

# VIKING Service Information for Model

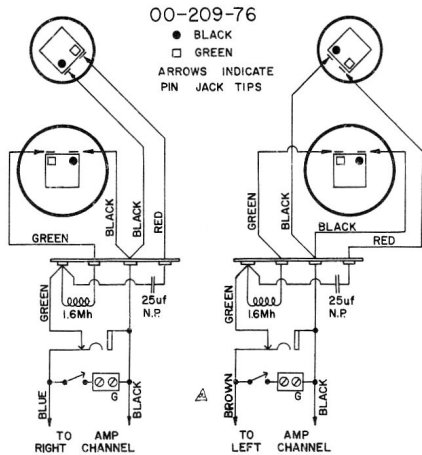
RCS-418

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 January 13, 1960.

Subsequent changes are covered by bulletin.



## SPECIFICATIONS

### AM - FM TUNER

Standard Broadcast Range — 535 to 1605 Kc.

Frequency Modulation Range — 88 to 108 Mc.

I.F. Frequency AM — 455 Kc.

FM — 10.7 Mc.

Sensitivity AM 2 uv. for 100 mv. at Detector.

FM 1 uv. for 20 db quieting.

Selectivity—AM 16 Kc. Bandwidth at 10X down. Tuner Selector

Switch set at DISTANT position. 24Kc. Bandwidth at 10X down  
—switch set at Hi-Fi position.

FM 265 Kc. Bandwidth at 10X down. Switch at FM position.

### PREAMPLIFIER - SELECTOR (Specifications per channel)

Frequency Response—20 cps to 15,000 at Tape Input.  $\pm$  2DB.

Intermodulation Distortion — (at Tape input) less than .5% at 2v output.

Hum and Noise — (at Tape input) 70 db. below 2 volts rated output.

Voltage Gain — 8 Auxiliary inputs to top of contour control.

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

**Contour Control Dual Element** — Designed to provide 15 db. lift at 30 cps. when control is 60° removed from CCW position with reference to response at 1000 cps. and at the same time provide 11 db. lift at 15,000 cps.

**Bass Tone Control Dual Element** — Designed to provide 10 to 15 db. cut or lift at 50 cps. Covers sound spectrum from 20-1000 cps.

**Treble Tone Control Dual Element** — Designed to provide 10 to 15 db. cut or lift at 10,000 cps. Covers sound spectrum from 1000-15,000 cps.

### SLAVE AMPLIFIER (Specifications per channel)

Frequency Response — 20 cps. to 30,000 cps.

Intermodulation Distortion — Less than 1.0% at 1w output.

Hum and Noise — 80 db. below rated output.

Voltage Input Required for 8w Output 1.0 V AC Nominal.

Power Output — Nominal undistorted at 1000 cps.

Per channel — 10 w  $\pm$  1 db.

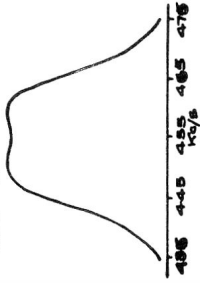
Peak power 20 w  $\pm$  1 db.

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**THE T. EATON CO LIMITED**  
CANADA

# AM-FM TUNER ALIGNMENT

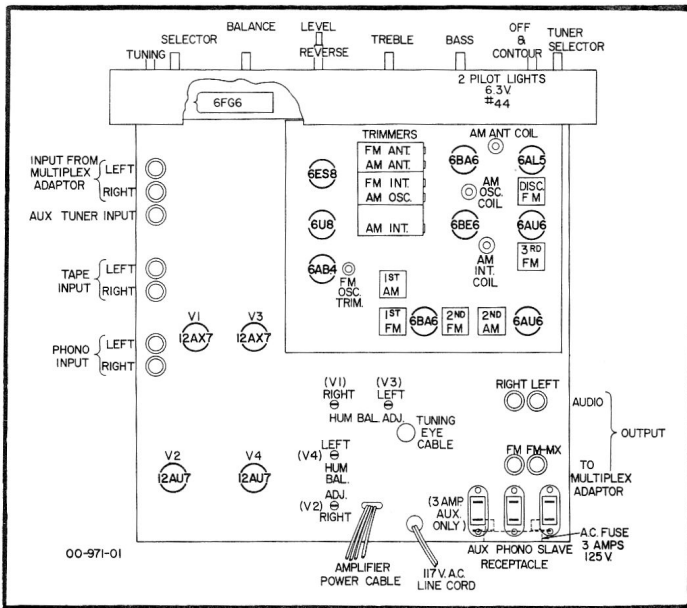
STEP #2



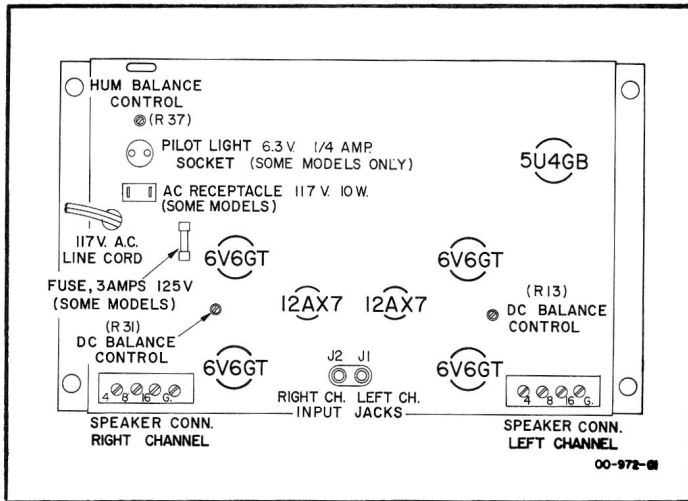
STEP	DUMMY ANTENNA	SIGNAL APPLIED TO	FREQ	MODULATION	BAND-SWITCH SETTING	DIAL POINTER SETTING	INDICATING METER	ADJUST	REMARKS	NOMINAL SENSITIVITY
1	.05 ufd	PIN #7 V9 (6 BE 6)	455 Kc/s	400 CPS AM AT 30%	#2 AM-SHARP (AM DAY)	600 Kc/s	AC-VTVM AUDIO OUTPUT	T9 & T10 1st & 2nd AM IF	ADJUST FOR MAXIMUM OUTPUT	300 uv FOR 20 mv OUTPUT
2	CHANGE BAND SWITCH SETTING TO POSITION #3-AM-WIDE BAND (AM-HI FI), TUNE SIGNAL GEN. ACROSS 440-470 Kc/s FREQ. RANGE AND CHECK FOR APPROXIMATE RESPONSE CURVE AS SHOWN. THIS TEST CAN ALSO BE MADE WITH A PROPER SWEEP GEN. & SCOPE.									
3	200 ufd	AM ANT. TERM. STRIP #1	600 Kc/s	400 CPS AM AT 30%	#2 AM-SHARP (AM DAY)	600 Kc/s	AC-VTVM AUDIO OUTPUT	T6, T7 AND T8	CONNECT FOR LONG WIRE ANT. ADJUST FOR MAX. OUTPUT	2 uv FOR 20 mv OUTPUT
4	200 ufd	AM ANT. TERM. STRIP #1	1460 Kc/s	400 CPS AM AT 30%	#2 AM-SHARP (AM DAY)	1460 Kc/s	AC-VTVM AUDIO OUTPUT	C1D, C1E & C1F TRIMMERS	CONNECT FOR LONG WIRE ANT. ADJUST FOR MAX. OUTPUT	2 uv FOR 20 mv OUTPUT
5	REPEAT STEPS 3 & 4 AND CHECK FOR TRACKING AT 950 Kc/s									
6		PIN #2 V2 (6U8) FM MIX OSC	10.7 Mc/s	NONE	#4 FM	POINT OF NO INTER- FERENCE	DC-VTVM ACROSS C20 & R11	T1, T2 & T3 1st, 2nd & 3rd FM IF	ADJUST FOR MAX- IMUM METER DEFLECTION	
7		V2 (6U8) FM MIX- OSC.	10.7 Mc/s	NONE	#4 FM	POINT OF NO INTER- FERENCE	DC-VTVM TO FM OUTPUT	T4 FM DISCRIM. TRANS.	ADJUST PRI. FOR MAX. DEFLECTION WITH SEC. SLIGHTLY DETUNED	
8		V2 (6U8) FM MIX- OSC.	10.7 Mc/s	NONE	#4 FM	POINT OF NO INTER- FERENCE	DC-VTVM TO FM OUTPUT	T4 FM DISCRIM. TRANS.	ADJUST SECONDARY (TOP SLUG) FOR ZERO VOLTAGE	
9	.	FM ANT. TERM. STRIP	90 Mc/s	400 CPS FM 22.5 Kc/s DEVIATION	#4 FM	90 Mc/s	AC-VTVM AUDIO OUTPUT	EXPAND OR COMPRESS L7,8,9	ADJUST FOR MAXIMUM OUTPUT	2.5 uv FOR 20 db QUIETING
10	.	FM ANT. TERM. STRIP	106 Mc/s	400 CPS FM 22.5 Kc/s DEVIATION	#4 FM	106 Mc/s	AC-VTVM AUDIO OUTPUT	C1A, C1B & C1C TRIMMERS	ADJUST FOR MAXIMUM OUTPUT	2.5 uv FOR 20 db QUIETING
11	REPEAT STEPS 9 & 10 UNTIL OUTPUT DROPS AT LEAST 20db WITH INDICATED INPUT, WHEN FM MODULATION IS TURNED OFF									
12	NONE	INPUT SIDE OF 10Kc/s FILT.	1 Kc/s	NONE	#1 AM SHARP 10 Kc/s FILT. (AM. DIST)	REMOVE 6AU6 V5	AC-VTVM AUDIO OUTPUT	ADJUST 1 Kc/s LEVEL FOR .5 VOLTS ON OUTPUT METER AND CHANGE GEN. TO 10 Kc/s	ATTENU- ATION 40 db MIN	

\* 120 OHMS IN HOT LEAD AND 150 OHMS IN COLD LEAD FROM SIG. GENERATOR.

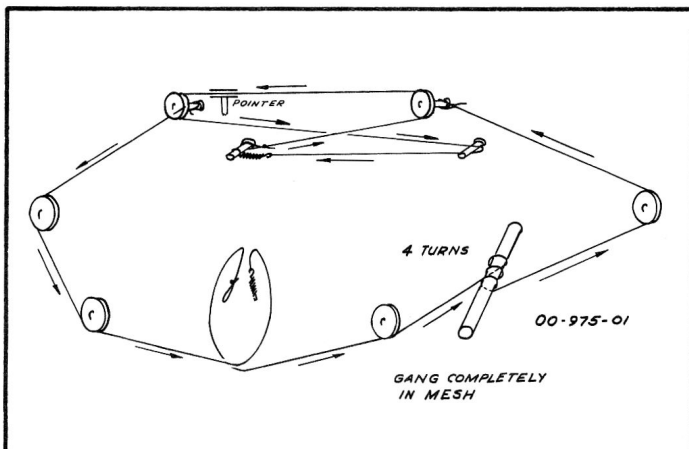
# AM-FM TUNER & PREAMPLIFIER



**PREAMPLIFIER**



**SLAVE AMPLIFIER**



**STRINGING DETAIL**

## TUNER PLATTER ASSEMBLY

- 21-300-02 R.F. Heater Choke and Peaking Coil
- 21-326-11 R.F. Choke 3.3 uh
- 21-410-03 B.C. Ant. Coil
- 21-455-01 Discriminating Trans. - FM
- 21-421-01 B.C. Osc. Coil
- 21-428-02 B.C. Int. Coil
- 21-431-01 AM IF Trans—1st.
- 21-432-01 AM IF Trans—2nd.
- 21-433-03 FM IF Trans
- 21-436-01 FM RF Coil
- 21-437-01 FM Int. Coil
- 21-438-01 FM Osc. Coil
- 21-439-01 RF Choke 1 uh
- 21-439-02 RF Choke 2.2 uh
- 21-440-01 Balun
- 26-54-01 Band Selector Switch
- 42-1-36 Resistor—W.W. 5W 4700 ohm  $\pm$  10%
- 45-30-01 AM-FM Gang Condenser
- 45-36-01 FM Trimmer (Tubular)

## MECHANICAL DETAILS

- 14-EM84 Tuning Eye 6.3V
- 27-2-01 Pilot Lamp 6 - 8V .15A #47
- 35-105-08 Pointer & Slide Assembly
- 35-602-01 Pointer Carriage
- 53-446-01 Indicator Disc - Selector

## PREAMPLIFIER—CHASSIS ASSEMBLY

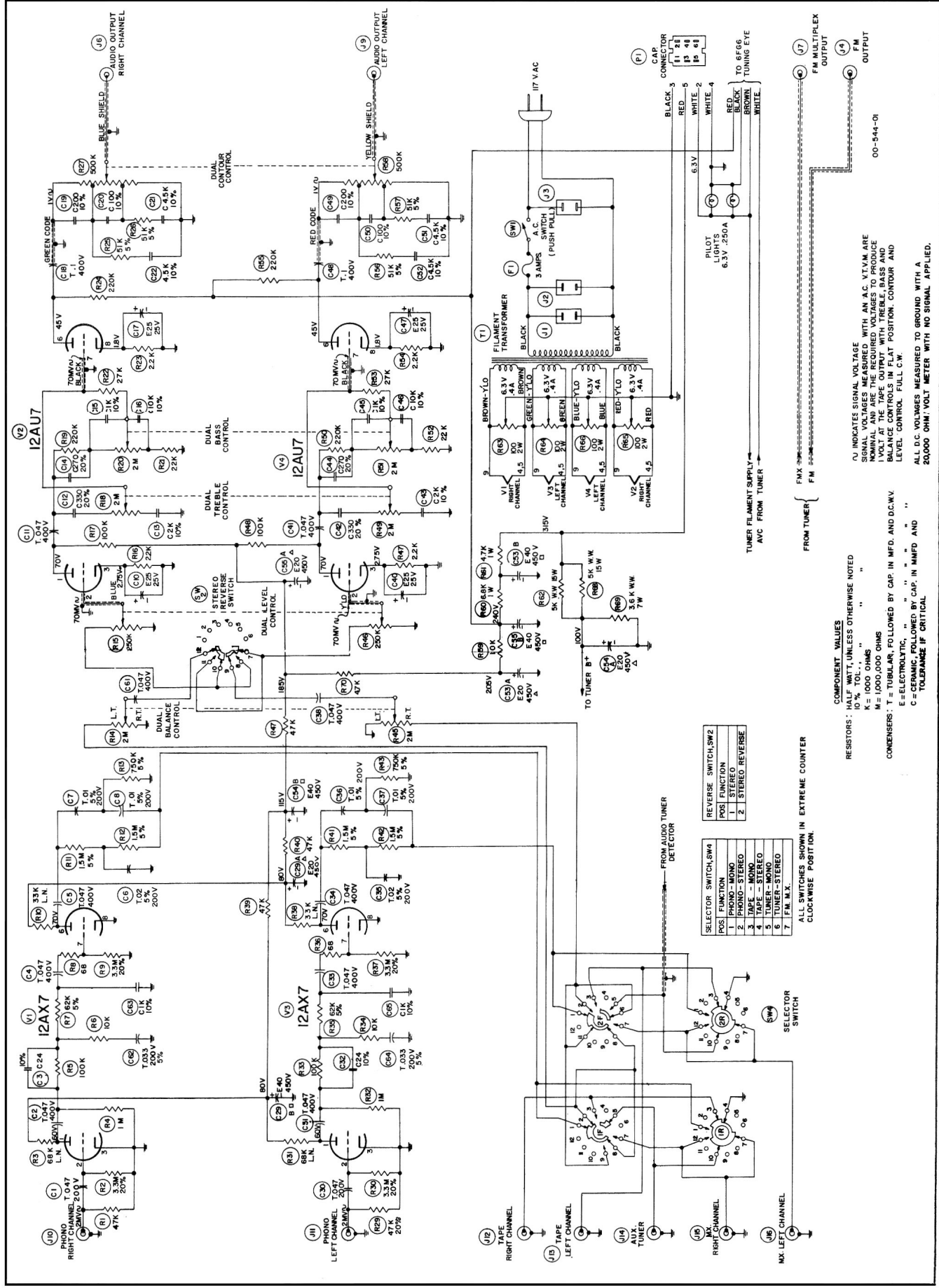
- 26-58-01 Selector Switch
- 27-6-06 Fuse 3 AG 250V
- 41-128-02 Dual Control—Level and Switch
- 41-71-02 Dual Control—Contour and Rot. Switch
- 41-141-01 Dual Control—Balance
- 41-100-05 Dual Control—Tone—Treble
- 41-100-06 Dual Control—Tone—Bass
- 42-1-54 Resistor—WW 3600 ohm  $\pm$  10% 7W
- 42-1-55 Resistor—WW 5000 ohm  $\pm$  10% 15W
- 42-2-01 Resistor—Low Noise 33K
- 42-2-02 Resistor—Low Noise 68K
- 44-70-01 Electrolytic 25 ufd x 25V
- 44-69-01 Electrolytic 40, 20 ufd x 450V
- 41-6-01 Potentiometer 100 ohm

## CHASSIS ASSEMBLY—SLAVE AMPLIFIER

- 24-10052-01 Power Transformer—60 cycle
- 24-80031-01 Audio Output Transformer
- 44-43-02 Electrolytic—Miniature 250 ufd x 15V
- 44-67-01 Electrolytic—Triple 40, 20, 20 ufd x 450V
- 44-68-01 Electrolytic—Dual 100, 100 ufd x 100V
- 41-6-01 100 Ohm Potentiometer



# PREAMPLIFIER SCHEMATIC



SELECTOR SWITCH SW4	REVERSE SWITCH SW2
1 PHONO - MONO	1 STEREO
2 PHONO - STEREO	2 STEREO REVERSE
3 TAPE - MONO	
4 TAPE - STEREO	
5 TUNER - MONO	
6 TUNER - STEREO	
7 FM M.X.	

ALL SWITCHES SHOWN IN EXTREME COUNTER CLOCKWISE POSITION.

**COMPONENT VALUES**  
 RESISTORS: HALF WATT, UNLESS OTHERWISE NOTED  
 Ω = OHMS  
 K = 1000 OHMS  
 M = 1000,000 OHMS  
 CONDENSERS: T = TUBULAR, FOLLOWED BY CAP. IN MFD. AND D.C. WV.  
 C = ELECTROLYTIC, FOLLOWED BY CAP. IN MMFD AND TOLERANCE IF CRITICAL

Ⓝ INDICATES SIGNAL VOLTAGE  
 SIGNAL VOLTAGES MEASURED WITH AN A.C. V.T.M. ARE NOMINAL AND ARE THE REQUIRED VOLTAGES TO PRODUCE VOLT AT THE TAPE OUTPUT WITH TREBLE, BASS AND BALANCE CONTROLS AT POSITION. CONTOUR AND LEVEL CONTROL: FULL C.W.  
 ALL D.C. VOLTAGES MEASURED TO GROUND WITH A 20,000 OHM/VOLT METER WITH NO SIGNAL APPLIED.

00-544-01



# SERVICE REPLACEMENT PARTS LIST

## — RCS-418

### FINAL ASSEMBLY

16-90014-02	Garrard RC88/4D Changer 60 cycle Brown
16-120037-01	Plug In Pickup Case and Hardware
16-250016-01	Shure M7DM Cartridge—Diamond Stereo
16-120004-01	Garrard RC88 45 RPM Spindle
19-60003-02	6" P.M. Speaker 8 ohm V.C.
19-120003-03	12" P.M. Speaker 8 ohm V.C.
24-130001-05	Crossover Inductance
27-2-01	Pilot Lamp 6.3V #47 .15 Amp.
30-117-01	Control Panel
44-5-03	Electrolytic 25 ufd x 25V
51-1-05	Loop Antenna Assembly
53-475-08	Indicator Disc—Off Contour
53-407-06	Indicator—Treble, Bass, Balance
53-475-05	Indicator—Selector
53-411-06	Knobs—Selector—Band
53-411-02	Knobs—Tuning, etc.
53-411-05	Knobs—Level Rev. (Front)
53-427-02	Knobs—Level Rev. (Rear)
53-447-01	Glass Retaining Strip
53-412-01	Glass Retaining Strip—Bottom
53-142-01	Viking Ship Medallion