User's Manual
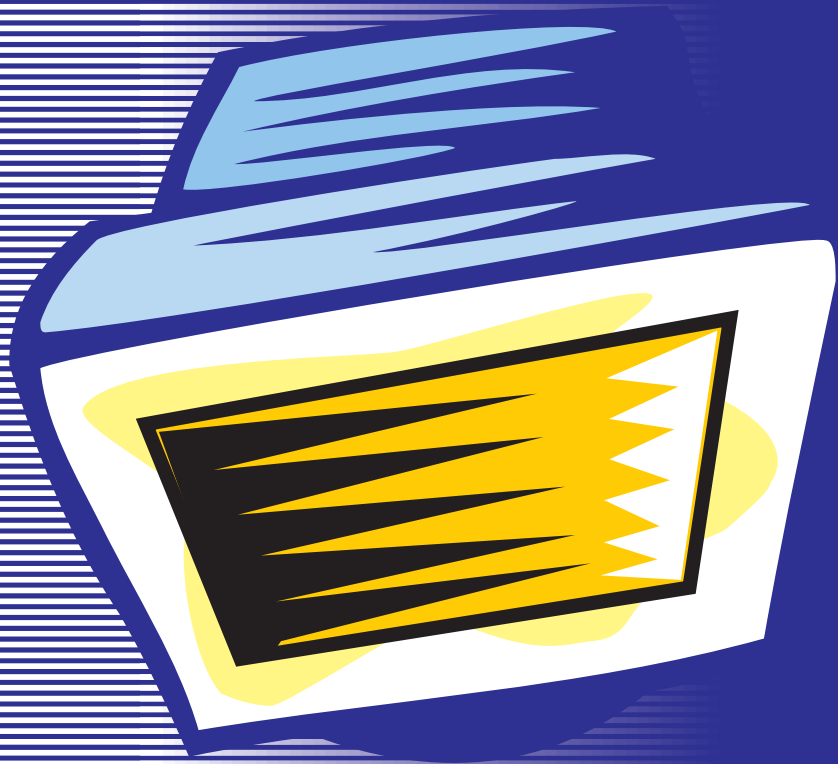
15" TFT LCD COLOR MONITOR

※ Please read the instruction in this booklet carefully before using this monitor

CONTENTS

This Monitor was
Manufactured by ISO 9001
Certified Factory

SAFETY INSTRUCTION

1. Read all of these instructions.

2. Save these instructions for later use.

3. Follow all warnings and instructions marked on the product.

4. Unplug this product from the wall outlet before cleaning.
   Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.

5. Do not use this product near water.

6. Do not place this product on an unstable cart, stand or table.
   The product may fall, causing serious damage to the product.

7. Slots and openings in the cabinet and the back are provided for
   ventilation: to ensure reliable operation of the product, these openings
   must not be blocked by placing the product on a bed, sofa, rug or
   other similar surface.
   This product should never be placed near or over a heat register.
   This product should not be placed in a built-in installation unless proper ventilation
   is provided.

8. This product should be operated from the type of power source indicated on the
   marking label. If you are not sure of the type of power available, consult your dealer
   or local power company.

9. This product is equipped with a 3 wire grounding type plug having a third(grounding)
   pin. This is a safety feature. If you are unable to insert the plug into the outlet,
   contact your electrician to replace your obsolete outlet. Do not defeat the purpose of
   the grounding-type plug.

10. Do not allow anything to rest on the power cord.
    Do not locate this product where persons will walk on the cord.

11. If an extension cord is used with this product, make sure that the total of the
    ampere ratings on the products plugged into the extension cord do not exceed the
    extension cord ampere rating. Also, make sure that the total of all products
    plugged into the wall outlet does not exceed 10 amperes.

12. Never push objects of any kind into this product through cabinet slots as they may
    touch dangerous voltage points or short out parts that could result in a risk of fire
    or electric shock. Never spill any kind of liquid on the product.

13. Do not attempt to service this product yourself, as opening or removing covers
    may expose you to dangerous voltage points or other risks.
    Refer all servicing to service personnel.

SAFETY INSTRUCTION

14. Unplug this product from the wall outlet and refer servicing to qualified service personnel under the following conditions.

    A. When the power cord or plug is damaged or frayed.

    B. If liquid has been spilled into the product.

    C. If the product has been exposed to rain or water.

    D. If the Product does not operate normally when the operating instructions are followed. Adjust only those controls that are covered by the operating instructions since improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore normal operation.

    E. If the product has been dropped or the cabinet has been damaged.

    F. If the product exhibits a distinct change in performance, indicating a need for service.

▶ ▶ CAUTION

   The power supply cord is used as the main disconnect device, ensure that the socket-outlet is located/installed near the equipment and is easily accessible.

▶ ▶ ATTENTION

   Le cordon d`alimentation est utillsé comme interrupteur général. La prise de courant doit être située ou installée à proximité du matériel et être facile d`accès

CAUTION TO SERVICE PERSONNEL

POWER SUPPLY CORD IS USED AS MAIN POWER DISCONNECT DEVICE IN THIS PRODUCT. UNPLUG THIS PRODUCT FROM THE WALL OUTLET BEFORE REMOVING THE BACK COVER AND SERVICING

EMISSION CHARACTERISTICS TESTED BY SEMKO

THIS PRODUCT HAS BEEN TESTED AND HAS SHOWN COMPLIANCE WITH THE NATIONAL SPECIFICATIONS SUCH AS SWEDISH MPR 1990.10.(MPR Ⅱ)

CAUTIONS

▶ **NEVER REMOVE THE BACK COVER**
Removal of the back cover should be carried out only by qualified personnel.

▶ **DO NOT USE IN HOSTILE ENVIRONMENTS**
To prevent shock or fire hazard, do not expose the unit to rain or moisture.
This unit is designed to be used in the office or home. Do not subject the unit to vibrations, dust of corrosive gases.

▶ **KEEP IN A WELL VENTILATED PLACE**
Ventilation holes are provided on the cabinet to prevent the temperature from rising.
Do not cover the unit or place anything on the top of unit.

▶ **AVOID HEAT**
Avoid placing the unit in direct sunshine or near a heating appliance.

▶ **TO ELIMINATE EYE FATIGUE**
Do not use the unit against a bright back ground and where sunlight or other light sources will shine directly on the monitor.

▶ **BE CAREFUL OF HEAVY OBJECT**
Neither the monitor itself nor any other heavy object should rest on the power cord.
Damage to a power cord can cause fire or electrical shock.

FCC RF
INTERFERENCE STATEMENT

▶▶ 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 against harmful interference in a residential installation.

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.

- Only shielded interface cable should be used.

Finally, any changes or modifications to the equipment by the user not expressly approved by the grantee or manufacturer could void the users authority to operate such equipment.

▶ **DOC COMPLIANCE NOTICE**
This digital apparatus does not exceed the Class B limits for radio noise emissions from digital apparatus set out in the radio interference regulation of Canadian Department of Communications.
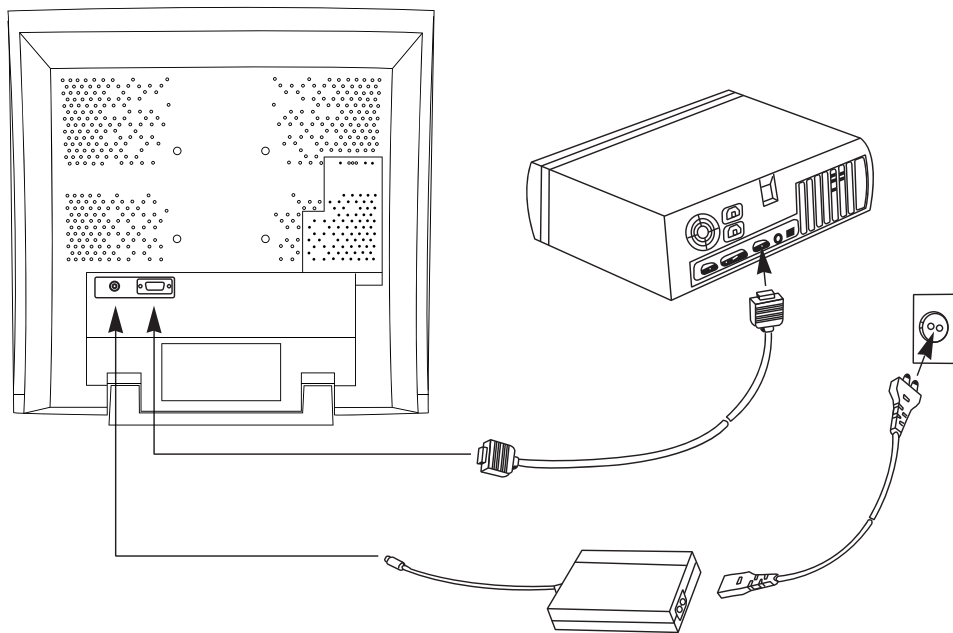
▶ **AVIS DE CONFORMATION AU MDC(DOC)**
Le presént appareil numérique n`émet pas de bruits radio-électriques dépassant les limites appliqués aux appareils numériques de Class B d´arès les règlement sur le brouillage radio-électrique conçuent par le ministère des communications du Canada.

CONNECTING WITH EXTERNAL EQUIPMENT

▶▶CAUTION

Be sure to turn off the power of your computer before connecting the monitor.

1. CONNECT THE VIDEO SIGNAL CABLE

A. Connect one end of the signal cable to the back panel of the monitor and connect the other end to the graphic card on back of the computer.

B. Secure the connection with the screws on the plug.

2. CONNECT THE POWER CORD

A. Connect the plug of the AC/DC adaptor to the monitor.

B. Connect the female end of the power cord to the power input receptacle on the AC/DC adaptor .
Then, plug the male end of the power cord to an AC outlet or computer.

3. TURN THIS MONITOR ON AND START YOUR SYSTEM

RESOLUTION

This monitor is a digitally-controlled multi-frequency monitor.
It operates at horizontal frequencies of 31 to 60KHz and vertical
frequencies of 56 to 75Hz.

Because of its micro processor-based designs it offers auto-synchronization
and auto-sizing capabilities. This monitor offers 6 programmed settings
as listed in the table below.
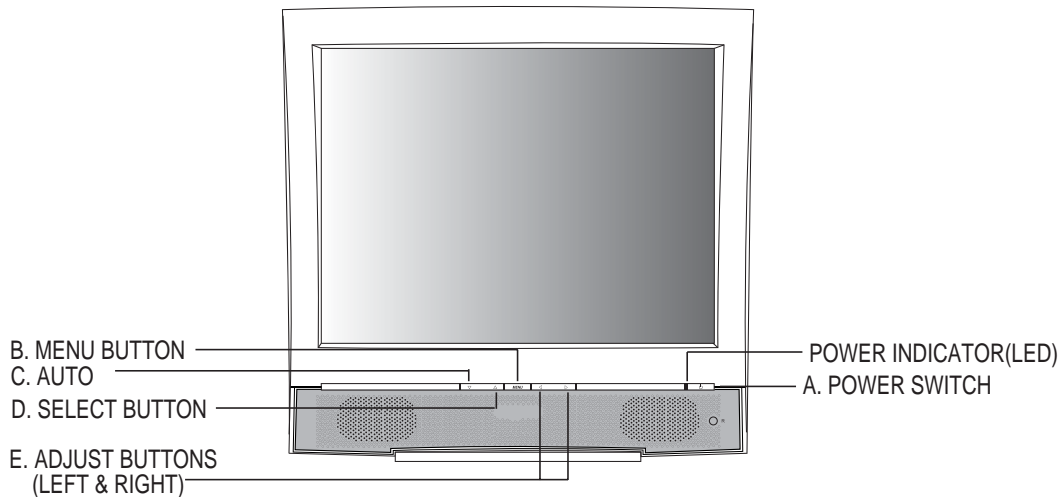And designs its best quality at 1024X768, 48KHz@60Hz.

Sometimes, displayed image quality couldn't be good enough in other modes
because of TFT-LCD Monitor's basic characteristics.
To enjoy the best quality, change the mode; click the right mouse botton
anywhere on the desktop → "Properties" → "Settings", and applies the resolution to
1024X768. Click the "Advanced" button, change "Refresh rate" to 60Hz.

These 6 preset modes cover most of the common video modes supported by
popular graphic adaptors. However, each adaptors implementation of these
video modes may vary slightly in timings. You may find it necessary to make
minor adjustments to the display settings (i.e., horizontal position) using
the On Screen Display. For further information and instructions on using
the On Screen Display, please refer to "Controls and Functions."

PRESET MODES	RESOLUTION		FREQUENCY	
	H(Pixels)	V(Lines)	H(KHz)	V(Hz)
VGA	640	350	31.5	70
	720	400	31.5	70
	640	480	31.5	60
MAC	640	480	35.0	67
VESA	800	600	37.8	60
	1024	768	48.3	60

CONTROLS AND FUNCTIONS

B. MENU BUTTON
C. AUTO
D. SELECT BUTTON

E. ADJUST BUTTONS
   (LEFT & RIGHT)

POWER INDICATOR(LED)
A. POWER SWITCH

A. POWER ON/OFF(⏻)

Turns the power ON or OFF. There will be a few seconds delay before
the display appears.
The power LED(next to the power switch) lights when the power
is turned ON.
The power is turned off by pressing the power switch again and
the power LED goes out.

B. MENU

Activates and exits the On Screen Display.
Auto Adjust
Screen   : Brightness, Contrast, H. Position, V. Position, Phase Adjust, Clock Adjust
Color   : Color Temp, Red, Green, Blue
Utility   : Recall, Full Auto
Language: English, Francais, Deutsch, Espanol, 한국어
OSD   : OSD Timeout, OSD H. Position, OSD V. Position, OSD Transparency

C. AUTO(▼)

Auto geometry adjustment.

CONTROLS AND FUNCTIONS

D. SELECT(▲)

The select button allows user to activate the desired adjustment
with changing the adjustment bar to green.

E. ADJUST (◀, ▶)

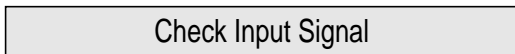The Adjust button allows user to choose the icons (controls) in the menu.
Pressing the adjust button ◀ or ▶ will step through all available
adjustment icons (controls).
In addition this adjust button can be used to adjust the icons (controls)
that is selected and changing the adjustment bar to green via the select button when
the adjust button is pressed, the window containing an adjustment bar will increase
or decrease.
After completing all the desired adjustments, the On Screen Display
will disappear with pressing the menu button.

1. SELF-TEST DISPLAY

When there is no connection, the On Screen Display will show "Check Input Signal"
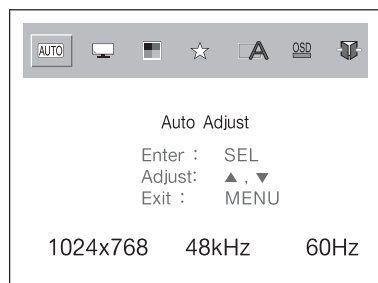for 5 seconds.

Check Input Signal

2. OSD MENU DESCRIPTION

AUTO **Auto Adjust**

Auto geometry adjustment.
This function can be also activated by pushing the "AUTO" button
on the monitor without the OSD window.

```
AUTO  ▭  ▥  ☆  A  OSD  ⬙

        Auto  Adjust

   Enter :   SEL
   Adjust:   ▲ , ▼
   Exit  :   MENU

 1024x768     48kHz      60Hz
```
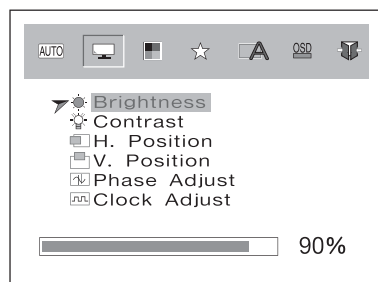
To get the best quality of picture, while any stop motion image to the screen,
click the "start" button of Windows → "system shutdown" and then push
the "AUTO" button on the monitor to Auto-adjustment. Cancel the "shutdown".
If there is still noise, use Phase Adjust / Clock Adjust function.

CONTROLS AND FUNCTIONS

Screen

Adjusts the Brightness, Contrast, H. Position, V. Position, Phase and Frequency of the Screen.

```
┌──────────────────────────────────────────┐
│ AUTO  🖵  ▦  ☆  🄰  OSD  🛡             │
│                                            │
│   ▶ ☀ Brightness                          │
│     💡 Contrast                            │
│     ▦ H. Position                         │
│     ▦ V. Position                         │
│     ⎍ Phase Adjust                        │
│     ⎍ Clock Adjust                        │
│                                            │
│   ▣▣▣▣▣▣▣▣▣▣▣▣▣▣▣▣▣         90%          │
└──────────────────────────────────────────┘
```

Brightness

Increases(▶) or decreases(◀) the intensity(illumination) of the image.

Contrast

Increases(▶) or decreases(◀) the strength(lightness or dimness) of the image.

H. Position

Moves images to left(◀) or right(▶).

V. Position

Moves images to up(▶) or down(◀).

Phase Adjust

As removing horizontal noise, adjusts the focus of the screen's image.
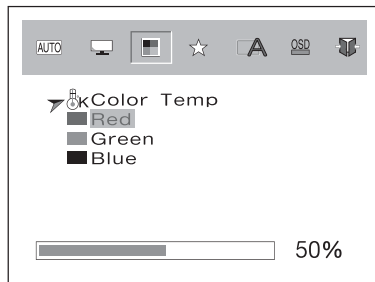
Clock Adjust

The clock adjust function can be used, if the screen image is shaking or horizontal size isn't fitted with bezel size. This noise can be caused by some abnormal modes.

CONTROLS AND FUNCTIONS

■ Color

Adjusts the Color Temperature, Red, Green, Blue of the Screen.

🌡K Color Temp

Adjusts color temperature to 9300K, 6500K, custom color mode.
(9300K is Factory default data)

■ Red

Increases or Decrease the strength of the Red.

■ Green

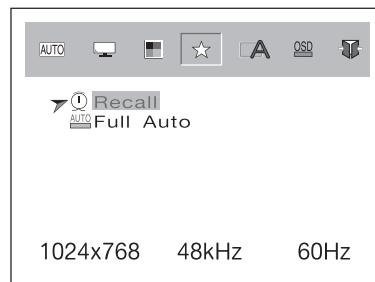Increases or Decrease the strength of the Green.

■ Blue

Increases or Decrease the strength of the Blue.

☆ Utility

Extra Functions. (Recall, Full Auto)

🕐 Recall

Resets the control functions back to the original factory preset values.
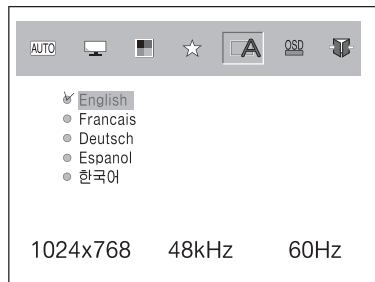
AUTO Full Auto

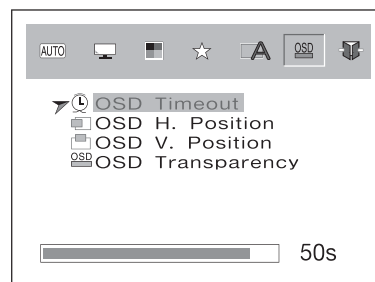Auto-adjusts of geometry and color balance.

CONTROLS AND FUNCTIONS

▢Ａ Language

Selects a language among English, Francais, Deutsch, Espanol, 한국어.

```
┌─────────────────────────────────────────┐
│ AUTO  🖥  ▣  ☆  ▢Ａ  OSD  ⬙              │
│                                          │
│   ☑ English                              │
│   ● Francais                             │
│   ● Deutsch                              │
│   ● Espanol                              │
│   ● 한국어                                │
│                                          │
│   1024x768    48kHz    60Hz              │
└─────────────────────────────────────────┘
```

OSD OSD

Adjusts the OSD Timeout, OSD H. Position, OSD V. Position and
Transparency of the OSD

```
┌─────────────────────────────────────────┐
│ AUTO  🖥  ▣  ☆  Ａ  OSD  ⬙               │
│                                          │
│  ➤🕐 OSD Timeout                         │
│    ▢ OSD H. Position                     │
│    ▢ OSD V. Position                     │
│    OSD OSD Transparency                  │
│                                          │
│  [████████████████        ]  50s         │
└─────────────────────────────────────────┘
```

🕐 OSD Timeout

Adjusts the OSD display timing.
Increase or Decrease the display time of the OSD.

▢ OSD H. Position

Moves the OSD position to left/right.

▢ OSD V. Position

Moves the OSD position to up/down.

OSD OSD Transparency

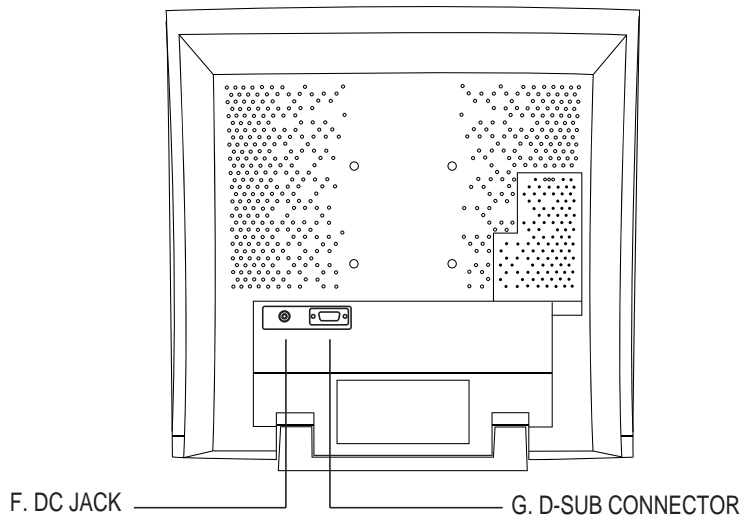Increase or Decrease the display Transparency of the OSD.

⬙ Exit

Exit user menu.

REAR VIEW

F. DC JACK
AC/DC adaptor connection.

G. D-SUB CONNECTOR
Connect to the video signal cable.

F. DC JACK —————————————————————— G. D-SUB CONNECTOR

▶ **AC/DC ADAPTOR**

1 ————● ———— 2

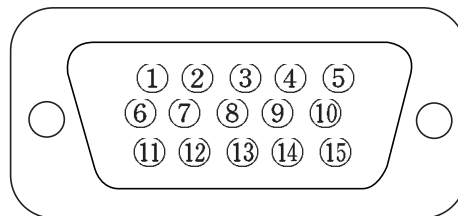| 1	GROUND
2	DC+12V out

▶ **ACCESSORY**
1. POWER CORD
2. USE'R MANUAL
3. AC/DC ADAPTOR
4. VIDEO SIGNAL CABLE

D-SUB CONNECTOR
PIN ASSIGNMENTS

▶ **PIN ASSIGNMENTS**

Pin 1	RED VIDEO	9	
2	GREEN VIDEO	10	SIGNAL CABLE DETECT
3	BLUE VIDEO	11	GROUND
4	GROUND	12	SDA(for DDC)
5	GROUND	13	H-SYNC.(or H+V SYNC.)
6	RED GROUND	14	V-SYNC.
7	GREEN GROUND	15	SCL(for DDC)
8	BLUE GROUND		

D-SUB

POWER MANAGEMENT

This monitor features a power management system to "power down" upon receipt of the VESA DPMS(The display power management signaling) from a VESA DPMS video card.
The VESA DPMS-compliant video card performs this signaling system through not sending horizontal, vertical, or sync signal.
This monitor enters an appropriate mode through identifying each of the three modes of the signaling system.

POWER CONSUMPTION

MODE	POWER CONSUMPTION
ON	< 35W
STANDBY	< 5W
SUSPEND	< 5W
ACTIVE OFF	< 5W

LED INDICATOR

The power management feature of the monitor is comprised of four stages : On(Green), Standby, Suspend, Active off(Amber) and Not preset mode(Green).

MODE	LED COLOR	MONITOR OPERATION
ON	GREEN	Normal Operation
STANDBY	AMBER	Screen blanks after preset idle time and some electronic circuits or all circuitry in the monitor shut down.
SUSPEND		
ACTIVE OFF		
NOT PRESET MODE OUT OF RANGE	GREEN	Normal operation but the on screen display will show error massage.

SPECIFICATIONS

▶ **LCD Type**
15.0 ″ Diagonal AM-TFT(Active-Matrix)
DOT PITCH: 0.297mm
BRIGHTNESS: 250cd/㎡(Typical)
CONTRAST RATIO: 300:1(Typical)
RESPONSE TIME: 25 msec(Typical)

▶ **RESOLUTION(H x V)**
1024X768 @60Hz

▶ **FREQUENCY**
HORIZONTAL: 31-60KHz
VERTICAL: 56-75Hz

▶ **VIDEO DOT RATE**
80MHz

▶ **INPUT SIGNAL**
VIDEO(Analog 0.7Vp-p / 75 Ω)
SYNC(Separate TTL Level)

▶ **ACTIVE DISPLAY AREA (W x H)**
304mm X 228mm

▶ **DIMENSIONS (W x D x H)**
367mm X 181mm X 358mm

▶ **WEIGHT**
Net Weight   : 3Kg
Gross Weight : 5Kg

▶ **ELECTRICAL RATINGS**
INPUT: AC100 - 240V, 50/60Hz (auto switching)
OUTPUT: DC12V, 2.5A

▶ ▶ NOTE :
Technical specifications are subject to change without notice.

TROUBLESHOOTING GUIDE

TROUBLE	TROUBLESHOOTING TIP
No image on display screen	1. Check that power cord of the Monitor have been connected securely into wall outlet or grounded extension cable or strip. 2. Power switch should be in the ON position and LED is lit. 3. Check that the Brightness and/or the Contrast adjustments of the Display have not been turned down to minimum levels.
"Check Input Signal" message on screen	1. The signal cable should be completely connected to the video card/computer. 2. The video card should be completely seated in its slot and the computer is switched ON.
Display image is not centered, too small or too large	Select "Auto" in the OSD.
Vertical or Horizontal noise is present in the picture	Adjust H-Size and Clock-Phase in the OSD.

WICHTIGE HINWEISE

▶ Achten Sie darauf, daβ das Gerät nur in eine AC100-240V(DC12V) Schuko-Steckdose eingesteckt wird.

▶ Die Steckdose sollte jederzeit frei zugänglich sein, um bei einem evtl. auftretenden Notfall das Gerät schnell von der Stromversorgung zu trennen.

▶ Achten Sie desweiteren darauf, daβ die Netzanschluβleitung nicht mechanisch beansprucht noch sonstwie beschädigt wird.

▶ Öffnen Sie niemals das Gerät! Im Inneren befinden sich Teile mit gefährlicher Spannung.

▶ Bevor Sie das Gerät reinigen, ziehen Sie bitte den Netzstecker aus der Steckdose. Säubern Sie das Gerät dann mit einem feuchten (keinesfalls tropfnassen) Lappen.

▶ Das Gerät ist funkentstört nach EN55022, EN55024 & EN61000-3-2 / -3-3.

▶ Stellen Sie das Gerät an einem ergonomisch günstigen Ort auf und sorgen Sie dafür, daβ der Betrieb des Monitors mit nach ISO9241-3.7.8 geprüfter Peripherie sichergestellt ist.

▶ Maschinenlärminformationsverordnung 3. GSGV, 18.01.91 : Der arbeitsplatzbezogene Schalldruckpegel beträgt 70dB(A) oder weniger gemäβ ISO 7779.

Falls SIe dennoch Fragen haben, auf die die Bedienungsanleitung keine Antwork geben kann, so kontaktieren Sie bitte den nächsten Fachhändler.