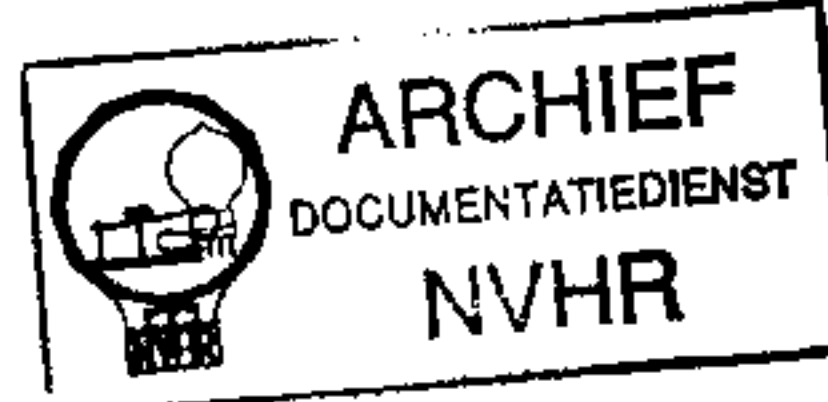
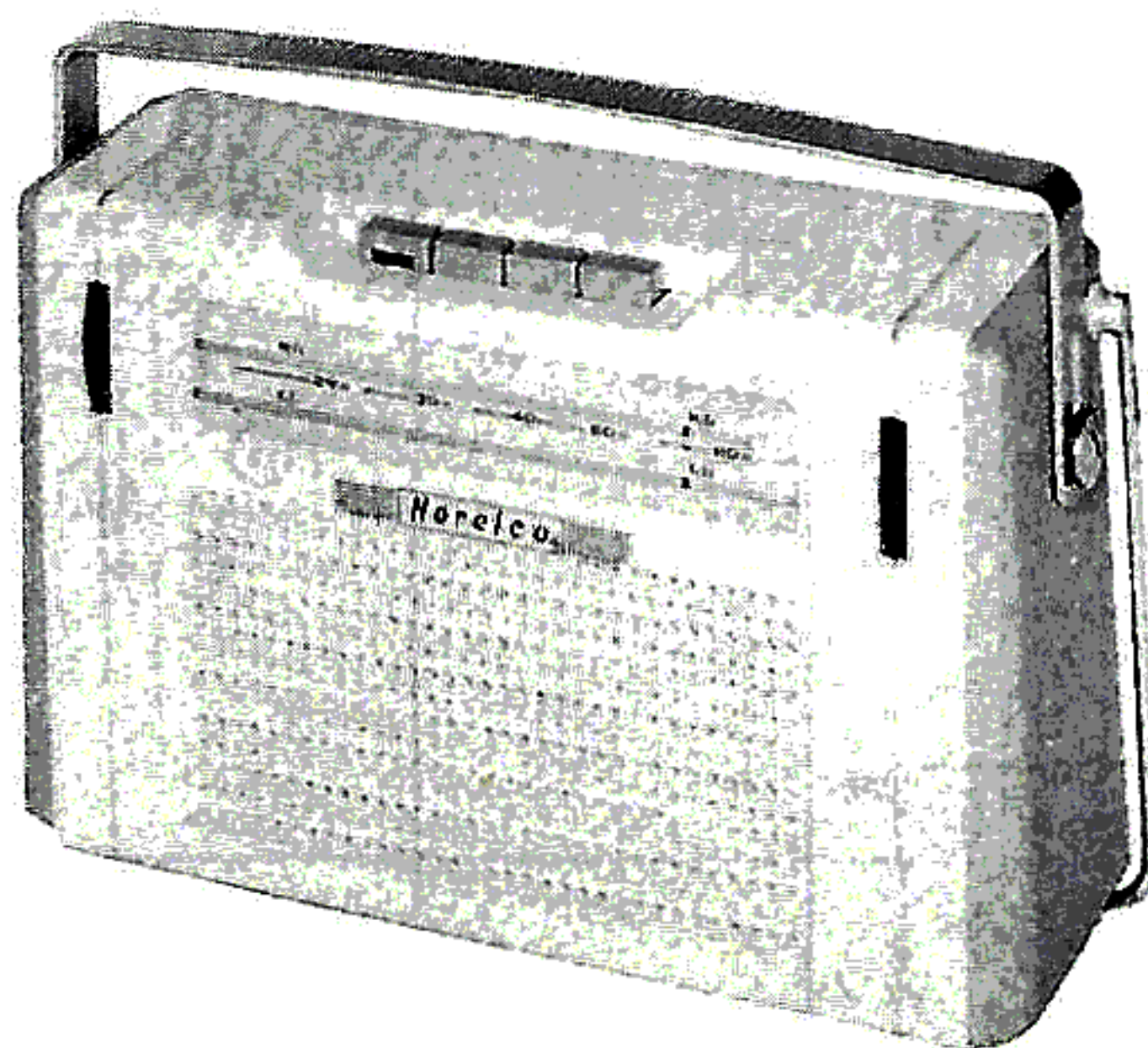


Met dank aan Jef Bos

Ned. Ver. v. Historie v



TRADE NAME	Norelco Model L3X88T		
SUPPLIER	North American Philips Co., Inc., 230 Duffy Ave., Hicksville, N. Y.		
TYPE SET	Battery Operated Transistorized Portable BC-SW Receiver		
POWER SUPPLY	9 Volts DC	RATING	13MA@9 Volts DC (No Signal, Min. Volume) 50MA@9 Volts DC (Signal, Normal Volume)
TUNING RANGE--BROADCAST	512-1635KC	SHORT WAVE	4.65 - 12.2MC

## 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.

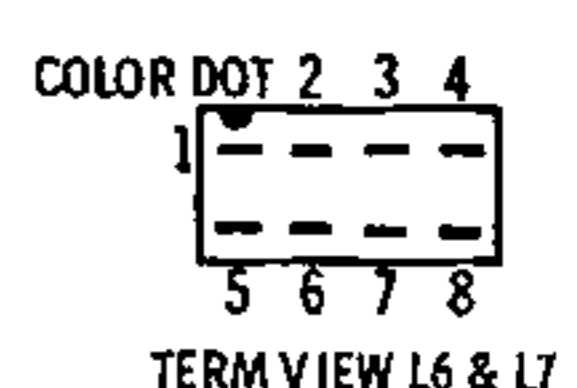
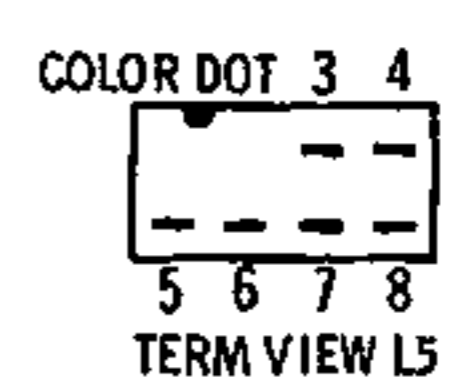
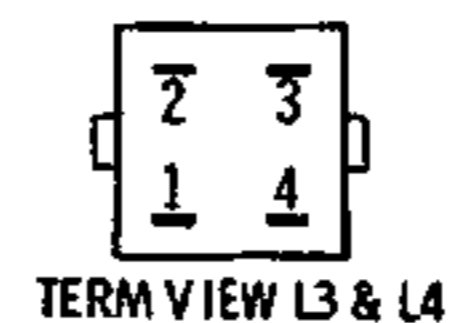
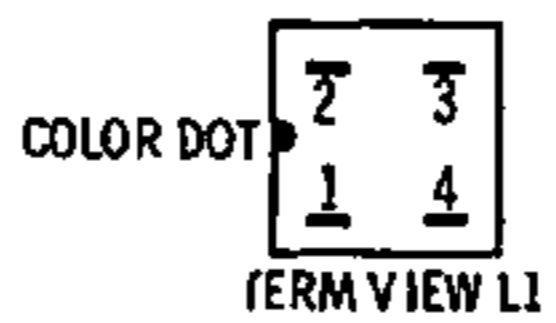
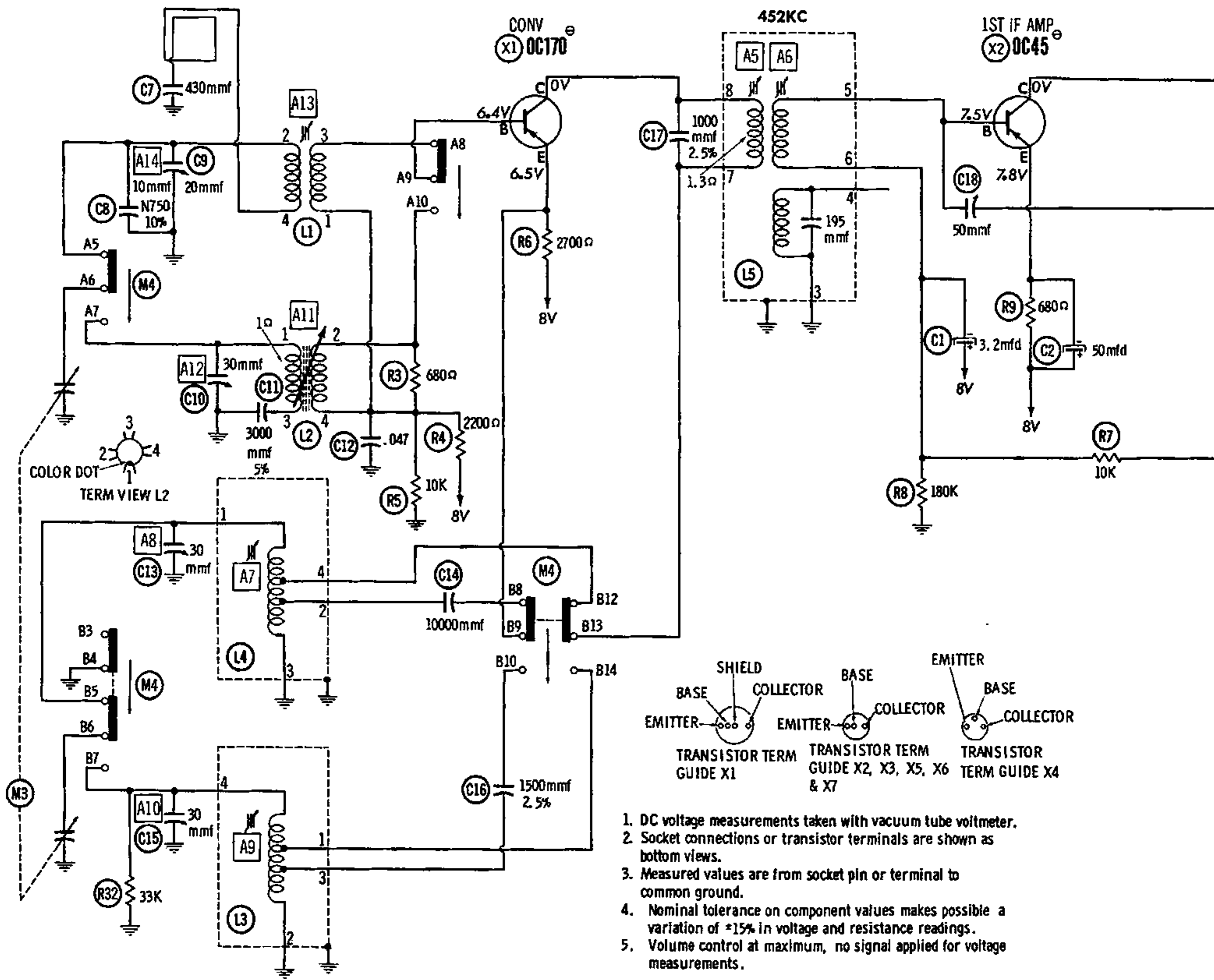
Suggested Alignment Tools: A1 thru A7, A9, A13, . . . . GENERAL CEMENT #8721, 8722  
WALSCO #2519

	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	OUTPUT METER	ADJUST	REMARKS
1.	Loop	452KC (400v Mod.)	(BC) Tuning gang fully open.	Across voice coil.	A1, A2, A3, A4, A5, A6	Fashion loop of several turns of wire and radiate signal into loop of receiver. Adjust for maximum output.
2.	"	512KC	(BC) Tuning gang fully closed.	"	A7	"
3.	"	1635KC	(BC) Tuning gang fully open.	"	A8	Adjust for maximum output. Repeat Steps 2 and 3.
4.	"	4.65MC	(SW) Tuning gang fully closed.	"	A9	Adjust for maximum output.
5.	"	12.2MC	(SW) Tuning gang fully open.	"	A10	Adjust for maximum output. Repeat Steps 4 and 5.
6.	"	600KC	(BC) 600KC Signal.	"	A11	Adjust for maximum output.
7.	"	1500KC	(BC) 1500KC Signal.	"	A12	Adjust for maximum output. Repeat Steps 6 and 7.
8.	"	5.05MC	(SW) 5.05MC Signal.	"	A13	Adjust for maximum output.
9.	"	11.7MC	(SW) 11.7MC Signal.	"	A14	Adjust for maximum output. Repeat Steps 8 and 9.

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

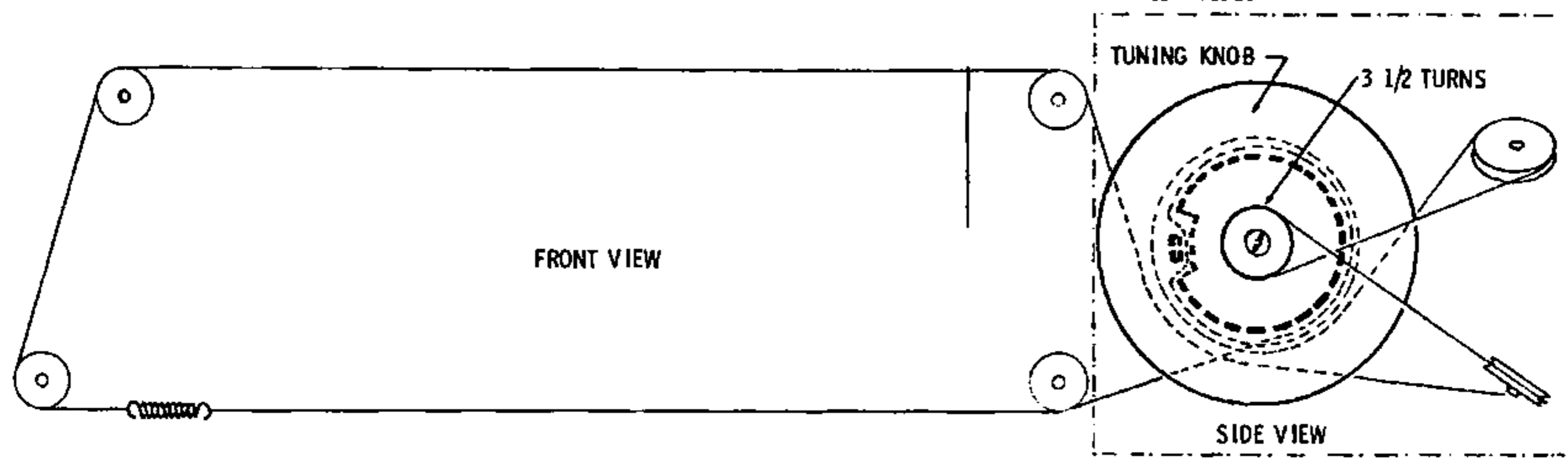
The listing of any available replacement part herein does not constitute in any case a recommendation, warranty or guaranty by Howard W. Sams & Co., Inc., as to the quality and suitability of such replacement part. The numbers of these parts have been compiled from information furnished to Howard W. Sams & Co., Inc., by the manufacturers of KFI24

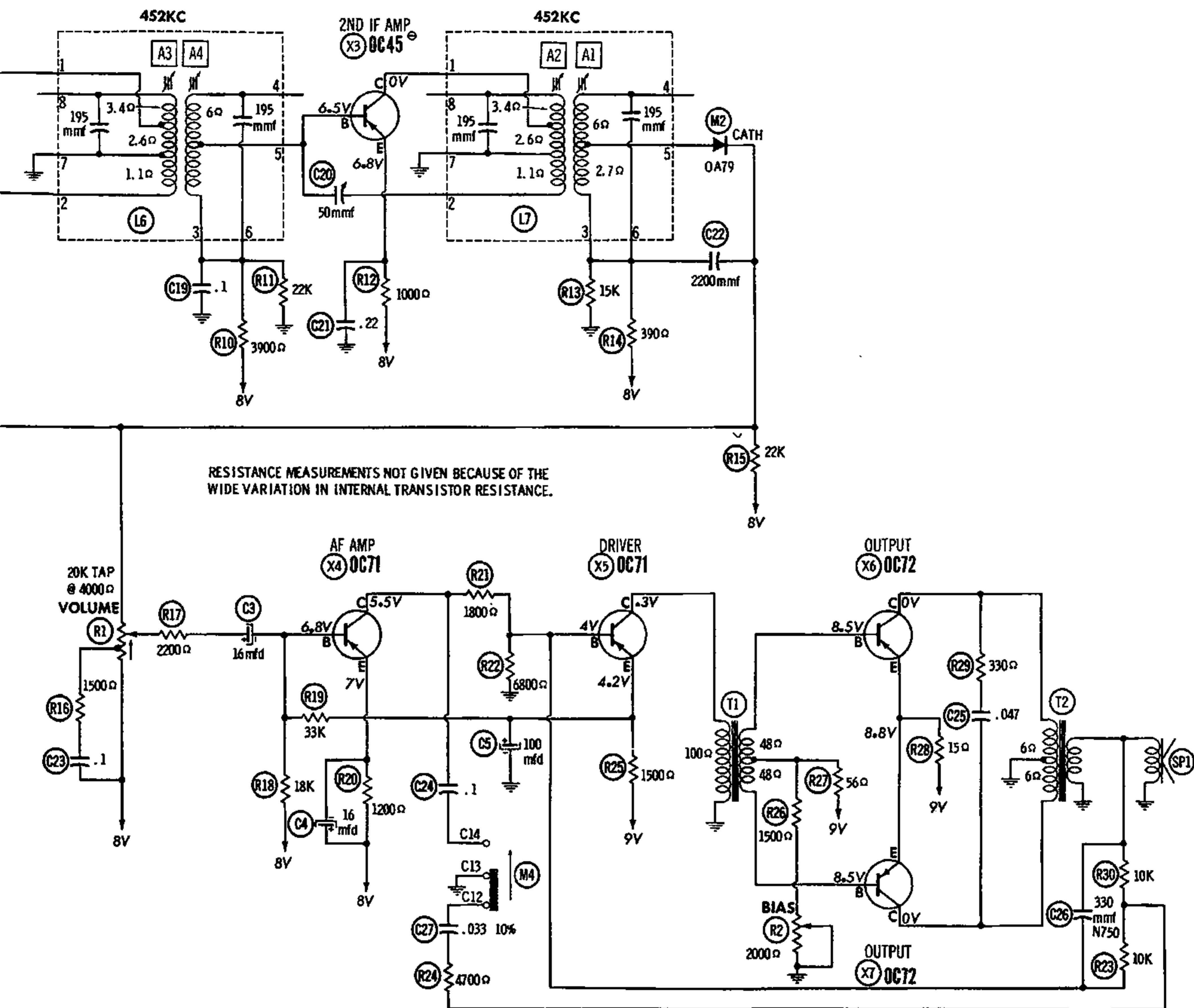
the particular type of replacement part listed. Reproduction or use, without express permission, of editorial or pictorial content, in any manner, is prohibited. No patent liability is assumed with respect to the use of the information contained herein. © 1960 Howard W. Sams & Co., Inc., Indianapolis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



### DIAL CORD STRINGING

TUNING GANG FULLY CLOSED

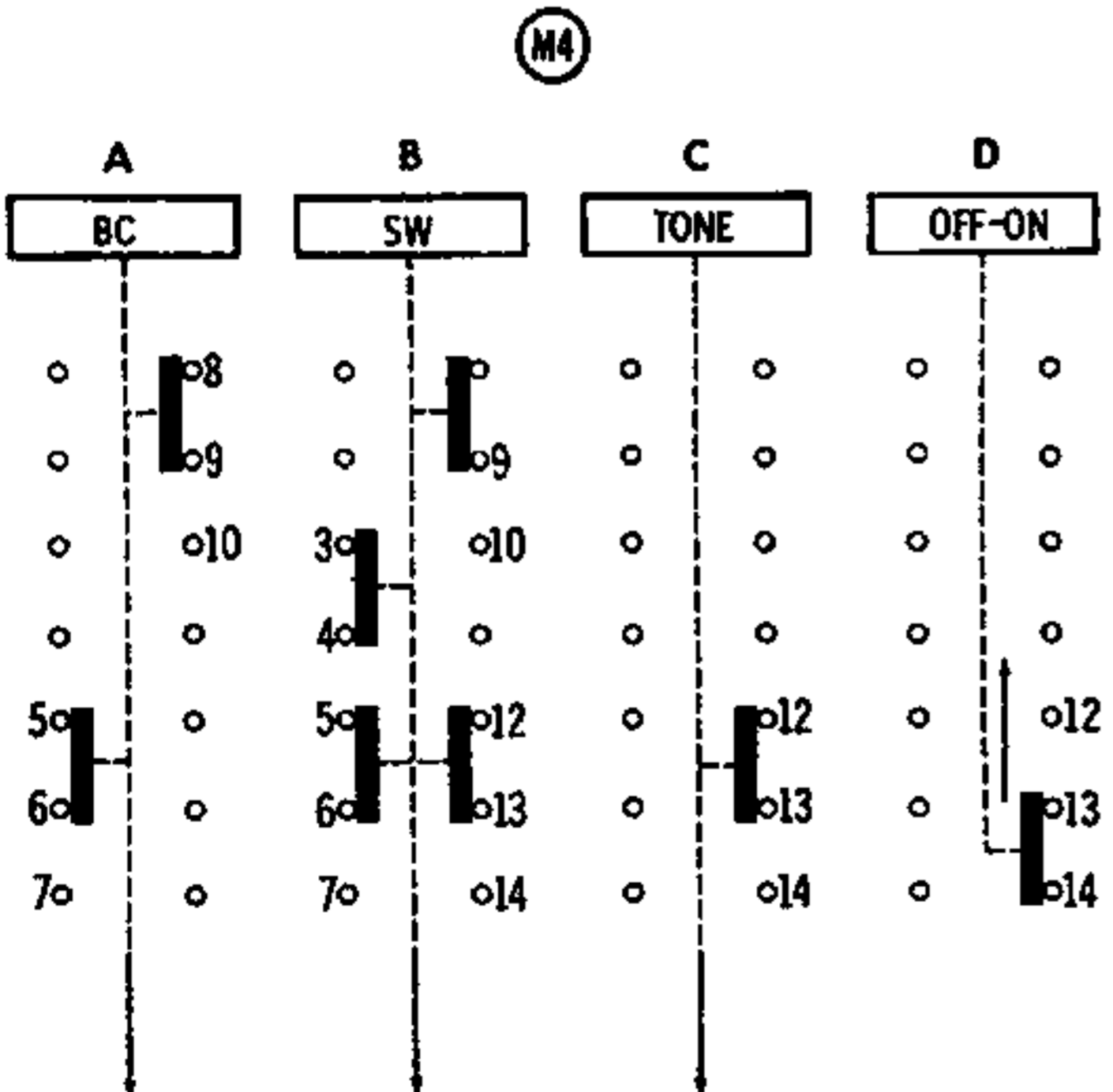
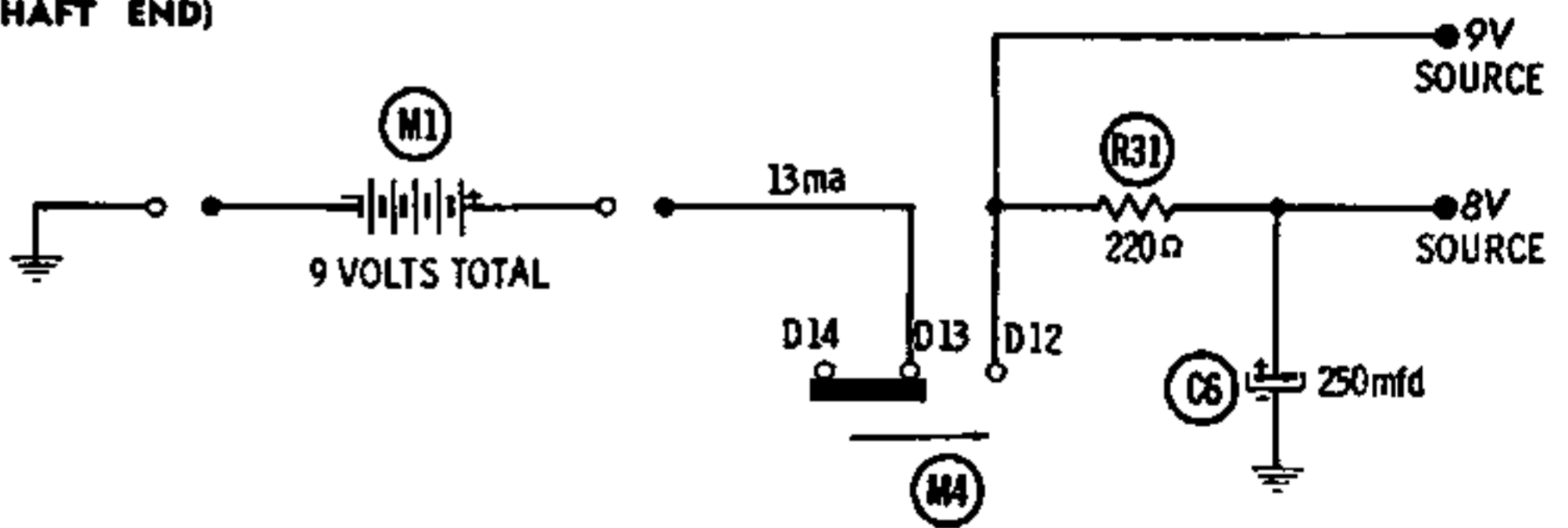




SEE PARTS LIST FOR ALTERNATE VALUE OR APPLICATION

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

ARROWS ON CONTROLS INDICATE CLOCKWISE ROTATION (CONTROL VIEWED FROM SHAFT END)

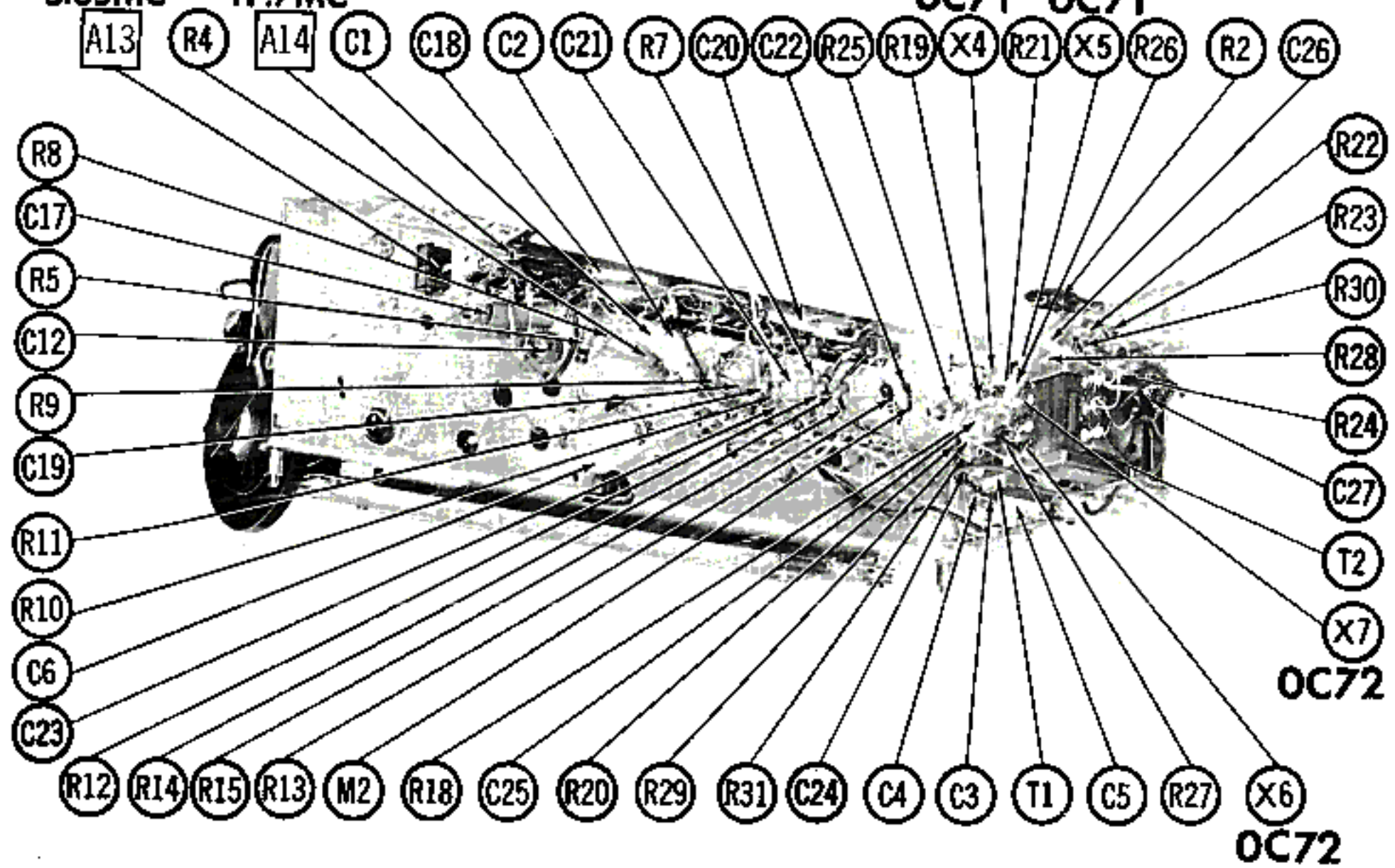


PUSHBUTTON SWITCH ASSEMBLY SHOWN WITH OFF-ON PUSH-BUTTON DEPRESSED

SW ANT  
5.05MC

SW ANT  
11.7MC

OC71 OC71



CHASSIS BOTTOM VIEW

# PARTS LIST AND DESCRIPTIONS

## WIRING DATA

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

### TRANSISTORS

ITEM No.	ORIG. TYPE	USE	REPLACEMENT DATA			NOTES
			RCA PART No.	RAYTHEON PART No.	SYLVANIA PART No.	
X1	OC170①	Converter	2N371		2N371	PNP
X2	OC45②	1st IF Amplifier	2N410	2N483	2N410	PNP
X3	OC45②	2nd IF Amplifier	2N410	2N483	2N410	PNP
X4	OC71	AF Amplifier	2N406	2N362		PNP
X5	OC71	Driver	2N406	2N362		PNP
X6	OC72	Output	2N408	2N360		PNP Matched
X7	OC72	Output	2N408	2N360		PNP Pair

- ① Alternate Type 2N371 may be used.  
② Alternate Type 2N410 may be used.

### 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	3.2	70	909/ E3, 2	PRS1400	NLW3-100	TT80X4	TD-4-150	TE-1403	
C2	50	12.5	909/ B50	XPP-15050	BBR50-25	TT15X50	ML50-15	TE-1160	
C3	16	12.5	AC5703/ 16	XPP-25015	NLW15-25	TT25X15	ML15-25	TE-1205	
C4	16	12.5	AC5703/ 16	XPP-25015	NLW15-25	TT25X15	ML15-25	TE-1205	
C5	100	12.5	909/ B100	PRS1200	BBR100-25	TC2501	ML100-25	TE-1211	
C6	250	12.5	910/ B250	PRS1210	BR2502	TC50025	TD-250-15	TE-1138	

### FIXED CAPACITORS

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

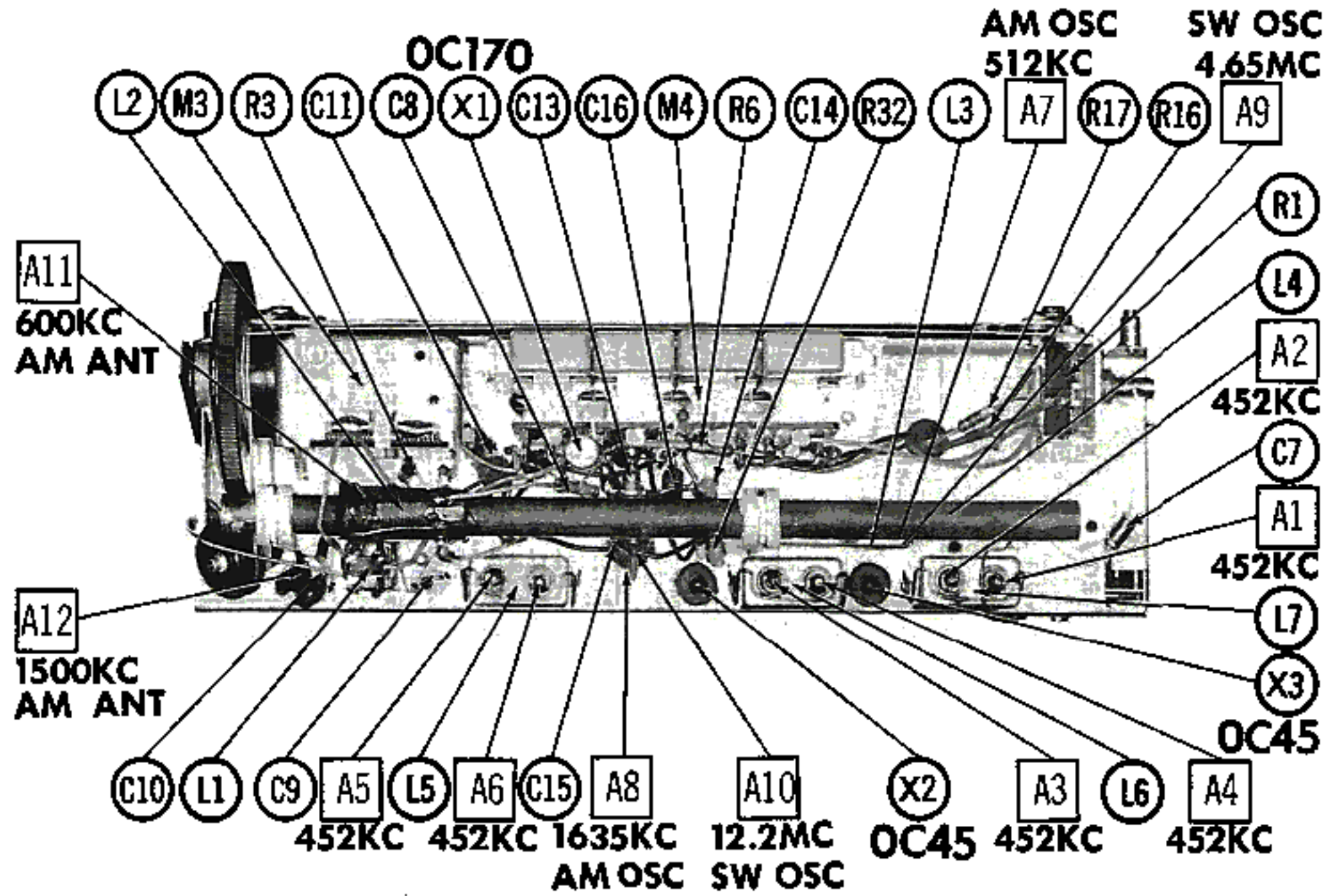
ITEM No.	RATING	REMARKS	REPLACEMENT DATA					
			AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ELMENCO PART No.	MALLORY PART No.	SPRAGUE PART No.
C7	430			DD-471	L10T42	CCD-471	B-347	10TS-T47
C8	10 N750 10%		N750-SI 10	TCN-10	C10Q10U	CCTN-100	CN7-410	10TCU-Q10
C9	20	*						
C10	30	*						
C11	3000 5%				1R5D33	CM-19B-302J	MCE461	MS-23
C12	.047 125V		P288N-047	DD-503	CUB2S47	4DP-3-473	GEM-4147	2TM-S47
C13	30	*						
C14	10000		SI 10000	D6-103	BYA10S1	CCD-103	B-110	5HK-S10
C15	30	*						
C16	1500 2.5%					CM-20C-152G	MCE456	
C17	1000 2.5%					CM-20E-102G	MCE255	
C18	50	*						
C19	.1 125V		P288N-1	DF-104	CUB2P1	2DP-3-104	GEM-201	2TM-P1
C20	50	*						
C21	.22 125V		P288N-22		CUB2P22	2DP-4-224	GEM-2022	2TM-P22
C22	2200		SI 2200	DD-222	BYA10D22	CCD-222	B-222	5HK-D22
C23	.1 125V		P288N-1	DF-104	CUB2P1	2DP-3-104	GEM-201	2TM-P1
C24	.1 125V		P288N-1	DF-104	CUB2P1	2DP-3-104	GEM-201	2TM-P1
C25	.047 125V		P288N-047	DD-503	CUB2S47	4DP-3-473	GEM-4147	2TM-S47
C26	330 N750		N750-SI 330	TCN-330	C10T33U		CN7-333	10TCU-T33
C27	.033 250V 10%		V84C4S33-10%		PM6S33	4DP-2-333	GEM-1613	6TM-S33

\* Nominal Value

### 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.	
R1	20K 4000Ω Tap	1/2	B163865					Volume
R2	2000Ω	1/2	B151422					Bias

**CHASSIS—TOP VIEW**



# PARTS LIST AND DE

## RESISTORS (IRC or EQUIVALENT)

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

ITEM No.	RATING	REMARKS
R3	680Ω	Note 1
R4	2200Ω	
R5	10K	
R6	2700Ω	
R7	10K	
R8	180K	
R9	680Ω	
R10	3900Ω	
R11	22K	
R12	1000Ω	

ITEM No.	RATING	REMARKS
R13	15K	
R14	390Ω	
R15	22K	
R16	1500Ω	
R17	2200Ω	
R18	18K	
R19	33K	
R20	1200Ω	
R21	1800Ω	
R22	6800Ω	

ITEM No.	RATING	REMARKS
R23	10K	
R24	4700Ω	
R25	1500Ω	
R26	1500Ω	
R27	56Ω	
R28	15Ω	
R29	330Ω	
R30	10K	
R31	220Ω	
R32	33K	

Note 1. Not used in some versions.

## COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA					NOTES
		NORELCO PART No.	Merit PART No.	Miller PART No.	Ram PART No.	Stancor PART No.	
L1	SW Ant. Trans.	A380470					
L2	Loopstick	A380408					
L3	SW Osc. Coil	A312926					
L4	BC Osc. Coil	A312881					
L5	1st IF Trans.	A312884					
L6	2nd IF Trans.	A312842					
L7	3rd IF Trans.	A312841					

## 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	1.3	1	A316206					

## TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE		REPLACEMENT DATA					NOTES
	PRI.	SEC.	NORELCO PART No.	Merit PART No.	Ram PART No.	Stancor PART No.	Thordarson PART No.	
T2	36Ω CT	3-4Ω	918108					

# DESCRIPTIONS (Continued)

## SPEAKER

ITEM No.	TYPE			REPLACEMENT DATA		NOTES
				NORELCO PART No.	QUAM PART No.	
	SIZE	FIELD	V. C. IMP.			
SP1	4"x 6"	PM	3-4Ω	AD3460Z	46A15Z3.8	

## BATTERIES

ITEM No.	VOLTAGE	NORELCO PART No.	REPLACEMENT DATA						NOTES
			BURGESS		EVEREADY		MALLORY		
			"A"	"B"	"A"	"B"	"A"	"B"	
M1	1.5V			230 *		A100 *		M-13R *	* 6 Required

## CRYSTAL DIODES

ITEM No.	ORIG. TYPE	REPLACEMENT DATA			NOTES
		NORELCO PART No.	RAYTHEON PART No.	SYLVANIA PART No.	
M2	0A79		IN295	IN295	Detector (Pigtail)

## MISCELLANEOUS

ITEM No.	PART NAME	NORELCO PART No.	NOTES
M3 M4	Tuning Cap. Switch	4900204 A379210	2 Gang (Ant. 8-533mmf, Osc. 7-151mmf) Pushbutton Assembly; Includes off switch, Tone, Short Wave, AM.

## CABINETS & CABINET PARTS

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

NAME	PART NO.	DESCRIPTION
Knob	P407771/ 799	Tuning Volume
Knob	P407740/ 799	
Dial (S)	A395584	
Dial (OV)	A395585	
Dial (Can.)	A395586	
Cabinet	A378187	
Cabinet Front	P521007/ 159	
Cabinet Rear	P545015/ 159	
Handle	A367324	