

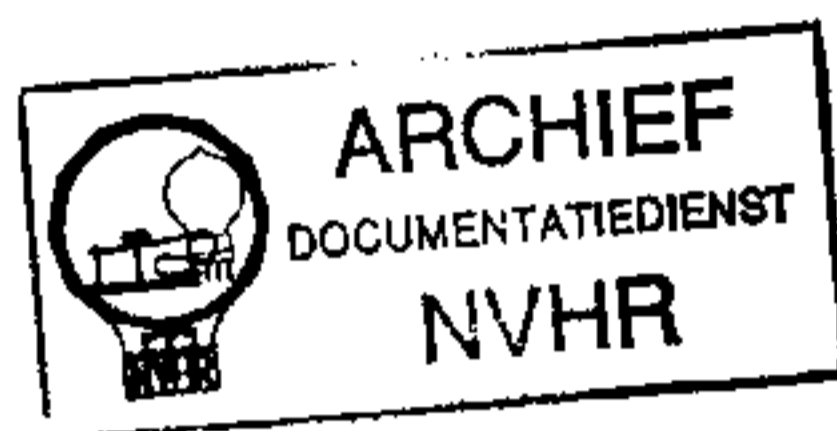


with CIRCUITRACE<sup>®</sup>



Met dank aan Jef Bos

Ned. Ver. v. Historie v/d Radio



MODEL GEN-1120C

TRADE NAME Airline Models GEN-1120A, GEN-1120B, GEN-1120C  
 SUPPLIER Montgomery Ward & Co., 619 Chicago Ave., Chicago, Illinois  
 TYPE SET Battery Operated Portable Transistorized AM Receiver

POWER SUPPLY 9 Volts DC  
 TUNING RANGE—BROADCAST 537 — 1640KC  
 RATING 12MA@9 Volts DC (No Signal, Min. Volume)  
 14MA@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:

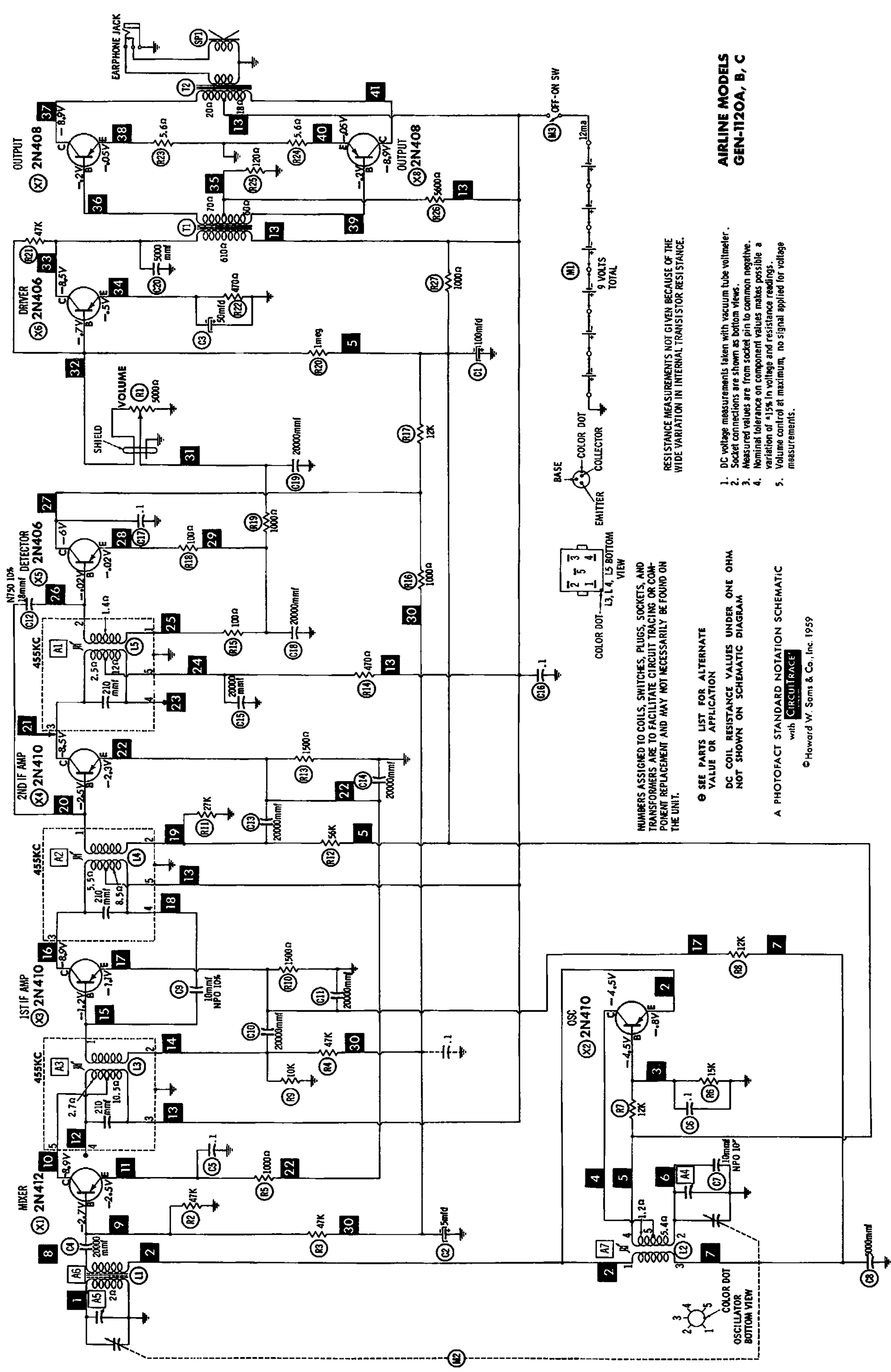
- A1, A2, A3..... GENERAL CEMENT #5097, 8727  
WALSCO #2515
- A4, A5..... GENERAL CEMENT #5004, 5008, 5009  
WALSCO#2520
- A7..... GENERAL CEMENT #8282, 8606, 8606L, 9091  
WALSCO #2526, 2541, 2543, 2544

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 coice 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.	"	1400KC	1400KC	"	A5	"
4.	"	600KC	600KC	"	A6	Check by using a tuning wand near the antenna and if necessary adjust A6 by moving adjustable turns of antenna for maximum output.
5.	"	537KC	Tuning gang fully closed	"	A7	Adjust for maximum output. Repeat step 2.

### 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 JF310

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

1. DC voltage measurements taken with vacuum tube voltmeter.
2. Socket connections are shown as bottom views.
3. Measured values are from socket pin to common negative.
4. Nominal tolerance on component values makes possible a variation of ±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.

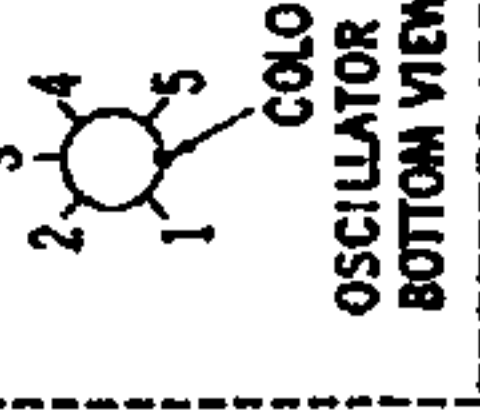
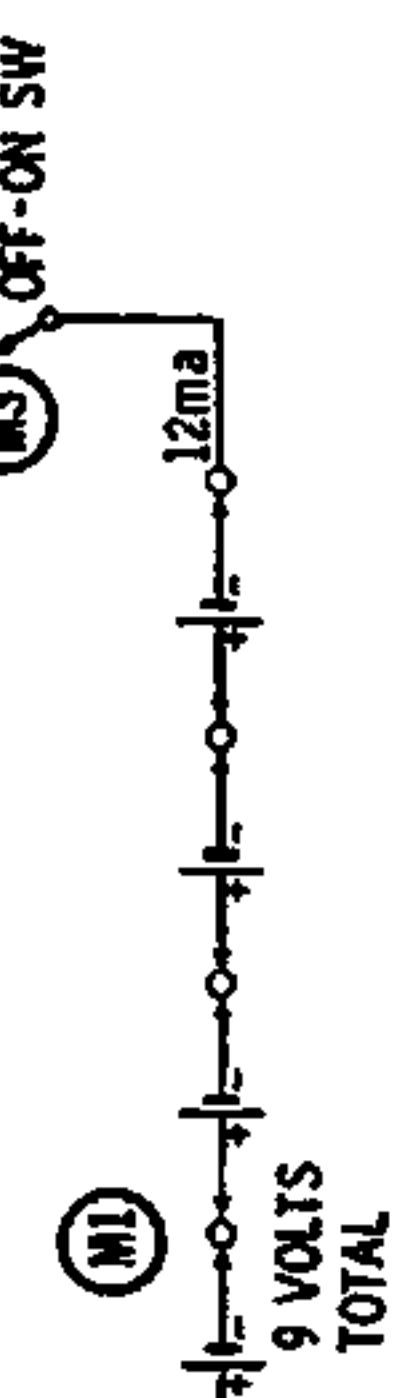
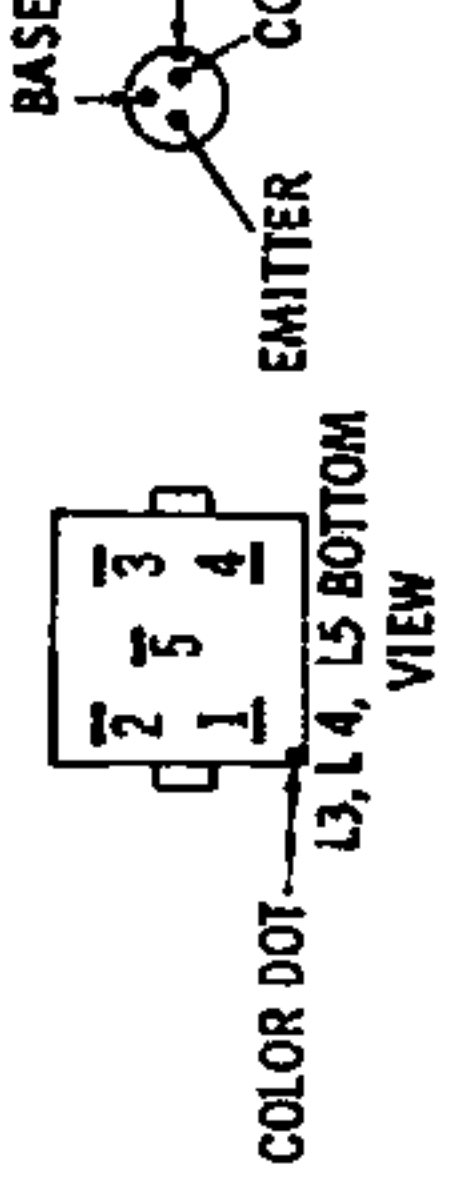
SEE PARTS LIST FOR ALTERNATE VALUE OR APPLICATION

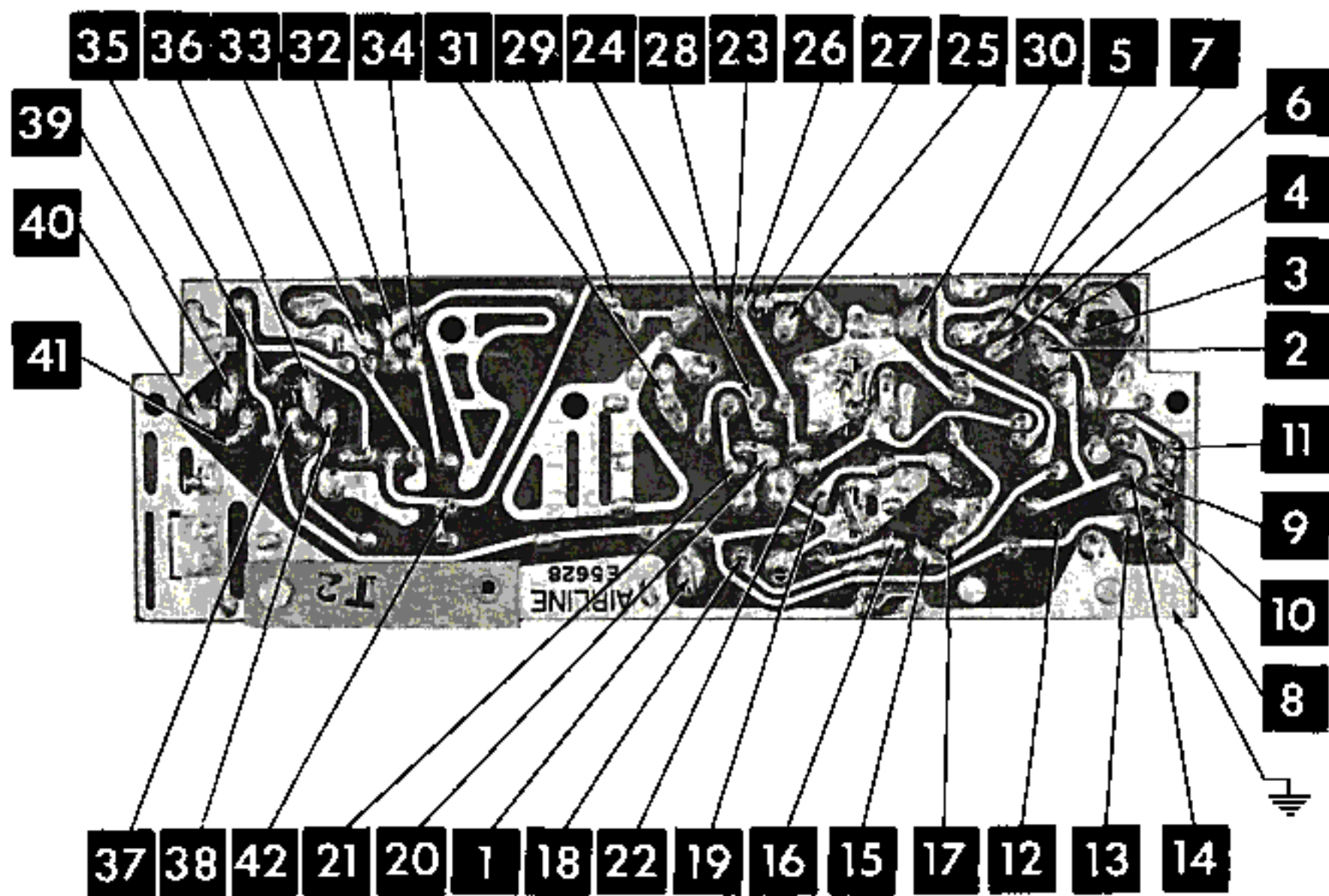
DC COIL RESISTANCE VALUES UNDER ONE OHM NOT SHOWN ON SCHEMATIC DIAGRAM

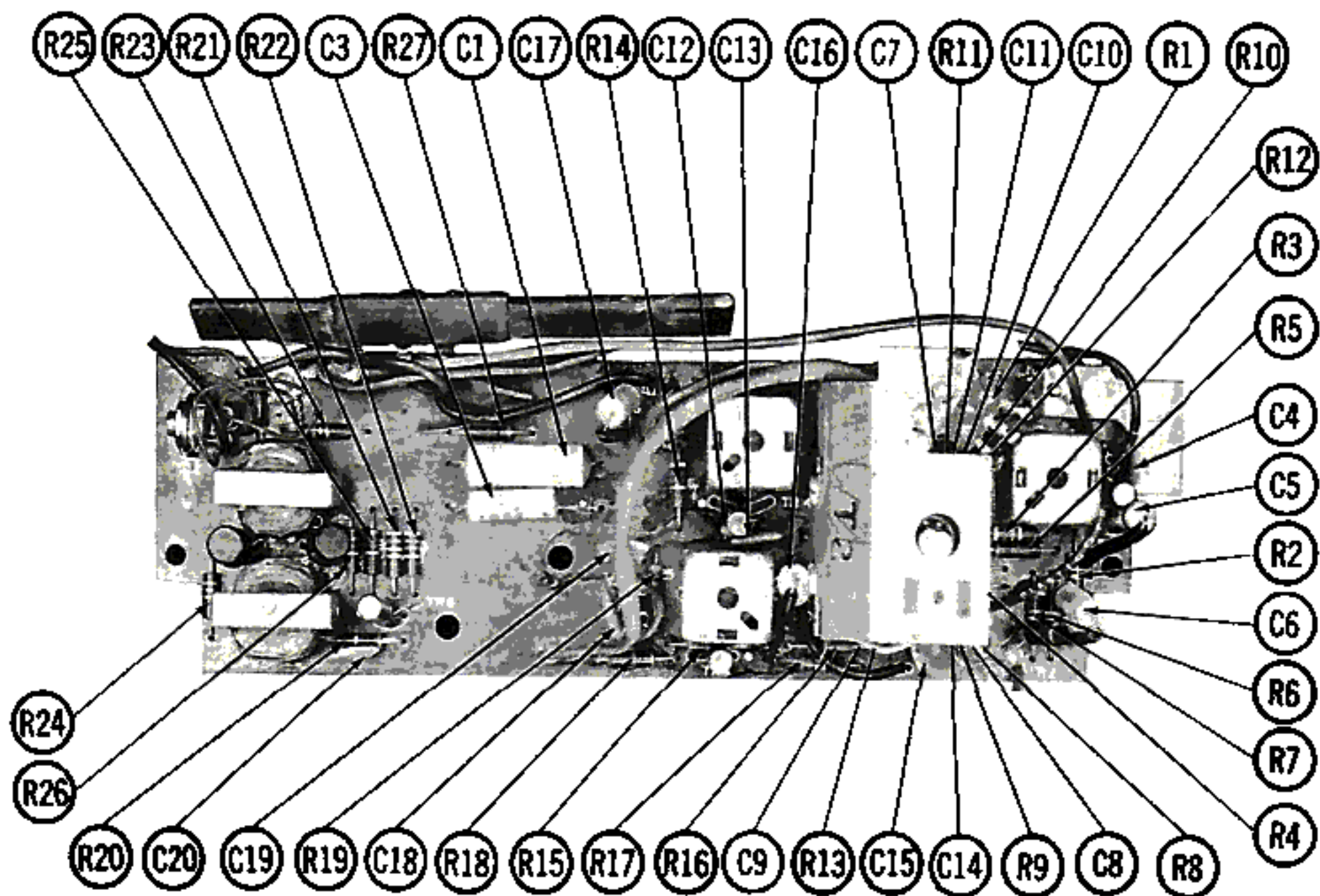
A PHOTOFACIT STANDARD NOTATION SCHEMATIC with **CIRCUITRACE**

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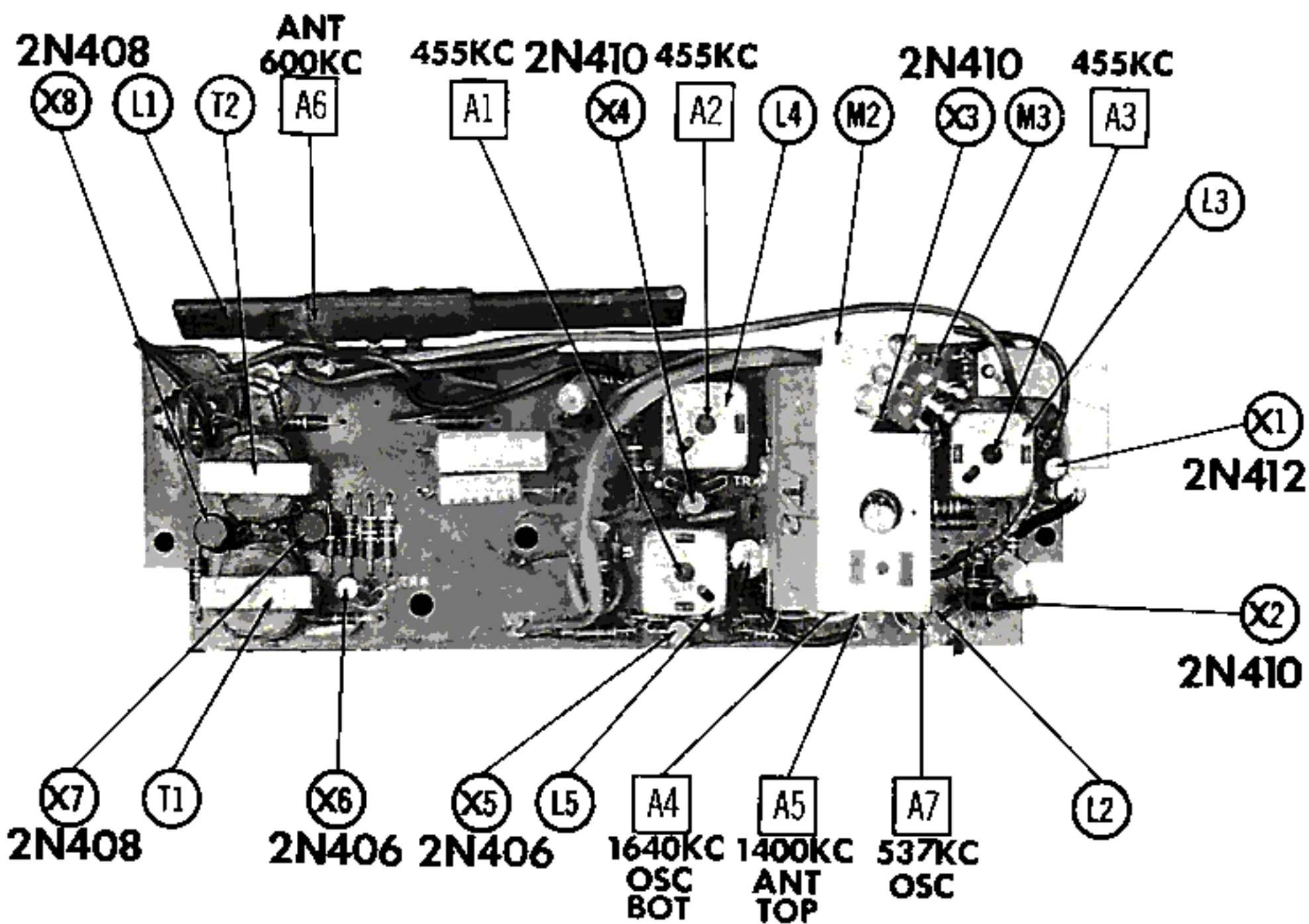
**AIRLINE MODELS  
 GEN-1120A, B, C**







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	2N412	Mixer		2N412	2N488	2N412	PNP PNP PNP PNP PNP PNP PNP } Matched PNP } Pair
X2	2N410	Oscillator		2N410	2N485	2N410	
X3	2N410	1st IF Amplifier		2N410	2N483	2N410	
X4	2N410	2nd IF Amplifier		2N410	2N482	2N410	
X5	2N408	Detector		2N408	2N382	2N408	
X6	2N408	Driver		2N408	2N382	2N408	
X7	2N408	Output		2N408	2N633	2N408	
X8	2N408	Output		2N408	2N633	2N408	

## ELECTROLYTIC CAPACITORS

ITEM No.	RATING		REPLACEMENT DATA						NOTES
	CAP.	VOLT.	AIRLINE PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	PYRAMID PART No.	SPRAGUE PART No.	
C1	100	10	E3215	PWE10100	EC100-10	TT15X100	ML100-15	TE-1119.3	
C2	5	10	E3227	PWE10005	EC5-15	TT12X5	ML5-15	TE-1127	
C3	50	3	E3226	PWE3050	EC50-3	TT6X50	ML50-3	TE-1058	

## 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	AIRLINE PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	SPRAGUE PART No.	
C4	20000			E3348	BPD-02	DD-203	BYB6S2	B-120	5HK-S2	
C5	.1	100		E3345	P288N-1	DF-104	CUB2P1	GEM-201	2TM-P1	
C6	.1	100		E3345	P288N-1	DF-104	CUB2P1	GEM-201	2TM-P1	
C7	10		NPO 10%	E3346	NPO-DI 10	DTZ-10	C10Q1C	CNO-410	5TCC-Q1S 10%*	
C8	5000			E3327	BPD-005	DD-502	BYA10D5	B-250	5HK-D5	
C9	10		NPO 10%	E3346	NPO-DI 10	DTZ-10	C10Q1C	CNO-410	5TCC-Q1S 10%*	
C10	20000			E3348	BPD-02	DD-203	BYB6S2	B-120	5HK-S2	
C11	20000			E3348	BPD-02	DD-203	BYB6S2	B-120	5HK-S2	
C12	18		N750 10%	E3347		TCN-18	C10Q18U	CN7-418	5TCU-Q18S 10%*	
C13	20000			E3348	BPD-02	DD-203	BYB6S2	B-120	5HK-S2	
C14	20000			E3348	BPD-02	DD-203	BYB6S2	B-120	5HK-S2	
C15	20000			E3348	BPD-02	DD-203	BYB6S2	B-120	5HK-S2	
C16	.1	100		E3345	P288N-1	DF-104	CUB2P1	GEM-201	2TM-P1	
C17	.1	100		E3345	P288N-1	DF-104	CUB2P1	GEM-201	2TM-P1	
C18	20000			E3348	BPD-02	DD-203	BYB6S2	B-120	5HK-S2	
C19	20000			E3348	BPD-02	DD-203	BYB6S2	B-120	5HK-S2	
C20	5000			E3327	BPD-005	DD-502	BYA10D5	B-250	5HK-D5	

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

## 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	1/4	E-2531					Volume

# D DESCRIPTIONS

## 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	47K				R15	100Ω			
R3	47K				R16	1000Ω			
R4	47K				R17	12K			
R5	1000Ω				R18	100Ω			
R6	15K				R19	1000Ω			
R7	12K				R20	1meg			
R8	12K				R21	47K			
R9	10K				R22	470Ω			
R10	1500Ω				R23	5.6Ω		E2016	
R11	27K				R24	5.6Ω		E2016	
R12	56K				R25	120Ω			
R13	1500Ω				R26	5600Ω			
R14	470Ω				R27	1000Ω			

## COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA						NOTES
		AIRLINE PART No.	Gramer PART No.	Meissner PART No.	Merit PART No.	Miller PART No.	Ram PART No.	
L1	Loopstick	E6028						
L2	Osc. Coil	E6138						
L3	1st IF Trans.	E6221						
L4	2nd IF Trans.	E6222						
L5	3rd IF Trans.	E6223						

## TRANSFORMER (DRIVER)

ITEM No.	TURNS RATIO		REPLACEMENT DATA						NOTES
			AIRLINE PART No.	Halldorson PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.	
	PRI.	SEC.							
T1	2.5	1	E1122					TY-51X①	① Bend Tabs Down

## 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	300Ω CT	3-4Ω	E1123	TR-113①				TA-41 ①	TR-113①	TY-57X ①	① Bend Tabs Down

## SPEAKER

ITEM No.	TYPE			REPLACEMENT DATA		NOTES
				AIRLINE PART No.	QUAM PART No.	
	SIZE	FIELD	V. C. IMP.			
SP1	4"x 6"	PM	3-4Ω	E1037	46A07 ①	① Enlarge Mounting Holes

# PARTS LIST AND DES

## BATTERIES

ITEM No.	VOLTAGE	AIRLINE PART No.	REPLACEMENT DATA						NOTES
			BURGESS		EVEREADY		MALLORY		
			"A"	"B"	"A"	"B"	"A"	"B"	
M1	9V	62-68 ①		2R ①		950 ①		M-13M ①	① 6 Used

## MISCELLANEOUS

ITEM No.	PART NAME	AIRLINE PART No.	NOTES
M2 M3	Tuning Cap Switch Printed Board	E3524 E129 E5628	2 Gang; Ant. 22-243mmf, Osc. 11-107mmf Power On-Off (DPDT, Slide Type)

# DESCRIPTIONS (Continued)

## CABINETS & CABINET PARTS

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

NAME	PART NO.	DESCRIPTION
Knob Knob Cabinet	E5086 E5083 E7048-3	Tuning Volume

## WIRING DATA

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