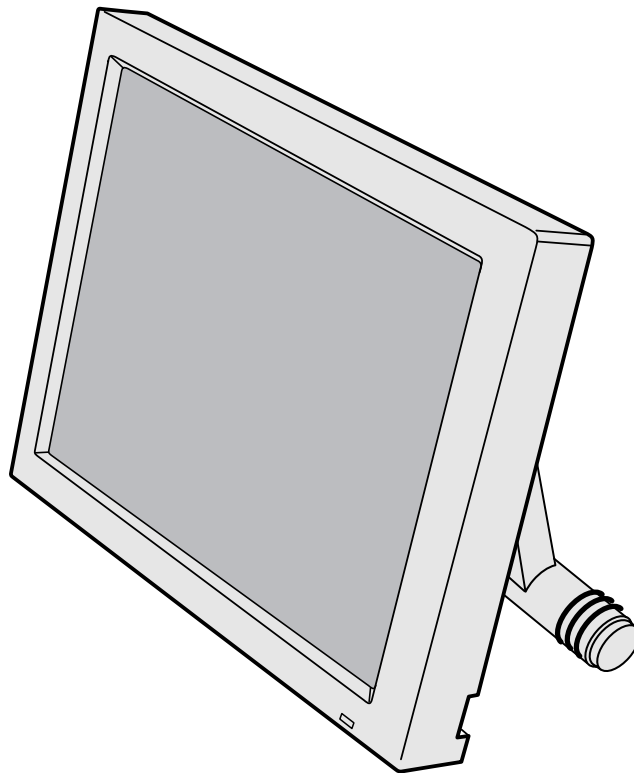


SERVICE MANUAL

INDUSTRIAL MONITOR

LMU-TK12AS2 (Without Touch Panel)
LMU-TK12AS2TC (With Touch Panel)
(GENERAL)
LMU-TK12AS2TR (With Touch Panel)
(UK)

PRODUCT CODE NO.	
LMU-TK12AS2	1 938 102 58
LMU-TK12AS2TC	1 938 102 57
LMU-TK12AS2TR	1 938 102 75



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**Refer to the separate volume User's Manual and CD-ROM
that included for instruction.**

PRECAUTIONS

Placement precautions

- Avoid placing the unit in humid or dusty places, or where it will be exposed to excessive heat (direct sunlight, heaters, etc.)
- Do not step on or set anything on the AC cord.
DAMAGE TO THE AC CORD IS A SAFETY RISK AND CAN CAUSE A FIRE.
- Do not connect the unit to the same AC as outlet with appliances that generate large amounts of interference (such as heaters with thermostats, appliances with motors, etc.). It is best to use a completely separate electrical outlet.
- Keep the unit away from water. If water accidentally enters the unit, unplug the AC power cord immediately. DO NOT PLUG IN THE UNIT AGAIN.

Handling precautions

- Avoid bending, kinking or damaging the AC power cord.
- Never insert or remove the power cord with wet hands. Also, be sure to hold cord by the plug when removing it from the outlet.
- Do not remove any parts that are held in place with screws. (The unit does not contain any user serviceable items.)
- Maintain standard room temperature (5°C to 35°C, or 41°F to 95°F) during use. Do not subject the unit to shock or vibration. Do not move the unit while it is in use.
- A rapid increase in room temperature in cool weather can cause condensation to form inside the unit. If this occurs, wait at least 15 minutes after turning the unit on before attempting to operate it.

1. MAIN SPECIFICATION

LMU-TK12AS2

LCD

Liquid Crystal Panel	TFT
Display Size	12.1"
Pixel Configuration	800 x 600
Pixel Pitch	0.308 x 0.308 mm
Brightness	350 cd/m ²
Response Time	70 ms
Contrast	350 : 1 typ.
Angle of Visibility	Up 40, Down 50, Right 55, Left 55 degrees (contrast ratio of less than 10)

Video

Horizontal signal	31.4 - 48.1kHz
Vertical signal	56 - 75Hz
Video Signal	Analog RGB 75ohm 0.7Vp-p
No. of Colors	16.19 million
OSD Language	English, German, French, Spanish
Plug & Play	VESA DDC1, DDC2B
Power Management	VESA DPMS

Physical

Dimensions	294.4 (W) x 232.9 (H) x 42.7 (D) mm	
Weight	1.8kg	
Operating Conditions	Operating Temperature:	5°C to 35°C
	Humidity:	30% to 85% RH (no condensation)
Power Supply/AC Adapter	Model Name:	GI40-US1225
	Input:	115-240VAC 1.0A-0.55A, 50-60Hz
	Output:	DC 12V 2.5A
Power Consumption	16W (2W in Energy Saving mode)	

Note : To improve this LCD monitor's performance level, its specifications and appearance are subject to change without notice.

LMU-TK12AS2TC / LMU-TK12AS2TR

LCD

Liquid Crystal Panel	TFT
Display Size	12.1"
Pixel Configuration	800 x 600
Pixel Pitch	0.308 x 0.308 mm
Brightness	350 cd/m ²
Response Time	70 ms
Contrast	350 : 1 typ.
Angle of Visibility	Up 40, Down 50, Right 55, Left 55 degrees (contrast ratio of less than 10)

Video

Horizontal signal	31.4 - 48.1kHz
Vertical signal	56 - 75Hz
Video Signal	Analog RGB 75ohm 0.7Vp-p
No. of Colors	16.19 million
OSD Language	English, German, French, Spanish
Plug & Play	VESA DDC1, DDC2B
Power Management	VESA DPMS

Touch Screen

Type	Capacitive(LMU-TK12AS2TC)	Resistive (LMU-TK12AS2TR)
Electrical Resolution	10bit (1,024 x 1,024)	4095 x 4095 (0.1 mm)
Communication	Bi-directional asynchronous RS-232C serial communication	

Physical

Dimensions	294.4 (W) x 232.9 (H) x 42.7 (D) mm		
Weight	2.4kg (LMU-TK12AS2TC)		2.1kg (LMU-TK12AS2TR)
Operating Conditions	Operating Temperature:		5°C to 35°C
	Humidity:		30% to 85% RH (no condensation)
Power Supply/AC Adapter	Model Name:	GI40-US1225	
	Input:	115-240VAC 1.0A-0.55A, 50-60Hz	
	Output:	DC 12V 2.5A	
Power Consumption	17W (3W in Energy Saving mode)		

Note : To improve this LCD monitor's performance level, its specifications and appearance are subject to change without notice.

2. TROUBLESHOOTING

The "TROUBLESHOOTING for LCD Monitor" is described in below.

Please refer to the manual "TROUBLE SHOOTING for Touch-Screen" in CD-ROM that included in "LMU-TK12AS2TC" "LMU-TK12AS2TR"

Sympton	Check Points	Treatments	Class
No Picture with LCD back light OFF			
1	Is the Power to a LCD monitor "ON"?	Check AC outlet, AC cord, DC Jack and Power switch for a LCD monitor	A
2	Is an AC Adapter defective?	Replace an AC Adapter with the new one	B
3	Is the Power to a computer "ON"?	Check AC outlet, AC cord, DC Jack and Power switch for a computer	A
4	Is a computer standing by ?	Be out of standing by condition, by operating to a computer	A
5	Is the wire harness between main PCB and Rotary volume disconnected?	Check the connection of wire harness	C
6	Is the wire harness between main PCB and DC-DC PCB disconnected ?	Check the connection of wire harness	C
7	Is the wire harness between Inverter PCB and a LCD module disconnected ?	Check the connection of wire harness	C
8	Is the wire harness between main PCB and Inverter PCB disconnected ?	Check the connection of wire harness	C
9	Is the Inverter unit defective ?	Replace an Inverter unit with the new one	C
10	Is the rotaly volume defective?	Replace a sub PCB with the new one	C
11	Is a LCD module defective ?	Replace a LCD module with the new one	C
12	Is the main PCB defective ?	Replace the main PCB with the new one	C
No Picture with LCD back light ON			
1	Is a signal cable connected securely ?	Check the connection of a signal cable	A
2	Disconnected a signal cable ? or Bent a terminal pin ?	Replace a signal cable with the new one	B
3	Is the wire harness between main PCB and a LCD module disconnected ?	Check the connection of wire harness	C
4	Is the Brightness control volume defective ?	Replace the Volume PCB with new one, and check the screen	C
5	Is a LCD module defective ?	Replace a LCD module with the new one	C
6	Is the computer's signal timing not agreeable to the LCD's specification ?	Adjust the computer's signal timing, if possible	B
7	Is the main PCB defective ?	Replace the main PCB with the new one	C

CLASS

- A It is possible to treated by end-user
- B It might be possible to treat by end-user in some case.
- C It must be treated by Professional Technical Staff

Sympton	Check Points	Treatments	Class
Screen's display range is incorrect			
1	Is the adjustment for screen performed correctly ?	Adjust the screen correctly	A
2	Is the size of screen set correctly ?	Set the size of screen again(refer to User's Manual for the computer)	A
3	Is the switch setting for adapter to convert signals performed correctly ?	Check the specification of an adapter to convert signals and a computer	B
Screen is distorted			
1	Is a signal cable connected securely ?	Check the connection of a signal cable	A
2	Is a signal cable extended too long ?	Not to extend a signal cable	A
3	Is the output level of a computer screen not agreeable to the LCD's specification ?	Check the specification of a computer	B
4	Is the main PCB defective ?	Replace the main PCB with the new one	C
Part of colors(R/G/B) is not displayed			
Black line is appeared vertically			
1	Is a signal cable connected securely ?	Check the connection of a signal cable	A
2	Is the connection between main PCB and a LCD module securely ?	Check the connector	C
3	Is the main PCB defective ?	Replace the main PCB with the new one	C

CLASS

- A It is possible to treated by end-user
- B It might be possible to treat by end-user in some case.
- C It must be treated by Professional Technical Staff

3. MAINTENANCE

3-1 LMU-TK12AS2

Disassembling the major components

- (1) Cabinet
 1. Unscrew to secure the cabinet (8-position)
 2. Pull the cabinet upward to remove it
- (2) LCD Panel
 1. Unscrew to secure the LCD panel (4-position)
 2. Pull the LCD panel up carefully. Disconnect the FPC from main PCB, and pull the connector out to inverter unit.
- (3) Inverter Unit
 1. Unscrew to secure the Inverter Unit (2-position)
 2. Disconnect the cable from the main PCB
- (4) Main PCB
 1. Pull the RGB signal cable out
 2. Unscrew to secure the main PCB (4-position)
 3. Disconnect the cables on the main PCB (4-position)
 - / Two connector from the VR-OSD PCB
 - / One connector from the DC-IN PCB
 - / One connector from the Inverter PCB
 4. Unscrew to secure the bracket for RGB Connector (2-position)
- (5) VR-OSD PCB
 1. Unscrew to secure the VR-OSD PCB (3-position)
 2. Disconnect the cables from the main PCB and the LED PCB
- (6) DC-IN PCB
 1. Unscrew to secure the DC-IN PCB (2-position)
 2. Disconnect one cable from Power Switch, and another cable from the main PCB
- (7) Power Switch
 1. Remove the Power Switch, while pressing the hook of the Power Switch
- (8) LED PCB
 1. Unscrew to secure the LED PCB (1-position)
 2. One cable has already been disconnected.

3-2 LMU-TK12AS2TC

Disassembling the major components

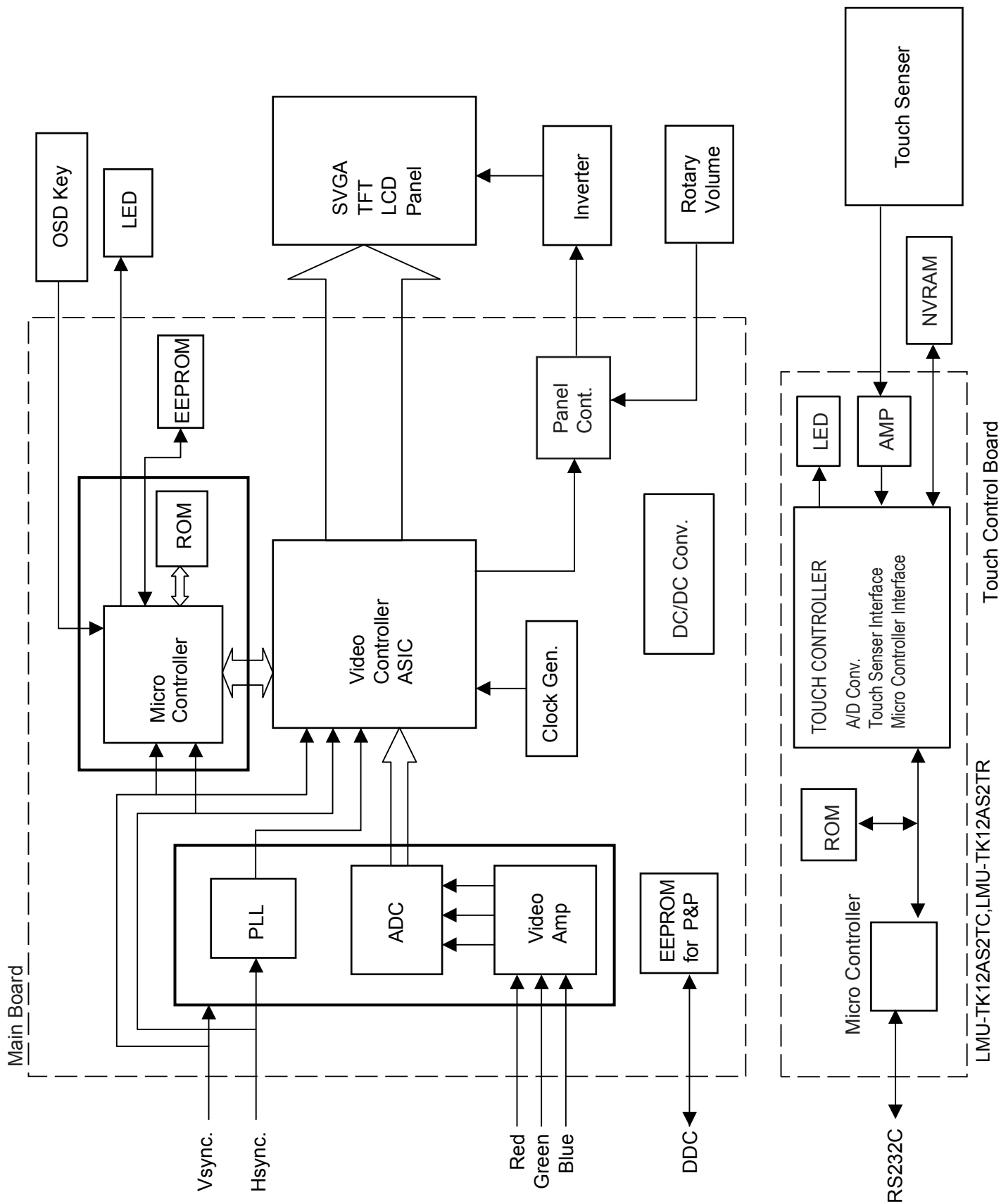
- (1) Cabinet
 1. Unscrew to secure the cabinet (8-position)
 2. Pull the cabinet upward to remove it
- (2) LCD Panel and Touch Panel
 1. The Touch panel is on the LCD panel. The clearance between the Touch Panel and the bottom case are filled with 8 rubber pieces. Pull the right side of the Touch panel upward carefully, then turn it over at the left side of the bottom case.
 2. Unscrew to secure the LCD panel (4-position)
 3. Pull the LCD panel up carefully. Disconnect the FPC from the main PCB, and pull the connector out to inverter unit.
 4. Unscrew to secure the earth terminal (1-position)
 5. Disconnect the cable on the main PCB (Orange, Grey)
 6. Disconnect the cable on the Touch controller PCB
- (3) Inverter Unit
 1. Unscrew to secure the Inverter Unit (2-position)
 2. Disconnect the cable from the main PCB
- (4) Main PCB
 1. Pull a RGB signal cable out
 2. Unscrew to secure the main PCB (4-position)
 3. Disconnect the cables on the main PCB (6-position)
 - / Two cables have already been disconnected
 - / Two connectors from the VR-OSD PCB
 - / One connector from the DC-IN PCB
 - / One connector from the Inverter PCB
 4. Unscrew to secure the bracket for RGB Connector (2-position)
- (5) Touch Controller PCB
 1. Unscrew to secure the Touch controller PCB (2-position)
 2. Disconnect the serial cable
- (6) Serial Cable (Connector and Cable with bracket)
 1. Unscrew to secure the bracket and Clamp for serial cable (3-position)
- (7) VR-OSD PCB
 1. Unscrew to secure the Joint PCB (3-position)
 2. Disconnect the cables from the main PCB and the LED PCB
- (8) DC-IN PCB
 1. Unscrew to secure the DC-IN PCB (2-position)
 2. Disconnect one cable from Power Switch, and another cable from the main PCB
- (9) Power Switch
 1. Remove the Power Switch, while pressing the hook of the Power Switch
- (10) LED PCB
 1. Unscrew to secure the LED PCB (1-position)
 2. One cable has already been disconnected.

3-3 LMU-TK12AS2TR

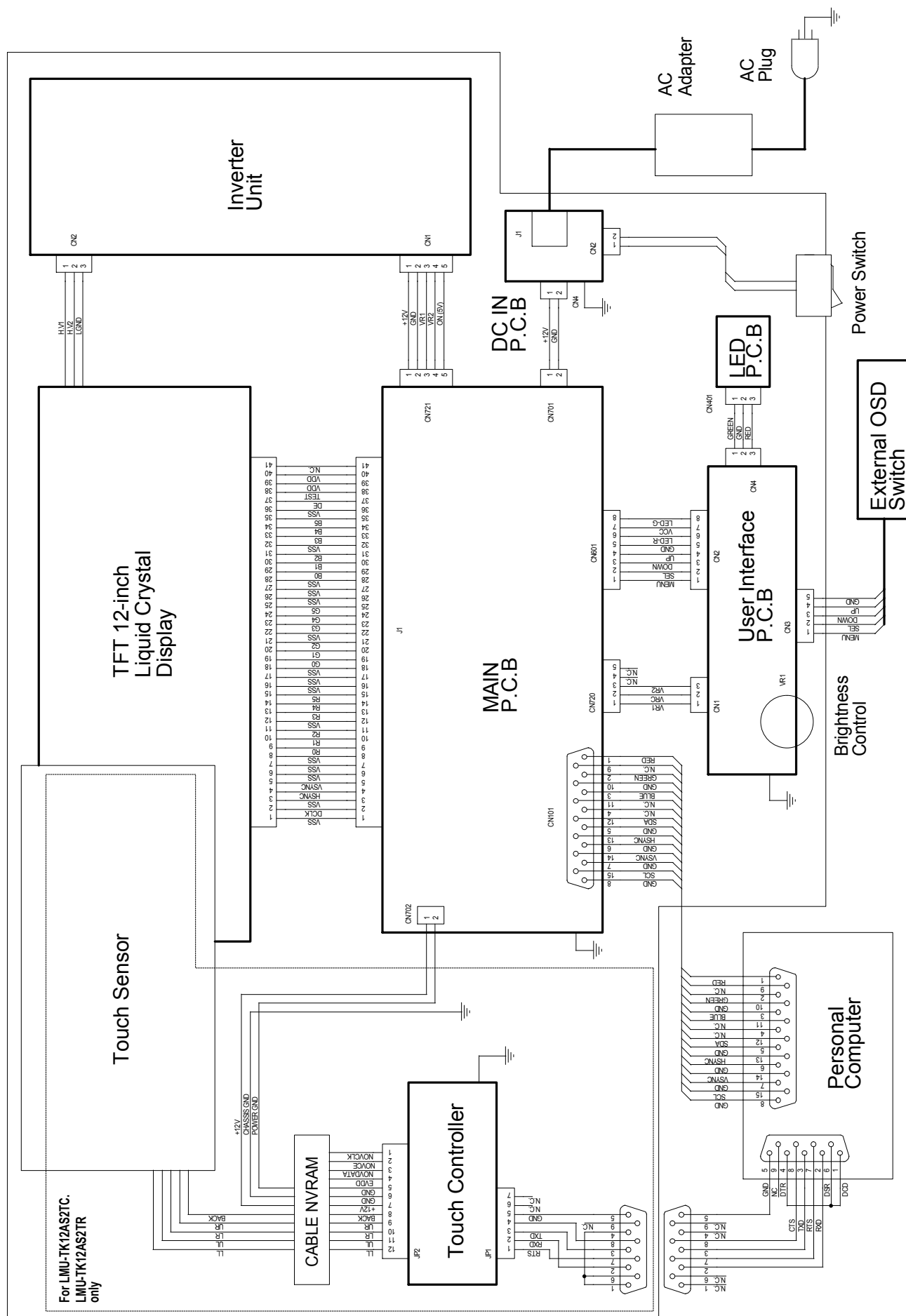
Disassembling the major components

- (1) Cabinet
 1. Unscrew to secure the cabinet (8-position)
 2. Pull the cabinet upward to remove it
- (2) LCD Panel and Touch Panel
 1. The Touch panel is on the LCD panel. The clearance between the Touch Panel and the bottom case are filled with 8 rubber pieces. Pull the right side of the Touch panel upward carefully, then turn it over at the left- side of the bottom case.
 2. Unscrew to secure the LCD panel (4-position)
 3. Pull the LCD panel up carefully. Disconnect the FPC from main PCB, and pull the connector out to inverter unit.
 4. Disconnect the FPC cable on the Touch controller PCB
- (3) Inverter Unit
 1. Unscrew to secure the Inverter Unit (2-position)
 2. Disconnect the cable from the main PCB
- (4) Main PCB
 1. Pull the RGB signal cable out
 2. Unscrew to secure the main PCB (4-position)
 3. Disconnect the cables on the main PCB (5-position)
 - / Two connector from the VR-OSD PCB
 - / One connector from the Touch Controller PCB
 - / One connector from the DC-IN PCB
 - / One connector from the Inverter PCB
 4. Unscrew to secure the bracket for RGB Connector (2-position)
- (5) Touch Controller PCB
 1. Unscrew to secure the Touch controller PCB (2-position)
 2. Disconnect the serial cable
- (6) Serial Cable (Connector and Cable with bracket)
 1. Unscrew to secure the bracket for serial cable (2-poswition)
- (7) VR-OSD PCB
 1. Unscrew to secure the Joint PCB (3-position)
 2. Disconnect the cables from the main PCB and the LED PCB
- (8) DC-IN PCB
 1. Unscrew to secure the DC-IN PCB (2-position)
 2. Disconnect one cable from Power Switch, and another cable from the main PCB
- (9) Power Switch
 1. Remove the Power Switch, while pressing the hook of the Power Switch
- (10) LED PCB
 1. Unscrew to secure the LED PCB (1-position)
 2. One cable has already been disconnected.

4. BLOCK DIAGRAM



5. CONNECTION DIAGRAM



6. TABLE OF SIGNAL NAME

Main board

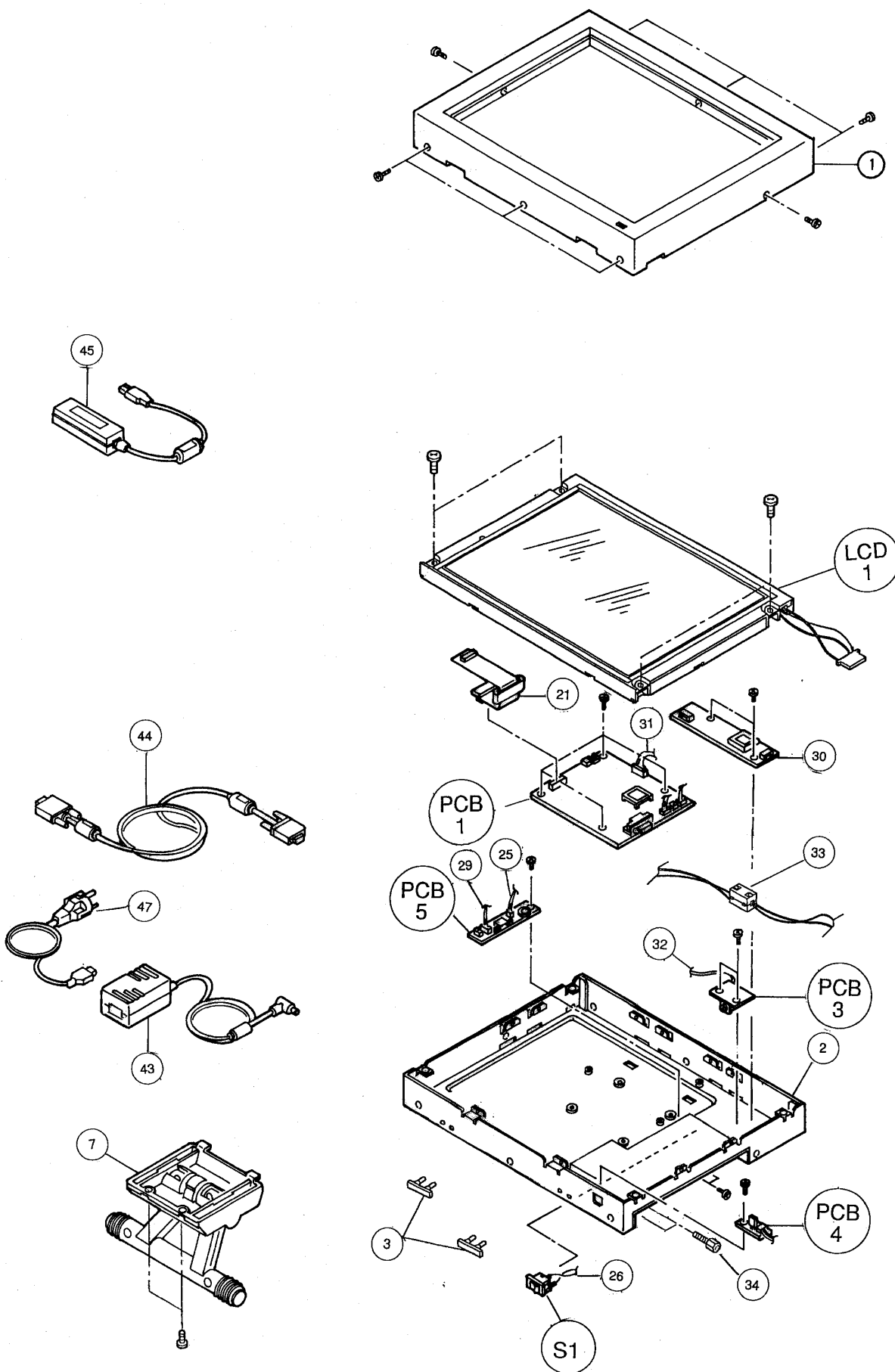
Symbol	Signal Name	Location	Notes
DCLK	Data Clock	J1-2	
HSYNC	Horizontal Sync.	J1-4	This signal is invalid, input H or L.
VSYNC	Vertical Sync.	J1-5	This signal is invalid, input H or L.
R0	Red Data (LSB)	J1-9	
R1	Red Data	J1-10	
R2	Red Data	J1-11	
R3	Red Data	J1-13	
R4	Red Data	J1-14	
R5	Red Data (MSB)	J1-15	
G0	Green Data (LSB)	J1-19	
G1	Green Data	J1-20	
G2	Green Data	J1-21	
G3	Green Data	J1-23	
G4	Green Data	J1-24	
G5	Green Data (MSB)	J1-25	
B0	Blue Data (LSB)	J1-29	
B1	Blue Data	J1-30	
B2	Blue Data	J1-31	
B3	Blue Data	J1-33	
B4	Blue Data	J1-34	
B5	Blue Data (MSB)	J1-35	
DE	Data Enable (positive)	J1-37	
TEST	Display test	J1-38	For display test, to be L.
VDD	Power Supply	J1-39	3.3V
VDD	Power Supply	J1-40	3.3V
VIN	Inverter Power	CN721-1	12V
VR1,2	Controlled Voltage	CN721-3,4	
ON	Back Light Control	CN721-5	H : Light ON
VR1,2	Brightness Volume	CN720-1,3	
VRC	Brightness Volume	CN720-2	
MENU	MENU Key	CN601-1	
SEL	SELECT Key	CN601-2	
DOWN	DOWN Key	CN601-3	
UP	UP Key	CN601-4	
LED-R	LED Red	CN601-6	
LED-G	LED Green	CN601-8	
RED	VIDEO Red Signal	CN101-1	
GREEN	VIDEO Green Signal	CN101-2	
BLUE	VIDEO Blue Signal	CN101-3	
HSYNC	Horizontal Sync.	CN101-13	
VSYNC	Vertical Sync.	CN101-14	
SDA	DDC Data	CN101-12	
SCL	DDC Clock	CN101-15	
VR1,2	Controlled Voltage	CN720-3,4	
ON	Back Light Control	CN720-5	H : Light ON

Touch Controller Board
(for LMU-TK12AS2TC,LMU-TK12AS2TR only)

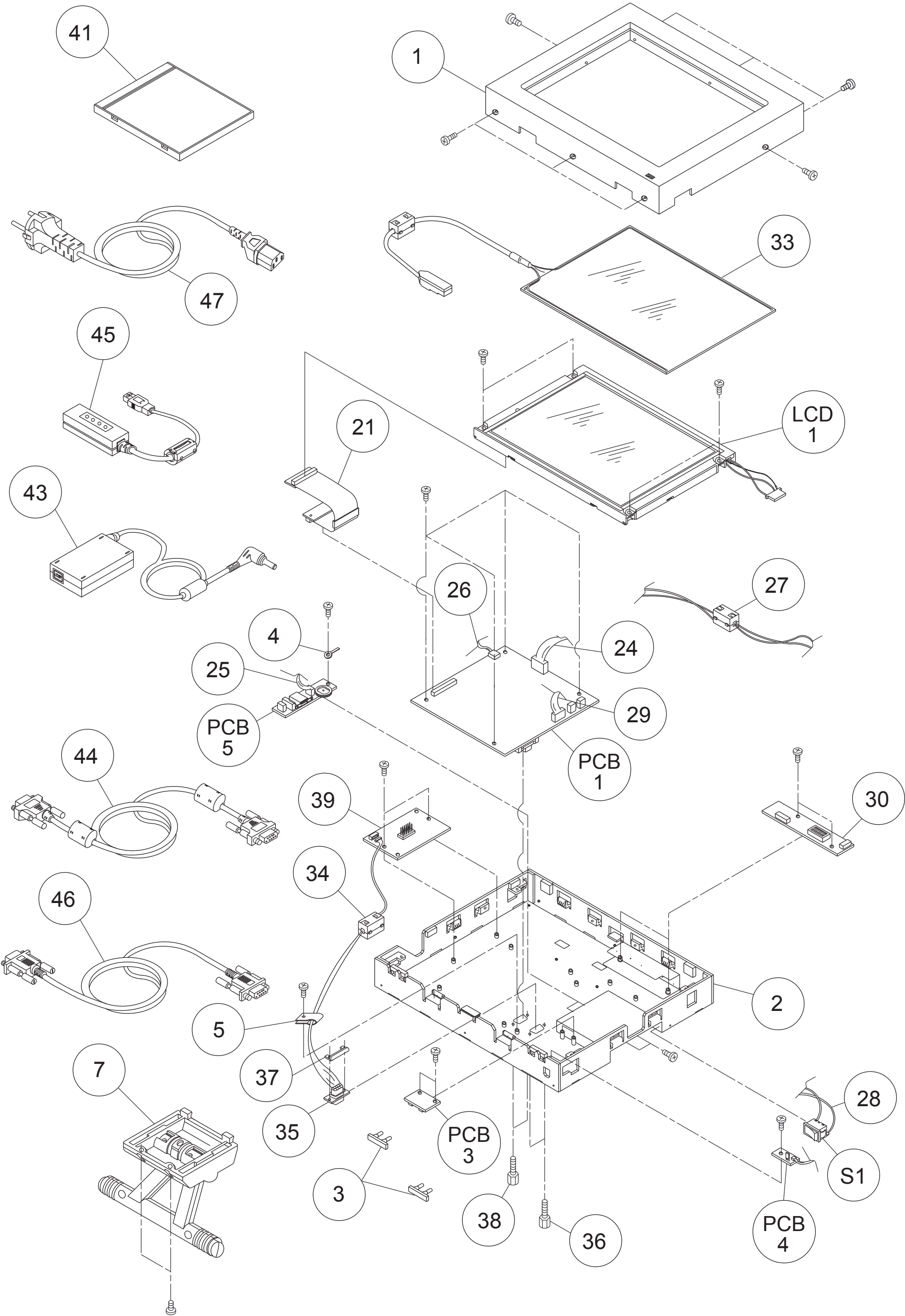
Symbol	Signal Name	Location	Notes
RTS	Request To Send	JP1-1	
RXD	Receive Data	JP1-2	
TXD	Transmit Data	JP1-3	
CTS	Clear To Send	JP1-4	
DCD	Data Carrier Detect	NC	
DTR	Data Terminal Ready	NC	
GND	Signal ground	NC	
DSR	Data Set Ready	NC	
GND	Chassis (earth) ground	NC	
UR	Upper right (UR) corner	JP2-9	
LR	Lower right (LR) corner	JP2-10	
UL	Upper left (UL) corner	JP2-11	
LL	Lower left (LL) corner	JP2-12	

7. EXPLODED VIEW AND PARTS LIST

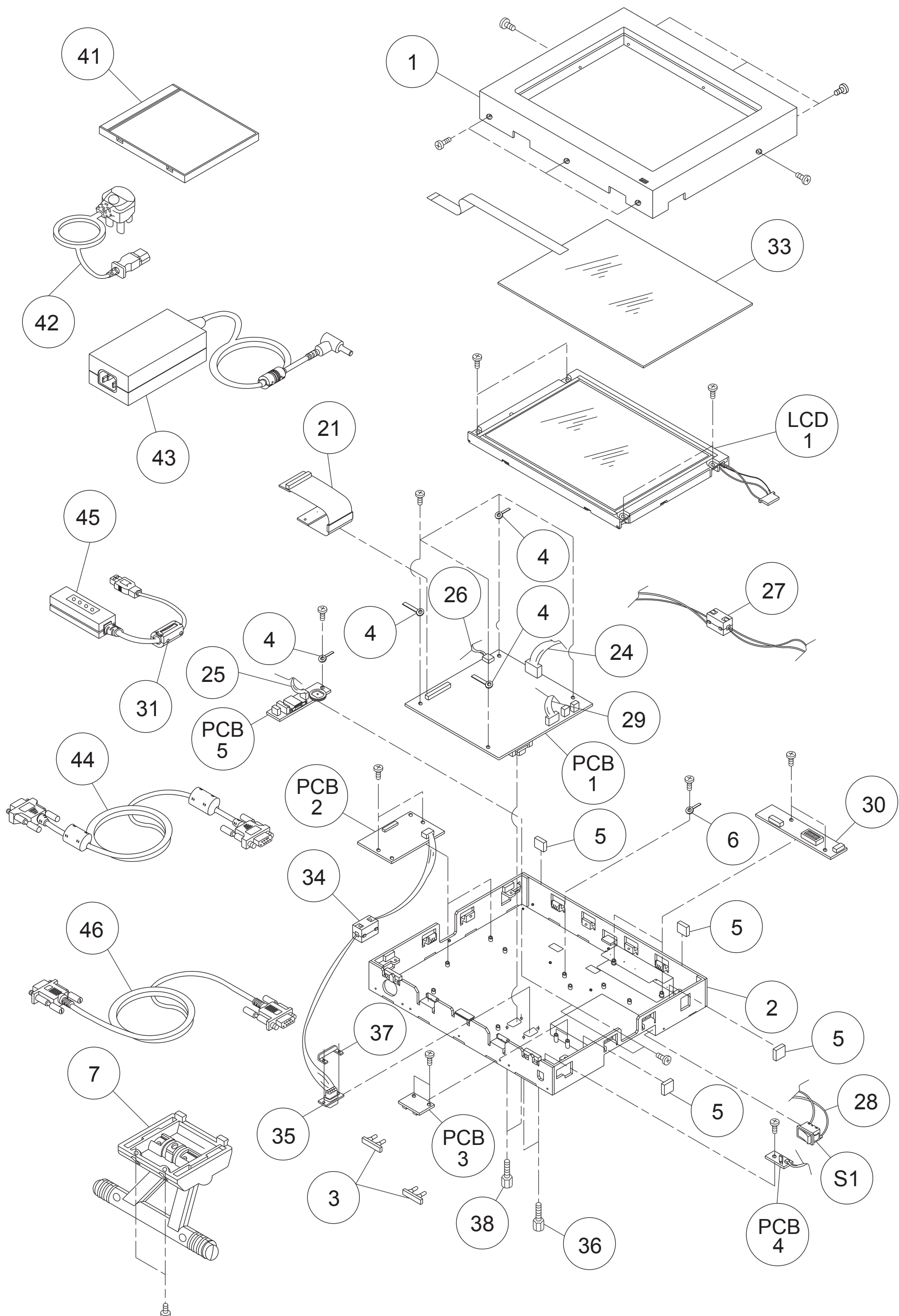
7-1 Exploded view (LMU-TK12AS2)



7-1 Exploded view (LMU-TK12AS2TC)





7-1 Exploded view (LMU-TK12AS2TR)




7-2 PARTS LIST

7-2-1 LMU-TK12AS2(K)/SS

PRODUCT SAFETY NOTICE

Each precaution in this manual should be followed during servicing. Components identified with the IEC symbol  in the parts list and the schematic diagram designate components in which safety can be of special significance. When replacing a component identified with  use only the replacement parts designated, or parts with the same ratings of resistance, wattage or voltage that are designated in the parts list in this manual. Leakage-current or resistance measurements must be made to determine that exposed parts are acceptably insulated from the supply circuit before returning the product to the customer.



Ref. No.	PART No.	DESCRIPTION	Q'ty
OUTER			
	661 006 6665	OUTER CARTON,TR(K)	1
	632 758 4209	LABEL, BAR CODE	1
INDIVIDUAL			
	632 872 2570	PAD, BOTTOM	1
	632 872 2587	PAD, SIDE	1
	632 872 2594	PAD, ACCESSORY	1
	632 872 2600	PAD, TOP	1
	632 298 2376	POLYETHYLENE BAG CONT BOX	1
	632 822 4425	POLYETHYLENE BAG, 300X450	1
	632 607 4824	POLYETHYLENE BAG,L180X270 MANUAL	1
	632 567 2588	POLYETHYLENE BAG, 200X300 RGB CABLE	1
ACCESSORY			
43	661 006 7709	INSTRUCTION MANUAL,ENGLIS	1
44	661 006 7716	INSTRUCTION MANUAL,GERMAN	1
44	632 880 5488	AC ADAPTOR	1
45	661 001 7254	RGB CABLE, 1.8M	1
47	661 011 2614	REMOCON ASSY	1
47	632 880 1596	AC CORD, 1.8M	1
47 OR 	632 735 3058	AC CORD, 180MM	1
CABINET			
1	632 880 4719	TOP LID	1
	411 174 2705	SCR BIN 2.5X5	8
CHASSIS			
2	661 011 2492	CHASSIS ASSY,BOTTOM	1
3	632 868 5615	BASE, CUSHION	2
	411 047 0104	SCR PAN+SW+W 3X8	2
	411 030 6403	CHASSIS-IN SCR BIN 2X5	2
	411 030 6403	CHASSIS-INV. SCR BIN 2X5	3
		CHASSIS-SUB	



Ref. No.	PART No.	DESCRIPTION	Q'ty
	411 047 0104	SCR PAN+SW+W 3X8	4
	411 047 0104	CHASSIS-MAIN SCR PAN+SW+W 3X8	1
	411 001 8900	CHASSIS-LED SCR BIN 3X8	4
	661 033 8861	LCD-CHASSIS RATING LABEL	1
STAND			
7	661 020 3398	STAND ASSY	1
	411 041 8700	SCR PAN 3X6	2
	632 607 4732	POLYETHYLENE BAG,L 70X100	1
CHASSIS ELECTRICAL			
21	632 880 1442	FPC BOARD ASS'Y	1
25	661 004 4298	WIRE HARNESS, MAIN-VOLUME	1
26	632 873 7802	WIRE HARNESS, DC IN-PWR	1
29	632 869 6796	WIRE HARNESS, MAIN-JOINT	1
30	661 003 7481	POWER UNIT, INVERTER	1
LCD1	661 003 2172	LIQUID CRYSTAL DISPLAY,	1
S1	632 874 5449	SEESAW SWITCH	1
31	632 868 6261	WIRE HARNESS, MAIN-INV.	1
32	661 001 4635	WIRE HARNESS, MAIN-DC IN	1
33	632 837 2713	CORE	1
34	661 001 2570	SPECIAL SCREW	2
MAIN P.C.B. ASSEMBLY			
PCB1	661 037 6061	PCB-ML ASSY,MAIN	1
VR-OSD P.C.B. ASSEMBLY			
PCB5	661 007 0112	PW BOARD ASS'Y, VR-OSD	1
DC-IN P.C.B. ASSEMBLY			
PCB3	661 006 8737	PW BOARD ASS'Y, DC-IN	1
LED P.C.B. ASSEMBLY			
PCB4	661 034 9461	PW BOARD ASS'Y, LED	1

- NOTES:
1. Part orders must contain Model Number, Part Number and Description.
 2. Ordering quantity of screws and resistors must be multiple of 10 pcs.
 3. Regular type resistor and capacitor are omitted. Check the schematic diagram for these values.

7-2-2 LMU-TK12AS2TC(K)/SS

PRODUCT SAFETY NOTICE

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
Ref. No.	PART No.	DESCRIPTION	Q'ty
OUTER			
	661 006 6665	OUTER CARTON,TR(K)	1
	632 758 4209	LABEL, BAR CODE	1
INDIVIDUAL			
	632 872 2570	PAD, BOTTOM	1
	632 872 2587	PAD, SIDE	1
	632 872 2594	PAD, ACCESSORY	1
	632 872 2600	PAD, TOP	1
	632 298 2376	POLYETHYLENE BAG CONT BOX	1
	632 822 4425	POLYETHYLENE BAG, 300X450	1
	632 607 4824	POLYETHYLENE BAG,L180X270	1
	632 607 4824	MANUAL POLYETHYLENE BAG,L180X270	1
	632 298 2376	SERIAL CABLE	1
	632 567 2588	POLYETHYLENE BAG	1
		POLYETHYLENE BAG, 200X300	1
ACCESSORY			
41	632 867 2325	CD-ROM DISK, TOUCHWARE	1
	661 006 7709	INSTRUCTION MANUAL,ENGLIS	1
	661 006 7716	INSTRUCTION MANUAL,GERMAN	1
	661 010 5906	LEAFLET,EARTH WIRE	1
43	632 880 5488	AC ADAPTOR	1
44	661 001 7254	RGB CABLE, 1.8M	1
45	661 011 2614	REMOCON ASSY	1
46	632 866 8397	SERIAL CABLE, 1.8M	1
47	 632 880 1596	AC CORD, 1.8M	1
47 OR	 632 735 3058	AC CORD, 180MM	1
CABINET			
1	632 880 1336	TOP LID ASSY	1
CHASSIS			
2	661 037 1608	BOTTOM LID ASSY	1
3	632 868 5615	BASE, CUSHION	2
	411 047 0104	SCR PAN+SW+W 3X8	2
		CHASSIS-DC-IN AMP	
	411 044 7502	SCR PAN+SW 2X5	2
		CHASSIS-INV.	
	411 030 6403	SCR BIN 2X5	2
		CHASSIS-SUB	
	411 044 7502	SCR PAN+SW 2X5	1
		CHASSIS-SUB	
	411 031 7508	SCR BIN 3X5	2
		CHASSIS-CONT.	
	411 047 0104	SCR PAN+SW+W 3X8	4
		CHASSIS-MAIN	
	411 008 0402	WASHER OUT TW 3	1
5	632 886 5789	CLAMP	1


Ref. No.	PART No.	DESCRIPTION	Q'ty
4	411 001 8900	SCR BIN 3X8	1
	411 047 0104	SCR PAN+SW+W 3X8	1
	411 001 8900	SCR BIN 3X8	4
	632 250 0655	WIRE FIXTURE	1
	632 250 2802	WIRE BAND,	1
	411 001 8900	SCR BIN 3X8	1
	411 008 0402	WASHER OUT TW 3	1
STAND			
7	661 020 3398	STAND ASSY	1
	411 041 8700	SCR PAN 3X8	2
	632 607 4732	POLYETHYLENE BAG,L 70X100	1
	632 607 4855	POLYETHYLENE BAG,L 260X380	1
CHASSIS ELECTRICAL			
21	632 880 1442	FPC BOARD ASS'Y	1
24	632 868 6261	WIRE HARNESS, MAIN-INV.	1
25	661 004 4298	WIRE HARNESS, MAIN-VOLUME	1
26	632 868 6247	WIRE HARNESS, MAIN-DC IN	1
27	632 837 2713	CORE	1
		HARNESS MAIN-DC IN	
28	661 004 2102	WIRE HARNESS, DC IN-PWR	1
29	632 869 6796	WIRE HARNESS, MAIN-JOINT	1
30	661 003 7481	POWER UNIT, INVERTER	1
LCD1	661 037 1615	TOUCH SENSOR ASSY	1
S1	632 874 5449	SEESAW SWITCH	1
33	632 883 5829	TOUCH SENSOR, 12.1	1
34	632 837 2713	CORE	1
		CABLE RS232C	
39	632 886 2443	SERIAL CONTROLLER	1
35	661 007 0631	CABLE, RS232C	1
36	661 001 2570	SPECIAL SCREW	2
		CABLE	
37	632 889 5083	BRACKET, SERIAL	1
		CABLE	
	632 889 8916	EARTH WIRE, 1.8M	1
38	632 773 6011	SPECIAL SCREW	2
MAIN P.C.B. ASSEMBLY			
PCB1	661 021 2666	MAIN PCB ASSY	1
VR-OSD P.C.B. ASSEMBLY			
PCB5	661 007 0112	PW BOARD ASS'Y, VR-OSD	1
DC-IN P.C.B. ASSEMBLY			
PCB3	661 006 8737	PW BOARD ASS'Y, DC-IN	1
LED P.C.B. ASSEMBLY			
PCB4	661 034 9461	PW BOARD ASS'Y, LED	1

- NOTES:
1. Part orders must contain Model Number, Part Number and Description.
 2. Ordering quantity of screws and resistors must be multiple of 10 pcs.
 3. Regular type resistor and capacitor are omitted. Check the schematic diagram for these values.

7-2-3 LMU-TK12AS2TR(K)/UK

PRODUCT SAFETY NOTICE

Each precaution in this manual should be followed during servicing. Components identified with the IEC symbol  in the parts list and the schematic diagram designate components in which safety can be of special significance. When replacing a component identified with  use only the replacement parts designated, or parts with the same ratings of resistance, wattage or voltage that are designated in the parts list in this manual. Leakage-current or resistance measurements must be made to determine that exposed parts are acceptably insulated from the supply circuit before returning the product to the customer.

Ref. No.	PART No.	DESCRIPTION	Q'ty
OUTER			
	661 006 6665	OUTER CARTON,TR(K)	1
	632 758 4209	LABEL, BAR CODE	1
INDIVIDUAL			
	632 872 2570	PAD, BOTTOM	1
	632 872 2587	PAD, SIDE	1
	632 872 2594	PAD, ACCESSORY	1
	632 872 2600	PAD, TOP	1
	632 298 2376	POLYETHYLENE BAG	1
		CONT BOX	1
	632 822 4425	POLYETHYLENE BAG, 300X450	1
	632 607 4824	POLYETHYLENE BAG,L180X270	1
		MANUAL	1
	632 607 4824	POLYETHYLENE BAG,L180X270	1
		SERIAL CABLE	1
	632 567 2588	POLYETHYLENE BAG, 200X300	1
ACCESSORY			
41	661 015 1705	CD-ROM DISK,FUJITSU	1
	661 006 7709	INSTRUCTION MANUAL,ENGLIS	1
	661 006 7716	INSTRUCTION MANUAL,GERMAN	1
	661 021 9795	LEAFLET,SOFTWARE,JPN/ENGL	1
42	632 893 2610	AC CORD, 1.8M	1
42 OR 	632 892 0792	AC CORD, 1.8M	1
43	632 880 5488	AC ADAPTOR	1
44	661 001 7254	RGB CABLE, 1.8M	1
45	661 001 3164	REMOTE CONTROLLER ASSY	1
46	632 866 8397	SERIAL CABLE, 1.8M	1
CABINET			
1	632 880 1336	TOP LID ASSY	1
CHASSIS			
2	661 021 5049	BOTTOM LID ASSY	1
	661 033 8861	RATING LABEL	1
3	632 868 5615	BASE, CUSHION	2
	411 047 0104	SCR PAN+SW+W 3X8	2
		CHASSIS - DC-IN AMP	
	411 044 7502	SCR PAN+SW 2X5	2
		CHASSIS - INV. PCB	
	411 030 6403	SCR BIN 2X5	2
		CHASSIS - SUB PCB	
	411 044 7502	SCR PAN+SW 2X5	1
		CHASSIS - SUB PCB	
	411 047 0104	SCR PAN+SW+W 3X8	2
		CHASSIS - CONT. PCB	
	411 047 0104	SCR PAN+SW+W 3X8	4
		CHASSIS - MAIN PCB	
	411 047 0104	SCR PAN+SW+W 3X8	1
		CHASSIS - LED PCB.	
	411 001 8900	SCR BIN 3X8	4
		LCD - CHASSIS	

Ref. No.	PART No.	DESCRIPTION	Q'ty
5	661 018 6509	SPACER,5.5 T5	4
4	632 250 0655	WIRE FIXTURE	4
	632 250 2802	WIRE BAND,	1
6	632 250 0167	WIRE FIXTURE	1
	411 047 0104	SCR PAN+SW+W 3X8	1
	661 018 1009	WIRE FIX. - CHASSIS	1
		LABEL,BK	1
STAND			
7	661 020 3398	STAND ASSY	1
	411 041 8700	SCR PAN 3X6	2
	632 607 4732	POLYETHYLENE BAG,L 70X100	1
	632 607 4855	POLYETHYLENE BAG,L260X380	1
CHASSIS ELC.			
21	632 880 1442	FPC BOARD ASSY	1
24	632 868 6261	WIRE HARNESS, MAIN-INV.	1
25	661 004 4298	WIRE HARNESS, MAIN-VOLUME	1
26	632 868 6247	WIRE HARNESS, MAIN-DC IN	1
27	632 837 2713	CORE	1
		HARNESS MAIN-DC IN	
28	661 004 2102	WIRE HARNESS, DC IN-PWR	1
29	632 869 6796	WIRE HARNESS, MAIN-JOINT	1
30	661 003 7481	POWER UNIT, INVERTER	1
LCD1	661 021 5094	TOUCH SENSOR ASSY	1
31	661 001 7278	CORE,CONTROL BOX	1
S1	632 874 5449	SEESAW SWITCH	1
33	661 015 0388	TOUCH PANEL,12.1	1
34	632 837 2713	CORE	1
		CABLE RS232C	
35	661 015 6113	CABLE,RS232C	1
36	661 001 2570	SPECIAL SCREW	2
		CABLE	
37	632 889 5083	BRACKET, SERIAL	1
		CABLE	
38	632 773 6011	SPECIAL SCREW	2
MAIN P.C.B. ASSEMBLY			
PCB1	661 021 2666	MAIN PCB ASSY	1
CONTROL P.C.B. ASSEMBLY			
PCB2	661 014 9337	PCB-W ASSY,	1
DC-IN P.C.B. ASSEMBLY			
PCB3	661 006 8737	PW BOARD ASSY, DC-IN	1
LED P.C.B. ASSEMBLY			
PCB4	661 034 9461	PW BOARD ASSY, LED	1
VR-OSD P.C.B. ASSEMBLY			
PCB5	661 007 0112	PW BOARD ASSY, VR-OSD	1

- NOTES:
1. Part orders must contain Model Number, Part Number and Description.
 2. Ordering quantity of screws and resistors must be multiple of 10 pcs.
 3. Regular type resistor and capacitor are omitted. Check the schematic diagram for these values.

APPENDIX

Version of Firmware

The Version of Firmware is displayed on screen.

Turn the Power Switch to 'OFF'. While pressing of the [ENTER] button, turn the Power Switch to 'ON'.