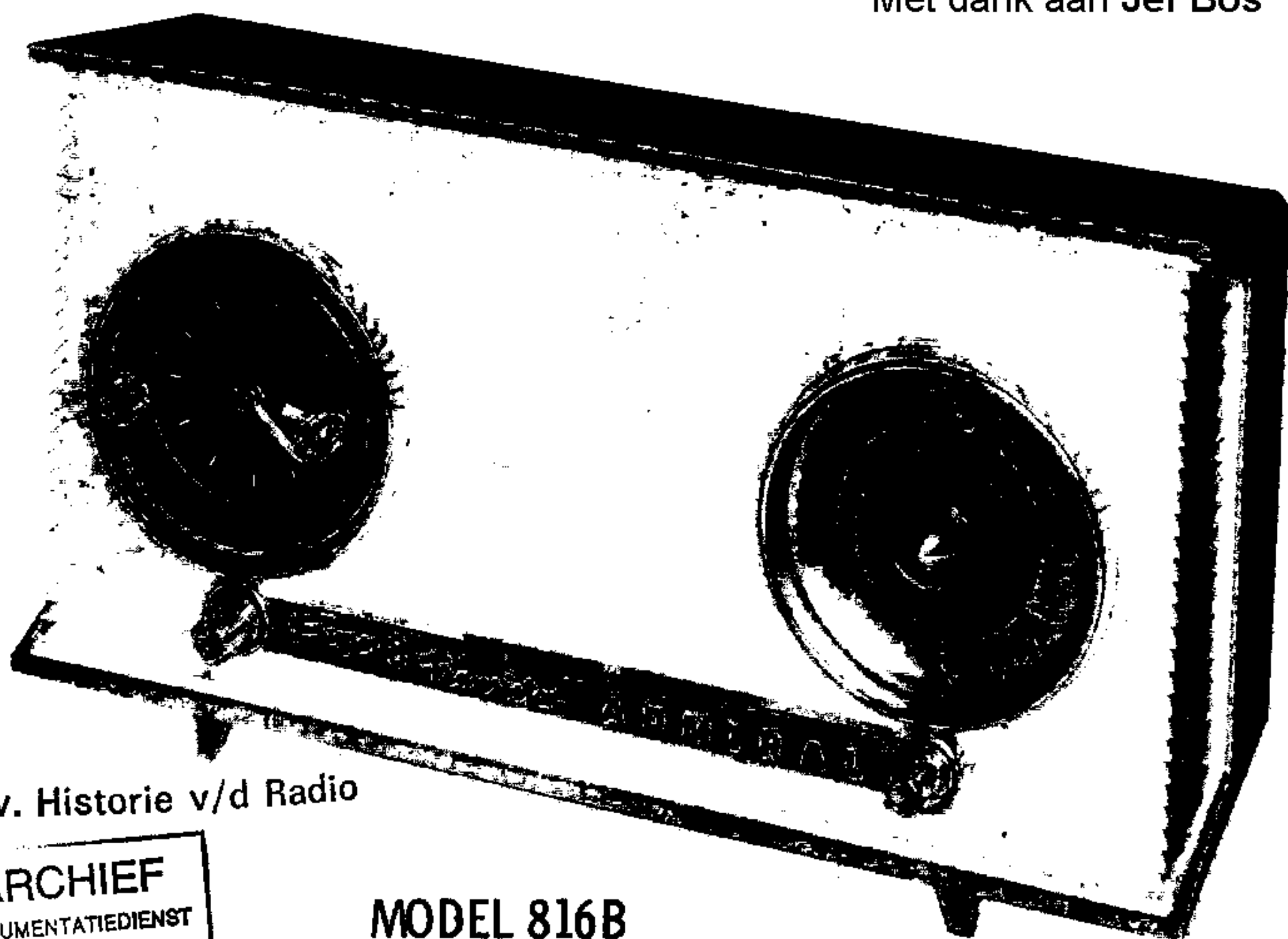
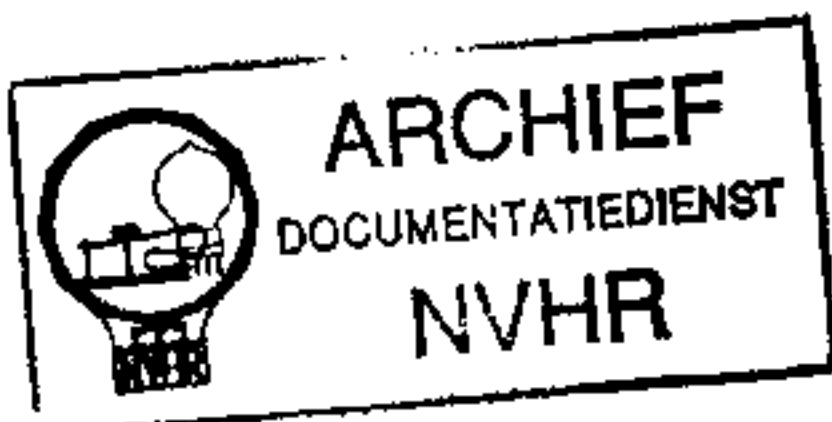


Met dank aan Jef Bos



Ned. Ver. v. Historie v/d Radio



MODEL 816B

TRADE NAME	Admiral Models 811B, 816B (Ch. 851C)		
MANUFACTURER	Admiral Corp., 3800 W. Cortland Street, Chicago 47, Illinois		
TYPE SET	Battery Operated Transistorized Portable AM Receiver With Clock		
POWER SUPPLY	9 Volts DC (Radio)	1.5 Volts DC (Clock)	RATING 10MA @ 9 Volts DC (No Signal, Min. Volume)
TUNING RANGE—BROADCAST	540 — 1620KC		15MA @ 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:

- A1, A2.... GENERAL CEMENT #5009, 8195, 8274, 8275, 8728, 8729, 8987, 8988, 8989
WALSCO #2515, 2531, 2532
- A3, A4... GENERAL CEMENT #5097, 8727
WALSCO #2515
- A5, A6.... GENERAL CEMENT #5004, 5008, 5009
WALSCO #2520

	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	OUTPUT METER	ADJUST	REMARKS
1.	Loop	455KC (400v Mod.)	Tuning gang fully open.	Across voice coil.	A1, A2, A3, A4	Fashion loop of several turns of wire and radiate signal into loop of receiver. Adjust for maximum output.
2.	"	1620KC	"	"	A5	"
3.	"	1400KC	Tune to 1400KC Signal.	"	A6	Adjust for maximum output while rocking tuning gang. Repeat Steps 2 and 3.

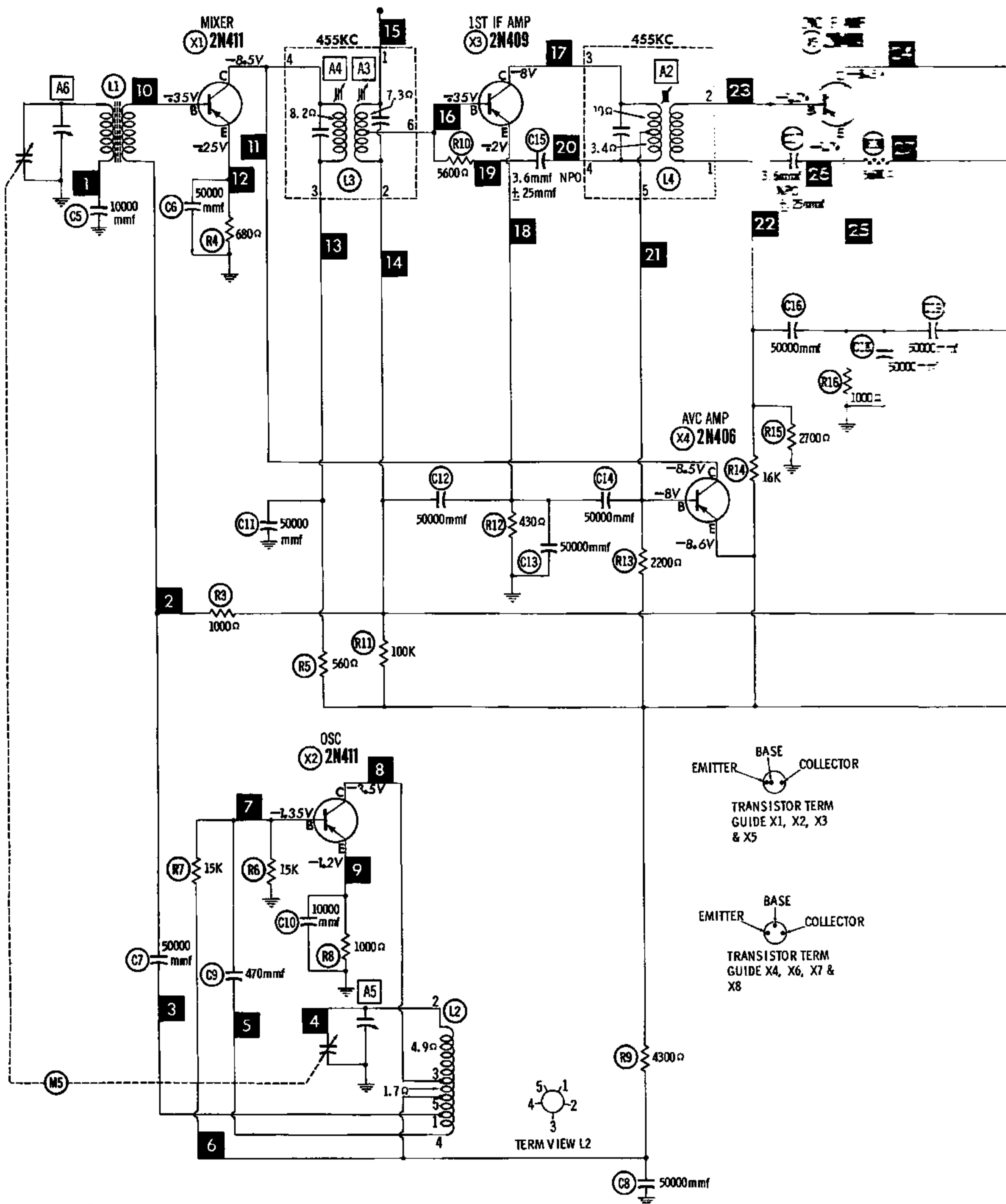
DISASSEMBLY

1. Remove 2 screws from cabinet bottom near front edge.
2. Remove 2 screws from cabinet back (upper section).
3. Separate cabinet rear from front.

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 JG937

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

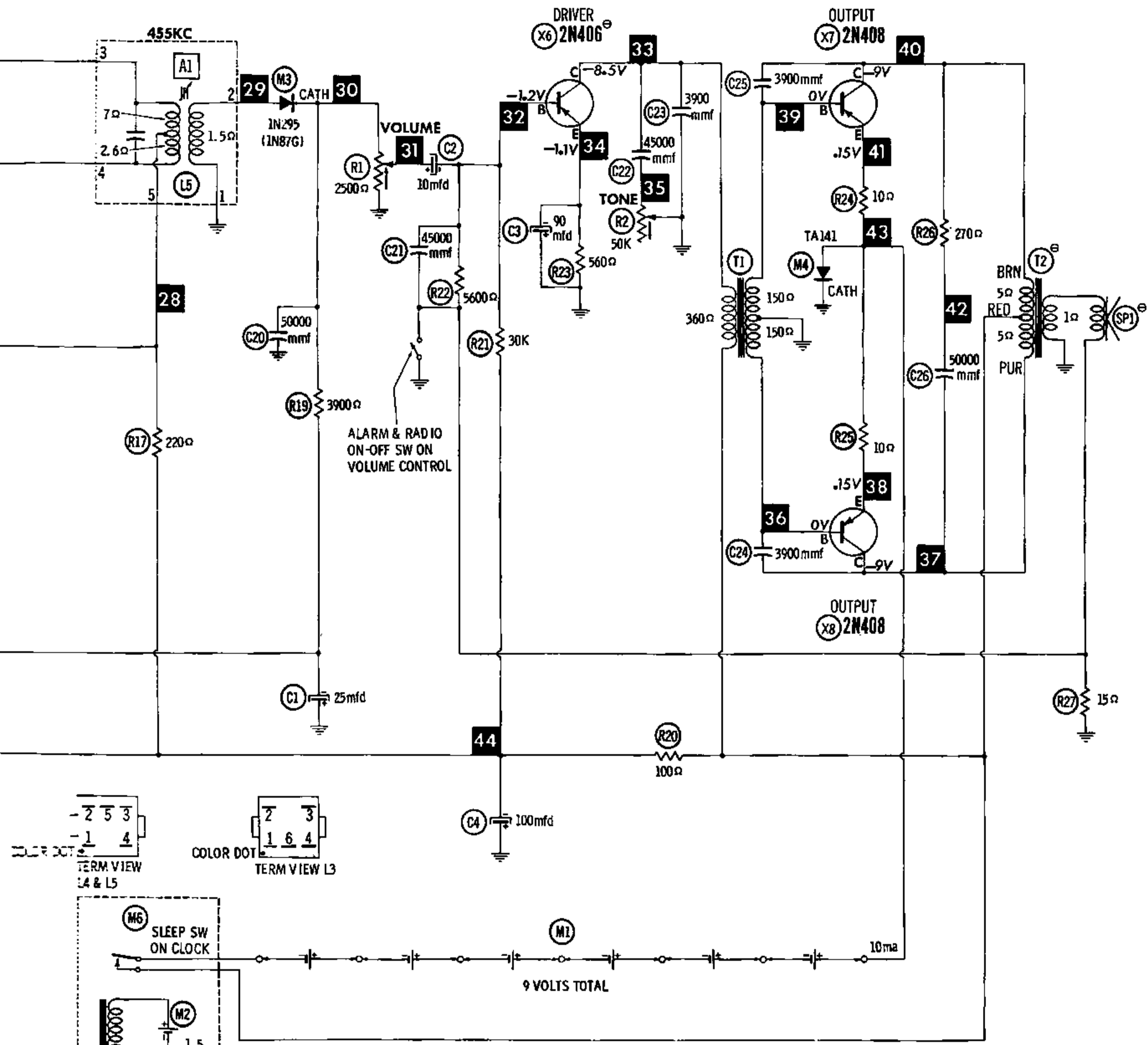
DC COIL RESISTANCE VALUES UNDER ONE OHM NOT SHOWN ON SCHEMATIC DIAGRAM

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

A PHOTOFACIT STANDARD NOTATION SCHEMATIC with **CIRCUITRACE**

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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.

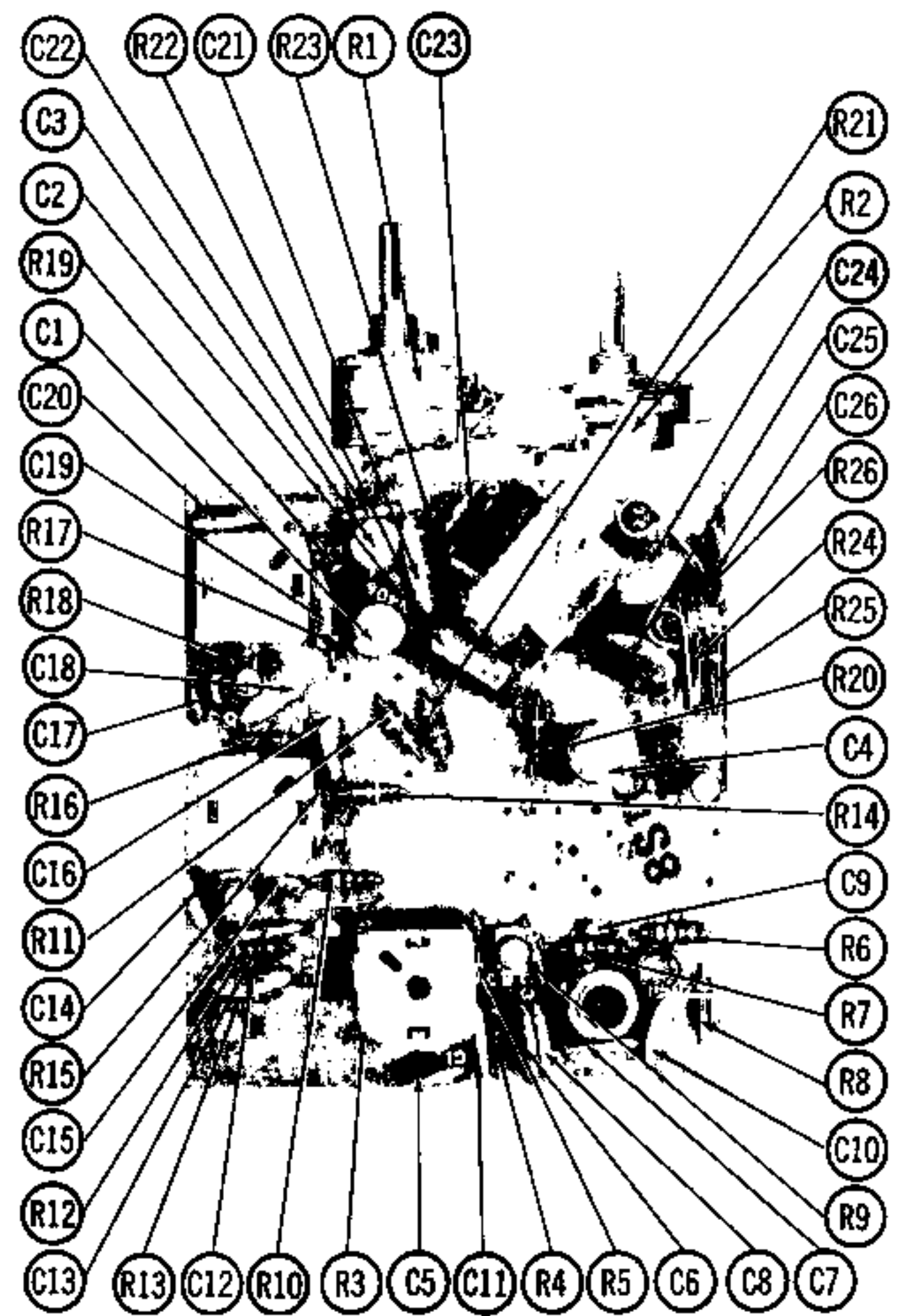
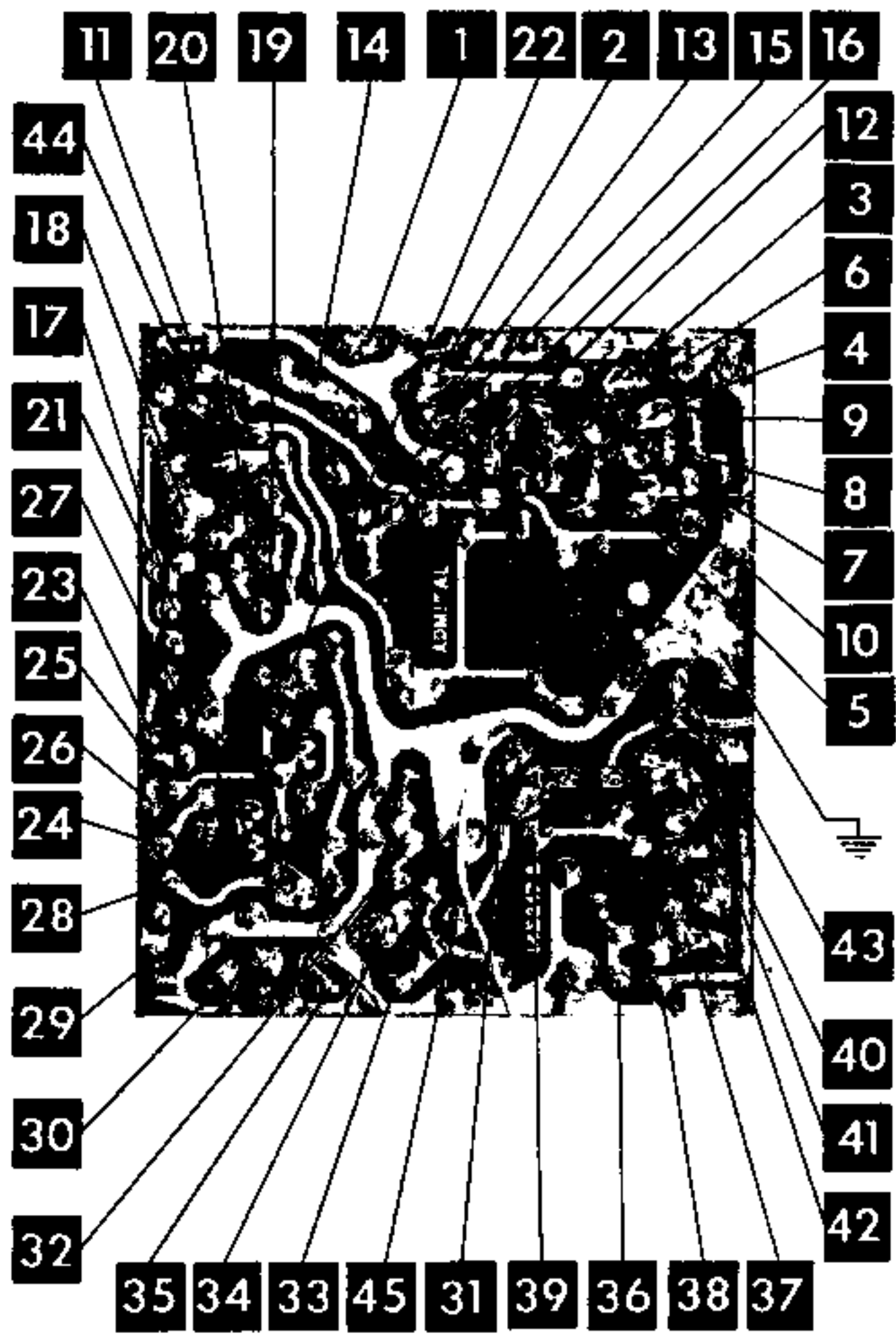


NUMBERS ASSIGNED TO COILS, SWITCHES, PLUGS, SOCKETS, AND TRANSFORMERS ARE TO FACILITATE CIRCUIT TRACING OR COMPONENT REPLACEMENT AND MAY NOT NECESSARILY BE FOUND ON THE UNIT.

RESISTANCE READINGS

ITEM	TYPE	BASE	EMITTER	COLLECTOR
X1	2N411	6500Ω	680Ω	† 660Ω
X2	2N411	9500Ω	1000Ω	† 4000Ω
X3	2N409	5000Ω	430Ω	
X4				
X5	2N409	2700Ω	1000Ω	† 320Ω
X6				
X7				
X8				

TRANSISTORS REMOVED FOR RESISTANCE MEASUREMENTS.
 † MEASURED FROM JUNCTION OF R20 AND RED LEAD OF OUTPUT TRANSFORMER T2.
 RESISTANCE MEASUREMENTS ON X4, X6, X7 AND X8 NOT GIVEN BECAUSE OF THE WIDE VARIATION IN INTERNAL TRANSISTOR RESISTANCE.



PARTS LIST

TRANSISTORS

ITEM No.	ORIG. TYPE	USE	REPLACEMENT DATA				NOTES
			CBS PART No.	RCA PART No.	RAYTHEON PART No.	SYLVANIA PART No.	
X1	2N411	Mixer		2N411	2N488	2N411	PNP
X2	2N411	Oscillator		2N411	2N485	2N411	PNP
X3	2N409	1st IF Amplifier		2N409	2N483	2N409	PNP
X4	2N406	AVC Amplifier		2N406	2N362	2N406	PNP
X5	2N409	2nd IF Amplifier		2N409	2N483	2N409	PNP
X6	2N406 *	Driver		2N406	2N362	2N406	PNP
X7	2N408	Output		2N408	2N632	2N408	PNP
X8	2N408	Output		2N408	2N632	2N408	PNP } Matched Pair

* Early versions use type 2N408.

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		REPLACEMENT DATA						NOTES
	CAP.	VOLT.	ADMIRAL PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	PYRAMID PART No.	SPRAGUE PART No.	
C1	25	3	67B32-13	BCD3025	ECPB11	PET130		VL-1041	
C2	10	3	67B35-8	PFT3010	NLW10-8	TT3X10	ML10-6	TE-1053	
C3	90	3	67B32-10	BCD3100	ECPB17	TT6X100		VL-1051	
C4	100	12	67B32-8	BCD12100	NLW100-12	PET1500		VL-1137	

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	10000		BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C6	50000		BPD-05	DD-503	H-05S5	IDP-2-503	GP150	5HK-S50
C7	50000		BPD-05	DD-503	H-05S5	IDP-2-503	GP150	5HK-S50
C8	50000		BPD-05	DD-503	H-05S5	IDP-2-503	GP150	5HK-S50
C9	470		BPD-00047	DD-471	BYA10T47	CCD-471	B-347	10TS-T47
C10	10000		BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S1
C11	50000		BPD-05	DD-503	H-05S5	IDP-2-503	GP150	5HK-S50
C12	50000		BPD-05	DD-503	H-05S5	IDP-2-503	GP150	5HK-S50
C13	50000		BPD-05	DD-503	H-05S5	IDP-2-503	GP150	5HK-S50
C14	50000		BPD-05	DD-503	H-05S5	IDP-2-503	GP150	5HK-S50
C15	3.6 NPO + .25mmf	#65D 6-190						10TCC-V39
C16	50000		BPD-05	DD-503	H-05S5	IDP-2-503	GP150	5HK-S50
C17	3.6 NPO + .25mmf	#65D 6-190						10TCC-V39
C18	50000		BPD-05	DD-503	H-05S5	IDP-2-503	GP150	5HK-S50
C19	50000		BPD-05	DD-503	H-05S5	IDP-2-503	GP150	5HK-S50
C20	50000		BPD-05	DD-503	H-05S5	IDP-2-503	GP150	5HK-S50
C21	45000	#65B 45-11						
C22	45000	#65B 45-11						

AND DESCRIPTIONS

FIXED CAPACITORS (cont)

ITEM No.	RATING	REMARKS	REPLACEMENT DATA					
			AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBNER PART No.	ELMENCO PART No.	MALLORY PART No.	SPRAGUE PART No.
C23	3900		BPD-004	DD-392	L10D39	CCD-392	GP239	10TS-D39
C24	3900		BPD-004	DD-392	L10D39	CCD-392	GP239	10TS-D39
C25	3900		BPD-004	DD-392	L10D39	CCD-392	GP239	10TS-D39
C26	50000		BPD-05	DD-503	H-05S5	IDP-2-503	GP150	5HK-S50

† Admiral Part Number.

CONTROLS

ITEM No.	RATING		REPLACEMENT DATA				INSTALLATION NOTES	
	RESISTANCE	WATTS	ADMIRAL PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.		MALLORY PART No.
R1A B C	2500Ω Shaft Switch	$\frac{1}{2}$	75D1-126			B13-111 SK9 76-1		Volume Radio-Alarm Tone
R2A B	50K Shaft	$\frac{1}{2}$	75D1-123		A47-50K-Z RS-3/16	B13-123 SK9	U33 DS-37	

RESISTORS

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

ITEM No.	RATING	REMARKS
R3	1000Ω	
R4	680Ω	
R5	560Ω	
R6	15K	
R7	15K	
R8	1000Ω	
R9	4300Ω	
R10	5600Ω	
R11	100K	

ITEM No.	RATING	REMARKS
R12	430Ω	
R13	2200Ω	
R14	16K	
R15	2700Ω	
R16	1000Ω	
R17	220Ω	
R18	5600Ω	
R19	9900Ω	
R20	100Ω	

ITEM No.	RATING	REMARKS
R21	30K	
R22	5600Ω	
R23	560Ω	
R24	10Ω	
R25	10Ω	
R26	270Ω	
R27	15Ω	

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA					NOTES
		ADMIRAL PART No.	Gramer PART No.	Meissner PART No.	Merit PART No.	Miller PART No.	
L1	Loopstick	69B225-4			BC-419		
L2	Osc. Coil	69B222-2					
L3	1st IF Trans.	72C189-1					
L4	2nd IF Trans.	72C190-1					
L5	3rd IF Trans.	72C190-2					

PARTS LIST AND DESCRIPTIONS (Continued)

TRANSFORMER (DRIVER)

ITEM No.	TURNS RATIO		REPLACEMENT DATA					NOTES
			ADMIRAL PART No.	Haldorson PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	
	PRI.	SEC.						
T1	1	1	79B76-3					

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE		REPLACEMENT DATA					NOTES
			ADMIRAL PART No.	Haldorson PART No.	Merit PART No.	Ram PART No.	Stancor PART No.	
	PRI.	SEC.						
T2	400Ω	4-8Ω	(Part of SP1)					

SPEAKER

ITEM No.	TYPE			REPLACEMENT DATA		NOTES
				ADMIRAL PART No.	QUAM PART No.	
	SIZE	FIELD	V. C. IMP.			
SP1	4"	PM	3-4Ω	78C156-4 *	4A07 ♦	* Includes T2 ♦ Fabricate New Mounting Bracket

BATTERIES

ITEM No.	VOLTAGE	ADMIRAL PART No.	REPLACEMENT DATA				NOTES		
			BURGESS		EVEREADY			MALLORY	
			"A"	"B"	"A"	"B"		"A"	"B"
M1 M2	1.5V 1.5V	*		*130 130		*635 635		*M-14R M-14R	* 6 Required (Radio) (Clock)

CRYSTAL DIODES

ITEM No.	ORIG. TYPE	REPLACEMENT DATA				NOTES
		ADMIRAL PART No.	CBS PART No.	RAYTHEON PART No.	SYLVANIA PART No.	
M3 M4	1N295 * TA141		1N636	1N295 CK879	1N295	Detector (Pigtail) Bias Regulator

* Alternate Type 1N87G.

MISCELLANEOUS

ITEM No.	PART NAME	ADMIRAL PART No.	NOTES
M5 M6	Tuning Cap. Printed Board Clock	68B66-10 14E247-5	2 Gang

CABINETS & CABINET PARTS

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

NAME	PART NO.	DESCRIPTION
Knob	33D296-2	Tuning
Knob	33C230-7	Volume, Tone
Knob	91C23-10	Clock
Dial	33D296-1	Tuning
Cabinet Front	34D136-1	
Cabinet Rear	34E138-3	Model 811 (Black)
Cabinet Rear	34E138-4	Model 816 (Gold)

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

