

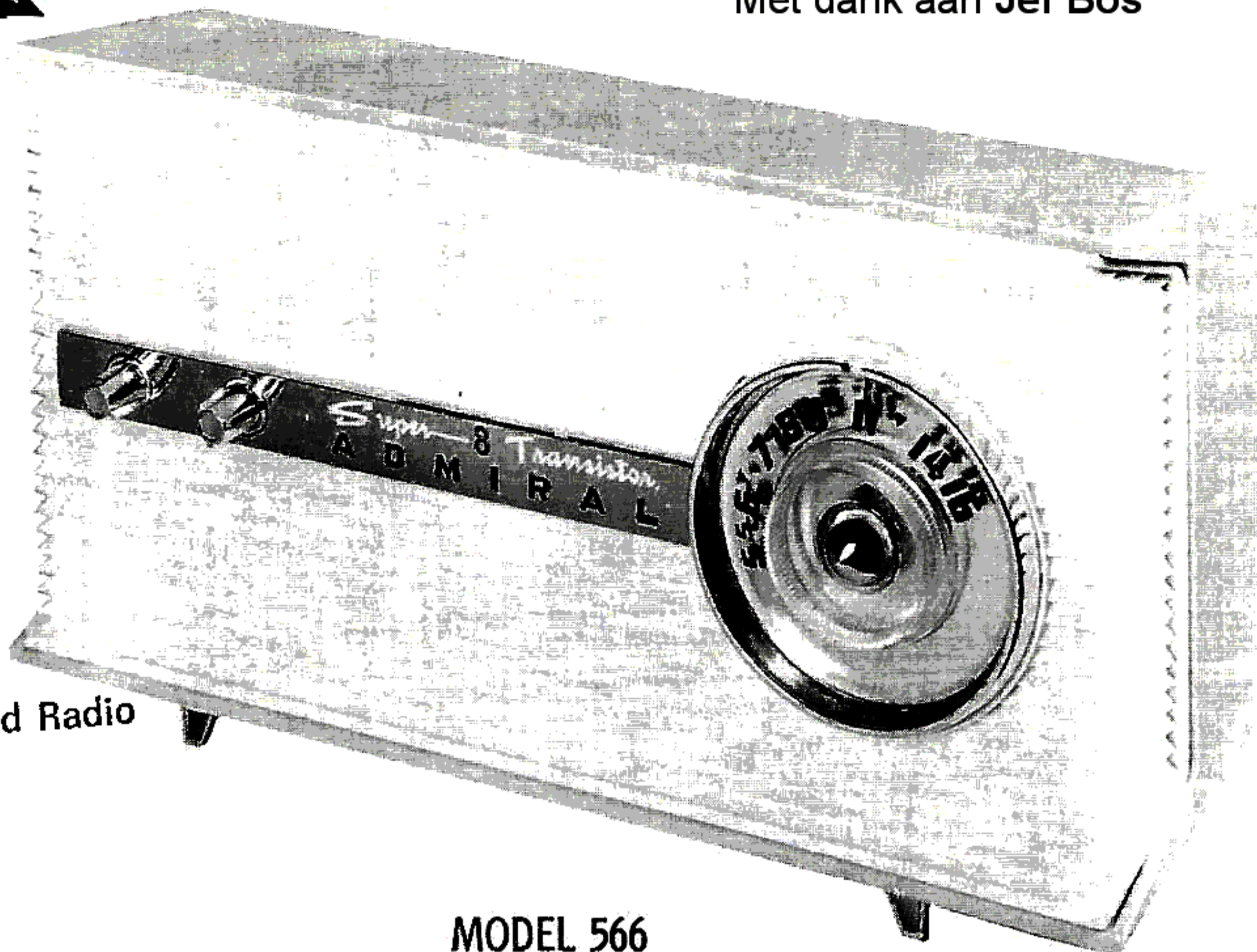
PHOTOFACT* Folder



with CIRCUITRACE

ADMIRAL MODELS 561, 566, 811, 816 (Ch. 8S1, 8S1A)

Met dank aan Jef Bos



Historie v/d Radio

CHIEF
STATIEDIENST
VHR

MODEL 566

TRADE NAME	Admiral Models 561, 566 (Ch. 8S1), 811, 816 (Ch. 8S1A)		
MANUFACTURER	Admiral Corp., 3800 W. Cortland St., Chicago 47, Illinois		
TYPE SET	Battery Operated Transistorized AM Portable Receiver (Models 811 and 816 are Clock Versions)		
POWER SUPPLY	9 Volts DC (Receiver), 1.5 Volts DC (Clock)	RATING	7.3MA @ 9 Volts DC (No Signal, Min. Volume)
TUNING RANGE—BROADCAST	535-1620KC		10.5MA @ 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, A3, A4 ... GENERAL CEMENT #8282, 8606, 8606L, 9091
WALSCO #2526, 2541, 2543, 2544
A5, A6 GENERAL CEMENT #5000, 5003, 5014, 5015, 5016, 8276, 8290
WALSCO #2512, 2515, 2522, 2523, 2525, 2537

DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	OUTPUT METER	ADJUST	REMARKS
1.	Loop	455KC (400% 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	Adjust for maximum output.
3.	"	1400KC	1400KC signal	"	A6	Adjust for maximum output while rocking tuning gang. Repeat steps 2 and 3.

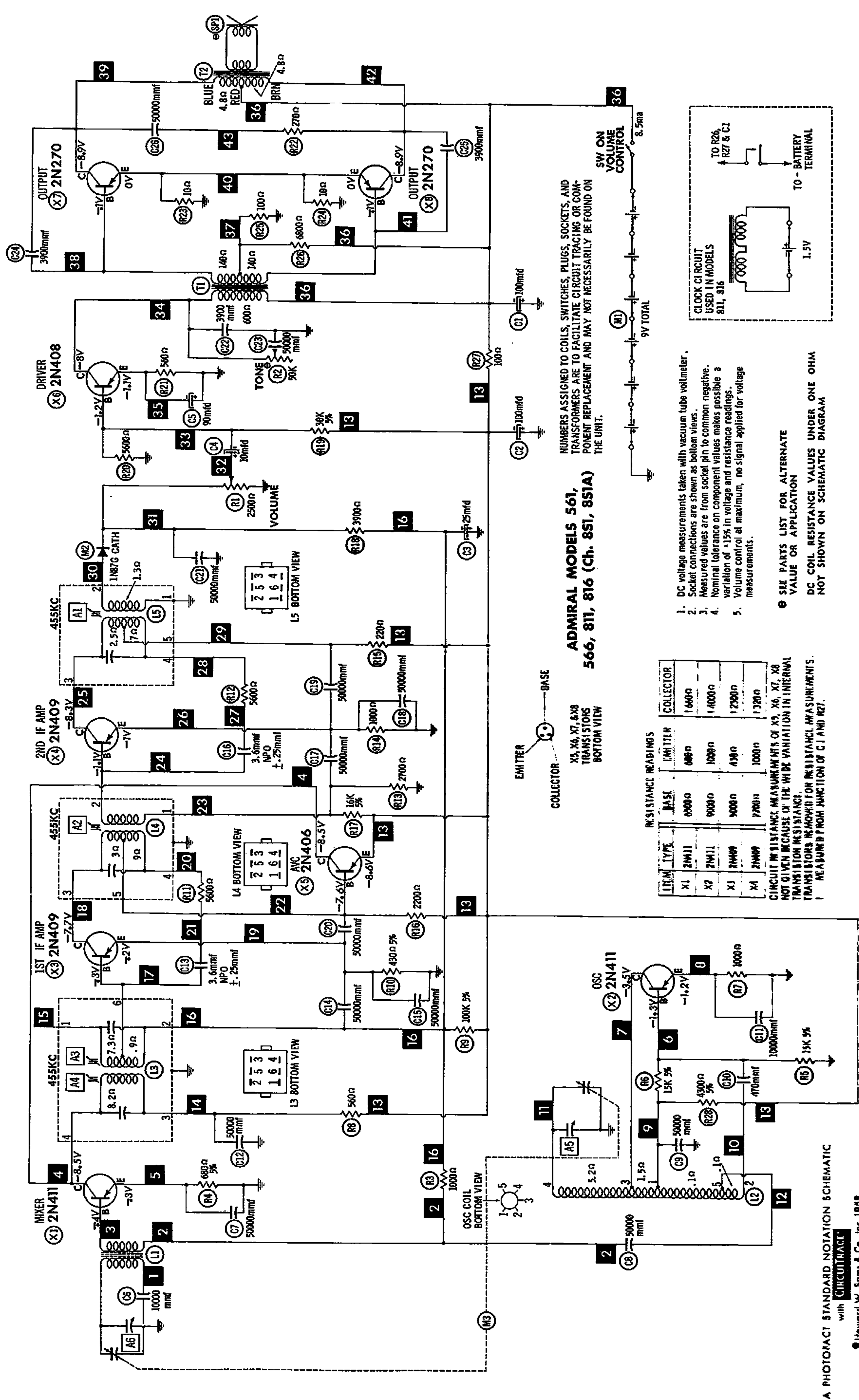
DISASSEMBLY

1. Remove 2 screws near front of cabinet front.
2. Remove 2 screws from top of cabinet back.
3. Remove front panel (with components) from cabinet.

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 J138

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. © 1959 Howard W. Sams & Co., Inc., Indianapolis 6, Indiana. Printed in U.S. of America



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.

ADMIRAL MODELS 561, 566, 811, 816 (Ch. 851, 851A)

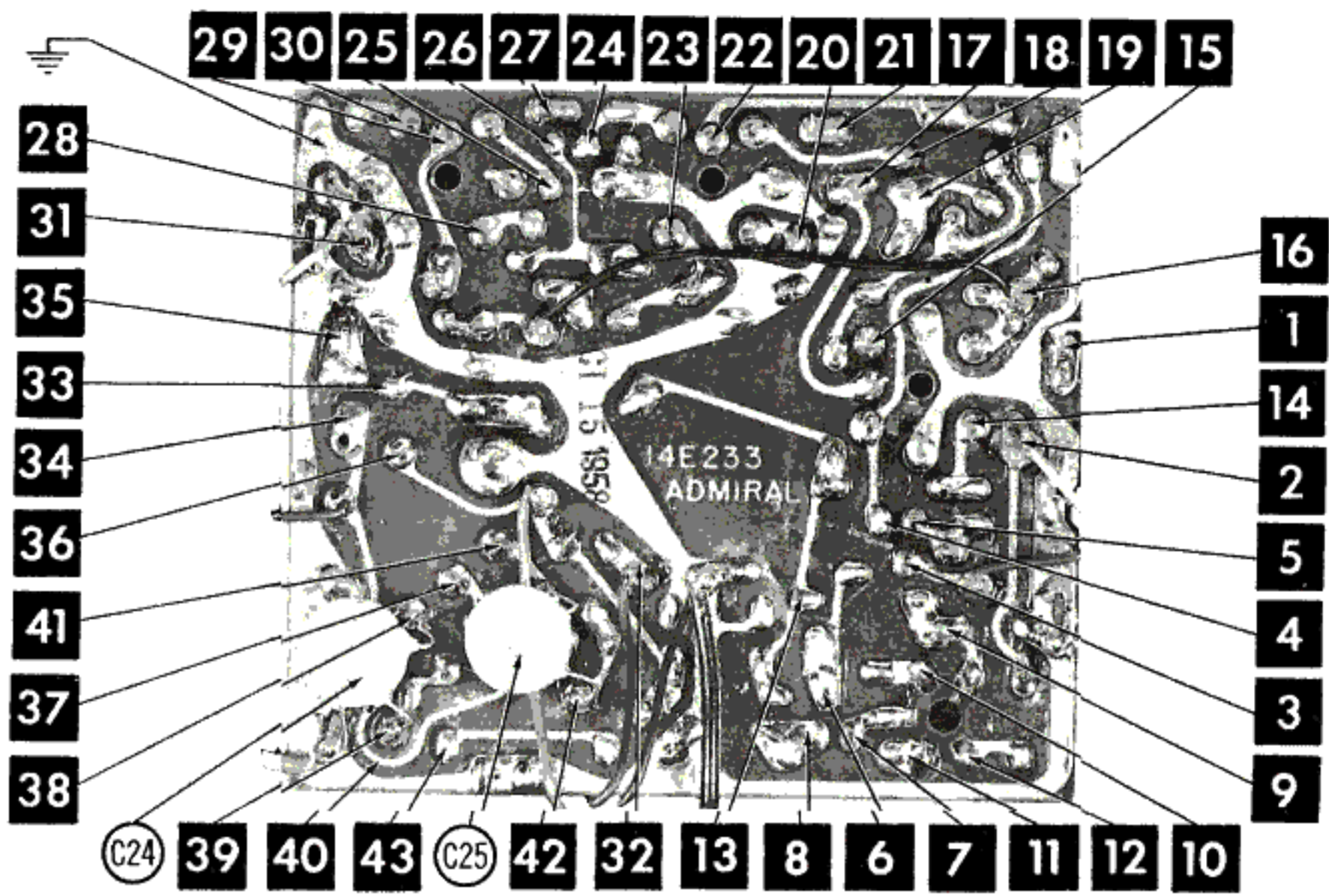
1. DC voltage measurements taken with vacuum tube voltmeter. Socket connections are shown as bottom views.
2. Measured values are from socket pin to common negative.
3. Nominal tolerance on component values makes possible a variation of $\pm 15\%$ in voltage and resistance readings.
4. Volume control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

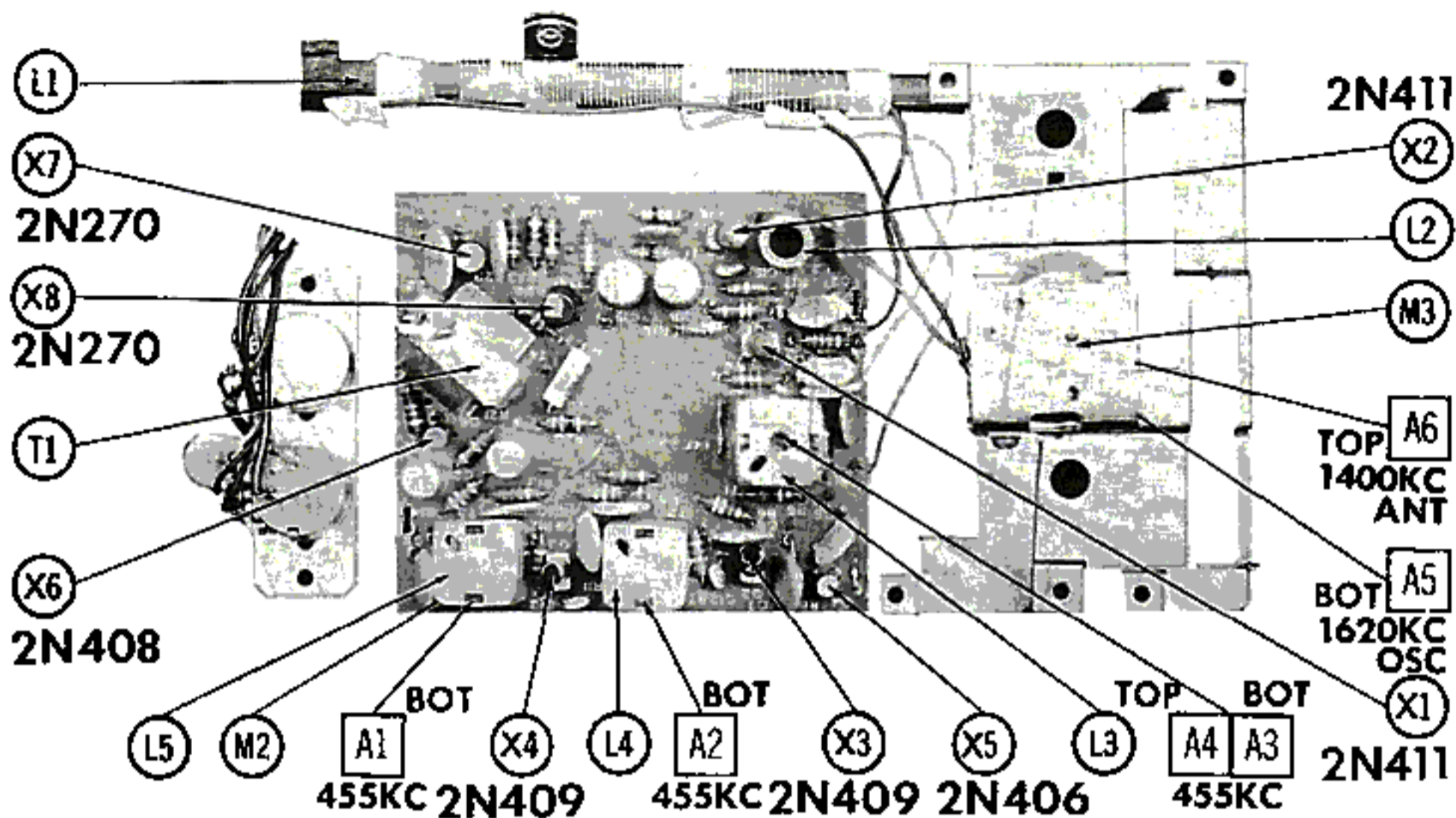
SEE PARTS LIST FOR ALTERNATE VALUE OR APPLICATION
DC COIL RESISTANCE VALUES UNDER ONE OHM NOT SHOWN ON SCHEMATIC DIAGRAM

RESISTANCE READINGS			
ITEM	TYPE	BASE	COLLECTOR
X1	2N411	6200 Ω	1600 Ω
X7	2N411	9000 Ω	14000 Ω
X5	2N409	9000 Ω	12300 Ω
X4	2N409	7200 Ω	1220 Ω

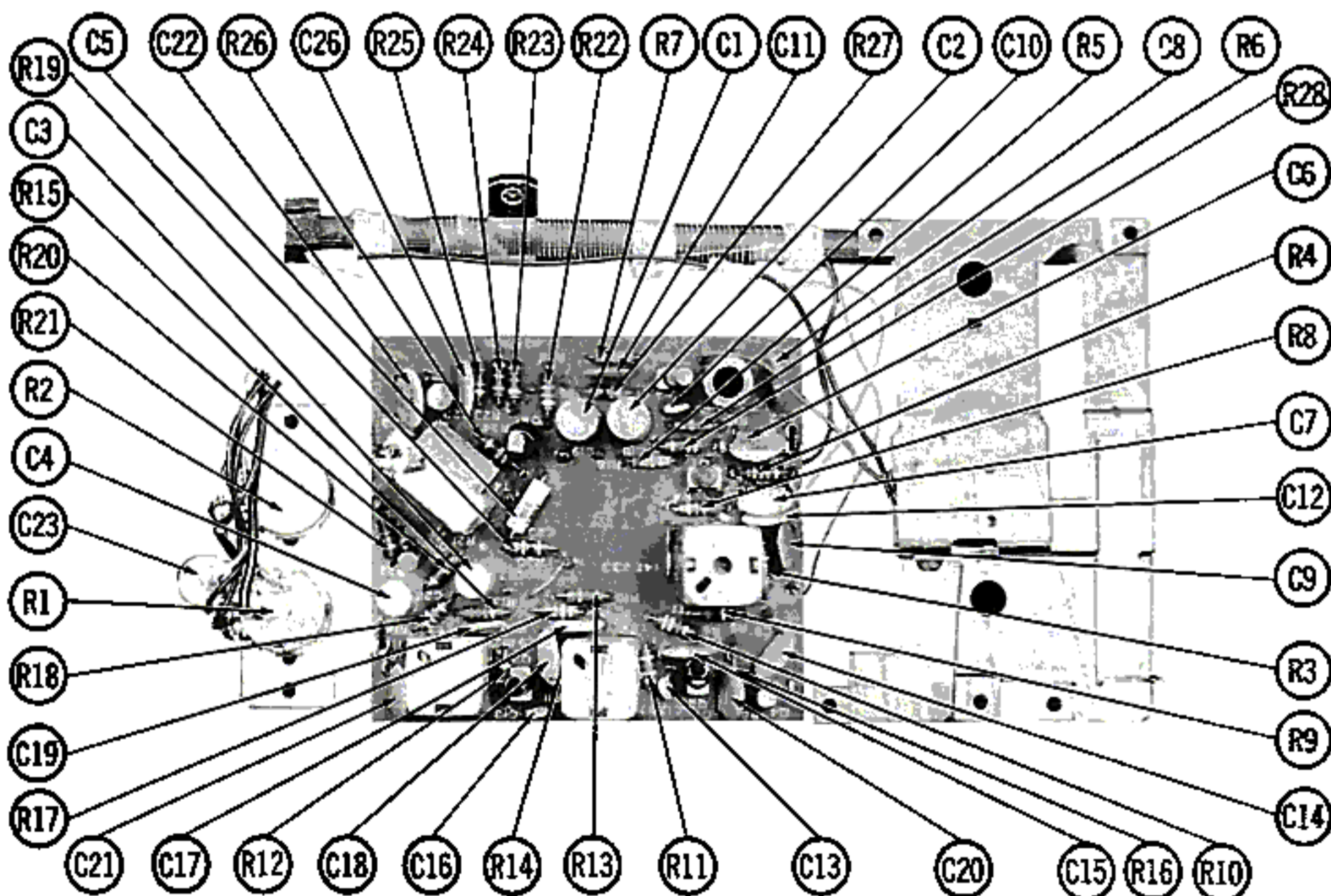
CIRCUIT RESISTANCE MEASUREMENTS OF X5, X6, X7, X8 NOT GIVEN BECAUSE OF THE WIDE VARIATION IN INTERNAL TRANSISTOR RESISTANCE.
MEASUREMENTS SHOWN FOR RESISTANCE MEASUREMENTS.

EMITTER
COLLECTOR
BASE
X5, X6, X7, X8 TRANSISTORS BOTTOM VIEW





CHASSIS TOP VIEW



CHASSIS TOP VIEW

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		2N411	PNP
X2	2N411	Oscillator		2N411		2N411	PNP
X3	2N409	1st IF Amp.		2N409		2N409	PNP
X4	2N409	2nd IF Amp.		2N409		2N409	PNP
X5	2N406	AVC		2N406	2N363	2N406	PNP
X6	2N408	Driver		2N408		2N408	PNP
X7	2N270	Output		2N270	2N361	2N270	PNP
X8	2N270	Output		2N270	2N361	2N270	PNP Matched Pair

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	100	12	67B32-8	BCD12100	ECPB417	PET1500		TE-1162	
C2	100	12	67B32-8	BCD12100	ECPB417	PET1500		TE-1162	
C3	25	3	67B32-13	BCD3025	ECPB11	PET1960		VL-1041	
C4	10	3	67B35-8	PWE3010	NL10-3	TT3X10	ML-10-6	TE-1053	
C5	90	3	67B32-10	BCD10100	ECPB417	PTE1400		TE-1102	

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			REPLACEMENT DATA						NOTES
	CAP.	VOLT	TOL	ADMIRAL PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	SPRAGUE PART No.	
C6	10000			65D10-41	BPD-01	DD-103	BYA10S1	B-110	5HK-S1	
C7	50000			65B45-6	BPD-05	DDA-503	H-05S5	TA-150	5HK-S5	
C8	50000			65B45-6	BPD-05	DDA-503	H-05S5	TA-150	5HK-S5	
C9	50000			65B45-6	BPD-05	DDA-503	H-05S5	TA-150	5HK-S5	
C10	470			65D10-70	BPD-00047	DD-471	BYA10T47	B-347	5GA-T47	
C11	10000			65D10-41	BPD-01	DD-103	BYA10S1	B-110	5HK-S1	
C12	50000			65B45-6	BPD-05	DDA-503	H-05S5	TA-150	5HK-S5	
C13	3.6		NPO ±.25mmf	65D6-190					5TCCB-V36S ±.25mmf*	
C14	50000			65B45-6	BPD-05	DDA-503	H-05S5	TA-150	5HK-S5	
C15	50000			65B45-6	BPD-05	DDA-503	H-05S5	TA-150	5HK-S5	
C16	3.6		NPO ±.25mmf	65D6-190					5TCCB-V36S ±.25mmf*	
C17	50000			65B45-6	BPD-05	DDA-503	H-05S5	TA-150	5HK-S5	
C18	50000			65B45-6	BPD-05	DDA-503	H-05S5	TA-150	5HK-S5	
C19	50000			65B45-6	BPD-05	DDA-503	H-05S5	TA-150	5HK-S5	
C20	50000			65B45-6	BPD-05	DDA-503	H-05S5	TA-150	5HK-S5	
C21	50000			65B45-6	BPD-05	DDA-503	H-05S5	TA-150	5HK-S5	
C22	3900			65B45-14	BPD-004	DD-392	L10D39	JL-239	5GA-D39	
C23	50000			65B45-6	BPD-05	DDA-503	H-05S5	TA-150	5HK-S5	
C24	3900			65B45-14	BPD-004	DD-392	L10D39	JL-239	5GA-D39	
C25	3900			65B45-14	BPD-004	DD-392	L10D39	JL-239	5GA-D39	
C26	50000			65B45-6	BPD-05	DDA-503	H-05S5	TA-150	5HK-S5	

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

CONTROLS

ITEM No.	RATING		REPLACEMENT DATA					INSTALLATION NOTES
	RESISTANCE	WATTS	ADMIRAL PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	IRC PART No.	MALLORY PART No.	
RIA	2500Ω	½	75D1-124		A47-2500-S	Q13-111	U8	Volume
B	Shaft				RS-3/16	NQ	DS-37	
C	Switch				SWE-12	76-1	US-26	Power On-Off
R2A	50K	½	75D1-121	AB-32	A47-50K-Z	Q13-123	U33	Tone, Note 1
B	Shaft			AK-8	RS-3/16	NQ	DS-37	

Note 1. Some versions may use 50K Tone (Part #75D1-123)

DESCRIPTIONS

RESISTORS

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

ITEM No.	RATING		ADMIRAL PART No.	NOTES
	OHMS	WATT		
R3	1000Ω		60B8-102	
R4	680Ω 5%		60B8-681	
R5	15K 5%		60B7-153	
R6	15K 5%		60B7-153	
R7	1000Ω		60B8-102	
R8	560Ω		60B8-561	
R9	100K 5%		60B7-104	
R10	430Ω 5%		60B7-431	
R11	5600Ω		60B8-562	
R12	5600Ω		60B8-562	
R13	2700Ω		60B8-272	
R14	1000Ω		60B8-102	
R15	220Ω		60B8-221	

ITEM No.	RATING		ADMIRAL PART No.	NOTES
	OHMS	WATT		
R16	2200Ω		60B8-222	
R17	16K 5%		60B7-163	
R18	3900Ω		60B8-392	
R19	30K 5%		60B7-303	
R20	5600Ω		60B8-562	
R21	560Ω		60B8-561	
R22	270Ω		60B8-271	
R23	10Ω		60B8-100	
R24	10Ω		60B8-100	
R25	100Ω		60B8-101	
R26	6800Ω		60B8-682	
R27	100Ω		60B8-101	
R28	4300Ω 5%		60B7-432	

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					
L2	Osc. Coil	69B222-2					
L3	1st IF Trans.	72C189-1					
L4	2nd IF Trans.	72C190-1					
L5	3rd IF Trans.	72C190-2					

TRANSFORMER (DRIVER)

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

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE		REPLACEMENT DATA					NOTES	
	PRI.	SEC.	ADMIRAL PART No.	Halldorson PART No.	Merit PART No.	Ram PART No.	Stancor PART No.		Thordarson PART No.
T2	55Ω CT	3-4Ω	Part of SP1						

SPEAKER

ITEM No.	TYPE			REPLACEMENT DATA		NOTES
	SIZE	FIELD	V. C. IMP.	ADMIRAL PART No.	QUAM PART No.	
SP1	4"	PM	3-4Ω	78B156-1 ①	4A1	① Includes T2. Alternate Part #78C156.

PARTS LIST AND DES

BATTERIES

ITEM No.	VOLTAGE	ADMIRAL PART No.	REPLACEMENT DATA						NOTES
			BURGESS		EVEREADY		MALLORY		
			"A"	"B"	"A"	"B"	"A"	"B"	
M1	9V 1.5V			1 ① 1 ②		935 ① 935 ②		M-14 ① M-14 ②	8 used (Receiver) 1 used (Clock)

CRYSTAL DIODES

ITEM No.	ORIG. TYPE	REPLACEMENT DATA			NOTES
		ADMIRAL PART No.	CBS PART No.	SYLVANIA PART No.	
M2	1N87C		1N60 ①	1N295 ①	① Pigtail Type

MISCELLANEOUS

ITEM No.	PART NAME	ADMIRAL PART No.	NOTES
M3	Tuning Cap.	68B66-10	2 Gang (Ant. 272.3mmf, Osc. 102.1mmf Max.)

DESCRIPTIONS (Continued)

CABINETS & CABINET PARTS

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

NAME	PART NO.	DESCRIPTION
Knob	33D296-1	Tuning, Models 561, 566
Knob	33D296-2	Tuning, Models 811, 816
Knob	33C230-7	Volume, Tone
Knob	33D292-2	Vernier, Models 561, 566
Knob	91C23-10	Clock, Models 811, 816
Cabinet	34E138-1	Black, Model 561
Cabinet	34E138-2	Gold, Model 566
Cabinet	34E138-3	Black, Model 811
Cabinet	34E138-4	Gold, Model 816
Cabinet Front	34D137-1	Models 561, 566
Cabinet Front	34D136-1	Models 811, 816
Battery Case	A7256	Model 561
Battery Case	A7257	Model 566
Battery Case	A7264	Model 811
Battery Case	A7263	Model 816

WIRING DATA

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