VIKING SERVICE INFORMATION FOR MODELS

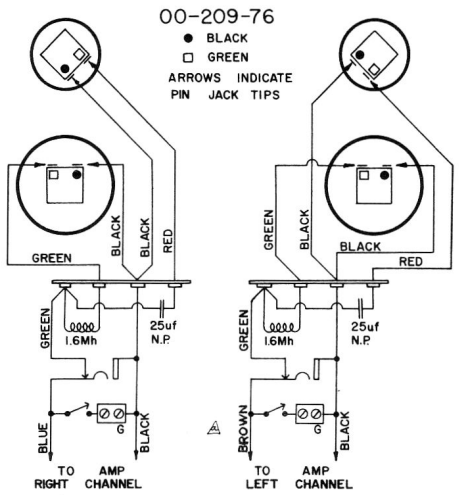
RCS-448
449

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 13, 1960.

Subsequent changes are covered by bulletin.



SPECIFICATIONS

AM & 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 2.5 uv. for 100 mv. at Detector.

FM 1.75 uv. for 20 db quieting.

Selectivity -- AM 16 Kc. Bandwidth at 10X down.

Tuner Selector FM 265 Kc. Bandwidth at 10X down.

Switch at FM position.

PREAMPLIFIER - SELECTOR (Specifications per channel)

Frequency Response - 150 cps to 15,000 at Phono Input. ± 2db.

Music Power Output - 3W per channel ± 1db.

Peak Power - 6W ± 1db.

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

Level Balance Control - Designed to provide 15db. lift at 30cps. when control is 60°removed from CCW position with reference to response at 1000cps. and at the same time provide 11db. lift at 15,000 cps.

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

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

THE T. EATON Co LIMITED
CANADA

54-1378-01 750 6/60 D.E.I. PRINTED IN CANADA

AM-FM TUNER ALIGNMENT

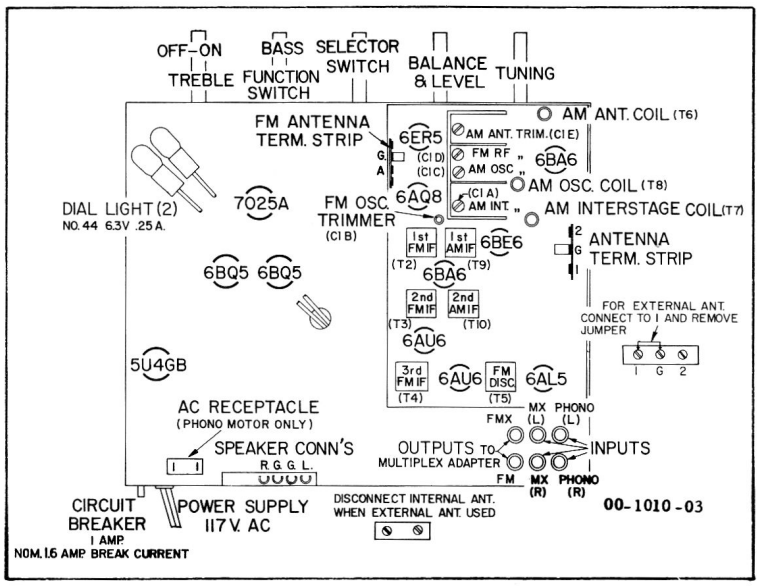
STEP	DUMMY ANTENNA	SIGNAL APPLIED TO	FREQ.	MODULATION	BAND-SWITCH SETTING	DIAL POINTER SETTING	INDICATING METER	ADJUST	REMARKS	NOMINAL SENSITIVITY
1	.05 uf	Pin # 1 V3 6BA6	455 Kc/s	400 c.p.s. AM at 30%	AM	600 Kc/s	AC-VTVM To Point "E"	T10 2nd. AM-IF	Adjust for maximum output.	5000 uv for 20 mv output
2	.05 uf	Pin # 7 V8 6BE6	455 Kc/s	400 c.p.s. AM at 30%	AM	600 Kc/s	AC-VTVM To Point "E"	T9 1st. AM-IF	Adjust for maximum output.	350 uv for 20 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 "E"	T6, T7 and T8	Connect for long wire antenna, adjust for maximum output.	3.5 mv for 20 mv output
4	200 uuf	AM Ant. Term. Strip # 1	1460 Kc/s	400 c.p.s. AM at 30%	AM	1460 Kc/s	AC-VTVM To Point "E"	C1E, C1A and C1C Trimmers	Connect for long wire antenna, adjust for maximum output.	2.5 mv for 20 mv output
5	Repeat steps 3 and 4, check for band coverage at 535 Kc/s - 1650 Kc/s and for tracking at 950 Kc/s.									
6	-	Pin # 1 V4 6AU6	10.7 Mc/s	-	FM	Point of no interference	DC-VTVM To Point "G"	T4 3rd. FM-IF	Adjust for maximum meter deflection.	15000 uv for 1V output
7	-	Pin # 1 V3 6BA6	10.7 Mc/s	-	FM	Point of no interference	DC-VTVM To Point "G"	T3 2nd. FM-IF	Adjust for maximum meter deflection.	250 uv for 1V output
8	-	C1D FM Gang	10.7 Mc/s	-	FM	Point of no interference	DC-VTVM To Point "G"	T2 1st. FM-IF	Adjust for maximum meter deflection.	-
9	-	Pin # 1 V4 6AU6	10.7 Mc/s	-	FM	Point of no interference	DC-VTVM To Pin # 5 of T5	T5 FM Discriminator Primary	Adjust for maximum meter deflection.	10000 uv for 3V output
10	-	Pin # 1 V4 6AU6	10.7 Mc/s	-	FM AFC	Point of no interference	DC-VTVM To Point "C"	T5 FM Discriminator Secondary	Adjust for zero voltage.	-
11	270 ohms	FM-Ant. Term. Strip	90 Mc/s	400 c.p.s. FM 22.5 Kc/s Deviation	FM	90 Mc/s	AC-VTVM To Point "J"	Expand or compress L3 and T1	Adjust for maximum output.	3 uv for 100 mv output
12	270 ohms	FM-Ant. Term. Strip	106 Mc/s	400 c.p.s. FM 22.5 Kc/s Deviation	FM	106 Mc/s	AC-VTVM To Point "J"	C1B and C1D Trimmers	Adjust for maximum output.	2.5 uv for 100 mv output
13	Repeat steps 11 and 12 until output drops at least 20 db. when mod. is turned off.									3.5 uv

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

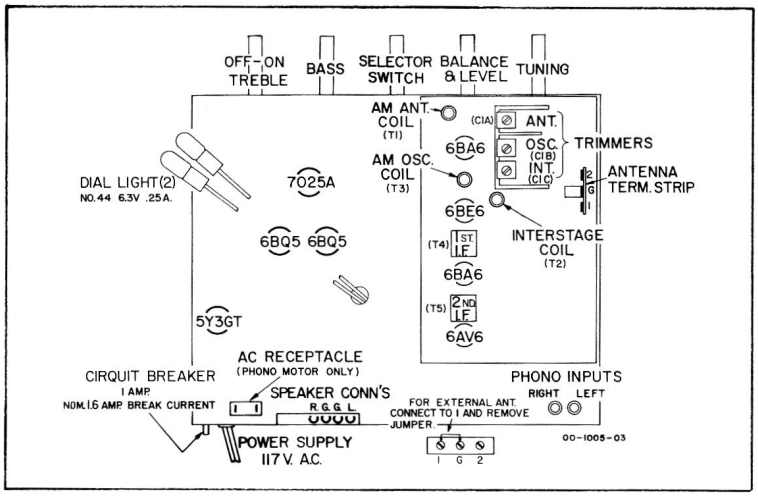
2 2-18-60
1 DATE ISSUE

PART NO 00-1826-01

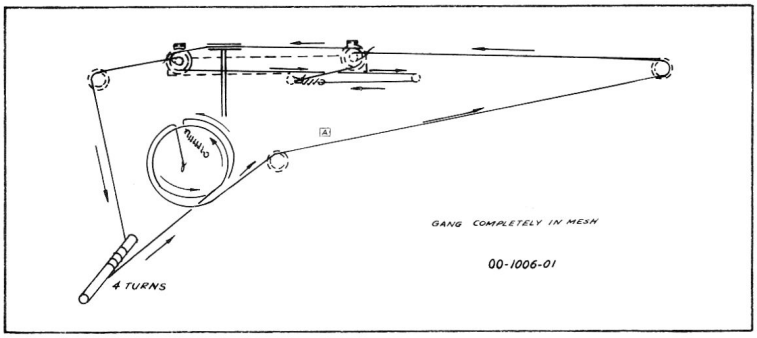
AM & AM-FM TUNER & AMPLIFIER



CHASSIS LAYOUT AM MODEL



CHASSIS LAYOUT AM-FM MODEL



STRINGING DETAIL

SERVICE REPLACEMENT PARTS LIST

Tuner Platter Chassis AM

PART NO.	DESCRIPTION
21-410-01	B.C. Ant. Coil
21-421-01	B.C. Osc. Coil
21-428-01	B.C. Int. Coil
21-432-01	AM IF Trans. - 1st.
21-432-03	AM IF Trans. - 2nd.
45-41-01	AM Gang Condenser

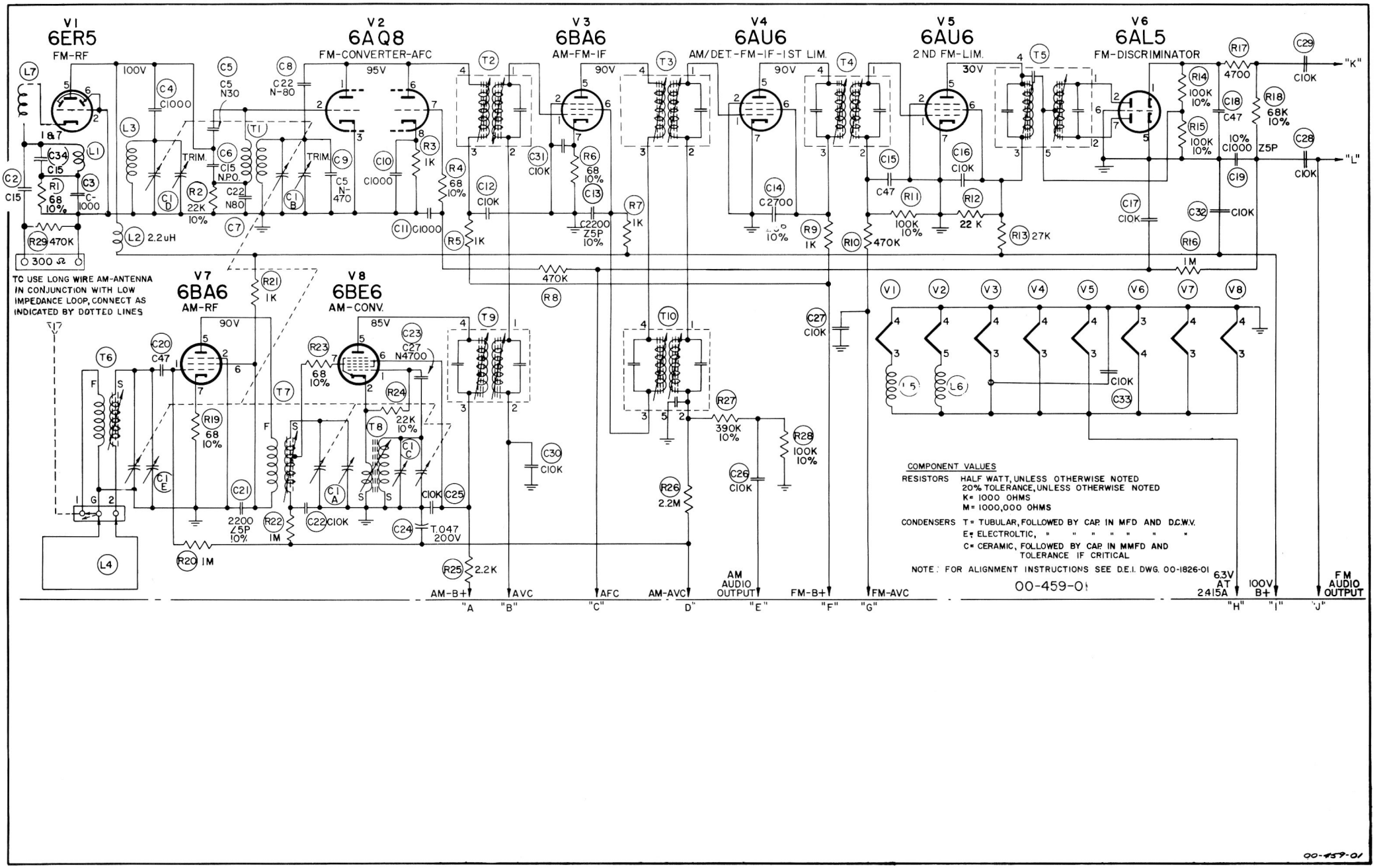
Tuner Platter Chassis AM-FM

21-300-01	Coil
21-300-02	R.F. Heater Choke & Peaking Coil
21-439-02	R.F. Choke 2.2uh
21-410-01	B.C. Ant. Coil
21-455-01	Discriminator Trans. - FM
21-421-01	B.C. Osc. Coil
21-428-01	B.C. Int. Coil
21-432-01	AM I.F. Trans. - 1st.
21-432-03	AM I.F. Trans. - 2nd.
21-433-01	FM I.F. Trans.
21-433-02	FM I.F. Trans.
21-433-03	FM I.F. Trans.
21-458-01	FM RF Coil
21-457-01	FM Osc. Coil
21-445-02	FM Feedback Coil
45-31-01	AM-FM Gang Condenser
45-36-01	FM Trimmer

Amplifier – Chassis Assy.

24-10064-01	Power Transformer 60 cy. (AM-FM model)
24-10043-02	Power Transformer 60 cy. (AM model)
24-80035-03	Output Transformer 8 ohm V.C.
24-20064-01	Power Transformer 25 cy.
26-65-02	Circuit Breaker
26-73-01	Selector Switch SW2 (AM-FM model)
26-37-01	Selector Switch SW2 (AM model)
35-602-01	Pointer Carriage
35-519-01	Drive Shaft
41-120-06	Dual Control – Treble – Off On
41-121-05	Dual Control – Bass (AM model)
41-122-05	Dual Control – Balance – Level
41-150-01	Dual Control – Bass and Switch (AM-FM model)
42-1-09	W.W. Resistor 5600 ohm 5W
42-1-46	W.W. Resistor 470 ohm 5W
42-1-59	W.W. Resistor 3000 ohm 5W
42-1-27	W.W. Resistor 1500 ohm 5W
42-1-61	W.W. Resistor 1200 ohm 7W
44-113-01	Electrolytic, Dual. 80, 40 ufd. x 350 V.
44-118-01	Electrolytic, Triple. 40, 40, 40 ufd. x 350 V.

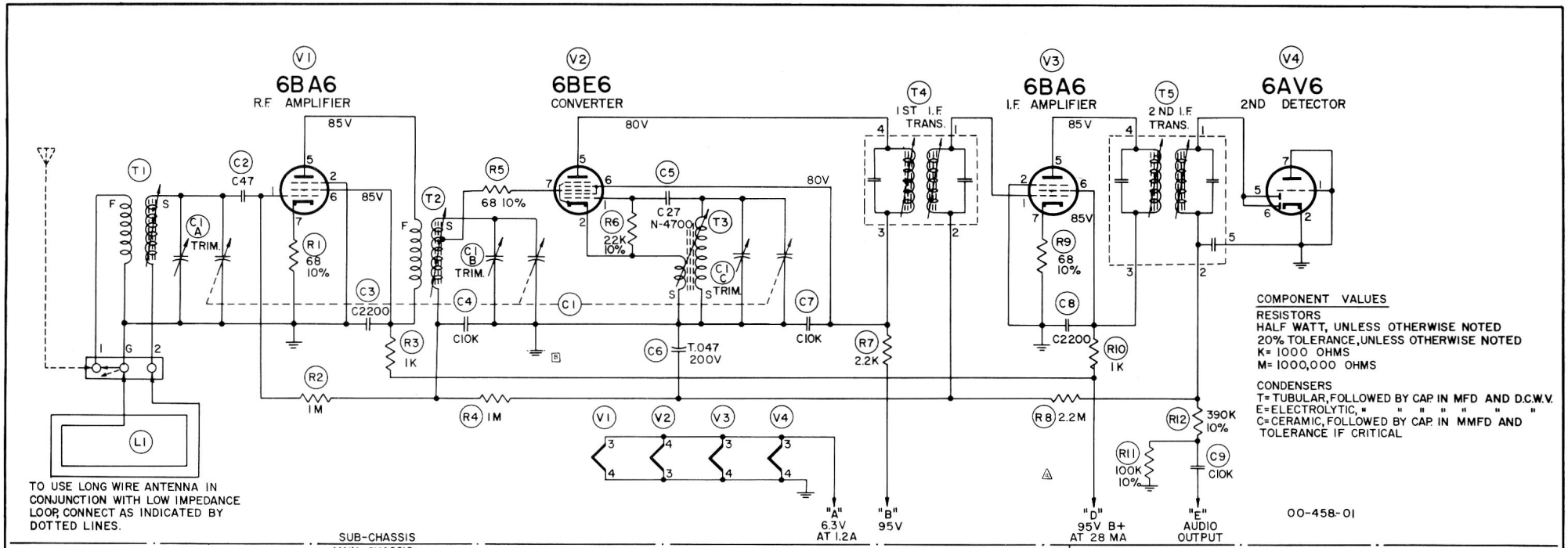
AM-FM TUNER SCHEMATIC



00-459-01

ISSUE 4

AM TUNER SCHEMATIC



COMPONENT VALUES

RESISTORS
HALF WATT, UNLESS OTHERWISE NOTED
20% TOLERANCE, UNLESS OTHERWISE NOTED
K= 1000 OHMS
M= 1000,000 OHMS

CONDENSERS
T= TUBULAR, FOLLOWED BY CAP. IN MFD AND D.C.W.V.
E= ELECTROLYTIC, " " " " " " "
C= CERAMIC, FOLLOWED BY CAP. IN MMFD AND TOLERANCE IF CRITICAL

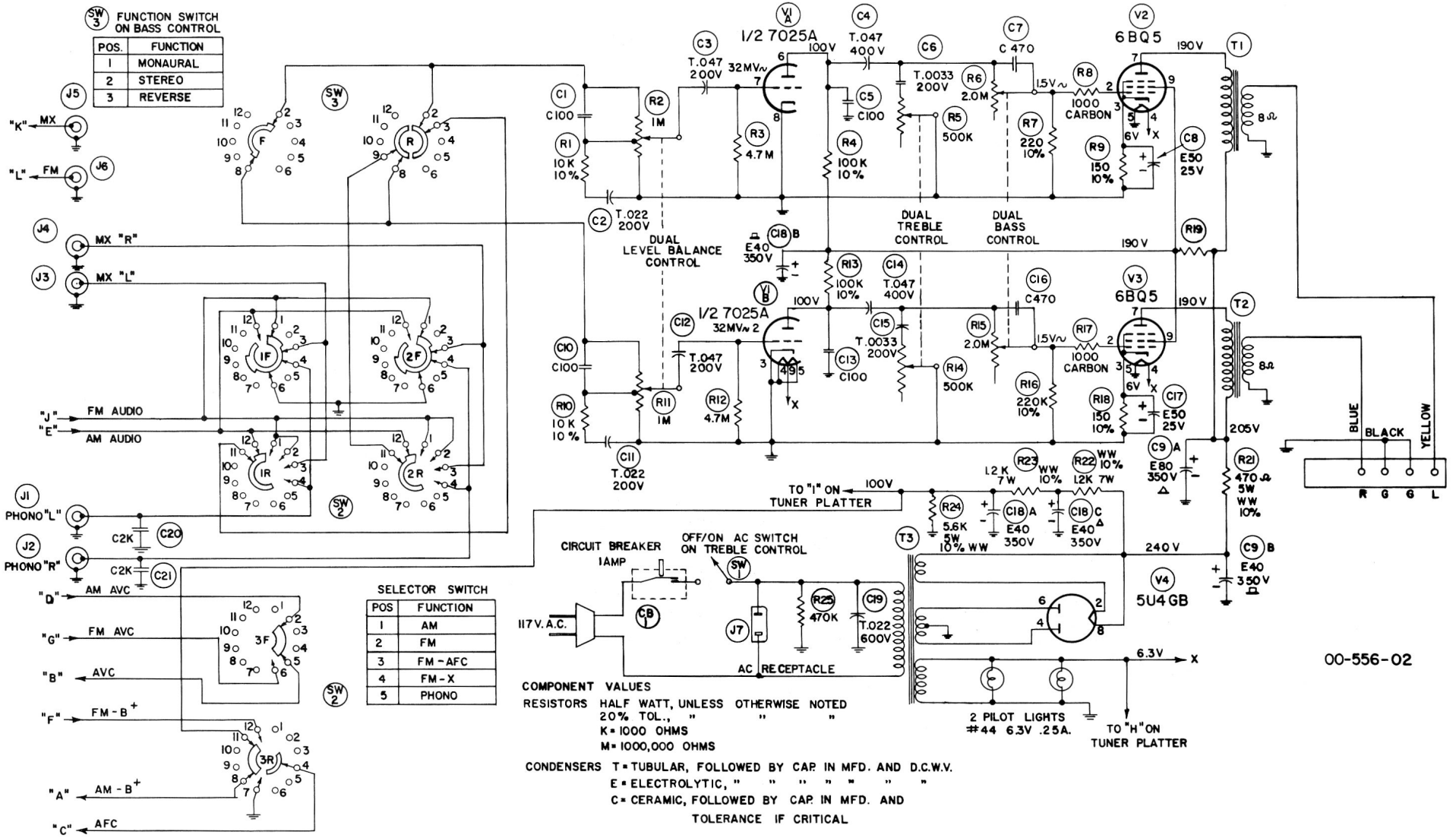
00-458-01

ALIGNMENT AND SENSITIVITY SIGNAL GENERATOR MODULATED 30% AT 400 CYCLES
*100 MILLIVOLTS ACROSS DIODE LOAD OR 20MV AT AUDIO TAKE OFF POINT ("E")

STEP	APPLY SIGNAL AT KC	APPLY SIGNAL TO	THRU SERIES DUMMY	SET GANG AT KC	ADJUST FOR MAX. OUTPUT	* NOMINAL SENSITIVITY
1	455	PIN 1-V3 6BA6	.05	MIN CAP	SLUGS T5	6000 uv
2	455	PIN 7- V2 6BE6	.05	MIN CAP	SLUGS T4 AND REPEAT STEP 1	300 uv
3	1460	EXT. ANT CONN.	200 uufd	1460 KC	C1A, C1B AND C1C TRIMMERS	1.8 uv
4	600	EXT. ANT CONN.	200 uufd	600 KC	SLUGS T1, T2 & T3 REPEAT STEPS 3 & 4	2.0 uv
5	535 960 & 1605	EXT. ANT CONN	200 uufd	TUNE THRU	CHECK ONLY	—

DO NOT SCALE PRINT
TOLERANCE UNLESS OTHERWISE SPECIFIED
FRACTIONS — DECIMALS — HOLES — ANGLES —
NAME AM — TUNER SCHEMATIC
SCALE ✓
MODEL FIRST USED ON 7747-1
DRAWN BY K.C. MARSHALL
MECH APPROVAL
CHECKED BY
ELEC APPROVAL
DATE
PART NO. 00-458-01

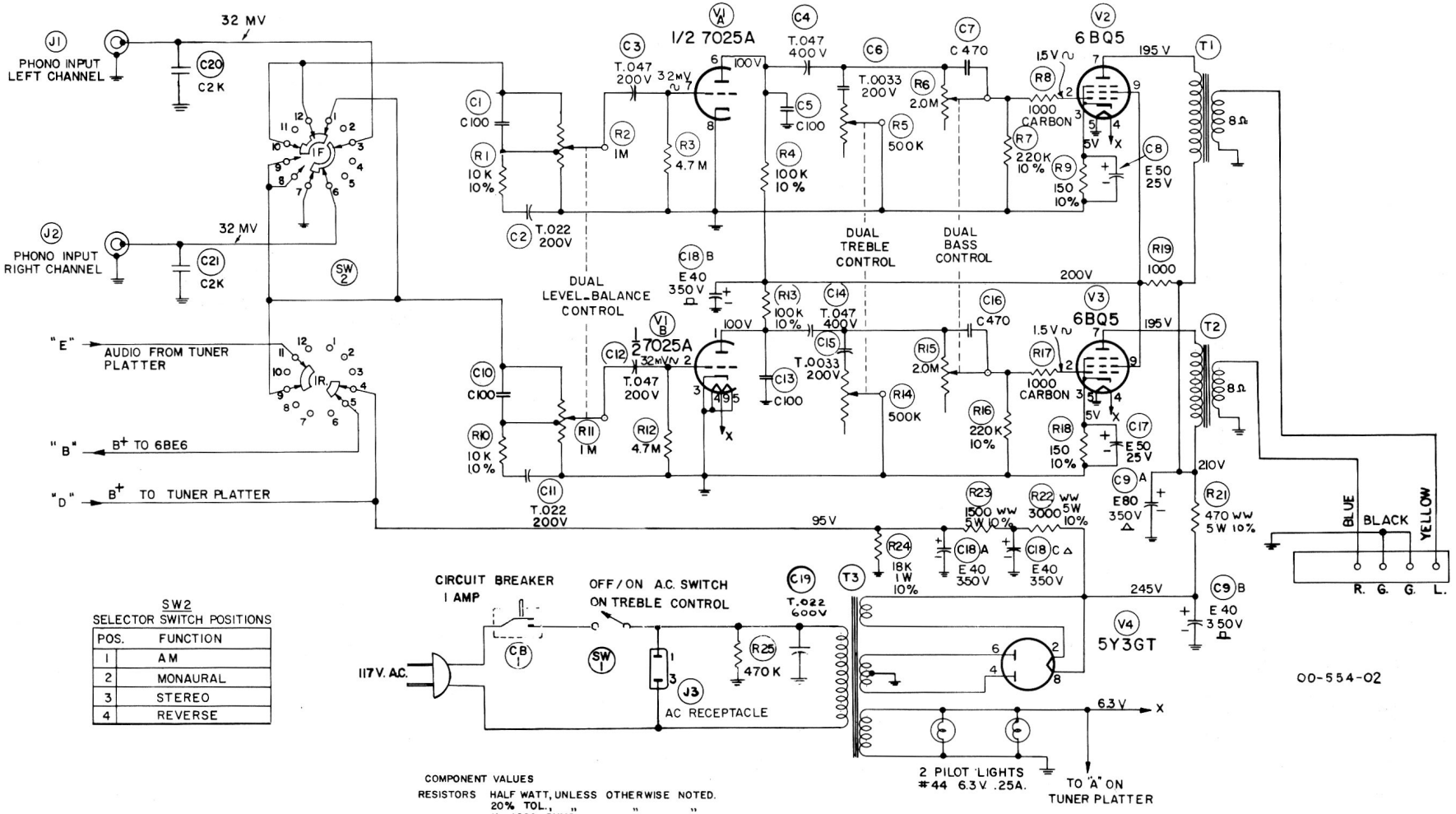
AM-FM AMPLIFIER SCHEMATIC



ISSUE	C.N. NO.	DATE	CHANGE	BY	ISSUE	C.N. NO.	DATE	CHANGE	BY

DO NOT SCALE PRINT
TOLERANCES UNLESS OTHERWISE SPECIFIED: FRACTIONS ±, DECIMALS ±, HOLES ±, ANGLES ±
NAME: WIRING DIAGRAM
SCALE: NONE
DRAWN: M.L. DONAU
MECH. APPROVAL:
CHECKED:
ELEC. APPROVAL:
MODEL FIRST USED ON: R.C.S. 449
DWG. NO. 00-556-02

AM AMPLIFIER SCHEMATIC



SW2
SELECTOR SWITCH POSITIONS

POS.	FUNCTION
1	AM
2	MONAURAL
3	STEREO
4	REVERSE

COMPONENT VALUES

RESISTORS HALF WATT, UNLESS OTHERWISE NOTED.
20% TOL., " " "
K = 1000 OHMS
M = 1000,000 OHMS

CONDENSERS T= TUBULAR, FOLLOWED BY CAP. IN MFD. AND D.C.W.V.
E = ELECTROLYTIC, " " " " " " "
C = CERAMIC, FOLLOWED BY CAP. IN MMFD AND TOLERANCE IF CRITICAL.

ISSUE	C.N. NO.	DATE	CHANGE	CHECK

REFERENCE
MATERIAL
FINISH

DO NOT SCALE PRINT
TOLERANCE UNLESS OTHERWISE SPECIFIED
FRACTIONS — DECIMALS — HOLES — ANGLES —

NAME WIRING DIAGRAM
SCALE —
MODEL FIRST USED ON RC 448
DRAWN BY R. A. DATE MECH. APPROVAL DATE
CHECKED BY DATE ELEC. APPROVAL DATE
PART NO. 00-554-02

SERVICE REPLACEMENT PARTS LIST

MODEL RCS-448, 449

Final Assy.

PART NO.	DESCRIPTION
16-90018-01	Garrard 210 Changer
16-250015-02	Acos GP73-1 Stereo Cartridge
16-120040-02	Replacement Stylus
19-80006-03	Speaker 8" P.M. 8ohm V.C.
19-30003-02	Speaker 3½" P.M. 8ohm V.C.
30-145-01	Control Panel AM
30-145-02	Control Panel AM-FM
35-459-01	Sliding Pointer
53-142-01	Viking Ship Medallion
53-489-01	Glass Retaining Strip
53-490-01	Knob – Timing
53-490-02	Knob – (Bass) Treble, Off-On, Selector
53-490-03	Knob – Balance, Level
53-485-01	Knob – Switch