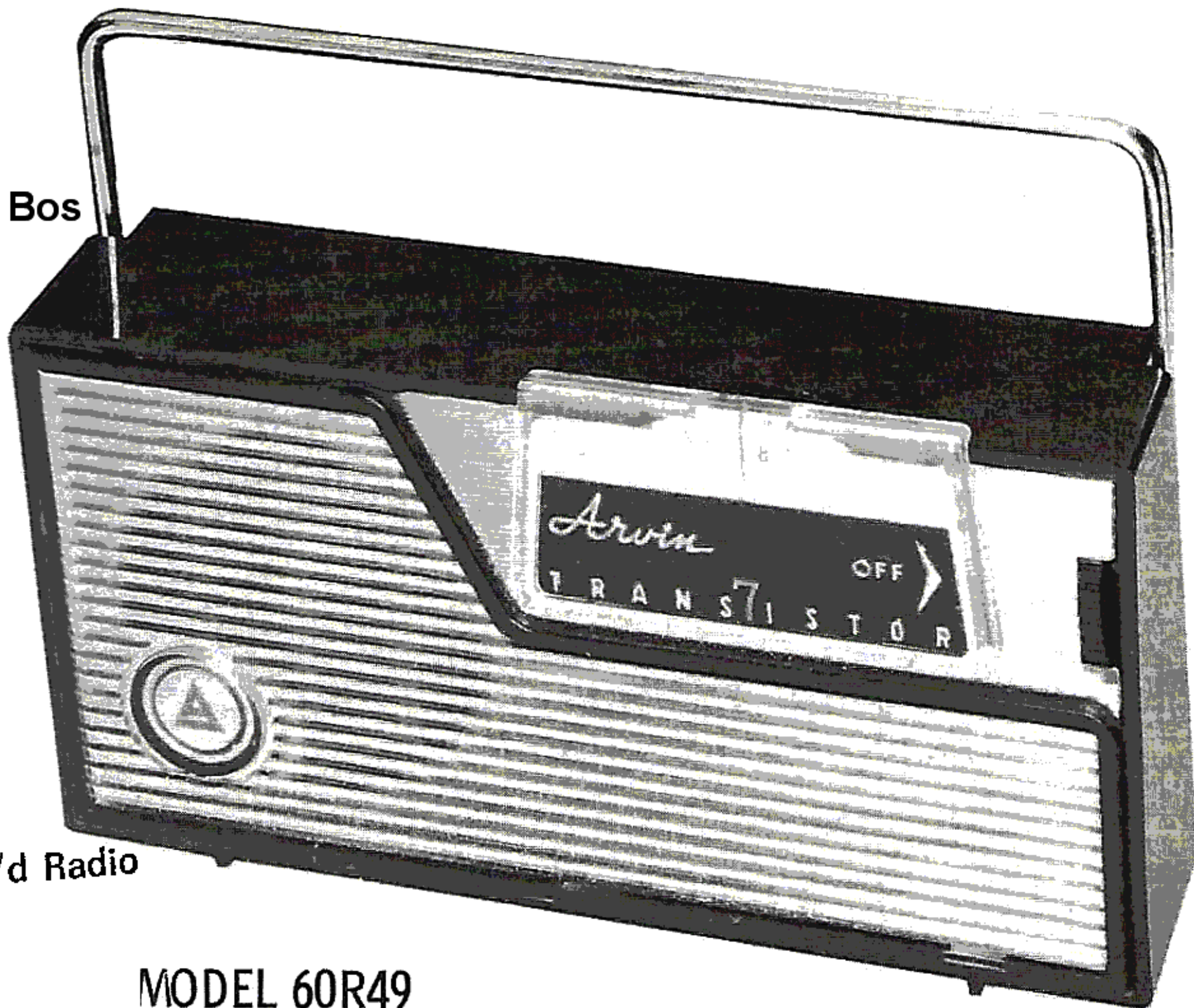


PHOTOFACT® Folder

with CIRCUITRACE

ARVIN MODELS 60R47,  
60R49 (Ch. 1.50401)

Met dank aan Jef Bos



Ver. v. Historie v/d Radio



MODEL 60R49

TRADE NAME	Arvin Models 60R47, 60R49 (Ch. 1.50401)	
MANUFACTURER	Arvin Industries, Inc., Columbus, Indiana	
TYPE SET	Battery Operated Transistorized Portable AM Receiver	
POWER SUPPLY	6 Volts DC	RATING 7MA@6 Volts DC (No Signal, Min. Volume)
TUNING RANGE—BROADCAST	540 — 1670KC	12MA@6 Volts DC (Signal, Normal Volume)

## 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, ... GENERAL CEMENT #5009, 8195, 8274, 8275, 8728, 8729, 8987, 8988, 8989, WALSCO #2515, 2531, 2532

A4, A5, ..... GENERAL CEMENT #5004, 5009, 8195, 8274, 8275, 8607, 8728, 8987, 8988, 8989, 9291  
WALSCO #2515, 2520, 2522, 2523, 2531, 2532, 2534, 2537, 2538

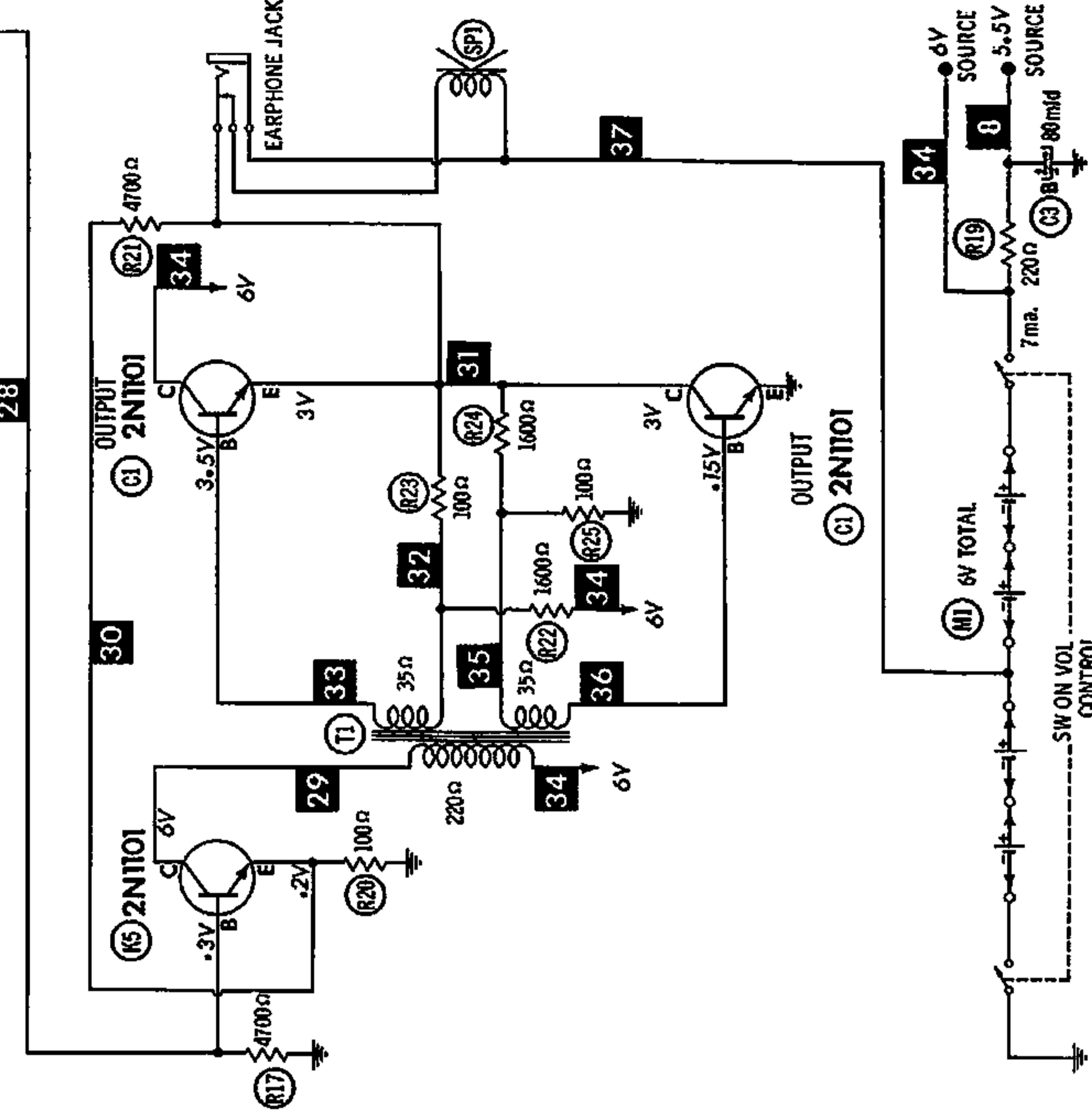
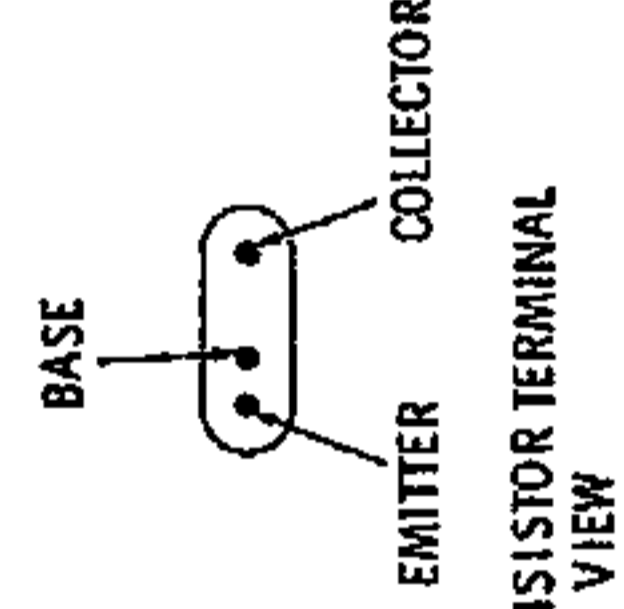
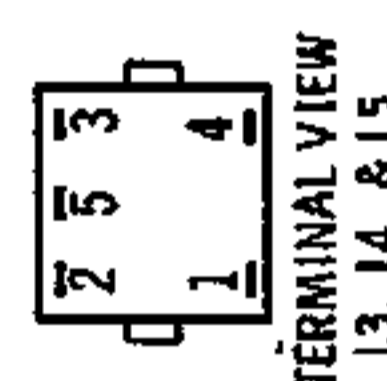
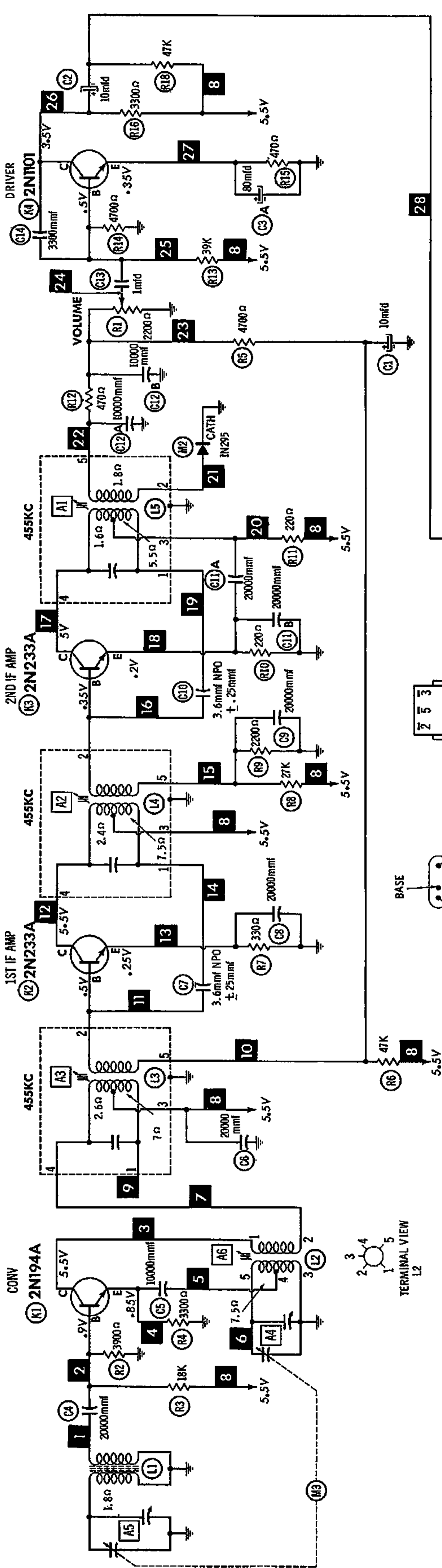
A6, ..... GENERAL CEMENT #8282, 8606, 8606-L, 9295, 9440  
WALSCO #2526, 2543, 2544, 2545

SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	OUTPUT METER	ADJUST	REMARKS
1. High side thru .05mfd to antenna stator lug of tuning gang. Low side to chassis.	455KC (400% Mod.)	Tuning gang fully open.	Across voice coil.	A1, A2, A3	Adjust for maximum output.
2. Loop	1670KC	"	"	A4	Fashion loop of several turns of wire and radiate signal into loop of receiver. Adjust for maximum output.
3. "	1400KC	1400KC Signal.	"	A5	"
4. "	600KC	600KC Signal.	"	A6	Adjust for maximum output while rocking tuning gang.

### 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 KFI70

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A PHOTOFACIT STANDARD NOTATION SCHEMATIC  
with **CIRCUITRACE**  
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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.

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  $\pm 15\%$  in voltage and resistance readings.
5. Volume control at maximum, no signal applied for voltage measurements.

**ARVIN MODELS 60R47,  
60R49 (Ch. 1.50401)**

# PARTS LIST AND DESCRIPTIONS

## TRANSISTORS

ITEM No.	ORIG. TYPE	USE	REPLACEMENT DATA			NOTES
			RCA PART No.	RAYTHEON PART No.	SYLVANIA PART No.	
X1	2N194A	Converter		2N1366	2N194	NPN
X2	2N233A	1st IF Amplifier		2N1367	2N233A	NPN
X3	2N233A	2nd IF Amplifier		2N1367	2N233A	NPN
X4	2N1101	AF Amplifier	2N649		2N1101	NPN
X5	2N1101	Driver	2N649		2N1101	NPN
X6	2N1101	Output	2N649		2N1101	NPN } Matched
X7	2N1101	Output	2N649		2N1101	NPN } Pair

## ELECTROLYTIC CAPACITORS

ITEM No.	RATING		REPLACEMENT DATA						NOTES
	CAP.	VOLT.	ARVIN PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	PYRAMID PART No.	SPRAGUE PART No.	
C1	10	10	44396-4	PTT10010	NLW10-10	TT12X10	ML10-15	TE-1114	
C2	10	10	44396-4	PTT10010	NLW10-10	TT12X10	ML10-15	TE-1114	
C3A	80	12	44397-4	BCD10X8080	ECPAN14	TT15X100		VL-2350	
B	80	12							

## 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.
C4	20000		BPD-02	DD-203	BYB6S2	CCD-203	B-120	5HK-S20
C5	10000		BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
C6	20000		BPD-02	DD-203	BYB6S2	CCD-203	B-120	5HK-S20
C7	3.6 NPO $\pm$ .25mmf							
C8	20000		BPD-02	DD-203	BYB6S2	CCD-203	B-120	5HK-S20
C9	20000		BPD-02	DD-203	BYB6S2	CCD-203	B-120	5HK-S20
C10	3.6 NPO $\pm$ .25mmf							
C11A	20000		BPD-2X02	DD-203	BYB6S2	CCD-203	B-120	5HK-2XS20
B	20000			DD-203	BYB6S2	CCD-203	B-120	5HK-2XS1
C12A	10000		BPD-2X01	DD3-103	BYD6DS1	CCD-103	B2X110	5HK-2XS1
B	10000					CCD-103		
C13	1mfd 3V	#44684-9		UK-105				HY-135
C14	3300		BPD-0033		BYA10D33	CCD-332	B-233	5HK-D33

# Arvin Part Number.

## CONTROLS

ITEM No.	RATING		REPLACEMENT DATA				INSTALLATION NOTES	
	RESISTANCE	WATTS	ARVIN PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.		MALLORY PART No.
R1	2200 $\Omega$	1/4	46800-4					Volume & Switch

## RESISTORS (IRC or EQUIVALENT)

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

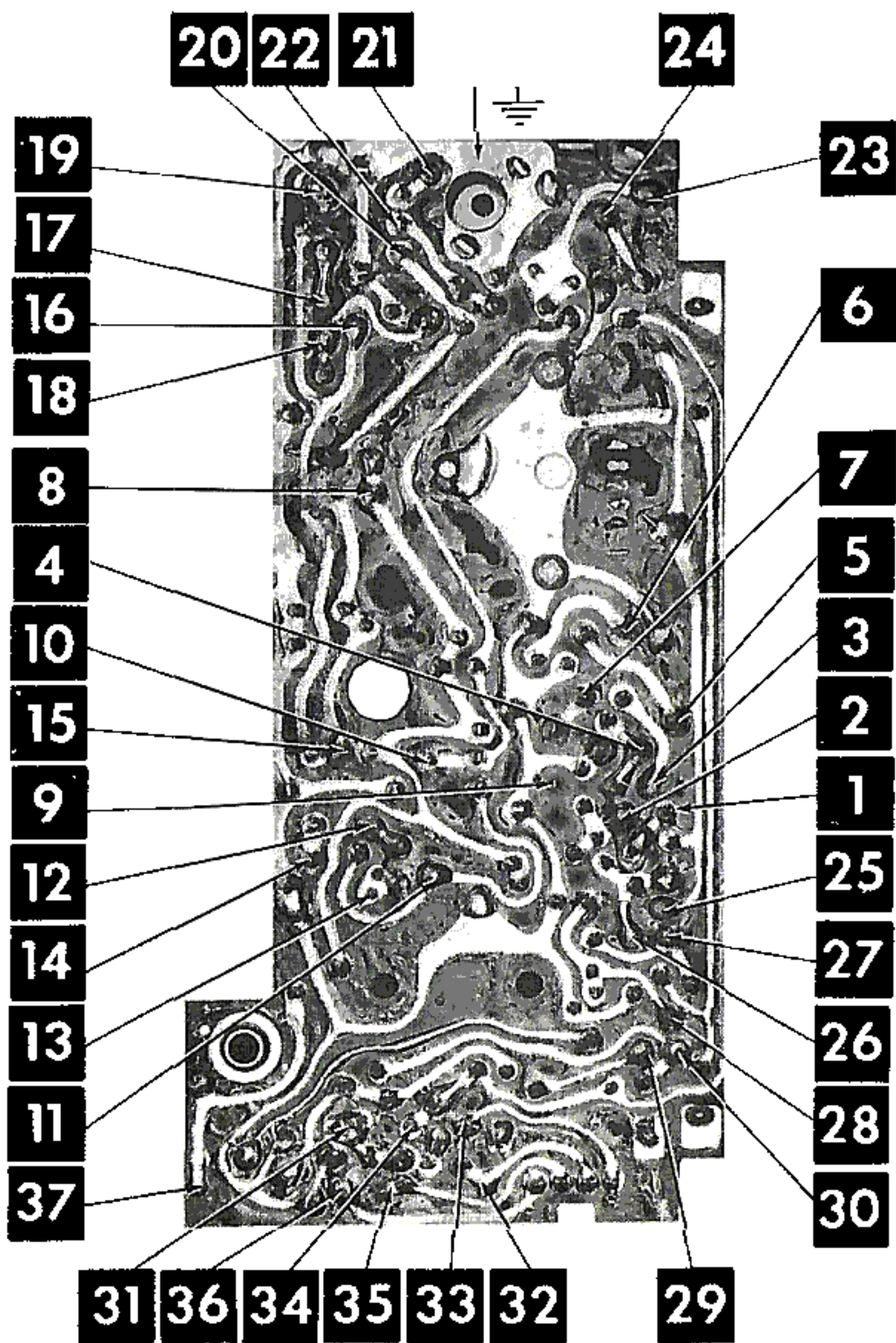
ITEM No.	RATING	REMARKS
R2	3900 $\Omega$	
R3	18K	
R4	3300 $\Omega$	
R5	4700 $\Omega$	
R6	47K	
R7	330 $\Omega$	
R8	27K	
R9	2200 $\Omega$	

ITEM No.	RATING	REMARKS
R10	220 $\Omega$	
R11	220 $\Omega$	
R12	470 $\Omega$	
R13	39K	
R14	4700 $\Omega$	
R15	470 $\Omega$	
R16	3300 $\Omega$	
R17	4700 $\Omega$	

ITEM No.	RATING	REMARKS
R18	47K	
R19	220 $\Omega$	
R20	100 $\Omega$	
R21	4700 $\Omega$	
R22	1600 $\Omega$	
R23	100 $\Omega$	
R24	1600 $\Omega$	
R25	100 $\Omega$	

# PRINTED BOARD

A Howard W. Hunt **CINCINNATI** Photo



# PARTS LIST AND DESCRIPTIONS (Continued)

## COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA					NOTES
		ARVIN PART No.	Merit PART No.	Miller PART No.	Ram PART No.	Stancor PART No.	
L1	Loopstick	44511-6					
L2	Osc. Coil	45783-12					
L3	1st IF Trans.	47163-1					
L4	2nd IF Trans.	47163-2					
L5	3rd IF Trans.	47163-3					

## TRANSFORMER (DRIVER)

ITEM No.	TURNS RATIO		REPLACEMENT DATA					NOTES
			ARVIN PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.	
	PRI.	SEC. 1						
T1	3.8	1	45604-6					
		SEC. 2						
	3.8	1						

## SPEAKER

ITEM No.	TYPE			REPLACEMENT DATA		NOTES
	SIZE	FIELD	V. C. IMP.	ARVIN PART No.	QUAM PART No.	
SP1	2 3/4"	PM	48. 9Ω	44280-2		

## BATTERIES

ITEM No.	VOLTAGE	ARVIN PART No.	REPLACEMENT DATA						NOTES
			BURGESS		EVEREADY		MALLORY		
			"A"	"B"	"A"	"B"	"A"	"B"	
M1	1.5V								4 Required

## CRYSTAL DIODES

ITEM No.	ORIG. TYPE	REPLACEMENT DATA			NOTES
		ARVIN PART No.	RAYTHEON PART No.	SYLVANIA PART No.	
M2	1N295	43959	1N295	1N295	Detector (Pigtail)

## MISCELLANEOUS

ITEM No.	PART NAME	ARVIN PART No.	NOTES
M1	Tuning Cap. Printed Board	47431 48264-1	2 Gang

## CABINETS & CABINET PARTS

(When Ordering Cabinets & Cabinet Parts, Specify Model, Chassis & Color)

NAME	PART NO.	DESCRIPTION
Model	47132-29	Tuning, Black
Model	47132-87	Tuning, White
Model	46658-29	Volume, Black
Model	46658-87	Volume, White
Cabinet	46921-29	Back, Black
Cabinet	46921-87	Back, White
Cabinet	48272	Front
Handle	46923-1	Chrome

## WIRING DATA

General-use Unshielded Hook-up Wire ..... Use BELDEN No. 8530 (Solid) Available in Ten Colors  
8524 (Stranded) Available in Ten Colors

# CHASSIS—TOP VIEW

