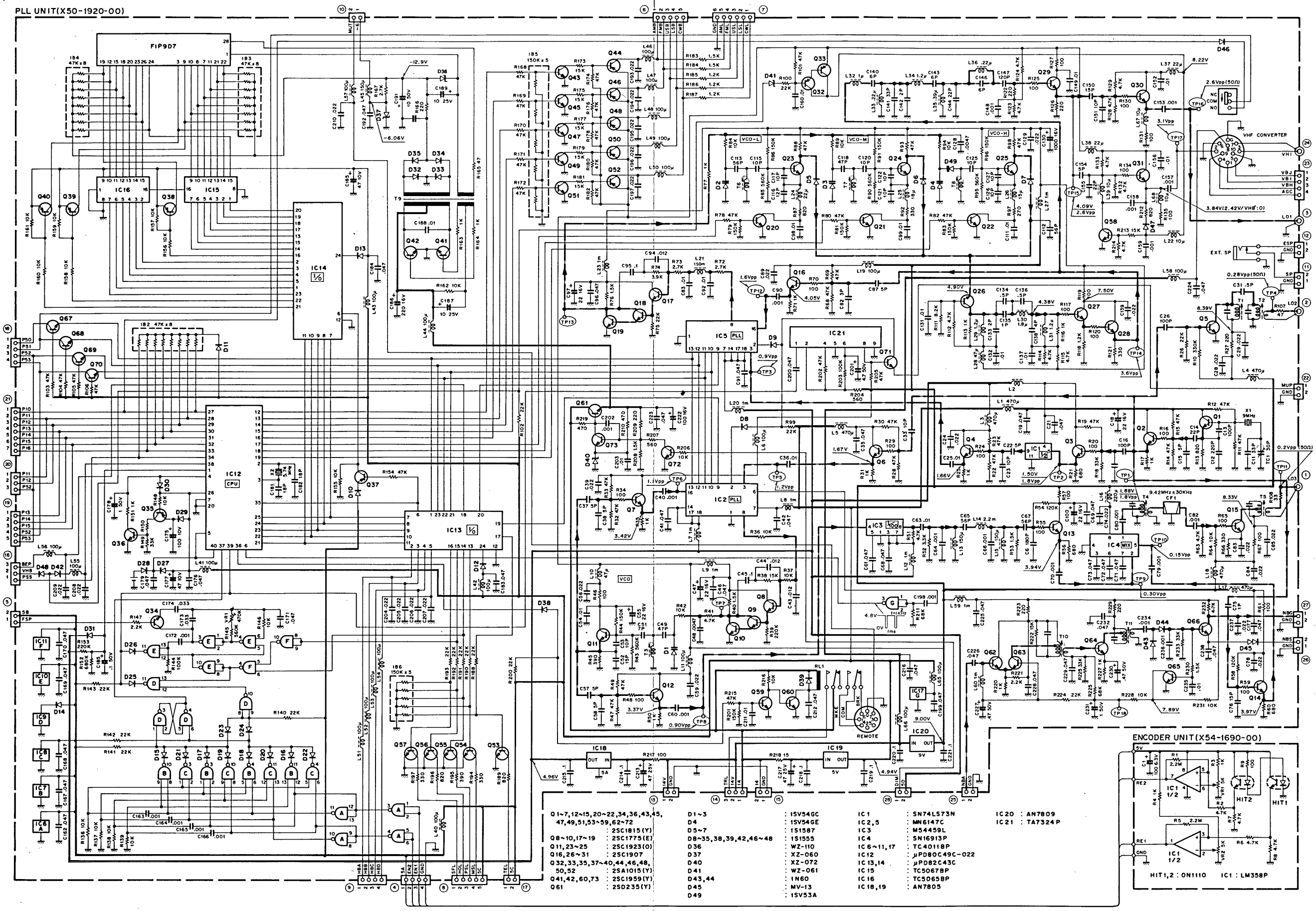
R-2000

SCHEMATIC DIAGRAM PLL UNIT (X50-1920-00)

Measurement conditions.
Freq.: 14.525 MHz, USB, RX no signal

: Signal line
: Control line
: Common DC line
: Test point
: Adjusting point



SCHEMATIC DIAGRAM RX UNIT (X55-1340-00)

R-2000

Measurement conditions.
Freq.: 14.525 MHz, USB, RX no signal
Notes
1. (1.5/2.0) F: (Squelch open/close) FM Mode
2. XXmVrms: Level

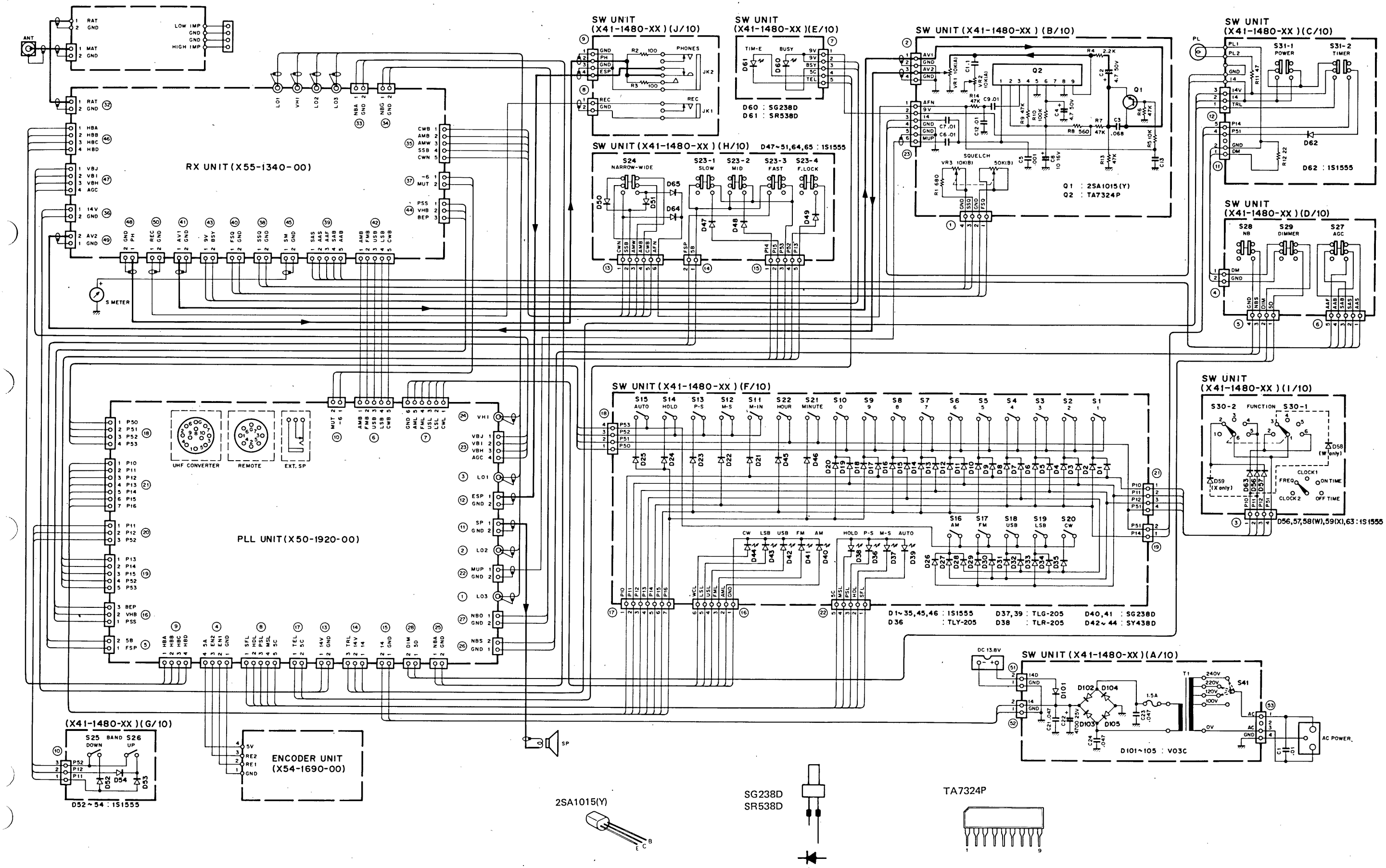
: Signal line
: Control line
: Common DC line
: Test point
: Adjusting point

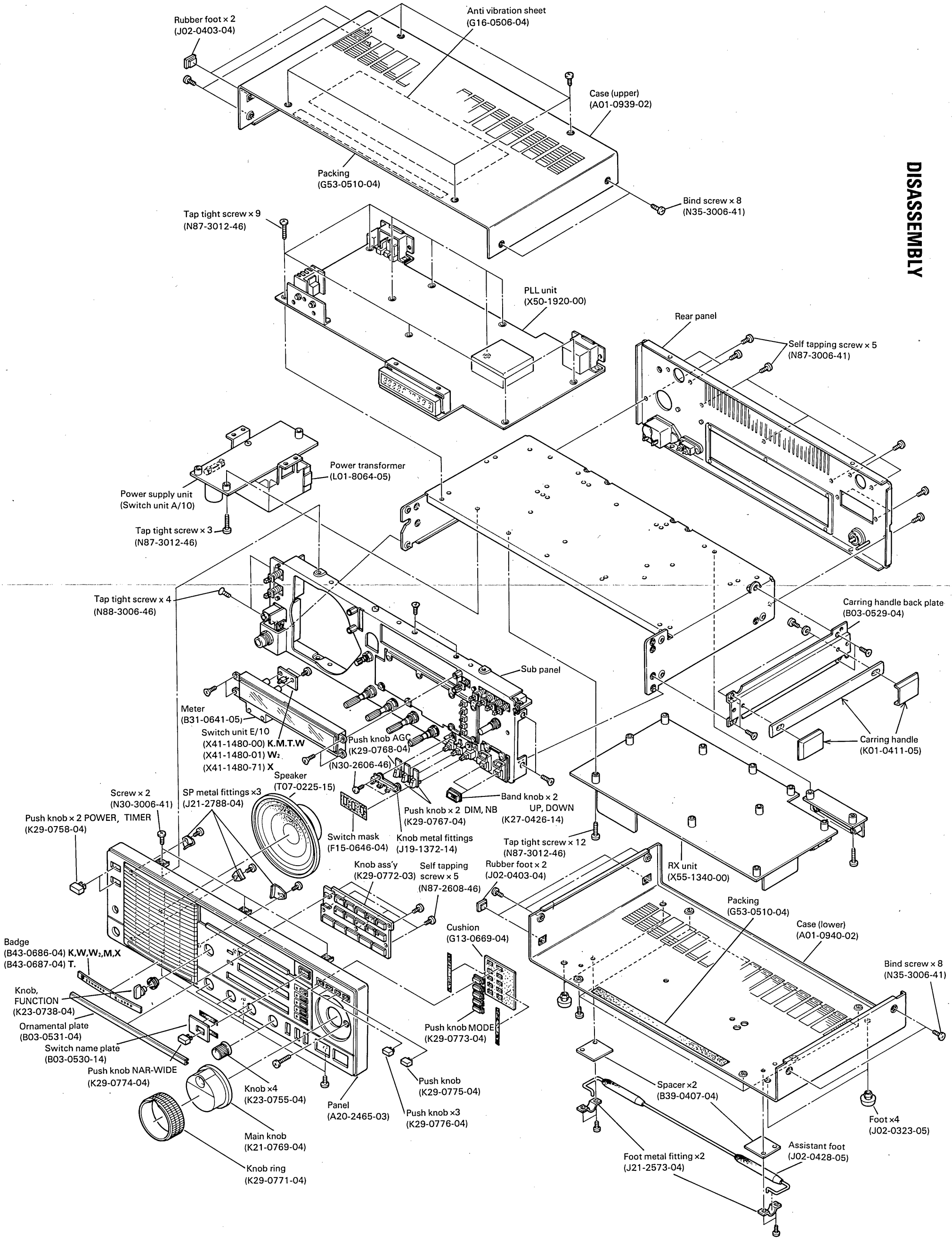
Q1,3,4,9,10,12,13 : 3SK73(GR)
Q2,5,6,11,14,20~28,31,37,38, 40~47,49,56,59,60 : 2SC1815(Y)
Q7,8 : 3SK74(L)
Q15~18,52 : 2SC2240(GR)
Q29,50 : 2SK192(GR)
Q30,48,51,61 : 2SA1015(Y)
Q32 : TA7060P
Q33 : 2SC1675(L)
Q34 : μPC577H
Q35,36 : 2SC1775(E)
Q39 : NJM4558D
Q53 : 2SC1959(Y)
Q54 : AN7809
Q55 : 2SC2878
Q57 : HA1368R
Q58 : SN74LS145N
D1~14 : 8A282
D15~20,24 : 1S1587
D21~23 : 1S1007
D25~29,37,38,41, 42,44,45 : 1N60
D30~36,46~48,51~53, 60,61 : 1S1555
D43 : D33A
D54 : RD47EB3
D57 : ERZD03DK331

RX UNIT (X55-1340-00)

SCHEMATIC DIAGRAM

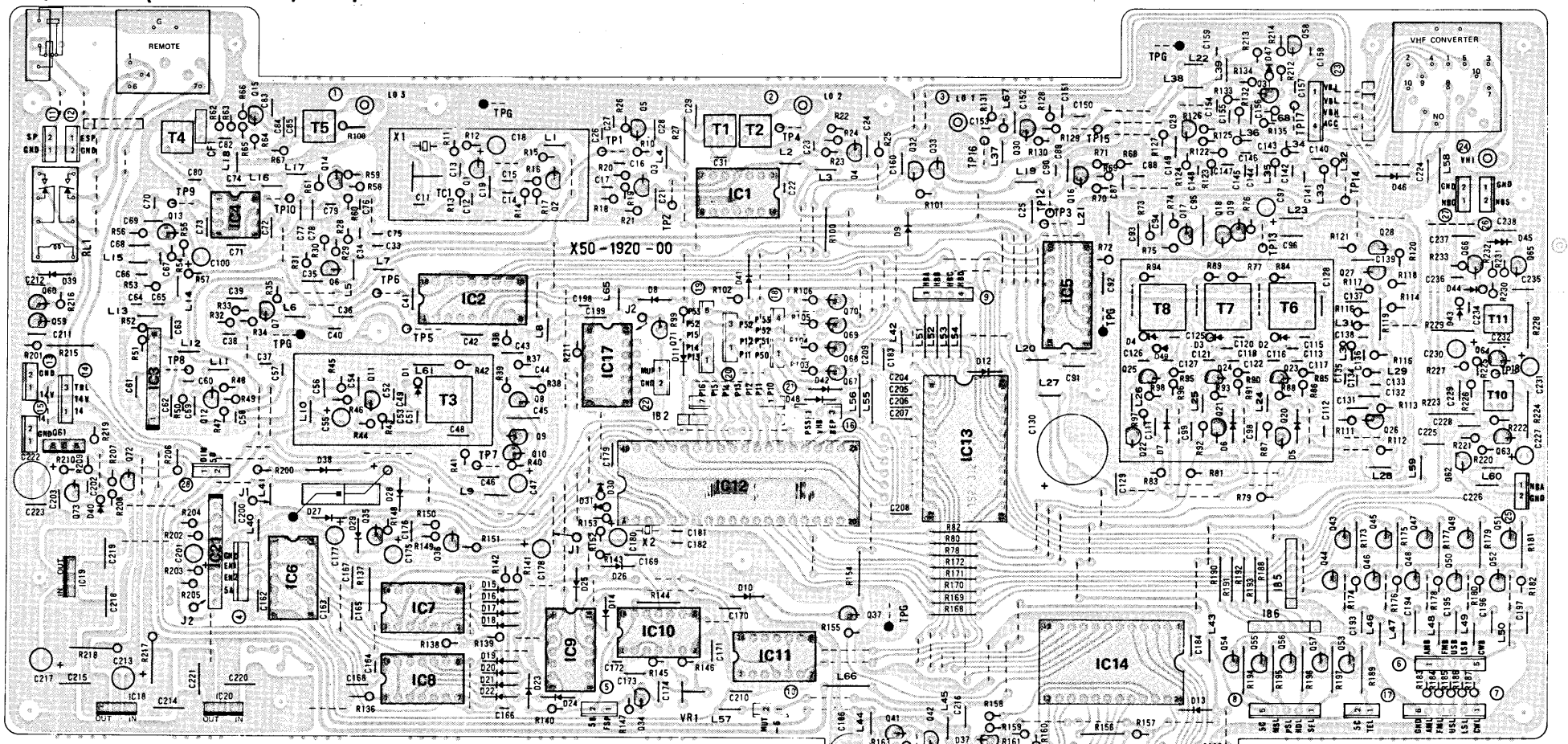
——— : Signal line




Rubber foot x 2
(J02-0403-04)
Anti vibration sheet
(G16-0506-04)
Case (upper)
(A01-0939-02)
Packing
(G53-0510-04)
Bind screw x 8
(N35-3006-41)
Tap tight screw x 9
(N87-3012-46)
PLL unit
(X50-1920-00)
Rear panel
Self tapping screw x 5
(N87-3006-41)
Power transformer
(L01-8064-05)
Power supply unit
(Switch unit A/10)
Tap tight screw x 3
(N87-3012-46)
Tap tight screw x 4
(N88-3006-46)
Carring handle back plate
(B03-0529-04)
Sub panel
Meter
(B31-0641-05)
Switch unit E/10
(X41-1480-00) K.M.T.W
(X41-1480-01) W2
(X41-1480-71) X
Push knob AGC
(K29-0768-04)
(N30-2606-46)
Carring handle
(K01-0411-05)
Speaker
(T07-0225-15)
Screw x 2
(N30-3006-41)
SP metal fittings x3
(J21-2788-04)
Band knob x 2
Push knob x 2 DIM, NB
(K29-0767-04)
UP, DOWN
(K27-0426-14)
Push knob x 2 POWER, TIMER
(K29-0758-04)
Switch mask
(F15-0646-04)
Knob metal fittings
(J19-1372-14)
Tap tight screw x 12
(N87-3012-46)
RX unit
(X55-1340-00)
Knob ass'y
(K29-0772-03)
Self tapping
screw x 5
(N87-2608-46)
Rubber foot x 2
(J02-0403-04)
Packing
(G53-0510-04)
Case (lower)
(A01-0940-02)
Cushion
(G13-0669-04)
Bind screw x 8
(N35-3006-41)
Badge
(B43-0686-04) K,W,W2,M,X
(B43-0687-04) T.
Knob,
FUNCTION
(K23-0738-04)
Ornamental plate
(B03-0531-04)
Switch name plate
(B03-0530-14)
Push knob MODE
(K29-0773-04)
Push knob NAR-WIDE
(K29-0774-04)
Knob x4
(K23-0755-04)
Push knob
(K29-0775-04)
Panel
(A20-2465-03)
Push knob x3
(K29-0776-04)
Spacer x2
(B39-0407-04)
Foot x4
(J02-0323-05)
Main knob
(K21-0769-04)
Assistant foot
(J02-0428-05)
Foot metal fitting x2
(J21-2573-04)
Knob ring
(K29-0771-04)

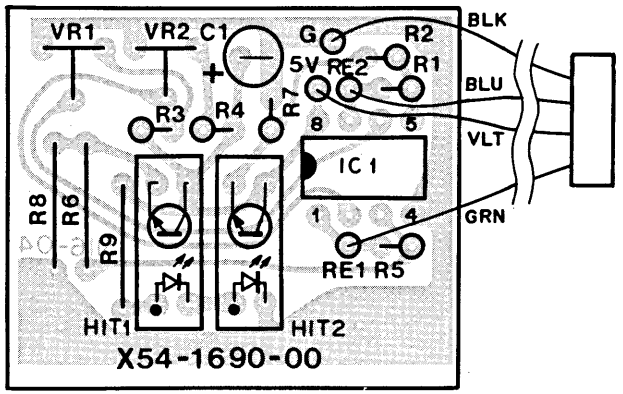
PC BOARD VIEWS

PLL UNIT (X50-1920-00) Component side view

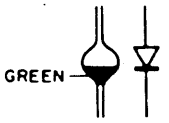


ENCODER UNIT (X54-1690-00)

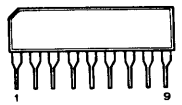
Component side view



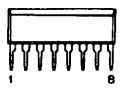
MV-13



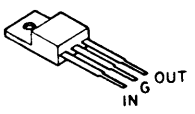
TA7324P



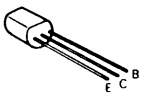
M54459L



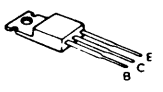
AN7805
AN7809



2SA1015 (Y)
2SC1775 (E) 2SC1923 (O)
2SC1815 (Y) 2SC1959 (Y)
2SC1907



2SD235 (Y)

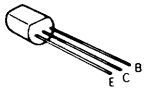


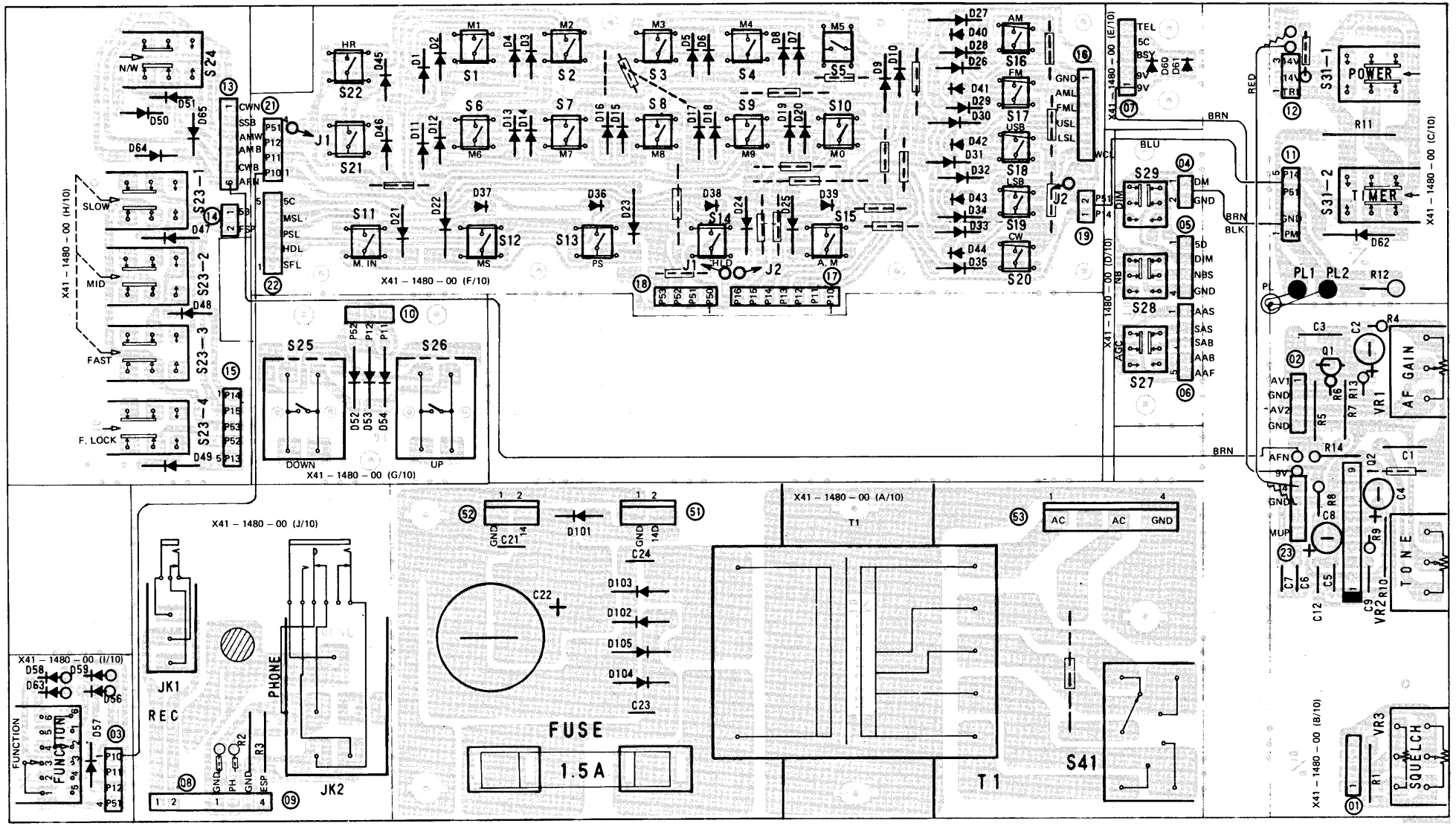
R-2000

PC BOARD VIEWS

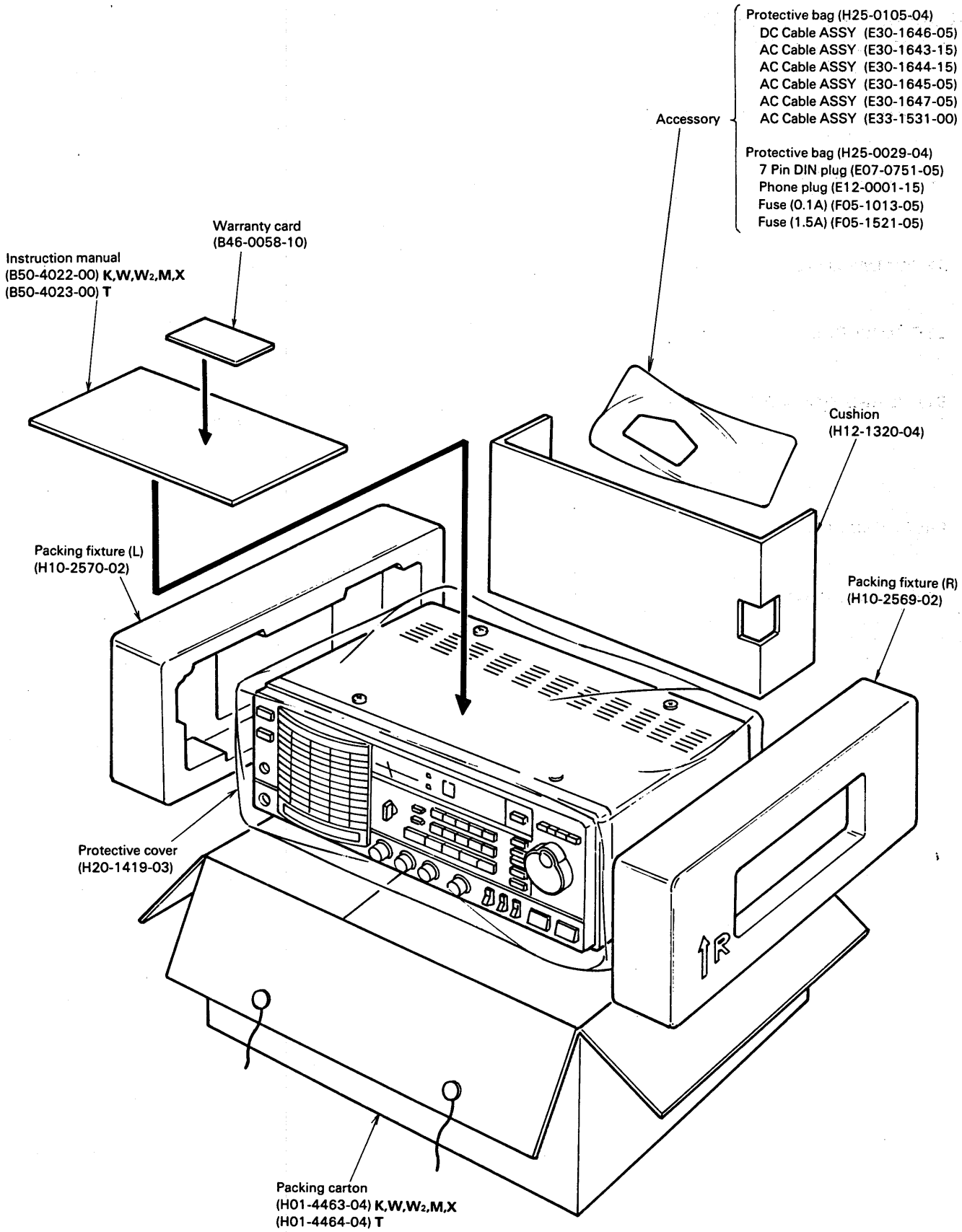
20 SWITCH UNIT (X41 - 1480 - ○○) Component side view

2SA1015(Y)





PACKING


Protective bag (H25-0105-04)
DC Cable ASSY (E30-1646-05)
AC Cable ASSY (E30-1643-15)
AC Cable ASSY (E30-1644-15)
AC Cable ASSY (E30-1645-05)
AC Cable ASSY (E30-1647-05)
AC Cable ASSY (E33-1531-00)
Accessory
Protective bag (H25-0029-04)
7 Pin DIN plug (E07-0751-05)
Phone plug (E12-0001-15)
Fuse (0.1A) (F05-1013-05)
Fuse (1.5A) (F05-1521-05)
Warranty card
(B46-0058-10)
Instruction manual
(B50-4022-00) K,W,W2,M,X
(B50-4023-00) T
Cushion
(H12-1320-04)
Packing fixture (L)
(H10-2570-02)
Packing fixture (R)
(H10-2569-02)
Protective cover
(H20-1419-03)
Packing carton
(H01-4463-04) K,W,W2,M,X
(H01-4464-04) T

ADJUSTMENT

REQUIRED TEST EQUIPMENT

1. VTVM or DVM (DC VM)

1) Input resistance: More than 1 MΩ
2) Voltage range: 1.5 to 1000V DC

NOTE: A high-precision voltmeter may be used. However, accurate readings can not be obtained for high-impedance circuits.

2. AF VTVM (AF VM)

1) Frequency range: 50 Hz to 10 kHz
2) Input impedance: 1 MΩ or greater
3) Voltage range: 10 mV to 30V

3. AF DUMMY LOAD

1) Impedance: 8Ω
2) Dissipation: 3W or greater

4. OSCILLOSCOPE

Requires high sensitivity and external synchronization capability.

5. STANDARD SIGNAL GENERATOR (SSG)

1) Frequency range: 100 kHz to 80 MHz
2) Output: –20 dB/0.1 μV to 120 dB/1V
3) Output Z = 50 Ω
4) Should have AM modulation capability. Generator must be frequency stable.

6. FREQUENCY COUNTER

1) Minimum input voltage: 50 mV
2) Frequency range: Greater than 80 MHz

7. NOISE GENERATOR

Must generate ignition-like nose containing harmonics beyond 30 MHz.

PREPARATION

Unless otherwise specified, set the controls as follows.

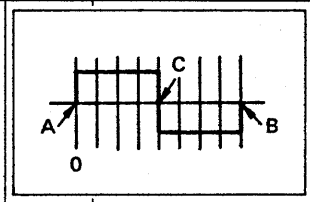
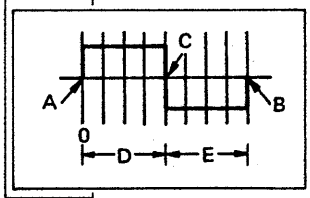
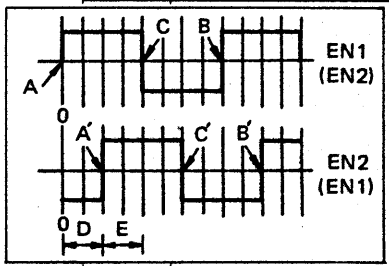
POWER	ON
TIMER	OFF
FUNCTION	FREQUENCY
NARROW/WIDE	WIDE
TUNING SPEED	SLOW
F. LOCK	OFF
MODE	AM
AGC FAST	OFF
NB	OFF
DIMMER	OFF
AF GAIN	MIN
TONE	CENTER
SQUELCH	MIN
RF ATT	0
M.SCAN	OFF
PG.SCAN	OFF
AUTO.M	OFF

REFERENCE

Japanese "SSG"	American "SG"
–6 dB	0.25 μV
0 dB	0.5 μV
6 dB	1 μV
12 dB	2 μV
24 dB	8 μV
30 dB	15.8 μV
40 dB	50 μV
50 dB	158 μV
60 dB	500 μV
70 dB	1.58 mV
80 dB	5 mV
90 dB	15.8 mV
100 dB	50 mV
120 dB	0.5 V

ADJUSTMENT

Adjusting PLL Section

Item	Condition	Measurement			Adjustment			Specifications
		Test equipment	Unit	Terminal	Unit	Part	Method	
1. Reference oscillator frequency	1) POWER: ON	Frequency counter	PLL	TP4	PLL	TC1	36,000,000 Hz	±20 Hz
2. VCO	1) MODE: AM f: 17,000.0 kHz	DC VM	PLL	TP7	PLL	T3	7.5V	±0.05V
	2) f: 16,999.9 kHz						Check	2.3V or more
3. VCO-H	1) MODE: AM f: 29,999.9 kHz	DC VM	PLL	TP13	PLL	T8	7.8V	±0.05V
	(W2 type) f: 25,999.9 kHz						5.6V	
	2) f: 17,000.0 kHz						Check	2.0V or more
4. VCO-M	1) MODE: AM f: 16,999.9 kHz	DC VM	PLL	TP13	PLL	T7	7.8V	±0.05V
	2) f: 8,000.0 kHz						Check	2.0V or more
5. VCO-L	1) MODE: AM f: 7,999.9 kHz	DC VM	PLL	TP13	PLL	T6	7.8V	±0.05V
	2) f: 100.0 kHz						Check	2.0V or more
	(W2 type) f: 150.0 kHz							
	(X type) f: 2,000.0 kHz						Check	3.0V or more
6. Encoder	1) Remove the MAIN knob and motor-drive the encoder at approx. 300 rpm.	Oscilloscope	PLL	Connector ④-EN1				Point C may be located anywhere. When motor drive is not available, manually turn the MAIN control to check the duty ratio.
	2) EN1 duty ratio adjustment: Turn a motor clockwise and counterclockwise.				Encoder	VR1		After adjusting with the MAIN control turned CW, check that intervals D and E are also identical when the MAIN control is turned CCW.
	3) EN2 duty ratio adjustment: Turn a motor in the both direction.			Connector ④-EN2		VR2	Adjust until intervals D and E are equal to each other with point C placed at the center.	
	4) EN1, EN2 phase difference adjustment: Same as above.			Connector ④-EN1 and EN2				EN1 (EN2): Within 90° ±20% (The difference between CW and CCW rotation must also be within this specification.) The phases of EN1 and EN2 may be replaced with each other as indicated in the brackets.
7. PG SCAN SPEED	1) f: 15,000.0 kHz MEMORY CH: 9 Write in with M. IN switch.							
	2) f: 15,010.0 kHz MEMORY CH: 0 Write in with M. IN switch.							
	3) PG SCAN: ON				PLL	VR1	Turn clockwise/counterclockwise to check scan speed change. Set to mechanical center.	

ADJUSTMENT

Adjusting Receiver Section

Item	Condition	Measurement			Adjustment			Specifications
		Test equipment	Unit	Terminal	Unit	Part	Method	
1. RB voltage		DC VM	RX	TP4	RX	VR7	2.3V	
2. BFO (Coarse adjustment)	1) MODE: USB	Frequency counter	RX	TP3	RX	T19	456,500 Hz	±50 Hz
3. Sensitivity (RF,IF amp)	1) f: 14,525.0 kHz MODE: USB AGC: FAST SSG output: 0 dBμ	SSG AF VM Oscilloscope AF dummy load	Rear panel	ANT	PLL	T1, T2, T4, T5	MAX	
				EXT SP	RX	T5 to T16, T18	MAX Perform adjustment in the following order: T5, T6, T7, T8, T7, T6, T5, T9, T10, T11, T12, T11, T10, T11, T12, T11, T10, T13, T14, T15, T16, T18.	S/N: 10 dB or more
4. 1st MIX BALANCE	1) f: 187.3 kHz MODE: USB TUNING STEP: SLOW	AF VM Oscilloscope AF dummy load	Rear panel	EXT SP	RX	VR1	MIN. Heterodyne	
5. BFO (Fine adjustment)	1) f: 14,525.0 kHz MODE: USB, then LSB	SP			RX	T19	Alternate MODE between USB and LSB and adjust for equal noise tone. (Equal highs and lows)	
	2) SSG output: 14.525 MHz 0 dBμ	SSG AF VM Oscilloscope AF dummy load	Rear panel	ANT EXT SP			Receive the 14.525 MHz generator signal in USB mode, tune for 1 kHz beat frequency, and AF output at 0.63V/8Ω. Set to LSB mode, adjust for 1 kHz beat and measure the AF output difference.	Within 1.5 dB
6. FM sensitivity (FM IF amp)	1) f: 14,525.0 kHz MODE: FM SSG output: 6 dBμ (MODE: 1 kHz DEV: 5 kHz)	SSG AF VM Oscilloscope AF dummy load	Rear panel	ANT EXT SP	RX	T21	MAX	S/N: 20 dB or more
	2) SSG output: 6 to 100 dBμ						Confirm that the output is constant from 6 dB to 100 dB.	Specified output.
7. S meter	1) MODE: USB AGC: FAST	S meter			RX	VR8	Zero adjustment. Set to S meter starting point.	
	2) f: 14,525.0 kHz SSG output: 8 dBμ	SSG S meter	Rear panel	ANT		T17	S-1 Adjust CCW from the peak.	
	3) SSG output: 30 dBμ					VR9	S-9	
	4) MODE: FM SSG output: 30 dBμ					VR6	+40 dB	
8. Squelch	1) MODE: FM AGC: SLOW SQUELCH: Threshold	SP					Check	Between 1 and 3 (Squelch level) BUSY indicator goes off.
	2) MODE: USB				RX	VR5	Point at which noise disappears.	
	3) f: 14,525.0 kHz MODE: USB SQUELCH: Threshold SSG output: 20 dBμ	SSG AF VM Oscilloscope AF dummy load	Rear panel	ANT			Check	The squelch should open at less than 20 dBμ and the BUSY indicator should light.
	4) MODE: FM SQUELCH: Threshold SSG output: 0 dBμ							The squelch should open at less than 0 dBμ and the BUSY indicator should light.

ADJUSTMENT

Item	Condition	Measurement			Adjustment			Specifications
		Test equipment	Unit	Terminal	Unit	Part	Method	
9. NB	1) f: 14,525.0 kHz MODE: AM WIDE/NARROW: WIDE NB: ON Noise generator output level: S meter indicator 5 ± 1	Noise generator	Rear panel	ANT	RX	VR4	MIN	S1 or less (Typical)
	2)				PLL	T10, T11	Repeat steps 1) and 2) so the NB functions on noise which is below the minimum S meter level.	
10. 1st IF trap	1) f: 29,525.0 kHz MODE: USB SSG output: 45.875 MHz 90 dBμ	SSG AF VM Oscilloscope AF dummy load	Rear panel	ANT	RX	T3	MIN	70 dB or more
11. "Beeper"	1) AF GAIN: Center TONE: Center SQUELCH: Closed (No noise) * Connect R259 and R273. (Disconnect after adjustment.)	AF VM Oscilloscope AF dummy load	Rear panel	EXT SP	RX	VR10	0.3V	Tone should remain audible even when the AF GAIN is reduced to MIN.

<Microprocessor operational check>

Item	Condition	Operation Check
1. Encoder (Dial)	1) TUNING SPEED: SLOW Turn the tuning control clockwise and counterclockwise.	Display changes in 100 Hz steps.
	Turn the main tuning 1 turn.	Display changes 10 kHz.
	2) TUNING SPEED: MID Turn the tuning control clockwise and counterclockwise.	Display changes in 500 Hz step.
	Turn the main tuning 1 turn.	Changes 100 kHz.
	3) TUNING SPEED: FAST Turn the tuning control clockwise and counterclockwise.	Changes in 5 kHz step.
	Turn the main tuning 1 turn.	Changes 1 MHz.
2. BAND	1) TUNING SPEED: FAST Keep the UP switch depressed until tuning stops. Then turn the tuning control clockwise.	The MHz digit scans up in 1 MHz steps and stop when the display indicates 29,995.0 kHz. W2 type stops tuning at 25,995.0.
	Keep the DOWN switch depressed until tuning stops. Turn the tuning control counterclockwise.	The MHz digit scans down to 0.100.0 at a 1 MHz step. W2 type stops tuning at 0.150.0 and X type stops at 2.000.0
3. F. LOCK	1) F. LOCK: ON Turn the tuning control and BAND knob.	The display should not change.

Item	Condition	Operation Check
4. DIMMER	DIMMER: ON	The S meter and display illumination should be reduced.
5. CLOCK and TIMMER	1) POWER: OFF FUNCTION: CLOCK 1	The clock should function. The illumination should be dim.
	2) TIMER: ON	* TIMER ERROR (red) indicator should light. * CLOCK display flashes.
	3) TIMER: ON Simultaneously press both the HOUR and MINUTE TIME SET switches.	* CLOCK display should be 0:00. * TIMER ERROR (red) indicator should go off.
	4) FUNCTION: CLOCK 2 Keep the HOUR and MINUTE switches depressed.	The display should continuously advance.
	Set the hours digit.	The display should indicate the time difference from CLOCK 1.
	5) FUNCTION: ON Set the TIMER display to 0.02.	
	6) FUNCTION: OFF Set the TIMER display to 0.03.	
	7) FUNCTION: CLOCK 1 Set the TIMER display to 0.02.	Power should turn on and the unit should function.
	Set the TIMER display to 0.03.	Power should shut off.

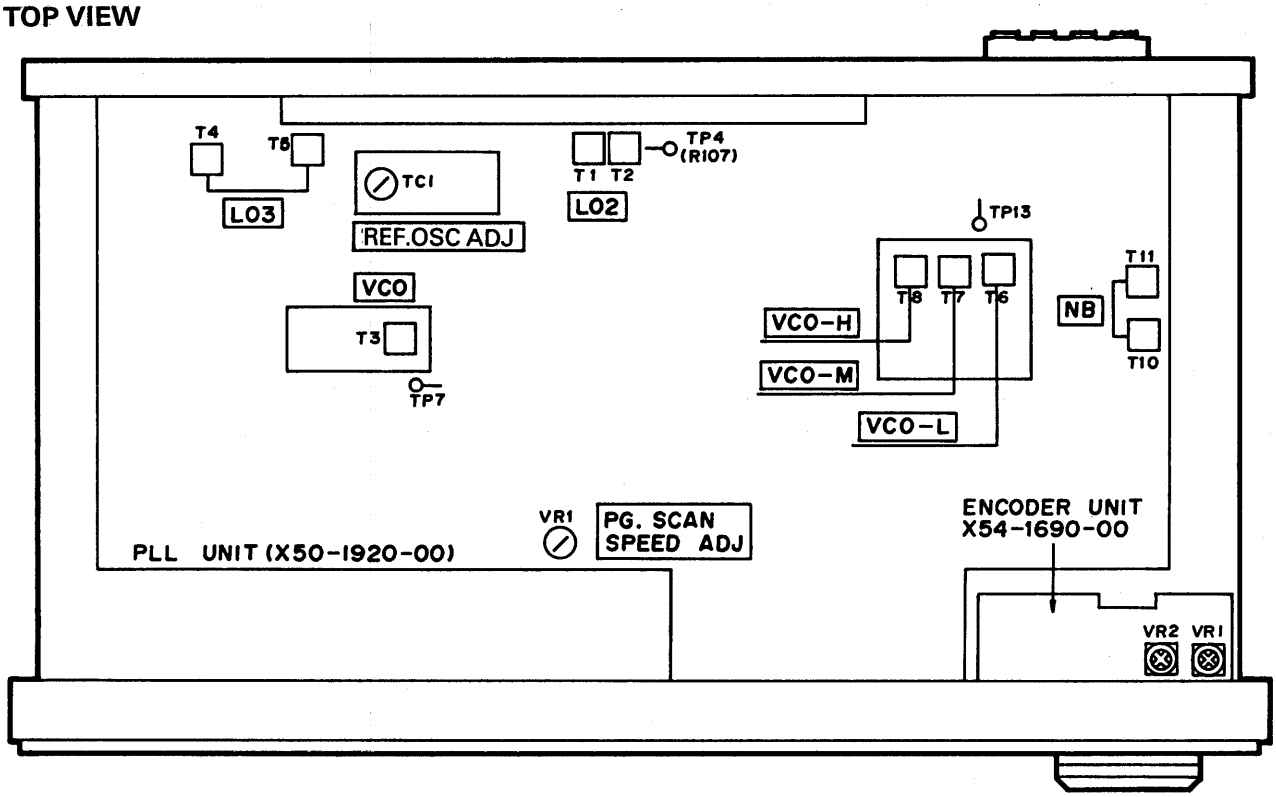
ADJUSTMENT

Item	Condition	Operation Check
6. RECALL and MODE	1) POWER: ON TIMER: OFF FUNCTION: FREQUENCY Press memory switches (1 through 0).	* The MEMO indicator should change from 1 through 0. * The frequency display should indicte 15,000.0 for each channel.
	Press MODE AM, FM, USB, LSB and CW switches.	* The green indicators should light for AM and FM modes. * The yellow indicators should light for USB, LSB and CW modes.
7. MEMORY	1) MODE: USB Press the M. IN switch and store 10,615.0 in channel 9.	The beep should be heard when data is stored in channels 9 and 0.
	Press the M. IN switch and store 10,635.0 in channel 0.	
8. M. SCAN	1) M. SCAN: ON	The M. SCAN indicator (green) should light and each channel should be scanned for 2 seconds.
	2) HOLD: ON (Release after test)	The scan should stop and the HOLD indicator (red) should light. When the HOLD switch is again depressed, scanning should resume.
9. Select SCAN	1) M. SCAN: ON Press channels 1 through 3 and then channel 2 again (twice).	"C" should be displayed on the MEMO indicator and channels 1 and 3 should be scanned continuously.
10. PG. SCAN	1) PG. SCAN: ON	* The PG. SCAN indicator (yellow) should light. * "P" should be displayed on the MEMO indicator and the USB indicator should light. * The scan should start from 10,615.0 at 5 kHz interval. When 10,635.0 is reached, a "beep" should sound and the scan should restart from 10,615.0.
	2) HOLD: ON Turn the tuning control clockwise and counter-clockwise.	Scan should stop. The frequency should change from 10,615.0 to 10,635.0.

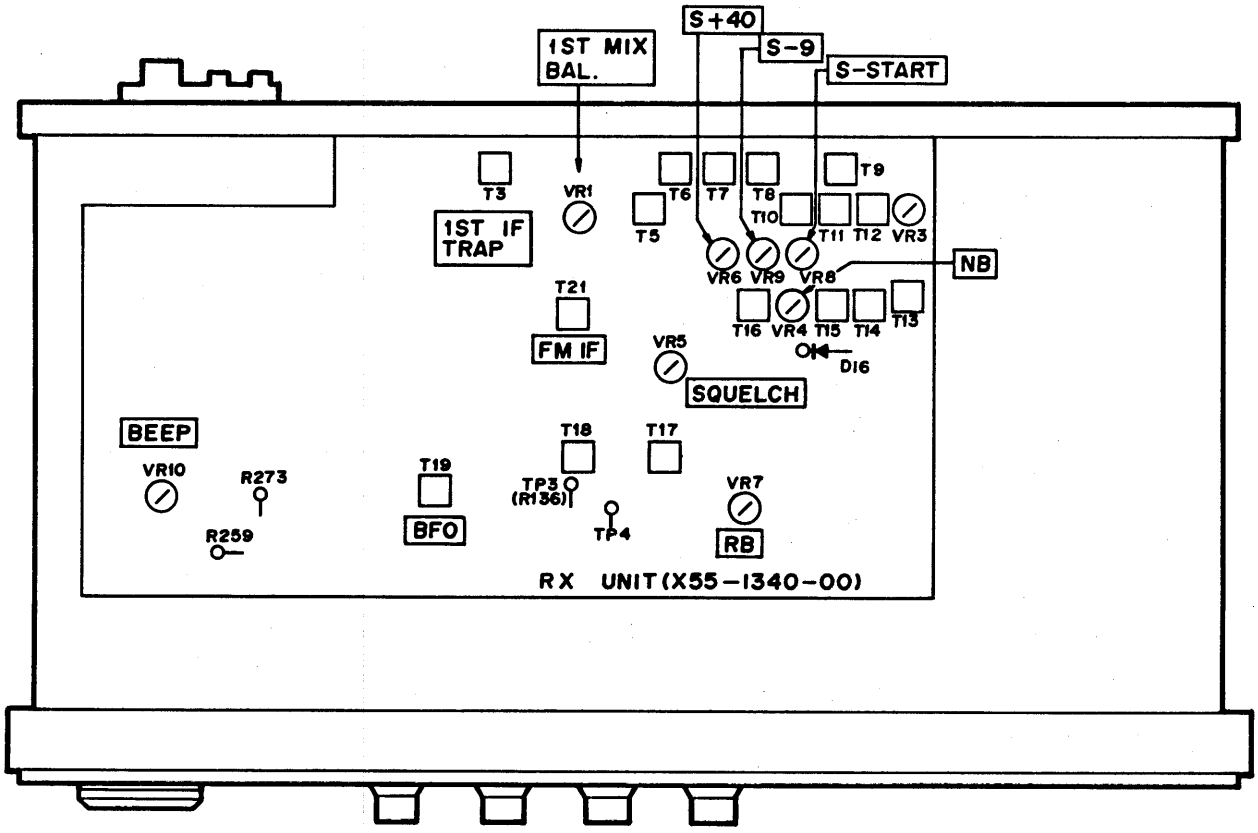
Item	Condition	Operation Check
11. AUTO. M	1) AUTO. M: ON Press channel 1 and store 17,000.0 then press channel 2 and 1.	The AUTO. M indicator (green) should light and 17,000.0 should be displayed.
12. Reset	1) POWER: OFF Keep the power cable connected to the receiver and disconnect the lithium battery (–) terminal.	
	Disconnect the power cable and ground IC12 pin 40. (IC12: μPD80C49C-022)	
	Reconnect the power cable. POWER: ON AUTO. M: ON	Indication MEMO: E f : 150,055.0
	Disconnect, then reconnect the power cable.	Indication MEMO: 1 f : 15,000.0
	POWER: OFF Reconnect the lithium battery (–) terminal.	
	2) POWER: ON	Indication MEMO: 1 f : 15,000.0
	Disconnect the power cable. Reconnect the power after approximately 30 minutes.	The memory contents should be retained and the above should be displayed
	3) MEMORY: 1	Indication MEMO: 1 f : 15,000.0
	MEMORY: 2	MEMO: 2 f : 15,000.0
	⋮ MEMORY: 0	⋮ MEMO: 0 f : 15,000.0

ADJUSTMENT POINT

▼ TOP VIEW



▼ BOTTOM VIEW



TERMINAL FUNCTION

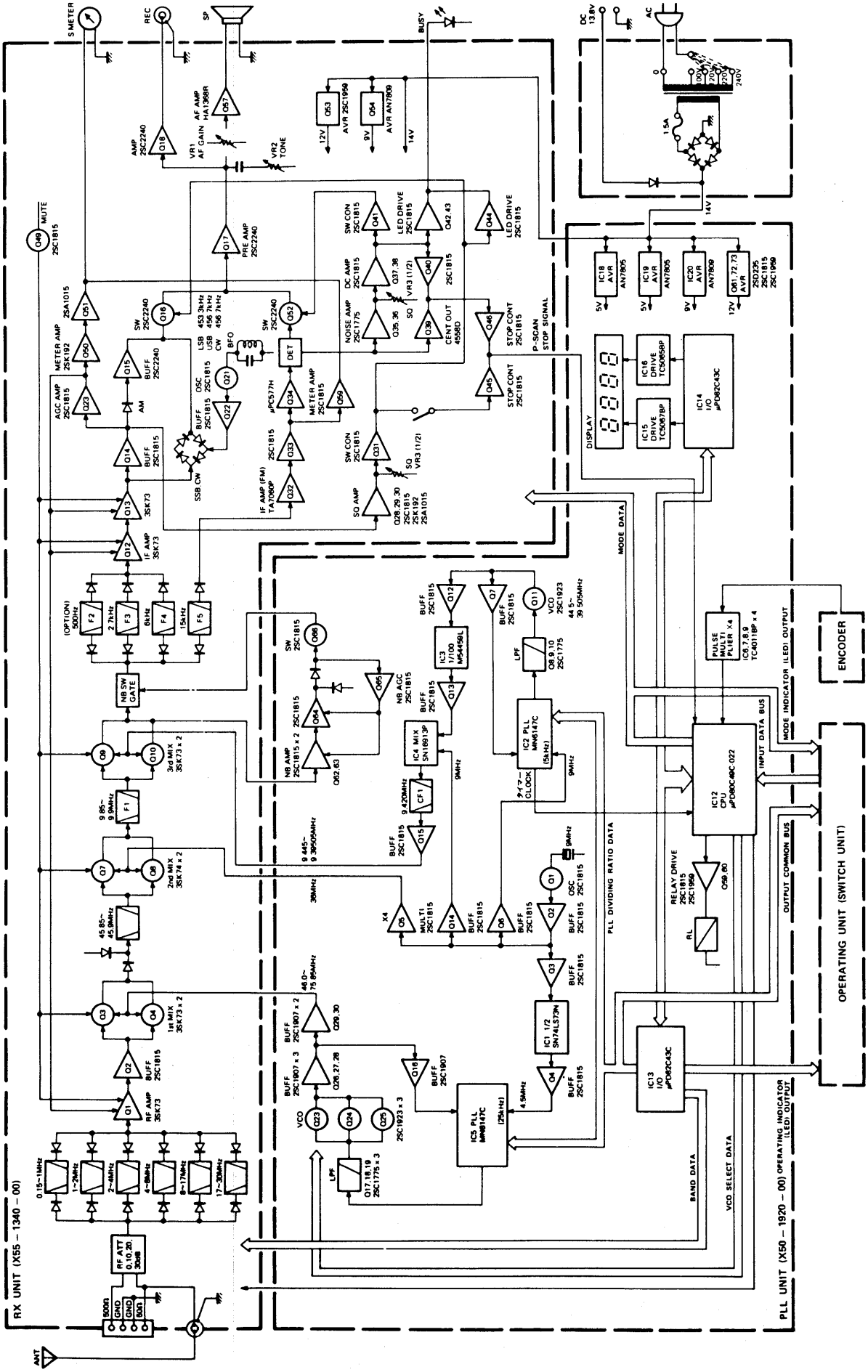
PLL unit

Connector No.	Terminal No.	Name	Destination	Function
1		L03	RX	3rd Local OSC output
2		L02	RX	2nd Local OSC output
3		L01	RX	1st Local OSC output
4	1	5A	Encoder	5V line
	2	EN2	Encoder	Pulse input
	3	EN1	Encoder	Pulse input
	4	GND	Encoder	
5	1	FSP	Switch	Program SCAN speed adjust terminal
	2	5B	Switch	5V line
6	1	AMB	RX	AM, 9V line
	2	FMB	RX	FM, 9V line
	3	USB	RX	USB, 9V line
	4	LSB	RX	LSB, 9V line
	5	CWB	RX	CW, 9V line
7	1	CWL	Switch	CW LED (Y) light
	2	LSL	Switch	LSB LED (Y) light
	3	USL	Switch	USB LED (Y) light
	4	FML	Switch	FM LED (G) light
	5	AML	Switch	AM LED (G) light
	6	GND	Switch	
8	1	SFL	Switch	AUTO-M LED (G) light
	2	HDL	Switch	HOLD LED (R) light
	3	PSL	Switch	P.SCAN LED (Y) light
	4	MSL	Switch	M.SCAN LED (G) light
	5	5C	Switch	5V line
9	1	HBA	RX	BPF select signal
	2	HBB	RX	BPF select signal
	3	HBC	RX	BPF select signal
	4	HBD	RX	BPF select singal
10	1	–6	RX	–6V line
	2	MUT	RX	MUTE control
11	1	GND	SP	
	2	SP	SP	Speaker line
12	1	ESP	Phone jack	
	2	GND	Phone jack	
13	1	14V	RX	RX 14V line
	2	GND	RX	
14	1	14	Switch	14V line
	2	14V	Switch	14V line
	3	14L	Switch	14V line
15	1	GND	Switch	
	2	14	Switch	14V line
16	1	PSS	RX	Program SCAN stop input
	2	VHB	RX	VHF signal output (VHF:H)
	3	BEP	RX	BEEP control output (BEEP:H)
17	1	TEL	Switch	Timer error, LED(R)light
	2	5C	Switch	5V line
18	1	P50	Switch	Output common bus
	2	P51	Switch	Output common bus
	3	P52	Switch	Output common bus
	4	P53	Switch	Output common bus
19	1	P13	Switch	Input data bus
	2	P14	Switch	Input data bus
	3	P15	Switch	Input data bus
	4	P52	Switch	Output common bus
	5	P53	Switch	Output common bus
20	1	P11	Switch	Input data bus
	2	P12	Switch	Input data bus
	3	P52	Switch	Output common bus
21	1	P10	Switch	Input data bus
	2	P11	Switch	Input data bus
	3	P12	Switch	Input data bus
	4	P13	Switch	Input data bus
	5	P14	Switch	Input data bus
	6	P15	Switch	Input data bus
	7	P16	Switch	Input data bus
22	1	MUP	Switch	Unlock AF muting output
	2	GND	Switch	
23	1	VBJ	RX	VHF converter, Band input
	2	VBI	RX	VHF converter, Band input
	3	VBH	RX	VHF converter, Band input
	4	AGC	RX	VHF converter, AGC input
24		VHI	RX	VHF converter, IF output
25	1	NBA	RX	NB, IF input
	2	GND	RX	
26	1	GND	Switch	
	2	NBS	Switch	NB switch, GND:ON
27	1	NBG	RX	NB switching pulse output
	2	GED	RX	
28	1	DIM	Switch	Dimmer switch
	2	5D	Switch	5V line

RX unit

Connector No.	Terminal No.	Name	Destination	Function
31	1	MAT	UHF Receptacle	
	2	GND		
32	1	RAT		Receiver input
	2	GND		
33	1	NBA	PLL	NB, IF output
	2	GND	PLL	
34	1	NBG	PLL	NB, Switching pulse input
	2	GND	PLL	
35	1	CWB	Switch	CW, 9V line input
	2	AMB	Switch	AM, 9V line input
	3	AMW	Switch	AM wide, 9V line input
	4	SSB	Switch	SSB, 9V line input
	5	CWN	Switch	CW narrow, 9V line input
36	1	14V	PLL	14V input
	2	GND	PLL	
37	1	–6	PLL	–6V input
	2	MUT	PLL	Muting control signal input
38	1	SSQ	Switch	SSB, squelch Adj input
	2	GND	Switch	
39	1	SAS	Switch	AGC select (SSB SLOW)
	2	AAS	Switch	AGC select (AM SLOW)
	3	AAF	Switch	AGC select (AM FAST)
	4	SAB	Switch	AGC select (SSB AGC reference voltage)
	5	AAB	Switch	AGC select (AM AGC reference voltage)
40	1	FSQ	Switch	FM squelch Adj input
	2	GND	Switch	
41	1	AV1	Switch	AF pre-amp, output
	2	GND	Switch	
42	1	AMB	PLL	AM, 9V input
	2	FMB	PLL	FM, 9V input
	3	USB	PLL	USB, 9V input
	4	LSB	PLL	LSB, 9V input
	5	CWB	PLL	CW, 9V input
43	1	9V	Switch	9V line output
	2	BSY	Switch	BUSY LED (G)
44	1	PSS	PLL	Program scan stop signal output
	2	VHB	PLL	High when VHF, RX
	3	BEP	PLL	Beeper control input
45	1	SM	Smeter	S-meter (+)
	2	GND	Smeter	
46	1	HBA	PLL	Band data input
	2	HBB	PLL	Band data input
	3	HBC	PLL	Band data input
	4	HBD	PLL	Band data input
47	1	VBJ	PLL	VHF converter, Band data output
	2	VBI	PLL	VHF converter, Band data output
	3	VBH	PLL	VHF converter, Band data output
	4	AGC	PLL	VHF converter, AGC output
48	1	PH	Phone jack	AF output
	2	GND	Phone jack	
49	1	GND	Switch	
	2	AV2	Switch	AF power AMP input
50	1	REC	REC jack	
	2	GND		
		L01	PLL	1st Local OSC input
		L02	PLL	2nd Local OSC input
		L03	PLL	3rd Local OSC input
		VHI	PLL	VHF converter, IF

BLOCK DIAGRAM



DCK-1 D.C. OPERATION KIT (OPTION)

PARTS LIST

Ref. No.	Part No.	Description	Re-marks
–	B50-2703-00	Instruction sheet	
–	E08-0203-25	Cable with 2P connector	
–	E31-2027-05	Cable with terminal	
–	E30-1646-05	DC cable ass'y	
–	F05-1023-05	Fuse UL 1A × 2	
–	H25-0029-04	Protective bag 60 mm × 110 mm	
–	H25-0117-04	Protective bag 80 mm × 250 mm	

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