

TFT LCD DISPLAY

User's Manual

FCC Compliance 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 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 /television technician for help.

Notice 1 :

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

Notice 2 :

Shielded interface cables, if any, must be used in order to comply with the emission limits.

DOC CLASS B NOTICE

This digital apparatus does not exceed Class limits for radio noise emission for a digital apparatus as set out in the Radio Interference Regulations of the Canadian Department of Communications.

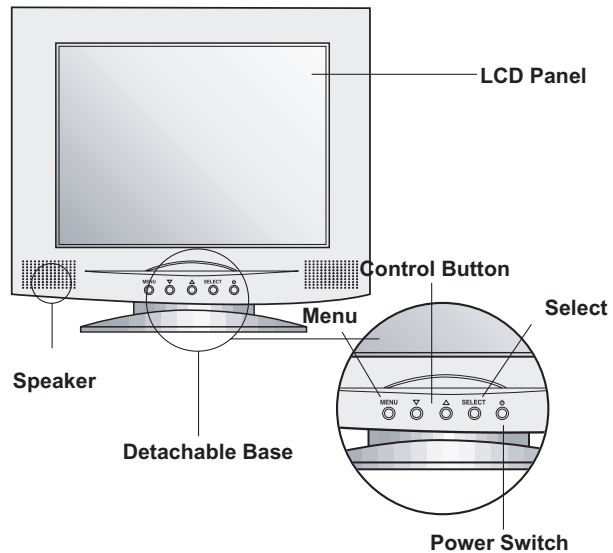
Contents

INSTRUCTION	
MAIN FEATURE	2
FRONT/BACK OF MONITOR	2,3
FUNCTION	3
INSTALLING	
COMPONENTS	4
PRECAUTIONS IN INSTALLING	4
CONNECTING TO YOUR PC For 15" Only	5
CONNECTING TO YOUR PC For 17" Only	6
TV/VIDEO FUNCTION SETTING	
PICTURE CONTROL	7
SOUND CONTROL	8
INSTALL	9
OSD	10
TELETEXT FUNCTION	
TELETEXT (OPTION)	11,12
PC FUNCTION SETTING	
OSD CONTROL	13
CONTRAST / BRIGHTNESS /ADJUST CONTROL	14,15
OTHERS	
POWER SAVING MODE(S)	16
STANDARD SIGNAL TIME CHART	17
PRECAUTIONS	18
TROUBLE SHOOTING	19
REMOTE CONTROL	20
SPECIFICATIONS For 15" Only	21
SPECIFICATIONS For 17" Only	22

MAIN FEATURES

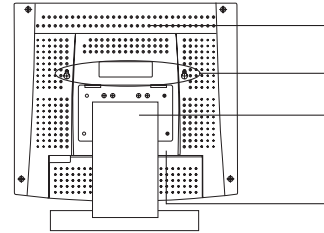
Thank you for purchasing our high resolution TFT LCD monitor.
We recommend that you thoroughly read through this user's guide before using the product.
It is also recommended to safely store the guide in times of immediate need in the course of using the product.

FRONT OF MONITOR



- * Used in turning on/off the screen.
- * The power light shows regular and safe mode functions with colors.

BACK OF MONITOR



- Ventilator(Caution!)
Do not block the ventilator
- Hole for wall hanging
- Detachable Base
Detachable for other equipments (VESA ARM) and wall hanging use.
- Connector to External Functions
Connects signals with external equipments and PCs. (TV/VIDEO)

FUNCTIONS

Although regular monitors for PCs use CDT as a medium for display, the TFT LCD monitor is a Flat Panel Display based on digital technology, and was originally used only for laptops PCs. Now it is used for desktops and laptops alike, opening a world of conveniences and quality to those ardent PC users.

The following functions are provided in our products.

1. Convenient and easy to handle Control Button.
2. From PC function to TV/VIDEO functions.
3. Remote Control.
4. A slim and space reducing monitor.
5. Monitor transferable for wall hanging.
6. Industrial robot and VESA install able.
7. Liberal angle control.(+30 °~ -5 °)
8. Low energy consumption.
9. Scarcely influences surrounding objects, with no harmful electronic waves, noise, heat or magnetic activities.

COMPONENTS

- After discarding the package and wrapping of the LCD TV, check for the following components in the box.

►Components

- LCD TV
- Power Adapter
- User's Guide
- Signal Cable
- Power Cable
- Audio Cable
- Remote Controller
- Battery (AA) 1.5V x 2

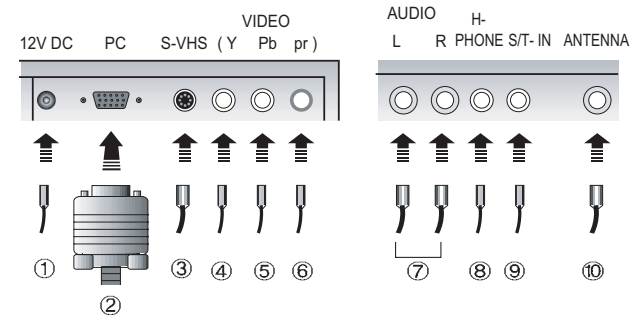
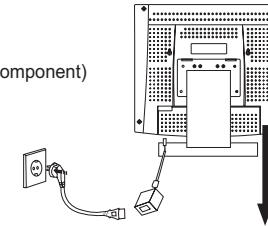
PRECAUTIONS IN INSTALLING

- Install on safe ground. : There's a possibility of damage of the product or harming people.
- Always cover the product or keep in a well ventilated place. : There is danger of fire and also for safe maintenance.
- Do not put anything containing water, medicine, small metal material, or heavy objects on the product. : Danger of fire, electrocution, and damage to the product.
- Do not expose the product to direct sun light. : The screen will not maintain clarity and may cause damage to the eye.
- Do not install in damp, dusty, or wet places. : Danger of fire and electrocution.
- Do not put candles, cigarettes, or other objects with excessive heat. : Danger of fire.
- Do not install any external connections, only connecting cords and adapter included in the box. : Damage and fire may occur.

CONNECTING TO YOUR PC for 15" Only

Connect to 100V~240V capacity outlets. (Free Voltage)

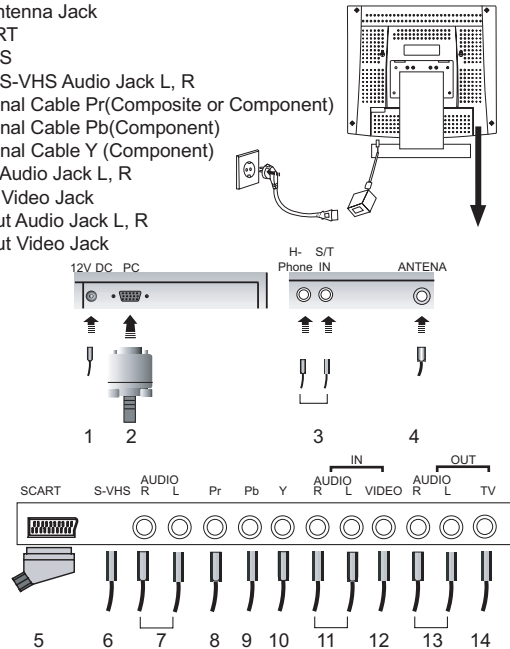
- ① 12V DC Jack
- ② PC 15 pin Jack
- ③ S-VHS Jack
- ④ Terminal Cable Y (Composite or Component)
- ⑤ Terminal Cable Pb (Component)
- ⑥ Terminal Cable Pr (Component)
- ⑦ Audio Cable L . R
- ⑧ Head Phone Jack
- ⑨ PC Audio Jack
- ⑩ TV Antenna Jack



1. Connect to 12V DC with the adapter included in the box to 100V~240V outlet.
2. Connect signal cable to PC. "Check Signal Cable" will appear on the monitor if improperly connected. In case of using Macintosh, use the exclusive adapter.
3. Connect to S-VHS Terminal of VCR, DVD, Camcorder. (optional)
4. Connect to Terminal of composite or Y-Terminal of component.
5. Connect to Pb-Terminal of component.
6. Connect to Pr-Terminal of component.
7. Connect to input terminals L, R that need Audio output. (DVD, VCR or CAMCORDER)
8. Connect headphones to the connecting terminal.
9. Connect to PC Audio output.
10. Connect to antenna or CATV connecting cable to the 'Antenna' terminal.

CONNECTING TO YOUR PC for 17" Only

- 1 : 12V DC Jack
- 2 : PC 15 pin Jack
- 3 : Head Phone Jack, PC Audio Jack
- 4 : TV Antenna Jack
- 5 : SCART
- 6 : S-VHS
- 7 : DVD/S-VHS Audio Jack L, R
- 8 : Terminal Cable Pr(Composite or Component)
- 9 : Terminal Cable Pb(Component)
- 10: Terminal Cable Y (Component)
- 11: Input Audio Jack L, R
- 12: Input Video Jack
- 13: Output Audio Jack L, R
- 14: Output Video Jack



1. Connect to 12V DC with the adapter included in the box to 100V~240V outlet.
2. Connect to signal cable to PC. "Check Signal Cable" will appear on the monitor if improperly connected. In case of using Macintosh, use the exclusive adapter.
3. Connect to headphones to the connecting terminal and PC Audio output.
4. Connect to antenna or CATV connecting cable to the 'Antenna' terminal.
5. Connect to SCART
If you connect the SCART, you must remove the RCA(COMPOSITE).
6. Connect to S-VHS Terminal of VCR, DVD, Camcorder.(Optional)
7. Connect to input Audio Terminals L,R of Component
8. Connect to Pr-Terminal of component.
9. Connect to Pb-Terminal of component.
10. Connect to Terminal of composite or Y-Terminal of component.
11. Connect to Input Audio Terminals L,R of Composite
12. Connect to Input Video Terminal of Composite
13. Connect to Output Audio Terminals L,R of TV
14. Connect to Output Video Terminal of TV

TV/ VIDEO FUNCTION SETTING

Picture

Controlling Screen Contrast

Menu → Picture → Contrast → Select →

Control with → Menu

You can control the contrast of the images or letter on the screen.

Controlling Screen Brightness

Menu → Picture → Brightness → Select →

Control with → Menu

You can control the brightness of the screen.

Controlling Screen Color

Menu → Picture → Color → Select →

Control with → Menu

You can control the color of the screen.

Controlling Screen Sharpness

Menu → Picture → Sharpness → Select →

Control with → Menu

You can select the sharpness of the screen.

Controlling Screen Tint(only NTSC)






Menu → Picture → Tint → Select →

Control with → Menu

You can select the tint of the screen.






Sound

Adjust Volume

Menu  → Sound → Volume → Select  →
Control with   → Menu 






You can adjust volume of this screen.

Adjust Balance

Menu  → Sound → Balance → Select  →
Control with   → Menu 






You can adjust the Balance of this screen.

Adjust Bass

Menu  → Sound → Bass → Select  →
Control with   → Menu 

You can adjust the Bass of this screen.


Adjust Treble

Menu  → Sound → Treble → Select  →
Control with   → Menu 




You can adjust the Treble of this screen.

Install




Auto search

Menu  → Install → Auto search
You can search channels automatically




TV System(PAL Only)

Menu  → TV System → Select
Control with   → Menu
You can choose the TV System(PAL → SECAM).




TV Sound(PAL Only)

Menu  → TV Sound → Select
Control with   → Menu
You can choose the TV Sound(BG → DK → I).




Manual tune

Menu  → Install → Manual tune
Control with   → Menu
You can change channel range positively or negatively.




Fine Tune

Menu  → Install → Fine Tune
Control with   → Menu
You can change range of tuner positively or negatively($\pm 0.05\text{Mhz}$)

Store to






Menu  → Install → Store to →
Control with   → Menu
You can store the channel(P0 P99).

Skip

Menu  → Install → Skip → Select
Control with   → Menu
You can skip the channel(Yes → No).






OSD (On Screen Display)

Vertical position of OSD

Menu  → OSD → V Position → Select  →
Control with   → Menu 

You can adjust vertical position of OSD.

Horizontal position of OSD

Menu  → OSD → H Position → Select  →
Control with   → Menu 

You can adjust horizontal position of OSD.


Half-tone of OSD

Menu  → OSD → Half-tone → Select  →
Control with   → Menu 

You can adjust half-tone

Input

TV or changing to another mode


Menu  → INPUT → Select  → Control with   → Menu 

You can change input mode

(TV → COMPOSITE → S-VHS → COMPONENT → PC)

TELETEXT (Option)

SWITCHING TELETEXT ON/OFF

Press the TELETEXT button (). The index page viewed last will appear.

Press the TELETEXT button to return to the TV mode.

COLOR BUTTONS IN TOP/FLOF TELETEXT

A red, green, yellow and blue field is shown at the bottom of the screen.

If TOP or FLOF teletext (FASTEXT) is transmitted by the station, pressing the corresponding color button on the remote controller, you can select the desired page easily.

SELECTING PAGES


The NUMBER button 0...9 are used to enter a page number.

The selected page number appears at the top of the screen and the page appears after a short time.

The UP/DOWN buttons increase or decrease the current page number by 1.

INDEX PAGE


You can switch directly to the program preview (with TOP text)


or the overview page of the station you are currently viewing by pressing the INDEX () button.

PAGE HOLD

Several sub pages can be combined under a page number and are scrolled at an interval determined by the television station.

The presence of sub pages is indicated by, Y example, 3/6 beneath the time, which means that you are looking at the 3rd page of a total of 6 pages.

If you want to look at a subpage for a longer period of time, press the HOLD () button.

The contents of the subpage shown are kept on the screen and no longer updated or switched to other subpages. The HOLD symbol () will be displayed on the top left hand side instead of the page no..

Pressing the HOLD button again, the current subpage will appear.

CALLING UP SUBPAGE DIRECTLY


The NUMBER button 0...9 are used to enter a page number.


The selected page number appears at the top of the screen and the page appears after a short time.

The UP/DOWN buttons increase or decrease the current page number by 1.

WATCHING TELEVISION DURING TELETEXT MODE

Some pages are continually updated, for example, stock market reports, sports announcements, and the latest news.


If you want to watch television and stay informed at the same time, press CANCEL () button.

The regular program is still visible and the teletext symbol () appears at the top of the screen.


Pressing the CANCEL button again, the teletext page appears with the update information.

REVEAL ANSWER

This function can be used on certain pages to reveal the solution of riddles.

Press the REVEAL button () to reveal a hidden answer and press again to hide it.

DOUBLING CHARACTER SIZE

Repeatedly pressing the SIZE button () doubles the character size in the following order: Upper half of the page-> Lower half of the page-> Return to normal size.

PC FUNCTION SETTING

Information

Information of the screen

Menu  → Information → Select  →

Control with   → Menu 

You can see the information of the screen.

Input Source

TV or changing to another mode



Menu  → INPUT → Select  →

Control with   → Menu 

You can change input mode.
(TV - Composite - S-VHS - Component - PC)

OSD Control



Vertical Position of OSD

Menu  → OSD Control → V Position → Select  →

Control with   → Menu 

You can adjust vertical position of OSD.

Horizontal Position of OSD

Menu  → OSD Control → H Position → Select  →

Control with   → Menu 

You can adjust horizontal position of OSD.

Half-tone of OSD


Menu  → OSD Control → Half-tone → Select  →

Control with   → Menu 

You can adjust half-tone of OSD.

Contrast

To clarify the screen



Menu  → Picture → Contrast → Select  →

Control with   → Menu 

You can control the contrast of the images or letter on the screen

Brightness

To control brightness of the screen



Menu  → Picture → Brightness → Select  →

Control with   → Menu 

You can control the brightness of the screen.

Adjust



Vertical Position

Menu  → Adjust → V Po. → Select  →

Control with   → Menu 

You can adjust th vertical position of the screen.



Horizontal Position


Menu  → Adjust → H P. → Select  →

Control with   → Menu 

You can adjust the horizontal position of the screen.



Clock Adjust

Menu  → Adjust → Clock Adj. → Select  →

Control with   → Menu 

You can adjust the clock.



Phase Adjust

Menu  → Adjust → Phase Adj. → Select  →

Control with   → Menu 

You can adjust the phase.



Auto Adjust




Menu  → Adjust → Auto Adj. → Select  →

Control with   → Menu 

You can adjust position of the screen automatically.

Reset

Menu  → Adjust → Reset. → Select  →

Control with   → Menu 

You can reset the screen.

POWER SAVING MODE(S)

If your computer system features a display power management function, the Monitor enters into the power saving modes as follows.

When it is used with a computer system equipped with DPMS(VESA) this Monitor provides an EnergyStar compliant function. If your computer does not feature display power management, please source an optional DPMS software program.

Power saving modes greatly reduce power consumption when the computer is temporarily not in use. Simply press any key or mouse button to return the Monitor display to normal operation.

	Normal Operation	Power Saving function EPA		
		stand-by	suspend	Power Off
H-Sync	Active	Inactive	Active	Inactive
V-Sync	Active	Active	Inactive	Inactive
Video	Active	Blanked	Blanked	Blanked
LED Color	Green	Orange/Green Blinking(1sec)	Orange/Green Blinking(0.5sec)	Orange
Power Consumption	35 Watts Less Than	8 Watts Less Than	8 Watts Less Than	5 Watts Less Than

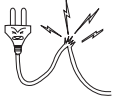
STANDARD SIGNAL TIMING CHART

If the signals conveyed from the computer match the following standard signals, the screen automatically controls the signals. Conversely, if the signals do not match, the screen will not appear or only the power light would activate. Therefore it is important that you first set as the following, with reference to the Video Card Guide.

	Resolution	Frequency			Polarity	
		Horizontal(KHz)	Vertical(Hz)	Clock Frequency(MHz)	H	V
1	640×350	31,5	70,0	25,175	+	-
2	640×400	31,3	70,0	25,056	-	+
3	600×400	37,9	85,1	31,500	-	+
4	720×400	31,5	70,1	28,322	-	+
5	720×400	37,9	85,0	35,500	-	+
6	640×480	31,5	59,9	25,175	-	-
7	640×480	37,5	75,0	31,500	-	-
8	640×480	37,9	72,8	31,500	-	-
9	800×600	35,2	56,3	36,000	+	+
10	800×600	37,9	60,3	40,000	+	+
11	800×600	46,9	75,0	49,500	+	+
12	800×600	48,1	72,2	50,000	+	+
13	800×600	53,7	85,1	56,250	+	+
14	832×624	49,7	74,5	57,283	-	-
15	1024×768	48,4	60,0	65,000	-	-
16	1024×768	56,5	70,1	75,000	-	-
17	1024×768	60,0	75,0	78,750	+	+
18	1152×864	54,5	60,0	90,000	-	-
19	1152×864	63,8	70,0	96,600	-	-
20	1152×864	65,8	72,0	96,600	-	-
21	1152×864	68,5	75,0	98,000	-	-
22	1280×1024	64,9	60,0	108,000	+	+

PRECAUTIONS

The below precautions should be carefully followed for the effective function of the product and safety of users.



Do not use damaged plugs or worn out outlets.
(Danger of electrocution)



Do not expose the product to severe impacts.
(This could occur damage)



Do not try to disassemble, repair, renovate the product without expert assistance.
(Contact the service for parts needing repair)



In weather conditions of thunder and/or lightning, or when you will not be using the product for a long period of time, leave the plug out of the outlet. (Danger of electrocution)



Do not try to bend the cord or put it under heavy objects.
(Danger of electrocution, fire)



Do not leave the product in damp or wet places as there is danger when the product is exposed to water or metal. (Danger of electrocution)

• Other Precautions

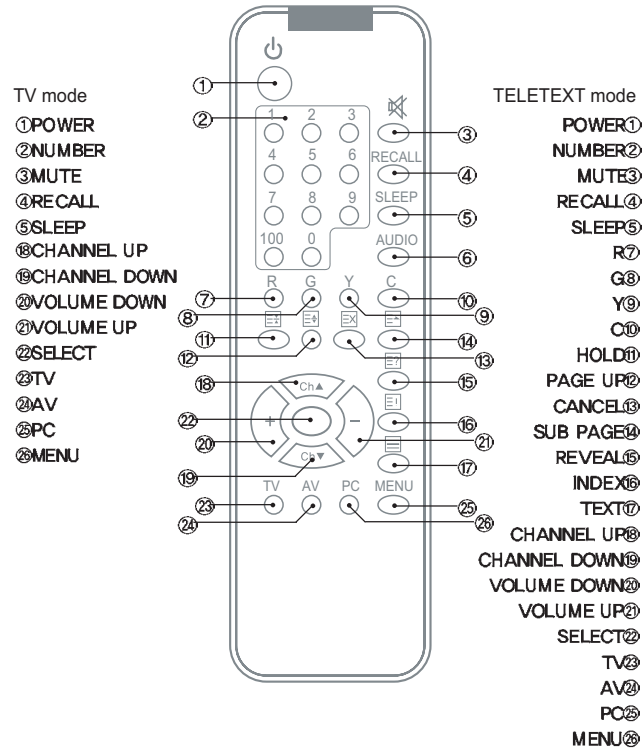
In cleaning the product take out the plug from the outlet, wipe with a soft and clean cloth then with water. Never use benzene, alcohol or other cleaners. (Contact the service center or a store near you for static controllers and cleaners. The LCD polarizing plate may peel off or the product may decolorize, dissolve, or crack.

TROUBLE SHOOTING

When failure or problems occur, refer to the following. For further assistance, contact our customer support centers.

The power dose not turn on	Check whether the plug is in place and try to reconnect it. (refer to pg5,pg6)
"Check signal cable" sign appears	Check if the signal cable is properly connected to the computer or video card and try to reconnect it (refer to pg4)
"Out of range" appears on the screen.	Set the resolution and frequency compatible to the monitor.(refer to pg18)
The screen looks like it is melting	Check the connection of the monitor and the signal cable of the computer.
The screen trembles	Check if the resolution and frequency of the computer or the video card is set to accommodate the monitor and then reset the screen according to the present mode of the monitor menu and the standard signal timing chart.
A shadow appears on the screen	
The screen is too bright	Try to control the brightness or contrast of the screen.(refer to pg 14)
The color of the screen appears as if there is a shadow.	Go to the OSD color control menu, the user mode and control the door.(refer to pg10)
White does not to look like white	
The screen is not in place	Recontrol image setting
There is no sound	Check the connecting cable. (refer to pg4, pg8)
The volume is too low	Control with the up and down buttons (refer to pg8)
The sound is dull	Control with the up and down buttons (refer to pg8)
The TV won't turn on	Check if the antenna is connected and control and control the mode with the TV.
The power light is orange or flickers	Check if the computer is on safe mode. Press on the PC keyboard or move the mouse. The screen will appear.
The screen is blurry	Control the screen 's frequency and clarity. (refer to pg 7)

REMOTE CONTROL



SPECIFICATIONS For 15" Only

Category	Specification	
LCD	Screen Size	15 inch (diagonal length)
(PANEL)	Visible Screen size	304.1(H) X 228.1(V)
	Pixel Range	0.297(H) X 0.297(V)
	Type	A-si TFT LCD(liquid crystal display)
Frequency	Horizontal Frequency	31 ~ 60 KHz(Auto Set)
	Vertical Frequency	56 ~ 75 Hz (Auto Set)
Color Display	Display color	16.2M Color
Input Signal	Video Signal	Analog 0.714Vp_p POSITIVE(75 ohm)
TV	TV Color System	PAL , SECAM , NTSC(option)
	Channel memory	100 Channel Memory -- PAL SYSTEM
	Receiving Channel	181ch [113ch CATV] -- NTSC SYSTEM
	Video Input Color	PAL/SECAM/NTSC
Sound	Sound Output	2W + 2W (1KHz MOD 80%)
	Voltage Use	Flow 100~240V, 50/60Hz DC 12V/3A
Energy Consumption	Regular Energy Consumption	Maximum 30W
	Safe Mode Consumption	Less than 5W
Movement	Temperature	0°C ~ 40°C
Conditions	Humidity	10% ~ 85%
	Size	Excluding Base Including Base
Weight	Net	5Kg (11 lbs)
	Gross	7kg (15.4 lbs)
Features	Channel auto programming Full function remote control Composite video Input S-VHS video Input Component Input PC sound Input	
Jack & Terminals	TV ANT Input Video In RCA jack Audio In RCA jack 4-Pin Mini Din jack 15-Pin Mini D-Sub	

The above specifications can be changed without prior notice for quality improvement.

SPECIFICATIONS For 17" Only

Category		Specification
LCD	Screen Size	17 inch (diagonal length)
(PANEL)	Visible Screen size Pixel Range Type Visual Angle	337.0(H) X 270.0(V) 0.264(H) X 0.264(V) A-si TFT LCD(Liquid crystal display) Upper 80'/lower 80' , left 80'/right 80'
Frequency	Horizontal Frequency Vertical Frequency	31 ~ 60 KHz(Auto Set) 56 ~ 75 Hz (Auto Set)
Color Display	Display color	16.2M Color
Input Signal	Video Signal	Analog 0.714Vp_p POSITIVE(75 ohm)
TV	TV Color System Channel memory Receiving Channel Video Input Color	PAL , SECAM , NTSC(option) 100 Channel Memory -- PAL SYSTEM 181ch [113ch CATV] -- NTSC SYSTEM PAL/SECAM/NTSC
Sound	Sound Output	2W + 2W (1KHz MOD 80%)
Power/Voltage	Voltage Use	Flow 100~240V, 50/60Hz DC 12V/3A
Energy Consumption	Regular Energy Consumption	Maximum 35W
	Safe Mode Consumption	Less than 5W
Movement	Temperature	0°C ~ 40°C
Conditions	Humidity	10% ~ 85%
Size	Excluding Base	413(W) X 134(D) X 425(H)
	Including Base	492(W) X 240(D) X 492(H)
Weight	Net	7Kg (11 lbs)
	Gross	9kg (15.4 lbs)
Features	Channel auto programming Full function remote control Composite video Input S-VHS video Input Component Input PC sound Input	
Jack & Terminals	TV ANT Input Video In RCA jack Audio In RCA jack 4-Pin Mini Din jack 15-Pin Mini D-Sub	

The above specifications can be changed without prior notice for quality improvement.