

# VIKING SERVICE INFORMATION FOR MODELS

## 12 TUBE AM-FM STEREO RADIO-PHONO COMBINATION

RCS-576  
RCS-577  
RCS-578

For Operation on 110-120 Volts A.C. Cycle as Marked.

When writing for Service Information or Parts please quote Model Number, Serial Number and finish of cabinet. All information printed in this leaflet is up to date as of July 5, 1962. Subsequent changes are covered by bulletin.

### SPECIFICATIONS

Standard Broadcast Range..... 535 to 1650 Kc.  
Frequency Modulation Range..... 88 to 109 Mc..  
Band Width ..... AM 10 Kc. Band Width at 2X Down  
19 Kc. Band Width at 10X Down

AM Hi-Fi 22.5 Kc. Band Width at 2X Down  
35 Kc. Band Width at 10X Down  
FM 350 Kc. Band Width at 10X Down

Sensitivity..... AM--- 2.5 uv for 100 mv at Detector  
2.5 uv for 20 mv at Audio Take Off Point.  
FM--- 1.75 uv for 20db quieting  
3.5uv for 30db quieting

### AMPLIFIER (Specifications per channel)

Frequency Response - 20cps. to 50,000 cps. ± 2db  
POWER OUTPUT - 20 watts peak ± 1db

### LEVEL BALANCE CONTROL DUAL ELEMENT FRICTION CLUTCH TYPE

Designed to provide bass and treble lift as follows: -  
35° Rotation from CCW position - 18 db lift at 30 C/S  
35° Rotation from CCW position - 12 db lift at 15 KC/S  
65° Rotation from CCW position - 6 db lift at 30 C/S  
65° Rotation from CCW position - 6 db lift at 15 KC/S  
with reference to 1000 C/S

### BASS TONE CONTROL DUAL ELEMENT

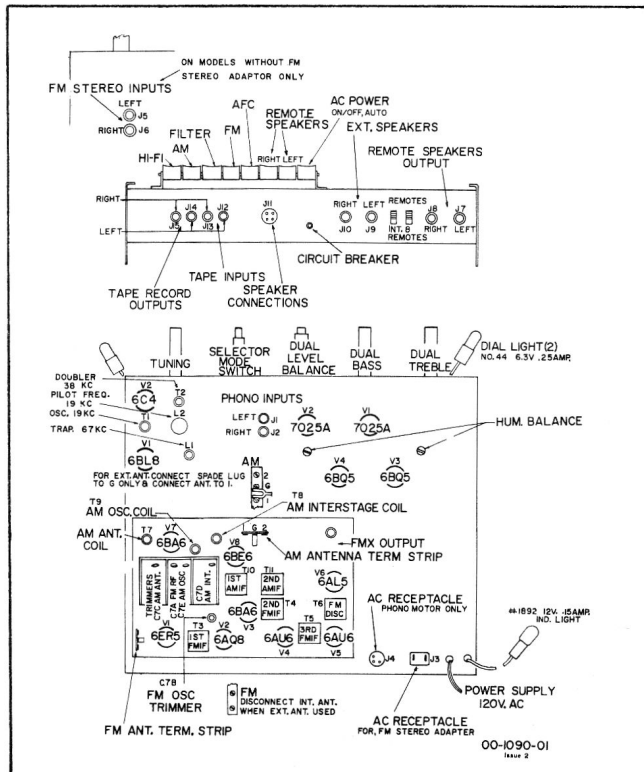
Designed to provide 10 to 15db cut and lift at 50 cps. Covers sound spectrum from 20-1000 cps.

### TREBLE TONE CONTROL DUAL ELEMENT

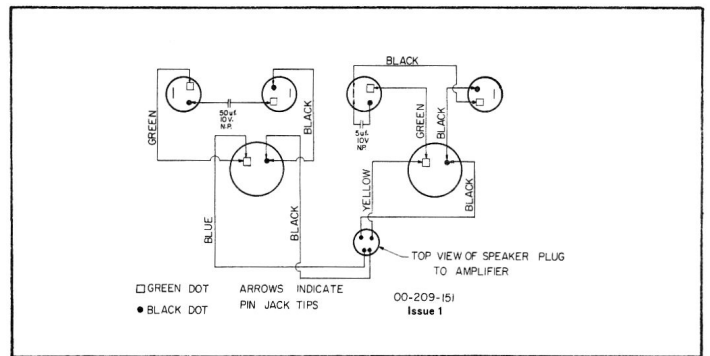
Designed to provide 10 to 15db cut and lift at 10,000 cps. Covers sound spectrum from 1000 to 15,000 cps.

Measurements with tone controls in flat position, level control fully clockwise.

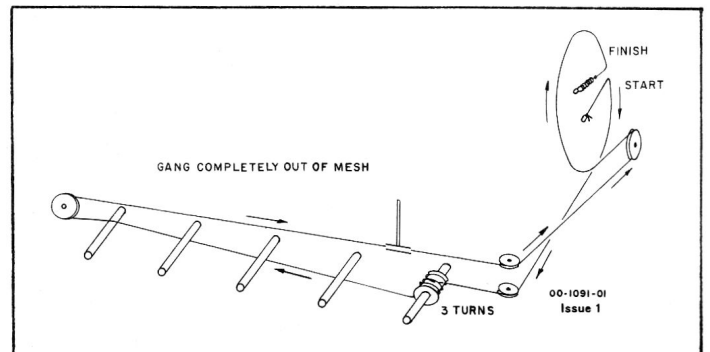
### CHASSIS LAYOUT



### SPEAKER CONNECTIONS



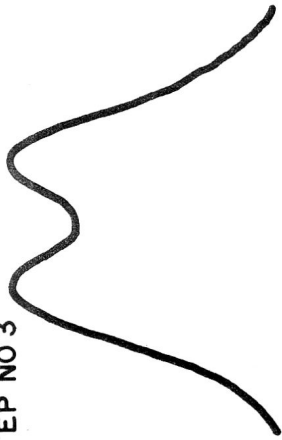
### STRINGING DETAIL



**THE T. EATON CO. LIMITED**  
CANADA

# AM-FM TUNER ALIGNMENT

STEP NO 3



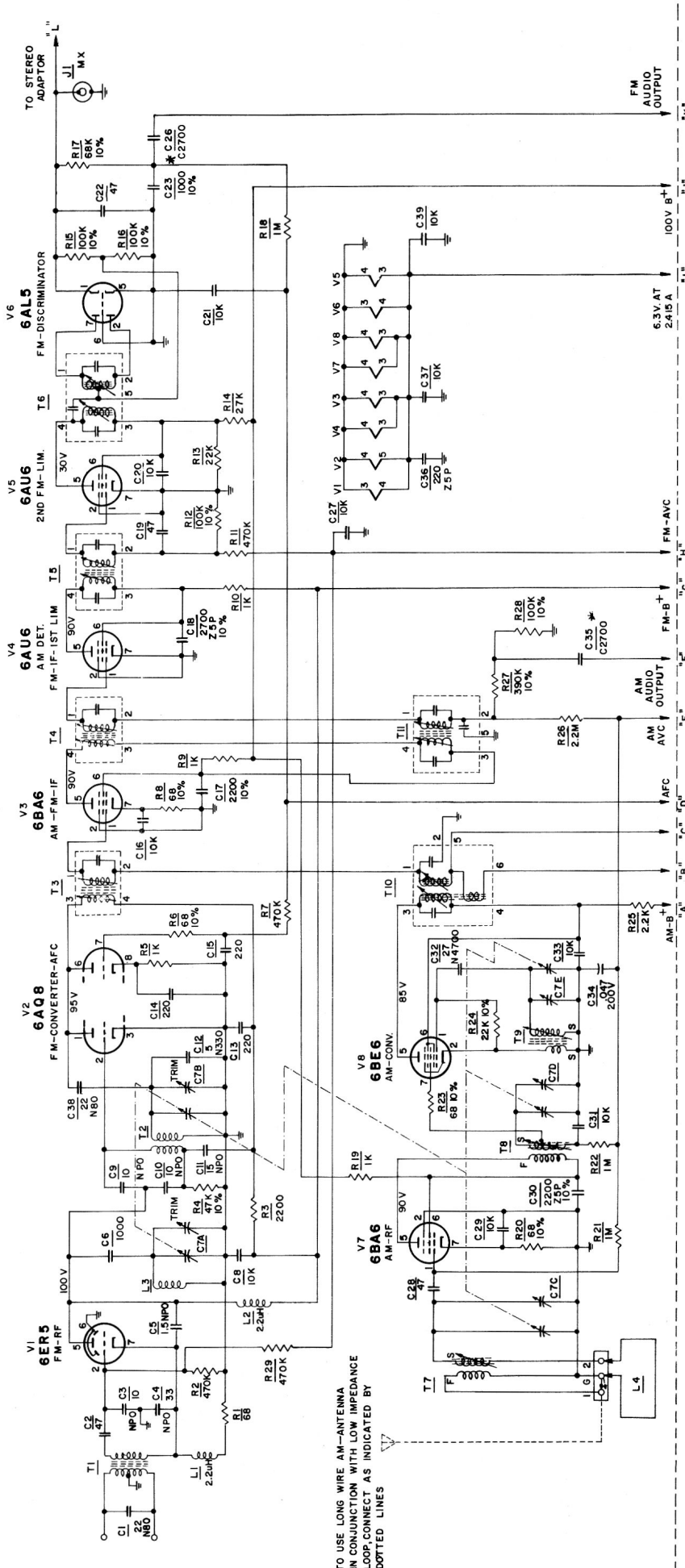
435 445 455 465 475 KC/S

\* For FM dummy antenna connect one 150 $\mu$ carbon resistor from grounded side of sig. gen. to ant. term. and one 120 $\mu$ carbon resistor from hot side of sig. gen. to ant. term.

| STEP | DUMMY ANTENNA  | SIGNAL APPLIED TO         | FREQ. MODULATION                                 | BAND SWITCH SETTING | DIAL POINTER SETTING     | INDICATING METER           | ADJUST                        | REMARKS   | NOMINAL SENSITIVITY      |
|------|--|---------------------------|--|---------------------|--------------------------|----------------------------|-------------------------------|---|--------------------------|
| 1    | .05 uf   | Pin No. 1<br>V3<br>6BA6   | 455 Kc/s<br>400 c.p.s.<br>AM at 30%              | AM                  | 600 Kc/s                 | AC-VTVM To Point "F"       | T11 2nd. AM-IF                | Adjust for maximum output.                                | 4000 uv for 20 mv output |
| 2    | .05 uf   | Pin No. 7<br>V8<br>6BE6   | 455 Kc/s<br>400 c.p.s.<br>AM at 30%              | AM                  | 600 Kc/s                 | AC-VTVM To Point "F"       | T10 1st. AM-IF                | Adjust for maximum output.                                | 300 uv for 20 mv output  |
| 3    | Change Band Switch Setting to (AM HI-FI). Tune Signal Generator across 440-470 Kc/s. Frequency Range and check for approx. response curve as shown. This test should preferably be made with a proper sweep generator and scope. |                           |  |                     |                          |                            |                               |   |                          |
| 4    | 200 uuf  | AM Ant. Term. Strip No. 1 | 600 Kc/s<br>400 c.p.s.<br>AM at 30%              | AM                  | 600 Kc/s                 | AC-VTVM To Point "F"       | T7, T8, and T9                | Connect for long wire antenna, adjust for maximum output. | 2.5 uv for 20 mv output  |
| 5    | 200 uuf  | AM Ant. Term. Strip No. 1 | 1400 Kc/s<br>400 c.p.s.<br>AM at 30%             | AM                  | 1400 Kc/s                | AC-VTVM To Point "E"       | C1C, C1D, and C1E Trimmers    | Connect for long wire antenna, adjust for maximum output. | 1.8 uv for 20 mv output  |
| 6    | Repeat steps 4 and 5, check for band coverage at 535 Kc/s - 1650 Kc/s and for tracking at 950 Kc/s.  |                           |  |                     |                          |                            |                               |   |                          |
| 7    | -  | Pin No. 1<br>V4<br>6AU6   | 10.7 Mc/s  | FM                  | Point of no Interference | DC-VTVM To Point "H"       | T5 3rd. FM-IF                 | Adjust for maximum meter deflection.                      | 15000 uv for 1V output   |
| 8    | -  | Pin No. 1<br>V4<br>6AU6   | 10.7 Mc/s  | FM                  | Point of no Interference | DC-VTVM to Pin No. 5 of T6 | T6 FM Discriminator Primary   | Adjust for maximum meter deflection.                      | 10000 uv for 3V output   |
| 9    | -  | Pin No. 1<br>V4<br>6AU6   | 10.7 Mc/s  | FM AFC              | Point of no Interference | DC-VTVM To Point "D"       | T5 FM Discriminator Secondary | Adjust for zero voltage                                   | -                        |
| 10   | -  | Pin No. 1<br>V3<br>6BA6   | 10.7 Mc/s  | FM                  | Point of no Interference | DC-VTVM To Point "H"       | T4 2nd. FM-IF                 | Adjust for maximum meter deflection                       | 250 uv for 1V output     |
| 11   | -  | C1A FM Gang               | 10.7 Mc/s  | FM                  | Point of no Interference | DC-VTVM To Point "H"       | T3 1st. FM-IF                 | Adjust for maximum meter deflection.                      | -                        |
| 12   | *  | FM Ant. Term. Strip       | 90 Mc/s<br>400 c.p.s.<br>FM 22.5 Kc/s Deviation  | FM                  | 90 Mc/s                  | AC-VTVM To Point "K"       | Expand or compress L3 and T2  | Adjust for maximum output.                                | 3 uv for 100 mv output   |
| 13   | *  | FM Ant. Term. Strip       | 106 Mc/s<br>400 c.p.s.<br>FM 22.5 Kc/s Deviation | FM                  | 106 Mc/s                 | AC-VTVM To Point "K"       | C1B and C1A Trimmers          | Adjust for maximum output.                                | 3 uv for 100 mv output   |
| 14   | Repeat steps 12 and 13 until output drops at least 20 db. when mod. is turned off.   |                           |  |                     |                          |                            |                               |   |                          |

00-1909-01  
ISSUE 2

NOTE: To achieve more accurate alignment of FM IF's and Discriminator it is preferable to use a proper sweep generator and oscilloscope.



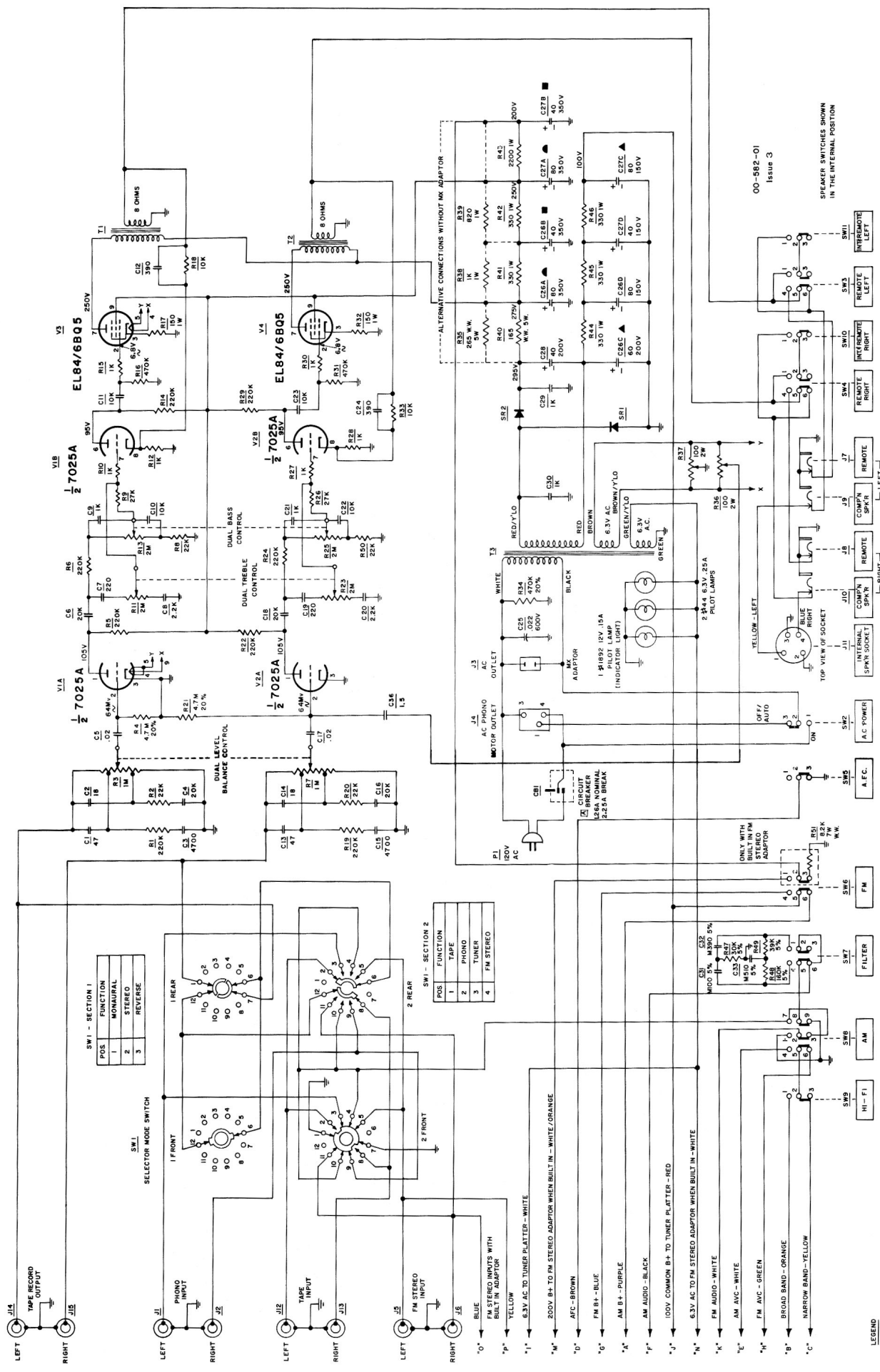
TO USE LONG WIRE AM-ANTENNA  
IN CONJUNCTION WITH LOW IMPEDANCE  
LOOP, CONNECT AS INDICATED BY  
DOTTED LINES

LEGEND  
RESISTORS:  
1/2 WATT UNLESS OTHERWISE NOTED.  
2 WATT UNLESS OTHERWISE NOTED.  
K=1,000 OHMS  
M=1,000,000 OHMS

CAPACITORS  
TUBULAR CAPACITY IN  $\mu$ F., AND D.C.W.V.  
CURVED LINE-OUTSIDE FOIL  
ELECTROLYTIC CAPACITY IN  $\mu$ F., AND D.C.W.V.  
CERAMIC, MICA OR OTHER TYPES WITH NO  
OBVIOUS OUTSIDE OR GROUNDED SIDE  
CAPACITY IN  $\mu$ F., TOLERANCE IF CRITICAL  
AND D.C.W.V.

SPECIAL CAPACITORS SUCH AS TEMPERATURE  
COMPENSATING TYPES ARE IDENTIFIED BY A  
NOTE AT CAPACITOR LOCATION.  
eg. GF=OIL FILLED  
SM=SILVER MICA  
NP=NON POLARIZED

NOTE: FOR ALIGNMENT INSTRUCTIONS SEE D.E.I. DWG. 00-1909-01  
\* NOTE 2-10K ON ALL 6 WATT MODELS.



00-582-01  
Issue 3

SPEAKER SWITCHES SHOWN  
IN THE INTERNAL POSITION

SW1 - SECTION 1

| POS. | FUNCTION |
|------|----------|
| 1    | MONAURAL |
| 2    | STEREO   |
| 3    | REVERSE  |

SW2 - SECTION 2

| POS. | FUNCTION  |
|------|-----------|
| 1    | TAPE      |
| 2    | PHONO     |
| 3    | TUNER     |
| 4    | FM STEREO |

LEGEND  
RESISTORS  
K=1,000 M=1,000,000

SPECIAL CAPACITORS SUCH AS TEMPERATURE COMPENSATING TYPES  
ARE IDENTIFIED BY A NOTE AT CAPACITOR LOCATION.  
\*S. O-P FIL FILLED S.M.-SILVER MICA M-MICA  
+ NP-NON POLARIZED.

TUBULAR CAPACITY IN  $\mu$ F AND D.C.KV.  
CURVED LINE OUTSIDE FOIL  
ELECTROLYTIC CAPACITY IN  $\mu$ F, B. D.C.KV.  
CERAMIC MICA OR OTHER TYPES WITH NO  
CAPACITY IN  $\mu$ F, TOL. IF CRITICAL, B. D.C.V.

# SERVICE REPLACEMENT PARTS LIST

## RCS-576, RCS-577, RCS-578

### FINAL ASSEMBLY

| Part No.     | Description                                  |
|--------------|--|
| 16-120048-01 | Turntable (RCS-578 only)                     |
| 16-120049-01 | Turntable mat (RCS-578 only)                 |
| 16-120047-01 | 45 R.P.M. Inserts                            |
| 19-40015-01  | 4" P.M. Speaker - 4 ohm VC                   |
| 19-120009-03 | 12" P.M. Speaker - 8 ohm VC (except RCS-578) |
| 19-100006-03 | 10" P.M. Speaker - 8 ohm VC (RCS-578 only)   |
| 27-7-03      | Pilot Lamp - 12V .15A No. 1892               |
| 30-233-01    | Control Panel                                |
| 53-591-01    | Retaining Strip                              |
| 53-617-01    | Switch Knob - Level Balance, Mode            |
| 53-507-11    | Knob - Tuning                                |
| 53-507-12    | Knob - Bass Treble                           |
| 53-507-13    | Knob - Level Balance, Selector               |

### AMPLIFIER CHASSIS ASSEMBLY

| Symbol      | Part No.    | Description  |
|-------------|-------------|--|
| T3          | 24-10080-01 | Power Transformer - 60 cycle   |
| T3          | 24-20080-01 | Power Transformer - 25 cycle (25 cycle models only)                              |
| T1,T2       | 24-80042-02 | Audio Output Transformer - 8 ohm VC  |
| SW3,4,6,7   | 26-2-05     | Slider Switch - DPDT   |
| SW5,9,10,11 | 26-2-07     | Slider Switch - SPDT   |
| SW8         | 26-2-12     | Slider Switch - TPDT   |
| SW2         | 26-2-13     | Slider Switch - SPDT   |
| CB1         | 26-65-08    | Circuit Breaker  |
| SW1         | 26-87-03    | Selector and Mode Switch   |
|             | 27-1-01     | Pilot Lamp - 6-8 V No. 44 .25A   |
| SR1,2       | 28-6-01     | Silicon Rectifier - 500 ma   |
|             | 30-235-01   | Dial Scale   |
| R3,7        | 41-161-03   | Control - Dual - Level Balance - 1 meg   |
| R11,23      | 41-100-10   | Control - Treble   |
| R13,25      | 41-100-11   | Control - Bass   |
| R35         | 42-21-87    | Resistor - W.W. - 265 ohm $\pm$ 10% 5W   |
| C28         | 44-140-01   | Electrolytic - Single - Insulated 40 ufd - 200V                                  |
| C26         | 44-141-01   | Electrolytic - Quadruple - Can 80,40 ufd x 350V;<br>60 ufd x 200V; 80 ufd x 150V |
| C27         | 44-142-01   | Electrolytic - Quadruple - Can 80,40 ufd x 350V;<br>80,40 ufd x 150V             |
|             | 53-600-01   | Pushbutton Assembly  |
|             | 53-606-01   | Strip - Logging Scale  |

# SERVICE REPLACEMENT PARTS LIST (Continued)

## TUNER PLATTER CHASSIS ASSEMBLY

| Symbol | Part No.  | Description                     |
|--------|-----------|---------------------------------|
| T7     | 21-410-04 | BC Antenna Coil                 |
| T9     | 21-421-01 | BC Oscillator Coil              |
| T8     | 21-428-03 | BC Interstage Coil              |
| T10    | 21-431-01 | AM IF Transformer - 1st         |
| T11    | 21-432-04 | AM IF Transformer - 2nd         |
| T3     | 21-433-04 | FM IF Transformer               |
| T4     | 21-433-02 | FM IF Transformer               |
| T5     | 21-433-03 | FM IF Transformer               |
| L1,2   | 21-439-02 | RF Choke 2.2 uh                 |
| T2     | 21-445-02 | FM Feedback Coil                |
| T6     | 21-455-01 | Discriminator Transformer - FM  |
| T2,L   | 21-461-01 | FM Oscillator & FM RF Coil      |
| T1     | 21-471-01 | FM Antenna Matching Transformer |
| C7     | 45-50-02  | AM FM Gang Condenser            |
| C7B    | 45-36-01  | FM Trimmer                      |

## CHANGER ASSEMBLY

| Part No.     | Description                        |
|--------------|------------------------------------|
| 16-90020-02  | Garrard Type A Changer (RCS-578)   |
| 16-12022-12  | Plug-in Pick-up Case (RCS-578)     |
| 16-250018-01 | Astatic 17D Stereo Cartridge       |
| 16-90025-02  | Garrard AT6 Changer (RCS-576, 577) |
| 16-120052-01 | Garrard Multipurpose Pick-up Case  |