

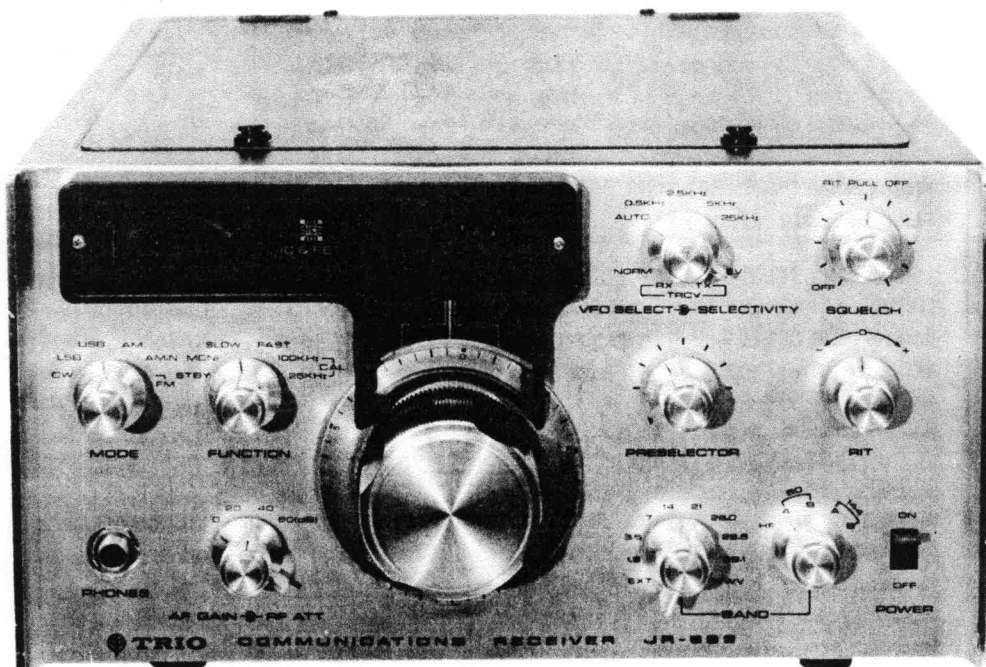
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KATWIJK AAN ZEE



TRIO

SERVICE MANUAL

JR-599



COMMUNICATIONS RECEIVER

PARTS DESCRIPTION LIST

(Custom De Luxe)

■ MAIN CHASSIS (LC7JM) SECTION				
PRINTED CIRCUIT				
-	RF Block	(UC1120J)		
-	IF Block	(UC1212J)		
-	Filter Block	(UC1213J)		
-	VFO Block	(UC0116J)		
-	Carrier Block	(UC1214J)		
-	Marker Block	(UC1505J)		
-	AVR Block	(UC1010J)		
-	AF Block	(UC1307J)		
-	Fixed Channel Block	(UC0113J)		
Symbol No.	Description		Part No.	Remarks
CAPACITORS				
C1, 2	Ceramic	0.04 μ F	+100%, -0%	
C3	Electrolytic Tubular	1 μ F	50WV	
C4	Electrolytic Tubular	10 μ F	25WV	
C5~8	Ceramic	0.04 μ F	+100%, -0%	
C9~11	Electrolytic Block	1000 μ F x 2	25WV	
C12	Oil Impregnated Paper	0.01 μ F	\pm 20%	
C13, 14	Ceramic	0.01 μ F	+100%, -0%	
C15	Ceramic	0.04 μ F	+100%, -0%	
TC1~5	Trimmer Capacitor	10P x 6		L08-0001-05
RESISTORS				
R1	Fixed Carbon Composition	68 Ω	\pm 5%	1/4W
R2	Fixed Carbon Composition	270 Ω	\pm 5%	1/4W
R3	Fixed Carbon Composition	33 Ω	\pm 5%	1/4W
R4	Fixed Carbon Composition	270 Ω	\pm 5%	1/4W
R5	Fixed Carbon Composition	33 Ω	\pm 5%	1/4W
R6	Fixed Carbon Composition	270 Ω	\pm 5%	1/4W
R7	Fixed Carbon Composition	100 Ω	\pm 5%	1/4W
R8, 9	Fixed Carbon Composition	4.7k Ω	\pm 5%	1/4W
R10	Fixed Carbon Composition	470k Ω	\pm 5%	1/4W
R11	Fixed Carbon Composition	10 Ω	\pm 10%	1/2W
R12	Fixed Carbon Composition	4.7k Ω	\pm 5%	1/4W
POTENTIOMETERS				
VR1	100k Ω (B) (with SW.)	SQU.		R03-5001-05
VR2	5k Ω (B)	MONI.		R10-53
VR3	5k Ω (B)	RIT.		R01-0425
VR4	10k Ω (with SW.)			S03-2001-15
VR5	50k (B)			R10-56
SWITCHES				
S1	Band (B) Rotary			S04-2006-15
S2	RF ATT Rotary (with VR4)			S03-2001-15
S3	Function Rotary			S29-3001-05
S4	MODE Rotary			S29-3001-05
S5, 6	VFO SELECT, SELECTIVITY Rotary			S03-1001-05
S7	Power Switch			S44-2001-05
S8	RIT (with VR1)			R03-5001-05
S9	Fixed Ch. Rotary			S04-1002-05
S10	AC SELECT (included Fuse Holder)			J13-0003-05

PARTS DESCRIPTION LIST

(Custom De Luxe)

Symbol No.	Description	Part No.	Remarks
S11 S12	AC/DC SELECT Band (included Coil Pack)	S10-22D	
DIODES			
D1 D2~4	S1B02-01C 1N60		
MISCELLANEOUS			
—	Case	A01-0008-02	
—	Chassis	A10-0016-02	
—	Panel	A20-0025-12	
—	Back Panel	A23-0014-03	
—	Sole Panel	A40-0003-02	
—	Patch	A90-364	
—	Dial Escation	B07-0005-13	
—	Dial Escation Framework	B07-0006-03	
—	Jewel	B07-0007-04	
—	Name Plate (for Serial No.)	B09-263	
—	Acryl Board (A)	B19-0007-14	
—	Acryl Board (B)	B19-0011-04	
—	Acryl Dial Scale	B19-0015-04	
PL1~3	Pilot Lamp (14V 200mA)	B30-0005-05	
M	S-Meter	B31-0004-05	
—	Model Name Plate	B40-0045-04	
—	A Certificate	B42-0009-04	
—	Name Plate (1) RF	B42-0011-04	
—	Name Plate (2) 50MHz	B42-0012-04	
—	Name Plate (3) 144MHz	B42-0013-04	
—	Name Plate (4) Fixed Ch.	B42-0014-04	
—	Instruction Manual	B50-0042-00	
—	Instructions	B58-0009-00	
—	Small Bush	D10-09	
—	Shaft	D21-0025-04	
—	Lug	E04-101B	
—	Lug x 7	E04-202B	
—	2P Terminal	E06-12J	
—	M Type Receptacle Jack	E07-11P	
—	2P Connector Socket	E08-0203-05	
—	16P Connector Socket	E08-1601-05	
—	2P Connector Plug	E09-0203-05	
—	16P Connector Plug	E09-1601-05	
—	US Jack	E16-09	
—	Crystal Socket x 4	E18-0201-05	
—	Crystal Socket x 4	E4014	
—	Beaded Band x 3	E4097	
—	Beaded Band x 4	E4099	
—	Shield Case	F15-0014-04	
—	Spring	G01-0023-04	
—	Legs x 4	G10-02	
—	Cord Bushing	G11-01	
—	Accessory Bag	H08-04B	
—	Corrugated Cardboard Case	H01-0079-03	
—	Form Polyethylene Fixture	H10-0081-03	

PARTS DESCRIPTION LIST

(Custom De Luxe)

Symbol No.	Description	Part No.	Remarks
—	Fixture	H10-0082-04	
—	Protective Board	H10-0083-04	
—	Protective Cover	H20-0020-03	
—	Sub-legs x 2	J02-0005-14	
—	Fuse Holder x 3	J13-0002-05	
—	Fuse Holder (with SW.)	J13-0003-05	
—	Meter Holder	J20-0006-14	
—	VFO Holder	J20-0008-04	
—	Metal Fittings x 7	J21-0047-04	
—	P.C. Board Holder	J21-0048-04	
—	Rotary SW. Holder	J21-0049-04	
—	P.C. Board	J25-0025-04	
—	Grummet x 2	J59-0001-05	
—	Plunger x 2	J59-0002-05	
—	Knob (Large)	K20-0007-04	
—	Knob (Small) x 7	K20-0008-04	
—	Knob (Small Pointer)	K20-0012-04	
—	Knob (Concentric Inside) x 2	K20-0010-04	
—	Knob (Concentric Outside) x 2	K20-0011-04	
—	Knob Framework	K20-0015-04	
—	Knob	K21-0007-04	
—	Knob Collar	K29-0014-04	
P.T.	Power Transformer	L09-0001-15	
—	Audio Transformer	L15-0002-15	
L1, 2	Ferri-Inductor (FL-7H-222J)		
L3	Choke Coil	L20-010	
—	Decorative Screw (4φ x 10 – ISO) x 4	N11-41	
—	Screw (for Terminal)	N11-47	
—	Washer	N19-0015-04	
—	P.C. Board Terminal x 5	N4086	
—	Bearing	N4105	
—	Washer x 2	N4106	
F	Fuse (1A)	S17-01	
—	Shaft Joint	S4013	
—	Switch Stopper	S4103	
RL1	Relay	S4143	
—	P.V.C. Insulated Wire (0.5φ) 0.57m	W02-50	
—	P.V.C. Insulated Wire (0.5φ) 3.9m	W02-52	
—	P.V.C. Insulated Wire (0.5φ) 2.5m	W02-54	
—	P.V.C. Insulated Wire (0.5φ) 1.7m	W02-56	
—	P.V.C. Insulated Wire (0.5φ) 1.6m	W02-59	
—	Tinned Wire (0.5φ) 0.05m	W03-05	
—	Tinned Wire (0.8φ) 0.6m	W03-08	
—	Insulating Sleeve 0.15m	W06-154	
—	Insulating Sleeve 0.1m	W06-204	
—	AC Cord	W09-01	
—	Single-core Shielded Wire 0.75m	W11-010B	
—	Single-core Shielded Wire 3m	W11-016K	
—	Coaxial Cable (1.5C – 2V) 1.5m	W13-06	
—	Double-core Shielded Wire 0.46m	W51-020	
—	P.V.C. Insulated Wire (0.5φ Spiral) 1.5m	W62-509	
—	P.V.C. Insulated Wire (0.5φ Spiral) 2m	W62-519	

PARTS DESCRIPTION LIST

(Custom De Luxe)

Symbol No.	Description	Part No.	Remarks
—	P.V.C. Insulated Wire (0.5φ Spiral) 3.5m	W62-529	
—	P.V.C. Insulated Wire (0.5φ Spiral) 2m	W62-539	
—	P.V.C. Insulated Wire (0.5φ Spiral) 2m	W62-549	
—	P.V.C. Insulated Wire (0.5φ Spiral) 3.5m	W62-559	
—	P.V.C. Insulated Wire (0.5φ Spiral) 2m	W62-569	
—	P.V.C. Insulated Wire (0.5φ Spiral) 2m	W62-579	
—	P.V.C. Insulated Wire (0.5φ Spiral) 2m	W62-589	
—	Decorative Screw (⊕MH3 x 6 – F.B – ISO) x 5		
—	Decorative Screw (⊕MH2 x 15 – F.B) x 2		
—	Pan Head Screw (⊕P3 x 6F – ISO) x 30		
—	Tapping Screw (⊕TM3 x 6 – F) x 50		
—	Tapping Screw (⊕TM2.3 x 6 – F) x 2		
—	Tapping Screw (⊕T2M3 x 16G)		
—	Flat Head Washer (W3 – F) x 6		
—	Flat Head Washer (W4 – F) x 6		
—	Flat Head Screw (⊕S2.6 x 6 – F) x 6		
—	Flat Head Screw (⊕S3 x 6 – F – ISO) x 5		
—	Nut (N3 – F – ISO) x 4		

■ UC1120J

CAPACITORS

C1	Silver-Mica	100pF	±5%		
C2	Super-Mica	1000pF	±5%		
C3	Silver-Mica	33pF	±5%		
C4	Ceramic	100pF	±10%		
C5	Ceramic	0.004μF	+80%, -20%		
C6, 7	Ceramic	0.04μF	+80%, -20%		
C8	Ceramic	100pF	±10%		
C9	Silver-Mica	33pF	±5%		
C10	Ceramic	100pF	±10%		
C11	Ceramic	0.04μF	+80%, -20%		
C12	Ceramic	2pF	±0.5pF		
C13	Silver-Mica	5pF	±0.5pF		
C14	Ceramic	0.04μF	+80%, -20%		
C15	Ceramic	0.01μF	+80%, -20%		
C16	Silver-Mica	22pF	±5%		
C17	Silver-Mica	33pF	±5%		
C18	Ceramic	22pF	±10%		
C19	Ceramic	3pF	±0.5pF		
C20	Ceramic	0.04μF	+80%, -20%		
C21	Ceramic	0.01μF	+80%, -20%		
C22	Ceramic	0.04μF	+80%, -20%		
C23	Electrolytic Tubular	0.47μF	50WV		
V.C.	Variable Capacitor			C01-0002-05	

RESISTORS

R1	Fixed Carbon Composition	470kΩ	±5%	1/4W	
R2	Fixed Carbon Composition	1kΩ	±5%	1/4W	
R3	Fixed Carbon Composition	2.2kΩ	±5%	1/5W	
R4	Fixed Carbon Composition	100Ω	±5%	1/5W	
R5	Fixed Carbon Composition	470kΩ	±5%	1/4W	
R6	Fixed Carbon Composition	560Ω	±5%	1/4W	
R7	Fixed Carbon Composition	100kΩ	±5%	1/4W	

PARTS DESCRIPTION LIST

(Custom De Luxe)

Symbol No.	Description	Part No.	Remarks
R8	Fixed Carbon Composition 100Ω ±5% 1/4W		
R9	Fixed Carbon Composition 33kΩ ±5% 1/4W		
R10	Fixed Carbon Composition 6.8kΩ ±5% 1/4W		
R11	Fixed Carbon Composition 1kΩ ±5% 1/4W		
R12	Fixed Carbon Composition 100kΩ ±5% 1/4W		
R13~15	Fixed Carbon Composition 100Ω ±5% 1/4W		
TRANSISTORS/DIODES			
Q1, 2	3SK22 (GR)		
Q3, 4	2SC460 (B)		
D1, 2	1N60		
D3	RD-4A		
COILS			
—	Coil Pack	L60-0002-02	
—	8.3 Trap Coil	L31-0070-04	
—	8.8 Trap Coil	L31-0011-04	
—	12.3 Trap Coil	L31-0012-04	
L3, 5, 6	Ferri-Inductor (FL-5H102K)		
MISCELLANEOUS			
—	Printed Circuit Board	J25-0020-04	
—	Shield Board (A)	F10-0008-03	
—	Shield Board (B)	F10-0009-04	
—	Shield Board (C) x 2	F10-0010-04	
—	Shield Board (D) x 2	F10-0011-04	
VR1	100kΩ	R10-65	
—	Terminal x 20	N4085	
—	P.V.C. Insulated Wire (0.5/s.) 0.2m	W02-50	
—	P.V.C. Insulated Wire 0.2m	W02-52	
—	P.V.C. Insulated Wire 0.3m	W02-54	
—	Reticular Wire 0.1m	W14-01	
—	Pan Head Screw (⊕P3 x 4 – F – ISO) x 4		
—	Pan Head Screw (⊕P3 x 6 – F – ISO) x 4		
—	Tapping Screw x 10		

■ UC1212J

CAPACITORS			
C1	Silver-Mica	100pF	±5%
C2	Silver-Mica	39pF	±5%
C3	Silver-Mica	120pF	±5%
C4	Ceramic	0.04μF	+80%, -20%
C5	Ceramic	0.002μF	+80%, -20%
C6	Ceramic	0.04μF	+80%, -20%
C7	Silver-Mica	5pF	±0.5pF
C8, 9	Ceramic	0.002μF	+80%, -20%
C10	Ceramic	100pF	±10%
C11	Ceramic	0.04μF	+80%, -20%
C12	Ceramic	5pF	±0.5pF
C13, 14	Ceramic	33pF	±10%
C15	Ceramic	0.04μF	+80%, -20%
C16	Ceramic	0.002μF	±20%
C17	Electrolytic Tubular	0.47μF	50WV

PARTS DESCRIPTION LIST

(Custom De Luxe)

Symbol No.	Description	Part No.	Remarks
C18	Ceramic 0.01 μ F +80%, -20%		
C19	Ceramic 220pF \pm 10%		
C20	Ceramic 47pF \pm 10%		
C21	Ceramic 0.004 μ F \pm 20%		
C22	Electrolytic Tubular 4.7 μ F 16WV		
C23	Ceramic 0.01 μ F +80%, -20%		
C24	Ceramic 0.001 μ F +80%, -20%		
C25	Electrolytic Tubular 1 μ F 50WV		
C26	Electrolytic Tubular 33 μ F 16WV		
C27, 28	Ceramic 0.04 μ F +80%, -20%		
C29	Silver-Mica 100pF \pm 10%		
C30	Ceramic 0.04 μ F +80%, -20%		
C31	Electrolytic Tubular 10 μ F 16WV		
C32	Ceramic 0.001 μ F +80%, -20%		
C33	Ceramic 0.01 μ F +80%, -20%		
C34	Ceramic 0.04 μ F +80%, -20%		
RESISTORS			
R1	Fixed Carbon Composition 6.8k Ω \pm 5% 1/4W		
R2	Fixed Carbon Composition 10k Ω \pm 5% 1/4W		
R3	Fixed Carbon Composition 470 Ω \pm 5% 1/4W		
R4, 5	Fixed Carbon Composition 1k Ω \pm 5% 1/4W		
R6	Fixed Carbon Composition 22k Ω \pm 5% 1/4W		
R7	Fixed Carbon Composition 68k Ω \pm 5% 1/4W		
R8	Fixed Carbon Composition 47k Ω \pm 5% 1/4W		
R9	Fixed Carbon Composition 10k Ω \pm 5% 1/4W		
R10	Fixed Carbon Composition 1k Ω \pm 5% 1/4W		
R11	Fixed Carbon Composition 15k Ω \pm 5% 1/4W		
R12	Fixed Carbon Composition 4.7k Ω \pm 5% 1/4W		
R13	Fixed Carbon Composition 100k Ω \pm 5% 1/4W		
R14 ~16	Fixed Carbon Composition 10k Ω \pm 5% 1/4W		
R17	Fixed Carbon Composition 100k Ω \pm 5% 1/4W		
R18	Fixed Carbon Composition 47k Ω \pm 5% 1/4W		
R19	Fixed Carbon Composition 1M Ω \pm 5% 1/4W		
R20	Fixed Carbon Composition 33 Ω \pm 5% 1/4W		
R21, 22	Fixed Carbon Composition 10k Ω \pm 5% 1/4W		
R23	Fixed Carbon Composition 220k Ω \pm 5% 1/4W		
R24	Fixed Carbon Composition 33 Ω \pm 5% 1/4W		
R25	Fixed Carbon Composition 1M Ω \pm 5% 1/4W		
R26, 27	Fixed Carbon Composition 4.7k Ω \pm 5% 1/4W		
R28	Fixed Carbon Composition 3.3k Ω \pm 5% 1/4W		
R29	Fixed Carbon Composition 47k Ω \pm 5% 1/4W		
R30	Fixed Carbon Composition 4.7k Ω \pm 5% 1/4W		
R31	Fixed Carbon Composition 1k Ω \pm 5% 1/4W		
R32	Fixed Carbon Composition 470 Ω \pm 5% 1/4W		
R33, 34	Fixed Carbon Composition 1k Ω \pm 5% 1/4W		
R35	Fixed Carbon Composition 15k Ω \pm 5% 1/4W		
R36	Fixed Carbon Composition 4.7k Ω \pm 5% 1/4W		
TRANSISTOR/IC/FET/DIODE			
Q1	2SK22 (GR) FET		
Q2	TA7045M (Red) 1C		
Q3	2SC460 (B)		

PARTS DESCRIPTION LIST

(Custom De Luxe)

Symbol No.	Description	Part No.	Remarks
Q4	2SC733 (Y) or (GR)		
Q5	2SA495 (Y)		
Q6, 7	2SC733 (Y) or (GR)		
Q8	2SC460 (B)		
D1 ~ 10	1N60		
POTENTIOMETERS			
VR1, 2	1k Ω (B)	R10-98	
VR3	10k Ω (B)	R10-54	
IF TRANS./COIL			
T1	IFT (B.P.F.)	L30-0008-04	
T2	IFT	L30-0009-04	
T3	IFT (B.P.F.)	L30-0008-04	
T4, 5	IFT	L30-0010-04	
T6	IFT	L30-0011-04	
T7	IFT	L30-0012-04	
T8	IFT	L30-0013-04	
L1	Ferri-Inductor (FL5H102K)		
MISCELLANEOUS			
—	Printed Circuit Board	J25-0030-04	
—	Terminal x 26	N4086	
—	P.V.C. Insulated Wire (White 0.5/s.) 0.06m	W02-59	
—	Tinned Wire (0.5 ϕ , TCW) x 0.03m	W03-05	
—	Tinned Wire (0.6 ϕ , TCW) x 0.03m	W03-08	
—	Insulating Sleeve x 0.04m	W06-154	

■ UC1213J

CAPACITORS					
C1	Silver-Mica	27pF	$\pm 5\%$		
C2	Ceramic	0.001 μ F	+80%, -20%		
C3, 4	Ceramic	0.04 μ F	+80%, -20%		
C5 ~ 7	Ceramic	0.001 μ F	+80%, -20%		
C8, 9	Ceramic	0.04 μ F	+80%, -20%		
C10, 11	Ceramic	0.001 μ F	+80%, -20%		
C12, 13	Ceramic	0.04 μ F	+80%, -20%		
C14, 15	Ceramic	0.001 μ F	+80%, -20%		
C16	Ceramic	0.04 μ F	+80%, -20%		
C17	Silver-Mica	2pF	± 0.5 pF		
C18	Ceramic	0.04 μ F	+80%, -20%		
C19	Ceramic	0.001 μ F	+80%, -20%		
C20, 21	Ceramic	0.04 μ F	+80%, -20%		
RESISTORS					
R1	Fixed Carbon Composition	220 Ω	$\pm 5\%$	1/4W	
R2	Fixed Carbon Composition	4.7k Ω	$\pm 5\%$	1/4W	
R3	Fixed Carbon Composition	220 Ω	$\pm 5\%$	1/4W	
R4	Fixed Carbon Composition	4.7k Ω	$\pm 5\%$	1/4W	
R5	Fixed Carbon Composition	22k Ω	$\pm 5\%$	1/4W	
R6	Fixed Carbon Composition	220 Ω	$\pm 5\%$	1/4W	
R7	Fixed Carbon Composition	4.7k Ω	$\pm 5\%$	1/4W	
R8	Fixed Carbon Composition	220 Ω	$\pm 5\%$	1/4W	
R9	Fixed Carbon Composition	4.7k Ω	$\pm 5\%$	1/4W	

PARTS DESCRIPTION LIST

(Custom De Luxe)

Symbol No.	Description	Part No.	Remarks
R10	Fixed Carbon Composition 22kΩ ±5% 1/4W		
R11	Fixed Carbon Composition 220Ω ±5% 1/4W		
R12	Fixed Carbon Composition 4.7kΩ ±5% 1/4W		
R13	Fixed Carbon Composition 220Ω ±5% 1/4W		
R14	Fixed Carbon Composition 4.7kΩ ±5% 1/4W		
R15	Fixed Carbon Composition 22kΩ ±5% 1/4W		
R16	Fixed Carbon Composition 220Ω ±5% 1/4W		
R17	Fixed Carbon Composition 4.7kΩ ±5% 1/4W		
R18	Fixed Carbon Composition 220Ω ±5% 1/4W		
R19	Fixed Carbon Composition 4.7kΩ ±5% 1/4W		
R20	Fixed Carbon Composition 22kΩ ±5% 1/4W		
R21, 22	Fixed Carbon Composition 1kΩ ±5% 1/4W		
MISCELLANEOUS			
—	Printed Circuit Board	J25-0026-04	
L1, 2	Ferri-Inductor (FL5H102K)		
—	VHF Coil	L34-0015-04	
—	Crystal Filter	L4013	
D1~8	1N60		
—	Terminal x 8	N4086	
—	Coaxial Cable (1.5C - XV) x 0.4m	W13-06	

■ UC0116J

CAPACITORS			
C1	Temperature Compensating Ceramic	47pF ±5%	
C2, 3	Temperature Compensating Ceramic	150pF ±5%	
C4	Temperature Compensating Ceramic	70pF ±5%	
C5	Temperature Compensating Ceramic	470pF ±5%	
C6	Temperature Compensating Ceramic	220pF ±5%	
C7, 8	Super Mica	1500pF	
C9	Hi Q Mica	3pF ±0.5pF	
C10	Ceramic	0.02μF +80%, -20%	
C11, 12	Ceramic	0.04μF +80%, -20%	
C13	Ceramic	0.02μF +80%, -20%	
C14	Ceramic	33pF ±0.5%	
C15	Ceramic	5pF ±0.5pF	
C16	Ceramic	10pF ±0.5pF	
C17	Ceramic	5pF ±0.5pF	
C18	Ceramic	0.01μF +80%, -20%	
C19	Ceramic	0.04μF +80%, -20%	
C20	Temperature Compensating Ceramic	(CC94CG1H100J)	
RESISTORS			
R1	Fixed Carbon Composition	270kΩ ±5% 1/4W	
R2	Fixed Carbon Composition	100Ω ±5% 1/4W	
R3, 4	Fixed Carbon Composition	1MΩ ±5% 1/4W	
R5	Fixed Carbon Composition	330Ω ±5% 1/4W	
R6	Fixed Carbon Composition	33kΩ ±5% 1/4W	
R7	Fixed Carbon Composition	47kΩ ±5% 1/4W	
R8	Fixed Carbon Composition	1kΩ ±5% 1/4W	
R9	Fixed Carbon Composition	100Ω ±5% 1/4W	

PARTS DESCRIPTION LIST

(Custom De Luxe)

Symbol No.	Description	Part No.	Remarks
COILS			
L2~4	Ferrite Inductor (FL5H-102K)	L11-78	
L5	Ferrite Inductor (FL5H-220K)		
L6~7	Ferrite Inductor (FL5H-102K)		
L	OSC Coil		
TRANSISTORS/DIODES			
Q1	3SK22 (Y)		
Q2	2SK19 (Y)		
Q3, 4	2SC460 (B)		
D1	SD111		
D2, 3	1N60		
MISCELLANEOUS			
—	Printed Circuit Board	J25-0019-04	
—	Dial Scale	B20-0021-04	
—	Name Plate	B42-0010-04	
V.C.	Variable Capacitor	C01-0001-05	
V.C.	Midget Capacitor	C03-0001-05	
—	Trimmer (ECV-1ZW 10P12)	C4036	
—	Dial	D40-0007-05	
—	V.F.O. Box (A)	F11-0004-13	
—	V.F.O. Box (B)	F11-0005-04	
—	V.F.O. Box (C)	F11-0006-03	
—	V.F.O. Box (D)	F11-0007-04	
—	V.F.O. Box (E)	F11-0008-04	
—	V.F.O. Box (F)	F11-0009-04	
—	V.F.O. Box (G)	F11-0010-04	
—	V.F.O. Box (H)	F11-0011-04	
—	V.F.O. Box (I)	F11-0012-04	
—	Lug	E04-101B	
—	Acme Terminal	E4071	
—	Terminal x 5	N4085	
—	Earth Lug	N28-0.32	
—	Shaft Coupling	S4082	
—	P.V.C. Insulated Wire 0.5/s. 0.3m	W02-50	
—	P.V.C. Insulated Wire 0.2m	W02-52	
—	P.V.C. Insulated Wire 0.3m	W02-54	
—	P.V.C. Insulated Wire 0.2m	W02-56	
—	Tinned Wire 0.8/s TCW 0.2m	W03-08	
—	Pan Head Screw (⊕P2 x 4-F) x 3		
—	Pan Head Screw (⊕P3 x 6-F) x 38		
—	Flat Head Washer (W3-F) x 4		
—	Pan Head Screw (⊕P3 x 4-F)		

■ UC1214J

CAPACITORS					
C1	Ceramic	0.001μF	+80%	-20%	
C2	Silver-Mica	22pF	±5%		
C3	Ceramic	0.001μF	+80%	-20%	
C4	Silver-Mica	22pF	±5%		
C5	Ceramic	0.001μF	+80%	-20%	
C6	Silver-Mica	22pF	±5%		

PARTS DESCRIPTION LIST

(Custom De Luxe)

Symbol No.	Description	Part No.	Remarks		
C7	Ceramic 0.001 μ F +80%, -20%	C4042			
C8	Ceramic 470pF \pm 10%				
C9	Polystyrene Film 220pF \pm 5%				
C10	Ceramic 100pF \pm 10%				
C11	Silver-Mica 10pF \pm 5%				
C12	Ceramic 0.04 μ F +80%, -20%				
C13	Silver-Mica 22pF \pm 5%				
C14	Ceramic 0.01 μ F +80%, -20%				
Tc1 ~3	Ceramic (ECV-1ZW20P12)				
RESISTORS					
R1 ~4	Fixed Carbon Composition 10k Ω \pm 5% 1/4W				
R5	Fixed Carbon Composition 33k Ω \pm 5% 1/4W				
R6	Fixed Carbon Composition 6.8k Ω \pm 5% 1/4W				
R7	Fixed Carbon Composition 1k Ω \pm 5% 1/4W				
R8	Fixed Carbon Composition 68k Ω \pm 5% 1/4W				
R9	Fixed Carbon Composition 100 Ω \pm 5% 1/4W				
TRANSISTOR/DIODE					
Q1, 2	2SC460 (B)				
D1 ~4	1S1555				
CRYSTAL/COIL					
X1	3395.0 kHz	T13-98			
X2	3396.5 kHz	T13-97			
X3	3393.5 kHz	T13-95			
-	OSC Coil				
L1 ~6	Ferri-Inductor (FL5H102K)				
MISCELLANEOUS					
-	Printed Circuit Board	J05-0029-04			
-	Terminal x 7	E23-0003-04			
-	Shield Patch	F10-0012-04			
-	Shield Box	F11-0015-04			
-	P.V.C. Insulated Wire (Red 0.5 ϕ) 0.08m	W02-52			
-	P.V.C. Insulated Wire (Yellow 0.5 ϕ) 0.08m	W02-54			
-	Tapping Screw (\oplus T2M3 x 6G) x 8				

■ UC1505J

CAPACITORS			
C1	Ceramic 0.01 μ F \pm 20%	C4051	
C2	Silver-Mica 150pF \pm 5%		
C3	Temperature Compensating Ceramic 100pF \pm 5%		
C4	Silver-Mica 150pF \pm 5%		
C5	Ceramic 0.04 μ F +80%, -20%		
C6	Silver-Mica 39pF \pm 5%		
C7	Silver-Mica 33pF \pm 5%		
C8	Silver-Mica 82pF \pm 5%		
C9	Silver-Mica 200pF \pm 5%		
C10	Ceramic 50pF \pm 10%		
C11	Ceramic 5pF \pm 0.5pF		
C12	Ceramic 0.04 μ F +80%, -20%		
C13	Silver-Mica 47pF \pm 5%		
CT1	Ceramic Trimmer		

PARTS DESCRIPTION LIST

(Custom De Luxe)

Symbol No.	Description	Part No.	Remarks
RESISTORS			
R1	Fixed Carbon Composition 47kΩ ±5% 1/4W		
R2	Fixed Carbon Composition 10kΩ ±5% 1/4W		
R3	Fixed Carbon Composition 100Ω ±5% 1/4W		
R4	Fixed Carbon Composition 47kΩ ±5% 1/4W		
R5	Fixed Carbon Composition 4.7kΩ ±5% 1/4W		
R6	Fixed Carbon Composition 220kΩ ±5% 1/4W		
R7	Fixed Carbon Composition 1MΩ ±5% 1/2W		
R8~10	Fixed Carbon Composition 4.7kΩ ±5% 1/4W		
TRANSISTORS/DIODE			
Q1	2SC373 or 2SC458 (B)		
Q2, 3	2SC373		
Q4	2SC373 or 2SC458 (B)		
D1	1N60		
MISCELLANEOUS			
—	Printed Circuit Board (A)	J25-0023-14	
—	Printed Circuit Board (B)	J19-0016-19	
L1	Ferri-Inductors (FL-9H-123J)		
X1	Crystal Resonator		
—	Crystal Holder	J19-0013-04	
—	Terminal x 4	N4086	

■ UC1010J

CAPACITOR			
C1	Electrolytic Tubular	100μF 16WV	
RESISTORS			
R1	Fixed Carbon Composition 10kΩ ±5% 1/4W		
R2	Fixed Carbon Composition 68kΩ ±5% 1/4W		
R3	Fixed Carbon Composition 330Ω ±5% 1/4W		
R4	Fixed Carbon Composition 470Ω ±5% 1/4W		
R5	Fixed Carbon Composition 1kΩ ±5% 1/4W		
R6	Fixed Carbon Composition 2.2kΩ ±5% 1/4W		
R7	Fixed Carbon Composition 2.7kΩ ±5% 1/4W		
R8	Fixed Carbon Composition 2.2kΩ ±5% 1/4W		
R9	Fixed Carbon Composition 470Ω ±5% 1/4W		
R10	Fixed Carbon Composition 3.9kΩ ±5% 1/4W		
R11	Fixed Carbon Composition 1kΩ ±5% 1/4W		
TRANSISTORS/DIODE			
Q1	2SA537 (C)		
Q2~4	2SC372		
D1	RD6A		
POTENTIOMETERS			
VR1	500Ω (B)	R10-93	
VR2	10k (B)	R12-3003-05	
MISCELLANEOUS			
—	Printed Circuit Board	J25-0028-04	
—	Terminal x 7	N4085	

PARTS DESCRIPTION LIST

(Custom De Luxe)

■ UC1307J				
Symbol No.	Description	Part No.	Remarks	
CAPACITORS				
C1	Electrolytic Tubular	1 μ F	50WV	
C2	Electrolytic Tubular	100 μ F	3.15WV	
C3	Electrolytic Tubular	33 μ F	16WV	
C4	Electrolytic Tubular	10 μ F	16WV	
C5	Ceramic	0.004 μ F	\pm 20%	
C6	Electrolytic Tubular	47 μ F	3.15WV	
C7	Electrolytic Tubular	33 μ F	16WV	
C8	Electrolytic Tubular	220 μ F	16WV	
RESISTORS				
R1	Fixed Carbon Film	22k Ω	\pm 5%	1/4W
R2	Fixed Carbon Film	10k Ω	\pm 5%	1/4W
R3	Fixed Carbon Film	1k Ω	\pm 5%	1/4W
R4	Fixed Carbon Film	470 Ω	\pm 5%	1/4W
R5	Fixed Carbon Film	1k Ω	\pm 5%	1/4W
R6	Fixed Carbon Film	1.5k Ω	\pm 5%	1/4W
R7	Fixed Carbon Film	220 Ω	\pm 5%	1/4W
R8	Fixed Carbon Film	470 Ω	\pm 5%	1/4W
R9	Fixed Carbon Film	33 Ω	\pm 5%	1/4W
R10	Fixed Carbon Film	10k Ω	\pm 5%	1/4W
R11, 12	Resin Coated Wire Wound	0.47 Ω	\pm 10%	1/2W
TRANSISTORS/THERMISTOR				
Q1	2SC733 (Y)			
Q2	2SC734 (Y)			
Q3	2SD90 (Red)			
Q4	2SB473 (C.D.N.)			
TH1	5T-31			
MISCELLANEOUS				
—	Printed Circuit Board			J25-0027-04
VR1	500 Ω (B)			R10-93
—	Terminal x 4			N4085
—	Pan Head Screw	(\oplus P3 x 8 – F – ISO)	x 4	
—	Nut	(N3 – F – ISO)	x 4	
—	Toothed Lock Washer	(KW13 – F)	x 4	

■ UC0113J

CAPACITORS				
C1	Super-Mica	330pF	\pm 5%	
C2	Ceramic	0.04 μ F	+100%, –0%	
C3	Silver-Mica	82pF	\pm 5%	
C4	Silver-Mica	10pF	\pm 5%	
C5	Silver-Mica	33pF	\pm 5%	
C6	Ceramic	0.01 μ F	+100%, –0%	
C7	Ceramic	0.04 μ F	+100%, –0%	
CT1	Ceramic Trimmer	(ECV-1ZW40P12)		C4047
RESISTORS				
R1	Fixed Carbon Composition	6.8k Ω	\pm 5%	1/4W
R2	Fixed Carbon Composition	47k Ω	\pm 5%	1/4W

PARTS DESCRIPTION LIST

(Custom De Luxe)

Symbol No.	Description	Part No.	Remarks
R3	Fixed Carbon Composition 3.3kΩ ±5% 1/4W		
R4	Fixed Carbon Composition 100kΩ ±5% 1/4W		
TRANSISTOR/DIODE			
Q1, 2	2SC460 (B)		
D1	1N60		
MISCELLANEOUS			
—	Printed Circuit Board	S23-273	
—	Ferri-Inductor (FL-5H100K)		
—	Ferri-Inductor (FL-5H102K)		
—	Terminal x 5	N4085	

■ Custom Special (M)

Description	Modification		Page	Application
	Before	After		
M Type Receptacle	—	E07-11M	2	Add
Name Plate (3), 144 MHz	B42-0013-04	—	2	Cancel
Model Name Plate	B40-0045-04	B40-0050-04	2	Change
Filter Block	UC1213J	UC1213J3	1	Change
Converter Block 144 MHz	—	UC2301J	1	Add

■ Custom Special (X)

Description	Modification		Page	Application
	Before	After		
Back Panel	A23-0014-03	A23-0019-03	2	Change
Patch	A90-364	—	2	Cancel
Cord Bushing	G11-01	G11-18	2	Change
Name Plate (2) 50 MHz	B42-0012-04	—	2	Cancel
Name Plate (3) 144 MHz	B42-0013-04	—	2	Cancel
Model Name Plate	B40-0045-04	B40-0050-04	2	Cancel
Tuning Coil	—	L31-0042-04	3	Add
Name Plate (for Changeover-Switch)	—	B42-0029-04	2	Add
Name Plate (for A.C. Supply)	—	B42-0030-04	2	Add
Filter Block	UC1213J	UC1213J2	1	Change
Converter Block 50 MHz	—	UC2302J	1	Add
Converter Block 144 MHz	—	UC2301J	1	Add
A.C. Cord	W12-01	W12-030	3	Change

PARTS DESCRIPTION LIST

(Custom De Luxe)

Symbol No.	Description	Part No.	Remarks
■ UC2301J			
CAPACITOR			
C1, 2	Mica	3pF ±0.5pF	
C3~7	Ceramic	0.01μF +80% -20%	
C8	Mica	3pF ±0.5pF	
C9	Mica	5pF ±0.5pF	
C10	Mica	3pF ±0.5pF	
C12~14	Ceramic	0.01μF +80% -20%	
C15	Ceramic	22pF ±5%	
C16	Mica	15pF ±5%	
C17	Ceramic	470pF ±10%	
C18	Ceramic	0.01μF ±80% -20%	
C19	Mica	22pF ±5%	
C20, 21	Ceramic	0.01μF +80% -20%	
C22	Ceramic	22pF ±5%	
C23	Ceramic	0.01μF +80% -20%	
C24	Mica	22pF ±5%	
C25, 26	Ceramic	0.01μF +80% -20%	
C27	Ceramic	22pF ±5%	
C28	Ceramic	0.01μF +80% -20%	
C29	Mica	15pF ±5%	
RESISTOR			
R1~3	Insulated Carbon Film	100kΩ ±5% 1/4W	
R4	Insulated Carbon Film	5.6kΩ ±5% 1/4W	
R5	Insulated Carbon Film	1kΩ ±5% 1/4W	
R6	Insulated Carbon Film	100kΩ ±5% 1/4W	
R7	Insulated Carbon Film	3.3kΩ ±5% 1/4W	
R8	Insulated Carbon Film	1kΩ ±5% 1/4W	
R9	Insulated Carbon Film	470Ω ±5% 1/4W	
R10	Insulated Carbon Film	1kΩ ±5% 1/4W	
R11	Insulated Carbon Film	390Ω ±5% 1/4W	
R12	Insulated Carbon Film	68kΩ ±5% 1/4W	
R13	Insulated Carbon Film	6.8kΩ ±5% 1/4W	
R14	Insulated Carbon Film	1kΩ ±5% 1/4W	
R15	Insulated Carbon Film	390Ω ±5% 1/4W	
R16	Insulated Carbon Film	68kΩ ±5% 1/4W	
R17	Insulated Carbon Film	6.8kΩ ±5% 1/4W	
POTENTIOMETER/QUARTZ CRYSTAL			
VR1, 2	50kΩ (B)		R10-56
X1	HC-18/μ	38,666MHz	L77-0033-05
X2	HC-18/μ	39,233MHz	L77-0034-05
TRANSISTOR/DIODE/VARICAP.			
Q1	2SK-19 (GR)		
Q2	3SK-22 (GR)		
Q3, 4	2SC 535 (B)		
Q5	2SC 384 (O)		
D1, 2	1N60		
D3	RD-4A		
D4, 5	1S-85 (W)		

PARTS DESCRIPTION LIST

(Custom De Luxe)

Symbol No.	Description	Part No.	Remarks
COIL/TRIMMER			
L1	VHF Coil	L34-0028-04	
L3	VHF Coil	L34-0029-04	
L4	TUNING Coil	L31-0039-04	
L5, 6	TUNING Coil	L31-0040-04	
L7	VHF Coil	L34-0030-04	
	Choke Coil	L20-010D	
MISCELLANEOUS			
—	Printed Circuit Board	J25-0038-03	
—	Shield Board (A)	F10-0031-04	
—	Shield Board (B)	F10-0032-04	
—	Terminal	x 9 N4085	
—	P.V.C. Insulated Wire	(0.5/s) 0.6m W02-59	
—	P.V.C. Insulated Wire	(0.5φ, TCW) 0.1m W03-05	

■ UC2302J

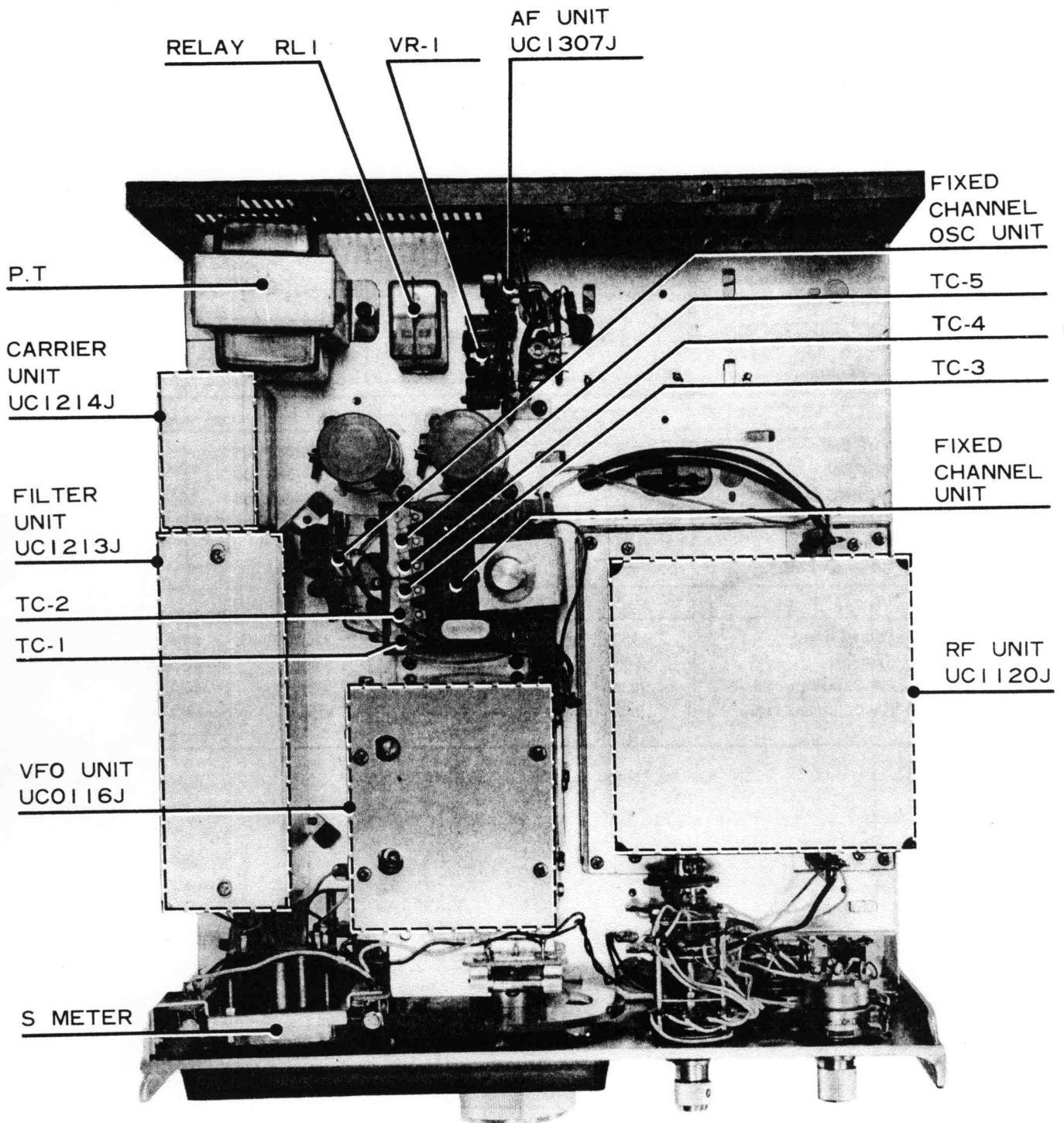
CAPACITOR					
C1	Mica	10pF	±0.5pF		
C2	Mica	33pF	±10%		
C3~5	Ceramic	0.01μF	+80%	-20%	
C6	Ceramic	0.04μF	+80%	-20%	
C7	Ceramic	0.01μF	+80%	-20%	
C8, 9	Mica	10pF	±0.5pF		
C10	Ceramic	0.01μF	+80%	-20%	
C11	Mica	10pF	±0.5pF		
C12, 13	Ceramic	0.01μF	+80%	-20%	
C14	Ceramic	47pF	±5%		
C15	Ceramic	0.01μF	+80%	-20%	
C16	Ceramic	0.001μF	+80%	-20%	
C17	Mica	47pF	±5%		
C18, 19	Ceramic	0.01μF	+80%	-20%	
C20	Ceramic	22pF	±5%		
C21	Ceramic	0.01μF	+80%	-20%	
C22	Mica	47pF	±5%		
C23, 24	Ceramic	0.01μF	+80%	-20%	
C25	Ceramic	22pF	±5%		
C26	Ceramic	0.01μF	+80%	-20%	
C27	Mica	15pF	±5%		
RESISTOR					
R1~3	Insulated Carbon Film	100kΩ	±5%	1/4W	
R4	Insulated Carbon Film	5.6kΩ	±5%	1/4W	
R5	Insulated Carbon Film	1kΩ	±5%	1/4W	
R6, 7	Insulated Carbon Film	100kΩ	±5%	1/4W	
R8	Insulated Carbon Film	3.3kΩ	±5%	1/4W	
R9	Insulated Carbon Film	470Ω	±5%	1/4W	
R10	Insulated Carbon Film	1kΩ	±5%	1/4W	
R11	Insulated Carbon Film	390Ω	±5%	1/4W	
R12	Insulated Carbon Film	68kΩ	±5%	1/4W	
R13	Insulated Carbon Film	6.8kΩ	±5%	1/4W	
R14	Insulated Carbon Film	1kΩ	±5%	1/4W	

PARTS DESCRIPTION LIST

(Custom De Luxe)

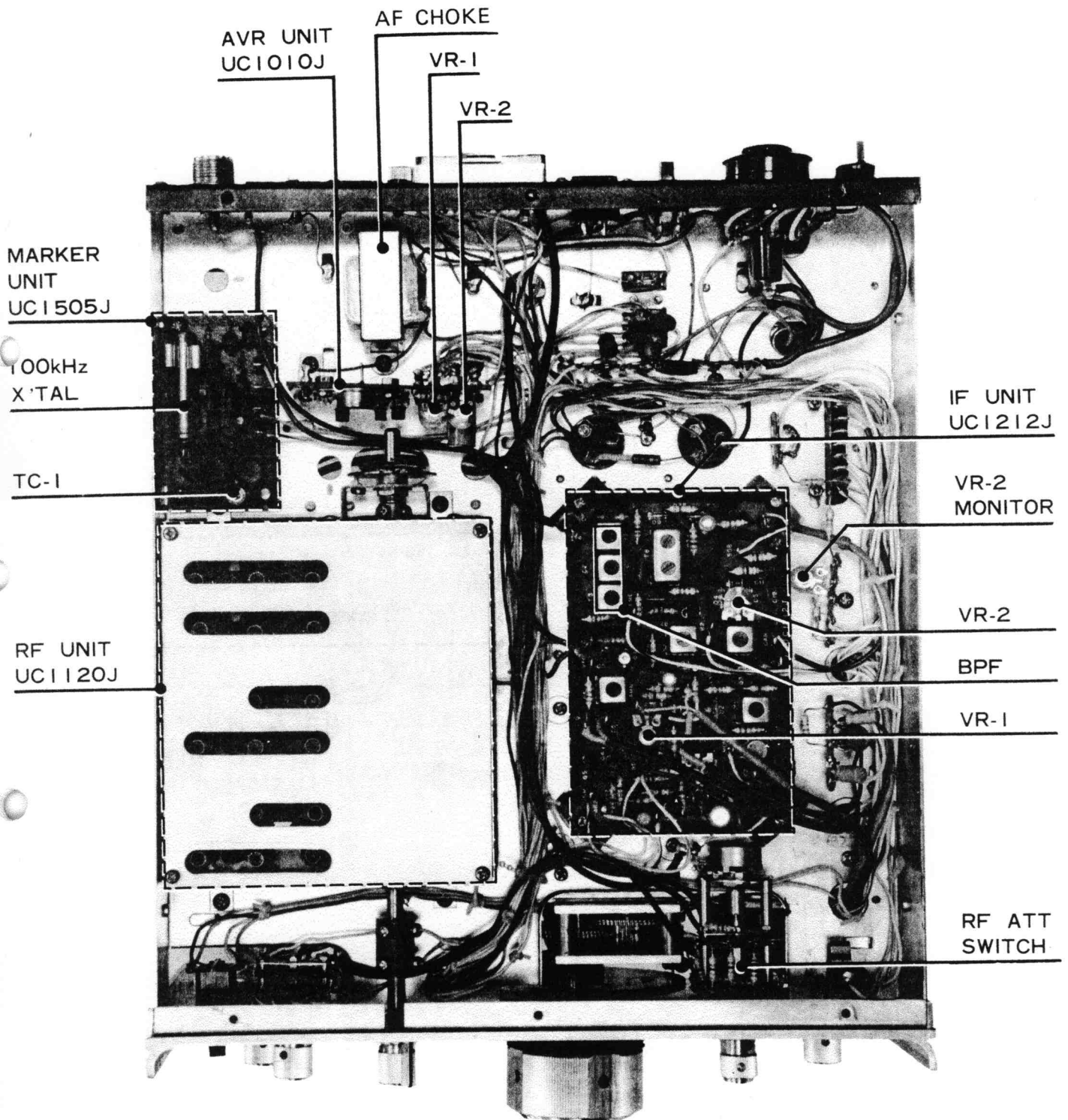
Symbol No.	Description	Part No.	Remarks
R15	Insulated Carbon Film 390Ω ±5% 1/4W		
R16	Insulated Carbon Film 68kΩ ±5% 1/4W		
R17	Insulated Carbon Film 6.8kΩ ±5% 1/4W		
R18	Insulated Carbon Film 47kΩ ±5% 1/4W		
POTENTIOMETER/QUARTZ CRYSTAL			
VR1~3	50kΩ (B)	R10-56	
X2	HL-18/μ 23,700MHz	L77-0035-05	
X4	HC-18/μ 22,000MHz	T13-115	
TRANSISTOR/DIODE/VARICAP.			
Q1	2SK-19 (GR)		
Q2	3SK-22 (GR)		
Q3, 4	2SC 785 (R)		
D1, 2	1N60		
D3	RD-4A		
D4~6	1S-85 (W)		
COIL/TRIMMER			
L1	VHF Coil	L34-0031-04	
L2	VHF Coil	L34-0032-04	
L3	TUNING Coil	L31-0039-04	
L4, 5	TUNING Coil	L31-0041-04	
CT1, 3, 4	Trimmer 10P	C4035	
CT2	Trimmer 6P	C4036	
MISCELLANEOUS			
—	Printed Board	J25-0039-03	
—	Terminal x 8	N4085	
—	P.V.C. Insulated Wire (0.5/s P.V.C.) 0.7m	W02-59	
—	P.V.C. Insulated Wire (0.5φ TCW) 0.2m	W03-05	

CHASSIS TOP VIEW



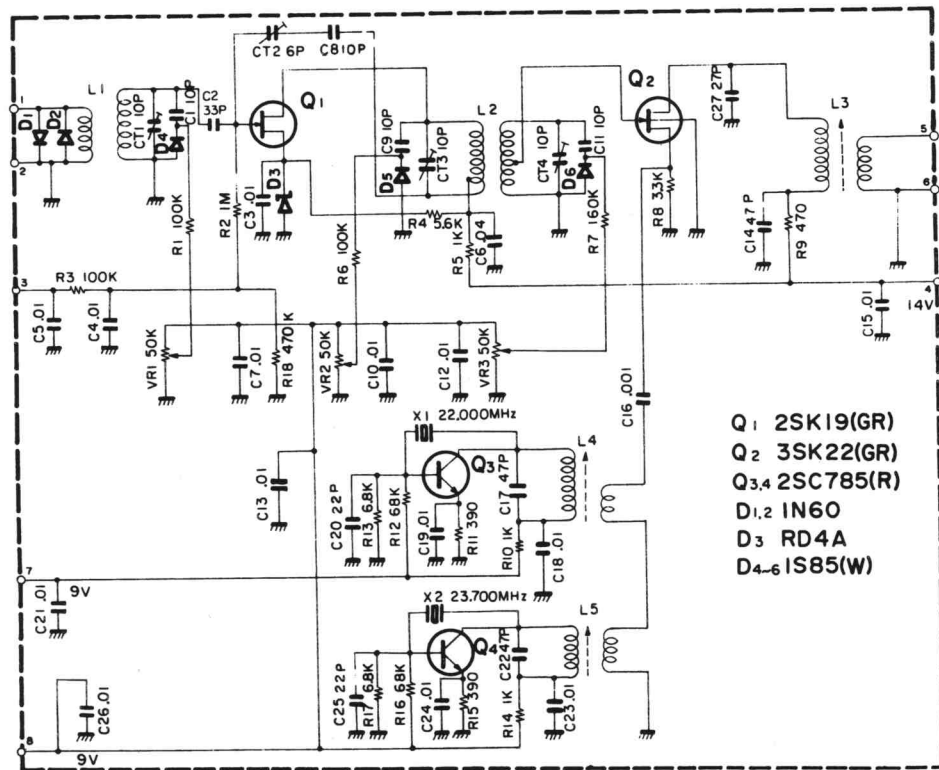
(This is Custom De Luxe, Custom Special is set Converter Block UC2301J, UC2302J on the TOP.)

CHASSIS BOTTOM VIEW

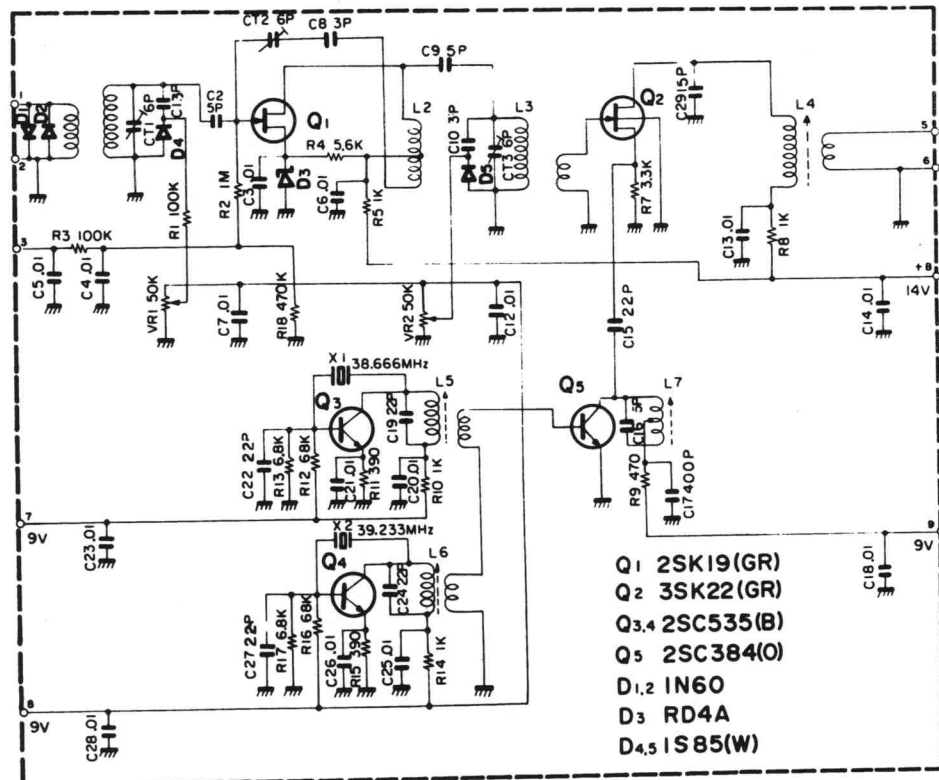


SCHEMATIC DIAGRAM

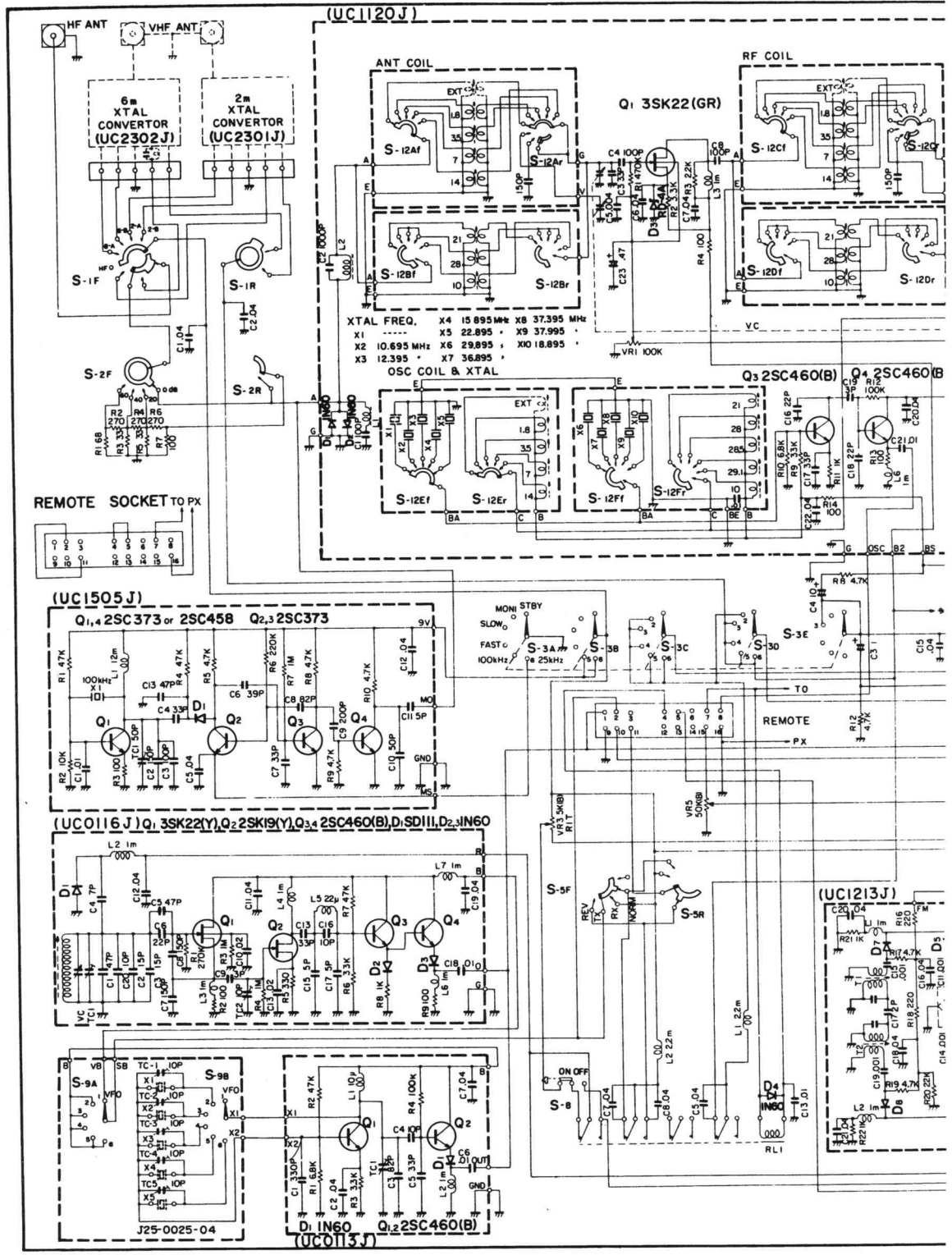
UC2302J



UC2301J



SCHEMATIC

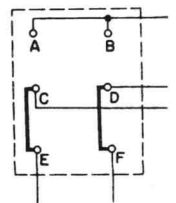


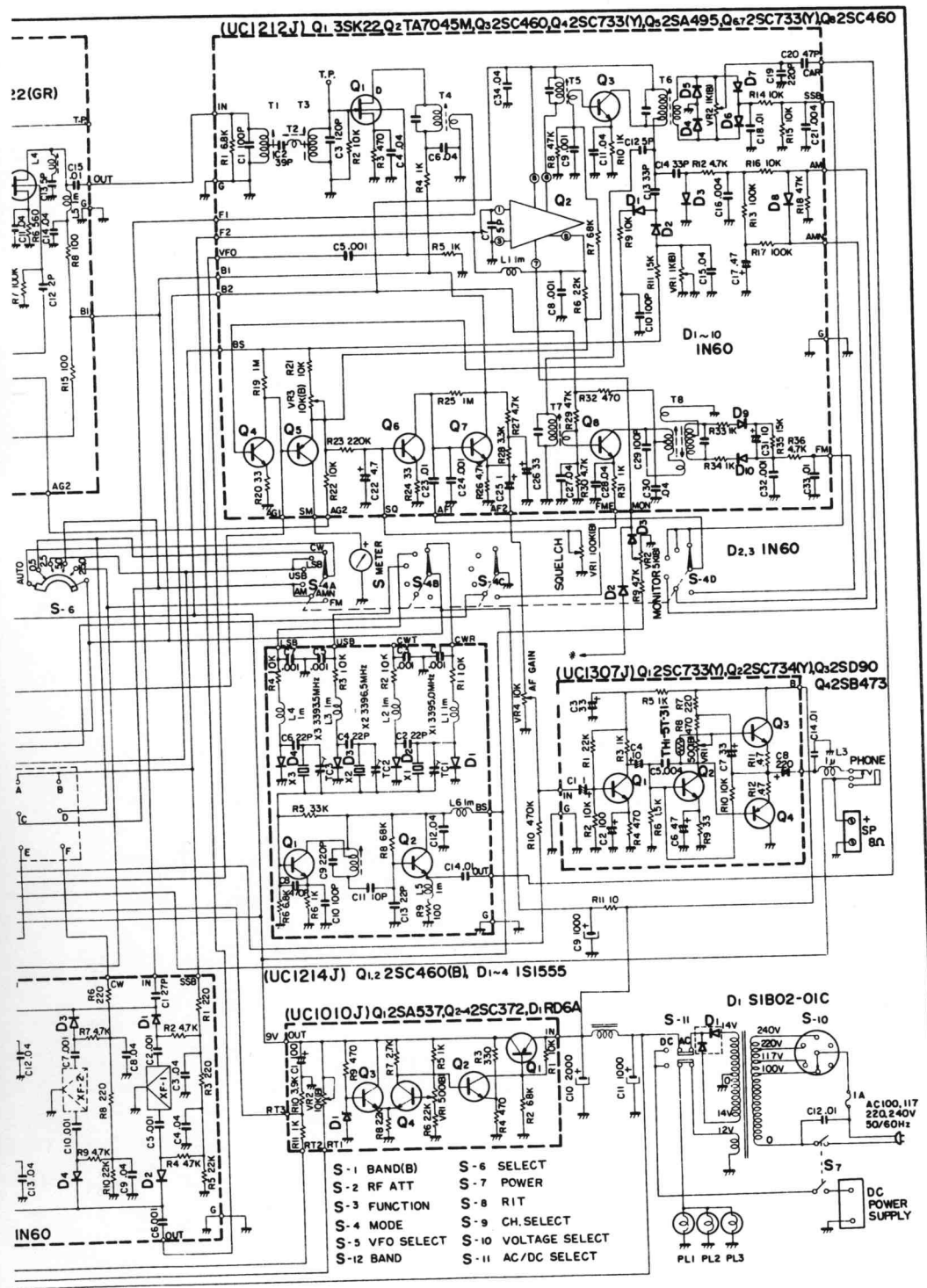
CAUTION

For Custom SPECIAL (X) type Models, the wiring inside the block marked * is changed as shown at right.

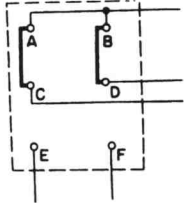
This model is also equipped with a 2-meter and 6-meter Xtal Converter Sections (UC2301J) (UC2302J).

It also is equipped with XF-2 and XF-3 of UC1213J and the block code number is UC1213J2.

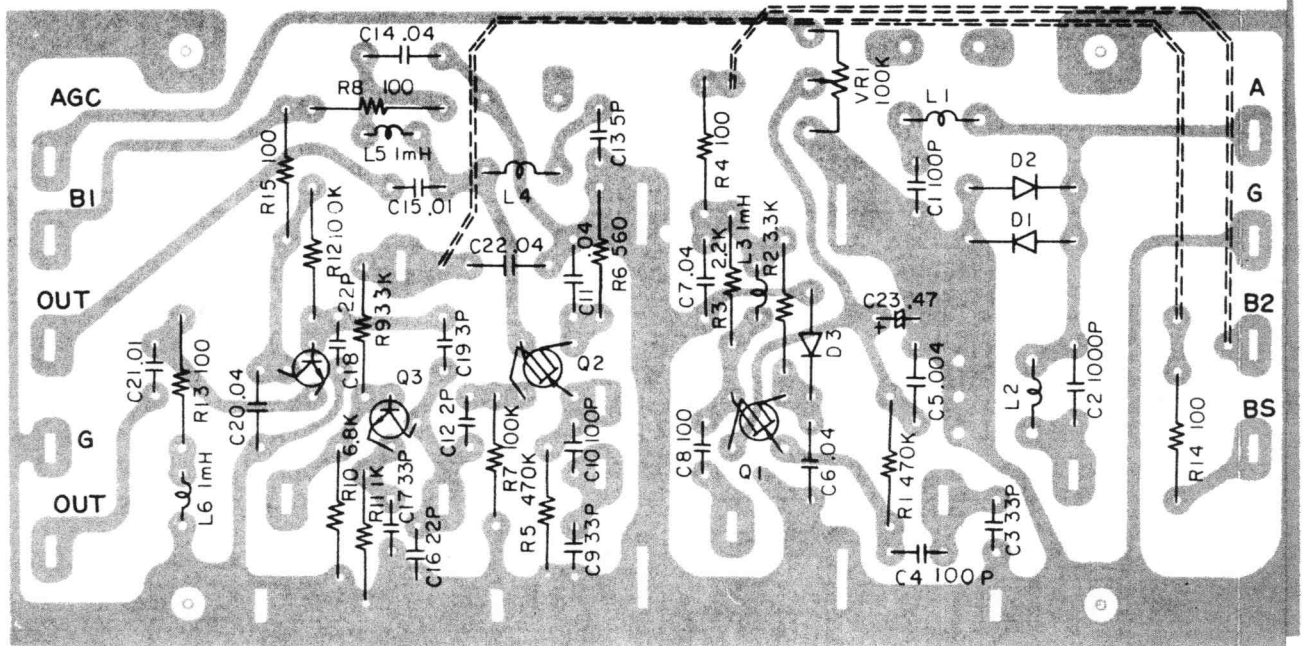




For Custom DELUXE type Models, the wiring inside the block marked * is changed as shown at right. This model is not equipped with a 2-meter and 6-meter Xtal Converters.



UC1120J



Q1,2 3SK22 (GR), Q3,4 2SC460 (B)

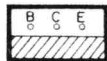
3SK22



2SA495



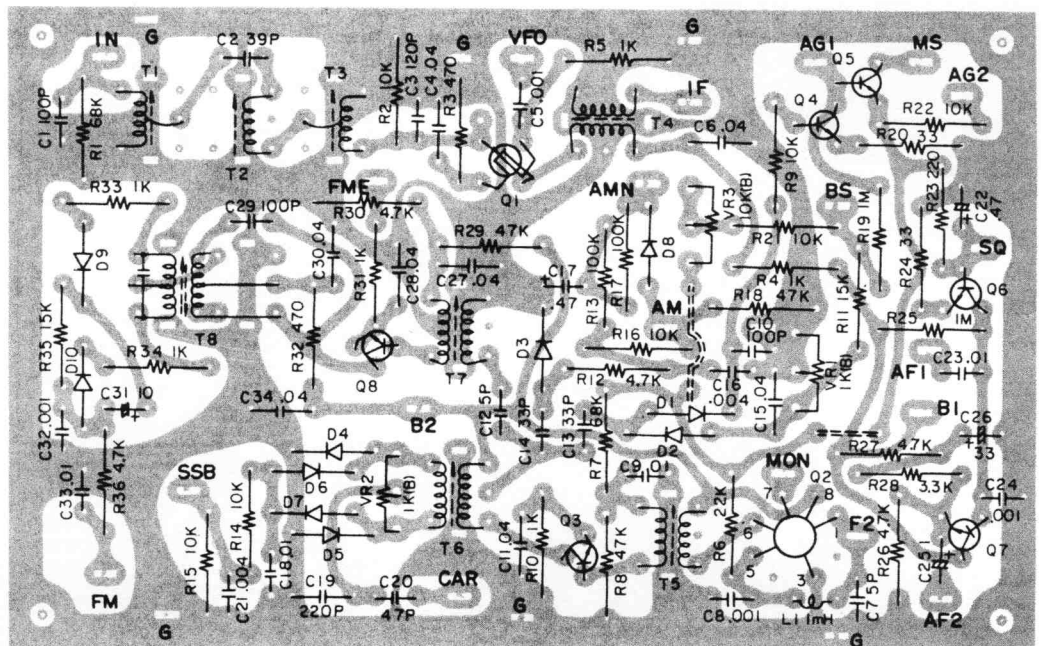
2SC460B
2SC460



2SC733Y



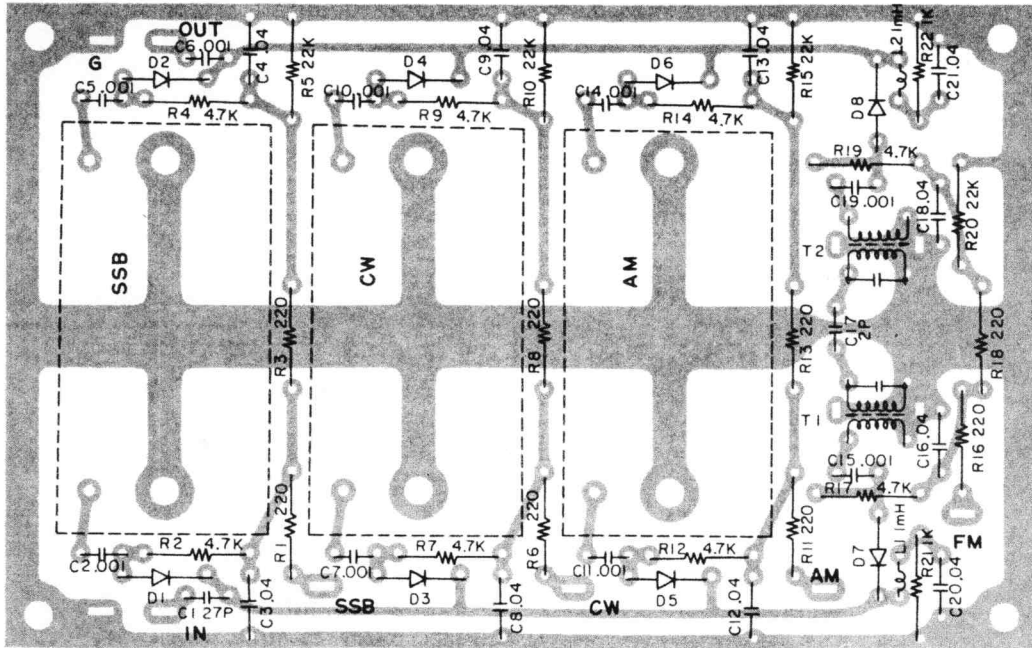
UC1212J



Q1 3SK22, Q2 TA7045M, Q3 2SC460, Q4 2SC733(Y), Q5 2SA495, Q6,7 2SC733(Y), Q8 2SC460

BLUES-PHANTOM VIEWS

UC1213J



D1~8 IN60

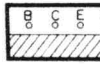
2SK19Y



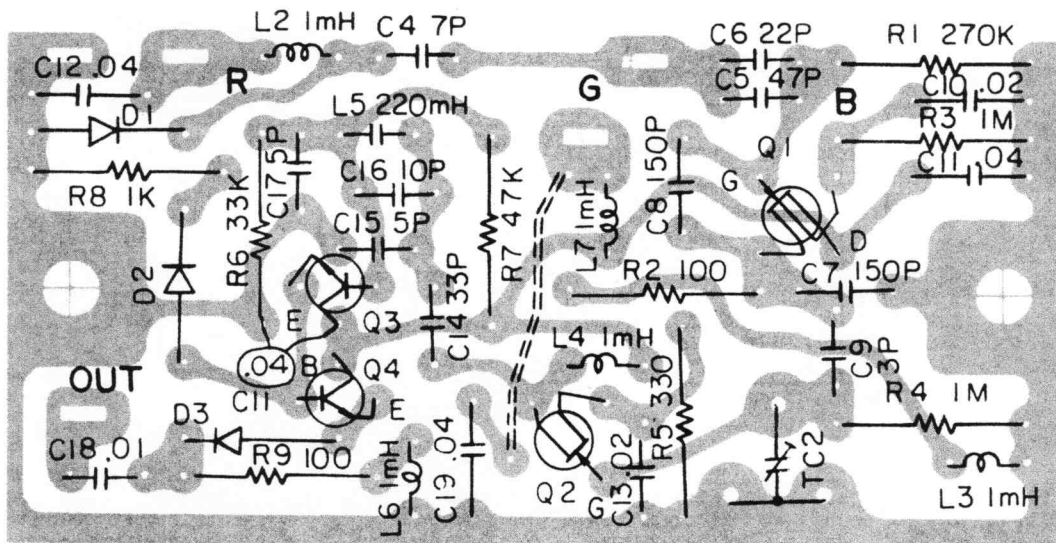
3SK22



2SB460B



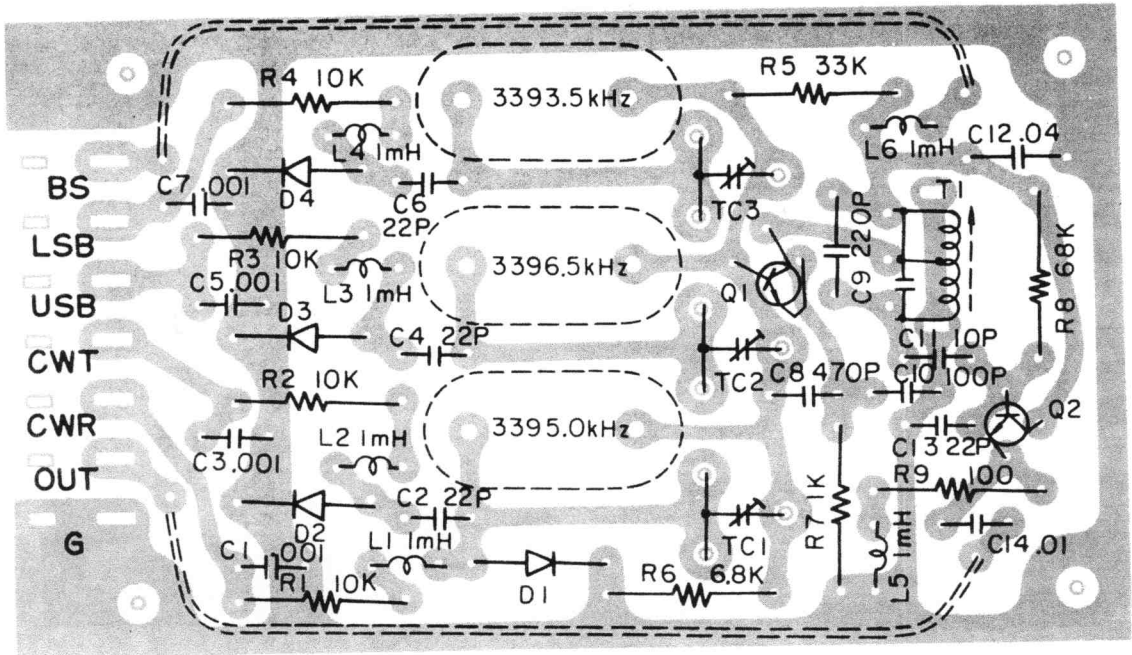
UC0116J



Q1 3SK22(Y), Q2 2SK19(Y), Q3,4 2SC460(B), D SDIII, D2,3 IN60

SEALED CIRCUIT ASSEMBLIES-PHANTOM VIEWS

UC1214J



D1~4 1S1555, Q1,2 2SC460(B)

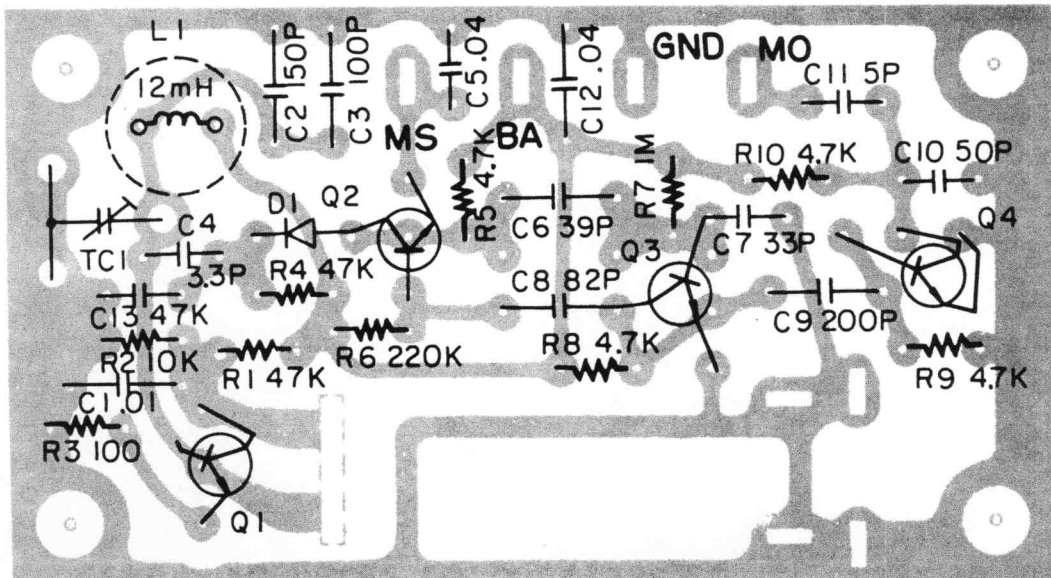
2SB460

2SC458

2SC373



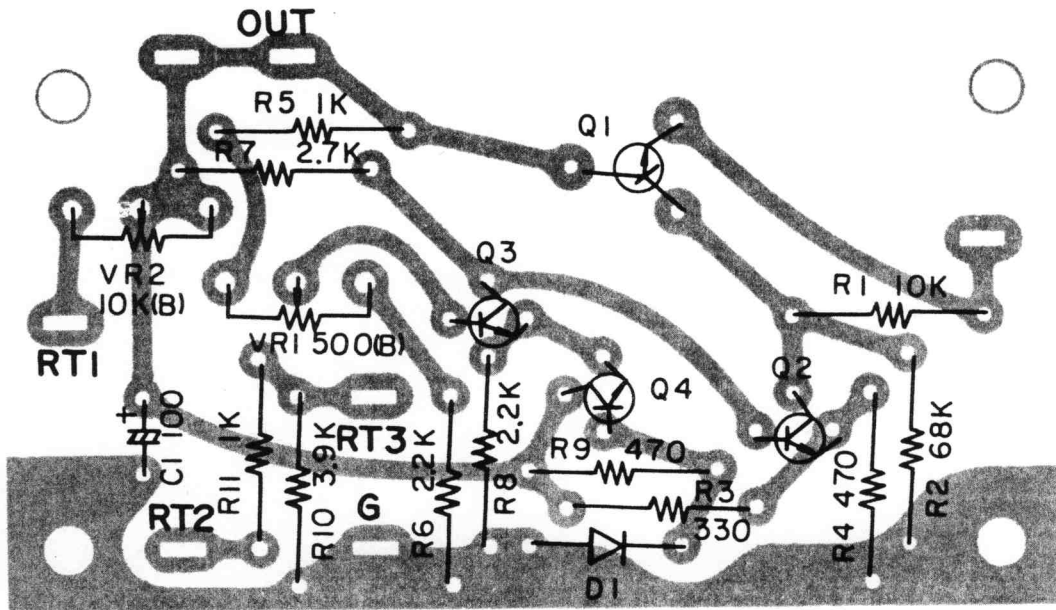
UC1505J



Q1,4 2SC458 or 2SC373, Q2,3 2SC373, D1 IN60

SEALED CIRCUIT ASSEMBLIES-PHANTOM VIEWS

UC1010J

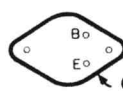


Q1 2SA537, Q2~4 2SC372, D1 RD6A

2SA537

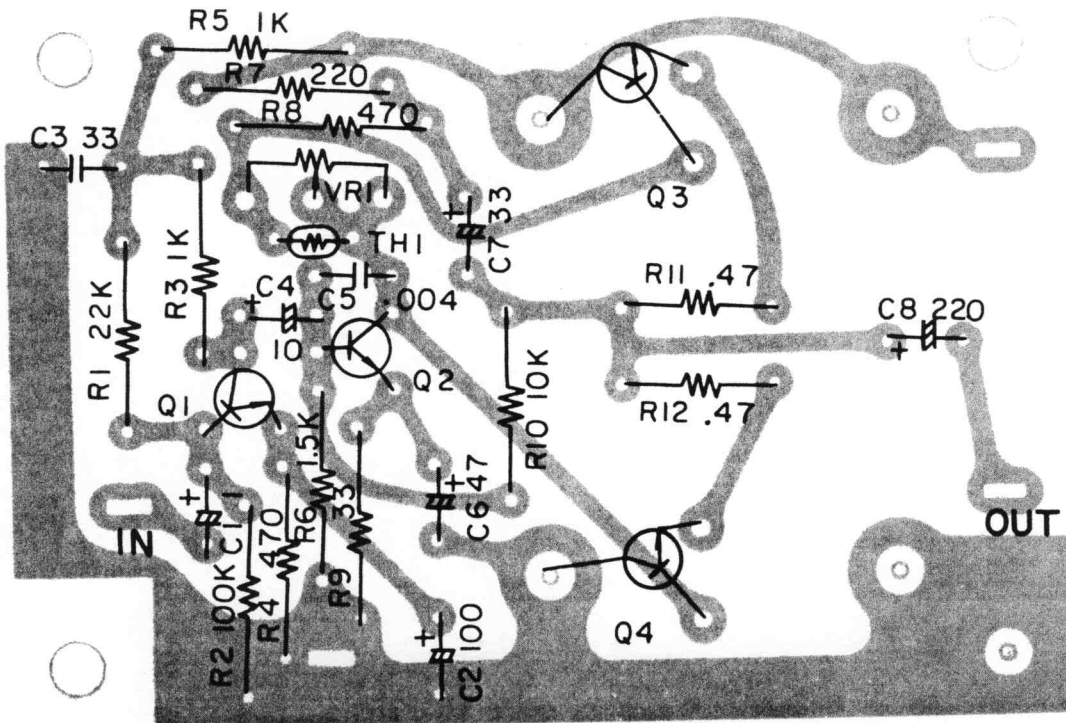
2SC734
2SC372
2SC733

2SD90
2SD473



CASE COLLECTOR

UC1307J

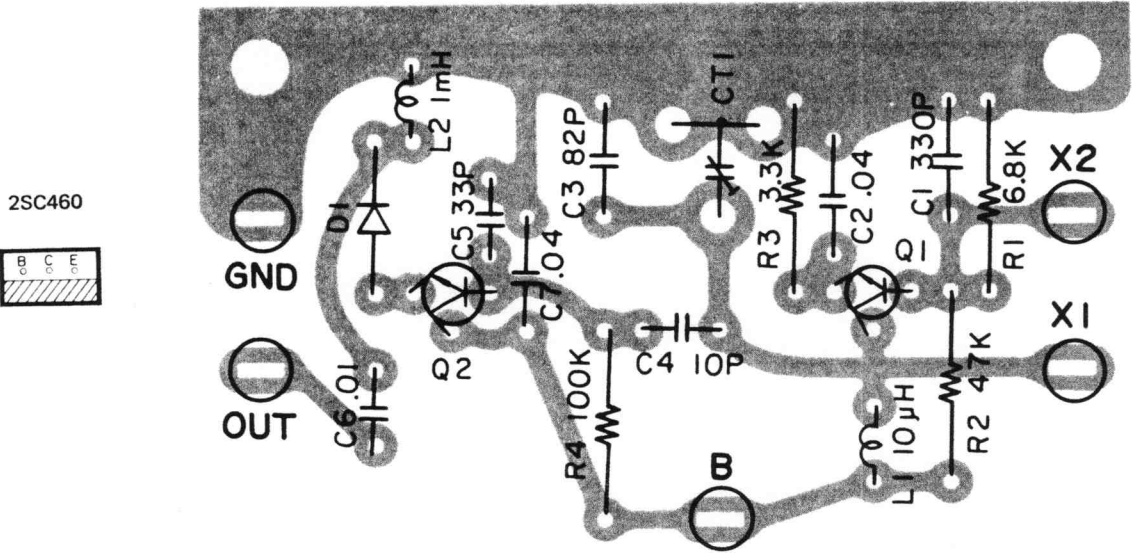


Q1 2SC733(Y), Q2 2SC734(Y), Q3 2SD90, Q4 2SB473

TH1 5T-31.

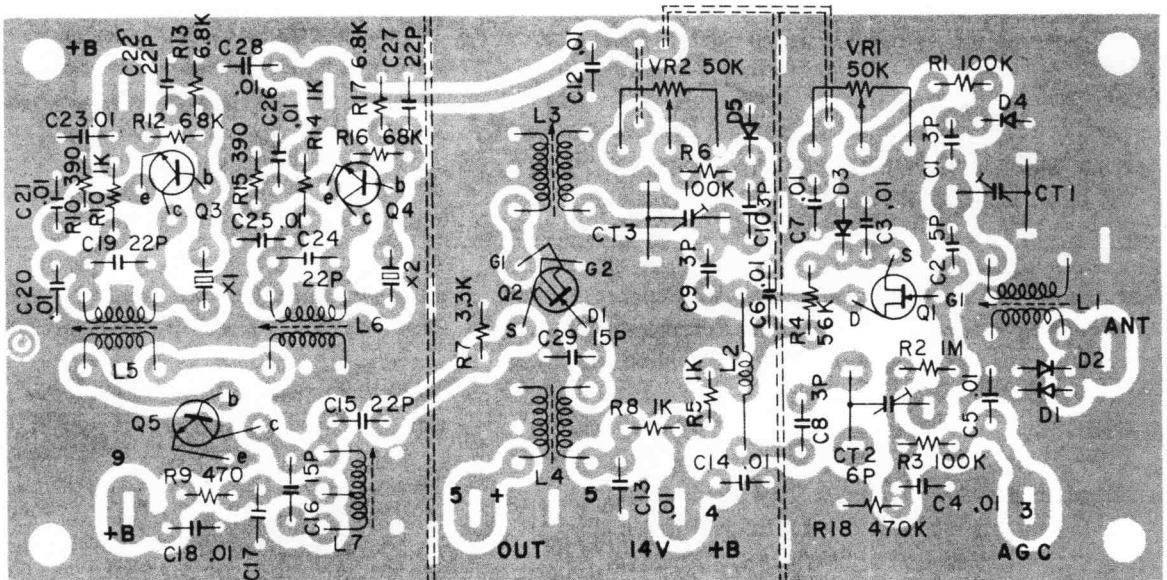
SEALED CIRCUIT ASSEMBLIES-PHANTOM VIEWS

UC0113J

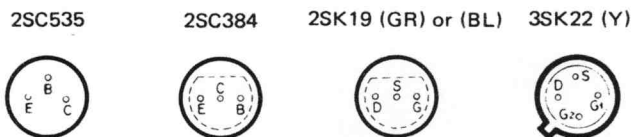


Q1,2 2SC460(B), D1 1N60

UC2301J

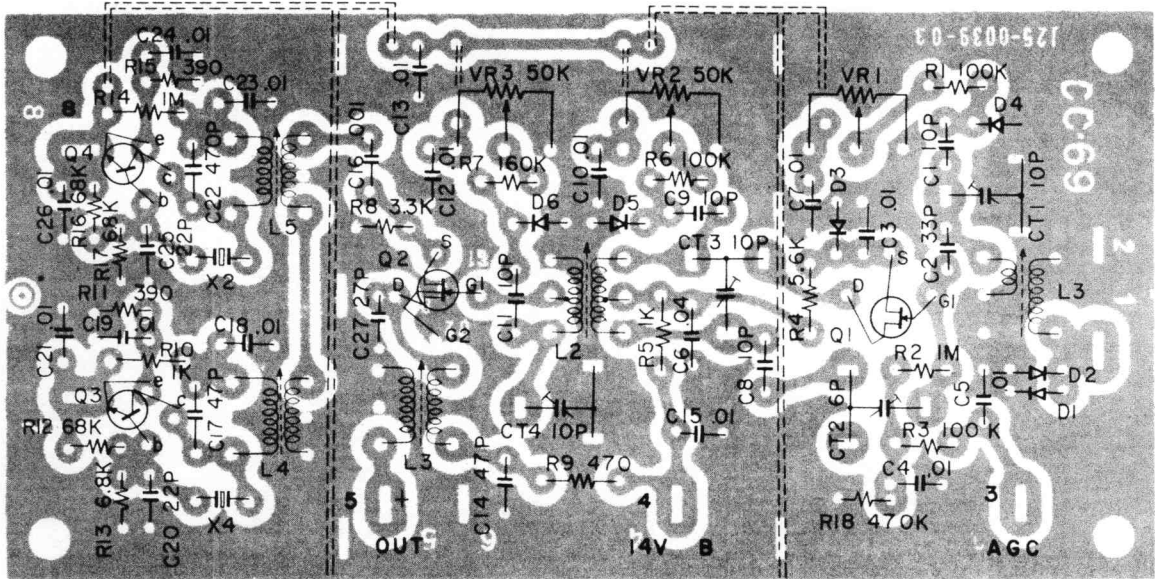


Q1 2SK19(GR), Q2 3SK 22(GR), Q3,4 2SC535(B), Q5 2SC384(O) D1,2 1N 60
D3 RD4A D4,5 1S85(W)



SEALED CIRCUIT ASSEMBLIES-PHANTOM VIEWS

UC2302J



Q1 2SK19(GR), Q2 3SK22(GR), Q3,4 2SC785(R) D1,2 1N60 D3 RD4A
 D4,6 1S85(W) X1 22.000MHz X2 23.700MHz

2SK19 (GR) or (BL)



3SK22 (Y)



2SC785 (R)

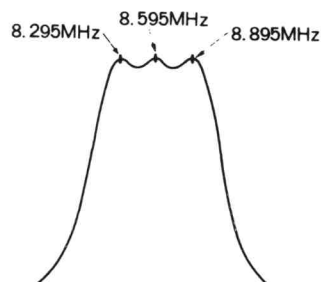


ALIGNMENT PROCEDURE

I. Preliminary Operations

Place operating controls at the following position:

- 1) Front panel controls
 MODE at USB.
 FUNCTION at FAST.
 RF ATT at O.
 VFO SELECT at NORM.
 SELECTIVITY at AUTO.
 SQUELCH at OFF.
 RIT at O.
 BAND at 14 (HF).
 POWER at ON.
- 2) Control within the set
 Channel selector switch at VFO.
- 3) Rear panel
 Connect a 8Ω dummy resistor to the output terminal
 (Check to see that VOLTAGE SELECTOR and
 AC-DC selector switches are in the normal positions,
 as selected depending on the type of power source).



II. Voltage Check of AVR Unit (UC-1010J)

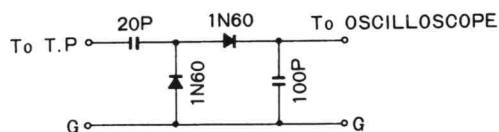
With a DC vacuum tube voltmeter connected across the OUT terminals of AVR unit UC-1010J, check to see that the voltmeter reads 9.0V. If not, adjust variable resistor VR1 on the unit until the meter reads 9.0V.

III. Current Check of AF Unit (UC-1307J)

Disconnect the output lead wires from terminals B of AF unit UC-1307J and connect an ammeter across terminals B. Check that the ammeter reads 40mA with no signal applied to the receiver input under the above condition. If not, adjust variable resistor VR1 on the unit until the meter reads 40mA.

IV. Adjustment of IF Unit (UC-1212J)

- 1) Adjustment of B.P.F
 - (1) Connect a sweep signal generator (model WO-1 with 8.295, 8.595 and 8.895MHz markers or its equivalent) to terminal T.P on RF unit UC-1120J.
 - (2) Connect an oscilloscope through the detector specified below to terminal T.P of IF unit UC-1212J.



- (3) Adjust transformers T1, T2 and T3 on the unit until the oscilloscope displays the characteristic curve shown below.

V. Adjustment of RIT Control

- 1) Set the RIT control on the front panel to just 0.
- 2) Connect a DC vacuum tube voltmeter to the RIT terminal of VFO.
- 3) Adjust variable resistor VR2 on AVR unit UC-1010J until the DC vacuum tube voltmeter remains undeflected when the RIT switch on the front panel is turned on and off.

VI. Adjustment of VFO Unit (UC-0116J)

Apply a marker signal of 14.0MHz (or harmonic of 3.5 or 1MHz marker signal) from the marker oscillator to the antenna input.

Adjust the main tuning dial under the above condition until the VFO zero beats with the marker signal. Turn the main dial scale manually until its zero graduation is aligned to the red line index provided above the tuning dial.

VII. Adjustment of RF Unit (UC-1120J)

- 1) Adjustment of OSC coils
 - (1) Connect a HF vacuum tube voltmeter to the OSC terminal of RF unit UC-1120J.
 - (2) Set the BAND switch to 1.8MHz.
 - (3) Adjust the core of the 1.8 OSC coil until the oscillator voltage is set to a value one dB below the maximum voltage, as measured on the voltmeter. Fix the core in that position.
 - (4) Repeat steps (2) and (3) to all bands.
- 2) Adjustment of ANT and RF Coils
 With the MODE switch set at AM, connect a SSG to the ANT terminal and an AF vacuum tube voltmeter to the output terminal.

ALIGNMENT PROCEDURE

Set the dial at 0 excepting step (3), c) in this adjustment. In step (3), c) only, set the dial to 500. Set up the SSG for 1,000Hz, 30% modulation.

(1) Band 1.8MHz

With the output frequency of the SSG set to 1.8MHz and the PRESELECTOR switch on the front panel to 30°, adjust the 1.8MHz ANT and RF coils until the receiver delivers the maximum output.

(2) Band 3.5MHz

- a) With the output frequency of the SSG set to 3.5MHz and the PRESELECTOR switch to 45° (hereinafter always set the PRESELECTOR switch to 45° in each adjustment), adjust the 3.5MHz ANT and RF coils until the receiver delivers the maximum output.
- b) Set the SSG output frequency to 3.395MHz and adjust trap coil L4 until the receiver delivers the minimum output.

(3) Band 7MHz

- a) With the output frequency of the SSG set to 7.0MHz, adjust 7MHz ANT and RF coils until the receiver delivers the maximum output.
- b) With the SSG output frequency set to 8.895MHz, adjust trap coil L1 for the minimum output of the receiver.
- c) With the SSG output frequency set to 8.295MHz and the dial to 500, adjust trap coil L2 until the receiver delivers the minimum output.

(4) Band 14MHz

With the output frequency of the SSG set to 14.0MHz, adjust the 14MHz ANT and RF coils until the receiver delivers the maximum output.

(5) Adjust bands 21, 28.0 and 10MHz similarly as did in step (4).

Note: In this adjustment, the receiver deliver a constant output owing to its AGC characteristic effective with increasing antenna input. Therefore, make the adjustment with the ATT of the SSG always set as counter-clockwise as possible.

VIII. Adjustment of S Meter

- 1) Set up the SSG for a 14.2MHz, 20dB (10 μ V) output frequency under no modulation. Place the dial at 200 and the MODE switch at USB. Adjust the dial and PRESELECTOR switch until the S meter give the maximum deflection.
- 2) With the output level of the SSG changed to 100dB (0.1V), adjust variable resistor VR3 of IF unit (UC1212J) until the S meter reads an indication of +60.

- 3) With the output level of the SSG reduced to 40dB (100 μ V), adjust variable resistor VR1 of RF unit until the S meter deflects to graduation S9 on the scale.

IX. Adjustment of Monitor Circuit

Set the FUNCTION switch to MONI and the SSG output frequency to 14.2MHz.

Ground pin 7 of the REMOTE terminal with pins 4 and 5 short-circuited to place the receiver in the stand-by condition. Adjust variable resistor VR2 on the receiver unit until the receiver sensitivity is 60dB lower than that under the normal operating condition (that is, set the AF output voltage or S meter indication under the normal operating condition, or 0dB SSG output, to those under monitor, or 60dB SSG output).

X. Adjustment of Side Tone Level

Set the AF GAIN control to the center.

With a 1kHz, 1V signal applied from an AF generator to the pin 15 of REMOTE socket, adjust variable resistor VR5 (receiver unit) until the receiver delivers an AF output of 0.63V/8 Ω .

XI. Adjustment of Marker Unit (UC-1505J)

Set the FUNCTION switch to the CAL 25kHz position and connect a frequency counter to the MO terminal. Adjust trimmer TC1 until the counter reads a frequency within 25kHz \pm 2Hz.

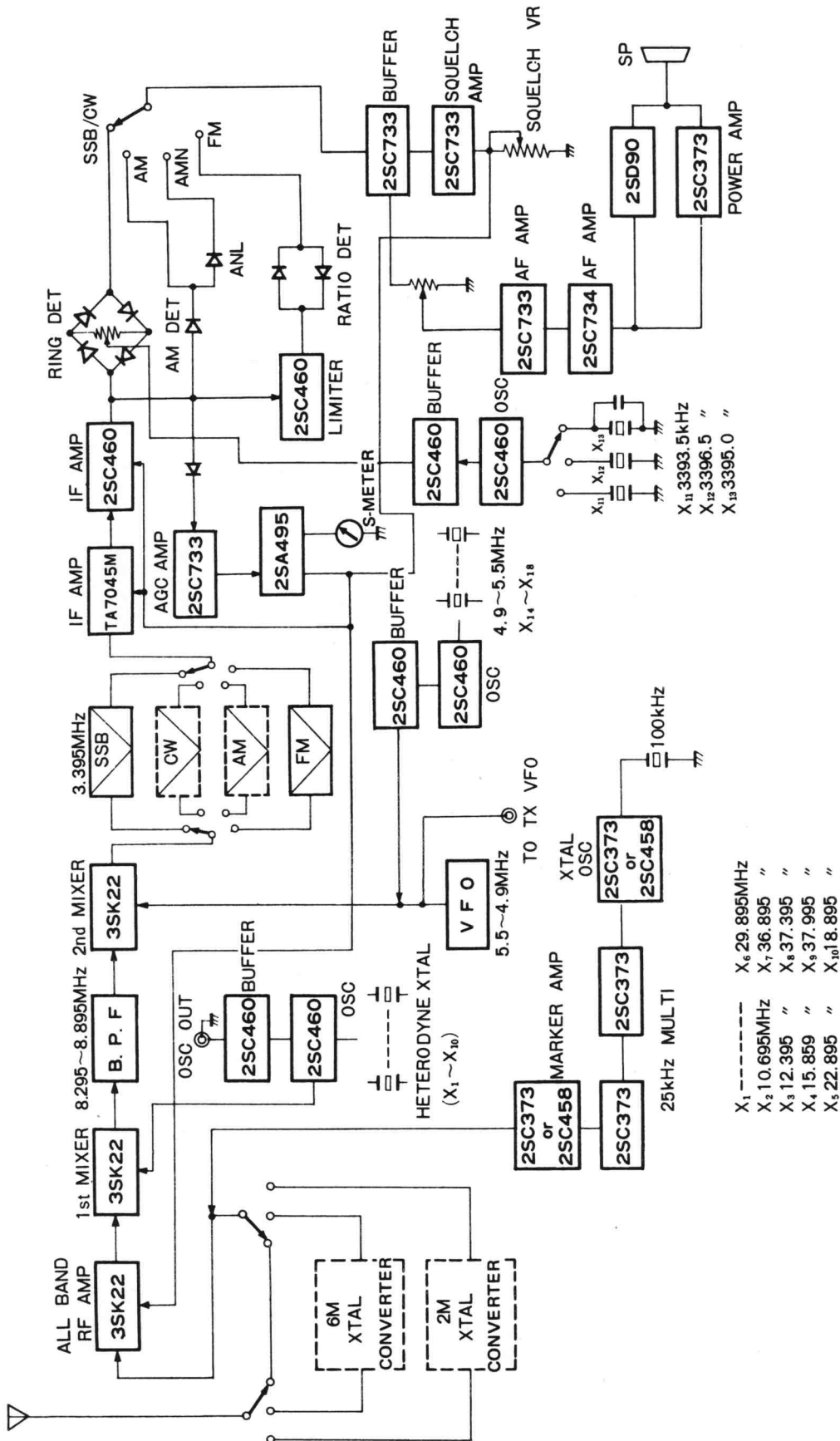
NOTICE

We can use "CO-502S" in place of "WO-1"

Specification of CO-502S

- 1) Vertical Amp.
Deflection Sensitivity: 0.03V/cm~30V/cm (\pm 5%)
Frequency: D.C. DC~2MHz (Less than -3dB)
A.C. 2Hz~2MHz (Less than -3dB)
Rise Time: 0.18 μ S
Overshoot: Less than 3%
Input Impedance: 1M Ω (parallel capacity less than 35pF)
- 2) Sweep Circuit
Sweep System: Start-Stop and Auto.
Sweep Time: 1 μ S/cm~0.3S/cm (\pm 5%)
Linearity of Sweep: Less than 3% (0.3S/cm~3 μ S/cm)
Less than 5% (1 μ S/cm)
- 3) Horizontal Amp.
Deflection Sensitivity: Less than 1V/cm
Frequency: D.C.~400kHz (Less than -3dB)
Input Impedance: 100k Ω (parallel capacity less than 40pF)
Calibrative Voltage: 3Vpp (Error less than 5%)
Direct Reflection: Less than 25Vpp/cm

BLOCK DIAGRAM



- X₁ ----- X₆ 29.895MHz
- X₂ 10.695MHz X₇ 36.895 "
- X₃ 12.395 " X₈ 37.395 "
- X₄ 15.859 " X₉ 37.995 "
- X₅ 22.895 " X₁₀ 18.895 "

* "Custom Special (X)" is set 6M, 2M Crystal Converter, "Custom Special (M)" only 2M Converter.



Manufactured by TRIO ELECTRONICS INC., TOKYO, JAPAN.

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