

# VIKING

## Service Information for Models

RCS 635  
RCS 635M  
RCS 636  
RCS 636M  
RCS 637  
RCS 637M

### 9 Tube AM-FM Stereo Radio-Phono Combination

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 May 28, 1963. 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  
18 Kc. Band Width at 10X Down  
FM 250 Kc. Band Width at 10X Down

Sensitivity..... AM---14 uv for 100 mv output at Detector  
FM--- 2 uv for 20db quieting  
4 uv for 30db quieting

I.F. Frequency - AM - 455 Kc/s  
FM - 10.7 Mc/s

#### AMPLIFIER (Specifications per channel)

Frequency Response - 50 cps. to 20,000 cps.  $\pm$  3db  
POWER OUTPUT - 20 watts peak. (10 watts per channel)

#### LEVEL BALANCE CONTROL DUAL ELEMENT FRICTION CLUTCH TYPE

Designed to provide bass and treble boost as follows:

- 35° removed from CCW position 20 db. lift at 30 C/S
  - 35° removed from CCW position 15 db. lift at 15 Kc/s
  - 65° removed from CCW position 7 db. lift at 30 C/S
  - 65° removed from CCW position 10 db. lift at 15 Kc/s
- with reference to 1000 cps.

#### BASS TONE CONTROL DUAL ELEMENT

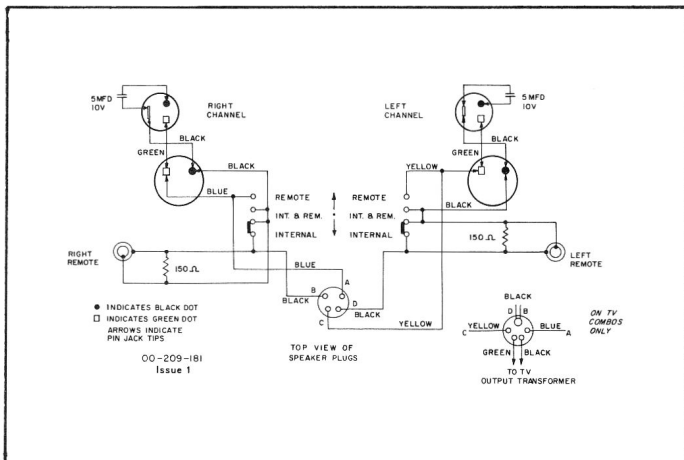
Designed to provide 7 db cut at 50 cps. Covers sound spectrum from 20-1000 cps.

#### TREBLE TONE CONTROL DUAL ELEMENT

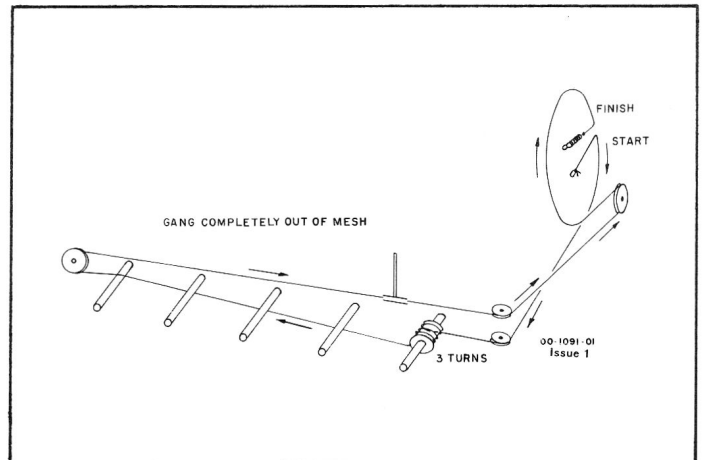
Designed to provide 15 db cut at 10,000 cps. Covers sound spectrum from 1000 to 15,000 cps.

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

#### SPEAKER CONNECTIONS



#### STRINGING DETAIL



# EATON'S OF CANADA



# AM-FM TUNER ALIGNMENT PROCEDURE

STEP	DUMMY ANTENNA	SIGNAL APPLIED TO	FREQ	MODULATION	BAND SWITCH SETTING	DIAL POINTER SETTING	INDICATING METER	ADJUST	REMARKS	NOMINAL SENSITIVITY
1	.05 uf	Pin #1 V3 6BA6	455 Kc/s	400 C.P.S. AM at 30%	AM	600 Kc/s	AC-VTVM To Point "I"	T7 2nd AM-IF	Adjust for maximum output	3000 uv. for 70 Mv. output
2	.05 uf	Pin #7 V6 6BE6	455 Kc/s	400 C.P.S. AM at 30%	AM	600 Kc/s	AC-VTVM To Point "I"	T5 1st AM-IF	Adjust for maximum output	100 uv. for 70 Mv. output
3	200 uuf	AM Ant. Term. Strip #1	600 Kc/s	400 C.P.S. AM at 30%	AM	600 Kc/s	AC-VTVM To Point "I"	T10 and T9 AM-Osc. & AM Ant.	Connect for long wire ant. Adjust for Max. output***	35 uv. for 70 Mv. output
4	200 uuf	AM Ant. Term. Strip #1	1400 Kc/s	400 C.P.S. AM at 30%	AM	1400 Kc/s	AC-VTVM To Point "I"	C2D and C2B Trimmers	Connect for long wire ant. Adjust for Max. output***	45 uv. for 70 Mv. output
5	Repeat steps 3 and 4, check band coverage at 535 Kc/s - 1650 Kc/s and for tracking at 950 Kc/s.									
6	—	Pin #1 V3 6BA6	10.7 Mc/s	Nil	FM	Point of no interference	DC-VTVM To Point "K"	T6, 3rd. FM-IF	Adjust for maximum meter deflection	10000 uv. for 1V output
7	—	Pin #1 V3 6BA6	10.7 Mc/s	Nil	FM	Point of no interference	DC-VTVM To MX Output	T8 FM Ratio Det. Primary (Bo.t)	Adjust for maximum meter deflection	1250 uv. for 1V output
8	—	Pin #1 V3 6BA6	10.7 Mc/s	Nil	FM	Point of no interference	DC-VTVM To MX Output	T8 FM Ratio Detector Sec'dary (Top)	Adjust for zero voltage. NOTE**	—
9	—	Pin #1 V2 6AU6A	10.7 Mc/s	Nil	FM	Point of no interference	DC-VTVM To Point "K"	T4 2nd FM-IF	Adjust for maximum meter deflection	160 uv. for 1V output
10	—	C1A FM Gang	10.7 Mc/s	Nil	FM	Point of no interference	DC-VTVM To Point "K"	T3, 1st. FM-IF	Adjust for maximum meter deflection	—
11	NOTE *	FM Ant. Term. Strip	90 Mc/s	400 C.P.S. FM 22.5 Kc/s Dev.	FM	90 Mc/s	AC-VTVM To Point "H"	T2 Slug and L3 coil	Adjust for maximum output	3 uv. for 200 Mv. output
12	NOTE *	FM Ant. Term. Strip	106 Mc/s	400 C.P.S. FM 22.5 Kc/s Dev.	FM	106 Mc/s	AC-VTVM To Point "H"	C1D and C1B Trimmers	Adjust for maximum output	3 uv. for 200 Mv. output
13	Repeat steps 11 and 12 until output drops at least 20 db. when mod. is turned off.									

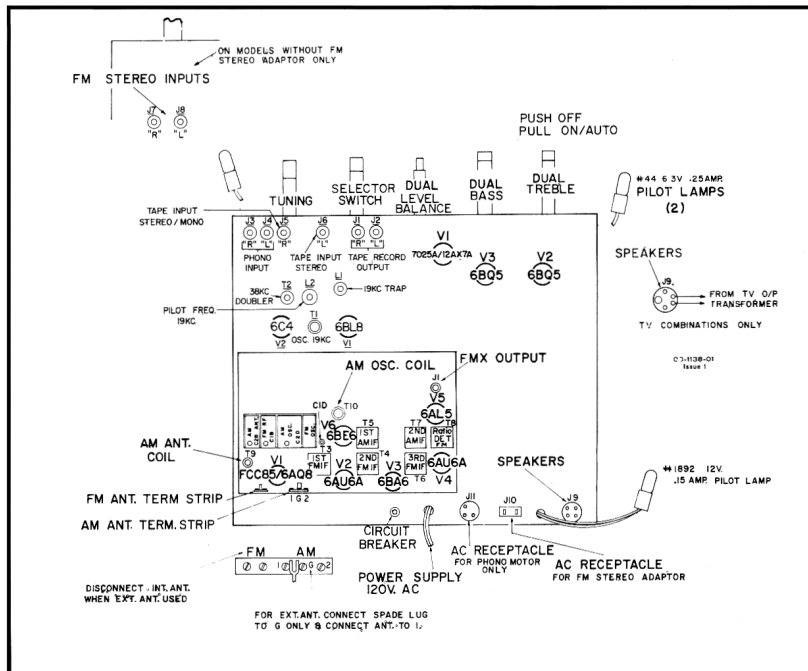
**NOTE:** To achieve more accurate alignment of FM IF's and ratio detector it is preferable to use a proper sweep generator and oscilloscope.

\* For FM dummy antenna connect one 150 ohm carbon resistor from grounded side of sig. gen. to antenna terminal and one 120 ohm carbon resistor from hot side of signal generator to antenna terminal.

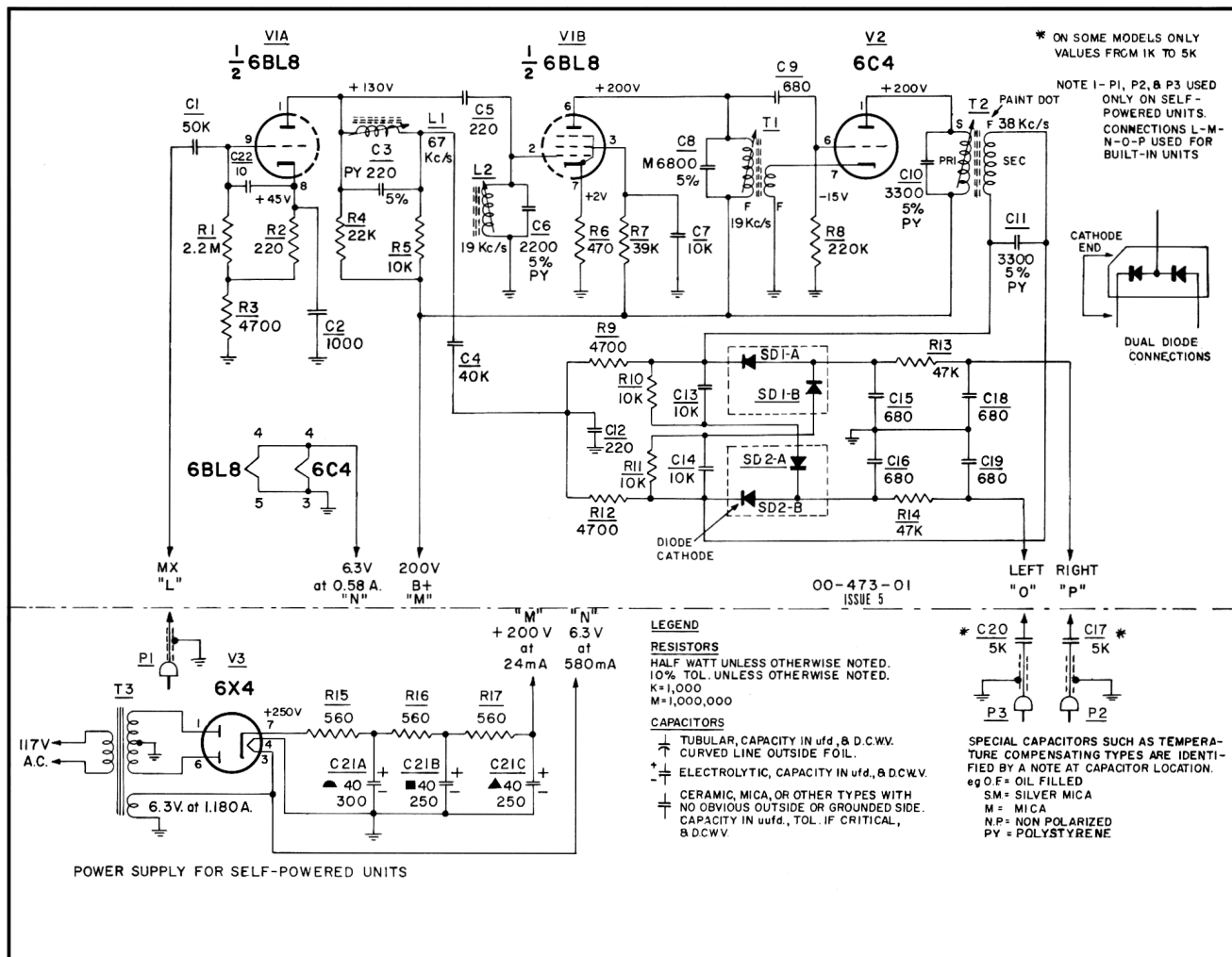
\*\* With ground lead of DC VTVM connected to two 100 K resistors. To be temporarily connected in series across C31 (4 ufd CAP)

\*\*\* For AM-RF alignment purpose. The low impedance loop, installed in the cabinet or its electrical equivalent must be connected to the set as shown in the schematic.

# CHASSIS LAYOUT



# FM STEREO RADIO ADAPTER SCHEMATIC







# SERVICE REPLACEMENT PARTS LIST

## FINAL ASSEMBLY

Part No.	Description
16-120047-01	45 RPM Inserts
19-40015-02	Speaker - 4" P.M. - 8 ohm V.C.
19-100006-06	Speaker - 10" P.M. - 8 ohm V.C.
27-7-03	Pilot Lamp - 12V - .12A - #1892
30-233-06	Control Panel
53-617-04	Lever Knob - Level Balance
53-696-01	Knob - Tuning
53-696-02	Knob - Bass, Treble, Selector
53-696-03	Knob - Level Balance

## AMPLIFIER ASSEMBLY

Symbol	Part No.	Description
SW1	26-109-01	Selector Switch
	27-1-01	Pilot Lamp - 6-8V #44 .25A
R27	42-21-65	Resistor - W.W. 165 ohm $\pm$ 10% 5W (models with multiplex only)
R24	42-21-87	Resistor - W.W. 265 ohm $\pm$ 10% 5W (on models without multiplex only)
T3	24-10082-01	Power Transformer - 60 cycle
T3	24-20082-01	Power Transformer - 25 cycle (25 cycle models only)
T1, T2	24-80054-01	Output Transformer - 8 ohm V.C.
CB1	26-65-02	Circuit Breaker
SR1, SR2	28-6-01	Silicon Rectifier
	OR	
	28-15-01	Dual Silicon Rectifier
	30-280-01	Dial Scale
R3, R15	41-161-04	Control - Dual Level Balance - 2 meg
R8, R18	41-164-03	Control - Treble - 500K
R9, R19	41-121-05	Control - Bass - 2 meg
C28	44-140-01	Electrolytic - 40 ufd x 200V
C24	44-141-01	Electrolytic - Quadruple - 80, 40 ufd x 350V; 60 ufd x 200V; 80 ufd x 150V
C25	44-142-01	Electrolytic - Quadruple - 80, 40 ufd x 350V; 80, 40 ufd x 150V
	53-609-01	Viking Plastic Ship
C9, C20	44-40-04	Electrolytic - 50 ufd x 25V
	53-703-01	Viking Overlay
C5, C6	48-12031-02	Condenser - Metallized Paper Tubular - .02 ufd $\pm$ 20% 150V

## TUNER PLATTER ASSEMBLY

Symbol	Part No.	Description
L4, L5	21-300-01	Heater Choke
T10	21-421-01	BC Oscillator Coil
T5, T7	21-432-02	AM IF Transformer - 1st and 2nd
T4	21-433-02	FM IF Transformer - 2nd
T6	21-433-03	FM IF Transformer - 3rd
T3	21-433-04	FM IF Transformer - 1st
L1, L2, L6	21-439-02	RF Choke 2.2 uh
T1	21-471-01	FM Antenna Matching Transformer
T9	21-480-01	BC Antenna Coil
T8	21-485-01	Ratio Detector
T2	21-486-01	FM Oscillator Coil
L3	21-487-01	FM RF Coil
C31	44-88-01	Electrolytic - Single Tubular 4 ufd x 64V
	45-36-01	FM Trimmer
	45-52-04	AM-FM Gang Condenser

## STEREO RADIO ADAPTER PLATTER ASSEMBLY

Symbol	Part No.	Description
SD1, 2	14-503-03	Dual Diode
L1, L2	21-334-03	Horizontal Stabilizing Coil
T2	21-482-01	38 Kc Doubler Coil
T1	21-483-01	19 Kc Oscillator Coil
C8	47-36825-01	Condenser - Dipped Mica - 6800 uufd $\pm$ 5% 300V
C10, 11	48-103325-05	Condenser - Tubular - Polystyrene - 3300 uufd $\pm$ 5% 500V
C3	48-102215-05	Condenser - Tubular - Polystyrene - 220 uufd $\pm$ 5% 500V
C6	48-102225-05	Condenser - Tubular - Polystyrene - 2200 uufd $\pm$ 5% 500V
C1	48-15031-02	Condenser - Metallized Paper Tubular - .05 ufd 150V $\pm$ 20%

## CHANGER ASSEMBLY

Part No.	Description
16-250017-10	Astatic 86TSBD Cartridge
16-90028-02	Garrard Autoslim Changer
16-120028-02	78 Replacement Stylus - Astatic N8-3S
16-120028-05	LP Replacement Stylus Astatic N7-7D