

PHOTOFACT* Folder

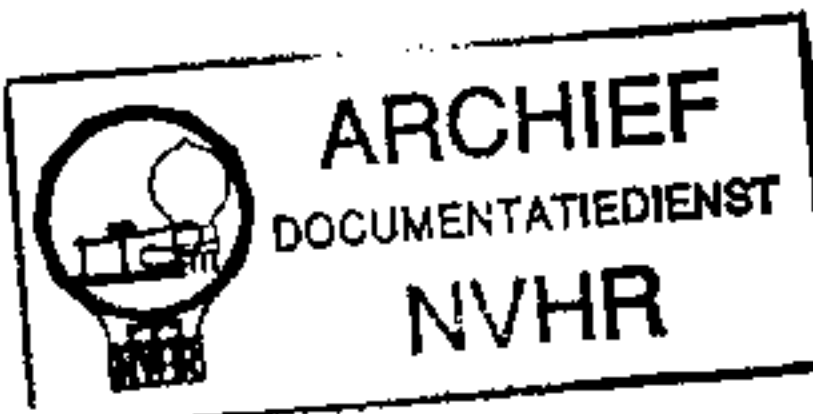


with CIRCUITRACE

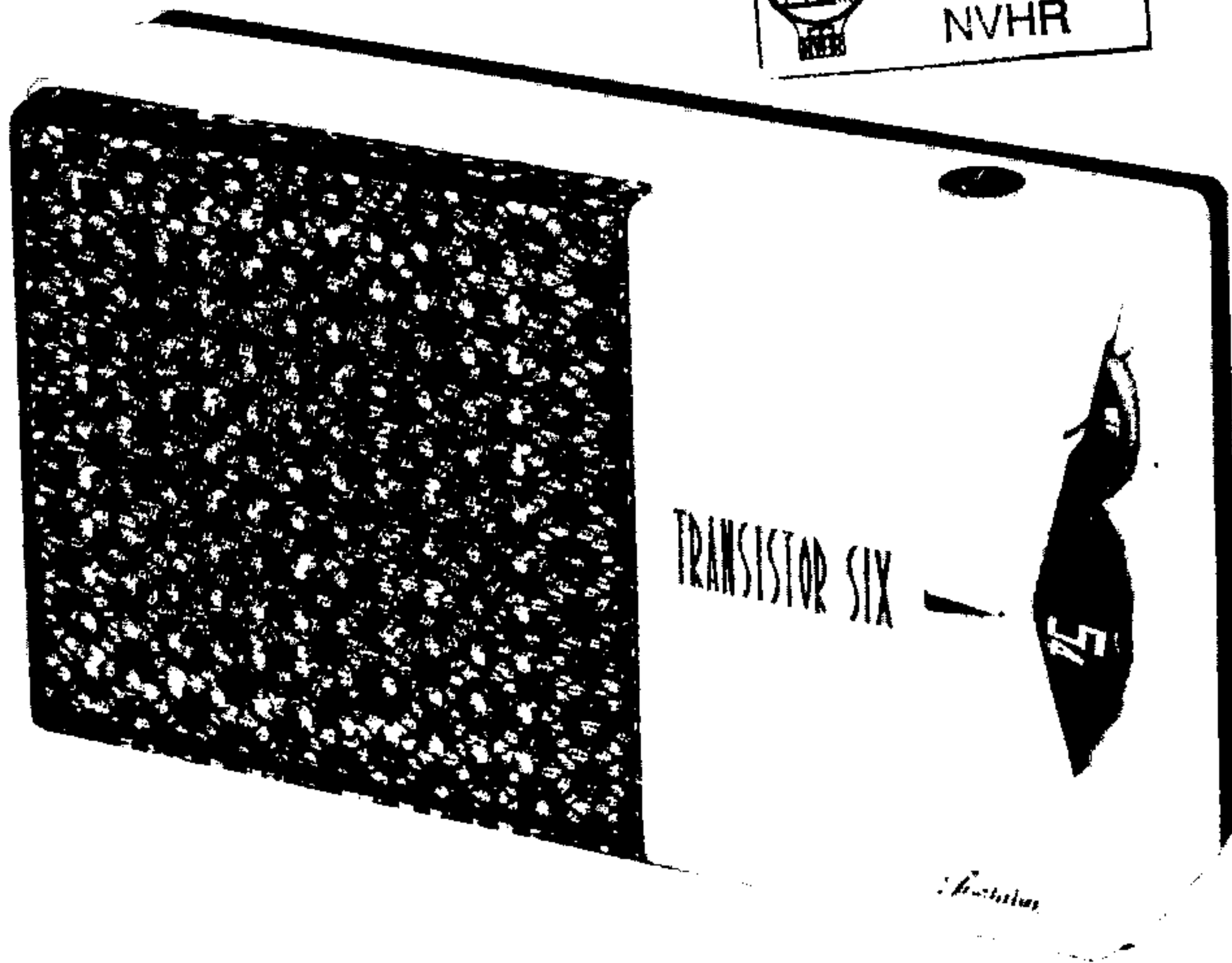


TOSHIBA MODEL 6TR-186

Ned. Ver. v. Historie v/d Radio



Met dank aan Jef Bos



TRADE NAME	Toshiba Model 6TR-186		
IMPORTER	Excel Corp. of America, 9 Rockefeller Plaza, New York 20, N. Y.		
TYPE SET	Battery Operated Portable Transistorized AM Receiver		
POWER SUPPLY	6 Volts DC	RATING	7.6MA@6 Volts DC (No Signal, Min. Volume)
TUNING RANGE—BROADCAST	540 — 1600KC		10MA@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:

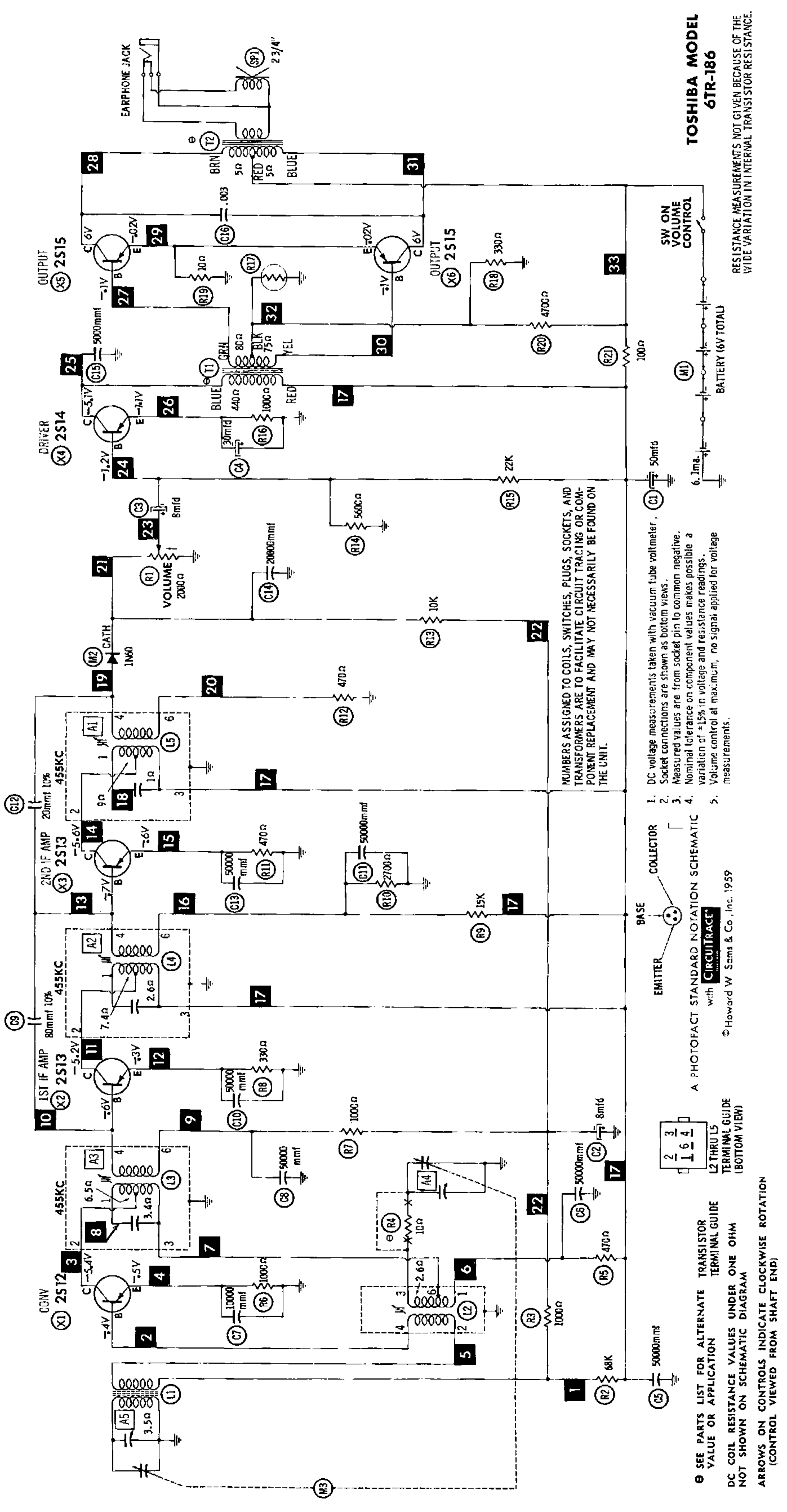
A4, A5..... GENERAL CEMENT #5004, 5008, 5009
WALSCO #2520

	DUMMY ANTENNA	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	1400KC	"	A5	"

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

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**TOSHIBA MODEL
6TR-186**

SEE PARTS LIST FOR ALTERNATE TRANSISTOR TERMINAL GUIDE VALUE OR APPLICATION

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

ARROWS ON CONTROLS INDICATE CLOCKWISE ROTATION (CONTROL VIEWED FROM SHAFT END)

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.

DC voltage measurements taken with vacuum tube voltmeter. Socket connections are shown as bottom views.

Measured values are from socket pin to common negative.

Nominal tolerance on component values makes possible a variation of $\pm 15\%$ in voltage and resistance readings.

Volume control at maximum, no signal applied for voltage measurements.

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

SW ON VOLUME CONTROL

BATTERY (6V TOTAL)

6.1ma

MI

100 Ω

50mfd

C1

22K

R15

5600 Ω

R14

10K

R13

470 Ω

R12

50000mfd

R11

2700 Ω

C11

15K

R9

50000mfd

C13

470 Ω

R11

15K

R9

50000mfd

C10

390 Ω

R8

1000 Ω

R6

10000mfd

C7

68K

R2

1000 Ω

R3

470 Ω

R5

8mfd

C2

50000mfd

C6

1000 Ω

R3

1000 Ω

R3

1000 Ω

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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	2S12	Converter			2N486		PNP
X2	2S13	1st IF Amplifier			2N483		PNP
X3	2S13	2nd IF Amplifier			2N482		PNP
X4	2S14	Driver			2N362		PNP
X5	2S15	Output			2N633		PNP
X6	2S15	Output			2N633		PNP Matched

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		REPLACEMENT DATA						NOTES
	CAP.	VOLT.	TOSHIBA PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	PYRAMID PART No.	SPRAGUE PART No.	
C1	50	6	30228	XPP-6050	NLW50-6	TT6X50	ML50-6	TE-1100	
C2	8	3	30226	XPP-3008	NLW8-6	TT6X8	ML8-6	TE-1052.5	
C3	8	3	30226	XPP-3008	NLW8-6	TT6X8	ML8-6	TE-1052.5	
C4	30	3	30227	XPP-3030	NLW30-6	TT6X30	ML30-6	TE-1092	

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			REPLACEMENT DATA						NOTES
	CAP.	VOLT	TOL	TOSHIBA PART No.	AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	SPRAGUE PART No.	
C5	50000			30213	C-80V503AM	DDA-503	H-05S5	TA-150	TG-S50	
C6	50000			30213	C-80V503AM	DDA-503	H-05S5	TA-150	TG-S50	
C7	10000			30211	C-80V103AM	DM-103	H-05S1	TA-110	TG-S10	
C8	50000			30213	C-80V503AM	DDA-503	H-05S5	TA-150	TG-S50	
C9	80		10%		1469-00008	DTZ-82	22R5Q82	CNO-482	MS-482	
C10	50000			30213	C-80V503AM	DDA-503	H-05S5	TA-150	TG-S50	
C11	50000			30213	C-80V503AM	DDA-503	H-05S5	TA-150	TG-S50	
C12	20		10%		1469-00002	DTZ-20	22R5Q2	CNO-422	MS-42	
C13	50000			30213	C-80V503AM	DDA-503	H-05S5	TA-150	TG-S50	
C14	20000			30212	C-80V203AM	DDM-203	H-05S2	TA-120	TG-S20	
C15	5000			30210	C-80V502AM	DDM-502	H-05D5	TA-250	TG-D50	
C16	.003	250		30255	P485N-003	DM-302	WMF4D33E	GTM-4233	6TM-D3	

CONTROLS

ITEM No.	RATING		REPLACEMENT DATA					INSTALLATION NOTES
	RESISTANCE	WATTS	TOSHIBA PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	IRC PART No.	MALLORY PART No.	
R1	2000Ω	1/4	40256	BI6-212				Volume & Switch

RESISTORS

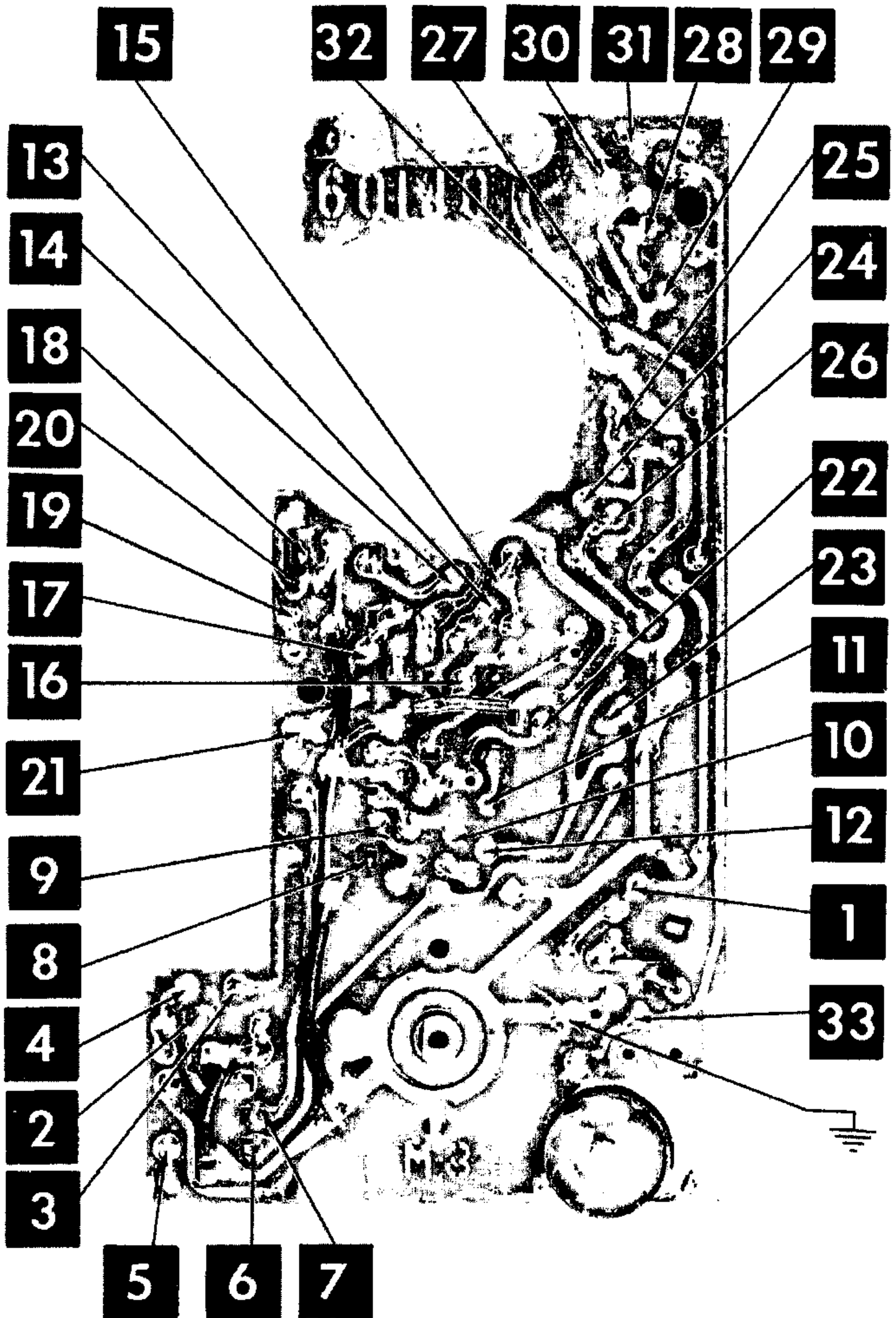
All wattages 1/2 watt, or less, unless otherwise listed.

ITEM No.	RATING		TOSHIBA PART No.	NOTES	ITEM No.	RATING		TOSHIBA PART No.	NOTES
	OHMS	WATT				OHMS	WATT		
R2	68K		40549	Note 1	R12	470Ω		40210	Temp. Compensating
R3	1000Ω		40211		R13	10K		40216	
R4	10Ω		40510		R14	5600Ω		40538	
R5	470Ω		40210		R15	22K		40218	
R6	1000Ω		40211		R16	1000Ω		40211	
R7	1000Ω		40211		R17			40250	
R8	330Ω		40526		R18	330Ω		40526	
R9	15K		40542		R19	10Ω		40510	
R10	2700Ω		40535		R20	4700Ω		40537	
R11	470Ω		40210		R21	100Ω		40206	

Note 1. Not used in some versions.

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.	
L1	Loopstick	20170					
L2	Osc. Coil	20171					
L3	1st IF Trans.	20172					
L4	2nd IF Trans.	20173					
L5	3rd IF Trans.	20174					

TRANSFORMER (DRIVER)

ITEM No.	TURNS RATIO	REPLACEMENT DATA					NOTES
		TOSHIBA PART No.	Halldorson PART No.	Merit PART No.	Stancor PART No.	Thordarson PART No.	
	PRI. SEC.						
T1	1.9 1	20214 ①					① Alternate Part #20175

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE		REPLACEMENT DATA					NOTES		
	PRI.	SEC.	TOSHIBA PART No.	Halldorson PART No.	Merit PART No.	Ram PART No.	Stancor PART No.		Thordarson PART No.	Triad PART No.
T2	550Ω CT	6-8Ω	20215 ①				TA-21 ②			① Alternate Part #20176 ② Use Original frame

SPEAKER

ITEM No.	TYPE			REPLACEMENT DATA		NOTES
	SIZE	FIELD	V. C. IMP.	TOSHIBA PART No.	QUAM PART No.	
SP1	2 3/4"	PM	16-18Ω	50076	25A07Z16.8	

BATTERIES

ITEM No.	VOLTAGE	TOSHIBA PART No.	REPLACEMENT DATA					NOTES	
			BURGESS		EVEREADY		MALLORY		
			"A"	"B"	"A"	"B"	"A"		"B"
M1	6V	UM3		Z ①		915 ① E9 ②		M-15R ① ZMB ②	① 4 Used ② Mercury Type, 4 used

CRYSTAL DIODES

ITEM No.	ORIG. TYPE	REPLACEMENT DATA			NOTES
		TOSHIBA PART No.	CBS PART No.	SYLVANIA PART No.	
M2	1N60	1N60A	1N60	1N60	Detector (Pigtail)

MISCELLANEOUS

ITEM No.	PART NAME	TOSHIBA PART No.	NOTES
M3	Tuning Cap. Printed Board	30225 60140	2 Gang, Ant. 165mmf, Osc. 70mmf Max.

CABINETS & CABINET PARTS

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

