



# PHOTOFACT<sup>®</sup> with

# CIRCUITRACE<sup>®</sup>



Met dank aan Jef Bos

TRADE NAME: Panasonic Model R-140  
 SUPPLIER: For Current Address, see Master Index  
 TYPE SET: 6 Transistor AM Receiver  
 POWER SUPPLY: 6 Volts DC  
 RATING: 12MA@6VDC (No Signal, Min. Volume)  
 25MA@6VDC (Signal, Normal Volume)

TUNING RANGE: BROADCAST 540 - 1620KC

I. Ver. v. Historie v/d Radio

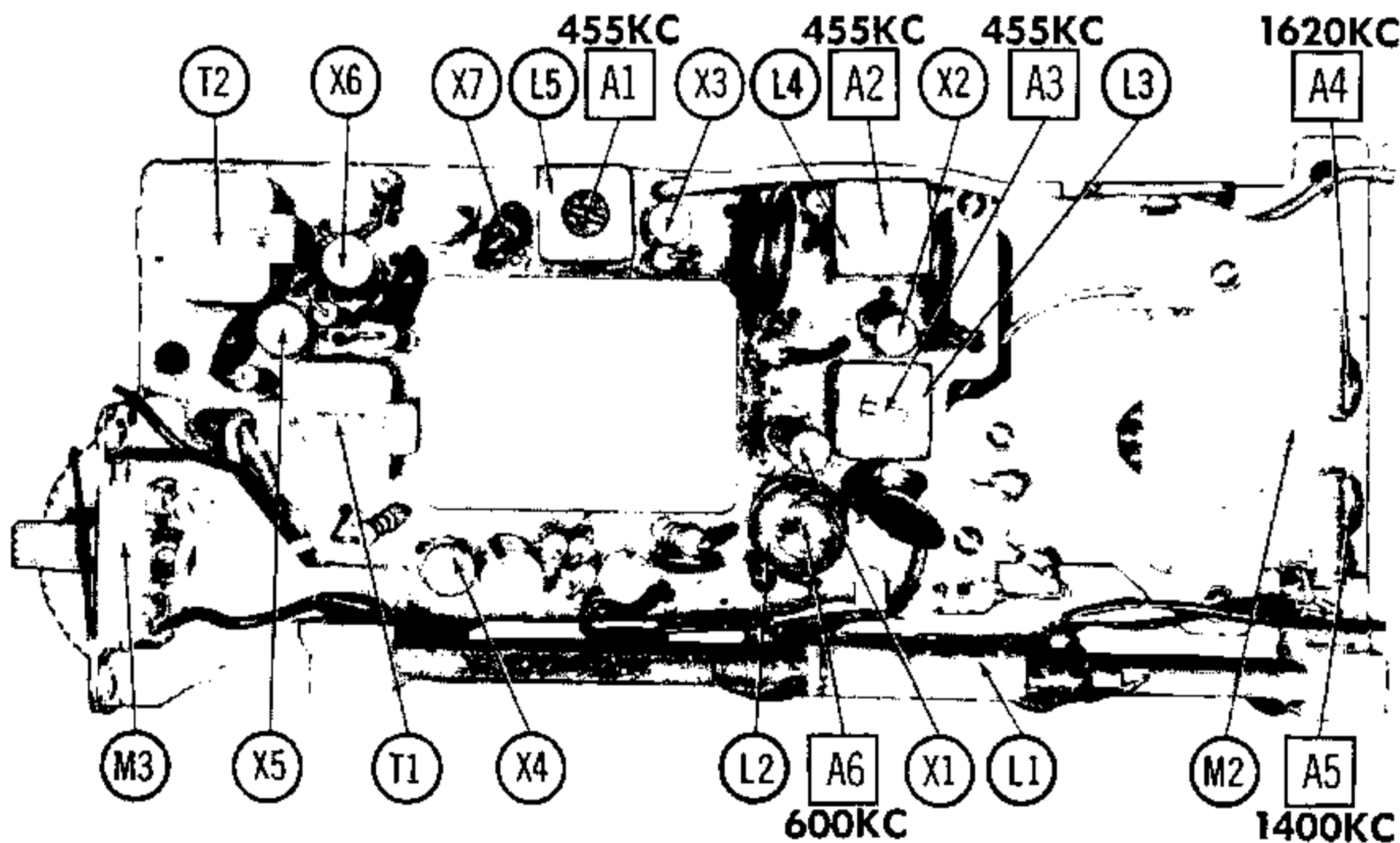


## ALIGNMENT INSTRUCTIONS

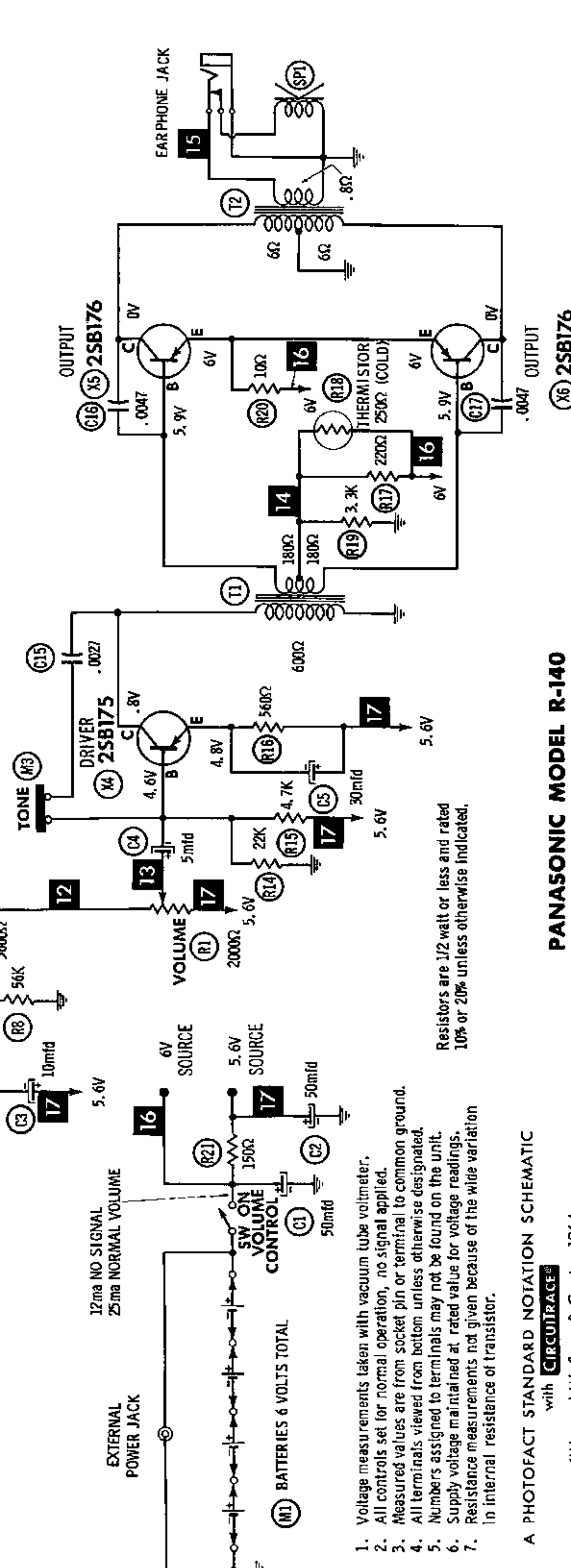
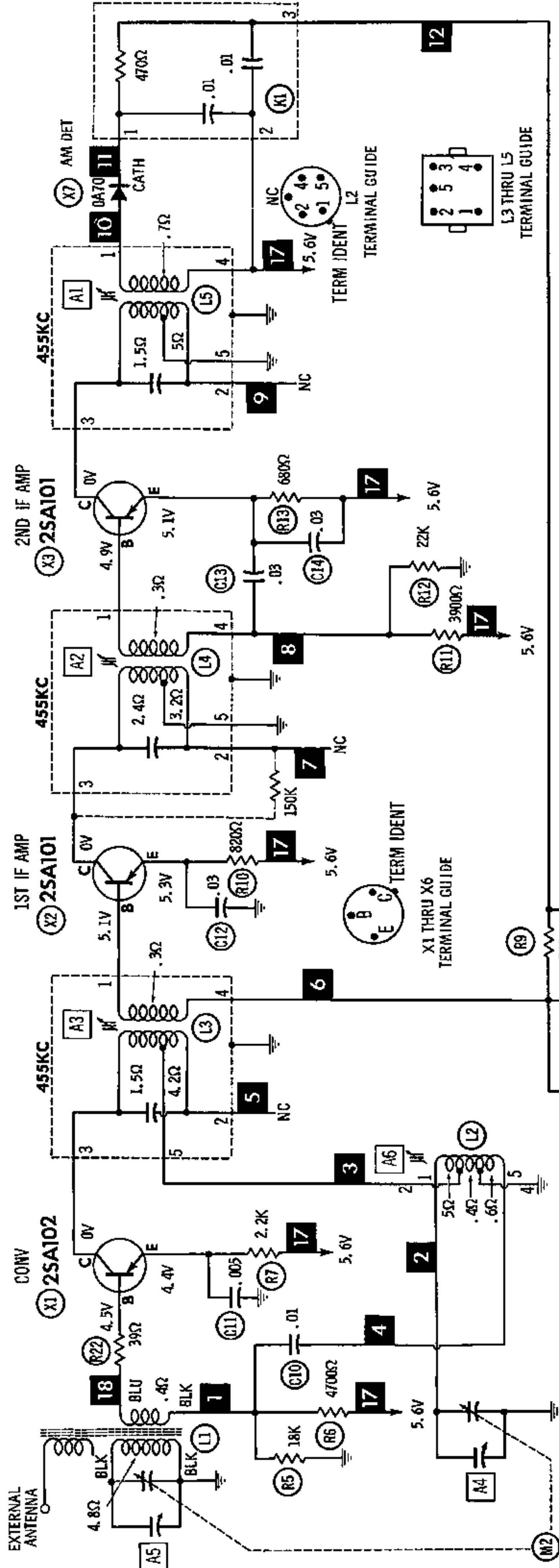
Check for specified source voltage. Set Volume control at maximum.  
 Fashion loop of several turns of wire and connect generator across loop.  
 Adjust output of generator to radiate only enough signal into receiver to obtain a suitable indication.  
 Suggested Alignment Tools:

A1, A2, A3.....GENERAL CEMENT #9087....WALSCO #2528  
 A4, A5, A6.....GENERAL CEMENT #8605....WALSCO #2505

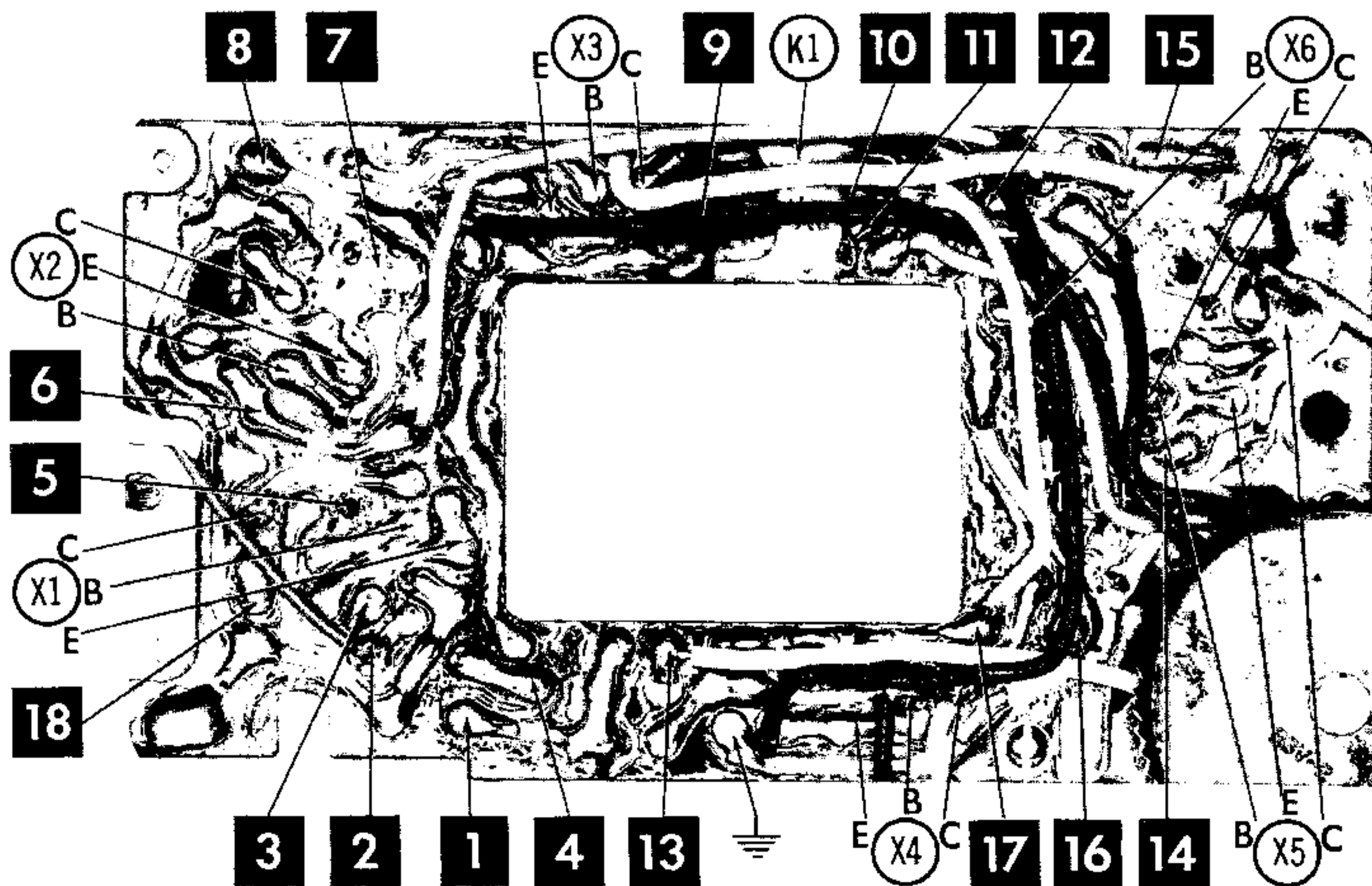
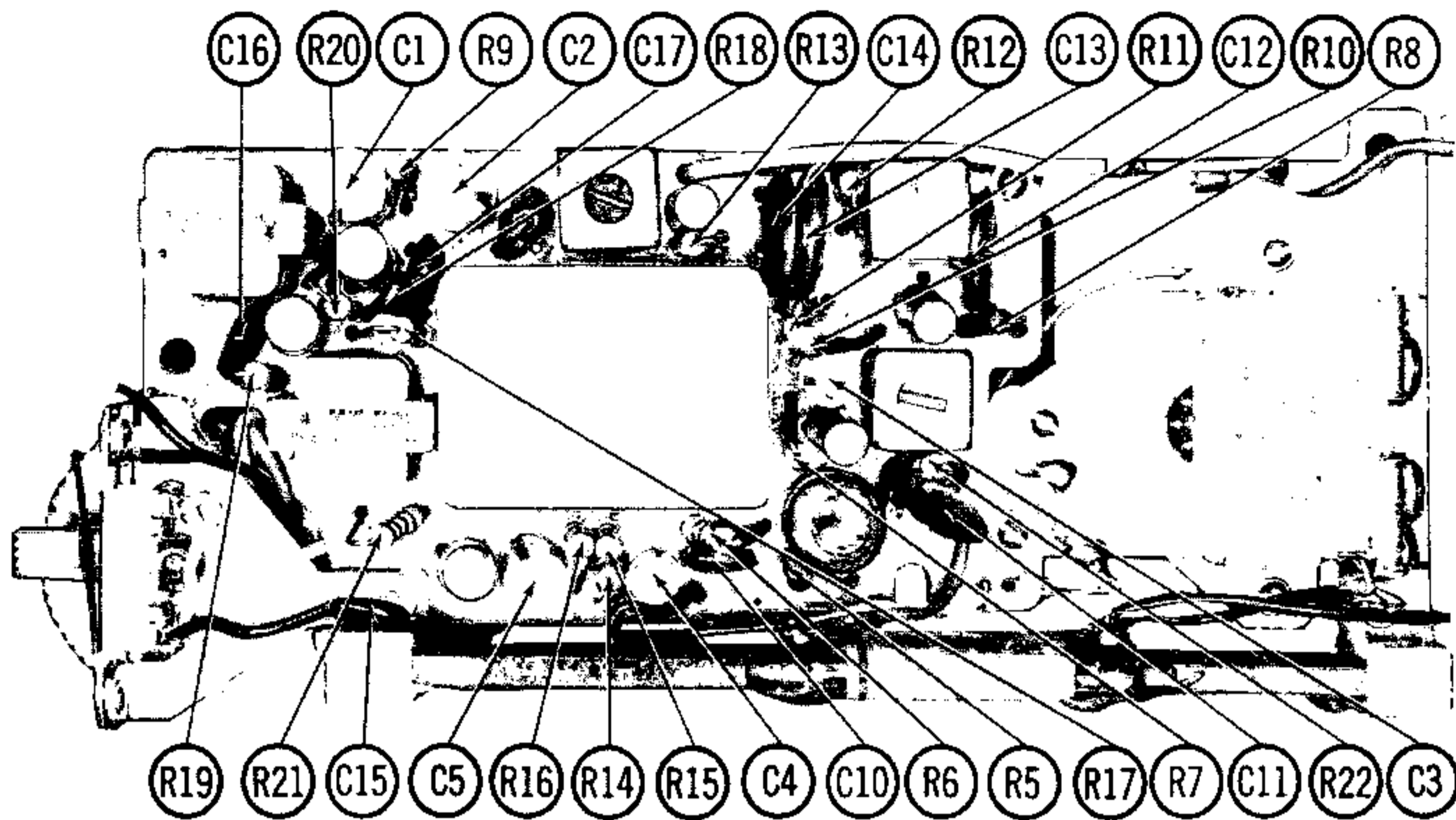
GENERATOR FREQUENCY	DIAL SETTING	INDICATOR	ADJUST	REMARKS
1. 455KC (400% Mod.)	Tuning gang fully open.	Output Meter across Voice coil.	A1, A2, A3	Adjust for maximum. Repeat until no further improvement can be made.
2. 1620KC	"	"	A4	Adjust for maximum.
3. 1400KC	Tune to signal.	"	A5	Adjust for maximum.
4. 600KC	"	"	A6	Rock tuning gang and adjust for maximum. Repeat steps 2 thru 4 until no further improvement can be made.



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



1. Voltage measurements taken with vacuum tube voltmeter.
  2. All controls set for normal operation, no signal applied.
  3. Measured values are from socket pin or terminal to common ground.
  4. All terminals viewed from bottom unless otherwise designated.
  5. Numbers assigned to terminals may not be found on the unit.
  6. Supply voltage maintained at rated value for voltage readings.
  7. Resistance measurements not given because of the wide variation in internal resistance of transistor.
- Resistors are 1/2 watt or less and rated 10% or 20% unless otherwise indicated.



## TRANSISTORS

ITEM No.	ORIG. TYPE	USE	REPLACEMENT DATA			NOTES
			DELCO PART No.	GENERAL ELECTRIC PART No.	RCA PART No.	
X1	2SA102	Converter	DS-25	GE-1	2N218	PNP
X2	2SA101	1st IF Amp.	DS-25	GE-1	2N218	PNP
X3	2SA101	2nd IF Amp.	DS-25	GE-1	2N218	PNP
X4	2SB175	Driver	DS-26	GE-2	2N581	PNP
X5	2SB176	Output	DS-26	GE-2	2N217	PNP
X6	2SB176	Output	DS-26	GE-2	2N217	PNP

## POWER RECTIFIERS &amp; SIGNAL DIODES

ITEM No.	MEASURED CURRENT	ORIGINAL Part or Type No.	RECTIFIERS				DIODES
			GENERAL ELECTRIC PART No.	MALLORY PART No.	RCA PART No.	SARKES TARZIAN PART No.	GENERAL ELECTRIC PART No.
X7		OA70					1N34AS

## ELECTROLYTIC CAPACITORS

ITEM No.	RATING		REPLACEMENT DATA						
	CAP.	VOLT.	PANASONIC PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	GENERAL INSTRUMENT PART No.	MALLORY PART No.	SPRAGUE PART No.
C1	50	6	NCA6V50	CRE317A	NLW50-6	MT1-15	MLV50-6	TT6X50	TE-1100
C2	50	6	NCA6V50	CRE317A	NLW50-6	MT1-15	MLV50-6	TT6X50	TE-1100
C3	10	6	NCA6V10	CRE307A	NLW10-6	MT1-5	MLV10-6	TT6X10	TE-1087
C4	5	6	NCA6V5	CRE304A	NLW5-15	MT1-3	MLV5-6	TT6X5	TE-1084
C5	30	6	NCA3V30	CRE313A	NLW30-6	MT1-13	MLV30-6	TT6X30	TE-1092

## FIXED 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.
C10	.01		TTD-01	CK-103	H2		TA110	TG-S10
C11	.005		TTD-005	CK-502	H1		TA250	TG-D50
C12	.03		TTD-03	CK-303				TG-S30
C13	.03		TTD-03	CK-303				TG-S30
C14	.03		TTD-03	CK-303				TG-S30
C15	.0027		DI-2700	DD-272	BYA10D27	CCD-272	GP227	10TS-D27
C16	.0047		BPD-0047	DD-472	BYA10D47M	CCD-472	GP247	5HK-D47
C17	.0047		BPD-0047	DD-472	BYA10D47M	CCD-472	GP247	5HK-D47

## CONTROLS

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

ITEM No.	USE	RESISTANCE	REPLACEMENT DATA					
			PANASONIC PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLORY PART No.	
R1	Volume & Switch	2000Ω	SNV16T12-2KΩ ASG					

## RESISTORS (Power and Special)

ITEM No.	RATING	REPLACEMENT DATA			ITEM No.	RATING	REPLACEMENT DATA		
		IRC PART No.	WORKMAN PART No.	REMARKS			IRC PART No.	WORKMAN PART No.	REMARKS
R18	250Ω Cold			#MT-250					

# Panasonic Part Number.

# DESCRIPTION

## COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA					NOTES
		PANASONIC PART No.	MERIT PART No.	MILLER PART No.	STANCOR PART No.	WORKMAN PART No.	
L1	Loopstick Osc. 1st IF 2nd IF 3rd IF	AP42011-AH-2					
L2		A006-DX-3					
L3		TI-21G	BC-574	2086	RTC-9266		
L4		TI-22D	BC-575	2087	RTC-9267		
L5		TI-23E	BC-576	2088	RTC-9268		

## TRANSFORMER (DRIVER)

ITEM No.	TURNS RATIO		REPLACEMENT DATA					NOTES
			PANASONIC PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
	PRI.	SEC.						
T1	1.4	1	TT-59L (TT-59S)					

## TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE		REPLACEMENT DATA					NOTES
			PANASONIC PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	TRIAD PART No.	
	PRI.	SEC.						
T2	130Ω CT	8Ω	TT-84L (TT-84S)					

## SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		PANASONIC PART No.	QUAM PART No.	
SP1	2 1/2" PM 6-8Ω	P-222SB		

## COMPONENT COMBINATIONS

ITEM No.	USE	DESCRIPTION	PANASONIC PART NO.	REPLACEMENT DATA
K1	Detector RF Filter	470Ω, .01mfd, .01mfd	CR31PK471	

## BATTERIES

ITEM No.	VOLTAGE	PANASONIC PART No.	REPLACEMENT DATA			NOTES
			BURGESS	EVEREADY	MALLORY	
M1	6V		930 or AL9 or Hg9	1015 or E91 or E9	M15R or Mn1500 or ZM9	4 Required

## MISCELLANEOUS

ITEM No.	PART NAME	PANASONIC PART No.	NOTES
M2	Tuning Cap.	2YL-13B18	

## CABINETS & CABINET PARTS

(When Ordering Specify Model, Chassis & Color)

ITEM	PART No.	ITEM	PART No.
Knob - Tuning	RBT-20	Battery Holder	RJK-340-1
Knob - Volume	RBV-2	Cabinet - Complete	RYA-30

## WIRING DATA

General-use Unshielded Hook-up Wire .....	Use BELDEN No. 8530 (Solid 22AWG)	Available
	8524 (Stranded 22AWG)	in
	8570 (Stranded 26AWG)	12 Colors