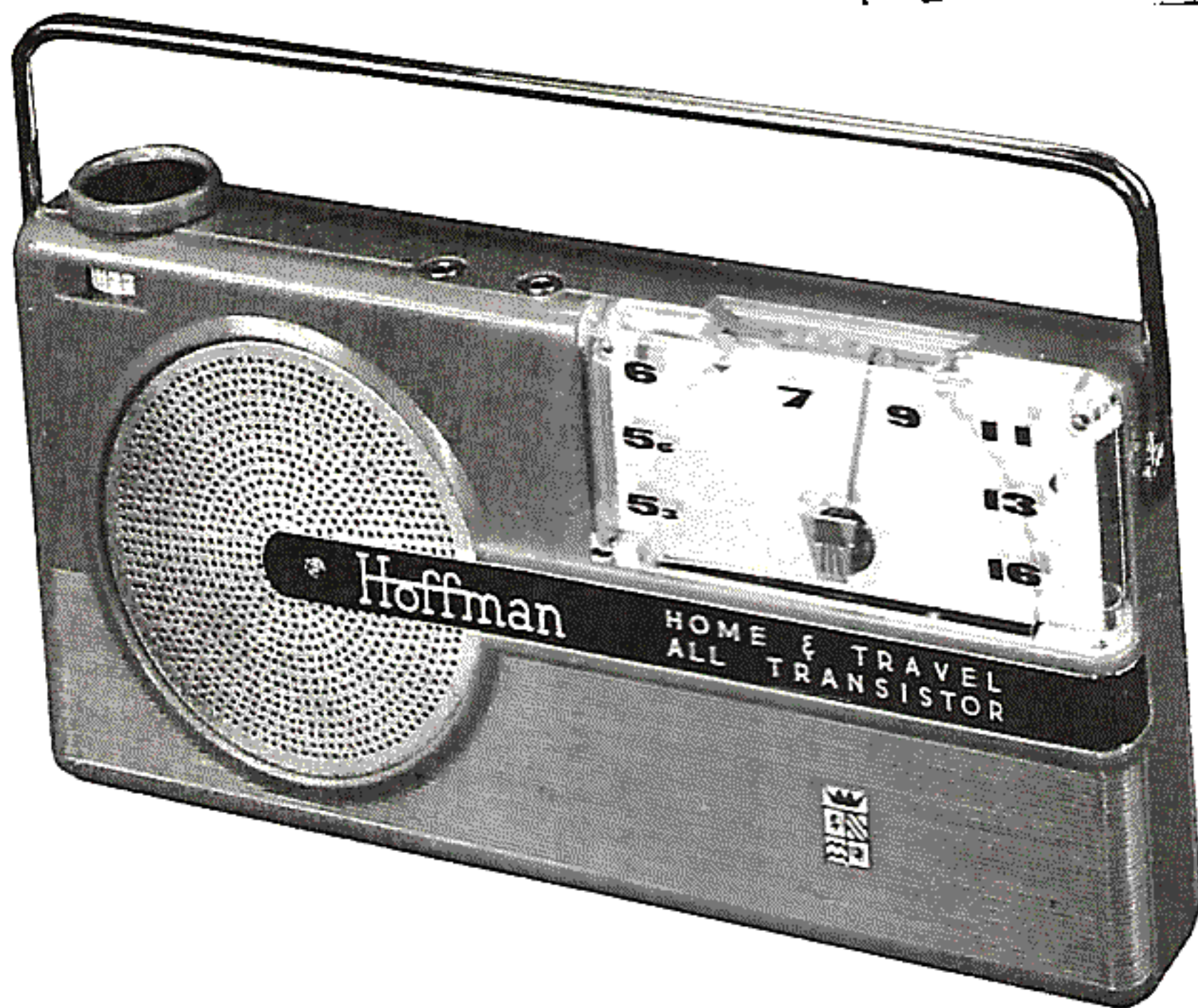




Ned. Ver. v. Historie v/d Radio

Met dank aan Jef Bos

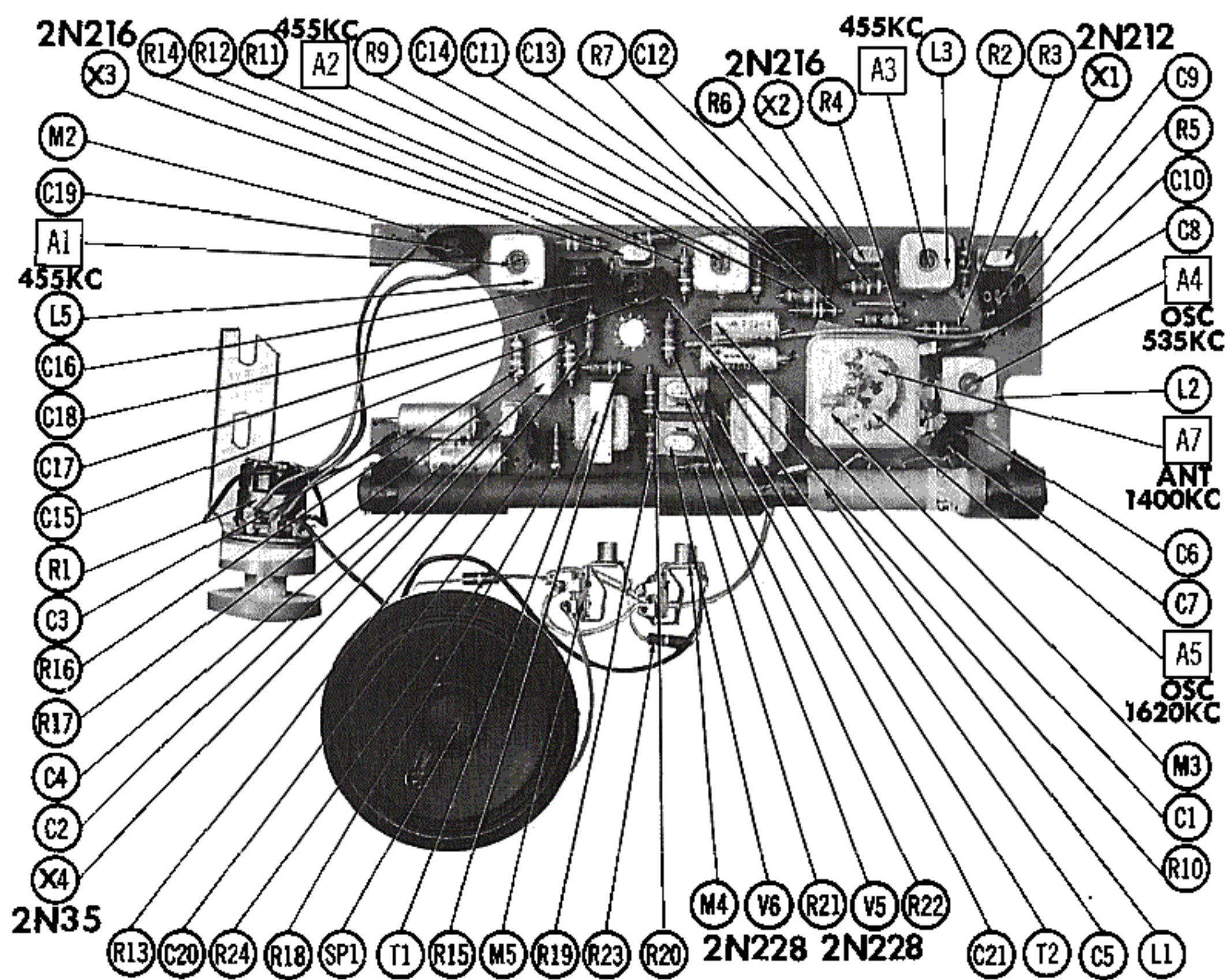


<b>TRADE NAME</b>	Hoffman Models P410 Series, P411 Series Ch. 1109.					
<b>MANUFACTURER</b>	Hoffman Radio Corp., 6200 S. Avalon Blvd., Los Angeles 3, California					
<b>TYPE SET</b>	Battery Operated Portable AM Transistorized Receiver (Solar Power Pack Unit Used in Model P411 Series)					
<b>POWER SUPPLY</b>	6 Volts DC			<b>RATING</b>	6.8MA @ 6 Volts DC	
<b>TUNING RANGE—BROADCAST</b>	535KC - 1620KC					
<b>ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT</b>						
A6 is not adjustable in some versions. Disconnect speaker, connect an 8Ω resistor across audio output transformer secondary.						
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 8Ω resistor connected across T2 secondary.	A1, A2, A3	Fashion loop of several turns of wire and radiate signal into loop of receiver. Adjust for maximum output. Reduce signal generator to maintain .2 Volt output. Repeat adjustments until no improvement is obtained.
2.	"	535KC	535KC	"	A4	Fashion loop of several turns of wire and radiate signal into loop of receiver. Adjust for maximum output. Maintain .2 Volts output.
3.	"	1620KC	1620KC	"	A5	Fashion loop of several turns of wire and radiate signal into loop of receiver. Adjust for maximum output. Maintain .2 Volts output. Repeat steps 2 & 3 until no further improvement can be obtained.
4.	"	600KC	600KC	"	A6	Fashion loop of several turns of wire and radiate signal into loop of receiver. Adjust for maximum output.
5.	"	1400KC	1400KC	"	A7	Fashion loop of several turns of wire and radiate signal into loop of receiver. Adjust for maximum output. Rock tuning gang during adjustment. Repeat steps 4 & 5 until no further improvement can be obtained.

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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 H215

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CHASSIS TOP VIEW

# PARTS LIST AND DESCRIPTIONS

## TRANSISTORS

ITEM No.	ORIG. TYPE	USE	REPLACEMENT DATA			NOTES
			CBS PART No.	RAYTHEON PART No.	SYLVANIA PART No.	
X1	2N212	Converter			2N212	
X2	2N216	1st IF Amplifier			2N216	
X3	2N216	2nd IF Amplifier			2N216	
X4	2N35	AF Amplifier			2N35	
X5	2N228	Output			2N228	
X6	2N228	Output			2N228	

## ELECTROLYTIC CAPACITORS

ITEM No.	RATING		REPLACEMENT DATA						NOTES
	CAP.	VOLT.	HOFFMAN PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	PYRAMID PART No.	SANGAMO PART No.	
C1	3	6	856008	XPP6003	NL3-6	TT6X5	ML4-6		TE-1082
C2	3	6	856008	XPP6003	NL3-6	TT6X5	ML4-6		TE-1082
C3	50	6	856010	XPP6050	NL50-6	TT6X50	ML50-6		TE-1100
C4	50	6	856010	XPP6050	NL50-6	TT6X50	ML50-6		TE-1100
C5	25	6	856009	XPP6025	NL25-6	TT6X25	ML30-6		TE-1091

## 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	HOFFMAN PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ERIE PART No.	MALLORY PART No.		SPRAGUE PART No.
C6	10		847204	NPO-SI 10	TCZ-10	C10Q1C	TCO-10	ZT-541	5TCC-Q1	5% NPO ①
C7	5		847205	NPO-SI 5	TCZ-4R7	C10V5C	TCO-5	ZT-555	5TCCB-V5	
C8	100000		851009						TG-P10	
C9	10000		851007	BPD-01	DD-103	BYA6S1	ED-01	DC511	TG-S10	
C10	2200		851010	BPD-0022	DD-222	BYA10D22	ED-0022	UC-5222	5GA-D22	
C11	50000		851008						TG-S50	
C12	50000		851008						TG-S50	
C13	50000		851008						TG-S50	
C14	10		847204	NPO-SI 10	TCZ-10	C10Q1C	TCO-10	ZT-541	5TCC-Q1	5% NPO
C15	50000		851008						TG-S50	
C16	50000		851008						TG-S50	
C17	10		847204	NPO-SI 10	TCZ-10	C10Q1C	TCO-10	ZT-541	5TCC-Q1	5% NPO
C18	50000		851008						TG-S50	
C19	50000		851008						TG-S50	
C20	1000		851006	BPD-001	DD-102	BYA6D1	ED-1000	DC521	5HK-D1	
C21	100000		851009						TG-P10	

① Not used in some versions.

## CONTROLS

ITEM No.	RATING		REPLACEMENT DATA				INSTALLATION NOTES	
	RESISTANCE	WATTS	HOFFMAN PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	IRC PART No.		MALLORY PART No.
R1	5000Ω	½	800008					Volume & Switch

## RESISTORS

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

ITEM No.	RATING		HOFFMAN PART No.	NOTES	ITEM No.	RATING		HOFFMAN PART No.	NOTES
	OHMS	WATT				OHMS	WATT		
R2	18K		814207		R14	470Ω		814188	
R3	100K		814216		R15	15K		814206	
R4	1000Ω		814192		R16	4700Ω		814200	
R5	1800Ω		814195		R17	47K		814212	
R6	3900Ω		814199		R18	220Ω		814184	
R7	100K		814216		R19	120Ω		814181	
R8	1000Ω		814192		R20	4700Ω		814200	
R9	470Ω		814188		R21	10Ω		814168	
R10	3900Ω		814199		R22	100Ω		814180	
R11	15K		814206		R23	22Ω		814172	
R12	100K		814216		R24	22Ω		814172	
R13	1000Ω		814192						

# PARTS LIST AND DESCRIPTIONS (Continued)

## TRANSFORMER (DRIVER)

ITEM No.	Turns Ratio		REPLACEMENT DATA					NOTES	
			HOFFMAN PART No.	Halldorson PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.		Triad PART No.
	PRI.	SEC.							
T1	1:	1	726001					TR-1	

## TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE		REPLACEMENT DATA					NOTES	
			HOFFMAN PART No.	Halldorson PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.		Triad PART No.
	PRI.	SEC.							
T2	407Ω CT	6-8Ω	724007					TR-22	

## SPEAKER

ITEM No.	TYPE			REPLACEMENT DATA		NOTES
				HOFFMAN PART No.	QUAM PART No.	
	SIZE	FIELD	V. C. IMP.			
SP1	2½"	PM	6-8Ω	708005	25A1Z8.3R	

## COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA				NOTES
		HOFFMAN PART No.	MEISSNER PART No.	MERIT PART No.	MILLER PART No.	
L1	Loop Stick	924001-3				Alt. Part #924001
L2	Osc. Coil	768005			2021	
L3	1st IF	760005	16-9003			
L4	2nd IF	760005	16-9003			
L5	3rd IF	760006	16-9004			

## BATTERIES

ITEM No.	VOLTAGE	HOFFMAN PART No.	REPLACEMENT DATA								NOTES
			BURGESS		EVEREADY		MALLORY		RAY-O-VAC		
			"A"	"B"	"A"	"B"	"A"	"B"	"A"	"B"	
M1	6	930001 ①	#1		035		M14		1LP		4 used in series

① Part #930002 (Rechargeable cell) used in Model P411 Series

## CRYSTAL DIODES

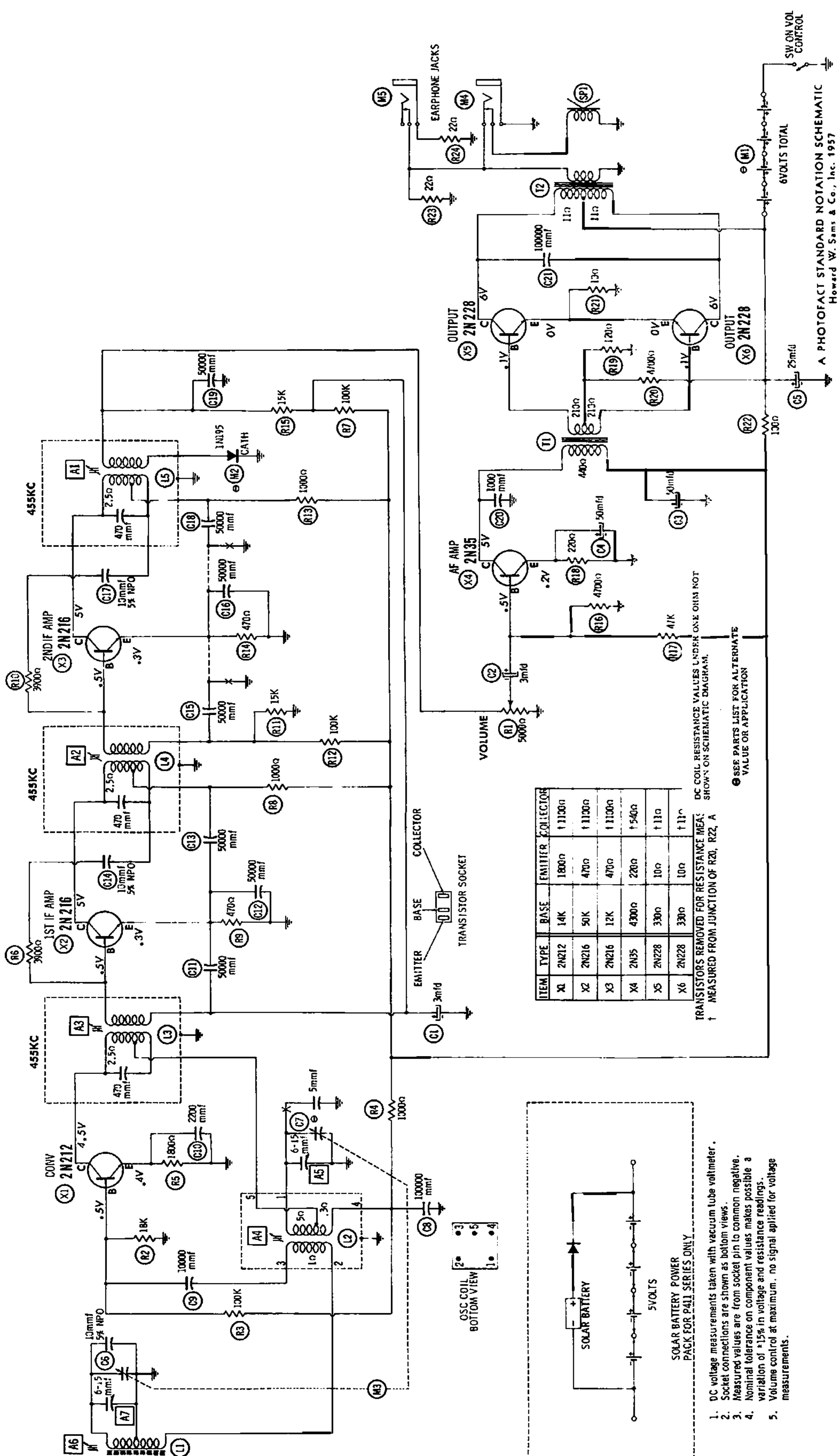
ITEM No.	ORIG. TYPE	REPLACEMENT DATA			NOTES
		HOFFMAN PART No.	CBS PART No.	SYLVANIA PART No.	
M2	1N295 ①	742002 ①	1N60	1N34A	Audio Det. (Alt. Types: 1N60, 1N87G)

① Alternate Part #742001 (Type 1N450) used in Model P411 Series

## MISCELLANEOUS

ITEM No.	PART NAME	HOFFMAN PART No.	NOTES
M3	Tuning Cap.	872001	2 Gang (Ant. 15-260MMF)
M4	Earphone Jack	934012	
M5	Earphone Jack	934012	

MODEL P411 (C)

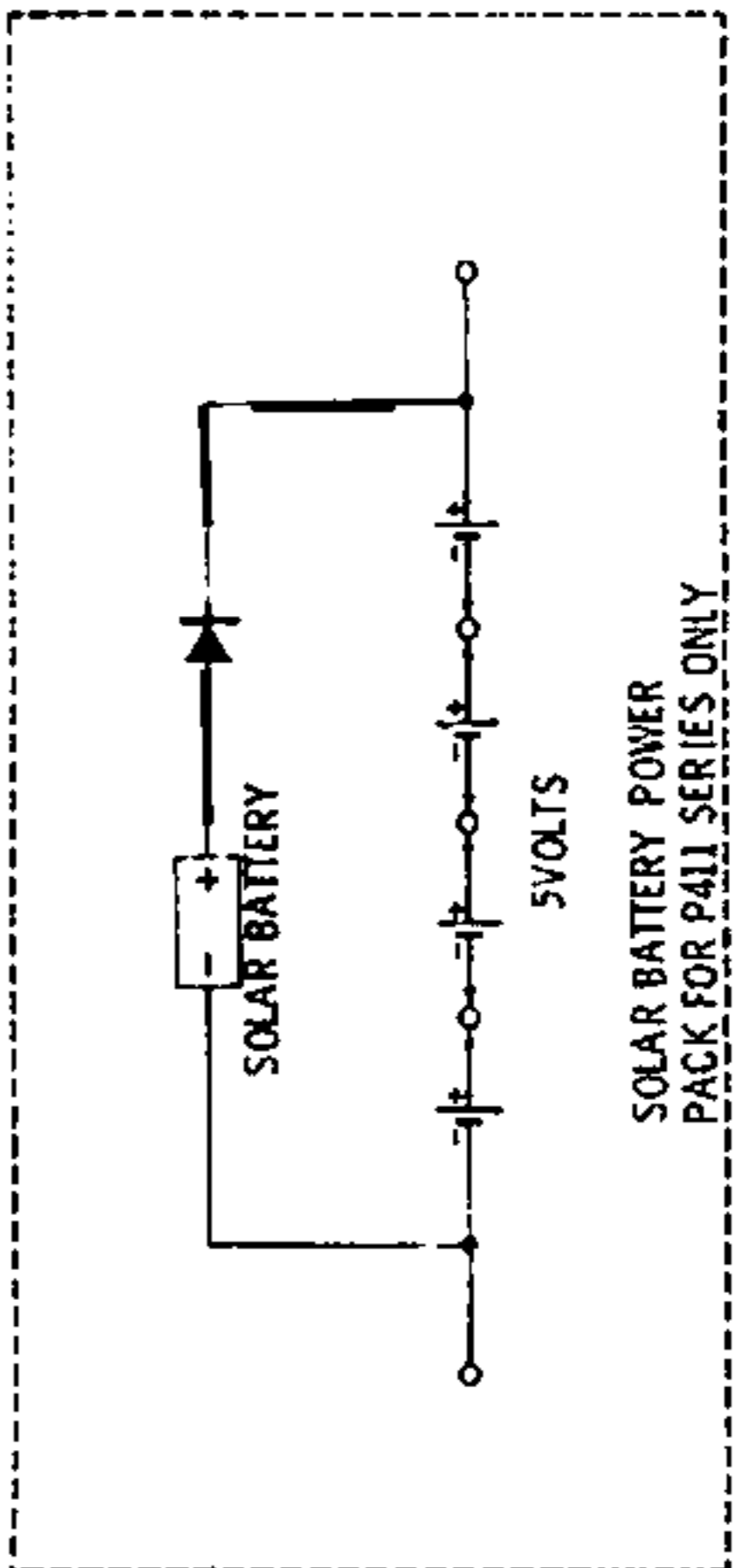


ITEM	TYPE	BASE	EMITTER	COLLECTOR
X1	2N212	14K	1800Ω	11100Ω
X2	2N216	50K	470Ω	11100Ω
X3	2N216	12K	470Ω	11100Ω
X4	2N35	4300Ω	220Ω	†540Ω
X5	2N228	330Ω	10Ω	†11Ω
X6	2N228	330Ω	10Ω	†11Ω

TRANSISTORS REMOVED FOR RESISTANCE MEASUREMENTS  
 † MEASURED FROM JUNCTION OF R20, R22, A

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

SEE PARTS LIST FOR ALTERNATE VALUE OR APPLICATION



- DC voltage measurements taken with vacuum tube voltmeter.
- Socket connections are shown as bottom views.
- Measured values are from socket pin to common negative.
- 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.