

Sears

ORIGINAL VERSION

SHEET 1 OF 23 SHEETS

MODEL NO: 934.38261800

DIVISION 61
TECHNICAL MANUAL
CITIZENS BAND RADIO

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Refer to the Div. 61 Authorized Price List 934.00 for current selling prices, availability and ordering information.

Service Flash References

Sears, Roebuck and Co., Sears Tower, Chicago, Illinois 60684

58
ALL

SPECIFICATIONS

These are average values except marked* items. *FCC limit.

RECEIVER:

Frequency Coverage	All 40 CB Channels (lower sideband, upper sideband, or AM), 26.965 to 27.405 MHz
Sensitivity	AM: 0.5 μ V for 10 dB S + N/N SSB: 0.1 μ V for 10 dB S + N/N
Selectivity	AM: 50 dB \pm 10 kHz SSB: 60 dB \pm 5 kHz
IF Frequency	AM: 1st IF = 10.695 MHz 2nd IF = 455 kHz SSB: 10.695 MHz
Audio Output	4.0 watts (THD 10%)
Frequency Response	400 - 2000 Hz
Signal to Noise Ratio at 1 mV input	45 dB
Cross Modulation	80 dB
Distortion at 5 mV input	3%
AGC figure of merit at 74 dB input	70 dB
Current Drain (13.8V supply)	270 mA (no signal) 950 mA (max. output)
Squelch	Adjustable from 0.25 μ V to 100 μ V

TRANSMITTER:

Frequency Coverage	All 40 CB Channels (lower sideband, upper sideband, or AM), 26.965 to 27.405 MHz
Power Output	AM: Less than 4.0 watts * SSB: Less than 12.0 watts* (P.E.P.)
Emission	AM: 6A3 SSB: 3A3J
Modulation Capabilities	\pm 85%
Spurious Radiation	Better than -60 dB *
Frequency Tolerance	0.005% *
Antenna Impedance	50 ohms
Current Drain (13.8V supply)	1200 mA (unmodulated) 1600 mA (full modulation)

GENERAL ITEMS:

Semiconductors	8 IC's 37 Transistors 1 FET 56 Diodes
Microphone	Dynamic
Power Requirements	13.8 volts DC, positive or negative ground
Dimensions	2-11/16" (H) \times 8-1/16" (W) \times 9-7/16" (D) (6.8 \times 20.5 \times 24 cm)
Weight	4 lbs. 14 oz. (2.2 kg)

FEDERAL COMMUNICATIONS COMMISSIONS REQUIREMENTS

NOTE

The technical information, diagrams, and charts provided in this manual are supplied for the use of a qualified holder of a first or second class radio-telephone license in servicing this transceiver. It is the user's responsibility to see that this unit is operating at all times in accordance with the FCC Citizens Radio Service regulations.

Transmitter adjustments are prohibited by the FCC unless you hold a first or second class radio-telephone license. A Citizens Band or Amateur license is insufficient.

When service is performed by an authorized and licensed person, care must be taken in the replacement of parts to use only authorized parts, in order not to void the type acceptance of this model.

The Sears, Roebuck and Co., hereby certifies that this unit has been designed, manufactured, and FCC type-accepted in accordance with Vol. 6, Part 95 of the current FCC rules and regulations as of the date of manufacture.

CONTROLS

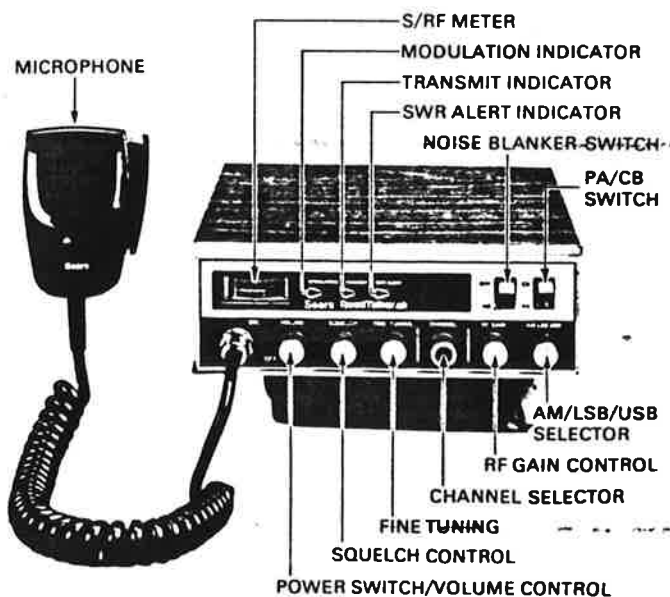


Figure 1

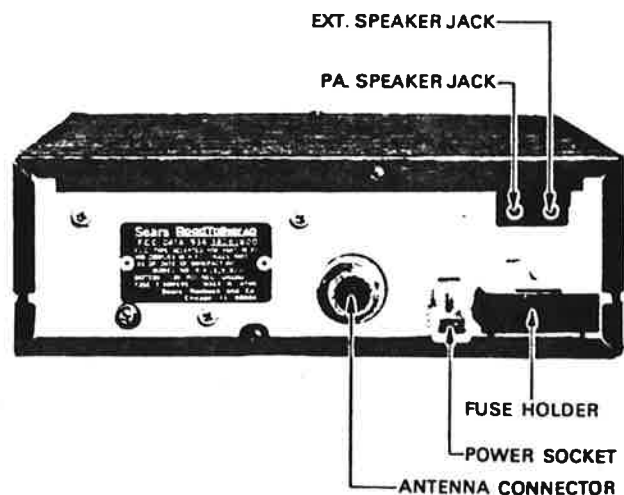


Figure 2

EXPLANATION OF PHASE-LOCKED LOOP (PLL)

1. PLL (Figure 3)

PLL Circuit consists of a phase detector (detects the difference in phase or frequency between two signals), a low pass filter (converts signals into DC voltages and filters out high frequencies) and a voltage controlled oscillator (changes oscillating frequencies by input voltages), and these circuits form a negative feed-back loop.

After output frequency (f_v) from VCO and reference frequency (f_r) have been compared at P-DET, the difference is supplied for VCO through LPF as D.C. and corrects output frequency. This completes the loop.

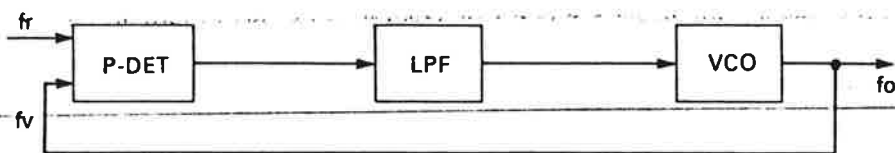


Figure 3

2. PLL Synthesizer (Figures 4 and 5)

When the loop becomes locked up, f_o becomes f_r multiplied by N .

Accordingly we can get desired frequencies by changing " N ".

Example:

In case of $f_r = 10$ kHz, and $N = 2707.5$, $f_o = 10 \text{ kHz} \times 2707.5 = 27.075 \text{ MHz}$.

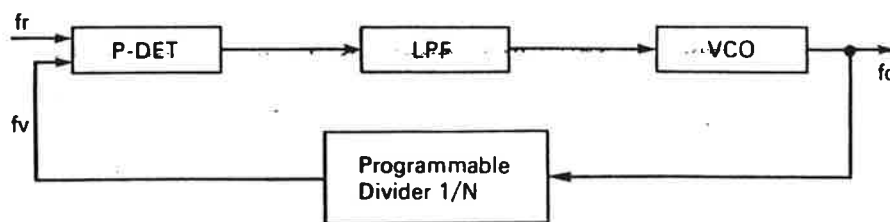


Figure 4

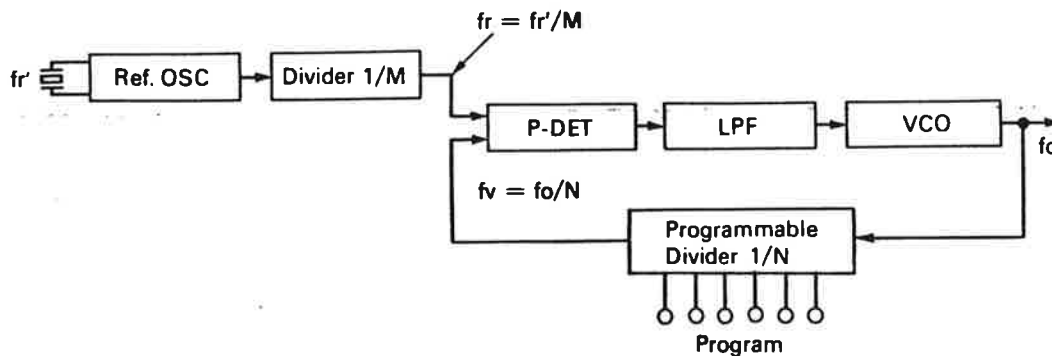


Figure 5



Figure 6

3. Basic Explanation of Block Diagram

1) Reference Osc and Divider 1/M

Reference Osc makes a reference frequency and divider divides the Osc frequency.

2) Phase detector

Compares the phase and frequency difference between the reference signals (fr) and input signals (fv). As shown in Figure 6, phase detector detects when fv is greater than fr and when fv is smaller than fr. The output impedance is very high in absence of a pulse. The resultant voltage (D) is fed to the low pass filter (LPF).

3) Low Pass Filter (LPF)

Is used as a DC-AC converter because the P-Det output is pulse signal which must be changed to a DC voltage to be supplied to the varactor diode in the VCO to correct its frequency.

4) VCO

Is oscillator whose frequency is controlled by a varactor diode. A varactor diode has a characteristic of changing capacitance proportionate to the amount of reverse bias applied. Therefore, the frequency can be controlled with a D.C. voltage.

5) Programmable divider

Consists of flip-flop circuits which determines the number of frequency divisions to be made.

4. Signal Flow of PLL (Also refer to figure 14)

PLL CIRCUIT

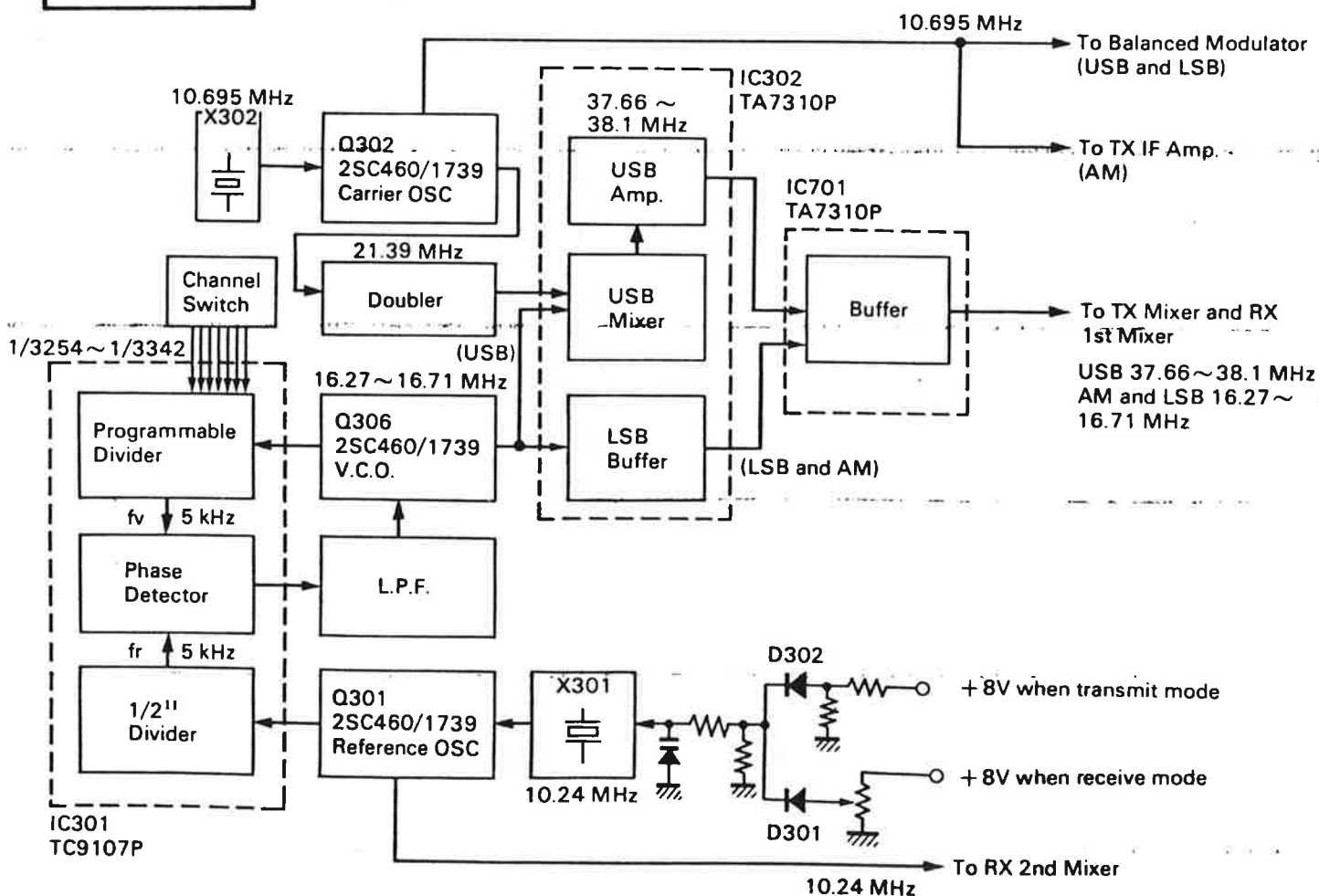


Figure 7

- 1) X301 generates 10.24 MHz and thru Q301 is fed to RX 2nd mixer. Q301 reference Osc frequency is divided by 2048 divider in IC301 producing approximately 5 kHz reference frequency (fr).

Phase detector in IC301 detects the difference between f_v from programmable divider and f_r from 1/2" divider and feeds a pulse signal to the LPF where a DC voltage is developed and fed to the VCO where the frequency is connected.

- 2) VCO (Q306) signal is fed to the LSB buffer, USB mixer and programmable divider. The signal received by the LSB buffer is fed to TX mixer and RX 1st mixer thru buffer in IC701.
- 3) X302 crystal generates 10.695 MHz and feeds the carrier Osc Q302. Q302 carrier Osc feeds the 10.695 MHz signal to the balanced modulator (USB and LSB), TX IF amp (AM) and the doubler where 21.39 MHz is developed. USB mixer accepts the 21.39 MHz signal from the doubler an approx. 16.27 to 16.71 MHz from the VCO. The output of the USB mixer is approx. 37.66 to 38.1 MHz and is fed to the USB amplifier and in turn sent to the buffer stage in IC701. Buffer in IC701 signal is fed to the TX mixer and RX 1st mixer. The frequencies from the buffer are approx. 37.66 to 38.1 MHz in the USB and approx. 16.27 to 16.71 MHz in the AM and LSB.

NOTE:

If the phase of the VCO frequency cannot be locked, the base bias of the Q304 (PLL unlock switching Transistor) is cut off by the protection circuit inside IC301, and any spurious emission will not radiate.

DISASSEMBLY

1. **Removal of Top Cover**
Remove six screws holding top cover as shown in figure 8.

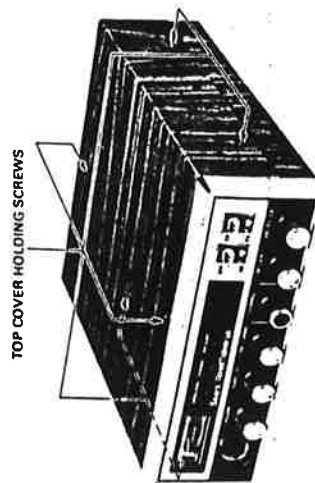


Figure 8

2. **Removal of Bottom Cover**
Remove three screws holding bottom cover as shown in figure 9.

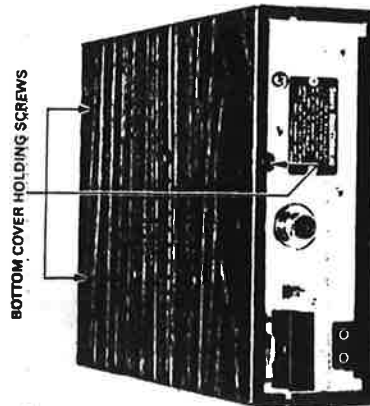


Figure 9

3. **Removal of Escutcheon**
1) Remove six knobs (volume, squelch, fine tuning, channel selector, RF gain and AM/LSB/USB selector).
2) Pull the both sides as shown in figure 10.

4. **Removal of Front Plate**
Remove four screws holding front panel as shown in figure 10.

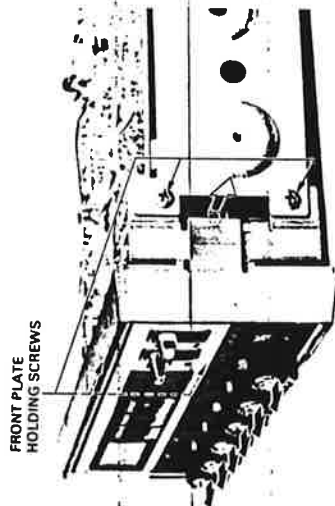


Figure 10

5. **Removal of Lever Switch Circuit Board**
Remove two screws holding lever switch board as shown in figure 11.
6. **Removal of Channel Selector Circuit Board**
Remove a nut and locking washer holding rotary switch as shown in figure 11.
7. **Removal of LED Circuit Board**
Push the two nails of LED holder.
8. **Removal of Volume Circuit Board**
Remove five nuts holding potentiometers as shown in figure 11.

Front Plate View

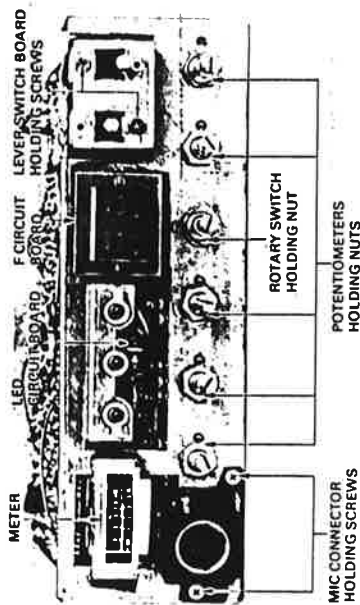


Figure 11

9. **Removal of Main Circuit Board**
Remove five screws holding main circuit board, two screws holding heat sink and a screw holding Q604 (2SC1061) as shown in figures 12 and 13.

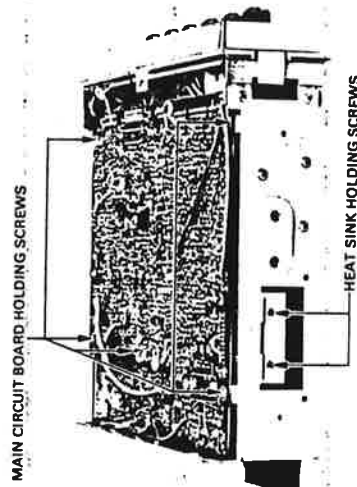


Figure 12

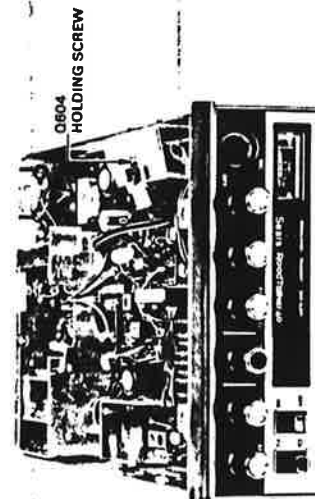
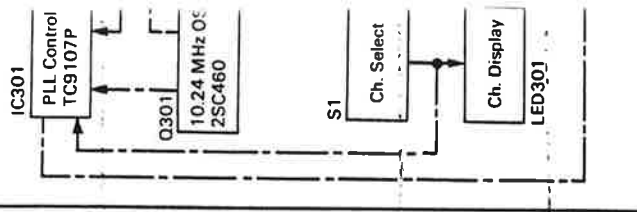
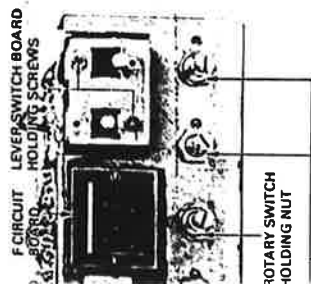
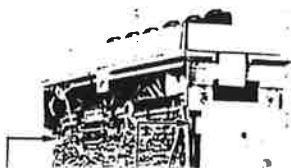


Figure 13

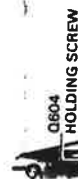




Board
ing main circuit
heat sink and a
061) as shown in



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BLOCK DIAGRAM

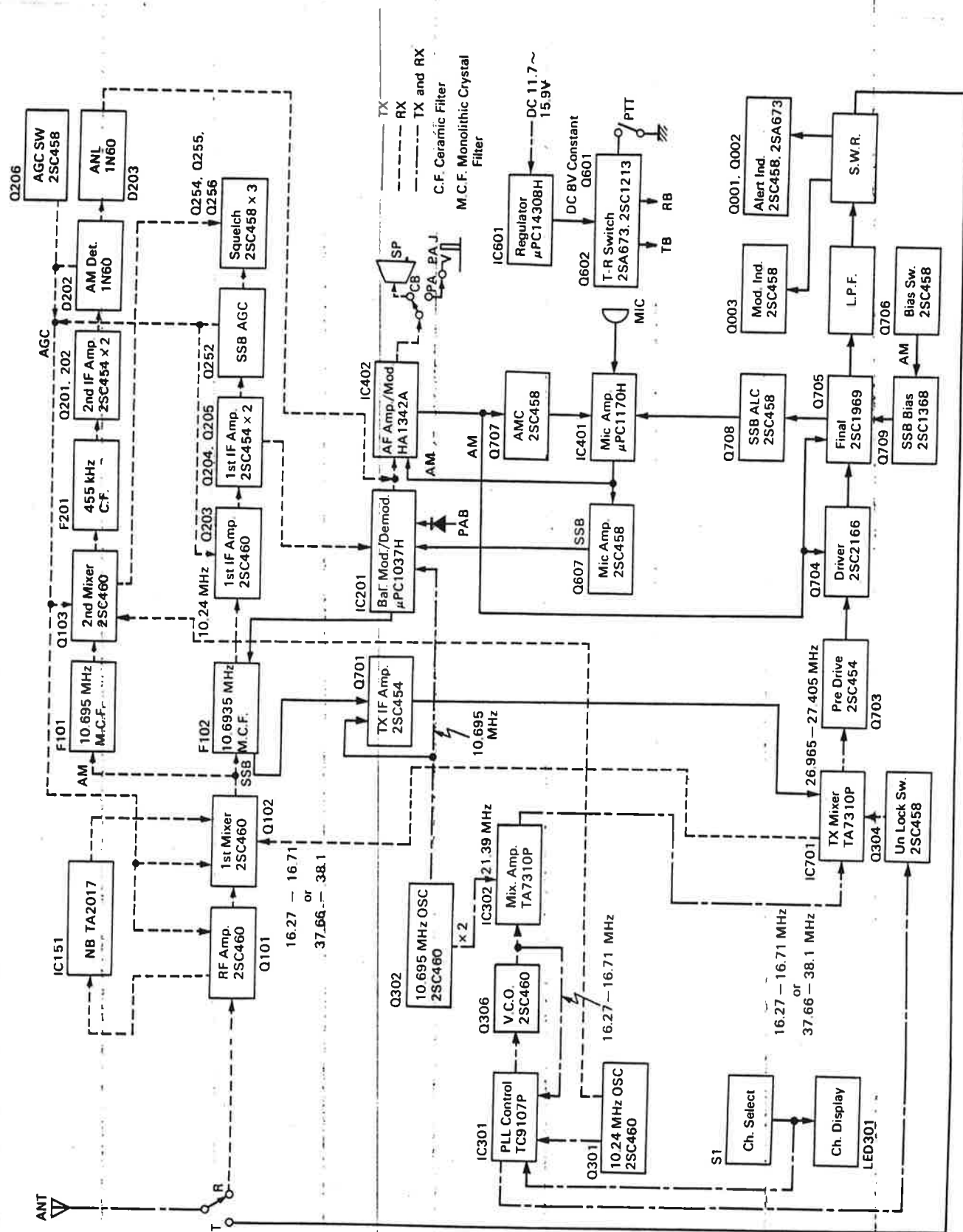


Figure 14

ORIGINAL VERSION

SHEET 4 OF 23 SHEETS

MODEL NO. 934.38261800

FREQUENCIES USED TO FUNCTION ON EACH CHANNEL

Channel	Frequency (MHz)	V.C.O. Frequency (MHz)	USB Mixer Frequency (MHz)	Reference Osc. Frequency (MHz)	Transmit Osc. Frequency (MHz)
1	26.965	16.27	37.66	10.24	10.695
2	26.975	16.28	37.67	10.24	10.695
3	26.985	16.29	37.68	10.24	10.695
4	27.005	16.31	37.70	10.24	10.695
5	27.015	16.32	37.71	10.24	10.695
6	27.025	16.33	37.72	10.24	10.695
7	27.035	16.34	37.73	10.24	10.695
8	27.055	16.36	37.75	10.24	10.695
9	27.065	16.37	37.76	10.24	10.695
10	27.075	16.38	37.77	10.24	10.695
11	27.085	16.39	37.78	10.24	10.695
12	27.105	16.41	37.80	10.24	10.695
13	27.115	16.42	37.81	10.24	10.695
14	27.125	16.43	37.82	10.24	10.695
15	27.135	16.44	37.83	10.24	10.695
16	27.155	16.46	37.85	10.24	10.695
17	27.165	16.47	37.86	10.24	10.695
18	27.175	16.48	37.87	10.24	10.695
19	27.185	16.49	37.88	10.24	10.695
20	27.205	16.51	37.90	10.24	10.695
21	27.215	16.52	37.91	10.24	10.695
22	27.225	16.53	37.92	10.24	10.695
23	27.255	16.56	37.95	10.24	10.695
24	27.235	16.54	37.93	10.24	10.695
25	27.245	16.55	37.94	10.24	10.695
26	27.265	16.57	37.96	10.24	10.695
27	27.275	16.58	37.97	10.24	10.695
28	27.285	16.59	37.98	10.24	10.695
29	27.295	16.60	37.99	10.24	10.695
30	27.305	16.61	38.00	10.24	10.695
31	27.315	16.62	38.01	10.24	10.695
32	27.325	16.63	38.02	10.24	10.695
33	27.335	16.64	38.03	10.24	10.695
34	27.345	16.65	38.04	10.24	10.695
35	27.355	16.66	38.05	10.24	10.695
36	27.365	16.67	38.06	10.24	10.695
37	27.375	16.68	38.07	10.24	10.695
38	27.385	16.69	38.08	10.24	10.695
39	27.395	16.70	38.09	10.24	10.695
40	27.405	16.71	38.10	10.24	10.695

SEMICONDUCTOR VOLTAGE TABLE

SYMBOL NO.		CB						PA					
		RECEIVE			TRANSMIT			When the button on the MIC is released			When the button on the MIC is depressed		
		AM	LSB	USB	AM	LSB	USB	AM	LSB	USB	AM	LSB	USB
Q001	B	0	0	0	-0.5	0	0	0	0	0	0	0	0
	C	0	0	0	8.2	8.2	8.2	0	0	0	0	0	0
	E	0	0	0	0	0	0	0	0	0	0	0	0
Q002	B	0	0	0	8.2	8.2	8.2	0	0	0	0	0	0
	C	0	0	0	-0.15	0	0	0	0	0	0	0	0
	E	0	0	0	8.2	8.2	8.2	0	0	0	0	0	0
Q003	B	0	0	0	0.1	0	0	0	0	0	0	0	0
	C	0	0	0	7.2	6.9	6.9	0	0	0	0	0	0
	E	0	0	0	0	0	0	0	0	0	0	0	0
Q101	B	2.2	1.8	1.8	0.35	0.8	0.8	0	0	0	0	0	0
	C	6.9	7.2	7.2	-0.15	0.2	0.2	8.3	0	0	0	0	0
	E	1.5	1.2	1.2	0.3	0.15	0.15	0	0	0	0	0	0
Q102	B	2.2	1.9	1.9	0.6	0.25	0.85	0	0	0	0	0	0
	C	7.6	7.8	7.8	0.1	0.25	0.25	8.2	8.2	8.2	0	0	0
	E	1.5	1.2	1.2	0.1	0.25	0.25	0.3	0.3	0.3	0	0	0
Q103	B	2.2	1.8	1.8	0.6	0.8	0.8	0	0	0	0	0	0
	C	7.0	7.2	7.2	0.1	0.2	0.2	8.3	8.3	8.3	0	0	0
	E	1.5	1.2	1.2	0.05	0.15	0.15	0.1	0.1	0.1	0	0	0
Q104	B	0.8	0.8	0.8	0.05	0.05	0.05	0.75	0.75	0.75	0	0	0
	C	0.04	0.04	0.04	21.0	0	0	0.05	0.05	0.05	0	0	0
	E	0	0	0	0	0	0	0	0	0	0	0	0
Q201	B	0.7	0.7	0.7	0	0.6	0.6	0.7	0.7	0.7	0	0	0
	C	1.8	0.15	0.15	-0.05	0.05	-0.05	1.75	1.75	1.75	0	0	0
	E	0	0	0	0	0	0	0	0	0	0	0	0
Q202	B	1.8	0.15	0.15	0.05	0.05	0.05	1.75	1.75	1.75	0	0	0
	C	7.2	8.2	8.2	0.15	0.25	0.25	7.2	7.2	7.2	0	0	0
	E	1.2	2.8	2.8		2.75	2.75	1.1	1.1	1.1	0	0	0
Q203	B	0.3	2.0	2.0	0.1	0.8	0.8	-0.15	-0.15	-0.15	0	0	0
	C	8.3	4.6	4.6	0.2	0.2	0.2	8.3	8.3	8.3	0	0	0
	E	0	1.5	1.5	0	0.15	0.15	0	0	0	0	0	0
Q204	B	0.7	0.7	0.7	0	0	0	0.7	0.7	0.7	0	0	0
	C	1.6	1.6	1.6	0.2	0.25	0.25	1.55	1.55	1.55	0	0	0
	E	0	0	0	0	0	0	0	0	0	0	0	0
Q205	B	1.6	1.6	1.6	0.2	0.25	0.25	1.55	1.55	1.55	0	0	0
	C	8.0	8.0	8.0	0.2	0.25	0.25	8.0	8.0	8.0	0	0	0
	E	0.9	0.9	0.9	0	0	0	0.9	0.9	0.9	0	0	0
Q206	B	0.7	0	0	0.7	0	0	0	0	0	0	0	0
	C	0	0	0	0	0	0	0	0	0	0	0	0
	E	0	0	0	0	0	0	0	0	0	0	0	0
Q252	G	0	0	0	0	0	0	0	0	0	0	0	0
	S	0.3	1.6	1.6	0.15	1.65	1.65	0.15	0.15	0.15	0	0	0
	D	0.3	6.8	6.8	0.15	6.8	6.8	0.15	0.15	0.15	0	0	0

SYMBOL NO.		CB						PA					
		RECEIVE			TRANSMIT			When the button on the MIC is released			When the button on the MIC is depressed		
		AM	LSB	USB	AM	LSB	USB	AM	LSB	USB	AM	LSB	USB
Q253	B	0.3	6.8	6.8	0.15	6.8	6.8	0.15	0.15	0.15	0	0	0
	C	0.3	2.4	2.4	0	2.4	2.4	0.15	0.15	0.15	0	0	0
	E	0.6	7.4	7.4	0.25	7.5	7.5	0.25	0.25	0.25	0	0	0
Q254	B	0.2	0.2	0.2	0	0	0	0.7	0.7	0.7	0.7	0.7	0.7
	C	0.7	0.7	0.7	0.2	0.25	0.25	0	0	0	0	0	0
	E	0	0	0	0	0	0	0	0	0	0	0	0
Q255	B	0.7	0.7	0.7	0.2	0.25	0.25	0	0	0	0	0	0
	C	0	0	0	0.7	0.7	0.7	0.75	0.75	0.75	0	0	0
	E	0	0	0	0	0	0	0	0	0	0	0	0
Q256	B	0	0	0	0.7	0.7	0.7	0.75	0.75	0.75	0	0	0
	C	0	0	0	0	0	0	0	0	0	0	0	0
	E	0	0	0	0	0	0	0	0	0	0	0	0
Q301	B	2.7	2.7	2.7	2.7	2.7	2.7	0	0	0	0	0	0
	C	6.9	6.9	6.9	6.9	6.9	6.9	0	0	0	0	0	0
	E	2.2	2.2	2.2	2.2	2.2	2.2	0	0	0	0	0	0
Q302	B	0.1	2.6	2.6	2.9	2.9	2.9	0	0	0	0	0	0
	C	7.6	7.0	7.0	7.0	7.0	7.0	0	0	0	0	0	0
	E	0	2.0	2.0	2.3	2.3	2.3	0	0	0	0	0	0
Q303	B	7.6	0	0	7.5	0	0	0	0	0	0	0	0
	C	0	0	0	8.1	0	0	0	0	0	0	0	0
	E	8.3	0	0	8.3	0.05	0.05	0	0	0	0	0	0
Q304	B	7.8	7.8	7.8	7.8	7.8	7.8	0	0	0	0	0	0
	C	8.3	8.3	8.3	8.3	8.3	8.3	0	0	0	0	0	0
	E	7.1	7.1	7.1	7.2	7.2	7.2	0	0	0	0	0	0
Q306	B	2.9	2.9	2.9	2.9	2.9	2.9	0	0	0	0	0	0
	C	7.6	7.6	7.6	7.7	7.7	7.7	0	0	0	0	0	0
	E	2.3	2.3	2.3	2.3	2.3	2.3	0	0	0	0	0	0
Q601	B	9.0	9.0	9.0	0	0	0	9	9	9	0	0	0
	C	8.3	8.3	8.3	8.3	8.3	8.3	8.4	8.4	8.4	8.3	8.3	8.3
	E	8.3	8.3	8.3	0.15	0.25	0.25	8.3	8.3	8.3	0	0	0
Q602	B	9.0	9.0	9.0	7.5	7.5	7.5	9	9	9	0	0	0
	C	0.1	0.1	0.1	8.2	8.2	8.2	0	0	0	0	0	0
	E	8.3	8.3	8.3	8.3	8.3	8.3	0	0	0	0	0	0
Q603	B	0.7	0.7	0.7	0	0	0	0.7	0.7	0.7	0	0	0
	C	0	0	0	8.2	8.2	8.2	0	0	0	0	0	0
	E	0	0	0	0	0	0	0	0	0	0	0	0
Q604	B	0	0	0	9.4	9	9	0	0	0	0	0	0
	C	13.5	13.5	13.5	13.5	13.5	13.5	13.5	13.5	13.5	13.5	13.5	13.5
	E	0	0	0	8.6	9.0	9.0	0	0	0	0	0	0
Q605	B	13.0	13.0	13.0	12.5	13.0	13.0	13.5	13.5	13.5	13.5	13.5	13.5
	C	0	0	0	9.4	9.0	9.0	0	0	0	0	0	0
	E	13.5	13.5	13.5	13.5	13.5	13.5	13.3	13.3	13.3	13.3	13.3	13.3
Q606	B	0	0	0	7.9	7.9	7.9	0	0	0	0	0	0
	C	0	0	0	12.5	13.0	13.0	13.3	13.3	13.3	13.3	13.3	13.3
	E	0	0	0	7.5	7.8	7.8	0	0	0	0	0	0

SEMICONDUCTOR VOLTAGE TABLE

SYMBOL NO.		CB						PA					
		RECEIVE			TRANSMIT			When the button on the MIC is released			When the button on the MIC is depressed		
		AM	LSB	USB	AM	LSB	USB	AM	LSB	USB	AM	LSB	USB
Q607	B	0.8	0.8	0.8	0.75	0.75	0.75	0.8	0.8	0.8	0.75	0.75	0.75
	C	0.2	0.2	0.2	2.45	2.35	2.35	0.15	0.15	0.15	2.65	2.65	2.65
	E	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.05	0.05	0.05
Q701	B	0	0	0	2.0	2.0	2.0	0	0	0	0	0	0
	C	0.1	0.1	0.1	6.9	6.9	6.9	0	0	0	0	0	0
	E	0	0	0	1.35	1.35	1.35	0	0	0	0	0	0
Q703	B	0	0	0	1.6	1.6	1.6	0	0	0	0	0	0
	C	13.5	13.5	13.5	12	12.5	12.5	13.5	13.5	13.5	13.5	13.5	13.5
	E	0	0	0	1.0	1.0	1.0	0	0	0	0	0	0
Q704	B	0	0	0	0.65	0.7	0.7	0	0	0	0	0	0
	C	0	13.5	13.5	7.5	13.5	13.5	0	13.5	13.5	0	13.5	13.5
	E	0	0	0	0	0	0	0	0	0	0	0	0
Q705	B	0	0	0	0.2	0.65	0.65	0	0	0	0	0	0
	C	0	13.5	13.5	7.5	13.5	13.5	0	13.5	13.5	0	13.5	13.5
	E	0	0	0	0	0	0	0	0	0	0	0	0
Q706	B	0.7	0	0	0.75	0	0	0	0	0	0	0	0
	C	0	0	0	0.2	0.65	0.65	0	0	0	0	0	0
	E	0	0	0	0	0	0	0	0	0	0	0	0
Q707	B	0	0	0	0.7	0.65	0.65	0	0	0	0	0	0
	C	0.2	0.2	0.2	0.1	0	0	0	0	0	0	0	0
	E	0	0	0	0	0	0	0	0	0	0	0	0
Q708	B	0.5	0.8	0.8	-1.75	0.75	0.75	0.25	0.25	0.25	0	0	0
	C	0.5	0.1	0.1	0.25	0.05	0.05	0.25	0.25	0.25	0	0	0
	E	0	0	0	0	0	0	0	0	0	0	0	0
Q709	B	0	0	0	0.2	0.65	0.65	0	0	0	0	0	0
	C	0	0	0	0	0	0	0	0	0	0	0	0
	E	0	0	0	0.2	0.65	0.65	0	0	0	0	0	0
IC151	1	0	0	0	0	0	0	0	0	0	0	0	0
	2	0.8	0.8	0.8	0.15	0.15	0.15	0.25	0.25	0.25	0	0	0
	3	0	0	0	0	0	0	0	0	0	0	0	0
	4	8.3	8.3	8.3	0.2	0.25	0.25	8.3	8.3	8.3	0	0	0
	5	0	0	0	0	0	0	0	0	0	0	0	0
	6	0	0	0	0	0	0	0	0	0	0	0	0
	7	0	0	0	0	0	0	0	0	0	0	0	0
	8	0	0	0	0	0	0	0	0	0	0	0	0
	9	0	0	0	0	0	0	0	0	0	0	0	0
	10	0	0	0	0	0	0	0	0	0	0	0	0
	11	6.4	6.6	6.6	0.1	0.15	0.15	7.0	7.0	7.0	0	0	0
	12	0	0	0	0	0	0	0	0	0	0	0	0

SYMBOL NO.		CB						PA					
		RECEIVE			TRANSMIT			When the button on the MIC is released			When the button on the MIC is depressed		
		AM	LSB	USB	AM	LSB	USB	AM	LSB	USB	AM	LSB	USB
IC201	1	0.6	7.4	7.4	0.25	7.5	7.5	0.25	0.25	0.25	0	0	0
	2	0.6	6.5	6.5	0.25	6.5	6.5	0.25	0.25	0.25	0	0	0
	3	0.1	5.9	5.9	0	5.9	5.9	0.25	0.25	0.25	0	0	0
	4	0	0	0	0	0	0	0	0	0	0	0	0
	5	0	3.3	3.3	0	3.3	3.3	0	0	0	0	0	0
	6	0	3.3	3.3	0	3.3	3.3	0	0	0	0	0	0
	7	0	3.3	3.3	0	3.3	3.3	0	0	0	0	0	0
IC301	1	7.6	7.6	7.6	7.6	7.6	7.6	0	0	0	0	0	0
	2	3.3	3.3	3.3	3.3	3.3	3.3	0	0	0	0	0	0
	3	0	0	0	0	0	0	0	0	0	0	0	0
	4	7.6	7.6	7.6	7.6	7.6	7.6	0	0	0	0	0	0
	5	3.8	3.8	3.8	3.8	3.8	3.8	0	0	0	0	0	0
	6	3.8	3.8	3.8	3.8	3.8	3.8	0	0	0	0	0	0
	7	2.7	2.7	2.7	2.7	2.7	2.7	0	0	0	0	0	0
	8	0.1	0.1	0.1	0.1	0.1	0.1	0	0	0	0	0	0
	9	3.4	3.4	3.4	3.4	3.4	3.4	0	0	0	0	0	0
	10	0	0	0	0	0	0	0	0	0	0	0	0
	11	0	0	0	0	0	0	0	0	0	0	0	0
	12	0	0	0	0	0	0	0	0	0	0	0	0
	13	0	0	0	0	0	0	0	0	0	0	0	0
	14	0	0	0	0	0	0	0	0	0	0	0	0
	15	0	0	0	0	0	0	0	0	0	0	0	0
	16	7.2	7.2	7.2	7.2	7.2	7.2	0	0	0	0	0	0
	17	7.2	7.2	7.2	7.2	7.2	7.2	0	0	0	0	0	0
	18	0	0	0	0	0	0	0	0	0	0	0	0
IC302	1	2.8	2.8	2.8	2.65	2.65	2.65	0	0	0	0	0	0
	2	2.1	2.1	2.1	2.0	2.0	2.0	0	0	0	0	0	0
	3	1.4	1.4	3.8	1.35	1.35	3.8	0	0	0	0	0	0
	4	1.5	1.5	2.8	1.5	1.5	2.7	0	0	0	0	0	0
	5	0	0	0	0	0	0	0	0	0	0	0	0
	6	1.0	1.0	7.0	1.0	1.0	7.0	0	0	0	0	0	0
	7	2.2	2.2	2.2	2.2	2.2	2.2	0	0	0	0	0	0
	8	7.6	7.6	7.6	7.6	7.6	7.6	0	0	0	0	0	0
	9	1.4	1.4	4.2	1.4	1.4	4.2	0	0	0	0	0	0
IC401	1	2.1	2.1	2.1	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
	2	2.1	2.1	2.1	2.1	2.1	2.1	2.3	2.3	2.3	2.3	2.3	2.3
	3	1.4	1.4	1.4	1.35	1.35	1.35	1.4	1.4	1.4	1.4	1.4	1.4
	4	1.0	1.0	1.0	0.1	0.1	0.1	1.0	1.0	1.0	0	0	0
	5	0	0	0	0	0	0	0	0	0	0	0	0
	6	0	0	0	0	0	0	0	0	0	0	0	0
	7	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3
	8	13.5	13.5	13.5	13.5	13.5	13.5	13.5	13.5	13.5	13.5	13.5	13.5
	9	0	0	0	0	0	0	0	0	0	0	0	0

SYMBOL NO.		CB						PA					
		RECEIVE			TRANSMIT			When the button on the MIC is released			When the button on the MIC is depressed		
		AM	LSB	USB	AM	LSB	USB	AM	LSB	USB	AM	LSB	USB
IC402	1	13.5	13.5	13.5	13.5	13.5	13.5	13.5	13.5	13.5	13.5	13.5	13.5
	2	1.4	1.4	1.4	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
	3	8.0	8.0	8.0	7.8	8.0	8.0	8.1	8.1	8.1	8.1	8.1	8.1
	4	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
	5	3.1	3.1	3.1	2.75	2.85	2.85	3.2	3.2	3.2	3.2	3.2	3.2
	6	3.8	3.8	3.8	3.7	3.7	3.7	3.9	3.9	3.9	3.9	3.9	3.9
	7	3.2	3.2	3.2	3.1	3.1	3.1	3.2	3.2	3.2	3.2	3.2	3.2
	8	12.5	12.5	12.5	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
	9	0	0	0	0	0	0	0	0	0	0	0	0
	10	6.6	6.6	6.6	6.4	6.6	6.6	6.8	6.8	6.8	6.8	6.8	6.8
IC601	1	13.5	13.5	13.5	13.5	13.5	13.5	13.5	13.5	13.5	13.5	13.5	13.5
	2	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3
	3	0	0	0	0	0	0	0	0	0	0	0	0
IC701	1	2.6	2.6	2.6	2.5	2.5	2.5	0	0	0	0	0	0
	2	1.9	1.9	2.0	1.9	1.9	2.05	0	0	0	0	0	0
	3	1.2	1.2	1.3	1.2	1.2	1.3	0	0	0	0	0	0
	4	1.2	1.2	1.3	2.35	2.35	2.4	0	0	0	0	0	0
	5	0	0	0	0	0	0	0	0	0	0	0	0
	6	0.5	0.5	0.5	7.6	7.6	7.6	0	0	0	0	0	0
	7	2.1	2.1	2.1	2.1	2.1	2.1	0	0	0	0	0	0
	8	4.0	4.0	4.0	4.4	4.4	4.4	0	0	0	0	0	0
	9	13.2	13.2	13.2	13.0	13.0	13.0	0	0	0	0	0	0

ALIGNMENT

1. Oscillator Frequency Alignment

Test Equipment Required

- 1) DC Volt Meter
- 2) Oscilloscope
- 3) Frequency Counter

General Alignment Information

- 1) A non-metallic alignment tool must be used for all adjustments.
- 2) Connection of test equipment is shown in figure 15.
- 3) Power supply adjusted for 13.8V DC.
- 4) Set the unit to the transmission mode, the channel selector to Ch. 18, and turn RT301 fully clockwise.

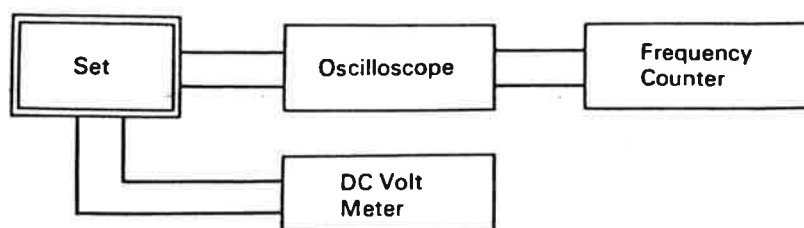


Figure 15

ALIGNMENT

1-1. PLL Alignment

Step	Item	Function	Testing Setup	Adjust	Adjust for
1	Lock range adjustment	LSB	Connect the DC voltmeter to the point (A) shown in figure 16.	T301	DC 2.7V \pm 0.5V
2	VCO output level adjustment	LSB	Connect the oscilloscope to the point (B) shown in figure 17.	T302	Amplitude, max.
3	LSB frequency adjustment	LSB	Same as step 2.	CT301	16.48 MHz \pm 100 Hz
4	Lock range adjustment	LSB	Same as step 1.	T301	DC 2.7V \pm 0.3V
5	21.39 MHz level adjustment	USB	Connect the oscilloscope to the point (C) shown in figure 18.	T305	Amplitude, max. (21.39 MHz \pm 5 kHz)
6	USB output level adjustment	USB	Connect the oscilloscope to the point (D) shown in figure 19.	T303, T304 T305	Amplitude, max.
7	USB output frequency adjustment	USB	Same as step 6.	CT302	37.87 MHz \pm 100 Hz

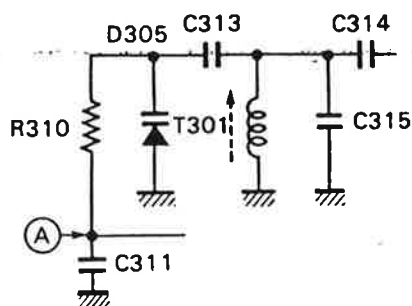


Figure 16

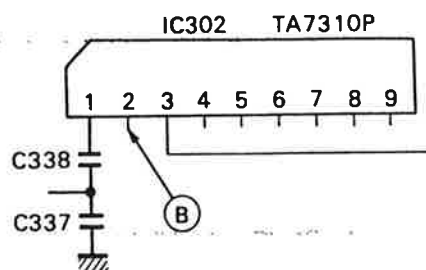


Figure 17

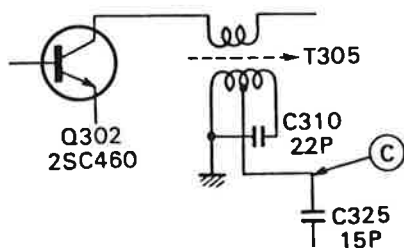


Figure 18

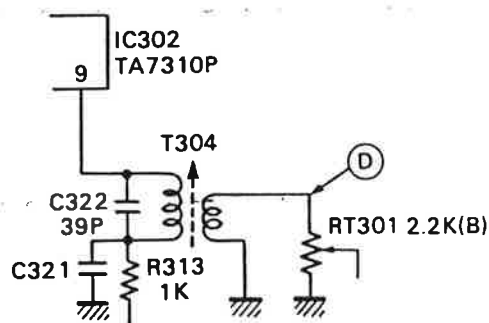


Figure 19

1-2. Specification Check

After PLL Circuit Alignment, check the specifications as shown below using frequency counter.

Check No.	Conditions	Check for
1	Connecting point is the pin No. 7 of IC201	10.695 MHz \pm 100 Hz
2	Turn the channel selector to CH1 and CH40. Connect frequency counter to point (B) (figure 17).	16.27 MHz \pm 100 Hz (CH1) 16.71 MHz \pm 100 Hz (CH40)
3	Turn the channel selector to CH1 and CH40. Connect frequency counter to point (D) (figure 19).	37.66 MHz \pm 100 Hz (CH1) 38.1 MHz \pm 100 Hz (CH40)

2. Transmitter Alignment

Test Equipment Required

- 1) Two-tone Audio Signal Generator
- 2) Attenuator
- 3) DC Volt Meter
- 4) Watt Meter (R-F Power Meter): 50 ohm
- 5) Oscilloscope
- 6) Frequency Counter
- 7) DC Ampere Meter

General Alignment Information

- 1) A non-metallic alignment tool must be used for all adjustments.
- 2) Transmitter is keyed when making adjustments.
- 3) Connection of test equipments is shown in figure 20.
- 4) Power supply adjusted for 13.8V DC.

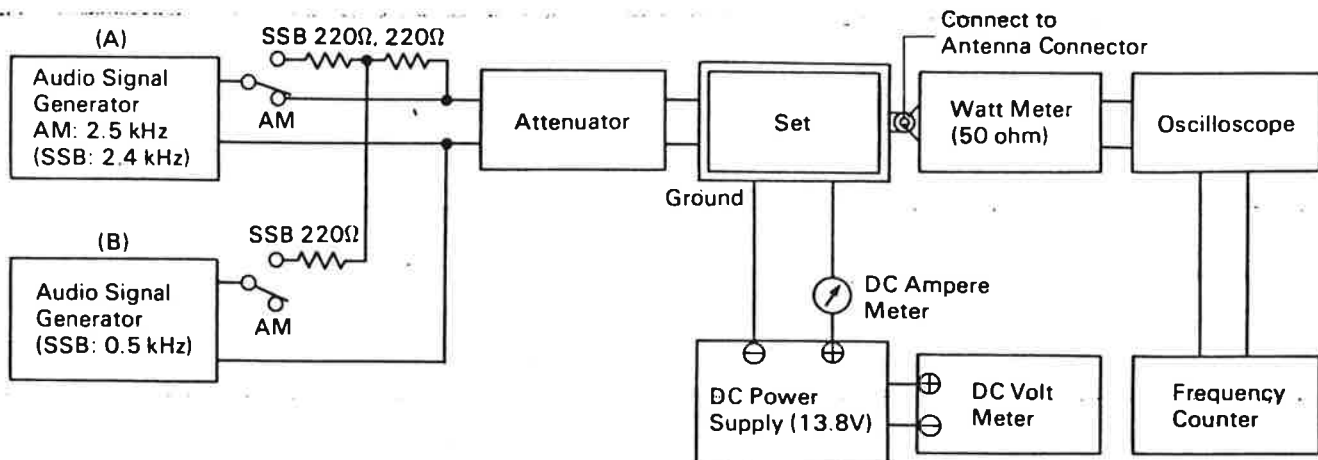


Figure 20

To set the transceiver into the transmit mode without the microphone, insert a dummy plug (wired as shown in figure 22) into the MIC jack on

the transceiver. When applying the audio modulation signal to the microphone input circuit, use the same plug.

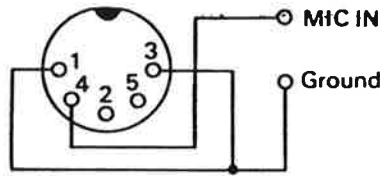


Figure 21

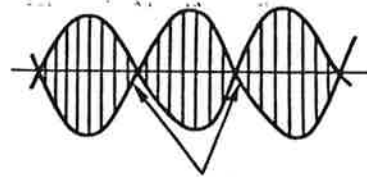


Figure 22

2-1. Transmitter Alignment for SSB

Mode Switch: LSB, Channel Selector 20, N.B. Switch: Off, PA/CB Switch: CB.

1. Bandwidth alignment

- 1) Set MIC level to 0, turn RT701 fully clockwise, and RT721 and RT722 counterclockwise.
- 2) Check the reading of DC amperemeter for approx. 480 to 485 mA by turning RT722 clockwise.
- 3) Align RT721 for 10 — 15 mA.

2. RF output (PEP) alignment

- 1) Adjust the attenuator for an input level of 2 to 3 mVrms at the mic input terminal of the set. (Set output levels of the audio oscillator A and B for a 2-tone waveform. Shown in figure 22.)
- 2) Roughly adjust T701, 702, 703, 704, 705, 706 for a waveform of maximum peak value. Then adjust the attenuator so that the peak value does not exceed 7.5W on the watt meter. (Set to around 6W.)
- 3) Cut the mic input using the attenuator, adjust RT203 for min. output. Make sure that carrier leakage is less than -30 dB after completing adjustment.
- 4) **Note:** Alignments from A to E are performed on less than 3W using the attenuator.
 - A) Adjust T701, T703 and T704 for a waveform of maximum peak value.
 - B) Set the channel to CH1 and adjust the input-side core (Black) of T702 for half a peak value.
 - C) Adjust the output-side core (Yellow) of T702 for a waveform of maximum peak value; and readjust the input-side core (Black) for a waveform of maximum peak value.
 - D) After item C, readjust A, B and C over again if the input level difference of the attenuator between on CH1 and on CH40 is more than 6 dB.
 - E) Set the MODE SELECTOR to USB, the CHANNEL SELECTOR to CH20 and RT301 fully clockwise. Adjust T305, T303 and T304 for the maximum output and adjust RT301 for the same output as on LSB.
- 5) Set the MODE SELECTOR to AM on CH20. Make sure that there is some output on the unmodulated signal and adjust RT602 for the output of 3.8W.
- 6) Adjust T705 and T706 for a waveform of the maximum peak value with around 50% ± 16 dB input of AM 2500 Hz (MOD.).
- 7) After item 6, readjust RT602 for the output power meter reading of 3.8W ± 0.1 W on the unmodulated signal. Make sure that the output deviation within 0.5W from CH1 to CH40. (NOTE: Adjust any channel that is over 4W to 3.8W.)
- 8) Adjust RT702 with the conditions as stated in item 7 so that the reading of RF meter is 5.
- 9) Set the audio oscillator A to 2500 Hz (MOD.), and adjust the attenuator so that the input level of the set 0.5 — 100 mVrms. Make sure that normal modulation is applied and no abnormality (excess modulation, negative modulation, or modulation of less than 70%) is found in the AMC circuit operation.
- 10) Set the mode selector to LSB on CH20 and the MIC input to more 13 dB. Adjust RT701 for a watt meter reading of 6W ± 0.1 W, and then make sure that the reading is less than 6.5W with more 10 dB MIC input.

ALIGNMENT

2-2. Transmitter Alignment for AM (1-tone adjustment)

MODE: AM, Channel: CH-20, CB, NB = OFF

- 1) Cut off RT602 by turning clockwise. (Direction of maximum power)
- 2) After SSB adjustment is completed, make sure that the AM non-modulated output is over 4W.
- 3) Adjust RT602 for an output power meter reading of 3.8W.
- 4) Make sure that the output deviation is within 0.5W from CH1 — CH40.
(Note: Adjust any channel that is over 4W to 3.8W.)
- 5) Set audio oscillator A (figure 20) to 2.5 kHz, adjust the attenuator so that the input level of the set is 0.5 — 100 mVrms, and make sure that normal modulation is applied and no abnormality (excess modulation, negative modulation, or modulation of less than 70%) is found in the AMC circuit operation.

2-3. SWR Alert Alignment

1. Fine-adjust the semi-fixed resistor RT002 (22k Ω) so that the alert LED lights with ANT output terminals short-circuited, non-modulated AM power voltage of 11.5V. (Turn RT002 fully counterclockwise initially.)
2. Check that the alert LED lights with the ANT output terminals open. When it will not light, readjust RT002 so that the alert LED lights under this condition.

3. Receiver Alignment

Test equipment required

- 1) R-F Signal Generator
- 2) 8-ohm Load Resistor
- 3) Oscilloscope
- 4) VTVM

General alignment information

- 1) Signal input must be kept as low as possible to avoid over-load and clipping. (Use highest possible sensitivity of output indicator.)
- 2) Standard modulation is 1000 Hz at 30% amplitude.
- 3) A non-metallic alignment tool must be used for all adjustments.
- 4) Connection of test equipment is shown in figure 23.

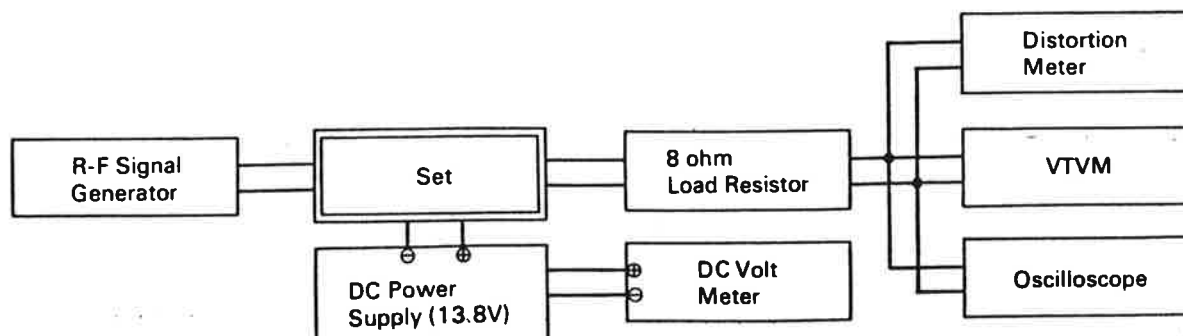


Figure 23

3-1. Receiver Alignment for AM

Step	Item	Set Condition	Testing Setup	Adjust	Adjust for
1	Sensitivity	Mode Switch: AM Set Channel Selector to Ch. 18 (27.174 MHz) Volume: Fully clockwise	R-F Signal Generator output: 27.175 MHz Modulated at 1,000 Hz. 30%	T101, T102, T103, T104, T201	Adjust the receiver output to be maximum with the input from the R-F signal generator minimized.
2	Maximum Sensitivity	Squelch: Fully counterclockwise Fine Tuning: Center R-F Gain: Fully clockwise N.B.: Off		RT108	Adjust the receiver output to be 2V (500 mW) with - 12 dB input from the R-F signal generator.
3	S Meter			RT201	Adjust the S meter for S-9 reading with 40 dB input from the R-F signal generator.
4	Squelch	Turn Squelch fully clockwise. Other settings are same as for steps 1-3.		RT251	Adjust the output to be obtained approx. 500 mW or more (2V RMS) with 40 dB input from the R-F signal generator.

3-2. Receiver Alignment for SSB

Step	Item	Set Condition	Testing Setup	Adjust	Adjust for
1	AGC voltage	Mode Switch: LSB other settings are same as for AM.	R-F Signal Generator input: 0	RT254	The collector voltage of Q253 is 2.5V.
2	Sensitivity		R-F Signal Generator output: 27.174 MHz unmodulated.	T202	Adjust the receiver output to be maximum with the input from the R-F signal generator minimized.
3	Maximum Sensitivity			RT202	Adjust the receiver output to be 2V (500 mW) with - 12 dB input from the R-F signal generator.
4	S Meter		R-F Signal Generator input: 40 dB another setup is same as for steps 2-3.	RT253	Adjust the S meter for S-9 reading with 40 dB input from the R-F signal generator.

TOP VIEW

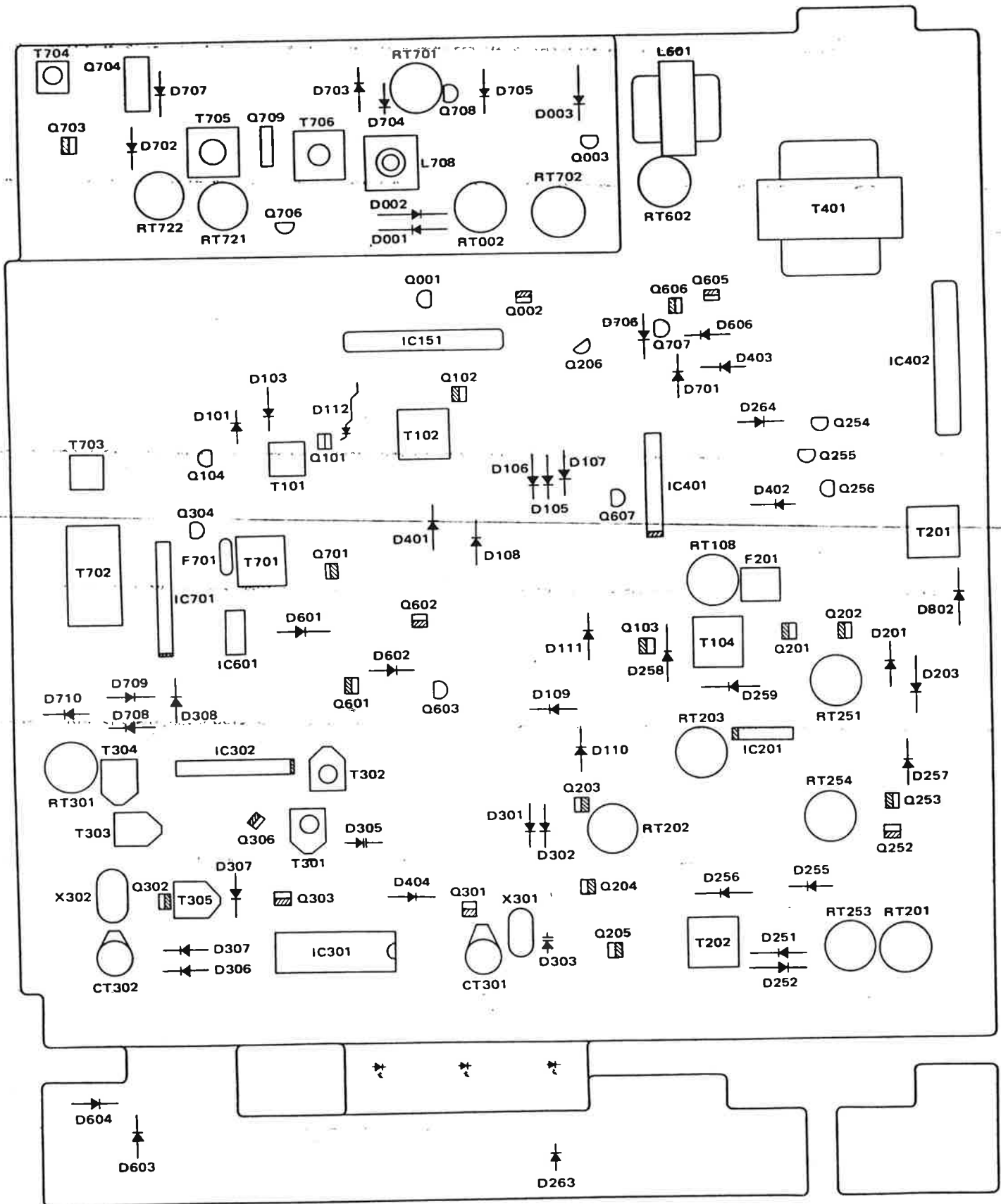
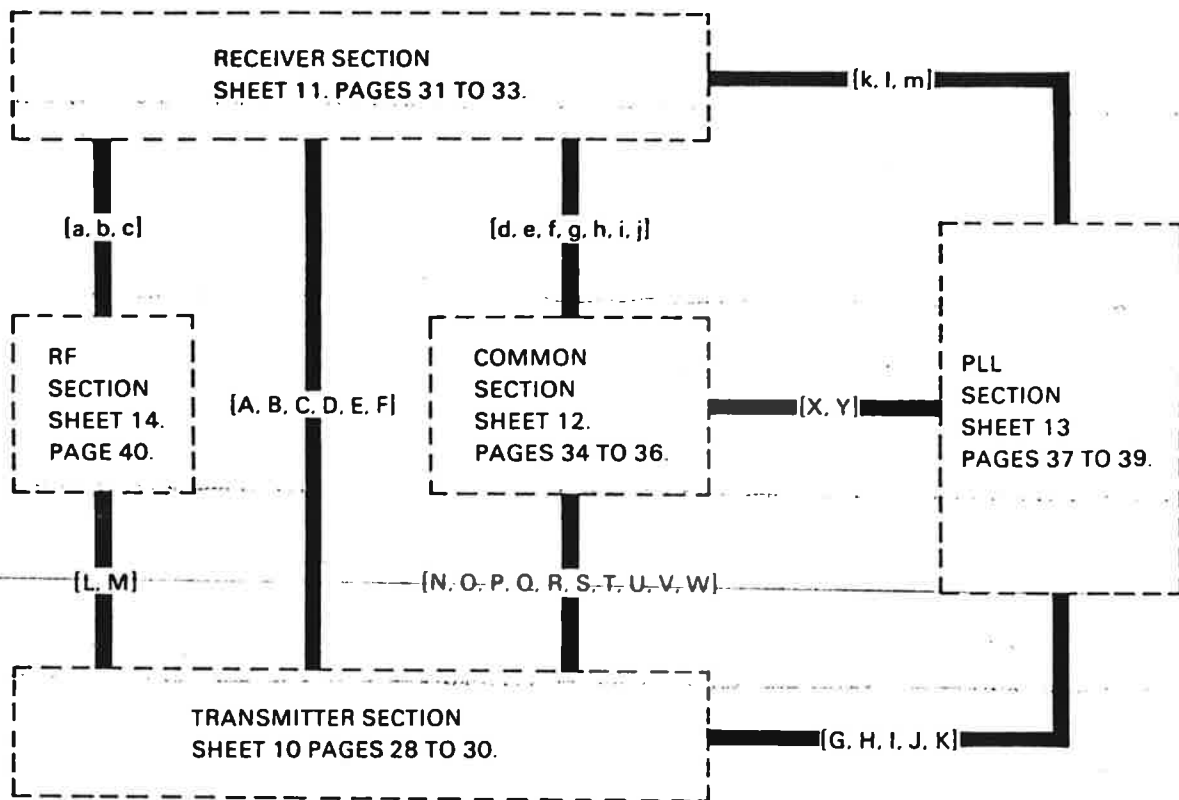


Figure 24

TOTAL BLOCK DIAGRAM FOR SCHEMATICS

SCHEMATIC DIAGRAM is divided into 5 SECTIONS; TRANSMITTER, RECEIVER, COMMON, PLL and RF. And they are connected each other with a LETTER.

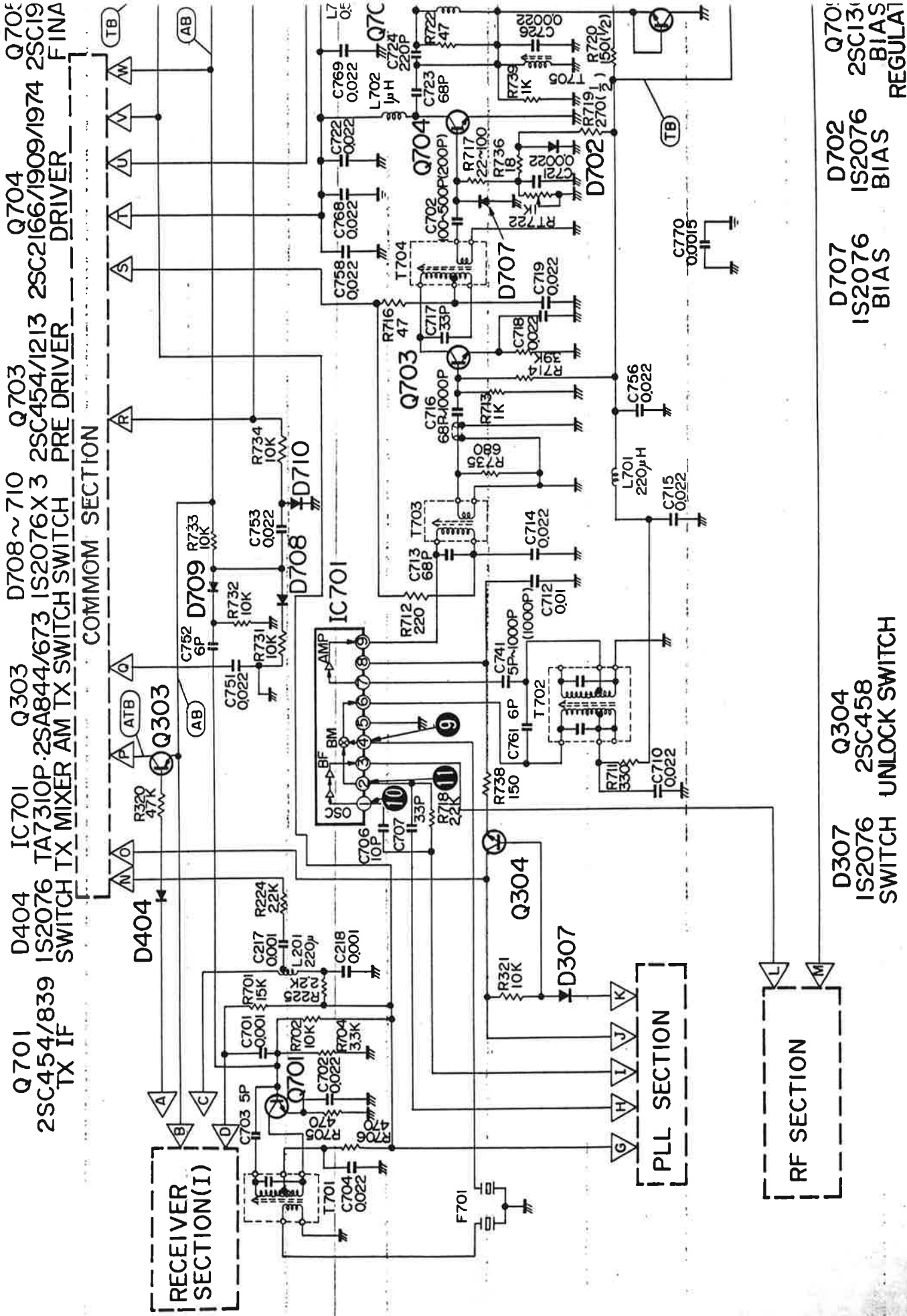


NOTE:

1. All resistance values in ohms. k = 1000.
2. All capacitance values in μF except "P" noted.
P = μF = PF.
M: Mylar film capacitor

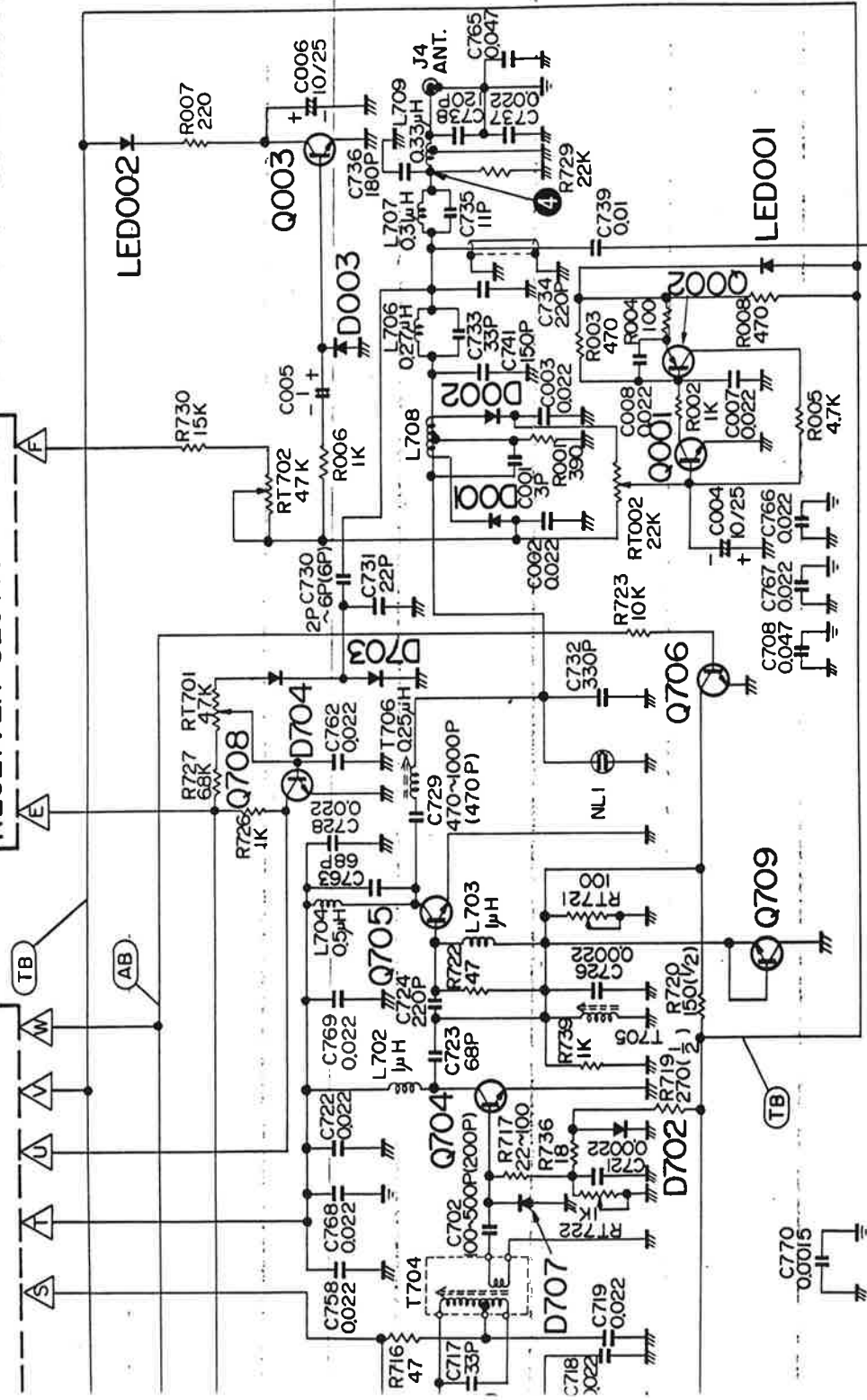
SWITCHES

SYMBOL	DESCRIPTION	POSITION
S1	CHANNEL SELECT SWITCH	1 CH
S2	POWER SWITCH	POWER OFF
S3 1 - 2	AM/SSB MODE SWITCH	AM
S4 1 - 2	PA/CB FUNCTION SWITCH	CB
S5 1 - 2	NB, ANL SWITCH	NB, ANL OFF
RV1	RF GAIN	
RV2	SQUELCH	
RV3	FINE TUNE	
RV4	AUDIO VOLUME	

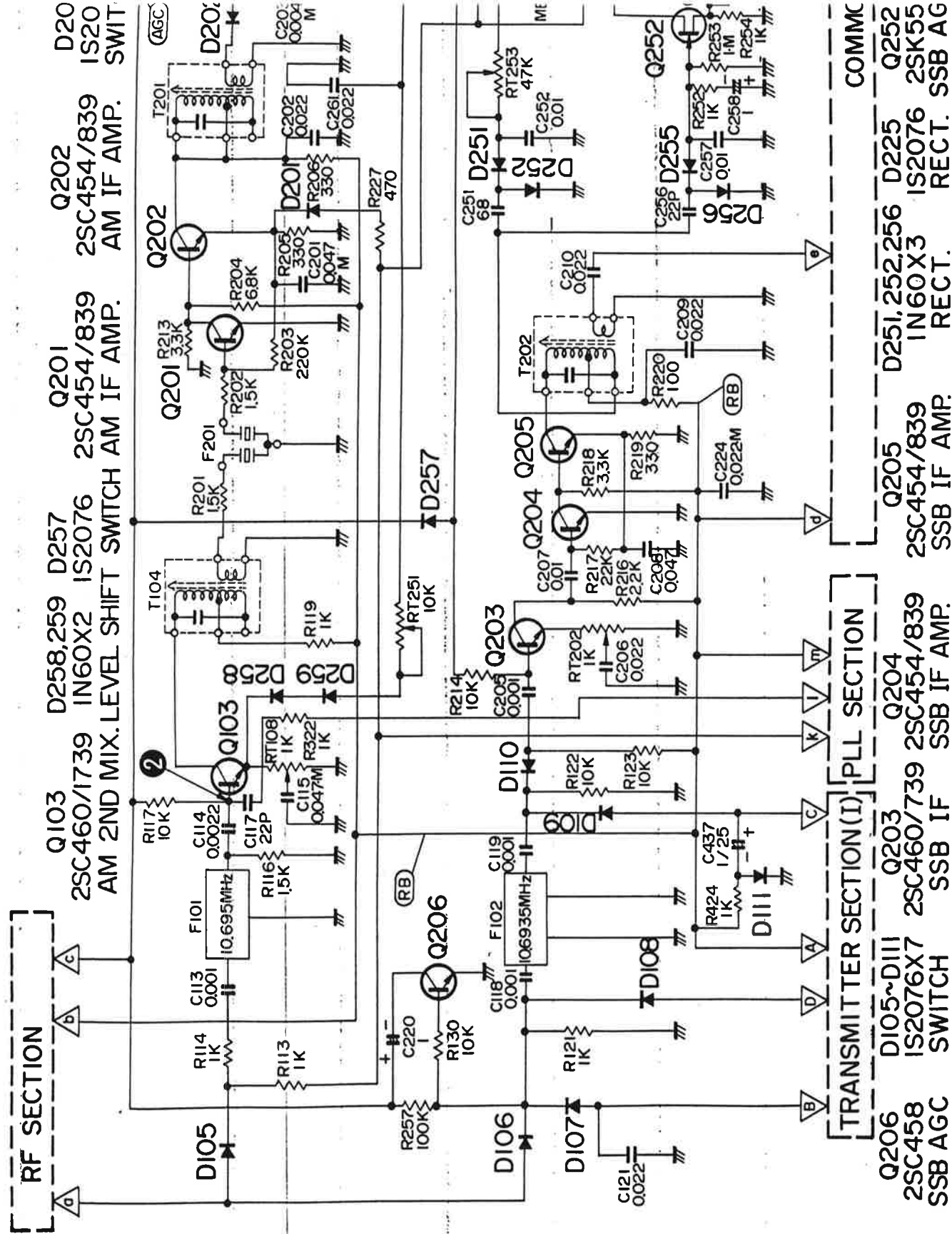


SECTION SCHEMATIC DIAGRAM (NOTE: Refer to pages 11 thru 15 for all semiconductor voltages.)

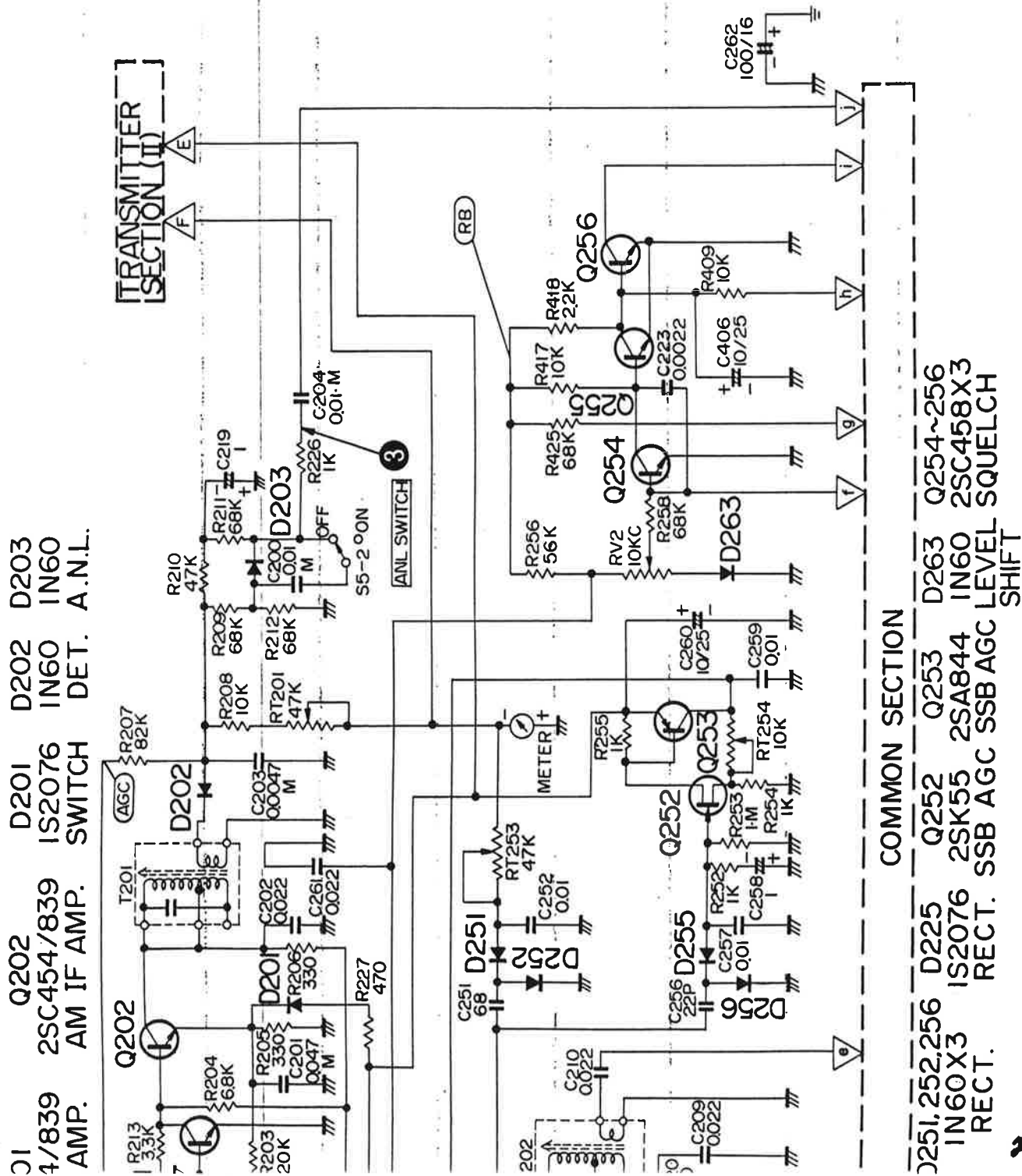
Q704 Q705 Q708 D704 D703 D003 LED002 Q003
 2SC2166/1909/1974 2SC1969 HV-46 IS2076 IN60 MOD 2SC458
 DRIVER FINAL A.L.C. LEVEL SHIFT RECT. RECT. DISPLAY MOD.DISPLAY

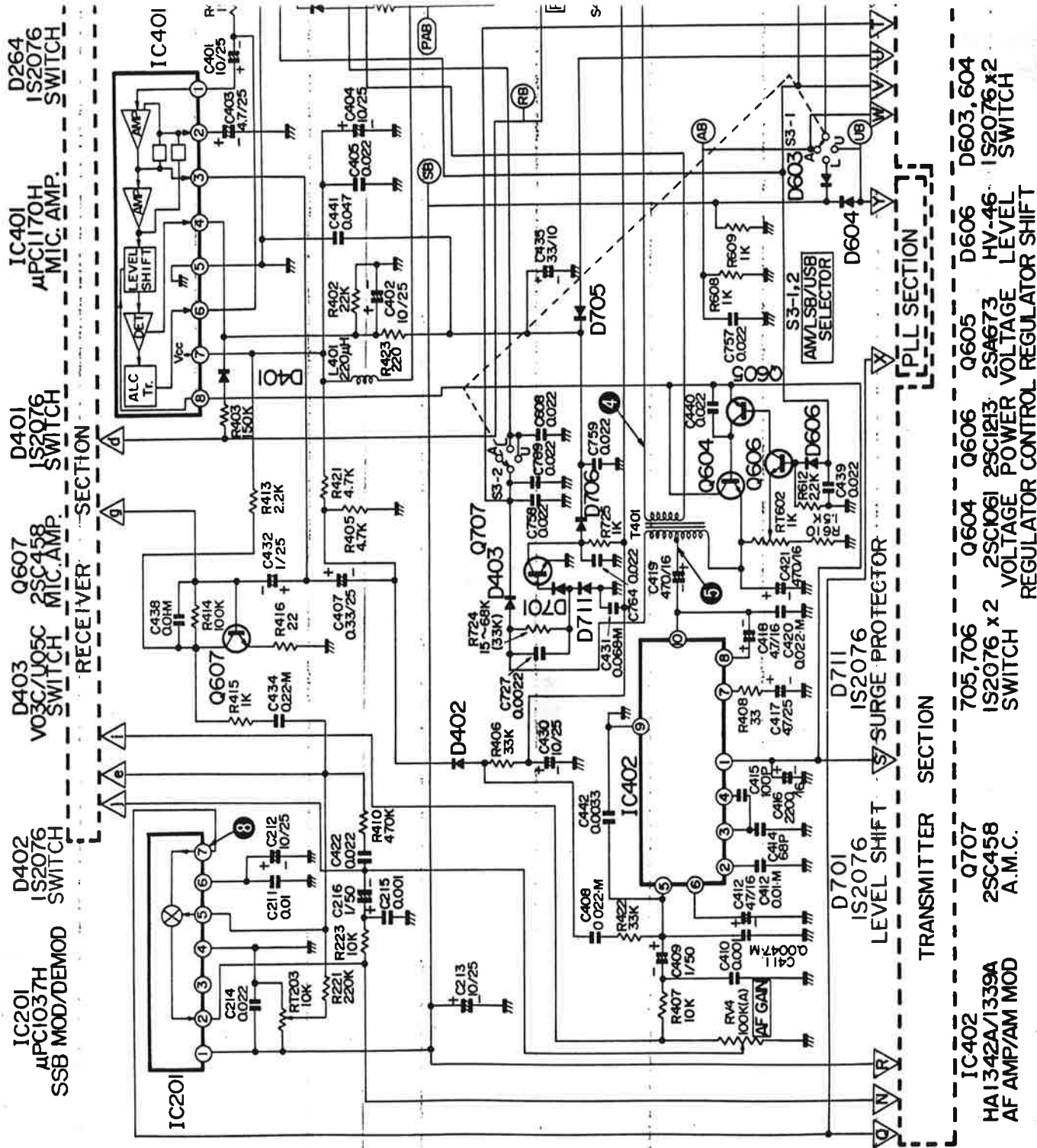


D707 D702 D709 Q706 D001 D002 Q001 LED001 Q002
 IS2076 IS2076 2SC1368 2SC458 IN60 IN60 2SC458 SWR ALERT 2SA844/673
 BIAS BIAS AM TX SWITCH RECT. RECT. SWR ALERT DISPLAY SWR ALERT



SECTION SCHEMATIC DIAGRAM (NOTE: Refer to pages 11 thru 15 for all semiconductor voltages.)





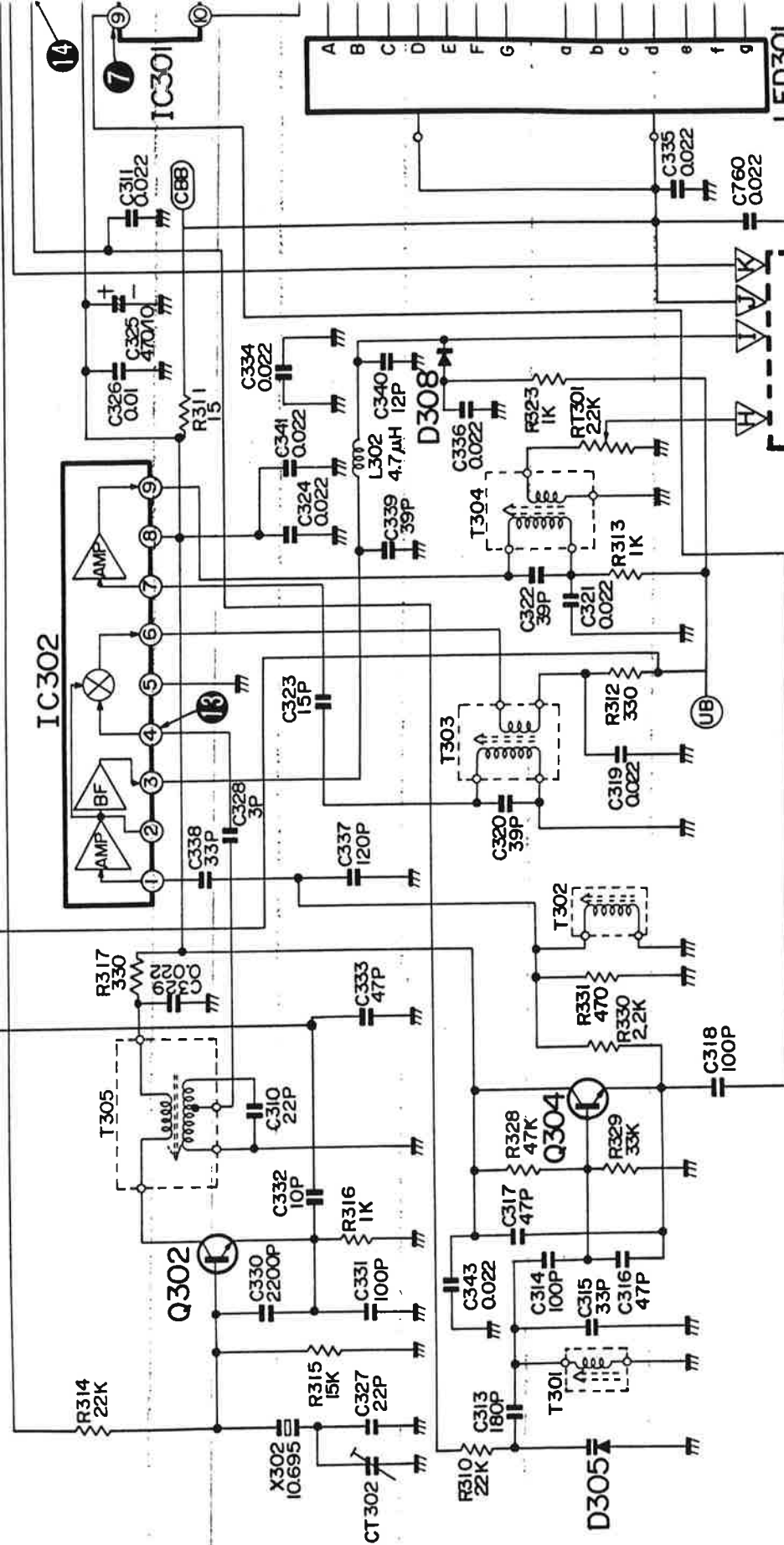
SECTION SCHEMATIC DIAGRAM



Q302
2SC460/1739
CARRIER OSC

IC302
TA7310P
PREMIXER

COMMON SECTION



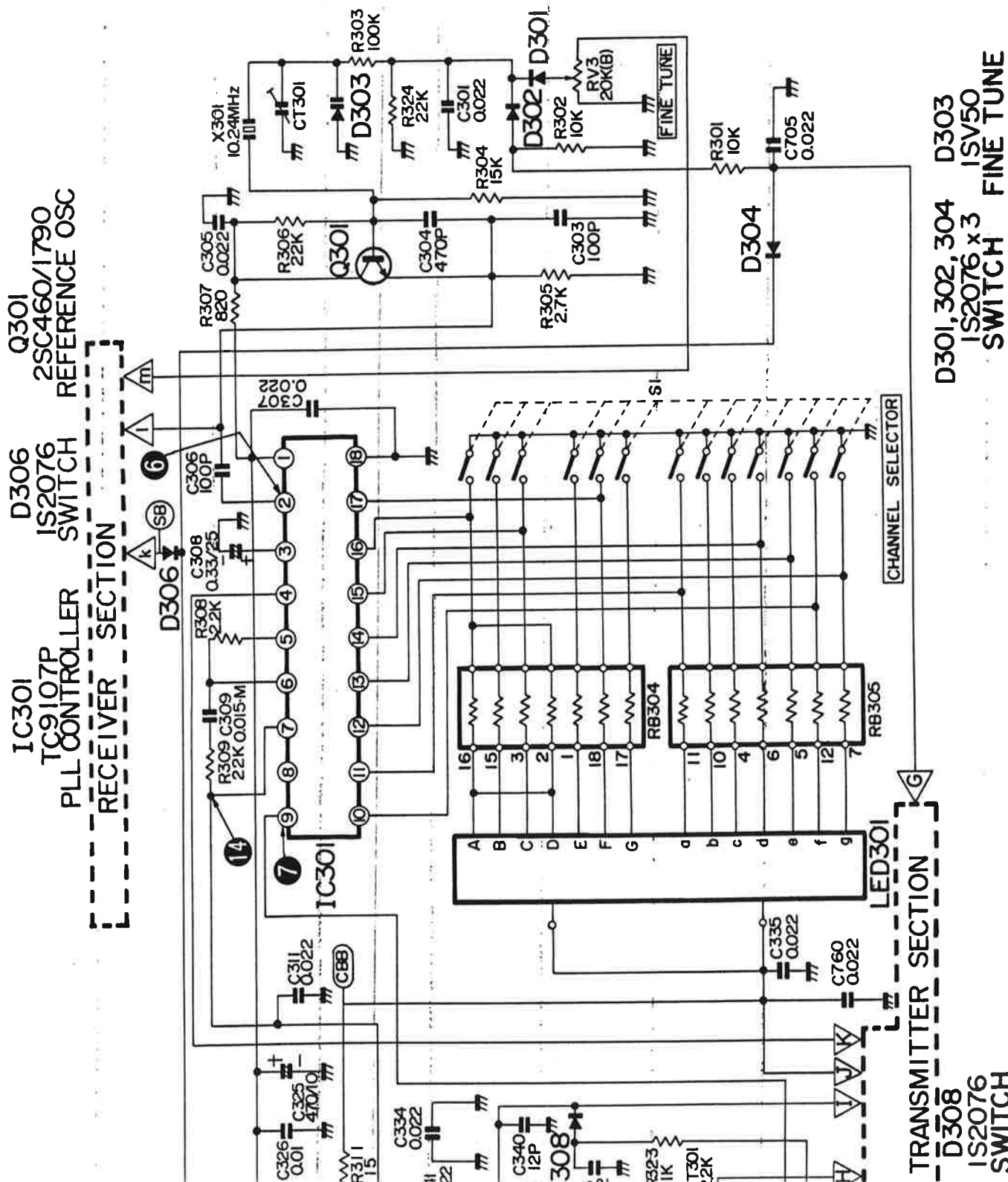
TRANSMITTER SECTION

D308
IS2076
SWITCH

Q304
2SC460/1739
UNLOCK SWITCH

D305
IS2790
FREQ. CONTROL

ON SCHEMATIC DIAGRAM (NOTE: Refer to pages 11 thru 15 for all semiconductor voltages.)



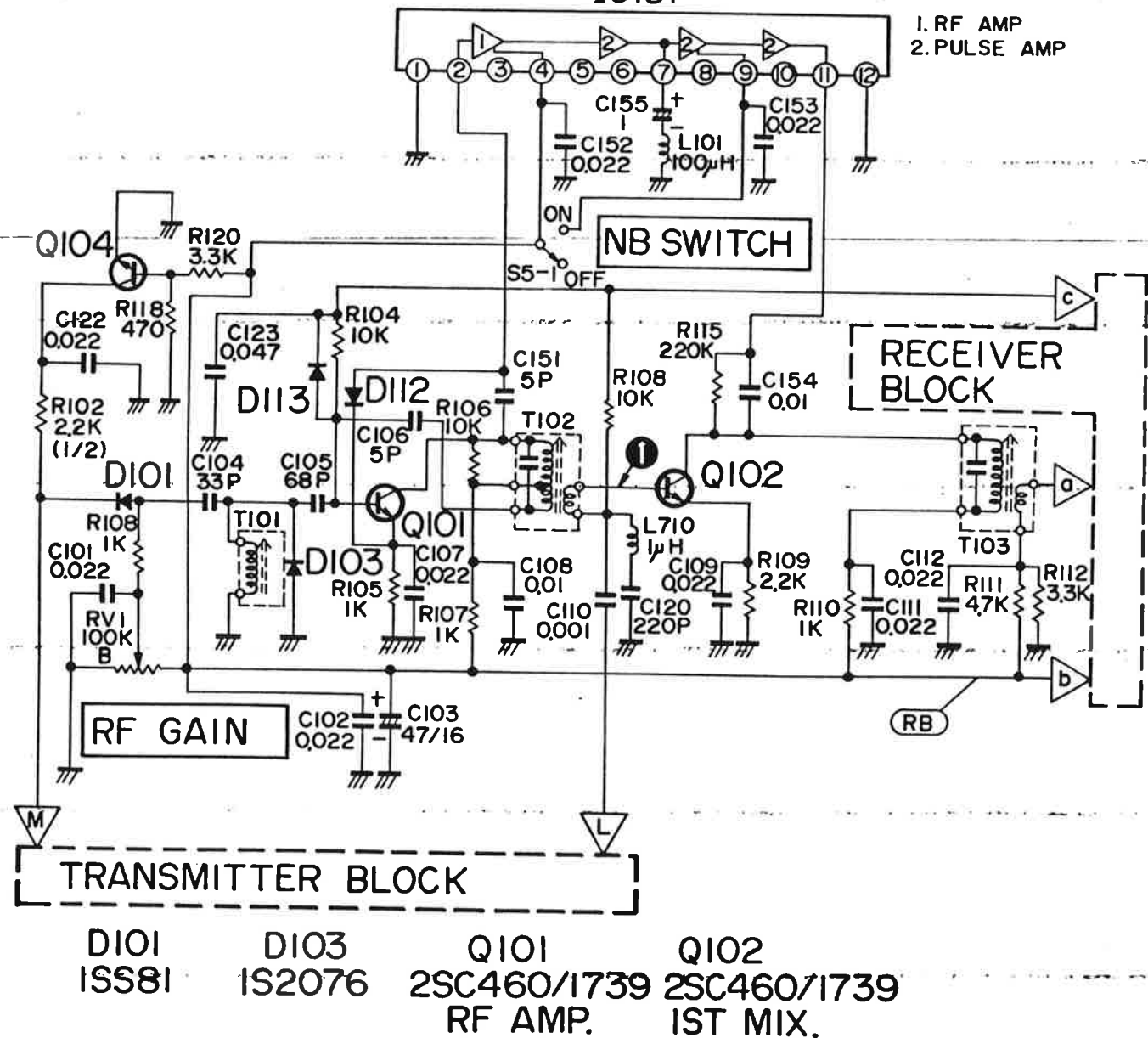
RF SECTION SCHEMATIC DIAGRAM

(NOTE: Refer to pages 11 thru 15 for all semiconductor voltages.)

Q104
2SC2308
RX SWITCHING

D112, 113
IN60X2

IC151
TA2017
NOISE BLANKER
IC151



WAVEFORM AND SEMI-CONDUCT

Conditions of Waveform

RX: Receiving

TX: Transmitting

RX AM INPUT: 74 dB (30%, 1 kHz, MOD.), OUTPUT: 500 mW,

NB: OFF, RF GAIN: MIN., SQUELCH: MIN.

RX SSB INPUT: 74 dB (30%, 1 kHz, DEMOD.), OUTPUT: 500 mW,

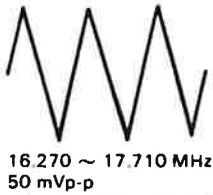
NB: OFF, RF GAIN: MIN., SQUELCH: MIN.

TX AM 2500 Hz 50% +16 dB MIC INPUT MOD.

TX SSB 2-TONE SIGNAL (500 Hz/2400 Hz), +10 dB (from the SATURATION POINT).

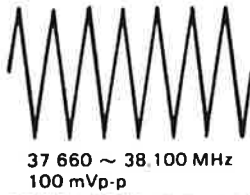
① (In RF sheet 11)

RX AM/LSB



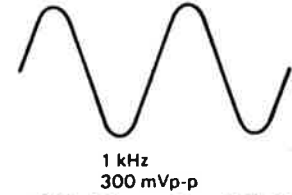
② (In RECEIVER sheet 11)

RX USB



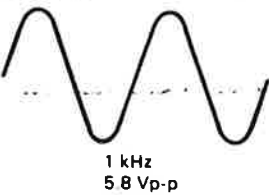
③ (Same as ②)

RX AM



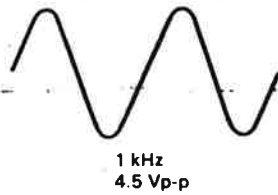
④ (In COMMON sheet 12)

RX AM/SSB



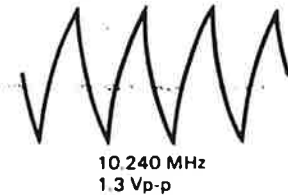
⑤ (Same as ④)

RX AM/SSB

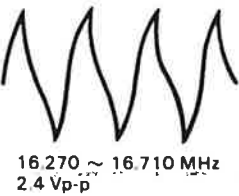


⑥ (In PLL sheet 13)

TX/RX AM/SSB

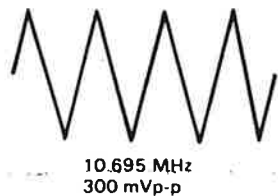


⑦ (Same as ⑥)



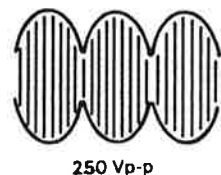
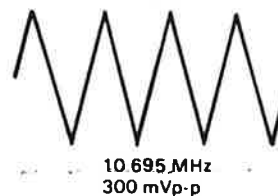
⑧ (Same as ④)

TX/RX SSB



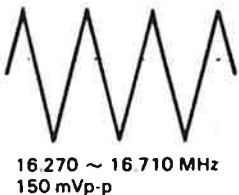
⑨ (In TRANSMITTER sheet 10)

TX AM



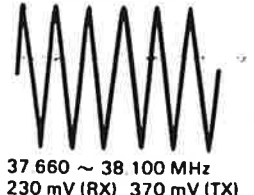
⑩ (Same as ⑨)

RX/TX AM/LSB



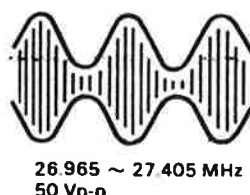
⑪ (Same as ⑨)

RX/TX USB

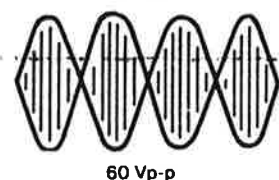


⑫ (Same as ⑨)

TX AM

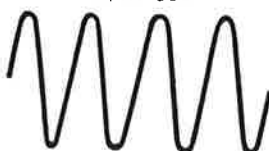


TX SSB

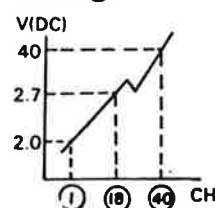


⑬ (Same as ⑥)

RX/TX USB

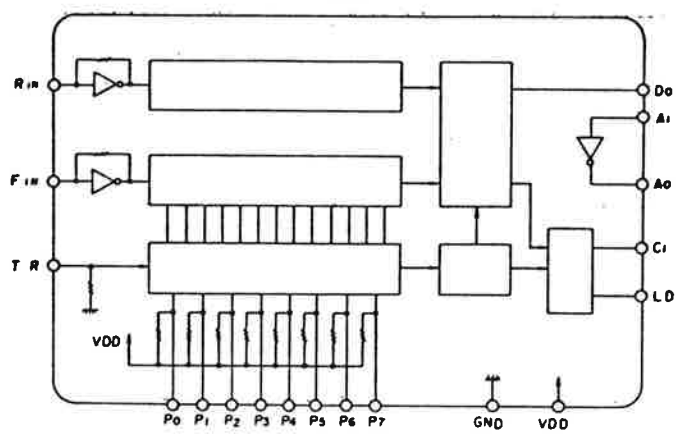


⑭ (Same as ⑥)

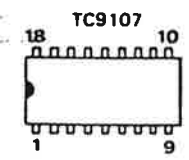
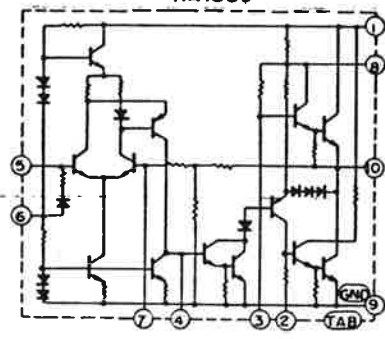


DUCTOR LEAD IDENTIFICATION

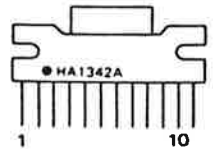
TC9107



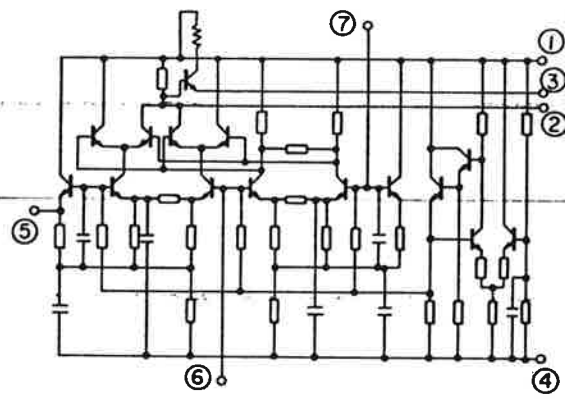
HA1339



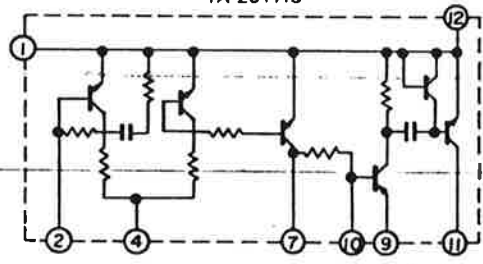
HA1342A
HA1339A



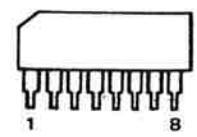
μPC1037H



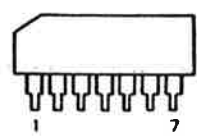
TA-2017IC



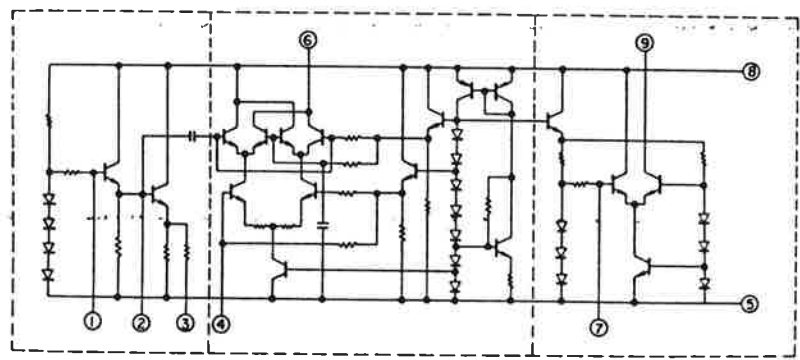
μPC1170H



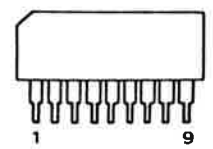
μPC1037H



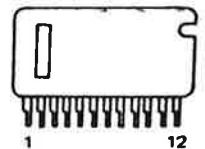
TA-7310P



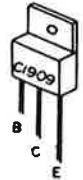
TA-7310P



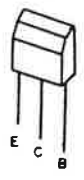
TA2017



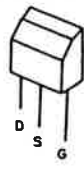
2SC1969
2SC2166



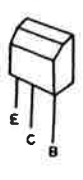
2SC454,
2SC460, 2SA844
2SA673, 2SC1213



2SK55



2SC458



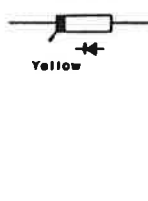
OR



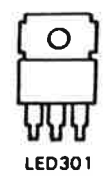
IS2790



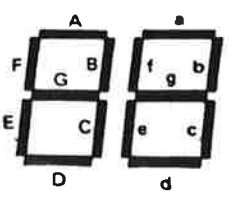
ISV50



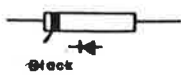
μPC14308H



LED301



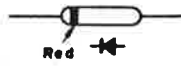
RD5-IE



IS2076



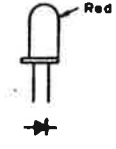
IN60(P)



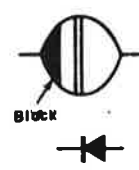
1SS81



LR0302R

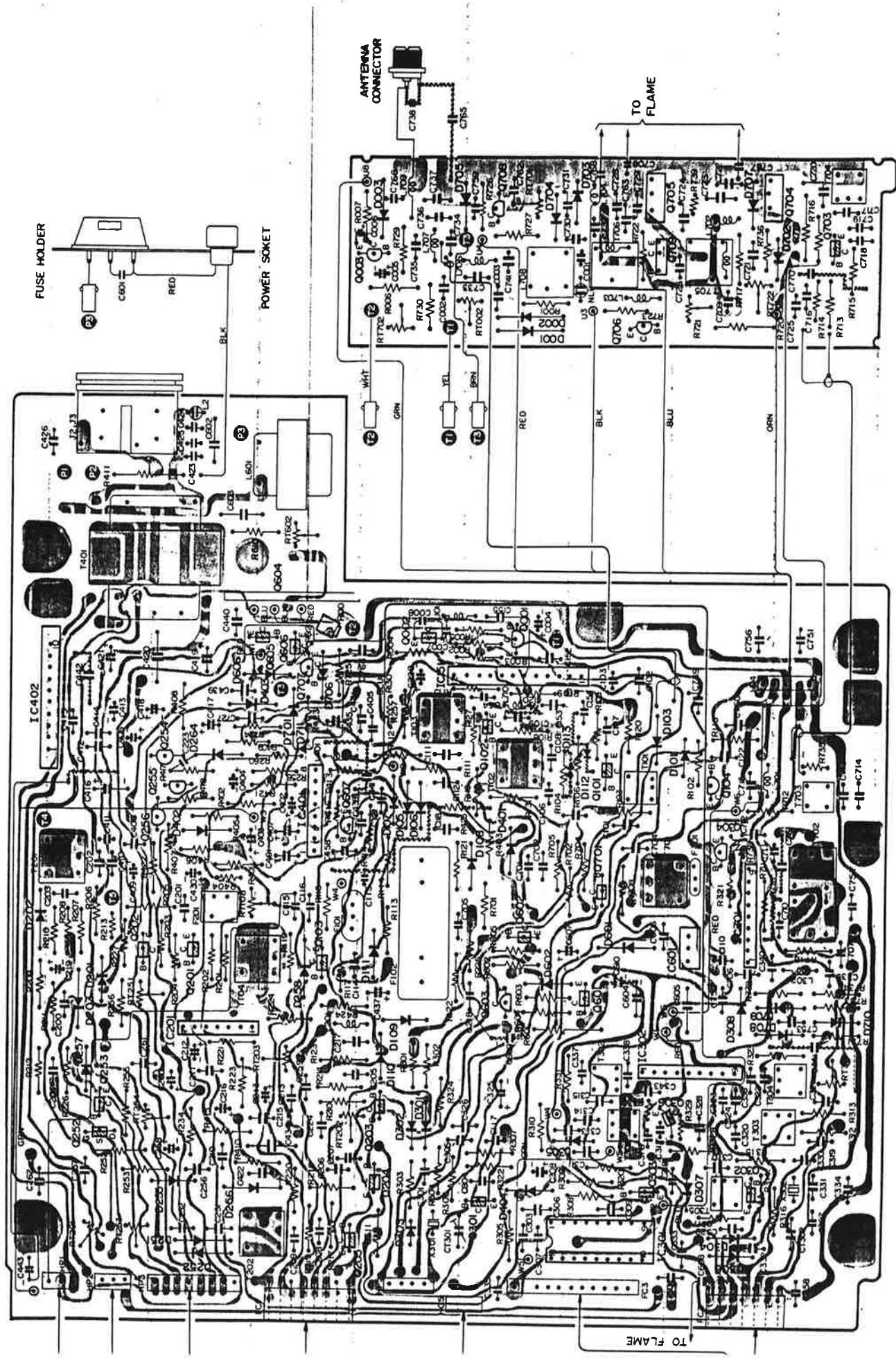


V03C, V0-60





RD DIAGRAM (Bottom View)



ORIGINAL VERSION

SHEET 16 OF 23 SHEETS

MODEL NO. 934.38261800

REPLACEMENT PARTS LIST

SYMBOL-NO	P-NO	DESCRIPTION
CAPACITORS		
CT301	5058104	TRIMMER 5PF
CT302	5058104	TRIMMER 5PF
C001	0248643	CERAMIC DISC. 3PF+-0.5PF
C002	0244173	CERAMIC DISC. 0.022MF+80-20%
C003	0244173	CERAMIC DISC. 0.022MF+80-20%
C004	0252621	ELECTROLYTIC 10MF 25V
C005	0252811	ELECTROLYTIC 1MF 50V
C006	0252621	ELECTROLYTIC 10MF 25V
C101	0244173	CERAMIC DISC. 0.022MF+80-20%
C102	0244173	CERAMIC DISC. 0.022MF+80-20%
C103	0252525	ELECTROLYTIC 47MF 16V
C104	0248703	CERAMIC DISCAL 13PF+-10%
C105	0248716	CERAMIC DISC. 47PF+-10%
C106	0248645	CERAMIC DISC. 5PF+-0.5PF
C107	0244173	CERAMIC DISC. 0.022MF+80-20%
C108	0249744	CERAMIC DISC. 0.01MF+-20%
C109	0244173	CERAMIC DISC. 0.022MF+80-20%
C110	0249738	CERAMIC DISC. 0.001MF+-20%
C111	0244173	CERAMIC DISC. 0.022MF+80-20%
C112	0244173	CERAMIC DISC. 0.022MF+80-20%
C113	0249738	CERAMIC DISC. 0.001MF+-20%
C114	0244173	CERAMIC DISC. 0.022MF+80-20%
C115	0275113	MYLAR 0.022MF+-20%

SYMBOL-NO	P-NO	DESCRIPTION
CAPACITORS.		
C116	0244173	CERAMIC DISC. 0.022MF+80-20%
C117	0248720	CERAMIC DISC. 68PF+-10%
C118	0249738	CERAMIC DISC. 0.001MF+-20%
C119	0249738	CERAMIC DISC. 0.001MF+-20%
C120	0248732	CERAMIC DISC. 220PF+-10%
C121	0244173	CERAMIC DISC. 0.022MF+80-20%
C122	0244173	CERAMIC DISC. 0.022MF+80-20%
C151	0248645	CERAMIC DISC. 5PF+-0.5PF
C152	0244173	CERAMIC DISC. 0.022MF+80-20%
C153	0244173	CERAMIC DISC. 0.022MF+80-20%
C154	0249744	CERAMIC DISC. 0.01MF+-20%
C155	0252811	ELECTROLYTIC 1MF 50V
C200	0275111	MYLAR 0.01MF+-20%
C201	0275111	MYLAR 0.01MF+-20%
C202	0244173	CERAMIC DISC. 0.022MF+80-20%
C203	0274115	MYLAR 0.0047MF+-20%
C204	0275111	MYLAR 0.01MF+-20%
C205	0249738	CERAMIC DISC. 0.001MF+-20%
C206	0244173	CERAMIC DISC. 0.022MF+80-20%
C207	0249744	CERAMIC DISC. 0.01MF+-20%
C208	0275115	MYLAR 0.047MF+-20%
C209	0244173	CERAMIC DISC. 0.022MF+80-20%
C210	0244173	CERAMIC DISC. 0.022MF+80-20%
C211	0249744	CERAMIC DISC. 0.01MF+-20%
C212	0252621	ELECTROLYTIC 10MF 25V
C213	0252621	ELECTROLYTIC 10MF 25V
C214	0244173	CERAMIC DISC. 0.022MF+80-20%

SYMBOL-NO	P-NO	DESCRIPTION
CAPACITORS		
C215	0249738	CERAMIC DISC. 0.001MF+-20%
C216	0252811	ELECTROLYTIC 1MF 50V
C217	0249738	CERAMIC DISC. 0.001MF+-20%
C218	0249738	CERAMIC DISC. 0.001MF+-20%
C219	0252811	ELECTROLYTIC 1MF 50V
C220	0252811	ELECTROLYTIC 1MF 50V
C223	0244173	CERAMIC DISC. 0.022MF+80-20%
C224	0275113	MYLAR 0.022MF+-20%
C251	0248720	CERAMIC DISC. 68PF+-10%
C252	0249744	CERAMIC DISC. 0.01MF+-20%
C256	0248708	CERAMIC DISC. 22PF+-10%
C257	0249744	CERAMIC DISC. 0.01MF+-20%
C258	0252811	ELECTROLYTIC 1MF 50V
C259	0249744	CERAMIC DISC. 0.01MF+-20%
C260	0252621	ELECTROLYTIC 10MF 25V
C261	0244173	CERAMIC DISC. 0.022MF+80-20%
C262	0244173	CERAMIC DISC. 0.022MF+80-20%
C301	0244173	CERAMIC DISC. 0.022MF+80-20%
C303	0248724	CERAMIC DISC. 100PF+-10%
C304	0249521	CERAMIC DISC. 470PF+-10%
C305	0244173	CERAMIC DISC. 0.022MF+80-20%
C306	0248724	CERAMIC DISC. 100PF+-10%
C307	0244173	CERAMIC DISC. 0.022MF+80-20%
C308	0256523	ELECTROLYTIC 0.33MF 25V
C309	0275112	MYLAR 0.015MF+-20%
C310	0246478	CERAMIC DISCAL 22PF+-10% (NP-0)
C311	0244173	CERAMIC DISC. 0.022MF+80-20%

ORIGINAL VERSION

SHEET 17 OF 23 SHEETS

MODEL NO. 934.38261800

REPLACEMENT PARTS LIST

SYMBOL-NO	P-NO	DESCRIPTION
CAPACITORS		
C313	0248730	CERAMIC DISC 180PF+-10%
C314	0248724	CERAMIC DISC. 100PF+-10%
C315	0246482	CERAMIC DISCAL 33PF+-10% (NP-0)
C316	0248716	CERAMIC DISC. 47PF+-10%
C317	0248716	CERAMIC DISC. 47PF+-10%
C318	0248724	CERAMIC DISC. 100PF+-10%
C319	0244173	CERAMIC DISC. 0.022MF+80-20%
C319	0249744	CERAMIC DISC. 0.01MF+-20%
C320	0248714	CERAMIC DISC. 39PF+-10%
C321	0244173	CERAMIC DISC. 0.022MF+80-20%
C322	0246484	CERAMIC DISCAL 39PF+-10% (NP-0)
C323	0248704	CERAMIC DISC. 15PF+-10%
C324	0244173	CERAMIC DISC. 0.022MF+80-20%
C325	0252335	ELECTROLYTIC 470MF 6.3V
C326	0249744	CERAMIC DISC. 0.01MF+-20%
C327	0246478	CERAMIC DISCAL 22PF+-10% (NP-0)
C328	0248643	CERAMIC DISC. 3PF+-0.5PF
C329	0244173	CERAMIC DISC. 0.022MF+80-20%
C330	0249738	CERAMIC DISC. 0.001MF+-20%
C331	0248724	CERAMIC DISC. 100PF+-10%
C332	0248650	CERAMIC DISC 10PF+-0.5PF
C333	0248716	CERAMIC DISC. 47PF+-10%
C334	0244173	CERAMIC DISC. 0.022MF+80-20%

SYMBOL-NO	P-NO	DESCRIPTION
CAPACITORS		
C335	0244173	CERAMIC DISC. 0.022MF+80-20%
C336	0244173	CERAMIC DISC. 0.022MF+80-20%
C337	0248726	CERAMIC DISC. 120PF+-10%
C338	0248712	CERAMIC DISC. 33PF+-10%
C339	0248714	CERAMIC DISC. 39PF+-10%
C340	0248702	CERAMIC DISC. 12PF+-10%
C341	0244173	CERAMIC DISC. 0.022MF+80-20%
C343	0244173	CERAMIC DISC. 0.022MF+80-20%
C401	0252621	ELECTROLYTIC 10MF 25V
C402	0252621	ELECTROLYTIC 10MF 25V
C403	0252615	ELECTROLYTIC 4.7MF 25V
C403	0252621	ELECTROLYTIC 10MF 25V
C404	0252621	ELECTROLYTIC 10MF 25V
C405	0244173	CERAMIC DISC. 0.022MF+80-20%
C406	0252621	ELECTROLYTIC 10MF 25V
C407	0256523	ELECTROLYTIC 0.33MF 25V
C408	0275113	MYLAR 0.022MF+-20%
C409	0252811	ELECTROLYTIC 1MF 50V
C410	0249738	CERAMIC DISC. 0.001MF+-20%
C411	0274115	MYLAR 0.0047MF+-20%
C412	0275111	MYLAR 0.01MF+-20%
C413	0252525	ELECTROLYTIC 47MF 16V
C414	0248720	CERAMIC DISC. 68PF+-10%
C416	0256189	ELECTROLYTIC 2200MF 16V
C417	0252615	ELECTROLYTIC 4.7MF 25V
C418	0252525	ELECTROLYTIC 47MF 16V
C419	0252535	ELECTROLYTIC 470MF 16V

SYMBOL-NO	P-NO	DESCRIPTION
CAPACITORS		
C420	0268235	MYLAR 0.22MF+-20%
C421	0252535	ELECTROLYTIC 470MF 16V
C422	0244173	CERAMIC DISC. 0.022MF+80-20%
C423	0249738	CERAMIC DISC. 0.001MF+-20%
C424	0249738	CERAMIC DISC. 0.001MF+-20%
C425	0249738	CERAMIC DISC. 0.001MF+-20%
C426	0249738	CERAMIC DISC. 0.001MF+-20%
C430	0252621	ELECTROLYTIC 10MF 25V
C431	0275116	MYLAR 0.68MF+-20%
C432	0252811	ELECTROLYTIC 1MF 50V
C434	0268235	MYLAR 0.22MF+-20%
C435	0252323	ELECTROLYTIC 33MF 10V
C437	0252811	ELECTROLYTIC 1MF 50V
C438	0275111	MYLAR 0.01MF+-20%
C439	0244173	CERAMIC DISC. 0.022MF+80-20%
C440	0244173	CERAMIC DISC. 0.022MF+80-20%
C441	0244175	CERAMIC DISC. 0.047MF+80-20%
C442	0249741	CERAMIC DISCAL 3300PF+-20%
C443	0252623	ELECTROLYTIC 33MF 25V
C601	0244173	CERAMIC DISC. 0.022MF+80-20%
C602	0244173	CERAMIC DISC. 0.022MF+80-20%
C603	0244175	CERAMIC DISC. 0.047MF+80-20%
C604	0256010	ELECTROLYTIC 1000MF 16V
C605	0244175	CERAMIC DISC. 0.047MF+80-20%
C606	0244173	CERAMIC DISC. 0.022MF+80-20%
C607	0252531	ELECTROLYTIC 100MF 16V
C608	0244173	CERAMIC DISC. 0.022MF+80-20%

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MODEL NO. 934.38261800

REPLACEMENT PARTS LIST

SYMBOL-NO	P-NO	DESCRIPTION
CAPACITORS		
C701	0249738	CERAMIC DISC. 0.001MF+-20%
C702	0244173	CERAMIC DISC. 0.022MF+80-20%
C703	0248645	CERAMIC DISC. 5PF+-0.5PF
C704	0244173	CERAMIC DISC. 0.022MF+80-20%
C705	0244173	CERAMIC DISC. 0.022MF+80-20%
C706	0248650	CERAMIC DISC. 10PF+-0.5PF
C707	0248712	CERAMIC DISC. 33PF+-10%
C708	0244175	CERAMIC DISC. 0.047MF+80-20%
C709	0244173	CERAMIC DISC. 0.022MF+80-20%
C710	0244173	CERAMIC DISC. 0.022MF+80-20%
C711	0248645	CERAMIC DISC. 5PF+-0.5PF
C712	0249744	CERAMIC DISC. 0.01MF+-20%
C713	0248720	CERAMIC DISC. 68PF+-10%
C714	0244173	CERAMIC DISC. 0.022MF+80-20%
C715	0244173	CERAMIC DISC. 0.022MF+80-20%
C716	0248720	CERAMIC DISC. 68PF+-10%
C717	0248712	CERAMIC DISC. 33PF+-10%
C718	0244173	CERAMIC DISC. 0.022MF+80-20%
C719	0244173	CERAMIC DISC. 0.022MF+80-20%
C720	0248732	CERAMIC DISC. 220PF+-10%
C721	0249740	CERAMIC DISC. 0.0022MF+-20%
C722	0244173	CERAMIC DISC. 0.022MF+80-20%
C723	0248720	CERAMIC DISC. 68PF+-10%

SYMBOL-NO	P-NO	DESCRIPTION
CAPACITORS		
C724	0248732	CERAMIC DISC. 220PF+-10%
C725	0244173	CERAMIC DISC. 0.022MF+80-20%
C726	0249740	CERAMIC DISC. 0.0022MF+-20%
C727	0249738	CERAMIC DISC. 0.001MF+-20%
C728	0244173	CERAMIC DISC. 0.022MF+80-20%
C729	0249521	CERAMIC DISC. 470PF+-10%
C730	0248642	CERAMIC DISC. 2PF+-0.5PF
C731	0244173	CERAMIC DISC. 0.022MF+80-20%
C732	0248736	CERAMIC DISC. 330PF+-10%
C733	0248712	CERAMIC DISC. 33PF+-10%
C734	0248732	CERAMIC DISC. 220PF+-10%
C735	0248661	CERAMIC DISCAL 11PF+-5%
C736	0248730	CERAMIC DISC 180PF+-10%
C737	0244173	CERAMIC DISC. 0.022MF+80-20%
C738	0248726	CERAMIC DISC. 120PF+-10%
C739	0249744	CERAMIC DISC. 0.01MF+-20%
C741	0248728	CERAMIC DISC. 150PF+-10%
C751	0244173	CERAMIC DISC. 0.022MF+80-20%
C751-753	0244173	CERAMIC DISC. 0.022MF+80-20%
C752	0248646	CERAMIC DISC. 6PF+-0.5PF
C755	0244173	CERAMIC DISC. 0.022MF+80-20%
C756	0244173	CERAMIC DISC. 0.022MF+80-20%
C757	0244173	CERAMIC DISC. 0.022MF+80-20%
C758	0244173	CERAMIC DISC. 0.022MF+80-20%
C759	0244173	CERAMIC DISC. 0.022MF+80-20%
C760	0244173	CERAMIC DISC. 0.022MF+80-20%
C761	0248650	CERAMIC DISC 10PF+-0.5PF

SYMBOL-NO	P-NO	DESCRIPTION
CAPACITORS		
C762	0244173	CERAMIC DISC. 0.022MF+80-20%
C763	0248720	CERAMIC DISC. 68PF+-10%
C764	0244173	CERAMIC DISC. 0.022MF+80-20%
RESISTORS		
RT002	0151887	SEMI VARIABLE 22KOHM
RT108	0151883	SEMI VARIABLE 1KOHM(B)
RT201	0151888	SEMI VARIABLE 47KOHM
RT202	0151883	SEMI VARIABLE 1KOHM(B)
RT203	0151886	SEMI VARIABLE 10KOHM (B)
RT251	0151886	SEMI VARIABLE 10KOHM (B)
RT253	0151888	SEMI VARIABLE 47KOHM
RT254	0151886	SEMI VARIABLE 10KOHM (B)
RT301	0151884	SEMI VARIABLE 2.2KOHM
RT602	0151883	SEMI VARIABLE 1KOHM(B)
RT701	0151888	SEMI VARIABLE 47KOHM
RT702	0151888	SEMI VARIABLE 47KOHM
RT721	0151881	SEMI VARIABLE 220OHM(B)
RT722	0151883	SEMI VARIABLE 1KOHM(B)
RV1	5000434	VARIABLE 100KOHM(B)
RV2	5000432	VARIABLE 10KOHM(C)
RV3	5000307	VARIABLE 20KOHM(B)
RV4	5003242	VARIABLE 100KOHM(A)
R002	0123933	CARBON FILM 1KOHM+-5% 1/8F
R003	0123929	CARBON FILM 470OHM+-5% 1/8F
R004	0123921	CARBON FILM 100OHM+-5% 1/8F
R005	0123941	CARBON FILM 4.7KOHM+-5% 1/8F
R006	0122952	CARBON FILM 1KOHM+-5% 1/8F

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MODEL NO. 934.38261800

REPLACEMENT PARTS LIST

SYMBOL-NO	P-NO	DESCRIPTION
RESISTORS		
R007	0122925	CARBON FILM 220OHM+-5% 1/8W
R101	0123945	CARBON FILM 10KOHM+-5% 1/8F
R102	0113362	CARBON FILM 2.2KOHM+-5% 1/2W
R103	0123933	CARBON FILM 1KOHM+-5% 1/8F
R104	0123945	CARBON FILM 10KOHM+-5% 1/8F
R105	0123933	CARBON FILM 1KOHM+-5% 1/8F
R106	0123941	CARBON FILM 4.7KOHM+-5% 1/8F
R107	0123933	CARBON FILM 1KOHM+-5% 1/8F
R108	0123945	CARBON FILM 10KOHM+-5% 1/8F
R109	0123939	CARBON FILM 3.3KOHM+-5% 1/8F
R110	0123933	CARBON FILM 1KOHM+-5% 1/8F
R111	0123941	CARBON FILM 4.7KOHM+-5% 1/8F
R112	0123939	CARBON FILM 3.3KOHM+-5% 1/8F
R113	0123933	CARBON FILM 1KOHM+-5% 1/8F
R114	0123933	CARBON FILM 1KOHM+-5% 1/8F
R116	0123941	CARBON FILM 4.7KOHM+-5% 1/8F
R117	0123945	CARBON FILM 10KOHM+-5% 1/8F
R119	0123933	CARBON FILM 1KOHM+-5% 1/8F
R121	0123933	CARBON FILM 1KOHM+-5% 1/8F
R122	0123933	CARBON FILM 1KOHM+-5% 1/8F
R123	0123951	CARBON FILM 33KOHM+-5% 1/8F
R125	0122974	CARBON FILM 68KOHM+-5% 1/8W
R126	0123945	CARBON FILM 10KOHM+-5% 1/8F

SYMBOL-NO	P-NO	DESCRIPTION:
RESISTORS		
R127	0123943	CARBON FILM 6.8KOHM+-5% 1/8F
R201	0123935	CARBON FILM 1.5KOHM+-5% 1/8F
R202	0123935	CARBON FILM 1.5KOHM+-5% 1/8F
R203	0123961	CARBON FILM 220KOHM+-5% 1/2F
R204	0123939	CARBON FILM 3.3KOHM+-5% 1/8F
R205	0123927	CARBON FILM 330OHM+-5% 1/8F
R206	0123927	CARBON FILM 330OHM+-5% 1/8F
R207	0123956	CARBON FILM 82KOHM+-5% 1/8F
R208	0123945	CARBON FILM 10KOHM+-5% 1/8F
R209	0123955	CARBON FILM 68KOHM+-5% 1/8F
R210	0123953	CARBON FILM 47KOHM+-5% 1/8F
R211	0123955	CARBON FILM 68KOHM+-5% 1/8F
R212	0123955	CARBON FILM 68KOHM+-5% 1/8F
R214	0123945	CARBON FILM 10KOHM+-5% 1/8F
R216	0123937	CARBON FILM 2.2KOHM+-5% 1/8F
R217	0123949	CARBON FILM 22KOHM+-5% 1/8F
R218	0123939	CARBON FILM 3.3KOHM+-5% 1/8F
R219	0123927	CARBON FILM 330OHM+-5% 1/8F
R220	0123921	CARBON FILM 100OHM+-5% 1/8F
R221	0123961	CARBON FILM 220KOHM+-5% 1/8F
R222	0123945	CARBON FILM 10KOHM+-5% 1/8F
R223	0123945	CARBON FILM 10KOHM+-5% 1/8F
R224	0123937	CARBON FILM 2.2KOHM+-5% 1/8F
R225	0123951	CARBON FILM 33KOHM+-5% 1/8F
R226	0123933	CARBON FILM 1KOHM+-5% 1/8F
R227	0123929	CARBON FILM 470OHM+-5% 1/8F
R228	0123945	CARBON FILM 10KOHM+-5% 1/8F

SYMBOL-NO	P-NO	DESCRIPTION
RESISTORS		
R251	0123969	CARBON FILM 1MOHM+-5% 1/8F
R252	0123933	CARBON FILM 1KOHM+-5% 1/8F
R253	0123969	CARBON FILM 1MOHM+-5% 1/8F
R254	0123933	CARBON FILM 1KOHM+-5% 1/8F
R255	0123933	CARBON FILM 1KOHM+-5% 1/8F
R256	0123953	CARBON FILM 47KOHM+-5% 1/8F
R257	0123957	CARBON FILM 100KOHM+-5% 1/8F
R258	0123955	CARBON FILM 68KOHM+-5% 1/8F
R260	0123945	CARBON FILM 10KOHM+-5% 1/8F
R301	0123945	CARBON FILM 10KOHM+-5% 1/8F
R302	0123945	CARBON FILM 10KOHM+-5% 1/8F
R303	0123957	CARBON FILM 100KOHM+-5% 1/8F
R304	0123947	CARBON FILM 15KOHM+-5% 1/8F
R305	0123938	CARBON FILM 2.7KOHM+-5% 1/8F
R306	0123949	CARBON FILM 22KOHM+-5% 1/8F
R307	0123932	CARBON FILM 820OHM+-5% 1/8w
R308	0123937	CARBON FILM 2.2KOHM+-5% 1/8F
R309	0123949	CARBON FILM 22KOHM+-5% 1/8F
R310	0123949	CARBON FILM 22KOHM+-5% 1/8F
R312	0123933	CARBON FILM 1KOHM+-5% 1/8F
R313	0123933	CARBON FILM 1KOHM+-5% 1/8F
R314	0123949	CARBON FILM 22KOHM+-5% 1/8F
R315	0123947	CARBON FILM 15KOHM+-5% 1/8F
R316	0123933	CARBON FILM 1KOHM+-5% 1/8F
R317	0123934	CARBON FILM 1.2KOHM+-5% 1/8F
R320	0123953	CARBON FILM 47KOHM+-5% 1/8F
R321	0123945	CARBON FILM 10KOHM+-5% 1/8F

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MODEL NO. 934.38261800

REPLACEMENT PARTS LIST

SYMBOL-NO	P-NO	DESCRIPTION
RESISTORS		
R322	0123933	CARBON FILM 1KOHM+-5% 1/8F
R323	0123933	CARBON FILM 1KOHM+-5% 1/8F
R324	0123949	CARBON FILM 22KOHM+-5% 1/8F
R326	0123933	CARBON FILM 1KOHM+-5% 1/8F
R327	0123959	CARBON FILM 150KOHM+-5% 1/8F
R328	0123953	CARBON FILM 47KOHM+-5% 1/8F
R329	0137907	CARBON FILM 33KOHM+-5% 1/4W
R330	0137855	CARBON FILM 2.2KOHM+-5% 1/4W
R401	0123947	CARBON FILM 15KOHM+-5% 1/8F
R402	0123949	CARBON FILM 22KOHM+-5% 1/8F
R403	0123949	CARBON FILM 22KOHM+-5% 1/8F
R404	0137859	CARBON FILM 4.7KOHM+-5% 1/4W
R405	0123946	CARBON FILM 12KOHM+-5% 1/8W
R406	0123951	CARBON FILM 33KOHM+-5% 1/8F
R407	0123945	CARBON FILM 10KOHM+-5% 1/8F
R408	0123915	CARBON FILM 33OHM+-5% 1/8W
R411	0112921	OXIDE METAL FILM 220HM+-5% 2W
R412	0123933	CARBON FILM 1KOHM+-5% 1/8F
R413	0123937	CARBON FILM 2.2KOHM+-5% 1/8F
R414	0123943	CARBON FILM 6.8KOHM+-5% 1/8F
R415	0123933	CARBON FILM 1KOHM+-5% 1/8F
R416	0123927	CARBON FILM 330OHM+-5% 1/8F
R417	0123957	CARBON FILM 100KOHM+-5% 1/8F

SYMBOL-NO	P-NO	DESCRIPTION
RESISTORS		
R418	0123945	CARBON FILM 10KOHM+-5% 1/8F
R419	0123941	CARBON FILM 4.7KOHM+-5% 1/8F
R420	0123933	CARBON FILM 1KOHM+-5% 1/8F
R421	0123941	CARBON FILM 4.7KOHM+-5% 1/8F
R422	0123951	CARBON FILM 33KOHM+-5% 1/8F
R423	0123925	CARBON FILM 220OHM+-5% 1/8F
R424	0123933	CARBON FILM 1KOHM+-5% 1/8F
R425	0122974	CARBON FILM 68KOHM+-5% 1/8W
R601	0170241	CARBON FILM 1.5KOHM+-5% 1/4F
R602	0123933	CARBON FILM 1KOHM+-5% 1/8F
R603	0123917	CARBON FILM 470HM+-5% 1/8F
R604	0123945	CARBON FILM 10KOHM+-5% 1/8F
R605	0123921	CARBON FILM 1000HM+-5% 1/8F
R606	0113292	CARBON FILM 2700HM+-5% 2W
R608	0123933	CARBON FILM 1KOHM+-5% 1/8F
R609	0123933	CARBON FILM 1KOHM+-5% 1/8F
R610	0123935	CARBON FILM 1.5KOHM+-5% 1/8F
R611	0123929	CARBON FILM 4700HM+-5% 1/8F
R701	0123947	CARBON FILM 15KOHM+-5% 1/8F
R702	0123945	CARBON FILM 10KOHM+-5% 1/8F
R703	0123931	CARBON FILM 6800HM+-5% 1/8F
R704	0123939	CARBON FILM 3.3KOHM+-5% 1/8F
R705	0123929	CARBON FILM 4700HM+-5% 1/8F
R706	0123929	CARBON FILM 4700HM+-5% 1/8F
R711	0123927	CARBON FILM 3300HM+-5% 1/8F
R712	0123933	CARBON FILM 1KOHM+-5% 1/8F
R713	0122952	CARBON FILM 1KOHM+-5% 1/8P

SYMBOL-NO	P-NO	DESCRIPTION
RESISTORS		
R714	0122959	CARBON FILM 3.9KOHM+-5% 1/8W
R715	0122936	CARBON FILM 470HM+-5% 1/8W
R716	0122936	CARBON FILM 470HM+-5% 1/8W
R717	0122932	CARBON FILM 220HM+-5% 1/8W
R718	0122952	CARBON FILM 1KOHM+-5% 1/8P
R719	0113292	CARBON FILM 2700HM+-5% 2W
R720	0113289	CARBON FILM 1500HM+-5% 1/2W
R722	0122936	CARBON FILM 470HM+-5% 1/8W
R723	0122964	CARBON FILM 10KOHM+-5% 1/8P
R724	0123951	CARBON FILM 33KOHM+-5% 1/8F
R725	0123933	CARBON FILM 1KOHM+-5% 1/8F
R726	0122952	CARBON FILM 1KOHM+-5% 1/8P
R727	0122972	CARBON FILM 47KOHM+-5% 1/8W
R729	0122968	CARBON FILM 22KOHM+-5% 1/8P
R730	0122966	CARBON FILM 15KOHM+-5% 1/8P
R731-734	0123945	CARBON FILM 10KOHM+-5% 1/8F
R735	0137851	CARBON FILM 1KOHM+-5% 1/4W
R736	0123912	CARBON FILM 180HM+-5% 1/8F
R738	0137805	CARBON FILM 2200HM+-5% 1/4W
SEMI-CONDUCTORS		
D001-003	5330731	DIODE 1N60
D101	5331001	DIODE 1S881
D103-111	5330131	ZENNER DIODE HZ7C
D112	0575019	DIODE 1N60P
D201	5330131	ZENNER DIODE HZ7C
D202	5330731	DIODE 1N60
D203	5330731	DIODE 1N60

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MODEL NO. 934.38261800

REPLACEMENT PARTS LIST

SYMBOL-NO	P-NO	DESCRIPTION
SEMI-CONDUCTORS		
D204-206	5330131	ZENNER DIODE HZ7C
D207	5330731	DIODE 1N60
D251	5330731	DIODE 1N60
D252	5330731	DIODE 1N60
D253	5330131	ZENNER DIODE HZ7C
D254	5330731	DIODE 1N60
D255	5330131	ZENNER DIODE HZ7C
D256	5330731	DIODE 1N60
D257	5330131	ZENNER DIODE HZ7C
D258	5330731	DIODE 1N60
D260-262	5330131	ZENNER DIODE HZ7C
D263	0575019	DIODE 1N60P
D264	5330131	ZENNER DIODE HZ7C
D301	5330131	ZENNER DIODE HZ7C
D302	5330131	ZENNER DIODE HZ7C
D303	5330852	DIODE 1SV50
D304	5330131	ZENNER DIODE HZ7C
D305	5330661	DIODE 1S2790
D306-308	5330131	ZENNER DIODE HZ7C
D307	5330131	ZENNER DIODE HZ7C
D401	5330131	ZENNER DIODE HZ7C
D402	5330131	ZENNER DIODE HZ7C
D403	5330001	DIODE V03C

SYMBOL-NO	P-NO	DESCRIPTION
SEMI-CONDUCTORS		
D404	5330131	ZENNER DIODE HZ7C
D601	5330101	DIODE V06C
D601	5330341	RECTIFIER W06A
D602	5330131	ZENNER DIODE HZ7C
D603	5330133	DIODE 1S2076-TF1
D604	5330133	DIODE 1S2076-TF1
D605	5330133	DIODE 1S2076-TF1
D606	5330131	ZENNER DIODE HZ7C
D701	5330131	ZENNER DIODE HZ7C
D702-705	5330131	ZENNER DIODE HZ7C
D706	5330131	ZENNER DIODE HZ7C
D707	5330131	ZENNER DIODE HZ7C
D708-710	5330131	ZENNER DIODE HZ7C
IC151	5356751	IC TA2017
IC201	5351421	IC MPC1037H
IC301	5351431	IC TC9107P
IC302	5351391	IC TA7310P
IC401	5350741	IC MPC1170H
IC402	5350493	IC HA1342A
IC601	5350572	IC UPC14308H
IC701	5351391	IC TA7310P
LED001	5380182	LED LR0302R
LED002	5380182	LED LR0302R
LED301	5310142	DISPLAY
LED601	5380182	LED LR0302R
Q001	5320064	TRANSISTOR 2SC458D
Q002	5321253	TRANSISTOR 2SA844-E

SYMBOL-NO	P-NO	DESCRIPTION
SEMI-CONDUCTORS		
Q003	5320064	TRANSISTOR 2SC458D
Q101	0573487	TRANSISTOR 2SC460C
Q102	0573487	TRANSISTOR 2SC460C
Q103	0573487	TRANSISTOR 2SC460C
Q104	5322172	TRANSISTOR 2SC2308C
Q201	0573492	TRANSISTOR 2SC454C
Q202	0573492	TRANSISTOR 2SC454C
Q203	0573487	TRANSISTOR 2SC460C
Q204	0573492	TRANSISTOR 2SC454C
Q205	0573492	TRANSISTOR 2SC454C
Q252	5320942	TRANSISTOR 2SK55-DE
Q253	5321253	TRANSISTOR 2SA844-E
Q254	5320064	TRANSISTOR 2SC458D
Q255	5320064	TRANSISTOR 2SC458D
Q256	5320064	TRANSISTOR 2SC458D
Q301	0573487	TRANSISTOR 2SC460C
Q302	0573487	TRANSISTOR 2SC460C
Q303	5321253	TRANSISTOR 2SA844-E
Q304	5320064	TRANSISTOR 2SC458D
Q306	0573487	TRANSISTOR 2SC460C
Q601	5320613	TRANSISTOR 2SC1213C
Q602	5320593	TRANSISTOR 2SA673C
Q603	5320064	TRANSISTOR 2SC458D
Q604	5320671	TRANSISTOR 2SC1061T-B
Q605	5320593	TRANSISTOR 2SA673C
Q606	5320613	TRANSISTOR 2SC1213C
Q607	5320064	TRANSISTOR 2SC458D

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MODEL NO. 934.38261800

REPLACEMENT PARTS LIST

SYMBOL-NO	P-NO	DESCRIPTION
SEMI-CONDUCTORS		
Q701	0573492	TRANSISTOR 2SC454C
Q703	0573492	TRANSISTOR 2SC454C
Q704	5321831	TRANSISTOR 2SC2166
Q705	5321841	TRANSISTOR 2SC1969
Q706	5320064	TRANSISTOR 2SC458D
Q707	5320064	TRANSISTOR 2SC458D
Q708	5320064	TRANSISTOR 2SC458D
Q709	5320922	TRANSISTOR 2SC1368C
TRANSFORMERS		
T101	5126372	FM OSC. 0.6MICRO H
T102	5120099	CB RF
T103	5142026	FM IF
T104	0322116	AM-IFT
T201	5132031	AM IF
T202	0322341	AM IF
T301	5123636	SW RF COIL
T302	5123633	SW RF COIL
T303	5123634	SW RF COIL
T304	5123634	SW RF COIL
T305	5123635	SW RF COIL
T401	5250242	OUT PUT TRANSFORMER
T701	0322341	AM IF
T702	5123651	SW RF COIL 27MHZ

SYMBOL-NO	P-NO	DESCRIPTION
TRANSFORMERS		
T703	5126376	FM OSC. 6MICRO H
T704	5123375	CB-RF
T705	5123593	SW RF COIL
T706	5123593	SW RF COIL
COILS		
L201	5152092	CHOKE COIL 220MICROH
L302	5152069	CHOKE COIL 4.7MICROH
L401	5152092	CHOKE COIL 220MICROH
L601	5220002	CHOKE
L701	5152092	CHOKE COIL 220MICROH
L702	5150783	CHOKE COIL 1MICRO H
L703	5152122	CHOKE 1MICRO H
L704	5123271	TRAP 0.5MICRO H
L706	5126553	CHOKE COIL 0.27MICROH
L707	5126554	CHOKE COIL 0.31MICROH
L708	5150481	CHOKE COIL
L709	5150073	CHOKE 0.33MICRO H
L710	5123271	TRAP 0.5MICRO H
CRYSTALS		
X301	5780281	CRYSTAL 10.240MHZ
X302	5780282	CRYSTAL 10.695MHZ
MISCELLANEOUS		
	5677141	MIC JACK (5P DIN)
FC1	5894241	FLAT CABLE
FC2	5894231	FLAT CABLE
F101	5780401	CRYSTAL FILTER 10.695MHZ
F102	5780411	CRYSTAL FILTER 10.6935MHZ

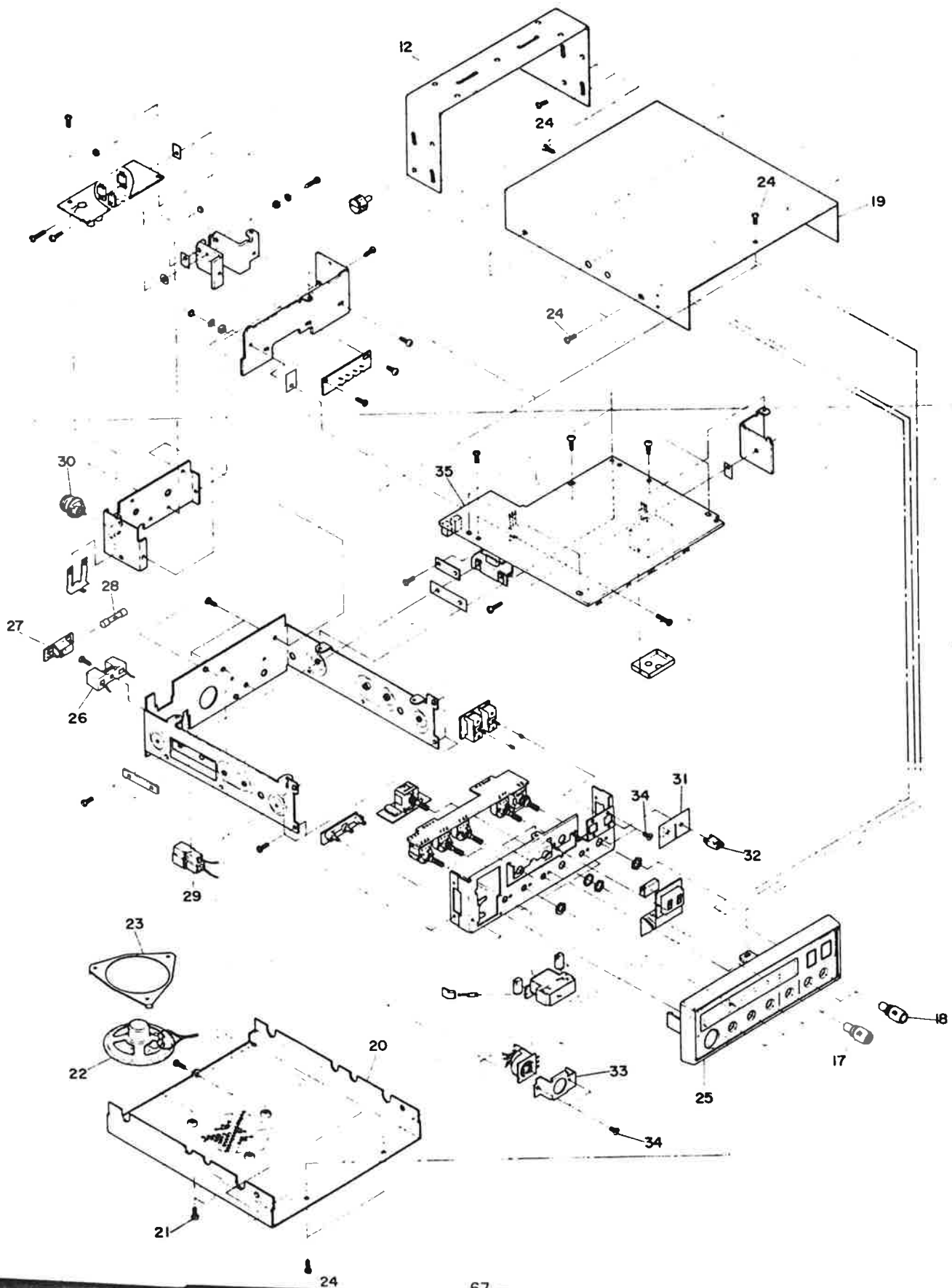
SYMBOL-NO	P-NO	DESCRIPTION
MISCELLANEOUS		
F201	5160012	CERAMIC FILTER 455KHZ
F701	5160211	CERAMIC FILTER 10.7MHZ
LM	5554531	LEVEL METER
NL1	0594094	NEON LAMP
RB304	5067041	RESISTOR BLOCK
RB305	5067041	RESISTOR BLOCK
S1	5612272	ROTARY SWITCH
S3	5612291	ROTARY SWITCH
S4	5604082	LEVER SWITCH
S5	5604082	LEVER SWITCH

ORIGINAL VERSION

SHEET 23 OF 23 SHEETS

MODEL NO. 934.38261800

EXPLODED VIEW



REPLACEMENT PARTS LIST

SYMBOL-NO	P-NO	DESCRIPTION
FOR FINAL ASSEMBLY		
1	7060586	SCREW PACK ASSEMBLY
2	7183331	MIC. HANGER
3	8781438	TAPPING SCREW - 3MMD X 8MM
4	8811114	WASHER - 3MMD
5	8811117	WASHER - 5MMD
6	8785720	TAPPING SCREW - 5MMD X 20MM
7	8813118	SPRING WASHER - 6MMD
8	8811118	WASHER - 6MMD
9	7781051	SCREW FOR SET BRACKET MOUNTING
10	8711710	PAN HEAD SCREW-5MMDX10MM
11	8785710	TAPPING SCREW-5MMDX10MM
12	7401671	SET BRACKET
13	7401541	F BRACKET(A)
14	7401551	F BRACKET(B)
15	5421451	MICROPHONE
16	5748211	F POWER CORD

SYMBOL-NO	P-NO	DESCRIPTION
FOR CASE ASSEMBLY		
17	6286953	KNOB ASSEMBLY
18	6286954	KNOB ASSEMBLY
19	6148931	UPPER COVER
20	6148941	UNDER COVER
21	8648406	BIND SCREW - 3MMD X 6MM
22	5402521	SPEAKER - 7.7CM
23	7217692	SPEAKER BRACKET
24	8648408	FT BIND SCREW-3MMDX8MM
25	6242741	ESCUTCHEON ASSEMBLY
26	5722121	FUSE HOLDER
27	5722071	FUSE COVER
28	5720264	FUSE 3A
29	5892751	M POWER CORD
30	5659091	ANTENNA CONNECTOR
31	7765561	SWITCH COVER
32	6296124	SWITCH KNOB
33	7297652	MIC HOLDER
34	0721305	FLAT SCREW - 2.6MMD X 5MM
35	5673131	JACK (EXT,SP/PA,SP)
	7698211	OWNERS MANUAL