22    |
| C834     | .039      |                | DC-104             | MGP1                      | TA010            | QC2-233          | TG-P10       |
| C835     | .01       |                | UK50-103           |                           | MAG5011          |                  |              |
| C836     | 500       |                | DD-501             | GP500                     | GP350            |                  | 10TS-T50     |
| C837     | 10        |                | DTZ-10             | NP010                     | CN0410           |                  | 10TCC-Q10    |
| C838     | .01       |                | UK50-103           |                           | MAG5011          |                  |              |
| C839     | .039      |                | DC-104             | MGP1                      | TA010            | QC2-233          | TG-P10       |
| C840     | 82 N220   |                |                    |                           | *                |                  | 10TCR-Q82    |
| C841     | 30        |                | DTZ-33             | NP033                     | CN0433           |                  | 10TCC-Q33    |
| C842     | 82 N220   |                |                    |                           | *                |                  | 10TCR-Q82    |
| C843     | 15        |                | DTZ-15             | NP015                     | CN0415           |                  | 10TCC-Q15    |
| C844     | .001      |                | DD-102             |                           | GP210            |                  | 10TS-D10     |
| C845     | 150 N220  |                |                    |                           | *                |                  | 10TCR-T15    |
| C846     | .039      |                | DC-104             | MGP1                      | TA010            | QC2-233          | TG-P10       |
| C847     | 5         |                | DTZ-4R7            | NP04P7                    | CN0547           |                  | 10TCC-V47    |
| C848     | 150 N220  |                |                    |                           | *                |                  | 10TCR-T15    |
| C849     | 3         |                | DTZ-3R3            | NP03P3                    | CN0533           |                  | 10TCC-V33    |
| C850     | 50 N220   |                |                    |                           | *                |                  | 10TCR-Q50    |
| C851     | .01 50V   |                |                    | WMF1S1                    | EWFA1A110        | QF1-91           | 1PB-S10      |
| C901     | 500 10%   |                | DD-501             | GP500                     | GP350            |                  | 10TS-T50     |

## PARTS LIST AND DESCRIPTION (CONTINUED)

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

### CAPACITORS (cont)

| ITEM No. | RATING       | MFR. PART No. | REPLACEMENT DATA   |                           |                  |                |                       |
|----------|--------------|---------------|--------------------|---------------------------|------------------|----------------|-----------------------|
|          |              |               | CENTRALAB PART No. | CORNELL-DUBILIER PART No. | MALLORY PART No. | SPRAGUE Q-LINE | PART No. GENERAL LINE |
| C902     | .022         |               |                    |                           | M192P2239R8      |                | 192P2239R8            |
| C903     | 47 N220 5%   |               |                    |                           | *                |                | 10TCR-Q47             |
| C905     | .039         |               | DC-104             | MGP1                      | TA010            | QC2-233        | TG-P10                |
| C906     | .039         |               | DC-104             | MGP1                      | TA010            | QC2-233        | TG-P10                |
| C907     | .0022        |               |                    |                           | GP222            |                | 10TS-D22              |
| C908     | 82 N220 5%   |               |                    |                           | *                |                | 10TCR-Q82             |
| C909     | 180 N220 10% |               |                    |                           | *                |                | 10TCR-T18             |
| C910     | .039         |               | DC-104             | MGP1                      | TA010            | QC2-233        | TG-P10                |
| C911     | .0022        |               |                    |                           | GP222            |                | 10TS-D22              |
| C912     | .01          |               | UK50-103           |                           | MAG5011          |                |                       |
| C913     | 390 10%      |               | DD-391             | GP390                     | GP339            |                | 10TS-T39              |
| C914     | 270 10%      |               | DD-271             | GP270                     | GP327            |                | 10TS-T27              |
| C915     | 150 10%      |               | DTZ-150            |                           | CN0315           |                | 10TCC-T15             |
| C916     | 27           |               |                    |                           | CN0427           |                | 10TCC-Q27             |
| C917     | .039         |               | DC-104             | MGP1                      | TA010            | QC2-233        | TG-P10                |
| C918     | .01          |               | UK50-103           |                           | MAG5011          |                |                       |
| C919     | .01          |               | UK50-103           |                           | MAG5011          |                |                       |
| C920     | .01          |               | UK50-103           |                           | MAG5011          |                |                       |
| C921     | .01          |               | UK50-103           |                           | MAG5011          |                |                       |
| C922     | .01          |               | UK50-103           |                           | MAG5011          |                |                       |
| C923     | .039         |               | DC-104             | MGP1                      | TA010            | QC2-233        | TG-P10                |
| CT801    | 30           | 4-224R157     |                    |                           |                  |                |                       |

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

### CONTROLS (All wattages 1/2 watt, or less, unless listed)

| ITEM No. | FUNCTION            | RESISTANCE | REPLACEMENT DATA |                    |                  |              |
|----------|---------------------|------------|------------------|--------------------|------------------|--------------|
|          |                     |            | MFR. PART No.    | CENTRALAB PART No. | MALLORY PART No. | TRW PART No. |
| VR1      | AGC Voltage         | 100K       | 4-222R781        |                    |                  | U260R104B    |
| VR2      | Squelch             | 10K        | 4-222R512        |                    |                  |              |
| VR3      | Squelch Range       | 50K        | 4-222R780        |                    |                  | U260R503B    |
| VR4      | S Meter             | 10K        | 4-222R778        |                    |                  | U260R103B    |
| VR5      | Volume/Power Switch | 10K        | 4-222R526        |                    |                  |              |
| VR6      | AMC                 | 1000       | 4-222R775        |                    |                  | U260R102B    |
| VR7      | RF Meter            | 50K        | 4-222R780        |                    |                  | U260R503B    |

### RESISTORS (Power and Special)

| ITEM No. | RATING           | REPLACEMENT DATA |               | ITEM No. | RATING        | REPLACEMENT DATA |               |
|----------|------------------|------------------|---------------|----------|---------------|------------------|---------------|
|          |                  | WORKMAN PART No. | MFR. PART No. |          |               | WORKMAN PART No. | MFR. PART No. |
| IR501    | Resistor Network |                  | 4-221R804     | TH501    | 4900 Cold NTC |                  | SDT-500GR     |
| IR801    | Resistor Network | (1)              | 4-221R803     |          |               |                  |               |

(1) Consists of seven 47K resistors.

### COILS (RF-IF)

| ITEM No. | FUNCTION                 | REPLACEMENT DATA |                      |                 | REMARKS |
|----------|--------------------------|------------------|----------------------|-----------------|---------|
|          |                          | PART No.         | OTHER IDENTIFICATION | MILLER PART No. |         |
| F901     | TVI Trap (54MHz)         | 4-253R919        |                      |                 |         |
| L101     | Antenna Matching (27MHz) | 4-257R815        | 7R815                | CBS126          |         |
| L102     | RF Amp (27MHz)           | 4-259R828        | 9R828                | CBS742-T        |         |
| L801     | RF Choke (100MHz)        | 4-253R706        | 101                  | 9250-104        |         |
| L901     | XMT Buffer (27MHz)       | 4-259R865        | F865                 |                 |         |
| L902     | RF Choke                 | 4-253R709        |                      | 74F186AP        |         |
| L903     | XMT Driver (27MHz)       | 4-259R891        |                      |                 |         |
| L904     | RF Choke                 | 4-265R802        |                      |                 |         |
| L905     | Loading Final (27MHz)    | 4-259R80810      |                      |                 |         |
| L906     | Pi Filter                | 4-253R715        |                      |                 |         |
| L907     | RF Choke                 | 4-259R89810      |                      |                 |         |
| T301     | Mixer (9.785MHz)         | 4-256R75130      |                      |                 |         |
| T302     | Mixer (9.785MHz)         | 4-256R74930      |                      |                 |         |
| T303     | IF (455kHz)              | 4-256R748        | 6R7483072            | 8535            |         |
| T304     | IF (455kHz)              | 4-256R734        | T7346512             |                 |         |
| T801     | Mixer (10.240MHz)        | 4-259R872        |                      |                 |         |
| T802     | Oscillator (37MHz)       | 4-259R890        |                      |                 |         |
| T803     | Amp (37MHz)              | 4-259R875        | 87566Y               |                 |         |
| T804     | Mixer (27MHz)            | 4-259R876        | 876                  |                 |         |
| T805     | Amp (27MHz)              | 4-259R886        | 88686K               |                 |         |
| T806     | Amp (27MHz)              | 4-259R886        | 886                  |                 |         |
| T807     | Amp (27MHz)              | 4-259R887        | 88766Y               |                 |         |

### FILTER CHOKE

| ITEM No. | RATINGS            |         |                              | REPLACEMENT DATA      |                     |                | NOTES               |
|----------|--------------------|---------|------------------------------|-----------------------|---------------------|----------------|---------------------|
|          | CURRENT (Measured) | DC RES. | INDUCTANCE (0 CURRENT 1000~) | MFR. PART No.         | THORDARSON PART No. | TRIAD PART No. |                     |
| T702     | 1.35A              | .128    | 1.3mH                        | 4-255R810<br>R810 (1) |                     |                | (L) Number on unit. |

CHANNEL MASTER MODEL CB6834

## PARTS LIST AND DESCRIPTION (CONTINUED)

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

### TRANSFORMER (Audio Output)

| ITEM No. | IMPEDANCE |                | REPLACEMENT DATA      |                     |                | NOTES               |
|----------|-----------|----------------|-----------------------|---------------------|----------------|---------------------|
|          | PRI.      | SEC.           | MFGR. PART No.        | THORDARSON PART No. | TRIAD PART No. |                     |
| T701     | 3.4       | 1 2<br>8 20.48 | 4-254R811<br>4R811(1) |                     | MCB46          | (1) Number on unit. |

### SPEAKER

| ITEM No. | TYPE  |        | REPLACEMENT DATA |               | NOTES |
|----------|-------|--------|------------------|---------------|-------|
|          |       |        | MFGR. PART No.   | QUAM PART No. |       |
| SP       | 3" PM | 8 Ohms | 4-151R813        | 30A05Z8R      |       |

### FUSE DEVICES

| ITEM No. | DESCRIPTION     | REPLACEMENT DATA |        |               |        |                     |        |
|----------|-----------------|------------------|--------|---------------|--------|---------------------|--------|
|          |                 | PART No.         |        | BUSS PART No. |        | LITTELFUSE PART No. |        |
|          |                 | DEVICE           | HOLDER | DEVICE        | HOLDER | DEVICE              | HOLDER |
| F1       | 2A Quick Acting |                  |        | AGC2          | HRK    | 312002              | 150145 |

### 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      | 4-153R80901A     | 18-032      | 18-034          | 18-010   | 18-094          | 2      | 4         | 3         | 1       | NC       | 4        |

### MISCELLANEOUS

| ITEM No. | PART NAME  | PART No.     | NOTES                                                                 |
|----------|------------|--------------|-----------------------------------------------------------------------|
| D508     | LED        | SLP123B02    | XMT Modulation (1.70V @ 14mA)                                         |
| D611     | LED        | SL-1271      | Channel Indicator Tens & Units (Each segment supplied 1.97V @ 8.75mA) |
| F301     | Filter     | 4-253R910    | 455kHz (CFU-455H) HF                                                  |
| F302     | Filter     | 4-253R804    | 455kHz (SF-455D)                                                      |
| J1       | Jack       | 4-235R806    | Antenna                                                               |
| J2       | Jack       | 4-235R829    | PA Speaker                                                            |
| J3       | Jack       | 4-235R829    | External Speaker                                                      |
| J4       | Jack       | 4-235R815    | Microphone                                                            |
| M1       | Meter      | 4-511R809    | XMT Power/Signal Assembly                                             |
| PL1      | Lamp       | 4-612R81771  | Meter (11.80V @ 32mA)                                                 |
| S1       | Switch     | 4-231R223    | ANL On/Off                                                            |
| S2       | Switch     | 4-231R526    | Channel Selector                                                      |
| S3       | Switch     | 4-231R223    | Delta Tune                                                            |
| S4       | Switch     | 4-231R221    | CB/PA                                                                 |
| S5       | Switch     |              | Power On/Off (Part of volume control)                                 |
| X1       | Crystal    | 4-225R830    | 10.240MHz (10.238MHz)                                                 |
| X2       | Crystal    | 4-225R840    | 11.690MHz                                                             |
| X3       | Crystal    | 4-225R842    | 9.783MHz                                                              |
|          | Cord       | 4-243R20501A | Assembly, DC Power                                                    |
|          | P.C. Board | 4-226R963A   | PLL                                                                   |
|          | P.C. Board | 4-226R95701  | Channel Selector and Channel Indicator                                |
|          | P.C. Board |              | Main                                                                  |
|          | P.C. Board |              | Switch                                                                |

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

| ITEM                            | PART No.      | ITEM                                     | PART No.      |
|---------------------------------|---------------|------------------------------------------|---------------|
| Front Panel Assembly            | 176-0-122R134 | Knob Assembly, Volume, Squelch & RF Gain | 176-2-372R102 |
| Knob Assembly, Channel Selector | 176-0-163R126 |                                          |               |