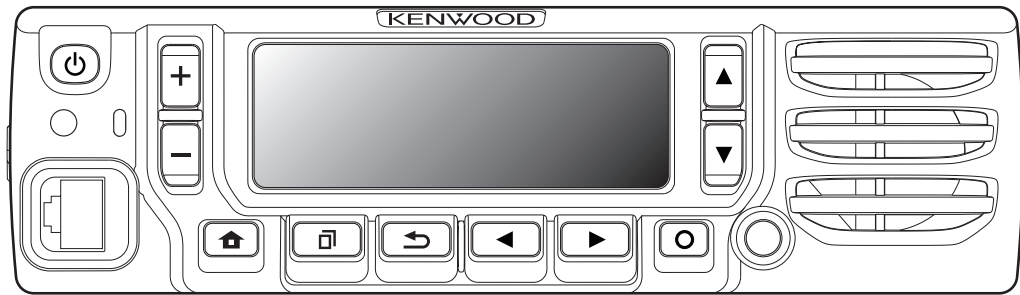


KENWOOD

SERVICE MANUAL

CONTROL HEAD KIT

KCH-19



Note :

Lead free solder used in the board (material : Sn, Ag, In, Bi, melting point : 227 Centigrade)

TABLE OF CONTENTS

1	PRECAUTION.....	1-3
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This product complies with the **RoHS** directive for the European market.



This product uses Lead Free solder.

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Disclaimer

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JVC KENWOOD Corporation reserves the right to make changes to any products herein at any time for improvement purposes.

SECTION 1 PRECAUTION

This service manual does not describe PRECAUTION.

SECTION 2 SPECIFIC SERVICE INSTRUCTIONS

2.1 CIRCUIT DESCRIPTION

■LCD Circuit

The LCD module is connected to the connector (CN4) of the Sub (Display) unit. The LCD module is controlled using parallel interface (EMIF) from the MPU (IC706) of the transceiver main unit. The backlight of the LCD is controlled by the backlight driver (IC8). The backlight driver (BD1754HFN) has a single-line digital control interface (UPIC) that can control the power ON/OFF and LED current value through the EN pin. The backlight driver is controlled by I/O Expander (IC10).

■Indicator LED Circuit and Key Backlight

Indicator LED and key backlight LED are controlled by I/O Expander (IC10). Indicator LED is consist of 3 color (Red, Green, Blue).

■Key Detection Circuit

IC10 is I/O port expander with keypad matrix decoder. It handles key scanning and flag the MPU (IC706) of the transceiver main unit via an interrupt line when key events have occurred. It communicates with the MPU via I2C serial communication.

■Light Sensor Circuit

Light sensor (IC6) senses intensity of ambient light. The intensity value of ambient light is converted to digital signal and provided to the MPU (IC706) of the transceiver main unit via I2C serial communication.

■Power Supply Circuit

The battery voltage (SB) is provided from the transceiver main unit via SB and SP interface connector (CN2). The battery voltage (SB) goes to 8 pin interface connector (J1). Other power supply (54M, 18M, 33M) is provided from the transceiver main unit via 50 pin interface connector (CN6). 54M outputs 5.36V and goes to illumination circuit, AVR_IC (IC1). IC1 (50M) outputs 5.0V. 18M outputs 1.8V and goes to LCD module. 33M outputs 3.3V and goes to AVR_IC (IC2). IC2 (30LCD) outputs 3.0V.

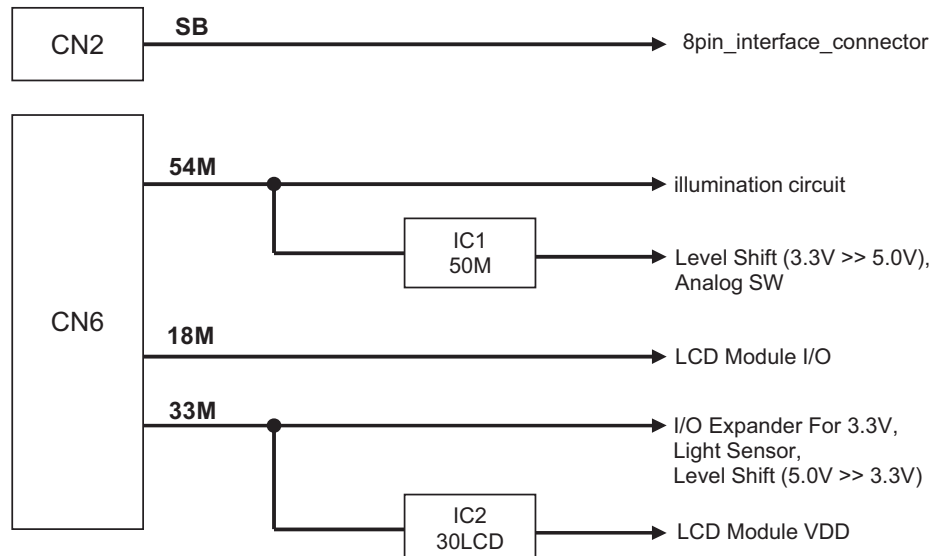


Fig.1 Power supply circuit

2.2 COMPONENTS DESCRIPTION

2.2.1 SUB (Display) unit (XC3-0020-20)

Ref.No	Part Name	Description
IC1	IC	Voltage regulator (50M)
IC2	IC	Voltage regulator (30LCD)
IC3	IC	Logic control
IC4	IC	Analog SW
IC6	IC	Illuminance sensor
IC8	IC	LED driver
IC9	IC	Logic control
IC10	IC	I/O expander
IC12	IC	Logic control
Q2	FET	DC SW
Q3, 4	Transistor	DC SW
Q6	Transistor	DC SW
D1, 2	Zener diode	Overvoltage protection
D4~7	LED	LED
D9~12	LED	LED
D14~16	LED	LED
D20	Zener diode	Overvoltage protection
D21	LED	LED
D22	Diode	Overvoltage protection
D23, 24	Zener diode	Overvoltage protection
D25	Varistor	Surge protector
D26~32	Zener diode	Overvoltage protection

2.3 TERMINAL FUNCTION

2.3.1 Sub (Display) unit (XC3-0020-20)

Pin No.	Name	I/O	Function
CN2 (to Main unit A/2 CN900 of transceiver)			
1	SP+	I	Speaker output
2	SPG	-	Speaker ground
3	GND	-	Ground
4	SB	I	Switched power supply
CN4 (LCD)			
1	VSSA	-	Ground
2	VSSA	-	Ground
3	VSSA	-	Ground
4	VCC	O	3V output
5	VCC	O	3V output
6	VSSD	-	Ground
7	VSSD	-	Ground
8	VSSD	-	Ground
9	IOVCC	O	1.8V output
10	IOVCC	O	1.8V output
11	RDX	O	LCD driver RD signal
12	WRX	O	LCD driver WR signal

Pin No.	Name	I/O	Function
13	DCX	O	LCD driver data/command switch signal
14	CSX	O	LCD driver chip-select signal
15	DB1	I/O	LCD driver data output
16	DB2	I/O	LCD driver data output
17	DB3	I/O	LCD driver data output
18	DB4	I/O	LCD driver data output
19	DB5	I/O	LCD driver data output
20	DB6	I/O	LCD driver data output
21	DB7	I/O	LCD driver data output
22	DB8	I/O	LCD driver data output
23	DB10	I/O	LCD driver data output
24	DB11	I/O	LCD driver data output
25	DB12	I/O	LCD driver data output
26	DB13	I/O	LCD driver data output
27	DB14	I/O	LCD driver data output
28	DB15	I/O	LCD driver data output
29	DB16	I/O	LCD driver data output
30	DB17	I/O	LCD driver data output
31	CABC	-	No connection
32	RESX	O	LCD driver reset signal
33	IM0	O	Interface mode select
34	LEDA	O	54M output (LED light anode)
35	LED1	I	LED light cathode 1
36	LED2	I	LED light cathode 2
37	LED3	I	LED light cathode 3
38	LED4	-	No connection
CN5 (Internal speaker)			
1	SPG	-	Speaker ground
2	SP+	O	Speaker output
CN6 (to Main unit A/2 CN749 of transceiver)			
1	GND	-	Ground
2	R_SET0	O	Radio setting signal 0
3	R_SET1	O	Radio setting signal 1
4	R_SET2	O	Radio setting signal 2
5	ME	-	MIC ground
6	MIC	O	MIC signal output
7	AFO-	I	AF signal input minus
8	AFO+	I	AF signal input plus
9	/PSW	O	Detection signal input of power switch
10	/PTT	O	PTT output
11	TXD	I	Serial data input
12	RXD	O	Serial data output
13	GND	-	Ground
14	DM/KVL	I/O	MIC data detection
15	33M	I	3.3V input

Pin No.	Name	I/O	Function
16	GND	-	Ground
17	USB_D+	I/O	USB0 PHY data plus
18	USB_D-	I/O	USB0 PHY data minus
19	GND	-	Ground
20	I2CDT	I/O	I2C serial data
21	I2CCK	I	I2C serial clock
22	/KEYINT	O	Key state change signal
23	PRST	I	LCD driver reset signal
24	/RD_LCD	I	LCD driver Read signal
25	/WR_LCD	I	LCD driver Write signal
26	DC	I	LCD driver data/command switch signal
27	/CS_LCD	I	LCD driver chip-select signal
28	D[0]	I/O	LCD driver data input
29	D[1]	I/O	LCD driver data input
30	D[2]	I/O	LCD driver data input
31	D[3]	I/O	LCD driver data input
32	D[4]	I/O	LCD driver data input
33	D[5]	I/O	LCD driver data input
34	D[6]	I/O	LCD driver data input
35	D[7]	I/O	LCD driver data input
36	D[8]	I/O	LCD driver data input
37	D[9]	I/O	LCD driver data input
38	D[10]	I/O	LCD driver data input
39	D[11]	I/O	LCD driver data input
40	D[12]	I/O	LCD driver data input
41	D[13]	I/O	LCD driver data input
42	D[14]	I/O	LCD driver data input
43	D[15]	I/O	LCD driver data input
44	18M	I	1.8V input
45	GND	-	Ground
46	GND	-	Ground
47	54M	I	5.4V input
48	GND	-	Ground
49	NC	-	No connection
50	NC (IGN)	-	No connection (Ignition sense input)
J1 (MIC jack)			
1	DM/KVL_3	I/O	MIC data detection
2	HOOK/RXD/D-2	I/O	Hook detection / Serial data input / USB PHY data minus
3	MIC_3	I	MIC signal input
4	ME_3	-	MIC ground
5	PTT/TXD_3	I/O	PTT input / Serial data output
6	GND	-	Ground
7	SB_2	O	Switched power supply

Pin No.	Name	I/O	Function
8	BLC_4/D+2	I/O	Back light control signal / USB PHY data plus

SECTION 3 DISASSEMBLY

3.1 Precautions for Disassembly

3.1.1 Removing the speaker hardware fixture (J2B-0023-00) and holder (J1K-0019-00)

- (1) Remove the speaker lead from the holder hook. <1>
- (2) Remove the speaker connector from the display unit connector (CN5). <2>
- (3) When removing the speaker hardware fixture, insert a flat-head screwdriver at the position shown in Figure 1-1 and tilt it in the direction shown by the arrow. <3>
- (4) To remove the holder, insert a flat-head screwdriver into tab of the holder and tilt it in the direction shown by the arrow. <4>

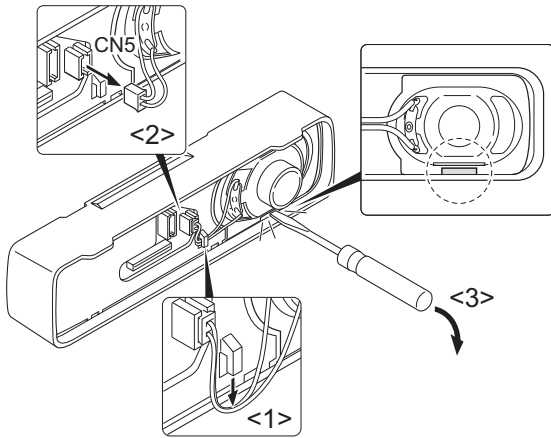


Fig.1-1

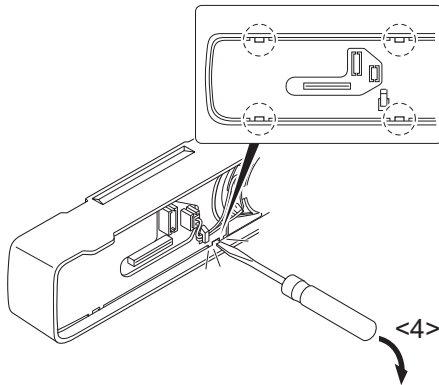


Fig.1-2

3.2 Precautions for Reassembly

3.2.1 Installing the holder (J1K-0019-00) and speaker hardware fixture (J2B-0023-00)

- (1) Insert two tabs of the holder (J1K-0019-00) into the hollows in the top of the panel. <1>
- (2) Push the two tabs of the holder in on the opposite side of those in step 1 above and fit them into the hollow in the bottom of the panel. <2>

Note:

Push in the holder until it snaps in place.

- (3) Install the speaker holder onto the panel. <3>

Note:

To improve water resistance, fit the panel into the groove of the holder.

- (4) Place the speaker into the speaker holder.

Note:

The speaker must not ride on the holder rib.

- (5) Place the spacer on the speaker.
- (6) Insert the hardware fixture (J2B-0023-00) into the hollow of the panel as shown in Figure 2-3, then push two parts of the hardware fixture and fit it into the hollow of the top of the panel. (Fig. 2-3 <4>)

Note:

Push in the hardware fixture until it snaps in place.

- (7) Insert the speaker connector into the display unit connector (CN5).
- (8) Place the speaker lead on the holder hook.

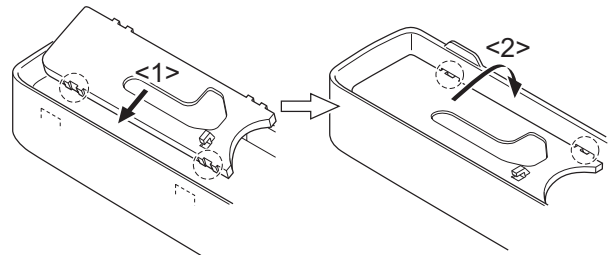


Fig.2-1

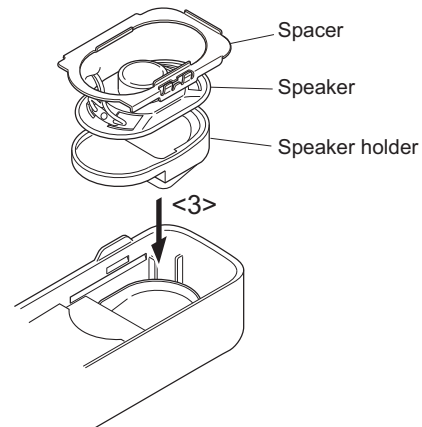


Fig.2-2

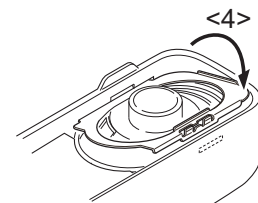


Fig.2-3

**SECTION 4
ADJUSTMENT**

This service manual does not describe ADJUSTMENT.
(There is no adjustment item on KCH-19.)

**SECTION 5
TROUBLESHOOTING**

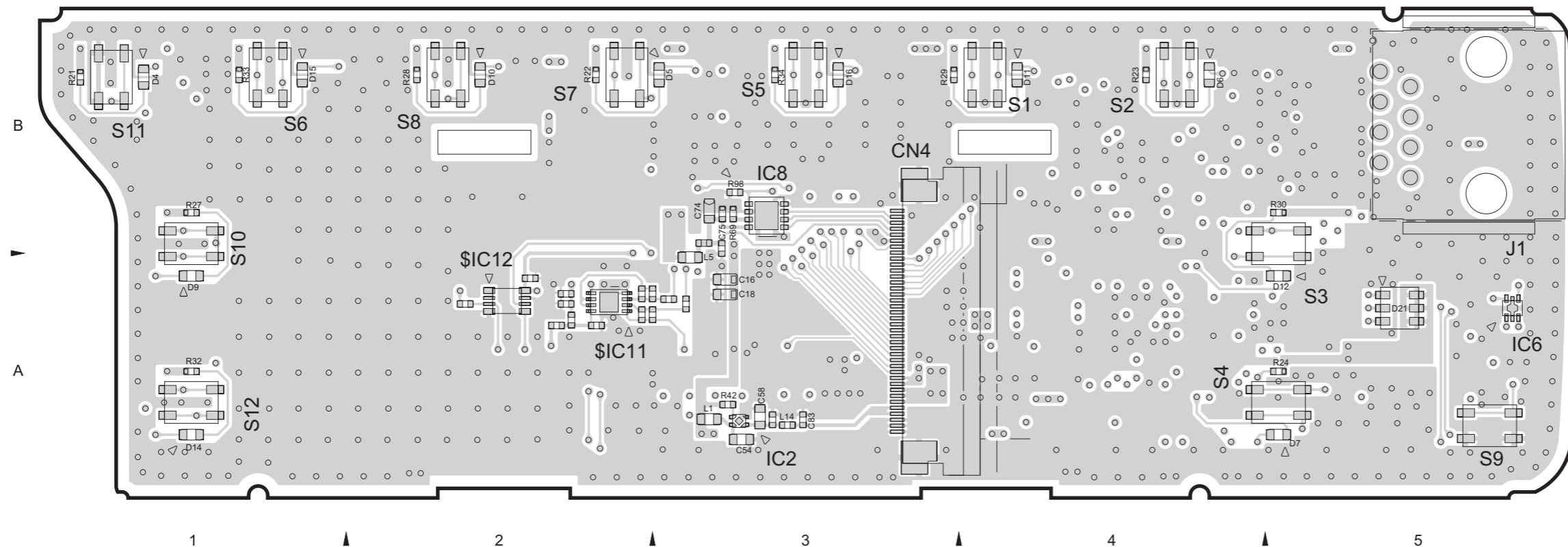
This service manual does not describe TROUBLESHOOTING.

MEMO

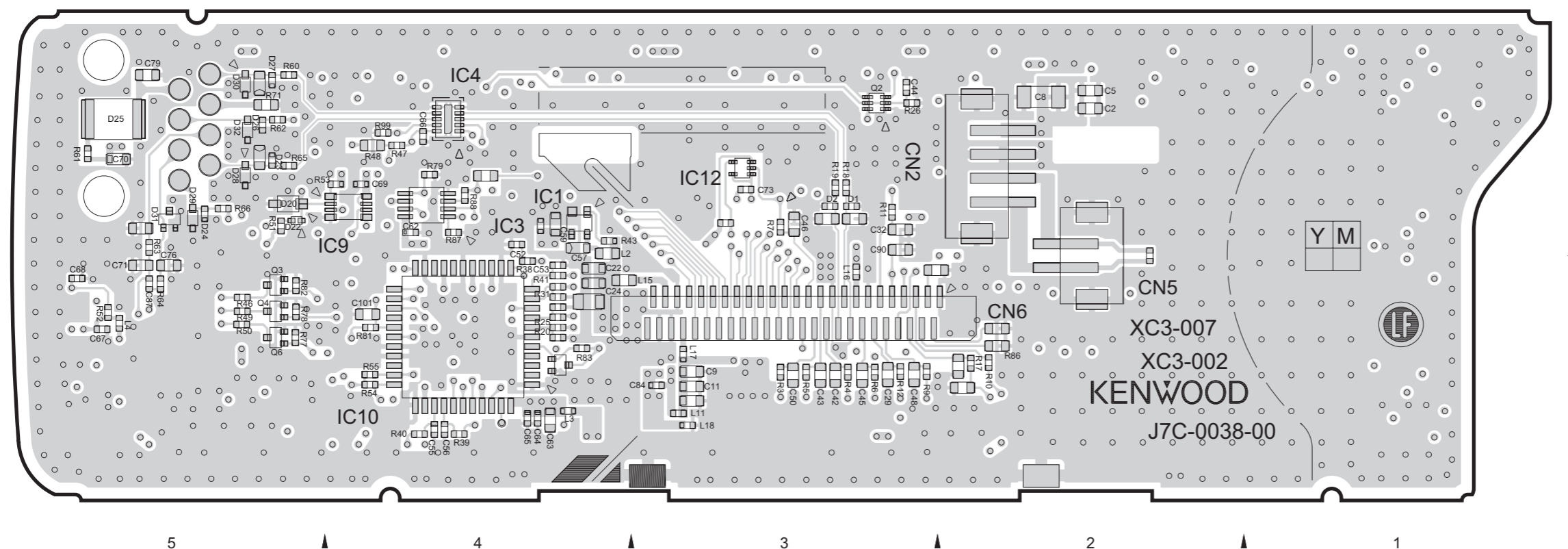
PRINTED CIRCUIT BOARD

■ SUB (DISPLAY) UNIT (XC3-0020-20)

--- Component side view (J7C-0038-00) ---



--- Foil side view (J7C-0038-00) ---



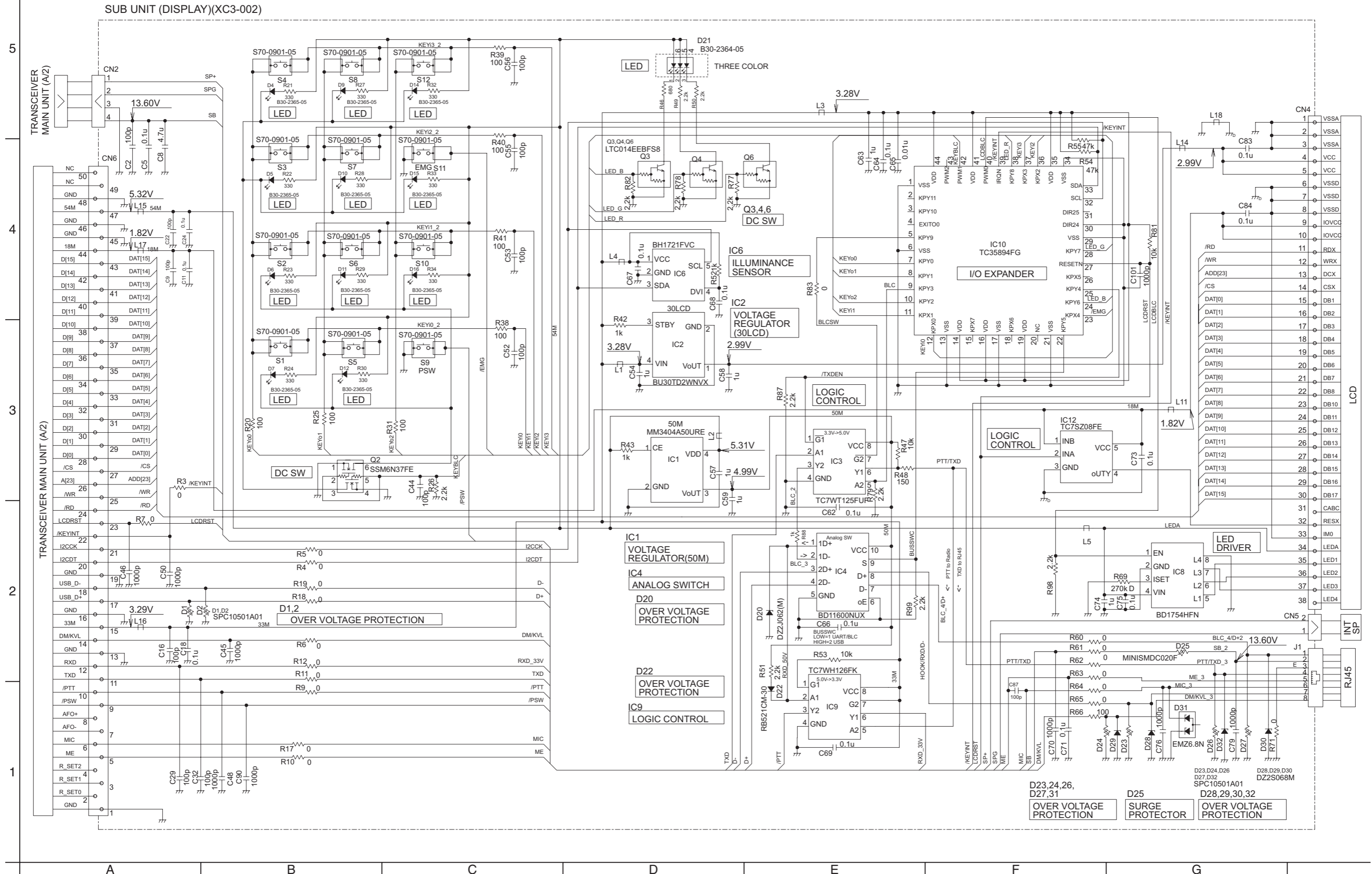
● ADDRESS TABLE OF BOARD PARTS

Each address may have an address error by one interval.

REF.NO.	LOCATION	REF.NO.	LOCATION	REF.NO.	LOCATION
IC		R52	B- 5A	S7	A- 2B
IC1	B- 4B	R53	B- 4B	S8	A- 2B
IC2	A- 3A	R54	B- 4A	S9	A- 5A
IC3	B- 4B	R55	B- 4A	S10	A- 1B
IC4	B- 4B	R60	B- 5B	S11	A- 1B
IC6	A- 5A	R61	B- 5B	S12	A- 1A
IC8	A- 3B	R62	B- 5B		
IC9	B- 4B	R63	B- 5B	J1	A- 5B
IC10	B- 4A	R64	B- 5A		
IC12	B- 3B	R65	B- 5B	L1	A- 3A
		R66	B- 5B	L2	B- 4B
TRANSISTOR		R69	A- 3B	L3	B- 4A
Q2	B- 3B	R71	B- 5B	L4	B- 5A
Q3	B- 5A	R77	B- 5A	L5	A- 3A
Q4	B- 5A	R78	B- 5A	L11	B- 3A
Q6	B- 5A	R79	B- 4B	L14	A- 3A
		R81	B- 4A	L15	B- 4A
DIODE		R82	B- 5A	L16	B- 3A
D1	B- 3B	R83	B- 4A	L17	B- 3A
D2	B- 3B	R86	B- 2A	L18	B- 3A
D4	A- 1B	R87	B- 4B		
D5	A- 3B	R88	B- 4B		
D6	A- 4B	R98	A- 3B		
D7	A- 5A	R99	B- 4B		
D9	A- 1A				
D10	A- 2B	CAPACITOR			
D11	A- 4B	C2	B- 2B		
D12	A- 5A	C5	B- 2B		
D14	A- 1A	C8	B- 2B		
D15	A- 1B	C9	B- 3A		
D16	A- 3B	C11	B- 3A		
D20	B- 5B	C16	A- 3A		
D21	A- 5A	C18	A- 3A		
D22	B- 5B	C22	B- 4A		
D23	B- 5B	C24	B- 4A		
D24	B- 5B	C29	B- 3A		
D25	B- 5B	C32	B- 3B		
D26	B- 5B	C42	B- 3A		
D27	B- 5B	C43	B- 3A		
D28	B- 5B	C44	B- 3B		
D29	B- 5B	C45	B- 3A		
D30	B- 5B	C46	B- 3B		
D31	B- 5B	C48	B- 3A		
D32	B- 5B	C50	B- 3A		
		C52	B- 4B		
RESISTOR		C53	B- 4A		
R3	B- 3A	C54	A- 3A		
R4	B- 3A	C55	B- 4A		
R5	B- 3A	C56	B- 4A		
R6	B- 3A	C57	B- 4B		
R7	B- 3B	C58	A- 3A		
R9	B- 3A	C59	B- 4B		
R10	B- 2A	C62	B- 4B		
R11	B- 3B	C63	B- 4A		
R12	B- 3A	C64	B- 4A		
R17	B- 2A	C65	B- 4A		
R18	B- 3B	C66	B- 4B		
R19	B- 3B	C67	B- 5A		
R20	B- 4A	C68	B- 5A		
R21	A- 1B	C69	B- 4B		
R22	A- 2B	C70	B- 5B		
R23	A- 4B	C71	B- 5A		
R24	A- 5A	C73	B- 3B		
R25	B- 4A	C74	A- 3B		
R26	B- 3B	C75	A- 3B		
R27	A- 1B	C76	B- 5A		
R28	A- 2B	C79	B- 5B		
R29	A- 3B	C83	A- 3A		
R30	A- 5B	C84	B- 3A		
R31	B- 4A	C87	B- 5A		
R32	A- 1A	C90	B- 3B		
R33	A- 1B	C101	B- 4A		
R34	A- 3B				
R38	B- 4A	OTHER			
R39	B- 4A	CN2	B- 2B		
R40	B- 4A	CN4	A- 3A		
R41	B- 4A	CN5	B- 2B		
R42	A- 3A	CN6	B- 3A		
R43	B- 4B				
R46	B- 5A	S1	A- 4B		
R47	B- 4B	S2	A- 4B		
R48	B- 4B	S3	A- 5B		
R49	B- 5A	S4	A- 5A		
R50	B- 5A	S5	A- 3B		
R51	B- 5B	S6	A- 1B		

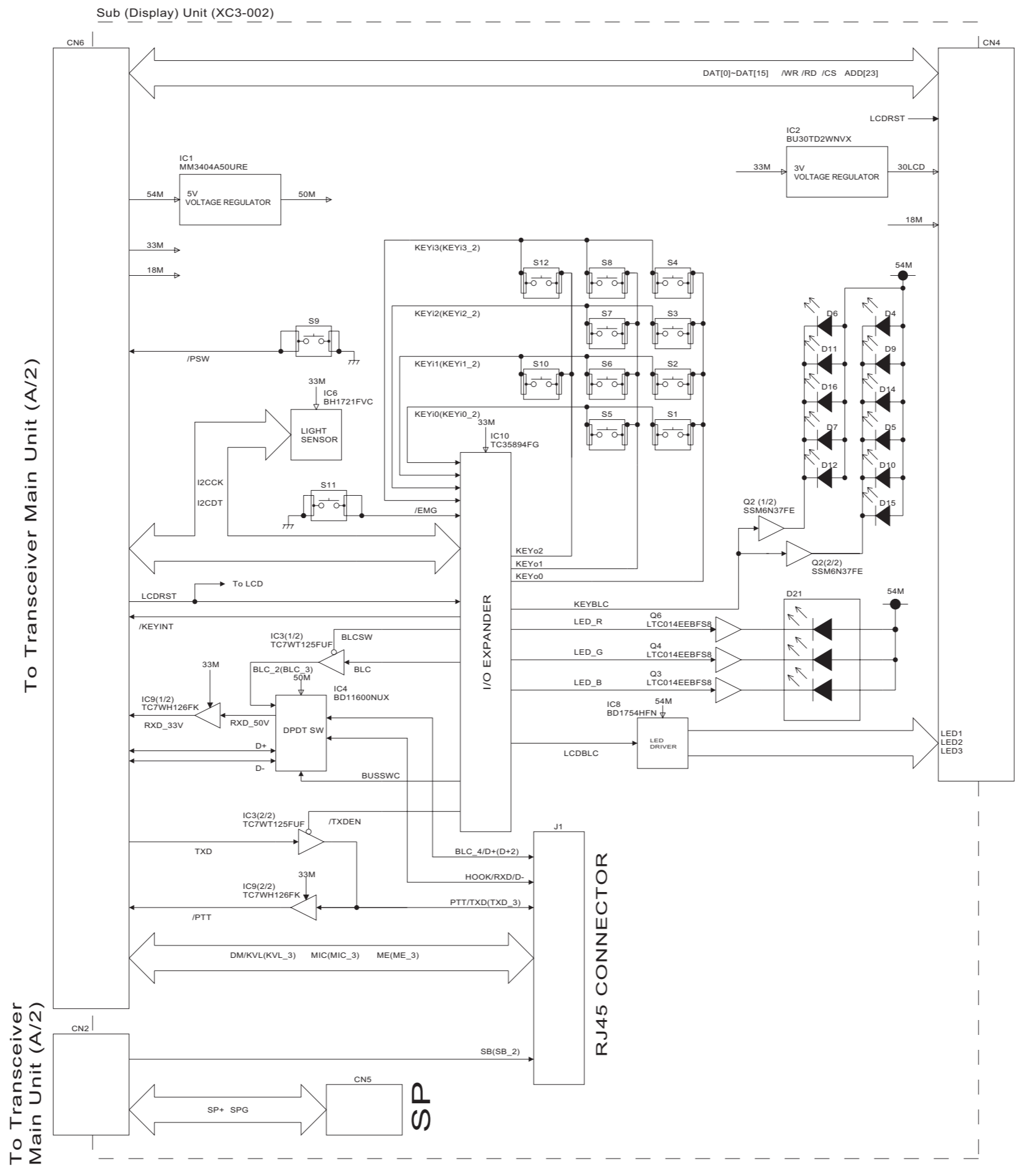
SCHEMATIC DIAGRAM

■ SUB (DISPLAY) UNIT (XC3-0020-20)



BLOCK DIAGRAM

■ SUB (DISPLAY) UNIT



MEMO

PARTS LIST

[KCH-19]

* SAFETY PRECAUTION

Parts identified by the ⚠ symbol are critical for safety. Replace only with specified part numbers.

* BEWARE OF BOGUS PARTS

Parts that do not meet specifications may cause trouble in regard to safety and performance. We recommend that genuine parts be used.

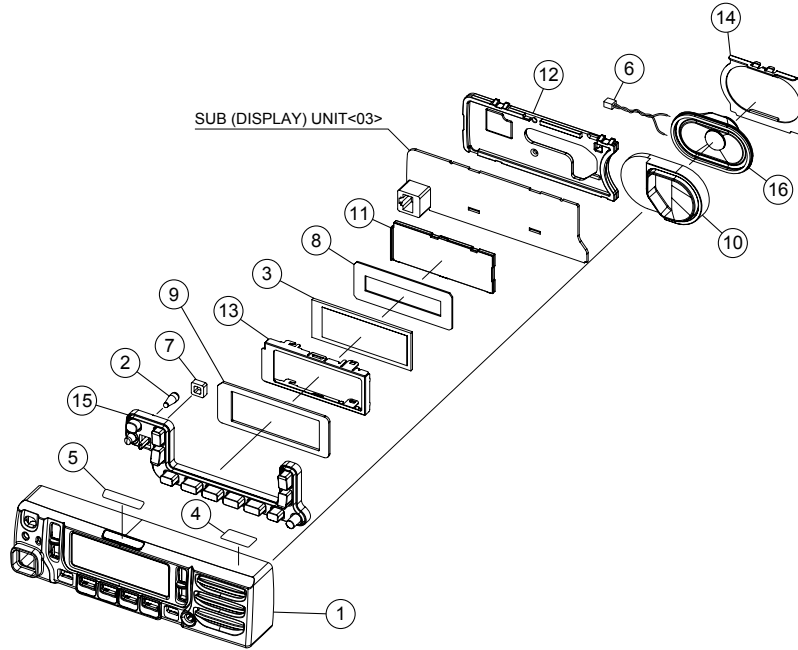
* (x_) in a description column shows the number of the used part.

- Contents -

Exploded view of general assembly and parts list	3-2
Packing and accessories	3-2
Electrical parts list	3-3

Exploded view of general assembly and parts list

Block No.M1MM



General assembly

Block No. [M][1][M][M]

Symbol No.	Part No.	Part Name	Description	Local
1	A6C-0003-10	PANEL ASSY		
2	B1B-0017-00	ILLUMINATION GUIDE		
3	B38-0966-05	LCD ASSY		
4	B4B-0008-00	CAUTION STICKER		
5	B4D-0021-00	BADGE		
6	E37-1693-05	LEAD WIRE WITH CONNECTOR(SP 2P)		
7	F1E-0002-00	SHADE(TX-BUSY)		
8	G1D-0011-00	CUSHION(LCD-HOLDER)		
9	G1D-0012-00	CUSHION(LCD-F.GLASS)		
10	G5D-0015-00	PACKING(SP)		
11	J1K-0018-00	HOLDER(LCD)		
12	J1K-0019-00	HOLDER(PCB PANEL)		
13	J2B-0021-00	MOUNTING HARDWARE(LCD)		
14	J2B-0023-00	MOUNTING HARDWARE(SP)		
15	K2K-0100-00	KEY TOP		
16	T07-0810-05	SPEAKER		

Packing and accessories

Block No. [M][2][M][M]

Symbol No.	Part No.	Part Name	Description	Local
1	H1C-0026-00	CARTON BOARD		
2	H5A-0217-00	ITEM CARTON CASE		

Electrical parts list

SUB (DISPLAY) UNIT

XC3-0020-20

Block No. [0][3]

△ Symbol No.	Part No.	Part Name	Description	Local
IC1	MM3404A50URE	IC(MOS-IC)		
IC2	BU30TD2WNVX	IC(MOS-IC)		
IC3	TC7WT125FUF	IC(MOS-IC)		
IC4	BD11600NUX	IC(MOS-IC)		
IC6	BH1721FVC	IC(MOS-IC)		
IC8	BD1754HFN	IC(MOS-IC)		
IC9	TC7WH126FK	IC(MOS-IC)		
IC10	TC35894FG	IC(MOS-IC)		
IC12	TC7S208FE	IC(MOS-IC)		
Q2	SSM6N37FE	FET		
Q3	LTC014EEBFS8	DIGI TRANSISTOR		
Q4	LTC014EEBFS8	DIGI TRANSISTOR		
Q6	LTC014EEBFS8	DIGI TRANSISTOR		
D1	SPC10501A01	VARISTOR		
D2	SPC10501A01	VARISTOR		
D4	B30-2365-05	LED(WHITE)		
D5	B30-2365-05	LED(WHITE)		
D6	B30-2365-05	LED(WHITE)		
D7	B30-2365-05	LED(WHITE)		
D9	B30-2365-05	LED(WHITE)		
D10	B30-2365-05	LED(WHITE)		
D11	B30-2365-05	LED(WHITE)		
D12	B30-2365-05	LED(WHITE)		
D14	B30-2365-05	LED(WHITE)		
D15	B30-2365-05	LED(WHITE)		
D16	B30-2365-05	LED(WHITE)		
D20	DZ2J062(M)	ZENER DIODE		
D21	B30-2364-05	LED(RGB)		
D22	RB521CM-30	DIODE		
D23	SPC10501A01	VARISTOR		
D24	SPC10501A01	VARISTOR		
D25	MINISMDC020F	VARISTOR		
D26	SPC10501A01	VARISTOR		
D27	SPC10501A01	VARISTOR		
D28	DZ2S068M	ZENER DIODE		
D29	DZ2S068M	ZENER DIODE		
D30	DZ2S068M	ZENER DIODE		
D31	EMZ6.8N	ZENER DIODE		
C2	CC73GCH1H101J	C CAPACITOR	100PF J	
C5	CK73GXR1H104K	C CAPACITOR	0.1UF K	
C8	C93-1810-05	C CAPACITOR	4.7UF K	
C9	CC73GCH1H101J	C CAPACITOR	100PF J	
C11	CK73GXR1H104K	C CAPACITOR	0.1UF K	
C16	CC73GCH1H101J	C CAPACITOR	100PF J	
C18	CK73GXR1H104K	C CAPACITOR	0.1UF K	
C22	CC73GCH1H101J	C CAPACITOR	100PF J	
C24	CK73GXR1H104K	C CAPACITOR	0.1UF K	
C29	CC73GCH1H101J	C CAPACITOR	100PF J	
C32	CC73GCH1H101J	C CAPACITOR	100PF J	
C44	CC73HCH1H101J	C CAPACITOR	100PF J	
C45	CK73GBB1H102K	C CAPACITOR	0.010UF K	
C46	CK73GBB1H102K	C CAPACITOR	0.010UF K	
C48	CK73GBB1H102K	C CAPACITOR	0.010UF K	
C50	CK73GBB1H102K	C CAPACITOR	0.010UF K	
C52	CC73HCH1H101J	C CAPACITOR	100PF J	
C53	CC73HCH1H101J	C CAPACITOR	100PF J	
C54	CK73GB1E105K	C CAPACITOR	1.0UF K	
C55	CC73HCH1H101J	C CAPACITOR	100PF J	
C56	CC73HCH1H101J	C CAPACITOR	100PF J	
C57	CK73GB1E105K	C CAPACITOR	1.0UF K	
C58	CK73GB1E105K	C CAPACITOR	1.0UF K	
C59	CK73GB1E105K	C CAPACITOR	1.0UF K	
C62	CK73HB1E104K	C CAPACITOR	0.10UF K	
C63	CK73GB1E105K	C CAPACITOR	1.0UF K	
C64	CK73HB1E104K	C CAPACITOR	0.10UF K	
C65	CK73HBB1E103K	C CAPACITOR	0.10UF K	
C66	CK73HB1E104K	C CAPACITOR	0.10UF K	
C67	CK73HB1E104K	C CAPACITOR	0.10UF K	
C68	CK73HB1E104K	C CAPACITOR	0.10UF K	
C69	CK73HB1E104K	C CAPACITOR	0.10UF K	
C70	CK73GBB1H102K	C CAPACITOR	0.010UF K	
C71	CK73GXR1H104K	C CAPACITOR	0.1UF K	
C73	CK73HB1E104K	C CAPACITOR	0.10UF K	
C74	CK73GB1E105K	C CAPACITOR	1.0UF K	
C75	CK73HB1E104K	C CAPACITOR	0.10UF K	
C76	CK73GBB1H102K	C CAPACITOR	0.010UF K	
C79	CK73GBB1H102K	C CAPACITOR	0.010UF K	
C83	CK73HB1E104K	C CAPACITOR	0.10UF K	
C84	CK73HB1E104K	C CAPACITOR	0.10UF K	
C87	CC73HCH1H101J	C CAPACITOR	100PF J	
C90	CK73GBB1H102K	C CAPACITOR	0.010UF K	
C91	CC73GCH1H470J	C CAPACITOR	47PF J	
C92	CC73GCH1H470J	C CAPACITOR	47PF J	
C101	CK73GBB1H102K	C CAPACITOR	0.010UF K	
R3	RK73HB1J000J	MG RESISTOR	0.0 J 1/16W	
R4	RK73HB1J000J	MG RESISTOR	0.0 J 1/16W	
R5	RK73HB1J000J	MG RESISTOR	0.0 J 1/16W	
R6	RK73HB1J000J	MG RESISTOR	0.0 J 1/16W	
R7	RK73HB1J000J	MG RESISTOR	0.0 J 1/16W	
R9	RK73HB1J000J	MG RESISTOR	0.0 J 1/16W	
R10	RK73HB1J000J	MG RESISTOR	0.0 J 1/16W	
R11	RK73HB1J000J	MG RESISTOR	0.0 J 1/16W	
R12	RK73HB1J000J	MG RESISTOR	0.0 J 1/16W	
R17	RK73HB1J000J	MG RESISTOR	0.0 J 1/16W	
R18	RK73HB1J000J	MG RESISTOR	0.0 J 1/16W	
R19	RK73HB1J000J	MG RESISTOR	0.0 J 1/16W	
R20	RK73HB1J101J	MG RESISTOR	100 J 1/16W	
R21	RK73HB1J331J	MG RESISTOR	330 J 1/16W	
R22	RK73HB1J331J	MG RESISTOR	330 J 1/16W	
R23	RK73HB1J331J	MG RESISTOR	330 J 1/16W	
R24	RK73HB1J331J	MG RESISTOR	330 J 1/16W	
R25	RK73HB1J101J	MG RESISTOR	100 J 1/16W	
R26	RK73HB1J222J	MG RESISTOR	2.2K J 1/16W	
R27	RK73HB1J331J	MG RESISTOR	330 J 1/16W	
R28	RK73HB1J331J	MG RESISTOR	330 J 1/16W	
R29	RK73HB1J331J	MG RESISTOR	330 J 1/16W	
R30	RK73HB1J331J	MG RESISTOR	330 J 1/16W	
R31	RK73HB1J101J	MG RESISTOR	100 J 1/16W	
R32	RK73HB1J331J	MG RESISTOR	330 J 1/16W	
R33	RK73HB1J331J	MG RESISTOR	330 J 1/16W	
R34	RK73HB1J331J	MG RESISTOR	330 J 1/16W	
R38	RK73HB1J101J	MG RESISTOR	100 J 1/16W	
R39	RK73HB1J101J	MG RESISTOR	100 J 1/16W	
R40	RK73HB1J101J	MG RESISTOR	100 J 1/16W	
R41	RK73HB1J101J	MG RESISTOR	100 J 1/16W	
R42	RK73HB1J102J	MG RESISTOR	1.0K J 1/16W	
R43	RK73HB1J102J	MG RESISTOR	1.0K J 1/16W	
R46	RK73HB1J102J	MG RESISTOR	1.0K J 1/16W	
R47	RK73HB1J103J	MG RESISTOR	10K J 1/16W	
R48	RK73GB2A151J	MG RESISTOR	150 J 1/10W	
R49	RK73HB1J562J	MG RESISTOR	5.6K J 1/16W	
R50	RK73HB1J222J	MG RESISTOR	2.2K J 1/16W	
R51	RK73HB1J102J	MG RESISTOR	1.0K J 1/16W	
R52	RK73HB1J102J	MG RESISTOR	1.0K J 1/16W	
R53	RK73HB1J103J	MG RESISTOR	10K J 1/16W	
R54	RK73HB1J473J	MG RESISTOR	47K J 1/16W	
R55	RK73HB1J473J	MG RESISTOR	47K J 1/16W	
R60	RK73HB1J000J	MG RESISTOR	0.0 J 1/16W	
R61	RK73HB1J000J	MG RESISTOR	0.0 J 1/16W	
R62	RK73HB1J101J	MG RESISTOR	100 J 1/16W	
R63	RK73HB1J000J	MG RESISTOR	0.0 J 1/16W	
R64	RK73HB1J000J	MG RESISTOR	0.0 J 1/16W	
R65	RK73HB1J000J	MG RESISTOR	0.0 J 1/16W	
R66	RK73HB1J101J	MG RESISTOR	100 J 1/16W	
R69	RK73HH1J274D	MG RESISTOR	270K D 1/16W	
R71	RK73GB2A000J	MG RESISTOR	0.0 J 1/10W	
R77	RK73HB1J222J	MG RESISTOR	2.2K J 1/16W	
R78	RK73HB1J222J	MG RESISTOR	2.2K J 1/16W	
R79	RK73HB1J222J	MG RESISTOR	2.2K J 1/16W	
R81	RK73HB1J103J	MG RESISTOR	10K J 1/16W	
R82	RK73HB1J222J	MG RESISTOR	2.2K J 1/16W	
R83	RK73HB1J000J	MG RESISTOR	0.0 J 1/16W	

Symbol No.	Part No.	Part Name	Description	Local
R87	RK73HB1J222J	MG RESISTOR	2.2K J 1/16W	
R88	RK73HB1J102J	MG RESISTOR	1.0K J 1/16W	
R98	RK73HB1J222J	MG RESISTOR	2.2K J 1/16W	
R99	RK73HB1J222J	MG RESISTOR	2.2K J 1/16W	
L1	LB73G0AM-004	CHIP FERRITE BEADS		
L2	LB73G0AM-004	CHIP FERRITE BEADS		
L3	LB73H0AV-003	CHIP FERRITE BEADS		
L4	LB73H0AV-003	CHIP FERRITE BEADS		
L5	LB73G0AM-004	CHIP FERRITE BEADS		
L11	LB73H0AV-003	CHIP FERRITE BEADS		
L14	LB73H0AV-003	CHIP FERRITE BEADS		
L15	LB73G0AM-004	CHIP FERRITE BEADS		
L16	LB73H0AV-003	CHIP FERRITE BEADS		
L17	LB73H0AV-003	CHIP FERRITE BEADS		
L18	LB73H0AV-003	CHIP FERRITE BEADS		
CN2	E41-2673-05	PIN ASSY		
CN4	E40-6965-05	FLAT CABLE CONNECTOR		
CN5	E41-2671-05	PIN ASSY		
CN6	E40-6913-05	FLAT CABLE CONNECTOR		
J1	E58-0535-05	MODULAR JACK		
S1	S70-0901-05	TACT SWITCH		
S2	S70-0901-05	TACT SWITCH		
S3	S70-0901-05	TACT SWITCH		
S4	S70-0901-05	TACT SWITCH		
S5	S70-0901-05	TACT SWITCH		
S6	S70-0901-05	TACT SWITCH		
S7	S70-0901-05	TACT SWITCH		
S8	S70-0901-05	TACT SWITCH		
S9	S70-0901-05	TACT SWITCH		
S10	S70-0901-05	TACT SWITCH		
S11	S70-0901-05	TACT SWITCH		
S12	S70-0901-05	TACT SWITCH		

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