

PHOTOFACT® Folder

with CIRCUITRACE

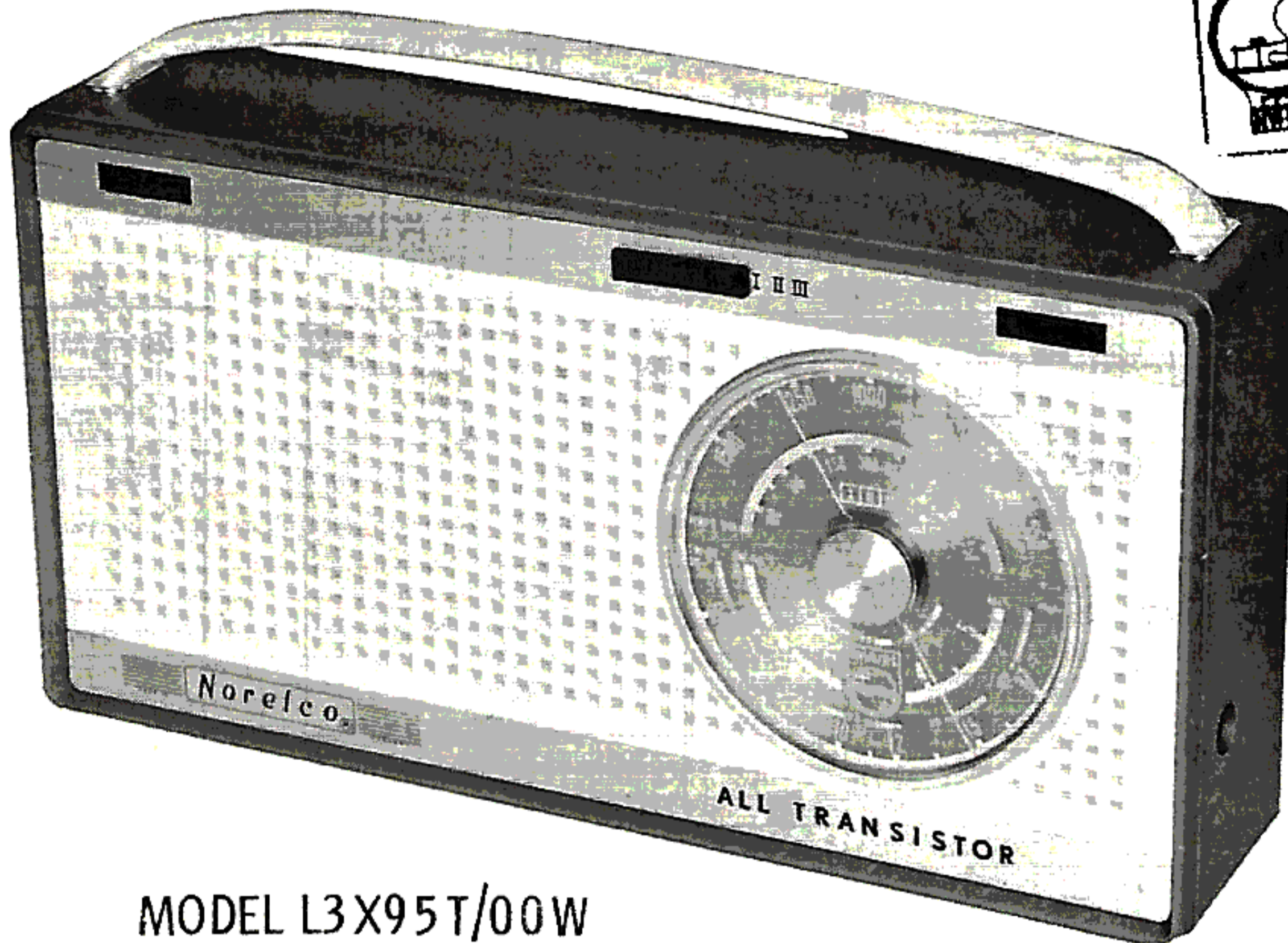
NORELCO MODELS L3X95T/OOE, L3X95T/OOS, L3X95T/OOW, L3X95T/OOX

Met dank aan Jef Bos

Ned. Ver. v. Historie v/d F



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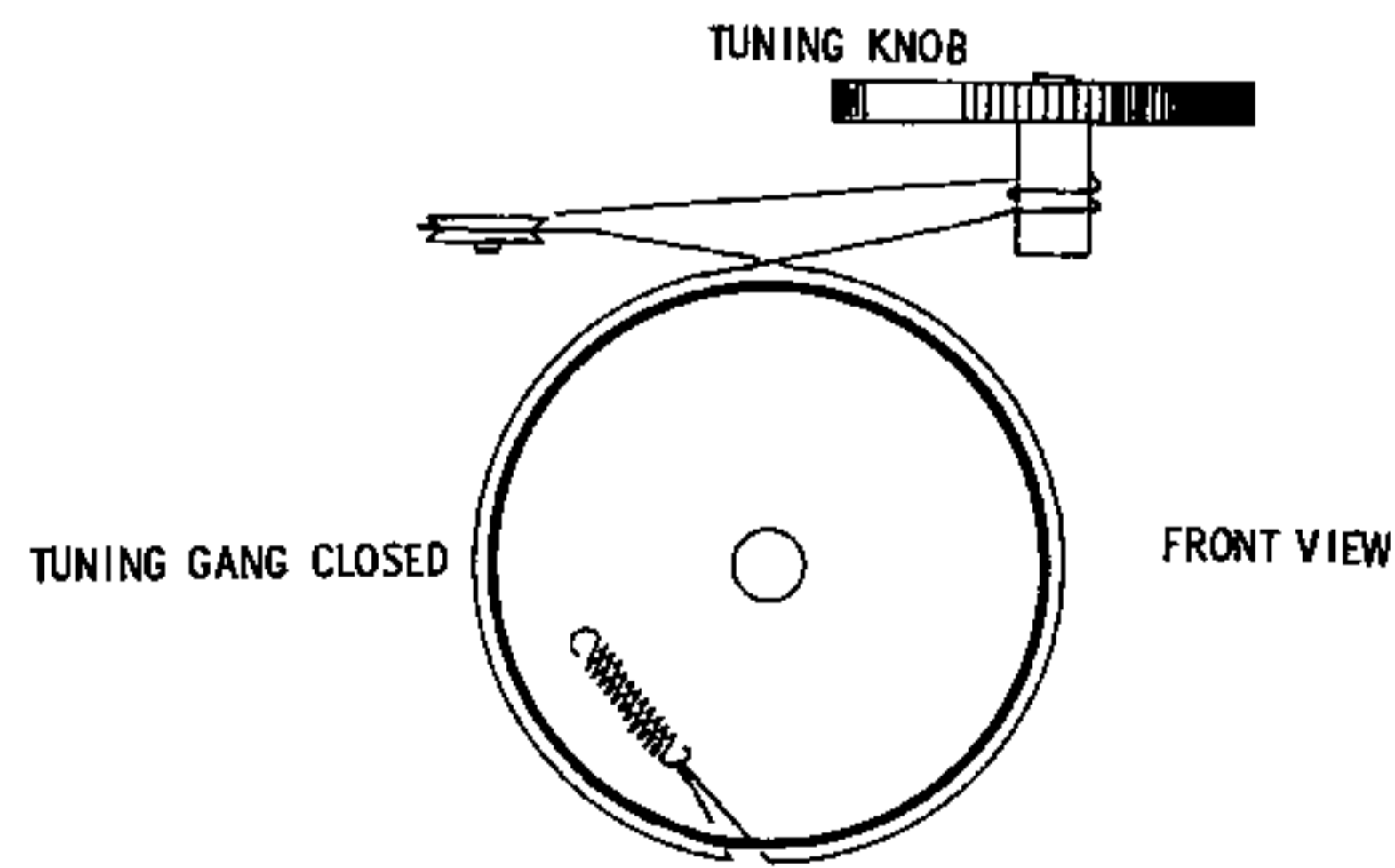


MODEL L3X95T/OOW

TRADE NAME	Norelco Models L3X95T/OOE, L3X95T/OOS, L3X95T/OOW, L3X95T/OOX		
SUPPLIER	North American Philips Co., Inc., 100 E. 42nd Street, New York 17, N. Y.		
TYPE SET	Battery Operated Transistorized Portable BC-SW Receiver		
POWER SUPPLY	6 Volts DC	RATING	15MA@6 Volts DC (No Signal, Min. Volume) 25MA@6 Volts DC (Signal, Normal Volume)
TUNING RANGE — BROADCAST	517 — 1622KC	SHORT WAVE	5.9 — 18.1MC MARINE BAND 1.6 — 5.2MC

NORELCO MODELS L3X95T/OOE,
L3X95T/OOS, L3X95T/OOW, L3X95T/OOX

DRIVE CORD STRINGING

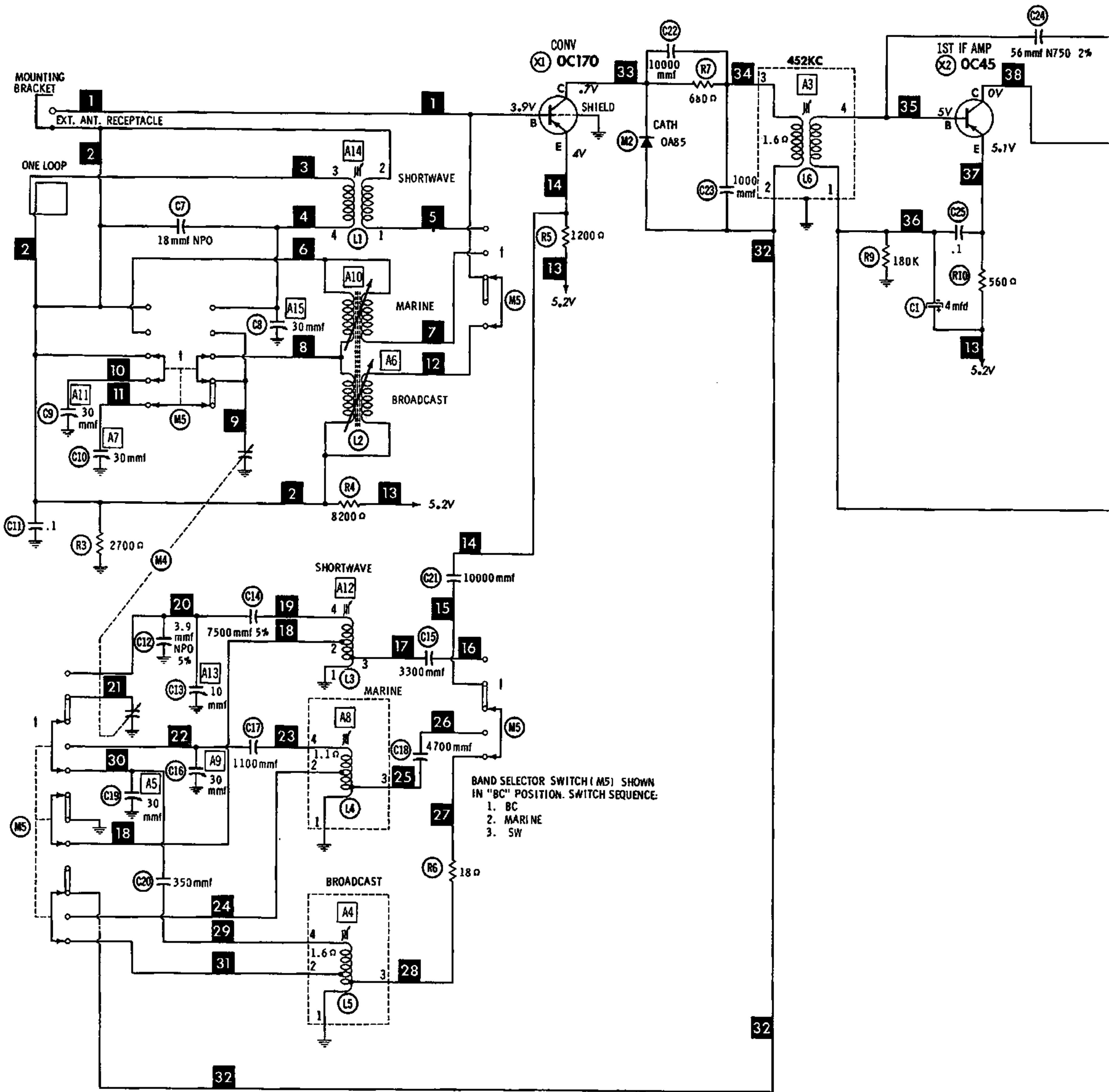


HOWARD W. SAMS & CO., INC. Indianapolis 6, Indiana

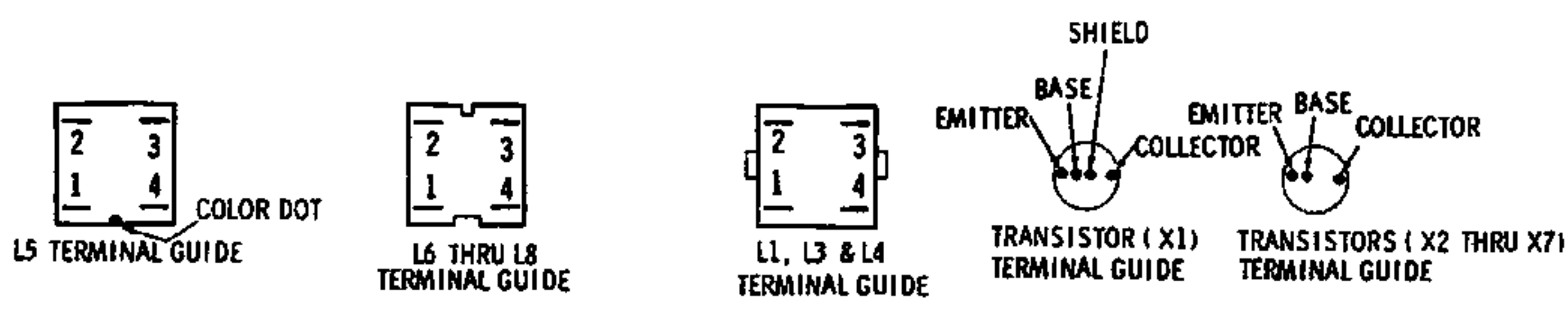
The listing of any available replacement part herein does not constitute in any case a recommendation, warranty or guaranty by Howard W. Sams & Co., Inc., as to the quality and suitability of such replacement part. The numbers of these parts have been compiled from information furnished to Howard W. Sams & Co., Inc., by the manufacturers of KF589

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. © 1961 Howard W. Sams & Co., Inc., Indianapolis 6, Indiana. Printed in U.S. of America





BAND SELECTOR SWITCH (M5) SHOWN IN "BC" POSITION. SWITCH SEQUENCE:
 1. BC
 2. MARINE
 3. SW

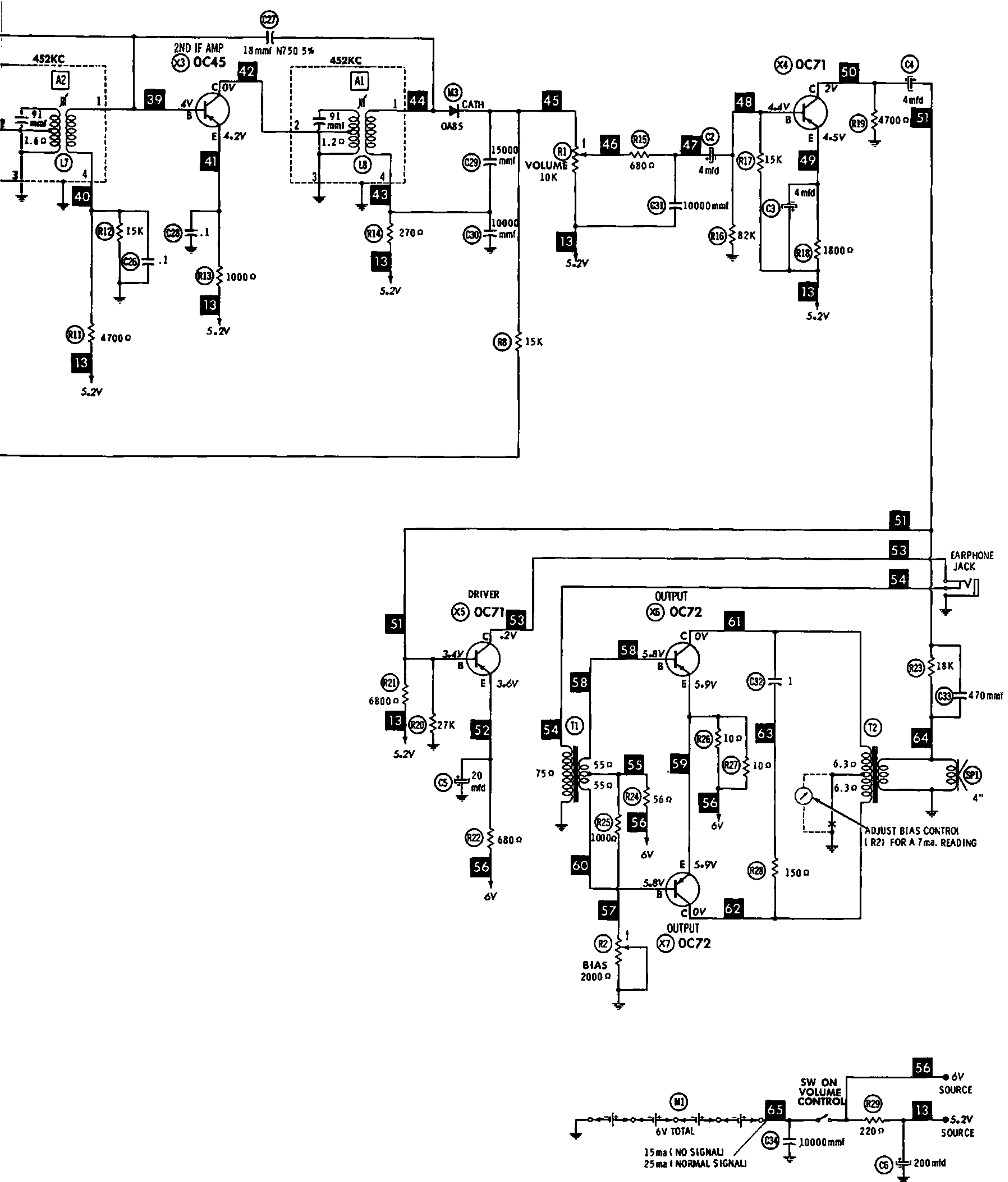


1. DC voltage measurements taken with vacuum tube voltmeter.
2. Socket connections or transistor terminals are shown as bottom views.
3. Measured values are from socket pin or terminal to common ground.
4. Nominal tolerance on component values makes possible a variation of $\pm 15\%$ in voltage and resistance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

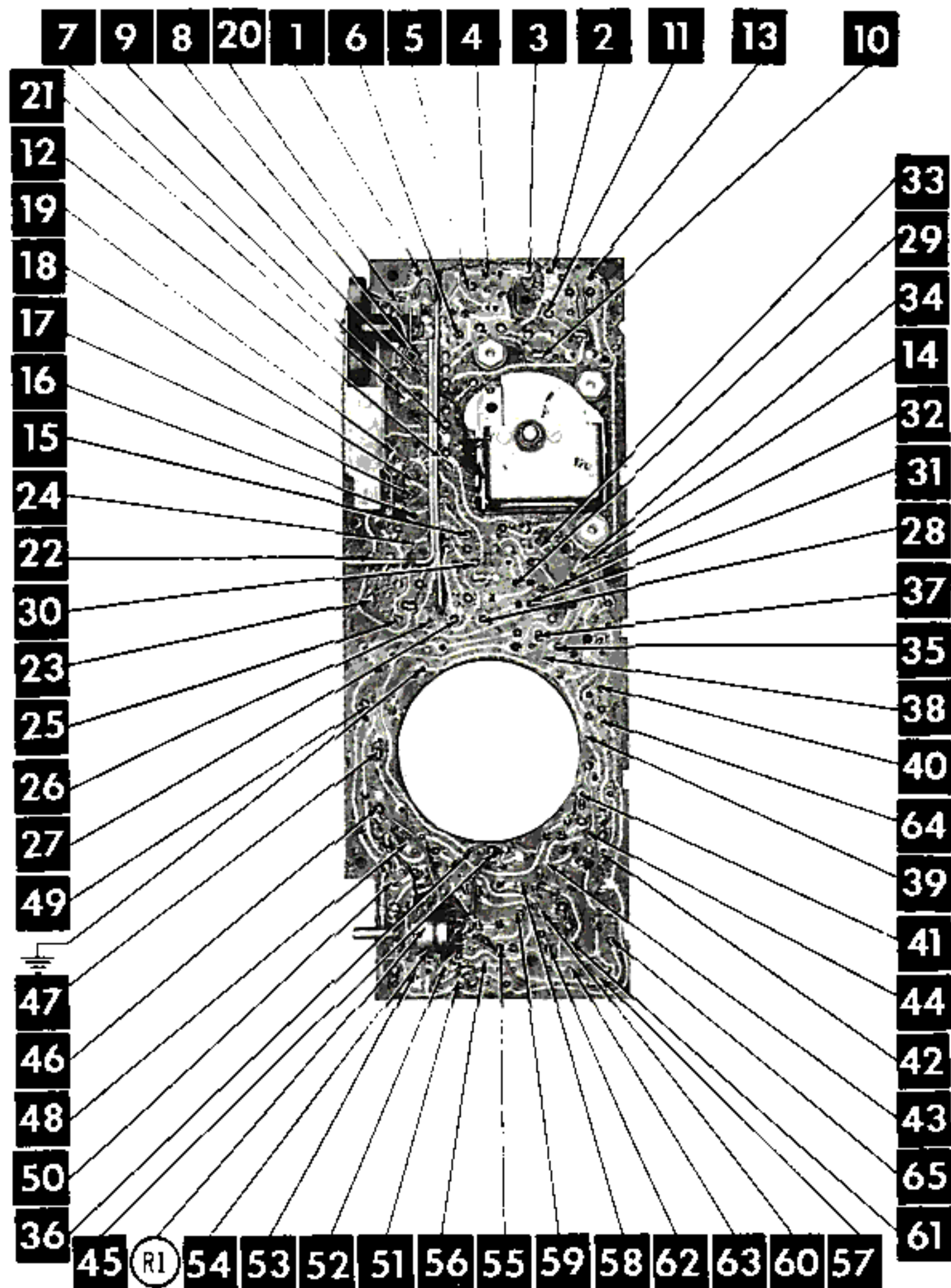
NUMBERS ASSIGNED TO COILS, SWITCHES, PLUGS, SOCKETS, AND TRANSFORMERS ARE TO FACILITATE CIRCUIT TRACING OR COMPONENT REPLACEMENT AND MAY NOT NECESSARILY BE FOUND ON THE UNIT.

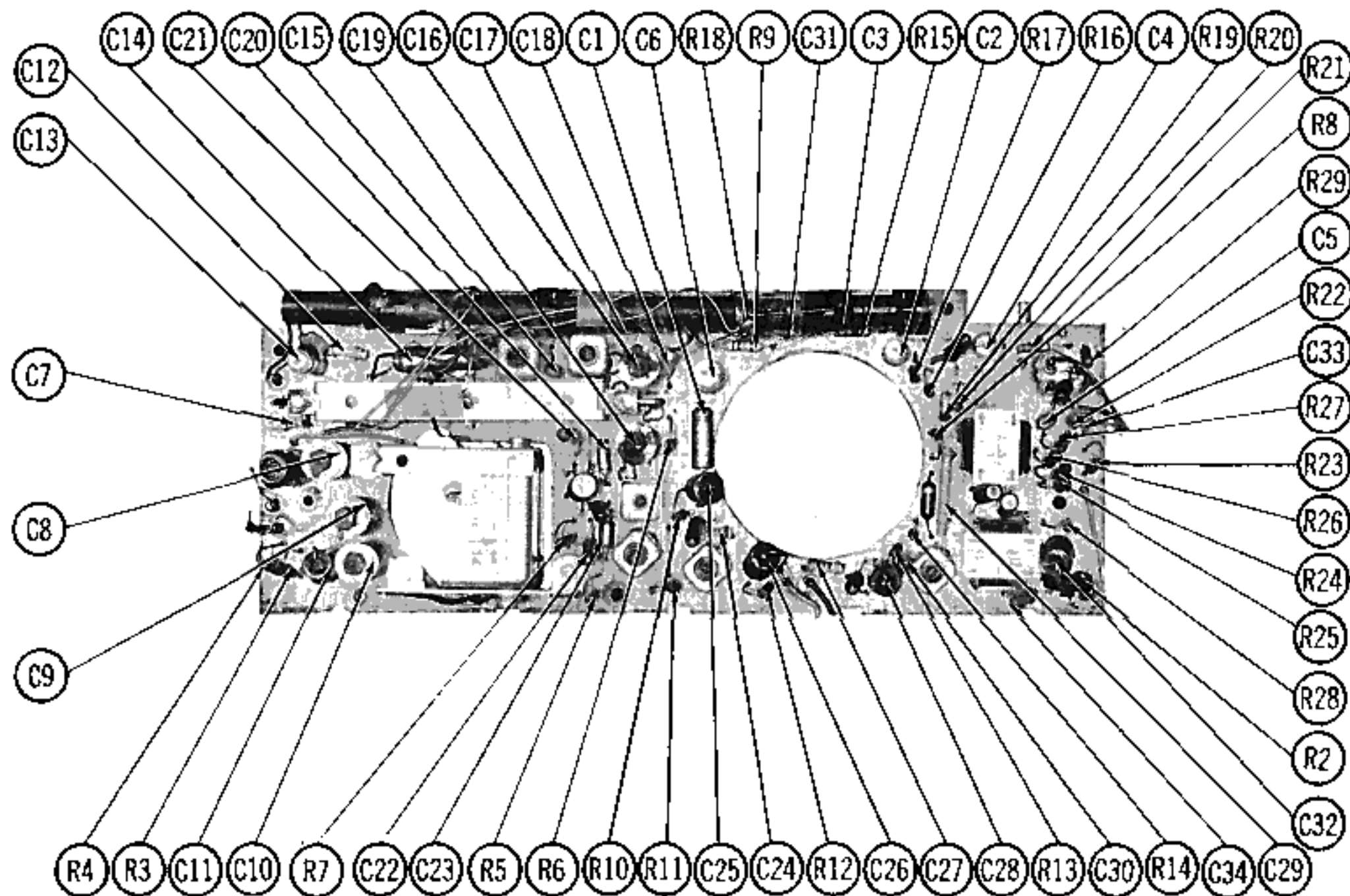
DC COIL RESISTANCE VALUES UNDER ONE OHM NOT SHOWN ON SCHEMATIC DIAGRAM
 ARROWS ON CONTROLS INDICATE CLOCKWISE ROTATION (CONTROL VIEWED FROM SHAFT END)

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



NORELCO MODELS L3X95T/OOE, L3X95T/OOS, L3X95T/OOW, L3X95T/OOX





CHASSIS TOP VIEW-CAPACITOR & RESISTOR IDENT.

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: A8, A12..... GENERAL CEMENT #5009, 8195, 8274, 8275, 8728, 8729, 8987, 8988, 8989
 WALSCO #2515, 2531, 2532
 A14..... GENERAL CEMENT #8807, 9291, 9294
 WALSCO #2520, 2522, 2523, 2524, 2534, 2537

	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	OUTPUT METER	ADJUST	REMARKS
1.	High side thru 100K to Collector of Converter. Low side to chassis.	452KC (400Ω 30% AM)	(BC) Tuning gang fully open.	Across voice coil.	A1, A2, A3	Adjust for maximum output.
2.	Loop	512KC	Tuning gang fully closed.	"	A4	Fashion loop of several turns of wire and radiate signal into loop of receiver. Adjust for maximum output.
3.	"	1635KC	Tuning gang fully open.	"	A5	"
4.	"	550KC	550KC Signal.	"	A6	"
5.	"	1500KC	1500KC Signal.	"	A7	"
6.	"	1.61MC	(SWS) Tuning gang fully closed.	"	A8	"
7.	"	5.25MC	Tuning gang fully open.	"	A9	"
8.	"	1.74MC	1.74MC Signal.	"	A10	"
9.	"	4.8MC	4.8MC Signal.	"	A11	"
10.	"	5.85MC	(SW2) Tuning gang fully closed.	"	A12	"
11.	"	18.2MC	Tuning gang fully open.	"	A13	"
12.	"	6.35MC	6.35MC Signal.	"	A14	"
13.	"	16.9MC	16.9MC Signal.	"	A15	Adjust for maximum output. Repeat Steps 2 thru 13.

PARTS LIST AND DESCRIPTIONS

TRANSISTORS

ITEM No.	ORIG. TYPE	USE	REPLACEMENT DATA			NOTES
			RCA PART No.	RAYTHEON PART No.	SYLVANIA PART No.	
X1	OC170	Converter				PNP
X2	OC45	1st IF Amplifier		2N483	2N410	PNP
X3	OC45	2nd IF Amplifier		2N483	2N410	PNP
X4	OC71	AF Amplifier	2N406	2N362	2N406	PNP
X5	OC71	Driver	2N406	2N362	2N406	PNP
X6	OC72	Output	2N408	2N632	2N408	PNP
X7	OC72	Output	2N408	2N632	2N408	PNP

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		REPLACEMENT DATA						NOTES
	CAP.	VOLT.	NORELCO PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	PYRAMID PART No.	SPRAGUE PART No.	
C1	4	64	909/Z4	PTT-10005	NLW4-15	TT50X4	MLV5-12	TE-1123	
C2	4	64	909/Z4	PTT-10005	NLW4-15	TT50X4	MLV5-12	TE-1123	
C3	4	64	909/Z4	PTT-10005	NLW4-15	TT50X4	MLV5-12	TE-1123	
C4	4	64	909/Z4	PTT-10005	NLW4-15	TT50X4	MLV5-12	TE-1123	
C5	20	6.4	C426AM/C20	PTT-10020	NLW20-15	TT15X20	MLV20-12	TE-1130	
C6	200	6.4	909/W200	PTT-6200	NLW200-12		MLV200-12	TE-1119.6	

FIXED CAPACITORS

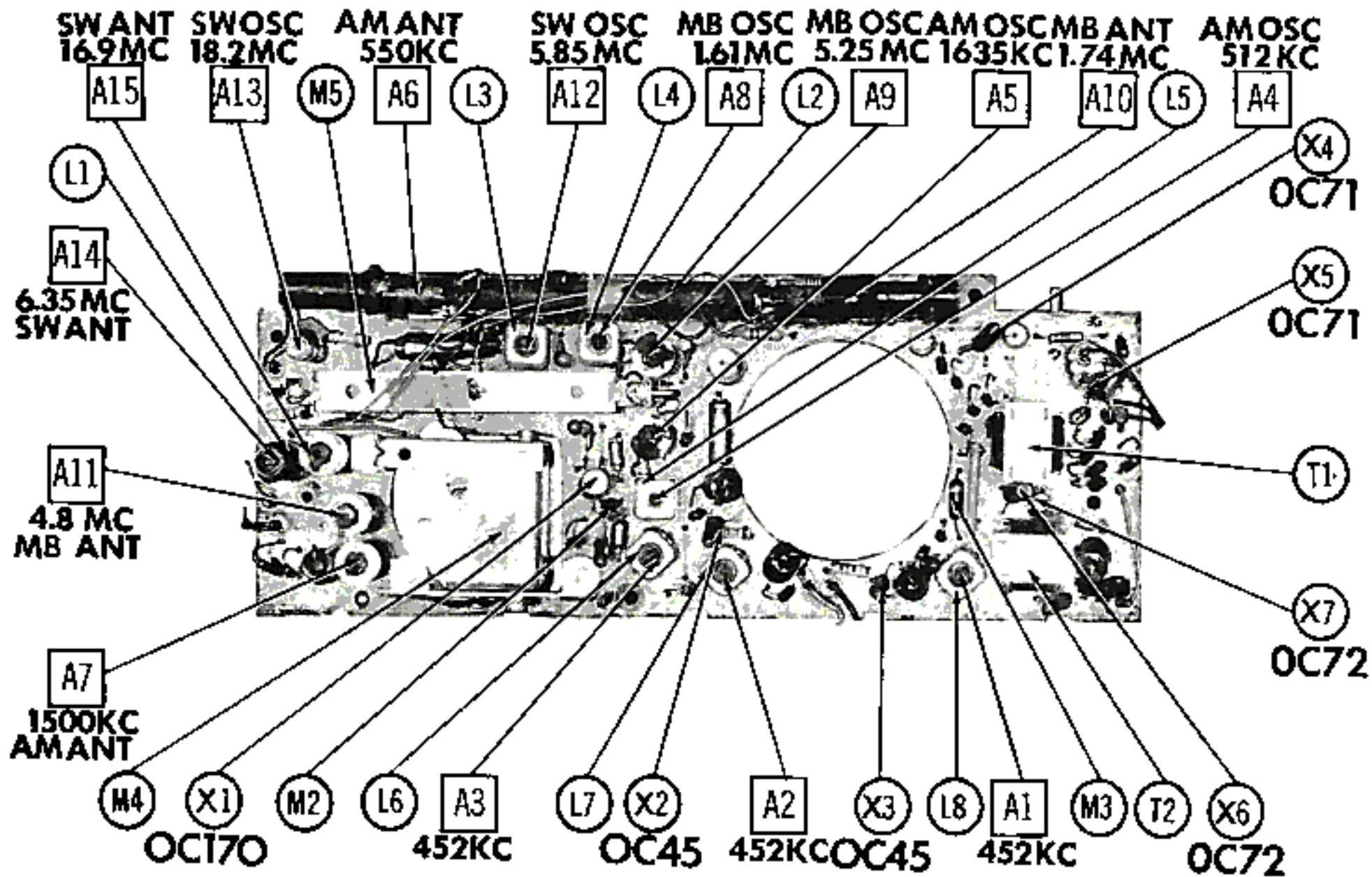
Capacity values given in the rating column are in mfd. for Paper Capacitors, and in mmfd. for Mica and Ceramic Capacitors.

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.
C7	18 NPO		NPO-SI 18	TCZ-18	C10Q18C	CCTO-180	CNO-418	10TCC-Q18
C8	30							
C9	30							
C10	30							
C11	.1 125V		P288N-1	DF-104	CUB2P1	2DP-3-104	GEM-201	2TM-P10
C12	3.9 NPO 5%				C10V4C			10TCC-V39
C13	10							
C14	7500 5%				10R5D75	CM-35B-752J		MS-275
C15	3300		SI 3300	D6-332	BYA10D33	CCD-332	B-233	5HK-D33
C16	30							
C17	1100		SI 1200	D6-123	L10D12	CCD-122	B-212	10TS-D12
C18	4700		SI 4700	D6-472	BYA10D47M	CCD-472	B-247	5HK-D47
C19	30							
C20	350		SI 360		L10T35		GP335	10TS-T35
C21	10000		SI 10000	D6-103	BYA10S1	CCD-103	B-110	5HK-S10
C22	10000		SI 10000	D6-103	BYA10S1	CCD-103	B-110	5HK-S10
C23	1000		SI 1000	D6-102	BYA10D1	CCD-102	B-210	5HK-D10
C24	56 N750 2%			TCN-56				
C25	.1 125V		P288N-1	DF-104	CUB2P1	2DP-3-104	GEM-201	2TM-P10
C26	.1 125V		P288N-1	DF-104	CUB2P1	2DP-3-104	GEM-201	2TM-P10
C27	18 N750 5%			TCN-18	C10Q18U		CN7-418	10TCU-Q18
C28	.1 125V		P288N-1	DF-104	CUB2P1	2DP-3-104	GEM-201	2TM-P10
C29	15000		SI 15000	DD-153	BYA10S15	CCD-153	B-115	5HK-S15
C30	10000		SI 10000	D6-103	BYA10S1	CCD-103	B-110	5HK-S10
C31	10000		SI 10000	D6-103	BYA10S1	CCD-103	B-110	5HK-S10
C32	.1 125V		P288N-1	DF-104	CUB2P1	2DP-3-104	GEM-201	2TM-P10
C33	470		SI 470	D6-471	BYA10T47	CCD-471	B-347	10TS-T47
C34	10000		SI 10000	D6-103	BYA10S1	CCD-103	B-110	5HK-S10

CONTROLS

ITEM No.	RATING		REPLACEMENT DATA					INSTALLATION NOTES
	RESISTANCE	WATTS	NORELCO PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLORY PART No.	
RIA	10K	1/4	B151485					Volume Power Off-On Bias
B R2	Switch 2000Ω	1/4	B151454					

CHASSIS—TOP VIEW



PARTS LIST AND DES

RESISTORS

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

ITEM No.	RATING	REPLACEMENT DATA			ITEM No.	RATING	REPLACEMENT DATA		
		IRC PART No.	WORKMAN TV PART No.	REMARKS			IRC PART No.	WORKMAN TV PART No.	REMARKS
R3	2700Ω				R17	15K			
R4	8200Ω				R18	1800Ω			
R5	1200Ω				R19	4700Ω			
R6	18Ω				R20	27K			
R7	680Ω				R21	6800Ω			
R8	15K				R22	680Ω			
R9	180K				R23	18K			
R10	560Ω				R24	56Ω			
R11	4700Ω				R25	1000Ω			
R12	15K				R26	10Ω			
R13	1000Ω				R27	10Ω			
R14	270Ω				R28	150Ω			
R15	680Ω				R29	220Ω			
R16	82K								

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA					NOTES
		NORELCO PART No.	Merit PART No.	Miller PART No.	Stancor PART No.	Workman TV PART No.	
L1	Sw. Ant.	A398609					
L2A	Marine Loopstick	A398601					
B	BC Loopstick						
L3	Sw. Osc.	A312981					
L4	Marine Osc.	A312982					
L5	BC Osc.	A312980					
L6	1st IF	A312983					
L7	2nd IF	A312960					
L8	3rd IF	A312961					

TRANSFORMER (DRIVER)

ITEM No.	TURNS RATIO		REPLACEMENT DATA					NOTES
	PRI.	SEC.	NORELCO PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.	
T1	1	1	A316221					

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE		REPLACEMENT DATA					NOTES
	PRI.	SEC.	NORELCO PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.	
T2	100Ω CT	3-4Ω	A315424			TA-39 ①		① Remove frame

SPEAKER

ITEM No.	TYPE			REPLACEMENT DATA		NOTES
	SIZE	FIELD	V. C. IMP.	NORELCO PART No.	QUAM PART No.	
SP1	4"	PM	3-4Ω	AD3414Z	4A05 *	* Trim mounting bracket to fit.

BATTERIES

ITEM No.	VOLTAGE	NORELCO PART No.	REPLACEMENT DATA						NOTES
			BURGESS		EVEREADY		MALLORY		
			"A"	"B"	"A"	"B"	"A"	"B"	
MI	1.5V	*		230 *		A100 *		M-13R*	* 4 Required

RIPTIONS (Continued)

SIGNAL DIODES

ITEM No.	ORIG. TYPE	REPLACEMENT DATA				NOTES
		NORELCO PART No.	GENERAL ELECTRIC PART No.	RAYTHEON PART No.	SYLVANIA PART No.	
M2 M3	OA85 OA85			1N60 1N60	1N60 1N60	Overload (Pigtail) Detector (Pigtail)

MISCELLANEOUS

ITEM No.	PART NAME	NORELCO PART No.	NOTES
M4 M5	Tuning Cap. Switch	4900246	2 Gang Band Selector (Slider Type)

CABINETS & CABINET PARTS

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

NAME	PART NO.	DESCRIPTION
Knob	A378418	Volume
Knob	P407809/417/AA	Tuning, Model L3X95T/00S
Knob	P407809/417/UB	Tuning, Models L3X95T/00W, L3X95T/00E, L3X95T/00X
Knob	P541166/423/HA	Selector, Model L3X95T/00S
Knob	P541166/423/FY	Selector, Models L3X95T/00W, L3X95T/00E, L3X95T/00X
Cabinet	A396107	Green, Model L3X95T/00S
Cabinet	A396115	Blue, Model L3X95T/00X
Cabinet	A396120	Yellow, Model L3X95T/00E
Cabinet	A396121	Orange, Model L3X95T/00W
Handle	A367331	Model L3X95T/00S
Handle	A367337	Models L3X95T/00X, L3X95T/00E, L3X95T/00W

WIRING DATA

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