User's Manual

15.0" TFT-LCD Monitor

DCM-150

Ver 1.00E

FCC Information

This equipment has been tested and found to comply with limits for a class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment can generates, uses, and 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 unacceptable interference to radio and 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.

Caution : Any changes or modifications in construction of this device whice are not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment

CONTENTS

1. Safety Instructions

To reduce the risk of fire, electrical shock, and other injuries, keep these safety precautions in mind when installing, using, and maintaining your machine.

▶ Notice Mark

Here is Notice mark with <Warning> & <Caution> and its meanings are as followed;

⚠ **<Warning>** : If you manipulate against the notice, it may cause serious injury or death to user.

⚠ **<Caution>** : If you manipulate against the notice, it may cause slight injury to user or appliance.

▶ <Warning for Power

- Do not use damaged or loose plug and receptacle.
    - ◎ This may cause an electric shock or fire.

- Do not touch the plug with wet hands.
    - ◎ This may cause an electric shock.

- Do not connect too many extension cords or plugs to a wall outlet.
    - ◎ This may cause a fire.

- Do not bend the plug and wire excessively or place heavy objects upon them, which could cause damage.
    - ◎ Failure to do so may cause an electric shock or fire.

- Plug the power cord perfectly into a wall outlet.
    - ◎ Unstable connection of the power cord may cause a fire.

▶ <Caution for Power

- Hold the head part of power cord when you unplug it from the wall outlet.
    - ◎ Its violation may cause unexpected heating or fire by wires damage.

- Disconnect the plug from the outlet while cleaning the TV.
    - ◎ Its violation may cause an electric shock or fire.

▶ <Warning> for Installation

- Do not put a glass of water, chemical substances or any small metal object on the TV set.
    - ◎ This may cause damage, electric shock or fire. If a foreign substance gets into the set, unplug it and contact a service center.

- Keep your monitor out of humidity and dust.
    - ◎ An electric shock or fire could occur in the monitor.

- Do not use or store inflammable substances near the monitor.
    - ◎ This may cause an explosion or fire.

- Do not place the monitor on an unstable cart, stand, tripod, bracket or table. Otherwise, it can fall.
    ◎ The set can be damaged seriously if this happens.
    ◎ Place the set on a stable surface.

- Do not place or use any inflammable spray, materials, etc near the set.
    ◎ This may cause an explosion or fire.

- Do not keep the set under feeble and bad ventilation condition such as on the bookshelf or in the wall closet.
    ◎ This may cause a fire by increasing internal temperature of the set.

- Do not place power cord near radiator or heat register.
    ◎ This may cause an electric shock or fire by melting power cord's coating.

- Do not place the set on an unstable cart, stand, tripod, bracket or table.
    ◎ This can cause serious injury to a child or adult and serious damage to the appliance.

- Do not incline the set over 15°.
    ◎ This may cause serious injure to a child or adult and serious damage to the appliance.

▶ <Caution> for Installation

- Place the set at a certain distance from the wall for ventilation.
    ◎ If not, it may cause a fire by increasing internal temperature of the set.

- Do not cover the vents on the monitor cabinet.
    ◎ Bad ventilation may cause a breakdown or fire.

- Place the set on a flat and stable surface.

- Lift the set using both hands when you move it.

▶ <Warning> for Use

- Disconnect the plug from the outlet during storms, lightening or your long absence.
    ◎ Failure to do so may cause an electric shock or fire.

- Never insert any metal object into the set's connectors.
    ◎ This may cause an electric shock, fire or injury.

- Do not remove its cover (or back). No user serviceable parts inside.
◎ This may cause an electric shock or fire. Refer servicing to qualified service personnel.

▶ <Caution> for Use

- Unplug the set from the wall outlet when not being used for a long period of time.
◎ If not, the dust heated in the unit may cause an electric shock or fire.

- Unplug the set from the wall outlet and disconnect all cables when moving it to other places.
◎ If not, it may cause damage to cable system and cause an electric shock or fire.

- Unplug the power cord from the wall outlet if you notice strange smoke, sound or smell from the set, and refer servicing to qualified service personnel.
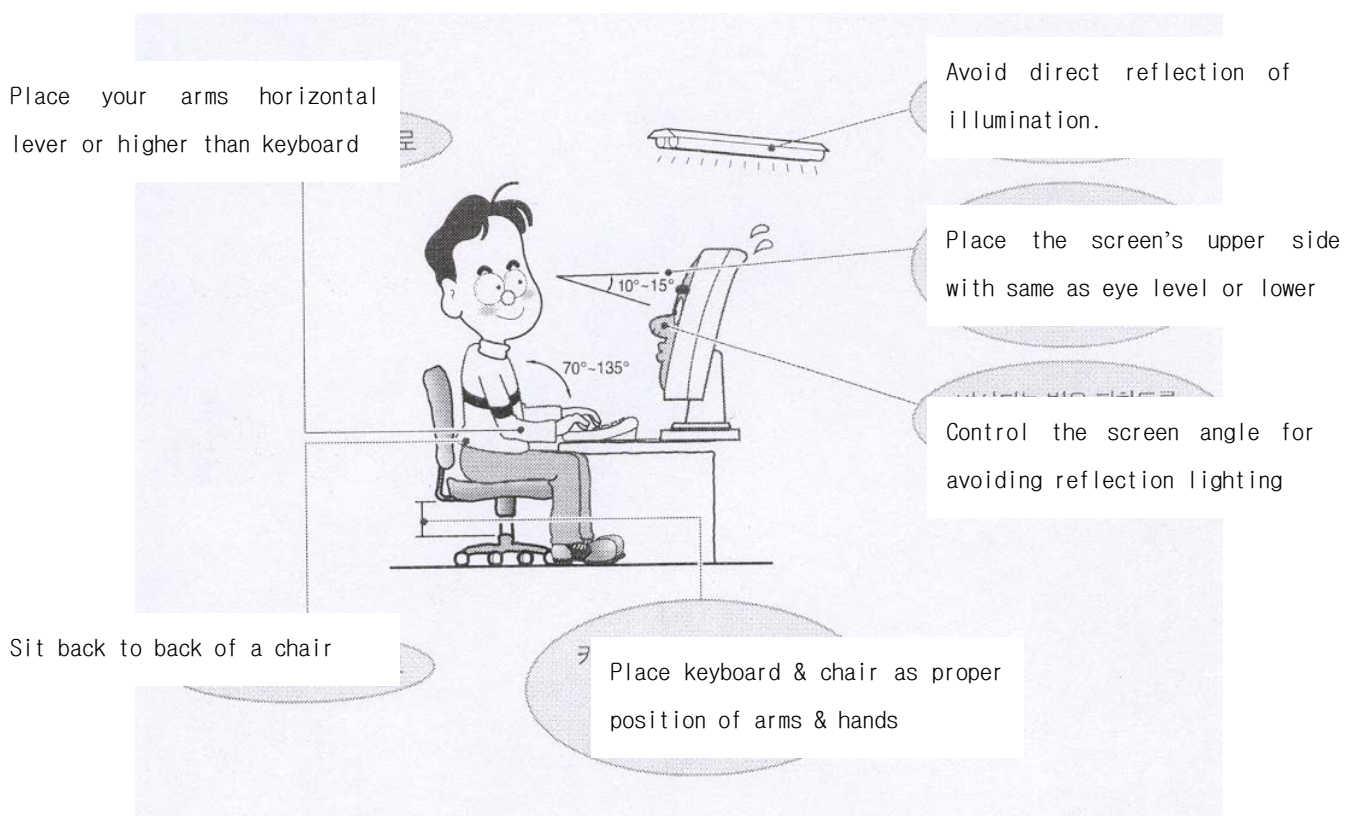◎ This may cause an electric shock or fire.

- Unplug the set from the wall outlet before cleaning. Use a damp cloth but not liquid or aerosol cleaners.
◎ If not, an electric shock or fire may be provoked.

▶ Correct Carriage of Use

For comfortable & efficient use of the monitor, please make your seat and the monitor position as your need.
Please refer to the below picture.

Place your arms horizontal lever or higher than keyboard

Avoid direct reflection of illumination.

Place the screen's upper side with same as eye level or lower

Control the screen angle for avoiding reflection lighting

Sit back to back of a chair

Place keyboard & chair as proper position of arms & hands

10°~15°

70°~135°

2. Product

1) Features

- Easy Installation

  It is designed light & slime, which is 1/5 size than CRT monitor and 1/2 size than normal LCD monitor.

- Cool Design & Easy-to-Handle

  It is easy to carry or use because it is designed slimmest & lightest (1.1kg) in the same class products.

- Adapted Digital Interface (DVI) Type

  User can use the monitor with better colors definition of screen image by adapted dual interface type (D-Sub & DVI : Digital Video Interface).

- Auto Adjustment of Image (Auto tuning)

  User can adjust the screen to optimum image by controlling menu buttons or hotkey (Select button).

- Simple Installation on the wall

  User can install the unit on the wall simply with two screws or nails.

  (Attention : The wall should be solid enough to avoid that the monitor is crooked or dropped.)

- Audio IN/OUT Connectors (Option)

  If user purchases audio IN/OUT connector option, user can enjoy audio with headphone or outer speaker.

- VESA Wall Mounting (Option)

  User can mount the monitor on the wall with 10x10 VESA standard adapter.

2) Package Contents

☞ Please make sure the following items are included with your LCD TV. If any items are missing, contact with your dealer.
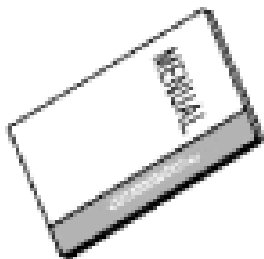

LCD Monitor

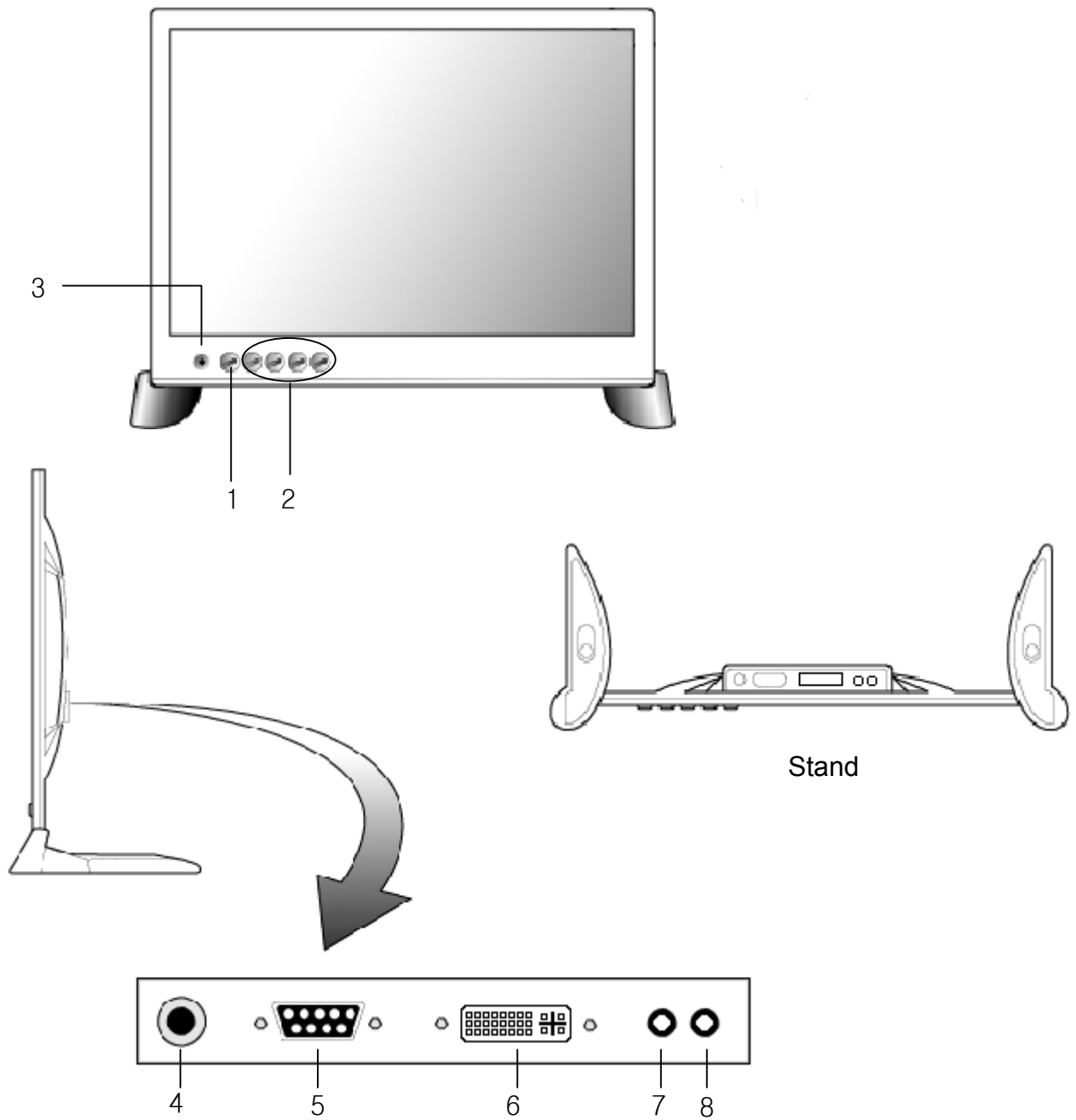Adapter

Power Cord

VGA Cable (D-Sub)

User's Manual

DVI Cable (Option)

Audio Cable (Option)

3) Parts

Front

Stand

1. Power Button
2. Screen Control Buttons (Menu, Select, Left, Right)
3. Power Indicator   4. Power Connector (DC 12V)
5. VGA Cable (D-Sub) Connector   6. DVI Cable connector
7. Audio In Connector (Option)   8. Audio Out Connector (Option)
                                         (Earphone Jack)

4) MENU Button

MENU Buttons functions are as follows;
To access OSD MENU, press MENU button.
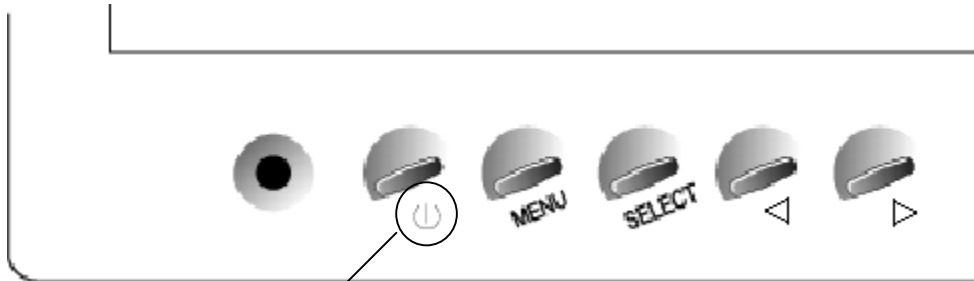
- ● POWER( ) : This button turns on and off.
- ● MENU
  - - You use the button to start or quit the menu mode.
  - - You can enter sub menu or return to main-menu section by this button.
- ● SELECT : Select main menu or sub menu.
- ● Left (◁) / Right (▷)
  - - It moves of main menu or sub menu to left/right.
  - - It controls value to increase/decrease.

◑ Hotkey
- ● Select : Auto Adjustment
- ● Left (◁) / Right (▷) : Brightness control

3. Connection

1) Analog RGB (D-Sub) & DVI Cable

PC Signal Connectors
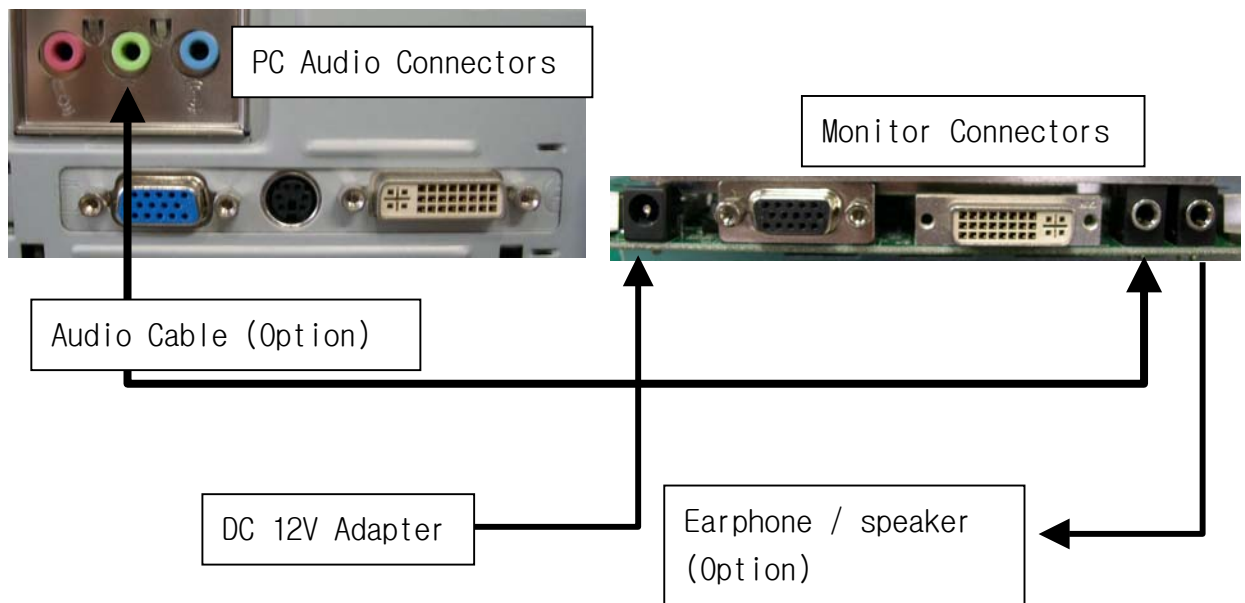
Monitor Signal Connectors

VGA Cable
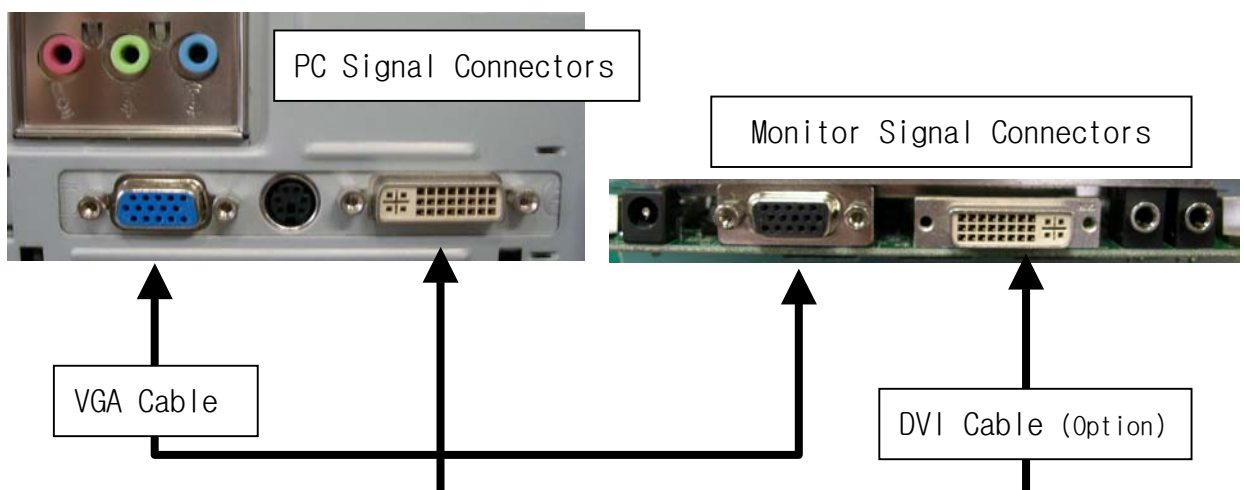
DVI Cable (Option)

* SAFETY INSTRUCTIONS FOR CONNECTING CABLES
1. Please turn off the monitor before connecting cables.
2. Connect one end of the VGA cable to PC and the other to Monitor and fasten the screws.
3. DVI cable output is only available with PC(Graphic card) supports DVI output.
4. DVI cable is separate purchasing item.

2) Audio Cable (Optional)

Please use the volume control button of PC or Speaker as monitor does not support volume control function.

PC Audio Connectors

Monitor Connectors

Audio Cable (Option)

DC 12V Adapter

Earphone / speaker (Option)

* SAFETY INSTRUCTIONS FOR CONNECTING AUDIO CABLE
1. Please turn off the monitor before connecting cables.
2. Connect one end of the AUDIO cable to the AUDIO OUT connector of PC and the other end to AUDIO IN connector of Monitor.
3. Connect POWER ADAPTER cable to the rear port of monitor.
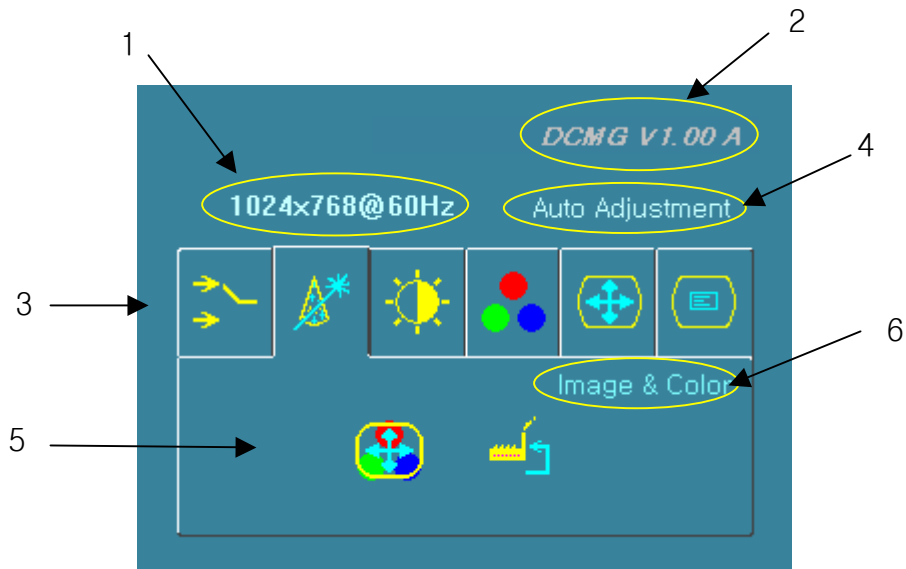4. Audio cable is separate purchasing item.

3) HOW TO INSTALL MONITOR DRIVER

You do not need to install additional monitor driver as this model supports Plug & Play function.

4. MENU

1) Illustration

If you press MENU button, you can see below image of OSD (On Screen Display).

1. Resolution
2. Monitor Version
3. Main MENU Icon
4. Selected Main MENU Icon
5. Sub MENU Icon
6. Selected Sub MENU Icon

.
- Push the button of Left ($\triangleleft$) / Right ($\triangleright$) to select main-menu.
- Push the SELECT button again to move to sub-menu from main-menu.
- Push the button of Left ($\triangleleft$) / Right ($\triangleright$) to select menu you want when you are in sub-menu.
- You can adjust values of menu(specific working environment) with the button of Left ($\triangleleft$) / Right ($\triangleright$).
- If you want to move to main-menu from sub-menu or to finish adjusting of menu, please use MENU button.

## 2) Input Select (PC Input Signal Selection)
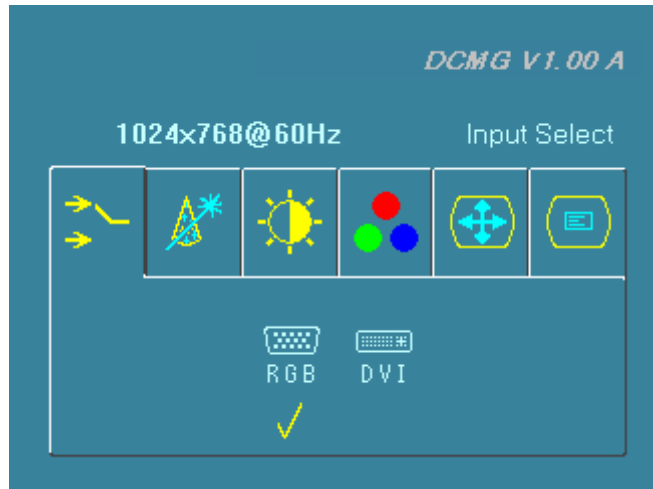
The monitor has dual input connector, which has one 15-pin D-sub connector and one 24-pin DVI connector. User can select input connector.

The 24-pin DVI connector is for digital signal if your PC has a graphic card with DVI connector. Please make sure that you can use only DVI-D type of DVI not DVI-I. (DVI cable is optional item)

If both video signal of the analog(D-sub) and digital(DVI) are connected at the same time, the signal input can be selected as analog RGB.

If single signal input is connected, it will be automatically adjusted. User does not need to adjust input signal.

3) Auto Adjustment
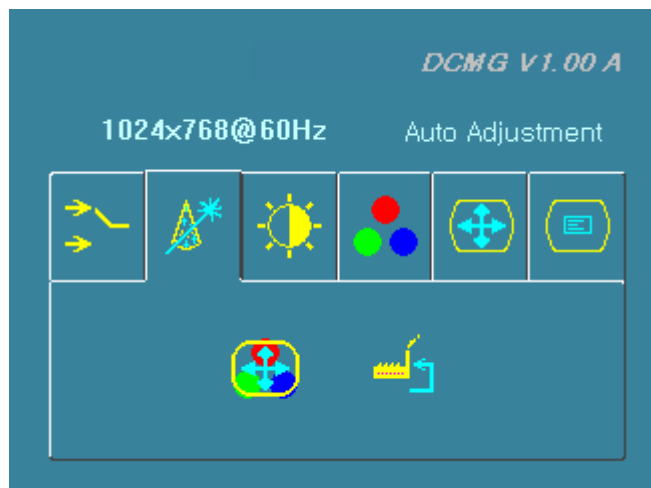
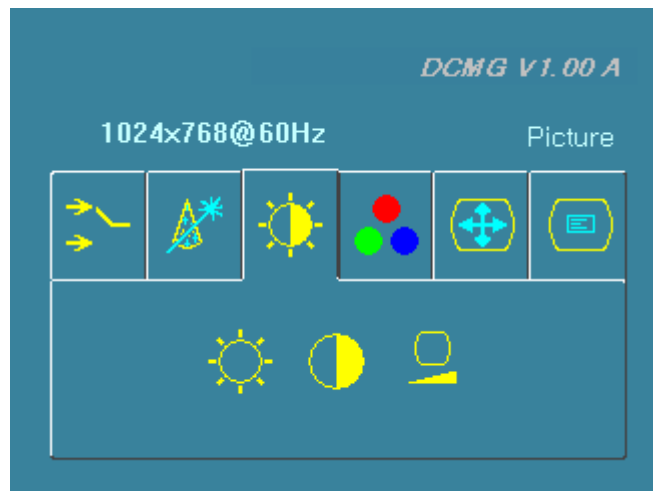This adjusts the image to optimum status automatically.

 Image & Color : Adjust the best condition of image and size of the screen. This is especially useful to adjust stable and clear display when your PC or resolution is changed.

 Factory Reset : This allows you to reset all the OSD control settings back to the factory settings.

4) Picture

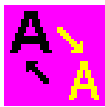 Brightness : This controls the brightness of the LCD.

 Contrast : This controls the contrast of the LCD.

 Black Level : This controls the back level of the LCD.

5) Color
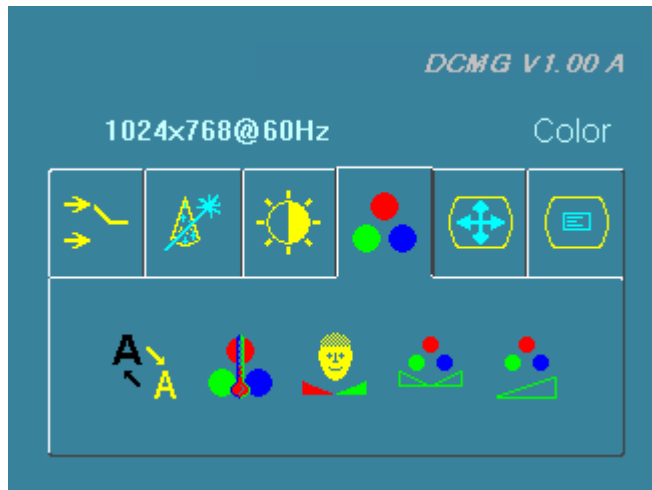
Sharpness : This adjusts the clarity of screen image.

Color Temperature : This adjusts color temperature..
WARM 4200K -> 5000K -> 6500K -> 7500K -> 9300K COOL
USER : User can adjust each of R, G, B.

Flesh Tone : This adjusts tone of skin color.
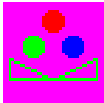
Hue : This adjusts screen color.
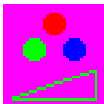
Saturation : This adjusts the 채도 of screen image.

6) Image
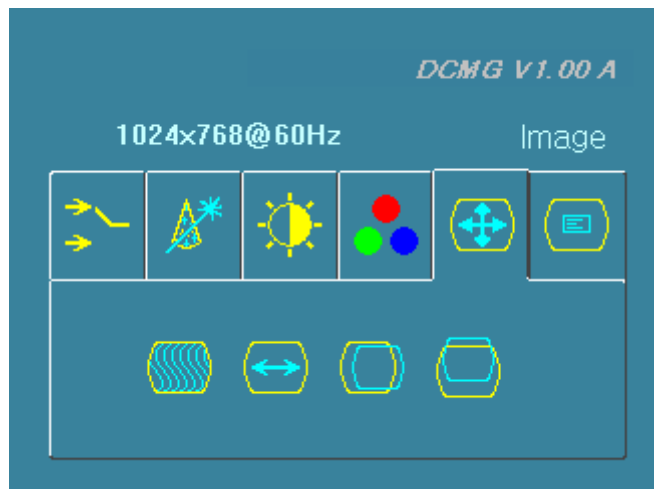
Phase : It adjusts the focus, clarity and stability of image.

Width : It controls horizontal image size.
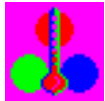
H. Position : It controls horizontal image position.

V. Position : It controls vertical image position.

7) OSD (On Screen Display)
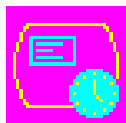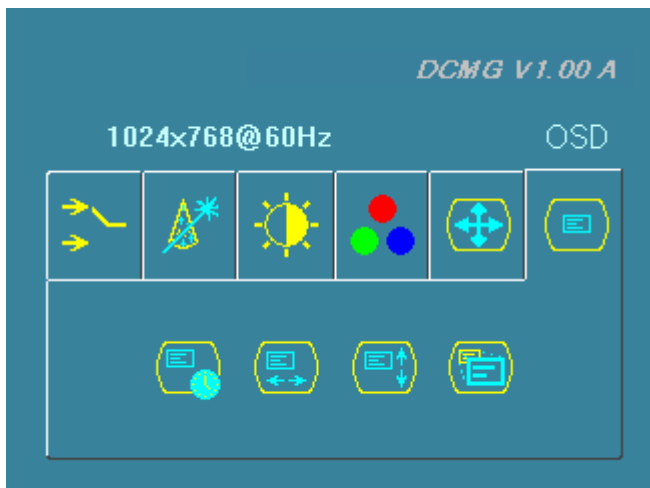
OSD Timeout : User can select the display time of OSD.
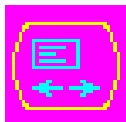
OSD H. Pos : It controls OSD horizontal position.
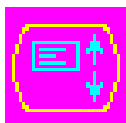
OSD V. Pos : It controls OSD vertical position.
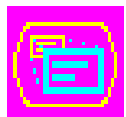
OSD Size : It controls OSD size.

8) For Optimum Screen Image

- You must check if all menus are adjusted properly before use,
  Optical Resolution : 1024 x 768 @ 60 Hz
  Max. Resolution : 1024 x 768 @ 75 Hz

- You can find the error message of "Out of Range" when the resolution is beyond the maximum. Then you will see a distortion of screen or nothing will be displayed.

- TFT-LCD, which is used in the monitor, manufactured by using high-end technology of production is technical limitation of manufacturing and there can be 1/1,000,000 possibility of bad pixel. This is not from bad quality and you can use the monitor without uneasiness. This monitor has 2,949,120 pixels.

- To stabilize and clarify your display, please use "Auto Adjustment" menu, which can simply adjust the PC mode to the best condition. Also you can enjoy better display with DVI connector than the Analog RGB.

- When you display same picture for a long time, it can cause a stain of LCD due to the property of the LCD. Please use the function of Power Save Mode etc.

5. Troubleshooting

- If the set seems to have a problem, follow the list of possible problems and solutions presented below. If none of these troubleshooting tips applies, call your nearest service center.
-

No image on the screen
- The VGA cable (D-Sub) should be connected completely to the set and computer.
- The display card should be inserted fully in its slot.
- Power switch of both PC and the monitor should be turned on.
- Make sure that a supported mode has been selected on the display card or system in use.
- Make sure that the refresh rate (Vertical frequency) is 60Hz.
- Check if VGA cable (D-Sub) pin is not bent or took off.

Unable to turn on the equipment

- Check if the AC cord (Power cord) is plugged in correctly and retry to turn on the monitor.
- Plug the monitor AC cord (Power cord) off the power socket. Connect the AC cord (Power cord) again in 10 ~ 20 minutes.

LED on the monitor is red flickering without image

- Check if the VGA cable (D-Sub) is connected to the monitor and computer correctly.
- Check if the computer is in power-saving mode by touching the keyboard or mouse.

Image is unstable and out of focus

- Check if the VGA cable (D-Sub) or DVI cable is connected to the computer correctly.
- You need to readjust the image when computer display mode changes. Please readjust the image by using Auto setting or adjustment menu.
- Check if the monitor and graphic card are compatible and if they are set at the proper refresh rate. If the characters appear distorted, please reset the refresh rate to 60Hz.

Image size is strange

- Please reset the image size using vertical and horizontal positions function of screen adjustment menu
- Please try Auto Adjust function.

6. SIZE

1) Size

334 mm

279 mm

305 mm

364 mm

24 mm

15 mm

33 mm

133.4 mm

364 mm
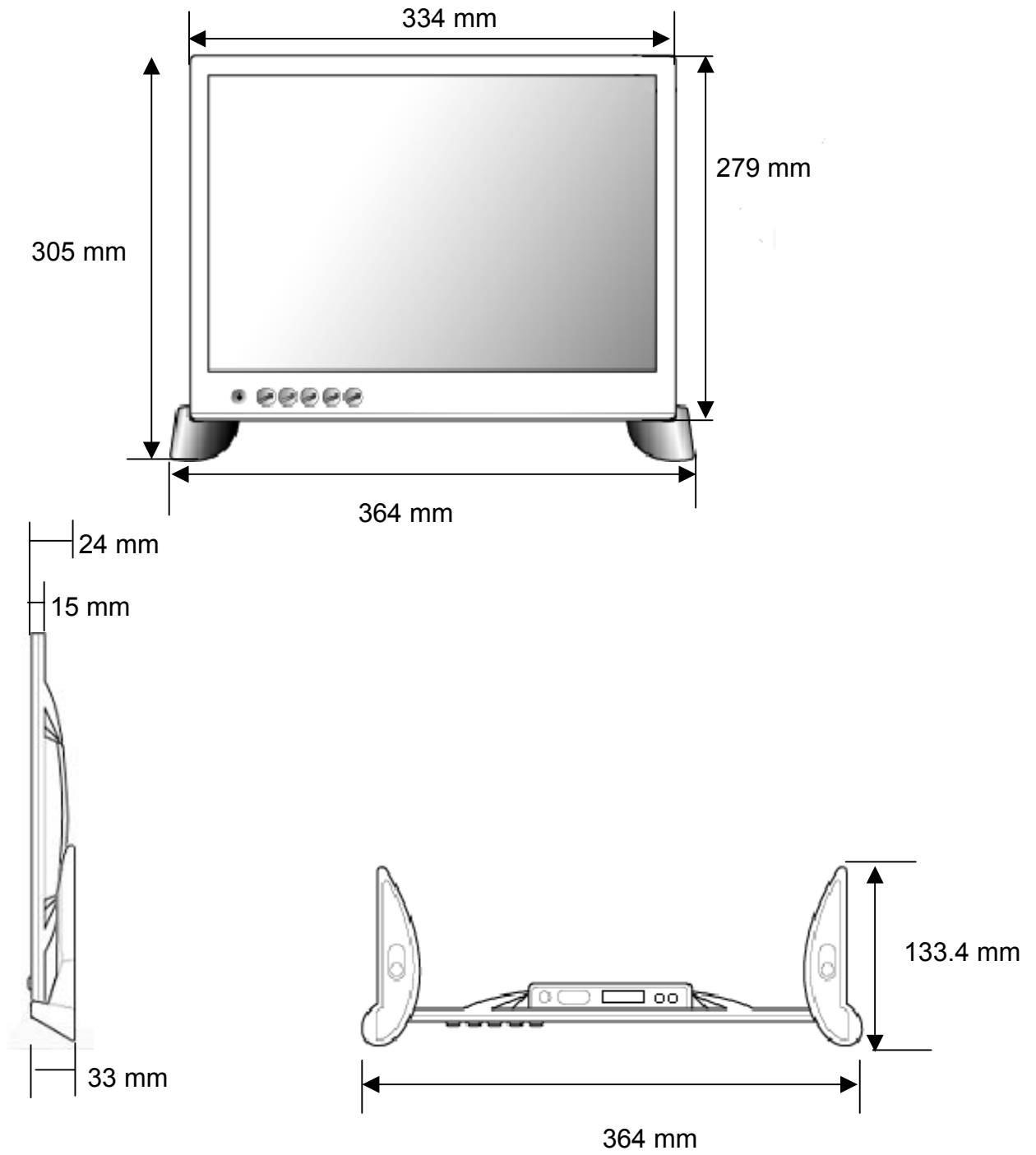
2) Specification

MODEL		DCM-150
LCD	TYPE	a-Si TFT-LCD
	LCD Size	15.0" (diagonal length)
	Resolution	1024(H) x 768(V)
	Pixel Pitch	0.279mm x 0.279mm
	Colors	6bit, 262144 Colors (16M colors by dithering)
	Contrast Ratio	300 : 1(Typ.)
	Brightness	200 cd /㎡
	Active Display Area	304.128 mm (H) x 228.096 mm (V)
	Viewing Angle	L/R : 60° / 60° U/D : 45° / 45°
	Interface	LVDS
Resolution	Other	VGA, SVGA, XGA
	Optimum	1024 x 768 @ 60Hz
	Maximum	1024 x 768 @ 75Hz
Power Consumption	Operation	< 20W
	DPMS/OFF	< 10W
PLUG & PLAY		DDC1/DDC2B
Frequency	Vertical	30~61 kHz
	Horizontal	56~75 Hz
Power Supply Adapter	Input	AC 100V~240V, 50~60Hz
	Output	DC 12V
	Power Saving	VESA DPMS
Package Contents (Standard)		15Pin VGA Cable (D-Sub), AC Adapter, Power cord, User's Manual
Weight		1.1Kg (Net)

- The present home appliance is certified and approved by EMC/EMI and can be used in all places including residency area.

3) The Standard Signal Mode

If the signal from the system corresponds to the standard signal mode, the screen is adjusted automatically. However, if the signal discords with it, the screen may go blank with the power LED on or display <Out of Range> error message.

Refer to the display card manual and adjust the screen as follows;

Resolution (H x V)	Horizontal Frequency (KHz)	Vertical Frequency (Hz)	Clock Frequency (MHz)	Sync Polarity (H/V)
640*480	31.469	59.94	25.175	- / -
640*480	35	66.667	30.24	- / -
640*480	37.861	72.809	31.5	- / -
640*480	37.5	75	31.5	- / -
720*400	31.469	70.087	28.322	- / +
800*600	37.879	60.317	40	+ / +
800*600	48.077	72.188	50	+ / +
800*600	46.875	75	49.5	+ / +
1024*768	48.363	60.004	65	- / -
1024*768	56.476	70.069	75	- / -
1024*768	60.023	75.029	78.75	+ / +

* The table of standard signal modes presented above shows only primary mode suitable for each resolution level concerned. In most of the cases, the resolution degrees up to XGA (1024 x 768), whether they are included in the table or not, are adjusted automatically to their best suitable signal mode without additional adjustment by PC graphic card. If the resolution is not adjusted automatically, please set graphic card's output mode to signal mode.

* The present unit has Plug and Play function. The computer perceives the monitors as "Basic Monitor", "Plug and Play Monitor" or "LCD Monitor".

7. Others & Services

1) Important Safety instructions

Please read the following instructions carefully. This manual should be retained for future use.

- Do not remove the cover or attempt to service this unit by yourselves.
  Especially, do not remove the rear cover of the unit as you can be exposed to electrical shock or any dangerous situation.
  You may void the warranty. Servicing of any nature should be performed only by an authorized technician.

- Do not place anything on top of the monitor. It can cause a deformation.

- Exposing the monitor to rain, water, moisture or sunlight can severely damage it.

- You need a stable level and clean surface near a wall outlet to install a monitor.

- If you disconnect a VGA cable(DVI cable) from a monitor when power is on, it can cause a severe damage to LCD. Please make sure that you should turn off the power of monitor if you need to disconnect a cable.

- When you move or handle the monitor, you should pack the monitor before moving and be careful from an impact or drop.

- Do not apply pressure to the LCD screen. It can cause a permanent damage to the LCD.

- To clean the LCD monitor screen, please make sure the monitor is turned off. Do not spray liquid cleaners directly on to unit. Stand away form the LCD monitor and spray cleaning solution on to a rag.

2) Concerning Services

For the product's functional trouble occurred in use, client can benefit from the warranty during one year from the date of purchase. However, all services for the troubles caused by client's erroneous use or by natural calamity will be charged even during the term of warranty validity.

Situations of charged services (client's responsibility to pay)

All services will be charged even during the term of warranty validity if requested in the situations as below

1. The product went out of order because you had put foreign objects (water, liquor, coffee, etc.)
2. The product is damaged or out of order because you dropped it or the unit was exposed to a shock.
3. The product's external cover is harmed or degraded by organic substances such as thinner or benzene.
4. Some accessories are lost or damaged due to the client's voluntary disassembly of the product.
5. The product fell out of order due to the accessories used other than those supplied by manufacturer. (adapter, etc.)
6. The product fell into trouble due to the wrong voltage applied.
7. The product fell out of order after being serviced by someone other than our client service staff.
8. Natural calamity (thunderbolt, fire, storm, flood, gas, sea wind, earthquake, etc.) caused trouble to the product.
9. User did not respect the present instructions manual and caused trouble to the product.
10. The product has trouble due to client's other faults.
11. If the purchase date cannot be recognized, we count the quality guarantee term from the first day of the third month after the date of manufacture.

CYNOS

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