User's Manual

20" MULTIMEDIA SCREEN
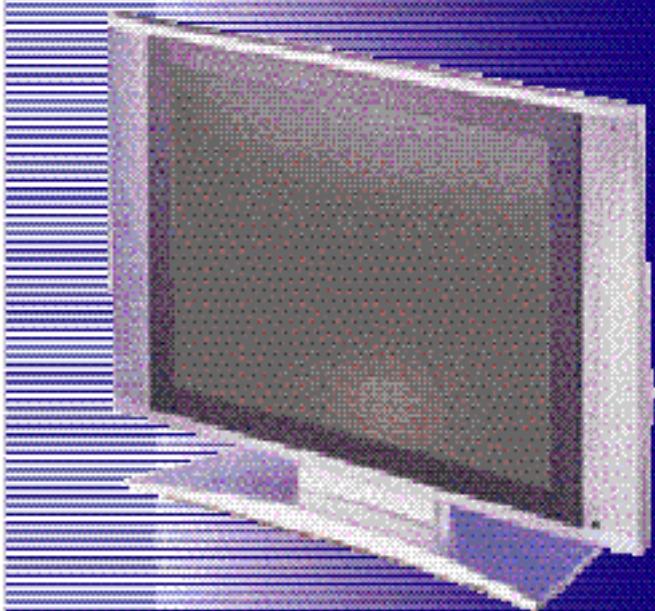
※ Please read the instruction in this booklet carefully before using this monitor

English

CONTENTS

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.

English

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 utilisé comme interrupteur général. La prise de courant doit être située ou installée à proximité du matériel et être facile d'accès

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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.

English

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 présént 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.
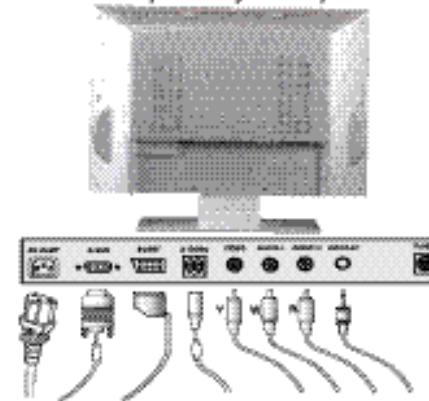
1. CONNECT THE VIDEO SIGNAL CABLE
A. Connect one end of the signal cable to the back panel of the monitor and connect the other end to the graphic card on back of the computer.
B. Secure the connection with the screws on the plug.

2. CONNECT THE POWER CORD
Connect the female end of the power cord to the power input receptacle on the LCD Monitor.
Then, plug the male end of the power cord to an AC outlet or computer.

3. CONNECT THE A/V CABLE
A. Connect the end of RCA(Yellow, White, Red) SCART or S-VHS cable to the terminals on the back of the Monitor.
B. Connect an antenna or CATV cable to the terminal on the back of the Monitor. (Optional TV Tuner can be purchased from the dealer)
C. Connect one end of stereo audio cable to the stereo jack on the back of the Monitor. (Connect another end of stereo audio cable to the "Audio(Line) out" terminal of the sound card on your computer or another audio equipment)
D. Headphone may be connected to the headphone jack(option) on the left-hand side of the Monitor.(While Headphone is connected, the sound from the built-in speaker will be disabled)

4. TURN THIS MONITOR ON AND START YOUR SYSTEM

5. CONNECT THE TUNER(OPTION)

English

RESOLUTION

This monitor is a digitally-controlled multi-frequency monitor.
It operates at horizontal frequencies of 31.5 KHz and vertical
frequencies of 60 Hz.

Because of its micro processor-based designs, it offers auto-synchronization
and auto-sizing capabilities. This monitor offers 1 programmed settings
as listed in the table below and designed its best quality at 640X480, 31.5 KHz@60Hz.

Sometimes, displayed image quality couldn't be good enough in other modes
because of TFT-LCD monitor 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
640X480. Click the "Advanced" button, change "Refresh rate" to 60Hz.

These 1 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	480	31.5	60
MAC	640	480	35.0	67

CONTROLS AND FUNCTIONS

- B. SOURCE BUTTON
- C. MENU BUTTON
- D. CHANNEL BUTTONS (UP & DOWN)
- E. VOLUME BUTTONS (RIGHT & LEFT)
- A. POWER SWITCH
- POWER LED
- REMOTE CONTROLLER SENSOR

English
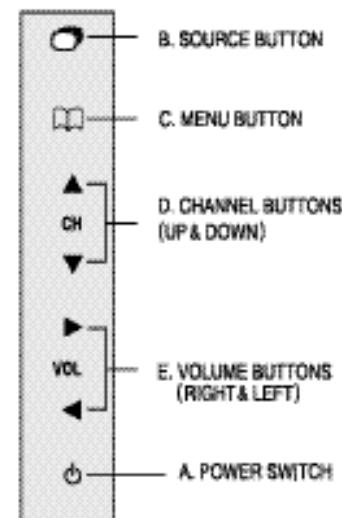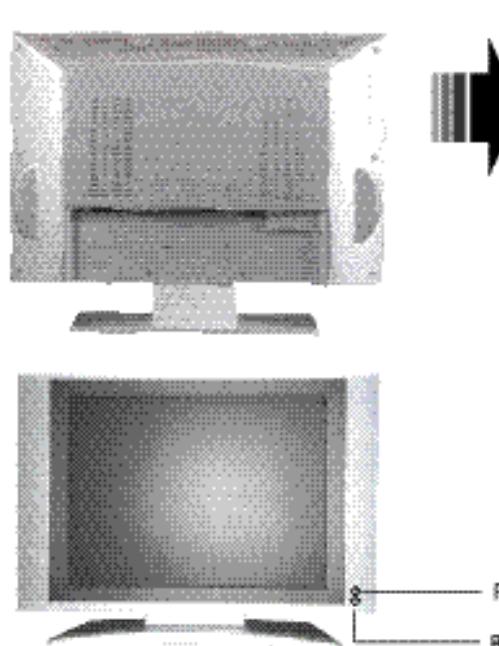
A. POWER ON/OFF(⏻)
Turns the power ON or OFF. There will be a few seconds delay before the
display appears.
The power LED(next to the power switch) lights with green when the power is turned ON.
The power is turned off by pressing the power switch again and the power
LED goes Red.

B. SOURCE (⬭)
Change input Source one by one
(PC, VIDEO, S-VIDEO, TV, SCART)

C. MENU (📖)
Activates and exits the On Screen Display.
This button can also be used to move previous menu or status.
OSD MENU(MAIN) : Input Source, Screen, Audio, OSD, Color, Utility, Exit.

CONTROLS AND FUNCTIONS

D. CHANNEL(CH: ▲▼)

Increases or decreases the channel number.
(In PC mode, down key operates as "Auto adjust")
This button allows user to enter the sub-menu of the activated function
when down key is pressed on the main menu.

E. VOLUME(VOL: ◄ ►)

Adjust the volume / Adjust menu settings.

1. SELF-TEST DISPLAY

When there is no connection at PC, the On Screen Display will show for 3 seconds.

```
Check input Signal
■   ■   ■
```
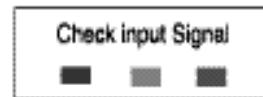
2. OSD MENU DESCRIPTION

: Input Source
Select PC or AV(TV, Video, S-Video, SCART) Source.

```
Input Source
PC   VIDEO   SVIDEO   TV   SCART

Move : ◄, ►, ▼        Exit : MENU
```
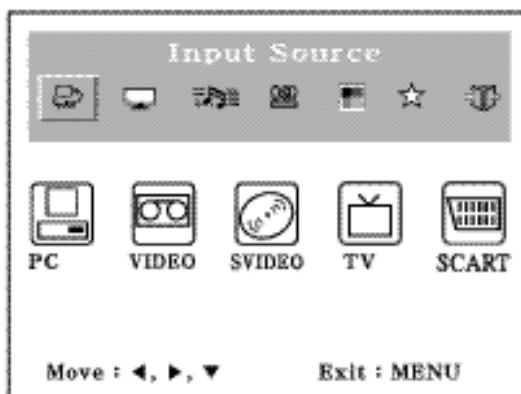
CONTROLS AND FUNCTIONS

: Screen

```
Screen

Brightness
Contrast
H. Position
V. Position
Clock
Phase

90%
```
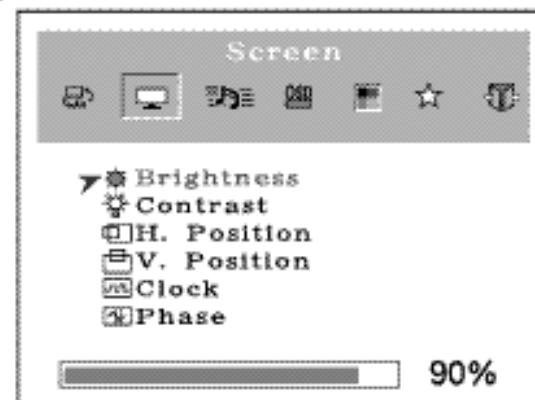
☀ : **Brightness**
   Increase or decrease the intensity of the image.

☼ : **Contrast**
   Increase or decrease the intensity(lightness or dimness) of the image.

▭ : **H. position (PC Mode Only)**
   Move image horizontally on screen right or left.

▭ : **V. position (PC Mode Only)**
   Move image vertically on screen up or down.

⊓⊔ : **Clock (PC Mode Only)**
   Adjust the vertical noise of screen image.

⊡ : **Phase (PC Mode Only)**
   Adjust the number of horizontal picture elements.

▮ : **Hue (AV, NTSC Only)**
   Adjust the tone of color.

▦ : **Saturation (AV Only)**
   Adjust the intensity of color level.

Δ : **Sharpness (AV Only)**
   Adjust the sharpness of video image.

CONTROLS AND FUNCTIONS

♫ : Audio
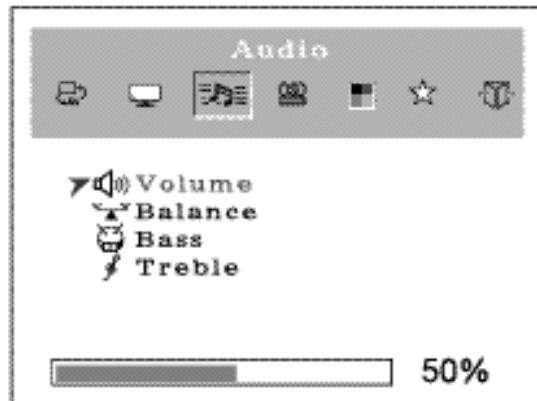
🔊 : Volume
Adjust audio volume.

♪ : Equalizer (Loudspeaker Only)
Boost / Cut specific frequency or compensate for frequency distortion of the sound.
Select preferred Sound setting: flat, music, movie, speech and Adjust the level of the Sound frequency in user mode.

: Balance (Loudspeaker Only)
Adjust the balance of left and right speaker sound.

: Loudness (Loudspeaker Only)
Compensate the sound to consider the frequency sensitivity of human ear.

CONTROLS AND FUNCTIONS

OSD : OSD
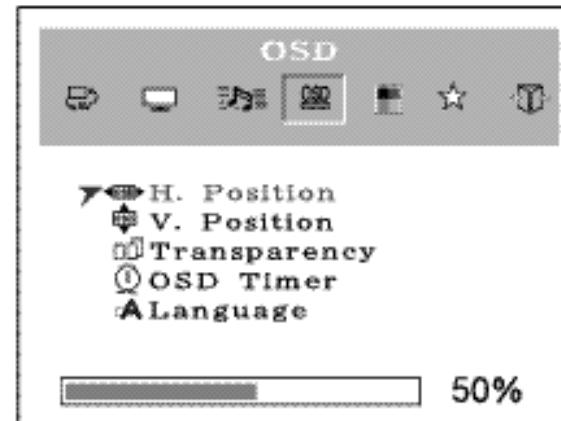
: H. Position
Move the OSD position to right(▶) or left(◀).

: V. Position
Move the OSD position to up(▶) or down(◀).

: Transparency
Select the OSD background.

: OSD Timer
Select the OSD display timing.

: Language
Select a language among English, Français, Deutsch, Español, Danish, Italiano.

CONTROLS AND FUNCTIONS

▦ : Color (PC Mode)
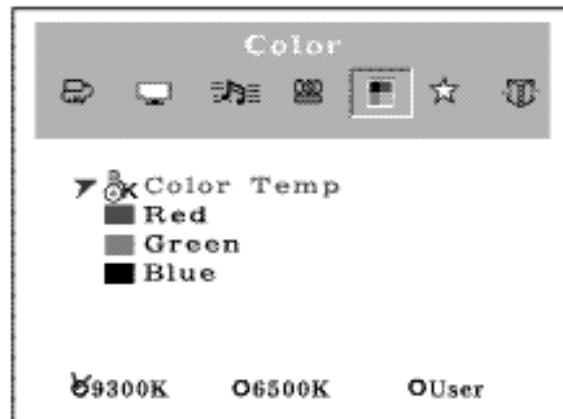
☼K : Color Temp
Adjust color temperature to 9300, 6500, user.

(note : 9300 is factory default)

▦ : Red
Adjust red color for user.

▦ : Green
Adjust green color for user.

▦ : Blue
Adjust blue color for user.

CONTROLS AND FUNCTIONS

☆ : Utility
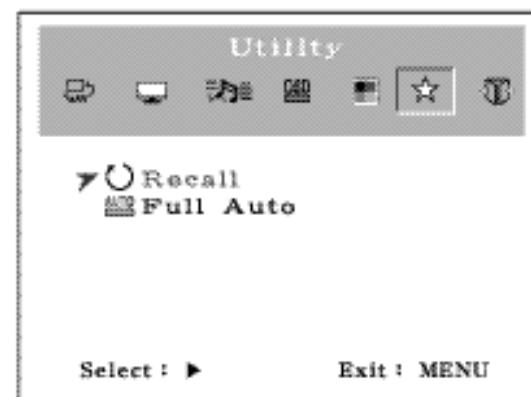
↻ : Recall
Select to reset all setting to the factory default values.

AUTO : Full Auto (PC Mode Only)
Auto geometry and color adjustment.

ABC : Caption (NTSC Only)
Enable or disable closed caption feature(CC1, CC2, CC3, CC4).

⬚ : Vchip (NTSC, US Only)
Initial passwords is "0000".

The V-chip can block certain rated television shows off

(if chosen) so children cannot watch programs that parents do not approve.

If the rating codes are higher than the preset values, the television signal

will be displayed.

To select V-chip on OSD, Enter 4 digits of number

if you Enter a wrong number, "invalid number" will be displayed.

English

CONTROLS AND FUNCTIONS

1) TV Guidelines

off	: Not Rated
TV-Y	: Young Children
TV-Y7	: Children 7 and over
TV-G	: General Audience
TV-PG	: Parent Guidance
TV-14	: Viewer 14 and over
TV-MA	: Mature Audience
(FV	: Fantasy Violence
V	: Violence
S	: Sexual Situation
L	: Coarse Language
D	: Suggestive Dialog)

2) MPAA Rating (Motion Picture Association of America [Movie rating organization])

off	: Not Rated
G	: General Guidance
PG	: Parental Guidance Suggested
PG-13	: Parents Strongly Cautioned
R	: Restricted Under 17 Requires
NC-17	: No Children Under 17 Admitted
X	: Adult only

3) New Password

Change Password Number.

CONTROLS AND FUNCTIONS

CH : **TV Channel (Program)**
This menu is possible to select, Input Source must be set 'TV'.
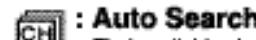
CH : **Auto Search**
Find available channels(Program) and save automatically.

: **Fine Tuning**
Adjust a mismatch between real and programmed channel(Program).

: **Store / Clear**
Select "Store" to save the channel(Program) or select "Clear" to remove the channel(Program).
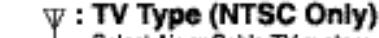
: **TV Type (NTSC Only)**
Select Air or Cable TV system.

: **Channel(Program) Swap (PAL or SECAM Only)**
Change current channel number to new channel number user want to change(Channel number will be different with real channel number after execute this menu).
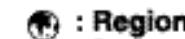
: **Region**
Select a channel system that is being used in your region.

USA, Korea	: NTSC(M)	W.EU, Scand	: PAL B/G
UK. Ireland	: PAL I	E.EU, CIS	: SECAM D/K
M.East	: SECAM B/G	France	: SECAM L/L'

CONTROLS AND FUNCTIONS

⬒ **: Exit**


```
                Utility
   ⬚   ⬚   ⬚   ⬚   ⬚   ☆   ⬚

         ⬚
        |▭|         H : 15.7KHz
        PC          V : 50.0Hz



   Move : ◄  ►  ▼        Exit : MENU
```
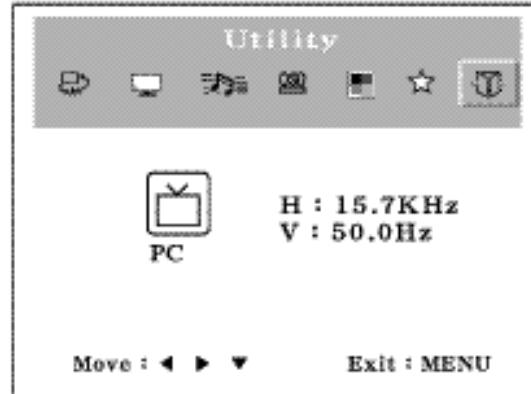
⬒ **: Exit**
Turn off OSD Menu.

REMOTE CONTROLLER FUNCTIONS

F. REMOTE CONTROLLER

English
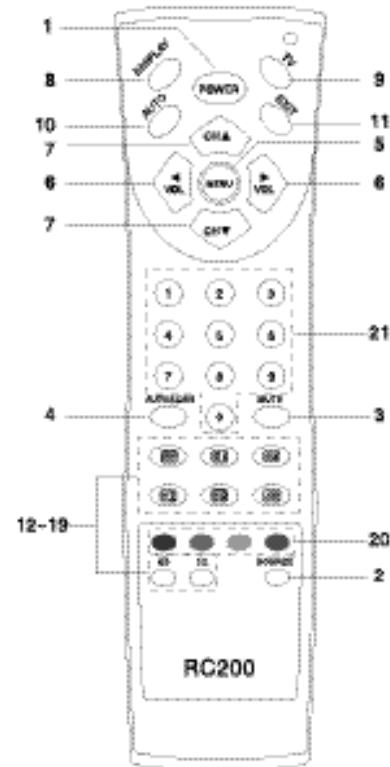
1. POWER(⏻)
Turns the power ON or OFF. There will be a few seconds delay before the display appears.

2. SOURCE
Select pc or video(TV / Video / S-Video / SCART) sources.

3. MUTE
Mute the sound.

4. AUTOSCAN
Find available channels(programs).

5. MENU
Activates and exits the On Screen Display.

6. VOL(◄►)
Increases or decreases the level of audio volume.

7. CH(▼▲)
Increases or decreases the channel number.
Up / Down the teletext page number in teletext mode

REMOTE CONTROLLER FUNCTIONS

8. DISPLAY
Channel display in TV Source.

9. TV
Change Input Source to TV.

10. AUTO
Auto geometry adjustment in PC Source.

11. EXIT
Exit the On Screen Display.

12. TEXT (☰)
Select Teletext display / Return to TV picture display.

13. INDEX (☰i)
Return to index page in teletext mode.

14. CANCEL(☰X)
Display the TV picture on the screen while waiting for the new teletext page.

15. REVEAL(☰?)
Reveal hidden text, such as Solutions of riddles or puzzles in teletext mode.

16. HOLD(☰I)
Toggle hold on or off for current display page in teletext mode.

17. SIZE(☰♦)
Page expand in teletext mode.

18. SUBCODE(☰)
Select Sub page in teletext mode.
If Some page may be multiple in teletext, Select subcode Key and enter four digits for the page you need.

19. I/II (Multi-Channel TV Sound)
Access I/II Setting(Stereo, Mono, Second Audio Selection) when a TV signal is received.

20. RED / GREEN / YELLOW / CYAN
Change to associated page in the display block according to the acquisition mode while teletext operating.

21. 0, 1, 2, 3, . . . 9(Number Key)
Using the 0, 1, 2, 3, . . . 9 Keys, the required channel or Teletext page are selected.

* Teletext, I/II function is optional.
The teletext functions only work in TV and Video.

REAR VIEW

G. AC INLET
Power cord connection.
NOTE:
Power cord is used as main power disconnect device in this product.

**H. D-SUB CONNECTOR**
Connect to the video signal cable.

H. D-SUB CONNECTOR

G. AC INLET

ACCESSORY
1. POWER CORD
2. REMOTE CONTROLLER
3. USER'S MANUAL
4. A/V CABLES(Option)
5. Batteries (TYPE AAAX2)

English
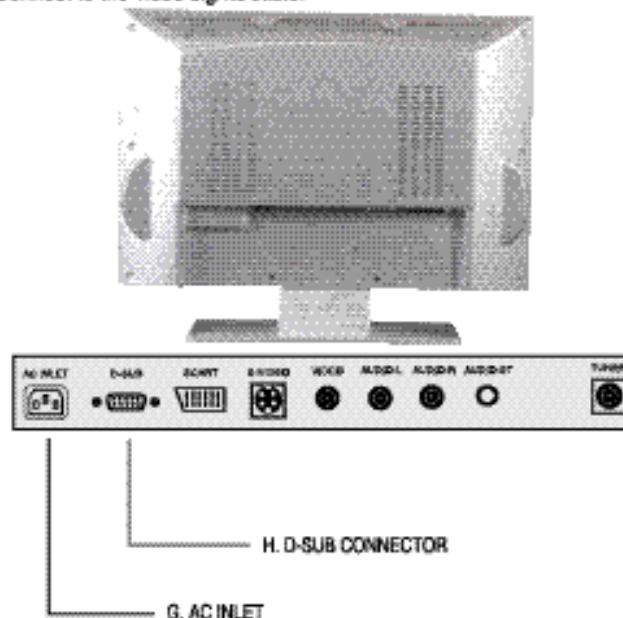
D-SUB CONNECTOR PIN ASSIGNMENTS

▶ **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

① ② ③ ④ ⑤
⑥ ⑦ ⑧ ⑨ ⑩
⑪ ⑫ ⑬ ⑭ ⑮
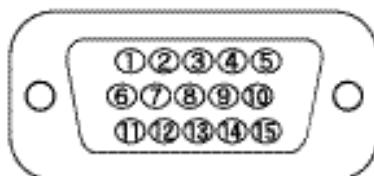
POWER MANAGEMENT

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	< 50W
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 Unsupported mode(Green).

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

SPECIFICATIONS

▶ **LCD Type**
20.1" Diagonal AM-TFT(Active-Matrix)
Pixel pitch(mm) : 0.51(H) × 0.51(V)
BRIGHTNESS: 500cd/m²(Typical)
CONTRAST RATIO: 500:1(Typical)
RESPONSE TIME: Tr -5msec, Tf-11msec(Typical)

▶ **RESOLUTION(H x V)**
640X480 @60Hz

▶ **FREQUENCY**
HORIZONTAL:31.5KHz
VERTICAL:60Hz

▶ **INPUT SIGNAL**
VIDEO(Analog 0.7Vp-p / 75Ω)
SYNC(Separate TTL Level)
SCART, S-VIDEO, AV(Composite, Sound L/R)
PC Stereo Sound, RF(Tuner option)

▶ **ACTIVE DISPLAY AREA (W x H)**
408mm X 306mm

▶ **DIMENSIONS (W x D x H)**
583mm X 202mm X 429mm

▶ **WEIGHT**
Net Weight   : 9 kg
Gross Weight : 13.5 kg

▶ **ELECTRICAL RATINGS**
AC100 - 240V, 50/60Hz (auto switching)

▶▶ **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 in PC mode	Push the down key in front side or Auto key in remocon.
Vertical or Horizontal noise is present in the picture	Adjust Clock and Phase in the OSD.

English