

EUT : LCD Monitor

FCC ID : OKTLM150138

Grandview Technology Inc.

User's Manual

FEDERAL COMMUNICATIONS COMMISSION

NOTE

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Shielded interface cables (except Audio out cable, AV-Video data cable) must be used in order to comply with emission limits.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Important Safeguards

Please read all of these instructions carefully before you use the device.
Save this manual for future reference.

- Unplug the LCD monitor from the wall outlet before cleaning.
- Do not spray liquid cleaners or aerosol cleaners directly on the device. Wet a cloth with a neutral detergent (e.g. clean water) and squeeze it tight, then clean the screen slightly with it.
- Do not expose the LCD monitor directly to rain, water, moisture or sunlight.
- Do not put anything over the Monitor-to-PC signal cord and make sure it is located properly so no one will step on it.
- Avoid pressure on the LCD screen to prevent permanent damage to the display.
- Do not attempt to service the monitor yourself. Improper operation may void your warranty. Refer all servicing to qualified service personnel.
- Safe storage environment of the LCD monitor is ranging between -20°C and 60°C. Permanent damage could occur if the LCD monitor is stored outside the safe range.
- Unplug the LCD monitor immediately and call a qualified service person under the following conditions:
 1. The Monitor-to-PC signal cord is frayed or damaged.
 2. If the monitor has been exposed to rain, liquid or water.
 3. If the monitor has been dropped or the cabinet has been damaged.

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Introduction

Congratulations on your purchase of the TFT LCD monitor – a marvelous contribution of cutting edge technology.

The LCD monitor has been designed with serious thoughts to present the best performance for most applications. Symbol of elegance, its compact and slim profile is well suited in working locations where space is at a premium.

With 1024x768 XGA resolution, the 15" LCD monitor displays sharper, more brilliant, crisper and flicker-free images with an equivalent screen size of 17" traditional CRT monitors. Complying with the power management regulations of VESA DPMS, the LCD monitor is extremely energy efficient and a power saver. Plus, the LCD monitor has extremely low radiation emissions and near zero electromagnetic fields which are supreme benefits.

Fully compatible with PC and Mac, the LCD monitor provides full interface for all sorts of related standards. Supported by "Plug & Play" complying with DDCC/DDC2B, installing the LCD monitor is absolutely trouble free.

To assist the user in making right adjustment for optimum display performance, the easy-to-operate On Screen Display menu in five languages is furnished as a convenient interface.

Moreover, with two stereo speakers in the base and the audio interface designed for connecting to external speakers, the LCD monitor provides the user with an easy access to multimedia applications.

Enjoy your use of the LCD monitor !

Chapter 1

Installation

Before Unpacking

It is very important to locate the LCD monitor in a suitable environment.

- The surface for placing the LCD monitor should be stable and level.
- Make sure the place has good ventilation, is out of direct sunlight, away from sources of excessive dust, dirt, heat, water, moisture and vibration.
- Convenience for connecting the LCD monitor to the related facilities should be well considered too.

Unpacking

The LCD monitor comes with the following standard parts shown as below. Check and make sure they are included and in good condition. If anything is missing or damaged, contact the dealer immediately.

- The LCD Monitor
- AC-DC Adapter
- Power Cord
- Monitor-to-PC Signal Cable
- Speaker Cable
- Audio Cable x 2 (One is for connecting built-in speakers; and the other with different heads is for connecting external speakers.)
- RCA Video Cable
- This User Manual

To comply with the FCC regulations, video cables included with the LCD monitor are ferrite-loaded.

It is better for you to keep the carton and the packing materials in case you might need them for packing or moving in the future.

Terminals on the Rear Panel

There are eight terminals on the rear panel for input and output connections.

For easier connection work, you are recommended to place the LCD monitor flat to see the terminals more clearly. Be sure the surface of the desk is safe without anything destructive to the LCD screen.

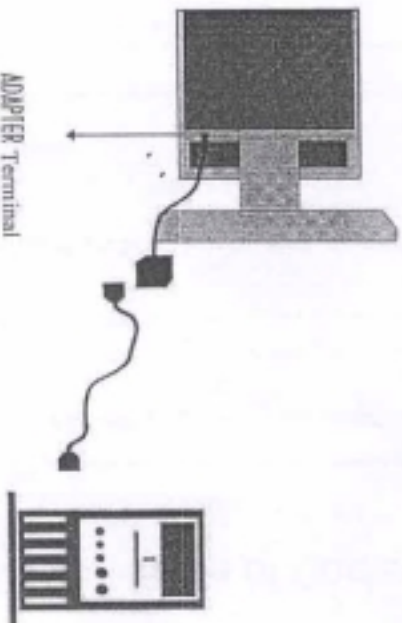


- **ADAPTER:** This is for connecting the provided AC-DC adapter.
- **AUDIO OUT:** The R, L sockets of AUDIO OUT are provided for connecting the speakers built in the base.
- **AUDIO IN:** This is to connect to the sound card port in your computer.
- **S VIDEO:** This is to connect to the source of S VIDEO.
- **RCA VIDEO:** This is to connect to the source of RCA VIDEO.
- **RGB:** This is to connect to the VGA card port in your computer.
- **USB:** This is to connect to an external USB hub.

Connecting Power

To supply the LCD monitor with power, use the provided AC-DC adapter and the power cord to connect to the power output socket of the computer. Fasten the connections securely.

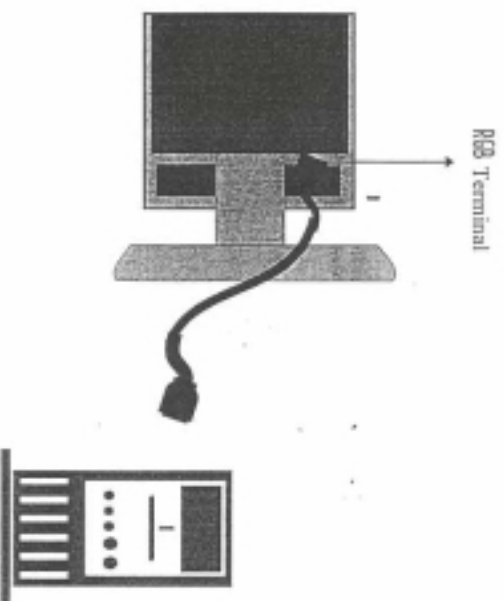
Pre: If your computer is not equipped with such a power output socket for the monitor, you may apply a power cord to connect to the provided AC-DC adapter and then plug it into the wall outlet. The plug should meet the electrical requirements in your country.



A "Surge Protection" device plugged between the AC-DC adapter and the wall outlet is recommended to prevent the effects of sudden current variations from reaching the LCD monitor. The sudden peaks of electricity may do harm to the LCD monitor.

Connecting the Computer

- Turn off the computer and the LCD monitor before connecting them.
- Use the Monitor-to-PC signal cable to connect the LCD monitor to the VGA port in your computer. The cable heads are the same on either side.
- Fasten the connections securely.

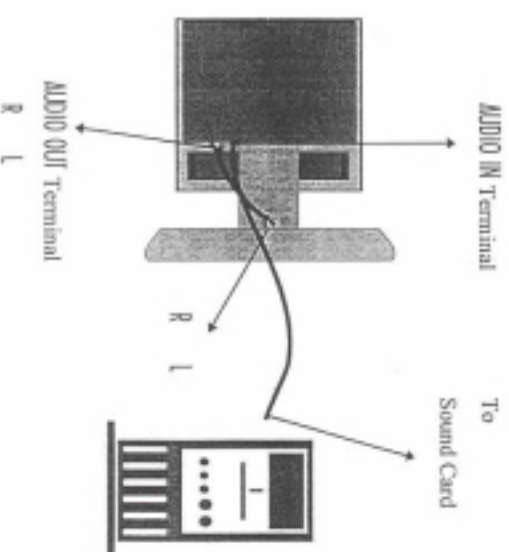


Connecting the Stereo Speakers (optional)

• Connecting Built-in Speakers

1. Use the provided Audio Cable to connect the AUDIO IN terminal of the LCD monitor to the sound card port of your computer.
2. Use the provided Speaker Cable to connect the ports R and L of the AUDIO OUT terminal on the rear panel to the audio ports R and L on the stand.

R stands for speaker on the right side and L for left. Refer to the color of the connector head. Insert the cable head to the port of the same color.



Positioning

- The positioning angle of the LCD monitor is adjustable to meet your working requirement.
- Hold the main unit of the LCD monitor firmly and adjust the positioning angle gently.
- You are allowed to pull the LCD monitor forward up to 10 degree or lay it backward up to 45 degree.
- Do not force the monitor over its maximum range, or you will damage the monitor and the stand as well.

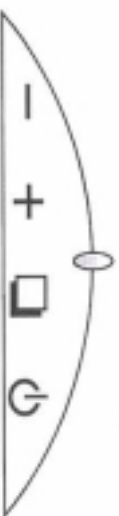


- To see the LCD screen from its either side, up to 70 degree viewing angle is the maximum for a satisfactory viewing quality. Visible viewing angle from the top is up to 60°, and 60° is the maximum to see the screen clearly from below.

Chapter 2

User Controls and Indicators

The LCD monitor is very easy and simple to operate. There are four controls below the front panel. You can see their respective indicators on the front.



Power Switch



Push up the Power Switch to turn on the LCD monitor and the power LED will light up green.

Menu/Enter Button

To activate the OSD menu, press the  Button.

When locating an item you like to adjust in the OSD menu, press  to bring up the corresponding sub-menu for options.

Increase / Moving Down Button

To move the locating cursor forward in the OSD menu, press  button. To increase the value while adjusting a parameter, press the  button.

Decrease / Moving Up Button

To move the locating cursor backward in the OSD menu, press the  button. To decrease the value while adjusting a parameter, press .

On Screen Display (OSD)

- ☞ There are five languages - English, German, French, Italian and Spanish for you to choose from for the OSD menu.
- ☞ Before you proceed with the adjustment, you may choose the language you are most familiar with.
- ☞ If the OSD menu goes off before you are done, just press to activate the OSD menu again and the cursor will still stay where you were. The OSD menu will automatically disappear if you stay longer than 10 seconds without giving any input.
- ☞ There are two OSD menus. One is for RGB (computer) sources, and the other is for Video sources. The LCD monitor will automatically detect the source the first time to bring the respective OSD menu. However you might change the source afterwards, therefore it will be necessary for you to activate the correct OSD menu by choosing in the INPUT SOURCE. There are only a few differences between those two menus. To give you a clearer illustration, we decide to present them separately in this manual.
- ☞ It is recommended you recall the factory default values if you fail to adjust the values satisfactorily in the OSD menu.

for RGB sources



- **R, G, B:** Use these three options to adjust the Red, Green, Blue gain. Range: 0-255
- **Brightness:** According to the room brightness, you can lower or raise the brightness level of the LCD display. Range: 0-255
- **H Position:** This option is for you to move the display horizontally to the left or the right. Range: 0-255
- **V Position:** This option is for you to move the display vertically downwards or upwards. Range: 0-255
- **Phase:** This option is for you to adjust the focus and clarity of the image. Range: 0-30
- **Frequency:** This option is for you to adjust the frequency of the screen display. Range: 0-255

- **Display Size:** There are two choices for this option: NORMAL or EXPAND. You can use this option to expand the display to the available largest size, or just set the display to the NORMAL size.
- **Volume:** This option is for you to control the volume of the speakers. Range: 0-255
- **Mode Hint:** For the LCD monitor to indicate the values of current display resolution, vertical frequency and horizontal frequency, activate the MODE HINT.
- **Language:** You have five choices of language for the OSD menu. You can choose English, German, French, Italian or Spanish.
- **Input Source:** Two types of input source are acceptable for the LCD monitor: RGB or VIDEO.
- **Save:** You can save your adjustments in the OSD menu.
- **Recall:** You can choose to set the LCD monitor's parameters to the factory set default values or a set of previously saved user-defined values. Besides, you can set the LCD monitor for the CIE coordinate 9300°K or 6500°K color temperature.

USER	FACTORY
9300K	6500K

- **EXIT:** This is for you to leave the OSD menu.

for Video Input



- **Color:** Use this option to adjust the overall color intensity of the LCD display. Range: 0-255
- **Contrast:** Use this option to adjust the contrast level of the LCD display. Range: 0-255
- **Sharpness:** Use this option to adjust the sharpness level of the LCD display. Range: 0-255
- **Brightness:** According to the room brightness, you can lower or raise the brightness level of the LCD display. Range: 0-255
- **H Position:** This option is for you to move the display horizontally to the left or the right. Range: 0-255
- **V Position:** This option is for you to move the display vertically downwards or upwards. Range: 0-255

Appendix A Specifications

- **Phase:** This option is for you to adjust the focus and clarity of the image. Range: 0-30
- **Frequency:** This option is for you to adjust the frequency of the screen display. Range: 0-255
- **Display Size:** There are two choices for this option: **NORMAL**, or **EXPAND**. You can use this option to expand the display to the available largest size, or just set the display to the **NORMAL** size.
- **Volume:** This option is for you to control the volume of the speakers. Range: 0-255
- **Mode Hint:** For the LCD monitor to indicate the values of current display resolution, vertical frequency and horizontal frequency, activate the Mode Hint
- **Language:** You have five choices of language for the OSD menu. You can choose English, German, French, Italian or Spanish.
- **Input Source:** Two types of input source are acceptable for the LCD monitor: **RGB** or **VIDEO**.
- **Save:** This is for you to save your adjustments in the OSD menu.
- **Recall:** You can choose to set the LCD monitor's parameters to the factory set default values or a set of previously saved user-defined values. Besides, you can set the LCD monitor for the CIE coordinate 9300°K or 6500°K color temperature.

USER	FACTORY
9300°K	6500°K

- **EXIT:** This is for you to leave the OSD menu.

Panel

Type	Color TFT
Size	Diagonal 15"
Display Area	304.1 x 228.1 mm
Brightness	200 cd/m ²
Contrast Ratio	300 : 1
Pixel Pitch	0.297x0.297mm
Max. Pixel Rate	80MHz
Viewing Angle (L/R/T/B)	70°/70°/60°/60°
Resolution	1024 x 768
Display Modes	Full Screen in 640x480, 800x600, 1024x 768 modes
Horizontal Frequency	15 - 60 KHz
Vertical Frequency	55 - 89 Hz
Color	262K
Input Signal	Analog RGB (0.7 Vp-p, 75ohms)
Input Terminal	D-sub mini 15 pin
Response Time	Tr: 20 ms Tf: 35ms
Plug & Play	DDCI, DDC2B
Compatibility	VGA, SVGA, XGA, IBM PC, MacII
Power Management	VESA DPMs
Stereo	Two 1-Watt Speakers Built-in Base
Power Consumption	
On-Working	36Watts (Max.)
On-Standby	4Watts
Input Voltage	AC 90-264V, 50-60Hz
Output	DC 12V / 3A
Operation Environment	
Temperature	0 ~ 40°C
Humidity	Less than 85%
Dimensions	400 x 380 x 200 mm (w/Stand)
Weight	5.8 Kg (w/ Stand)
Safety & EMI	UL, CSA, FCC-B, TUV/GS, CE

Appendix B Standard Timing

Resolution	Horizontal Frequency (kHz)	Vertical Frequency (Hz)	Pixel Frequency (MHz)	HV Sync Polarity	Type
640x350	31.469	70.087	25.175	+ / -	VGA-350
640x350	37.861	84.135	31.5	+ / -	VESA-350
640x600	24.83	56.42	21.65	- / -	NEC PC98-600
640x600	31.5	70.15	25.197	- / -	NEC PC98-600
640x400	37.861	84.136	31.5	- / +	VESA-400 GRAB11
640x480	31.469	59.94	25.175	- / -	VGA-480
640x480	35	66.67	30.24	- / -	APPLE MAC-480
640x480	37.861	72.809	31.5	- / -	VESA-480
640x480	37.5	75	31.5	- / -	VESA-480 75Hz
640x480	43.269	85.008	36	- / -	VESA-480 85Hz
720x400	31.469	70.087	28.322	- / +	VESA-600 TEXT
832x624	49.73	74.55	57.283	- / -	APPLE MAC-800
800x600	35.156	56.25	36	+ / +	SVGA
800x600	37.879	60.3	40	+ / +	VESA-600
800x600	48.077	72.188	50	+ / +	VESA-600 72Hz
800x600	46.875	75	49.5	+ / +	VESA-600 75Hz
800x600	53.674	85.061	56.25	+ / +	VESA-600 85Hz
1024x768	48.363	60.004	65	- / -	XGA
1024x768	53.964	66.132	71.644	+ / +	COMPAQ-XGA
1024x768	56.476	70.069	75	- / -	VESA-768
1024x768	60.023	75.029	78.75	+ / +	VESA-768 75Hz
1024x768	60.24	75.02	80	- / -	APPLE MAC-768
1024x768	35.522	86.96	44.9	+ / +	IBM 8514A

Appendix C Power Management System

The LCD monitor complies with the power management regulations of VESA DPM(Sversion 1.0p). It is provided with two phases of power saving modes by detecting the horizontal or vertical synchronous signal.

When the system is in the power saving mode or an incorrect timing is detected, the monitor screen will be blank and the power LED will flash orange.

Status	Power Consumption	Time to Resume	LED Color
On - Working	3.6 watts (max.)		Green
On - Standby	less than 4 watts	3 seconds	Orange

Appendix D

OSD Commands in Five Languages

English	German	French	Italian	Spanish
Color	Farbe	Couleur	colore	color
Contrast	Kontrast	contraste	contrast	contraste
brightness	Helligkeit	brilliant	vivacità	luminosidad
position	Position	position	posizione	posición
sharpness	Scharfe	brusquerie	accorzonone	definición
hue	Farblton	coul	tonalità	matiz
Display size	Anzeigegröße	Form, Video	dim. display	talla visual
volume	Lautstärke	amplieur	volume	volumen
mode list	Modusanzeiger	mode	Modallista	modo
language	Sprache	langage	lingua	lengua
input source	Empfänger	Sour. Entree	front input	orig de intr
save	Speichern	accepteur	salvare	salvar
recall	zurück	rappeleur	richiamare	Llamada
exit	Schließen	sortir	uscire	salir
phase	Phase	phase	fase	fase
frequency	Frequenz	frequence	frequenza	frecuencia
enter or normal	enteragen oder normal	enter ou normal	introdurre o normale	entrar o normal
expand	ausdehnen	étaler	allargare	ensanchar
Yes	Ja	oui	Si	SI
No	Nein	Non	No	No
on	an	ouvert	accenders	encender
off	aus	fermer	spegnere	apagar
English	Englisch	Anglais	Inglese	Inglés
German	Deutsch	allemand	Tedesco	Aleman
French	Französisch	Francaise	Francese	Francés
Italian	Italienisch	Italian	Italiano	Italiano
Spanish	Spanisch	Espagnol	Spagnolo	Español
factory	Faktor	Facieur	fabrice	factor
user	Benutzer	usager	utente	usuari/a
Menu	Menü	menu	menu	menú
Check input source and cable	Prüfen der Stromquelle und Kabel	Verifier cable et source d'entree	Controllare fonte input e cavo	chequear fuente de entrada y cable
Non-supported mode	Unerkannter Modus	Mode non-inclus	Modalità non supportata	modo no soportado

Appendix E Troubleshooting



To solve the following problems, you may need to refer to Appendix B Standard Timing for compatible display specifications.

- Problem: Unclear or Unsteady Display**
Actions:
 1. Change to the Windows's SHUT DOWN screen.
 2. Activate the OSD menu.
 3. Adjust the setting of Frequency to stabilize the display.
 4. Adjust the setting of Phase to clarify the image.
 5. You might need to repeat steps 3 and 4 to find balanced values for a best quality.
- Problem: No Display is shown on the LCD monitor.**
Actions:
 1. Make sure the LCD monitor is powered on by checking if the Power LED is lit. Check if all the connections are secure and the system is running correctly.
 2. If the Power LED lights up green, but there is still nothing displayed, connect your PC with another external monitor. If your PC works properly with that monitor, then it is possible that the VGA card timing of the system may be outside the LCD monitor's synchronous range. You may need a qualified technician for help.
- Problem: "Not Supported Mode" is shown on the display.**
Action:

This could be a mistake you made in the OSD menu while choosing the INPUT SOURCE: RGB or VIDEO. Or, it is possible that you have chosen a timing that is outside the LCD monitor's synchronous range. Recall the Factory default values may help to bring the screen back to normal.
- Problem: The LCD monitor does not work properly under Windows, but it functions all right in DOS mode.**
Action:

Make sure the display mode you choose in WINDOWS matches the LCD monitor.