

Important Safety Instructions	2
1. Introduction	4
1.1 General Information	4
1.2 Features	4
1.3 Check the list	5
2. Installing the monitor	6
2.1 Base Installation	6
2.2 Wall Mounting with VESA Standard (Fig.2)	7
2.3 Signal Cable Connection	7
2.4 Power Cord Connection	7
2.5 Power on	8
2.6 Saving Power Mode	8
2.9 Adjust the picture	8
3. Operation	9
3.1 Power on/off switch	9
3.2 Power LED indicator	9
3.3 OSD Control Keys	10
3.3.1 Auto Key	10
3.3.2 +/- key	10
3.3.3 Menu key	10
3.4 OSD Menu	11
3.4.1 OSD Menu Framework (VGA)	11
3.4.3 OSD Menu Framework (DVI)	19
3.4.4 OSD Menu Design (DVI)	20
3.5 Safety mode	24
3.6 Timing Guide	24
3.7 Plug & Play	25
3.8 Power Management	25
4. Specification	26
5. Simple troubleshooting	27
6. Regulatory Information	28
6.1 TCO'03 Information	28
6.2 Recycling Information for Customers	31

Important Safety Instructions

- 1. Read the manual carefully before using the monitor.**
- 2. Save the user manual for later use.**
- 3. Unplug the monitor from the power source when you clean the monitor. Don't use liquid cleaners or aerosol cleaners. Use cloth to clean it. If it doesn't do, please use LCD screen cleaners.**
- 4. Don't use attachments not recommended as they may cause hazards.**
- 5. Please grasp the plug to unplug the connector from the wall outlet. Don't pull the power cord to unplug it.**
- 6. Don't place anything on the power cord or step on it.**
- 7. Don't place the monitor near water source such as bathtub, washbowl, sink, laundry tub, swimming pool etc.**
- 8. The slots are designed for ventilation, simultaneously to keep the machinery workable and protect it from overheating. For the same reason, please do not place the monitor on the bed, sofa, carpets or other similar surface. Don't place the monitor near or over heat source or place in built-in installation.**
- 9. Keep 5cm away from the wall or other goods.**
- 10. This monitor can only use the power source indicated on the label. If you have questions, please consult your dealer.**
- 11. As safety measure, this monitor is equipped with a three-wire ground style plug. If you can't insert the plug into outlet, contact your electrician to replace your outlet. Don't defeat the safety purpose of the grounding- type plug.**
- 12. Please make sure that the outlet and power cord can afford the total electricity of the products.**
- 13. Place the monitor in safe place where the cord will not be abused by persons working on it.**

14. Follow all the warnings and instructions illustrated on the manual.

15. Don't overload the wall outlets and extend cords as this can result in fire or electric shocks.

16. Don't remove or open the cover to service this monitor yourself. It may expose you to dangerous voltage or other hazards before all servicing to qualified service personnel.

17. Unplug this monitor from the outlet and refer servicing to qualified service personnel under the following conditions.

- The power cord is frayed or damaged.
- The monitor has been dropped or the cabinet has been damaged.
- When the monitor displays a distinct change in performance, this indicates a need for service.

18. The power cord is the main device to disconnect the power.

19. Unplug the power cord when you do not use it for a long time.

20. Place the monitor in good ventilation and protect it from strong light, overheating and damp environment.

21. This monitor must be stored in temperature $-20\text{ }^{\circ}\text{C} \sim 55\text{ }^{\circ}\text{C}$.Otherwise, it may cause permanent damage.

1. Introduction

1.1 General Information

This monitor is a high-performance intelligent multi-scanning color monitor .It is with 19"W TFT LCD screen and MCU digital control low radiation and glary. The shape is tiny and thin adapting to small places, save your more place.

1.2 Features

- The best working mode: 1680x1050@60Hz
- Viewable angle: H,160° V,160°
- Active area: 473.76 mm x 296.1 mm
- Pixel pitch: 0.282 mm 0.282 mm
- Max.Brightness : 300cd/m²
- Static Contrast ratio: 1000:1
- Dynamic Contrast ratio: 5000:1
- Response time tr+tf : 5 ms
- Color: 16.7M
- Power saving compliant with EPA energy star and VESA DPMS.
- Auto color balance .When connected to different graphic adapter, the monitor can calibrate the white and black reference voltage.
- Plug & play, compatible with Windows9X&ME&NT&2000&XP&Vista and VESA DDC1/2B.
- HDCP (High-bandwidth Digital Content Protection)
- Kensington lock

1.3 Check the list

Please make sure that all of the following items are included before operating this monitor,

- LCD monitor (include base)
- Power cord, Adapter, VGA signal cable
- User's manual

If any of above listed items are missing, please contact your dealer for technical support.

2. Installing the monitor

Please consider the following advice before you install your monitor.

Position

Choose a place that reflects less to place your monitor. Generally, there is a suitable angle with a window.

Height

The peak of the monitor should be a little lower than your eyes when you sit down.

Inclination

You will feel comfortable with the sloping screen.

2.1 Base Installation

Place the monitor so, that the wide part of the foot will be settled to the front side (Figure 1).

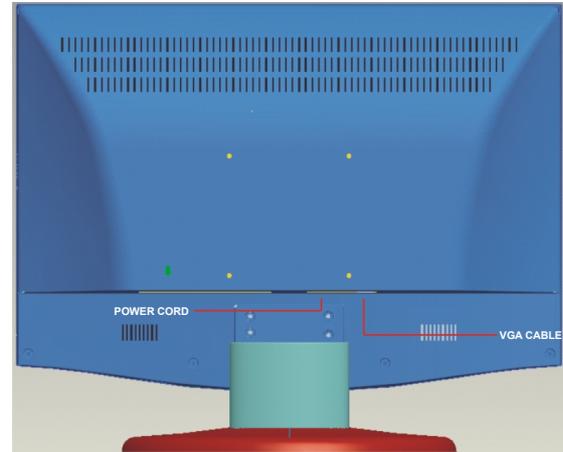


Fig. 1

2.2 Wall Mounting with VESA Standard (Fig.2)

1. Take off the lid of rotating axis on the rear cover and screw out the 4 bolts fixing the rotating axis with a screwdriver. Then the stand and base can be moved away from the monitor.

Remarks: Well keep the parts from the monitor for future use when wall-mounting is not needed.

2. Fix the wall -mounting parts (optional parts according with VESA standard) on the rear cover to mount the monitor on the wall.



Fig. 2

2.3 Signal Cable Connection

Insert the signal cable into VGA or DVI port of a computer. Then, lockup the cover with screws to assure full connection to the earth. Insert the other end of signal cable into the corresponding port (VGA or DVI port) and lock up with screws.

2.4 Power Cord Connection

Plug one end of the power cord into the input port of the monitor' power supply and then insert the other end into the socket of the electrical source.

2.5 Power on

Switch on the power to both the monitor and your computer. After the monitor is power on, the LED lights up green or blue. If the LED becomes red and flashing, please check the video signal cable connection. If the LED is off, please press power switch slightly.

2.6 Saving Power Mode

If there is no horizontal or vertical sync signal, your monitor will display Fig.3 to indicate no signal input. After a few seconds, the monitor will come into waiting and saving power mode; if the monitor receives the video signal, it will return to the normal mode.

2.9 Adjust the picture

In order to obtain the best visual display, you need adjust it, please refer to Chapter 3 " the Operation of the monitor ".



Fig. 3

3. Operation

OSD control panel

Fig.4 is model elevation. Other models differ in key-press position and front panel.

3.1 Power on/off switch

This is a slight touch digital control key. It is used to turn the monitor on or off.

3.2 Power LED indicator

When the monitor is working, the power LED is green or blue. If the monitor is in saving power mode, the power LED will be red and flashing. If you turn off the monitor, the power LED will be off. When the LED is off, the monitor is off, but the monitor is still electricized. In order to security, you should unplug the power cord while you don't use the monitor.

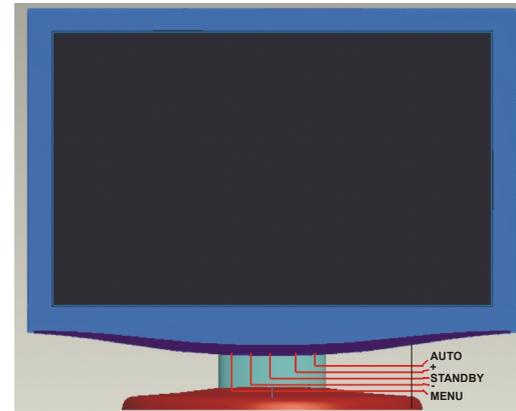


Fig. 4

3.3 OSD Control Keys

3.3.1 Auto Key

This key is used to complete auto- adjusting function, it make the monitor to be the best visual display status only in VGA mode. In addition, this key used to exit to upper menu.



3.3.2 +/- key

- To navigate to the right or left and to select the menu function control.

3.3.3 Menu key

Confirmation key can show the menu and complete the confirmation function.



3.4 OSD Menu

3.4.1 OSD Menu Framework (VGA)

OSD(VGA) Main Menu	Colour	(1) Contrast	0 <input type="checkbox"/> ----->100		
		(2) Brightness	0 <input type="checkbox"/> ----->100		
		(3) DCR	YES	NO	
		(4) Colour Temperature	9300		
			6500		
			5800		
			RGB		
			USER	Red	0 <input type="checkbox"/> ----->255
		Green		0 <input type="checkbox"/> ----->255	
		Blue		0 <input type="checkbox"/> ----->255	
		Exit			
	(5) Exit				
	Image	(6) H. Position	0 <input type="checkbox"/> ----->100		
		(7) V. Position	0 <input type="checkbox"/> ----->100		
		(8) Clock	0 <input type="checkbox"/> ----->100		
		(9) Phase	0 <input type="checkbox"/> ----->100		
		(10) Sharpness	0 – 1 – 2 – 3 – 4		
(11) Exit					

Function	(12)Auto Adjust	
	(13)Colour Adjust	
	(14) Exit	
OSD Menu	(15)Language	English, French, German, Spanish, Turkish, Italian, Portuguese, Danish, Norwegian, Finnish, Swedish, Russian, Greek, Romanian, Bulgarian
	NOTE: The language support of your monitor may differ due to different regions of the country.	
	(16)OSD H. Position	0 □----->100
	(17)OSD V. Position	0 □----->100
	(18)OSD Timer	3 □----->60
	(19)Translucence	0 □----->7
(20) Exit		
Misc	(21)Signal Source	VGA
		DVI
	(22)Reset	Yes
		No
	(23)OSD Skin	0 - 1 - 2 - 3 - 4
(24) Exit		
(25) Exit		

3.4.2 OSD Menu Design (VGA)

3.4.2.1 Color Menu



1. Contrast:

You can choose contrast level from 1 to 100.

2. Brightness

You can choose brightness level from 1 to 100.

3. DCR (Dynamic contrast ratio):

Software automatically adjust contrast and brightness settings, to give best image quality.

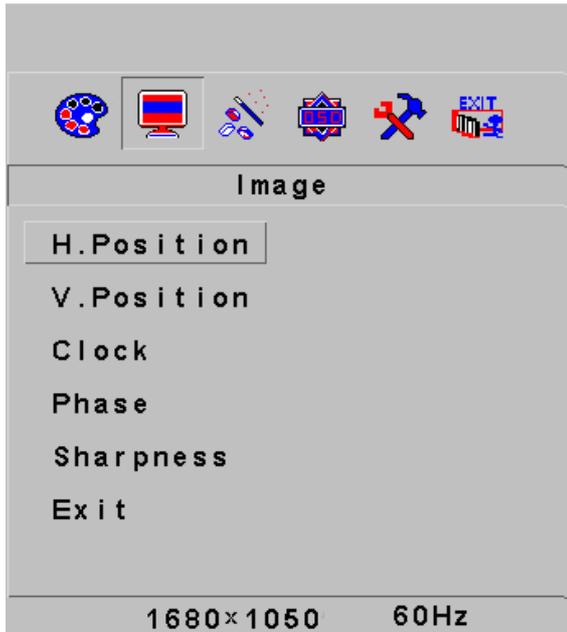
4. Color Temp:

You can choose a color template from the template list or adjust Red-Green-Blue levels whatever you want.

5. Exit:

Exit this menu.

3.4.2.2 Image Menu



6. H. Position:

You can adjust horizontal position by choosing from 1 to 100.

7. V. Position

You can adjust vertical position by choosing from 1 to 100.

8. Clock:

You can adjust screen width by choosing from 1 to 100.

9. Phase:

You can adjust phase level by choosing from 1 to 100.

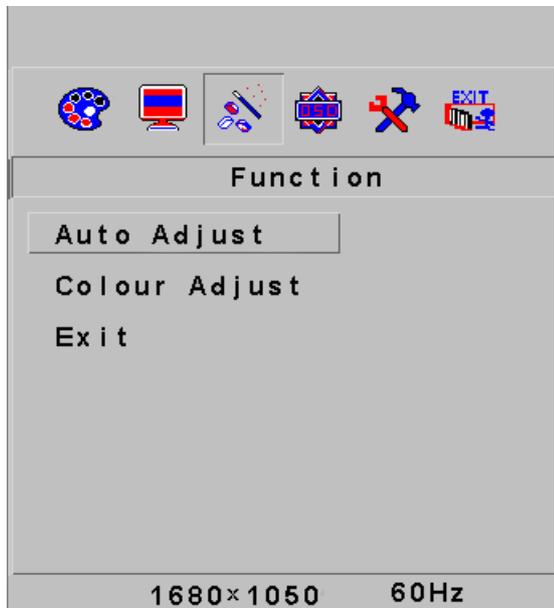
10. Sharpness:

You can adjust sharpness level by choosing from 0 to 4.

11. Exit:

Exit this menu.

3.4.2.3 Function Menu



12. Auto Adjust:

You can adjust screen automatically as the best vision with this choice (it is available only VGA mode). It is same as "Auto Key".

13. Color Adjust:

You can adjust color automatically.

14. Exit:

Exit this menu.

3.4.2.4 OSD Menu



15. Language:

You can choose menu language from list.

16. OSD H. Pos:

You can adjust horizontal position of OSD menu screen by choosing from 1 to 100.

17. OSD V. Pos:

You can adjust vertical position of OSD menu screen by choosing from 1 to 100.

18. OSD Timer:

You can determine how many seconds OSD menu screen will be shown choosing from 1 to 60.

19. Translucence:

You can adjust transparency level of OSD menu screen by choosing from 0 to 7.

20. Exit:

Exit this menu.

3.4.2.5 Miscellaneous Menu



21. Signal Source:

You can determine which type of source will be used to receive signal. Possible choices are VGA and DVI.

22. Reset:

You can reset display configuration to the default values.

23. OSD Skin:

You can select appearance of OSD menu screen from one of 5 skin templates.

24 Exit:

Exit this menu.



25. Exit:
Exit from OSD menu.

3.4.3 OSD Menu Framework (DVI)

OSD(DVI)	Colour	(1) Contrast	0 ←----->100		
		(2) Brightness	0 ←----->100		
		(3) DCR	YES	NO	
		(4) Colour Temperature	9300		
			6500		
			5800		
			RGB		
	USER		Red	0 ←----->255	
		Green	0 ←----->255		
		Blue	0 ←----->255		
		Exit			
	(5) Exit				
	OSD Menu	(6) Language	English, French, German, Spanish, Turkish, Italian, Portuguese, Danish, Norwegian, Finnish, Swedish, Russian, Greek, Romanian, Bulgarian		
		(7) OSD H. Position	0 ←----->100		
		(8) OSD V. Position	0 ←----->100		
		(9) OSD Timer	3 ←----->60		
		(10) Translucence	0 ←----->7		
(11) Exit					
Miscellaneous	(12) Signal Source	VGA			
		DVI			
	(13) Reset	Yes			
		No			
(14) OSD Skin	0 - 1 - 2 - 3 - 4				

3.4.4 OSD Menu Design (DVI)

3.4.4.1 Color Menu



1. Contrast:

You can choose contrast level from 1 to 100.

2. Brightness:

You can choose brightness level from 1 to 100

3. DCR (Dynamic contrast ratio):

Software automatically adjust contrast and brightness settings, to give best image quality.

4. Color Temp:

You can choose a color template from template list or adjust Red-Green-Blue levels whatever you want.

5. Exit:

Exit this menu.

3.4.4.2 OSD Menu



6. Language:

You can choose menu language from list.

7. OSD H. Pos:

You can adjust horizontal position of OSD menu screen by choosing from 1 to 100.

8. OSD V. Pos:

You can adjust vertical position of OSD menu screen by choosing from 1 to 100.

9. OSD Timer:

You can determine how many seconds OSD menu screen will be shown choosing from 1 to 60.

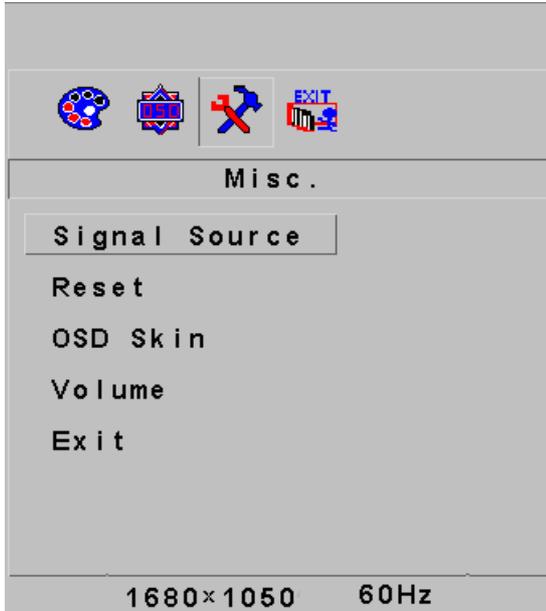
10. Translucence:

You can adjust transparency level of OSD menu screen by choosing from 0 to 7.

11. Exit:

Exit this menu.

3.4.4.3 Miscellaneous Menu



12. Signal Source:

You can determine which type of source will be used to receive signal. Possible choices are VGA and DVI.

13. Reset:

You can reset display configuration to the default values.

14. OSD Skin:

You can select appearance of OSD menu screen from one of 5 skin templates.

15. Volume:

You can adjust volume level of monitor speakers by choosing from 0 to 100.

16. Exit:

Exit this menu.

3.4.4.4 Exit



17. Exit:
Exit from OSD menu.

3.5 Safety mode

When the video signal exceeds the frequency range of the monitor, the monitor MCU will stop horizontal and vertical scanning in order to protect the monitor. Fig.10 will be displayed on the screen. After 15 seconds, the monitor will turn back previous configuration (if the operating system supports). If it does not work the monitor will enter turn-off mode. You must restart the computer and reset the frequency range.



3.6 Timing Guide

Mode	Resolution	V-Frequency	H-Frequency	Available Input Signal
SVGA	800x600	75 Hz	46.9 KHz	VGA, DVI
XGA	1024x768	75 Hz	60 KHz	VGA, DVI
SXGA	1280x1024	75 Hz	80 KHz	VGA, DVI
WXGA	1440x900	75 Hz	74.9 KHz	VGA, DVI
WSXGA+	1680x1050	75 Hz	74,9 KHz	VGA, DVI

3.7 Plug & Play

This monitor meets the standard of VESA DDC. When using video card with VESA DDC1/2B, it will auto-scan video frequency, output power, function and other data to PC when computer is on. It will go to proper connector mode and proper resolution frequency.

3.8 Power Management

Mode	Power Indicator	Power Consumption
On	Green or Blue	Max. 45 W
Stand by / Suspend	Red Flashing	<1W
Off	Off	<1W

4. Specification

OSD(DVI)	Colour	(1) Contrast	0 ←----->100	
		(2) Brightness	0 ←----->100	
		(3) DCR	YES	NO
		(4) Colour Temperature	9300	
			6500	
			5800	
			RGB	
	USER		Red	0 ←----->255
		Green	0 ←----->255	
		Blue	0 ←----->255	
	(5) Exit		Exit	
	OSD Menu	(6) Language	English, French, German, Spanish, Turkish, Italian, Portuguese, Danish, Norwegian, Finnish, Swedish, Russian, Greek, Romanian, Bulgarian	
		(7) OSD H. Position	0 ←----->100	
		(8) OSD V. Position	0 ←----->100	
(9) OSD Timer		3 ←----->60		
(10) Translucence		0 ←----->7		
(11) Exit				
Miscallenous	(12) Signal Source	VGA	DVI	
	(13) Reset	Yes		
		No		
	(14) OSD Skin	0 - 1 - 2 - 3 - 4		

5. Simple troubleshooting

Symptom	Solution
1. No picture / no LED	Check if the power cord, the monitor, and the power plug are well connected. Check whether the monitor is off or not.
2. No picture LED red flashing	Check if the PC video card and signal cable are well connected and check if signal cable well connected with monitor.
3. Picture faintness, too big or too small	Push auto key on the monitor or select auto adjust under the function tab in the OSD menu.
4. Picture too dark	Push directly +/- keys to adjust contrast and brightness.
5. Overheating	Keep 5 cm away from other goods for ventilation. Don't put anything on the monitor.
6. Bright or dark spot	It's normal phenomena. Eliminate the bright or dark spot in 20 minutes after turning on the monitor.
7. Picture distortion and flicker	Check the PC setting, select the proper resolution and adjust refresh frequency.
8. Short of color	Check if the signal cable pins are twisted or broken.
9. Noise signals on turning off	There may be noise signals during turning off the monitor. This is caused by electrical release and so is normal.
10. Problem on VGA / DVI switching	In some timing values, if there is no signal in VGA - DVI switching, try again by powering off/on the monitor.

6. Regulatory Information

6.1 TCO'03 Information



(Optional, only available for TCO'03 version)



Congratulations!

The display you have just purchased carries the TCO'03 Displays label. This means that your display is designed, manufactured and tested according to some of the strictest quality and environmental requirements in the world. This makes for a high performance product, designed with the user in focus that also minimizes the impact on our natural environment.

Some of the features of the TCO'03 Display requirements

Ergonomics

- Good visual ergonomics and image quality in order to improve the working environment for the user and to reduce sight and strain problems. Important parameters are luminance, contrast, resolution, reflectance, colour rendition and image stability.

Energy

- Energy-saving mode after a certain time-beneficial both for the user and the environment
- Electrical safety

Emissions

- Electromagnetic fields
- Noise emissions

Ecology

- The product must be prepared for recycling and the manufacturer must have a certified
- Environmental management system such as EMAS or ISO 14 000
- Restrictions on
 - chlorinated and brominated flame retardants and polymers
 - heavy metals such as cadmium, mercury and lead.

The requirements included in this label have been developed by TCO Development in co-operation with scientists, experts, users as well as manufacturers all over the world. Since the end of the 1980s TCO has been involved in influencing the development of IT equipment in a more userfriendly direction. Our labeling system started with displays in 1992 and is now requested by users and IT-manufacturers all over the world.

For more information, please visit [**www.tcodevelopment.com**](http://www.tcodevelopment.com)

6.2 Recycling Information for Customers



(Applicable in the European Union and other European countries with separate collection systems)

This marking shown on the product or its literature, indicates that it should not be disposed with other household wastes at the end of its working life. To prevent possible harm to the environment or human health from uncontrolled waste disposal, please separate this from other types of wastes and recycle it responsibly to promote the sustainable reuse of material resources.

Household users should contact either the retailer where they purchased this product, or their local government office, for details of where and how they can take this item for environmentally safe recycling.

Business users should contact their supplier and check the terms and conditions of the purchase contract. This product should not be mixed with other commercial wastes for disposal.

Reuse of waste is the preferred mode of recovery as reuse and repair of end-of-life products help reduce the increasingly growing waste amount. By extending the product life reuse enhances resource efficiency and saves energy, and thus reduces water and air pollution. This also applies for waste of electr(on)ical appliances. Though energy-efficiency of EEE is important, in most cases the overall ecological impact of an EEE can be reduced by using or reusing the appliance as long as possible.