SLK-129 Specification

WWW.LCDSOLAR.COM

Solar Technologies, Inc. – Headquarters
26180 Enterprise Way
Building No. 100
Lake Forest, CA 92630

949.458.1080 Tel.
949.458.1081 Fax
Sales@LCDSolar.com

The Solar Technologies name and logo are the registered service marks of Solar Technologies, Inc. All other trademarks, service marks, logos, slogans, domain names, trade names and copyrights (collectively "Marks") are the properties of their respective owners. Solar Technologies disclaims any proprietary interest in Marks other than its own. All product specifications are provided for convenience only. The product specifications contained herein are provided "as is" and with respect to the information contained therein Solar Technologies disclaims all representations and warranties of any kind, including warranties of merchantability, fitness for a particular purpose, and accuracy of the content. Please consult the manufacturer for specific product information.

Product Information

Issue Date: April 3, 2007

Model: SLK-129

Note: The product and specification are subject to change without prior notice. Please contact your sales representative for the most current specifications.

26180 Enterprise Way | Bldg 100
Lake Forest, CA 92630
USA

Tel: 949.458.1080
Fax: 949.458.1081
www.lcdsolar.com

Contents

1. **Overview** 3

2. **Supported Video Timing** 4

3. **On Screen Display (OSD)** 5

   3-1. **OSD Control Button** 5

   3-2. **OSD Control** 6

4. **PCB Assembly Functional Description** 15

   4-1. **A/D Board Parts** 15

   4-2. **OSD Control Parts** 18

5. **Board Block Diagram** 19

6. **Outline Dimension** 20

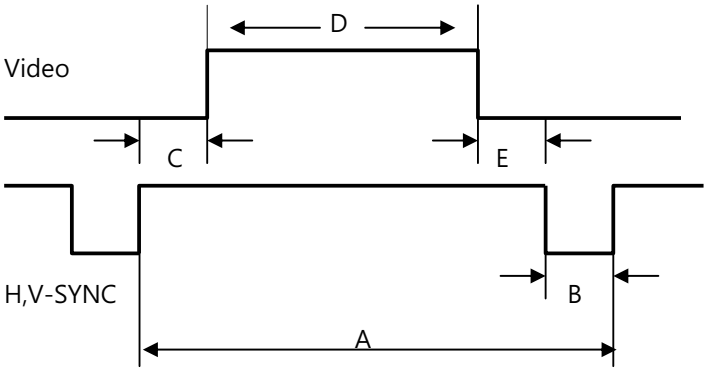
1. OVERVIEW

Display	**Target Panel Size**	**6.2"**
Supportable Signals	**Analog PC**	**H Frequency** **V Frequency** **Maximum Resolution**
Connector	**PC Analog**	**DSUB In**
OSD	**Language Support**	**English** **Espanola** **François** **Deutsch**
User Functions	**Image Adjustment**	**Picture: Brightness/Contrast/H-V Position/Phase /Clock/Auto Adjust** **Color: Color Temp/R,G,B Gain** **OSD: OSD H-V Position/OSD Timer/Transparency** **MISC: Language/Recall** **Auto Adjust**
Power	**Source** **Consumption**	**DC 12V** **9.8W**

2. SUPPORTED VIDEO TIMING

The microprocessor measures the H-sync, V-sync and V-sync/H-sync polarity for RGB inputs, and uses this timing information to control all of the display operations to get the proper image on a screen. This board can detect all VESA standard graphic modes shown on the table below and provide a more clear and stable image on a screen.

Timing Description



FH: H-Frequency
A: Total time
B: Sync time
C: Back porch
D: Active Area
E: Front Porch

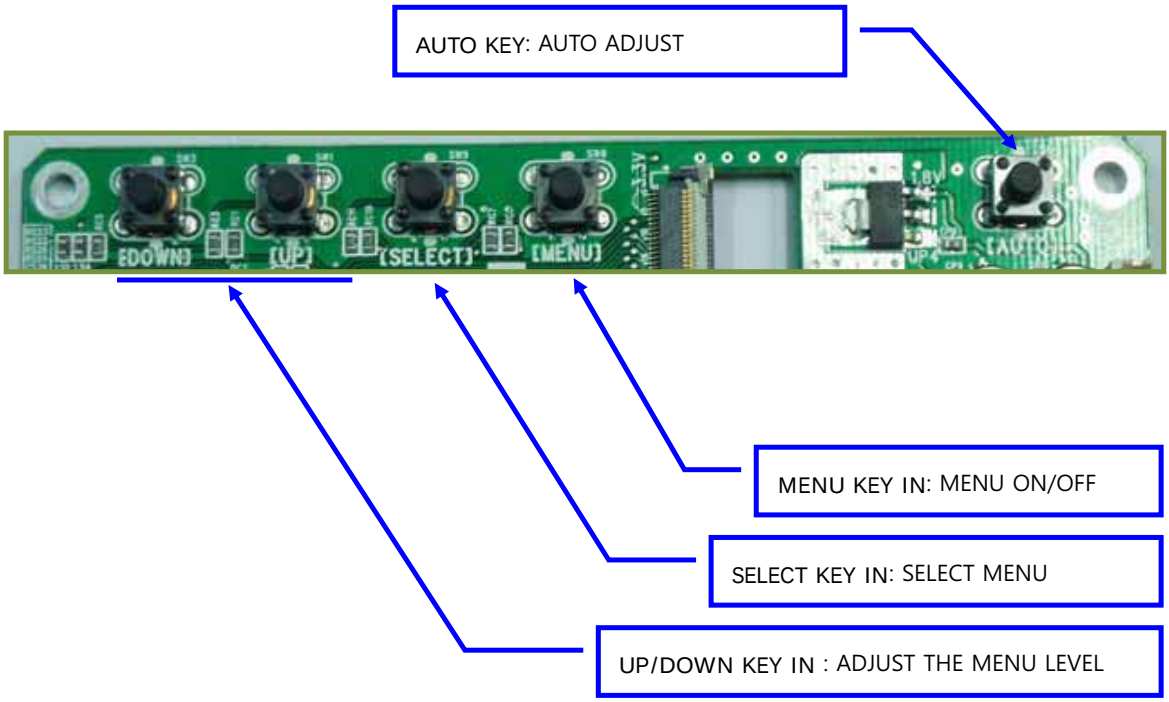
Description		640x240@60
Horizontal	FH	31.469KHZ
	A	31.778us
	B	3.813us
	C	1.589us
	D	25.422us
	E	0.318us
	POL	Negative
Vertical	VH	59.949HZ
	A	16.683ms
	B	0.064ms
	C	0.794ms
	D	15.253ms
	E	0.064ms
	POL	Negative

The monitor is compatible with additional modes within the one of following specified Frequency ranges provided that they are different at least for one of the following:

Horizontal frequency: +/- 1 KHz
Vertical frequency: +/- 1Hz

3. OSD (On Screen Display)

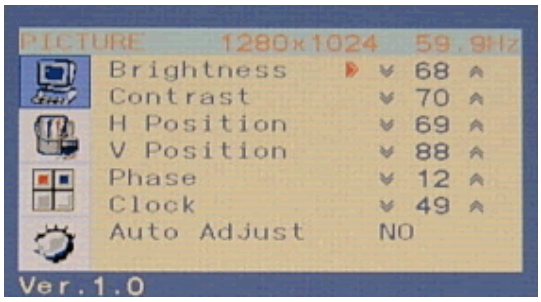
3-1. OSD (On Screen Display) Control Button



3-2. OSD (On Screen Display) Control

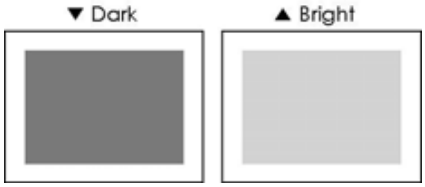
PICTURE

Brightness



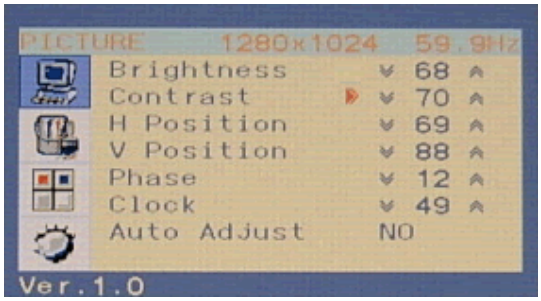
PROCEDURE

① Press the **MENU** button.
② Press the **UP** or **DOWN** button.
③ Select the Picture.
(Press the **SELECT** button)
Result: The Red cursor is displayed.
④ Press the **UP** or **DOWN** button.
⑤ Select the **Brightness** .
(Press the **SELECT** button)
⑥ Press the **UP** or **DOWN** button.
Result: Adjust the brightness of the screen.
⑦ Press the **MENU** button repeatedly to return to normal viewing.



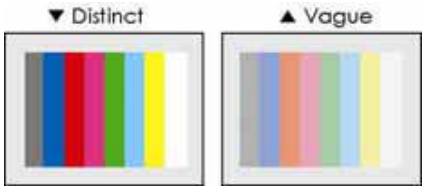
PICTURE

Contrast



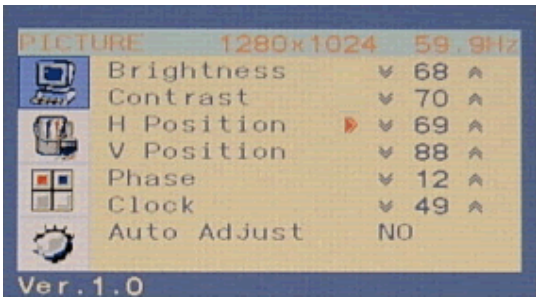
PROCEDURE

① Press the **MENU** button.
② Press the **UP** or **DOWN** button.
③ Select the Picture.
(Press the **SELECT** button)
Result: The Red cursor is displayed.
④ Press the **UP** or **DOWN** button.
⑤ Select the **Contrast** .
(Press the **SELECT** button)
⑥ Press the **UP** or **DOWN** button.
Result: Adjust the contrast of the screen.
⑦ Press the **MENU** button repeatedly to return to normal viewing.



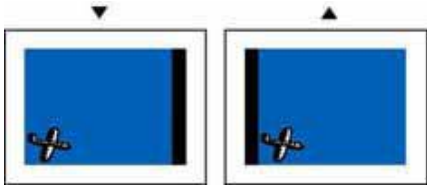
PICTURE

H Position



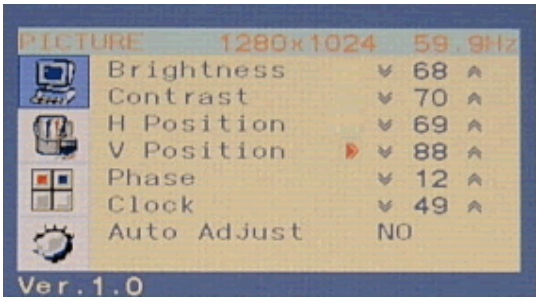
PROCEDURE

① Press the MENU button.
② Press the UP or DOWN button.
③ Select the Picture.
(Press the SELECT button)
Result: The Red cursor is displayed.
④ Press the UP or DOWN button.
⑤ Select the H Position.
(Press the SELECT button)
⑥ Press the UP or DOWN button.
Result: Adjust the H position of the screen.
⑦ Press the MENU button repeatedly to return to normal viewing.



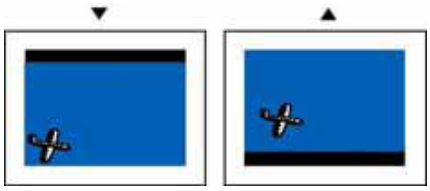
PICTURE

V Position



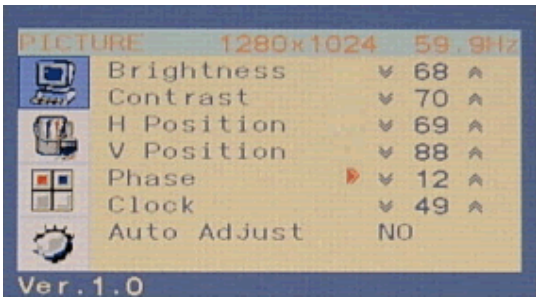
PROCEDURE

① Press the MENU button.
② Press the UP or DOWN button.
③ Select the Picture.
(Press the SELECT button)
Result: The Red cursor is displayed.
④ Press the UP or DOWN button.
⑤ Select the V Position.
(Press the SELECT button)
⑥ Press the UP or DOWN button.
Result: Adjust the V position of the screen.
⑦ Press the MENU button repeatedly to return to normal viewing.



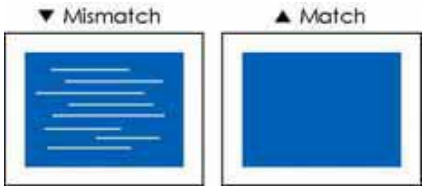
PICTURE

Phase



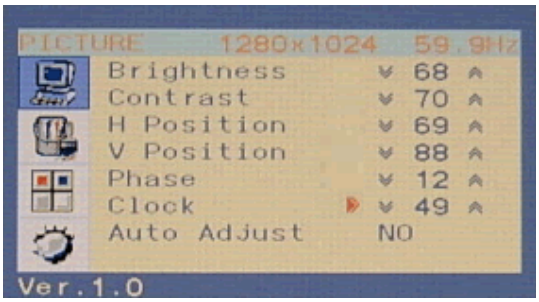
PROCEDURE

① Press the MENU button.
② Press the UP or DOWN button.
③ Select the Picture.
(Press the SELECT button)
Result: The Red cursor is displayed.
④ Press the UP or DOWN button.
⑤ Select the Phase.
(Press the SELECT button)
⑥ Press the UP or DOWN button.
Result: Adjust the phase of the screen.
⑦ Press the MENU button repeatedly to return to normal viewing.



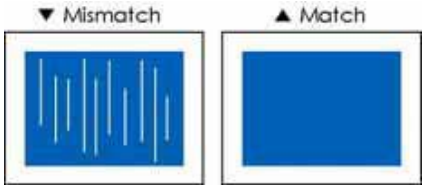
PICTURE

Clock



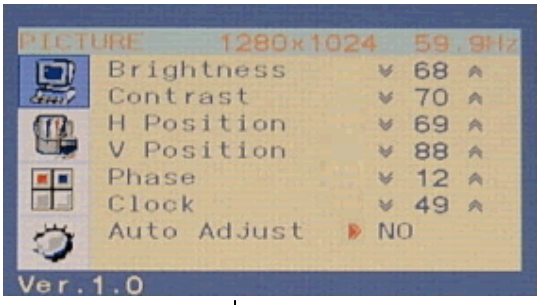
PROCEDURE

① Press the MENU button.
② Press the UP or DOWN button.
③ Select the Picture.
(Press the SELECT button)
Result: The Red cursor is displayed.
④ Press the UP or DOWN button.
⑤ Select the Clock.
(Press the SELECT button)
⑥ Press the UP or DOWN button.
Result: Adjust the clock of the screen.
⑦ Press the MENU button repeatedly to return to normal viewing.

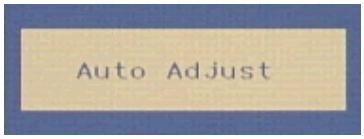


PICTURE

Auto Adjust



↓



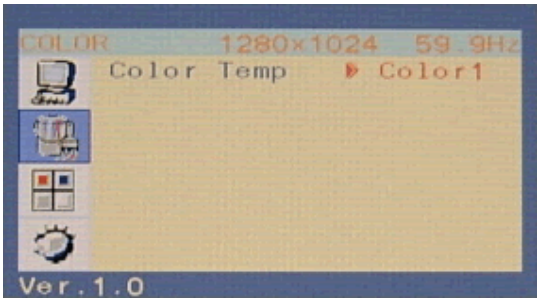
PROCEDURE

① Press the MENU button.
② Press the UP or DOWN button.
③ Select the Picture.
(Press the SELECT button)
Result: The Red cursor is displayed.
④ Press the UP or DOWN button.
⑤ Select the Auto Adjust .
(Press the SELECT button)
⑥ Select the "YES" .
(Press the UP or DOWN button.)
⑦ Press the SELECT button.
Result: Adjust Automatically the Vertical and Horizontal size.

※ Same as AUTO key.

COLOR

Color 1

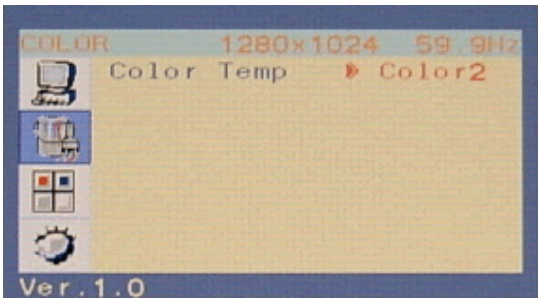


PROCEDURE

① Press the MENU button.
② Press the UP or DOWN button.
③ Select the color.
(Press the SELECT button)
Result: The Red cursor is displayed.
④ Select the Color 1(9300K).
(Press the SELECT button)
⑤ Press the MENU button repeatedly to return to normal viewing.

COLOR

Color 2

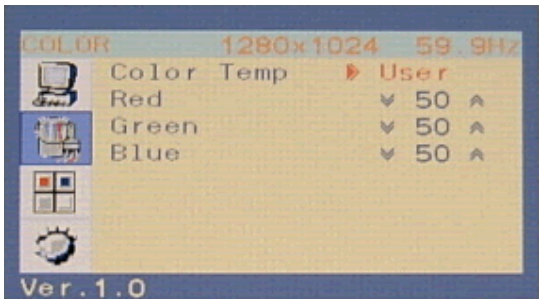


PROCEDURE

① Press the MENU button.
② Press the UP or DOWN button.
③ Select the color.
(Press the SELECT button)
Result: The Red cursor is displayed.
④ Select the Color 2(6500K).
(Press the SELECT button)
⑤ Press the MENU button repeatedly to return to normal viewing.

COLOR

User

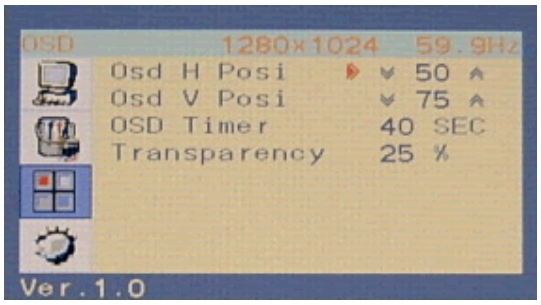


PROCEDURE

① Press the MENU button.
② Press the UP or DOWN button.
③ Select the color.
(Press the SELECT button)
Result: The Red cursor is displayed.
④ Select the User Mode.
(Press the SELECT button)
Result: The user menu is displayed.
⑤ Press the UP or DOWN button.
⑥ Select the Red, Green, or Blue.
(Press the SELECT button)
⑦ Press the UP or DOWN button.
Result: Adjust the R/G/B of the Screen.
⑧ Press the MENU button repeatedly to return to normal viewing.

OSD

OSD H Posi

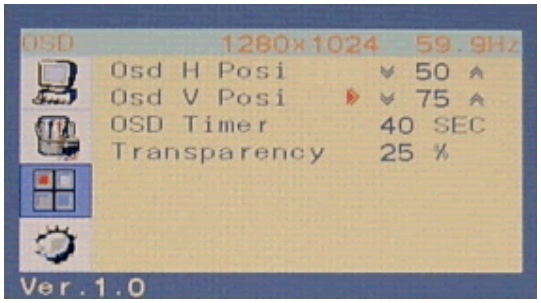


PROCEDURE

① Press the MENU button.
② Press the UP or DOWN button.
③ Select the OSD.
(Press the SELECT button)
Result: The Red cursor is displayed.
④ Press the UP or DOWN button.
⑤ Select the OSD H Posi.
(Press the SELECT button)
⑥ Press the UP or DOWN button.
Result: Adjust the OSD H Position of the Screen.
⑦ Press the MENU button repeatedly to return to normal viewing.

OSD

OSD V Posi

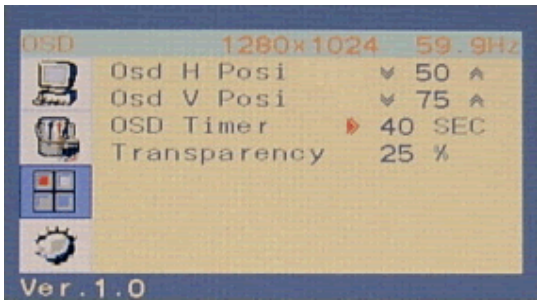


PROCEDURE

① Press the MENU button.
② Press the UP or DOWN button.
③ Select the OSD.
(Press the SELECT button)
Result: The Red cursor is displayed.
④ Press the UP or DOWN button.
⑤ Select the OSD V Posi.
(Press the SELECT button)
⑥ Press the UP or DOWN button.
Result: Adjust the OSD V Position of the Screen.
⑦ Press the MENU button repeatedly to return to normal viewing.

OSD

OSD Timer

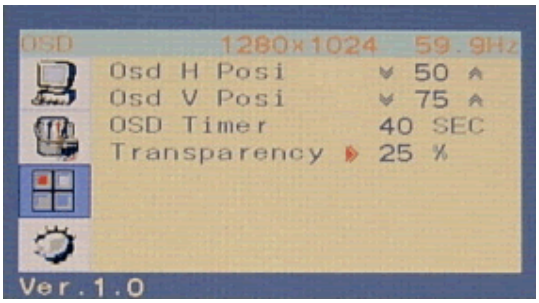


PROCEDURE

① Press the MENU button.
② Press the UP or DOWN button.
③ Select the OSD.
(Press the SELECT button)
Result: The Red cursor is displayed.
④ Press the UP or DOWN button.
⑤ Select the OSD Timer.
(Press the SELECT button)
⑥ Press the UP or DOWN button.
Result: Adjust the OSD time of the screen.
⑦ Press the MENU button repeatedly to return to normal viewing.

OSD

Transparency

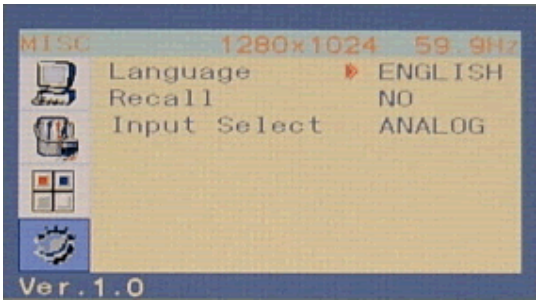


PROCEDURE

① Press the MENU button.
② Press the UP or DOWN button.
③ Select the OSD.
(Press the SELECT button)
Result: The Red cursor is displayed.
④ Press the UP or DOWN button.
⑤ Select the Transparency.
(Press the SELECT button)
⑥ Press the UP or DOWN button.
Result: Adjust the OSD transparency of the screen.
⑦ Press the MENU button repeatedly to return to normal viewing.

MISC

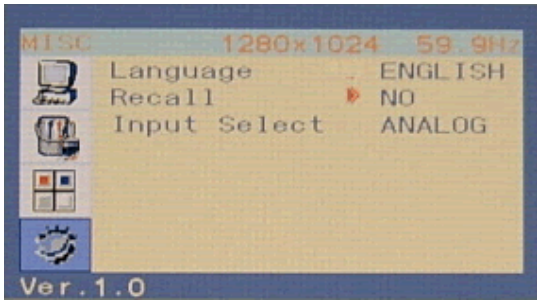
Language



PROCEDURE
① Press the MENU button.
② Press the UP or DOWN button.
③ Select the MISC.
(Press the SELECT button)
Result: The Red cursor is displayed.
④ Press the UP or DOWN button.
⑤ Select the Language.
(Press the SELECT button)
⑥ Press the UP or DOWN button.
Result: Select the OSD language of the screen.
⑦ Press the MENU button repeatedly to return to normal viewing.

M
I
S
C

Recall

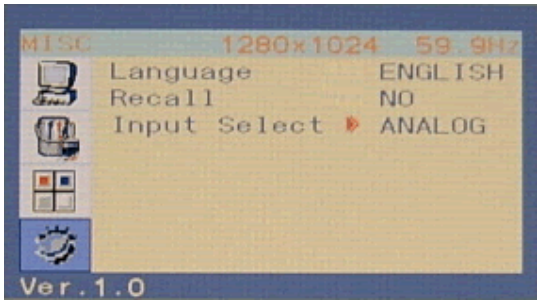


PROCEDURE

① Press the MENU button.
② Press the UP or DOWN button.
③ Select the MISC.
(Press the SELECT button)
Result: The Red cursor is displayed.
④ Press the UP or DOWN button.
⑤ Select the Recall.
(Press the SELECT button)
⑥ Select the "YES".
(Press the UP or DOWN button)
⑦ Press the SELECT button.
Result: After few seconds, Monitor will be power off and then re-start with default data.

M
I
S
C

Input Select



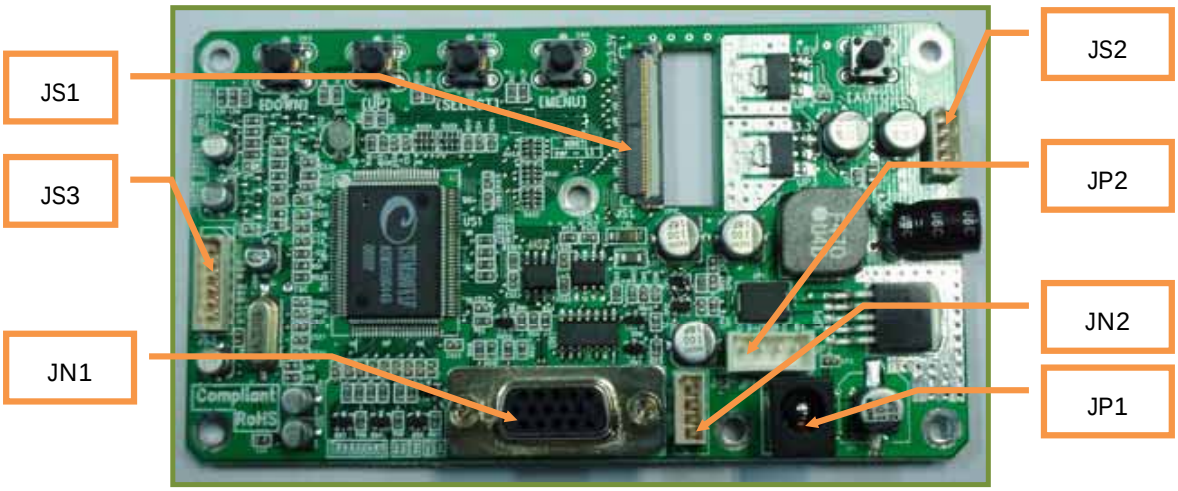
PROCEDURE

① Press the MENU button.
② Press the UP or DOWN button.
③ Select the MISC.
(Press the SELECT button)
Result: The Red cursor is displayed.
④ Press the UP or DOWN button.
⑤ Select the Input Select.
(Press the SELECT button)
⑥ Press the UP or DOWN button.
Result: Analog or Digital is selected.
⑦ Press the MENU button repeatedly to return to normal viewing.

4. PCB ASSEMBLY FUNCTIONAL DESCRIPTION

4-1. A/D Board Parts

Display Conversion A/D BOARD Assembly (Miniti Ver1.1) Connector Locations:



Reference	Description	Pin	Connector Type
JN2	TOUCH Power Connector	4	MOLEX 53015-0410
JP1	DC Power Connector	3	DC005 STRAIGHT
JP2	POWER Connector	4	SMW250-04
JS2	TOUCH Connector	4	MOLEX 53015-0410
JN1	D-SUB Connector	15	15P D-SUB 2.29MM RIGHT STRAIGHT
JS1	Signal Output Connector	40	FA5S040HP1R3000
JS3	Inverter Connector	6	MOLEX 53015-0610

JN2 : TOUCH Power Connector

Pin No.	Symbol	Description	Pin No.	Symbol	Description
1	VCC	+5V	3	VCC	+12V
2	NC	NC	4	GND	GROUND

JP1 : DC Power Connector

Pin No.	Symbol	Description
1	VCC	+12V
2	GND	GROUND
3	GND	GROUND

JP2 : POWER Connector

Pin No.	Symbol	Description	Pin No.	Symbol	Description
1	VCC	+12V	3	VCC	+12V
2	GND	GROUND	4	GND	GROUND

JS2 : TOUCH Connector

Pin No.	Symbol	Description	Pin No.	Symbol	Description
1	X+	Ex TSXP	3	X-	Ex TSXM
2	Y+	Ex TSYP	4	Y-	Ex TSYM

JS3 : Inverter Connector

Pin No.	Symbol	Description	Pin No.	Symbol	Description
1	VCC	+12V	4	ON	ON/OFF
2	VCC	+12V	5	GND	GROUND
3	ADJ	ADJUST	6	GND	GROUND

JN1 : D-SUB Connector

Pin No.	Symbol	Description	Pin No.	Symbol	Description
1	RED	VGA-RED	9	NC	NC
2	GREEN	VGA-GREEN	10	GND	SYNC GROUND
3	BLUE	VGA-BLUE	11	GND	GROUND
4	GND	GROUND	12	DATA	DDC DATA
5	GND	DDC GROUND	13	SYNC	HORIZONTAL SYNC
6	GND	RED GROUND	14	SYNC	VERTICAL SYNC
7	GND	GREEN GROUND	15	CLK	DDC CLK
8	GND	BLUE GROUND			

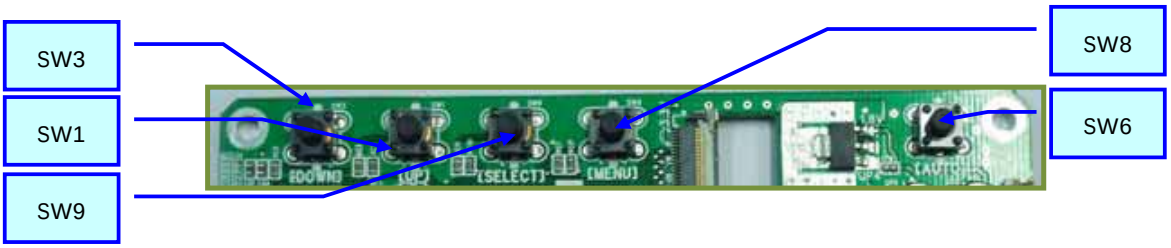
JS1 : Signal Output Connector

Pin No.	Symbol	Description	Pin No.	Symbol	Description
1	VCC	PANEL POWER 3.3V	21	G04	GREEN[6]
2	VCC		22	G03	GREEN[5]
3	VCC		23	GND	GROUND
4	VCC		24	G02	GREEN[4]
5	NC	NC	25	G01	GREEN[3]
6	DDE	DATA	26	G00	GREEN[2]
7	GND	GROUND	27	GND	GROUND
8	DCLK	CLOCK	28	R05	RED[7]
9	GND	GROUND	29	R04	RED[6]
10	NC	NC	30	R03	RED[5]
11	GND	GROUND	31	GND	GROUND
12	B05	BLUE[7]	32	R02	RED[4]
13	B04	BLUE[6]	33	R01	RED[3]
14	B03	BLUE[5]	34	R00	RED[2]
15	GND	GROUND	35	NC	NC
16	B02	BLUE[4]	36	GND	GROUND
17	B01	BLUE[3]	37	X+	Ex TSXP
18	B00	BLUE[2]	38	Y+	Ex TSYP
19	GND	GROUND	39	X-	Ex TSXM
20	G05	GREEN[7]	40	Y-	Ex TSYM

4-2. OSD Control Parts

OSD Key Pad Control Board Assembly

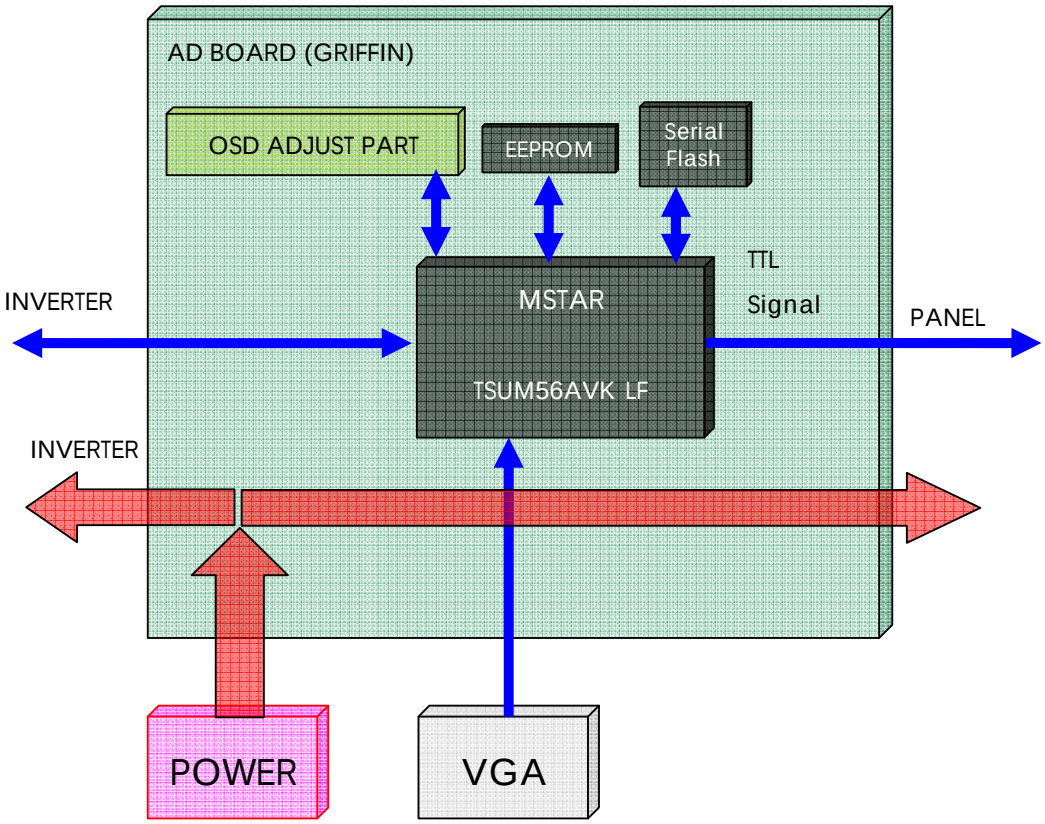
The Control Board assembly is the OSD user control/interface.

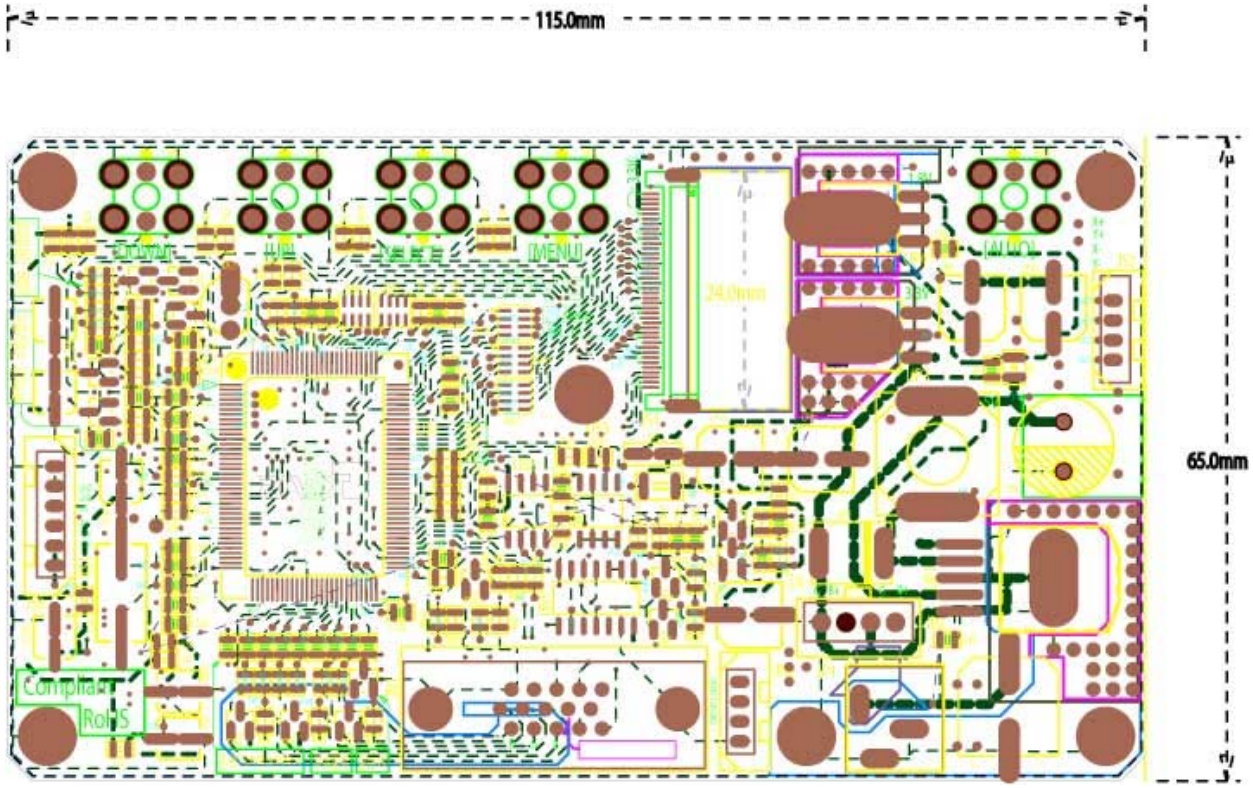


Control PCB Connector and Switch Identification:

CONTROL ADJUST : Miniti Ver1.1(All In One)		
Reference	Description	Connector Type
SW1	SW-TACT	IT-1102AH-T
SW3	SW-TACT	IT-1102AH-T
SW6	SW-TACT	IT-1102AH-T
SW8	SW-TACT	IT-1102AH-T
SW9	SW-TACT	IT-1102AH-T

5. BOARD BLOCK DIAGRAM



IC Scaler
TSUM59AVK-LF
IC SERIAL FLASH
MX25L512
IC EEPROM
24LC16

6. OUTLINE DIMENSION