

**PHOTOFACT® Folder**

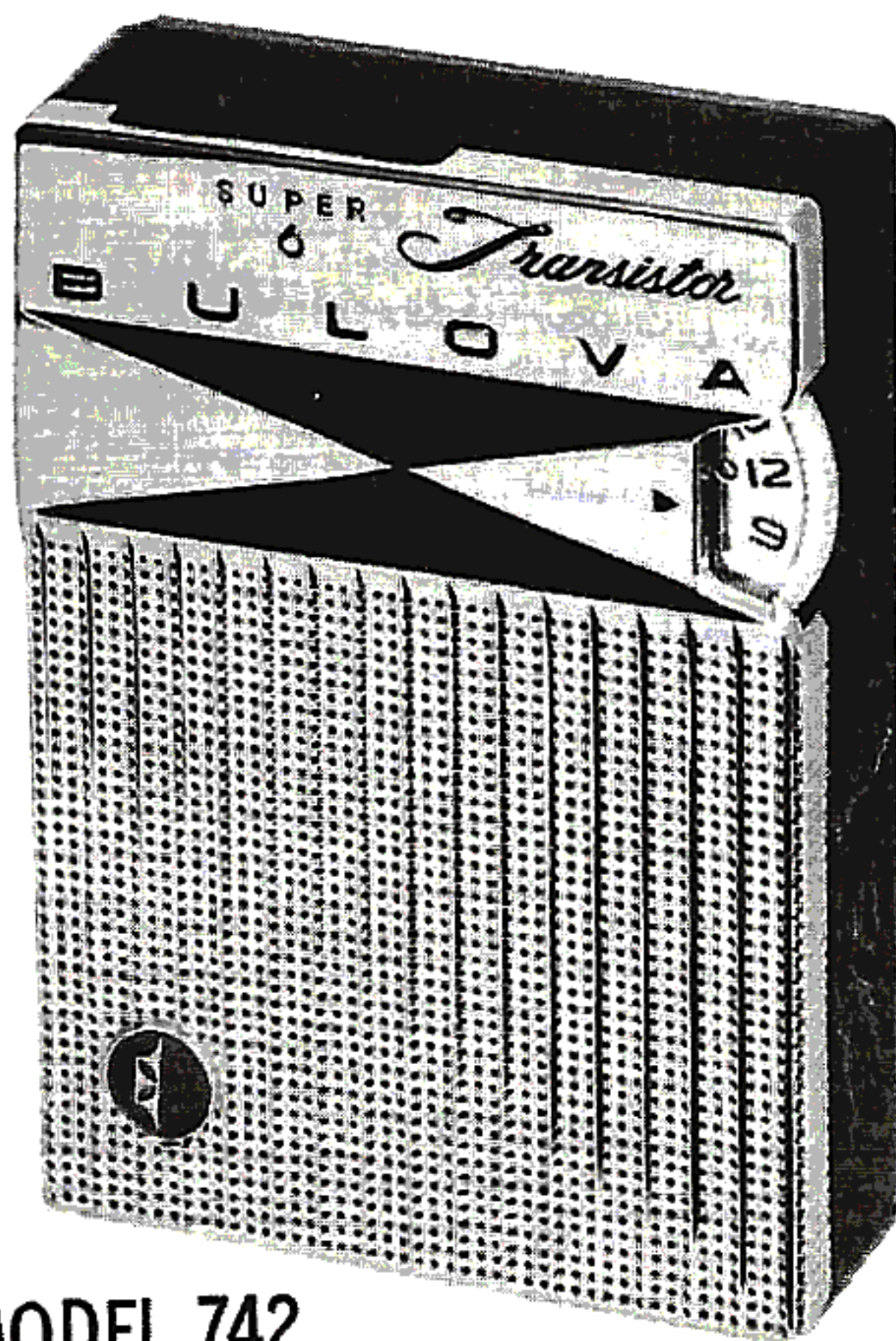
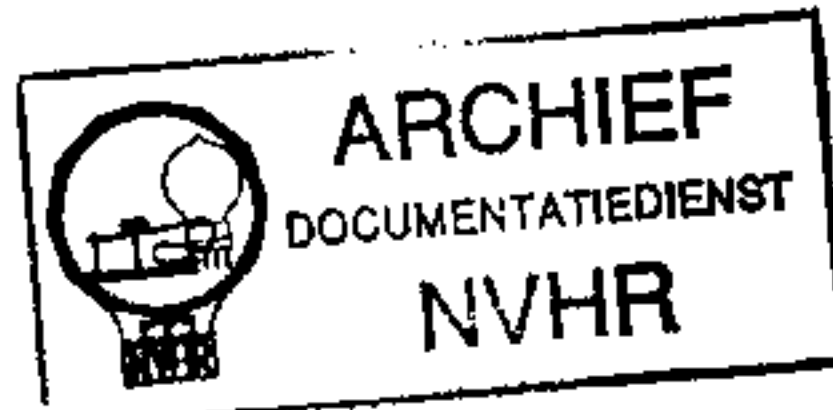
with **CIRCUITRACE®**

**BULOVA MODELS 742,  
743, 745, 746**



Met dank aan Jef Bos

Ned. Ver. v. Historie v.



**MODEL 742**

<b>TRADE NAME</b>	Bulova Models 742, 743, 745, 746		
<b>MANUFACTURER</b>	Bulova Watch Co., Bulova Park, Flushing 70, N. Y.		
<b>TYPE SET</b>	Battery Operated Transistorized Portable AM Receiver		
<b>POWER SUPPLY</b>	5.6 Volts DC	<b>RATING</b>	6MA @ 5.6 Volts DC (No Signal, Min. Volume)
<b>TUNING RANGE—BROADCAST</b>	540 — 1600KC		10MA @ 5.6 Volts DC (Signal, Normal Volume)

## ALIGNMENT INSTRUCTIONS

### ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT

Tuning control should be at maximum position. Output of signal generator should be no higher than necessary to obtain an exact 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 #5000, 5003, 5086, 8276, 8290, 9087, 9089  
WALSCO #2512, 2525, 2528
- A6.....GENERAL CEMENT #9440

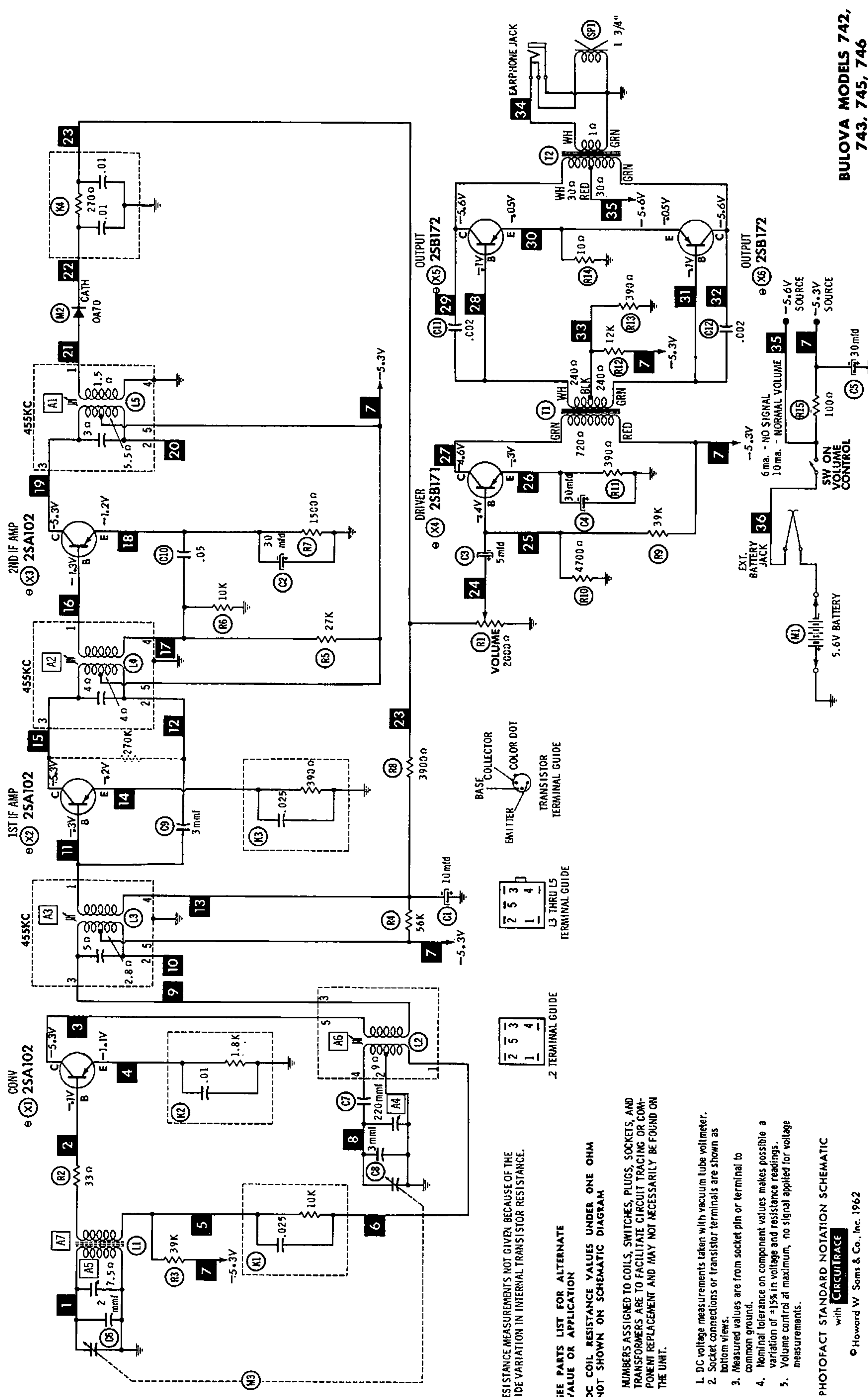
SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	OUTPUT METER	ADJUST	REMARKS
Position loop of several turns of wire and radiate signal into loop of receiver.	455KC (400% Mod.)	Tuning gang fully open.	Across voice coil.	A1, A2, A3	Adjust for maximum output.
"	1600KC	1600KC	"	A4, A5	"
"	600KC	600KC	"	A6, A7	Adjust for maximum output. A7 is adjusted by moving coil along ferrite core. Repeat steps 2 and 3.

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

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CONV  
e (X1) 2SA102

1ST IF AMP  
e (X2) 2SA102

2ND IF AMP  
e (X3) 2SA102

CATH  
0A70  
e (X4) 2SB171

OUTPUT  
e (X5) 2SB172

OUTPUT  
e (X6) 2SB172

RESISTANCE MEASUREMENTS NOT GIVEN BECAUSE OF THE WIDE VARIATION IN INTERNAL TRANSISTOR RESISTANCE.

SEE PARTS LIST FOR ALTERNATE VALUE OR APPLICATION

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

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.

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.

A PHOTOFACIT STANDARD NOTATION SCHEMATIC with **CIRCUITRACE**

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BULOVA MODELS 742, 743, 745, 746



# PARTS LIST AND DESCRIPTIONS

## TRANSISTORS

ITEM No.	ORIG. TYPE	USE	REPLACEMENT DATA		NOTES
			RCA PART No.	RAYTHEON PART No.	
X1	2SA102 MC102*	Converter	2N1527		PNP
X2	2SA102 MC102*	1st IF Amplifier	2N1525		PNP
X3	2SA102 MC102*	2nd IF Amplifier	2N1525		PNP
X4	2SB171 OC71*	Driver	2N406		PNP
X5	2SB172 OC72*	Output	2N408		PNP
X6	2SB172 OC72*	Output	2N408		PNP

\* Alternate

## ELECTROLYTIC CAPACITORS

ITEM No.	RATING		REPLACEMENT DATA						
	CAP.	VOLT.	BULOVA PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	MALLORY PART No.	PYRAMID PART No.	SPRAGUE PART No.
C1	10	3	T-49		NLW10-6		TT3X10		
C2	30	3	TC-87						
C3	5	3	T-48						
C4	30	3	TC-87						
C5	30	6	TC-81		NLW30-6	MTI-13	TT6X30	MLV30-6	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.
C6	2mmf		NPO-SI 2.0	TCZ-2R2	C10V2C	CCTO-2R2	CNO-522	10TCC-V22
C7	220		SI 220	D6-221	L10T22	CCD-221	GP322	10TS-T22
C8	3mmf		NPO-SI 3.0	TCZ-3R3	C10V3C	CCTO-3R3	CNO-533	10TCC-V33
C9	3mmf		NPO-SI 3.0	TCZ-3R3	C10V3C	CCTO-3R3	CNO-533	10TCC-V33
C10	.05		C80V503AM	DA-503	H-05S5		TA-150	TG-S50
C11	.002		BPD-002	DM-202	BYA10D2	CCD-202	B-210	5HK-D20
C12	.002		BPD-002	DM-202	BYA10D2	CCD-202	B-210	5HK-D20

## CONTROLS

ITEM No.	RATING		REPLACEMENT DATA				INSTALLATION NOTES	
	RESISTANCE	WATTS	BULOVA PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.		MALLORY PART No.
R1	2000Ω	1/4	TC-61					Volume & Switch

## RESISTORS

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

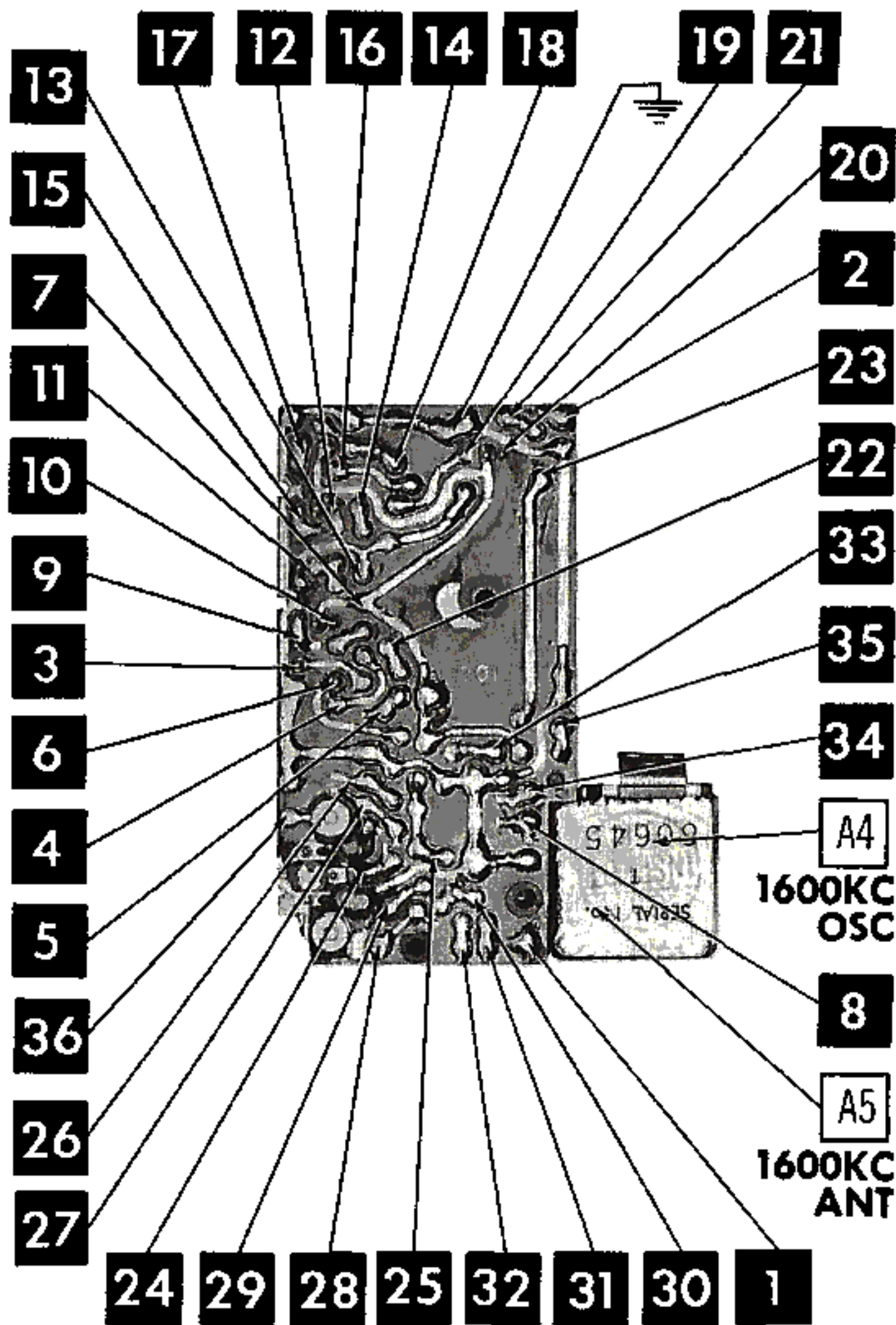
ITEM No.	RATING	REPLACEMENT DATA			ITEM No.	RATING	REPLACEMENT DATA		
		IRC PART No.	WORKMAN TV PART No.	REMARKS			IRC PART No.	WORKMAN TV PART No.	REMARKS
R2	33Ω				R9	39K			
R3	39K				R10	4700Ω			
R4	56K				R11	390Ω			
R5	27K				R12	12K			
R6	10K				R13	390Ω			
R7	1500Ω				R14	10Ω			
R8	3900Ω				R15	100Ω			

## COMPONENT COMBINATIONS

ITEM No.	USE	DESCRIPTION	BULOVA PART No.	REPLACEMENT DATA
K1	Osc. Coupling	.025mfd, 10K	T-55	
K2	Conv. Emitter Bias	.01mfd, 1800Ω	T-53	
K3	1st IF Emitter Bias	.025mfd, 390Ω	T-54	
M4	Det. RF Filter	.01mfd, .01mfd, 270Ω	T-56	

# PRINTED BOARD

A Howard W. Sams **CIRCUIT** Plate



# PARTS LIST AND DESCRIPTIONS (Continued)

## COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA					NOTES
		BULOVA PART No.	Merit PART No.	Miller PART No.	Stancor PART No.	Workman TV PART No.	
L1	Loopstick	TC-46					
L2	Osc.	T-18					
L3	1st IF	T-19					
L4	2nd IF	T-20					
L5	3rd IF	T-21					

## TRANSFORMER (DRIVER)

ITEM No.	TURNS RATIO		REPLACEMENT DATA					NOTES
			BULOVA PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.	
	PRI.	SEC.						
T1	1,3	1	TC-47					

## TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE		REPLACEMENT DATA					NOTES
	PRI.	SEC.	BULOVA PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.	
T2	1000Ω CT	8-8Ω	T-59					

## SPEAKER

ITEM No.	TYPE			REPLACEMENT DATA		NOTES
	SIZE	FIELD	V. C. IMP.	BULOVA PART No.	QUAM PART No.	
SP1	1 3/4"	PM	8-8Ω	T-80		

## BATTERIES

ITEM No.	VOLTAGE	BULOVA PART No.	REPLACEMENT DATA						NOTES
			BURGESS		EVEREADY		MALLORY		
			"A"	"B"	"A"	"B"	"A"	"B"	
MI	5.6V	24		HI64		E164		TR164	

## SIGNAL DIODES

ITEM No.	ORIG. TYPE	REPLACEMENT DATA			NOTES
		BULOVA PART No.	GENERAL ELECTRIC PART No.	RAYTHEON PART No.	
M2	0A70	T-17		1N60	Detector

## MISCELLANEOUS

ITEM No.	PART NAME	BULOVA PART No.	NOTES
M3	Tuning Cap. Switch	TC-22 T-10	2 Gang Off-On (Includes Ear Phone Jack)

## CABINETS & CABINET PARTS

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

NAME	PART NO.	DESCRIPTION
Knob	TC-25	Tuning
Knob	TC-82	Volume (Specify Color)
Cabinet	TC-23	(Specify Color)

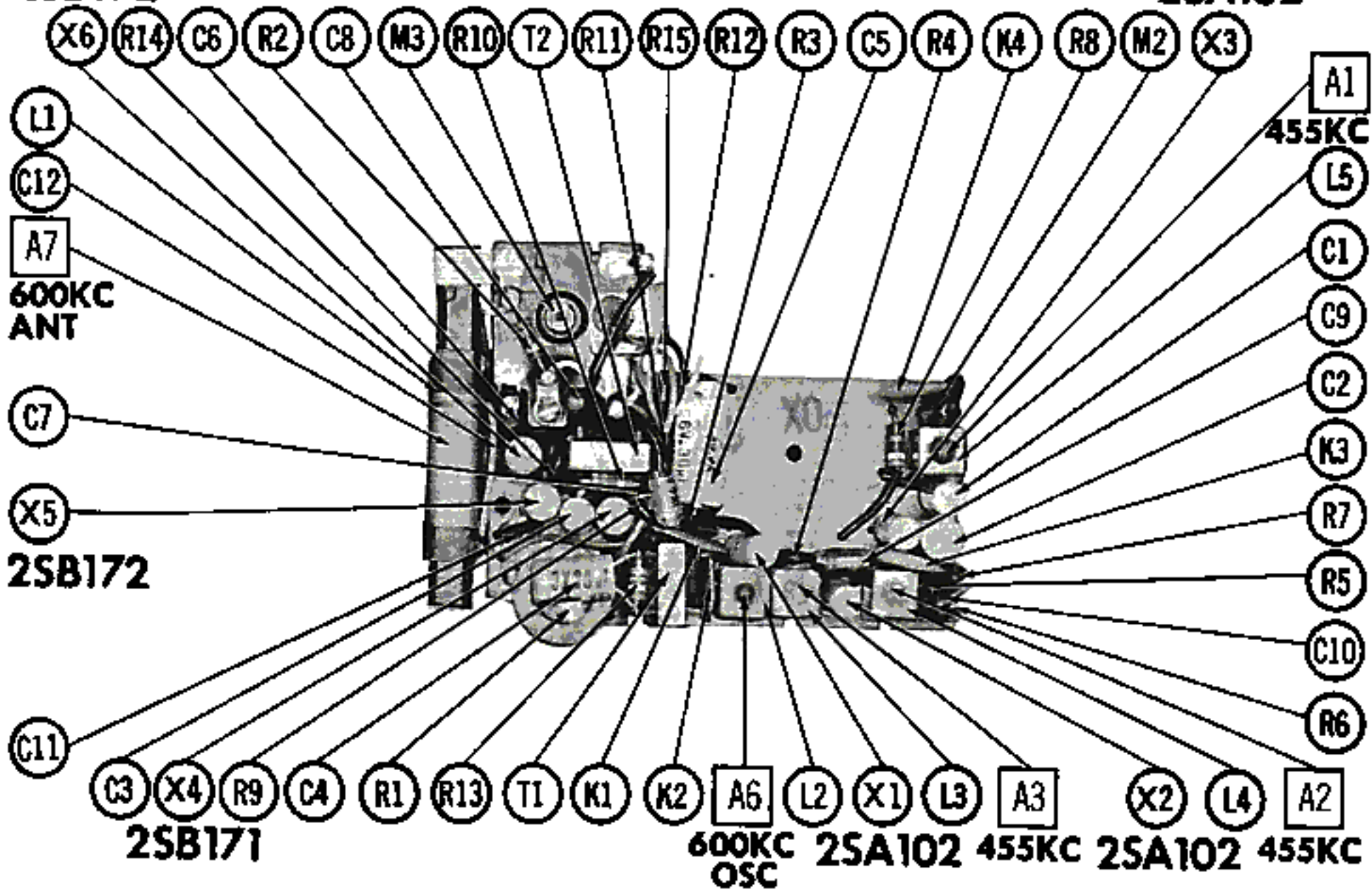
## WIRING DATA

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

**CHASSIS—TOP VIEW**

**2SB172**

**2SA102**



**2SB171**

**600KC OSC**

**2SA102**

**455KC**

**2SA102**

**455KC**