

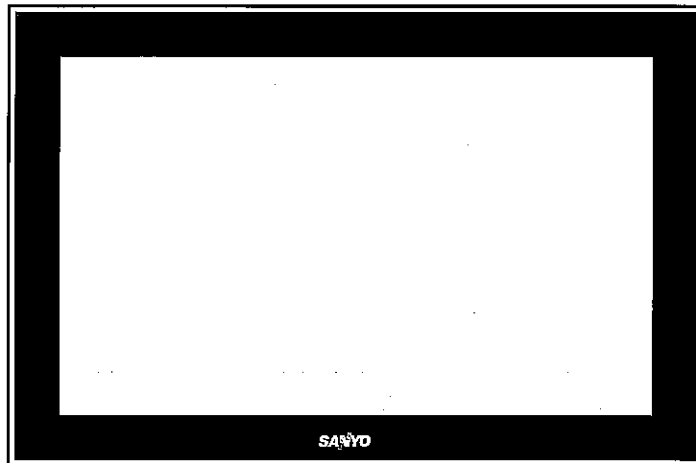
**SANYO**

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# INSTRUCTION MANUAL

29-inch  
LCD Multimedia Monitor

**SD29LM1**



# SAFETY PRECAUTIONS

## Important Safety Information

Please read this user's guide carefully before operating the monitor. Follow all operating and use instructions when installing, using and cleaning the monitor. Failure to follow the instructions in this manual could result in serious injury or damage to the monitor. Heed all warnings in the manual and on the monitor and keep this manual in a safe place for future reference.



### Warning

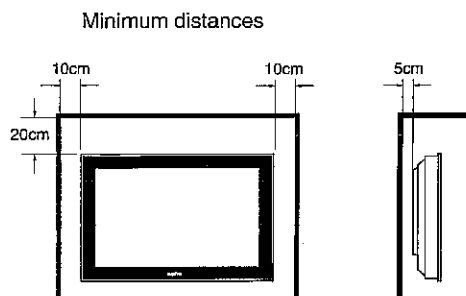
Please move the monitor only upright and with care!



### High Voltage

Risk of electric shock. Do not open!

- For your safety, use only the accessory cord designed for this product. The monitor is prepared for a mains voltage of AC100–240 V, 50–60 Hz. The power cord conforms to the power supply voltage.
- Provide ventilation for the monitor. The unit is designed with slots in the case for ventilation to protect it from overheating. Do not block these openings. Do not place the monitor near a radiator or heat register.



- Do not insert anything through the openings in the unit, where they could come in contact with dangerous voltage points or damage parts.
- Do not expose this unit to rain or moisture.
- Unplug the monitor from the mains before cleaning. Use a damp cloth. Do not use liquid or aerosol cleaners.
- Never add any attachments or equipment without approval of the manufacturer. Such additions can increase the risk of fire, electric shock or other personal injury.
- Do not use the monitor where contact with or immersion in water is possible, such as near bathtubs, sinks, washing machines, etc.
- Do not place the monitor on an unstable cart, stand, table or floor where it could fall.
- When moving the unit assembled with speakers, do not carry by holding the speakers.
- Do not attempt to service the monitor yourself. Adjust only those controls that are covered by the user's guide.
- Disconnect the monitor from the mains and disconnect the antenna or cable system during lightening storms or when left unattended and unused for a long period of time.
- Avoid having a fixed image remain on the screen for a long period of time. Typically, a frozen still picture from a VCR, 4:3 picture format or if text information is present, the fixed image could remain on the screen.
- If you connect a PC, please use a high-quality VGA cable with ferrite core.
- Only use loudspeakers specified by the manufacturer.

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# INSTALLATION

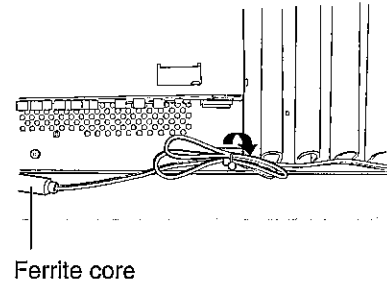
## Step 1

### ■ STEP 1: Attaching the optional speakers

You should attach the left and right speakers with the supplied hardware when using the optional speakers.

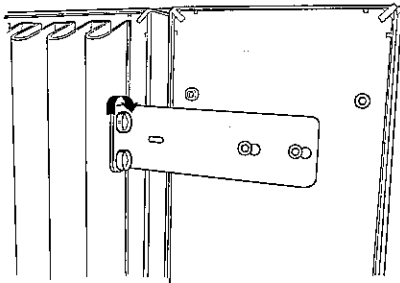
- Hardware:
-  Knurled screws, 8
  -  Washers, 8
  -  Cable supports, 2
  -  Ferrite core speaker cables, 2

- 5 The ferrite core of the speaker cables should be on side of the monitor. Use the supplied cable supports to hold the wires up so that nothing can be placed on them.

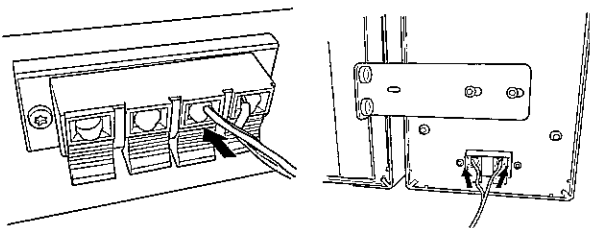


It is suggested that another person hold the speakers in place while you tighten the hardware to attach the speakers.

- 1 Match the left and right speakers to the corresponding side of the monitor. When properly attached and viewed from the rear, the attachment plates point towards the monitor and the speaker connection terminals are at the bottom of the speakers.
- 2 Attach a speaker with the knurled screws and washers for one side of the monitor. Before tightening the screws, align the top edge of the speaker with the top edge of the monitor. Hold the speaker in this position and tighten the screws.



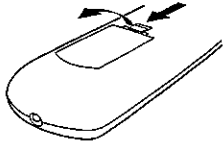
- 3 Repeat Step 2 for the remaining speaker.
- 4 Connect the speaker wires for each speaker to the audio out terminal on the monitor, matching red and black wires with the corresponding red and black terminals.



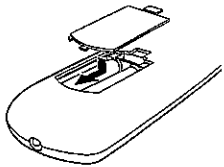
## Step 2

### STEP 2: Install batteries

- 1 Remove the battery cover by pulling it in the direction of the arrow.



- 2 Install two AAA, 1.5 volt batteries so that the + and - marks on the batteries match the + and - marks inside the battery compartment.



- 3 Close the battery compartment cover.

#### Note:

The normal life of batteries should be from nine to ten months. Dead batteries may leak and damage the unit. Replace the batteries when the monitor set shows the following symptoms:

- Operation is unsteady or erratic.
- Monitor does not respond to the remote control.

## Step 3

### STEP 3: Installation

There are various types of connections depending on the equipment you have or its particular use. Perform the connections to get the optimum picture quality according to the input function prepared for each AV terminal.

AV1 has RGB and composite video signal inputs and monitor output.

Following connection examples are our recommended standard connections. For further information, please consult your local dealer.

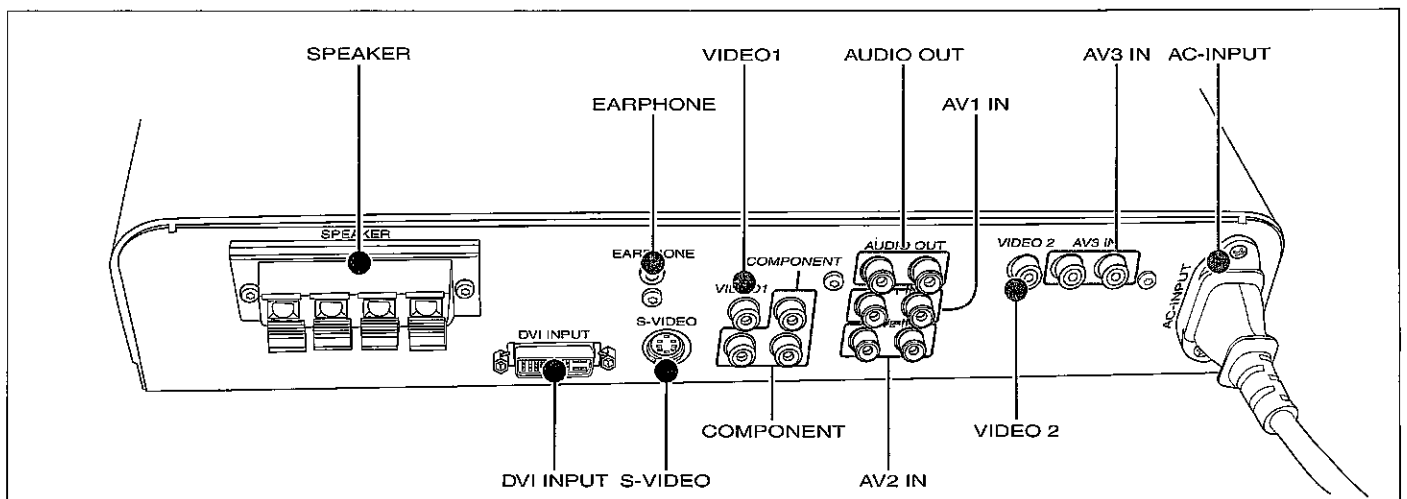
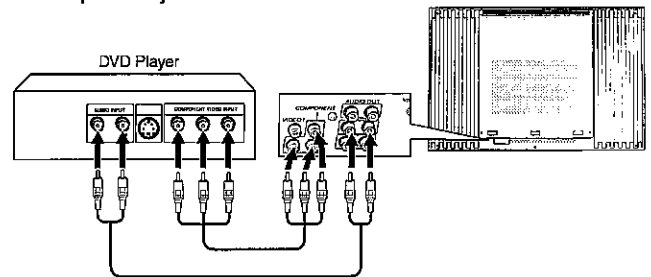
#### ● Using AUDIO/VIDEO IN jacks (AV1, AV2, AV3)

You can connect audio and video cables from other devices to the AUDIO/VIDEO IN jacks.

#### AV1

Connect component video device cables (Y/Cb/Cr) and audio from high-definition DVD players and other devices.

- 1 Turn off the monitor and the device you wish to connect.
- 2 Connect a DVD or other digital device video out to the monitor component video (AV1) in (Y/Cb/Cr) jacks.
- 3 Connect the DVD audio out to the monitor component audio in (AV1/L/R) jacks.
- 4 Turn on both the monitor and the external device.
- 5 Press INPUT to select the programme source: monitor signal or signal for the equipment you have connected to the component jacks.

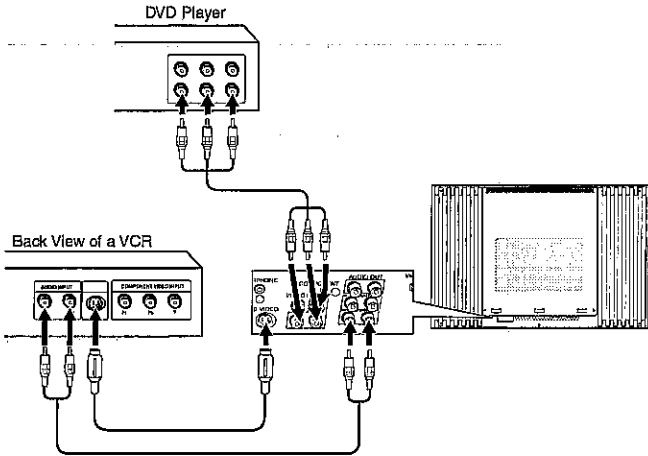


## INSTALLATION

### AV2/AV3

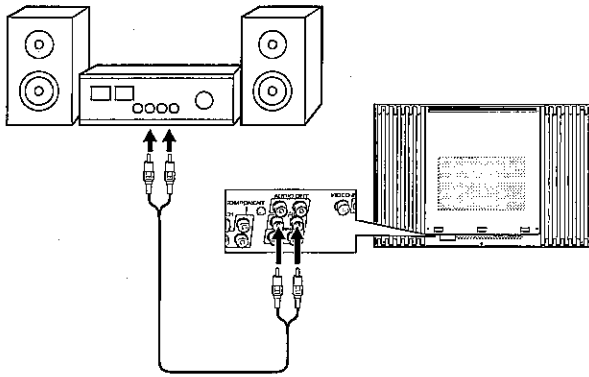
Connect normal video or S-Video device cables and audio from a VCR, DVD or other device.

- 1 Turn off the monitor and the device you wish to connect.
- 2 Connect the VCR, DVD or other device audio/video out to monitor audio input (AV2/AV3)
- 3 Connect VCR, DVD or other device S-Video out to the monitor S-Video in jack.
- 4 Turn on the both the monitor and the external device.
- 5 Press INPUT to select the programme source: Signal from the device you have just connect to the AV2 or AV3.



### Using AUDIO OUT jacks

Connect audio output to the audio input (L/R) of an external device for recording.

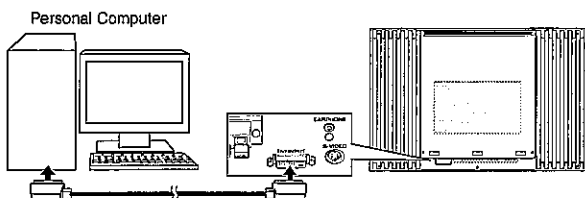


### Note:

- When the monitor speakers are in the OFF mode sound is sent through the AUDIO OUT jacks only.
- You can also connect audio output to a stereo amplifier audio in (L/R).

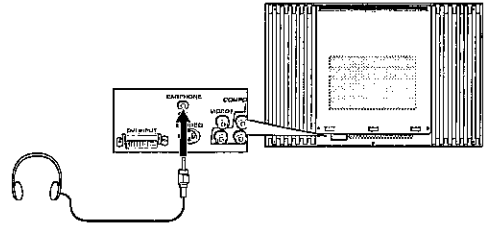
### Connecting a computer

Analog or digital RGB input from a computer can be displayed. Connect a computer with a DVI cable to the DVI connector on the monitor.



### Connecting earphones

Plug a earphone mini-plug into the EARPHONE jack.



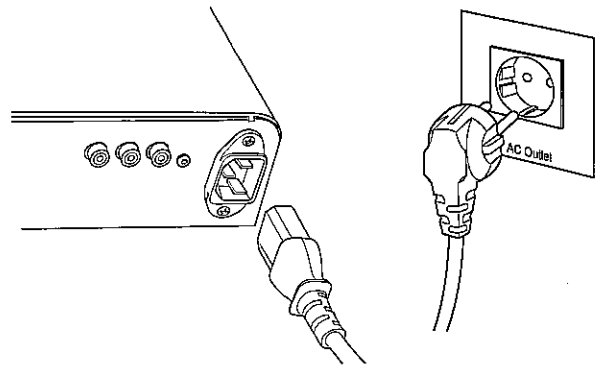
### Notes:

Earphones are not included in the supplied accessories.

## Step 4

### Step 4: Connecting the AC cord

Connect the power cord of the monitor set to mains and the monitor.



### Note:

The monitor is prepared for a mains voltage of AC100–240 V, 50–60 Hz. If you are not going to use the monitor for an extended period of time, it is advisable to disconnect the power cord from the power outlet.



### Warning!

High voltage is used in the operation of this monitor. Refer all servicing to qualified service personnel.



### High Voltage

The monitor should be placed close to the mains so that power can be supplied without the use of an extension cord. It is important to be able to quickly and easily remove the plug from the mains.

# CONTROLS

## ■ Remote control

**Display:** Press to display the On-Screen Display (OSD) of information.

**PC:** Press to switch between digital and analog input for the DVI connector.

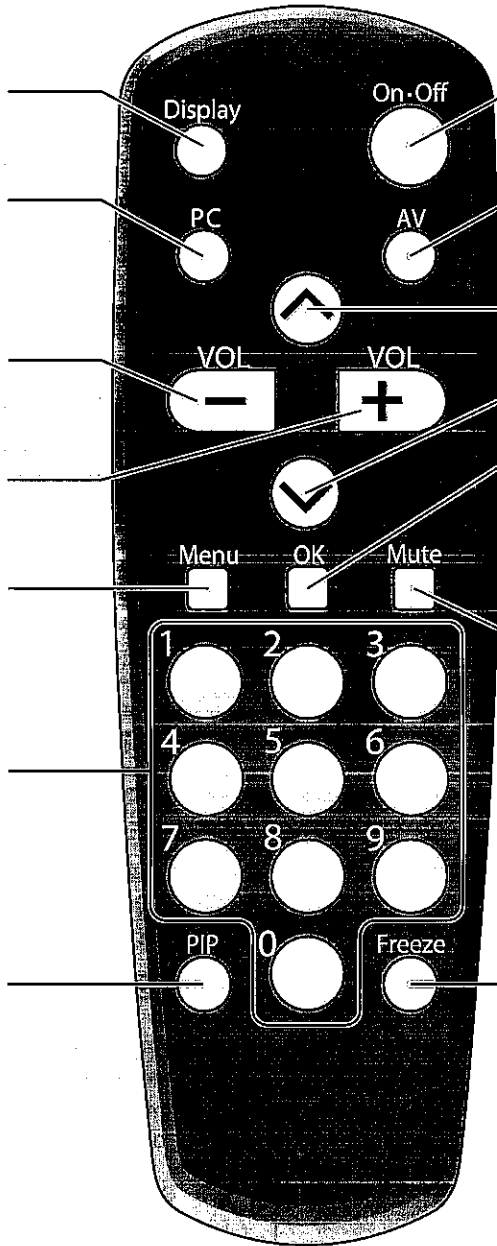
**VOL-:** Press to decrease volume. While the OSD is displayed, press to move the on-screen selection left.

**VOL+:** Press to increase volume. While the OSD is displayed, press to move the on-screen selection right or to activate function.

**Menu:** Press to display the OSD.

**Number keys:** Press to enter monitor ID code.

**PIP:** Press to display a picture-in-a-picture (PIP). Repeatedly pressing PIP changes the size of the PIP and switches PIP off.



**On-Off:** Press to turn the monitor on or place it in Standby.

**AV:** Press to choose an input: AV1, AV2 or AV3.

**^:** While the OSD is displayed, press to move the on-screen selection up.

**v:** While an OSD the displayed, press to move the on-screen selection down.

**OK:** Confirm selections and adjustment. User Adjust displays while the OSD is not displayed.

**Mute:** Press to mute or resume sound output.

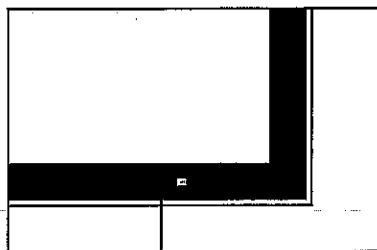
**Freeze:** Press to display a still image of the video showing on the screen. Press again to return to normal display.

# GENERAL OPERATION

## ■ Basic Operation

To turn on, press **On-Off**. The monitor's Power LED changes to green.

To turn off, press **On-Off**. The unit goes into Standby and the monitor's Power LED changes to amber.



Power LED

### Volume

Press **VOL+**/**VOL-** to turn the volume up/down.

### Mute

To mute the sound, press **Mute**.

### Display

The current mode can be displayed on the screen.

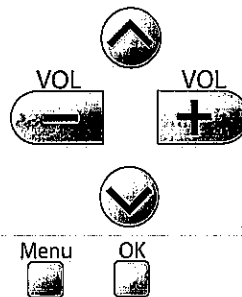
To display the current mode, press **Display**.

To clear the display, press and hold **Display** for about three seconds.

## ■ Using the on-screen display (OSD)

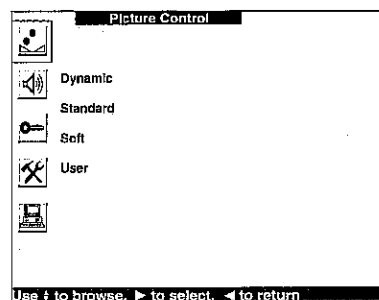
The on-screen display displays the current settings and allows you to select and adjust all the features of your monitor.

### ● Basic OSD operation



Press  
Menu

To  
Display the on-screen display



✓/∧

Select a desired function

-/+

Select the desired setting of the function

>/OK

Confirm a setting

Menu

Confirm a setting and/or return to normal monitor display

When the on-screen display is present, what buttons can be used and how to use them is displayed at the bottom of each screen.





• **PIP Size**

There are three PIP sizes; Small, Medium and Large. When a PC is the source Side-by-side display of the PIP and the video image is possible.

While **PIP** is selected:

- 1 Press + to choose **PIP Size**.
- 2 Press + to highlight sizes,
- 3 Press ^/v to scroll through the sizes.
- 4 Press + to confirm.

• **PIP Position**

You can control the placement of the PIP on the screen.

While **PIP** is selected:

- 1 Press + to choose **PIP Position**.
- 2 Press + to enable positioning.
- 3 Press +/-/^/v to move the PIP to the desired position.
- 4 Press **OK** or **Menu** to confirm.

**OSD Transparency**

You can control the transparency of the OSD above the monitor image.

While **Feature** is selected:

- 1 Press + to choose **OSD Transparency**.
- 2 Press + then press -/+ to adjust the transparency.
- 3 Press **OK** or **Menu** to confirm

**Backlight**

You can control the intensity of the LCD backlight.

While **Feature** is selected:

- 1 Press + to choose **Backlight**.
- 2 Press + then press -/+ to adjust backlight strength.
- 3 Press **OK** or **Menu** to confirm.

**Monitor ID Code**

You can assign and select a monitor by ID code from 1 – 30.

While **Feature** is selected:

- 1 Press + to choose **Monitor ID**.
- 2 Press + again to highlight **off**.
- 3 Press ^/v to change from **off** to any number between 1 and 30 in one-step increments.
- 4 Press + to confirm your selection.

**Note:**

The next time you turn on the monitor by pressing **On-Off** or any button other than **Display**, the Monitor ID select screen is displayed. Enter the monitor ID. If the number is 9 or less, press 0 (zero) then the number. For numbers over 9 press the two-digit number.

● **Preferences selection** 

There are number of preferences you can select.

**Video colour system**

You can select Auto or a specific video colour system used in your area. The colour systems are:

Auto, Pal, Pal-N, Pal-M, Pal 60, N443, N358, Secam

While Preference is selected:

- 1 Press + to choose **Video Colour System**, then press + to highlight one of the colour systems.
- 2 Press ^/v to select a colour system.
- 3 Press + to confirm.

**A/V Selection**

Set the type of input from external devices to inputs AV1, AV2 and/or AV3. The types of inputs are:

Video1, Video 2, S-Video, Component, HD Progressive

- 1 Choose **Preference**.
- 2 Press + to choose **A/V Selection** and + again to highlight the inputs.
- 3 Press ^/v to select **AV1**, **AV2** or **AV3**.
- 4 Press + to highlight the input types.
- 5 Press ^/v to select a specific input type.
- 6 Press + to confirm.

**Language**

You can select the language for the OSD and other information displayed on the screen.

The languages are:

English, Français, Español, Deutsch, Italiano, Dutch, Russian, Turkish

While Preference is selected:

- 1 Press + to choose **Language**, then press + to highlight the languages.
- 2 Press ^/v to select a specific language.
- 3 Press + to confirm.

**OSD Time out**

Choose the amount of time in seconds the OSD remains on screen from 5 to 60 seconds.

While Preference is selected:

- 1 Press + to choose **OSD Time out**, the press + to enter the adjustment.
- 2 Press +/- to adjust the amount of time.
- 3 Press **Menu** or **OK** to confirm.

**Recall Factory Setting**

You can reset all settings to the factory default settings.

While **Preference** is selected:

- 1 Press + to choose **Recall Factory Setting**, the press +.
- 2 Press ^/v to select **Yes** or **No**.
- 3 Press + to confirm.

● **PC settings** 

These setting control display of the image from a PC when connected through the DVI connector.

**Brightness**

You can adjust the brightness of the image.

While **PC** is selected:

- 1 Press + to choose **Brightness**, then press +.
- 2 Press +/- to adjust the brightness.
- 3 Press **Menu** or **OK** to confirm.

**Contrast**

You can adjust the contrast of the image.

While **PC** is selected:

- 1 Press + to choose **Contrast**, then press +.
- 2 Press +/- to adjust the contrast.
- 3 Press **Menu** or **OK** to confirm.

**Image Adjust**

You can adjust the display of the image.

• **Auto Setup**

After you connect the PC, use this to automatically make settings for proper display.

While **PC** is selected:

Press + to choose **Auto Setup**, then press +. Auto setup begins and stops automatically when finished.

• **Pitch**

You can adjust the Pitch of the image.

While **PC** is selected:

- 1 Press + to choose **Pitch**, then press +.
- 2 Press +/- to adjust the pitch.
- 3 Press **Menu** or **OK** to confirm.

• **Phase**

You can adjust the **Phase** of the image.

While **PC** is selected:

- 1 Press + to choose **Phase**, then press +.
- 2 Press +/- to adjust the phase.
- 3 Press **Menu** or **OK** to confirm.

### • Position

You can adjust the image position.

While **PC** is selected:

- 1 Press + to choose **Position**.
- 2 Press + to enable positioning.
- 3 Press +/-/^/∨ to move the image to the desired position.
- 4 Press **Menu** or **OK** to confirm.

### Aspect Ratio

You can choose between full screen or the original ratio display of the source.

While **PC** is selected:

- 1 Press + to choose **Aspect Ratio**.
- 2 Press + to move to the selections.
- 3 Press ^/∨ to select **Full Screen** or **Original Ratio**.
- 4 Press + to confirm.

### Color Temperature

You can choose from **Cool** (bluish), **Neutral** (unadjusted), **Warm** (reddish) or **User Adjust** (colours adjustable) display.

While **PC** is selected:

- 1 Press + to choose **Color temperature**.
- 2 Press + to move to the selections.
- 3 Press ^/∨ to select the desired colour temperature.
- 4 For **Cool**, **Neutral** or **Warm**, press + to confirm. The setting is finished.
- 5 For **User Adjust**, press + to move to colours.
- 6 Press ^/∨ to select a colour, **Red**, **Green** or **Blue**, then press +.
- 7 Press +/- to adjust the level of the colour.
- 8 Press **Menu** or **OK** to confirm.

### Mode Info

You can display the dimensions in pixels of the source image.

While **PC** is selected:

- 1 Press + to choose **Mode Info**.
- 2 Press +. The dimensions are displayed.

### ■ Helpful hints

No picture, no sound

- Is the monitor connected to the mains?

Poor picture, sound OK?

- Adjust Brightness control.
- Check connections on back of set.
- Check signal cable for broken wires.

No colour, picture OK?

- Adjust Color control.
- Check connections on back of set.
- Check signal cable for broken wires.

The following faults are not caused by the monitor:

### Interference

Interference could be caused by electrical appliances, car ignition systems or other sources. This should be a temporary condition, but if the interference persists, contact your dealer.

# SPECIFICATIONS

## ■ Specifications

LCD Panel	Type Screen Size Aspect ratio Resolution Viewing angle Brightness Contrast ratio	29.0" Wide visual size 16:9 WXGA (1280 x 768 dots) H: 170°/ V: 170° 450 cd/m <sup>2</sup> 600:1
Terminals (input)	CVBS S-Video Component Y Cb Cr DVI/I  Audio	2 x RCA jack (1.0 Vpp; 75 Ω) 4 Pin DIN connector (1.0 Vpp, C; 0.3 Vpp; 75 Ω) 3 x RCA jack (1.0 Vpp; 75 Ω) 1 x DVI/I compliant (Analogue RGB signal (0.7 Vpp) & Digital RGB signal (TMDS)) Stereo analogue (0.5 V <sub>rm</sub> ; 20K Ω) SRS WOW Surround* Earphone
Others	OSD language Operating Environment Temperature Humidity Power source Power Consumption Regulation compliance Dimensions (W x H x D mm) Weight	English, German, French, Spanish, Italian, Dutch, Russian, Turkish  5 – 35°C (in operation), –20 – 60°C (not in operation) 30 – 85%RH (without condensation) 100 – 240V, 50/60Hz 135W/1.8W (stand by) CE 736 x 483 x 103 mm 23 kg
Accessories		Remote control (incl. AAA batteries x 2) AC cable Instruction Manual
Options		Speaker



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Specifications subject to change without notice.

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