



# PHOTOFACT<sup>®</sup> with

# CIRCUITRACE<sup>®</sup>

For Supplier Address See PHOTOFACT Index

## NOTE

ONLY THOSE PERSONS PROPERLY LICENSED ARE PERMITTED TO MAKE REPAIRS OR ADJUSTMENTS WHICH MAY RESULT IN ILLEGAL OPERATION. (REFER TO FCC RULES AND REGULATIONS PART 95, SUBPARTS 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 Telsat SSB-50A (99-32849W)

## SYNTHESIZER ALIGNMENT

Trimmer capacitors should not require adjustment unless an oscillator circuit component has been replaced.

### 23MHz OSCILLATOR

Connect a frequency meter or counter input to TP1 (emitter of Q1). Set FINE TUNE control to center position. Key transmitter and adjust to frequency  $\pm 25\text{Hz}$ .

| CHANNEL SELECTOR | ADJUST | FREQUENCY |
|------------------|--------|-----------|
| 1                | TC1    | 23.330MHz |
| 5                | TC2    | 23.380MHz |
| 9                | TC3    | 23.430MHz |
| 13               | TC4    | 23.480MHz |
| 17               | TC5    | 23.530MHz |
| 21               | TC6    | 23.580MHz |

With FINE TUNE control in center position oscillator frequency should not change when transmitter is un-keyed; adjust trimmer on back of FINE TUNE control to equalize transmit and receive frequencies if necessary.

### 14MHz OSCILLATORS

Connect a frequency meter or counter to TP3 (emitter of Q3). Set mode switch to USB or AM. Adjust to frequency  $\pm 5\text{Hz}$ .

| CHANNEL SELECTOR | ADJUST | FREQUENCY |
|------------------|--------|-----------|
| 1                | TC7    | 14.910MHz |
| 2                | TC8    | 14.920MHz |
| 3                | TC9    | 14.930MHz |
| 4                | TC10   | 14.950MHz |

Connect frequency meter or counter to TP4 (emitter of Q4). Set mode switch to LSB. Adjust to frequency  $\pm 5\text{kHz}$ .

| CHANNEL SELECTOR | ADJUST | FREQUENCY |
|------------------|--------|-----------|
| 1                | TC11   | 14.907MHz |
| 2                | TC12   | 14.917MHz |
| 3                | TC13   | 14.927MHz |
| 4                | TC14   | 14.947MHz |

### 11MHz OSCILLATORS

Connect a frequency meter or counter to TP6 (emitter of Q6). Set mode switch to USB. Adjust TC15 to frequency of 11.275MHz.

Connect frequency meter or counter to TP7 (emitter of Q7). Set mode switch to LSB. Adjust TC16 to frequency of 11.272MHz.

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

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LAFAYETTE MODEL TELSAT SSB-50A

## RECEIVER ALIGNMENT

|                                                 |                   |
|-------------------------------------------------|-------------------|
| Suggested Alignment Tools:                      | GC ELECTRONICS    |
| L1 thru L16, L21, L24, L26, L30, L32, L33 ..... | #9440             |
| L18, L26 thru L29, L31 .....                    | #9087, 9089       |
| L19, L20 .....                                  | #9440, 9295, 9302 |

Connect an AC VTVM across speaker voice coil. Set SQUELCH control fully counterclockwise, FINE TUNE to center position, and ANL/NS to ANL. Adjust VOLUME control for suitable reading.

AM

| SIGNAL GENERATOR                                                                                                                                                                                                                                              | CHANNEL | ADJUST                              | REMARKS                                                                                                                             |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|-------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|
| Connect high side thru .01mfd to cathode of D35 or D36 (2nd Mixer), low side to ground. Set to 455kHz (Mod).                                                                                                                                                  | Any     | L29,<br>L28,<br>L27,<br>MF          | Set mode switch to AM.<br>Adjust for maximum.                                                                                       |
| Connect high side thru .01mfd to antenna connector, low side to chassis. Set to 27.085MHz. (Channel 11) (Mod.)                                                                                                                                                | 11      | L33,<br>L26,<br>L24,<br>L23,<br>L22 | Adjust for maximum.                                                                                                                 |
| AM SQUELCH ADJUSTMENT<br><br>Connect high side thru .01mfd to antenna connector, low side to chassis. Set to 27.085MHz (Channel 11) (Unmod). Set output level to desired squelch maximum.                                                                     | 11      | RV15                                | Turn SQUELCH control fully clockwise (maximum). Adjust until squelch just opens.                                                    |
| AM S-METER ADJUSTMENT<br><br>As above. Set output level to 150uv.                                                                                                                                                                                             | 11      | RV14                                | Adjust for reading of 9 on S-RF meter.                                                                                              |
| SSB<br><br>Connect high side thru .01mfd to antenna connector, low side to chassis. Set output to 27.086MHz. (Unmod).                                                                                                                                         | 11      | L25,<br>L10,<br>L21,<br>RV11        | Set mode switch to USB. Adjust for maximum.                                                                                         |
| SSB SQUELCH ADJUSTMENT<br><br>As above. Set output level to desired squelch maximum.                                                                                                                                                                          | 11      | RV12                                | Turn SQUELCH control fully clockwise. Adjust until squelch just opens.                                                              |
| SSB S-METER ADJUSTMENT<br><br>As above. Set output level to 150uv.                                                                                                                                                                                            | 11      | RV13                                | Adjust for reading of 9 on S-RF meter.                                                                                              |
| NOISE SILENCER ADJUSTMENT<br><br>Connect high side thru .01mfd to antenna connector, low side to chassis. Set to approximately 24MHz. (Mod). Connect the vertical input of an oscilloscope to observe detected signal, high side to TP25, low side to ground. |         | L32,<br>L31,<br>L30,<br>TC19        | Set ANL/NS switch to NS. Adjust for maximum without causing oscillation. Band width should be at least 500kHz, centered near 24MHz. |

AM

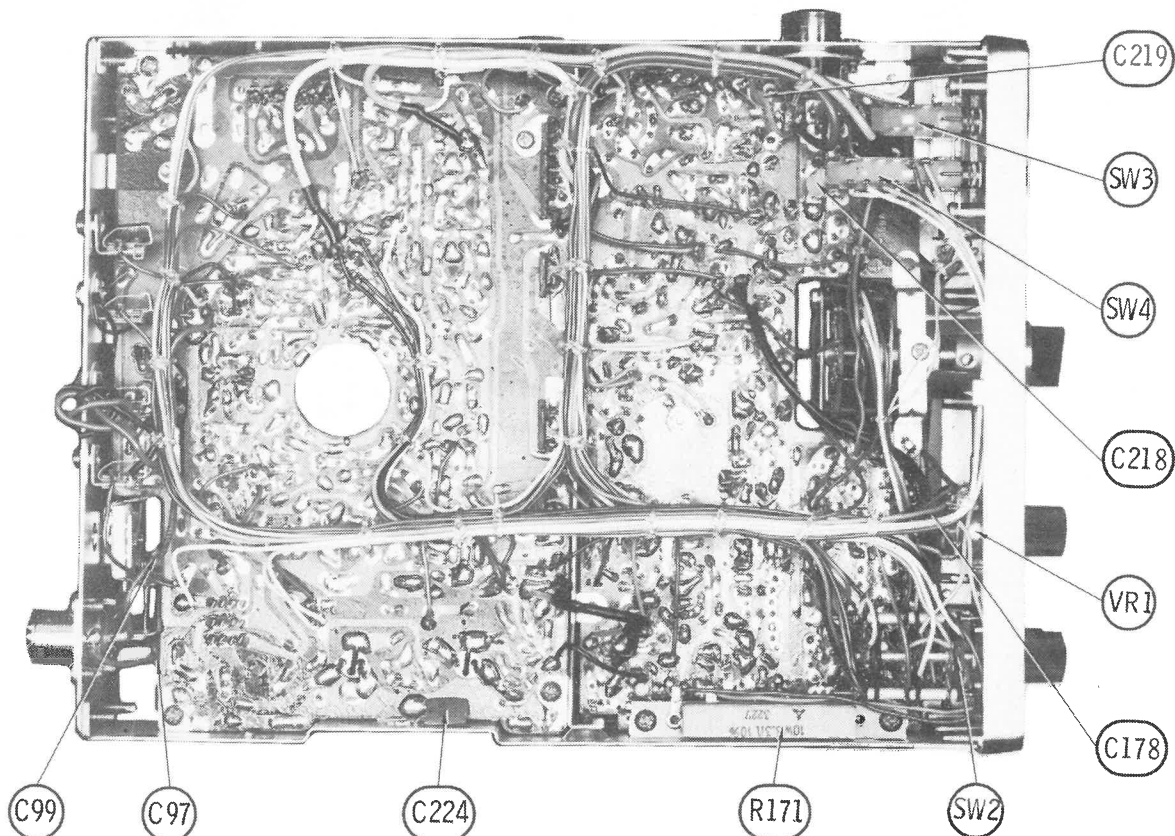
## TRANSMITTER ALIGNMENT

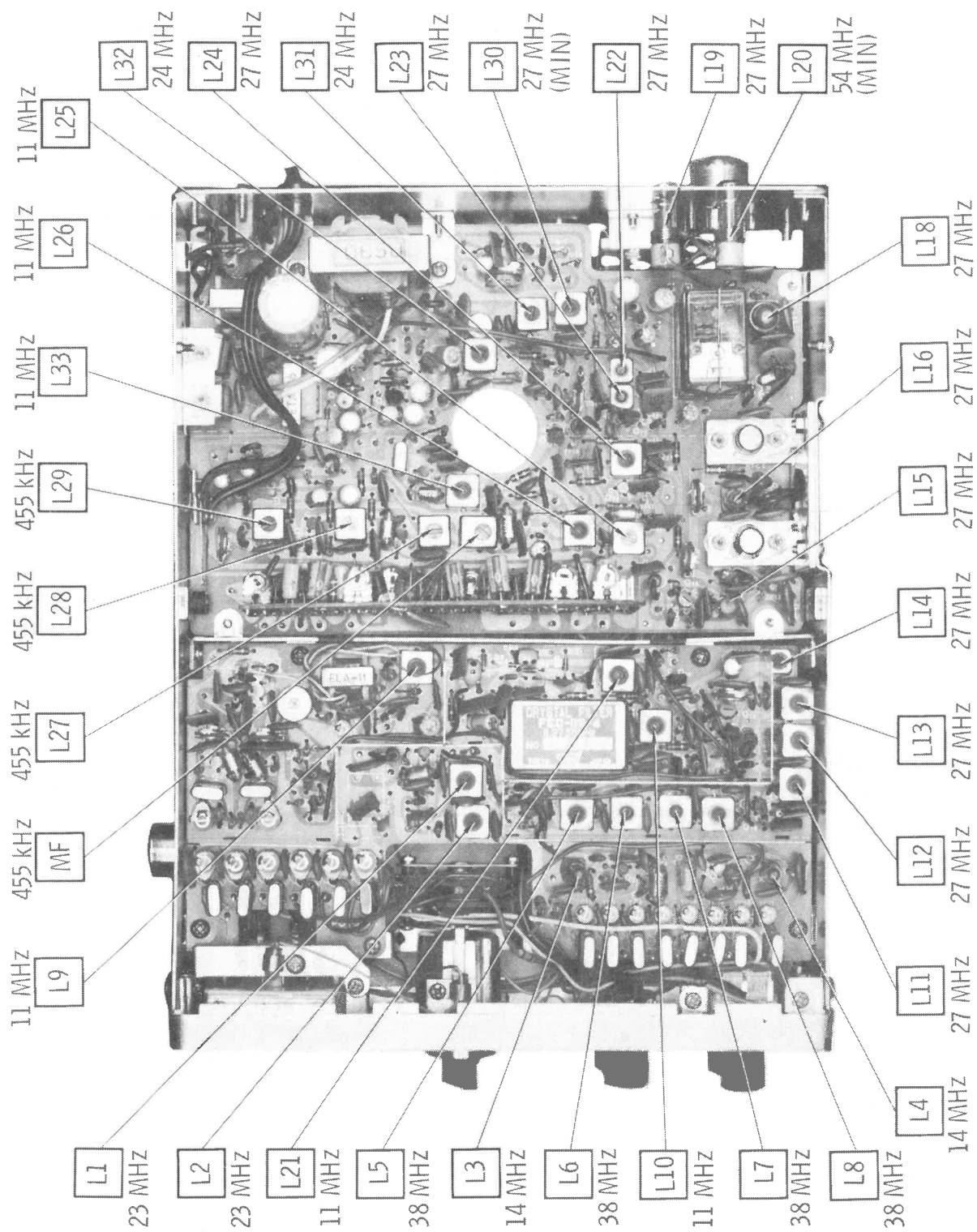
| INDICATOR                                                                                                                                   | ADJUST                                                 | REMARKS                                                                                                     |
|---------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|-------------------------------------------------------------------------------------------------------------|
| Measure voltage to ground at TP12 with a DC VTVM.                                                                                           | L1, L2,<br>L5, L6, L7<br>L8, L11,<br>L12, L13,<br>L14. | Set mode switch to AM. Key transmitter and adjust for MINIMUM voltage, approximately equal on all channels. |
| Connect an RF wattmeter between antenna connector and dummy load. Insert a 0-500ma DC ammeter in collector circuit of Q13 (RF Amp) at TP14. | L15,<br>L16,<br>L18,<br>L19,<br>TC18.                  | Adjust for maximum output. Readjust L19 to reduce DC input to 5 watts.                                      |
| RF-METER ADJUSTMENT<br><br>RF wattmeter as above.                                                                                           | RV6                                                    | Adjust for S-RF meter reading to agree with wattmeter.                                                      |

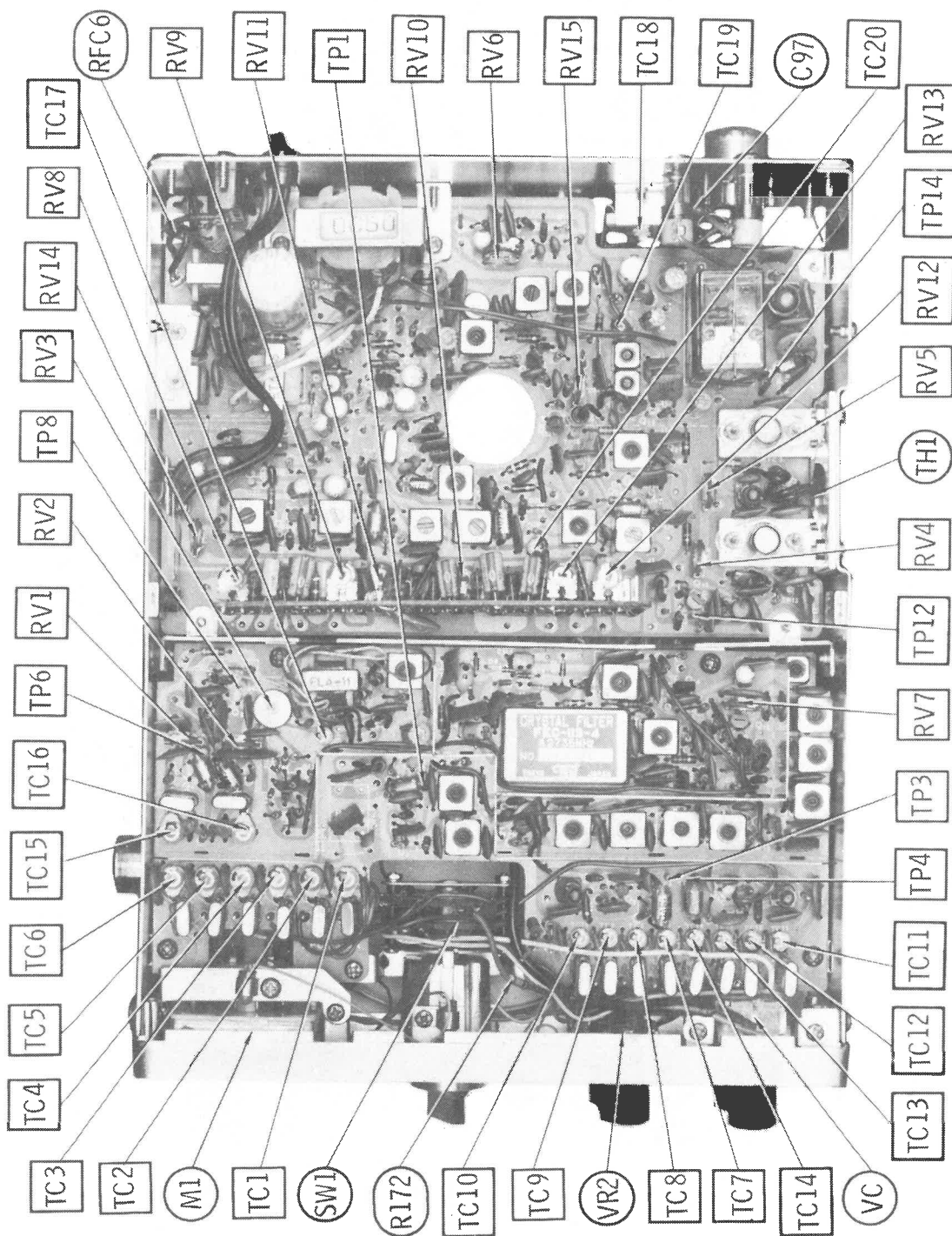
## TRANSMITTER ALIGNMENT

| INDICATOR                                                                                                                                                     | ADJUST        | REMARKS                                                                                                                                                                       |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| AM MODULATION ADJUSTMENT<br><br>Connect a modulation monitor across dummy load.                                                                               | RV8           | Key transmitter, speak into microphone, adjust to limit modulation to 100%.                                                                                                   |
| SSB BALANCED MODULATOR ADJUSTMENT<br><br>Measure voltage to ground at TP8 with a DC VTVM.                                                                     | RV1,<br>RV2.  | Adjust for equal readings at TP8 with mode switch in USB (RV1) and LSB (RV2) (approximately 1.7V).                                                                            |
| Connect an RF voltmeter across dummy load.                                                                                                                    | RV3,<br>TC17. | Set mode switch to USB or LSB. Remove microphone plug from socket; key transmitter by shorting point A to ground. Adjust for MINIMUM RF output. Remove short key transmitter. |
| Connect an audio frequency generator to center connector of microphone socket. Set to 1kHz. Connect an RF wattmeter between antenna connector and dummy load. | L9,<br>L10    | Adjust output level of audio generator for RF output of about 1 watt. Adjust L9 and L10 for maximum output.                                                                   |
| SSB BIAS ADJUSTMENT<br><br>Measure voltage to ground at the junction of R48 and RV4 (RF Driver emitter circuit).                                              | RV4           | Set mode switch to USB or LSB. Adjust for 7.50V.                                                                                                                              |
| Measure voltage at junction of R51 and RV5. (RF Final Amp emitter circuit).                                                                                   | RV5           | Adjust for 5.00V.                                                                                                                                                             |
| TV1 ADJUSTMENT<br><br>TV receiver tuned to channel 2.                                                                                                         | L20           | Set mode switch to AM. Key transmitter; adjust for MINIMUM interference.                                                                                                      |

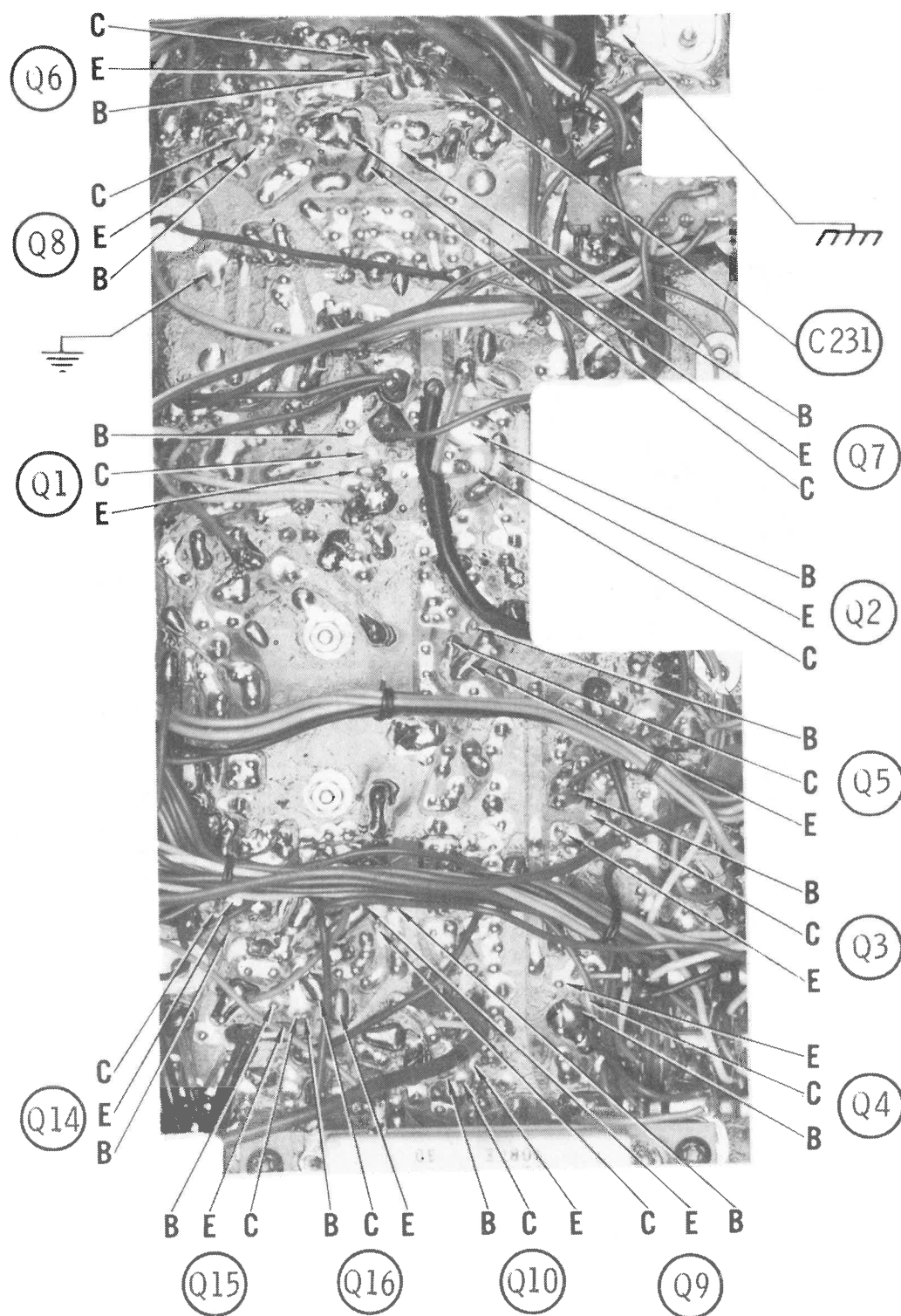
LAFAYETTE MODEL TELSAT SSB-50A



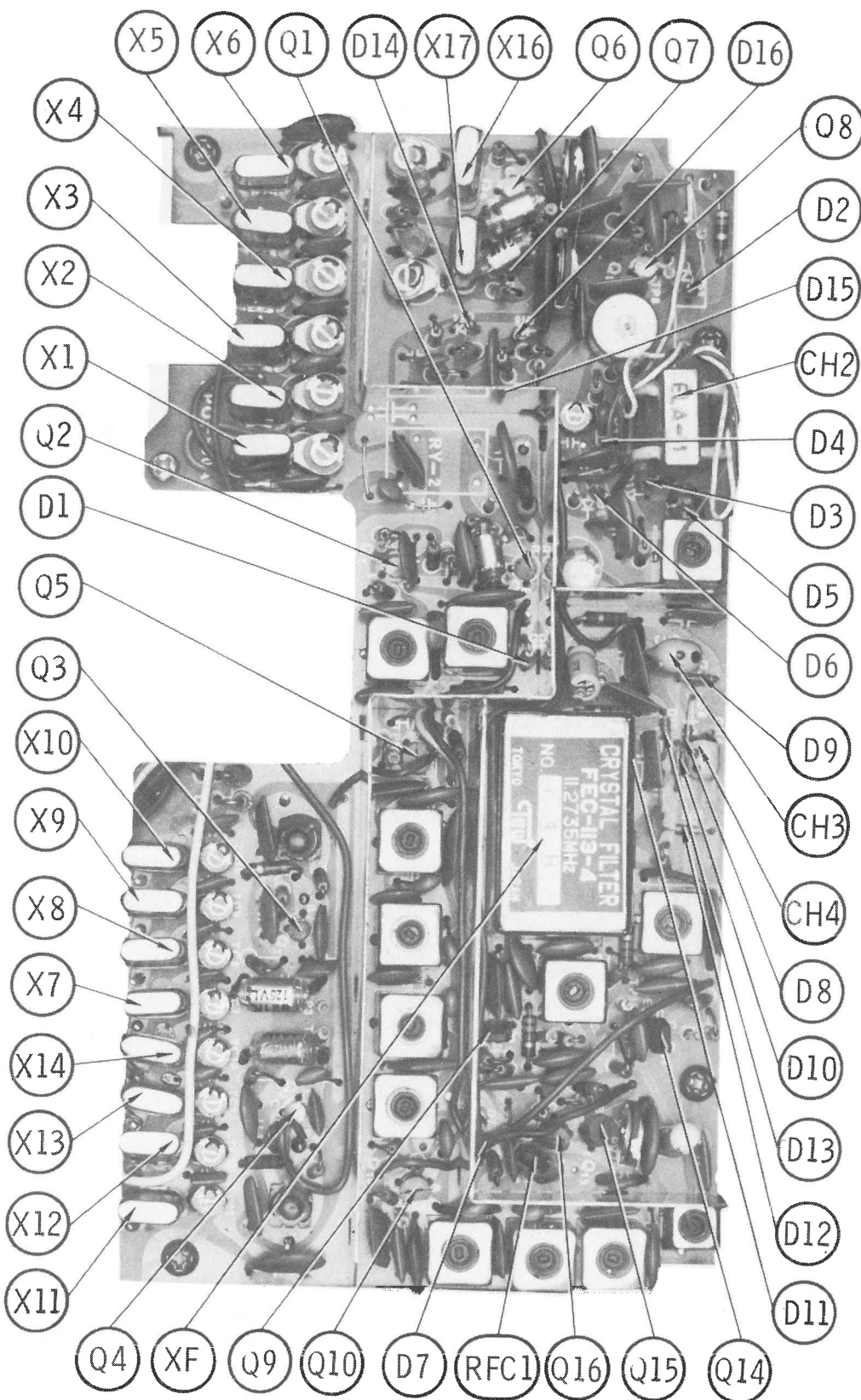




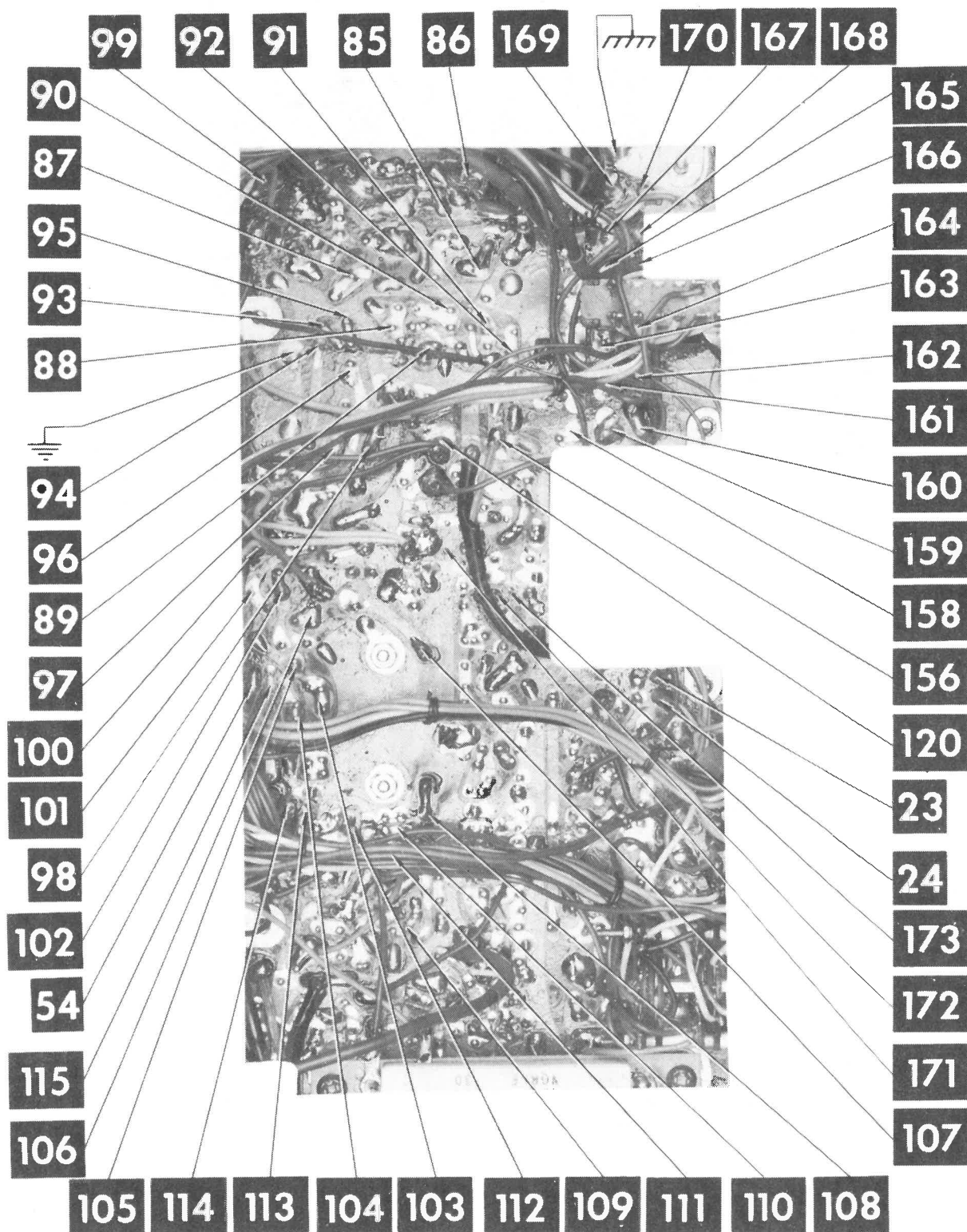
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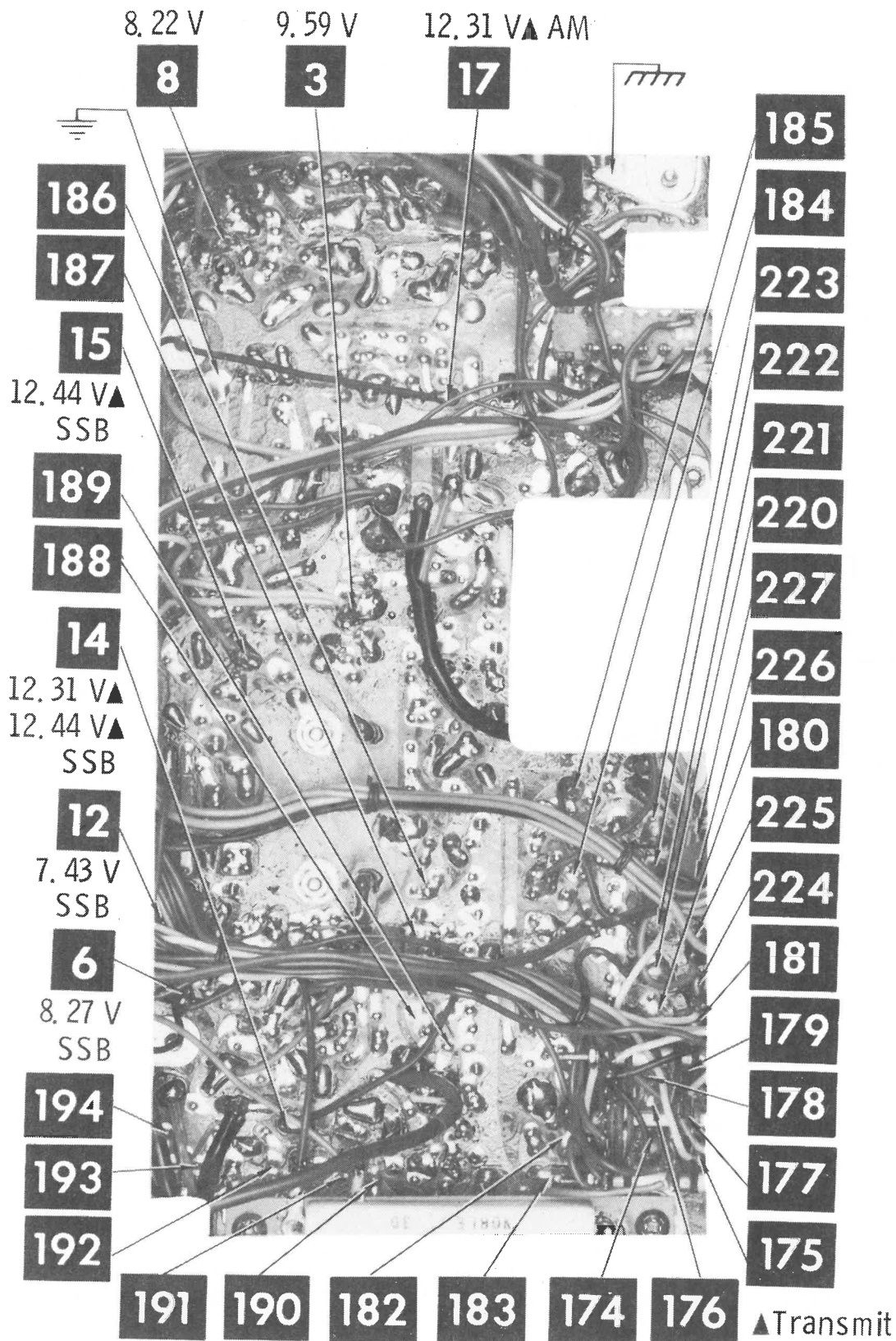
SYNTHESIZER BOARD



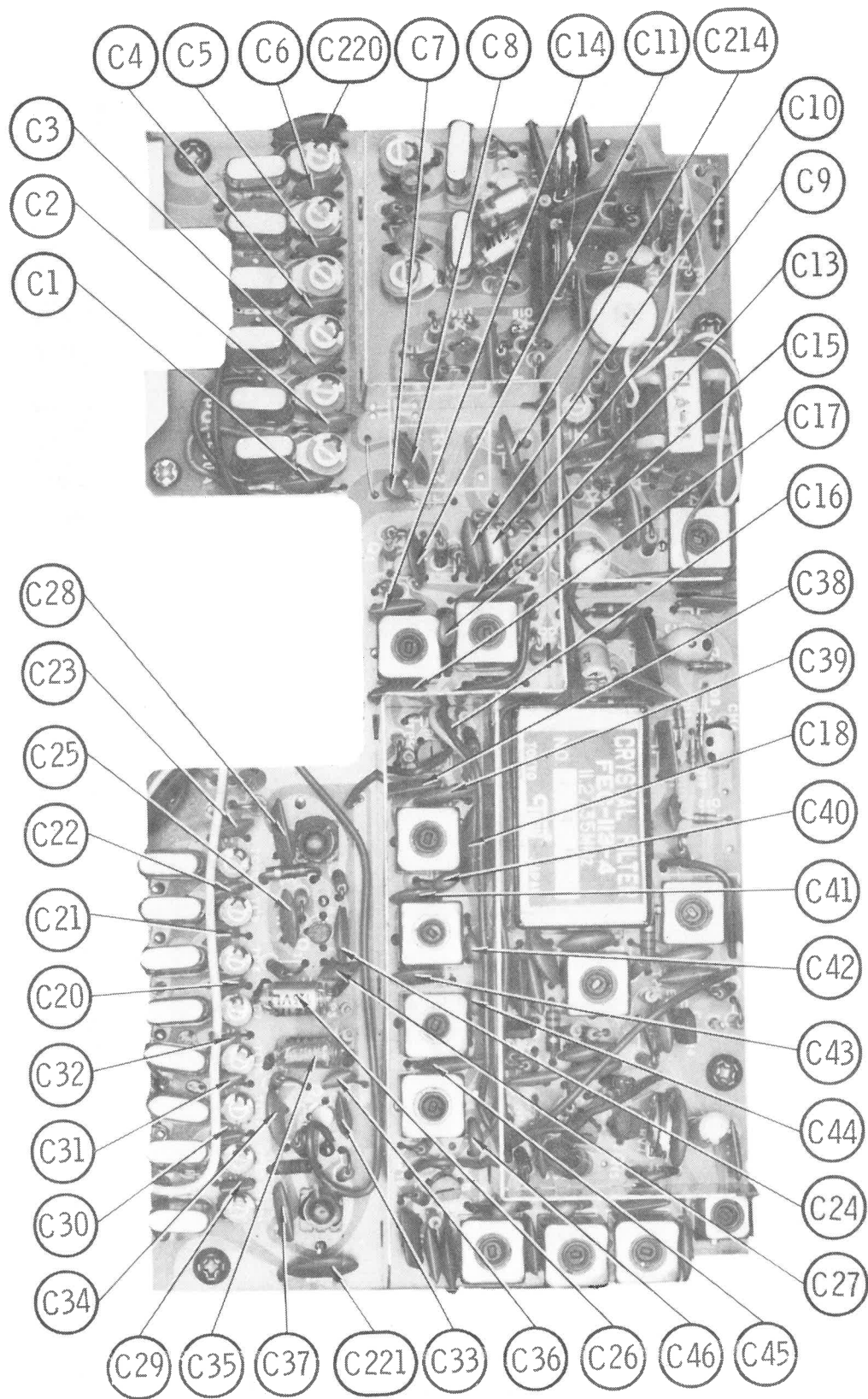
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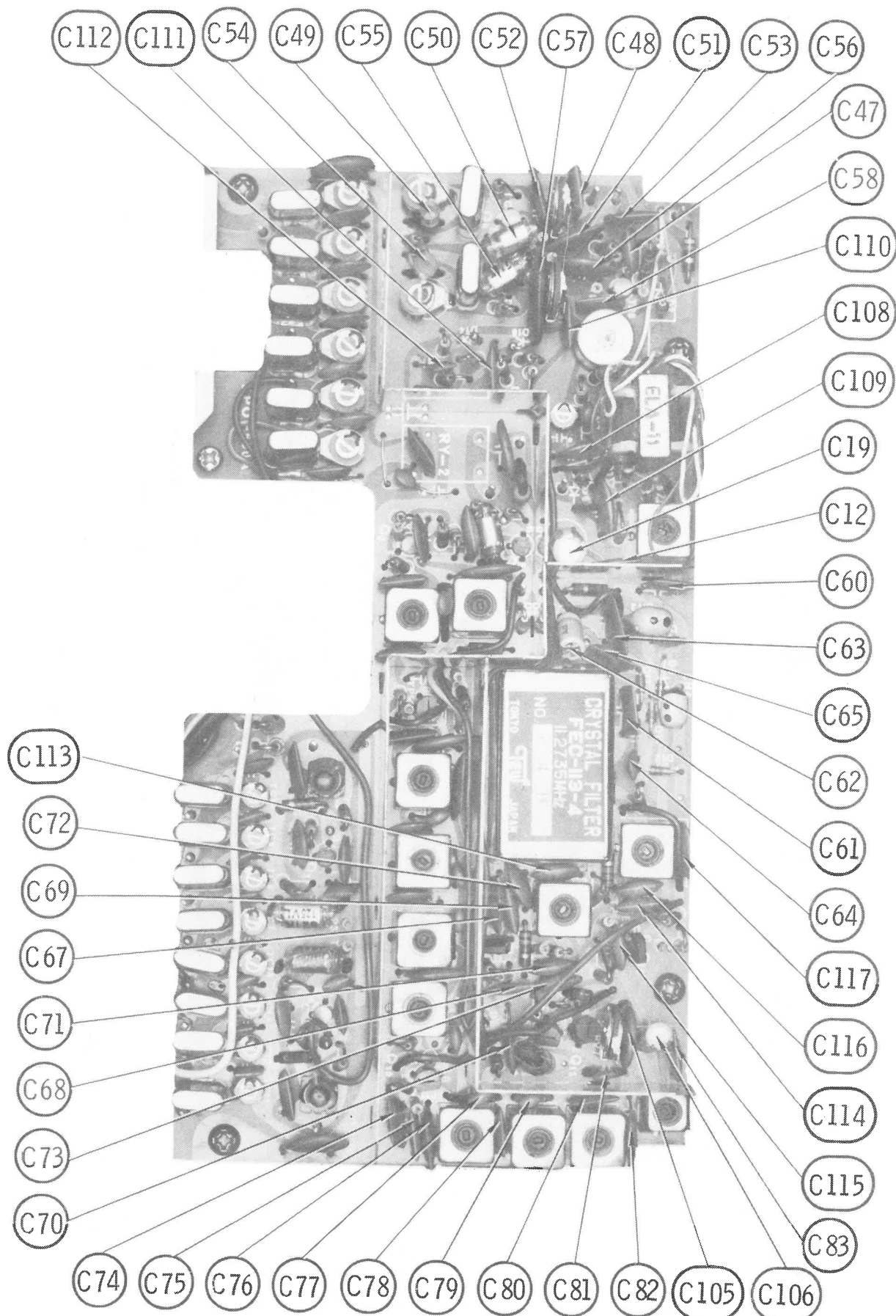
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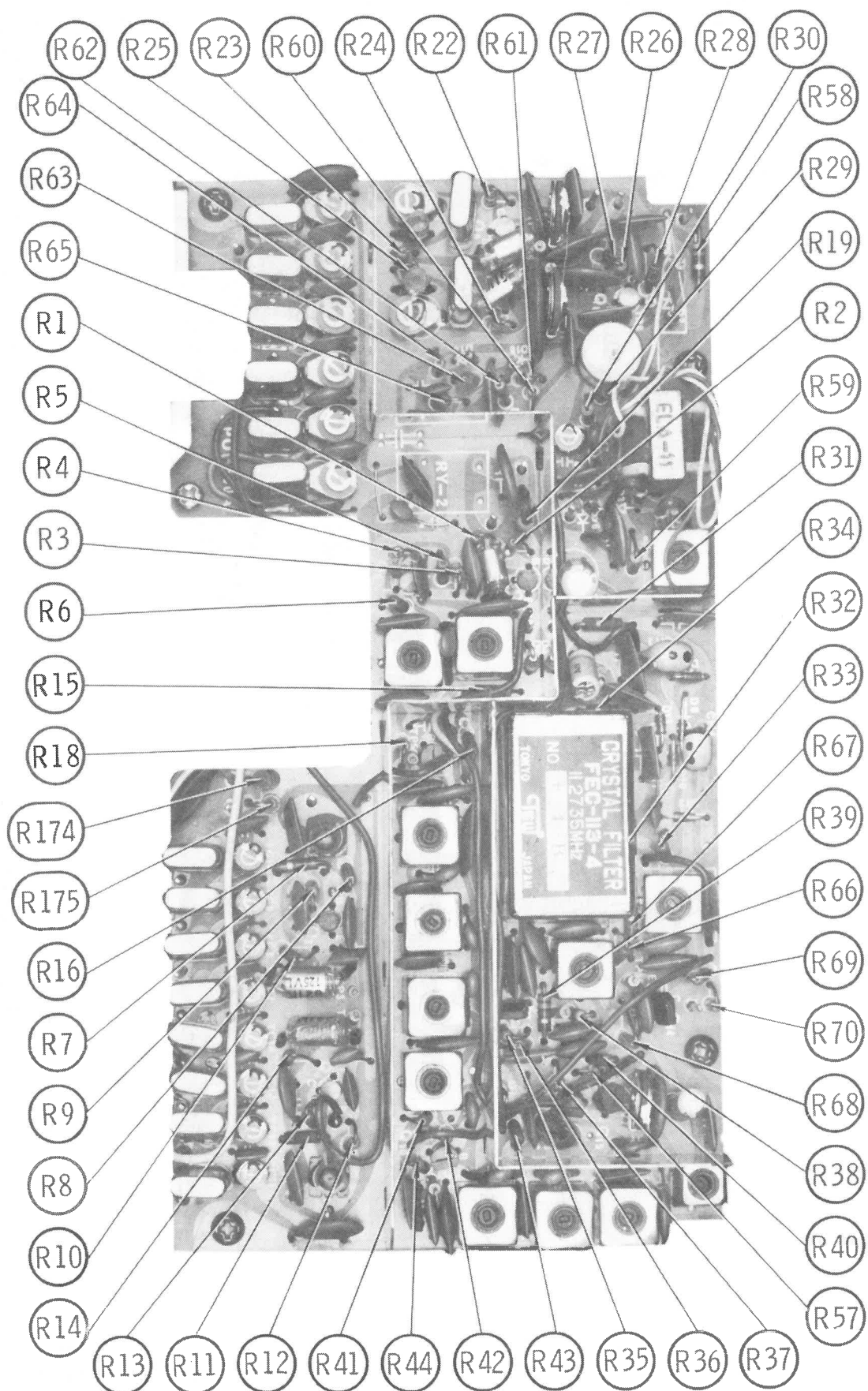
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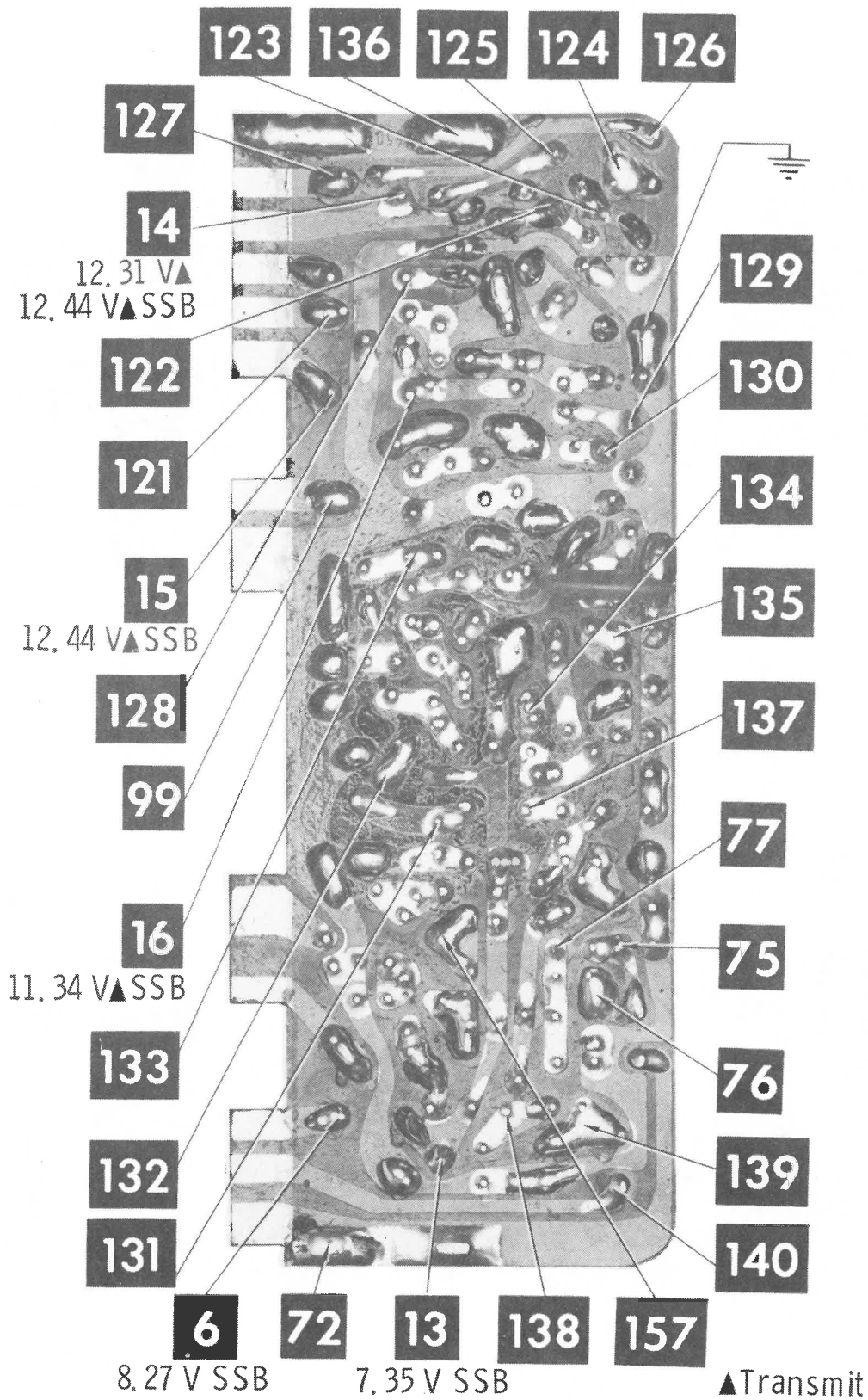
SYNTHESIZER BOARD



SYNTHESIZER BOARD

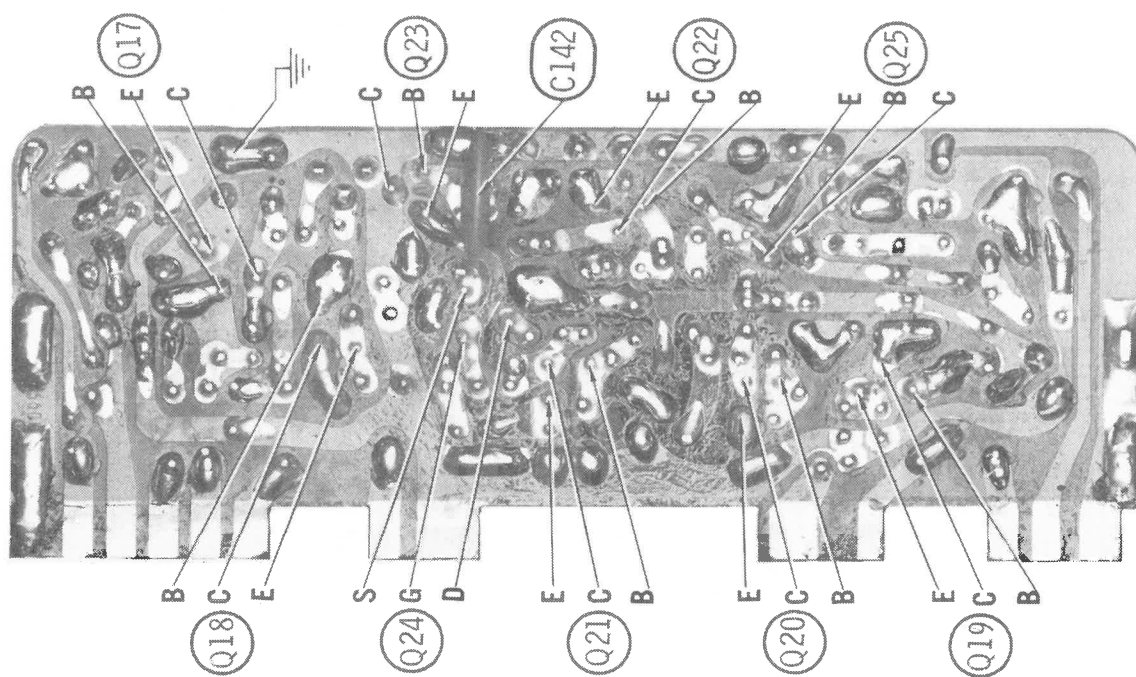
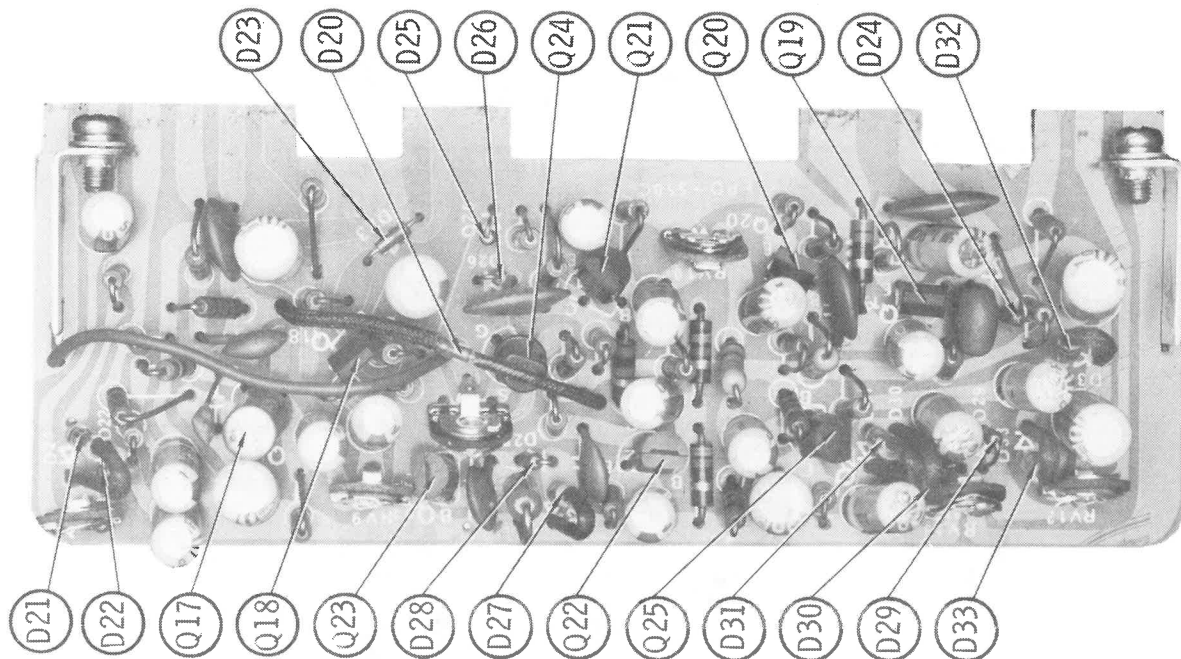


SYNTHESIZER BOARD



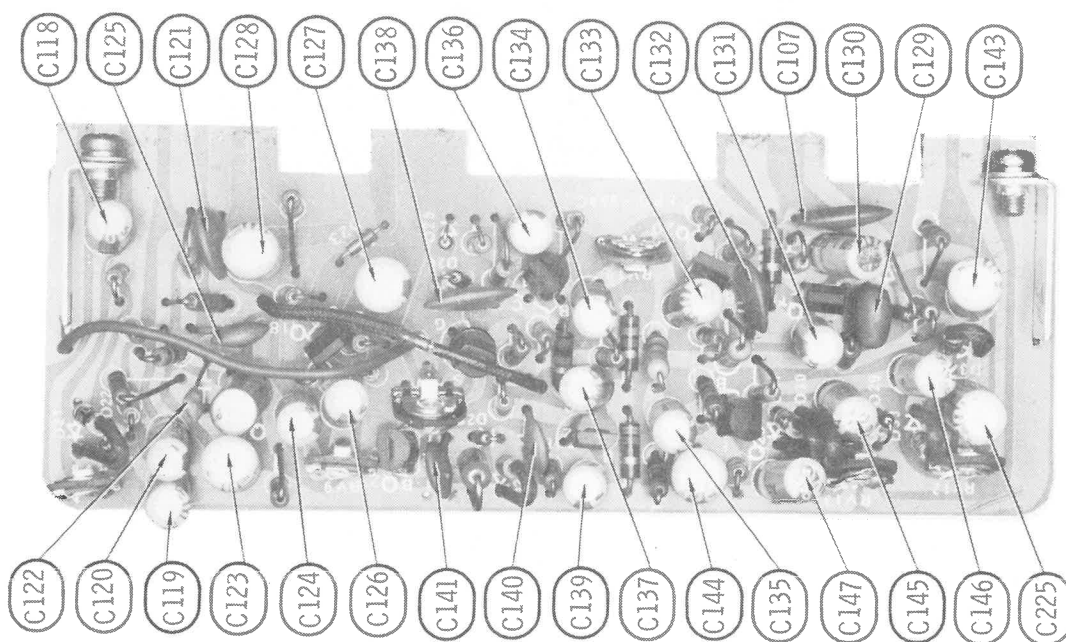
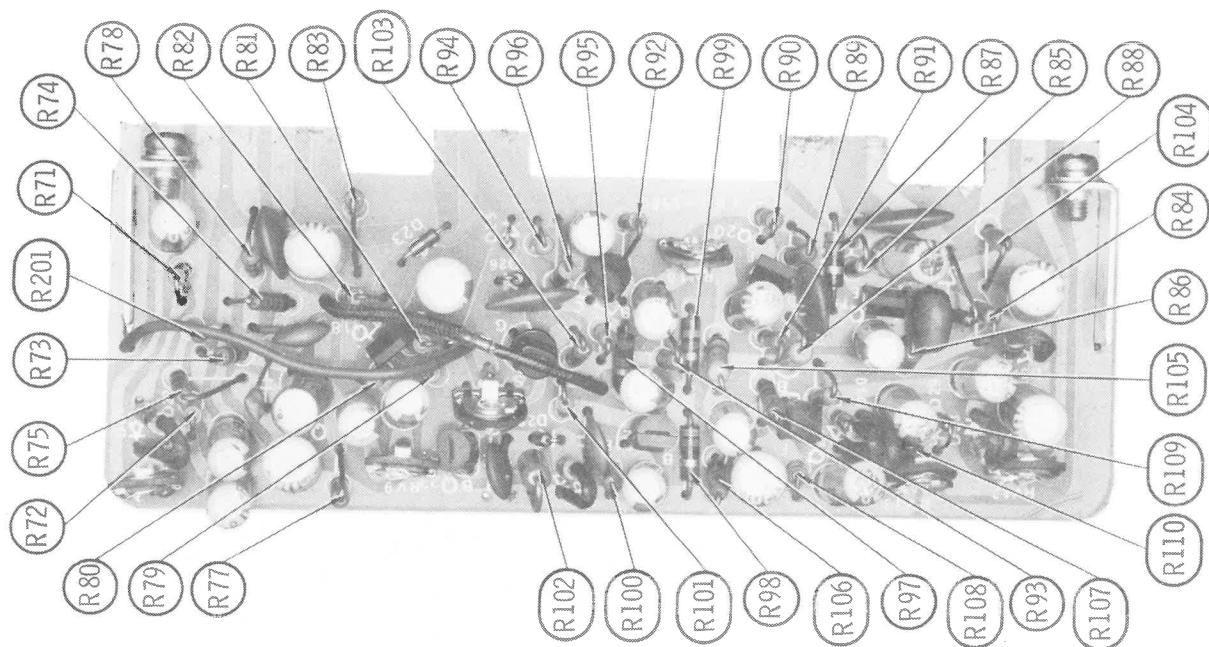
LAFAYETTE MODEL TELSAT SSB-50A

AGC BOARD

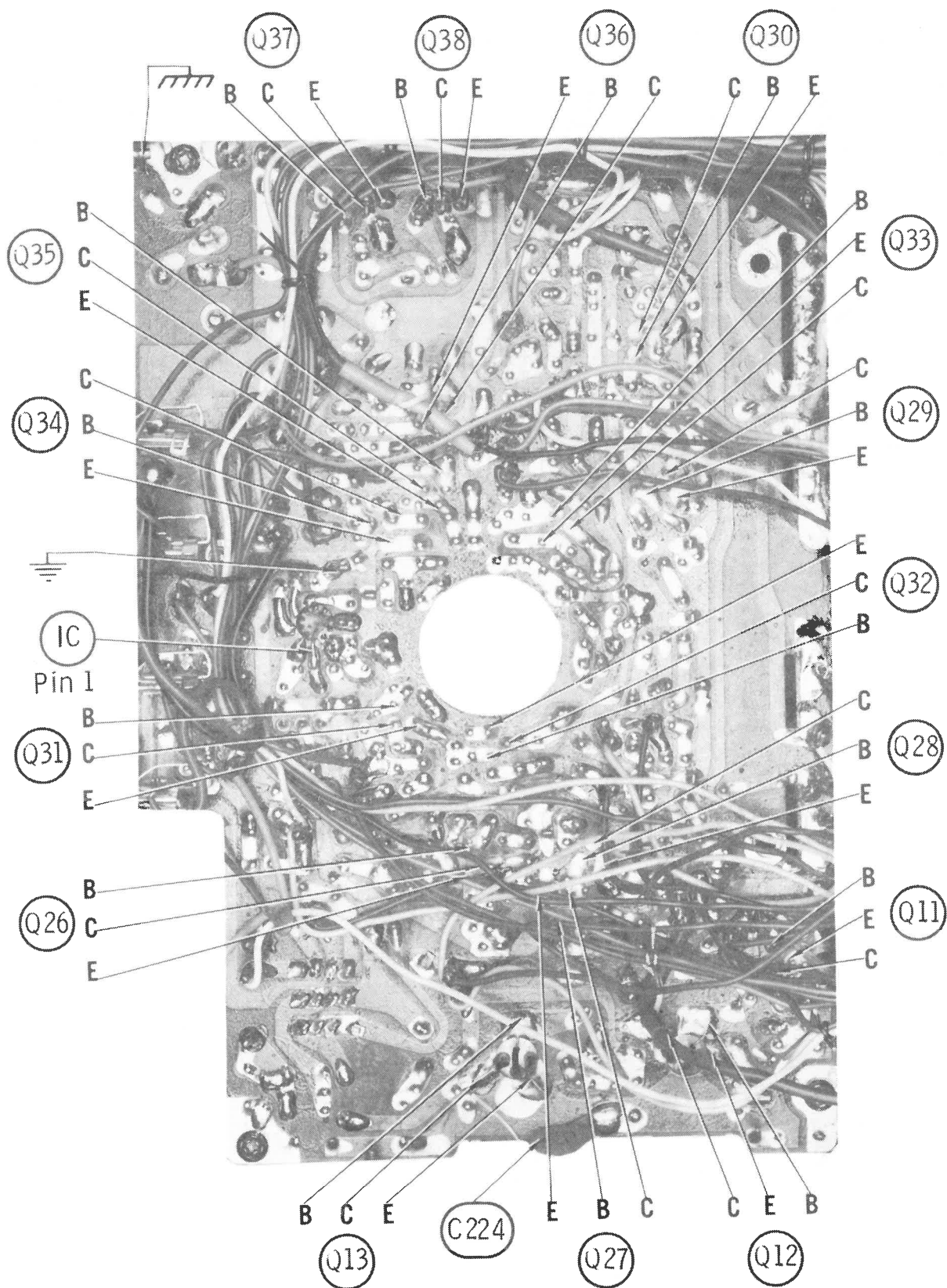


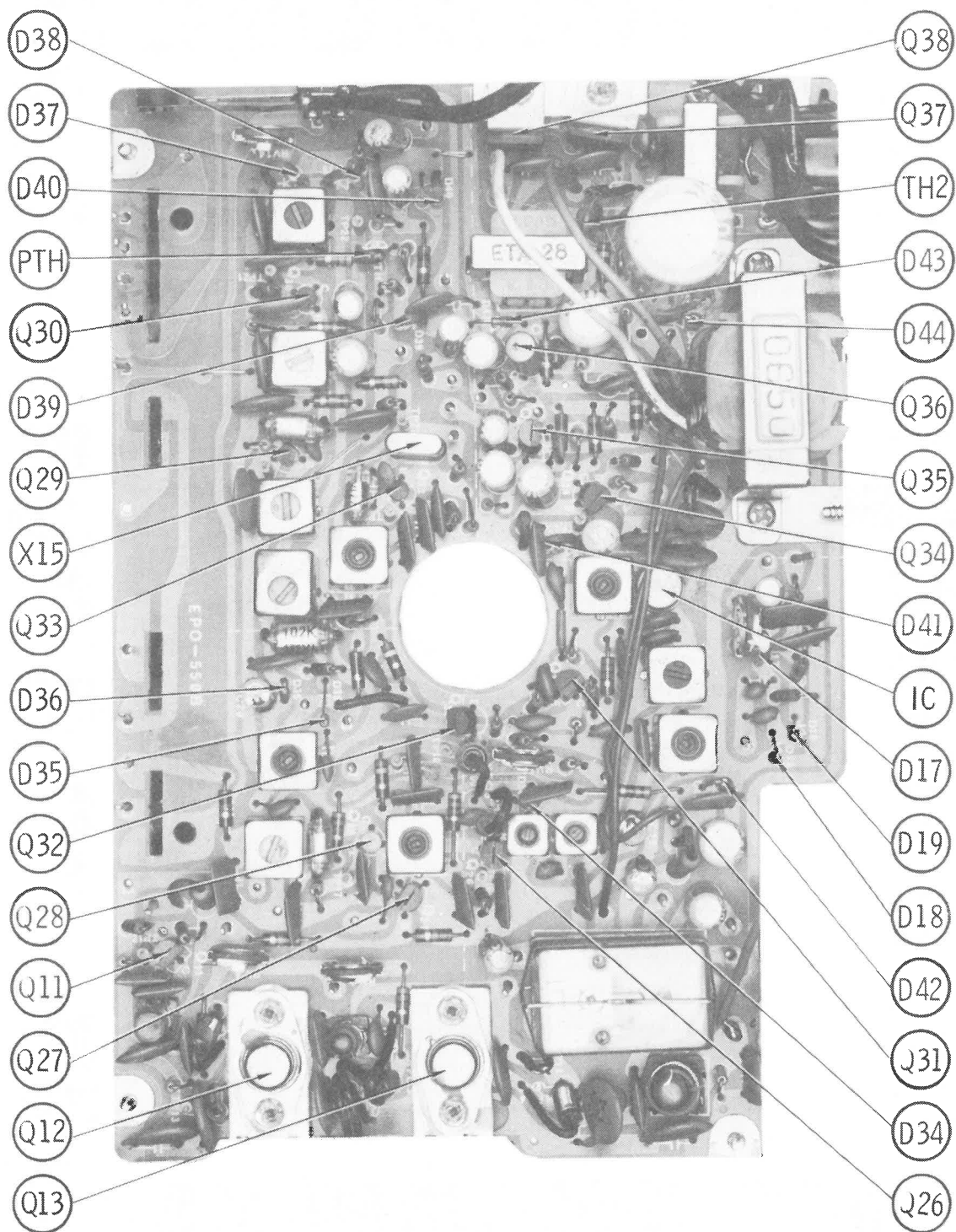
AGC BOARD

LAFAYETTE MODEL TELSAT SSB-50A

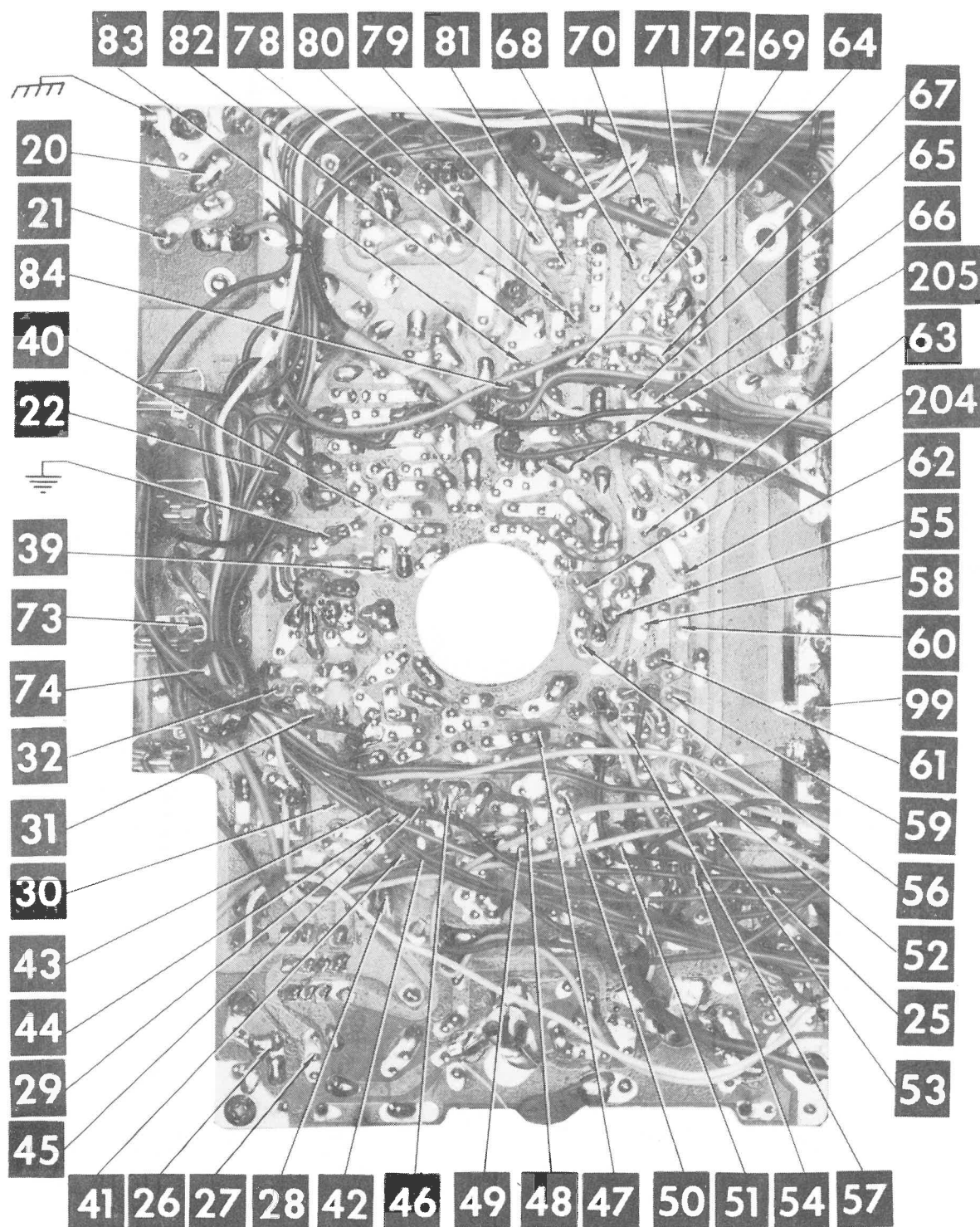


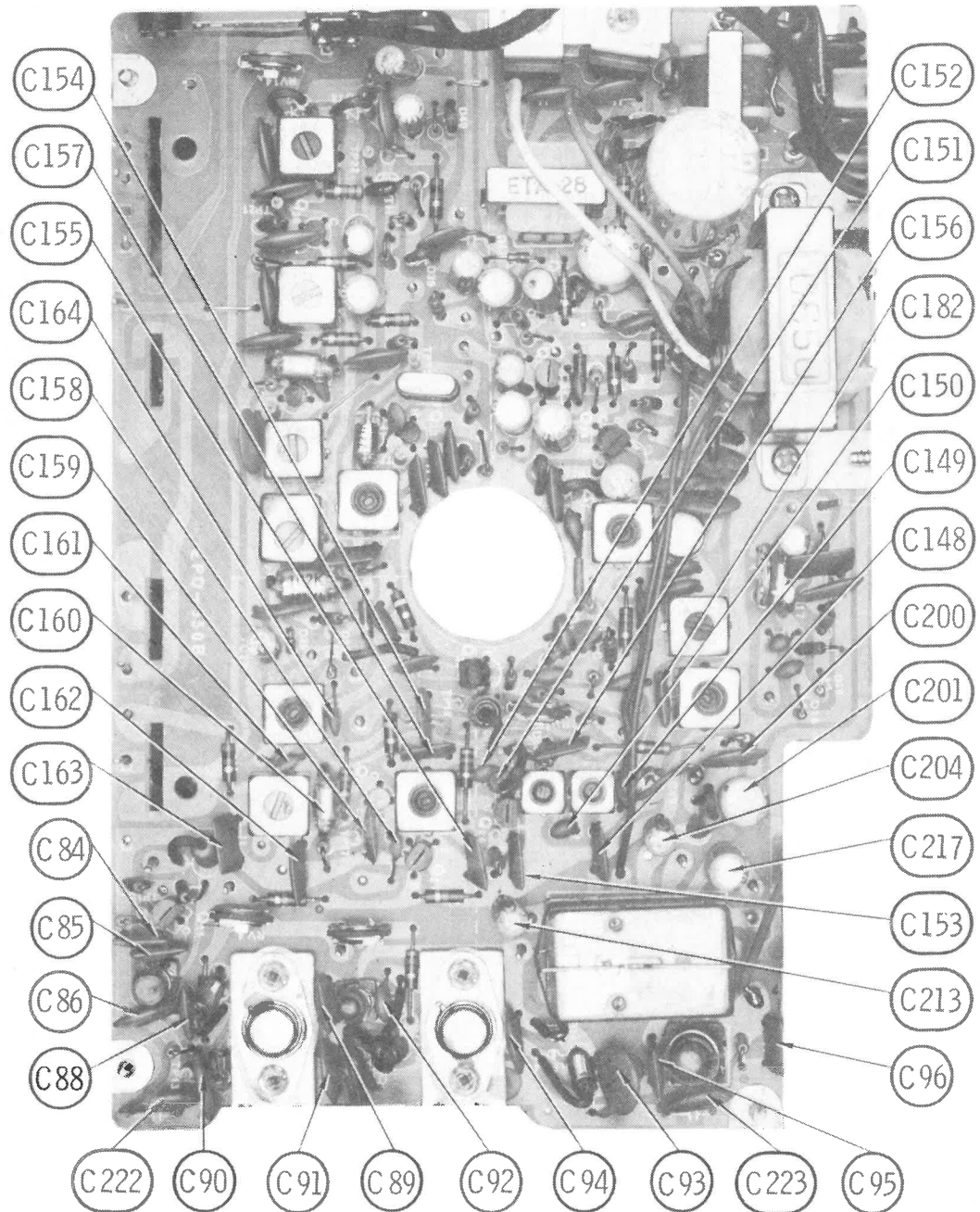
AGC BOARD

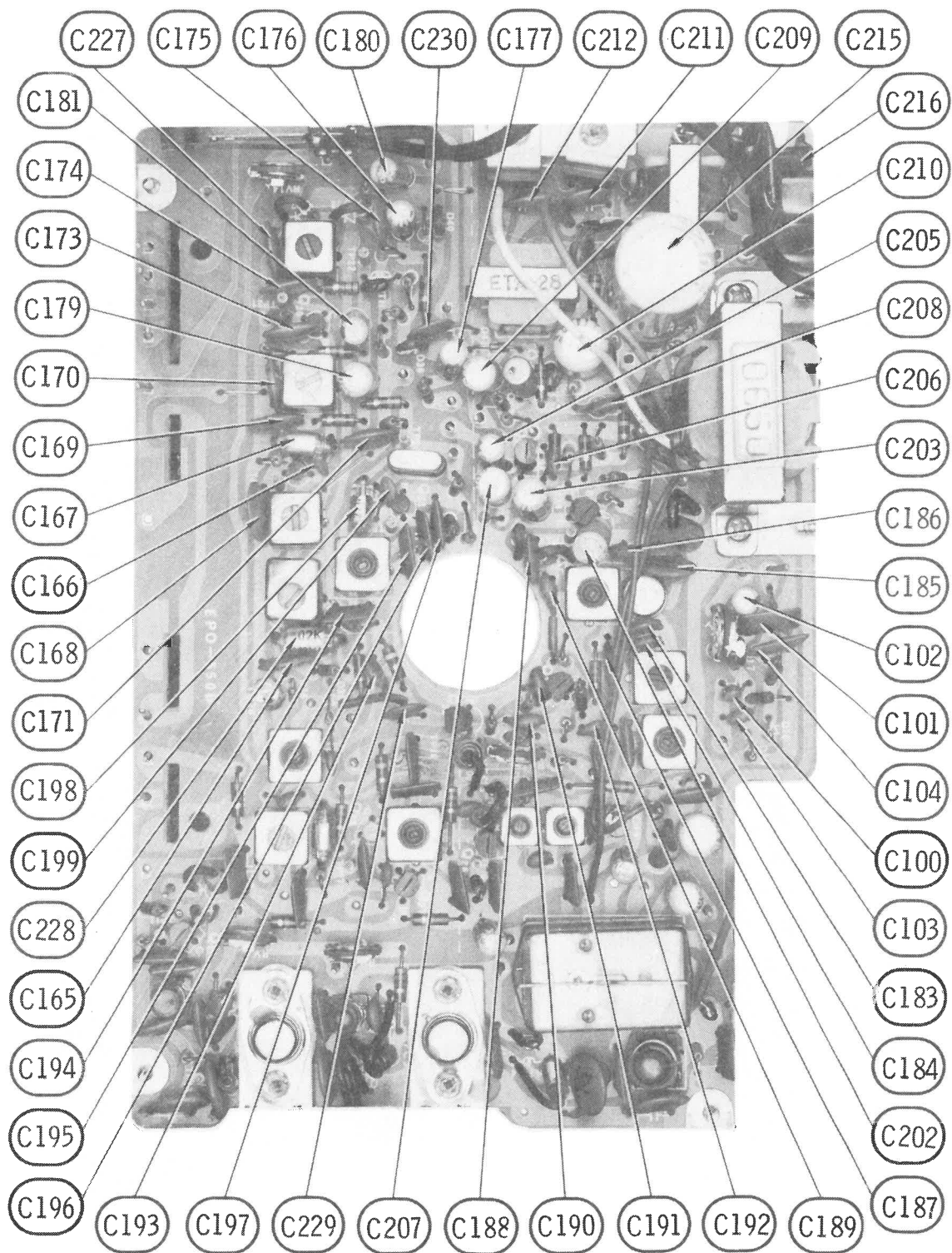


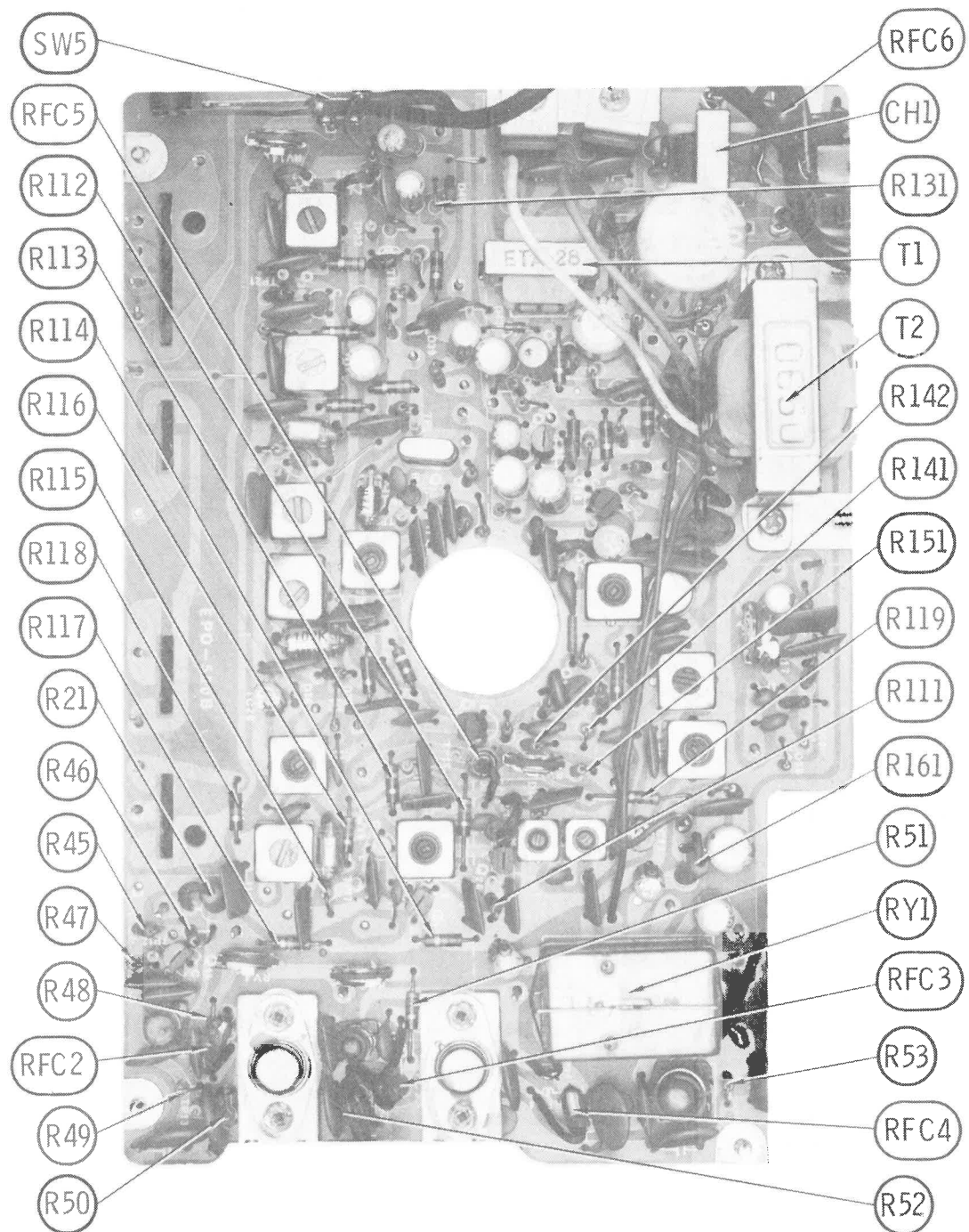


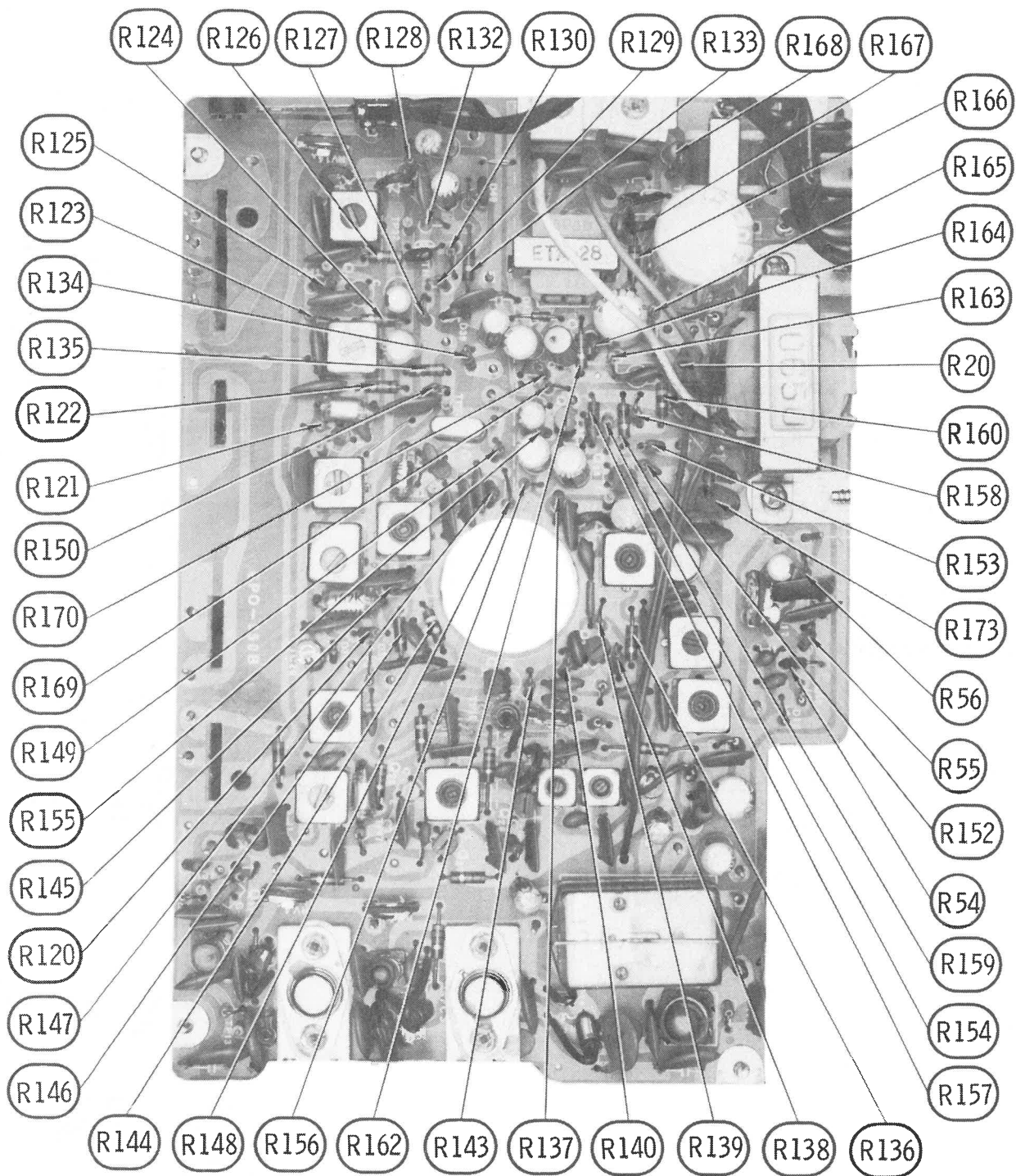


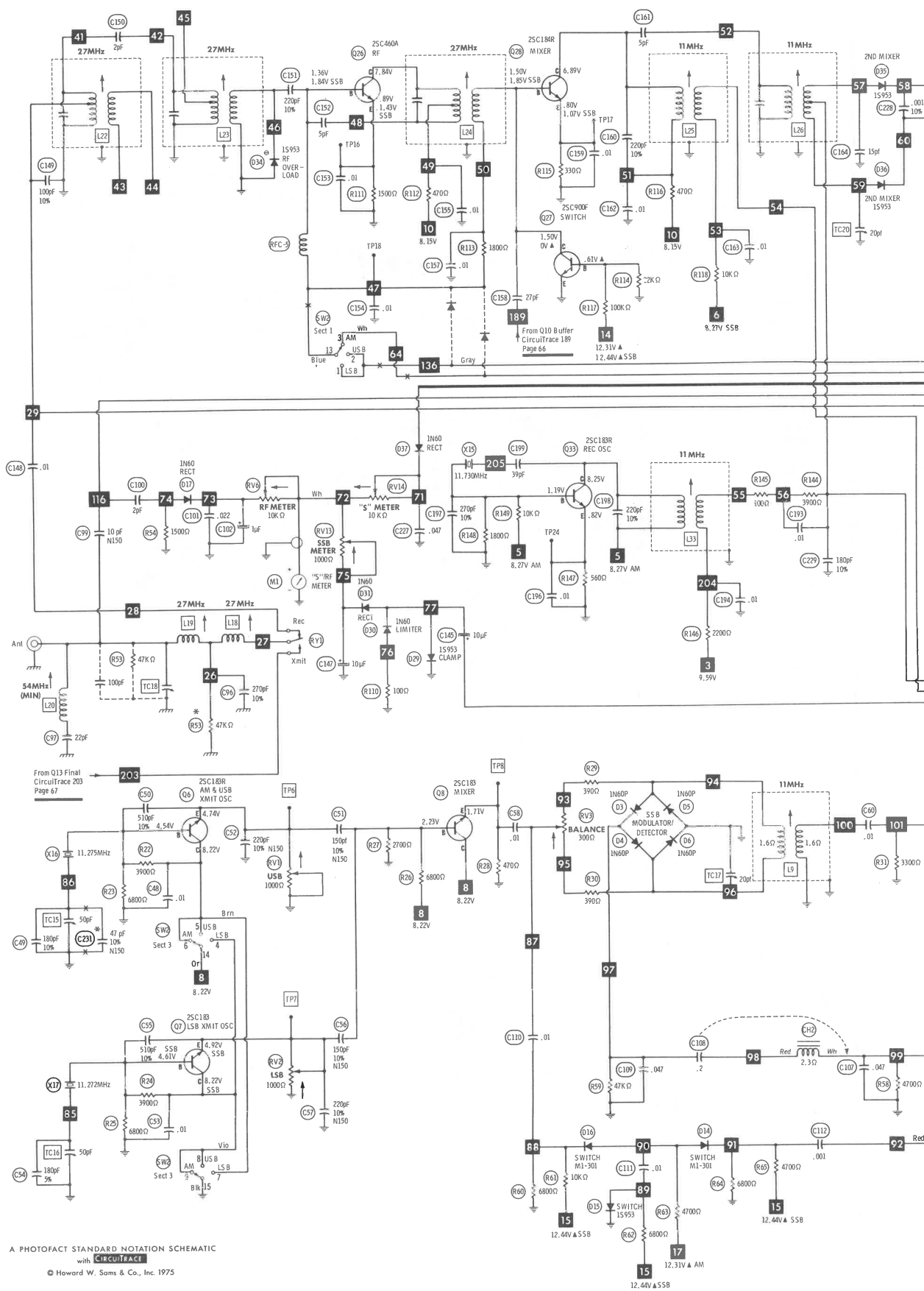




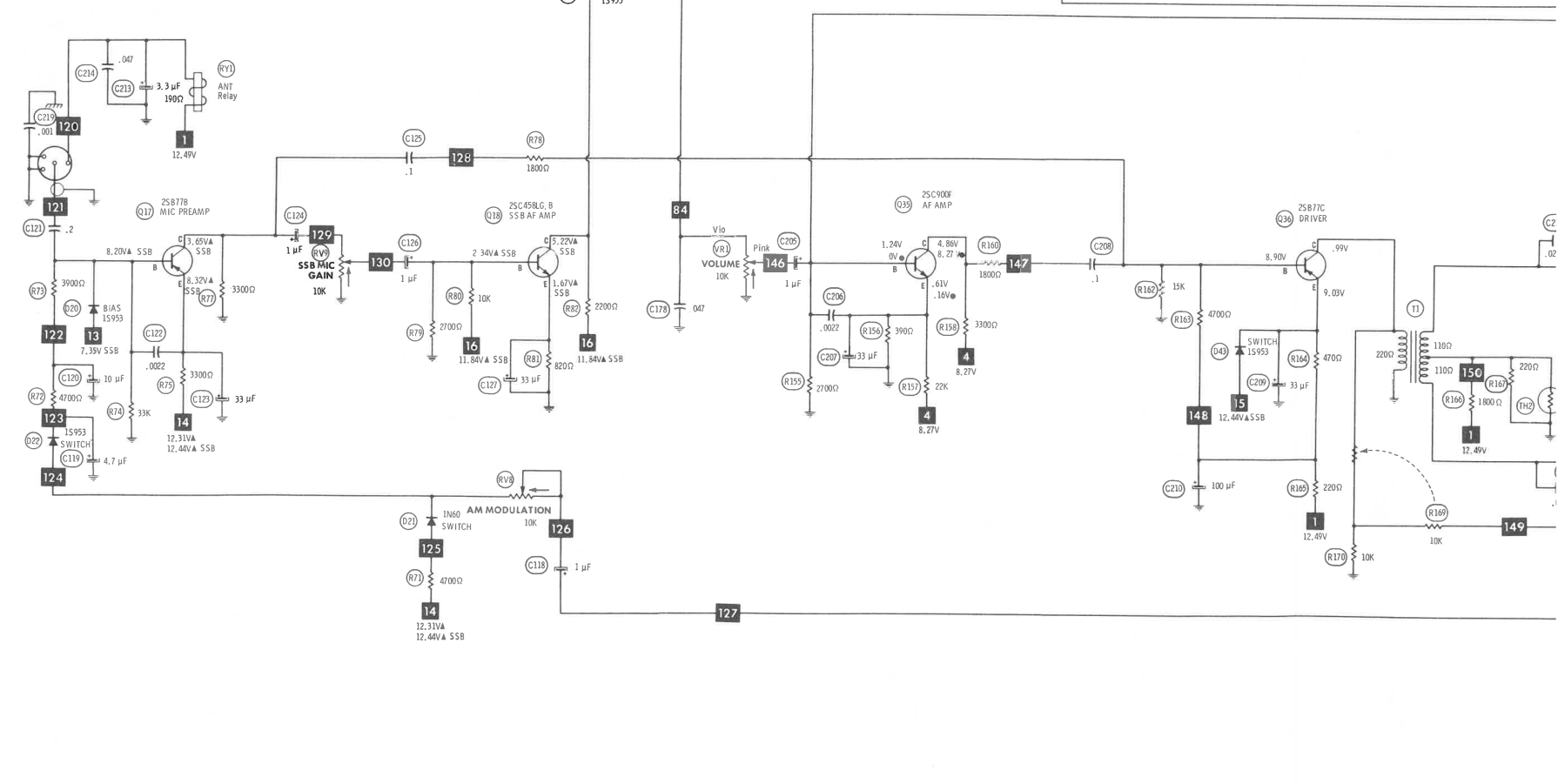
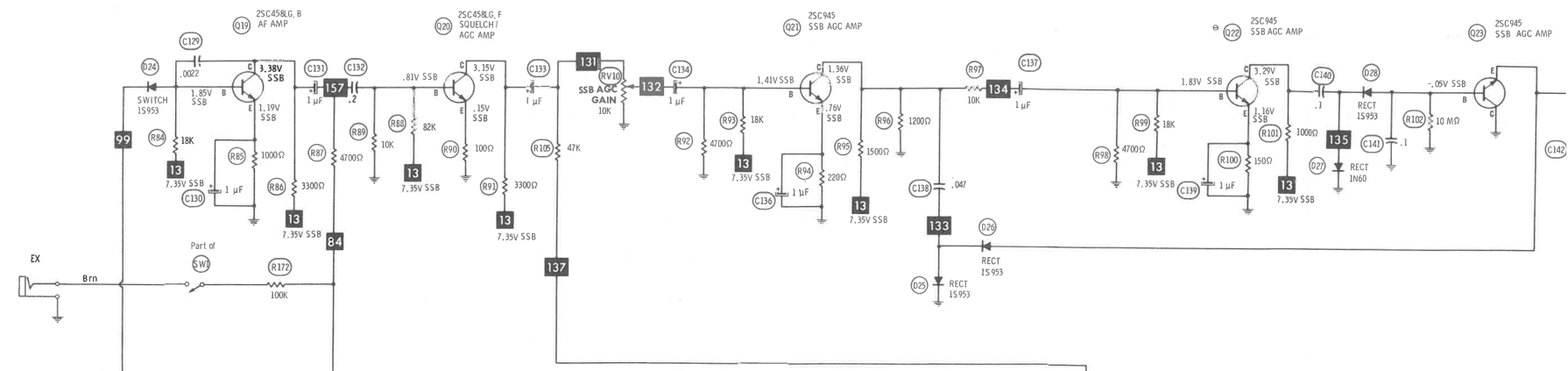








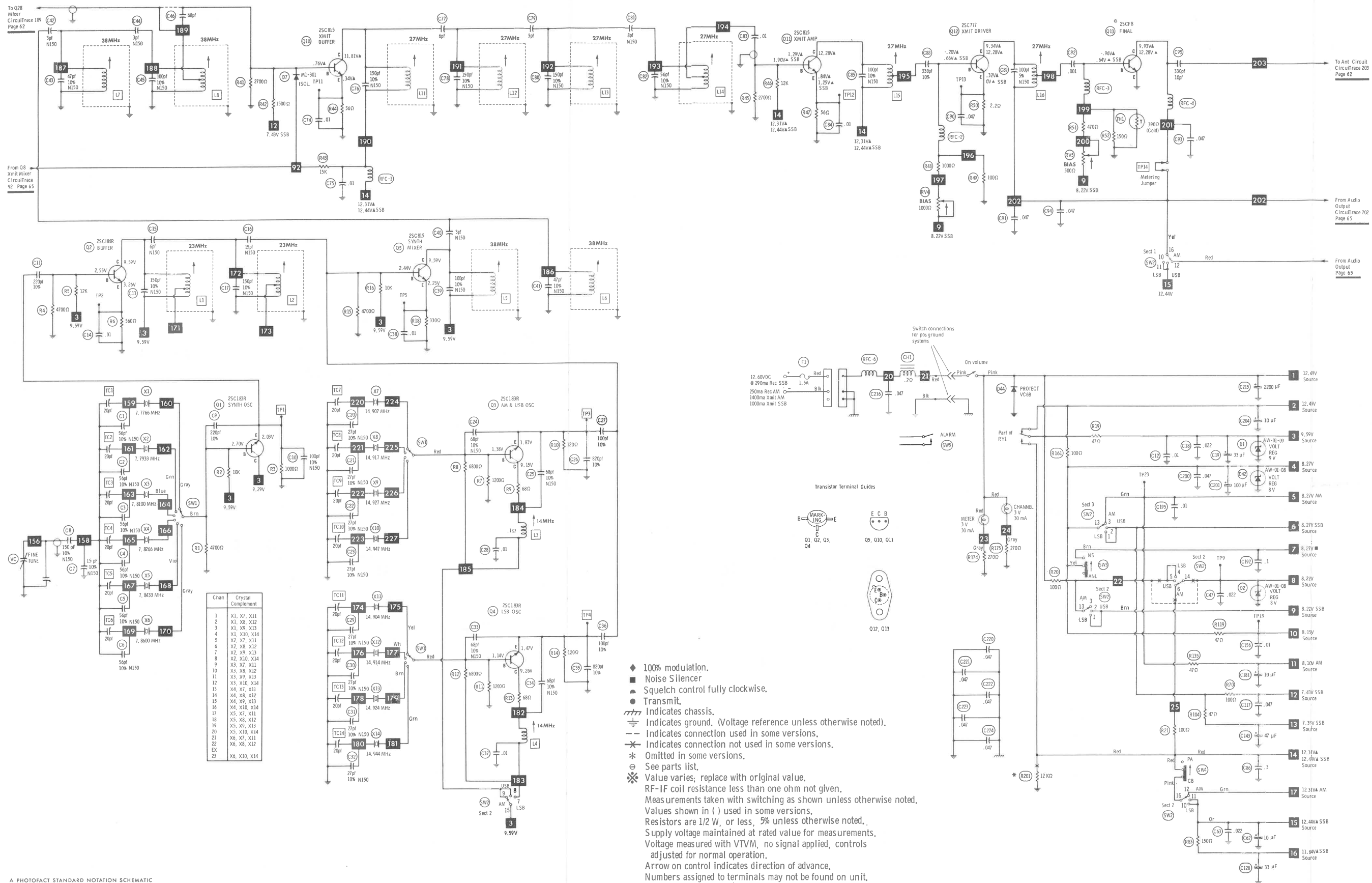
SEE NOTES ON PAGE 67



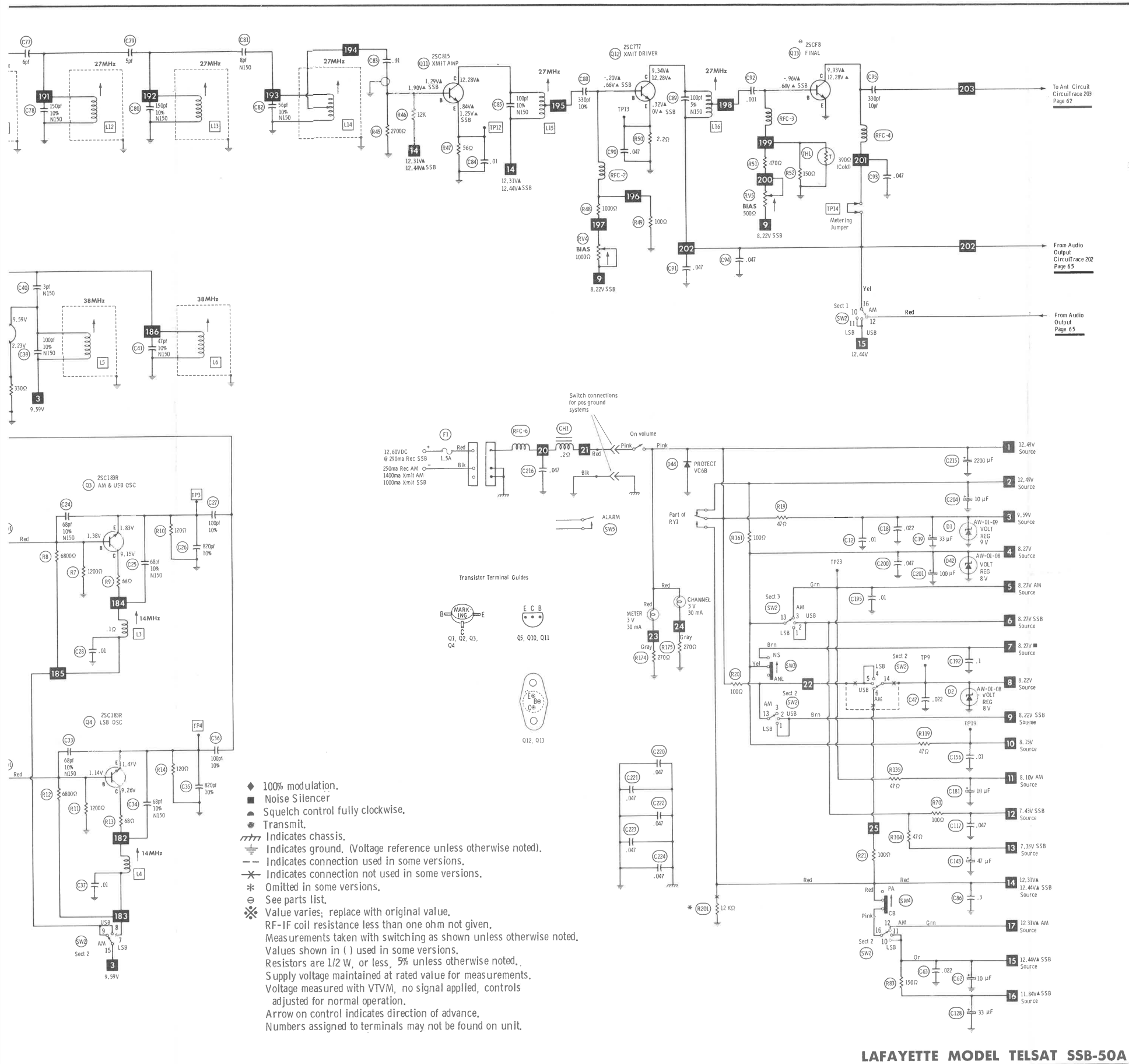


**SEMICONDUCT**

| ITEM No. | TYPE / MFRG. No. / PART No.   |
|----------|-------------------------------|
| D1       | AW-01-09/2150-17 9V Zener     |
| D2       | AW-01-08/2064-17 8V Zener     |
| D3       | 1N60P                         |
| D4       | 1N60P                         |
| D5       | 1N60P                         |
| D6       | 1N60P                         |
| D7       | MI-301/2065-17                |
| D8       | 1S953/2066-17                 |
| D9       | 1S953/2066-17                 |
| D10      | 1S953/2066-17                 |
| D11      | 1S953/2066-17                 |
| D12      | 1S953/2066-17                 |
| D13      | 1S953/2066-17                 |
| D14      | MI-301/2065-17                |
| D15      | 1S953/2066-17                 |
| D16      | MI-301/2065-17                |
| D17      | 1N60/1000-17                  |
| D18      | 1S953/2066-17                 |
| D19      | 1S953/2066-17                 |
| D20      | 1S953/2066-17                 |
| D21      | 1N60/1000-17                  |
| D22      | 1S953/2066-17                 |
| D23      | 1S953/2066-17                 |
| D24      | 1S953/2066-17                 |
| D25      | 1S953/2066-17                 |
| D26      | 1S953/2066-17                 |
| D27      | 1N60/1000-17                  |
| D28      | 1S953/2066-17                 |
| D29      | 1S953/2066-17                 |
| D30      | 1N60/1000-17                  |
| D31      | 1N60/1000-17                  |
| D32      | 1N60/1000-17                  |
| D33      | 1N60/1000-17                  |
| D34      | 1S953/2066-17                 |
| D35      | 1S953/2066-17                 |
| D36      | 1S953/2066-17                 |
| D37      | 1N60/1000-17                  |
| D38      | 1N60/1000-17                  |
| D39      | 1N60/1000-17                  |
| D40      | 1N60/1000-17                  |
| D41      | 1N60/1000-17                  |
| D42      | AW-01-08/2064-17 8V Zener     |
| D43      | 1S953/2066-17                 |
| D44      | V06B/2031-17                  |
| IC1      | CA3011/1002-25                |
| Q1       | 2SC183(R)/1210-17             |
| Q2       | 2SC184(R)/1634-17             |
| Q3       | 2SC183(R)/1210-17             |
| Q4       | 2SC183(R)/1210-17             |
| Q5       | 2SC815/1879-17                |
| Q6       | 2SC183(R)/1210-17             |
| Q7       | 2SC183/1210-17                |
| Q8       | 2SC183/1210-17                |
| Q9       | 2SC458(LG,R)/1374-17          |
| Q10      | 2SC815/1879-17                |
| Q11      | 2SC815/1879-17                |
| Q12      | 2SC777/2062-17 (1)            |
| Q13      | 2SCF8 2SC1239/2167-17 (2) (4) |
| Q14      | 2SC458(LG,R)/1374-17          |
| Q15      | 2SC900(F)/2132-17             |
| Q16      | 2SC900(F)/2132-17             |
| Q17      | 2SB77(B)/1060-17              |
| Q18      | 2SC458(LG,B)/1374-17          |
| Q19      | 2SC458(LG,B)/1374-17          |
| Q20      | 2SC458(LG,F)/1374-17          |
| Q21      | 2SC945 2SC945(R)/2063-17 (4)  |



**LAFAYETTE MODEL TELSAT SSB-50A**



## PARTS LIST AND DESCRIPTION

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

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

| ITEM No. | TYPE / MFR. No. / PART No. | REPLACEMENT DATA          |                                  |                  |                   |                  |                  |                    |
|----------|----------------------------|---------------------------|----------------------------------|------------------|-------------------|------------------|------------------|--------------------|
|          |                            | GENERAL ELECTRIC PART No. | INTERNATIONAL RECTIFIER PART No. | MALLORY PART No. | MOTOROLA PART No. | RCA PART No.     | SPRAGUE PART No. | SYLVANIA PART No.  |
| D1       | AW-01-09/2150-17 9V Zener  | GE-ZD-9.1                 | Z-1208                           | PTC505           | HEPZ0412          | SK3060           | RT240            | ECG 139            |
| D2       | AW-01-08/2064-17 8V Zener  | GE-X11                    | Z-1208                           | ZB8.2            | HEPZ0411          | SK3059           | RT239            | ECG 5072           |
| D3       | 1N60P                      | 1N60 (7)                  | 1N60 (7)                         | PTC206 (7)       | HEP135 (7)        | SK3088 (7)       | RT263 (7)        | ECG 110 (6)        |
| D4       | 1N60P                      | 1N60 (7)                  | 1N60 (7)                         | PTC206 (7)       | HEP135 (7)        | SK3088 (7)       | RT263 (7)        | ECG 110 (6)        |
| D5       | 1N60P                      | 1N60 (7)                  | 1N60 (7)                         | PTC206 (7)       | HEP135 (7)        | SK3088 (7)       | RT263 (7)        | ECG 110 (6)        |
| D6       | 1N60P                      | 1N60 (7)                  | 1N60 (7)                         | PTC206 (7)       | HEP135 (7)        | SK3088 (7)       | RT263 (7)        | ECG 110 (6)        |
| D7       | MI-301/2065-17             | GE-300                    | D200                             | PTC214           | HEPR0602          | SK3100           | RT218            | ECG 177            |
| D8       | 1S953/2066-17              | GE-300                    | D200                             | PTC214           | HEPR0602          | SK3100           | RT218            | ECG 177            |
| D9       | 1S953/2066-17              | GE-300                    | D200                             | PTC214           | HEPR0602          | SK3100           | RT218            | ECG 177            |
| D10      | 1S953/2066-17              | GE-300                    | D200                             | PTC214           | HEPR0602          | SK3100           | RT218            | ECG 177            |
| D11      | 1S953/2066-17              | GE-300                    | D200                             | PTC214           | HEPR0602          | SK3100           | RT218            | ECG 177            |
| D12      | 1S953/2066-17              | GE-300                    | D200                             | PTC214           | HEPR0602          | SK3100           | RT218            | ECG 177            |
| D13      | 1S953/2066-17              | GE-300                    | D200                             | PTC214           | HEPR0602          | SK3100           | RT218            | ECG 177            |
| D14      | MI-301/2065-17             | GE-300                    | D200                             | PTC214           | HEPR0602          | SK3100           | RT218            | ECG 177            |
| D15      | 1S953/2066-17              | GE-300                    | D200                             | PTC214           | HEPR0602          | SK3100           | RT218            | ECG 177            |
| D16      | MI-301/2065-17             | GE-300                    | D200                             | PTC214           | HEPR0602          | SK3100           | RT218            | ECG 177            |
| D17      | 1N60/1000-17               | 1N60                      | 1N60                             | PTC206           | HEP135            | SK3088           | RT263            | ECG 109            |
| D18      | 1S953/2066-17              | GE-300                    | D200                             | PTC214           | HEPR0602          | SK3100           | RT218            | ECG 177            |
| D19      | 1S953/2066-17              | GE-300                    | D200                             | PTC214           | HEPR0602          | SK3100           | RT218            | ECG 177            |
| D20      | 1S953/2066-17              | GE-300                    | D200                             | PTC214           | HEPR0602          | SK3100           | RT218            | ECG 177            |
| D21      | 1N60/1000-17               | 1N60                      | 1N60                             | PTC206           | HEP135            | SK3088           | RT263            | ECG 109            |
| D22      | 1S953/2066-17              | GE-300                    | D200                             | PTC214           | HEPR0602          | SK3100           | RT218            | ECG 177            |
| D23      | 1S953/2066-17              | GE-300                    | D200                             | PTC214           | HEPR0602          | SK3100           | RT218            | ECG 177            |
| D24      | 1S953/2066-17              | GE-300                    | D200                             | PTC214           | HEPR0602          | SK3100           | RT218            | ECG 177            |
| D25      | 1S953/2066-17              | GE-300                    | D200                             | PTC214           | HEPR0602          | SK3100           | RT218            | ECG 177            |
| D26      | 1S953/2066-17              | GE-300                    | D200                             | PTC214           | HEPR0602          | SK3100           | RT218            | ECG 177            |
| D27      | 1N60/1000-17               | 1N60                      | 1N60                             | PTC206           | HEP135            | SK3088           | RT263            | ECG 109            |
| D28      | 1S953/2066-17              | GE-300                    | D200                             | PTC214           | HEPR0602          | SK3100           | RT218            | ECG 177            |
| D29      | 1S953/2066-17              | GE-300                    | D200                             | PTC214           | HEPR0602          | SK3100           | RT218            | ECG 177            |
| D30      | 1N60/1000-17               | 1N60                      | 1N60                             | PTC206           | HEP135            | SK3088           | RT263            | ECG 109            |
| D31      | 1N60/1000-17               | 1N60                      | 1N60                             | PTC206           | HEP135            | SK3088           | RT263            | ECG 109            |
| D32      | 1N60/1000-17               | 1N60                      | 1N60                             | PTC206           | HEP135            | SK3088           | RT263            | ECG 109            |
| D33      | 1N60/1000-17               | 1N60                      | 1N60                             | PTC206           | HEP135            | SK3088           | RT263            | ECG 109            |
| D34      | 1S953/2066-17              | GE-300                    | D200                             | PTC214           | HEPR0602          | SK3100           | RT218            | ECG 177            |
| D35      | 1S953/2066-17              | GE-300                    | D200                             | PTC214           | HEPR0602          | SK3100           | RT218            | ECG 177            |
| D36      | 1S953/2066-17              | GE-300                    | D200                             | PTC214           | HEPR0602          | SK3100           | RT218            | ECG 177            |
| D37      | 1N60/1000-17               | 1N60                      | 1N60                             | PTC206           | HEP135            | SK3088           | RT263            | ECG 109            |
| D38      | 1N60/1000-17               | 1N60                      | 1N60                             | PTC206           | HEP135            | SK3088           | RT263            | ECG 109            |
| D39      | 1N60/1000-17               | 1N60                      | 1N60                             | PTC206           | HEP135            | SK3088           | RT263            | ECG 109            |
| D40      | 1N60/1000-17               | 1N60                      | 1N60                             | PTC206           | HEP135            | SK3088           | RT263            | ECG 109            |
| D41      | 1N60/1000-17               | 1N60                      | 1N60                             | PTC206           | HEP135            | SK3088           | RT263            | ECG 109            |
| D42      | AW-01-08/2064-17 8V Zener  | GE-X11                    | Z-1208                           | ZB8.2            | HEPZ0411          | SK3059           | RT239            | ECG 5072           |
| D43      | 1S953/2066-17              | GE-300                    | D200                             | PTC214           | HEPR0602          | SK3100           | RT218            | ECG 177            |
| D44      | V06B/2031-17               | GE-504A                   | 8D4 or 5A4D                      | PTC201 or PTC202 | HEPR0052          | SK3030 or SK3031 | RT213 or RT214   | ECG 116 or ECG 117 |
| IC1      | CA3011/1002-25             | GE-20                     | TR-70                            | PTC132           | HEP56             | SK3129           | RT113            | ECG 726            |
| Q1       | 2SC183(R)/1210-17          | GE-20                     | TR-21                            | PTC136           | HEP56             | SK3018           | RT113            | ECG 108            |
| Q2       | 2SC184(R)/1634-17          | GE-20                     | TR-21                            | PTC132           | HEP56             | SK3018           | RT113            | ECG 108            |
| Q3       | 2SC183(R)/1210-17          | GE-20                     | TR-70                            | PTC132           | HEP56             | SK3018           | RT113            | ECG 108            |
| Q4       | 2SC183(R)/1210-17          | GE-20                     | TR-70                            | PTC132           | HEP56             | SK3018           | RT113            | ECG 108            |
| Q5       | 2SC815/1879-17             | GE-20                     | TR-21                            | PTC139           | HEP724            | SK3038           | RT102            | ECG 123A           |
| Q6       | 2SC183(R)/1210-17          | GE-20                     | TR-70                            | PTC132           | HEP56             | SK3018           | RT113            | ECG 108            |
| Q7       | 2SC183/1210-17             | GE-20                     | TR-70                            | PTC132           | HEP56             | SK3018           | RT113            | ECG 108            |
| Q8       | 2SC183/1210-17             | GE-20                     | TR-70                            | PTC132           | HEP56             | SK3018           | RT113            | ECG 108            |
| Q9       | 2SC458(LG,R)/1374-17       | GE-20                     | TR-51                            | PTC136           | HEP738            | SK3124           | RT102            | ECG 123A           |
| Q10      | 2SC815/1879-17             | GE-20                     | TR-21                            | PTC139           | HEP724            | SK3038           | RT102            | ECG 123A           |
| Q11      | 2SC815/1879-17             | GE-20                     | TR-21                            | PTC139           | HEP724            | SK3038           | RT102            | ECG 123A           |
| Q12      | 2SC777/2062-17 (1)         |                           | TR-64                            |                  | HEP75             | SK3047           |                  | ECG 224            |
| Q13      | 2SCF8                      |                           |                                  |                  |                   | SK3048           |                  | ECG 224            |
|          | 2SC1239/2167-17 (2)        |                           |                                  |                  |                   | SK3049           |                  | ECG 237            |
| Q14      | 2SC458(LG,R)/1374-17       | GE-20                     | TR-24                            | PTC136           | HEP53             | SK3124           | RT102            | ECG 123A           |
| Q15      | 2SC900(F)/2132-17          | GE-20                     | TR-21                            | PTC139           | HEP725            | SK3124           | RT102            | ECG 123A           |
| Q16      | 2SC900(F)/2132-17          | GE-20                     | TR-21                            | PTC139           | HEP725            | SK3124           | RT102            | ECG 123A           |
| Q17      | 2SB77(B)/1060-17           | GE-1                      | IRTR-85                          | PTC109           | HEP633            | SK3004           | RT121            | ECG 102A           |
| Q18      | 2SC458(LG,B)/1374-17       | GE-20                     | TR-24                            | PTC136           | HEP53             | SK3124           | RT102            | ECG 123A           |
| Q19      | 2SC458(LG,B)/1374-17       | GE-20                     | TR-24                            | PTC136           | HEP53             | SK3124           | RT102            | ECG 123A           |
| Q20      | 2SC458(LG,F)/1374-17       | GE-20                     | TR-24                            | PTC136           | HEP53             | SK3124           | RT102            | ECG 123A           |
| Q21      | 2SC945                     | GE-20                     | (IR)2SC945                       | PTC136           | HEP728            | SK3124           | RT102            | ECG 123A           |
|          | 2SC945(R)/2063-17 (4)      | GE-20                     | TR-24                            | PTC136           | HEP728            | SK3124           | RT102            | ECG 123A           |

## 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 / MFR. No. / PART No.          | REPLACEMENT DATA          |                                  |                  |                   |                  |                  |                      |
|----------|-------------------------------------|---------------------------|----------------------------------|------------------|-------------------|------------------|------------------|----------------------|
|          |                                     | GENERAL ELECTRIC PART No. | INTERNATIONAL RECTIFIER PART No. | MALLORY PART No. | MOTOROLA PART No. | RCA PART No.     | SPRAGUE PART No. | SYLVANIA PART No.    |
| Q22      | 2SC945<br>2SC945(R)/<br>2063-17 (4) | GE-20<br>GE-20            | (IR)2SC945<br>TR-24              | PTC136<br>PTC136 | HEP728<br>HEP728  | SK3124<br>SK3124 | RT102<br>RT102   | ECG 123A<br>ECG 123A |
| Q23      | 2SC945                              | GE-20                     | TR-24                            | PTC136           | HEP728            | SK3124           | RT102            | ECG 123A             |
| Q24      | 2SK19(GR)/2074-17                   | GE-FET-2                  | FE-100                           | PTC152           | HEPF0021          | SK3116           | RT175            | ECG 132              |
| Q25      | 2SC945                              | GE-20                     | (IR)2SC945                       | PTC136           | HEP728            | SK3124           | RT102            | ECG 123A             |
| Q26      | 2SC460(A)/1373-17                   | GE-17                     | TR-24                            | PTC101           | HEP720            | SK3039           | RT107            | ECG 108              |
| Q27      | 2SC900(F)/2132-17                   | GE-20                     | TR-21                            | PTC139           | HEP725            | SK3124           | RT102            | ECG 123A             |
| Q28      | 2SC184(R)/1634-17                   | GE-20                     | TR-21                            | PTC136           | HEP56             | SK3018           | RT113            | ECG 108              |
| Q29      | 2SC183(R)/1210-17                   | GE-20                     | TR-70                            | PTC132           | HEP56             | SK3018           | RT113            | ECG 108              |
| Q30      | 2SC183(R)/1210-17                   | GE-20                     | TR-70                            | PTC132           | HEP56             | SK3018           | RT113            | ECG 108              |
| Q31      | 2SC900(F)/2132-17                   | GE-20                     | TR-21                            | PTC139           | HEP725            | SK3124           | RT102            | ECG 123A             |
| Q32      | 2SC900(F)/2132-17                   | GE-20                     | TR-21                            | PTC139           | HEP725            | SK3124           | RT102            | ECG 123A             |
| Q33      | 2SC183(R)/1210-17                   | GE-20                     | TR-70                            | PTC132           | HEP56             | SK3018           | RT113            | ECG 108              |
| Q34      | 2SC900(F)/2132-17                   | GE-20                     | TR-21                            | PTC139           | HEP725            | SK3124           | RT102            | ECG 123A             |
| Q35      | 2SC900(F)/2132-17                   | GE-20                     | TR-21                            | PTC139           | HEP725            | SK3124           | RT102            | ECG 123A             |
| Q36      | 2SB77(C)                            | GE-52                     | TR-85                            | PTC109           | HEP633            | SK3004           | RT121            | ECG 102A             |
| Q37      | 2SC1096(M)/<br>2168-17 (3)          | GE-28                     | TR-55                            | PTC110           |                   | SK3041           | RT133            | ECG 152              |
| Q38      | 2SC1096(M)/<br>2168-17 (3)          | GE-28                     | TR-55                            | PTC110           |                   | SK3041           | RT133            | ECG 152              |

- (1) Rating 2 Watts @ 1 Amp.  
 (2) Rating 12 Watts @ 4 Amp.  
 (3) Rating 10 Watts @ 2 Amp.  
 (4) Alternate.  
 (6) Matched Pair  
 (7) Two required - select matched pair.

LAFAYETTE MODEL TEISAT SSB-50A

### ELECTROLYTIC CAPACITORS

| ITEM No. | RATING   | REPLACEMENT DATA |               |                    |                           |                  |                  |
|----------|----------|------------------|---------------|--------------------|---------------------------|------------------|------------------|
|          |          | MFR. PART No.    | ARCO PART No. | CENTRALAB PART No. | CORNELL-DUBILIER PART No. | MALLORY PART No. | SPRAGUE PART No. |
| C19      | 33 16V   | 1058-52          | ME-3-E-035    | EP15-25            | PC30-25                   | MTV30CB25        | EV-1325          |
| C62      | 10 16V   | 1040-52          | RME-B-E-010   | EP15-10            | PC10-25                   | VTT10A25         | EV-1222          |
| C101     | 1 50V    | 1015-52          | RME-A-J-001   | EP50-1             | PC1-50                    | MTV1CB50         | EV-1615          |
| C106     | 1 50V    | 1015-52          | RME-A-J-001   | EP50-1             | PC1-50                    | MTV1CB50         | EV-1615          |
| C118     | 1 50V    | 1015-52          | RME-A-J-001   | EP50-1             | PC1-50                    | MTV1CB50         | EV-1615          |
| C119     | 4.7 25V  | 1031-52          | RME-A-G-005   | EP30-5             | PC5-50                    | VTT4R7A50        | EV-1319          |
| C120     | 10 16V   | 1040-52          | RME-B-E-010   | EP15-10            | PC10-25                   | VTT10A25         | EV-1222          |
| C123     | 33 16V   | 1058-52          | ME-3-E-035    | EP15-25            | PC30-25                   | MTV30CB25        | EV-1325          |
| C124     | 1 50V    | 1015-52          | RME-A-J-001   | EP50-1             | PC1-50                    | MTV1CB50         | EV-1615          |
| C126     | 1 50V    | 1015-52          | RME-A-J-001   | EP50-1             | PC1-50                    | MTV1CB50         | EV-1615          |
| C127     | 33 10V   | 1057-59          | ME-3-D-035    | EA15-25            | WBR35-50                  | MTA30D15         | TVA-1149.1       |
| C128     | 33 10V   | 1057-59          | ME-3-D-035    | EA15-25            | WBR35-50                  | MTA30D15         | TVA-1149.1       |
| C130     | 1 50V    | 1015-52          | RME-A-J-001   | EP50-1             | PC1-50                    | MTV1CB50         | EV-1615          |
| C131     | 1 50V    | 1015-52          | RME-A-J-001   | EP50-1             | PC1-50                    | MTV1CB50         | EV-1615          |
| C133     | 1 50V    | 1015-52          | RME-A-J-001   | EP50-1             | PC1-50                    | MTV1CB50         | EV-1615          |
| C134     | 1 50V    | 1015-52          | RME-A-J-001   | EP50-1             | PC1-50                    | MTV1CB50         | EV-1615          |
| C135     | 1 50V    | 1015-52          | RME-A-J-001   | EP50-1             | PC1-50                    | MTV1CB50         | EV-1615          |
| C136     | 1 50V    | 1015-52          | RME-A-J-001   | EP50-1             | PC1-50                    | MTV1CB50         | EV-1615          |
| C137     | 1 50V    | 1015-52          | RME-A-J-001   | EP50-1             | PC1-50                    | MTV1CB50         | EV-1615          |
| C139     | 1 50V    | 1015-52          | RME-A-J-001   | EP50-1             | PC1-50                    | MTV1CB50         | EV-1615          |
| C143     | 47 10V   | 1062-52          | RME-D-D-050   | EP15-50            | PC50-10                   | MTV50CB15        | EV-1226          |
| C144     | 33 10V   | 1057-52          | ME-3-D-035    | EA15-25            | WBR35-50                  | MTA30D15         | TVA-1149.1       |
| C145     | 10 16V   | 1040-52          | RME-B-E-010   | EP15-10            | PC10-25                   | VTT10A25         | EV-1222          |
| C146     | 10 16V   | 1040-52          | RME-B-E-010   | EP15-10            | PC10-25                   | VTT10A25         | EV-1222          |
| C147     | 10 16V   | 1040-52          | RME-B-E-010   | EP15-10            | PC10-25                   | VTT10A25         | EV-1222          |
| C176     | 10 16V   | 1040-52          | RME-B-E-010   | EP15-10            | PC10-25                   | VTT10A25         | EV-1222          |
| C177     | 1 50V    | 1015-52          | RME-A-J-001   | EP50-1             | PC1-50                    | MTV1CB50         | EV-1615          |
| C179     | 33 10V   | 1057-52          | ME-3-D-035    | EA15-25            | WBR35-50                  | MTA30D15         | TVA-1149.1       |
| C180     | 3.3 25V  | 1026-52          | RME-A-H-003   | EP30-5             | PC5-50                    | VTT3R3A50        | EV-1618          |
| C181     | 10 6.3V  | 1038-52          | RME-A-B-010   | EP6-10             | PC10-25                   | VTT10A25         | EV-1222          |
| C201     | 100 10V  | 1077-52          | RME-E-D-100   | EP15-100           | PC100-10                  | MTV100CB10       | EV-1130          |
| C202     | 33 10V   | 1057-52          | ME-3-D-035    | EA15-25            | WBR35-50                  | MTA30D15         | TVA-1149.1       |
| C203     | 33 16V   | 1058-52          | ME-3-E-035    | EP15-25            | PC30-25                   | MTV30CB25        | EV-1325          |
| C204     | 10 16V   | 1058-52          | RME-B-E-010   | EP15-10            | PC10-25                   | VTT10A25         | EV-1222          |
| C205     | 1 50V    | 1015-52          | RME-A-J-001   | EP50-1             | PC1-50                    | MTV1CB50         | EV-1615          |
| C207     | 33 16V   | 1058-52          | ME-3-E-035    | EP15-25            | PC30-25                   | MTV30CB25        | EV-1325          |
| C209     | 33 16V   | 1058-52          | ME-3-E-035    | EP15-25            | PC30-25                   | MTV30CB25        | EV-1325          |
| C210     | 100 16V  | 1080-52          | RME-E-E-100   | EP15-100           | PC100-16                  | MTV100CD15       | EV-1230          |
| C213     | 3.3 25V  | 1026-52          | RME-A-H-003   | EP30-5             | PC5-50                    | VTT3R3A50        | EV-1618          |
| C215     | 2200 16V | 1120-52          |               |                    |                           |                  |                  |
| C217     | 33 16V   | 1058-52          | ME-3-E-035    | EP15-25            | PC30-25                   | MTV30CB25        | EV-1325          |
| C218     | 33 16V   | 1058-52          | ME-3-E-035    | EP15-25            | PC30-25                   | MTV30CB25        | EV-1325          |
| C225     | 33 10V   | 1057-52          | ME-3-D-035    | EA15-25            | WBR35-50                  | MTA30D15         | TVA-1149.1       |

# PARTS LIST AND DESCRIPTION (CONTINUED)

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

## CAPACITORS

| ITEM No. | RATING       | MFG. PART No. | REPLACEMENT DATA     |                   |                          |                 |                 |
|----------|--------------|---------------|----------------------|-------------------|--------------------------|-----------------|-----------------|
|          |              |               | ARCO/ELMENCOPART No. | CENTRALABPART No. | CORNELL-DUBILIERPART No. | MALLORYPART No. | SPRAGUEPART No. |
| C1       | 56 N150 10%  |               | *                    |                   |                          | *               | 10TCP-Q56       |
| C2       | 56 N150 10%  |               | *                    |                   |                          | *               | 10TCP-Q56       |
| C3       | 56 N150 10%  |               | *                    |                   |                          | *               | 10TCP-Q56       |
| C4       | 56 N150 10%  |               | *                    |                   |                          | *               | 10TCP-Q56       |
| C5       | 56 N150 10%  |               | *                    |                   |                          | *               | 10TCP-Q56       |
| C6       | 56 N150 10%  |               | *                    |                   |                          | *               | 10TCP-Q56       |
| C7       | 1 N150       |               | *                    |                   |                          | *               |                 |
| C8       | 39 N150 10%  |               | *                    |                   |                          | *               | 10TCP-Q39       |
| C9       | 220 10%      |               | DM10-221J            | CPR-220J          | CD10FD221J03             | SX322           | 424ME220J501    |
| C10      | 100 N150 10% |               | *                    |                   |                          | *               | 10TCP-T10       |
| C11      | 220 10%      |               | CCD-221              | DD-221            |                          | GP322           | 10TS-T22        |
| C12      | .01          |               | CCD-103              | DC-103            | GP10000                  | MAG5011         | 2SS-S10         |
| C13      | 150 N150 10% |               | *                    |                   |                          | *               | 10TCP-T15       |
| C14      | .01          |               | CCD-103              | DC-103            | GP10000                  | MAG5011         | 2SS-S10         |
| C15      | 6 N150       |               | *                    |                   |                          | *               | 10TCP-V68       |
| C16      | 15 N150      |               | *                    |                   |                          | *               | 10TCP-Q15       |
| C17      | 150 N150 10% |               | *                    |                   |                          | *               | 10TCP-T15       |
| C18      | .022         |               | CCD-203              |                   |                          | GP120           | 5GA-S20         |
| C20      | 27 N150 10%  |               | *                    |                   |                          | *               | 10TCP-Q27       |
| C21      | 27 N150 10%  |               | *                    |                   |                          | *               | 10TCP-Q27       |
| C22      | 27 N150 10%  |               | *                    |                   |                          | *               | 10TCP-Q27       |
| C23      | 27 N150 10%  |               | *                    |                   |                          | *               | 10TCP-Q27       |
| C24      | 68 N150 10%  |               | *                    |                   |                          | *               | 10TCP-Q68       |
| C25      | 68 N150 10%  |               | *                    |                   |                          | *               | 10TCP-Q68       |
| C26      | 820 10%      |               | DM19-821J            | CPR-820J          | CD19FD821J03             | SX382           | 424ME820J501    |
| C27      | 100 10%      |               | CCT0-101             | DTZ-100           | NP0100                   | CN0310          | 10TCC-T10       |
| C28      | .01          |               | CCD-103              | DC-103            | GP10000                  | MAG5011         | 2SS-S10         |
| C29      | 27 N150 10%  |               | *                    |                   |                          | *               | 10TCP-Q27       |
| C30      | 27 N150 10%  |               | *                    |                   |                          | *               | 10TCP-Q27       |
| C31      | 27 N150 10%  |               | *                    |                   |                          | *               | 10TCP-Q27       |
| C32      | 27 N150 10%  |               | *                    |                   |                          | *               | 10TCP-Q27       |
| C33      | 68 N150 10%  |               | *                    |                   |                          | *               | 10TCP-Q68       |
| C34      | 68 N150 10%  |               | *                    |                   |                          | *               | 10TCP-Q68       |
| C35      | 820 10%      |               | DM19-821J            | CPR-820J          | CD19FD821J03             | SX382           | 424ME820J501    |
| C36      | 100 10%      |               | CCT0-101             | DTZ-100           | NP0100                   | CN0310          | 10TCC-T10       |
| C37      | .01          |               | CCD-103              | DC-103            | GP10000                  | MAG5011         | 2SS-S10         |
| C38      | .01          |               | CCD-103              | DC-103            | GP10000                  | MAG5011         | 2SS-S10         |
| C39      | 100 N150 10% |               | *                    |                   |                          | *               | 10TCP-T100      |
| C40      | 3 N150       |               | *                    |                   |                          | *               | 10TCP-V30       |
| C41      | 47 N150 10%  |               | *                    |                   |                          | *               | 10TCP-Q47       |
| C42      | 3 N150 10%   |               | *                    |                   |                          | *               | 10TCP-V30       |
| C43      | 47 N150 10%  |               | *                    |                   |                          | *               | 10TCP-Q47       |
| C44      | 3 N150       |               | *                    |                   |                          | *               | 10TCP-V30       |
| C45      | 100 N150 10% |               | *                    |                   |                          | *               | 10TCP-T10       |
| C46      | 68 10%       |               | CCD-680              | DD-680            | GP68                     | GP468           | 10TS-Q68        |
| C47      | .022         |               | CCTN-221             | DTN-220           | N220                     | CN7322          | 10TCU-T22       |
| C48      | .01          |               | CCD-103              | DC-103            | GP10000                  | MAG5011         | 2SS-S10         |
| C49      | 180 10%      |               |                      | DTN-150           | N150                     | CN7315          | 10TCU-T15       |
| C50      | 510 10%      |               | DM15-511J            | CPR-510J          | CD15FD511J03             | SX351           | 424ME510J501    |
| C51      | 150 N150 10% |               | *                    |                   |                          | *               | 10TCP-T15       |
| C52      | 220 N150 10% |               | *                    |                   |                          | *               | 10TCP-T22       |
| C53      | .01          |               | CCD-103              | DC-103            | GP10000                  | MAG5011         | 2SS-S10         |
| C54      | 180 5%       |               | DM10-181J            | CPR-180J          | CD7FD181J03              | SX318           | 424ME180J501    |
| C55      | 510 10%      |               | DM15-511J            | CPR-510J          | CD15FD511J03             | SX351           | 424ME510J501    |
| C56      | 150 N150 10% |               | *                    |                   |                          | *               | 10TCP-T15       |
| C57      | 220 N150 10% |               | *                    |                   |                          | *               | 10TCP-T22       |
| C58      | .01          |               | CCD-103              | DC-103            | GP10000                  | MAG5011         | 2SS-S10         |
| C60      | .01          |               | CCD-103              | DC-103            | GP10000                  | MAG5011         | 2SS-S10         |
| C61      | .01          |               | CCD-103              | DC-103            | GP10000                  | MAG5011         | 2SS-S10         |
| C63      | .022         |               | CCD-203              |                   |                          | GP120           | 5GA-S20         |
| C64      | .001         |               | CCD-821              | DD-821            | GP820                    | GP382           | 10TS-T82        |
| C65      | .001         |               | CCD-821              | DD-821            | GP820                    | GP382           | 10TS-T82        |
| C66      | 10           |               | CCT0-100             | DTZ-10            | NP010                    | CN0410          | 10TCC-Q10       |
| C67      | .01          |               | CCD-103              | DC-103            | GP10000                  | MAG5011         | 2SS-S10         |
| C68      | .01          |               | CCD-103              | DC-103            | GP10000                  | MAG5011         | 2SS-S10         |
| C69      | 100 N150 10% |               | *                    |                   |                          | *               | 10TCP-T10       |
| C70      | 47 N150 10%  |               | *                    |                   |                          | *               | 10TCP-Q45       |
| C71      | .022         |               | CCD-203              |                   |                          | GP120           | 5GA-S20         |
| C72      | .022         |               | CCD-203              |                   |                          | GP120           | 5GA-S20         |
| C73      | .022         |               | CCD-203              |                   |                          | GP120           | 5GA-S20         |
| C74      | .01          |               | CCD-103              | DC-103            | GP10000                  | MAG5011         | 2SS-S10         |
| C75      | .01          |               | CCD-103              | DC-103            | GP10000                  | MAG5011         | 2SS-S10         |
| C76      | 150 N150 10% |               | *                    |                   |                          | *               | 10TCP-T15       |
| C77      | 6 N150 10%   |               | *                    |                   |                          | *               | 10TCP-V68       |
| C78      | 150 N150 10% |               | *                    |                   |                          | *               | 10TCP-T15       |
| C79      | 5 N150 10%   |               | *                    |                   |                          | *               | 10TCP-V5        |
| C80      | 150 10%      |               | CCD-151              | DD-151            |                          | CN0315          | 10TCC-T15       |
| C81      | 8 N150 10%   |               | *                    |                   |                          | *               | 10TCP-V82       |
| C82      | 56 N150 10%  |               | *                    |                   |                          | *               | 10TCP-Q56       |
| C83      | .01          |               | CCD-103              | DC-103            | GP10000                  | MAG5011         | 2SS-S10         |
| C84      | .01          |               | CCD-103              | DC-103            | GP10000                  | MAG5011         | 2SS-S10         |
| C85      | 100 N150 10% |               | *                    |                   |                          | *               | 10TCP-T10       |
| C86      | .3           |               |                      |                   |                          |                 |                 |
| C88      | 330 10%      |               | CCD-331              | DD-331            | GP330                    | GP333           | 10TS-T33        |
| C89      | 100 N150 10% |               | *                    |                   |                          | *               | 10TCP-T10       |
| C90      | .047         |               | CCD-503              | DC-503            | MGP05                    | MAG5015         | TGL-S50         |
| C91      | .047         |               | CCD-503              | DC-503            | MGP05                    | MAG5015         | TGL-S50         |
| C92      | .001         |               | CCD-102              | DD-102            |                          | GP210           | 10TS-D10        |

# PARTS LIST AND DESCRIPTION (CONTINUED)

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

## CAPACITORS(cont)

| ITEM No. | RATING       | MFR. PART No. | REPLACEMENT DATA      |                    |                           |                  |                  |
|----------|--------------|---------------|-----------------------|--------------------|---------------------------|------------------|------------------|
|          |              |               | ARCO/ELMENCO PART No. | CENTRALAB PART No. | CORNELL-DUBILIER PART No. | MALLORY PART No. | SPRAGUE PART No. |
| C93      | .047         |               | CCD-503               | DC-503             | MGP05                     | MAG5015          | TGL-S50          |
| C94      | .047         |               | CCD-503               | DC-503             | MGP05                     | MAG5015          | TGL-S50          |
| C95      | 330 10%      |               | CCD-331               | DD-331             | GP330                     | GP333            | 10TS-T33         |
| C96      | 270 10%      |               | CCD-271               | DD-271             | GP270                     | GP327            | 10TS-T27         |
| C97      | 22           |               | CCTO-220              | DTZ-22             | NP022                     | CN0422           | 10TCC-Q22        |
| C99      | 15           |               | CCTO-150              | DTZ-15             | NP015                     | CN0415           | 10TCC-Q15        |
| C100     | 2            |               | CCTO-2R2              | DTZ-2R2            | NP02P2                    | CN0522           | 10TCC-V22        |
| C101     | .022         |               | CCD-203               |                    |                           | GP120            | 5GA-S20          |
| C103     | 3 N150       |               | *                     |                    |                           | *                | 10TCP-V30        |
| C104     | .022         |               | CCD-203               |                    |                           | GP120            | 5GA-S20          |
| C105     | .047         |               | CCD-503               | DC-503             | MGP05                     | MAG5015          | TGL-S50          |
| C107     | .047         |               | CCD-503               | DC-503             | MGP05                     | MAG5015          | TGL-S50          |
| C108     | .2           |               |                       |                    |                           |                  |                  |
| C109     | .047         |               | CCD-503               | DC-503             | MGP05                     | MAG5015          | TGL-S50          |
| C110     | .01          |               | CCD-103               | DC-103             | GP10000                   | MAG5011          | 2SS-S10          |
| C111     | .01          |               | CCD-103               | DC-103             | GP10000                   | MAG5011          | 2SS-S10          |
| C112     | .001         |               | CCD-102               | DD-102             |                           | GP210            | 10TS-D10         |
| C113     | .022         |               | CCD-203               |                    |                           | GP120            | 5GA-S20          |
| C114     | 150 N150 10% |               | *                     |                    |                           | *                | 10TCP-T15        |
| C115     | .022         |               | CCD-203               |                    |                           | GP120            | 5GA-S20          |
| C116     | .022         |               | CCD-203               |                    |                           | GP120            | 5GA-S20          |
| C117     | .047         |               | CCD-503               | DC-503             | MGP05                     | MAG5015          | TGL-S50          |
| C121     | .2           |               |                       |                    |                           |                  |                  |
| C122     | .0022        |               | CCD-222               |                    |                           | GP222            | 10TS-D22         |
| C125     | .1           |               |                       | DC-104             | MGP1                      | MAG5001          | TG-P10           |
| C129     | .0022        |               | CCD-222               |                    |                           | GP222            | 10TS-D22         |
| C132     | .2           |               |                       |                    |                           |                  |                  |
| C138     | .047         |               | CCD-503               | DC-503             | MGP05                     | MAG5015          | TGL-S50          |
| C140     | .1           |               |                       | DC-104             | MGP1                      | MAG5001          | TG-P10           |
| C141     | .1           |               |                       | DC-104             | MGP1                      | MAG5001          | TG-P10           |
| C142     | .5           |               |                       |                    |                           |                  |                  |
| C148     | .01          |               | CCD-103               | DC-103             | GP10000                   | MAG5011          | 2SS-S10          |
| C149     | 100          |               | CCTO-101              | DTZ-100            | NP0100                    | CN0310           | 10TCC-T10        |
| C150     | 2            |               | CCTO-2R2              | DTZ-2R2            | NP02P2                    | CN0522           | 10TCC-V22        |
| C151     | 220 10%      |               | CCD-221               | DD-221             |                           | GP322            | 10TS-T22         |
| C152     | 5            |               | CCTO-050              |                    |                           |                  | 10TCC-V50        |
| C153     | .01          |               | CCD-103               | DC-103             | GP10000                   | MAG5011          | 2SS-S10          |
| C154     | .01          |               | CCD-103               | DC-103             | GP10000                   | MAG5011          | 2SS-S10          |
| C155     | .01          |               | CCD-103               | DC-103             | GP10000                   | MAG5011          | 2SS-S10          |
| C156     | .01          |               | CCD-103               | DC-103             | GP10000                   | MAG5011          | 2SS-S10          |
| C157     | .01          |               | CCD-103               | DC-103             | GP10000                   | MAG5011          | 2SS-S10          |
| C158     | 27           |               | CCTO-270              |                    |                           | CN0427           | 10TCC-Q27        |
| C159     | .01          |               | CCD-103               | DC-103             | GP10000                   | MAG5011          | 2SS-S10          |
| C161     | 5            |               | CCTO-050              |                    |                           |                  | 10TCC-V50        |
| C162     | .01          |               | CCD-103               | DC-103             | GP10000                   | MAG5011          | 2SS-S10          |
| C163     | .01          |               | CCD-103               | DC-103             | GP10000                   | MAG5011          | 2SS-S10          |
| C164     | 15           |               | CCTO-150              | DTZ-15             | NP015                     | CN0415           | 10TCC-Q15        |
| C165     | .047         |               | CCD-503               | DC-503             | MGP05                     | MAG5015          | TGL-S50          |
| C166     | 6            |               |                       | DTZ-6R8            | NP06P8                    |                  | 10TCC-V68        |
| C167     | 570 5%       |               | CCD-561               | DD-561             |                           | GP356            | 10TS-T56         |
| C168     | .047         |               | CCD-503               | DC-503             | MGP05                     | MAG5015          | TGL-S50          |
| C169     | .047         |               | CCD-503               | DC-503             | MGP05                     | MAG5015          | TGL-S50          |
| C170     | .047         |               | CCD-503               | DC-503             | MGP05                     | MAG5015          | TGL-S50          |
| C171     | .047         |               | CCD-503               | DC-503             | MGP05                     | MAG5015          | TGL-S50          |
| C173     | .047         |               | CCD-503               | DC-503             | MGP05                     | MAG5015          | TGL-S50          |
| C174     | .047         |               | CCD-503               | DC-503             | MGP05                     | MAG5015          | TGL-S50          |
| C175     | .022         |               | CCD-203               |                    |                           | GP120            | 5GA-S20          |
| C178     | .047         |               | CCD-503               | DC-503             | MGP05                     | MAG5015          | TGL-S50          |
| C182     | 100 N150     |               | *                     |                    |                           | *                | 10TCP-T10        |
| C183     | .1           |               |                       | DC-104             | MGP1                      | MAG5001          | TG-P10           |
| C184     | .1           |               |                       | DC-104             | MGP1                      | MAG5001          | TG-P10           |
| C185     | .047         |               | CCD-503               | DC-503             | MGP05                     | MAG5015          | TGL-S50          |
| C186     | .047         |               | CCD-503               | DC-503             | MGP05                     | MAG5015          | TGL-S50          |
| C187     | .01          |               | CCD-103               | DC-103             | GP10000                   | MAG5011          | 2SS-S10          |
| C188     | 330          |               | CCD-331               | DD-331             | GP330                     | GP333            | 10TS-T33         |
| C189     | .01          |               | CCD-103               | DC-103             | GP10000                   | MAG5011          | 2SS-S10          |
| C190     | .01          |               | CCD-103               | DC-103             | GP10000                   | MAG5011          | 2SS-S10          |
| C191     | .1           |               |                       | DC-104             | MGP1                      | MAG5001          | TG-P10           |
| C192     | .1           |               |                       | DC-104             | MGP1                      | MAG5001          | TG-P10           |
| C193     | .01          |               | CCD-103               | DC-103             | GP10000                   | MAG5011          | 2SS-S10          |
| C194     | .01          |               | CCD-103               | DC-103             | GP10000                   | MAG5011          | 2SS-S10          |
| C195     | .01          |               | CCD-103               | DC-103             | GP10000                   | MAG5011          | 2SS-S10          |
| C196     | .01          |               | CCD-103               | DC-103             | GP10000                   | MAG5011          | 2SS-S10          |
| C197     | 270          |               | CCD-271               | DD-271             | GP270                     | GP327            | 10TS-T27         |
| C198     | 220 10%      |               | DM10-221J             | CPR-220J           | CD10FD221J03              | SX322            | 424ME2200J501    |
| C199     | 39           |               | CCTO-390              |                    |                           | CN0439           | 10TCC-Q39        |
| C200     | .047         |               | CCD-503               | DC-503             | MGP05                     | MAG5015          | TGL-S50          |
| C206     | .0022        |               | CCD-222               |                    |                           | GP222            | 10TS-D22         |
| C208     | .1           |               |                       | DC-104             | MGP1                      | MAG5001          | TG-P10           |
| C211     | .022         |               | CCD-203               |                    |                           | GP120            | 5GA-S20          |
| C212     | .022         |               | CCD-203               |                    |                           | GP120            | 5GA-S20          |
| C214     | .047         |               | CCD-503               | DC-503             | MGP05                     | MAG5015          | TGL-S50          |
| C216     | .047         |               | CCD-503               | DC-503             | MGP05                     | MAG5015          | TGL-S50          |
| C219     | .001         |               | CCD-102               | DD-102             |                           | GP210            | 10TS-D10         |
| C220     | .047         |               | CCD-503               | DC-503             | MGP05                     | MAG5015          | TGL-S50          |
| C221     | .047         |               | CCD-503               | DC-503             | MGP05                     | MAG5015          | TGL-S50          |
| C222     | .047         |               | CCD-503               | DC-503             | MGP05                     | MAG5015          | TGL-S50          |
| C223     | .047         |               | CCD-503               | DC-503             | MGP05                     | MAG5015          | TGL-S50          |
| C224     | .047         |               | CCD-503               | DC-503             | MGP05                     | MAG5015          | TGL-S50          |
| C227     | .047         |               | CCD-503               | DC-503             | MGP05                     | MAG5015          | TGL-S50          |

LAFAYETTE MODEL TELSAT SSR-50A

## PARTS LIST AND DESCRIPTION (CONTINUED)

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

### CAPACITORS(cont)

| ITEM No. | RATING       | MFR. PART No. | REPLACEMENT DATA      |                    |                           |                  |                  |
|----------|--------------|---------------|-----------------------|--------------------|---------------------------|------------------|------------------|
|          |              |               | ARCO/ELMENCO PART No. | CENTRALAB PART No. | CORNELL-DUBILIER PART No. | MALLORY PART No. | SPRAGUE PART No. |
| C228     | .001         |               | DM19-102J             | CPR-1000J          | CD19FD102J03              | SX210            | 424ME1001J501    |
| C229     | 180          |               | CCD-181               | DD-181             |                           | GP318            | 10TS-T18         |
| C230     | .002         |               | CCD-202               |                    |                           | GP220            | 10TS-D20         |
| C231     | 470 N150 10% |               | *                     |                    |                           | *                | 10TCP-T47        |
| TC1      | 20           | 1091-57       |                       |                    |                           |                  |                  |
| TC2      | 20           | 1091-57       |                       |                    |                           |                  |                  |
| TC3      | 20           | 1091-57       |                       |                    |                           |                  |                  |
| TC4      | 20           | 1091-57       |                       |                    |                           |                  |                  |
| TC5      | 20           | 1091-57       |                       |                    |                           |                  |                  |
| TC6      | 20           | 1091-57       |                       |                    |                           |                  |                  |
| TC7      | 20           | 1099-57       |                       |                    |                           |                  |                  |
| TC8      | 20           | 1099-57       |                       |                    |                           |                  |                  |
| TC9      | 20           | 1099-57       |                       |                    |                           |                  |                  |
| TC10     | 20           | 1099-57       |                       |                    |                           |                  |                  |
| TC11     | 20           | 1099-57       |                       |                    |                           |                  |                  |
| TC12     | 20           | 1099-57       |                       |                    |                           |                  |                  |
| TC13     | 20           | 1099-57       |                       |                    |                           |                  |                  |
| TC14     | 20           | 1099-57       |                       |                    |                           |                  |                  |
| TC15     | 50           | 1100-57       |                       |                    |                           |                  |                  |
| TC16     | 50           | 1100-57       |                       |                    |                           |                  |                  |
| TC17     | 20           | 1099-57       |                       |                    |                           |                  |                  |
| TC18     | 250          | 1086-57       |                       |                    |                           |                  |                  |
| TC19     | 20           | 1099-57       |                       |                    |                           |                  |                  |
| VC       |              | 15108-57      |                       |                    |                           |                  |                  |

\* 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          | RESIST-ANCE | REPLACEMENT DATA |                            |                    |                  |               |
|----------|-------------------|-------------|------------------|----------------------------|--------------------|------------------|---------------|
|          |                   |             | MFR. PART No.    | CENTRALAB PART No.         | CLAROSTAT PART No. | MALLORY PART No. | TRW PART No.  |
| RV1      | USB Meter         | 1000        | 2598-13          | TSV-1K or T-1000           | C-102              | MTC13L1          | X201R102B     |
| RV2      | LSB               | 1000        | 2598-13          | TSV-1K or T-1000           | C-102              | MTC13L1          | X201R102B     |
| RV3      | Balance           | 300         | 2570-13          | T-300 (2) or TSV-500 (2)   | C-501 (2)          | MTC32L1 (2)      | X201R351B (2) |
| RV4      | Bias              | 1000        | 2598-13          | TSV-1K or T-1000           | C-102              | MTC13L1          | X201R102B     |
| RV5      | Bias              | 500         | 2294-13          | TSV-500 (2) or T-500 (2)   | C-501 (2)          | MTC52L1 (2)      | X201R501B (2) |
| RV6      | RF Meter          | 10K         | 2596-13          | TSV-10K (2) or T-10K (2)   | C-103 (2)          | MTC14L1 (2)      | X201R103B (2) |
| RV7      | ALC               | 2000        | 2599-13          | TSV-2.5K (2) or T-2500 (2) | C-252 (2)          | MTC252L1 (2)     | X201R252B (2) |
| RV8      | AM Modulation     | 10K         | 2567-13          | TSV-10K (2) or T-10K (2)   | C-103 (2)          | MTC14L1 (2)      | X201R103B (2) |
| RV9      | SSB Mic Gain      | 10K         | 2716-13          | TSV-10K (2) or T-10K (2)   | C-103 (2)          | MTC14L1 (2)      | X201R103B (2) |
| RV10     | SSB AGC Gain      | 10K         | 2716-13          | TSV-10K (2) or T-10K (2)   | C-103 (2)          | MTC14L1 (2)      | X201R103B (2) |
| RV11     | SSB AGC           | 5000        | 2755-13          | TSV-5K (2) or T-5000 (2)   | C-502 (2)          | MTC53L1 (2)      | X201R502B (2) |
| RV12     | SSB Squelch Range | 5000        | 2756-13          | TSV-5K (2) or T-5000 (2)   | C-502 (2)          | MTC53L1 (2)      | X201R502B (2) |
| RV13     | SSB Meter         | 1000        | 2717-13          | TSV-1K (2) or T-1000 (2)   | C-102 (2)          | MTC13L1 (2)      | X201R102B (2) |
| RV14     | "S" Meter         | 10K         | 2596-13          | TSV-10K (2) or T-10K (2)   | C-103 (2)          | MTC14L1 (2)      | X201R103B (2) |
| RV15     | Squelch Range     | 10K         | 2596-13          | TSV-10K (2) or T-10K (2)   | C-103 (2)          | MTC14L1 (2)      | X201R103B (2) |
| VR1      | Volume/Switch     | 10K         | 1543-11          |                            |                    |                  |               |
| VR2      | Squelch           | 10K         | 1542-11          |                            |                    |                  |               |

(2) Cut off one of the end terminals and bend to fit PC board.

### 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. |
| PTH      | 50K CoId PTC |                  | 2169-17       | TH1      | 390 CoId NTC |                  | 2038-17       |
| R171     | 3.3 10W WW   |                  | 2595-13       | TH2      | 290 CoId NTC |                  | 2170-17       |

## PARTS LIST AND DESCRIPTION (CONTINUED)

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

### COILS (RF-IF)

| ITEM No. | FUNCTION               | REPLACEMENT DATA |                      |                      | REMARKS |
|----------|------------------------|------------------|----------------------|----------------------|---------|
|          |                        | PART No.         | OTHER IDENTIFICATION | MILLER PART No.      |         |
| CH3      | RF Choke (100uH)       | 2490-23          | ELR-45               | 74F104AI<br>74F104AI |         |
| CH4      | RF Choke (100uH)       | 2490-23          | ELR-45               |                      |         |
| L1       | Synth. Buffer (23MHz)  | 2491-23          | ETR-136              |                      |         |
| L2       | Synth. Buffer (23MHz)  | 2491-23          | ETR-136              |                      |         |
| L3       | AM/USB Osc (14MHz)     | 2219-23          | ETR-20               |                      |         |
| L4       | LSB Osc (14MHz)        | 2219-23          | ETR-20               |                      |         |
| L5       | Synth.Mixer (38MHz)    | 2220-23          | ETR-24               |                      |         |
| L6       | Synth.Mixer (38MHz)    | 2221-23          | ETR-25               |                      |         |
| L7       | Synth.Mixer (38MHz)    | 2221-23          | ETR-25               |                      |         |
| L8       | Synth.Mixer (38MHz)    | 2222-23          | ETR-26               |                      |         |
| L9       | Balance Mod. (11MHz)   | 2492-23          | ETR-137              |                      |         |
| L10      | SSB Amp/IF (11MHz)     | 2493-23          | ETR-101              |                      |         |
| L11      | Synth.Buffer (27MHz)   | 2220-23          | ETR-24               |                      |         |
| L12      | Synth.Buffer (27MHz)   | 2220-23          | ETR-24               |                      |         |
| L13      | Synth.Buffer (27MHz)   | 2220-23          | ETR-24               |                      |         |
| L14      | Synth.Buffer (27MHz)   | 2429-23          | ETR-101              |                      |         |
| L15      | Xmit. Amp (27MHz)      | 2225-23          | ETR-22               |                      |         |
| L16      | Xmit. Driver (27MHz)   | 2225-23          | ETR-22               |                      |         |
| L18      | Final Tank (27MHz)     | 2030-24          | ETR-94               |                      |         |
| L19      | Antenna (27MHz)        | 2489-23          | ETR-135              |                      |         |
| L20      | TVI Trap (54MHz)       | 2216-23          | ETR-18               |                      |         |
| L21      | SSB IF (11MHz)         | 2493-23          | ET1-65               |                      |         |
| L22      | Rec. Ant. (27MHz)      | 2228-23          | ETR-12               |                      |         |
| L23      | Rec. Ant. (27MHz)      | 2228-23          | ETR-12               |                      |         |
| L24      | RF Amp (27MHz)         | 2229-23          | ETR-27               |                      |         |
| L25      | 1st Mixer (27MHz)      | 2085-24          | ET1-66               |                      |         |
| L26      | 1st Mixer (27MHz)      | 2017-24          | ET1-32               |                      |         |
| L27      | Input IF (455kHz)      | 2036-24          | ET1-33               |                      |         |
| L28      | Interstage IF (455kHz) | 2037-24          | ET1-41               |                      |         |
| L29      | Output IF (455kHz)     | 1949-24          | ET1-43               |                      |         |
| L30      | Antenna (27MHz)        | 2039-24          | ET1-42               |                      |         |
| L31      | Noise Input (24MHz)    | 2040-24          | ETR-43               |                      |         |
| L32      | Noise Amp (24MHz)      | 2042-24          | ETR-44               |                      |         |
| L33      | Rec. Osc (11MHz)       | 2041-24          | ETR-28               |                      |         |
| MF       | 2nd Mixer (455kHz)(1)  | 2043-24          | EFC-3                |                      |         |
| RFC1     | RF Choke               | 2342-23          | ELR-4                |                      |         |
| RFC2     | RF Choke               |                  |                      |                      |         |
| RFC3     | RF Choke               |                  |                      |                      |         |
| RFC4     | RF Choke               |                  |                      |                      |         |
| RFC5     | RF Choke               |                  |                      |                      |         |
| RFC6     | RF Choke               | 2217-23          | ELR-11               |                      |         |

(1) Includes 455kHz Mechanical Filter.

### FILTER CHOKE

| ITEM No. | RATINGS            |         |                              | REPLACEMENT DATA |                  |                     |                | NOTES |
|----------|--------------------|---------|------------------------------|------------------|------------------|---------------------|----------------|-------|
|          | CURRENT (Measured) | DC RES. | INDUCTANCE (0 CURRENT 1000~) | MFGR. PART No.   | STANCOR PART No. | THORDARSON PART No. | TRIAD PART No. |       |
| CH1      | 1400mA             | .2      | .2mH                         | 1090-15 (ELA-2)  |                  |                     |                |       |

### CHOKE (Audio Output)

| ITEM No. | INDUCTANCE | REPLACEMENT DATA |                  |                     |                | NOTES |
|----------|------------|------------------|------------------|---------------------|----------------|-------|
|          |            | MFGR. PART No.   | STANCOR PART No. | THORDARSON PART No. | TRIAD PART No. |       |
| CH2      | 15mH       | 1637-15 (ELA-11) |                  |                     |                |       |

### TRANSFORMER (Driver)

| ITEM No. | TURNS RATIO |        |        | REPLACEMENT DATA |                  |                     |                | NOTES |
|----------|-------------|--------|--------|------------------|------------------|---------------------|----------------|-------|
|          | PRI.        | SEC. 1 | SEC. 2 | MFGR. PART No.   | STANCOR PART No. | THORDARSON PART No. | TRIAD Part No. |       |
| T1       | 1.25        | 1      |        | 2084-24 (ETA-28) |                  |                     |                |       |

### TRANSFORMER (Audio Output)

| ITEM No. | IMPEDANCE |      | REPLACEMENT DATA |                  |                     |                | NOTES |
|----------|-----------|------|------------------|------------------|---------------------|----------------|-------|
|          | PRI.      | SEC. | MFGR. PART No.   | STANCOR PART No. | THORDARSON PART No. | TRIAD PART No. |       |
| T2       | 55        | 24   | 1718-15 (ETA-27) |                  |                     |                |       |

LAFAYETTE MODEL TEISAT SSB-50A

## PARTS LIST AND DESCRIPTION (CONTINUED)

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

### SPEAKER

| ITEM No. | TYPE          | REPLACEMENT DATA    |               | NOTES |
|----------|---------------|---------------------|---------------|-------|
|          |               | MFGR. PART No.      | QUAM PART No. |       |
| SP       | 3" PM 16 ohms | 1268-36<br>(8P79SL) | 30A05RZ16     |       |

### FUSE DEVICES

|          |                   | REPLACEMENT DATA |        |               |        |                     |        |                  |
|----------|-------------------|------------------|--------|---------------|--------|---------------------|--------|------------------|
| ITEM No. | DESCRIPTION       | PART No.         |        | BUSS PART No. |        | LITTELFUSE PART No. |        | WORKMAN PART No. |
|          |                   | DEVICE           | HOLDER | DEVICE        | HOLDER | DEVICE              | HOLDER | DEVICE           |
| F1       | 1.5A Quick-acting |                  |        | AGC 1 1/2     | HDJ    | 31201.5             | 150145 | FG1 1/2-2        |

### MISCELLANEOUS

| ITEM No. | PART NAME             | PART No.         | NOTES              |
|----------|-----------------------|------------------|--------------------|
| C65      | Component Combination |                  |                    |
| C67      | Component Combination |                  |                    |
| M        | Meter                 | 1179-27 (EMM-21) | S/RF               |
| RY1      | Relay                 | 1069-37          | Antenna, Switching |
| SW1      | Switch                | 1730-14 (ESR-39) | Channel Selector   |
| SW2      | Switch                | 1872-14 (ESR-76) | AM/USB/LSB         |
| SW3      | Switch                | 1871-14 (ESP-49) | ANL/NS             |
| SW4      | Switch                | 1733-14 (ESP-19) | PA/CB              |
| XF       | Crystal Filter        | 1297-35 (EFC-13) | 11.2735MHz         |
| X1       | Crystal               | 1264-35          | 7.7766MHz          |
| X2       | Crystal               | 1265-35          | 7.7933MHz          |
| X3       | Crystal               | 1266-35          | 7.8100MHz          |
| X4       | Crystal               | 1267-35          | 7.8266MHz          |
| X5       | Crystal               | 1268-35          | 7.8433MHz          |
| X6       | Crystal               | 1269-35          | 7.8600MHz          |
| X7       | Crystal               | 1270-35          | 14.907MHz          |
| X8       | Crystal               | 1271-35          | 14.917MHz          |
| X9       | Crystal               | 1272-35          | 14.927MHz          |
| X10      | Crystal               | 1273-35          | 14.947MHz          |
| X11      | Crystal               | 1274-35          | 14.904MHz          |
| X12      | Crystal               | 1275-35          | 14.914MHz          |
| X13      | Crystal               | 1276-35          | 14.924MHz          |
| X14      | Crystal               | 1277-35          | 14.944MHz          |
| X15      | Crystal               | 1097-35          | 11.730MHz          |
| X16      | Crystal               | 1096-35          | 11.275MHz          |
| X17      | Crystal               | 1278-35          | 11.272MHz          |

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

| ITEM            | PART No. | ITEM                              | PART No. |
|-----------------|----------|-----------------------------------|----------|
| Escutcheon      | 7801-10  | Knob, Volume, Squelch, AM/USB/LSB | 1840-18  |
| Chassis, Right  | 7802-10  | Knob, Fine Tune                   | 1737-18  |
| Chassis, Left   | 7803-10  | Knob, Channel Selector            | 1735-18  |
| Chassis, Rear   | 7804-10  | Dial, Channel Selector            | 7808-10  |
| Chassis, Middle | 7805-10  | Button, ANL/NS, CB/PA             | 1839-18  |
| Cover, Top      | 7806-10  | Mobile Mounting Bracket           | 7810-10  |
| Cover, Bottom   | 1532-80  | Microphone Hanger                 | 7822-10  |

### ACCESSORIES

| ITEM          | MFGR. PART No. | REMARKS |
|---------------|----------------|---------|
| Microphone    | 1010-34        |         |
| DC Power Cord | 1288-38        |         |

### WIRING DATA

|                                  |                                                                         |
|----------------------------------|-------------------------------------------------------------------------|
| General-use Hook-up Wire .....   | Use BELDEN No. 8530 (Solid) Available in 12 Colors                      |
|                                  | 8524 (Stranded) Available in 12 Colors                                  |
| Shielded Antenna Lead .....      | Use BELDEN No. 8214 Lowest-loss (RG-8/U Type)                           |
|                                  | 8237 Low-loss (RG-8/U)                                                  |
|                                  | 8240 (Solid) Miniature (RG-58/U)                                        |
|                                  | 8259 (Stranded) Miniature (RG-58A/U)                                    |
| Coiled Microphone Cable .....    | Use BELDEN No. 8497 3-Conductor (1 shielded for Press-to-Talk) Neoprene |
|                                  | 8491 4-Conductor (2 shielded, 2 unshielded) Neoprene                    |
| Ignition Noise Suppression ..... | Use BELDEN No. 7300-Series Spark-Plug Sets                              |
| Bonding Strap .....              | Use BELDEN No. 8661 (3/8 inch)                                          |