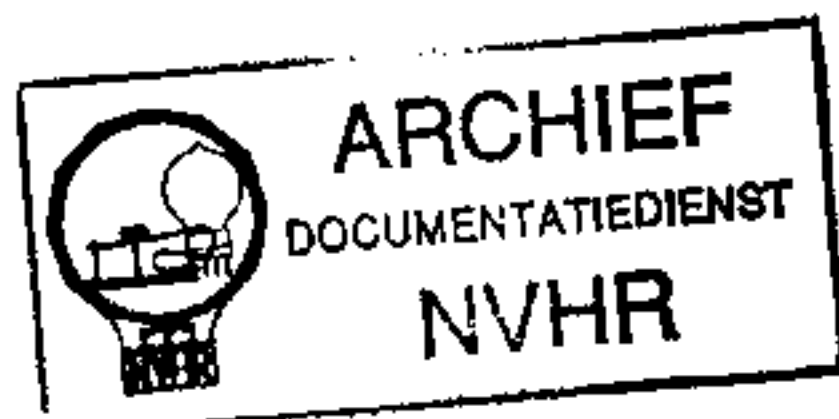


PHOTOFACT[®] Folder

with **CIRCUITRACE[®]**

**AIRLINE MODEL
GTM-1200A**

Ned. Ver. v. Historie v/d Rad

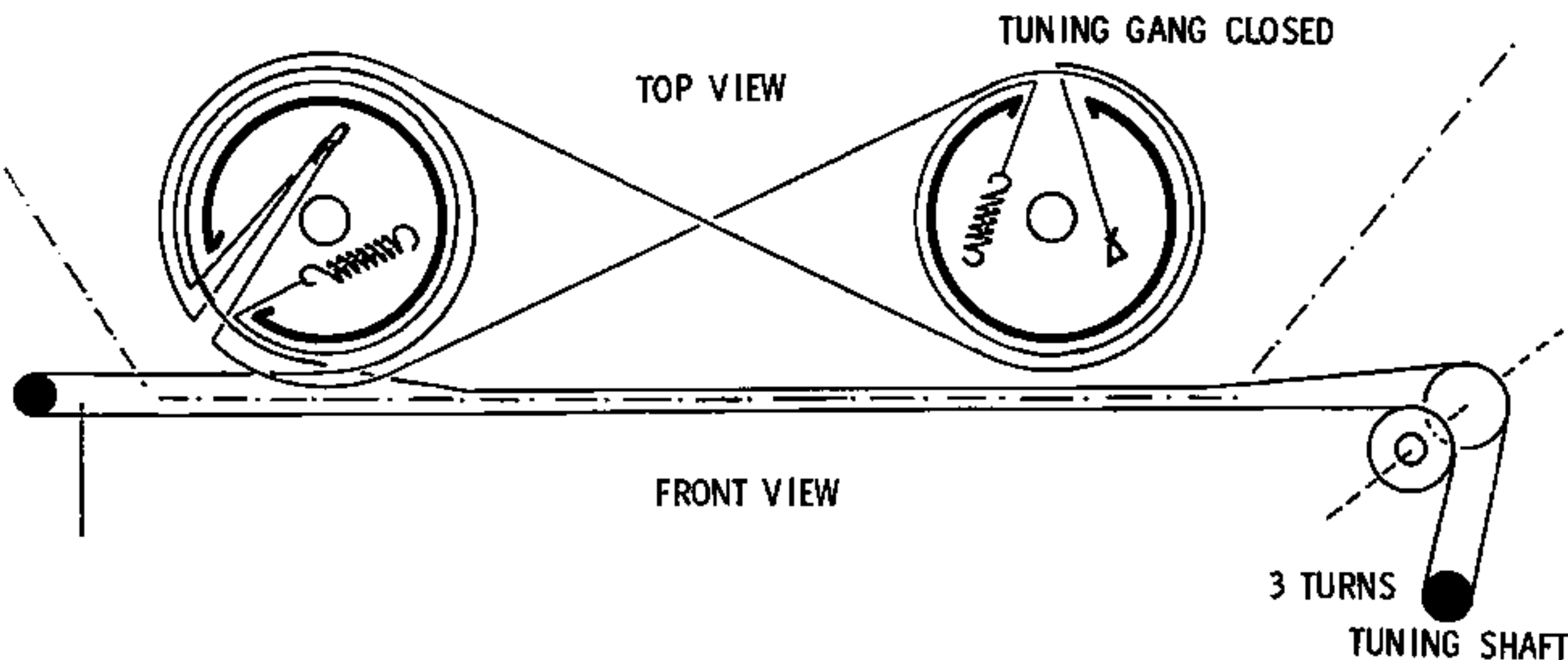


Met dank aan Jef Bos



SUPPLIER	Montgomery Ward & Co., 619 Chicago Ave., Chicago 7, Illinois		
TYPE SET	Battery Operated Transistorized Portable BC-SW Receiver		
POWER SUPPLY	9 Volts DC	RATING	11MA @ 9 Volts DC (No Signal, Min. Volume) 20MA @ 9 Volts DC (Signal, Normal Volume)
TUNING RANGE—BROADCAST	540 — 1600KC	SHORT WAVE	2.4 — 6.5MC

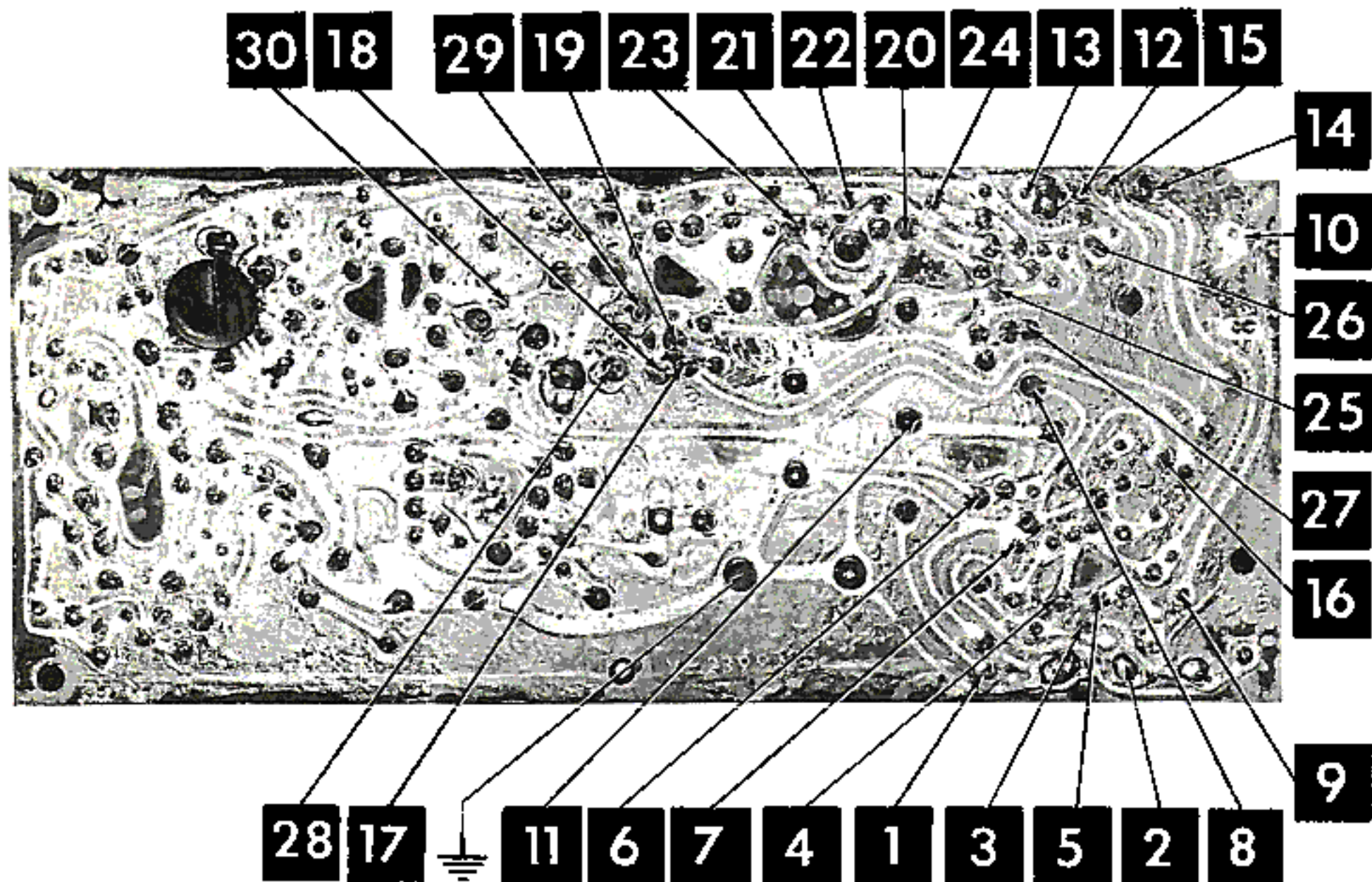
DIAL CORD STRINGING



HOWARD W. SAMS & CO., INC. Indianapolis 6, Indiana

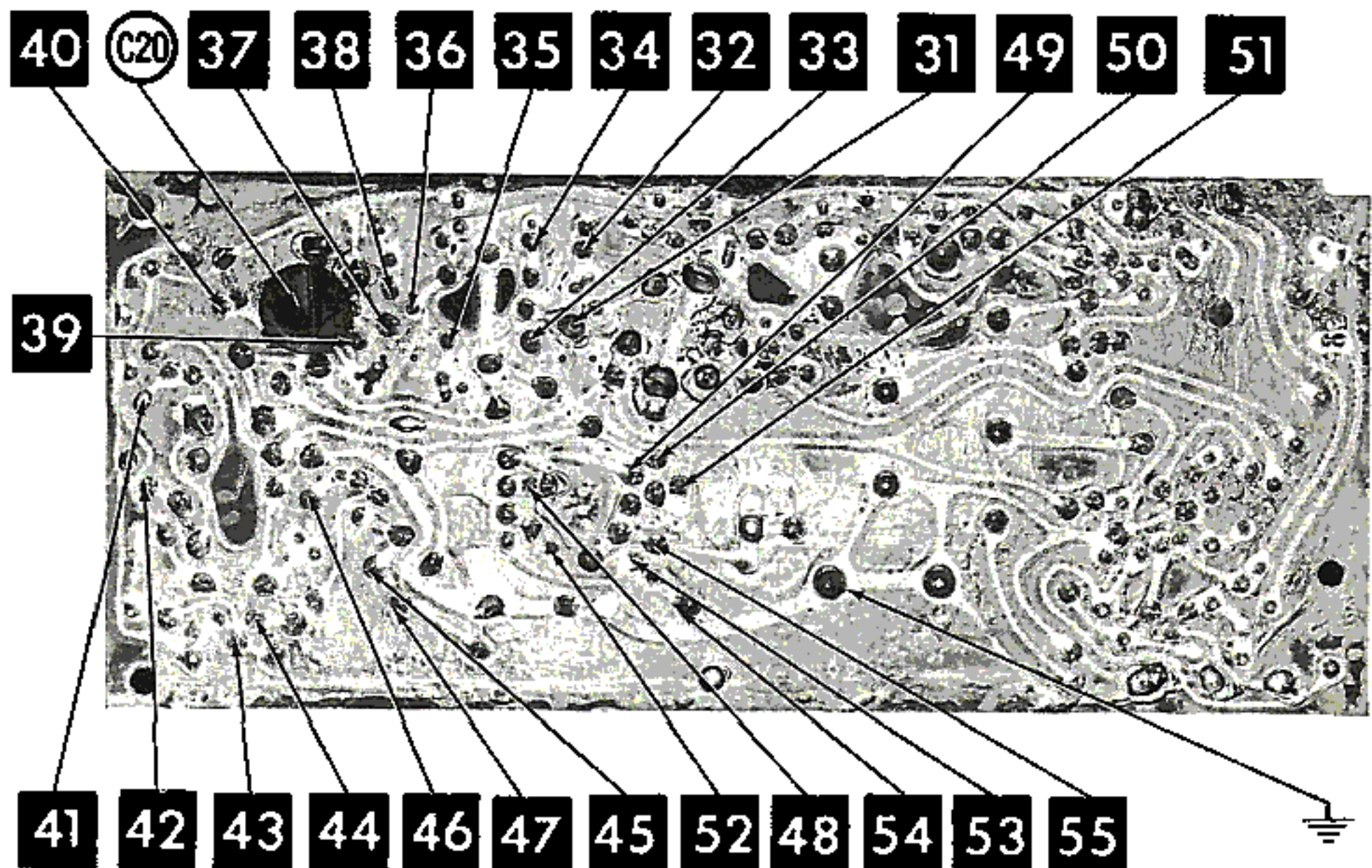
The listing of any available replacement part herein does not constitute in any case a recommendation, warranty or guaranty by Howard W. Sams & Co., Inc., as to the quality and suitability of such replacement part. The numbers of these parts have been compiled from information furnished to Howard W. Sams & Co., Inc., by the manufacturers of KF222

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. © 1961 Howard W. Sams & Co., Inc., Indianapolis 6, Indiana. Printed in U.S. of America



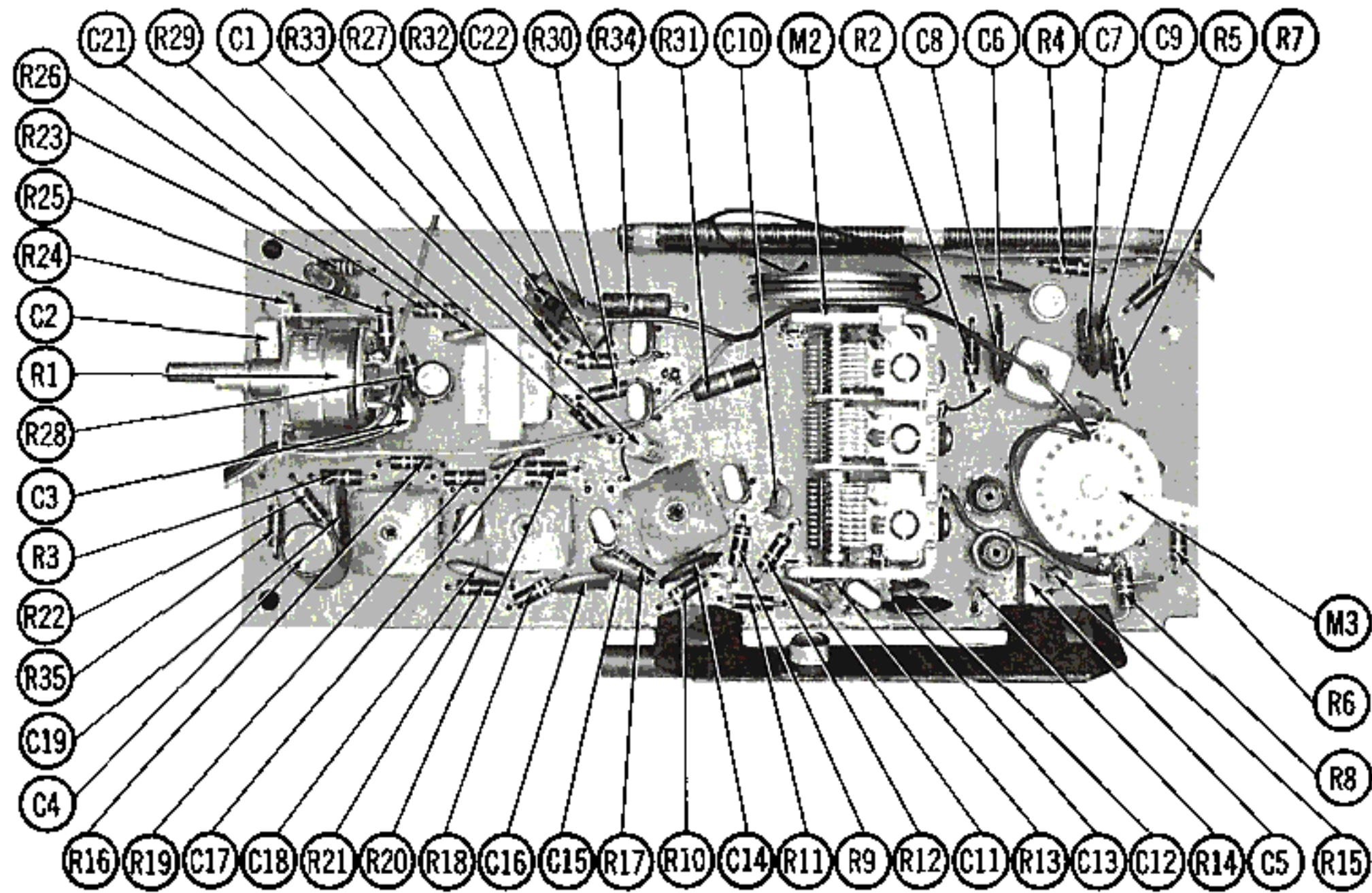
A Howard W. Sams **CIRCUITRACE** Photo

PRINTED BOARD

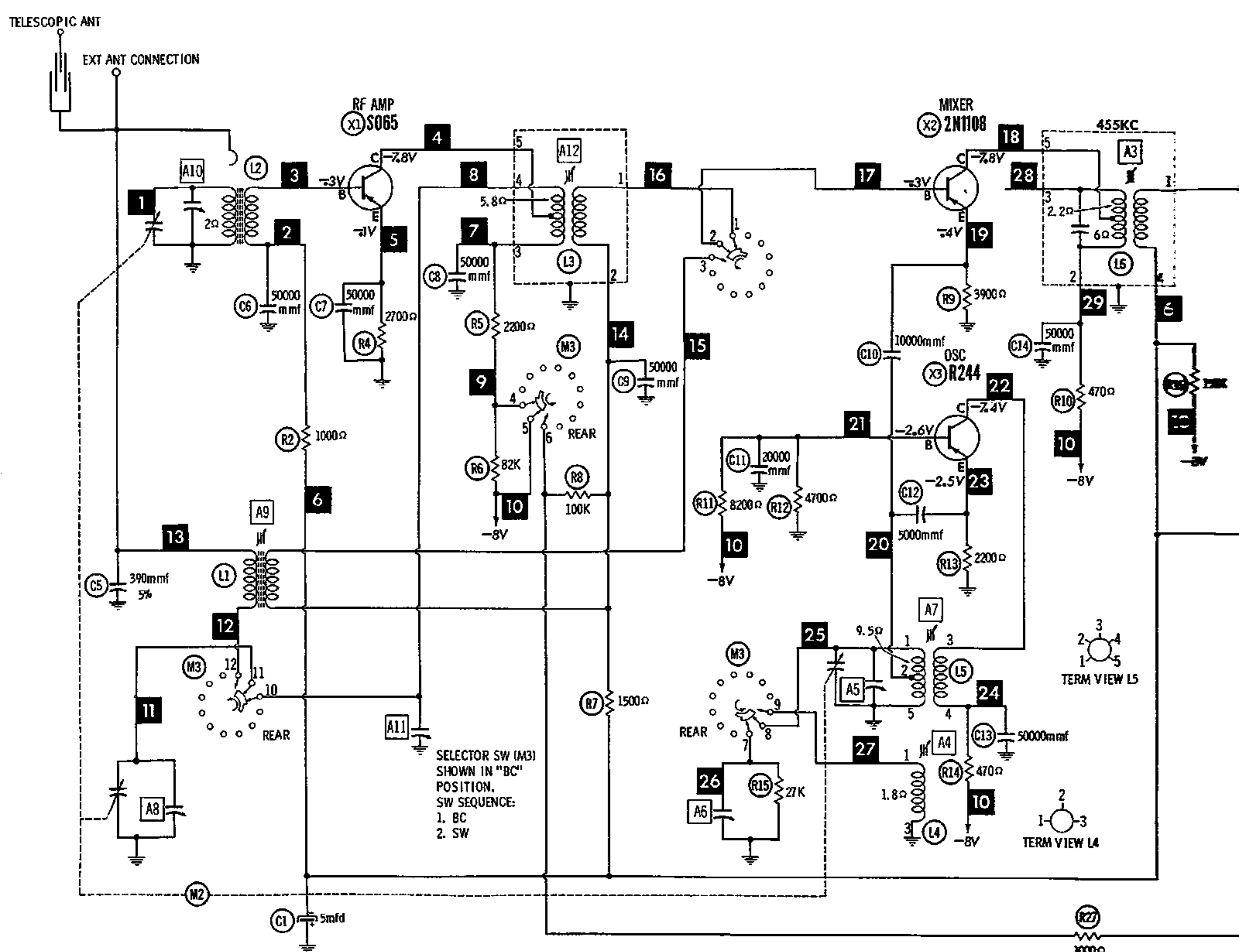


A Howard W. Sams **CIRCUITRACE** Photo

PRINTED BOARD



CHASSIS TOP VIEW-CAPACITOR, RESISTOR & MISC. IDENT.

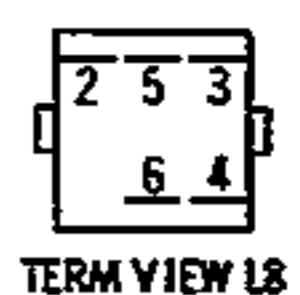
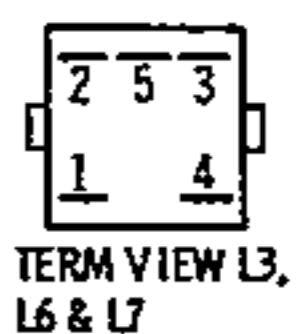


RESISTANCE MEASUREMENTS NOT GIVEN BECAUSE OF THE WIDE VARIATION IN INTERNAL TRANSISTOR RESISTANCE.

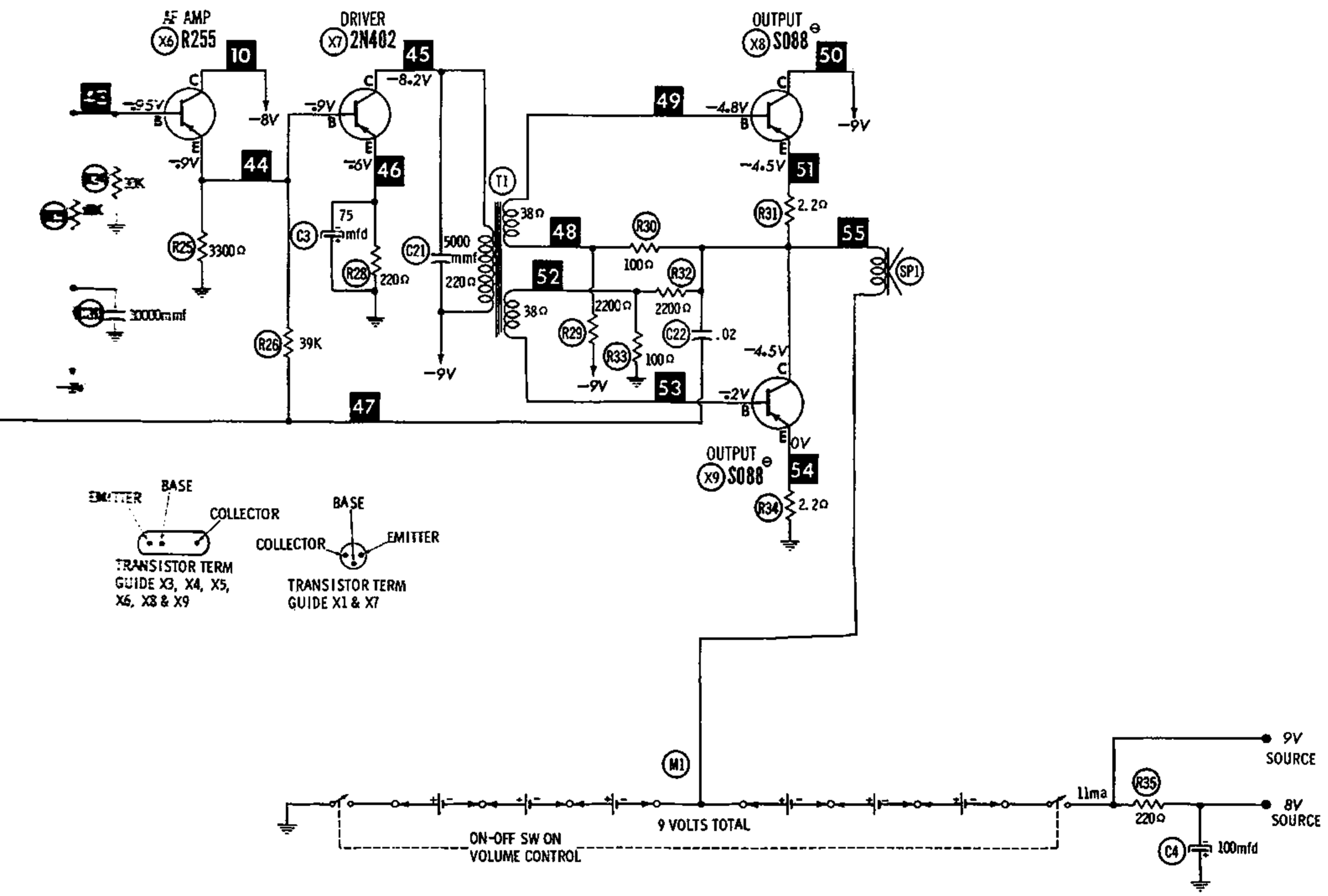
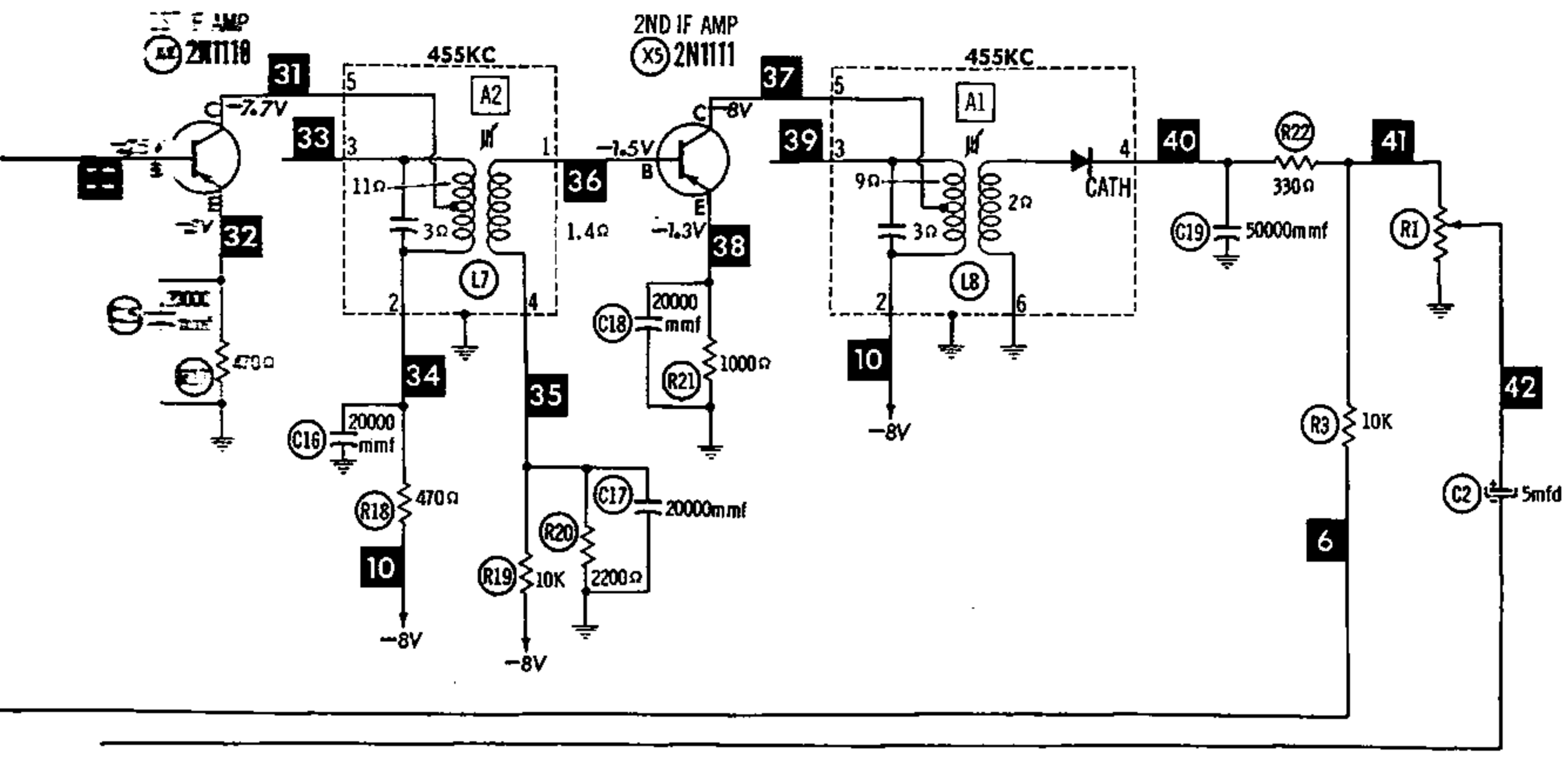
1. DC voltage measurements taken with vacuum tube voltmeter.
2. Socket connections or transistor terminals are shown as bottom views.
3. Measured values are from socket pin or terminal to common ground.
4. Nominal tolerance on component values makes possible a variation of $\approx 15\%$ in voltage and resistance readings.
5. 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



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.



**AIRLINE MODEL
GTM-1200A**

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, A7, A12.. GENERAL CEMENT #9440
 A5, A6, A8, A10, A11.... GENERAL CEMENT #5004, 5008, 5009
 WALSCO #2520
 A9..... GENERAL CEMENT #8282, 8606, 8606-L, 9295, 9440
 WALSCO #2526, 2543, 2544, 2545

	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	OUTPUT METER	ADJUST	REMARKS
1.	High side thru .01mfd to base of Mixer. Low side to chassis.	455KC (400% Mod.)	(BC) Tuning gang fully open.	Across voice coil.	A1, A2, A3	Adjust for maximum output.
2.	"	6.5MC	(SW) Tuning gang fully open.	"	A4	Turn A5 fully clockwise then back off $\frac{1}{2}$ turn. Adjust A4 for maximum output.
3.	Tune signal generator to 7.41 MC and increase generator output until image is heard. If not heard, the oscillator is tuned to low side of the incoming signal and A4 must be rotated counterclockwise until image signal is heard.					
4.	High side thru .01mfd to base of Mixer. Low side to chassis.	6.5MC	(SW) Tuning gang fully open.	Across Voice coil.	A5	Adjust for maximum output.
5.	"	2.4MC	(SW) Tuning gang fully closed.	"		Retouch A4 for maximum output. Repeat Steps 4 and 5.
6.	"	1625KC	(BC) Tuning gang fully open.	"	A6	Adjust for maximum output.
7.	"	530KC	(BC) Tuning gang fully closed.	"	A7	Adjust for maximum output. Repeat Steps 6 and 7.
8.	High side thru 15mmf to external antenna lead. Low side to chassis.	5.8MC	(SW) 5.8MC Signal.	"	A8	Adjust for maximum output.
9.	"	2.6MC	(SW) 2.6MC	"	A9	Adjust for maximum output. Repeat Steps 8 and 9.
10.	Loop	1400KC	(BC) 1400KC Signal.	"	A10, A11	Fashion loop of several turns of wire and radiate signal into loop of receiver. Adjust for maximum output.
11.	"	600KC	(BC) 600KC Signal.	"	A12	Adjust for maximum output. Repeat Step 10.

PARTS LIST AND DESCRIPTIONS

WIRING DATA

General-use Unshielded Hook-up Wire Use MIL-DEN No. 8630 (Solid) Available in Ten Colors
8624 (Stranded) Available in Ten Colors

TRANSISTORS

ITEM No.	ORIG. TYPE	USE	REPLACEMENT DATA			NOTES
			RCA PART No.	RAYTHEON PART No.	SYLVANIA PART No.	
X1	S065	RF Amplifier				PNP
X2	2N1108	Mixer		2N486	2N412	PNP
X3	R244	Oscillator				PNP
X4	2N1110	1st IF Amplifier		2N483	2N409	PNP
X5	2N1111	2nd IF Amplifier		2N483	2N409	PNP
X6	R255	AF Amplifier				PNP
X7	2N402	Driver	2N408	2N362	2N217	PNP
X8	S088 *	Output	2N408			PNP
X9	S088 *	Output	2N408			PNP } Matched Pair

* Alternate Types 10036, 10037, 10038, 10039.

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	5	8	218V012H19	PWE3005	NLW5-6	TT6X5	ML5-6	TE-1052, 2	
C2	5	3	218V012H19	PWE3005	NLW5-6	TT6X5	ML5-6	TE-1052, 2	
C3	75	3	218V012H17	PWE3100	NLW100-6	TT6X80	ML75-3	TE-1059	
C4	100	10	218V012H20	BCD10100	ECPB417	PET1400	ML100-15	VL-1140	

FIXED CAPACITORS

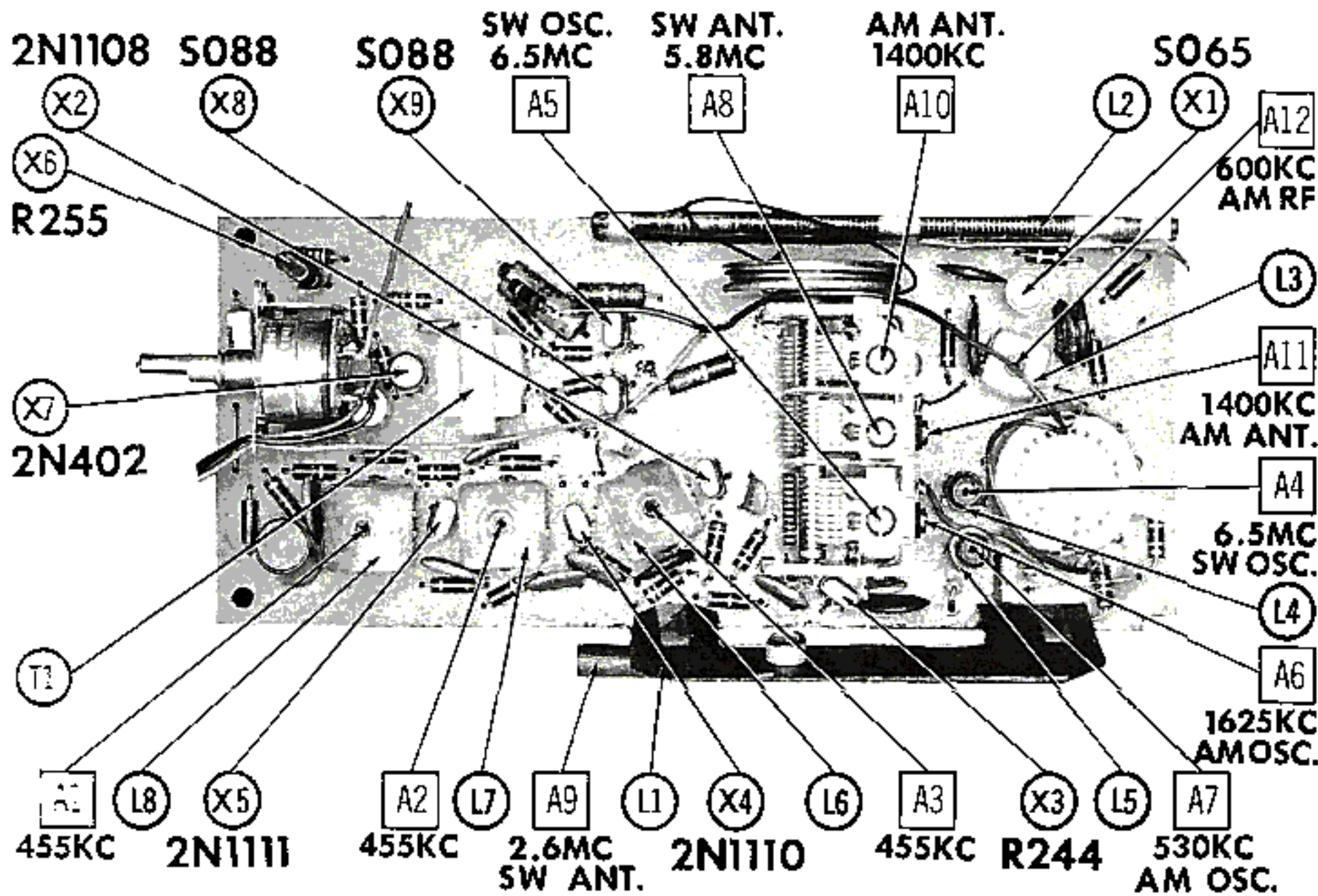
Capacity values given in the rating column are in mfd. for Paper Capacitors, and in mmfd. for Mica and Ceramic Capacitors.

ITEM No.	RATING	REMARKS	REPLACEMENT DATA					
			AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ELMENCO PART No.	MALLORY PART No.	SPRAGUE PART No.
C5	390 5%		1469-00039		5T5T39	CM-19B-391J		MS-339
C6	50000		BPD-05	DD-503	H-05S5	IDP-2-503	GP150	5HK-S50
C7	50000		BPD-05	DD-503	H-05S5	IDP-2-503	GP150	5HK-S50
C8	50000		BPD-05	DD-503	H-05S5	IDP-2-503	GP150	5HK-S50
C9	50000		BPD-05	DD-503	H-05S5	IDP-2-503	GP150	5HK-S50
C10	10000		BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C11	20000		BPD-02	DD-203	BYB6S2	CCD-203	B-120	5HK-S20
C12	5000		BPD-005	DD-502	BYA10D5	CCD-502	B-250	5HK-D50
C13	50000		BPD-05	DD-503	H-05S5	IDP-2-503	GP150	5HK-S50
C14	50000		BPD-05	DD-503	H-05S5	IDP-2-503	GP150	5HK-S50
C15	20000		BPD-02	DD-203	BYB6S2	CCD-203	B-120	5HK-S20
C16	20000		BPD-02	DD-203	BYB6S2	CCD-203	B-120	5HK-S20
C17	20000		BPD-02	DD-203	BYB6S2	CCD-203	B-120	5HK-S20
C18	20000		BPD-02	DD-203	BYB6S2	CCD-203	B-120	5HK-S20
C19	50000		BPD-05	DD-503	H-05S5	IDP-2-503	GP150	5HK-S50
C20	10000		BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C21	5000		BPD-005	DD-502	BYA10D5	CCD-502	B-250	5HK-D50
C22	.02 200V		P288N-02	DD-203	CUB2S2	4DP-2-203	GEM-412	2TM-S2

CONTROLS

ITEM No.	RATING		REPLACEMENT DATA					INSTALLATION NOTES
	RESISTANCE	WATTS	AIRLINE PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLORY PART No.	
RIA B	2500Ω Switch	1/2	270V027H15					Volume Power Off-On

CHASSIS—TOP VIEW



PARTS LIST AND DESCRIPTIONS (Continued)

RESISTORS (IRC or EQUIVALENT)

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

ITEM No.	RATING	REMARKS	ITEM No.	RATING	REMARKS	ITEM No.	RATING	REMARKS
R2	1000Ω		R14	470Ω		R26	39K	
R3	10K		R15	27K		R27	1000Ω	
R4	2700Ω		R16	150K		R28	220Ω	
R5	2200Ω		R17	470Ω		R29	2200Ω	
R6	82K		R18	470Ω		R30	100Ω	
R7	1500Ω		R19	10K		R31	2.2Ω	
R8	100K		R20	2200Ω		R32	2200Ω	
R9	3900Ω		R21	1000Ω		R33	100Ω	
R10	470Ω		R22	330Ω		R34	2.2Ω	
R11	8200Ω		R23	68K		R35	220Ω	
R12	4700Ω		R24	10K				
R13	2200Ω		R25	3300Ω				

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA				NOTES
		AIRLINE PART No.	Merit PART No.	Miller PART No.	Stancor PART No.	
L1	SW Loopstick	310V053H01				
L2	BC Loopstick	310V052H01				
L3	RF Trans.	235V050H01				
L4	SW Osc. Coil	230V078H01				
L5	BC Osc. Coil	230V077H01				
L6	1st IF Amp.	235V051H02				
L7	2nd IF Trans.	235V051H01				
L8	3rd IF Trans.	235V052H01				

TRANSFORMER (DRIVER)

ITEM No.	TURNS RATIO		REPLACEMENT DATA					NOTES
	PRI.	SEC. 1	AIRLINE PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	Triod PART No.	
		SEC. 2						
T1	3	1	430V076H01					
		1						

SPEAKER

ITEM No.	TYPE			REPLACEMENT DATA		NOTES
	SIZE	FIELD	V. C. IMP.	AIRLINE PART No.	QUAM PART No.	
SP1	4"	PM	25-30Ω	570V065H01	4A1Z27	

BATTERIES

ITEM No.	VOLTAGE	AIRLINE PART No.	REPLACEMENT DATA						NOTES
			BURGESS		EVEREADY		MALLORY		
			"A"	"B"	"A"	"B"	"A"	"B"	
M1	1.5V			230 *		A-100 *		M-13R *	* 6 Required

MISCELLANEOUS

ITEM No.	PART NAME	AIRLINE PART No.	NOTES
M2 M3	Tuning Cap. Switch Antenna	330V028H01 756V038H01 318V005H01	3 Gang Band Selector Telescoping