

PHOTOFACT[®] Folder

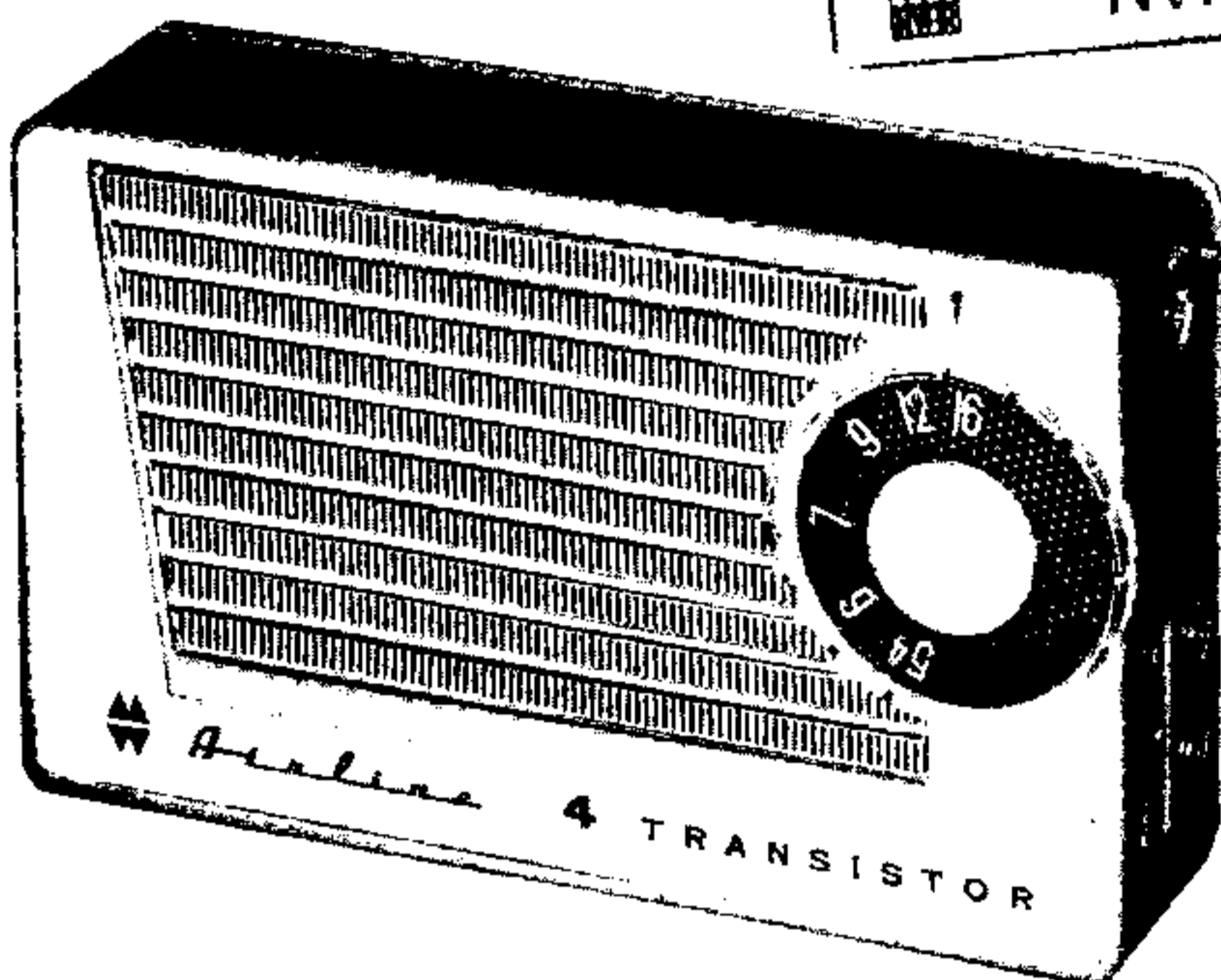
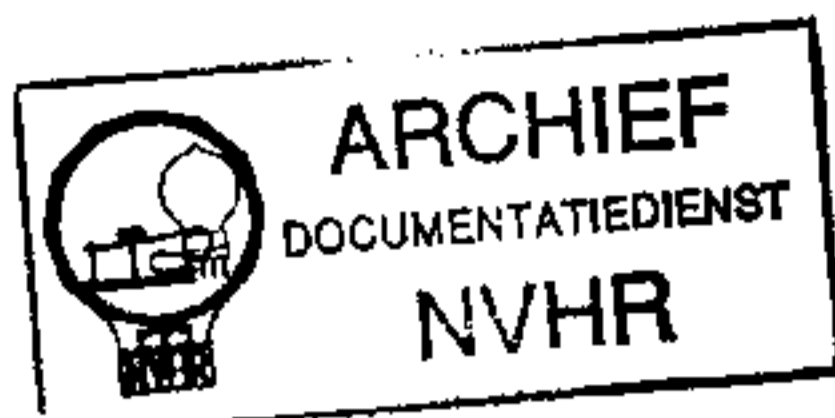
with **CIRCUITRACE[™]**

**AIRLINE MODEL
GEN-1212A**



Met dank aan Jef Bos

Ned. Ver. v. Historie v/d Radio



TRADE NAME	Airline Model GEN-1212A		
SUPPLIER	Montgomery Ward & Co., 619 Chicago Ave., Chicago 7, Illinois		
TYPE SET	Battery Operated Transistorized Portable AM Receiver		
POWER SUPPLY	9 Volts DC	RATING	9MA@9 Volts DC (No Signal, Min. Volume.)
TUNING RANGE—BROADCAST	540 - 1640KC		10MA@9 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 output reading.

Suggested Alignment Tools:

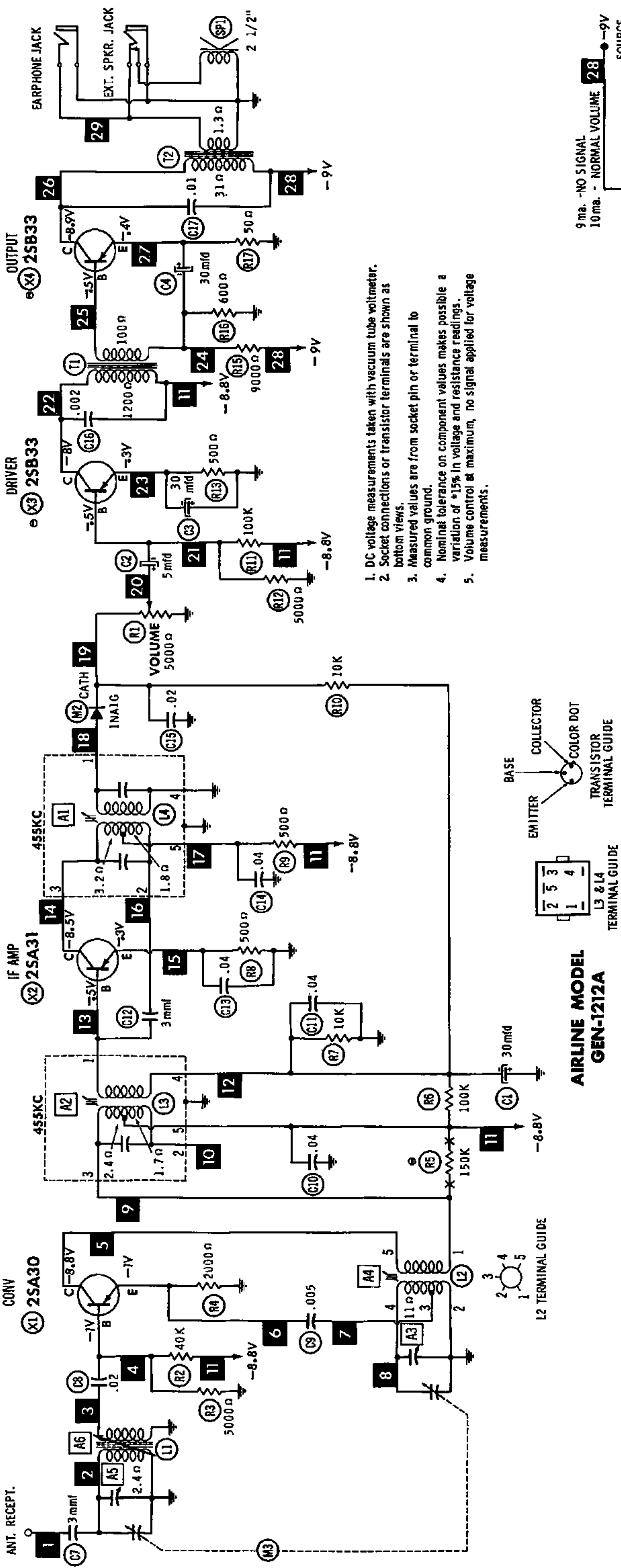
- A1, A2..... GENERAL CEMENT #8607, 9291, 9294
WALSCO #2520, 2522, 2523, 2524, 2534, 2537
- A3, A5..... GENERAL CEMENT #5004, 5009, 8195, 8274, 8275, 8607, 8728, 8987, 8988, 8989, 9291
WALSCO #2515, 2520, 2522, 2523, 2531, 2532, 2534, 2537, 2538
- A4..... GENERAL CEMENT #8721, 8722
WALSCO #2519

SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RADIO DIAL SETTING	OUTPUT METER	ADJUST	REMARKS
Ferrite 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	Adjust for maximum output.
	1640KC	"	"	A3	"
	600KC	600KC	"	A4	"
	1400KC	1400KC Signal.	"	A5	"
	600KC	600KC Signal.	"	A6	Adjust for maximum output by moving coil turns along ferrite core. Repeat steps 2 thru 5.

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

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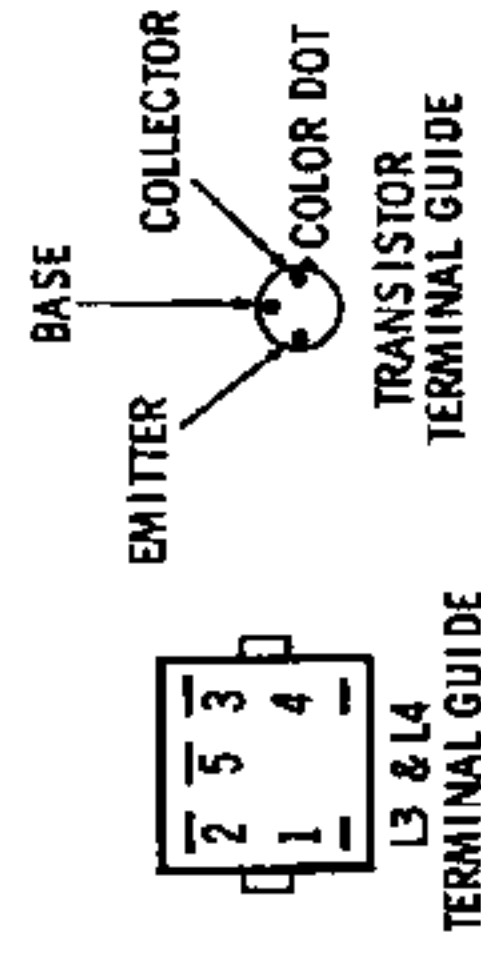


SEE PARTS LIST FOR ALTERNATE VALUE OR APPLICATION

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

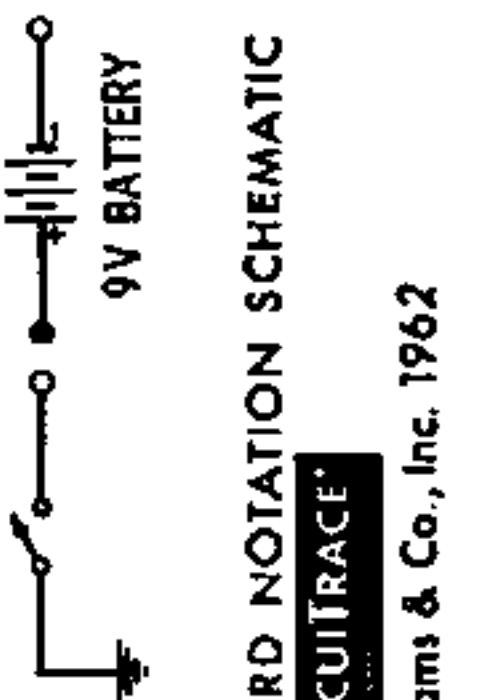
RESISTANCE MEASUREMENTS NOT GIVEN BECAUSE OF THE WIDE VARIATION IN INTERNAL TRANSISTOR RESISTANCE.

AIRLINE MODEL GEN-1212A



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.

SWON VOLUME CONTROL (M1)



A PHOTOFAC STANDARD NOTATION SCHEMATIC with CIRCUITRACE

PARTS LIST AND DESCRIPTIONS

WIRING DATA

General-use Unshielded Hook-up Wire Use DREDDEN No. 4530 (Solid) Available in Ten Colors
8524 (Stranded) Available in Ten Colors

TRANSISTORS

ITEM No.	ORIG. TYPE	USE	REPLACEMENT DATA		NOTES
			RCA PART No.	RAYTHEON PART No.	
X1	2SA30	Converter	2N412		PNP
X2	2SA31	IF Amplifier	2N410		PNP
X3	2B93	Driver	2N408		PNP
	2SA33*	Driver			PNP
X4	2B93	Output	2N408		PNP
	2SA33*	Output			PNP

* Alternate

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		REPLACEMENT DATA						
	CAP.	VOLT.	AIRLINE PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	MALLORY PART No.	PYRAMID PART No.	SPRAGUE PART No.
C1	30	3	J3211	PTT10	NLW30-8	MT1-13	TT6X30	MLV30-6	TE-1092
C2	5	3	J3212	PTT4	NLW5-15	MT1-3	TT6X5	MLV5-3	TE-1052.2
C3	30	3	J3211	PTT10	NLW30-8	MT1-13	TT6X30	MLV30-6	TE-1092
C4	30	3	J3211	PTT10	NLW30-8	MT1-13	TT6X30	MLV30-6	TE-1092
C5	30	10	J322	PTT43	NLW30-15	MT1-14	TT15X30	MLV35-15	TE-1158
C6	30	10	J322	PTT43	NLW30-15	MT1-14	TT15X30	MLV35-15	TE-1158

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.
C7	3mmf		NPO-SI 3	D6-030	C10V3C	CCTO-3R3	CNO-533	10TS-V33
C8	.02 50V			DDM-203	H-05S2	CCD-203	TA-120	TG-S20
C9	.005 50V		BPD-005	DDM-502	H-05D5	CCD-502	TA-250	TG-D50
C10	.04			DDA-503	H-05S5		TA-150	TG-S50
C11	.04			DDA-503	H-05S5		TA-150	TG-S50
C12	3mmf		NPO-SI 3	D6-030	C10V3C	CCTO-3R3	CNO-533	10TS-V33
C13	.04			DDA-503	H-05S5		TA-150	TG-S50
C14	.04			DDA-503	H-05S5		TA-150	TG-S50
C15	.02 50V			DDM-203	H-05S2	CCD-203	TA-120	TG-S20
C16	.002		BPD-002	DM-202	L10D2	CCD-202	GP220	5HK-D20
C17	.01			DDM-103	H-05S1	CCD-103	TA-110	TG-S10

CONTROLS

ITEM No.	RATING		REPLACEMENT DATA					INSTALLATION NOTES
	RESISTANCE	WATTS	AIRLINE PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLORY PART No.	
R1	5000Ω	1/4	J257					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	40K			Note 1	R10	10K			
R3	5000Ω				R11	100K			
R4	2000Ω				R12	5000Ω			
R5	150K				R13	500Ω			
R6	100K				R14	200Ω			
R7	10K				R15	9000Ω			
R8	500Ω				R16	600Ω			
R9	500Ω				R17	60Ω			

Note 1. Not used in some versions.

PRINTED BOARD

A Howard W. Name **CIRCUITRACE** Photo

