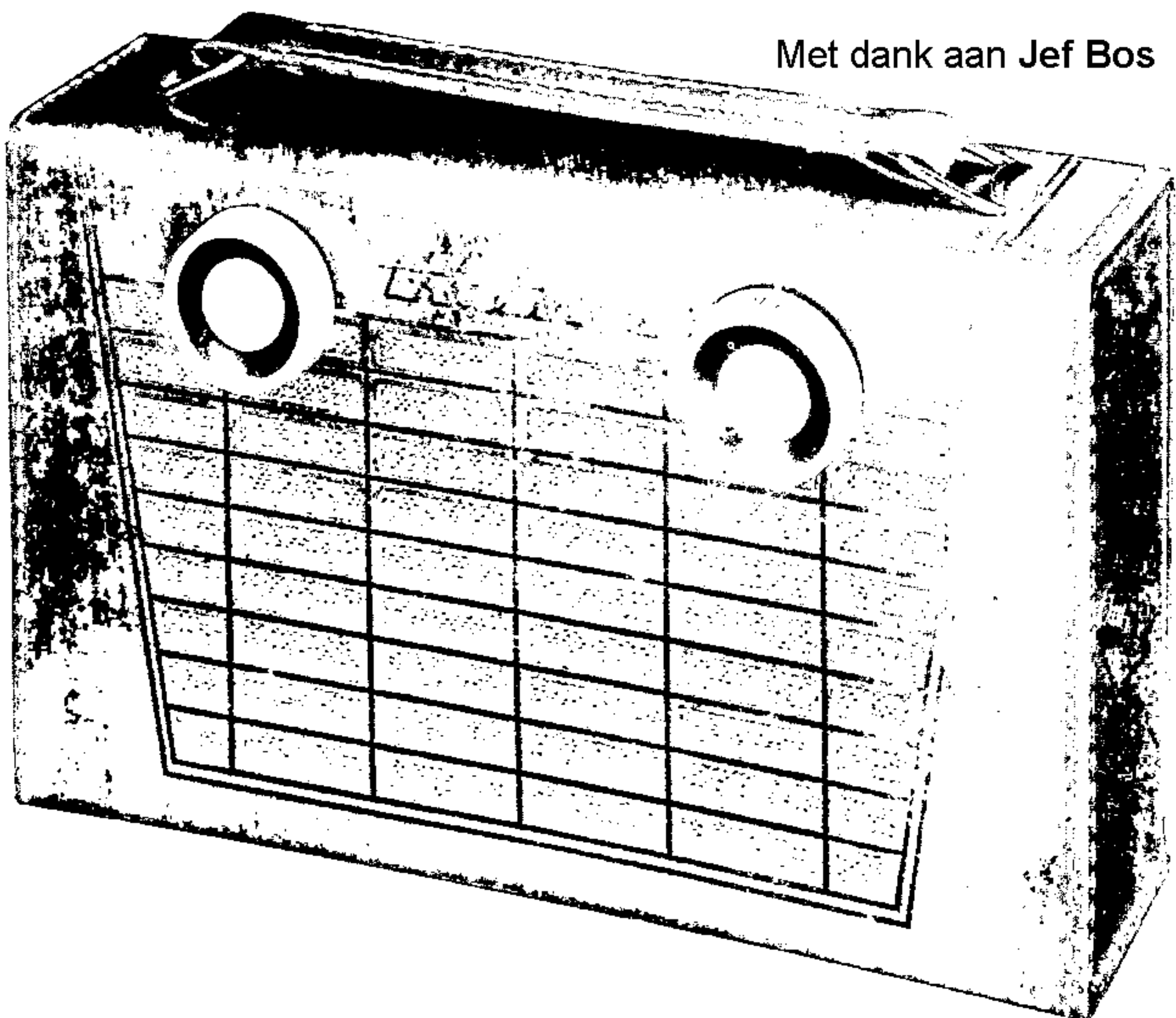




Met dank aan Jef Bos



Ned. Ver. v. Histo

TRADE NAME Truetone Model D3716A  
 SUPPLIER Western Auto Supply Co., 2107 Grand Ave., Kansas City, Mo.  
 TYPE SET Battery Operated Portable Transistorized AM Receiver

POWER SUPPLY 6 Volts DC  
 TUNING RANGE—BROADCAST 540KC-1620KC

RATING 6.5 MA@6 Volts DC



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.  
 To set pointer, turn tuning capacitor fully closed and set pointer to last reference mark at low frequency end of dial.

DUMMY ANTENNA	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	OUTPUT METER	ADJUST	REMARKS
1	Across secondary winding of antenna	455 KC (400 Mod.)	Tuning gang fully open	Across voice coil	A1, A2	Adjust for maximum output
2	"	"	Slowly cover entire tuning range.	"	A3	Adjust so that oscillation (if any) throughout tuning range is eliminated.
NOTE: IF oscillation (if any) will be heard as distortion ranging from "motor boating" to a howl. Some SLIGHT adjusting of A1 or A2 may be necessary to obtain neutralization over the entire tuning range.						
3	Loop	1620 KC	Tuning gang fully open	Across voice coil	A4	Fashion loop of several turns of wire and radiate signal into loop of receiver. Adjust for maximum output.
4	"	1400 KC	1400 KC	"	A5	"
5	"	535 KC	Tuning gang fully closed	"	A6	"

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

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H30

# PARTS LIST AND DESCRIPTIONS

## TRANSISTORS

TR  
MOD.

ITEM No.	USE	TRUETONE PART No.	NOTES
X1	Converter	112-001	
X2	IF Amplifier	112-002	
X3	Driver	112-004	

ITEM No.	USE	TRUETONE PART No.	NOTES
X4	Output	112-003	Note 1.
X5	Output	112-003	Note 1.

Note 1. X4 & X5 are a matched pair

### TRANSISTOR REPLACEMENT CHART

TRUETONE TYPE	GENERAL TRANSISTOR TYPE	GENERAL ELECTRIC TYPE	RAYTHEON TYPE	RCA TYPE	TEXAS INST. TYPE
112-001 112-002	GT766 GT760	2N136 2N135	CK760, 2N112, CK766	2N140 2N139	
112-003 112-004	GT2N109 GT81, 2N109	2N186 2N191	CK888 CK888	2N109 2N109	2N109, 352 310

### ELECTROLYTIC CAPACITORS

ITEM No.	RATING		REPLACEMENT DATA						
	CAP.	VOLT.	TRUETONE PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	PYRAMID PART No.	SANGAMO PART No.	SPRAGUE PART No.
C1	100	6	45-439	SRE6V100	NL100-6	TT6X100			
C2	10	2	45-438	XPP6V10	NL10-3	TT3X10	ML10-6	MMT-0210	TE-1102
C3	3	2	45-437	XPP6V3	NL3-6	TAW8A3	ML4-6	MMT-805	TE-1053
C4	30	2	45-436	XPP6V30	NL30-6	TT6X30	ML30-6	MMT-325	TE-1082 TE-1092

### 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.	TRUETONE PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ERIE PART No.	MALLORY PART No.	SPRAGUE PART No.	
C5	10000		47A354	BPD-01	DD-103	BYA6S1	ED-01	DC5L1	5HK-S1	5%
C6	350		C-8N1-274							
C7	4-40		44-471							5%
C8	350		C-8N1-274							
C9	.047	100	46C618-473M1	BPD-05	DF-503	CUB2S47		GEM-4147	2TM-S47	
C10	.047	100	46C618-473M1	BPD-05	DF-503	CUB2S47		GEM-4147	2TM-S47	
C11	.047	100	46C618-473M1	BPD-05	DF-503	CUB2S47		GEM-4147	2TM-S47	

### CONTROLS

ITEM No.	RATING		REPLACEMENT DATA					INSTALLATION NOTES
	RESISTANCE	WATTS	TRUETONE PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	IRC PART No.	MALLORY PART No.	
RIA	10K	1/2	25B1405	B-15	A47-10K-Z	Q13-116	U18	Volume
B	Shaft			Not req.	KSS-3	Not req.	Not req.	
C	Switch			KB-1	SWE-12	76-1	US-26	

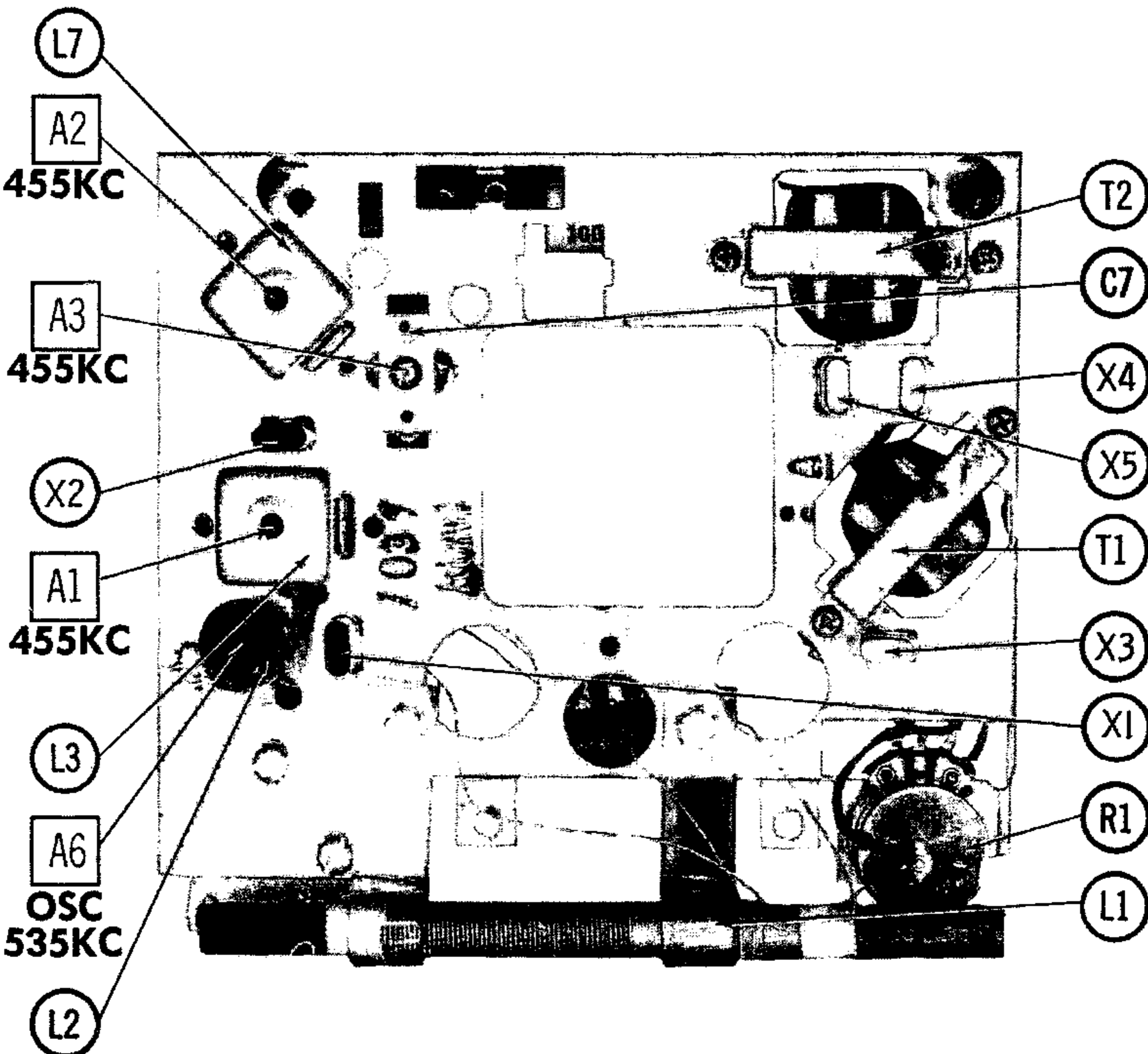
### RESISTORS

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

ITEM No.	RATING		REPLACEMENT DATA		NOTES	ITEM No.	RATING		REPLACEMENT DATA		NOTES
	OHMS	WATT	TRUETONE PART No.	IRC PART No.			OHMS	WATT	TRUETONE PART No.	IRC PART No.	
R2	6800Ω		23X20X682K	BTS-6800		R8	12K		23X20X123K	BTS-12K	
R3	12K		23X20X123K	BTS-12K		R9	470Ω		23X20X471K	BTS-470	
R4	100K		23X20X104K	BTS-100K		R10	2700Ω		23X20X272K	BTS-2700	
R5	470Ω		23X20X471K	BTS-470		R11	82Ω		23X20X820K	BTS-82	
R6	8200Ω		23X20X822K	BTS-8200		R12	8.2Ω5%		23X20X082K		
R7	68K		23X20X683K	BTS-68K		R13	8.2Ω5%		23X20X082K		

### TRANSFORMER (DRIVER)

ITEM No.	Turns Ratio		REPLACEMENT DATA					NOTES
	PRI.	SEC.	TRUETONE PART No.	Halldorson PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	
T1	2.7:1	1	60-324					



# PARTS LIST AND DESCRIPTIONS (Continued)

## TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE		REPLACEMENT DATA					NOTES	
			TRUETONE PART No.	Halldorson PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.		Triad PART No.
	PRI.	SEC.							
T2	465Ω CT	11Ω	55-325						

### SPEAKER

ITEM No.	TYPE			REPLACEMENT DATA		NOTES
	SIZE	FIELD	V. C. IMP.	TRUETONE PART No.	QUAM PART No.	
HPL	4"	PM	11Ω	85-102	4A07211	

### COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA				NOTES
		TRUETONE PART No.	MEISSNER PART No.	MERIT PART No.	MILLER PART No.	
L1	Loop Stick	57C247	14-9013			
L2	Osc. Coll	61-2153	14-9010			
L3	Input IF	50-703				
L4	Output	50-704				

### BATTERIES

ITEM No.	VOLTAGE	TRUETONE PART No.	REPLACEMENT DATA								NOTES
			BURGESS		EVEREADY		MALLORY		RAY-O-VAC		
			"A"	"B"	"A"	"B"	"A"	"B"	"A"	"B"	
M1	6V			2R*		950 *		M-13 *		2LP *	

\* Requires 4 in series.

### CRYSTAL DIODES

ITEM No.	ORIG. TYPE	REPLACEMENT DATA		NOTES
		TRUETONE PART No.	SYLVANIA PART No.	
M2	1N87 or 1N60	19B1933	1N80	Audio Detector (Pigtall)

### MISCELLANEOUS

ITEM No.	PART NAME	TRUETONE PART No.	NOTES
M3	Tuning Cap Knob Knob Cabinet Battery Holder Form Phone Jack Spring	48C379 15-1018 15-1019 78E1617  8B9574 38B085 75B506	Two Gang (11-145MMF, 16-96MMF) Tuning On-Off-Volume Leather (Complete)   Battery Holder

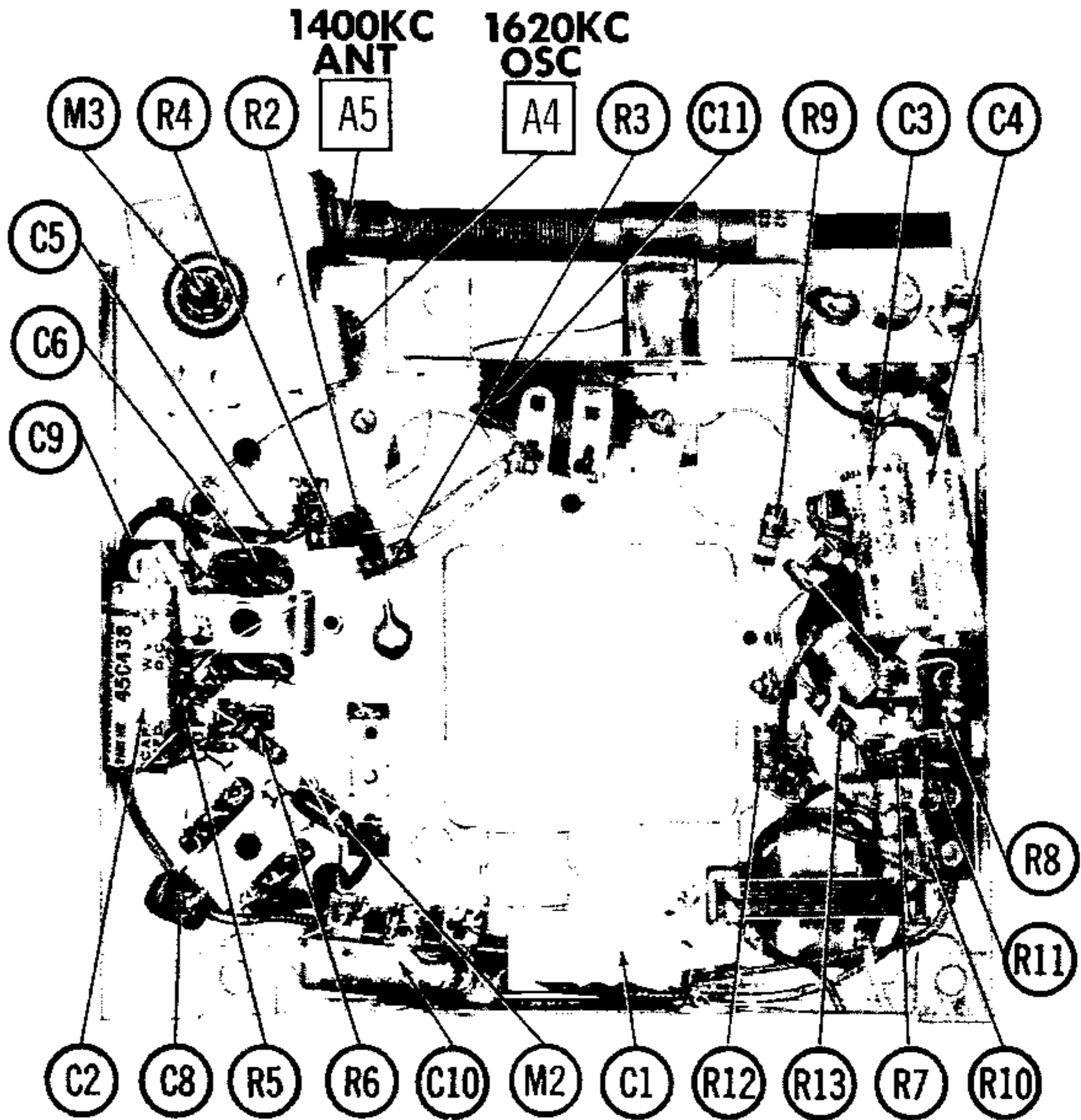
#### OSCILLATOR INJECTION VOLTAGE ADJUSTMENT

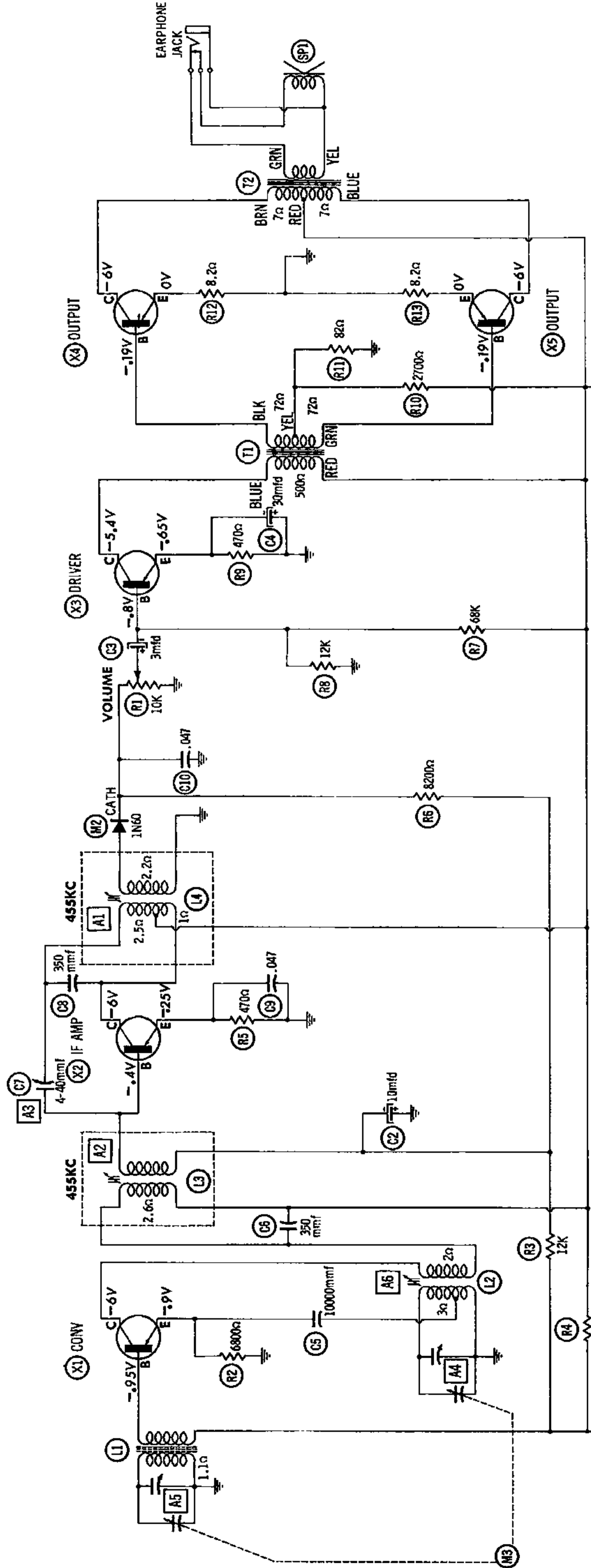
Oscillator injection voltage should be checked if the mixer-osc. (X1) transistor is replaced, if receiver operation is unsatisfactory when the supply voltage drops to approximately 4 volts, if the receiver lacks sensitivity near the low frequency end of the dial, or if "squaging" is present near the high end of the dial.

To measure the injection voltage, use a power source of 6 volts DC and connect a sensitive RF voltmeter across R2. The meter should indicate 60 millivolts with the tuning gang closed and should not exceed 150 millivolts with this tuning gang open.

If the injection voltage is not within the approximate limits, loosen the wax seal on the oscillator coil coupling winding and adjust the winding (by sliding) until the readings fall within the limits. Reseal the winding.

# CHASSIS—BOTTOM VIEW





A PHOTOFAC STANDARD NOTATION SCHEMATIC  
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ITEM	Base	Emitter	Collector
X1	17K	6800Ω	† 4.6Ω
X2	9000Ω	470Ω	† 1Ω
X3	12K	470Ω	† 500Ω
X4	† 2700Ω	8.2Ω	† 7Ω
X5	† 2700Ω	8.2Ω	† 7Ω

TRANSISTORS REMOVED FOR RESISTANCE MEASUREMENTS  
 † MEASURED FROM NEGATIVE SIDE OF C1

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.

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