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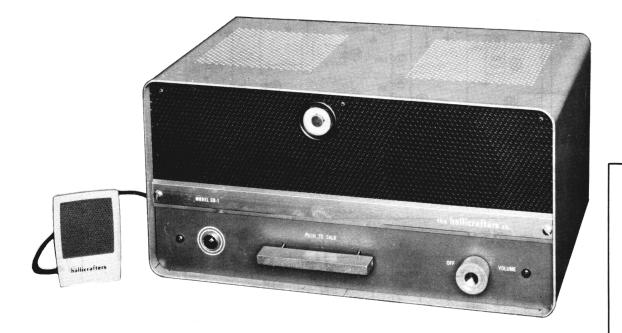
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MODEL CB-1

TRADE NAME MANUFACTURER TYPE SET POWER SUPPLY TUNING RANGE

Hallicrafters Model CB-1 The Hallicrafters Co., 4400W, 45th Street, Chicago 32, Illinois AC Operated Crystal Controlled II Tube Citizens Band Transmitter-Receiver 105 - 125 Volts AC, 60 Cycles RATING 60 Watts, .56 Amp. (a) 117 Volts AC Any one of Citizens Band Channels 1 thru 22

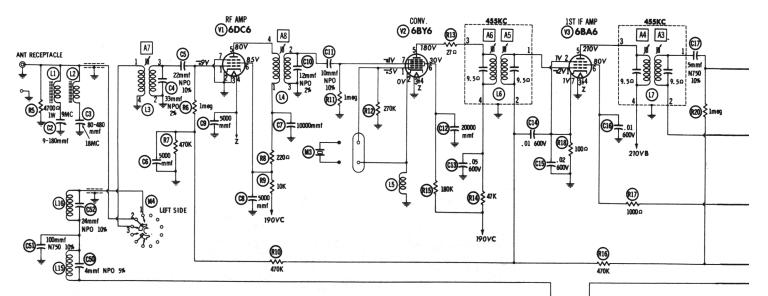
NOTICE

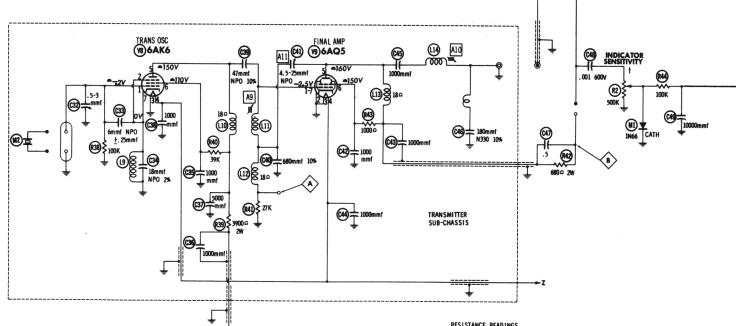
ONLY THOSE PERSONS PROPERLY LICENSED BY FCC ARE PERMITTED TO EFFECT REPAIRS OR MAKE CRYSTAL SUBSTITUTIONS ON THIS TYPE EQUIPMENT.

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



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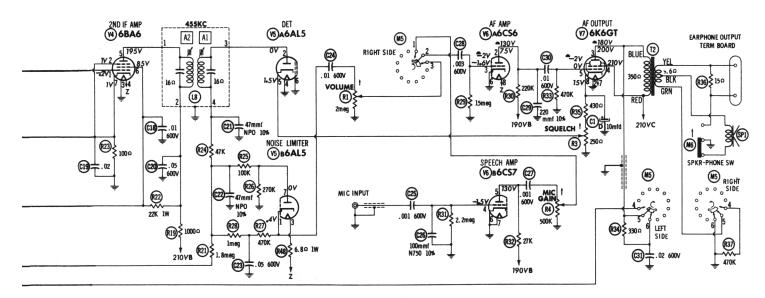


				RESI	STANCE R	EADINGS			
TEM	TUBE	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8
V1	6D C6	1. 5meg	00	00	.10	† 11K	† 11K	00	
V2	6BY6	270K	00	00	.10	† 48K	† 180K	lmeg	
٧3	6BA6	lmeg	1 00 Ω	00	.10	†330Ω	† 24K	1 00 Ω	
٧4	6BA6	2meg	1 00 Ω	00	.10	† 1300 Ω	† 23K	1 00 Ω	
V5	6AL5	800K	420K	.8 <u>0</u>	00	● 75Ω	00	270K	
V6	6SC7	TP	† 220K	15meg	2. 2meg ,	† 28K	00	0 <u>0</u>	.10
٧7	6 K6G ⊺	TP	00	†680Ω	† 330 Ω	470K	TP	.10	980 Ω
V8	6AK6	100K	00	00	.10	a†5200Ω	- † 44K	00	
٧9	6AQ5A	27K	00	00	.10	• † 1375 Q	•† 2350 Ω	27K	
V10	6E5	.10	_†lmeg	100K	†330Ω	00	0 <u>0</u>		
V 11	5Y3GT	TP	1	TP	105 Ω	TP	1150	TP	9

A PHOTOFACT STANDARD NOTATION SCHEMATIC [©]Howard W. Sams & Co., Inc. 1961

190VA

ALL MÉASUREMENTS MADE IN "RECEIVE" POSITION UNLESS OTHERWISE DESIGNATED. THIS READING WILL VARY DEPENDING UPON THE CONDITION OF THE ELECTROLYTIC IN THE CIRCUIT. THIS READING WILL VARY. CONTROL SET FOR NORMAL OPERATION. MEASURED IN "TRANSITI" POSITION. TMEASURED IN "TRANSITI" POSITION. TMEASURED IN "TRANSITI" POSITION. TMEASURED FROM PIN 8 OF V11. TP



SEE PARTS LIST FOR ALTERNATE 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)

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

70ma (TRANSMIT)

60ma (RECEIVE)

330 P 2W

(1)

50mfd

230

(1)

DZ

@ #

BLK

GRN

600 GRN

(1)^B

(14) RIGHT SIDE o

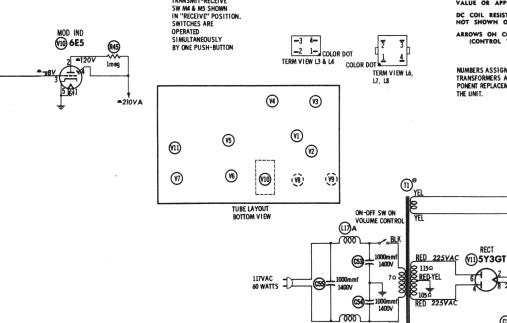
٥ \$

1000 ° ZW

(I)

10mfd

10mfr



TRANSMIT-RECEIVE

- DC voltage measurements taken with vacuum tube voltmet AC voltages measured with 1000 ohm per volt voltmeter.
 Socket connections are shown as bottom views.
 Measured values are from socket pin to common ground.
 Line voltage maintained at 117 volts for voltage readings.
 Nominal tolerance en component values makes possible a variation of ±15s in voltage and resistance readings.
 Volume control at maximum, no signal applied for voltage measurements.

HALLICRAFTERS MODEL CB-1

• 190VA SOURCE

190V B

SOURCE

• 190VC

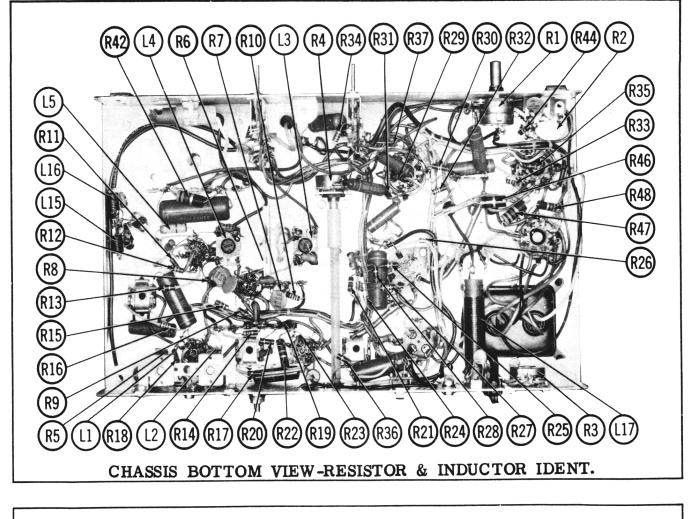
SOURCE • 210VA

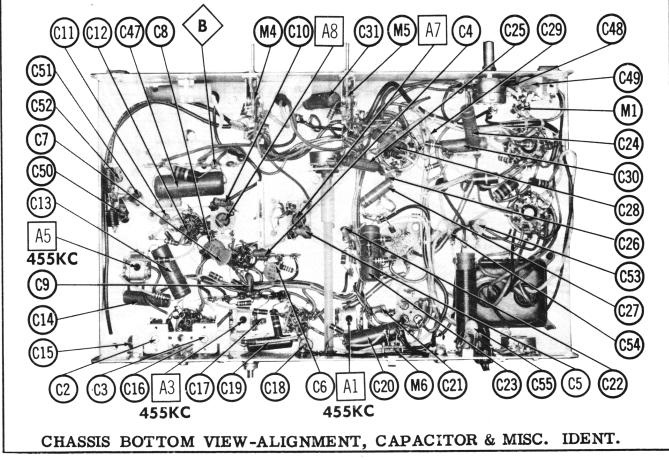
SOURCE

• 210VB

SOURCE

• 210VC SOURCE





PARTS LIST AND DESCRIPTIONS WIRING DATA

Unshielded Hook-up Wire Use BELDEN No. 8530 (Solid) Available in Ten Colors 8524 (Stranded) Available in Ten Colors 1735-B (6 Ft. Length) 1735-K (T_2^{\pm} Ft. Length) General-use Unshielded Hook-up Wire Use BELDEN No. TUBES Power Cord

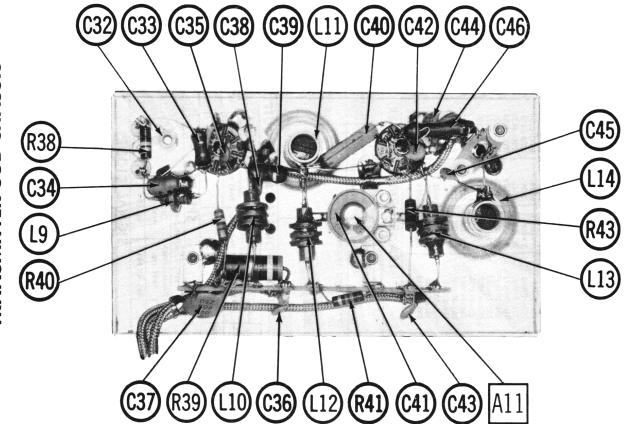
	•	GENERAL ELECTRIC	•	RAYTHEON	N + SYLVANIA	ANIA	•	
ITEM No.	USE	AT .	түре	ITEM No.	USE		TYPE	
١٨	RF Amplifier	6DC6		77	AF Output-Modula	tor	6K6GT	
V2	Converter	6BY6		V8	Trans. Oscillator		6AK6	
V3	lst IF Amplifier	6BA6		0A	Final Amplifier		6AQ5A	
V4	2nd IF Amplifier			V10	Mod. Indicator		6E5	
V5	DetNoise Limiter	6AL5		11 N	Rectifier		5Y3GT	
0.0	AF AmpSpeech Amp.	.dt						
		ELECT	ELECTROLYTIC	C CAP	CAPACITORS			

	NOTES		
	SPRAGUE PART No.	TVL-4771. 3	
	PYRAMID PART No.	TMQ-4634	id for Pane
REPLACEMENT DATA	MALLORY PART No.	FP475. 5	FIXED CAPACITORS
REPLA	CORNELL- DUBILIER PART No.	D0160	CAPAC
	AEROVOX PART No.	AFH4-17	FIXEL
	Hallicrafters PART No.	045-200122	Canacity val
RATING	VOLT.	350 350 350 25	
RAT	ITEM No. CAP. VOLT.	▲50 ▲10 10	
	ITEM No.	CIA B C D	

				THE OWNER AND ADDRESS OF TAXABLE PARTY OF TAXABLE PARTY.	And and an other statements of the statement of the state			
	30	FIXED CAPACITORS Capacity values given in the rating column are in mfd. for Paper Capacitors, and in mmfd. for Mica and Ceramic Capacitors.	FIXED given in the d in mmfd. f	FIXED CAPACITORS iven in the rating column are i in mmfd. for Mica and Cerar	ITORS mn are in m nd Ceramic	fd. for Paper Capacitors.		
					REPLACEA	REPLACEMENT DATA		
₹ P	RATING	REMARKS	AEROVOX PART No.	CENTRALAB PART No.	CORNELL- DUBILIER PART No.	ELMENCO PART No.	MALLORY PART No.	
22	9-180	#044_300517				463		
8	80-480	110000-1104				466		
4	33 NPO 2%			TCZ-33		CM-20C-330G		
32	22 NPO 10%		NPO-SI 22	TCZ-22	C10Q22C	CCTO-220	CNO-422	7
90	5000		BPD-005	DD-502	BYA10D5	CCD-502	B-250	ഹ
5	10000		BPD-01	DD-103	BYA10S1	CCD-103	B-110	S
8	5000		BPD-005	DD-502	BYA10D5	CCD-502	B-250	ഹ
60	5000		BPD-005	DD-502	BYA10D5	CCD-502	B-250	റ
010	12 NPO 2%	#491-104120-22		TCZ-12				
E	10 NPO 10%		NPO-SI 10	DTZ-10	CIQQIC	CCTO-100K	CNO-410	7
0				000 000	0000120			L

	-	capacitors, and in mmrd. for Mica and Ceramic Capacitors.	a in mmra.	tor Mica a	na Ceramic	Capacitors.		
ļ					REPLACE	REPLACEMENT DATA		
No.	RATING	REMARKS	AEROVOX PART No.	CENTRALAB PART No.	CORNELL- DUBILIER PART No.	ELMENCO PART No.	MALLORY PART No.	SPRAGUE PART No.
C3 C3	9-180 80-480	#044-300517				463 466		
C4	33 NPO 2%			TCZ-33		CM-20C-330G		
C5			NPO-SI 22	TCZ-22	C10Q22C	CCTO-220	CNO-422	10TCC-Q22
C6	5000		BPD-005	DD-502	BYA10D5	CCD-502	B-250	5HK-D50
C7	10000		BPD-01	DD-103	BYA10S1	CCD-103	B-110	5HK-S10
с8 С	5000		BPD-005	DD-502	BYA10D5	CCD-502	B-250	5HK-D50
C9			BPD-005	DD-502	BYA10D5	CCD-502	B-250	5HK-D50
C10	12 NPO 2%	#491-104120-22		TCZ-12				
CII	10 NPO 10%		NPO-SI 10	DTZ-10	C10QIC	CCTO-100K	CNO-410	10TCC-Q10
C12	20000		BPD-02	DD-203	BYB6S2	CCD-203	B-120	5HK-S20
C13	.05 600V		P688N-05	DD-503	CUB6S5	6DP-3-503	GEM-615	6TM-S50
C14	.01 600V		P688N-01	D6-103	CUB6S1	6DP-1-103	GEM-611	6TM-S10
C15	.02 600V		P688N-02	DD-203	CUB6S2	6DP-2-203	GEM-612	6TM-S20
C16	.01 600V		P688N-01	D6-103	C UB6S1	6DP-2-103	GEM-611	6TM-S10
C17	5 N750 10%		N750-SI 5	TCN-5	C10V5U	CCTN-050	CN7-550	10TC U-V50
C18	.00 600V		P688N-01	D6-103	CUB6S1	6DP-2-103	GEM-611	6TM-S10
C19	.02 200V		P288N-02	DD-203	C UB2S2	4DP-2-203	GEM-412	2TM-S20
C20	.05 600V		P688N-05	DD-503	C UB6S5	6DP-3-503	GEM-615	6TM-S50
C21	47 NPO 10%		NPO-SI 47	TCZ-47	C10Q47C	CCTO-470	CNO-447	10TCC-Q47
C22	47 NPO 10%		NPO-SI 47	TCZ-47	C10Q47C	CCTO-470	CNO-447	10TCC -Q47
C23	.05 600V		P688N-05	DD-503	CUB6S5	6DP-3-503	GEM-615	6TM-S50
C24	.01 600V		P688N-01	D6-103	C UB6SI	6DP-2-103	GEM-611	6TM-S10
C25	.001 600V		P688N-001	D6-102	CUB6D1	6DP-1-102	GEM-621	6TM-D10
C26	100 N750 10%		N750-SI 100	TCN-100	CIOTIU	CCTN-101	CN7-310	10TCU-T10
C27	.001 600V		P688N-001	D6-102	C UB6D1	6DP-1-102	GEM-621	6 TM-D10
C28	.003 600V		P688N-003	D6-302	CUB6D3	6DP-1-302	GEM-623	6TM-D30
C29	220 10%		1469-00022	TCZ-220	22R5T22	CM-19B-22IK	CNO-322	MS-322
C30	.01 600V		P688N-01	D6-103	C UB6S1	6DP-2-103	GEM-611	6TM-S10
C31	.02 600V		P688N-02	DD-203	CUB6S2	6DP-2-203	GEM-612	6TM-S20
C32	.5-3			829-3		CV-I	CT565	

TRANSMITTER SUB CHASSIS



			NOTES	© IRC Part #CLA					on Triad NOTES D. PART No.				()		d NOTES No.	-			NOTES			NOTES	Mod. Indicator Rect. (Pigtail)			lowing hyphen in	part Number) Receiver Osc. (Add Channel Number following hyphen in	ype) Ype)	
				RTC -8516 RTC -8516 RTC -8568 RTC -8568 RTC -8568 RTC -8632 RTC -8633 RTC -8633 RTC -8633 RTC -8633	RTC-8574 RTC-8592 RTC-8592	RTC -8515 RTC -8515 RTC -8518 RTC -8518 RTC -8518	POWER)		Stancor Thordarson PART No. PART No.				OUTPUT		PART No. PART No.						DES	SYLVANIA	PART No. IN66	SUC		nnel Number fol	annel Number f	Return, Wafer T Return, Wafer T Slide Type)	
	COILS (RF-IF)	REPLACEMENT DATA	Miller PART No.	4604 4604 6250 6250 6250 4594 12-C1 12-C1 12-C2	6112 6174 6174		ER	CEV	PART No. PAR				ER (AUDIO	REPLACEMENT DATA	Stancor PART No.		SPEAKER	ATA	QUAM PART No.	46A07	SIGNAL DIODES	DATA	PART No. IN66	MISCELLANEOUS	NOTES	. Osc. (Add Cha	ver Osc. (Add C)	par (wurner) Push To Talk (Spring Return, Wafer Type) Push To Talk (Spring Return, Wafer Type) Speaker-Phone (SPDT Slide Type)	
	ដ	REPLACEM	Merit PART No.	BC -562 BC -562 TV -116 TV -116 TV -116 TV -189 BC -353 BC -353 BC -353	TV-198 TV-188 TV-188	BC -561 BC -561 BC -564 BC -564	RANSF		Hallicrafters PART No.	052-300680-A D			TRANSFORMER		B Merit PART No.	9		뒯		\vdash	SIG	GENERAL ELECTRIC RAY	No	MIS		Trans	part r Recei	part r Push Push Speak	
tinued			PART No.	053-200546 053-200546 051-202568 051-202568 051-202567 053-100552 053-100552 050-300241 050-300241 050-300242	053-200538 053-200537 051-202570 053-200537	051-20259 051-202598 051-202598 051-202598 053-200540	F		EEC 2 PAI	, (B)	SEC. 5		TRAN		Hallicrafters PART No.	055-200406		REPL	MP. PART No.	<u>لام</u> 085-400203		Gene	_		Hallicrafters	019-302309-	019-302308-	060-202079 060-202079 060-200477 081-100101	
DESCRIPTIONS (Continued)			USE	RF Choke(1. 8uh) RF Choke(1. 8uh) Ant. Trans. RF Trans. Cathode (. 82uh) Let IF Srd IF	Cathode (100uh) RF Choke(515uh) T ransmitting Osc. RF Choke(515uh)			ONITA		- 580	SEC. 4	0.3V(a) 3.5A			PRI. SEC.	25000 1000 Tapa		TYPE	Size FIELD V. C. IMP.	4"x 6" PM 3-4Ω		ORIG. TYPE Hallicrafters	IN66 019-102311	ן ר	PART NAME	Crystal	Crystal	Switch Switch Switch Microphone	
PTIO		ITEM	° Z	LL L2 L5 L5 L5 L5 L5 L5 L5 L5 L5 L5 L5 L5 L5		<. m	-	ITEM	No.	TI II.	N a	0 er			No.	T2 2		ITEM		SPI 4'		ITEM No.	-	-	ITEM	M2	M3	M4 M5 M6	_
AND DESCR			MALLORY SPRAGUE PART No. PART No.	• ≓ ⊠ ພ ພ ພ ພ		B-210 5HK-D10 GEM-205 2TM-P50 GEM-621 6TM-D10 B-L10 5HK-210 B-L10 10000000000000000000000000000000000	CN7-310 10TCU-T10 CN0-425 10TCC-Q25		-		INSTALLATION NOTES		Volume	Power Off-On Indicator Sensitivity	Squelch	Mic. Gain			REPLACEMENT DATA	TV REMARKS	PAKI No.								
S LIST		ENT DATA	CORNELL- ELMENCO DUBILIER PART No.		CCD-102 CCD-102 CCD-102	4 8	CCTN-101	3CCD-102 3CCD-102		nufacturer.	MALLORY	RT No.		US-26 F U50 L		U50 Not Req.		rise listed.		IRC PAPT NO	+					M		. 84	~~~
PARTS	(cont)	REPLACEN	CORNELL- DUBILIER	C10V6C BYA10D1 BYA10D1 BYA10D1 BYA10D1 BYA10D1 C10Q47C		7 10 17	C1071U C1071U	HVBI6D1		order to ma	CTS-IRC	. d				QII-133 Not Req.		iless otherw		RATING	470K	Imeg I5meg 220K	2.2meg 27K	470K 330Ω 430Ω	150 470K	39000 2W	27K 6800 2W	10000 100K 10000 2W	6.80 IV
	CAPACITORS (cont)		CENTRALAB PART No.	TCZ-18 DD-102 B DD-102 B DD-102 B DD-502 B DD-102 B DD-102 B TCZ-47 C	822-AZ DD-102 E DD-102 E DD-102 E		TCN-100 C			stributor on NTROLS	REPLACEMENT DATA		A47-2meg-Z Q FS-3 N			A47-500K-S Q FS-3 N	١Ō	or less, ur	ITEM	Ŷ	R27	R28 R29 R30	R31 R32	R33 R34 R35	R36 R37	R39 R39	R41 P49	R43 R45 R46 R46	R48 R48
			AEROVOX C			T		DAC-2 I		ailable thru di	CENTRALAB CLAR			KR-1 SWE-1 B-59 A47-5		Not reeq. A47-5 B-59 A47-5 Not Req. FS-3	-	All wattages 1/2 watt, or less, unless otherwise listed	NTA -	REMARKS									
	FIXED		REMARKS	#491-101060-23 #491-104180-22 B1 B1 B1 B1 B1 B1	#044-100516 B	#491-156181-73 P: P: B: B:	N N			nber. utor's stock. Av	Hallicrafters CENT		025-201742 B-76 Not F	025-201719 B-5		025-201728 B-5 Not		All watt	REPLACEMENT DATA		0. PART No.								
		~	RATING	Jun	25 NPO		4 NPO 5% 100 N750 10% 34 NPO 10%	1000 1400V	1000 1400V	Hallicratiers Part Number. Not normally in distributor's stock. Available thru distributor on order to manufacturer.	ŊĊ	WATTS	-102	-		21				RATING IRC	47000 IW	1meg 470K 2203	10K 470K	lmeg 270K	47K 180K	470K 1900Ω	10000	1. 8meg 2.21 IW 1000 I 2001 IV	100K 270K
			No. No.	C33854 C3385 C338 C338 C338 C338 C338 C338 C33	C41 C42 C43 C43 C43 C43 C43 C43 C43 C43 C43 C43	C 45 C 46 C 48 C 49 C 49 C 49 C 49 C 49 C 49 C 49 C 49		C53	C55	**	ITEM	° V	RLA B	C B S	B R3A	B B B B			TEN	Š v	R5	R7 R7 R8	R9 R10	RII RI2	RI4 RI5	RIG RI7	R19	R21 R21 R23 R24	R25 R26

ALIGNMENT INSTRUCTIONS

	ALIG	NMENT INSTR	UCTIONS-READ CA	REFULLY	BEFORE ATTEMPTING ALIGNMENT							
	Volume control should be a output reading. Set Squelc Use Signal Generator with Suggested Alignment Tools	h, Microphon accuracy with : Al Thru	e Gain and Indicato nin . 005%. A6GENERAL CI WALSCO #25.	r sensitiv EMENT # 15 EMENT #	nerator should be no higher than necessary to obtain an vity controls fully counterclockwise. 5097, 8727 5004, 5009, 8195, 8274, 8275, 8607, 8728, 8987, 8988, 8989, 9291							
		A9, A10, J	WALSCO #25 All GENERAL CI WALSCO #25	EMENT #	2522, 2523, 2531, 2532, 2534, 2537, 2538 8721, 8722							
	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	OUTPUT METER	ADJUST	REMARKS							
L.[High side thru . 01mfd to pin 7 (grid) of Converter. Low side to chassis.	455KC (400∿ Mod.)	Across voice coil.	Al, A2, A3, A4, A5, A6	Adjust for maximum output.							
2.	High side thru 50Ω to antenna jack. Low side to chassi3.	Crystal frequency plus 455KC		A7, A8	n							
3.		USE VTVM DC probe to point (A). Common to chassis. Connect Wattmeter across antenna jack. A9, A10 Just A10 for maximum output on Wattmeter. A9, A10 Just A10 for maximum output on Wattmeter.										
4.		antenna jack. " All Press "Talk" bar. Remove jumper at point b. Connect vertical amp. of scope across Wattmeter. Adjust All for MINIMUM deflection on scope. Reconnect plug at point b										
5.	High side of Audio Signal generator thru 100K to the Microphone input jack. Low side to chassis.	500∿ at .03 volts output.	USE SCOPE Vert. amp. to antenna jack. Low side to chassis.	R4	Adjust for 85% modulation as seen on scope.							
β.	"	"	11	R2	Adjust for complete closure of indicator eye at 85% modulation with no foldover or bright area.							
7.	Connect a 9MC signal	into antenna a	and adjust C2 for m	inimum o	utput.							
3.	Connect an 18MC signa	al into antenna	a and adjust C3 for	minimum	output.							

