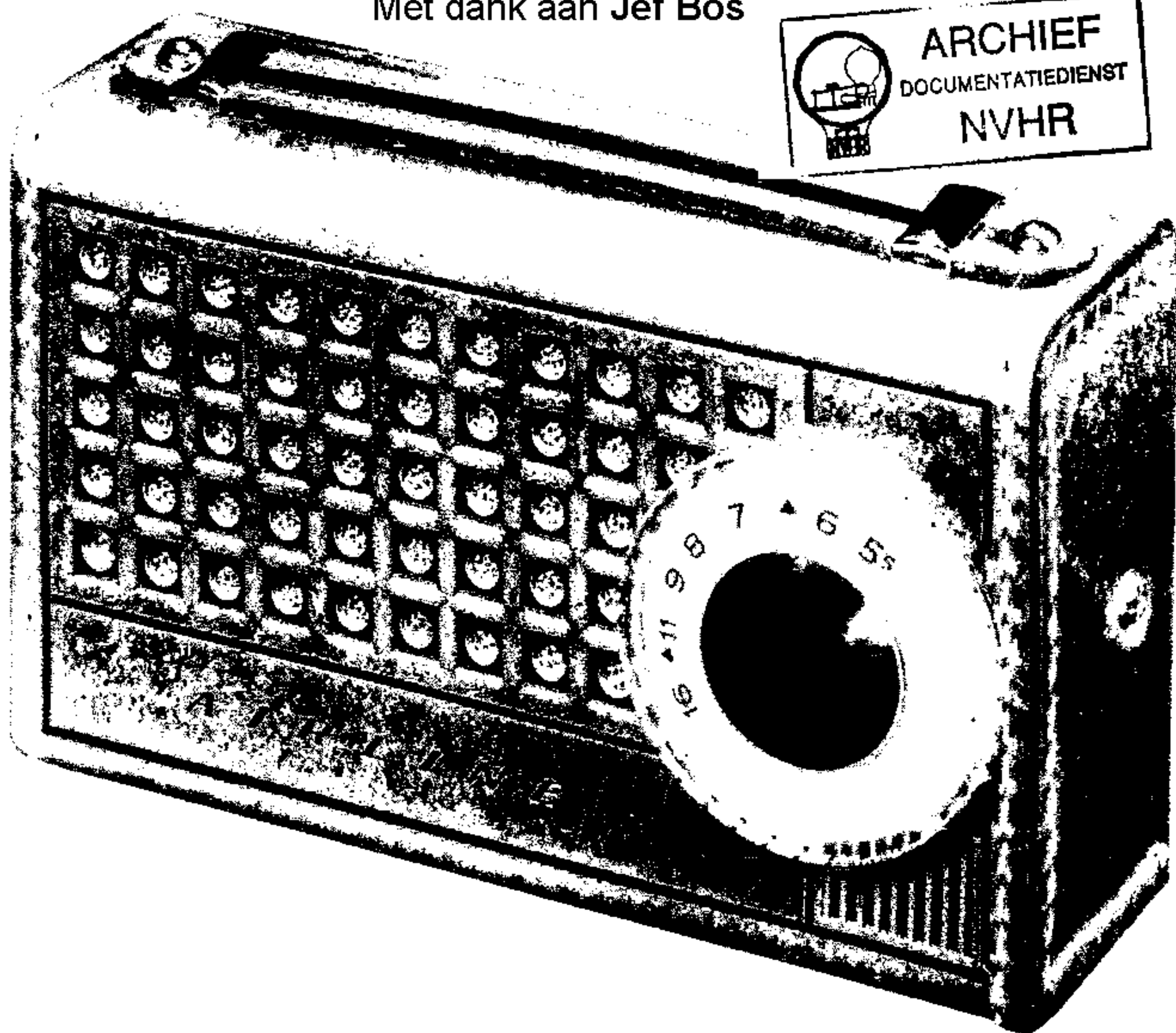
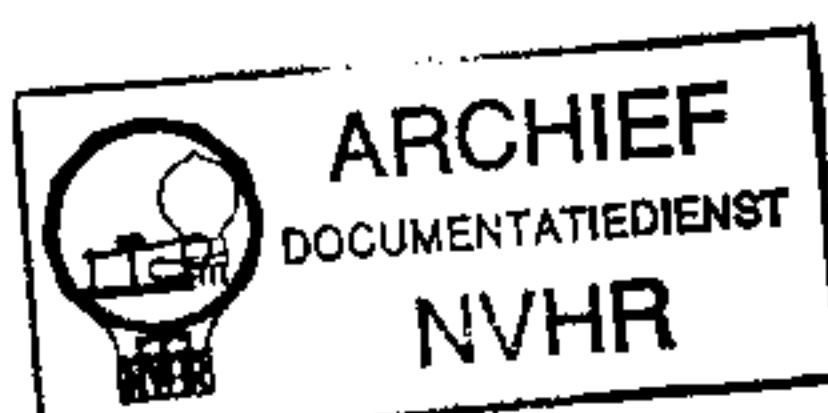




Met dank aan Jef Bos



TRADE NAME	Airline Models GEN-1106A, GEN-1112A		
SUPPLIER	Montgomery Ward & Co., 619 Chicago Ave., Chicago, Illinois		
TYPE SET	Battery Operated Portable AM Transistorized Receiver		
POWER SUPPLY	9 Volts DC	RATING	8.9MA @ 9 Volts DC (No Signal, Min. Volume)
TUNING RANGE—BROADCAST	540-1600KC		12MA @ 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. Use an insulated alignment screwdriver for adjusting.

DUMMY ANTENNA	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	Fashion loop of several turns of wire and radiate signal into loop of receiver. Adjust for maximum output.
2.	"	1640KC	"	"	A4	"
3.	"	535KC	Tuning gang fully closed	"	A5	Fashion loop of several turns of wire and radiate signal into loop of receiver. Adjust for maximum output. Repeat steps 2 and 3.
4.	"	1400KC	Tune to 1400KC signal	"	A6	Fashion loop of several turns of wire and radiate signal into loop of receiver. Adjust for maximum output.

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 H648

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PARTS LIST AND DESCRIPTIONS

TRANSISTORS

ITEM No.	ORIG. TYPE	USE	REPLACEMENT DATA				NOTES
			CBS PART No.	RCA PART No.	RAYTHEON PART No.	SYLVANIA PART No.	
X1	2N140	Converter		2N140	2N485		PNP Note 1
X2	2N139	1st IF Amplifier		2N139	2N482	2N139	PNP Note 2
X3	2N139	2nd IF Amplifier		2N139	2N482	2N139	PNP Note 2
X4	2N109	Driver	CBS-2N180	2N109	2N362	2N109	PNP
X5	2N109	Output	CBS-2N180	2N109	2N632	2N109	PNP Note 3
X6	2N109	Output	CBS-2N180	2N109	2N632	2N109	PNP Note 3

Note 1. Model GEN-1112A uses 2N405 in this application.

Note 2. Model GEN-1112A uses 2N407 in this application.

Note 3. Model GEN-1112A uses 2N411 in this application.

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		REPLACEMENT DATA						
	CAP.	VOLT.	AIRLINE PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	PYRAMID PART No.	SANGAMO PART No.	SPRAGUE PART No.
C1	100	10	E3215	PWE10100	NL100-10	TT15X100			TE-1162
C2	4	6	E3216	XPP-6004	NL4-6	TT8X5	ML4-6		TE-1083
C3	4	6	E3216	XPP-6004	NL4-6	TT8X5	ML4-6		TE-1083

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	AIRLINE PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	SPRAGUE PART No.	
C4	20000		E3331	BPD-02	DD-203	BYB6S2	DC511	5HK-S2	5%
C5	10000			BPD-01	DD-103	BYA6S1		5HK-S1	
C6	20000			BPD-02	DD-203	BYB6S2		5HK-S2	
C7	91								
C8	20000			BPD-02	DD-203	BYB6S2		5HK-S2	
C9	20000		BPD-02	DD-203	BYB6S2	5HK-S2			
C10	20000		BPD-02	DD-203	BYB6S2	5HK-S2			
C11	39		E3332	NPO-D139	DTZ-39	C10Q39C		5%	
C12	20000			BPD-02	DD-203	BYB6S2	6HK-S2		
C13	20000			BPD-02	DD-203	BYB6S2	5HK-S2		
C14	20000			BPD-02	DD-203	BYB6S2	5HK-S2		
C15	20000			BPD-02	DD-203	BYB6S2	5HK-S2		

CONTROLS

ITEM No.	RATING		REPLACEMENT DATA					INSTALLATION NOTES
	RESISTANCE	WATTS	AIRLINE PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	IRC PART No.	MALLORY PART No.	
R1	2500Ω	1/4	E2520					Volume & Switch

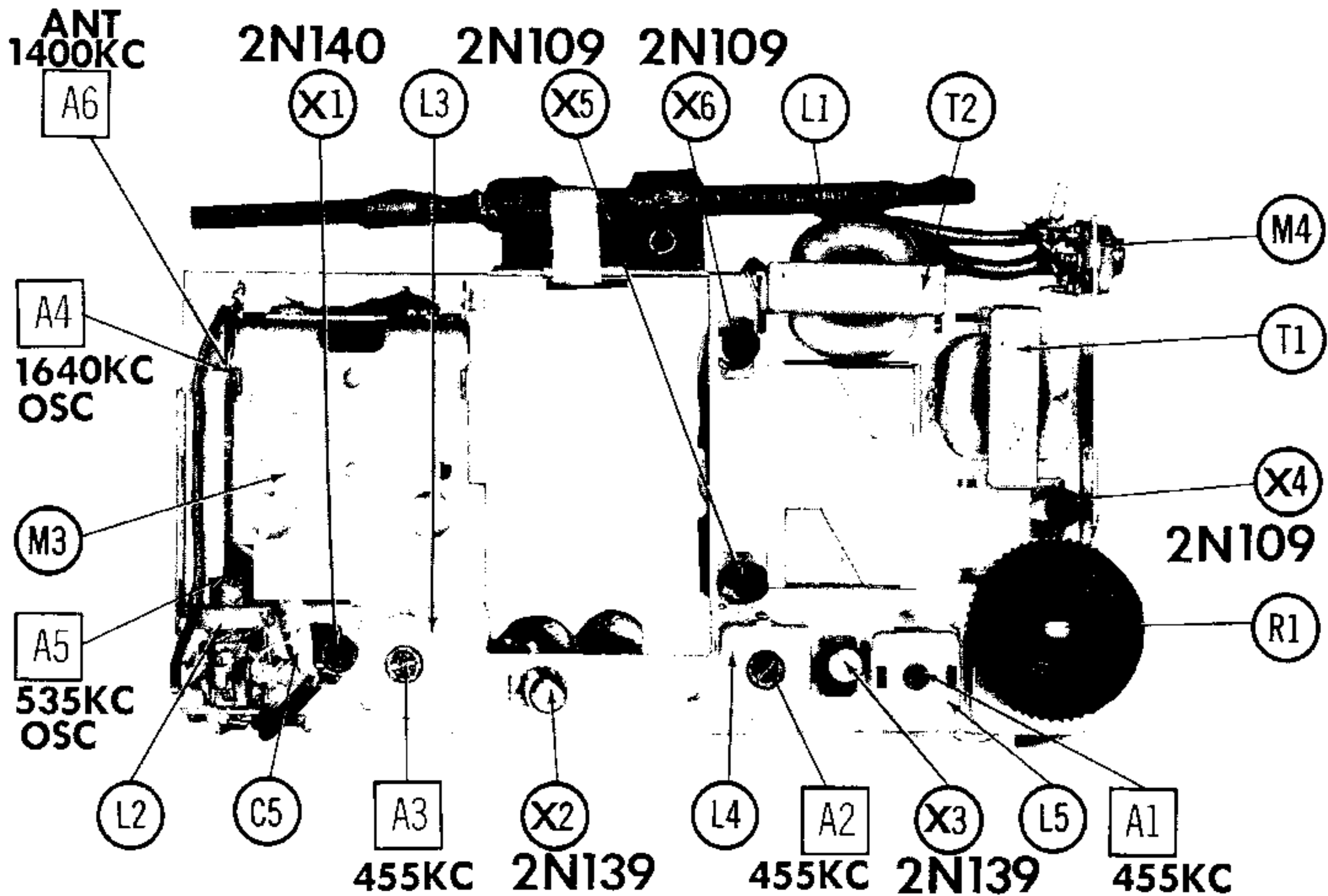
RESISTORS

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

ITEM No.	RATING		AIRLINE PART No.	NOTES	ITEM No.	RATING		AIRLINE PART No.	NOTES
	OHMS	WATT				OHMS	WATT		
R2	33K				R12	1000Ω			
R3	2200Ω				R13	33K			
R4	1000Ω				R14	150K			
R5	390Ω				R15	150K			
R6	470Ω				R16	33K			
R7	12K				R17	470Ω			
R8	150K				R18	150Ω			
R9	2200Ω				R19	8200Ω			
R10	240Ω 5%			Note 1	R20	47Ω 5%	1		
R11	1200Ω				R21	100Ω			

Note 1 Not used in some versions.

CHASSIS—TOP VIEW



PARTS LIST AND DESCRIPTIONS (Continued)

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA					NOTES
		AIRLINE PART No.	Moissner PART No.	Merit PART No.	Miller PART No.	Ram PART No.	
L1	Loop Stick	E8019					
L2	Osc. Coil	E8128 ▲		BC-403 *			
L3	1st IF	E8215					
L4	2nd IF	E8215					
L5	2nd IF	E8216					Alternate
	3rd IF	E8216					Alternate
	3rd IF	E8217					

▲ Includes C5.

* Reduce length of coil form.

TRANSFORMER (DRIVER)

ITEM No.	TURNS RATIO		REPLACEMENT DATA					NOTES
			AIRLINE PART No.	Halldorson PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	
	PRI.	SEC.						
T1	2	: 1	E1116					

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE		REPLACEMENT DATA						NOTES	
			AIRLINE PART No.	Halldorson PART No.	Merit PART No.	Ram PART No.	Stancor PART No.	Thordarson PART No.		Triad PART No.
	PRI.	SEC.								
T2	1400Ω CT	20Ω	E1116	GH7				TA-9		TY-44X

SPEAKER

ITEM No.	TYPE			REPLACEMENT DATA		NOTES
				AIRLINE PART No.	QUAM PART No.	
	SIZE	FIELD	V. C. IMP.			
SP1	2 3/4"	PM	20Ω	E1019		

BATTERIES

ITEM No.	VOLTAGE	AIRLINE PART No.	REPLACEMENT DATA						NOTES
			BURGESS		EVEREADY		MALLORY		
			"A"	"B"	"A"	"B"	"A"	"B"	
M1	9V	62-96		P6		226		M1600	

CRYSTAL DIODES

ITEM No.	ORIG. TYPE	REPLACEMENT DATA			NOTES
		AIRLINE PART No.	CBS PART No.	SYLVANIA PART No.	
M2	1N295		1N60	1N295	Detector (Pigtail)

MISCELLANEOUS

ITEM No.	PART NAME	AIRLINE PART No.	NOTES
M3	Tuning Cap.	E3520	2 Gang (Ant. 27-257mmf, Osc. 12-123mmf.) Miniature, Earphone
M4	Jack	E636	

CABINETS & CABINET PARTS

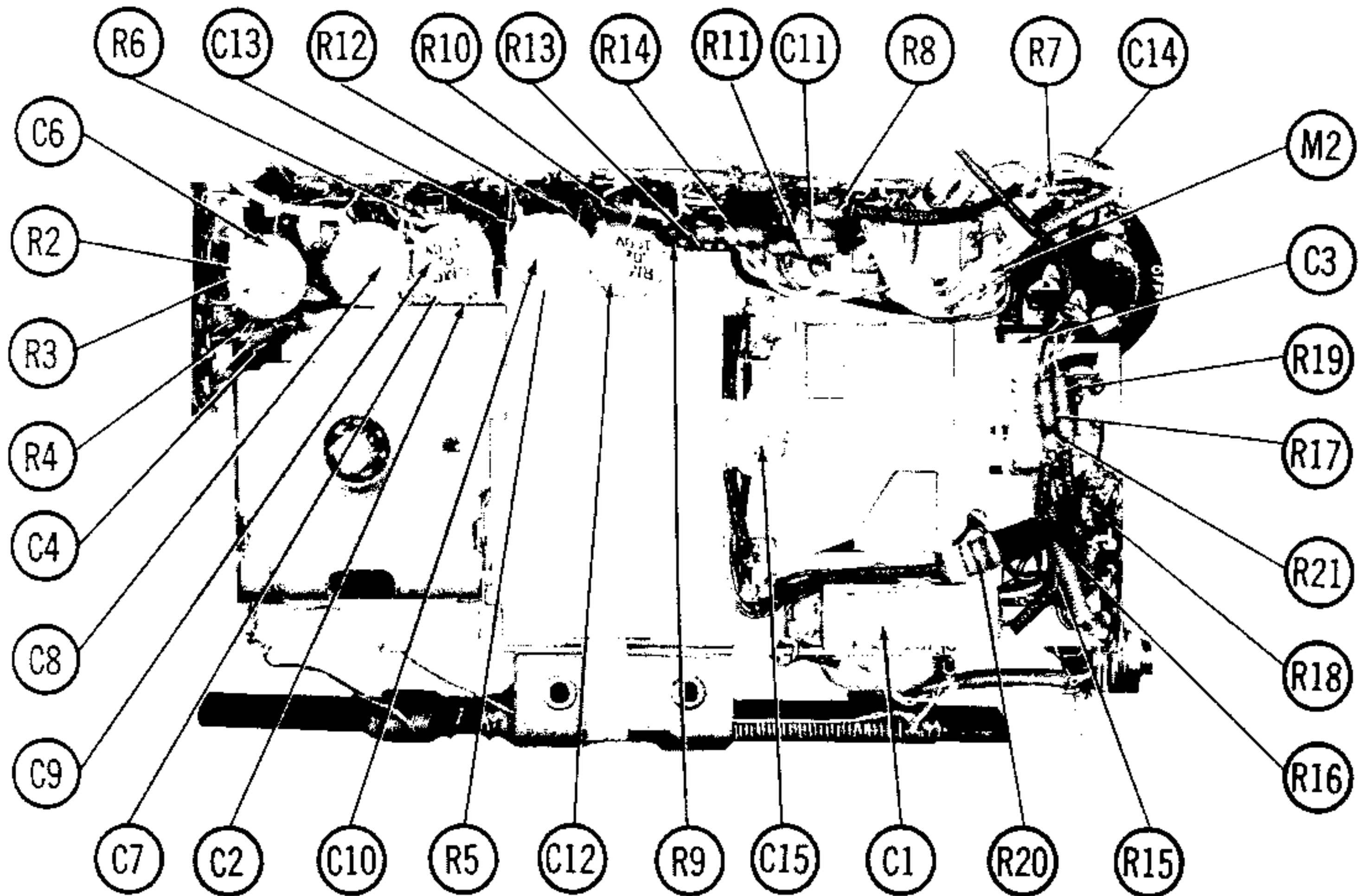
(When Ordering Cabinets & Cabinet Parts, Specify Model, Chassis & Color)

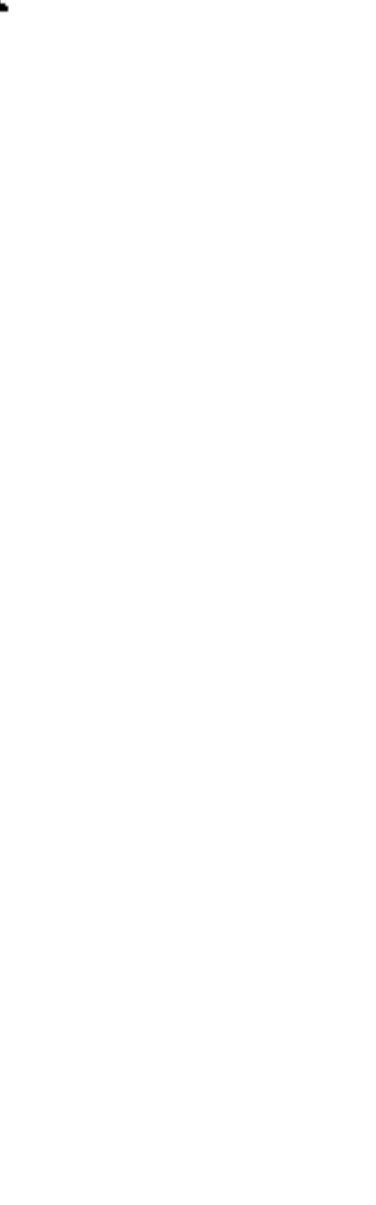
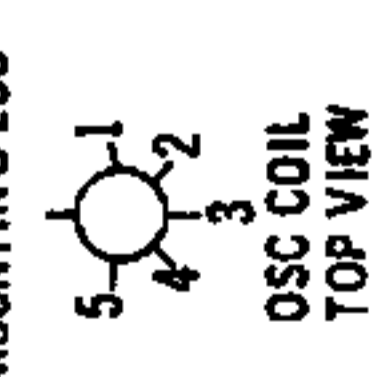
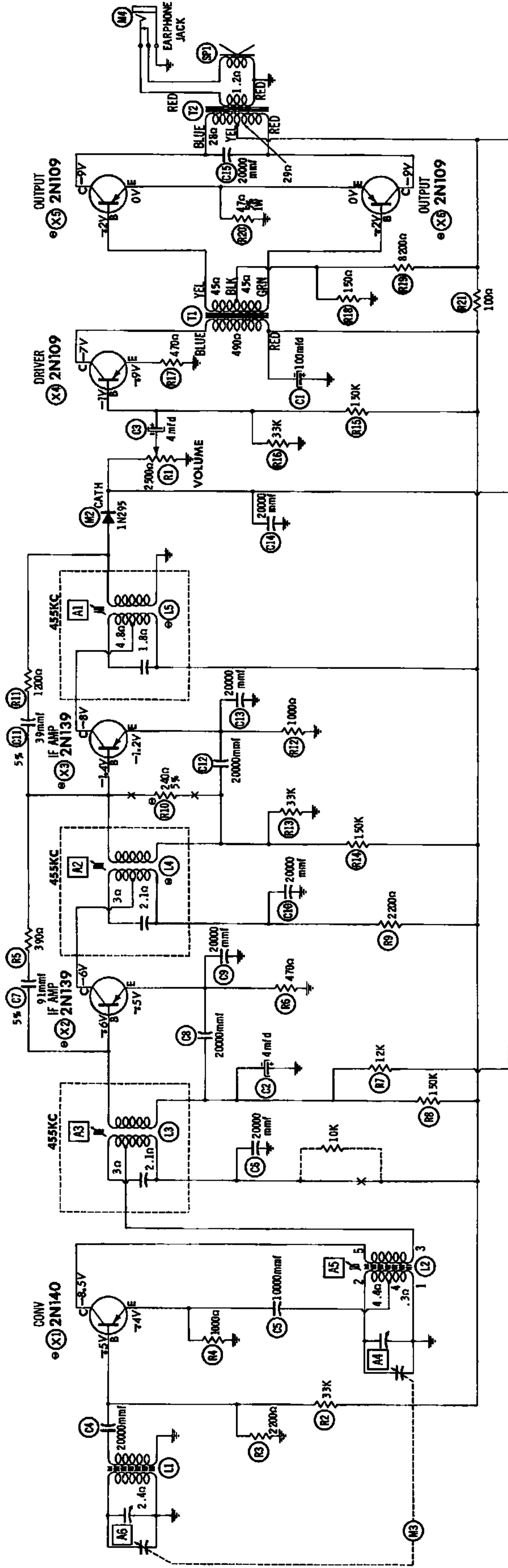
NAME	PART NO.	DESCRIPTION
Knob	E5053	Tuning On-Off-Volume Includes Handle
Knob	E5054	
Cabinet	E7032	

WIRING DATA

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

CHASSIS—BOTTOM VIEW





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	EMITTER	COLLECTOR
X1	2N140	2000Ω	1000Ω	↑ 100Ω
X2	2N139	14K	470Ω	↑ 2300Ω
X3	2N139	33K	1000Ω	↑ 100Ω
X4	2N109	33K	470Ω	↑ 590Ω
X5	2N109	190Ω	4.7Ω	↑ 28Ω
X6	2N109	190Ω	4.7Ω	↑ 29Ω

TRANSISTORS REMOVED FOR RESISTANCE MEASUREMENTS. MEASURED FROM JUNCTION OF R19 AND R21.

- 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.

A PHOTOFACT STANDARD NOTATION SCHEMATIC
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