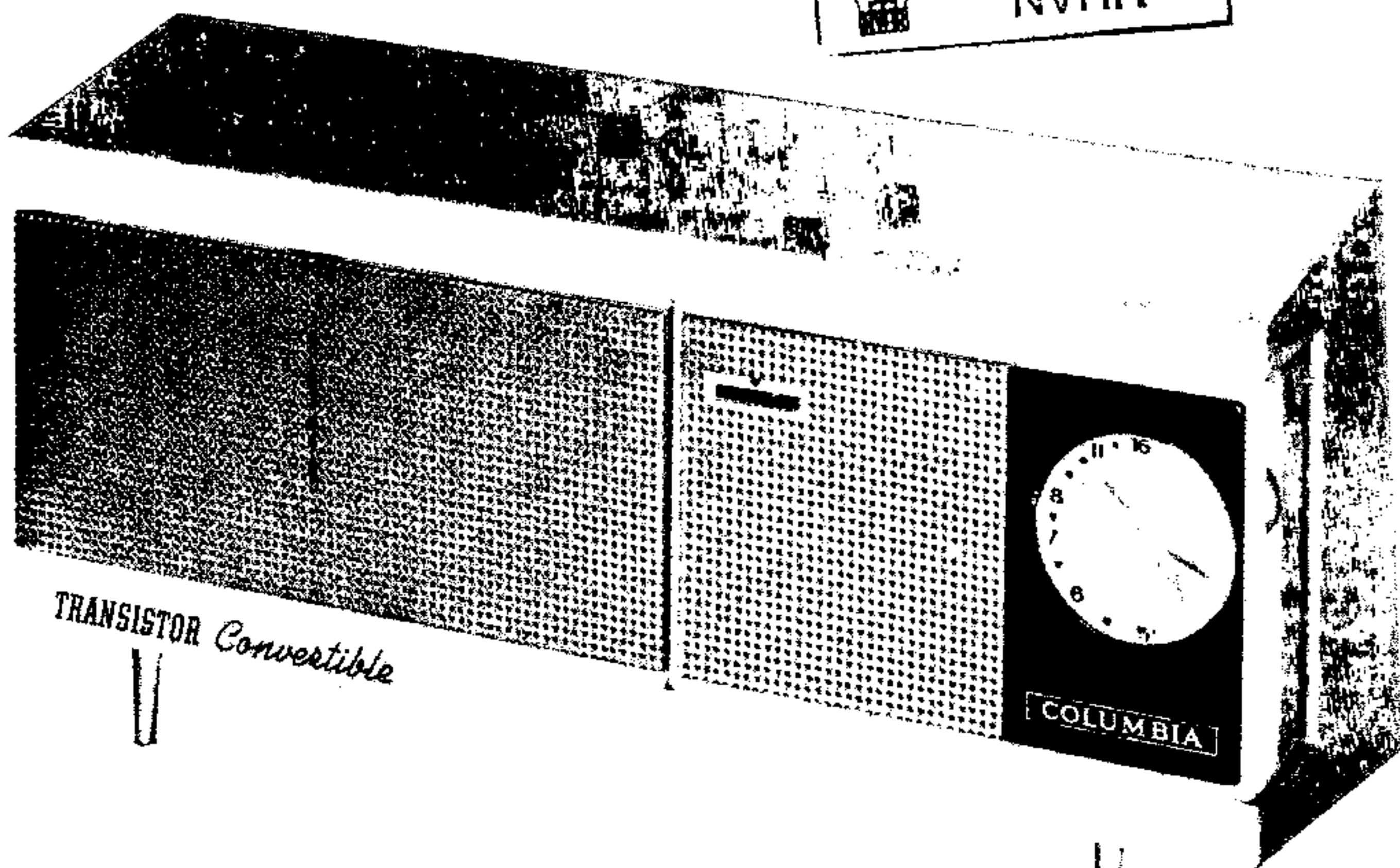
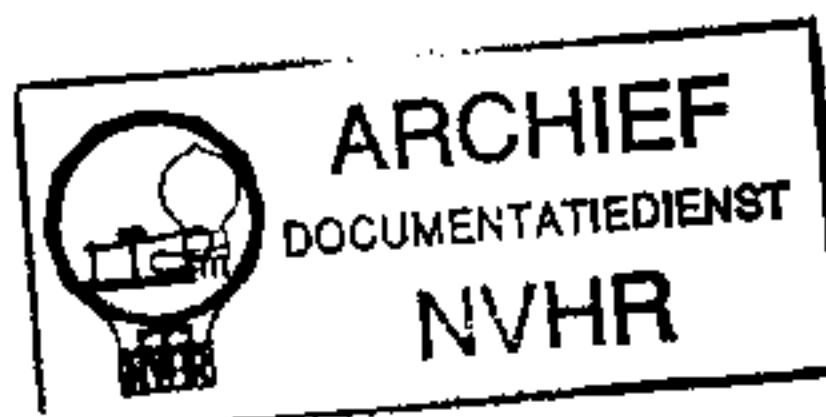


Ned. Ver. v. Historie v/d Radio

Met dank aan Jef Bos



MODEL 610G

TRADE NAME	Columbia Model 610G, 610R		
MANUFACTURER	CBS Electronics, 100 Endicott Street, Danvers, Mass.		
TYPE SET	Battery Operated Transistorized AM Receiver (Portable or Table Model)		
POWER SUPPLY	9 Volts DC	RATING	8 MA @ 9 Volts DC (No Signal, Min. Volume)
TUNING RANGE—BROADCAST	510 — 1620KC		10 MA @ 9 Volts DC (Signal, Normal Volume)

ALIGNMENT INSTRUCTIONS

ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT

Volume control should be at maximum position. Output of signal generator should be no higher than necessary to obtain an output reading.

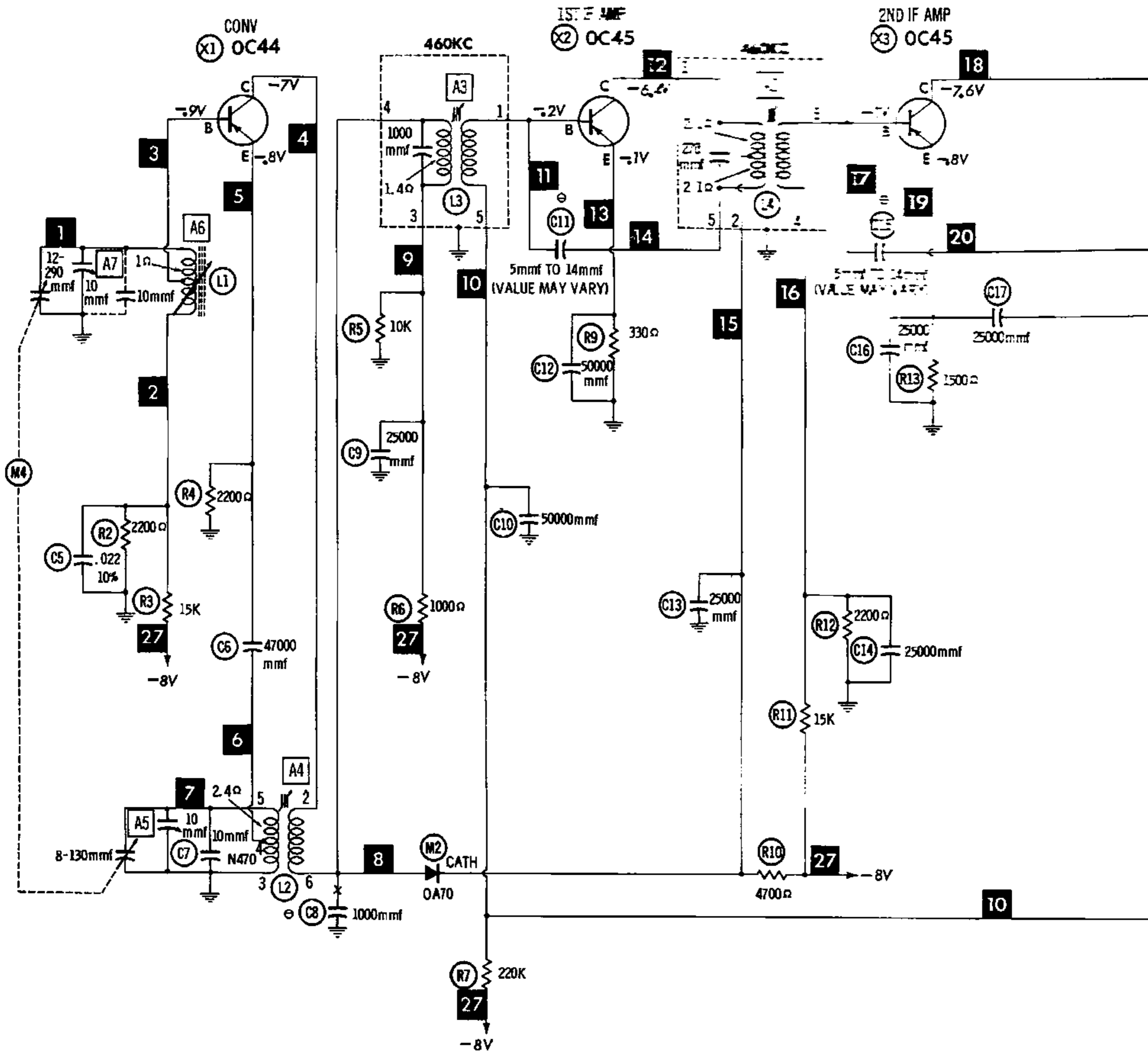
Suggested Alignment Tools: A5, A7..... GENERAL CEMENT #5000, 5003, 5066, 8276, 8290, 9087, 9089
WALSCO #2512, 2525, 2528

	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	OUTPUT METER	ADJUST	REMARKS
1.	High side thru .1mf to base of Converter. Low side to chassis.	460KC (400% Mod.)	Tuning gang fully open.	Across voice coil.	A1, A2, A3	Adjust for maximum output.
2.	Loop	510KC	Tuning gang fully closed.	"	A4	Fashion loop of several turns of wire and radiate signal into loop of receiver. Adjust for maximum output.
3.	"	1620KC	Tuning gang fully open.	"	A5	Adjust for maximum output. Repeat Steps 2 and 3.
4.	"	560KC	560KC Signal.	"	A6	Adjust for maximum output.
5.	"	1450KC	1450KC Signal.	"	A7	Adjust for maximum output. Repeat Steps 4 and 5.

HOWARD W. SAMS & CO., INC. Indianapolis 6, Indiana

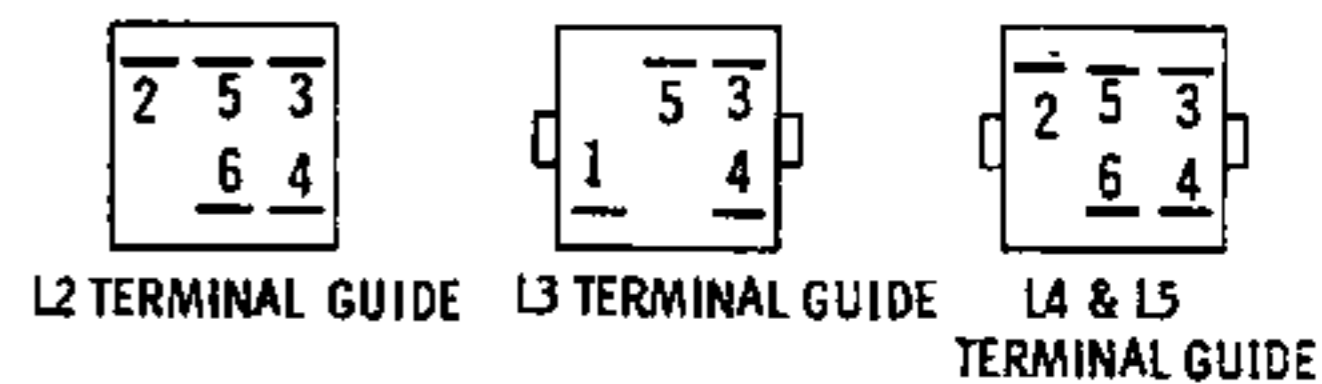
The listing of any available replacement part herein does not constitute in any case a recommendation, warranty or guaranty by Howard W. Sams & Co., Inc., as to the quality and suitability of such replacement part. The numbers of these parts have been compiled from information furnished to Howard W. Sams & Co., Inc., by the manufacturers of KGI96

the particular type of replacement part listed. Reproduction or use, without express permission, of editorial or pictorial content, in any manner, is prohibited. No patent liability is assumed with respect to the use of the information contained herein. © 1960 Howard W. Sams & Co., Inc., Indianapolis 6, Indiana. Printed in U. S. of America



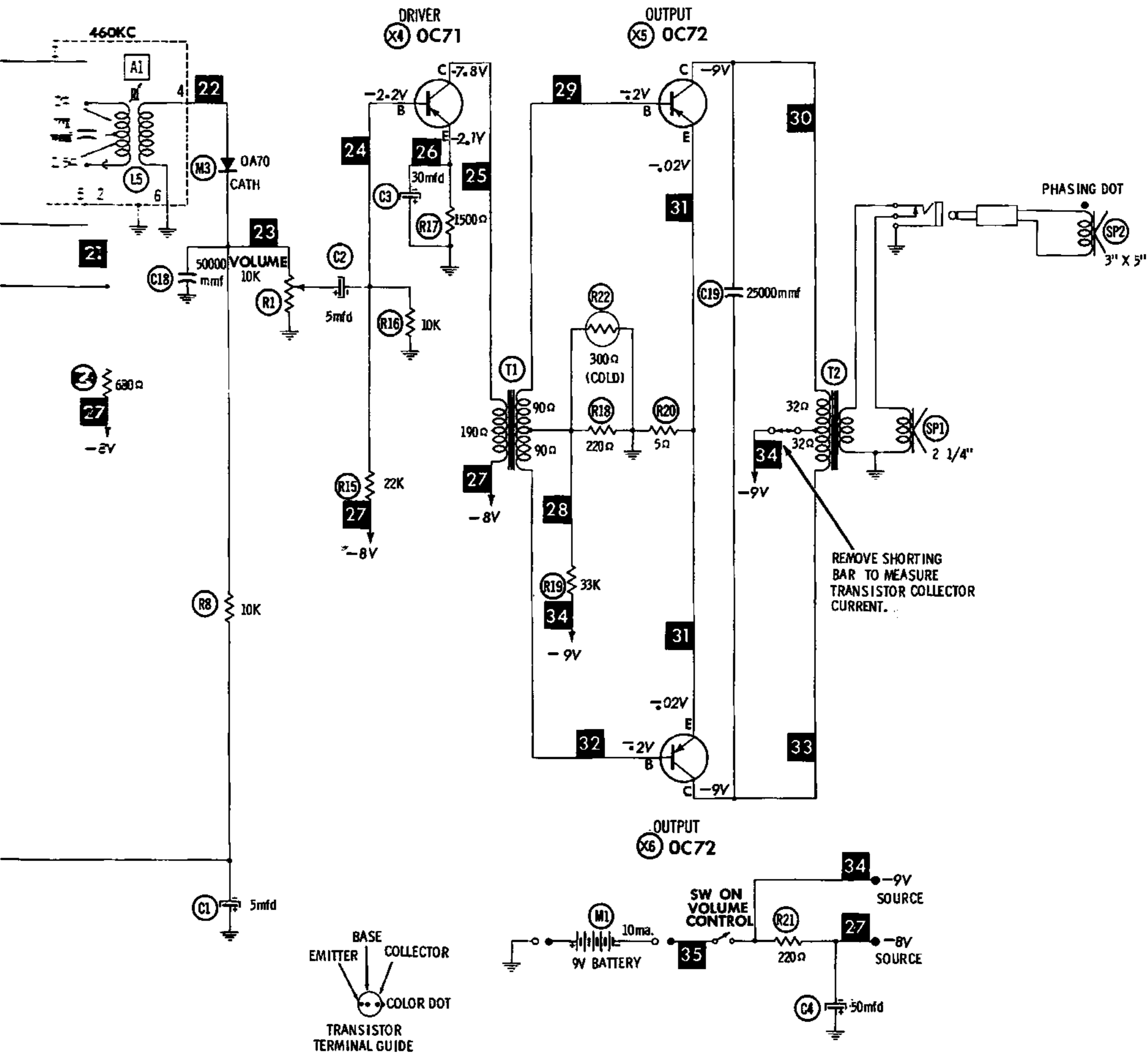
⊕ SEE PARTS LIST FOR ALTERNATE VALUE OR APPLICATION

DC COIL RESISTANCE VALUES UNDER ONE OHM NOT SHOWN ON SCHEMATIC DIAGRAM

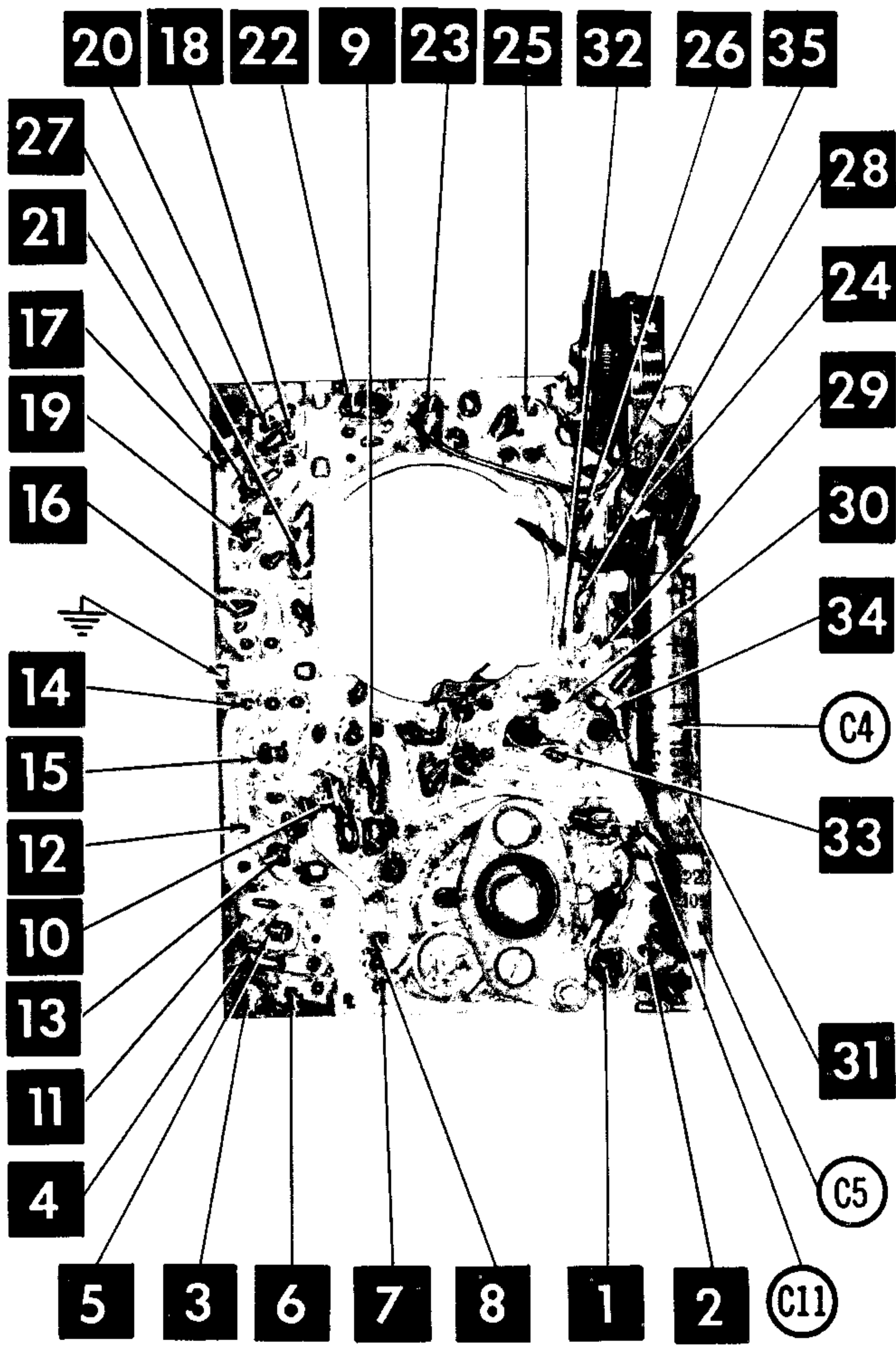


NUMBERS ASSIGNED TO COILS, SWITCHES, PLUGS, SOCKETS, AND TRANSFORMERS ARE TO FACILITATE CIRCUIT TRACING OR COMPONENT REPLACEMENT AND MAY NOT NECESSARILY BE FOUND ON THE UNIT.

1. DC voltage measurements taken with vacuum tube voltmeter.
2. Socket connections or transistor terminals are shown as bottom views.
3. Measured values are from socket pin or terminal to common ground.
4. Nominal tolerance on component values makes possible a variation of $\pm 15\%$ in voltage and resistance readings.
5. Volume control at maximum, no signal applied for voltage measurements.



RESISTANCE MEASUREMENTS NOT GIVEN BECAUSE OF THE WIDE VARIATION IN INTERNAL TRANSISTOR RESISTANCE.



TRANSISTORS

ITEM No.	ORIG. TYPE	USE	REPLACEMENT DATA				NOTES
			CBS PART No.	RCA PART No.	RAYTHEON PART No.	SYLVANIA PART No.	
X1	OC44	Converter			2N486	2N412	PNP
X2	OC45	1st IF Amplifier			2N483	2N410	PNP
X3	OC45	2nd IF Amplifier			2N483	2N410	PNP
X4	OC71	Driver		2N406	2N362	2N406	PNP
X5	OC72	Output		2N408	2N632	2N408	PNP
X6	OC72	Output		2N408	2N632	2N408	PNP

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		REPLACEMENT DATA						NOTES
	CAP.	VOLT.	COLUMBIA PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	PYRAMID PART No.	SPRAGUE PART No.	
C1	5	25		XPP-25005	NLW6-25	TT25X5	ML5-25	TE-1202	
C2	5	25		XPP-25005	NLW6-25	TT25X5	ML5-25	TE-1202	
C3	30	3		PWE3030	NLW30-6	TT6X30	ML30-6	TE-1092	
C4	50	12		XPP-12050	NLW50-15	TT15X50	ML50-15	TE-1133	

FIXED CAPACITORS

Capacity values given in the rating column are in mfd. for Paper Capacitors, and in mmfd. for Mica and Ceramic Capacitors.

ITEM No.	RATING	REMARKS	REPLACEMENT DATA						
			AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ELMENCO PART No.	MALLORY PART No.	SPRAGUE PART No.	
C5	.022 125V 10%		V84C2S22-10%						2WF-S22
C6	47000		C80V503AM	DA-503	H-05S5			TA-150	TG-S50
C7	10 N470						*		
C8	1000	Note 1	SI 1000	D6-102	H-05D1		CCD-102	B-210	5HK-D10
C9	25000				H-05S25			TA-125	TG-S25
C10	50000		C80V503AM	DA-503	H-05S5			TA-150	TG-S50
C11		Note 2							
C12	50000		C80V503AM	DA-503	H-05S5			TA-150	TG-S50
C13	25000				H-05S25			TA-125	TG-S25
C14	25000				H-05S25			TA-125	TG-S25
C15		Note 2							
C16	25000				H-05S25			TA-125	TG-S25
C17	25000				H-05S25			TA-125	TG-S25
C18	50000		C80V503AM	DA-503	H-05S5			TA-150	TG-S50
C19	25000				H-05S25			TA-125	TG-S25

Note 1. Not used in some versions.

Note 2. Values vary, 5-14mmf. Replace with original value.

* Not normally in distributor's stock. Available thru distributor on order to manufacturer.

ND DESCRIPTIONS

CONTROLS

ITEM No.	RATING		REPLACEMENT DATA					INSTALLATION NOTES
	RESIST-ANCE	WATTS	COLUMBIA PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLORY PART No.	
R1	10K	1/4	9K647					Volume & Switch

RESISTORS (IRC or EQUIVALENT)

All wattages 1/2 watt, or less, unless otherwise listed.

ITEM No.	RATING	REMARKS	ITEM No.	RATING	REMARKS	ITEM No.	RATING	REMARKS
R2	2200Ω		R9	330Ω		R16	10K	
R3	15K		R10	4700Ω		R17	1500Ω	
R4	2200Ω		R11	15K		R18	220Ω	
R5	10K		R12	2200Ω		R19	33K	
R6	1000Ω		R13	1500Ω		R20	5Ω	
R7	220K		R14	680Ω		R21	220Ω	
R8	10K		R15	22K		R22	300Ω Cold	

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA				NOTES
		COLUMBIA PART No.	Merit PART No.	Miller PART No.	Ram PART No.	
L1	Loopstick					
L2	Osc. Coil	20K374				
L3	1st IF Trans.	20K376				
L4	2nd IF Trans.	20K377				
L5	3rd IF Trans.	20K378				

TRANSFORMER (DRIVER)

ITEM No.	TURNS RATIO		REPLACEMENT DATA					NOTES
	PRI.	SEC.	COLUMBIA PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.	
T1	1.1	1	20K379					

PARTS LIST AND DESCRIPTIONS (Continued)

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE		REPLACEMENT DATA					NOTES
			COLUMBIA PART No.	Merit PART No.	Ram PART No.	Stancor PART No.	Thordarson PART No.	
	PRI.	SEC.						
T2	2200Ω CT	4-6Ω	3K257					

SPEAKER

ITEM No.	TYPE			REPLACEMENT DATA		NOTES
	SIZE	FIELD	V. C. IMP.	COLUMBIA PART No.	QUAM PART No.	
SP1	2 1/4"	PM	4-6Ω	1K163	22A06Z5.5	
SP2	3"x 5"	PM	3-4Ω			

BATTERIES

ITEM No.	VOLTAGE	COLUMBIA PART No.	REPLACEMENT DATA						NOTES
			BURGESS		EVEREADY		MALLORY		
			"A"	"B"	"A"	"B"	"A"	"B"	
MI	9V			2U6		216		M-1604	

CRYSTAL DIODES

ITEM No.	ORIG. TYPE	REPLACEMENT DATA				NOTES
		COLUMBIA PART No.	CBS PART No.	RAYTHEON PART No.	SYLVANIA PART No.	
M2	0A70	20K375	1N60	1N60	1N60	Overload, AGC (Pigtail) Detector (Pigtail)
M3	0A70	20K375	1N60	1N60	1N60	

MISCELLANEOUS

ITEM No.	PART NAME	COLUMBIA PART No.	NOTES
M4	Tuning Cap.	14K115	2 Gang

CABINETS & CABINET PARTS

(When Ordering Cabinets & Cabinet Parts, Specify Model, Chassis & Color)

NAME	PART NO.	DESCRIPTION
Pointer Knob	19K718	Dial
Cabinet	8K528	Tuning
Cabinet	17K893	Grey
Cabinet	17K894	Red

WIRING DATA

General-use Unshielded Hook-up Wire Use BELDEN No. 8530 (Solid) Available in Ten Colors
8524 (Stranded) Available in Ten Colors

CHASSIS—TOP VIEW

