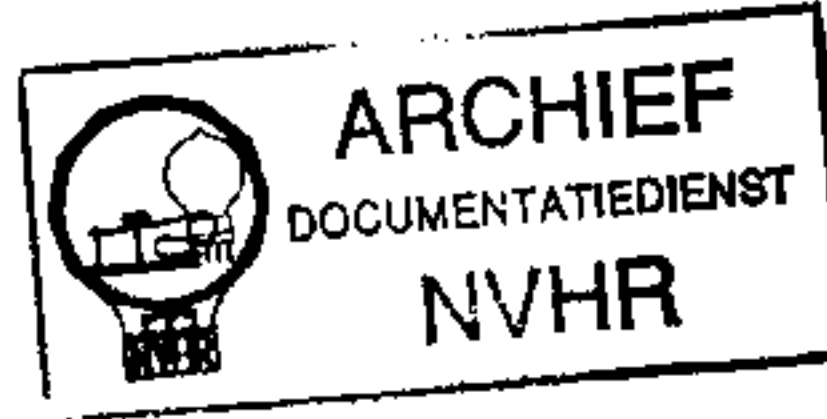


FACT Folder

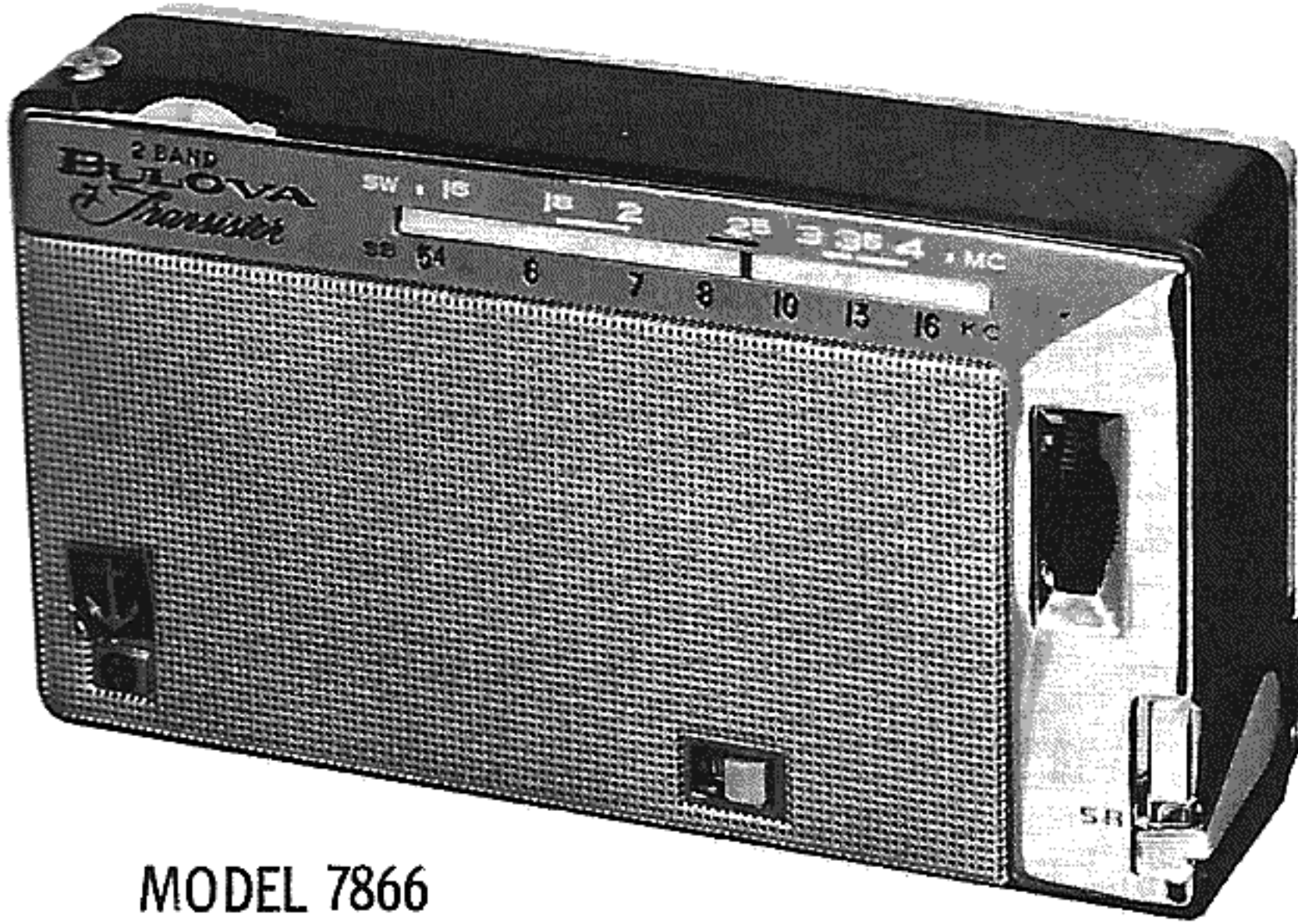
with CIRCUITRACE[®]

**BULOVA MODELS
7822, 7855, 7866**

Ned. Ver. v. Historie v/d Radio



Met dank aan Jef Bos



MODEL 7866

TRADE NAME	Bulova Models 7822, 7855, 7866		
SUPPLIER	Bulova Watch Co., Bulova Park, Flushing 70, N. Y.		
TYPE SET	Battery Operated Transistorized Portable BC-SW Receiver		
POWER SUPPLY	6 Volts DC	RATING	6MA@6 Volts DC (No Signal, Min. Volume) 15MA@6 Volts DC (Signal, Normal Volume)
TUNING RANGE—BROADCAST	540—1600KC	SHORT WAVE	1.6 — 4.0MC

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 S9 reading.

Suggested Alignment Tools:

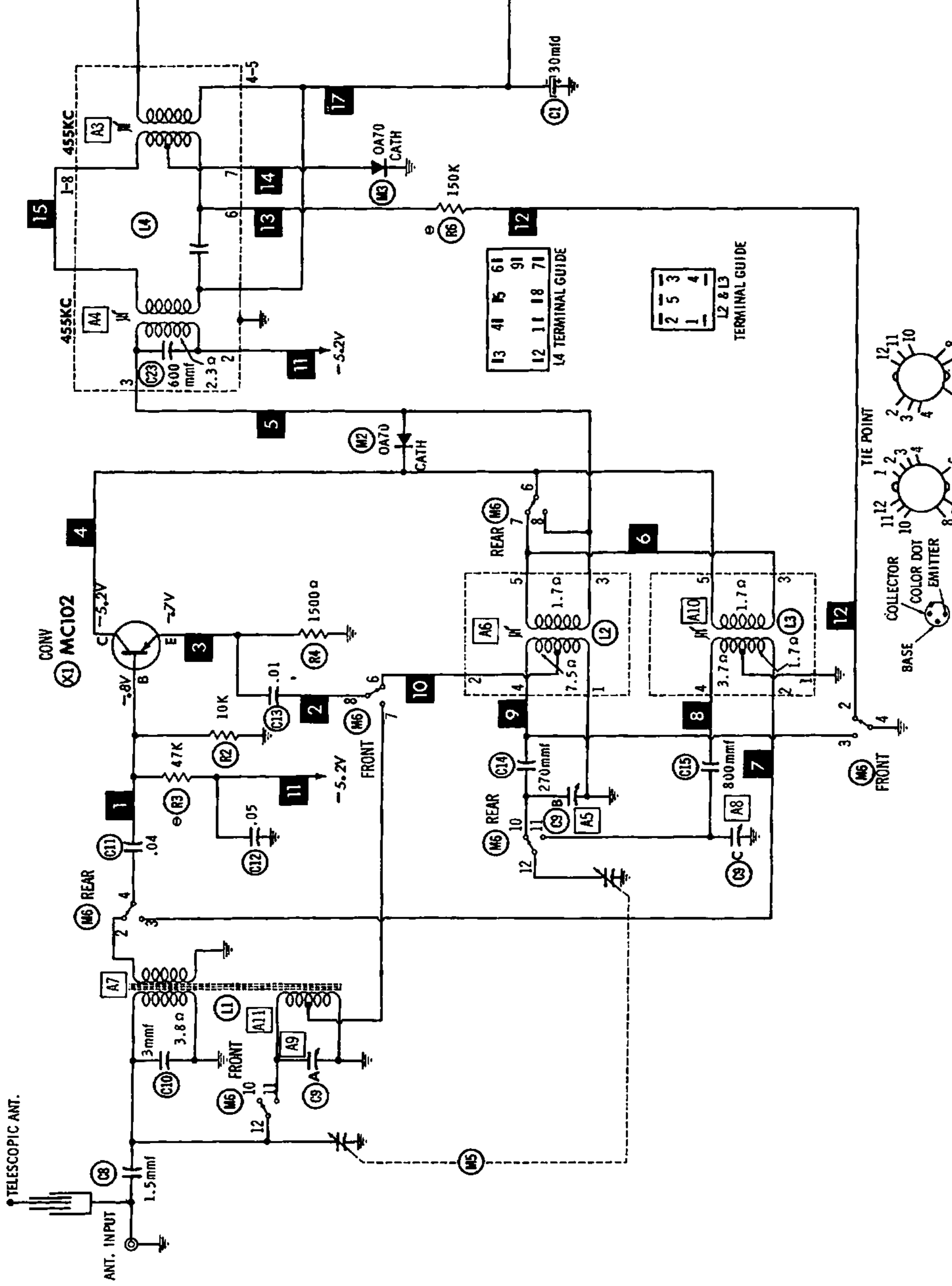
A1 thru A5, A8, A9..... GENERAL CEMENT #8607, 9291, 9294
WALSCO #2520, 2522, 2523, 2524, 2534, 2537
A6, A10..... GENERAL CEMENT #8282, 8606, 8606-L, 9091
WALSCO #2526, 2541, 2542, 2543, 2544

SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	OUTPUT METER	ADJUST	REMARKS
Fasten loop of several turns of wire and radiate signal into loop of receiver.	455KC (400% Mod.)	(SB) Tuning gang fully open.	Across voice coil.	A1, A2, A3, A4	Adjust for maximum output.
"	1600KC	1600KC	"	A5	"
"	600KC	600KC	"	A6, A7	Adjust for maximum output. A7 is adjusted by moving coil turns along ferrite core.
"	4.0MC	(SW) 4.0MC	"	A8, A9	Adjust for maximum output.
"	1.6MC	1.6MC	"	A10, A11	Adjust for maximum output. A11 is adjusted by moving coil turns along ferrite core. Repeat steps 2 thru 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

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. ©1962 Howard W. Sams & Co., Inc., Indianapolis 6, Indiana. Printed in U.S. of America

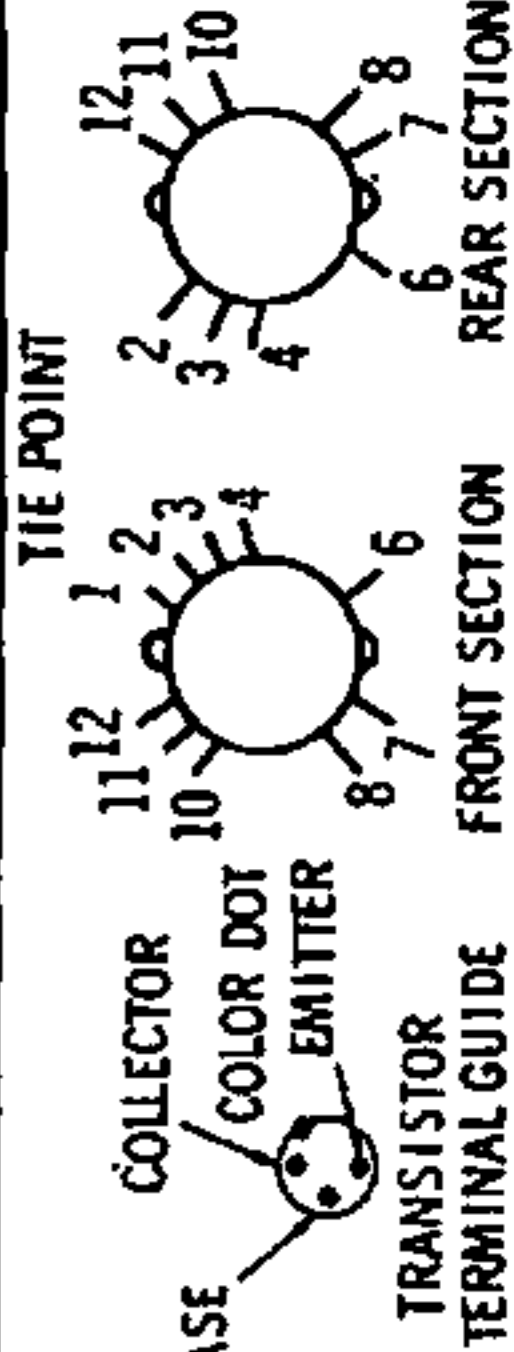


L4 TERMINAL GUIDE

13	41	15	61
12	11	18	71

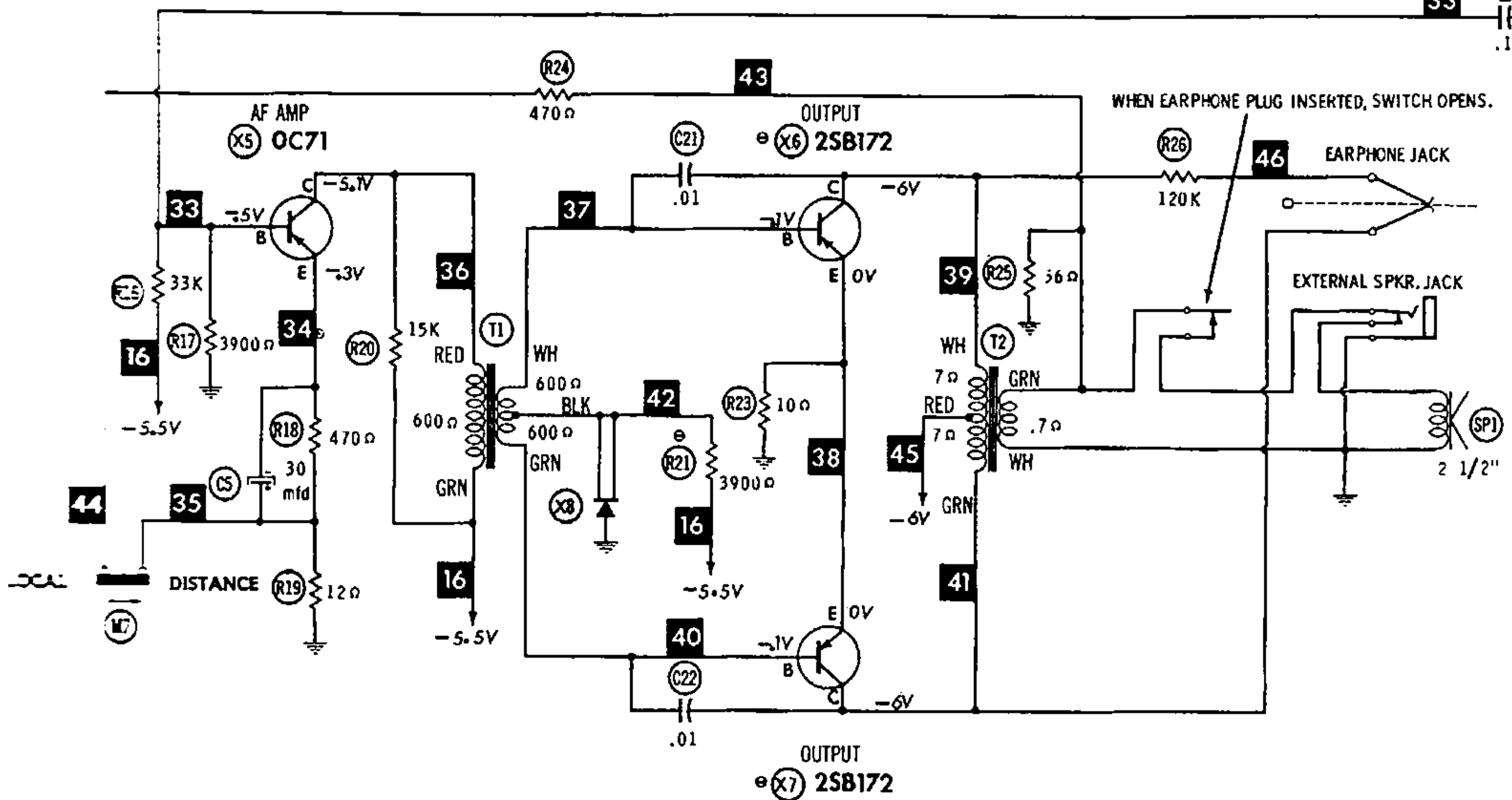
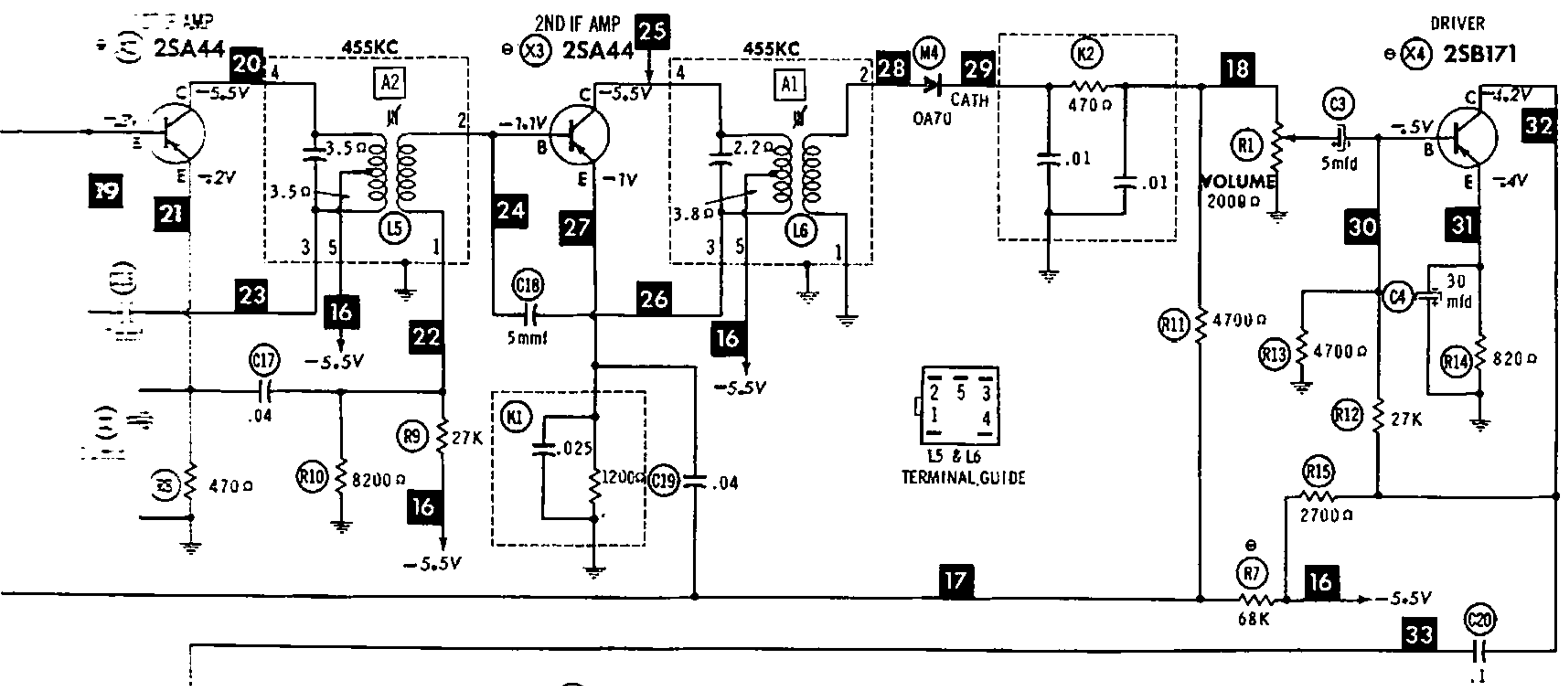
L2 & L3 TERMINAL GUIDE

2	5	3
1	1	4

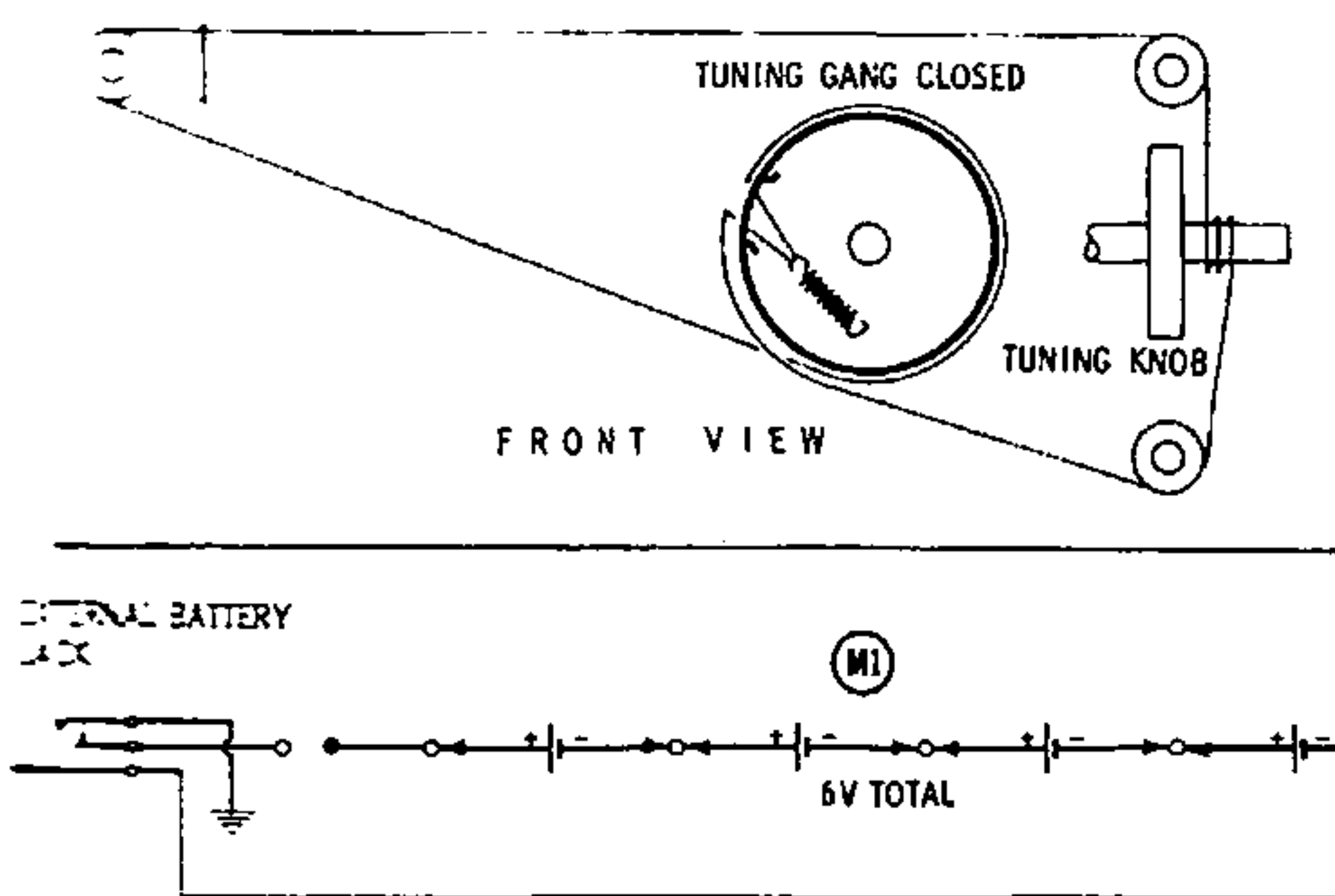


A PHOTOFAC STANDARD NOTATION SCHEMATIC
with **CIRCUTRACE**
© Howard W. Sams & Co., Inc. 1962

S8-SW BAND SWITCH TERMINAL GUIDE
(SHOWN IN SB POSITION!)



DIAL CORD STRINGING



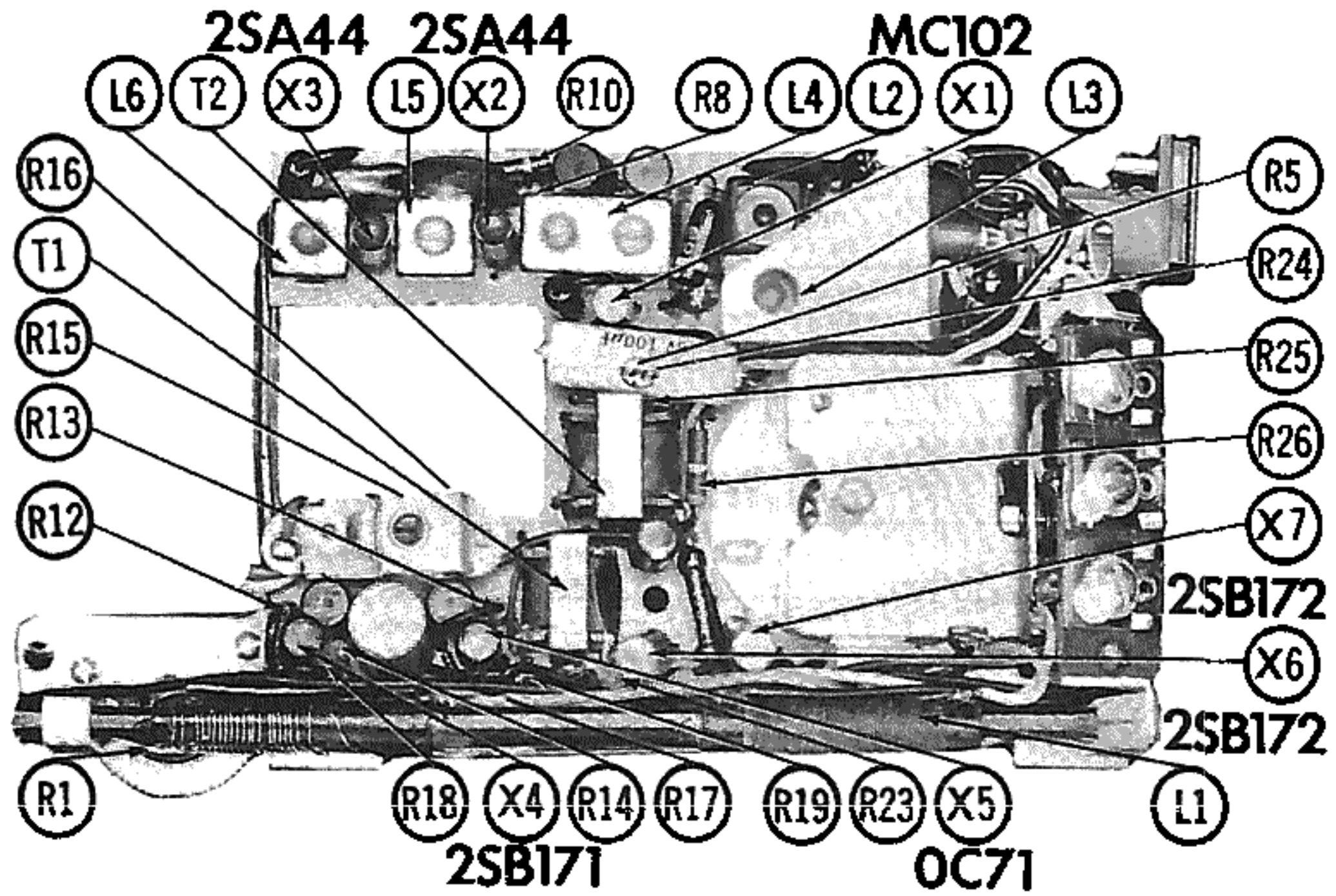
RESISTANCE MEASUREMENTS NOT GIVEN BECAUSE OF THE WIDE VARIATION IN INTERNAL TRANSISTOR RESISTANCE.

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

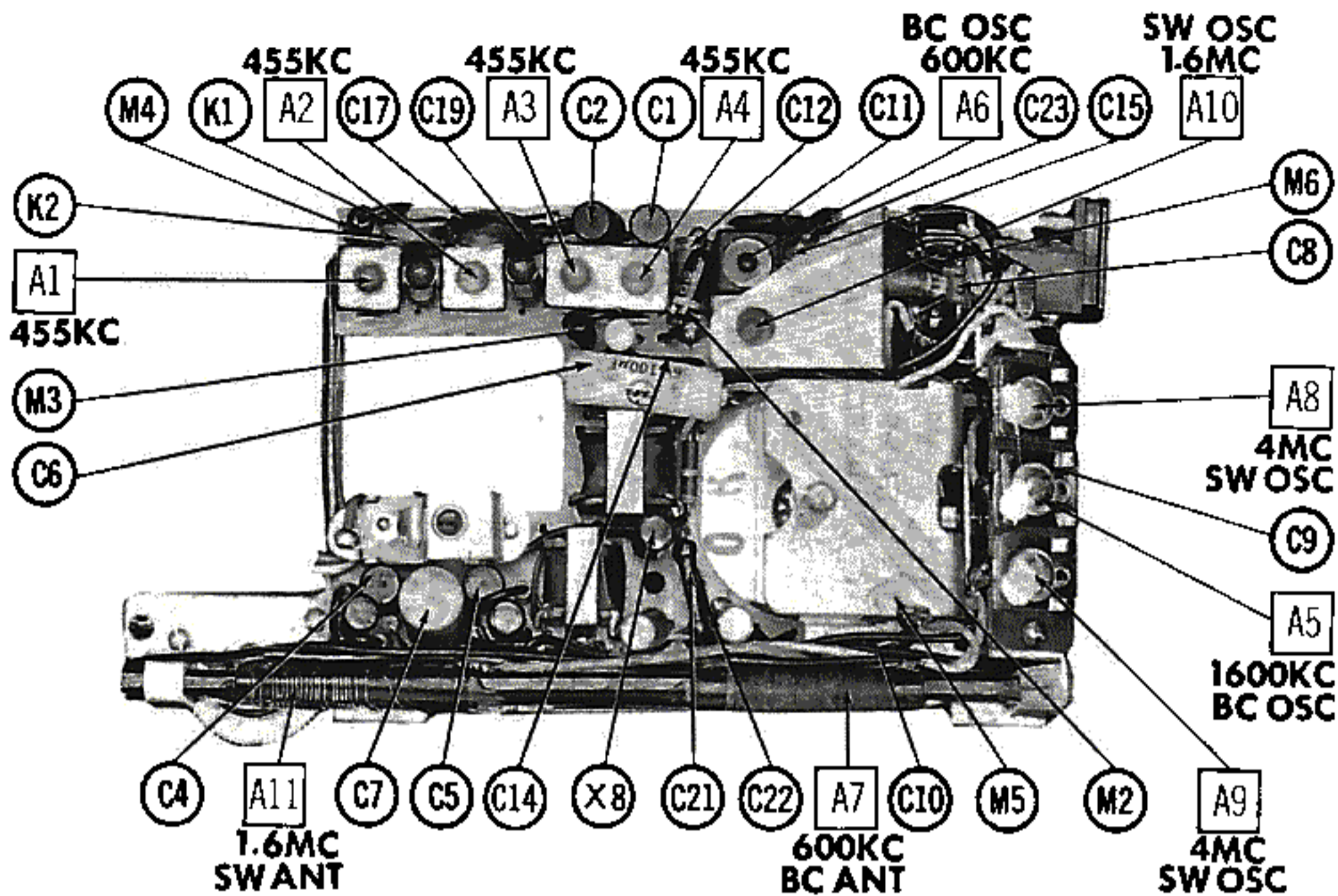
SEE PARTS LIST FOR ALTERNATE VALUE OR APPLICATION

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

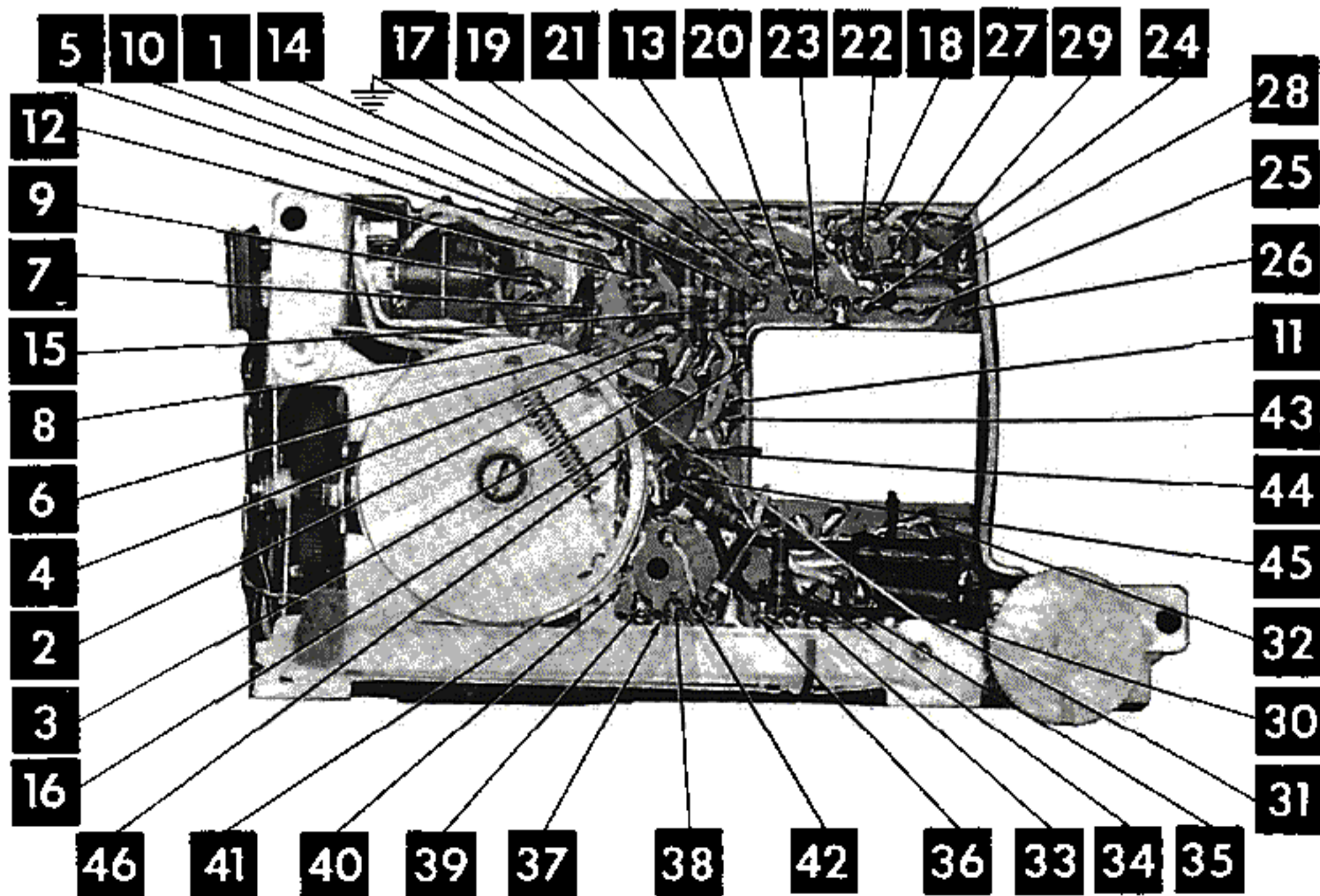
NUMBERS ASSIGNED TO COILS, SWITCHES, PLUGS, SOCKETS, AND TRANSFORMERS ARE TO FACILITATE CIRCUIT TRACING OR COMPONENT REPLACEMENT AND MAY NOT NECESSARILY BE FOUND ON THE UNIT.



PRINTED BOARD-
RESISTOR, INDUCTOR & TRANSISTOR IDENT.



PRINTED BOARD-ALIGN., CAPACITOR & MISC. IDENT.



PARTS LIST AND DESCRIPTIONS

TRANSISTORS

ITEM No.	ORIG. TYPE	USE	REPLACEMENT DATA		NOTES
			RCA PART No.	RAYTHEON PART No.	
X1	MC102	Converter	2N372		PNP
X2	2SA44	1st IF Amplifier	2N1525		PNP
	OC44*	1st IF Amplifier			PNP
X3	2SA44	2nd IF Amplifier	2N1525		PNP
	OC44*	2nd IF Amplifier			PNP
X4	2SB171	AF Amplifier	2N406		PNP
	OC71*	AF Amplifier			PNP
X5	OC71	Driver	2N406	2N362	PNP
X6	2SB172	Output	2N408		PNP
	OC72*	Output			PNP
X7	2SB172	Output	2N408		PNP
	OC72*	Output			PNP
X8		Bias Comp. (A33)	1N2326		

* Alternate

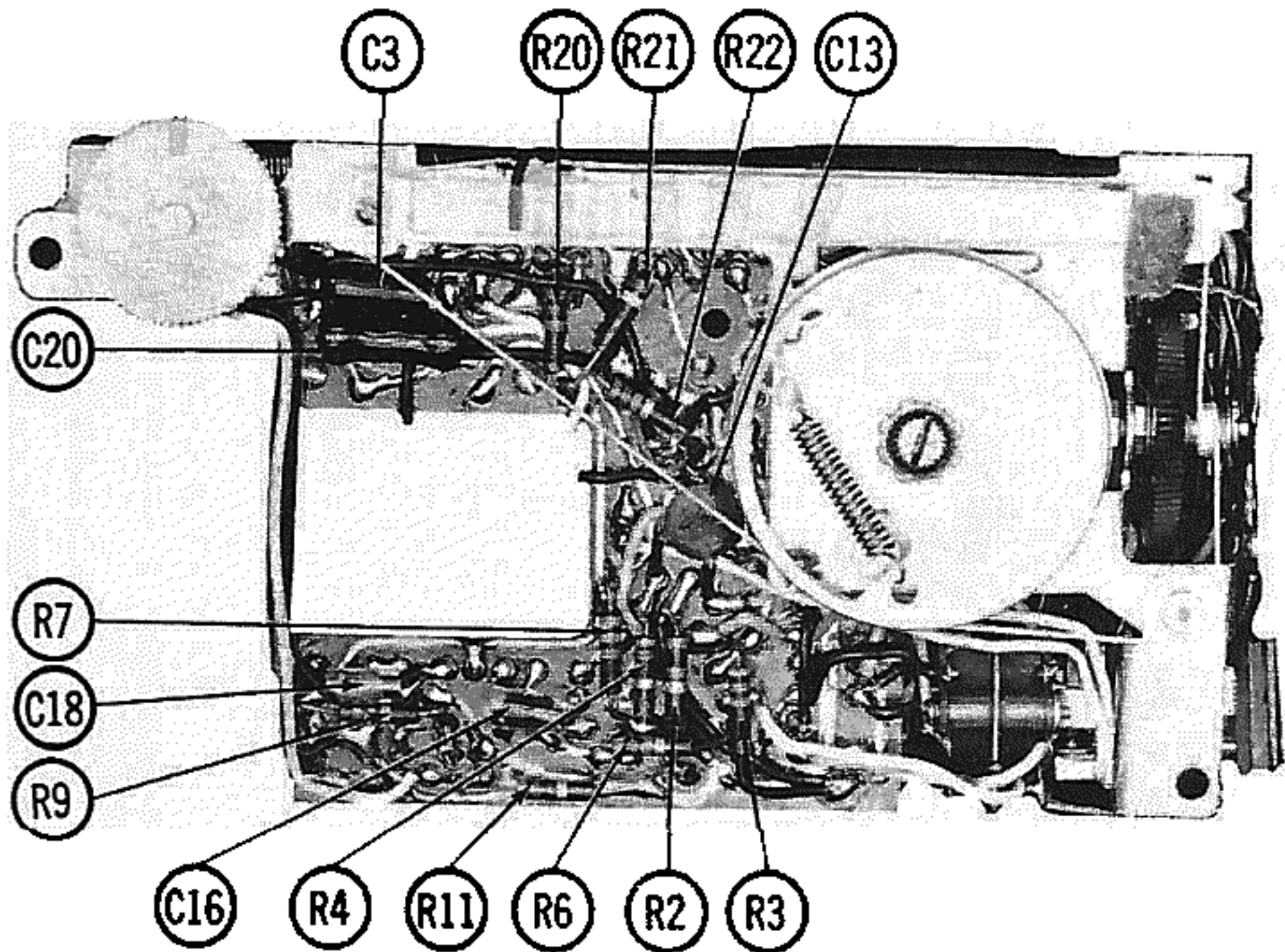
ELECTROLYTIC CAPACITORS

ITEM No.	RATING		REPLACEMENT DATA						
	CAP.	VOLT.	BULOVA PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	MALLORY PART No.	PYRAMID PART No.	SPRAGUE PART No.
C1	30	3	A-9	PTT10	NLW30-6	MT1-13	TT6X30	MLV30-6	TE-1092
C2	30	3	A-9	PTT10	NLW30-6	MT1-13	TT6X30	MLV30-6	TE-1092
C3	5	3	A-8	PTT4	NLW5-15	MT1-3	TT6X5	MLV5-3	TE-1052.2
C4	30	3	A-9	PTT10	NLW30-6	MT1-13	TT6X30	MLV30-6	TE-1092
C5	30	3	A-9	PTT10	NLW30-6	MT1-13	TT6X30	MLV30-6	TE-1092
C6	100	6	A-11	PTT30	NLW100-12	MT1-18	TT6X100	MLV100-6	TE-1102
C7	80	6	A-10	BCD6075	NLW75-10	MT1-18	TT6X80	MLV100-6	TE-1101.5

FIXED 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.
C8 C9A B C	1.5	} #A-8 Note 1 #A-15	NPO-SI 1.5	TCZ-1R5	C10V15C		CNO-515	10TCC-V15
C10	3		NPO-SI 3.0	TCZ-3R3	C10V3C	CCTO-3R3	CNO-533	10TCC-V30
C11	.04							
C12	.05		C80V503AM	DA-503	H-05S5		TA-150	TG-S50
C13	.01		C80V103AM	DA-103	H-05S1		TA-110	TG-S10
C14	270		SI 270	D6-271	L10T27	CCD-271	B-327	10TS-T27
C15	800		SI 820	D6-820	L10T8	CCD-801	B-382	10TS-T80
C16	7		NPO-SI 6.8	TCZ-6R8	C10V7C	CCTO-6R8	CNO-588	10TCC-V68

PRINTED BOARD -- BOTTOM VIEW



PARTS LIST AND DE

FIXED CAPACITORS (cont)

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.	
C17	.04	#A-15							
C18	5		NPO-SI 5.0	TCZ-4R7	C10V5C	CCTO-050	CNO-547	10TCC-V50	
C19	.04	#A-15							
C20	.1 100V		V84C2P1	DDA-104	DPMS2P1	1DP-2-104	GEM-201	2PS-P10	
C21	.01 100V		V84C2S1	DM-103	DPMS4S1	1DP-1-103	GEM-411	4PS-S10	
C22	.01 100V		V84C2S1	DM-103	DPMS4S1	1DP-1-103	GEM-411	4PS-S10	
C23	600			D6-801	L10T8		GP360	10TS-T60	

Note 1. If used, value may vary from 1.5 to 3.5mmf.
Bulova Part Number.

CONTROLS

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

ITEM No.	USE	RESISTANCE	REPLACEMENT DATA				
			BULOVA PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLORY PART No.
R1	Volume & Switch	2000Ω	A-7				

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
R2	10K			Note 1	R15	2700Ω			Note 4
R3	47K				R16	33K			
R4	1500Ω				R17	3900Ω			
R5	680Ω			R18	470Ω				
R6	150K			R19	12Ω				
R7	68K			R20	15K				
R8	470Ω			R21	3900Ω				
R9	27K			R22	150Ω				
R10	8200Ω			R23	10Ω				
R11	4700Ω			R24	470Ω				
R12	27K			R25	56Ω				
R13	4700Ω			R26	120K				
R14	820Ω								

Note 1. Value may vary from 27K to 56K.
Note 2. Value may vary from 150K to 560K.
Note 3. Value may vary from 47K to 100K.
Note 4. Value may vary from 2700Ω to 5600Ω.

COMPONENT COMBINATIONS

ITEM No.	USE	DESCRIPTION	BULOVA PART No.	REPLACEMENT DATA
K1	2nd IF Emitter Bias	.025mfd, 1200Ω		
K2	Diode RF Filter	.01mfd, .01mfd, 470Ω		

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA					NOTES
		BULOVA PART No.	Merit PART No.	Miller PART No.	Stancor PART No.	Workman TV PART No.	
L1A	BC Loopstick	A-4					
L1B	SW Loopstick						
L2	BC Osc.		A-34				
L3	SW Osc.		AM-158				
L4	1st IF		AM-145				
L5	2nd IF		A-37				
L6	3rd IF	A-38					

DESCRIPTIONS (Continued)

TRANSFORMER (DRIVER)

ITEM No.	TURNS RATIO		REPLACEMENT DATA					NOTES
			BULOVA PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.	
	PRI.	SEC.						
T1	1	1	A-2					

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE		REPLACEMENT DATA					NOTES
			BULOVA PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.	
	PRI.	SEC.						
T2	400Ω CT	10-12Ω	A-3					

SPEAKER

ITEM No.	TYPE			REPLACEMENT DATA		NOTES
				BULOVA PART No.	QUAM PART No.	
	SIZE	FIELD	V. C. IMP.			
SP1	2½"	PM	10-12Ω	A-1		

BATTERIES

ITEM No.	VOLTAGE	BULOVA PART No.	REPLACEMENT DATA						NOTES
			BURGESS		EVEREADY		MALLORY		
			"A"	"B"	"A"	"B"	"A"	"B"	
M1	1½V			930		1015		M-15R	4 Required

SIGNAL DIODES

ITEM No.	ORIG. TYPE	REPLACEMENT DATA			NOTES
		BULOVA PART No.	GENERAL ELECTRIC PART No.	RAYTHEON PART No.	
M2	OA70	A-30		1N80	Osc. Compensation Overload Detector, AVC
M3	OA70	A-30		1N80	
M4	OA70	A-30		1N80	

MISCELLANEOUS

ITEM No.	PART NAME	BULOVA PART No.	NOTES
M5	Tuning Cap.	A-39	2 Gang Band Selector Local-Distant (SPST Slide Type)
M6	Switch	A-5	
M7	Switch		

CABINETS & CABINET PARTS

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

NAME	PART NO.	DESCRIPTION
Dial Pointer	A-83	Tuning Volume Selector Specify Color
Knob	A-95	
Knob	A-96	
Lever	A-97	
Cabinet	AM-23	

WIRING DATA

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