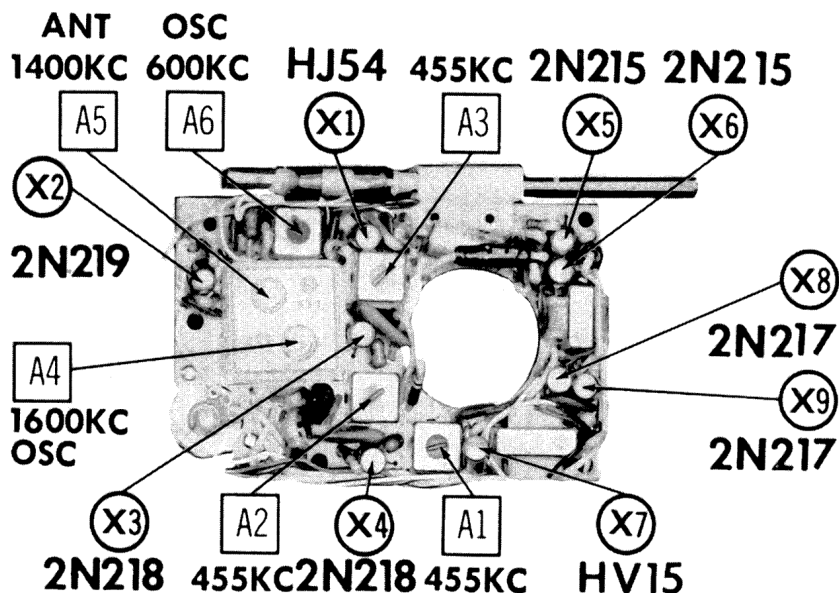


HITACHI MODEL TH-862R

HITACHI MODEL TH-862R



TRADE NAME	Hitachi Model TH-862R		
IMPORTER	Electronic Utilities Co., Div. of The Sampson Co., 2244 S. Western Ave., Chicago 8, Illinois		
TYPE SET	Battery Operated Transistorized Portable AM Receiver		
POWER SUPPLY	9 Volts DC	RATING	5MA@9 Volts DC (No Signal, Min. Volume) 10MA@9 Volts DC (Signal, Normal Volume)
TUNING RANGE—BROADCAST	535 — 1605KC		

### 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, A6, ..... GENERAL CEMENT #5004, 5009, 8195, 8274, 8275, 8607, 8728, 8987, 8988, 8989, 9291  
WALSCO #2515, 2520, 2522, 2523, 2531, 2532, 2534, 2537, 2538  
A4, A5, ..... GENERAL CEMENT #5000, 5003, 5066, 8276, 8290, 9087, 9089  
WALSCO #2512, 2525, 2528

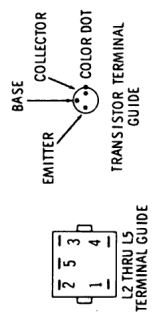
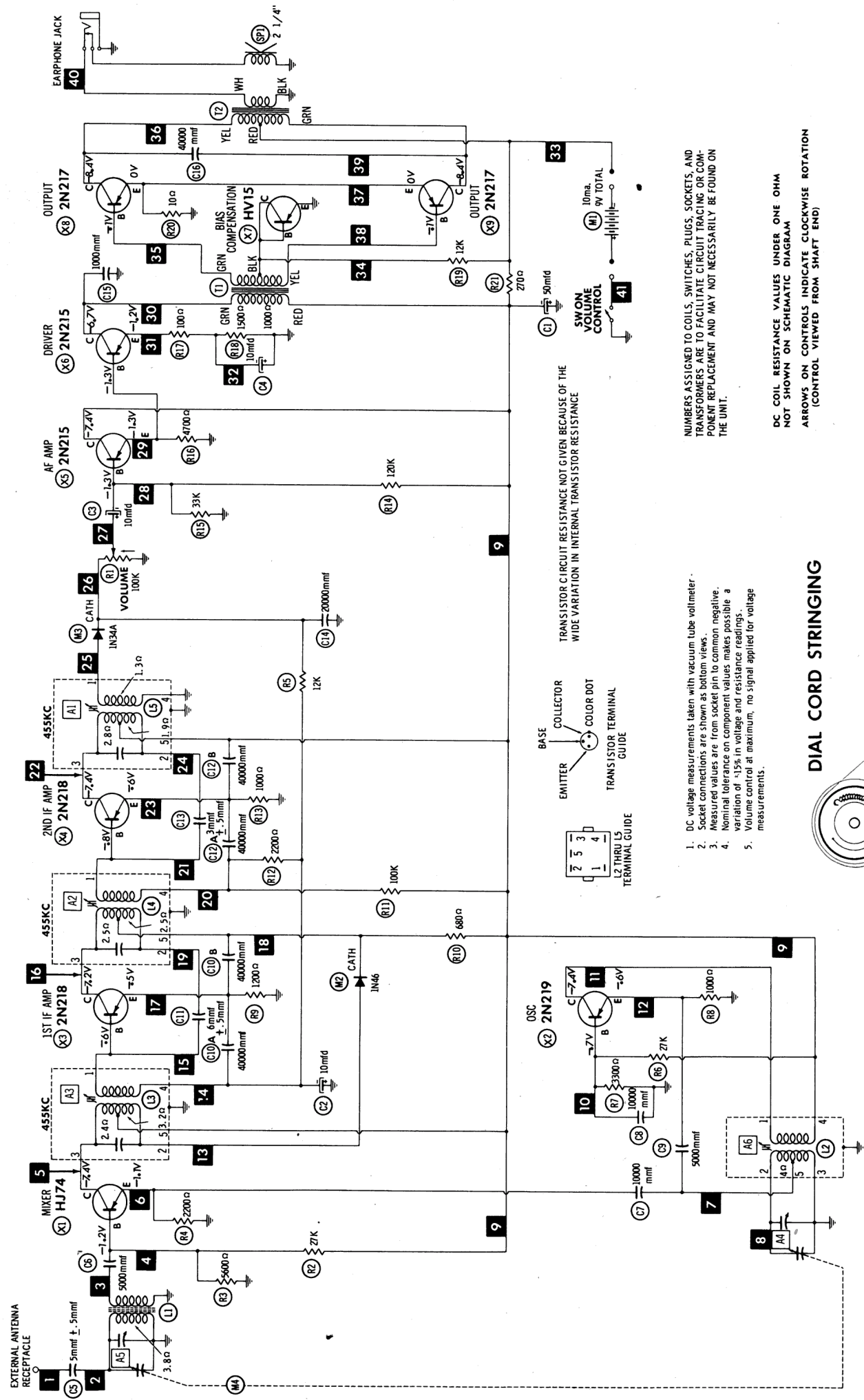
	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	OUTPUT METER	ADJUST	REMARKS
1.	Loop	455KC (400% Mod.)	Tuning gang fully open.	Across voice coil.	A1, A2, A3	Fashion loop of several turns of wire and radiate signal into loop of receiver. Adjust for maximum output.
2.	"	1600KC	1600KC	"	A4	"
3.	"	1400KC	Tune to 1400KC Signal.	"	A5	"
4.	"	600KC	Tune to 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 JF783

the particular type of replacement part listed. Reproduction or use, without express permission, of editorial or pictorial content, in any manner, is prohibited. No patent liability is assumed with respect to the use of the information contained herein. © 1960 Howard W. Sams & Co., Inc., Indianapolis 6, Indiana. Printed in U.S. of America



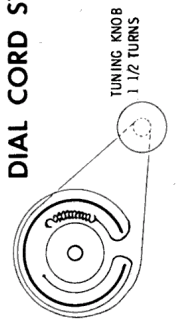
1. DC voltage measurements taken with vacuum tube voltmeter.
2. Socket connections are shown as bottom views.
3. Measured values are from socket pin to common negative.
4. Nominal tolerance on component values makes possible a variation of  $\pm 15\%$  in voltage and resistance readings.
5. Volume control at maximum, no signal applied for voltage measurements.

TRANSISTOR CIRCUIT RESISTANCE NOT GIVEN BECAUSE OF THE WIDE VARIATION IN INTERNAL TRANSISTOR RESISTANCE

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.

DC COIL RESISTANCE VALUES UNDER ONE OHM NOT SHOWN ON SCHEMATIC DIAGRAM  
ARROWS ON CONTROLS INDICATE CLOCKWISE ROTATION (CONTROL VIEWED FROM SHAFT END)

DIAL CORD STRINGING



A PHOTOFAC STANDARD NOTATION SCHEMATIC with **CIRCUITRACE**  
© Howard W. Sams & Co., Inc. 1960

# PARTS LIST AND DESCRIPTIONS

# PRINTED BOARD

A Howard W. Sams CIRCUITRACE<sup>SM</sup> Photo

## TRANSISTORS

ITEM No.	ORIG. TYPE	USE	REPLACEMENT DATA				NOTES
			CBS PART No.	RCA PART No.	RAYTHEON PART No.	SYLVANIA PART No.	
X1	HJ74	Mixer			2N486		PNP
X2	2N219	Oscillator	2N412		2N485		PNP
X3	2N218	1st IF Amplifier	2N410		2N482	2N218	PNP
X4	2U218	2nd IF Amplifier	2N406		2N362	2N215	PNP
X5	2N215	AF Amplifier	2N406		2N362	2N215	PNP
X6	2N215	Driver	2N406		2N362	2N215	PNP
X7	HV15	Bias Compensation	2N408		2N633	2N217	PNP
X8	2N217	Output	2N408		2N633	2N217	PNP
X9	2N217	Output	2N408		2N633	2N217	PNP

## ELECTROLYTIC CAPACITORS

ITEM No.	RATING CAP.	VOLT.	REPLACEMENT DATA				NOTES
			AEROVOX PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	PYRAMID PART No.	
C1	50	10	XPP-10050	NLW50-10	TT50X10	ML10-15	TE-1119
C2	10	10	XPP-10010	NLW10-10	TT12X10	ML10-15	TE-1114
C3	10	10	XPP-10010	NLW10-10	TT12X10	ML10-15	TE-1114
C4	10	10	XPP-10010	NLW10-10	TT12X10	ML10-15	TE-1114

## 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				SPRAGUE PART No.
			AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ELMENCO PART No.	
C5	5 + .5mmf		NPO-SI 5.0	TCZ-4R7	C10V5C	CCTO-050	CNO-547
C6	5000		C80V502AM	DM-502	H-05D5	CCD-502	TA-250
C7	10000		C80V103AM	DDM-103	H-05S1	CCD-502	TA-110
C8	10000		C80V103AM	DDM-103	H-05S1	CCD-502	TA-110
C9	5000		C80V502AM	DM-502	H-05D5	CCD-502	TA-250
C10A	40000						
B	40000						
C11	6 + .5mmf				C10V6C		10TCC-V56
C12A	40000						
B	40000						
C13	3 + .5mmf						
C14	20000		NPO-SI 3.0	TCZ-3R3	C10V3C	CCTO-3R3	CNO-533
C15	1000		C80V203AM	DDM-203	H-05S2	CCD-103	TA-120
C16	40000		C80V102AM	DM-102	H-05D1	CCD-102	GP210

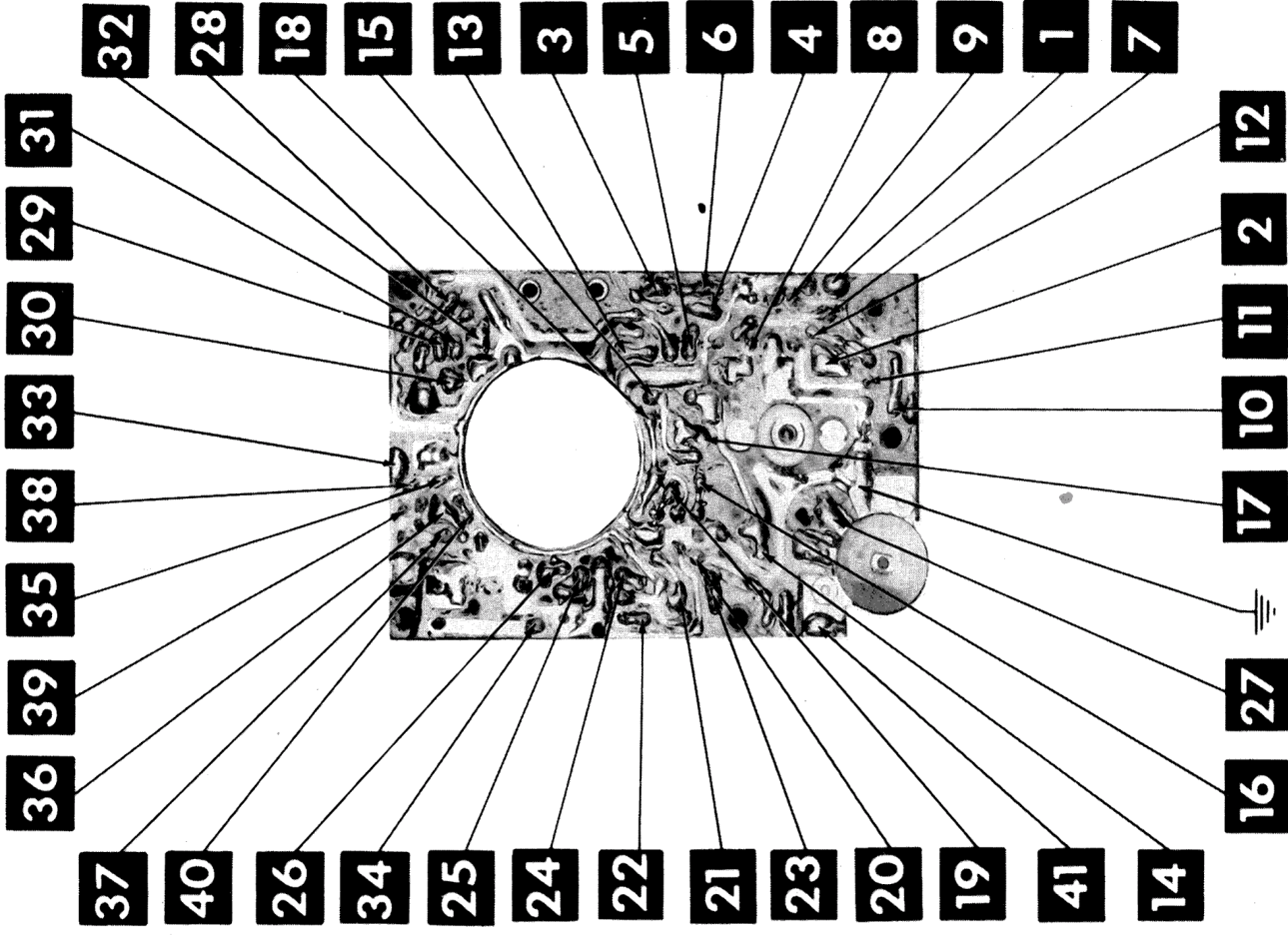
## CONTROLS

ITEM No.	RATING	REMARKS	REPLACEMENT DATA			INSTALLATION NOTES
			CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	
RL	100K	1/4	34.05			Volume & Switch

## RESISTORS

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

ITEM No.	RATING	REMARKS	ITEM No.	RATING	REMARKS	ITEM No.	RATING	REMARKS
R3	5600Ω		R10	680Ω		RL7	100Ω	
R4	2200Ω		R11	100K		RL8	1500Ω	
R5	12K		R12	2200Ω		RL9	12K	
R6	27K		R13	1000Ω		R20	10Ω	
R7	3300Ω		R14	120K		R21	270Ω	
R8	1000Ω		R15	33K				



# PARTS LIST AND DESCRIPTIONS (Continued)

## COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA						NOTES
		HITACHI PART No.	Gramer PART No.	Meissner PART No.	Merit PART No.	Miller PART No.	Ram PART No.	
L1	Loopstick							
L2	Osc. Coil							
L3	1st IF Trans.							
L4	2nd IF Trans.							
L5	3rd IF Trans.							

## TRANSFORMER (DRIVER)

ITEM No.	TURNS RATIO	REPLACEMENT DATA					NOTES
		HITACHI PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.	
T1	PRI. SEC. 1 .7	CT-85					

## TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE	REPLACEMENT DATA					NOTES
		HITACHI PART No.	Merit PART No.	Ram PART No.	Stancor PART No.	Thordarson PART No.	
T2	PRI. SEC. CT 22500, 10-120	OT-70					

## SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		HITACHI PART No.	QUAM PART No.	
SP1	SIZE FIELD V. C. IMP. PM 2 1/4" 10-120	SP2301	22A06Z8	

## BATTERIES

ITEM No.	VOLTAGE	HITACHI PART No.	REPLACEMENT DATA			NOTES
			BURGESS	EVEREADY	MALLORY	
M1	9V	BL-006P	"A" 2U6	"B" 216	"A" "B" M-1604	

## CRYSTAL DIODES

ITEM No.	ORIG. TYPE	REPLACEMENT DATA			NOTES
		HITACHI PART No.	CBS PART No.	RAYTHEON PART No.	
M2	IN46	IN636	IN295	IN295	Overload (Pigtail) Det. & AVC (Pigtail)
M3	IN34A	IN34A	IN34A	IN34A	

## MISCELLANEOUS

ITEM No.	PART NAME	HITACHI PART No.	NOTES
M4	Tuning Cap Earphone	EL-213	2 Gang

## 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

