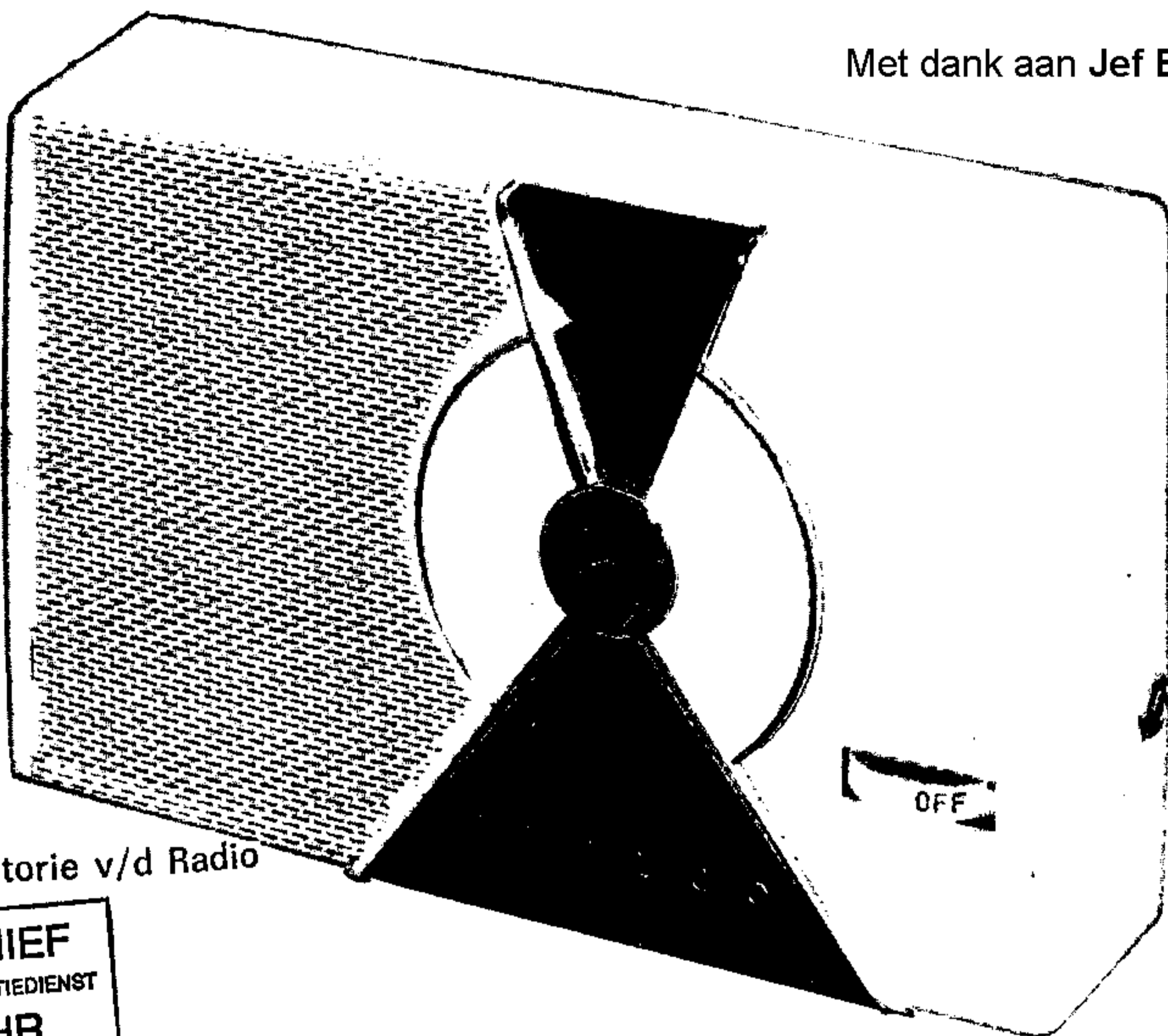




Met dank aan Jef Bos



Ver. v. Historie v/d Radio



TRADE NAME Philco Model T-7
 MANUFACTURER Philco Corp., Tioga & "C" Sts., Philadelphia, Pa.
 TYPE SET Battery Operated Portable AM Transistorized Receiver
 POWER SUPPLY 3 Volts DC RATING 17MA @ 3 Volts DC
 TUNING RANGE—BROADCAST 540KC-1620KC

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.

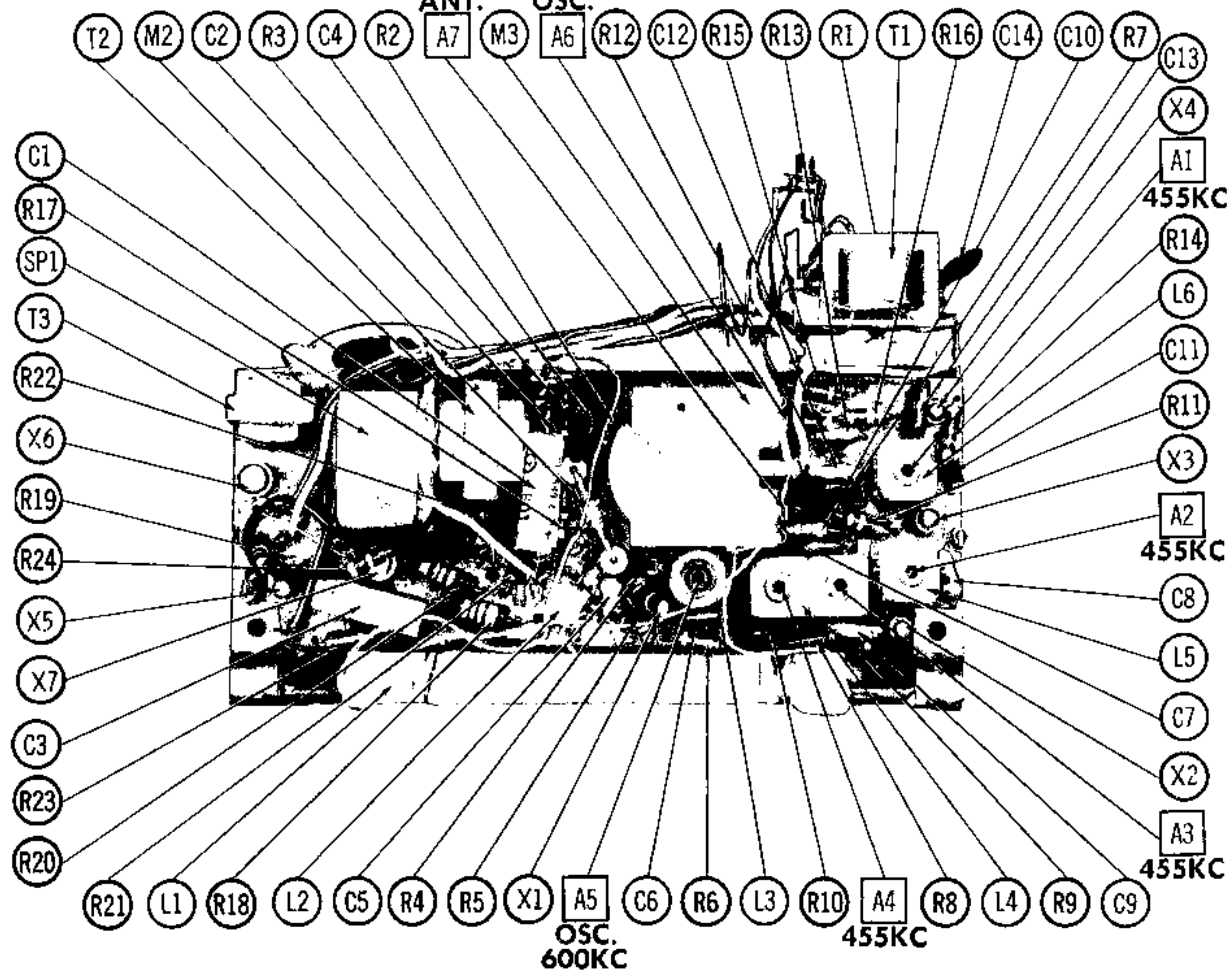
DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	OUTPUT METER	ADJUST	REMARKS
1. .1MFD	High side to ant. stator lug on tuning gang. Low side to chassis.	455KC (400% Mod)	Tuning gang fully open	Across voice coil	A1, A2, A3, A4	Adjust for maximum output.
2.	Loop	600KC	600KC	"	A5	Fashion loop of several turns of wire and radiate signal into loop of receiver. Adjust for maximum output. Rock tuning gang while making this adjustment.
3.	"	1620KC	Tuning gang fully open	"	A6	Fashion loop of several turns of wire and radiate signal into loop of receiver. Adjust for maximum output.
4.	"	1400KC	Tune to 1400KC signal	"	A7	"

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

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1400KC ANT.
1620KC OSC.



CHASSIS-TOP VIEW

PARTS LIST AND DESCRIPTIONS

TRANSISTORS

ITEM No.	USE	TYPE	PHILCO Part No.
X1	Converter	L-5113L	34-6000-3
X2	1st. IF Amplifier	L-5114L	34-6000-4
X3	2nd. IF Amplifier	L-5114L	34-6000-4
X4	Detector	L-5113L	34-6000-4

ITEM No.	USE	TYPE	PHILCO Part No.
X5	AF Amplifier	L-5021L	34-6001-9
X6	Output	L-5028 *	34-6005 *
X7	Output	L-5028 *	34-6005 *

* X6 and X7 must be a matched pair.

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		REPLACEMENT DATA						
	CAP.	VOLT.	PHILCO PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	PYRAMID PART No.	SANGAMO PART No.	SPRAGUE PART No.
C1	100	3	30-2588-2	SRESV100	BBR100-6T		ML100-3		TE-1102
C2	100	3	30-2588-2	SRESV100	BBR100-6T		ML100-3		TE-1102
C3	100	3	30-2588-2	SRESV100	BBR100-6T		ML100-3		TE-1102

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	PHILCO PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ERIE PART No.	MALLORY PART No.		SPRAGUE PART No.
C4	20000		30-1238-5	BPD-02	DD-203	K085	ED-02		5HK-S2	Note 1
C5	470		62-147001001	SI 470	D6-47I	TP46	GP-470	UC-5347	5GA-T47	
C6	5000		30-1238-1	BPD-005	DD-502	K080	ED-005	DC525	5HK-D5	
C7	10000		30-1238-2	BPD-01	DD-103	K082	ED-01	DC511	5HK-S1	
C8	47		62-047409011	NPO-SI 47	D6-470	TZ22	TCO-47	ZT-5447	5TCC-Q47	
C9	40000		30-1280-1	BPD-04						
C10	10000		30-1238-2	BPD-01	DD-103	K082	ED-01	DC511	5HK-S1	
C11	12		62-012409011	1469-000012	D6-120	TZ10	TCO-12			
C12	100000		30-1280							
C13	20000		30-1238-5	BPD-02	DD-203	K085	ED-02		5HK-S2	
C14	10000		30-1238-2	BPD-01	DD-103	K082	ED-01	DC511	5HK-S1	

Note 1. Some versions may use .01MFD in this application (Part #30-1238-6).

CONTROLS

ITEM No.	RATING		REPLACEMENT DATA				INSTALLATION NOTES	
	RESISTANCE	WATTS	PHILCO PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	IRC PART No.		MALLORY PART No.
R1	15K	1/2	33-6583					Volume & switch

RESISTORS

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

ITEM No.	RATING		REPLACEMENT DATA		NOTES	ITEM No.	RATING		REPLACEMENT DATA		NOTES
	OHMS	WATT	PHILCO PART No.	IRC PART No.			OHMS	WATT	PHILCO PART No.	IRC PART No.	
R2	820Ω		66-1828340	BTS-820		R13	270Ω		66-1278340	BTS-270	
R3	1000Ω		66-2108340	BTS-1000		R14	82Ω		66-0828340	BTS-82	
R4	33K		66-3338340	BTS-33K		R15	82Ω		66-0828340	BTS-82	
R5	22K		66-3228340	BTS-22K		R16	330Ω		66-1538340	BTS-330	
R6	4700Ω		66-2478340	BTS-4700		R17	2700Ω		66-2278340	BTS-2700	
R7	4700Ω		66-2478340	BTS-4700		R18	3.3Ω		66-9334360	BW $\frac{1}{2}$ -3.3	
R8	18K		66-3188340	BTS-18K		R19	390Ω			BTS-390	Note 2
R9	2200Ω		66-2228340	BTS-2200		R20	2.2Ω		66-9228360	BW $\frac{1}{2}$ -2.2	
R10	3300Ω		66-2338340	BTS-3300		R21	47Ω 5%		66-0478240	BTS-47	
R11	100K		66-4108340	BTS-100K		R22	1000Ω 5%		66-2108240	BTS-1000	
R12	4700Ω		66-2478340	BTS-4700		R23	150Ω		66-1158340	BTS-150	
						R24	180Ω			BTS-180	Note 1

Note 1. Not used in some versions.

Note 2. Some versions may use 120Ω in this application (Part #66-1128340).

PARTS LIST AND DESCRIPTIONS (Continued)

TRANSFORMER (INPUT)

ITEM No.	Resistance		REPLACEMENT DATA					NOTES
	PRI.	SEC.	PHILCO PART No.	Halldorson PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	
T1	178Ω	186Ω	32-8742				TR-1 ①	
	Turns Ratio 1: .7							

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	Resistance		REPLACEMENT DATA					NOTES
	PRI.	SEC.	PHILCO PART No.	Halldorson PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	
T2	75Ω	58Ω CT	32-8741				TR-1 ①	
	Turns Ratio .85:1							

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE		REPLACEMENT DATA					NOTES
	PRI.	SEC.	PHILCO PART No.	Halldorson PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	
T3	9500Ω CT	15Ω	32-8743					

SPEAKER

ITEM No.	TYPE			REPLACEMENT DATA		NOTES
	SIZE	FIELD	V. C. IMP.	PHILCO PART No.	QUAM PART No.	
SP1	2 3/4"	PM	15Ω	36-1664-2		

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA				NOTES
		PHILCO PART No.	MEISSNER PART No.	MERIT PART No.	MILLER PART No.	
L1	Loop Stick Ant. Choke	32-4668			4852 ■	1 Millihenry, wound on 680Ω resistor
L2		32-4665				
L3	Osc. Coil	32-4669			2041 2042	
L4	1st. IF Trans.	32-4667-2				
L5	2nd. IF Trans.	32-4667-1				
L6	3rd. IF Trans.	32-4667				

■ Parallel with 680Ω resistor.

BATTERIES

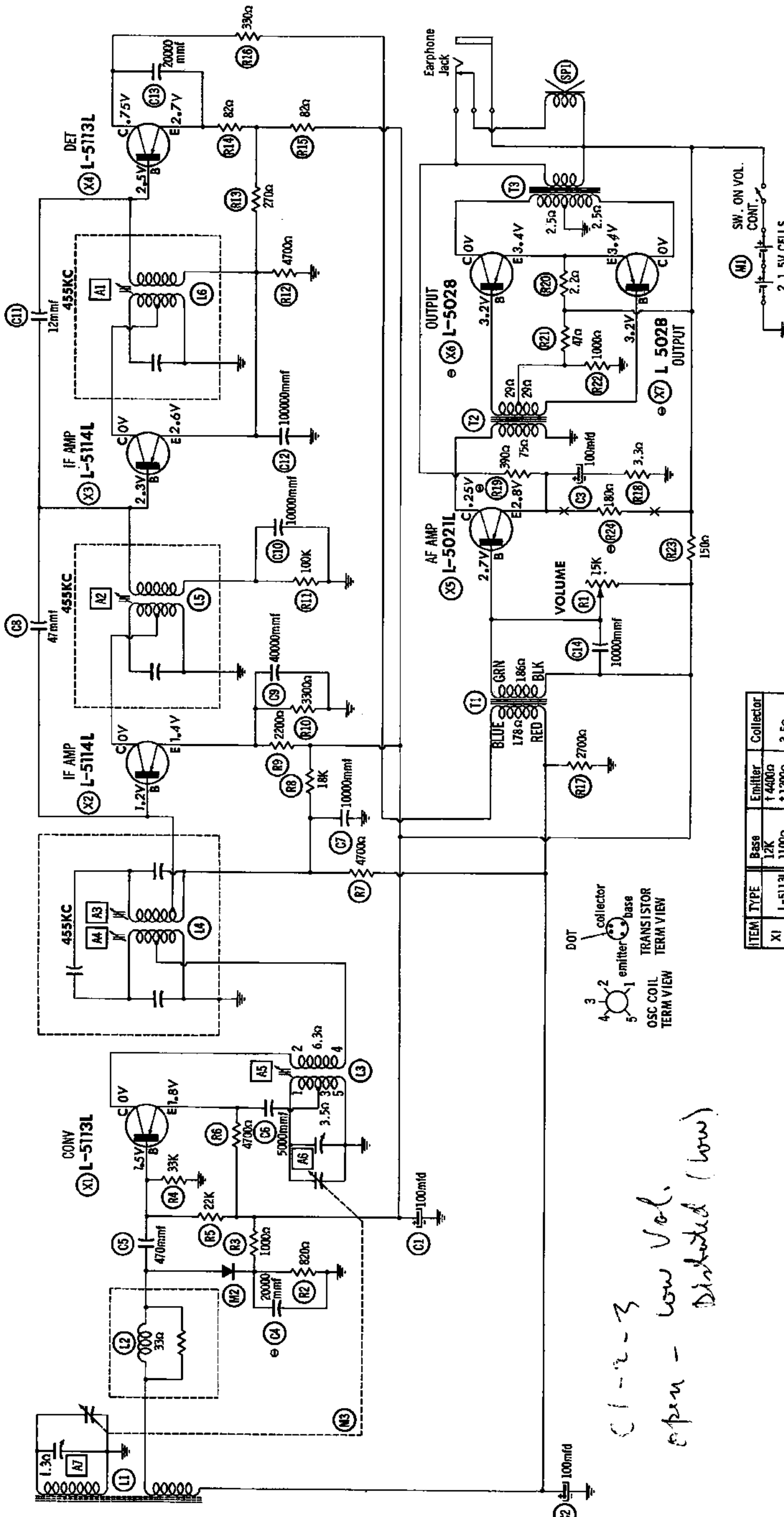
ITEM No.	VOLTAGE	PHILCO PART No.	REPLACEMENT DATA						INSTALLATION NOTES
			EVEREADY			BURGESS			
			"A"	"B"	"A-B"	"A"	"B"	"A-B"	
M1	1½V	P-920	950			2R			Connect two in series

CRYSTAL DIODES

ITEM No.	ORIG. TYPE	REPLACEMENT DATA		NOTES
		PHILCO PART No.	SYLVANIA PART No.	
M2	1N537	34-8038		Pigtail

MISCELLANEOUS

ITEM No.	PART NAME	PHILCO PART No.	NOTES
M3	Tuning Cap. Panel Cabinet Knob Knob	31-2782 54-6255 11181-1 54-6256-1 54-6257	Two Gang Printed Volume Tuning



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.

SEE PARTS LIST FOR ALTERNATE VALUE OR APPLICATION

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

ITEM	TYPE	Base	Emitter	Collector
X1	L-5113L	12K	† 4400Ω	3.5Ω
X2	L-5114L	800Ω	† 1400Ω	1.6Ω
X3	L-5114L	1100Ω	† 210Ω	1.2Ω
X4	L-5113L	700Ω	† 260Ω	2500Ω
X5	L-5021L	500Ω	† 125Ω	65Ω
X6	L-5028	200Ω	† 2.2Ω	2.5Ω
X7	L-5028	400Ω	† 2.2Ω	2.5Ω

† MEASURED FROM JUNCTION OF R23 AND R24.

DUAL READINGS INDICATE REVERSAL OF METER LEADS.

C1-2-3 open - low Vol. Distorted (low)