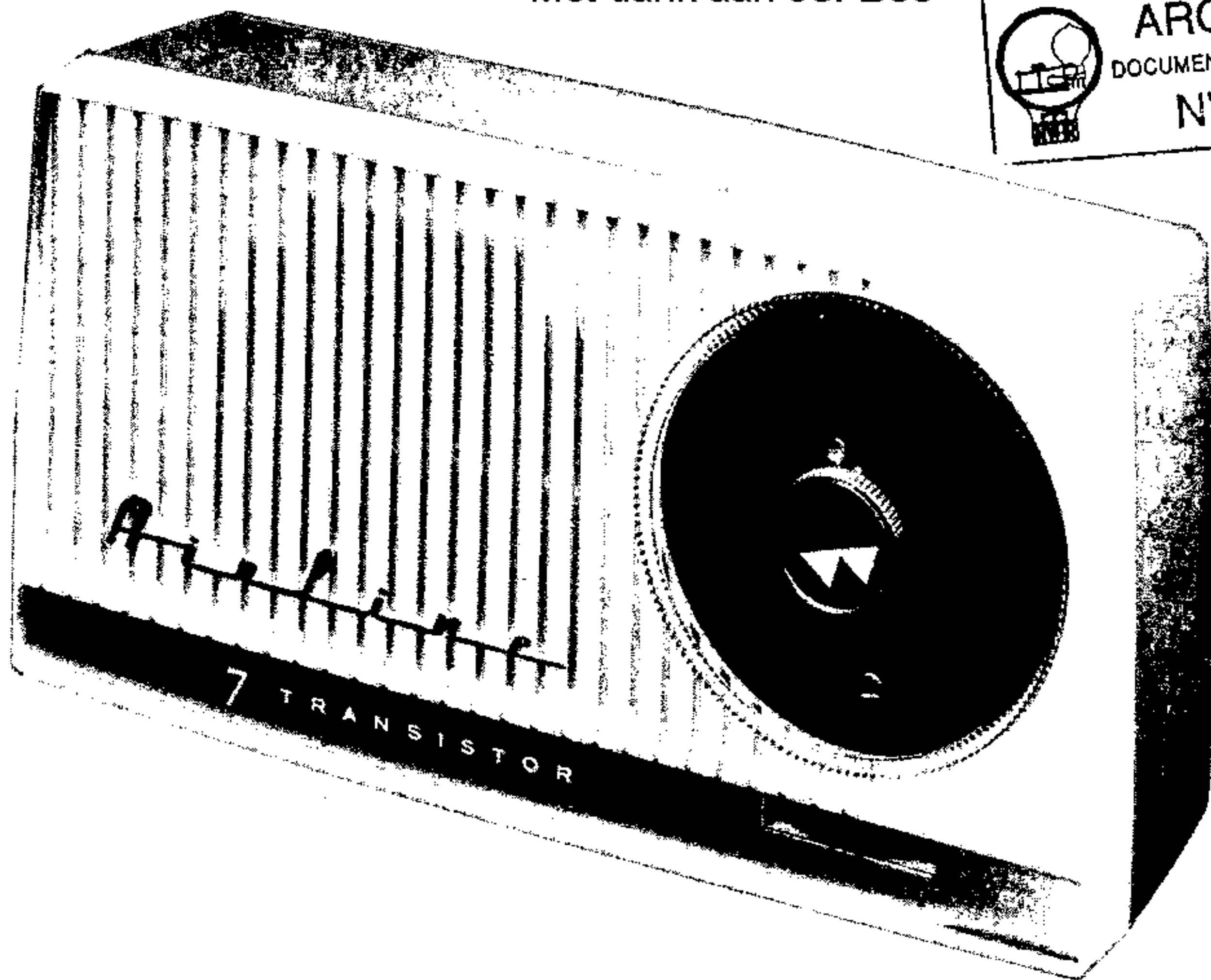
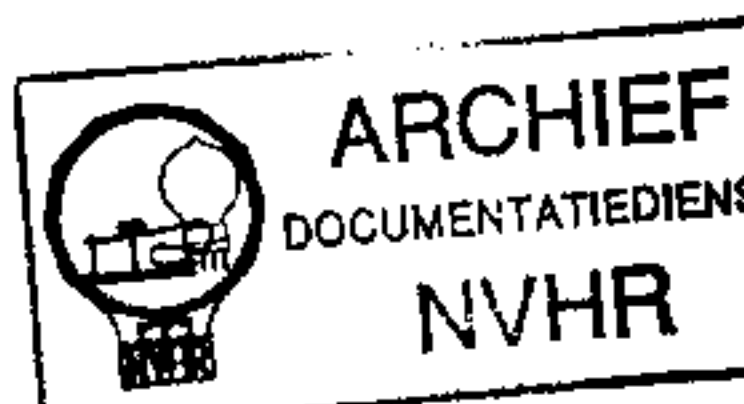




Met dank aan Jef Bos



TRADE NAME	Airline Model GTM-1109A
SUPPLIER	Montgomery Ward & Co., 619 Chicago Ave., Chicago, Illinois
TYPE SET	Battery Operated Portable Transistorized Receiver

POWER SUPPLY	9Volts DC	RATING	6MA@9 Volts DC
TUNING RANGE--BROADCAST	540-1600KC		

ALIGNMENT INSTRUCTIONS--READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT

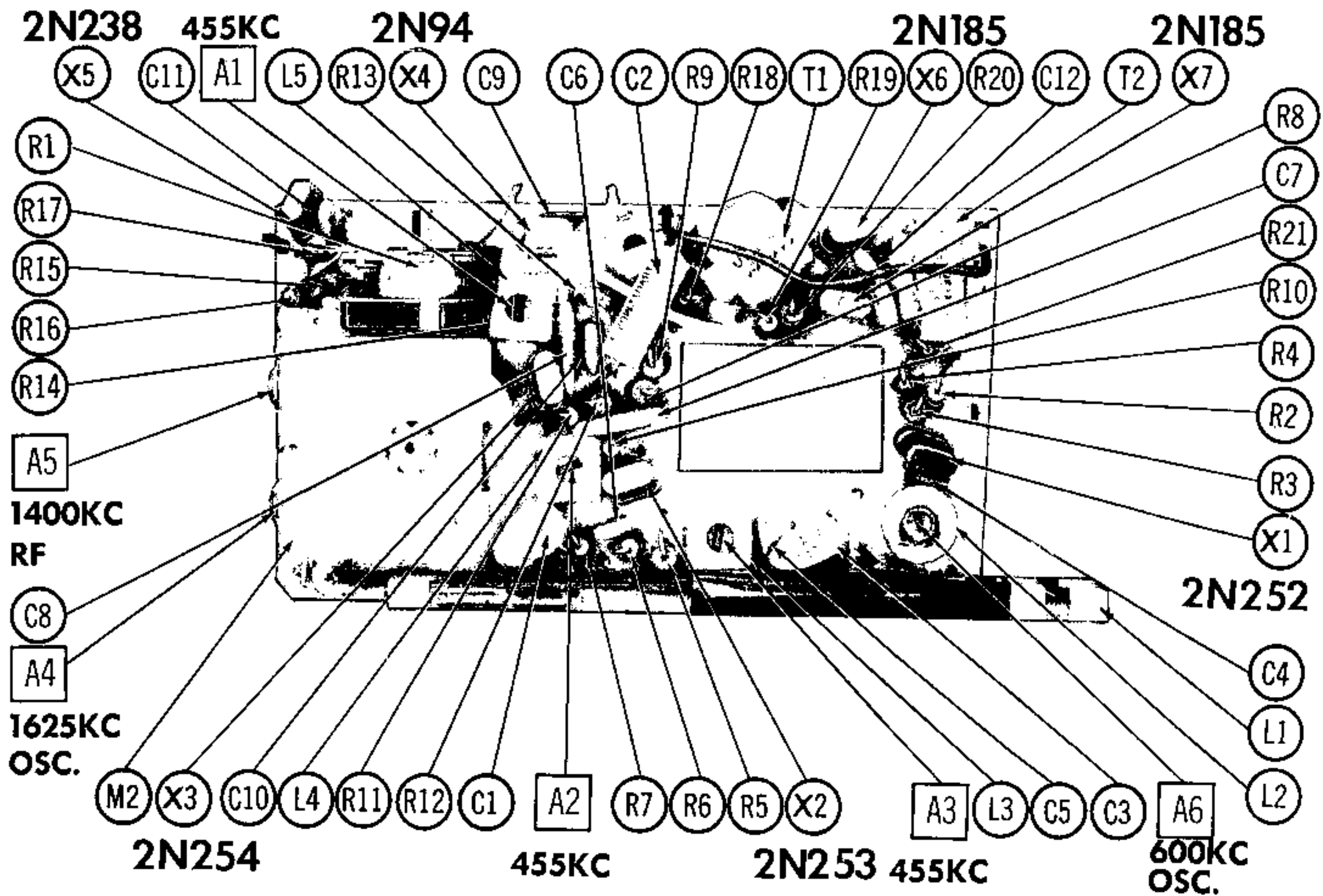
Volume control should be at maximum position. Output of signal generator should be no higher than necessary to obtain an output reading. Use an insulated alignment screwdriver for adjusting.

DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	OUTPUT METER	ADJUST	REMARKS
	Loop	455KC (400% Mod.)	Tuning Gang fully open	Across voice coil	A1, A2, A3	Remove Speaker bracket assembly. Fashion loop of several turns of wire and radiate signal into loop of receiver. Adjust for maximum output.
	Loop	1625KC	Tuning Gang fully open	Across voice coil	A4	Replace Speaker bracket assembly. Fashion loop of several turns of wire and radiate signal into loop of receiver. Adjust for maximum output.
	Loop	1400KC	Tune to 1400KC signal.	Across voice coil	A5	Fashion loop of several turns of wire and radiate signal into loop of receiver. Adjust for maximum output.
	Loop	600KC	600KC	Across voice coil	A6	Fashion loop of several turns of wire and radiate signal into loop of receiver. Adjust for maximum output. Repeat steps 2, 3 and 4 until no further improvement is obtained.

HOWARD W. SAMS & CO., INC. • Indianapolis 5, 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 H318

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. © 1958 Howard W. Sams & Co., Inc., Indianapolis 5, Indiana. Printed in U.S. of America



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	2N252	Converter		2N414		
X2	2N253	1st. IF Amplifier	2N438			
X3	2N254	2nd. IF Amplifier	2N439			
X4	2N94/880	Det. -AVC-AF Amplifier	2N438		2N94	
X5	2N238/310	AF Amplifier	2N180	2N362		
X6	2N185	Output	2N180	2N360		
X7	2N185	Output	2N180	2N360		

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	40	10	218V012H01	PWE10040	NL50-10	TT10X50	ML40-15		R2329 *
C2	40	3	218V012H02	PWE3040	NL40-3	TT3X40	ML40-6		TE-1057

* Non Catalog Item

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.	ERIE PART No.	MALLORY PART No.	
C3	4700			BPD-0047	DD-472	BYA10D47	ED-0047	UC-5247	5GA-D47
C4	1000		215V300H15	BPD-001	DD-102	BYA6D1	ED-1000	DC521	5HK-D1
C5	10000		215V300H12						TG-S10
C6	10000		215V300H12						TG-S10
C7	2200		215V102A22	BPD-0022	DD-222	BYA10D22	ED-0022	UC-5222	5HK-D22
C8	50000		215V303H03	BPD-05					TG-S50
C9	10000		215V300H12						TG-S10
C10	10000		215V300H12						TG-S10
C11	1000		215V300H15	BPD-001	DD-102	BYA6D1	ED-1000	DC521	5HK-D1
C12	50000		215V303H03	BPD-05					TG-S50

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	5000Ω	1/2	270V024H01					Volume and 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	39K				R12	470Ω			
R3	8200Ω				R13	3300Ω			
R4	4700Ω				R14	330K			
R5	3900Ω				R15	680Ω			
R6	15K				R16	82K			
R7	1000Ω				R17	220Ω			
R8	2200Ω				R18	6800Ω			
R9	330Ω				R19	100Ω			
R10	1000Ω				R20	10Ω			
R11	15K				R21	220Ω			

TRANSFORMER (DRIVER)

ITEM No.	TURNS RATIO		REPLACEMENT DATA					NOTES	
	PRI.	SEC.	AIRLINE PART No.	Halldorson PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.		Triad PART No.
T1	2.5:	1	430V024M02 Ⓢ						① Alternate Part #430V024H01

PARTS LIST AND DESCRIPTIONS (Continued)

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE		REPLACEMENT DATA					NOTES	
	PRI.	SEC.	AIRLINE PART No.	Halldorson PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.		Triad PART No.
T2	1200Ω CT	12Ω	430V025M02						① Alternate Part #430V025H01

SPEAKER

ITEM No.	TYPE			REPLACEMENT DATA		NOTES
	SIZE	FIELD	V. C. IMP.	AIRLINE PART No.	QUAM PART No.	
SP1	2 3/4"	PM	12Ω	570V004H01		

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA					NOTES
		AIRLINE PART No.	Meissner PART No.	Merit PART No.	Miller PART No.	Ram PART No.	
L1	Loop Stick	310V012H03					
L2	Osc. Coil	230V026H01					
L3	1st IF	235V014H01					
L4	2nd IF	235V014H01					
L5	3rd IF	235V014H02					

BATTERIES

ITEM No.	VOLTAGE	AIRLINE PART No.	REPLACEMENT DATA								NOTES
			BURGESS		EVEREADY		MALLORY		RAY-O-VAC		
			"A"	"B"	"A"	"B"	"A"	"B"	"A"	"B"	
M1	9V			P8		226		M1600		1800	

MISCELLANEOUS

ITEM No.	PART NAME	AIRLINE PART No.	NOTES
M2	Tuning Cap	330V005H01	2 Gang (Ant. 24-130mmf, Osc. 30-95mmf)

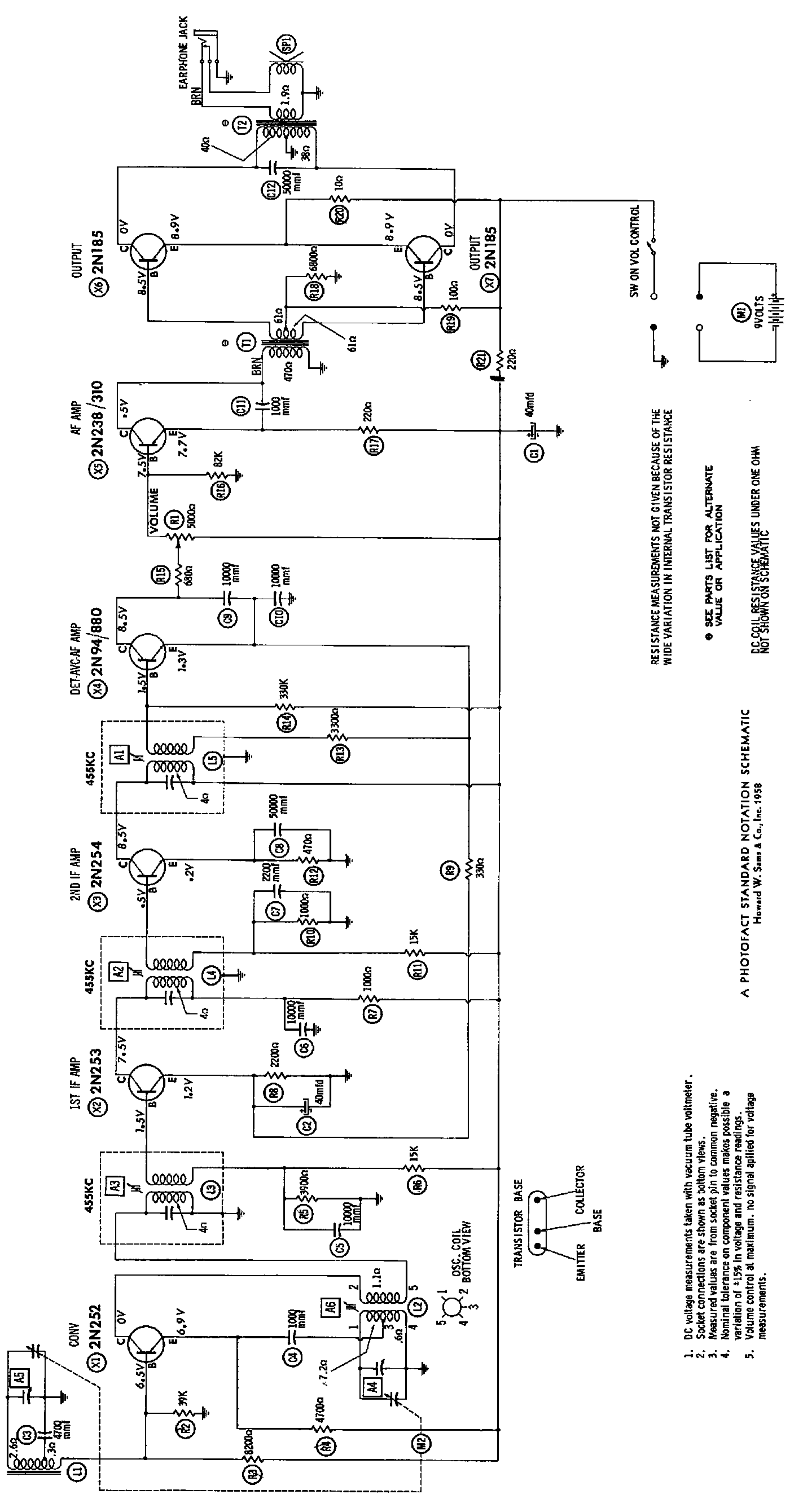
CABINETS & CABINET PARTS

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

NAME	PART NO.	DESCRIPTION
Knob	550V017H01	On-Off-Volume
Knob	550V033H01	Dial Tuning
Cabinet	513V016H01	Less Dial & Escutcheon
Escutcheon	555V015H01	
Dial	558V078H01	Calibration

WIRING DATA

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



CONV
X1 2N252

1ST IF AMP
X2 2N253

2ND IF AMP
X3 2N254

DET-AVC-AMP
X4 2N94/880

AF AMP
X5 2N238/310

OUTPUT
X6 2N185

OUTPUT
X7 2N185

SW ON VOL CONTROL

EARPHONE JACK

OSC. COIL
BOTTOM VIEW

TRANSISTOR BASE

EMITTER

COLLECTOR

BASE

9 VOLTS

SEE PARTS LIST FOR ALTERNATE VALUE OR APPLICATION

DC COIL RESISTANCE VALUES UNDER ONE OHM NOT SHOWN ON SCHEMATIC

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

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.

HOWARD W. SAMM & CO., INC. 1958

A PHOTOFACT STANDARD NOTATION SCHEMATIC