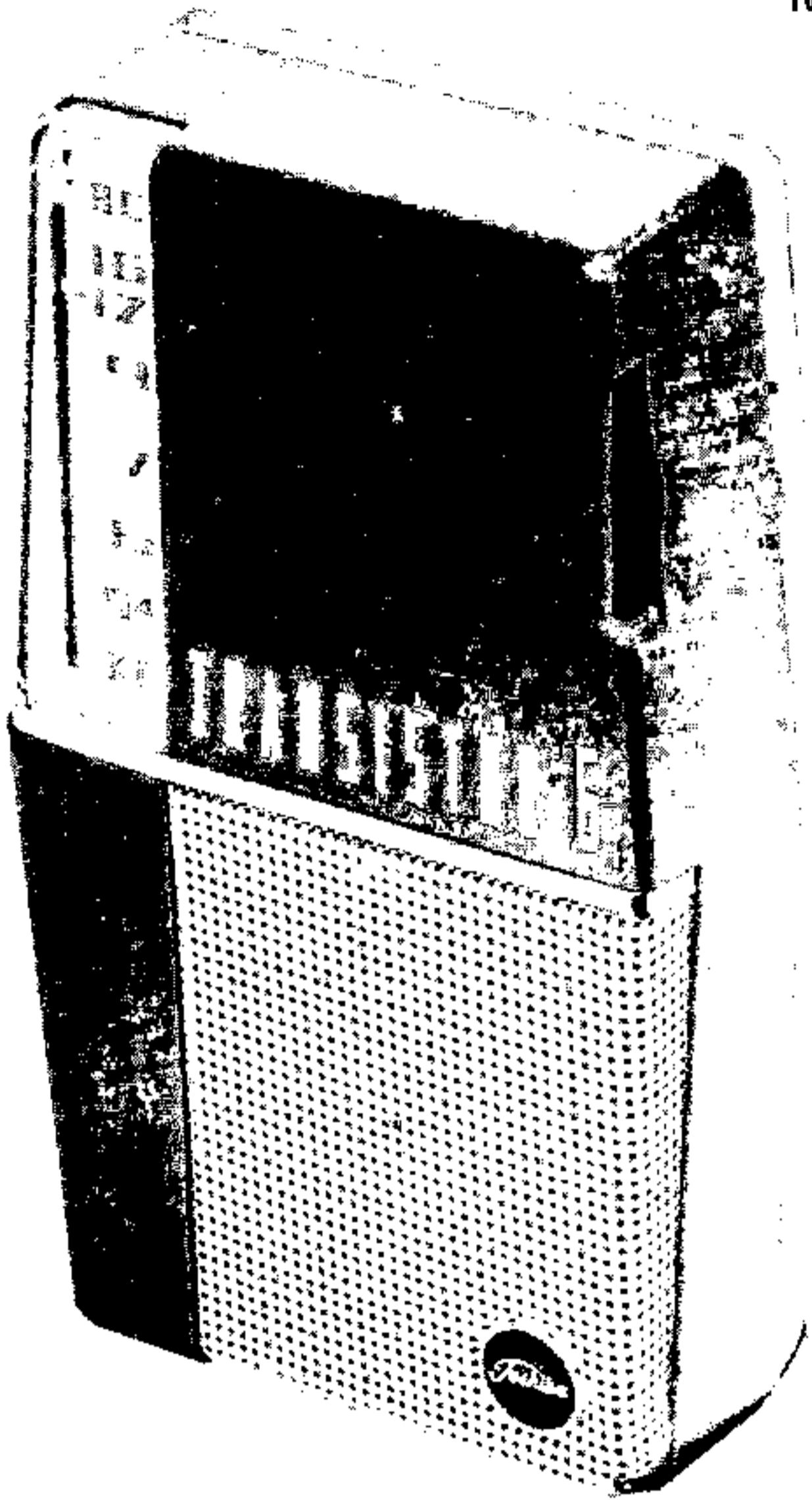


PHOTOFACT® Folder

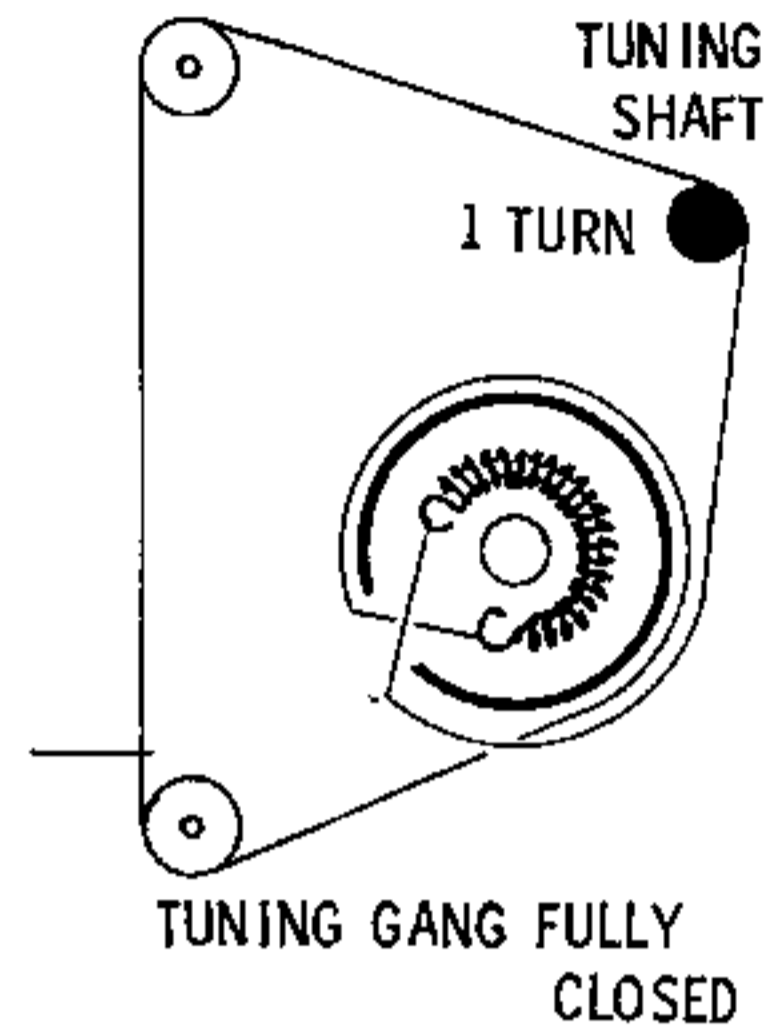
with CIRCUITRACE®

TOSHIBA  
6TP-304

Met dank aan Jef Bos

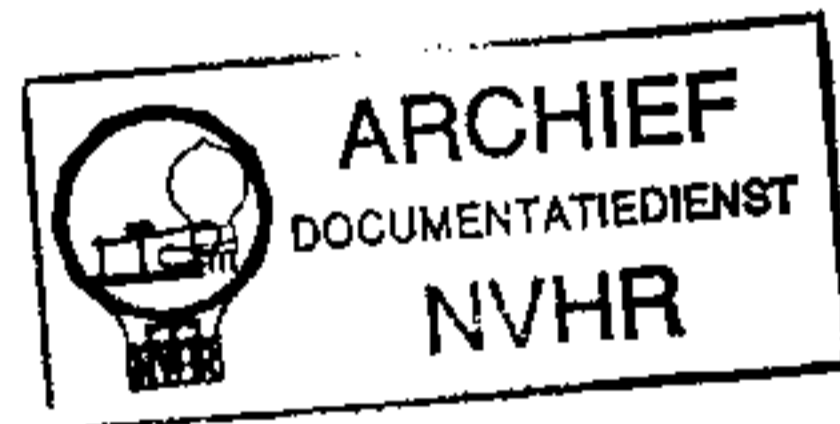


## DIAL CORD STRINGING



FRONT VIEW

Ned. Ver. v. Historie v/d Radio



TRADE NAME	Toshiba Model 6TP-304		
IMPORTER	Excel Corp. of America, 9 Rockefeller Plaza, New York 20, N.Y.		
TYPE SET	Battery Operated Transistorized Portable AM Receiver		
POWER SUPPLY	9 Volts DC	RATING	6 MA @ 9 Volts DC (No Signal, Minimum Volume)
TUNING RANGE-BROADCAST	530-1650KC		9 MA @ 9 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

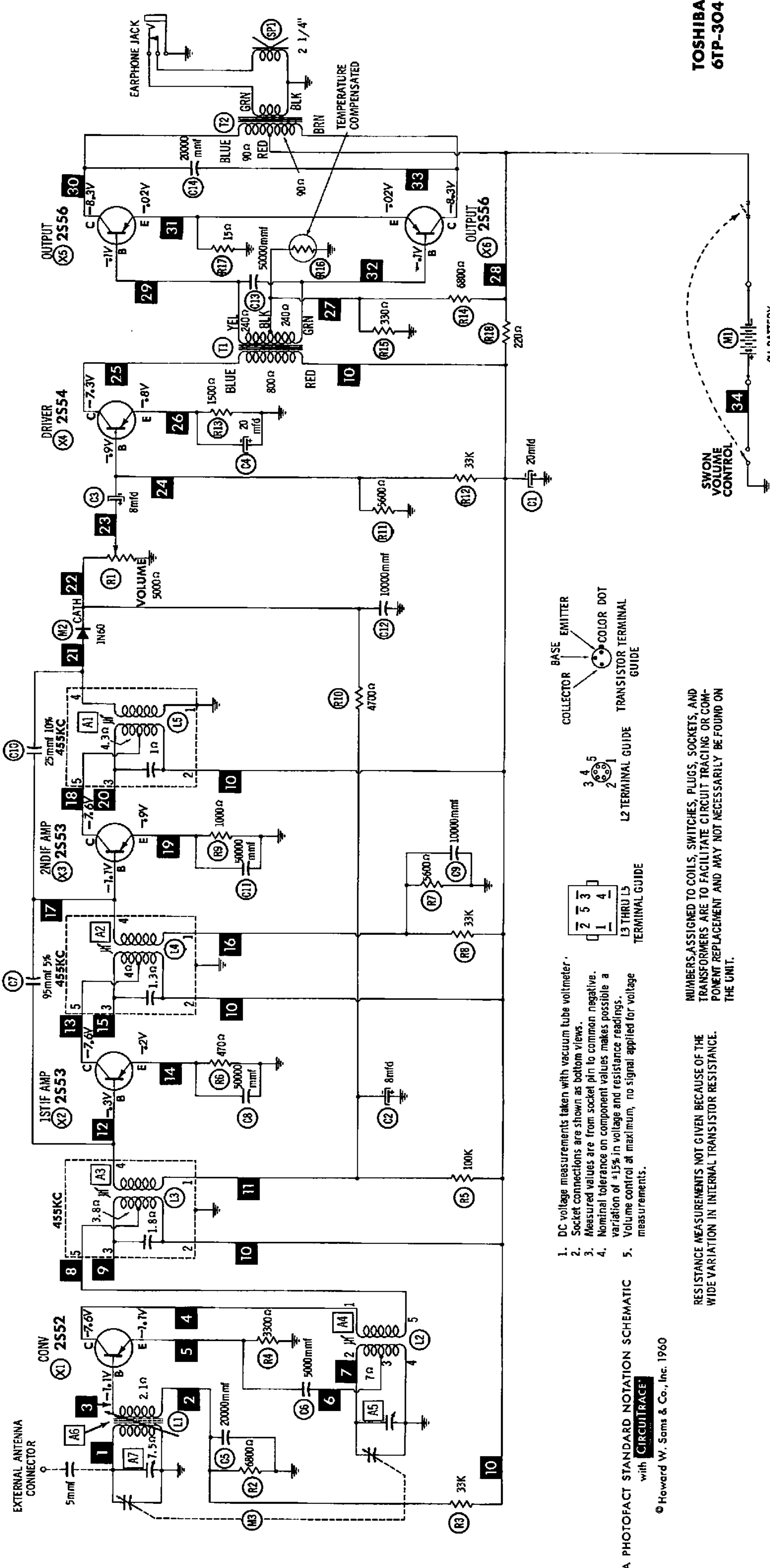
A5, A7..... GENERAL CEMENT #5000, 5003, 5086, 8276, 8290, 9087, 9089  
WALSCO #2512, 2525, 2528

	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	OUTPUT METER	ADJUST	REMARKS
1	Loop	455KC (400v 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	"	530KC	Tuning gang fully closed	"	A4	"
3	"	1650KC	Tuning gang fully open	"	A5	"
4	"	600KC	Tune to 600KC signal	"	A6	"
5		1400KC	Tune to 1400KC signal	"	A7	Adjust for maximum output while rocking tuning gang.

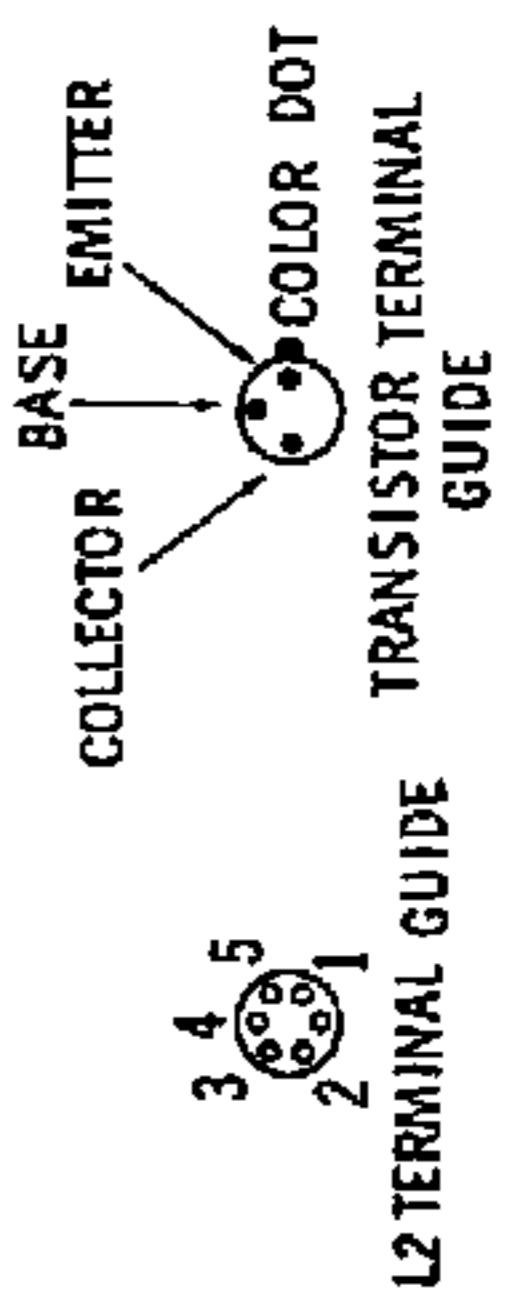
**HOWARD W. SAMS & CO., INC.** Indianapolis 6, Indiana

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 JF725

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.



A PHOTOFAC STANDARD NOTATION SCHEMATIC with **CIRCUITRACE**

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RESISTANCE MEASUREMENTS 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.

**TOSHIBA**  
**6TP-304**

# PARTS LIST AND DESCRIPTIONS

## TRANSISTORS

ITEM No.	ORIG. TYPE	USE	REPLACEMENT DATA				NOTES
			CBS PART No.	RCA PART No.	RAYTHEON PART No.	SYLVANIA PART No.	
X1	2S52	Converter		2N412	2N486	2N412	PNP
X2	2S53	1st IF Amplifier		2N410	2N483	2N410	PNP
X3	2S53	2nd IF Amplifier		2N410	2N483	2N410	PNP
X4	2S54	Driver		2N406	2N362	2N406	PNP
X5	2S56	Output		2N408	2N632	2N408	PNP
X6	2S56	Output		2N408	2N632	2N408	PNP

## ELECTROLYTIC CAPACITORS

ITEM No.	RATING		TOSHIBA PART No.	REPLACEMENT DATA					NOTES
	CAP	VOLT		AEROVOX PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	PYRAMID PART No.	SPRAGUE PART No.	
C1	20	10			NLW20-15			TE-1130	
C2	H	3			NLW8-6	TT6X8	ML8-6	TE-1052.5	
C3	H	3			NLW8-6	TT6X8	ML8-6	TE-1052.5	
C4	20	3			NLW20-6		ML25-3	TE-1054	

## 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.	MALLORY PART No.	
C5	20000		C80V203AM	DDA-203	H-05S2		TA-120	TG-S20
C6	5000		C80V502AM	DM-502	H-05D5		TA-250	TG-D50
C7	95 5%		1489-0001	DTZ-100	22R5T1	CM-19B-101J	MCE235	MS-31
C8	50000		C80V503AM	DDA-503	H-05S5		TA-150	TG-S50
C9	10000		C80V103AM	DDM-103	H-05S1		TA-110	TG-S10
C10	25 10%		1489-000025	DTZ-25	22R5Q25	CM-19B-250K	MCB220	MS-425
C11	50000		C80V503AM	DDA-503	H-05S5		TA-150	TG-S50
C12	10000		C80V103AM	DDA-103	H-05S1		TA-110	TG-S10
C13	5000		C80V502AM	DM-502	H-05D5		TA-250	TG-D50
C14	20000		C80V203AM	DDM-203	H-05S2		TA-120	TG-S20

## CONTROLS

ITEM No.	RATING		REPLACEMENT DATA				INSTALLATION NOTES	
	RESISTANCE	WATTS	TOSHIBA PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.		MALLORY PART No.
R1	5000Ω	1/4		B16-214				Volume and Switch

## RESISTORS

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

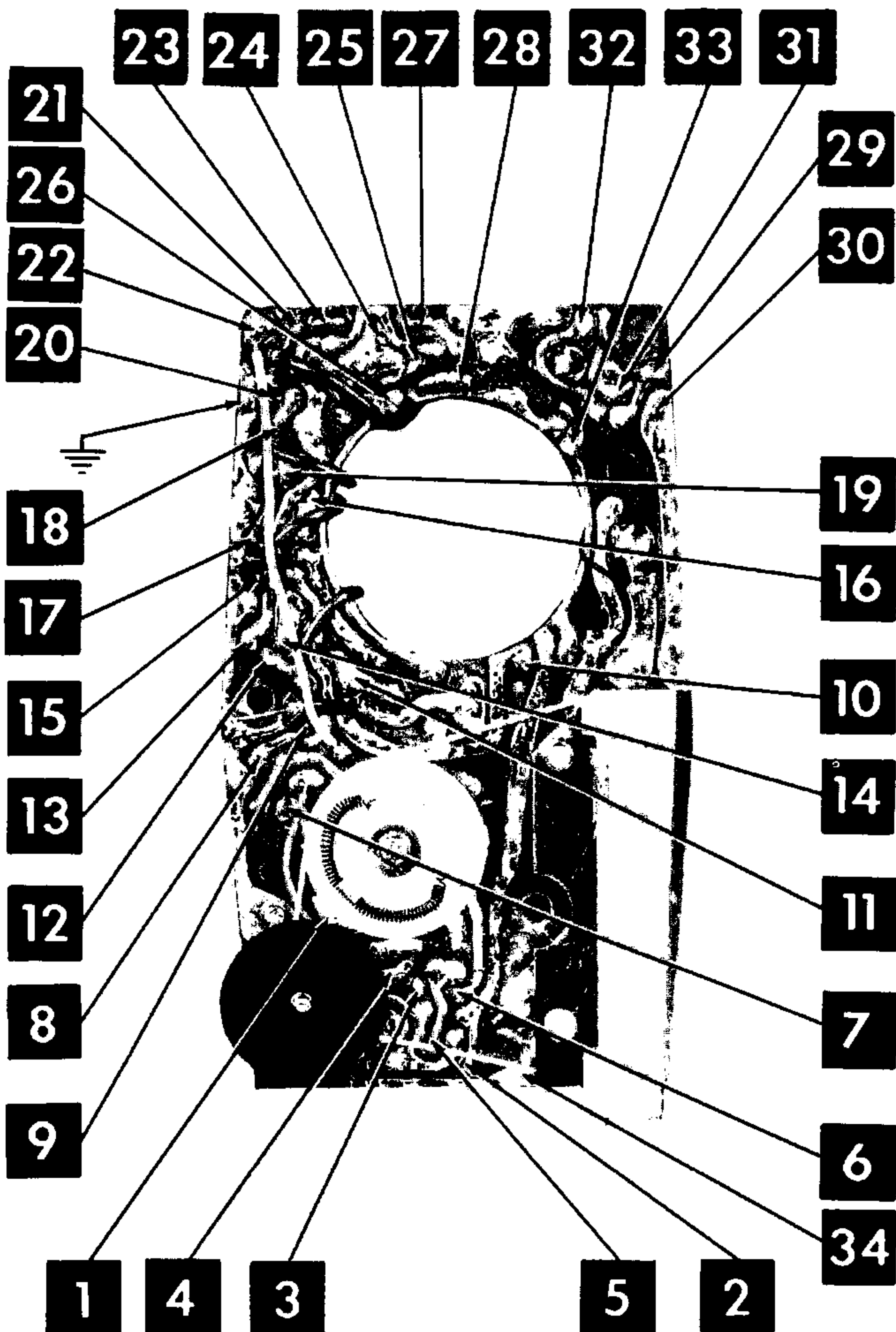
ITEM No.	RATING	REMARKS
R2	6800Ω	
R3	33K	
R4	3300Ω	
R5	100K	
R6	470Ω	
R7	5600Ω	

ITEM No.	RATING	REMARKS
R8	33K	
R9	1000Ω	
R10	4700Ω	
R11	5600Ω	
R12	33K	
R13	1500Ω	

ITEM No.	RATING	REMARKS
R14	6800Ω	
R15	330Ω	
R16		Temp. Comp.
R17	15Ω	
R18	220Ω	

# PRINTED BOARD

A Howard W. Sams **CIRCUITRACE** Photo



# PARTS LIST AND DESCRIPTIONS (Continued)

## COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA						NOTES
		TOSHIBA 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
		TOSHIBA PART No.	Haldorson PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	Triad PART No.	
	PRI. SEC.							
T1	1 1	DT-0311	TR-40			TR-40		

## TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE		REPLACEMENT DATA						NOTES	
	PRI.	SEC.	TOSHIBA PART No.	Haldorson PART No.	Merit PART No.	Ram PART No.	Stancor PART No.	Thordarson PART No.		Triad PART No.
T2	3200Ω CT	6-8Ω	MT-0470							

## SPEAKER

ITEM No.	TYPE			REPLACEMENT DATA		NOTES
	SIZE	FIELD	V. C. IMP.	TOSHIBA PART No.	QUAM PART No.	
SP1	2 1/4"	PM	8-10Ω	SP-2302A	22A06Z8	

## BATTERIES

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

## CRYSTAL DIODES

ITEM No.	ORIG. TYPE	REPLACEMENT DATA				NOTES
		TOSHIBA PART No.	CBS PART No.	RAYTHEON PART No.	SYLVANIA PART No.	
M2	1N60		1N60	1N60	1N60	Detector (Pigtail)

## MISCELLANEOUS

ITEM No.	PART NAME	TOSHIBA PART No.	NOTES
M3	Tuning Cap		2 Gang

## WIRING DATA

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

**CHASSIS—TOP VIEW**

