

This Manual is provided by
CBTricks.com

Someone who wanted to help you repair your equipment
scanned this manual.

If you would like to help us put more manuals online support us.

Supporters of CBTricks.com paid for the hosting so you would have this file.

CBTricks.com is a non-commercial personal website was created to help promote the exchange of service, modification, technically oriented information, and historical information aimed at the Citizens Band, GMRS (CB "A" Band), MURS, Amateur Radios and RF Amps.

CBTricks.com is not sponsored by or connected to any Retailer, Radio, Antenna Manufacturer or Amp Manufacturer, or affiliated with any site links shown in the links database. The use of product or company names on my web site is not endorsement of that product or company.

If your company would like to provide technical information to be featured on this site I will put up on the site as long as I can do it in a non-commercial way.

The site is supported with donation from users, friends and selling of the Galaxy Service Manual CD to cover some of the costs of having this website on the Internet instead of relying on banner ads, pop-up ads, commercial links, etc. to pay my costs. Thus I do not accept advertising banners or pop-up/pop-under advertising or other marketing/sales links or gimmicks on my website.

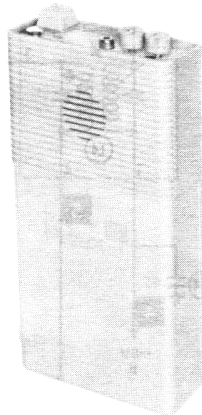
ALL the money from donations is used for CBTricks.com I didn't do all the work to make money (I have a day job). I all didn't do all this work for someone else to make money also, for example the ebay CD sellers.

All Trademarks, Logos, and Brand Names are the property of their respective owners.
This information is not provided by, or affiliated in any way with any radio or antenna Manufacturers.
Thank you for any support you can give.

PHOTOFACT® Folder

with CIRCUITRACE®

DUO COM
MODEL 100



NOTICE

ONLY THOSE PERSONS PROPERLY LICENSED ARE PERMITTED TO MAKE REPAIRS OR ADJUSTMENTS WHICH MAY RESULT IN ILLEGAL OPERATION. (REFER TO FCC RULES & REGULATIONS PART 19, SUBPART D, SECTION 19.71).

TRADE NAME	Duo Com Models 100, 100S		
MANUFACTURER	Osborne Electronic Sales Corp., 13105 S. Crenshaw Blvd., Hawthorne, California		
TYPE SET	Battery Operated 11 Transistor Single Channel Portable Citizens Band Transmitter-Receiver		
POWER SUPPLY	12 Volts DC	RATING	23 MA @ 12 Volts DC (Receive) 12 MA @ 12 Volts DC (Transmit)
TUNING RANGE	Any One of Citizens Band Channels 1 thru 23		

ALIGNMENT INSTRUCTIONS

ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT

When adjusting A4 and A6, best results are obtained with the unit connected to the antenna normally used, and the chassis as nearly in the cabinet as possible.

Suggested Alignment Tools: GENERAL CEMENT #8282, 8606, 8606-L, 9295, 9440
WALSCO #2526, 2543, 2544, 2545

RECEIVER ALIGNMENT

Connect DC VTVM across Volume control.

	SIGNAL GENERATOR	CHANNEL	ADJUST	REMARKS
1.	Tune to 455KC. Connect high side to base of Mixer, low side to ground.		A1	Remove receiver oscillator crystal. Adjust for maximum deflection. Reinsert crystal.
2.	Tune to 4680KC. Connect high side to base of Mixer, low side to ground.		A2	Adjust for maximum deflection.
3.	Tune to crystal frequency. High side to base of Mixer, low side to ground.	Highest Channel Used.	A3	Adjust for maximum deflection while rocking. Note rate of drop-off and set just below peak on side of gradual dropoff.
4.	"	"	A4	Adjust for maximum deflection.

TRANSMITTER ALIGNMENT

Output frequency should be checked by an accurately calibrated secondary frequency standard to be sure that frequency is within .005%.

ONLY THOSE PERSONS PROPERLY LICENSED ARE PERMITTED TO MAKE REPAIRS OR ADJUSTMENTS WHICH MAY RESULT IN ILLEGAL OPERATION. (REFER TO FCC RULES & REGULATIONS PART 19, SUBPART D, SECTION 19.71)

	SPECIAL INSTRUCTIONS	INDICATOR	ADJUST	REMARKS
5.	Connect suitable load to antenna receptacle. Connect R F Wattmeter across load.	DC VTVM between point A and ground.	A5	Adjust for maximum deflection while rocking. Note rate of dropoff and set just below peak on side of gradual drop-off.
6.	"		A6	Adjust for maximum output as indicated on Wattmeter (or field strength meter).

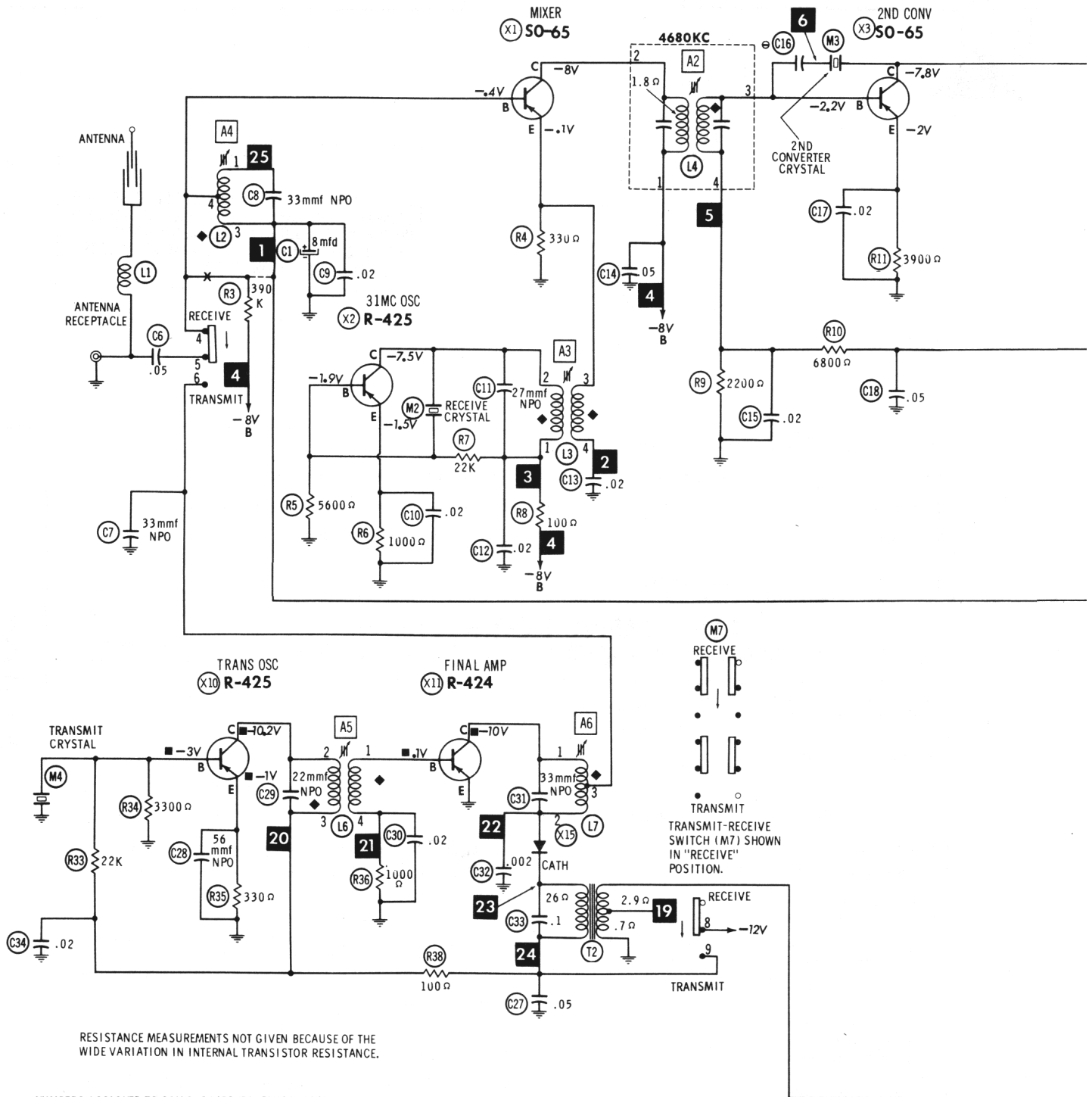
HOWARD W. SAMS & CO., INC. Indianapolis 6, Indiana



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 LY299

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. © 1962 Howard W. Sams & Co., Inc., Indianapolis 6, Indiana. Printed in U.S. of America

DUO COM
MODEL 100



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

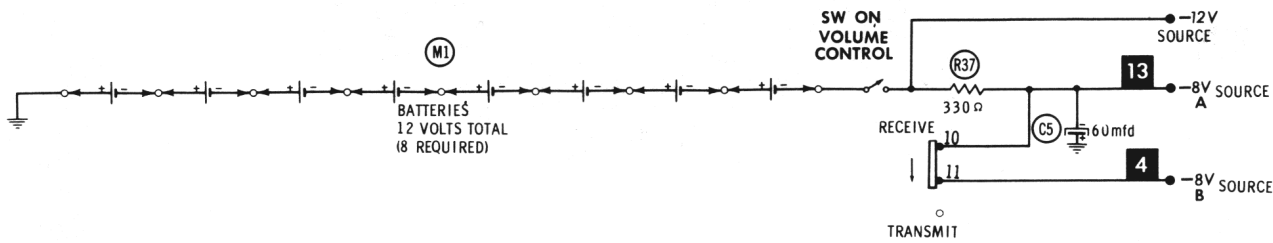
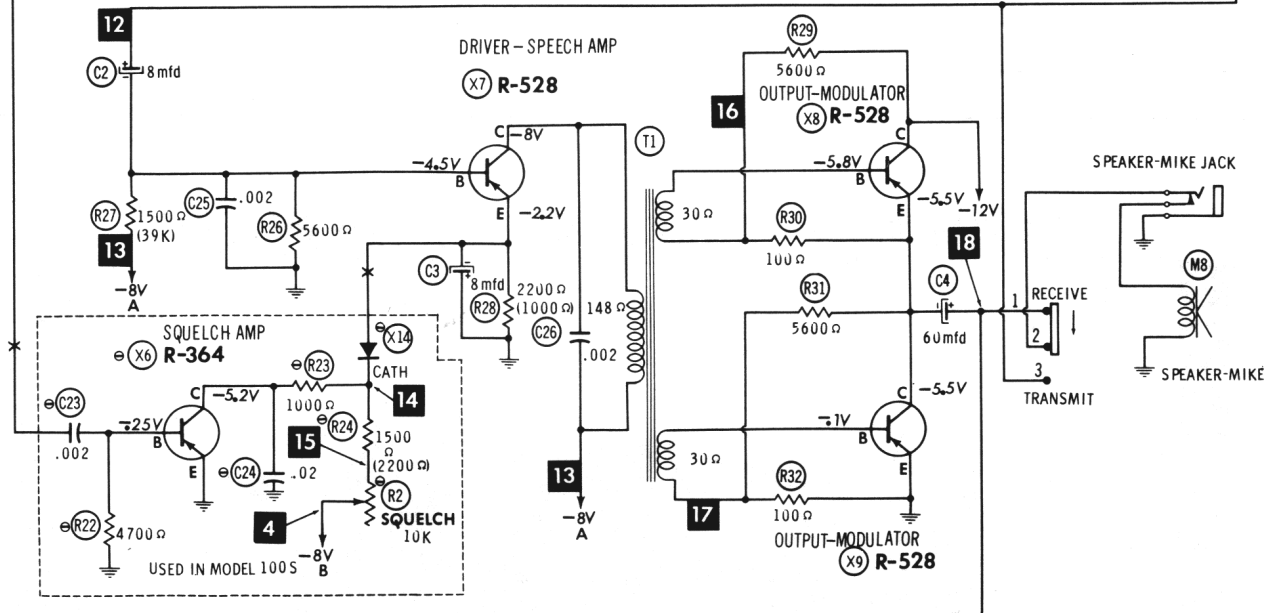
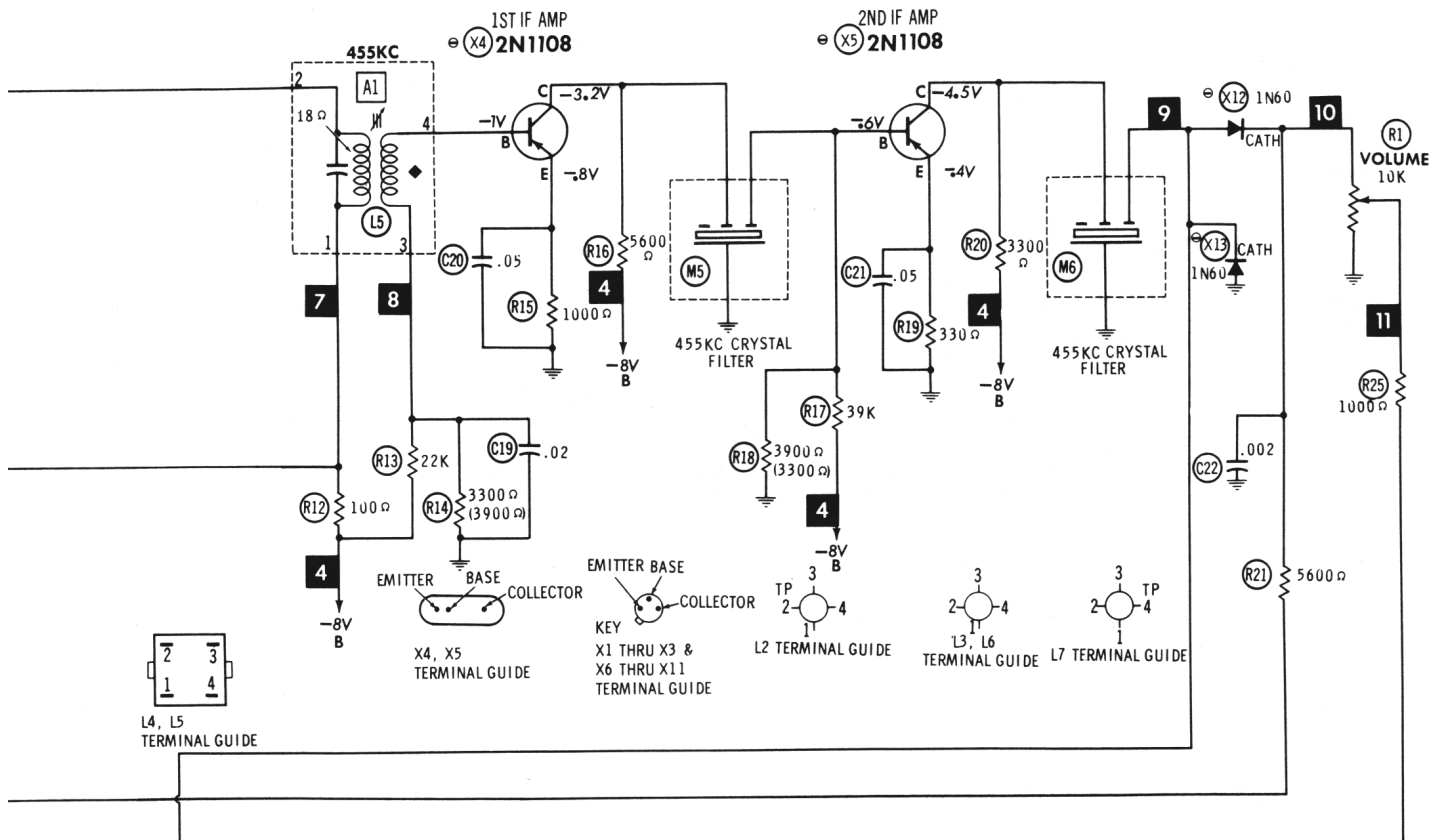
NUMBERS ASSIGNED TO COILS, SWITCHES, PLUGS, SOCKETS, AND TRANSFORMERS ARE TO FACILITATE CIRCUIT TRACING OR COMPONENT REPLACEMENT AND MAY NOT NECESSARILY BE FOUND ON THE UNIT.

⊕ SEE PARTS LIST FOR ALTERNATE VALUE OR APPLICATION

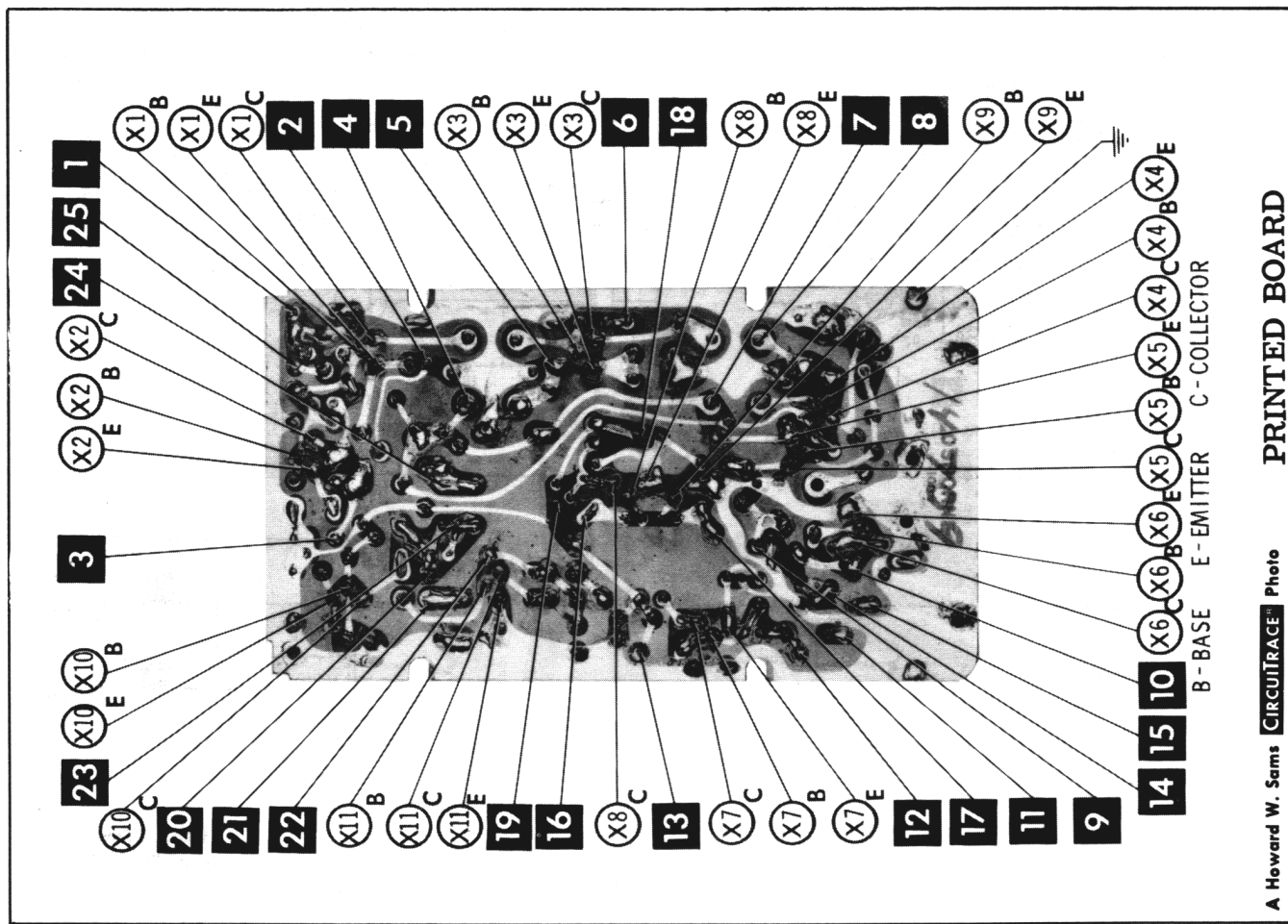
◆ DC COIL RESISTANCE VALUES UNDER ONE OHM NOT SHOWN ON SCHEMATIC DIAGRAM

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**

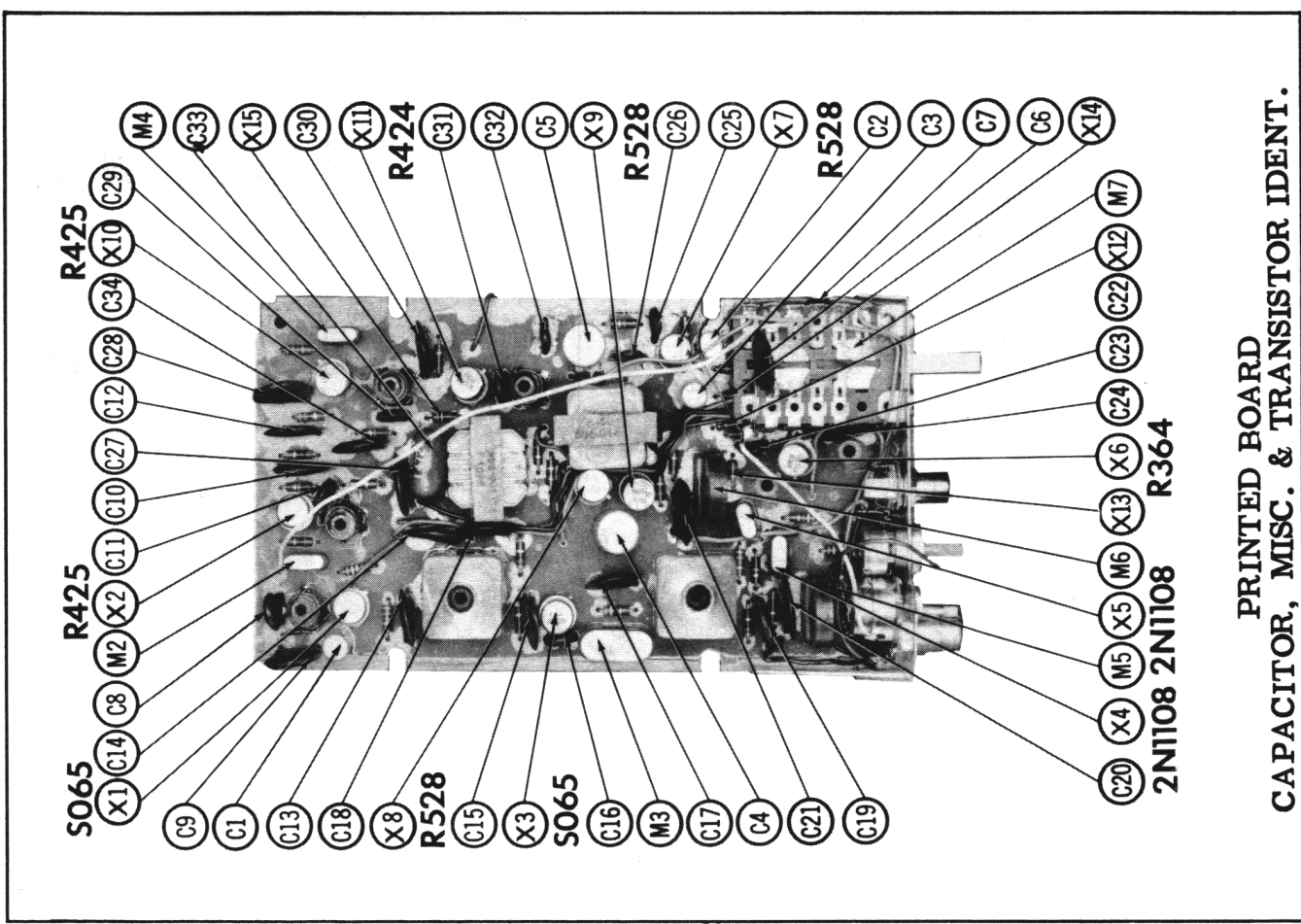


**DUO COM
 MODEL 100**



A Howard W. Sams **CIRCUITRACE** Photo

PRINTED BOARD



PRINTED BOARD
CAPACITOR, MISC. & TRANSISTOR IDENT.

PARTS LIST AND DESCRIPTIONS

WIRING DATA

ITEM No.	ORIG. TYPE	USE	REPLACEMENT DATA	NOTES
X1	SO-45	Mixer	2N1179	PNP
X2	R-425	31MC Osc.	2N1178	PNP
X3	SO-45	Converter (455KC)	2N1178	PNP
X4	2N1108	1st IF Amplifier	2N1525	PNP
X5	2N1107*	2nd IF Amplifier	2N1525	PNP
X6	R-364	Squelch Amp.	2N362	PNP (Note 1)
X7	R-528	Driver-Speech Amp.	2N362	PNP
X8	R-528	Output-Modulator	2N362	PNP
X9	R-528	Output-Modulator	2N362	PNP
X10	R-425	Trans. Osc.	2N1177	PNP
X11	R-424	Final Amp.	2N1177	PNP

TRANSISTORS

ITEM No.	ORIG. TYPE	USE	REPLACEMENT DATA		NOTES
			RCA PART No.	RAYTHEON PART No.	
X1	SO-45	Mixer	2N1179	PNP	
X2	R-425	31MC Osc.	2N1178	PNP	
X3	SO-45	Converter (455KC)	2N1178	PNP	
X4	2N1108	1st IF Amplifier	2N1525	PNP	
X5	2N1107*	2nd IF Amplifier	2N1525	PNP	
X6	R-364	Squelch Amp.	2N362	PNP (Note 1)	
X7	R-528	Driver-Speech Amp.	2N362	PNP	
X8	R-528	Output-Modulator	2N362	PNP	
X9	R-528	Output-Modulator	2N362	PNP	
X10	R-425	Trans. Osc.	2N1177	PNP	
X11	R-424	Final Amp.	2N1177	PNP	

Note 1. Not used in Model 100

* Alternate.

POWER RECTIFIERS & SIGNAL DIODES

ITEM No.	CURRENT RATING (Measured)	ORIGINAL Part or Type No.	RECTIFIERS		DIODES		NOTES
			RCA PART No.	SARKIS TARZIAN PART No.	RAYTHEON PART No.	NOTES	
X12	8	1N60*			1N60		Detector Limiter Squelch Rectifier ① Mixer
X13	8	1N60*			1N60		
X14	8	S-249					
X15	8	STC249					

① Model 1008 Only.

* Alternate Type 1N64 (Part #8805)

ELECTROLYTIC CAPACITORS

ITEM No.	RATING CAP.	VOLTS.	DUO COM PART No.	REPLACEMENT DATA				SPRAGUE PART No.	
				AEROVOX PART No.	CORNELL-DUBILIER PART No.	GENERAL ELECTRIC PART No.	MALLOY PART No.		PYRAMID PART No.
C1	8	10	8220	BCD12008	ECF8407	MT1-5	BET1340	MLV10-10	VL-1126
C2	8	10	8220	BCD12008	ECF8407	MT1-5	FET1340	MLV10-10	VL-1126
C3	8	10	8220	BCD12008	ECF8407	MT1-5	FET1340	MLV10-10	VL-1126
C4	60	12	8221	BCD12015	ECF8416	MT1-19	TT15X50	MLV50-12	VL-1157
C5	60	12	8221	BCD12015	ECF8418	MT1-19	TT15X50	MLV50-12	VL-1157

FIXED CAPACITORS (cont)

ITEM No.	RATING	REMARKS	REPLACEMENT DATA				MALLORY PART No.	SPRAGUE PART No.
			AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ELMENCOR PART No.		
C6	.05		BPD-06	DA-503	H-0585	TA-150	TG-850	
C7	33 NPO		NPO-D1 33	DTZ-33	C10Q33C	CNO-433	10TCC-Q33	
C8	33 NPO		NPO-D1 33	DTZ-33	C10Q33C	CNO-433	10TCC-Q33	
C9	.02		BPD-02	DA-203	H-0582	TA-120	TG-820	
C10	.02		BPD-02	DA-203	H-0582	TA-120	TG-820	
C11	27 NPO		NPO-D1 25	DTZ-27	C10Q27C	CNO-427	10TCC-Q27	
C12	.02		BPD-02	DA-203	H-0582	TA-120	TG-820	
C13	.02		BPD-02	DA-203	H-0582	TA-120	TG-820	
C14	.05		BPD-05	DA-503	H-0585	TA-150	TG-850	
C15	.02		BPD-02	DA-203	H-0582	TA-120	TG-820	
C16	.02		BPD-02	DA-203	H-0582	TA-120	TG-820	
C17	.05		BPD-05	DA-503	H-0585	TA-150	TG-850	
C18	.02		BPD-02	DA-203	H-0582	TA-120	TG-820	
C19	.02		BPD-02	DA-203	H-0582	TA-120	TG-820	
C20	.05		BPD-05	DA-503	H-0585	TA-150	TG-850	
C21	.05		BPD-05	DA-503	H-0585	TA-150	TG-850	
C22	.002		BPD-002	DM-202	BYA10D2	B-220	5HK-D20	
C23	.002		BPD-002	DM-202	BYA10D2	B-220	5HK-D20	
C24	.02		BPD-02	DA-203	H-0582	TA-120	TG-820	
C25	.002		BPD-002	DM-202	BYA10D2	B-220	5HK-D20	
C26	.002		BPD-002	DM-202	BYA10D2	B-220	5HK-D20	
C27	.05		BPD-05	DA-503	H-0585	TA-150	TG-850	
C28	56 NPO		NPO-D1 22	TCZ-56	C10Q56C	CNO-456	10TCC-Q56	
C29	22 NPO		NPO-D1 22	DTZ-22	C10Q22C	CNO-422	10TCC-Q22	
C30	.02		BPD-02	DA-203	H-0582	TA-120	TG-820	
C31	33 NPO		NPO-D1 33	DTZ-33	C10Q33C	CNO-433	10TCC-Q33	
C32	.002		BPD-002	DM-202	BYA10D2	B-220	5HK-D20	
C33	.1 100V		V84C2P1	IDP-2-104	DPM52P1	GEM-201	2TM-P10	
C34	.02		BPD-02	DA-203	H-0582	TA-120	TG-820	

Note 1. Value Varies (10mmf - 100mmf) depending on Crystal Series Resistance.

Note 2. Replace with Original Value.

Note 3. Model 1008 Only.

CONTROLS

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

ITEM No.	USE	RESISTANCE	REPLACEMENT DATA			
			DUO COM PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS - IRC PART No.
R1	Volume & Switch	10K	8408	JP2-103		MALC44AS
R2	Squelch	10K				MALC44A

① Model 1008 Only.

PARTS LIST AND DESCRIPTIONS (Continued)

RESISTORS

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

ITEM No.	REPLACEMENT DATA		ITEM No.	RATING	REPLACEMENT DATA	
	IRC PART No.	WORKMAN PART No.			IRC PART No.	WORKMAN PART No.
R3			R22	4700Ω		
R4			R23	1000Ω		Ⓢ
R5			R24	1500Ω		Ⓢ
R6			R25	1000Ω		(2200Ω)†
R7			R26	5600Ω		
R8			R27	1500Ω		(39K)*
R9			R28	2200Ω		(1000Ω)*
R10			R29	5600Ω		
R11			R30	100Ω		
R12			R31	5600Ω		
R13			R32	100Ω		
R14			R33	22K		
R15			R34	3300Ω		(3900Ω)†
R16			R35	330Ω		
R17			R36	1000Ω		
R18			R37	330Ω		(3300Ω)†
R19			R38	100Ω		
R20						
R21						
R22						

† Alternate Value.

* Value Used in Model 100.

Ⓢ Model 100S Only.

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA			NOTES
		DUO COM PART No.	Merit PART No.	Stancor PART No.	
L1	Ant. Loading (2.6uh)	8483			
L2	Antenna	8406			
L3	Receive Osc.	8404			
L4	4MC IF	8410			
L5	455KC IF	8409			
L6	Transmit Osc.	8405			
L7	Final	8407			

TRANSFORMER (DRIVER)

ITEM No.	TURNS RATIO	REPLACEMENT DATA			NOTES
		DUO COM PART No.	Merit PART No.	Stancor PART No.	
T1	2.5 1	8400			

TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE	REPLACEMENT DATA			NOTES
		DUO COM PART No.	Merit PART No.	Stancor PART No.	
T2		8401			

BATTERIES

ITEM No.	VOLTAGE	REPLACEMENT DATA			NOTES
		DUO COM PART No.	BURGESS PART No.	EVEREADY PART No.	
M1	1½V		930	1015	M-1BR 8 Required

MISCELLANEOUS

ITEM No.	PART NAME	DUO COM PART No.	NOTES
M3	Crystal	8450	Converter Crystal (4.65MC, Channel 10)
M4	Crystal	8451	Transmit Oscillator Crystal (Channel 10)
M5	Crystal Filter	8403	First 455KC Filter
M6	Crystal Filter	8403	Second 455KC Filter
M7	Switch	8480	Transmit-Receive (4PDT Spring Loaded)
M8	Speaker - Mike	8411	

PRINTED BOARD

