Website:http://biz.LGservice.com
E-mail:http://www.LGEservice.com/techsup.html

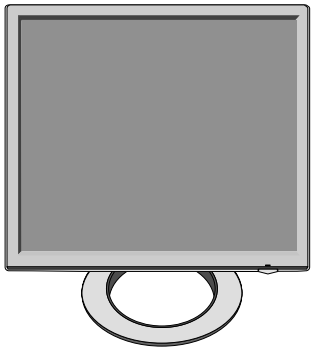
COLOR MONITOR
SERVICE MANUAL

CHASSIS NO. : LM51C

MODEL: FLATRON L1770HQ (L1770HQ-BFQ.AXQP, AG**QP)**
FLATRON L1970HR (L1970HR-BFQ.ARQP)**

( ) **Same model for Service

CAUTION
BEFORE SERVICING THE UNIT,
READ THE **SAFETY PRECAUTIONS** IN THIS MANUAL.



*To apply the **MSTAR Chip**.

CONTENTS

SPECIFICATIONS

1. LCD CHARACTERISTICS

Type	: TFT Color LCD Module
Active Display Area	: 17 inch **- L1770HQ**
	: 19 inch **- L1970HR**
Pixel Pitch	: 0.264 (H) x 0.264 (V) **- L1770HQ**
	: 0.294 (H) x 0.294 (V) **- L1970HR**
Color Depth	: 16.2M colors
Size	: 354.9 (H) x 290.3 (V) x 12.8(D) **- L1770HQ**
	: 396 (H) x 324 (V) x 17.5(D) **- L1970HR**
Electrical Interface	: LVDS
Surface Treatment	: Hard-coating(3H), Anti-Glare
Operating Mode	: Normally White, Transmissive mode
Backlight Unit	: 4-CCFL

2. OPTICAL CHARACTERISTICS

2-1. Viewing Angle by Contrast Ratio ≥ 10

L1770HQ

Left : -80° min., -88°(Typ) Right : +80° min., +88°(Typ)
Top :+70° min., +80°(Typ) Bottom : -65° min., -80°(Typ)

L1970HR

Left : -70° min., -80°(Typ) Right : +70° min., +80°(Typ)
Top :+60° min., +75°(Typ) Bottom : -70° min., -85°(Typ)

2-2. Luminance : 200(min), 250(Typ)-**6500K**
: 150(min), 200(Typ) -**9300K**
Brightness Uniformity : 75%(min)

2-3. Contrast Ratio : 450(min), 700(Typ)

3. SIGNAL (Refer to the Timing Chart)

3-1. Sync Signal
• Type : Separate Sync, Digital, SOG, Composite sync

3-2. Video Input Signal
1) Type : R, G, B Analog
2) Voltage Level : 0~0.71 V
a) Color 0, 0 : 0 Vp-p
b) Color 7, 0 : 0.467Vp-p
c) Color 15, 0 : 0.714Vp-p
3) Input Impedance : 75Ω

3-3. Operating Frequency
Horizontal : 30 ~ 83kHz
Vertical : 56 ~ 75Hz

4. Max. Resolution

D-sub Analog : 1280 x 1024@75Hz
Digital : 1280 x 1024@60Hz

5. POWER SUPPLY

5-1. Power : AC 100~240V, 50/60Hz , 0.6A

5-2. Power Consumption

MODE	H/V SYNC	VIDEO	POWER CONSUMPTION	LED COLOR
POWER ON (NORMAL)	ON/ON	ACTIVE	less than 35 W -**L1770HQ**	BLUE
			less than 39 W -**L1970HR**	
STAND-BY	OFF/ON	OFF	less than 1 W	AMBER
SUSPEND	ON/OFF	OFF	less than 1 W	AMBER
DPMS OFF	OFF/OFF	OFF	less than 1 W	AMBER
POWER S/W Off	-	-	less than 1 W	OFF

6. ENVIRONMENT

6-1. Operating Temperature : 10°C~35°C (50°F~95°F) (Ambient)
6-2. Relative Humidity : 10%~80% (Non-condensing)
6-3. MTBF : 50,000 HRS with 90% Confidence
Lamp Life : 50,000 Hours(Min)

7. DIMENSIONS (with TILT/SWIVEL)

L1770HQ

Width : 369.5 mm (15.35")
Depth : 310.9 mm (9.53")
Height : 56.9 mm (15.98")

L1970HR

Width : 411.3 mm (16.93")
Depth : 345 mm (9.13")
Height : 59 mm (16.89")

8. WEIGHT (with TILT/SWIVEL)

L1770HQ

Net. Weight : 4.3 kg (9.04 lbs)
Gross Weight : 6.3 kg (9.92 lbs)

L1970HR

Net. Weight : 5.4 kg (10.14 lbs)
Gross Weight : 7.45 kg (11.25 lbs)

PRECAUTION

WARNING FOR THE SAFETY-RELATED COMPONENT.

- There are some special components used in LCD monitor that are important for safety. ***These parts are marked ⚠ on the schematic diagram and the replacement parts list.*** It is essential that these critical parts should be replaced with the manufacturer's specified parts to prevent electric shock, fire or other hazard.
- Do not modify original design without obtaining written permission from manufacturer or you will void the original parts and labor guarantee.

TAKE CARE DURING HANDLING THE LCD MODULE WITH BACKLIGHT UNIT.

- Must mount the module using mounting holes arranged in four corners.
- Do not press on the panel, edge of the frame strongly or electric shock as this will result in damage to the screen.
- Do not scratch or press on the panel with any sharp objects, such as pencil or pen as this may result in damage to the panel.
- Protect the module from the ESD as it may damage the electronic circuit (C-MOS).
- Make certain that treatment person's body are grounded through wrist band.
- Do not leave the module in high temperature and in areas of high humidity for a long time.
- The module not be exposed to the direct sunlight.
- Avoid contact with water as it may a short circuit within the module.
- If the surface of panel become dirty, please wipe it off with a softmaterial. (Cleaning with a dirty or rough cloth may damage the panel.)

⚠ CAUTION

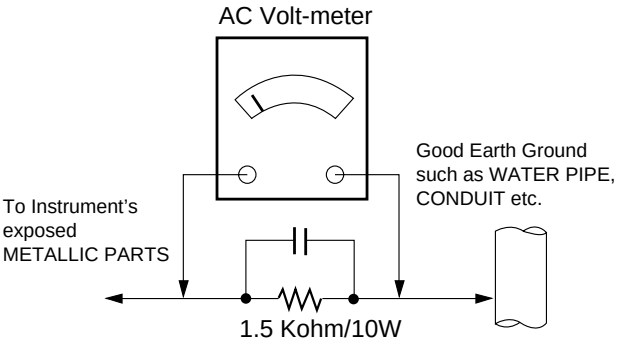
Please use only a plastic screwdriver to protect yourself from shock hazard during service operation.

⚠ WARNING

BE CAREFUL ELECTRIC SHOCK !

- If you want to replace with the new backlight (CCFL) or inverter circuit, must disconnect the AC adapter because high voltage appears at inverter circuit about 650Vrms.
- Handle with care wires or connectors of the inverter circuit. If the wires are pressed cause short and may burn or take fire.

Leakage Current Hot Check Circuit



SERVICING PRECAUTIONS

CAUTION: Before servicing receivers covered by this service manual and its supplements and addenda, read and follow the ***SAFETY PRECAUTIONS*** on page 3 of this publication.

NOTE: If unforeseen circumstances create conflict between the following servicing precautions and any of the safety precautions on page 3 of this publication, always follow the safety precautions. Remember: Safety First.

General Servicing Precautions

1. Always unplug the receiver AC power cord from the AC power source before;
   a. Removing or reinstalling any component, circuit board module or any other receiver assembly.
   b. Disconnecting or reconnecting any receiver electrical plug or other electrical connection.
   c. Connecting a test substitute in parallel with an electrolytic capacitor in the receiver.
   CAUTION: A wrong part substitution or incorrect polarity installation of electrolytic capacitors may result in an explosion hazard.
   d. Discharging the picture tube anode.
2. Test high voltage only by measuring it with an appropriate high voltage meter or other voltage measuring device (DVM, FETVOM, etc) equipped with a suitable high voltage probe.
   Do not test high voltage by "drawing an arc".
3. Discharge the picture tube anode only by (a) first connecting one end of an insulated clip lead to the degaussing or kine aquadag grounding system shield at the point where the picture tube socket ground lead is connected, and then (b) touch the other end of the insulated clip lead to the picture tube anode button, using an insulating handle to avoid personal contact with high voltage.
4. Do not spray chemicals on or near this receiver or any of its assemblies.
5. Unless specified otherwise in this service manual, clean electrical contacts only by applying the following mixture to the contacts with a pipe cleaner, cotton-tipped stick or comparable non-abrasive applicator; 10% (by volume) Acetone and 90% (by volume) isopropyl alcohol (90%-99% strength)
   CAUTION: This is a flammable mixture.
   Unless specified otherwise in this service manual, lubrication of contacts in not required.
6. Do not defeat any plug/socket B+ voltage interlocks with which receivers covered by this service manual might be equipped.
7. Do not apply AC power to this instrument and/or any of its electrical assemblies unless all solid-state device heat sinks are correctly installed.
8. Always connect the test receiver ground lead to the receiver chassis ground before connecting the test receiver positive lead.
   Always remove the test receiver ground lead last.
9. *Use with this receiver only the test fixtures specified in this service manual.*
   CAUTION: Do not connect the test fixture ground strap to any heat sink in this receiver.

Electrostatically Sensitive (ES) Devices

Some semiconductor (solid-state) devices can be damaged easily by static electricity. Such components commonly are called *Electrostatically Sensitive (ES) Devices.* Examples of typical ES devices are integrated circuits and some field-effect transistors and semiconductor "chip" components. The following techniques should be used to help reduce the incidence of component damage caused by static by static electricity.

1. Immediately before handling any semiconductor component or semiconductor-equipped assembly, drain off any electrostatic charge on your body by touching a known earth ground. Alternatively, obtain and wear a commercially available discharging wrist strap device, which should be removed to prevent potential shock reasons prior to applying power to the unit under test.
2. After removing an electrical assembly equipped with ES devices, place the assembly on a conductive surface such as aluminum foil, to prevent electrostatic charge buildup or exposure of the assembly.
3. Use only a grounded-tip soldering iron to solder or unsolder ES devices.
4. Use only an anti-static type solder removal device. Some solder removal devices not classified as "anti-static" can generate electrical charges sufficient to damage ES devices.
5. Do not use freon-propelled chemicals. These can generate electrical charges sufficient to damage ES devices.
6. Do not remove a replacement ES device from its protective package until immediately before you are ready to install it. (Most replacement ES devices are packaged with leads electrically shorted together by conductive foam, aluminum foil or comparable conductive material).
7. Immediately before removing the protective material from the leads of a replacement ES device, touch the protective material to the chassis or circuit assembly into which the device will be installed.
   CAUTION: Be sure no power is applied to the chassis or circuit, and observe all other safety precautions.
8. Minimize bodily motions when handling unpackaged replacement ES devices. (Otherwise harmless motion such as the brushing together of your clothes fabric or the lifting of your foot from a carpeted floor can generate static electricity sufficient to damage an ES device.)

General Soldering Guidelines

1. Use a grounded-tip, low-wattage soldering iron and appropriate tip size and shape that will maintain tip temperature within the range or 500˚F to 600˚F.
2. Use an appropriate gauge of RMA resin-core solder composed of 60 parts tin/40 parts lead.
3. Keep the soldering iron tip clean and well tinned.
4. Thoroughly clean the surfaces to be soldered. Use a mall wire-bristle (0.5 inch, or 1.25cm) brush with a metal handle.
   Do not use freon-propelled spray-on cleaners.
5. Use the following unsoldering technique
   a. Allow the soldering iron tip to reach normal temperature.
      (500˚F to 600˚F)
   b. Heat the component lead until the solder melts.
   c. Quickly draw the melted solder with an anti-static, suction-type solder removal device or with solder braid.
      CAUTION: Work quickly to avoid overheating the circuitboard printed foil.
6. Use the following soldering technique.
   a. Allow the soldering iron tip to reach a normal temperature (500˚F to 600˚F)
   b. First, hold the soldering iron tip and solder the strand against the component lead until the solder melts.
   c. Quickly move the soldering iron tip to the junction of the component lead and the printed circuit foil, and hold it there only until the solder flows onto and around both the component lead and the foil.
      CAUTION: Work quickly to avoid overheating the circuit board printed foil.
   d. Closely inspect the solder area and remove any excess or splashed solder with a small wire-bristle brush.

IC Remove/Replacement

Some chassis circuit boards have slotted holes (oblong) through which the IC leads are inserted and then bent flat against the circuit foil. When holes are the slotted type, the following technique should be used to remove and replace the IC. When working with boards using the familiar round hole, use the standard technique as outlined in paragraphs 5 and 6 above.

Removal

1. Desolder and straighten each IC lead in one operation by gently prying up on the lead with the soldering iron tip as the solder melts.
2. Draw away the melted solder with an anti-static suction-type solder removal device (or with solder braid) before removing the IC.

Replacement

1. Carefully insert the replacement IC in the circuit board.
2. Carefully bend each IC lead against the circuit foil pad and solder it.
3. Clean the soldered areas with a small wire-bristle brush. (It is not necessary to reapply acrylic coating to the areas).

"Small-Signal" Discrete Transistor Removal/Replacement

1. Remove the defective transistor by clipping its leads as close as possible to the component body.
2. Bend into a "U" shape the end of each of three leads remaining on the circuit board.
3. Bend into a "U" shape the replacement transistor leads.
4. Connect the replacement transistor leads to the corresponding leads extending from the circuit board and crimp the "U" with long nose pliers to insure metal to metal contact then solder each connection.

Power Output, Transistor Device Removal/Replacement

1. Heat and remove all solder from around the transistor leads.
2. Remove the heat sink mounting screw (if so equipped).
3. Carefully remove the transistor from the heat sink of the circuit board.
4. Insert new transistor in the circuit board.
5. Solder each transistor lead, and clip off excess lead.
6. Replace heat sink.

Diode Removal/Replacement

1. Remove defective diode by clipping its leads as close as possible to diode body.
2. Bend the two remaining leads perpendicular y to the circuit board.
3. Observing diode polarity, wrap each lead of the new diode around the corresponding lead on the circuit board.
4. Securely crimp each connection and solder it.
5. Inspect (on the circuit board copper side) the solder joints of the two "original" leads. If they are not shiny, reheat them and if necessary, apply additional solder.

Fuse and Conventional Resistor Removal/Replacement

1. Clip each fuse or resistor lead at top of the circuit board hollow stake.
2. Securely crimp the leads of replacement component around notch at stake top.
3. Solder the connections.
   CAUTION: Maintain original spacing between the replaced component and adjacent components and the circuit board to prevent excessive component temperatures.

Circuit Board Foil Repair

Excessive heat applied to the copper foil of any printed circuit board will weaken the adhesive that bonds the foil to the circuit board causing the foil to separate from or "lift-off" the board. The following guidelines and procedures should be followed whenever this condition is encountered.

At IC Connections

To repair a defective copper pattern at IC connections use the following procedure to install a jumper wire on the copper pattern side of the circuit board. (Use this technique only on IC connections).

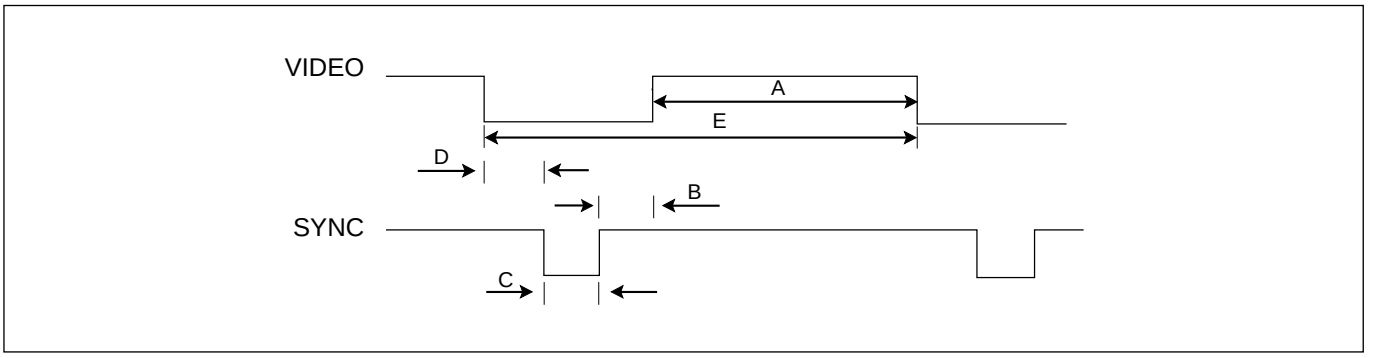
1. Carefully remove the damaged copper pattern with a sharp knife. (Remove only as much copper as absolutely necessary).
2. carefully scratch away the solder resist and acrylic coating (if used) from the end of the remaining copper pattern.
3. Bend a small "U" in one end of a small gauge jumper wire and carefully crimp it around the IC pin. Solder the IC connection.
4. Route the jumper wire along the path of the out-away copper pattern and let it overlap the previously scraped end of the good copper pattern. Solder the overlapped area and clip off any excess jumper wire.

At Other Connections

Use the following technique to repair the defective copper pattern at connections other than IC Pins. This technique involves the installation of a jumper wire on the component side of the circuit board.

1. Remove the defective copper pattern with a sharp knife.
   Remove at least 1/4 inch of copper, to ensure that a hazardous condition will not exist if the jumper wire opens.
2. Trace along the copper pattern from both sides of the pattern break and locate the nearest component that is directly connected to the affected copper pattern.
3. Connect insulated 20-gauge jumper wire from the lead of the nearest component on one side of the pattern break to the lead of the nearest component on the other side.
   Carefully crimp and solder the connections.
   CAUTION: Be sure the insulated jumper wire is dressed so the it does not touch components or sharp edges.

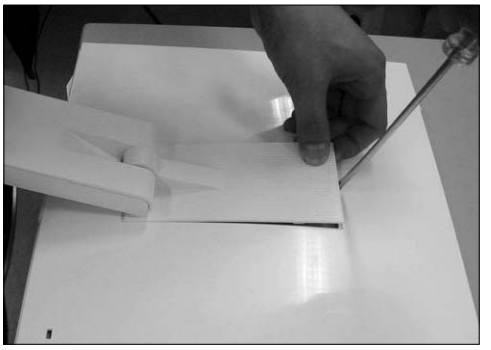
TIMING CHART



MODE	H / V	Sync Polarity	Dot Clock	Frequency	Total Period (E)	Video Active Time (A)	Sync Duration (D)	Front Porch (C)	Blanking Time (B)	Resolution
1	H(Pixels)	+	25.175	31.469	800	640	16	96	48	640 x 350
	V(Lines)	-		70.09	449	350	37	2	60	
2	H(Pixels)	-	28.321	31.468	900	720	18	108	54	720 X 400
	V(Lines)	+		70.08	449	400	12	2	35	
3	H(Pixels)	-	25.175	31.469	800	640	16	96	48	640 x 480
	V(Lines)	-		59.94	525	480	10	2	33	
4	H(Pixels)	-	31.5	37.5	840	640	16	64	120	640 x 480
	V(Lines)	-		75	500	480	1	3	16	
5	H(Pixels)	+	40.0	37.879	1056	800	40	128	88	800 x 600
	V(Lines)	+		60.317	628	600	1	4	23	
6	H(Pixels)	+	49.5	46.875	1056	800	16	80	160	800 x 600
	V(Lines)	+		75.0	625	600	1	3	21	
7	H(Pixels)	+/-	57.283	49.725	1152	832	32	64	224	832 x 624
	V(Lines)	+/-		74.55	667	624	1	3	39	
8	H(Pixels)	-	65.0	48.363	1344	1024	24	136	160	1024 x 768
	V(Lines)	-		60.0	806	768	3	6	29	
9	H(Pixels)	-	78.75	60.123	1312	1024	16	96	176	1024 x 768
	V(Lines)	-		75.029	800	768	1	3	28	
10	H(Pixels)	+/-	100.0	68.681	1456	1152	32	128	144	1152 x 870
	V(Lines)	+/-		75.062	915	870	3	3	39	
11	H(Pixels)	+/-	92.978	61.805	1504	1152	18	134	200	1152 x 900
	V(Lines)	+/-		65.96	937	900	2	4	31	
12	H(Pixels)	+	108.0	63.981	1688	1280	48	112	248	1280 x 1024
	V(Lines)	+		60.02	1066	1024	1	3	38	
13	H(Pixels)	+	135.0	79.976	1688	1280	16	144	248	1280 x 1024
	V(Lines)	+		75.035	1066	1024	1	3	38	

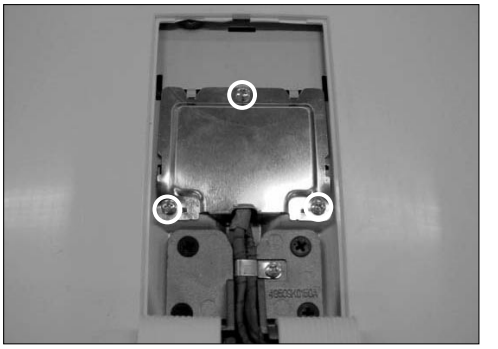
DISASSEMBLY

 # 1



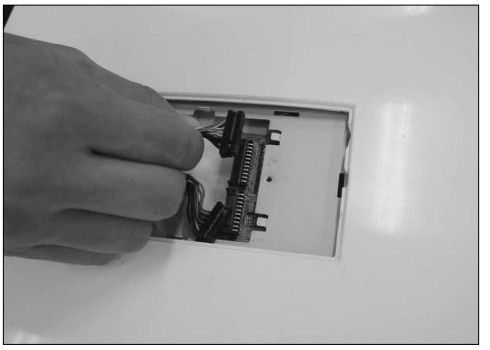
Disassembly Hinge Cover.

 # 2



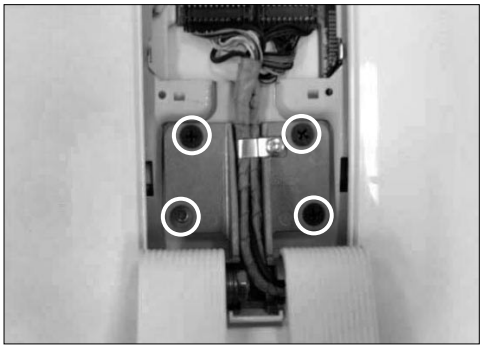
Remove the screws.

 # 3



Pull out the cable.

 # 4

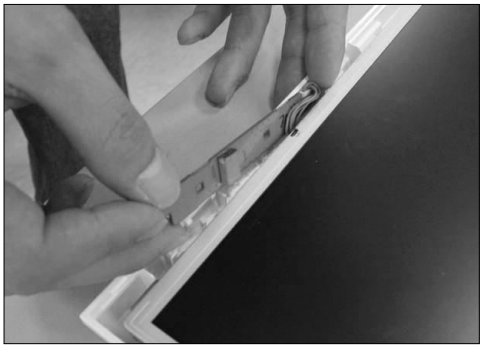


Remove the screws.

 # 5

1. Pull the front cover upward.
2. Then, let the all latches are separated.

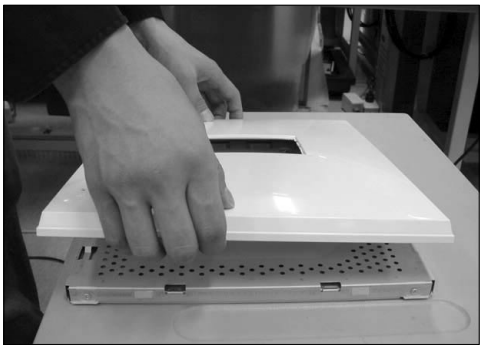
 # 6



1.Disassemble Control PCB.

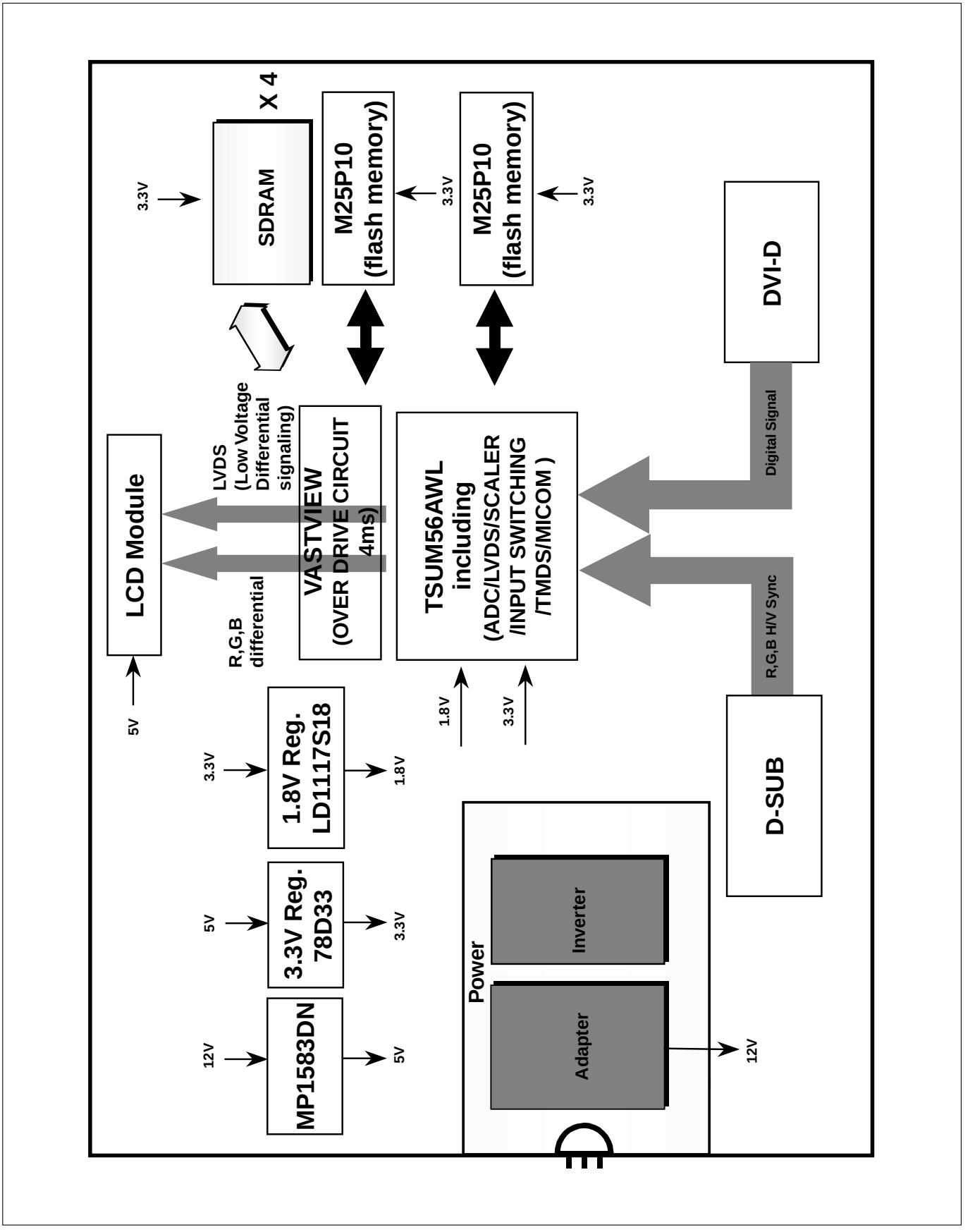
2. Put the front face down.

 # 7



Disassemble back cover

BLOCK DIAGRAM



DESCRIPTION OF BLOCK DIAGRAM

1. Video Controller Part.

This part amplifies the level of video signal for the digital conversion and converts from the analog video signal to the digital video signal using a pixel clock.
The pixel clock for each mode is generated by the PLL.
The range of the pixel clock is from 25MHz to 135MHz.
This part consists of the Scaler, ADC and TMDS receiver .
The Scaler gets the video signal converted analog to digital, interpolates input to 1280 X 1024 resolution signal and outputs 8-bit R, G, B signal to transmitter.

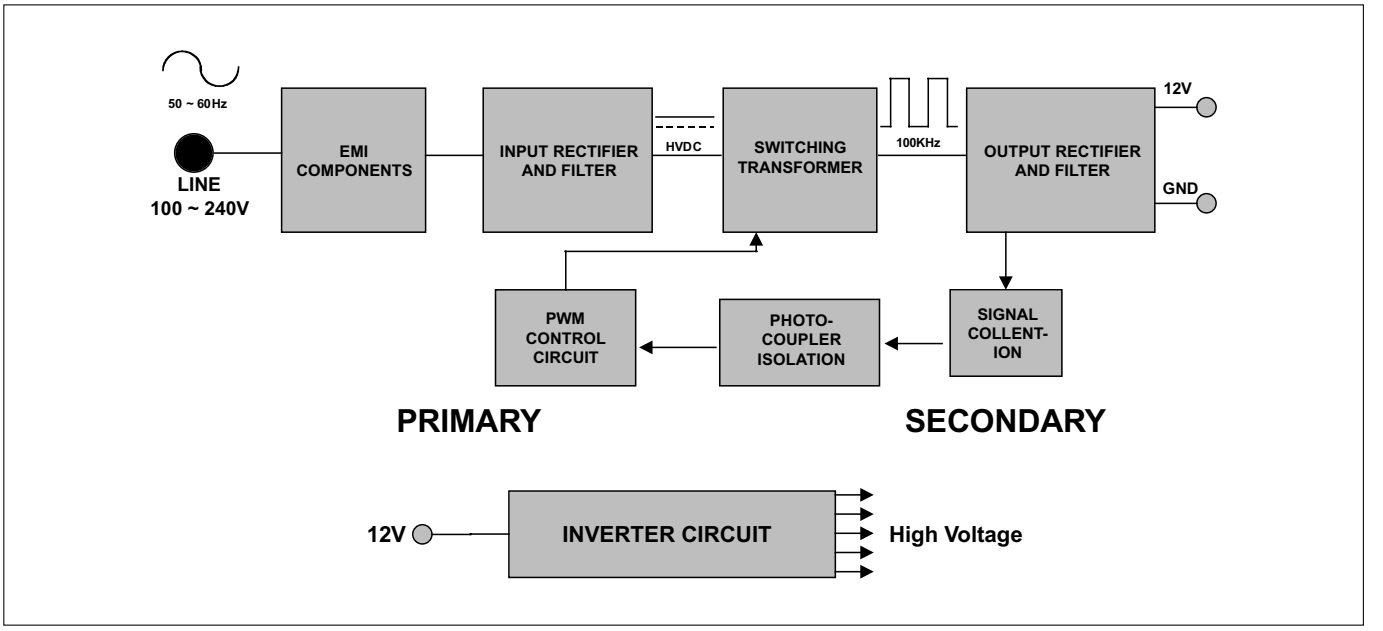
2. Power Part.

This part consists of the 3.3V regulator to convert power which is provided 12V,
5V in Power board and Micom
5V is provided for LCD panel.
Also, 5V is converted 3.3V by regulator and 3.3V is converted 1.8V by regulator.
Converted power is provided for IC in the main board.

3. MICOM Part.

This part consists of EEPROM IC which stores control data and the Micom.
The Micom distinguishes polarity and frequency of the H/V sync are supplied from signal cable.
The controlled data of each modes is stored in EEPROM.

LIPS Board Block Diagram



Operation description_LIPS

1. EMI components.

This part contains of EMI components to comply with global marketing EMI standards like FCC,VCCI CISPR, the circuit included a line-filter, across line capacitor and of course the primary protection fuse.

2. Input rectifier and filter.

This part function is for transfer the input AC voltage to a DC voltage through a bridge rectifier and a bulk capacitor.

3. Energy Transfer.

This part function is for transfer the primary energy to secondary through a power transformer.

4. Output rectifier and filter.

This part function is to make a pulse width modulation control and to provide the driver signal to power switch,to adjust the duty cycle during different AC input and output loading condition to achieve the dc output stabilized, and also the over power protection is also monitor by this part.

5. Photo-Coupler isolation.

This part function is to feed back the DC output changing status through a photo transistor to primary controller to achieve the stabilized DC output voltage.

6. Signal collection.

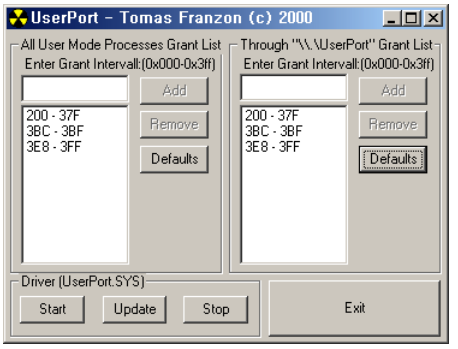
This part function is to collect the any change from the DC output and feed back to the primary through photo transistor.

ADJUSTMENT

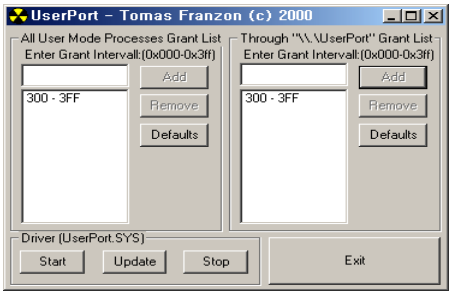
Windows EDID V1.0 User Manual

Operating System: MS Windows 98, 2000, XP
Port Setup: Windows 98 => Don't need setup
Windows 2000, XP => Need to Port Setup.
This program is available to LCD Monitor only.

1. Port Setup
   a) Copy "UserPort.sys" file to
   "c:\WINNT\system32\drivers" folder
   b) Run Userport.exe

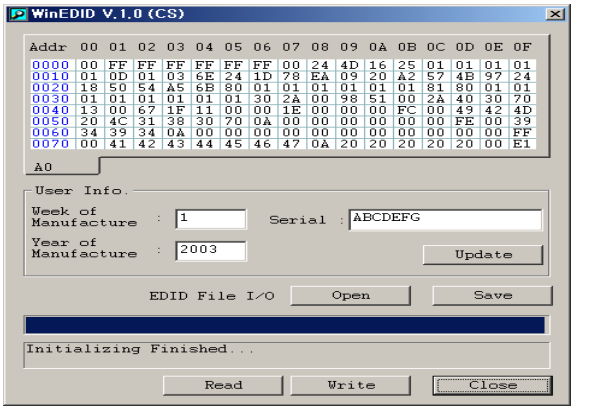


   c) Remove all default number
   d) Add 300-3FF

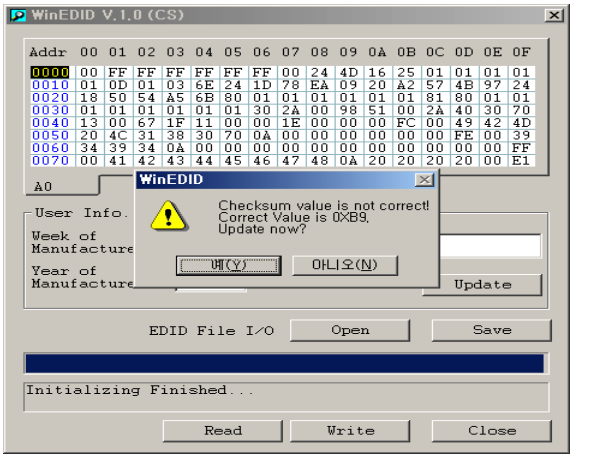


   e) Click Start button.
   f) Click Exit button.

2. EDID Read & Write
   1) Run WinEDID.exe



   2) Edit Week of Manufacture, Year of Manufacture, Serial Number
      a) Input User Info Data
      b) Click "Update" button
      c) Click " Write" button



SERVICE OSD

1) Turn off the power switch at the front side of the display.

2) Wait for about 5 seconds and press MENU, POWER switch with 1 second interval.

3) The SVC OSD menu contains additional menus that the User OSD menu as described below.

a) Auto Color : W/B balance and Automatically sets the gain and offset value.
b) NVRAM INIT : EEPROM initialize.(24C08)
c) CLEAR ETI : To initialize using time.
d) AGING : Select Aging mode(on/off).
e) R/G/B-9300K : Allows you to set the R/G/B-9300K value manually.
f) R/G/B-6500K : Allows you to set the R/G/B-6500K value manually.
g) R/G/B-Offset : Allows you to set the R/G/B-Offset value manually.(Analog Only)
h) R/G/B-Gain : Allows you to set the R/G/B-Gain value manually.(Analog Only)
i) MODULE : To select applied module.

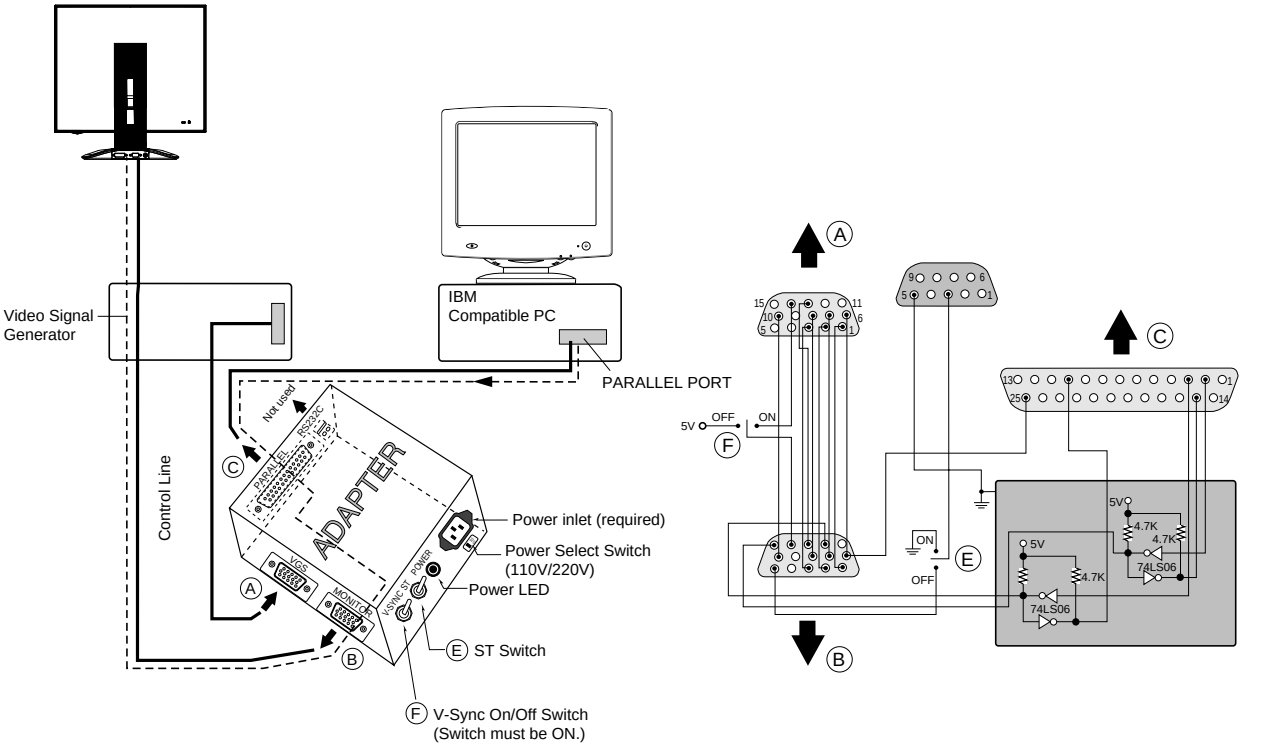
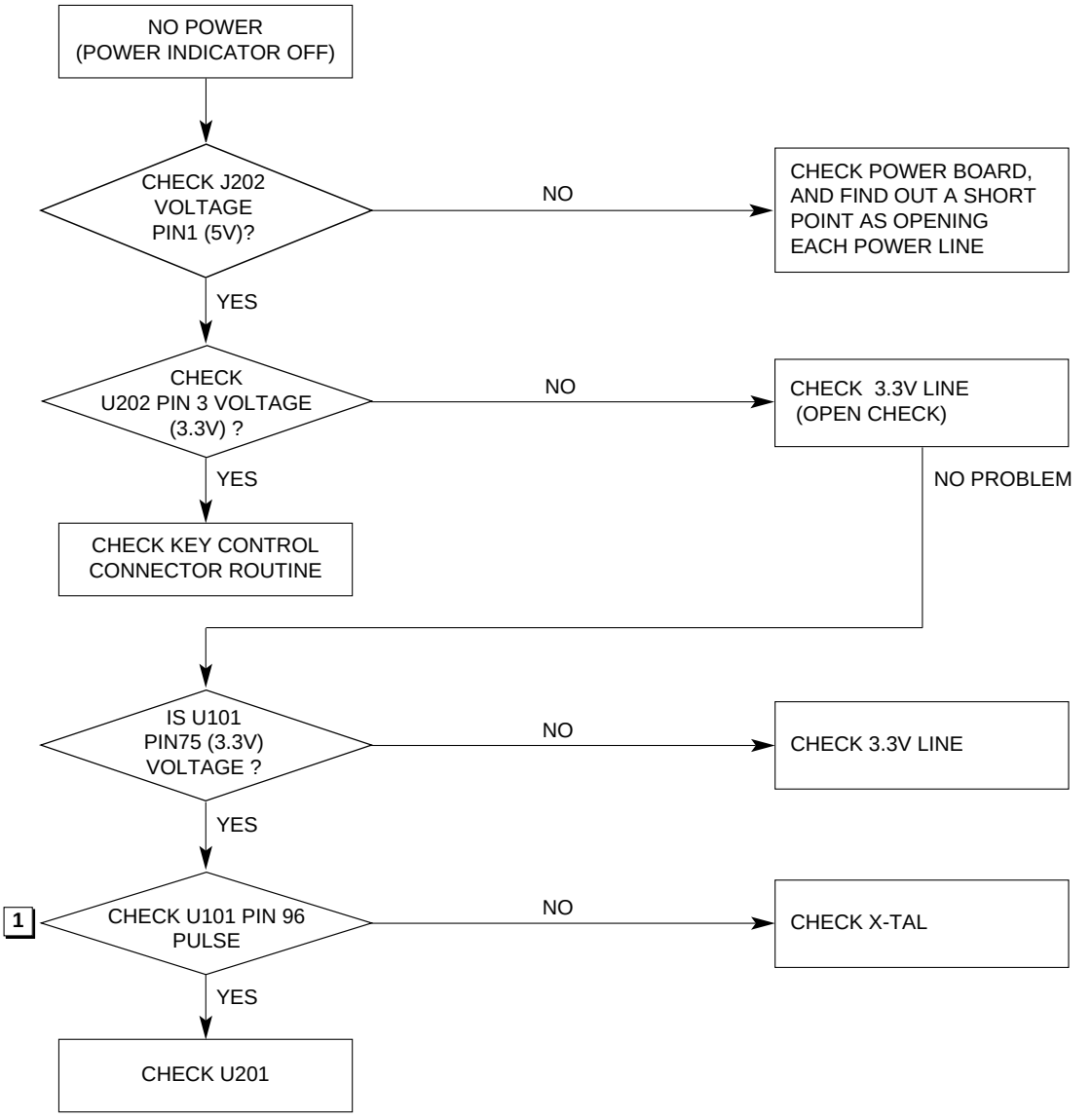


Figure 1. Cable Connection

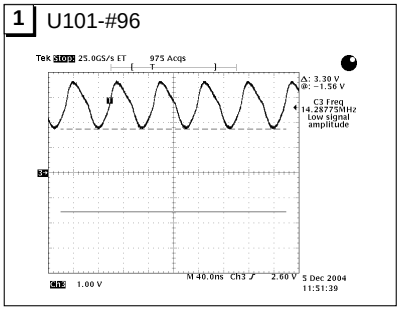
TROUBLESHOOTING GUIDE

1. NO POWER

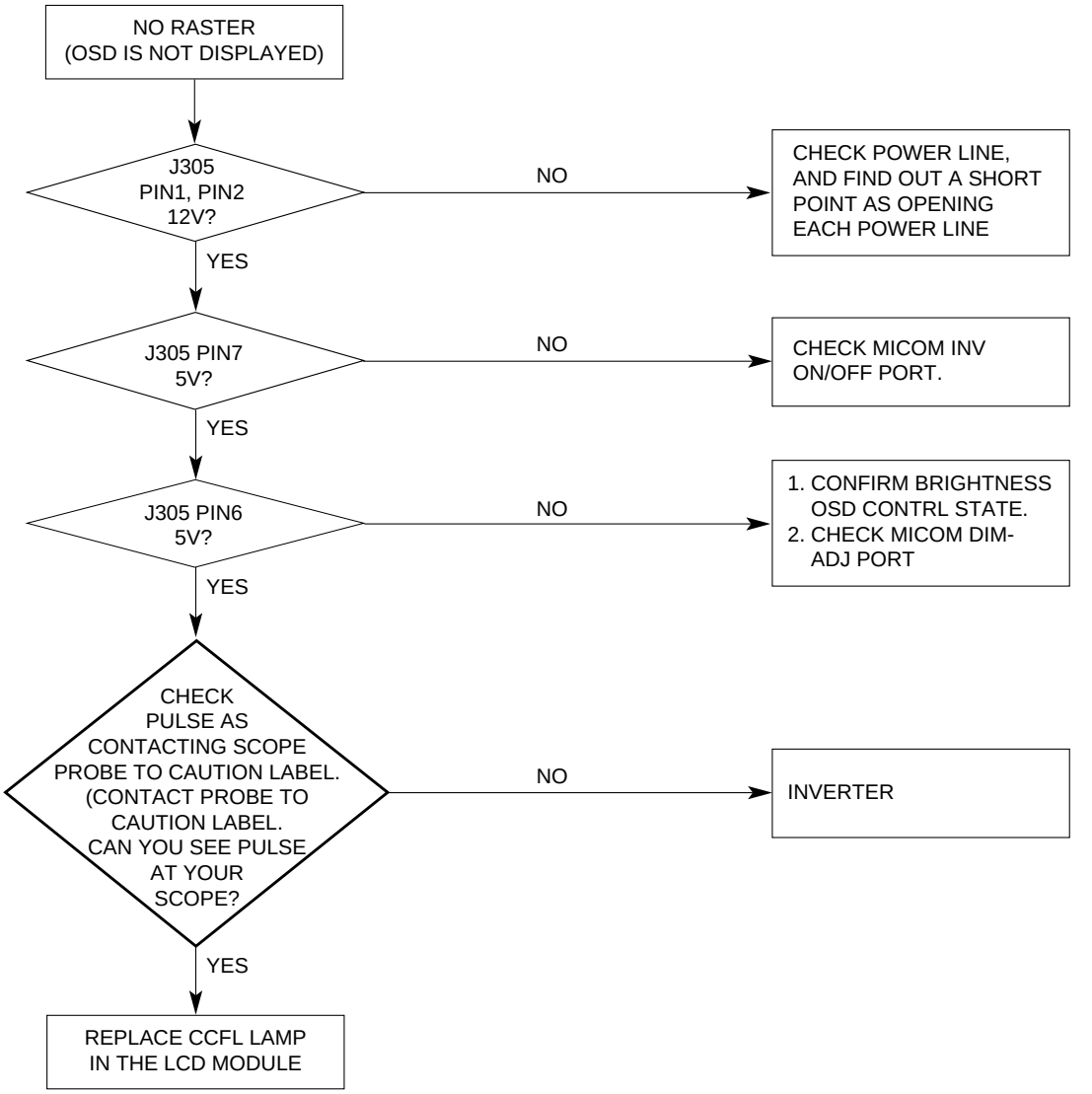


Waveforms

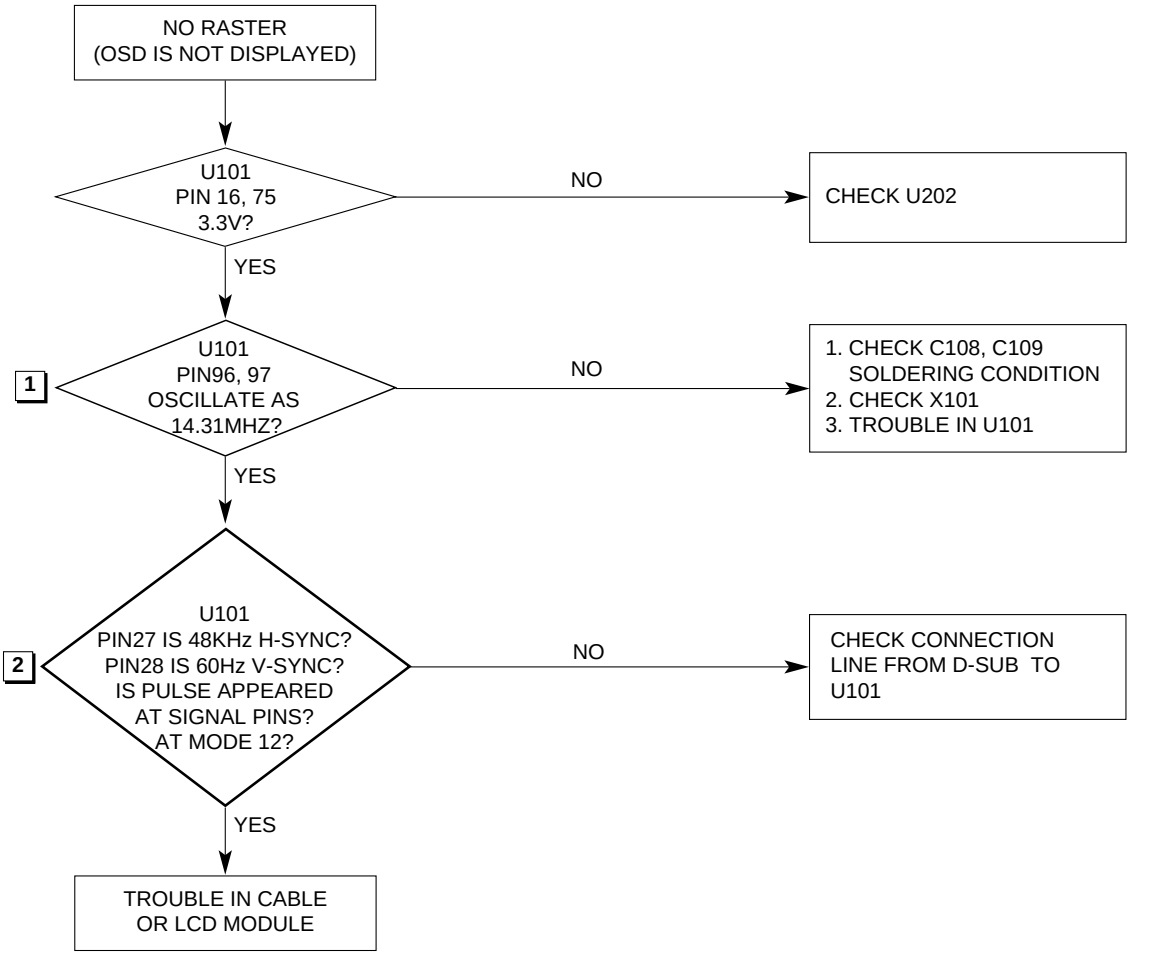
1 U101-#96



2. NO RASTER (OSD IS NOT DISPLAYED) – INVERTER

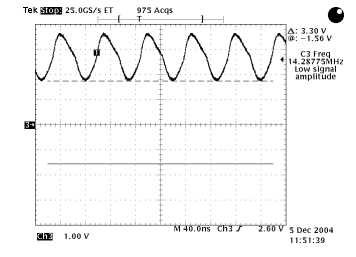


3. NO RASTER (OSD IS NOT DISPLAYED) – MSTAR

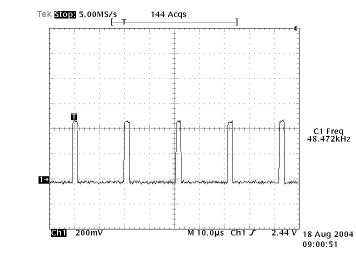


Waveforms

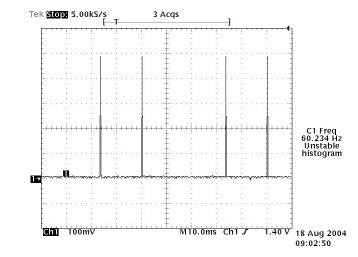
1 U101-#96, 97



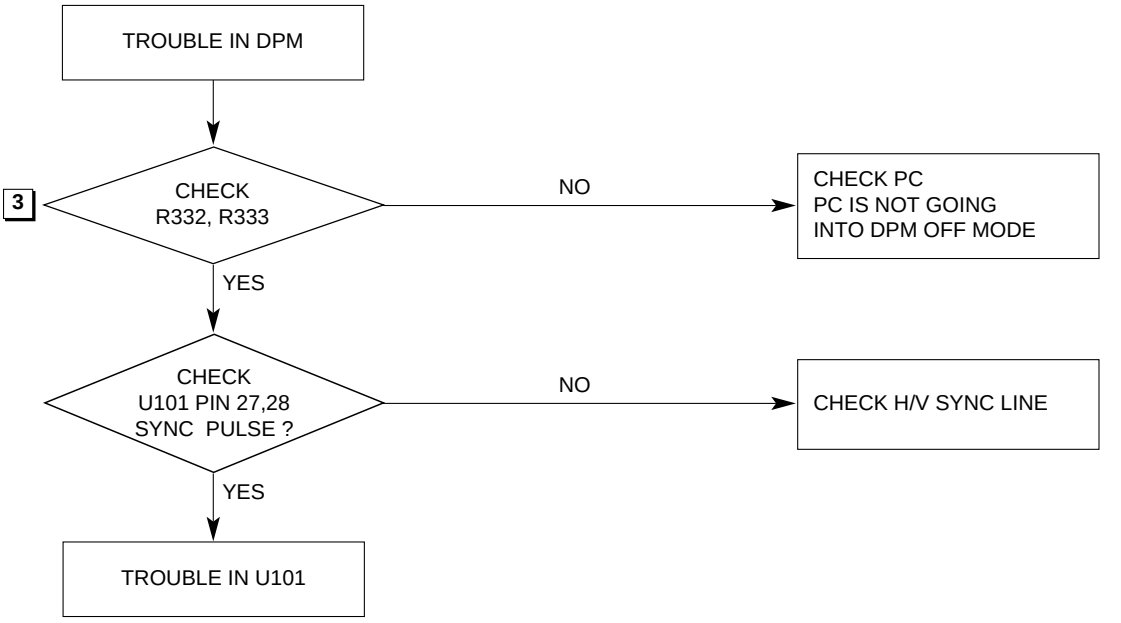
2 U101-#27 H-SYNC



2 U101-#28 V-SYNC

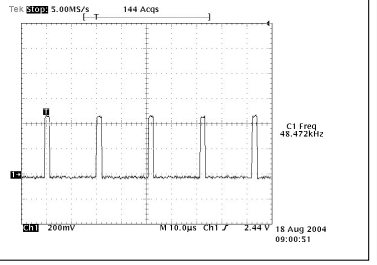


4. TROUBLE IN DPM

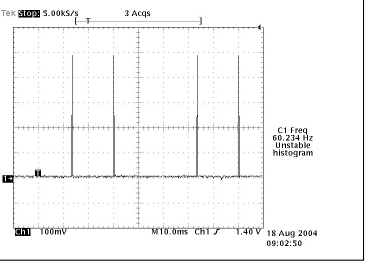


Waveforms

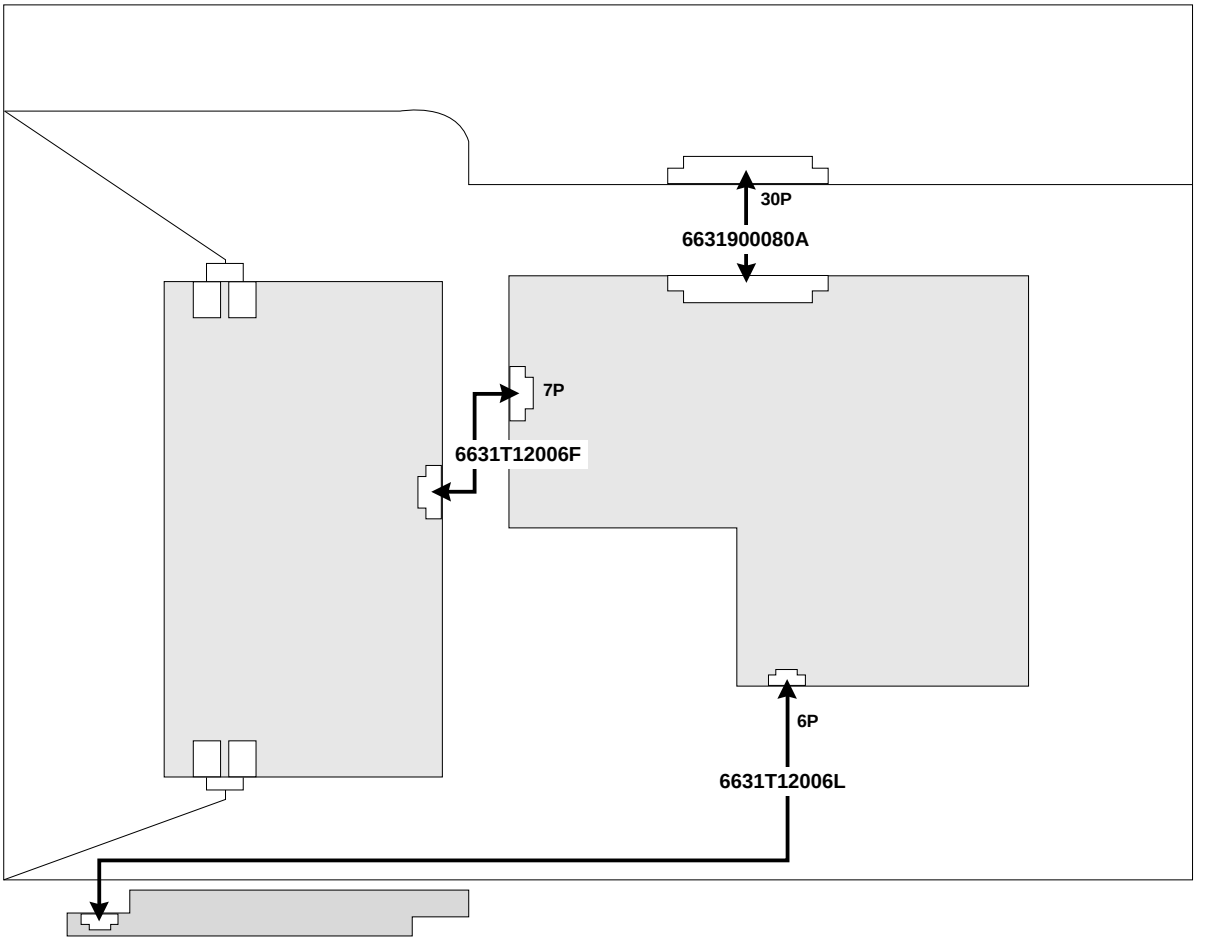
3 R332 H-Sync



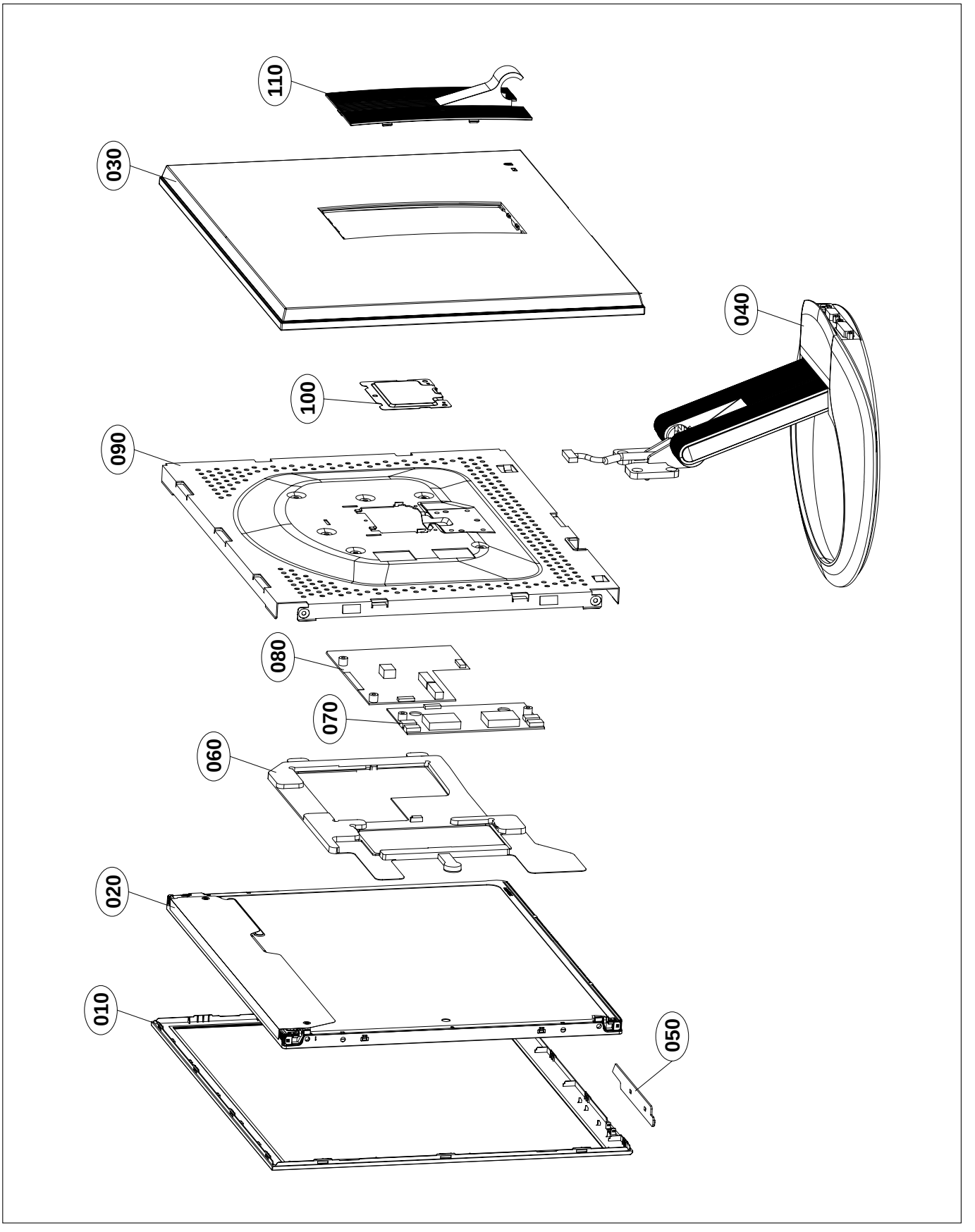
3 R333 V-Sync



WIRING DIAGRAM



EXPLODED VIEW



EXPLODED VIEW PARTS LIST

Ref. No.	Part No.	Description
010	30919L0012D	CABINET ASSEMBLY, **L1770** BRAND . B-CKD(SILVER,PC+ABS)
	30919L0013D	CABINET ASSEMBLY, **L1970** BRAND . B-CKD(SILVER, PC+ABS)
020	6304FCI012A	LCD(LIQUID CRYSTAL DISPLAY), ***M170E7-L01 CHIMEI TFT COLOR*** SLIM 2/5/5DOTS, 300NITS 8MS ROHS
	6304FLP338A	LCD(LIQUID CRYSTAL DISPLAY), ***LM170E02-TLA2 LG PHILPS TFT COLOR*** DOT FREE OF LM170E02-TLA1,SUPER SLIM(12.8T),P5,645CH,300NITS,8MS,P
	6304FHS014B	LCD(LIQUID CRYSTAL DISPLAY), ***HSD190ME13-D10 HANNSTAR TFT COLOR*** 2/3/5 DOTS,300NITS 5MS 700VS1 TCO-03
	or 6304FLP337A	LCD(LIQUID CRYSTAL DISPLAY), ***LM190E03-TLBB LG PHILPS TFT COLOR*** DOT FREE OF LM190E03-TLB7,P4,645CH,300NITS,TN,8MS,LPL KUMI,PB FREE
030	3809900137F	BACK COVER ASSEMBLY, **L1770** NON C-CKD(BK,PC-ABS)
	3809900138F	BACK COVER ASSEMBLY, **L1970** NON C-CKD(BLACK,PC+ABS)
040	3043900017E	TILT SWIVEL ASSEMBLY, **L1770** . A-CKD/ BLACK
	3043900017F	TILT SWIVEL ASSEMBLY, **L1970** . B-CKD / BLACK
050	68719ST966B	PWB(PCB) ASSEMBLY,SUB, SUB T.T CL95 L1X70H KNUSQPT CKD CONTROL LF
060	3300900042B	PLATE, INSULATION PVC . **L1770**(CMO)-CKD
	3300900043B	PLATE, INSULATION PVC . **L1970**(HSD)-CKD
070	66339A0020A	INVERTER ASSEMBLY, FRONTEK FIF1742-50B PWM DIMMING 19INCH PB FREE-**CMO,Hanstar**
	6633TZA019E	INVERTER ASSEMBLY, FRONTEK FIF1742-50A PWM DIMMING 17,19INCH SLIM PB FREE-**LPL**
080	33139L7019B	MAIN TOTAL ASSEMBLY, L1770H VASTVIEW BRAND LM51C CKD
090	49519S0022B	METAL ASSEMBLY, FRAME (**L1770**)A-CKD
	49519S0023F	METAL ASSEMBLY, FRAME **L1970**, HAN-CKD
100	48149K0021B	SHIELD, REAR L1770/L1970 EMI SHIELD, A-CKD
110	35509K0155D	COVER, **L1770** HINGE B-CKD(BK)
	35509K0157D	COVER, **L1970** HINGE B-CKD(BLACK)

REPLACEMENT PARTS LIST

CAUTION: BEFORE REPLACING ANY OF THESE COMPONENTS,
READ CAREFULLY THE **SAFETY PRECAUTIONS** IN THIS MANUAL.
* NOTE : **S** SAFETY Mark ⚠
AL ALTERNATIVE PARTS

DATE: 2006. 02. 06.

*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
		MAIN BOARD		
		CAPACITORS		
		C101	0CK473CH56A	0.047UF 1608 25V 10% R/TP X7
		C102	0CK473CH56A	0.047UF 1608 25V 10% R/TP X7
		C103	0CK473CH56A	0.047UF 1608 25V 10% R/TP X7
		C104	0CK473CH56A	0.047UF 1608 25V 10% R/TP X7
		C105	0CK473CH56A	0.047UF 1608 25V 10% R/TP X7
		C106	0CK473CH56A	0.047UF 1608 25V 10% R/TP X7
		C107	0CK473CH56A	0.047UF 1608 25V 10% R/TP X7
		C108	0CC220CK41A	22PF 1608 50V 5% R/TP NP0
		C109	0CC220CK41A	22PF 1608 50V 5% R/TP NP0
		C111	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C112	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C113	0CH8106F611	10UF 16V M 85STD(CYL) R/TP
		C114	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C116	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y
		C117	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C118	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C119	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C120	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C121	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C122	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C123	0CH8475J611	4.7UF 35V M 85STD(CYL) R/TP
		C124	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C125	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C126	0CH8106F611	10UF 16V M 85STD(CYL) R/TP
		C127	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C128	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C129	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C130	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C131	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C201	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C202	0CE107WF6DC	100UF MVK 16V 20% R/TP(SMD)
		C203	0CE107WF6DC	100UF MVK 16V 20% R/TP(SMD)
		C204	0CE107WF6DC	100UF MVK 16V 20% R/TP(SMD)
		C205	0CE107WF6DC	100UF MVK 16V 20% R/TP(SMD)
		C206	0CH8107F611	100UF 16V M 85STD(CYL) R/TP
		C207	0CH8107F611	100UF 16V M 85STD(CYL) R/TP
		C210	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y
		C211	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y
		C213	0CC101CK41A	100PF 1608 50V 5% R/TP NP0
		C214	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C215	0CE107WF6DC	100UF MVK 16V 20% R/TP(SMD)
		C216	0CE107WF6DC	100UF MVK 16V 20% R/TP(SMD)
		C217	0CH8107F611	100UF 16V M 85STD(CYL) R/TP
		C219	0CH8107F611	100UF 16V M 85STD(CYL) R/TP
		C220	0CE107WF6DC	100UF MVK 16V 20% R/TP(SMD)
		C221	0CH8107F611	100UF 16V M 85STD(CYL) R/TP
		C223	0CE107WF6DC	100UF MVK 16V 20% R/TP(SMD)
		C224	0CE107WF6DC	100UF MVK 16V 20% R/TP(SMD)
		C225	0CE107WF6DC	100UF MVK 16V 20% R/TP(SMD)
		C226	0CH8107F611	100UF 16V M 85STD(CYL) R/TP
		C227	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y
		C228	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R

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*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
		C229	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C230	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C231	0CC102CK41A	1000PF 1608 50V 5% R/TP NP0
		C232	0CK102CK56A	1000PF 1608 50V 0.1 R/TP X7R
		C233	0CK102CK56A	1000PF 1608 50V 0.1 R/TP X7R
		C234	0CK102CK56A	1000PF 1608 50V 0.1 R/TP X7R
		C235	0CK105CD56A	1UF 1608 10V 10% R/TP X7R
		C301	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C302	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C303	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C304	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C305	0CC220CK41A	22PF 1608 50V 5% R/TP NP0
		C306	0CC220CK41A	22PF 1608 50V 5% R/TP NP0
		C307	0CC101CK41A	100PF 1608 50V 5% R/TP NP0
		C308	0CC101CK41A	100PF 1608 50V 5% R/TP NP0
		C309	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C310	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C311	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C312	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C313	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C314	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C315	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C316	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C317	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y
		C320	0CC101CK41A	100PF 1608 50V 5% R/TP NP0
		C321	0CC101CK41A	100PF 1608 50V 5% R/TP NP0
		C322	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y
		C323	0CC101CK41A	100PF 1608 50V 5% R/TP NP0
		C324	0CC101CK41A	100PF 1608 50V 5% R/TP NP0
		C325	0CK105CD56A	1UF 1608 10V 10% R/TP X7R
		C326	0CC101CK41A	100PF 1608 50V 5% R/TP NP0
		C327	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y
		C330	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y
		C331	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y
		C332	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y
		C333	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y
		C334	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C401	0CK105CD56A	1UF 1608 10V 10% R/TP X7R
		C402	0CK105CD56A	1UF 1608 10V 10% R/TP X7R
		C403	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C404	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C405	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C406	0CK105CD56A	1UF 1608 10V 10% R/TP X7R
		C407	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C408	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y
		C409	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C410	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y
		C411	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C412	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C413	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C414	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C415	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C416	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C417	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R

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*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
		C418	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C419	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y
		C420	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C421	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C422	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C423	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C424	0CK105CD56A	1UF 1608 10V 10% R/TP X7R
		C425	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C426	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y
		C427	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C428	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y
		C429	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C430	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C431	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C432	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C433	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C434	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C435	0CK105CD56A	1UF 1608 10V 10% R/TP X7R
		C436	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C437	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y
		C438	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C439	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y
		C440	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C441	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y
		C442	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C443	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y
		C445	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C446	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y
		C447	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C449	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C450	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y
		C451	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C452	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C453	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y
		C454	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C455	0CH8107F611	100UF 16V M 85STD(CYL) R/TP
		DIODEs		
		D201	0DRON00268A	"MBRS190T3G,LF ON SEMI R/TP S"
		D301	0DS226009AA	KDS226 TP KEC - 80V - - 4NSE
		D302	0DS226009AA	KDS226 TP KEC - 80V - - 4NSE
		D303	0DS226009AA	KDS226 TP KEC - 80V - - 4NSE
		D304	0DS226009AA	KDS226 TP KEC - 80V - - 4NSE
		D305	0DS226009AA	KDS226 TP KEC - 80V - - 4NSE
		D306	0DS226009AA	KDS226 TP KEC - 80V - - 4NSE
		D307	0DS226009AA	KDS226 TP KEC - 80V - - 4NSE
		D308	0DS226009AA	KDS226 TP KEC - 80V - - 4NSE
		D309	0DS226009AA	KDS226 TP KEC - 80V - - 4NSE
		D310	0DS226009AA	KDS226 TP KEC - 80V - - 4NSE
		D311	0DS226009AA	KDS226 TP KEC - 80V - - 4NSE
		D312	0DS226009AA	KDS226 TP KEC - 80V - - 4NSE
		D313	0DD184009AA	KDS184 TP KEC - 85V - - - 30
		D314	0DD184009AA	KDS184 TP KEC - 85V - - - 30
		ZD301	0DZ560009GB	"BZT52C5V6S-(F),LF DIODES R/T"
		ZD302	0DZ560009GB	"BZT52C5V6S-(F),LF DIODES R/T"
		ZD303	0DZ560009GB	"BZT52C5V6S-(F),LF DIODES R/T"
		ZD304	0DZ560009GB	"BZT52C5V6S-(F),LF DIODES R/T"
		ZD305	0DZ560009GB	"BZT52C5V6S-(F),LF DIODES R/T"
		ZD306	0DZ560009GB	"BZT52C5V6S-(F),LF DIODES R/T"
		ZD307	0DZ560009GB	"BZT52C5V6S-(F),LF DIODES R/T"
		ZD308	0DZ560009GB	"BZT52C5V6S-(F),LF DIODES R/T"

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*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
		ICs		
		U101	0IPRP00705A	FE2031-LF(TSUM56AWL) MSTAR 1
		U102	0IZZ9H0140A	M25P10 SGS THOMSON SSOP 8PIN
		U103	0ICS240813B	"CAT24WC08J-TE13 8P,SOIC R/TP"
		U201	0IMCRMZ001A	"MP1583DN-Z,LF MONOLITHIC POW"
		U202	0IPMGKE011A	KIA78D33F KEC DPAK R/TP 3.3V
		U203	0IPMGSG019A	"LD1117S18TR,LF STM SOT223 R/"
		U301	0IMMR00014A	"M24C02-RMN6T(P),LF STM 8P,SO"
		U302	0IMMR00014A	"M24C02-RMN6T(P),LF STM 8P,SO"
		U401	0IZZ9H0141A	M25P10 SGS THOMSON SSOP 8PIN
		U402	0IPRP00680A	NVI-S5001 VASTVIEW TECHNOLO
		U403	0IMMR00080A	HY57V161610ETP-6 HYNIX 50PIN
		U404	0IMMR00080A	HY57V161610ETP-6 HYNIX 50PIN
		U405	0IMMR00080A	HY57V161610ETP-6 HYNIX 50PIN
		U406	0IMMR00080A	HY57V161610ETP-6 HYNIX 50PIN
		U407	0IPMGKE011A	KIA78D33F KEC DPAK R/TP 3.3V
		COILs & FILTERs		
		L201	6140TBZ048A	"SLF10145T-150M2R2, TDK,SMD,"
		L101	0LCML00003B	MLB-201209-0120P-N2 5A MAG L
		L202	0LCML00003B	MLB-201209-0120P-N2 5A MAG L
		L203	0LCML00003B	MLB-201209-0120P-N2 5A MAG L
		L301	6210TCE001S	HU-1M2012-121 CERATECH 2012M
		L401	0LCML00003B	MLB-201209-0120P-N2 5A MAG L
		L402	0LCML00003B	MLB-201209-0120P-N2 5A MAG L
		TRANSISTOR		
		Q301	0TRIH80001A	"RT1C3904-T112,LF ISAHAYA R/T"
		Q302	0TRIH80001A	"RT1C3904-T112,LF ISAHAYA R/T"
		Q303	0TR390609FA	FAIRCHILD KST3906-MTF TP SOT
		Q304	0TR390609FA	FAIRCHILD KST3906-MTF TP SOT
		Q402	0TRIH80001A	"RT1C3904-T112,LF ISAHAYA R/T"
		Q403	0TRIH80001A	"RT1C3904-T112,LF ISAHAYA R/T"
		U204	0TFVI80067A	SI3865BDV(E3) VISHAY R/TP TS
		RESISTORs		
		R101	0RJ0562D677	56 OHM 1/10 W 5% 1608 R/TP
		R102	0RJ0562D677	56 OHM 1/10 W 5% 1608 R/TP
		R103	0RJ0562D677	56 OHM 1/10 W 5% 1608 R/TP
		R104	0RJ0562D677	56 OHM 1/10 W 5% 1608 R/TP
		R105	0RJ1001D677	1K OHM 1/10 W 5% 1608 R/TP
		R106	0RJ0562D677	56 OHM 1/10 W 5% 1608 R/TP
		R107	0RJ0562D677	56 OHM 1/10 W 5% 1608 R/TP
		R108	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R109	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R110	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R111	0RJ3900D677	390 OHM 1/10 W 5% 1608 R/TP
		R113	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R115	0RJ4700D677	470 OHM 1/10 W 5% 1608 R/TP
		R118	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R120	0RJ4702D677	47000 OHM 1/10 W 5% 1608 R/T
		R121	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R124	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R125	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R126	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R128	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R129	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R130	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R131	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP

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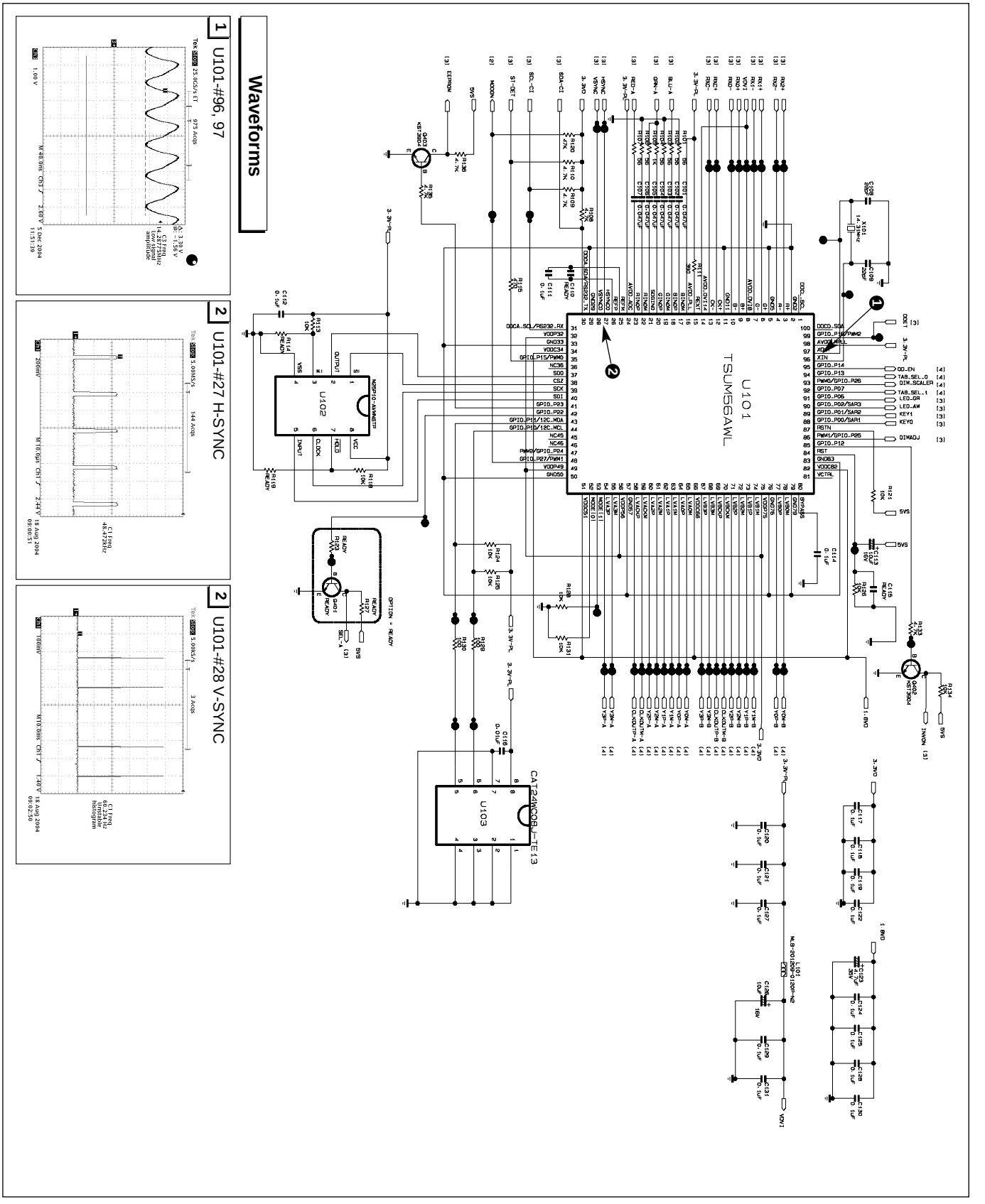
*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
		R133	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R134	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R135	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R136	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R201	0RJ9101D677	9.1K OHM 1/10 W 5% 1608 R/TP
		R202	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R203	0RJ3002D477	30K OHM 1/10 W 1% 1608 R/TP
		R205	0RJ5600D677	560 OHM 1/10 W 5% 1608 R/TP
		R206	0RJ2202D677	22K OHM 1/10 W 5% 1608 R/TP
		R207	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R208	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R209	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R301	0RJ0752D677	75 OHM 1/10 W 5% 1608 R/TP
		R302	0RJ0752D677	75 OHM 1/10 W 5% 1608 R/TP
		R303	0RJ0752D677	75 OHM 1/10 W 5% 1608 R/TP
		R304	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R305	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R306	0RJ0122D677	12 OHM 1/10 W 5% 1608 R/TP
		R307	0RJ0122D677	12 OHM 1/10 W 5% 1608 R/TP
		R308	0RJ0122D677	12 OHM 1/10 W 5% 1608 R/TP
		R309	0RJ0122D677	12 OHM 1/10 W 5% 1608 R/TP
		R310	0RJ0122D677	12 OHM 1/10 W 5% 1608 R/TP
		R311	0RJ0122D677	12 OHM 1/10 W 5% 1608 R/TP
		R312	0RJ0222D677	22 OHM 1/10 W 5% 1608 R/TP
		R313	0RJ0222D677	22 OHM 1/10 W 5% 1608 R/TP
		R314	0RJ4700D677	470 OHM 1/10 W 5% 1608 R/TP
		R315	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R317	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R318	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R320	0RJ0332D677	33 OHM 1/10 W 5% 1608 R/TP
		R321	0RJ0332D677	33 OHM 1/10 W 5% 1608 R/TP
		R322	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R323	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R325	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R327	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R328	0RJ0332D677	33 OHM 1/10 W 5% 1608 R/TP
		R329	0RJ0332D677	33 OHM 1/10 W 5% 1608 R/TP
		R330	0RJ1501D677	1.5K OHM 1/10 W 5% 1608 R/TP
		R331	0RJ1501D677	1.5K OHM 1/10 W 5% 1608 R/TP
		R332	0RJ1001D677	1K OHM 1/10 W 5% 1608 R/TP
		R333	0RJ1001D677	1K OHM 1/10 W 5% 1608 R/TP
		R336	0RJ0332D677	33 OHM 1/10 W 5% 1608 R/TP
		R337	0RJ0332D677	33 OHM 1/10 W 5% 1608 R/TP
		R343	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R345	0RJ1001D677	1K OHM 1/10 W 5% 1608 R/TP
		R346	0RJ1001D677	1K OHM 1/10 W 5% 1608 R/TP
		R347	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R353	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R354	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R355	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R356	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R357	0RJ0102D677	10 OHM 1/10 W 5% 1608 R/TP
		R358	0RJ0102D677	10 OHM 1/10 W 5% 1608 R/TP
		R359	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R360	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R361	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R362	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R363	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R364	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R365	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R366	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R408	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP

DATE: 2006. 02. 06.

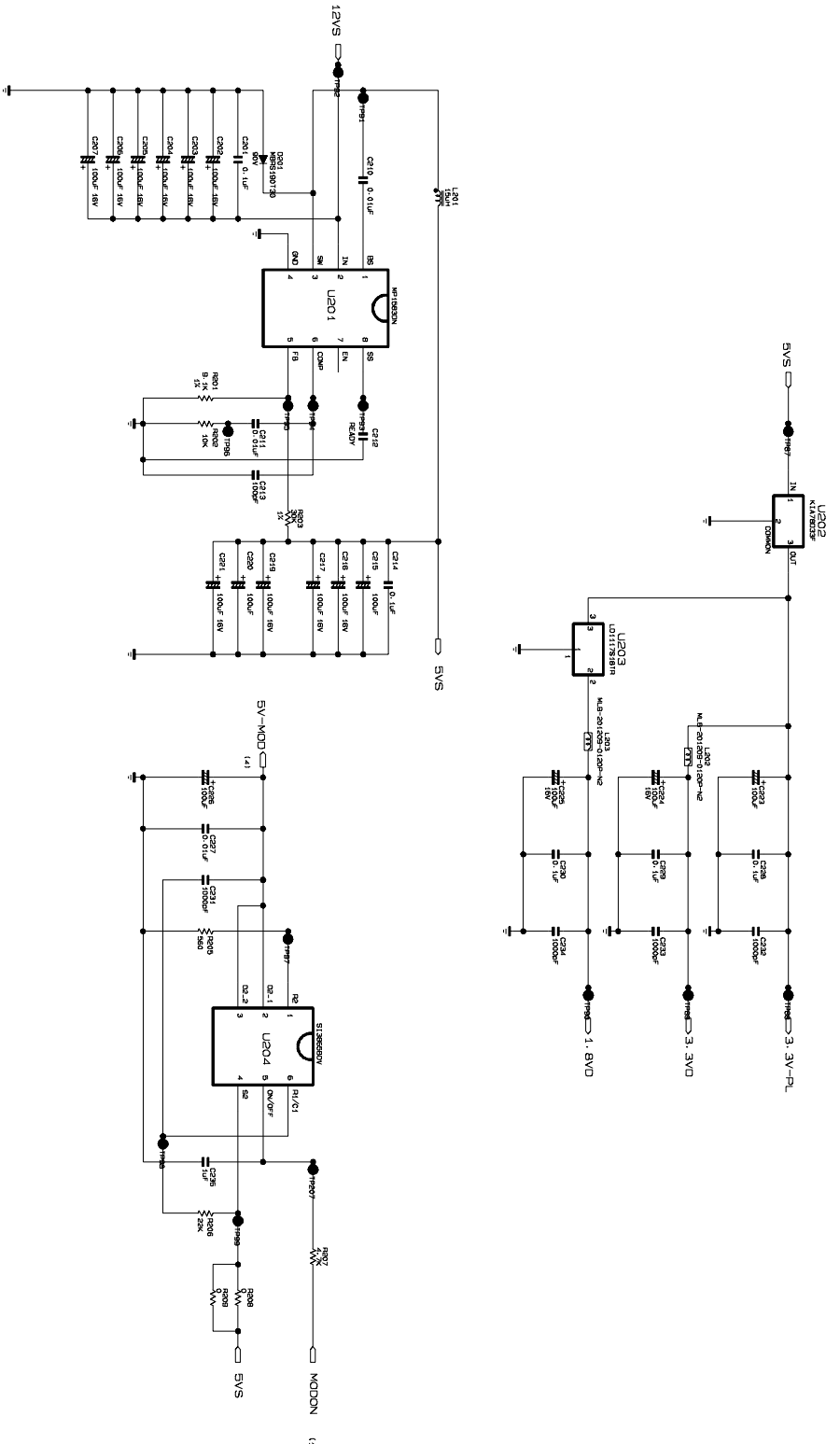
*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
		R409	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R410	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R411	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R412	0RJ0332D677	33 OHM 1/10 W 5% 1608 R/TP
		R413	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R414	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R415	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R416	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R417	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R418	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R419	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R420	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R421	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R422	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R445	0RJ0332D677	33 OHM 1/10 W 5% 1608 R/TP
		RA423	0RJ0332C687	33 OHM 1/16 W 5% 3216 ARRAY
		RA424	0RJ0332C687	33 OHM 1/16 W 5% 3216 ARRAY
		RA425	0RJ0332C687	33 OHM 1/16 W 5% 3216 ARRAY
		RA426	0RJ0332C687	33 OHM 1/16 W 5% 3216 ARRAY
		RA427	0RJ0332C687	33 OHM 1/16 W 5% 3216 ARRAY
		RA428	0RJ0332C687	33 OHM 1/16 W 5% 3216 ARRAY
		RA429	0RJ0332C687	33 OHM 1/16 W 5% 3216 ARRAY
		RA430	0RJ0332C687	33 OHM 1/16 W 5% 3216 ARRAY
		RA434	0RJ0332C687	33 OHM 1/16 W 5% 3216 ARRAY
		RA435	0RJ0332C687	33 OHM 1/16 W 5% 3216 ARRAY
		RA436	0RJ0332C687	33 OHM 1/16 W 5% 3216 ARRAY
		RA437	0RJ0332C687	33 OHM 1/16 W 5% 3216 ARRAY
		RA438	0RJ0332C687	33 OHM 1/16 W 5% 3216 ARRAY
		RA439	0RJ0332C687	33 OHM 1/16 W 5% 3216 ARRAY
		RA440	0RJ0332C687	33 OHM 1/16 W 5% 3216 ARRAY
		RA441	0RJ0332C687	33 OHM 1/16 W 5% 3216 ARRAY
		RA446	0RJ0332C687	33 OHM 1/16 W 5% 3216 ARRAY
		OTHERs		
		X101	6202TST001A	"SX-1 SUNNY ,SMS, 14.31818MHZ"
		CONTROL BOARD		
		C1	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C2	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		LED1	0DLBE0248AA	BRIGHT LED ELECTRONICS BL-HB
		Q1	0TRIH80001A	"RT1C3904-T112,LF ISAHAYA R/T"
		Q2	0TRIH80001A	"RT1C3904-T112,LF ISAHAYA R/T"
		R2	0RJ4700D677	470 OHM 1/10 W 5% 1608 R/TP
		R3	0RJ4700D677	470 OHM 1/10 W 5% 1608 R/TP
		R5	0RJ7501D677	7.5K OHM 1/10 W 5% 1608 R/TP
		R6	0RJ7501D677	7.5K OHM 1/10 W 5% 1608 R/TP
		R7	0RJ1201D677	1200 OHM 1/10 W 5% 1608 R/TP
		R8	0RJ1201D677	1200 OHM 1/10 W 5% 1608 R/TP
		R9	0RJ1801D677	1.8K OHM 1/10 W 5% 1608 R/TP
		SW1	6600R00004C	JTP1127WEM NAMAE 12VDC 50MA
		SW2	6600R00004C	JTP1127WEM NAMAE 12VDC 50MA
		SW3	6600R00004C	JTP1127WEM NAMAE 12VDC 50MA
		SW5	6600R00004C	JTP1127WEM NAMAE 12VDC 50MA
		SW6	6600R00004C	JTP1127WEM NAMAE 12VDC 50MA
		ZD1	0DZ560009GB	"BZT52C5V6S-(F),LF DIODES R/T"
		ZD2	0DZ560009GB	"BZT52C5V6S-(F),LF DIODES R/T"

SCHEMATIC DIAGRAM

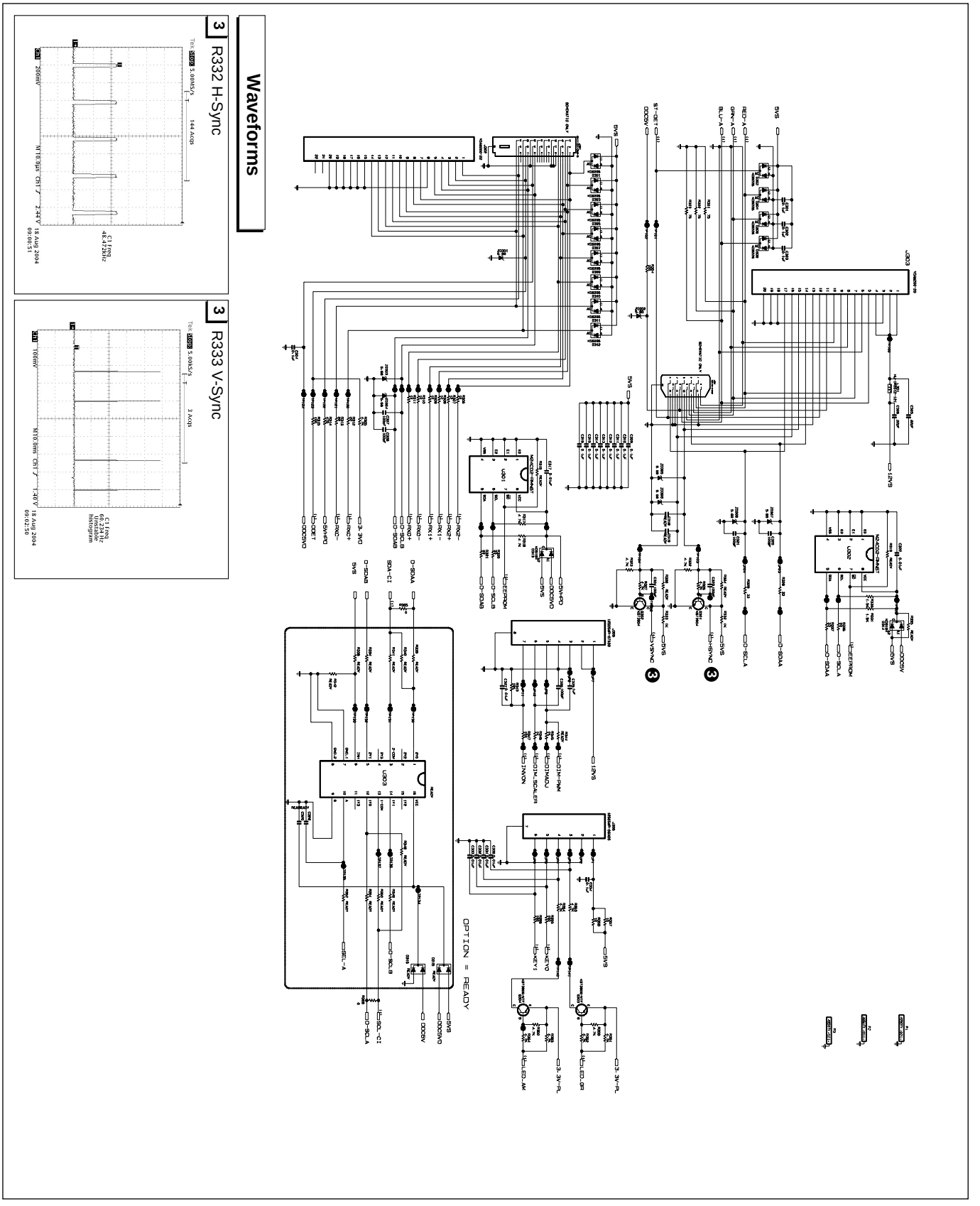
1. SCALER



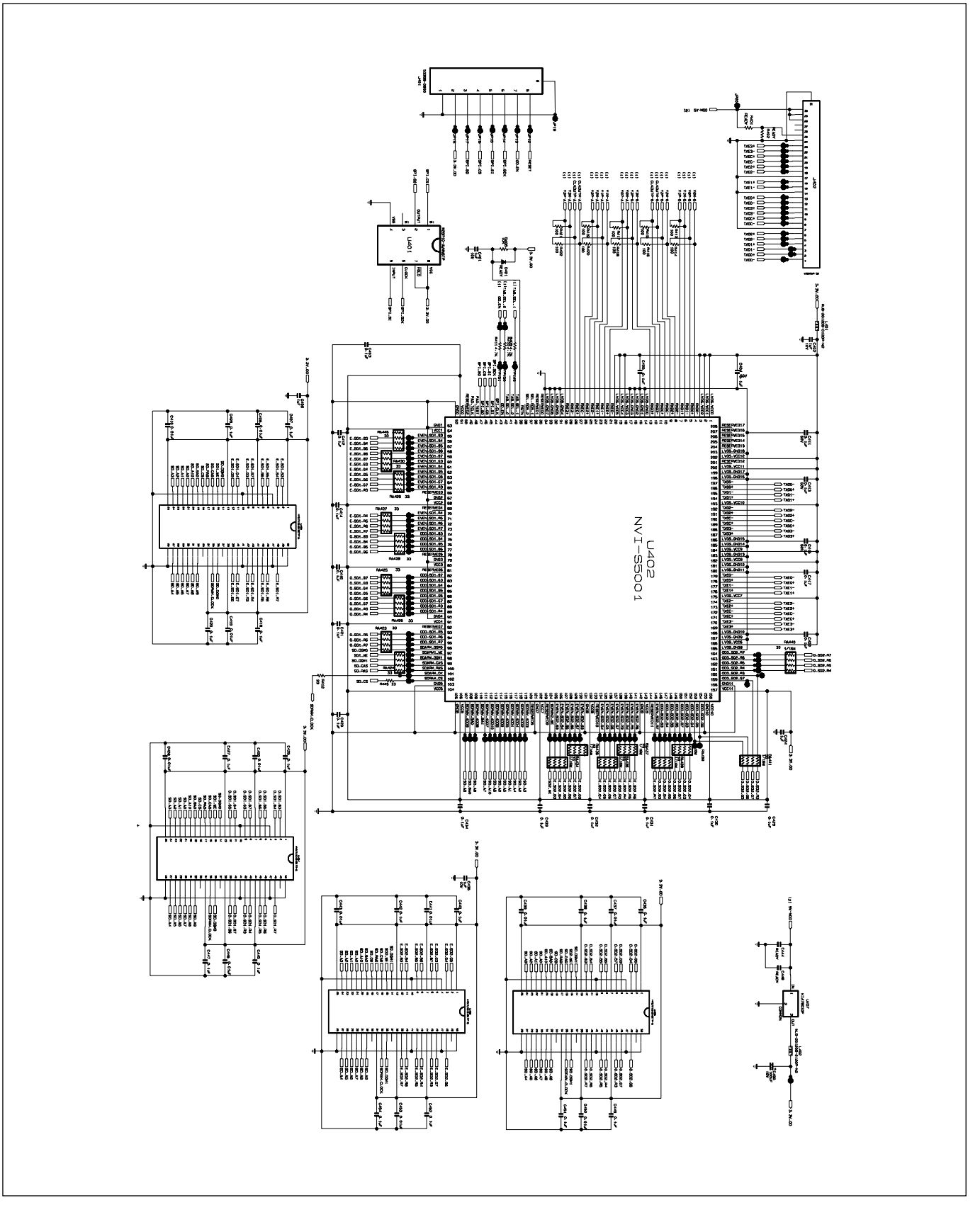
2. POWER



3. INPUT & WAFER



4. VTIO 3601



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