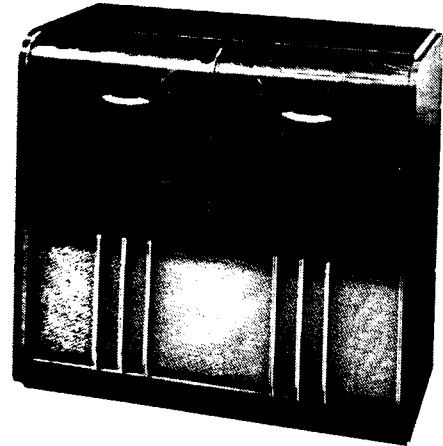
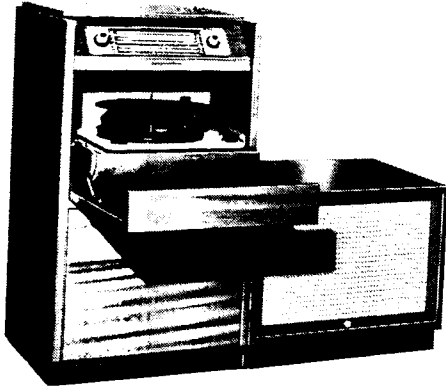


AWA RADIOLA

Models 776-GA and 778-GA

SEVEN VALVE. TWO BAND, A.C. OPERATED SUPERHETERODYNES

ISSUED BY AMALGAMATED WIRELESS (AUSTRALASIA) LTD.



ELECTRICAL SPECIFICATIONS

Frequency Ranges:

| | |
|------------------------------|---|
| Medium Wave | 540 — 1600 Kc/s. (555 — 187.5 Metres) |
| Short Wave | 6 — 18 Mc/s. (50 — 16 Metres) |
| Intermediate Frequency | 455 Kc/s. |
| Power Supply Rating | 200 — 260 volts 50 — 60 c/s. |
| Power Consumption | Receiver — 75 watts Record Player — 16 watts |
| Dial Lamps | 6.3 volts, 0.25 amp. M.E.S. |

Valve Complement:

- (1) 6BE6 Converter
- (2) 6BA6 I.F. Amplifier
- (3) 6AV6 Detector, Tone Control Amplifier, A.V.C.
- (4) 12AX7 A.F. Amplifier, Phase Splitter
- (5) 6V6GT Push-pull Output
- (6) 6V6GT
- (7) 5Y3GT Rectifier

Loudspeakers

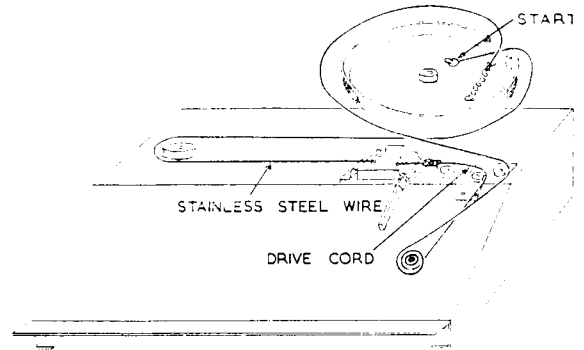
- 1 — 6 inch permanent magnet No. 20766
- 1 — 7 x 5 inch permanent magnet No. 20922
- 1 — 12 inch permanent magnet No. 20933
- Transformer No. 25861
- V.C. Impedance of Combination 15 ohms. at 400 c/s.
- Undistorted Power Output 8 watts.

Chassis Removal:

Remove the cabinet back. The complete receiver comprises two units — Tuner and Power Amplifier.
Remove the Broadcast aerial lead from the Ferrite Rod and the S.W. aerial lead from the spring terminal at the rear of the chassis.
Disconnect the Power Supply, Pick-up, Loudspeaker and Cabinet Indicating Lamp cables.
Each unit is held in the cabinet by two screws through the mounting boards. Removal of these screws enable the chassis to be withdrawn.

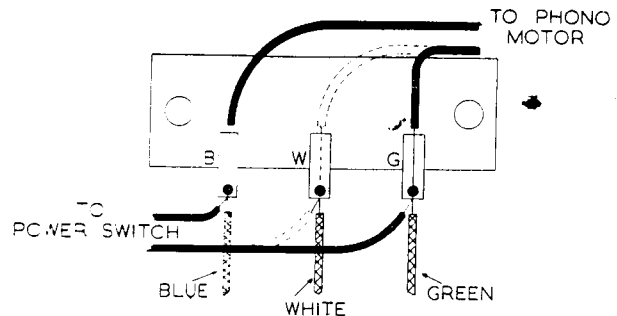
Drive Cord Replacement:

The accompanying diagram shows the route of the cord and the method of attachment.



Connection to Power Supply:

The receiver should not be connected to any circuit supplying other than alternating current from 200-260 volts and at the frequency stated on the label within the cabinet.



The power supply connections are shown in the accompanying diagram.

Alignment Procedure:

Manufacturer's Setting of Adjustments.

The receiver is tested by the manufacturer with precision instruments and all adjusting screws are sealed. Re-alignment should be necessary only when components in tuned circuits are repaired or replaced, or when it is found that the seals over the adjusting screws have been broken.

It is especially important that the adjustments should not be altered unless in association with the correct testing instruments listed below.

Under no circumstances should the plates of ganged tuning capacitor be bent, as the unit is accurately aligned during manufacture and cannot be re-adjusted unless by skilled operators using special equipment.

For all alignment operations, connect the "low" side of the signal generator to the receiver chassis and keep the generator output as low as possible to avoid A.V.C.

action. Also, keep the volume control in the maximum clockwise position.

Testing Instruments:

- (1) A.W.A. Junior Signal Generator, type 2R7003, or
- (2) A.W.A. Modulated Oscillator, series J6726.
If the modulated oscillator is used, connect a 0.25 megohm non-inductive resistor across the output terminals, and for short wave alignment, an additional 400 ohm non-inductive resistor in series with the "high" output lead of the instrument.
- (3) A.W.A. Output Meter, type 2M8832.

NOTE: On the short wave band the oscillator is working on the low side of the signal frequency; therefore, the image will now be heard if the receiver is tuned to a higher frequency than the signal. For example, if the receiver is tuned to receive a 16 Mc/s. signal, the image will be heard at 16.91 Mc/s. instead of the usual 15.09 Mc/s.

ALIGNMENT TABLE

| Order | Connect "High" side if Generator to: | Tune Generator to: | Tune Receiver to: | Adjust for Maximum Peak Output: |
|--|--------------------------------------|--------------------|-------------------|---------------------------------|
| 1 | Aerial Section of Gang (Drive End) | 455 Kc/s. | 540 Kc s. | Core L13 |
| 2 | Aerial Section of Gang (Drive End) | 455 Kc/s. | 540 Kc s. | Core L12 |
| 3 | Aerial Section of Gang (Drive End) | 455 Kc/s. | 540 Kc s. | Core L11 |
| 4 | Aerial Section of Gang (Drive End) | 455 Kc/s. | 540 Kc s. | Core L10* |
| 5 | Aerial Section of Gang (Drive End) | 455 Kc/s. | 540 Kc s. | Core L9* |
| 6 | Aerial Section of Gang (Drive End) | 455 Kc/s. | 540 Kc s. | Core L8 |
| *If the 1st and 2nd I.F. are completely out of alignment, tune core L9 and L10 for a sharp dip and then repeat the above adjustments, peaking all coils. | | | | |
| 7 | Inductively coupled to Rod Aerial† | 600 Kc/s. | 600 Kc s. | L.F. Osc. Core Adj. (L7)§ |
| 8 | Inductively coupled to Rod Aerial† | 1500 Kc/s. | 1500 Kc s. | H.F. Osc. Adj. (C11) |
| 9 | Inductively coupled to Rod Aerial† | 1500 Kc/s. | 1500 Kc s. | H.F. Aer. Adj. (C1) |
| Repeat the above adjustments until the maximum output is obtained. | | | | |
| 10 | S.W. Aerial Terminal | 16 Mc/s. | 16 Mc s. | H.F. Osc. Adj. (C8)‡ |
| 11 | S.W. Aerial Terminal | 16 Mc/s. | 16 Mc s. | H.F. Aer. Adj. (C3) |

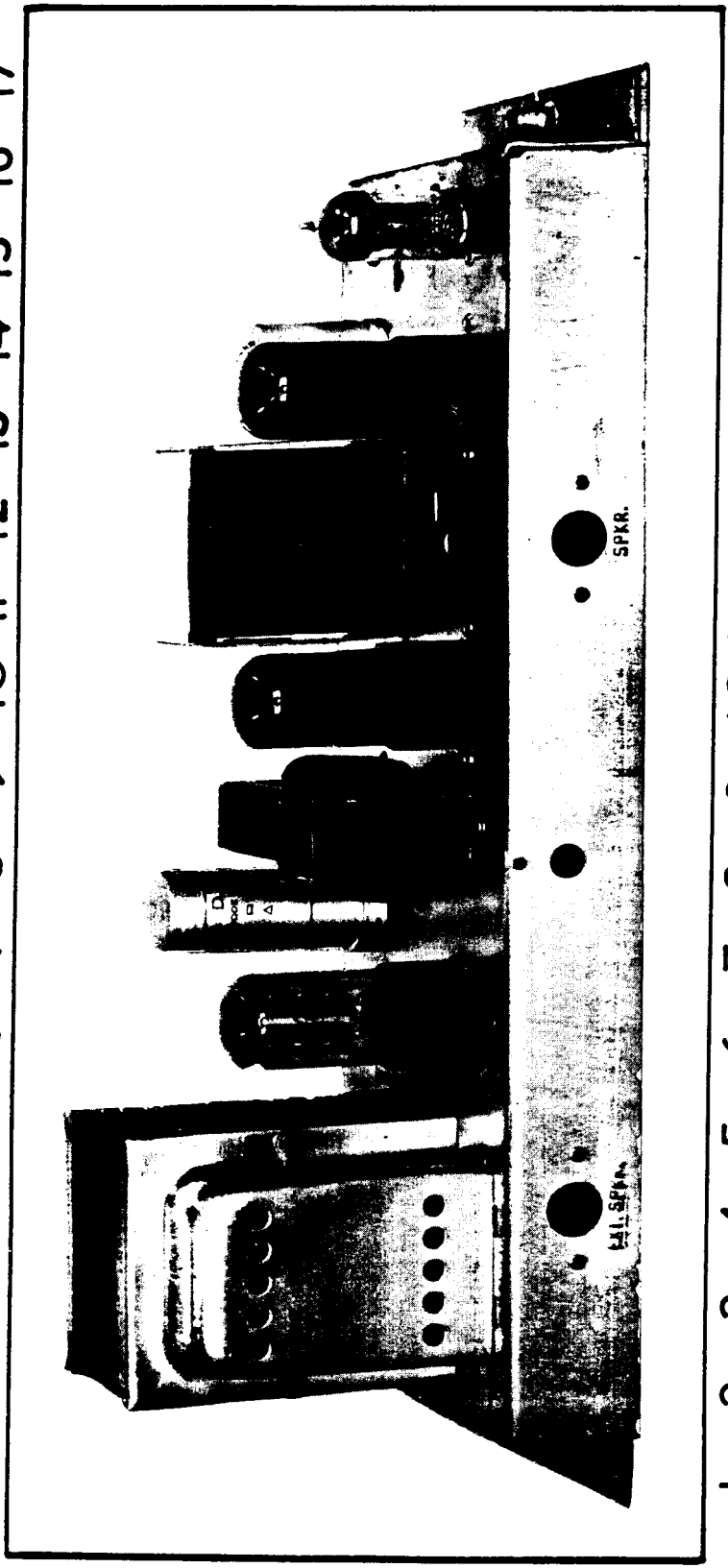
† A coil comprising 3 turns of 16 gauge D.C.C. wire and about 12 inches in diameter should be connected between the output terminals of the test instrument placed concentric with the rod aerial and distant not less than 1 foot from it.

§ Rock the tuning control back and forth through the signal.

‡ Use maximum capacity peak if two can be obtained. Check to determine that the trimmer has been adjusted to correct peak by tuning the receiver to approximately 16.91 Mc/s., where a weaker signal should be obtained.

A B C D E F G

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17



A B C D E F G

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17

CIRCUIT CODE — MODELS 776-GA and 778-GA

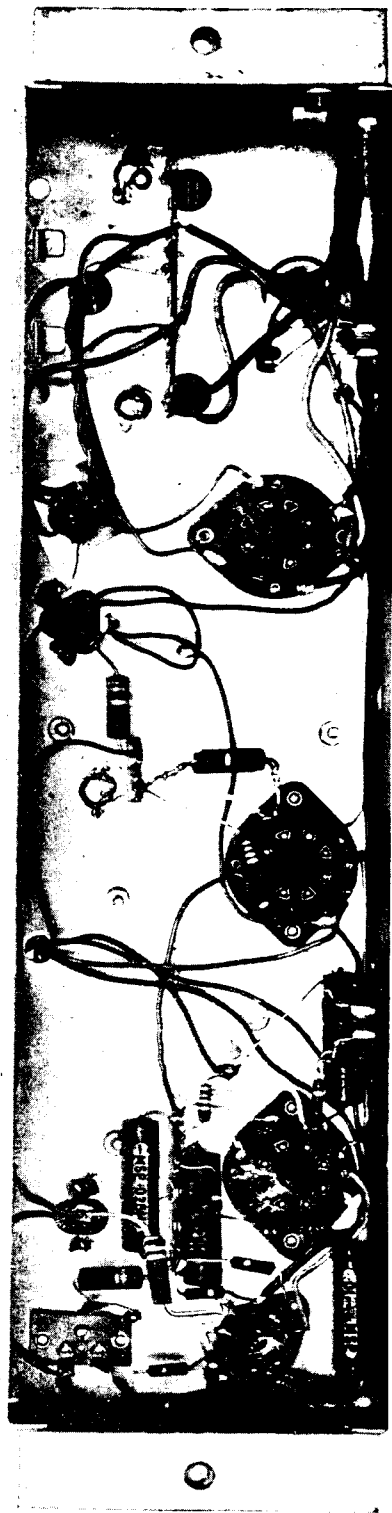
| Code No. | Description | Part No. | Fig. No. | Location | Code No. | Description | Part No. | Fig. No. | Location |
|-------------------|---------------------------------------|-----------------------|----------|----------|----------|---|----------|----------|------------------|
| INDUCTORS | | | | | | | | | |
| L1, L2 | Ferrite Aerial Assembly 540-1600 Kc/s | 34327 | 1 | B5 | C6 | 0.1 μ F paper 200V working | | | D3 |
| L3, L4 | Aerial Coil 6-18 Mc/s | 28228 | 1 | F6 | C7 | 0.0022 μ F paper 600V working | | | G3 |
| L5, L6 | Oscillator Coil 6-18 Mc/s | 28229 | 1 | F3 | C8 | 2.20 μ F Trimmer | 19659 | | E2 |
| L7 | Oscillator Coil 540-1600 Kc/s | 32406 | 1 | F2 | C9 | 12.445 μ F tuning | 18674 | | C4 |
| L8, L9 | 1st I.F. Transformer | 34384 | 1 | C7 | C10 | 470 μ F padlder \pm 2 1/2% | | | F2 |
| L10, L11 | 2nd I.F. Transformer | 34384 | 1 | C10 | C11 | 4.27 μ F Trimmer | 33304 | | F2 |
| L12, L13 | 3rd I.F. Transformer | 33596 | 1 | C12 | C12 | 47 μ F mica | | | D5 |
| L14 | Filter Choke | TU24 | 3 | D9 | C13 | 100 μ F silvered mica (in 1st I.F.) | | | D7 |
| RESISTORS | | | | | | | | | |
| R1 | 0.1 megohm | 1/2 watt | 1 | E5 | C14 | 100 μ F silvered mica (in 1st I.F.) | | | D7 |
| R2 | 11,000 ohms | 2 " | 1 | F9 | C15 | 0.01 μ F mica | | | E7 |
| R3 | 100 ohms | 1 " | 1 | L5 | C16 | 100 μ F silvered mica (in 2nd I.F.) | | | D10 |
| R4 | 22,000 ohms | 1 " | 1 | D5 | C17 | 100 μ F silvered mica (in 2nd I.F.) | | | E8 |
| R5 | 2.2 megohms | 1 " | 1 | E13 | C18 | 0.1 μ F paper 400V working | | | D12 |
| R6 | 150 ohms | 1 " | 1 | E10 | C19 | 220 μ F silvered mica (in 3rd I.F.) | | | E11 |
| R7 | 47,000 ohms | 1 " | 1 | F11 | C20 | 220 μ F silvered mica (in 3rd I.F.) | | | E11 |
| R8 | 2,200 ohms | 1 " | 1 | G9 | C21 | 100 μ F ceramic | | | G10 |
| R9 | 0.5 megohm | Volume Control | 1 | F11 | C22 | NOT USED | | | F12 |
| R10 | 10,000 ohms | 1/2 watt | 1 | G8 | C23 | 0.05 μ F paper 200V working | | | F10 |
| R11 | 1.0 megohm | 1 " | 1 | F12 | C24 | 0.05 μ F paper 200V working | | | F13 |
| R12 | 0.22 megohm | 1 " | 1 | F14 | C25 | 25 μ F 40 P.V. Electrolytic | | | E12 |
| R13 | 2.2 megohms | 1 " | 1 | E13 | C26 | 100 μ F silvered mica | | | F14 |
| R14 | 0.47 megohm | 1 " | 1 | G13 | C27 | 47 μ F ceramic | | | G13 |
| R15 | 1.0 megohm | Tone Control (Bass) | 1 | G13 | C28 | 0.01 μ F paper 600V working | | | H15 |
| R16 | 1.0 megohm | Tone Control (Treble) | 1 | G14 | C29 | 470 μ F mica | | | H14 |
| R17 | 47,000 ohms | 1/2 watt | 1 | G14 | C30 | 0.0025 μ F paper 600V working | | | H13 |
| R18 | 1.0 megohm | 1 " | 1 | G15 | C31 | 0.005 μ F mica | | | E6 |
| R19 | 2,200 ohms | 1 " | 2 | C7 | C32 | 0.001 μ F mica | | | C14 |
| R20 | 0.22 megohm | 1 " | 2 | C2 | C33 | 0.025 μ F paper 400V working | | | F3 |
| R21 | 4,700 ohms | 1 " | 2 | B10 | C34 | 8 μ F 525 P.V. Electrolytic | | | C4 |
| R22 | 0.1 megohm | 1 " | 2 | B3 | C35 | 0.01 μ F paper 600V working | | | B4 |
| R23 | 1.0 megohm | 1 " | 2 | C3 | C36 | 0.025 paper 400V working | | | C8 |
| R24 | 2,200 ohms | 1 " | 2 | D4 | C37 | 0.025 paper 400V working | | | C8 |
| R25 | 0.1 megohm | 1 " | 2 | B3 | C38A | 16 μ F 525 P.V. Electrolytic | | | C8 |
| R26 | 0.47 megohm | 1 " | 2 | C5 | C38B | 8 μ F 525 P.V. Electrolytic | | | C8 |
| R27 | 10,000 ohms | 1 " | 2 | C4 | C39 | 0.5 μ F paper 200V working | | | C8 |
| R28 | 33,000 ohms | 1 " | 2 | D6 | C40 | 0.025 μ F paper 400V working | | | (on loudspeaker) |
| R29 | 0.47 megohm | 1 " | 2 | C8 | C41 | 0.1 μ F paper 400V working | | | F9 |
| R30 | 10,000 ohms | 1 " | 2 | D8 | C42 | 10 μ F mica | | | F10 |
| R31 | 165 ohms | 2 " | 2 | D10 | T1 | TRANSFORMERS | | | E2 |
| R32 | 150 ohms | 1 " | 1 | E11 | T2 | Loudspeaker Transformer | 25861 | | D9 |
| CAPACITORS | | | | | | | | | |
| C1 | 2.20 μ F Trimmer | | 1 | G2 | L1 | Power Transformer | 25859 | | C3 |
| C2 | 4000 μ F padlder \pm 2 1/2% | | 1 | F5 | LS1 | 7 x 5 inch Permanent Magnet | 20922 | | |
| C3 | 2.20 μ F Trimmer | | 1 | F7 | LS2 | 12 inch Permanent Magnet | 20933 | | |
| C4 | 10 μ F mica | | 1 | F6 | LS3 | 6 inch Permanent Magnet | 20766 | | |
| C5 | 12.445 μ F tuning | | 1 | C4 | S1 | SWITCHES | | | |
| | | | | | S2 | Phone-Radio Switch | 35090 | | G3 |
| | | | | | | Power Switch (on R15, R16) | | | G14 |

MECHANICAL REPLACEMENT PARTS

| Item | Part No. |
|---|-----------------|
| Bracket Assembly (Ferrite Aerial) | 34500 |
| Bracket, Pulley Assembly | 33994 |
| Bracket, Tuning Spindle | 33387 |
| Cabinet, 776-GA | 28129 |
| Cabinet, 778-GA Receiver | 28130 |
| Cabinet, 778-GA Speakers | 28132 |
| Clip (Retaining I.F.'s) | 27730 |
| Clip (Retaining Phono Motor Socket) | 21915 |
| "C" Clip (Retaining Pulley No. 7885) | 2537 |
| "C" Clip (Retaining Pulley No. 17716) | 4865 |
| Dial Scale | 32244 |
| Drive Drum Assembly | 34123 |
| Grommet (Gang Mounting) | 33359 |
| Handle 776-GA (Turner Style 3357) | |
| Knob, moulded (Base and Tuning Controls) | 34133 |
| Knob, moulded (Power — Treble Control) | 35157 |
| Knob, moulded (Phono — Radio Switch) | 35153 |
| Knob, disc (Volume Control) | 34635 |
| Knob, door 778-GA (Satin Brass) | Code No. 423024 |
| Knob, door 778-GA (Satin Chrome) | Code No. 423025 |
| Lever Assembly (Receiver Compartment, Bronze) | 33176 |
| Lever Assembly (Receiver Compartment, Chrome) | 33174 |
| Pointer Assembly | 33979 |
| Power Cable Assembly | 34353 |
| Pulley (Drive Cord, Large) | 17835 |
| Pulley (Drive Cord, Small) | 17716 |
| Pulley (Tuning Spindle) | 33365 |
| Retainer (Cabinet Back) | 34254 |
| Screw (Broadcast Coil Mounting) | 31373 |
| Screen, Socket Valve 7 pin | Code No. 794574 |
| Socket, Valve 7 pin | Code No. 794576 |
| Socket, 2 pin | Code No. 793033 |
| Socket, 3 pin | 31325 |
| Socket, Phono Motor | 1741 |
| Spring, Drive Cord | 25373 |

When ordering, always quote the above part or code numbers, and in the case of coloured parts such as pointers, knobs, etc., the colour plus the part number.

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18



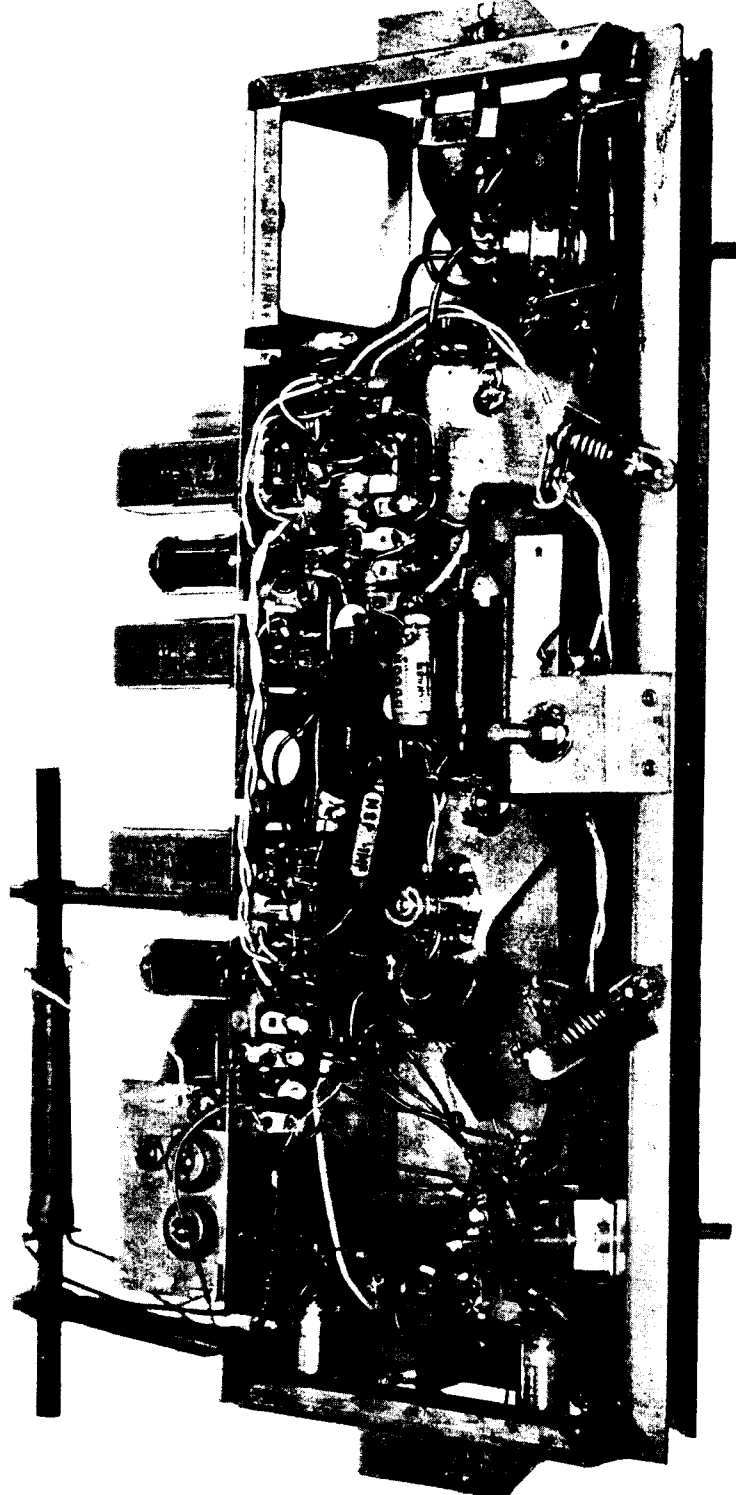
A B C D E

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18

A B C D E

A B C D E F G H I

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17



A B C D E F G H I

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17