

# KENWOOD

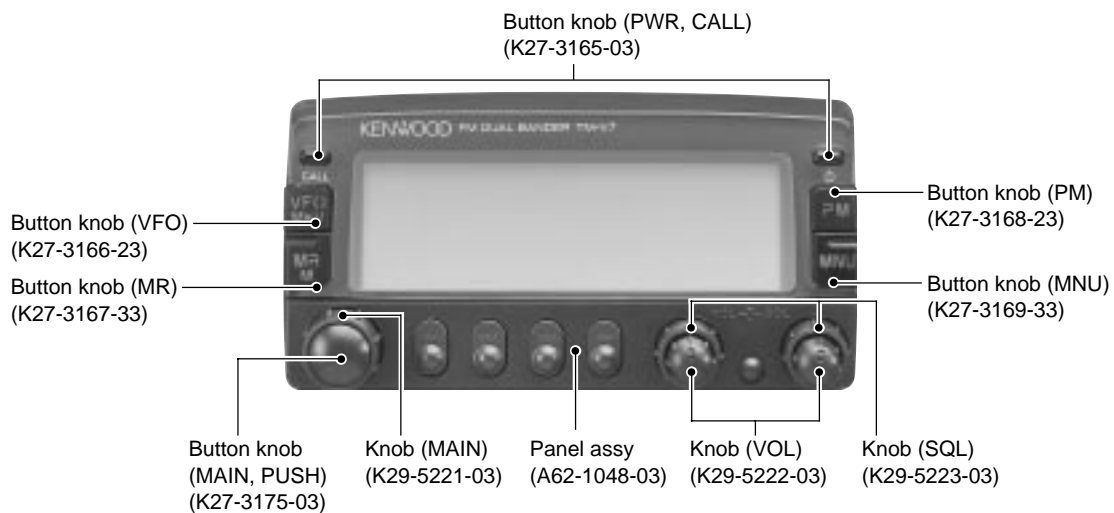
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## CIRCUIT DESCRIPTION

### Panel Section (LCD ASSY: B38-0772-65)

The panel section controls serial communications with the main unit control section, the key input circuit, the display circuit, and the dimmer circuit through the microprocessor (IC4).

#### • Serial communications circuit

A buffer is inserted in order to protect the microprocessor ports.

#### • Key input circuit

There is one microprocessor port for each panel section key. The PSW key is pulled down and the other keys are pulled up with software within the microprocessor. The rotary encoder is input directly to the microprocessor.

#### • Display circuit

Display section is a 152x45-dot full-dot matrix LCD controlled by two LCD. As shown in Figure 1, the master IC (IC5) side is connected to 32 common dots and 80 segment dots and the slave IC (IC6) side is connected to 13 common dots and 72 segment dots. The LCD drive voltage is obtained by raising the power supply voltage (5V) within the IC. Also, the contrast level (LEBEL8) for resetting is adjusted with R19 to be optimum.

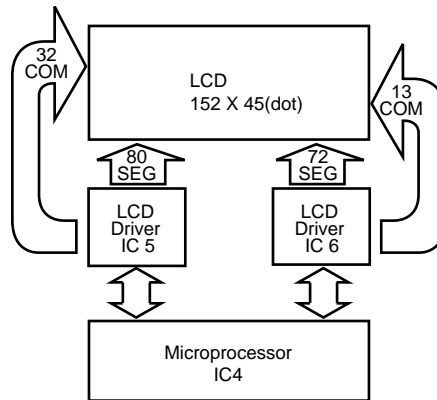


Fig. 1 Display circuit

#### • Dimmer circuit

The dimmer circuit switches the lamp brightness to one of four levels or OFF. (See Table 1.) The current flowing to the LEDs is varied by selecting resistors from R55 to R58.

Dimmer level	P60	P61	P62	P63
1	H	L	L	L
2	L	H	L	L
3	L	L	H	L
4	L	L	L	H
OFF	L	L	L	L

Table 1 Port logic

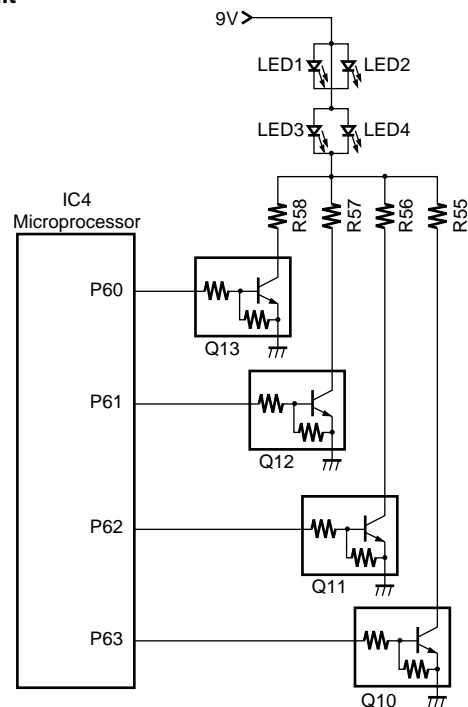


Fig. 2 Dimmer circuit

## SEMICONDUCTOR DATA / TERMINAL FUNCTION

### 78058GCC678BT (LCD ASSY : IC4)

Pin No.	Pin code	I/O	Function	Active level
1	P15/AN15	I	Connected to V <sub>SS</sub>	
2	P16/AN16	I		
3	P17/AN17	I		
4	AV <sub>SS</sub>		A/D converter reference ground	
5	P_LCDLE	O	LCD driver latch enable	
6	P131/AN01	I	Connected to V <sub>SS</sub>	
7	AV <sub>REF1</sub>		Connected to V <sub>DD</sub>	
8	P70/RXD	I		
9	P71/TXD	I	Connected to V <sub>SS</sub>	
10	P72/ASCK	I		
11	P_LCDRST	O	LCD driver reset	
12	P_LCDDI	O	LCD driver data select (AO)	
13	P_LCDWR	O	LCD driver write select	
14	P_LCDCE1	O	LCD driver chip select 1	
15	P_LCDCE2	O	LCD driver chip select 2	
16	P_SI	I	Common microprocessor SO	
17	P_SO	O	Common microprocessor SI	
18	P27/SCK0	I/O	Not used (Open)	
19	P_LCDDT0	O	LCD driver data line 0	
20	P_LCDDT1	O	LCD driver data line 1	
21	P_LCDDT2	O	LCD driver data line 2	
22	P_LCDDT3	O	LCD driver data line 3	
23	P_LCDDT4	O	LCD driver data line 4	
24	P_LCDDT5	O	LCD driver data line 5	
25	P_LCDDT6	O	LCD driver data line 6	
26	P_LCDDT7	O	LCD driver data line 7	
27	P_LED5	O	LED5 CLF dark lighting	
28	P51/A9	I	Connected to V <sub>SS</sub>	
29	P52/A10	I		
30	P_5CSW	O	SW 5C control	
31	P54/A12	I	Connected to V <sub>SS</sub>	
32	P55/A13	I		
33	V <sub>SS</sub>		Microprocessor ground	
34	P56/A14	I	Connected to V <sub>SS</sub>	
35	P57/A15	I		
36	P60	I	Connected to V <sub>DD</sub>	
37	P61	I		
38	P62	I		
39	P63	I		
40	P64/RD	O	Connected to V <sub>SS</sub>	
41	P65/WR	O		
42	P66/WAIT	I		
43	P67/ASTB	I		
44	P_DIM	O	CFL dimmer adjustment	
45	P31/TO1	I	Connected to V <sub>SS</sub>	
46	P_KEY9	I	PM KEY	L
47	P_KEY10	I	MENU KEY	L
48	P_KEY11	I	CONT KEY	L
49	P-PCL	O	LCD driver clock	
50	P_KEY12	I	B. SEL KEY (VHF)	L
51	P_KEY13	I	B. SEL KEY (UHF)	L
52	P_KEY1	I	VFO KEY	L
53	P_KEY2	I	MR KEY	L
54	P_KEY3	I	CALL KEY	L
55	P_KEY4	I	MHz KEY	L

Pin No.	Pin code	I/O	Function	Active level
56	P_KEY5	I	F KEY	L
57	P_KEY6	I	TONE KEY	L
58	P_KEY7	I	REV KEY	L
59	P_KEY8	I	LOW KEY	L
60	RESET	I	Reset input	
61	P_ENCCK	I	Encoder clock (encoder A signal)	
62	P_INT1	I	Connected to P_SI	
63	P_PWR	I	Power switch	
64	P_ENCDDT	I	Encoder data (encoder B signal)	
65	P_BCHK	I	Power voltage check	
66	P05/INTP5	I	Connected to V <sub>SS</sub>	
67	P06/INTP6	I		
68	V <sub>DD</sub>		Microprocessor power	
69	X2		Clock oscillator connection (4.19M)	
70	X1			
71	IC (V <sub>PP</sub> )			
72	XT2			
73	XT1/P07			
74	AV <sub>DD</sub>		A/D converter analog power	
75	AV <sub>REF</sub>		A/D converter reference voltage	
76	P_SQLU	I	430MHz band squelch input	
77	P_VOLU	I	430MHz band volume input	
78	P_SQLV	I	144MHz band squelch input	
79	P_VOLV	I	144MHz band volume input	
80	P14/AN14	I	Connected to V <sub>SS</sub>	

### TERMINAL FUNCTION

#### LCD ASSY (B38-0772-65)

CN No.	Pin No.	Name	Function
CN1	1	PSO	Serial data output
	2	PSI	Serial data input
	3	PE	Panel ground
	4	PB	Panel power
CN2	1	E	GND
	2	SQU	UHF band squelch input
	3	VOLU	UHF band volume input
	4	SWU	UHF band select switch input
	5	VCC	Reference voltage input
	6	SQV	VHF band squelch input
	7	VOLV	VHF band volume input
	8	SWV	VHF band select switch input
	9	E	GND

# RC-V7

## PARTS LIST

\* New Parts.  $\Delta$  indicates safety critical components.  
 Parts without **Parts No.** are not supplied.  
 Les articles non mentionnés dans le **Parts No.** ne sont pas fournis.  
 Teile ohne **Parts No.** werden nicht geliefert.

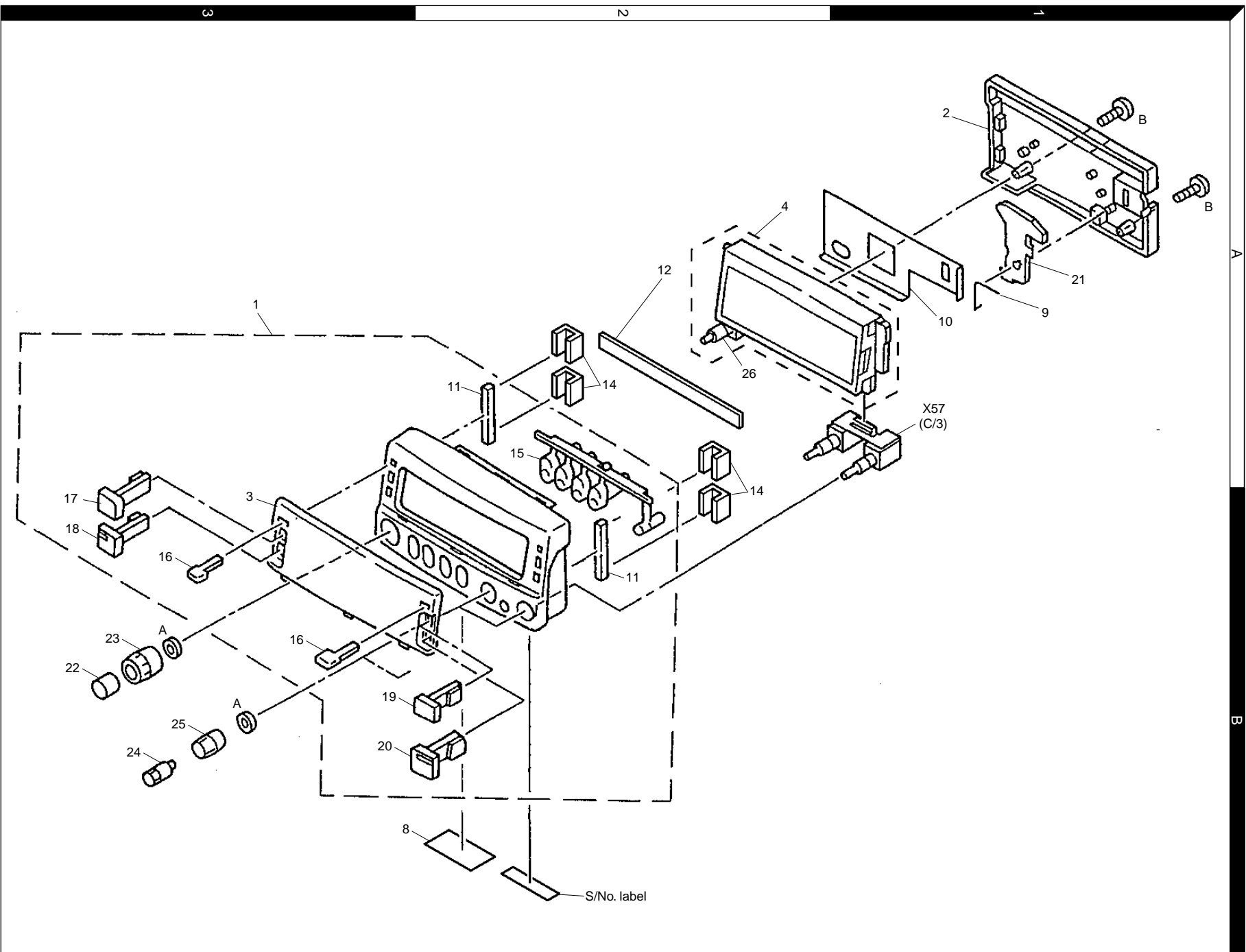
L: Scandinavia      K: USA      P: Canada  
 Y: PX (Far East, Hawaii)      T: England      E: Europe  
 Y: AAFES (Europe)      X: Australia      M: Other Areas

RC-V7 (Y62-4980-20)

Ref. No.	Address	New parts	Parts No.	Description	Destination	Ref. No.	Address	New parts	Parts No.	Description	Destination
<b>RC-V7</b>											
1	3A	*	A62-1048-03	PANEL ASSY							
2	1A		A82-0028-01	REAR PANEL							
3	3B	*	B10-2736-02	FRONT GLASS							
4	2A		B38-0772-65	LCD ASSY							
5	2D		B46-0310-03	WARRANTY CARD(EUROPE)							
6	2D		B46-0469-10	WARRANTY CARD(U.S.A./CANADA)							
7	2D	*	B59-2319-00	PAMPHLET							
8	2B	*	B72-2094-04	MODEL NAME PLATE							
9	1A		G09-0434-14	SPRING(RELEASE SWITCH)							
10	1A		G11-0794-14	SHEET(LCD ASSY)							
11	2A,2B		G13-1573-24	CUSHION(FRONT PANEL)							
12	2A		G13-1625-04	CUSHION(FRONT PANEL)							
13	3C	*	H52-1934-02	ITEM CARTON CASE							
14	2A,2B		J30-1237-24	SPACER(BUTTON KNOB:VFO,MR,PM,MNU)							
15	2A		K27-3164-13	BUTTON KNOB(4+1KEY)							
16	3B		K27-3165-03	BUTTON KNOB(PWR,CALL)							
17	3B		K27-3166-23	BUTTON KNOB(VFO)							
18	3B		K27-3167-33	BUTTON KNOB(MR)							
19	2B		K27-3168-23	BUTTON KNOB(PM)							
20	2B		K27-3169-33	BUTTON KNOB(MNU)							
21	1A		K27-3170-13	LEVER KNOB(RELEASE SWITCH)							
22	3B		K27-3175-03	BUTTON KNOB(MAIN,PUSH)							
23	3B		K29-5221-03	KNOB(MAIN)							
24	3B		K29-5222-03	KNOB(VOL)							
25	3B		K29-5223-03	KNOB(SQL)							
A	3B		N14-0569-04	CIRCULAR NUT(VOL)							
B	1A		N80-2010-45	PAN HEAD TAPTITE SCREW(PANEL)							
-		*	78058GCC678BT	CPU(LCD ASSY:IC4)							
26	2A		W02-1921-05	ENCODER							
<b>TX-RX UNIT (X57-6620-20) (C/3)</b>											
C701-706 CN701 VR701,702			CK73GB1H103K E40-5396-05 R31-0614-05	CHIP C      0.010UF K PIN ASSY VARIABLE RESISTOR      50K							

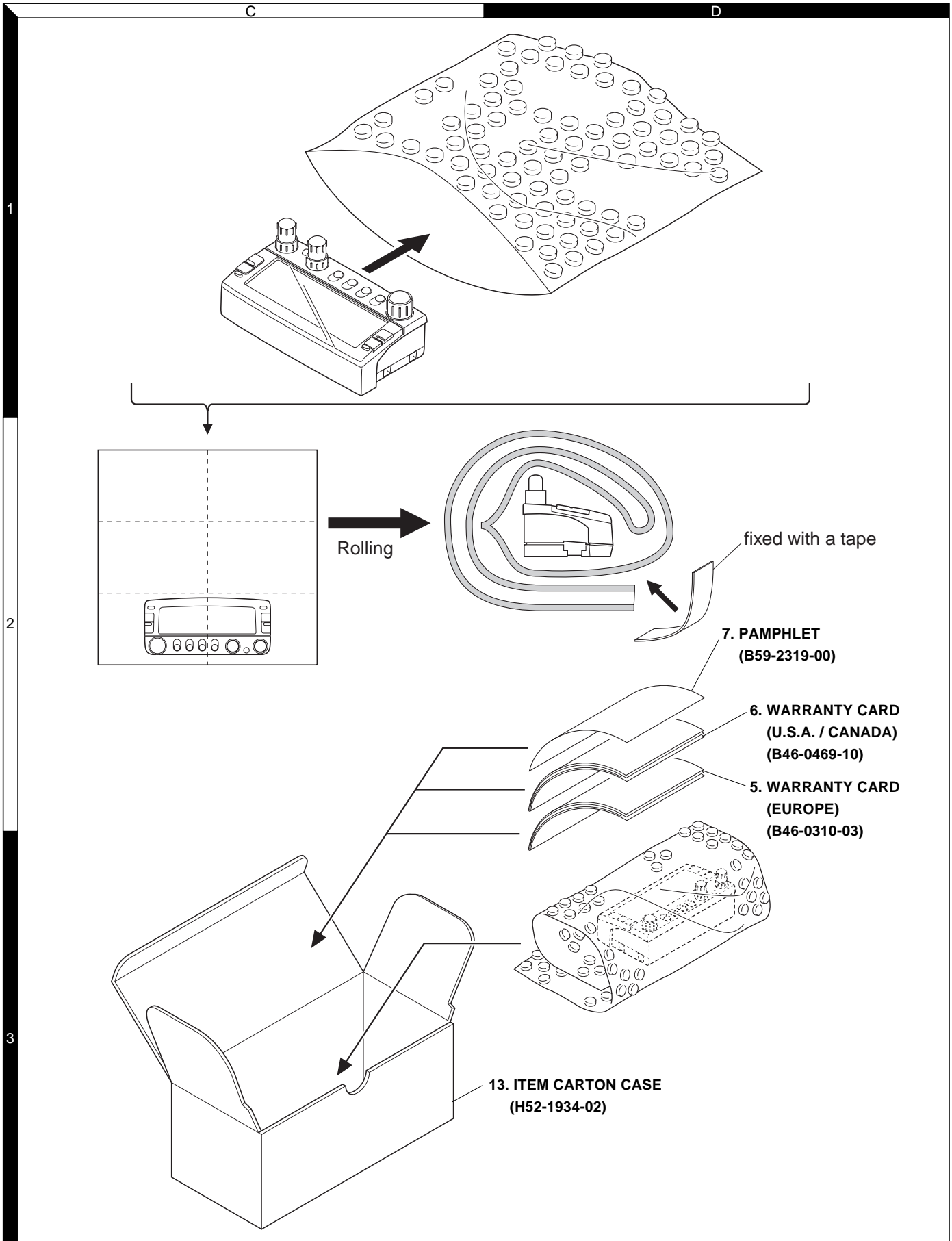
# EXPLODED VIEW

# RC-V7



Parts with the exploded numbers larger than 700 are not supplied. 5

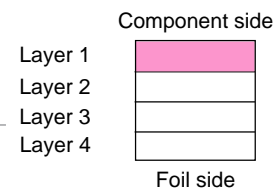
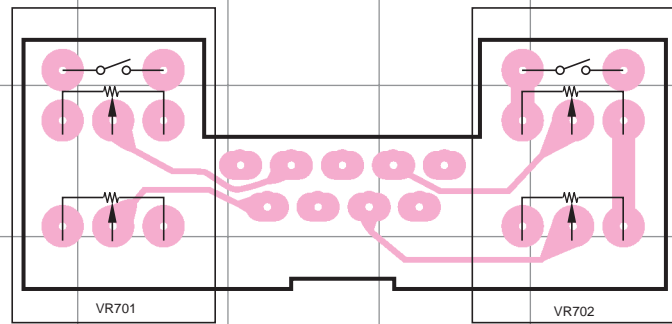
## PACKING



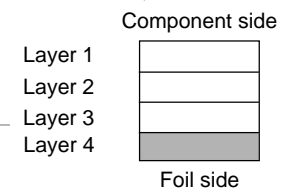
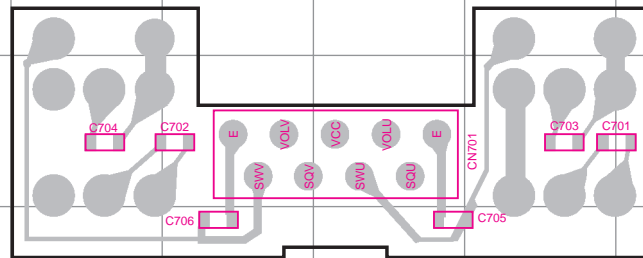
# PC BOARD VIEWS

# RC-V7

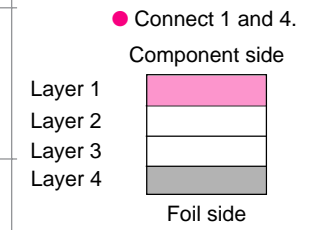
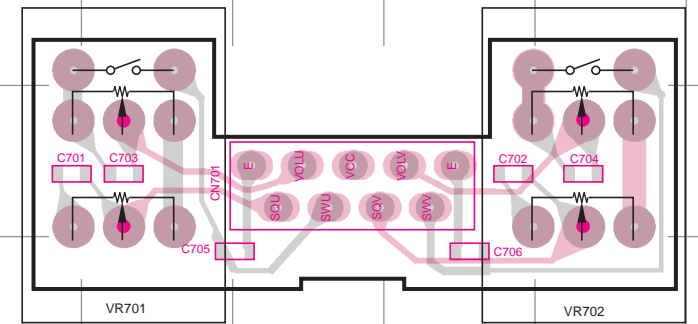
**TX-RX UNIT (X57-6620-20) (C/3)**  
**Component Side View (J72-0500-41)**



**TX-RX UNIT (X57-6620-20) (C/3)**  
**Foil Side View (J72-0500-41)**



**TX-RX UNIT (X57-6620-20) (C/3)**  
**Component Side View + Foil Side View (J72-0500-41)**

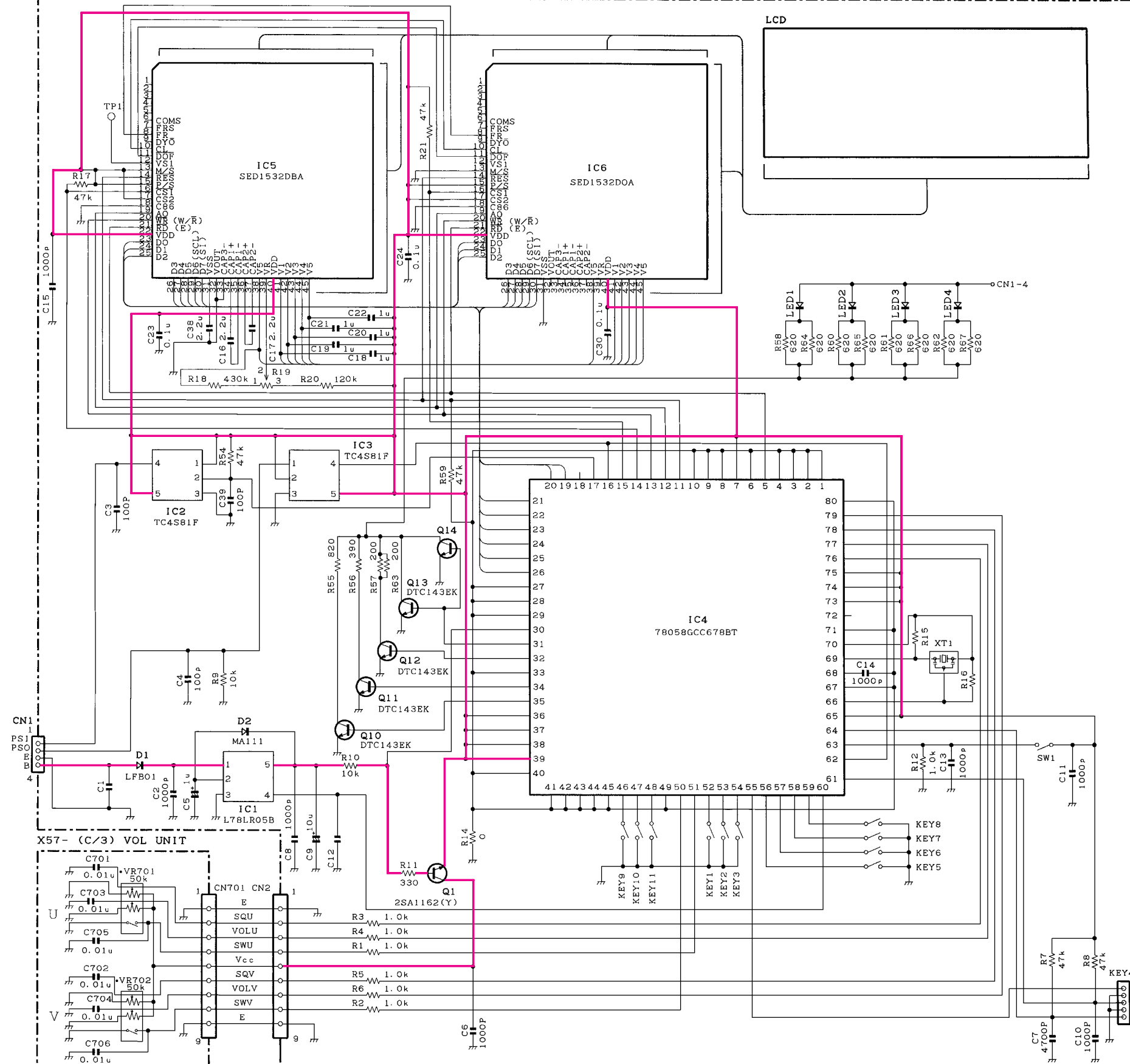




# RC-V7

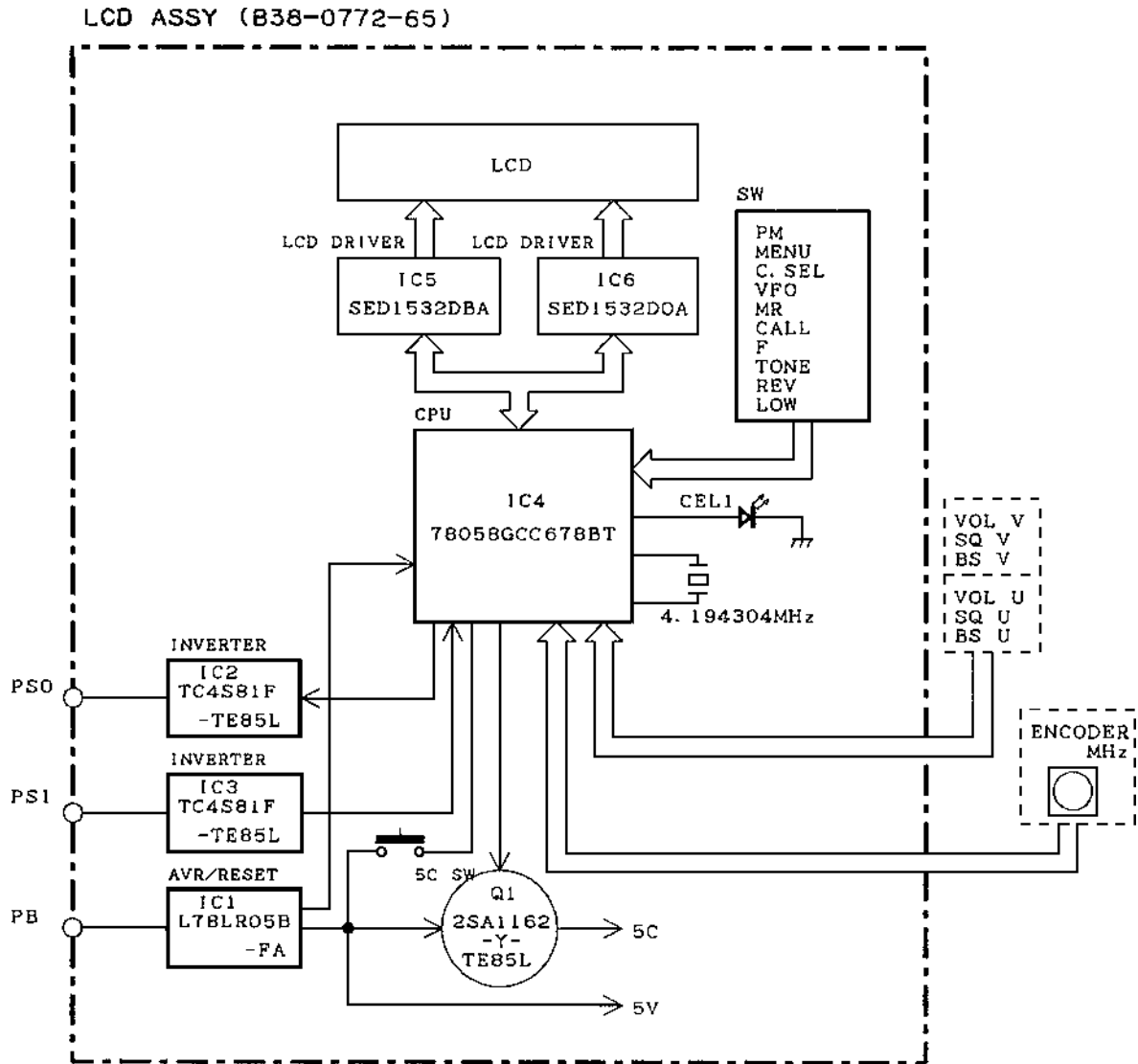
# SCHEMATIC DIAGRAM

B38-0772-65 LCD ASSY



Note) Components marked with a dot (●) are Parts of layer 1.

## BLOCK DIAGRAM



# RC-V7

## SPECIFICATIONS

Usable temperature range .....	-20°C to +60°C (-4°F to + 140°F)
Supply voltage .....	9.6V DC ±0.5V
Dimensions (W x H x D, Projections included) .....	105 (4-9/64) x 51.5 (2-1/32) x 46.5 (1-53/64) mm (inches)
Weight .....	Approx. 130g (4.6oz)

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