



# PHOTOFACT<sup>®</sup> with

# CIRCUITRACE<sup>®</sup>

Met dank aan Jef Bos

TRADE NAME : Motorola Models X47B, X47E (Ch. HS-6108)

SUPPLIER: Motorola Inc.  
9401 W. Grand Ave.,  
Franklin Park, Ill.

TYPE SET: 7 Transistor AM Receiver

POWER SUPPLY: 9 Volts DC

RATING: 8MA @ 9VDC (No Signal, Min. Volume)  
30MA @ 9VDC (Signal, Normal Volume)

TUNING RANGE: BROADCAST 540 - 1620KC



## ALIGNMENT INSTRUCTIONS

Check for specified source voltage.  
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:

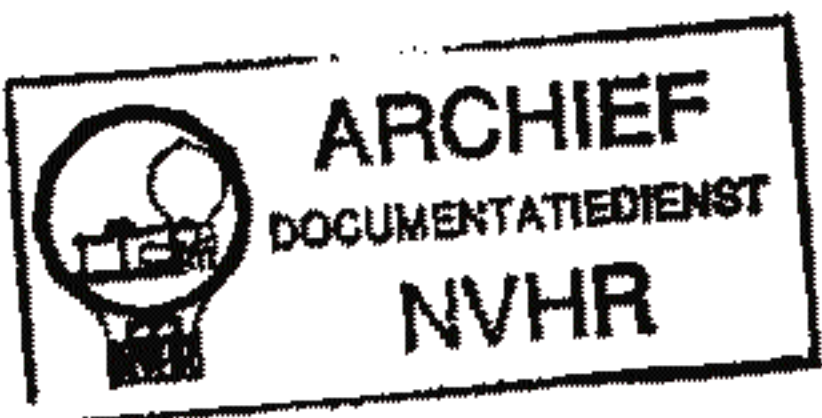
A1, A2, A3..... GENERAL CEMENT #8282, 8275  
WALSCO #2526

A4, A6..... GENERAL CEMENT #5000, 8290  
WALSCO #2525, 2528

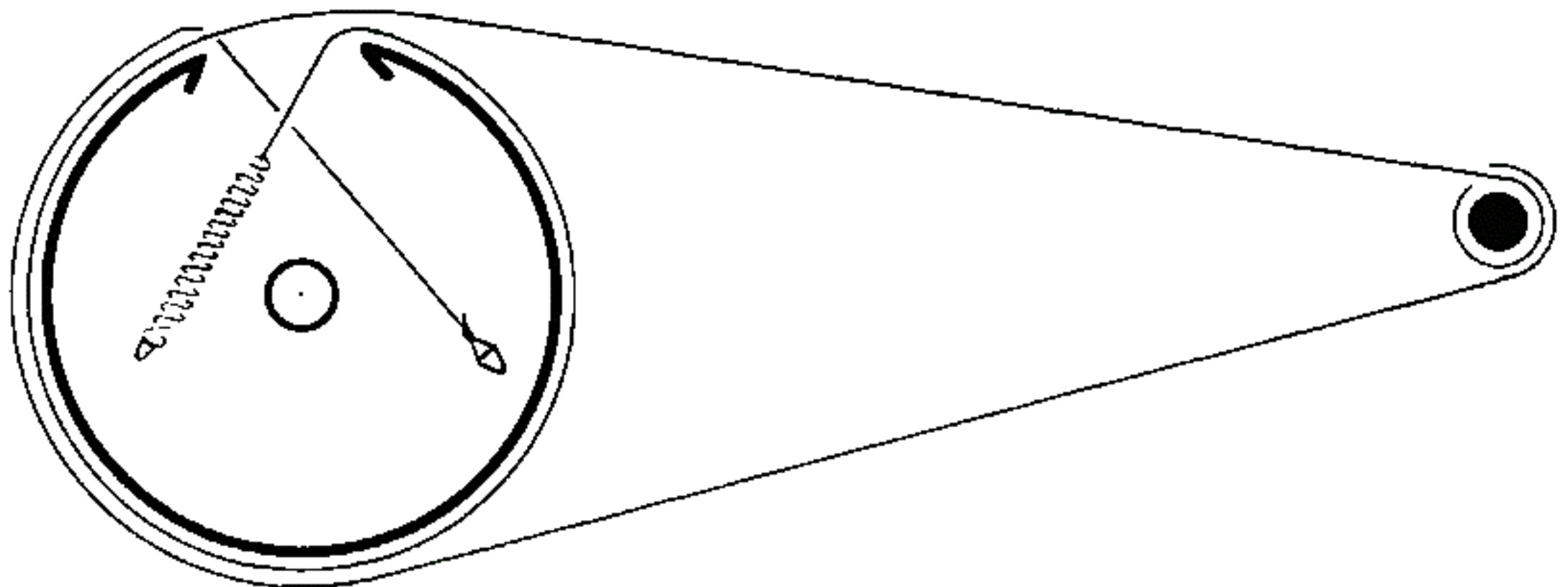
A5..... GENERAL CEMENT 9296

	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	INDICATOR	ADJUST	REMARKS
1.	455KC (400v Mod.)	Tuning gang fully open.	Output Meter across voice coil.	A1, A2, A3	Adjust for maximum. Repeat as required.
2.	1620KC	"	"	A4	Adjust for maximum.
3.	600KC	Tune to Signal.	"	A5	Rock tuning gang and adjust for maximum. Repeat steps 2 and 3.
4.	1400KC	"	"	A6	Adjust for maximum.

led. Ver. v. Historie v/d Radio

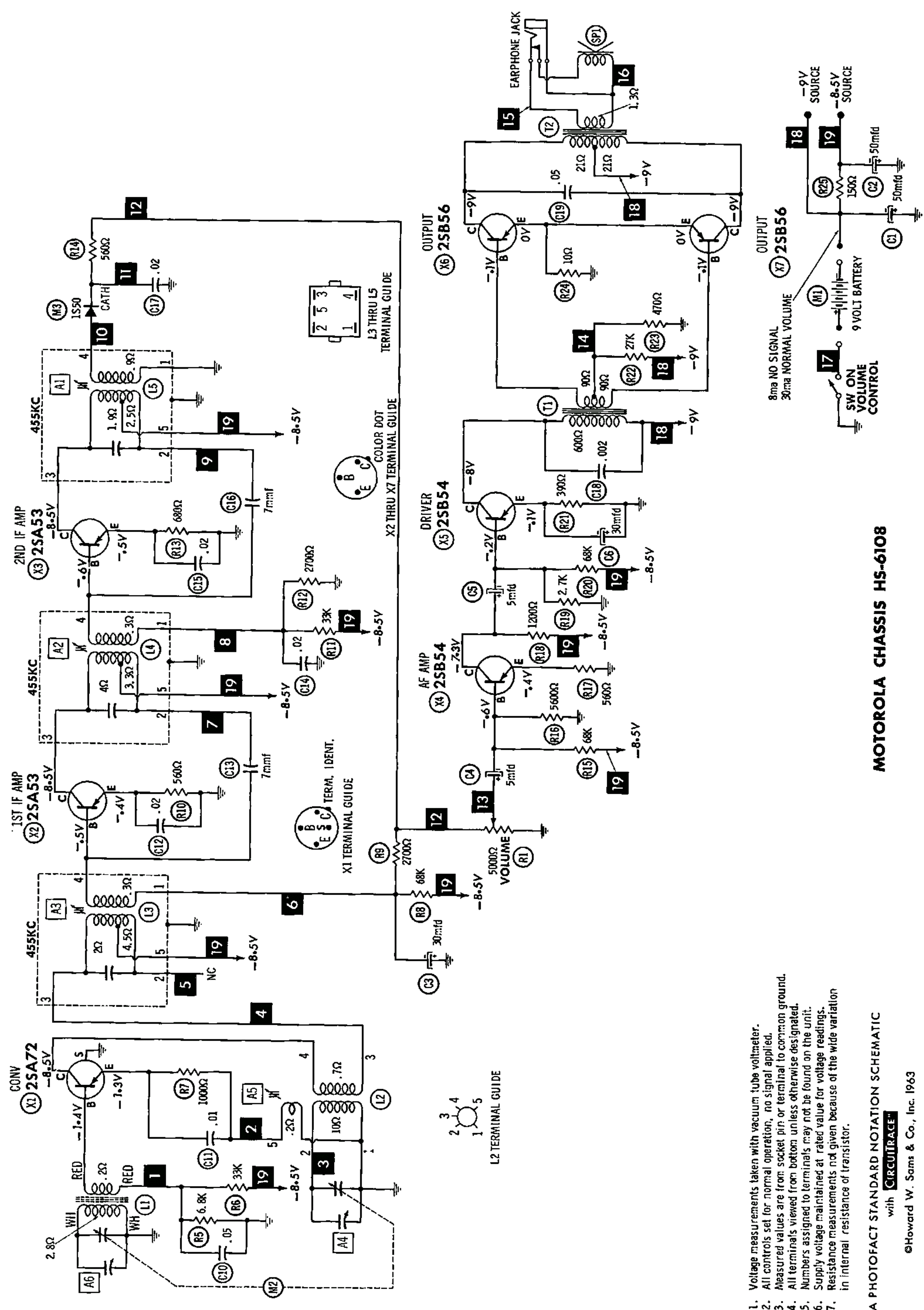


## DIAL CORD STRINGING



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



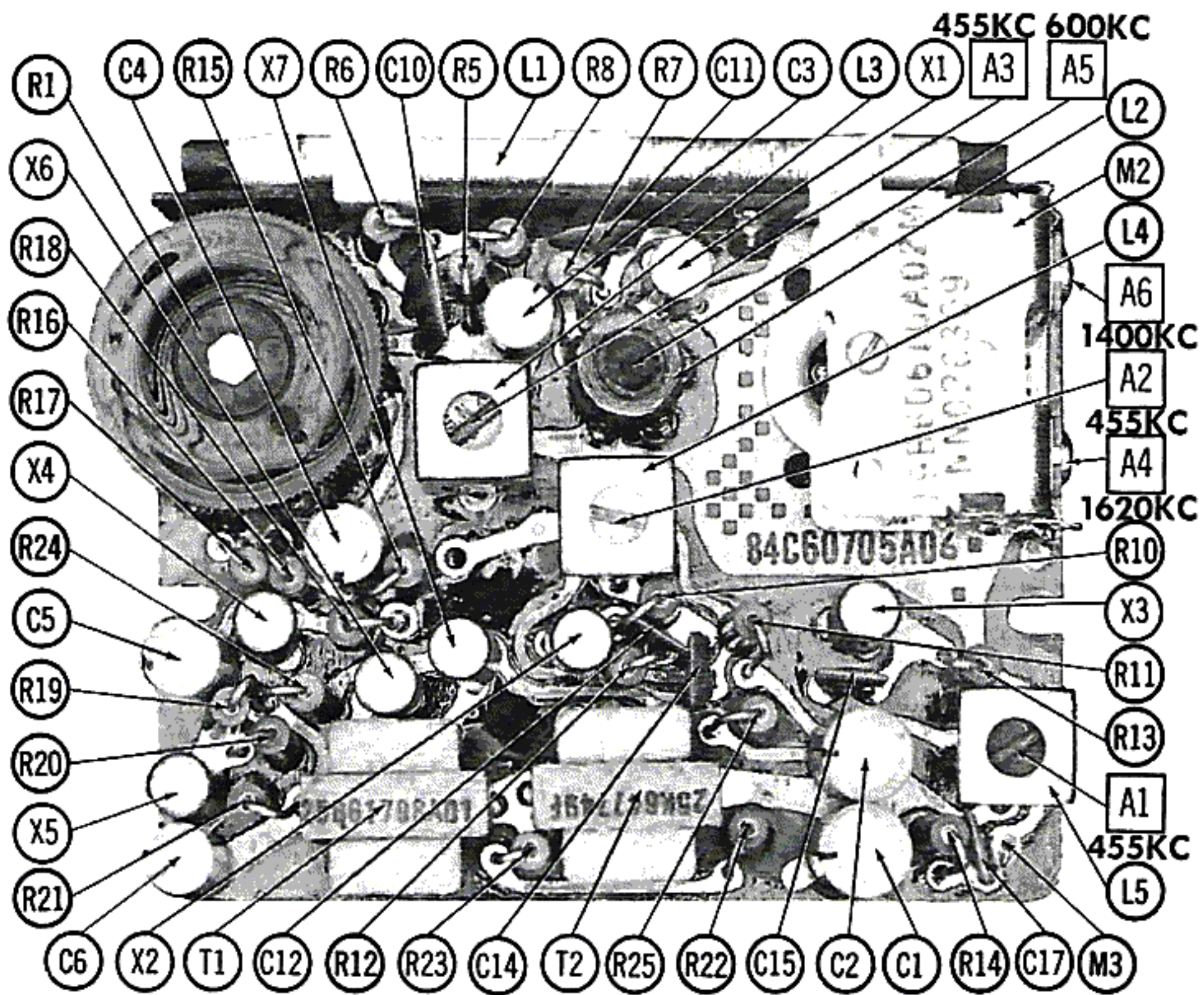
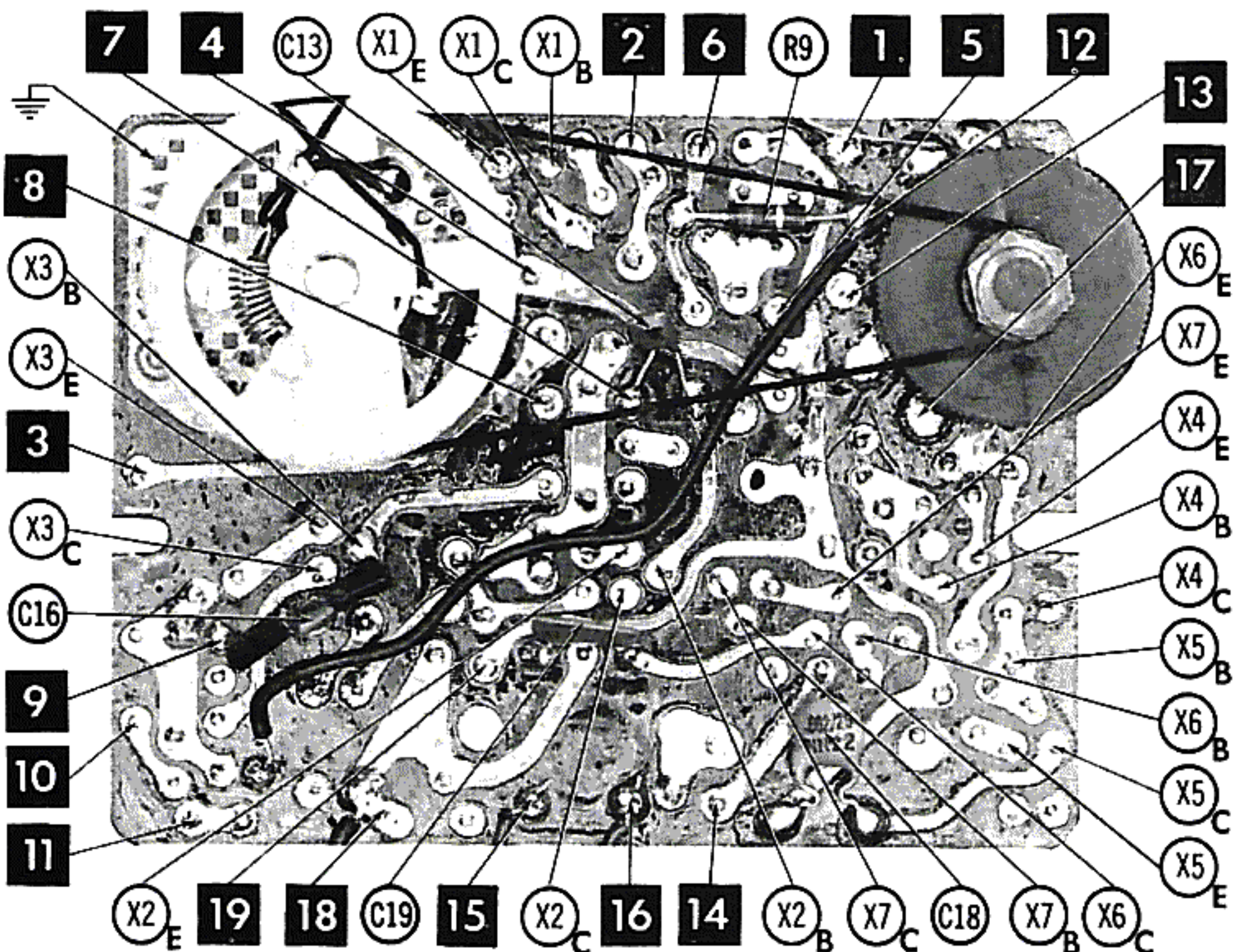


1. Voltage measurements taken with vacuum tube voltmeter.
2. All controls set for normal operation, no signal applied.
3. Measured values are from socket pin or terminal to common ground.
4. All terminals viewed from bottom unless otherwise designated.
5. Numbers assigned to terminals may not be found 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.

A PHOTOFAC T STANDARD NOTATION SCHEMATIC  
with **CIRCUITRACE**

**MOTOROLA CHASSIS HS-6108**







## TRANSISTORS

ITEM No.	ORIG. TYPE	USE	REPLACEMENT DATA			NOTES
			DELCO PART No.	GENERAL ELECTRIC PART No.	RCA PART No.	
X1	2SA72	Converter	DS-25	GE-1	2N1527	PNP
X2	2SA53	1st IF Amplifier	DS-25	GE-1	2N410	PNP
X3	2SA53	2nd IF Amplifier	DS-25	GE-1	2N410	PNP
X4	2SB54	AF Amplifier	DS-26	GE-2	2N406	PNP
X5	2SB54	Driver	DS-26	GE-2	2N406	PNP
X6	2SB56	Output	DS-26	GE-2	2N408	PNP
X7	2SB56	Output	DS-26	GE-2	2N408	PNP

## ELECTROLYTIC CAPACITORS

ITEM No.	RATING		REPLACEMENT DATA						
	CAP.	VOLT.	MOTOROLA 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	10	23C60496A04	BCD10050	NLW50-10	MT1-16	MLV50-10	TT10X50	TE-1119
C2	50	10	23C60496A04	BCD10050	NLW50-10	MT1-16	MLV50-10	TT10X50	TE-1119
C3	30	3	23C60496A02	BCD3025	ECPB412	MT1-13	MLV30-6	PET130	VL-1043
C4	5	6	23C60496A08	BCD8005	ECPB405	MT1-3	MLV5-6	TT6X5	VL-1084
C5	5	6	23C60496A08	BCD8005	ECPB405	MT1-3	MLV5-6	TT6X5	VL-1084
C6	30	3	23C60496A02	BCD3025	ECPB412	MT1-13	MLV30-6	PET130	VL-1043

## FIXED CAPACITORS

ITEM No.	RATING	REMARKS	REPLACEMENT DATA					
			AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ELMENDO PART No.	MALLORY PART No.	SPRAGUE PART No.
C10	.05		TTD-05	CK-503	H5		TA-150	TG-S50
C11	.01		TTD-01	CK-103	H2		TA-110	TG-S10
C12	.02		TTD-02	CK-203	H3		TA-120	TG-S20
C13	7		NPO-DI 6.8	DTZ-6R8	C10V7C	CCTO-6R8	CNO-568	10TCC-V68
C14	.02		TTD-02	CK-203	H3		TA-120	TG-S20
C15	.02		TTD-02	CK-203	H3		TA-120	TG-S20
C16	7		NPO-DI 6.8	DTZ-6R8	C10V7C	CCTO-6R8	CNO-568	10TCC-V68
C17	.02		TTD-02	CK-203	H3		TA-120	TG-S20
C18	.002			DM-202				
C19	.05		TTD-05	CK-503	H5		TA-150	TG-S50

## CONTROLS

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

ITEM No.	USE	RESISTANCE	REPLACEMENT DATA				
			MOTOROLA PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLORY PART No.
R1	Volume & Switch	5000Ω	18K647388	B16-214 ①			

① Use Original Knob.

## COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA					NOTES
		MOTOROLA PART No.	MERIT PART No.	MILLER PART No.	STANCOR PART No.	WORKMAN PART No.	
L1	Loopstick	24B61922A01		2009			
L2	Oscillator	24C60741A01					
L3	1st IF	24K646566	BC-574	2066	RTC-9266		
L4	2nd IF	24K646137	BC-575	2067	RTC-9267		
L5	3rd IF	24K646138	BC-576	2068	RTC-9268		

# DESCRIPTION

## TRANSFORMER (DRIVER)

ITEM No.	TURNS RATIO		REPLACEMENT DATA				NOTES
			MOTOROLA PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	
	PRI.	SEC.					
T1	2.1	1	25B61798A01				

## TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE		REPLACEMENT DATA				NOTES
			MOTOROLA PART No.	MERIT PART No.	STANCOR PART No.	THORDARSON PART No.	
	PRI.	SEC.					
T2	512Ω	6-8Ω	25K647749				

## SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		MOTOROLA PART No.	QUAM PART No.	
SP1	2 3/4" PM 6-8Ω	50B60558A01	27A06Z12	

## BATTERIES

ITEM No.	VOLTAGE	MOTOROLA PART No.	REPLACEMENT DATA			NOTES
			BURGESS	EVEREADY	MALLORY	
M1	9V		P6	226	M-1600 (or TR-286)	

## MISCELLANEOUS

ITEM No.	PART NAME	MOTOROLA PART No.	NOTES
M2 M3	Tuning Cap. Detector (1S50)	19B60610A02 48K644681	

## CABINETS & CABINET PARTS

(When Ordering Specify Model, Chassis & Color)

ITEM	PART No.	ITEM	PART No.
Knob - Tuning	36B60578A01	Cabinet Front Model X47E	1V60068A63
Knob - Volume	36B60657A03	Cabinet Back Model X47B	1V60050A51
Cabinet Front Model X47B	1V60068A62	Cabinet Back Model X47E	1V60050A52

## WIRING DATA

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