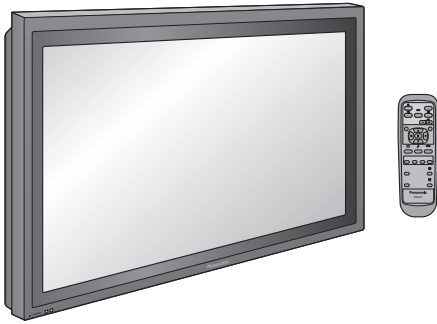


Panasonic[®]

Operating Instructions LCD Display

Model No. **TH-32LHD7B**



The illustration shown is an image.

Please read these instructions before operating your set and retain them for future reference.

English

TQB0E0178-1

Dear Panasonic Customer

Welcome to the Panasonic family of customers. We hope that you will have many years of enjoyment from your new LCD Display.

To obtain maximum benefit from your set, please read these Instructions before making any adjustments, and retain them for future reference.

Retain your purchase receipt also, and note down the model number and serial number of your set in the space provided on the rear cover of these instructions.

Visit our Panasonic Web Site <http://www.panasonic.co.jp/global/>

Table of Contents

Important Safety Notice	3	Reduces power consumption	27
Safety Precautions	4	Customizing the Input labels	27
Accessories	7	Setup for Input Signals	28
Accessories Supply	7	Component / RGB-in select.....	28
Remote Control Batteries	7	3D Y/C Filter	28
Connections	8	Colour system / Panasonic Auto	29
PC Input Terminals connection.....	9	Cinema reality / P-NR.....	29
SERIAL Terminals connection	10	Sync	30
AV & COMPONENT connection.....	11	H-Freq. (kHz) / V-Freq. (Hz).....	30
RGB signal (R, G, B, HD, VD).....	11	Shipping condition	31
Power On / Off	12	Troubleshooting	32
Initial selections	13	VIDEO/COMPONENT/RGB/PC input signals	33
Selecting the input signal	13	Specifications	34
Selecting the On-Screen Menu Language	13		
Basic Controls	14		
On-Screen Menu Displays	16		
ASPECT Controls	18		
Adjusting Picture Pos. / Size	19		
MULTI PIP	20		
Picture Adjustments	21		
Advanced settings	22		
Sound Adjustment	23		
Mute	23		
Digital Zoom	24		
PRESENT TIME Setup / Set up TIMER	25		
PRESENT TIME Setup.....	25		
Set up TIMER	26		

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Important Safety Notice

WARNING

- 1) To prevent damage which may result in fire or shock hazard, do not expose this appliance to dripping or splashing.
Do not place containers with water (flower vase, cups, cosmetics, etc.) above the set. (including on shelves above, etc.)
No naked flame sources, such as lighted candles, should be placed on / above the set.
- 2) To prevent electric shock, do not remove cover. No user serviceable parts inside. Refer servicing to qualified service personnel.
- 3) Do not remove the earthing pin on the power plug. This apparatus is equipped with a three pin earthing-type power plug. This plug will only fit an earthing-type power outlet. This is a safety feature. If you are unable to insert the plug into the outlet, contact an electrician.
Do not defeat the purpose of the earthing plug.
- 4) To prevent electric shock, ensure the earthing pin on the AC cord power plug is securely connected.

CAUTION

This appliance is intended for use in environments which are relatively free of electromagnetic fields. Using this appliance near sources of strong electromagnetic fields or where electrical noise may overlap with the input signals could cause the picture and sound to wobble or cause interference such as noise to appear. To avoid the possibility of harm to this appliance, keep it away from sources of strong electromagnetic fields.

WARNING

This is a class B product. In a domestic environment this product may cause radio interference in which case you may be required to take adequate measures.

IMPORTANT: THE MOULDED PLUG

FOR YOUR SAFETY, PLEASE READ THE FOLLOWING TEXT CAREFULLY.

This appliance is supplied with a moulded three pin mains plug for your safety and convenience. A 5 amp fuse is fitted in this plug. Shall the fuse need to be replaced, please ensure that the replacement fuse has a rating of 5 amps and that it is approved by ASTA or BSI to BS1362.

Check for the ASTA mark  or the BSI mark  on the body of the fuse.

If the plug contains a removable fuse cover, you must ensure that it is refitted when the fuse is replaced.

If you lose the fuse cover the plug must not be used until a replacement cover is obtained.

A replacement fuse cover can be purchased from your local Panasonic Dealer.

If the fitted moulded plug is unsuitable for the socket outlet in your home, then the fuse shall be removed and the plug cut off and disposed of safely. There is a danger of severe electrical shock if the cut off plug is inserted into any 13 amp socket.

If a new plug is to be fitted, please observe the wiring code as shown below.

If in any doubt, please consult a qualified electrician.

WARNING : — THIS APPARATUS MUST BE EARTHED.

IMPORTANT: —The wires in this mains lead are coloured in accordance with the following code: —

Green-and-Yellow : Earth

Blue: Neutral Brown: Live

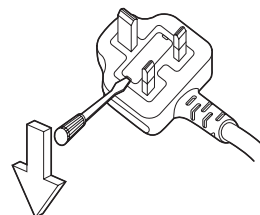
As the colours of the wire in the mains lead of this appliance may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows.

The wire which is coloured GREEN-AND-YELLOW must be connected to the terminal in the plug which is marked with the letter E or by the Earth symbol  or coloured GREEN or GREEN-AND-YELLOW.

The wire which is coloured BLUE must be connected to the terminal in the plug which is marked with the letter N or coloured BLACK.

The wire which is coloured BROWN must be connected to the terminal in the plug which is marked with the letter L or coloured RED.

How to replace the fuse. Open the fuse compartment with a screwdriver and replace the fuse.



Safety Precautions

WARNING

■ Setup

This LCD Display is for use only with the following optional accessories. Use with any other type of optional accessories may cause instability which could result in the possibility of injury.

(All of the following accessories are manufactured by Matsushita Electric Industrial Co., Ltd.)

- Speakers..... TY-SP32L7W-K (Black), TY-SP32L7W-S (Silver)
- Pedestal..... TY-ST32L7-K (Black), TY-ST32L7-S (Silver)
- Wall-hanging bracket (angled)..... TY-WK32LR1S
- BNC Component Video Terminal Board TY-42TM6A
- BNC Composite Video Terminal Board..... TY-42TM6B
- RCA Component Video Terminal Board TY-42TM6Z
- RCA Composite Video Terminal Board..... TY-42TM6V
- RGB (Digital) Terminal Board TY-42TM6D
- RGB Active Through Terminal Board..... TY-42TM6G
- PC Input Terminal Board..... TY-42TM6P
- Composite / Component Video Terminal Board..... TY-42TM6Y
- SDI Terminal Board..... TY-FB7SD
- HD-SDI Terminal Board TY-FB7HD
- HDMI Terminal Board TY-FB7HM
- Wireless Presentation Board TY-FB7WPE

Always be sure to ask a qualified technician to carry out set-up.

Do not leave unused small parts or similar within the reach of young children.

There is a risk that they may accidentally swallow them. Be equally careful about packaging materials and plastic sheets, etc.

- If you think a child may have swallowed such items, be sure to consult with a physician immediately.

Do not place the LCD Display on sloped or unstable surfaces.

- The LCD Display may fall off or tip over.

Do not place any objects on top of the LCD Display.

- If water is spilled onto the LCD Display or foreign objects get inside it, a short-circuit may occur which could result in fire or electric shock. If any foreign objects get inside the LCD Display, please consult your local Panasonic dealer.

Ventilation should not be impeded by covering the ventilation openings with items such as newspapers, table cloths and curtains.

For sufficient ventilation;

If using the pedestal (optional accessory) for the LCD Display, leave a space of at least 10 cm at the top, left and right, at least 5 cm at the bottom, and at least 7 cm at the rear. If using some other setting-up method, leave a space of at least 10 cm at the top, bottom, left and right, and at least 6 cm at the rear.

■ When using the LCD Display

The LCD Display is designed to operate on 220 - 240 V AC, 50/60 Hz.

Do not cover the ventilation holes.

- Doing so may cause the LCD Display to overheat, which can cause fire or damage to the LCD Display.

Do not stick any foreign objects into the LCD Display.

- Do not insert any metal or flammable objects into the ventilations holes or drop them onto the LCD Display, as doing so can cause fire or electric shock.

Do not remove the cover or modify it in any way.

- High voltages which can cause severe electric shocks are present inside the LCD Display. For any inspection, adjustment and repair work, please contact your local Panasonic dealer.

Ensure that the mains plug is easily accessible.

Securely insert the power supply plug as far as it will go.

- If the plug is not fully inserted, heat may be generated which could cause fire. If the plug is damaged or the wall socket is loose, they shall not be used.

Do not handle the power supply plug with wet hands.

- Doing so may cause electric shocks.

Do not do anything that may damage the power cable. When disconnecting the power cable, pull on the plug body, not the cable.

- Do not damage the cable, make any modifications to it, place heavy objects on top of it, heat it, place it near any hot objects, twist it, bend it excessively or pull it. To do so may cause fire and electric shock. If the power cable is damaged, have it repaired at your local Panasonic dealer.

If the LCD Display is not going to be used for any prolonged length of time, unplug the power supply plug from the wall outlet.

■ If problems occur during use

If a problem occurs (such as no picture or no sound), or if smoke or an abnormal odour starts to come out from the LCD Display, immediately unplug the power supply plug from the wall outlet.

- If you continue to use the LCD Display in this condition, fire or electric shock could result. After checking that the smoke has stopped, contact your local Panasonic dealer so that the necessary repairs can be made. Repairing the LCD Display yourself is extremely dangerous, and shall never be done.

If water or foreign objects get inside the LCD Display, if the LCD Display is dropped, or if the cabinet becomes damages, disconnect the power supply plug immediately.

- A short circuit may occur, which could cause fire. Contact your local Panasonic dealer for any repairs that need to be made.

Safety Precautions

CAUTION

■ When using the LCD Display

Do not bring your hands, face or objects close to the ventilation holes of the LCD Display.

- Heated air comes out from the ventilation holes at the top of LCD Display will be hot. Do not bring your hands or face, or objects which cannot withstand heat, close to this port, otherwise burns or deformation could result.

Be sure to disconnect all cables before moving the LCD Display.

- If the LCD Display is moved while some of the cables are still connected, the cables may become damaged, and fire or electric shock could result.

Disconnect the power supply plug from the wall socket as a safety precaution before carrying out any cleaning.

- Electric shocks can result if this is not done.

Clean the power cable regularly to prevent it becoming dusty.

- If dust built up on the power cord plug, the resultant humidity can damage the insulation, which could result in fire. Pull the power cord plug out from the wall outlet and wipe the mains lead with a dry cloth.

This LCD Display radiates infrared rays, therefore it may affect other infrared communication equipment. Install your infrared sensor in a place away from direct or reflected light from your LCD Display.

Cleaning and maintenance

The front of the display panel has been specially treated. Wipe the panel surface gently using only a cleaning cloth or a soft, lint-free cloth.

- If the surface is particularly dirty, wipe with a soft, lint-free cloth which has been soaked in pure water or water to which a small amount of neutral detergent has been added, and then wipe it evenly with a dry cloth of the same type until the surface is dry.
- Do not scratch or hit the surface of the panel with fingernails or other hard objects, otherwise the surface may become damaged. Furthermore, avoid contact with volatile substances such as insect sprays, solvents and thinner, otherwise the quality of the surface may be adversely affected.

If the cabinet becomes dirty, wipe it with a soft, dry cloth.

- If the cabinet is particularly dirty, soak the cloth in water to which a small amount of neutral detergent has been added and then wring the cloth dry. Use this cloth to wipe the cabinet, and then wipe it dry with a dry cloth.
- Do not allow any detergent to come into direct contact with the surface of the LCD Display. If water droplets get inside the unit, operating problems may result.
- Avoid contact with volatile substances such as insect sprays, solvents and thinner, otherwise the quality of the cabinet surface may be adversely affected or the coating may peel off. Furthermore, do not leave it for long periods in contact with articles made from rubber or PVC.

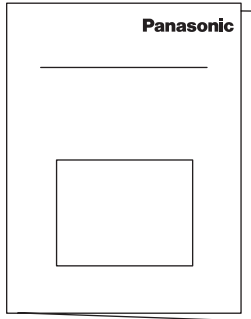
Accessories

Accessories Supply

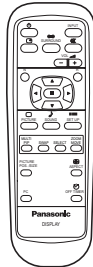
Check that you have the accessories and items shown



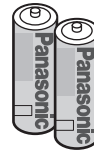
Operating Instruction book



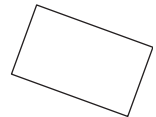
Remote Control Transmitter
EUR646538



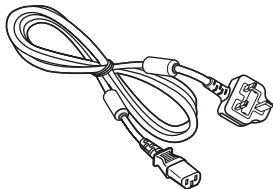
Batteries for the Remote Control Transmitter
(2 × R6 (UM3) Size)



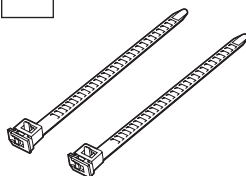
Pan European Guarantee Card



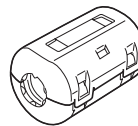
Power supply cord



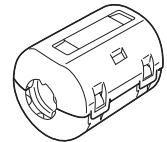
Fixing bands × 2



Ferrite core (Small size) × 2



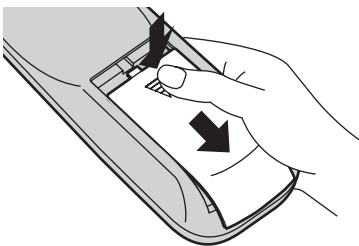
Ferrite core (Large size) × 2



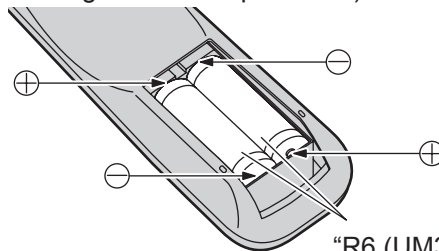
Remote Control Batteries

Requires two R6 batteries.

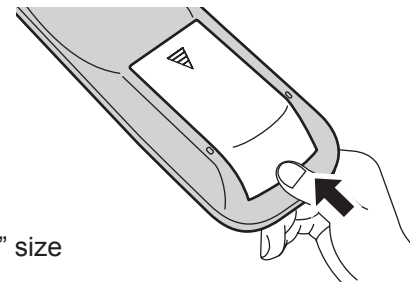
1. Turn the transmitter face down. Press and slide off the battery cover.



2. Install the batteries as shown in the battery compartment. (Polarity + or – must match the markings in the compartment.)



3. Replace the cover and slide in reverse until the lock snaps.



Helpful Hint:

For frequent remote control users, replace old batteries with Alkaline batteries for longer life.

⚠ Precaution on battery use

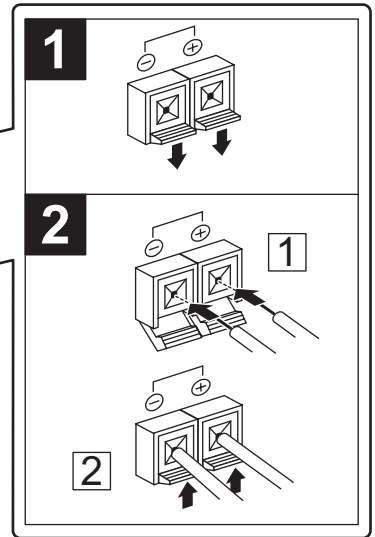
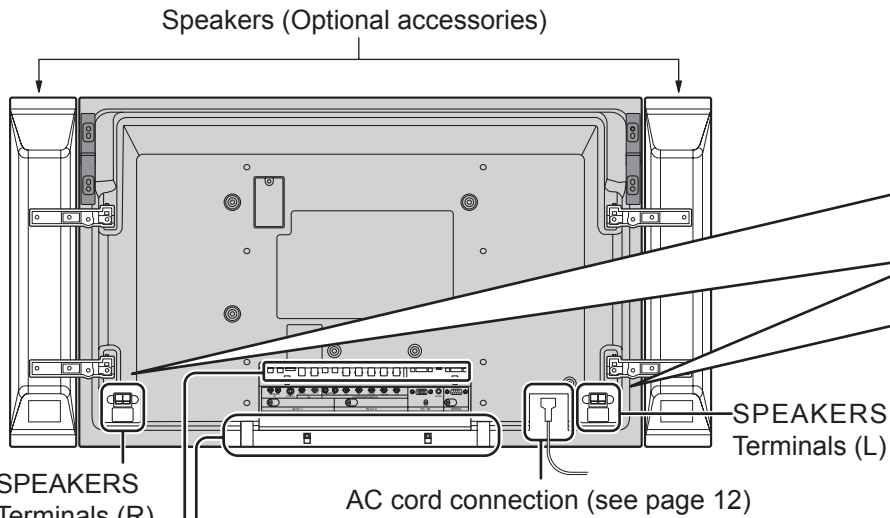
Incorrect installation can cause battery leakage and corrosion that will damage the remote control transmitter. Disposal of batteries should be in an environment-friendly manner.

Observe the following precaution:

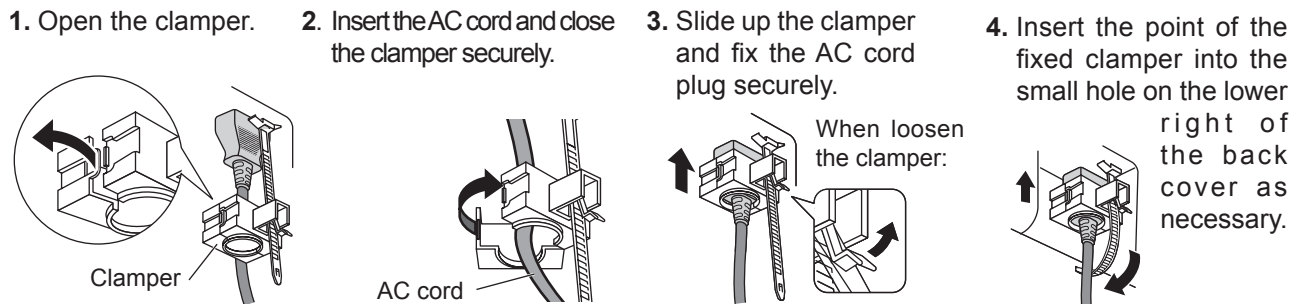
1. Batteries shall always be replaced as a pair. Always use new batteries when replacing the old set.
2. Do not combine a used battery with a new one.
3. Do not mix battery types (example: "Zinc Carbon" with "Alkaline").
4. Do not attempt to charge, short-circuit, disassemble, heat or burn used batteries.
5. Battery replacement is necessary when remote control acts sporadically or stops operating the LCD Display set.

Connections

When connecting the speakers, be sure to use only the optional accessory speakers. Refer to the speaker's Installation Manual for details on speaker installation.



- AC cord fixing

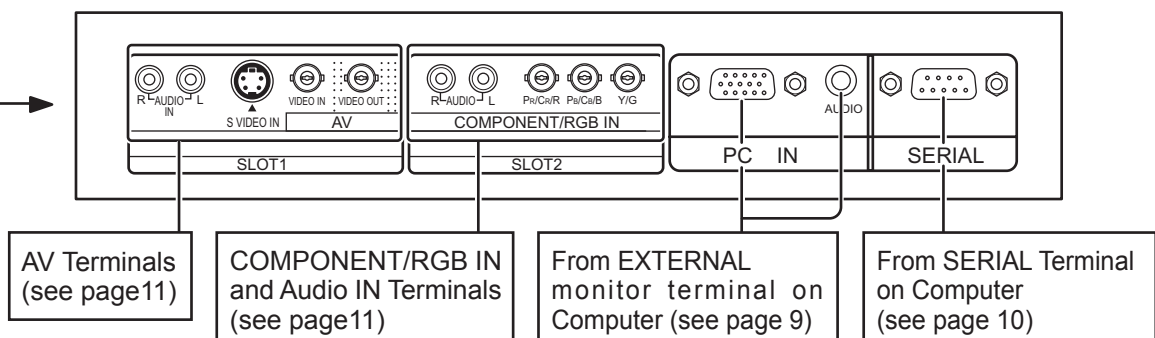
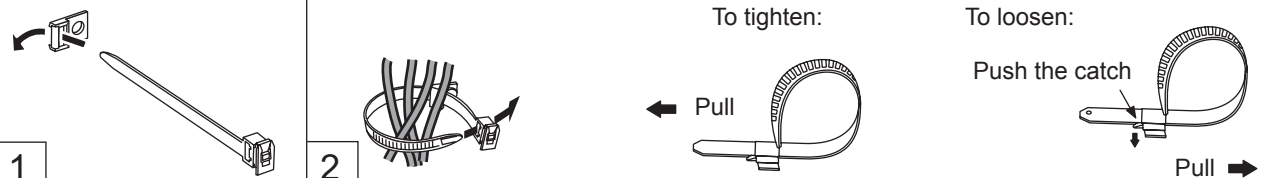


Note: The power plug in the illustration may not be the type fitted to your set.

- Cable fixing bands

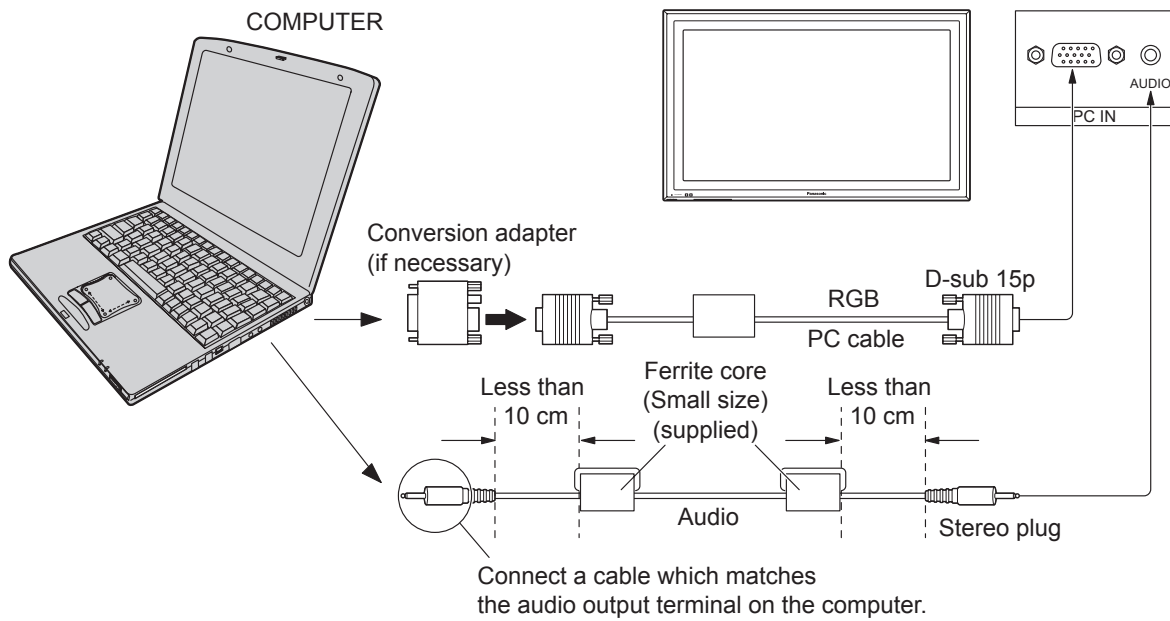
Secure any excess cables with bands as required.

Pass the attached cable fixing band through the clip as shown in the figure. To secure cables connected to Terminals, wrap the cable fixing band around them then pass the pointed end through the locking block, as shown in the figure. **While ensuring there is sufficient slack in cables to minimize stress (especially in the power cord), firmly bind all cables with the supplied fixing band.**

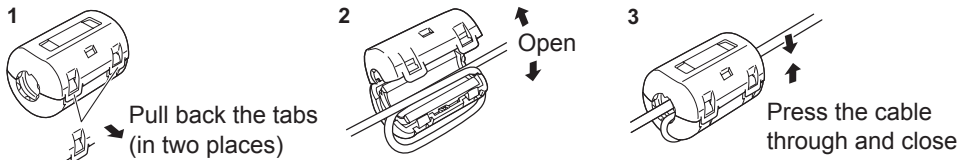


Note: At factory shipment, Terminal boards are installed in SLOT 1 and SLOT 2.

PC Input Terminals connection



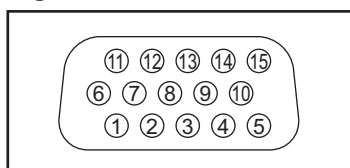
Installing the ferrite core (Small size)



Notes:

- Computer signals which can be input are those with a horizontal scanning frequency of 15 to 110 kHz and vertical scanning frequency of 48 to 120 Hz. (However, the image will not be displayed properly if the signals exceed 1,200 lines.)
- The display resolution is a maximum of 1,024 × 768 dots when the aspect mode is set to “4:3”, and 1,366 × 768 dots when the aspect mode is set to “16:9”. If the display resolution exceeds these maximums, it may not be possible to show fine detail with sufficient clarity.
- The PC input terminals are DDC1/2B-compatible. If the computer being connected is not DDC1/2B-compatible, you will need to make setting changes to the computer at the time of connection.
- Some PC models cannot be connected to the set.
- There is no need to use an adapter for computers with DOS/V compatible D-sub 15P terminal.
- The computer shown in the illustration is for example purposes only.
- Additional equipment and cables shown are not supplied with this set.
- Do not set the horizontal and vertical scanning frequencies for PC signals which are above or below the specified frequency range.

Signal Names for D-sub 15P Connector

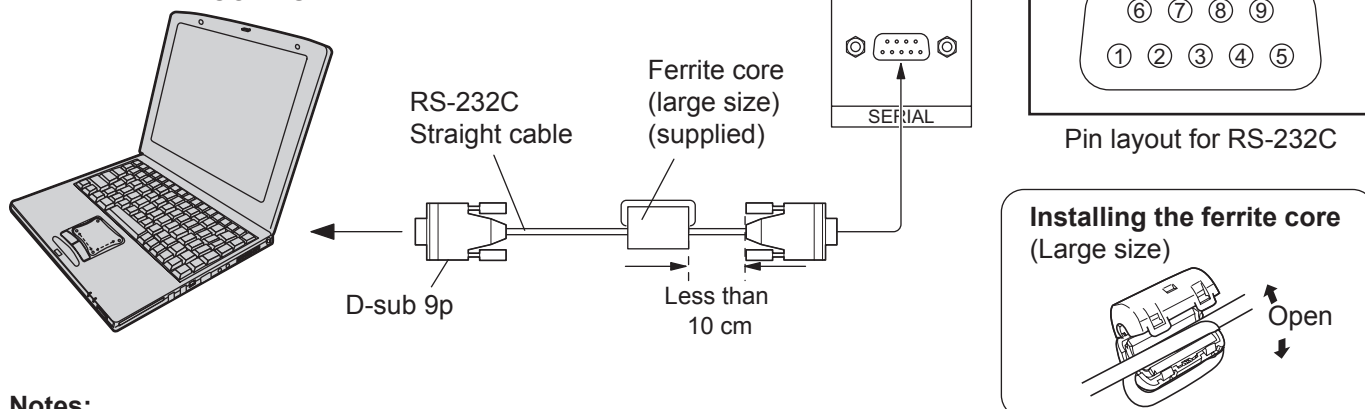


Pin Layout for PC Input Terminal

Pin No.	Signal Name	Pin No.	Signal Name	Pin No.	Signal Name
①	R (PR/CR)	⑥	GND (Ground)	⑪	GND (Ground)
②	G (Y)	⑦	GND (Ground)	⑫	SDA
③	B (PB/CB)	⑧	GND (Ground)	⑬	HD/SYNC
④	GND (Ground)	⑨	NC (not connected)	⑭	VD
⑤	GND (Ground)	⑩	GND (Ground)	⑮	SCL

SERIAL Terminals connection

The SERIAL terminal is used when the LCD Display is controlled by a computer.



Notes:

- Use the RS-232C cable to connect the computer to the LCD Display.
- The computer shown is for example purposes only.
- Additional equipment and cables shown are not supplied with this set.

The SERIAL terminal conforms to the RS-232C interface specification, so that the LCD Display can be controlled by a computer which is connected to this terminal.

The computer will require software which allows the sending and receiving of control data which satisfies the conditions given below. Use a computer application such as programming language software. Refer to the documentation for the computer application for details.

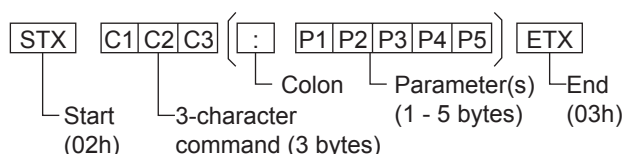
Communication parameters

Signal level	RS-232C compliant
Synchronization method	Asynchronous
Baud rate	9600 bps
Parity	None
Character length	8 bits
Stop bit	1 bit
Flow control	-

RS-232C Conversion cable	
D-sub 9-pin female	Details
②	R X D
③	T X D
⑤	GND
④ • ⑥	Non use
⑦	Shorted
⑧	
① • ⑨	NC

Basic format for control data

The transmission of control data from the computer starts with a STX signal, followed by the command, the parameters, and lastly an ETX signal in that order. If there are no parameters, then the parameter signal does not need to be sent.



Notes:

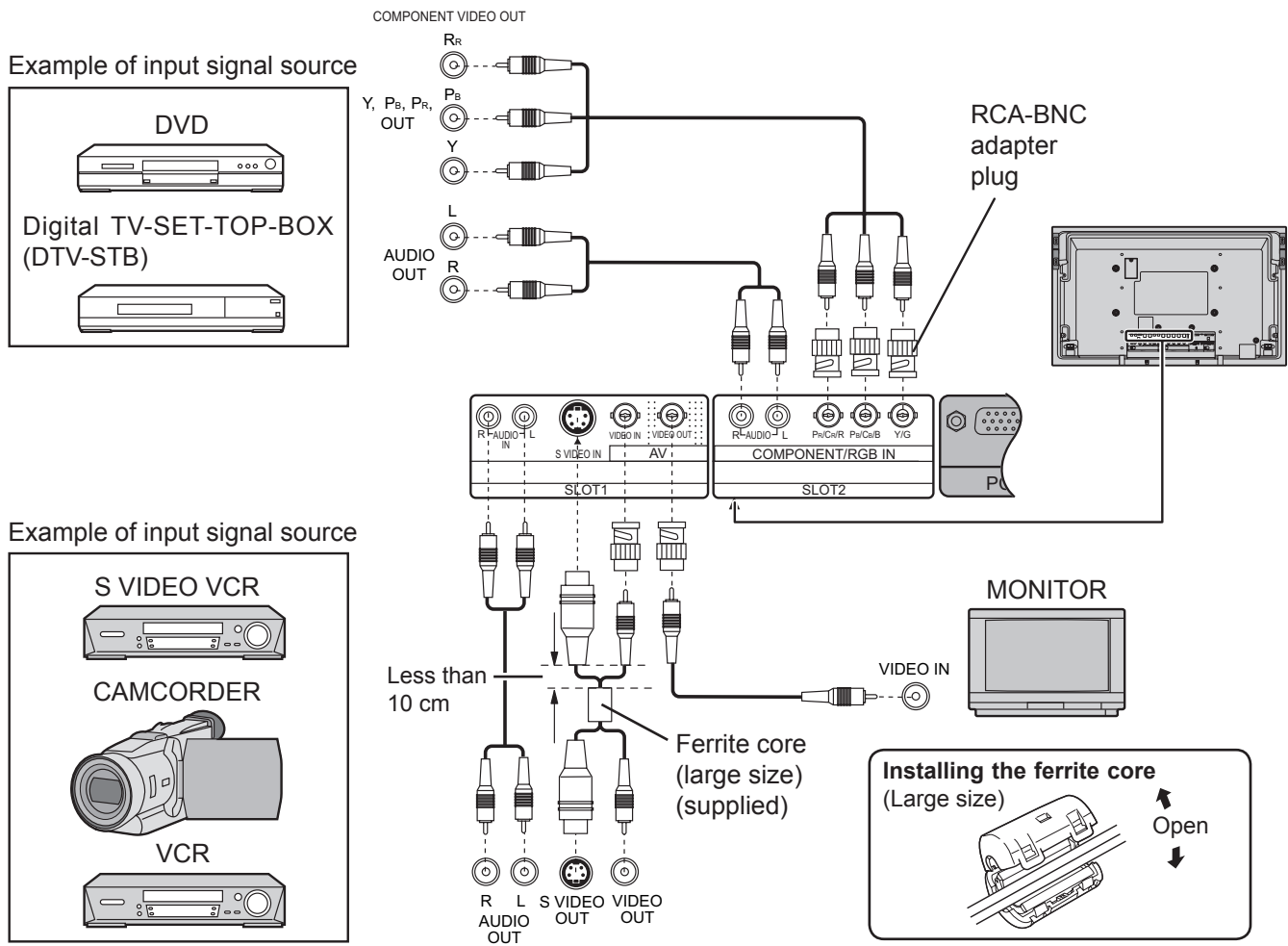
- If multiple commands are transmitted, be sure to wait for the response for the first command to come from this unit before sending the next command.
- If an incorrect command is sent by mistake, this unit will send an "ER401" command back to the computer.

Command

Command	Parameter	Control details
PON	None	Power ON
POF	None	Power OFF
AVL	**	Volume 00 - 63
AMT	0	Audio mute OFF
	1	Audio mute ON
IMS	None	Input select (toggle)
	SL1	Slot1 input
	SL2	Slot2 input
	PC1	PC input
DAM	None	Screen mode select (toggle)
	NORM	4 : 3
	ZOOM	Zoom
	FULL	16 : 9
	JUST	Just
	SELF	Panasonic Auto

With the power off, this display responds to PON command only.

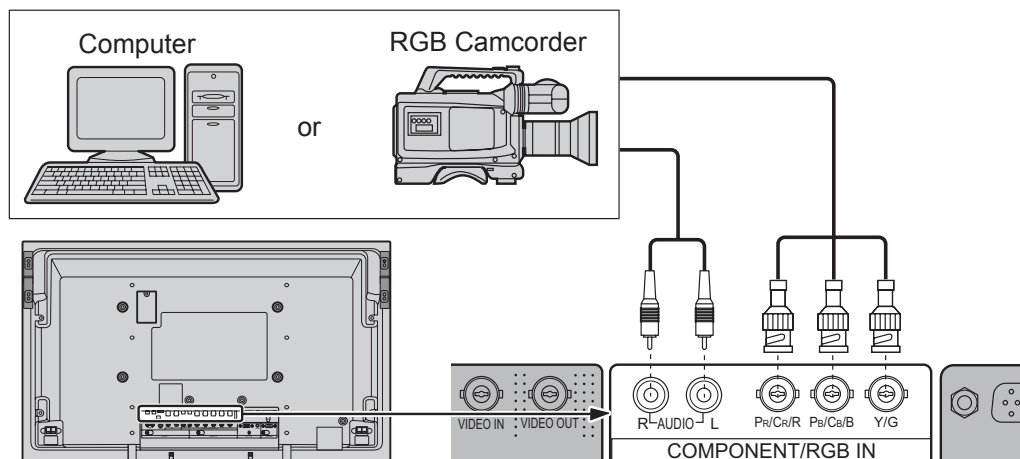
AV & COMPONENT connection



Notes:

- Change the “Component/RGB-in select” setting in the “Set up” menu to “Component”. (see page 28)
- Additional equipment, cables and adapter plugs shown are not supplied with this set.

RGB signal (R, G, B, HD, VD)



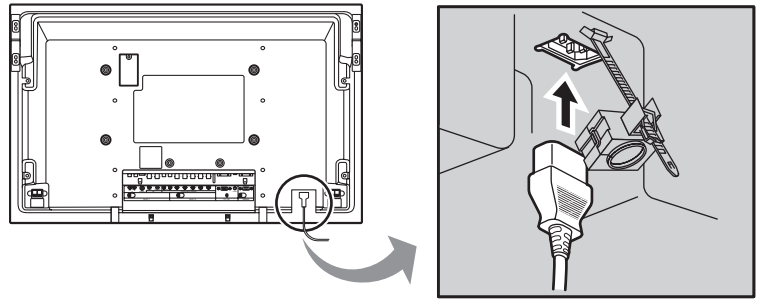
Notes:

- Change the “Component/RGB-in select” setting in the “Set up” menu to “RGB”. (see page 28)
- Additional equipment, cables and adapter plugs shown are not supplied with this set.

Power On / Off

Connecting the AC cord plug to the LCD Display.

Fix the AC cord plug securely to the LCD Display with the clamer. (see page 8)

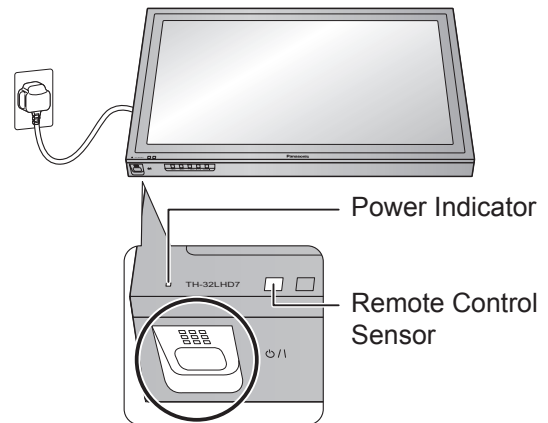


Connecting the plug to the Wall Outlet

Note:

Main plug types vary between countries. The power plug shown at right may, therefore, not be the type fitted to your set.

Press the Power switch on the LCD Display to turn the set on: Power-On.



Power Indicator: Green

Example: The screen below is displayed for a while after the LCD Display is turned on. (setting condition is an example.)

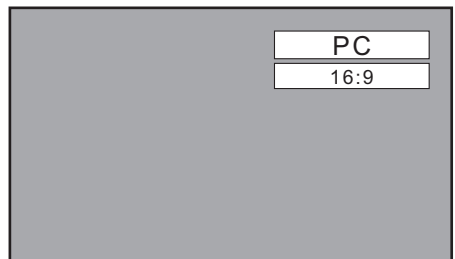
When the Power is turned on for the first time, the Language selection screen is displayed.


From the second time on, language selection can be done from the setup menu. (see page 13)

Select the desired language using the ▲ or ▼ button and press the ACTION (■) button.




From the second time on, the below screen is displayed for a while (setting condition is an example).




Press the  button on the remote control to turn the LCD Display off.

Power Indicator: Red (standby)

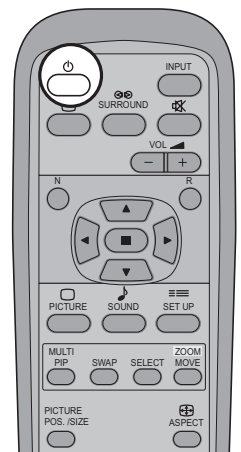
Press the  button on the remote control to turn the LCD Display on.

Power Indicator: Green

Turn the power to the LCD Display off by pressing the /| switch on the unit, when the LCD Display is on or in standby mode.

Note:

During operation of the power management function, the power indicator turns orange in the power off state.



Initial selections

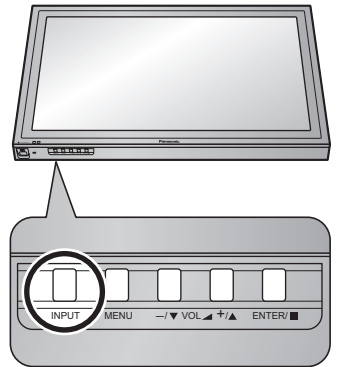
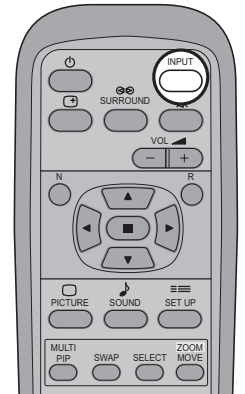
Selecting the input signal

Select the input signals to be connected by installing the optional Terminal Boards.



Press to select the input signal to be played back from the equipment which has been connected to the LCD Display.

Input signals will change as follows:



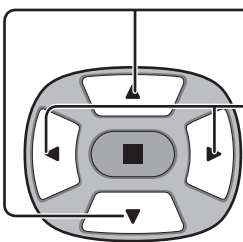
Notes:

- Selecting is also possible by pressing the INPUT button on the unit.
- Input terminal will not be selected if the terminal board is not installed into the SLOT.
- Select to match the signals from the source connected to the component/RGB input terminals. (see page 28)
- In 2 screen display, the same input mode cannot be selected for the main picture and sub picture.

Selecting the On-Screen Menu Language

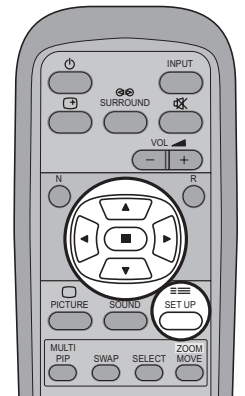


Press to display the Setup menu.



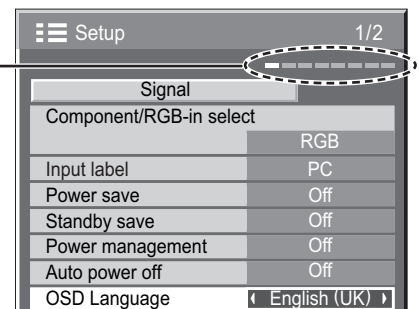
Press to select the OSD Language.

Press to select your preferred language.



■ Selectable languages

- English(UK)
- Deutsch
- Français
- Italiano
- Español
- ENGLISH(US)
- 中文.....(Chinese)
- 日本語.....(Japanese)



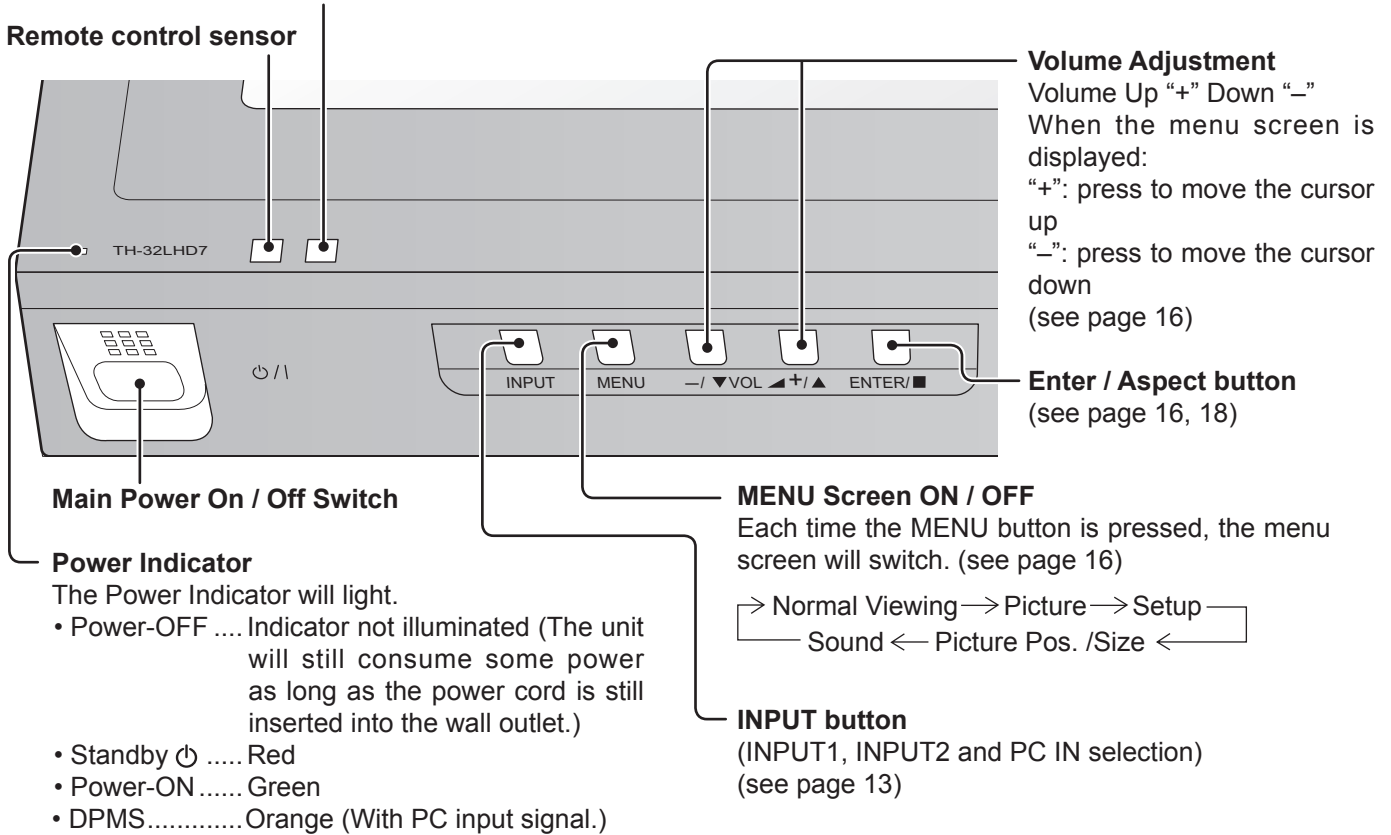
Basic Controls

C.A.T.S. sensor

C.A.T.S. (Contrast Automatic Tracking System)

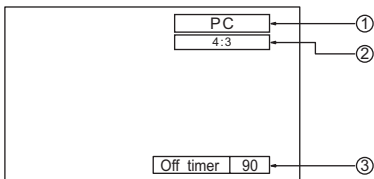
C.A.T.S. automatically senses the ambient light conditions and adjusts the brightness and gradation accordingly, to optimise contrast. (Effective when Picture Mode is set to Auto.)

Remote control sensor



Status button

Press the “Status” button to display the current system status.



- ① Input label
- ② Aspect mode (see page 18)
- ③ Off timer
The off timer indicator is displayed only when the off timer has been set.

N button (see page 19, 21, 22, 23)

PICTURE button (see page 21)

MULTI Window buttons (see page 20)

PC button

Press the “PC” input mode selection button to select the PC input mode. This button is used to switch directly to PC input mode.

Standby (ON / OFF) button

The LCD Display must first be plugged into the wall outlet and turned on at the power switch (see page 12). Press this button to turn the LCD Display On, from Standby mode. Press it again to turn the LCD Display Off to Standby mode.

Ambience button

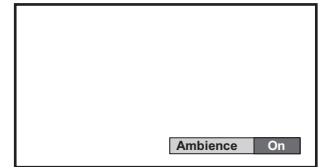
The surround setting switches on and off each time the SURROUND button is pressed.

The benefits of ambience sound are enormous. You can be completely enveloped in sound; just as if you were at a concert hall or cinema.

Note:

The surround settings are memorized separately for each Sound Mode (Normal, Auto).

On ← → Off



INPUT button (INPUT1, INPUT2 and PC IN selection)

Press to select INPUT1, INPUT2 and PC IN input SLOTS sequentially. (see page 13)

Sound mute On / Off (see page 23)

Volume Adjustment

Press the Volume Up "+" or Down "-" button to increase or decrease the sound volume level.

R button (see page 17)

Press the R button to return to previous menu screen.

ACTION button

Press to make selections.

POSITION buttons

SOUND button (see page 23)

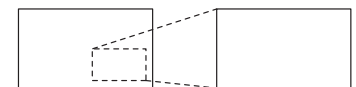
SET UP button (see page 16, 17)

Digital Zoom (see page 24)



Press to access Digital Zoom.

This displays an enlargement of the designated part of the displayed image.



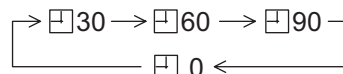
PICTURE POS. / SIZE button (see page 19)

ASPECT button

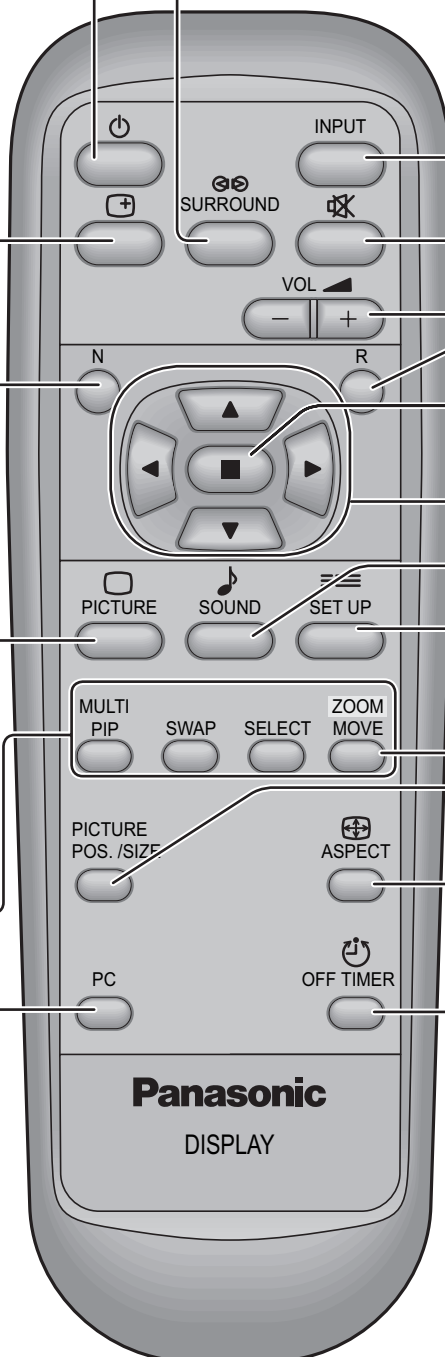
Press to adjust the aspect. (see page 18)

OFF TIMER button

The LCD Display can be preset to switch to stand-by after a fixed period. The setting changes to 30 minutes, 60 minutes, 90 minutes and 0 minutes (off timer cancelled) each time the button is pressed.

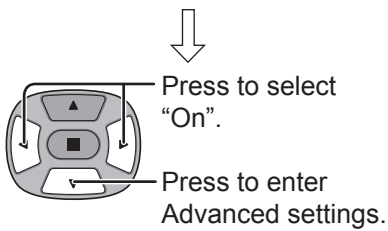
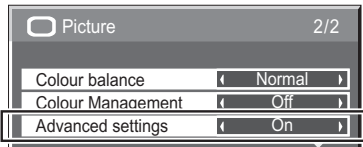
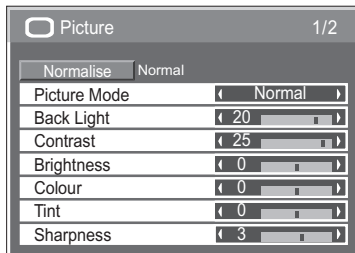


When three minutes remain, "Off timer 3" will flash. The off timer is cancelled if a power interruption occurs.

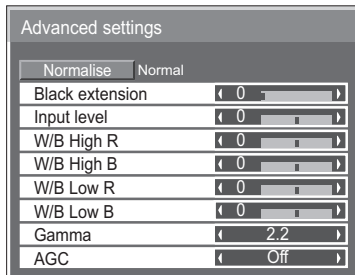


On-Screen Menu Displays

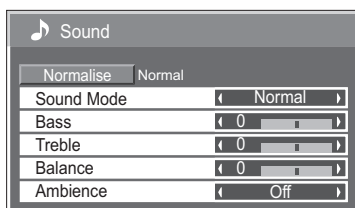
To Picture adjust menu
(see page 21)



To Advanced settings
(see page 21, 22)

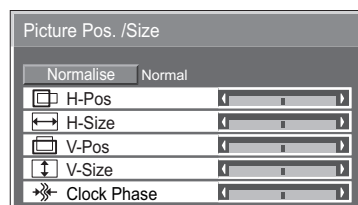
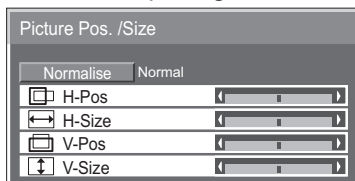


To Sound adjust menu
(see page 23)

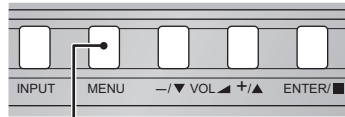


To Picture Pos./Size adjust menu (see page 19)

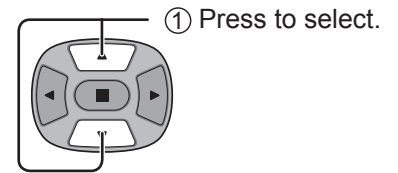
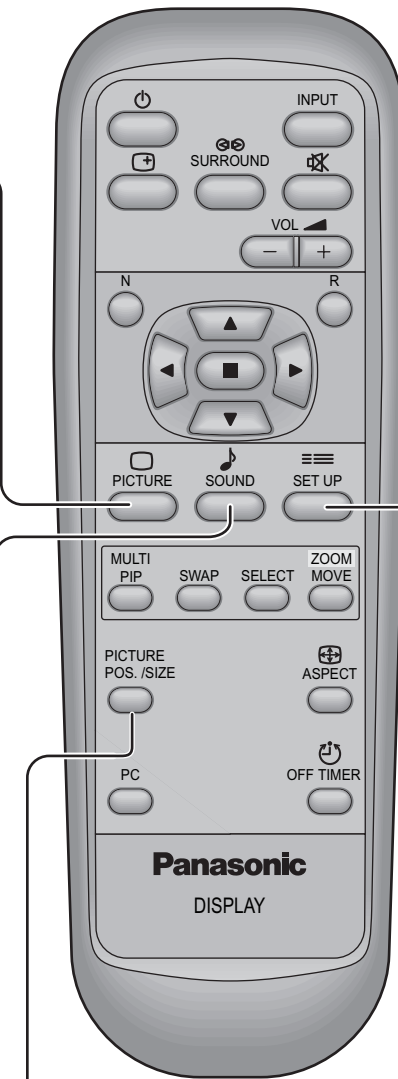
During "AV(S Video)", "Component" and "DVI" input signal. During "RGB / PC" input signal.



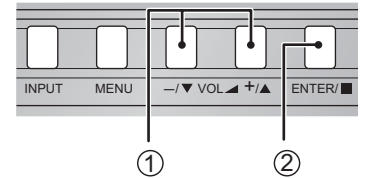
The MENU button on the unit can also be pressed.



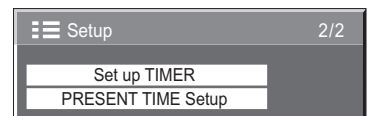
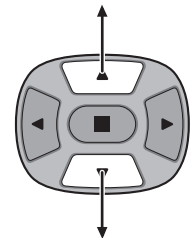
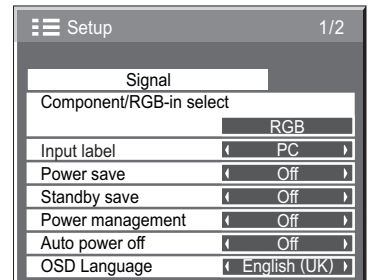
Each time the MENU button is pressed, the menu screen will switch.

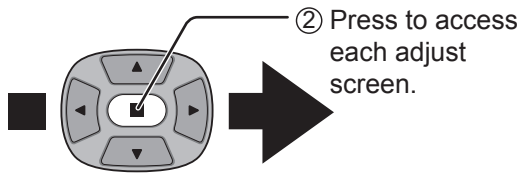


[from the unit]

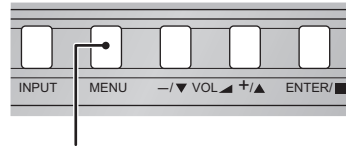


① Press to select.
② Press to access each adjust screen.

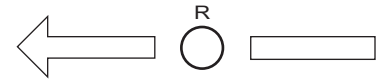




[from the unit]

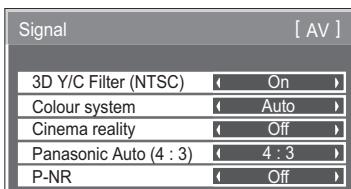


Press to return to next menu screen.

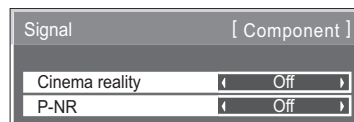


Press the R button to return to previous menu screen.

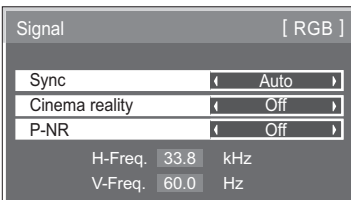
To Signal screen for AV(S Video) (see page 28, 29)



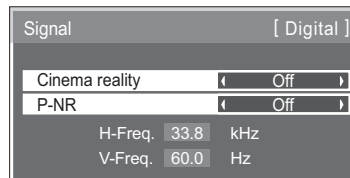
To Signal screen for Component (see page 29)



To Signal screen for RGB (see page 29, 30)

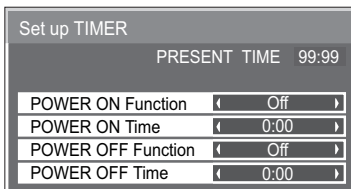


To Signal screen for DVI (see page 29, 30)

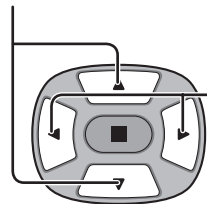


Note: "Signal" setup menu displays different setting condition for each input signals. (see page 13)

To Set up Timer selection screen (see page 25, 26)



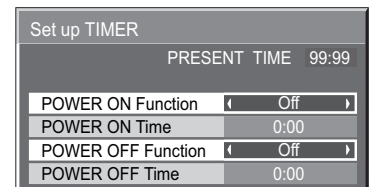
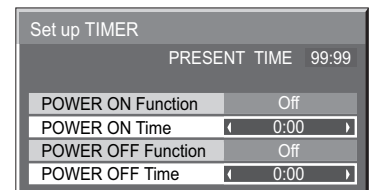
Press to select POWER ON Time / POWER OFF Time.



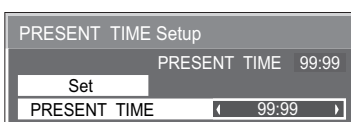
Press to Set up POWER ON Time / POWER OFF Time.



Press the R button to return to "Setup" menu.



To PRESENT TIME Setup (see page 25)

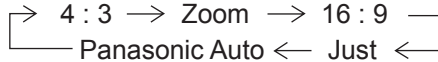


ASPECT Controls

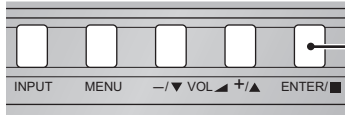
The LCD Display will allow you to enjoy viewing the picture at its maximum size, including wide screen cinema format picture.



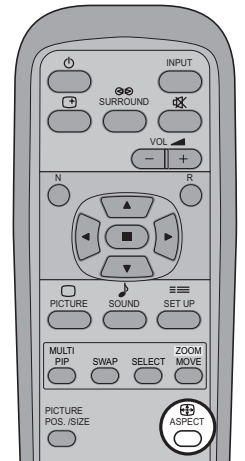
Press repeatedly to move through the aspect options:



[from the unit]



The aspect mode changes each time the ENTER button is pressed.



[During MULTI PIP Operations]

• Picture and Picture, Picture in Picture :


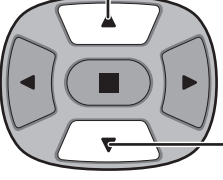
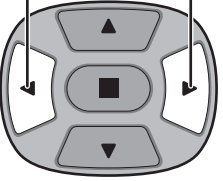

• Others : Aspect switching is not possible.

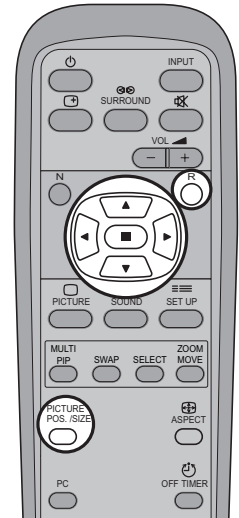
Notes:

- For PC signal input, the mode switches between “4:3”, “Zoom” and “16:9” only.
- For a 1125 (1080) / 60i · 50i · 24p · 25p · 30p · 24sF, 1250 (1080) / 50i, 750 (720) / 60p · 50p signal input during “Component”, “RGB” and “DVI” input signal, the mode is set to “16:9” mode, and switching is not possible.
- Panasonic Auto can be selected only during Video signal input.
- The aspect mode is memorized separately for each input terminal (INPUT1, INPUT2 and PC IN).

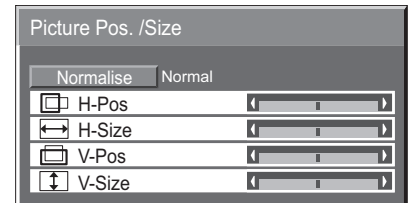
Mode	Picture	Explanation
4 : 3		4:3 will display a 4:3 picture at its standard 4:3 size.
Zoom		Zoom mode magnifies the central section of the picture.
16 : 9		16:9 will display the picture at its maximum size but with slight elongation.
Just		Just mode will display a 4:3 picture at its maximum size but with aspect correction applied to the center of the screen so that elongation is only apparent at the left and right edges of the screen. The size of the picture will depend on the original signal.
Panasonic Auto	 For an elongated image Image is expanded Changes in accordance with the Panasonic Auto mode setting (see page 29). For a 4:3 image	The display will automatically become enlarged (depending on the picture source), allowing you to view the picture at its maximum size. Notes: <ul style="list-style-type: none"> • Panasonic Auto mode is designed to automatically adjust the aspect ratio to handle a mix of 16:9 and 4:3 program material. Certain 4:3 program material, such as stock market data screens, may occasionally cause the image size to change unexpectedly. When viewing such programs, it is recommended that the ASPECT be set to 4:3. • If adjusting the Picture V-Pos/V-Size in Panasonic Auto with 16:9 mode, the adjustment is not memorized. When exiting the mode, the screen will return to a former adjustment.

Adjusting Picture Pos. / Size

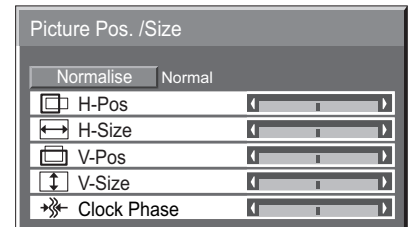
- 1  Press to display the Picture Pos. /Size menu.
- 2  Press to select H-Pos / H-Size / V-Pos / V-Size / Clock Phase.
- 3  Press to adjust Pos. / Size.
- 4  Press to exit from adjust mode.



During "AV(S Video)", "Component" and "DVI" input signal.



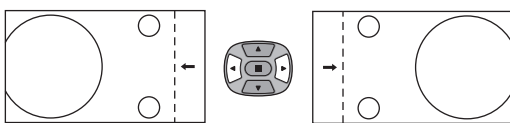
During "RGB / PC" input signal.



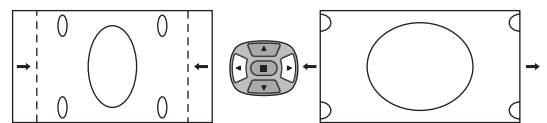
Notes:

- Adjustment details are memorized separately for different input signal formats (Adjustments for component signals are memorized for 525 (480) / 60i · 60p, 625 (575) / 50i · 50p, 1125 (1080) / 60i · 50i · 24p · 25p · 30p · 24sF, 1250 (1080) / 50i, 750 (720) / 60p · 50p each, and RGB/PC/DVI signals are memorized for each frequency.)
- If a "Cue" or "Rew" signal from a VCR or DVD player is received, the picture position will shift up or down. This picture position movement cannot be controlled by the Picture Pos./Size function.
- If adjusting the Picture V-Pos/V-Size in Panasonic Auto with 16:9 mode, the adjustment is not memorized. When exiting the mode, the screen will return to a former adjustment.

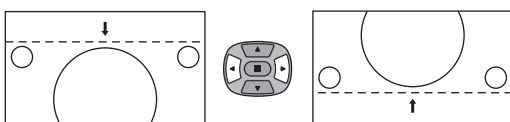
H-Pos Adjust the horizontal position.



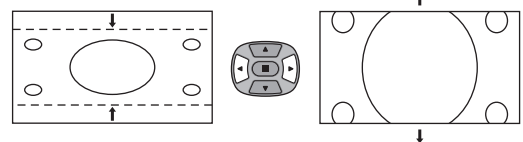
H-Size Adjust the horizontal size.



V-Pos Adjust the vertical position.



V-Size Adjust the vertical size.



Clock Phase
(RGB/PC in mode)

Eliminate the flickering and distortion.

Helpful Hint (/ **Normalise** Normalisation)

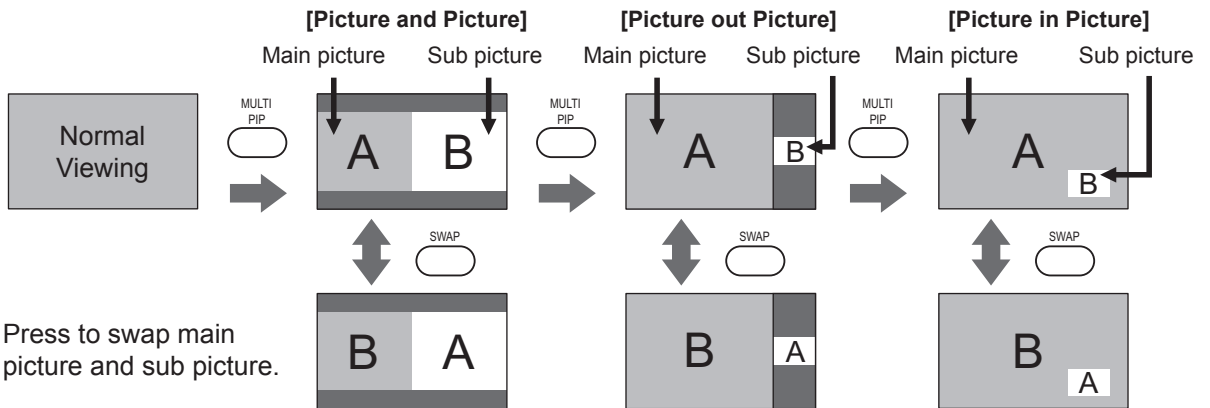
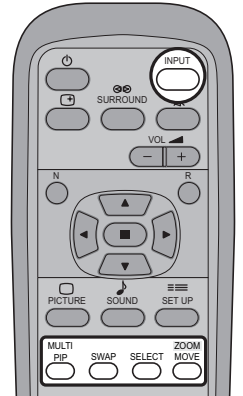
While the Picture Pos. / Size display is active, if either the N button on the remote control is pressed at any time or the ACTION (■) button is pressed during "Normalise", then all adjustment values are returned to the factory settings.

MULTI PIP

MULTI PIP



Press repeatedly.
Each time pressing this button main picture and sub picture will be displayed as follows bellow.



SWAP



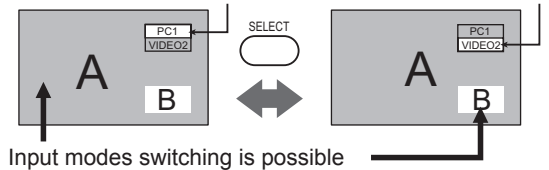
Press to swap main picture and sub picture.

[Example] Main picture label is bright Sub picture label is bright

SELECT



Press to select the input mode.
Under main Picture and sub picture display, select the picture which you would like to change input modes.

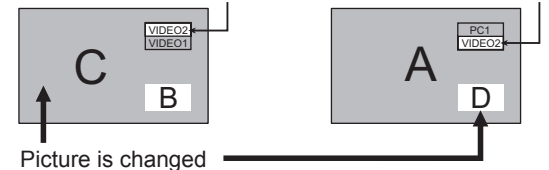


INPUT



Press to change input signal.

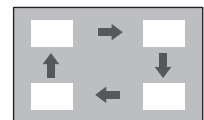
Main picture label is changed Sub picture label is changed



ZOOM MOVE



Press to move the sub picture.
Each time the location of the sub picture will be moved.



Notes:

- This button is effective only in the picture in picture.
- The sub picture may be hidden by the on screen display, depending on its position.

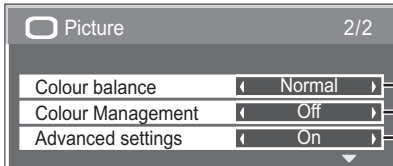
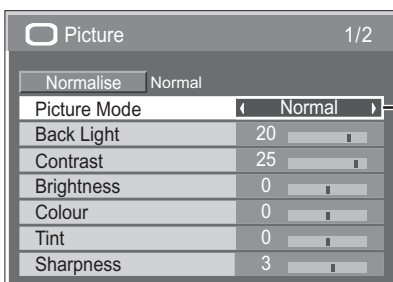
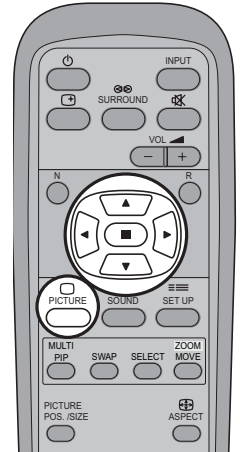
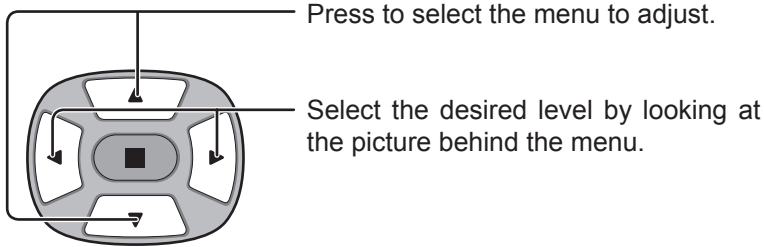
Notes:

- Sound output is from the main picture.
- In 2 screen display, the same input mode cannot be selected for the main picture and sub picture.
- The main picture and sub picture are processed by different circuits, resulting in a slight difference in the clarity of the pictures. There may also be a difference in the picture quality of the sub picture depending on the type of signals displayed on the main picture and depending on the 2-picture display mode.
- Due to the small dimensions of the sub pictures used for the picture in picture and picture out picture displays, these sub pictures cannot be shown in detail.
- Two computer screen pictures are displayed in a simplified format, and it may not be possible to discern details on them satisfactorily.

Picture Adjustments

1 PICTURE — Press to display the Picture menu.

2 Select to adjust each item.



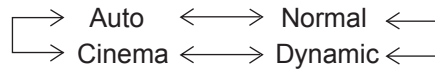
Press to select "On".

Press to enter Advanced settings.

Advanced settings On
Enables fine picture adjustment at a professional level (see next page).

Advanced settings Off
Displays images with settings of the Picture menu.

Press "◀" or "▶" button to switch between modes.



Auto

Automatically selects the mode that best suits the brightness of the environment.

Normal

For viewing in standard (evening lighting) environments. This menu selects the normal levels of Brightness and Contrast.

Dynamic

For viewing in brighter environments. This menu selects higher than normal levels of Brightness and Contrast.

Cinema

Ideal for movies.

Note:

If you would like to change the picture and colour of the selected Picture menu to something else, adjust using the items in the Picture menu. (see next page)


Press "◀" or "▶" button to switch between modes.















Colour Management On

Enables vivid colour adjustment automatically.

Helpful Hint (/ **Normalise** Normalisation)

While the "Picture" menu is displayed, if either the N button on the remote control is pressed at any time or the ACTION () button is pressed during "Normalise", then all adjustment values are returned to the factory settings.

















Picture Adjustments

Item	Effect	Adjustments
Back Light	 Darker  Brighter	Luminance of the back light is adjusted.
Contrast	 Less  More	Selects the proper brightness and density for the room.
Brightness	 Darker  Brighter	Adjusts for easier viewing of dark pictures such as night scenes and black hair.
Colour	 Less  More	Adjusts colour saturation.
Tint	 Reddish  Greenish	Adjusts for nice skin colour.
Sharpness	 Less  More	Adjusts picture sharpness.

Notes:

- “Colour” and “Tint” settings cannot be adjusted for “RGB/PC” and “DVI” input signal.
- You can change the level of each function (Back Light, Contrast, Brightness, Colour, Tint, Sharpness) for each Picture Mode.
- The setting details for normal, dynamic and cinema respectively are memorized separately for each input mode (INPUT1, INPUT2 and PC IN).
- The “Tint” setting can be adjusted for NTSC signal only during “AV (S Video)” input signal.


Advanced settings

Item	Effect	Details
Black extension	 Less  More	Adjusts the dark shades of the image in gradation.
Input level	 Less  More	Adjustment of parts which are extremely bright and hard to see. (This cannot be adjusted when the input signal is DVI.)
W/B High R	 Less  More	Adjusts the white balance for light red areas.
W/B High B	 Less  More	Adjusts the white balance for light blue areas.
W/B Low R	 Less  More	Adjusts the white balance for dark red areas.
W/B Low B	 Less  More	Adjusts the white balance for dark blue areas.
Gamma	 Down  Up	S Curve \longleftrightarrow 2.0 \longleftrightarrow 2.2 \longleftrightarrow 2.5
AGC	 Off  On	Increases the brightness of dark signal automatically.

Notes:

- Carry out “W/B” adjustment as follows.
 1. Adjust the white balance of the bright sections using the “W/B High R” and “W/B High B” settings.
 2. Adjust the white balance of the dark sections using the “W/B Low R” and “W/B Low B” settings.
 3. Repeat steps 1 and 2 to adjust.
 Steps 1 and 2 affect each other’s settings, so repeat each step in turn to make the adjustment.
- The adjustment values are memorized separately for each input mode (INPUT1, INPUT2 and PC IN).
- The adjustment range values should be used as an adjustment reference.

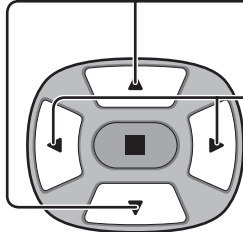
Helpful Hint (/ Normalisation)

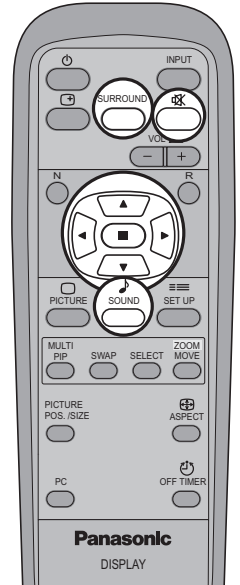
On the remote control unit, while the “Advanced settings” menu is displayed, if either the N button is pressed at any time or the ACTION () button is pressed during “Normalise”, then all adjustment values are returned to the factory settings.

Sound Adjustment

1  Press to display the Sound menu.

2 Select to adjust each item.

 Press to select the menu to adjust.
Select the desired level by listening to the sound.

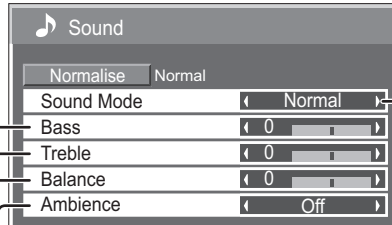


Bass
Adjusts low sounds

Treble
Adjusts high sounds

Balance
Adjusts left and right volumes

Ambience
Select On or Off



Normal Emits the original sound.




Auto Automatically controls proper volume level.

Notes:


- Press the SURROUND button to directly turn the surround effect On and Off. (see page 15)
- Bass, Treble and Ambience settings are memorized separately for each Sound Mode (Normal, Auto).

Helpful Hint (/ Normalisation)

While the "Sound" menu is displayed, if either the N button on the remote control is pressed at any time or the ACTION () button is pressed during "Normalise", then all adjustment values are returned to the factory settings.

Mute

Useful when answering the phone or receiving unexpected visitors.

 Press to mute the sound.
Press again to reactivate sound. Sound is also reactivated when power is turned off or volume level is changed.

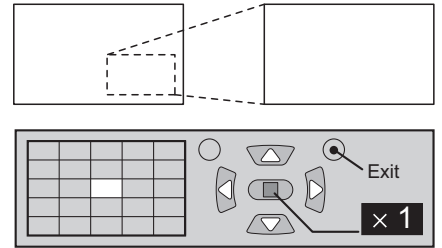
Digital Zoom

This displays an enlargement of the designated part of the displayed image.

1 Display the "Operation Guide".

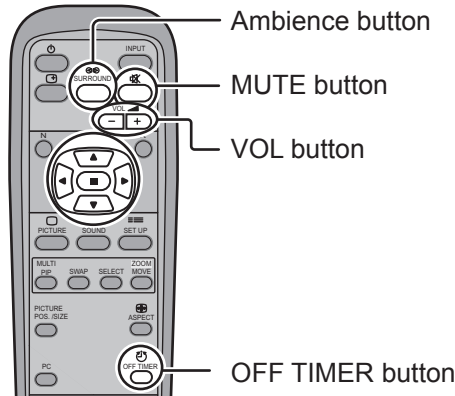


Press to access Digital Zoom.
The "Operation Guide" will be displayed.

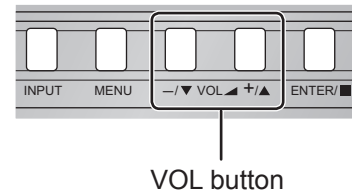


During Digital Zoom, only the following buttons can be operated.

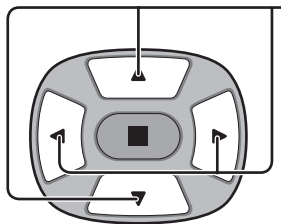
[Remote control]



[Unit]

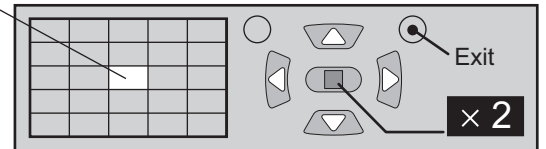
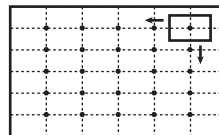


2 Select the area of the image to be enlarged.

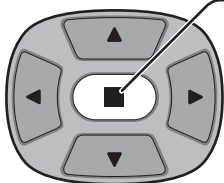


Press on the enlargement location to select.

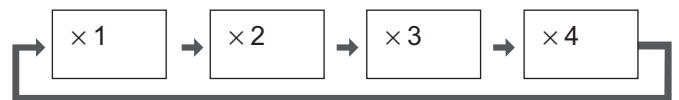
The cursor will move.



3 Select the magnification required for the enlarged display.



Each time this is pressed, the magnification factor changes.
This is shown in the image being displayed.



4 Return to normal display (quit Digital Zoom).



Press to exit from the Digital Zoom.

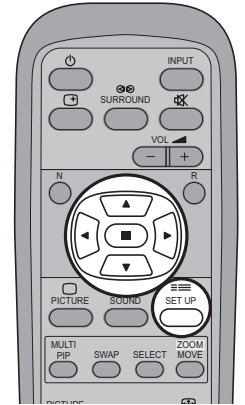
Notes:

- When power goes OFF (including "Off Timer" operation), Digital Zoom terminates.
- The Digital Zoom function cannot be selected while in the following operation state:
"Multi-viewer" (Picture in Picture, Picture out Picture, Picture and Picture) operation. (see page 20)
- While Digital Zoom is in operation, "Adjusting Picture Pos. / Size" cannot be used.
- The Digital Zoom capability is functional for the following component signals:
525 (480) / 60i · 60p, 625 (575) / 50i · 50p, 1125 (1080) / 60i · 50i · 24p · 25p · 30p · 24sF, 750 (720) / 60p · 50p, 1250 (1080) / 50i
- The Digital Zoom capability is functional for the following composite signals:
NTSC, PAL, SECAM

PRESENT TIME Setup / Set up TIMER

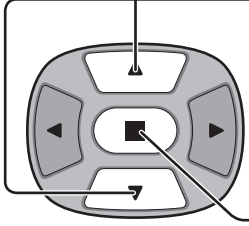
The timer can switch the LCD Display On or Off.

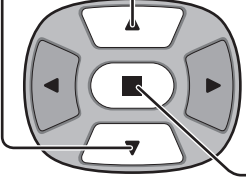
Before attempting Timer Set, confirm the PRESENT TIME and adjust if necessary. Then set POWER ON Time / POWER OFF Time.

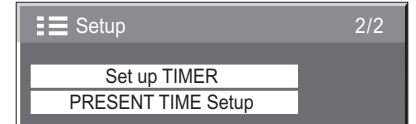
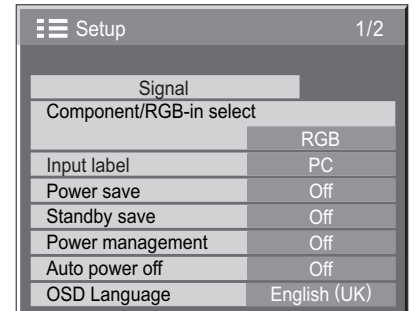


1  Press to display the Setup menu.

2  Press to select Set up TIMER or PRESENT TIME Setup.



 Press to display the Set up TIMER screen or PRESENT TIME Setup screen.

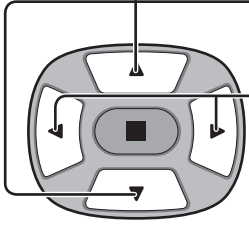


PRESENT TIME Setup

Display the PRESENT TIME Setup screen.

To setup PRESENT TIME, follow the procedure described below.

1  Press to select PRESENT TIME.



 Press to setup PRESENT TIME.

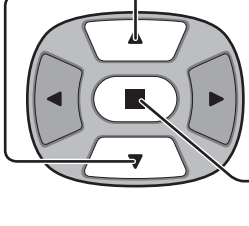
- ▶ button: Forward
- ◀ button: Back

Notes:

- Pressing “◀” or “▶” button once changes PRESENT TIME 1minute.
- Pressing “◀” or “▶” button continuously changes PRESENT TIME by 15 minutes.



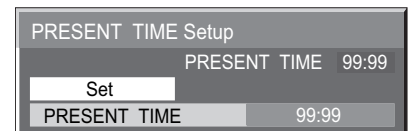
2  Press to select Set.




 Press to store PRESENT TIME Setup.

Note:

Set cannot be selected unless PRESENT TIME is set.



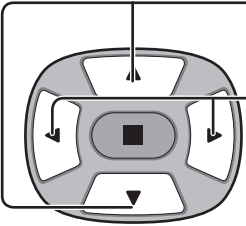
3  Press to exit from PRESENT TIME Setup.



Set up TIMER

Display the Set up TIMER screen.

1



Press to select
POWER ON Time / POWER OFF Time.

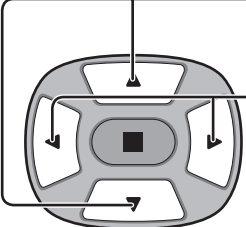
Press to setup
POWER ON Time / POWER OFF Time.
▶ button: Forward
◀ button: Back

Set up TIMER	
PRESENT TIME 99:99	
POWER ON Function	Off
POWER ON Time	◀ 0:00 ▶
POWER OFF Function	Off
POWER OFF Time	◀ 0:00 ▶

Notes:

- Pressing “◀” or “▶” button once changes POWER ON Time / POWER OFF Time 1minute.
- Pressing “◀” or “▶” button continuously changes POWER ON Time / POWER OFF Time by 15 minutes.

2




Press to select POWER ON Function/POWER OFF Function.

Press to select On.

Set up TIMER	
PRESENT TIME 99:99	
POWER ON Function	◀ Off ▶
POWER ON Time	0:00
POWER OFF Function	◀ Off ▶
POWER OFF Time	0:00

3



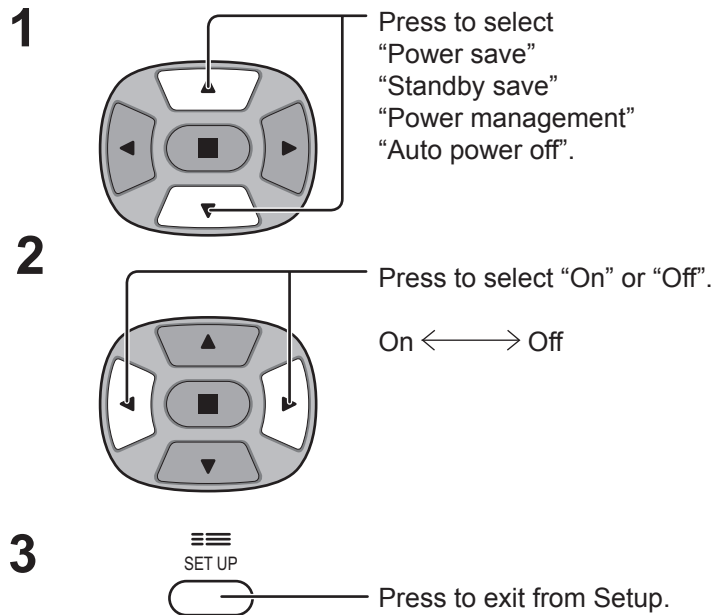
Press twice to exit from Setup.

Note:

Timer function will not work unless “PRESENT TIME” is set.

Reduces power consumption

- **Power save:** When this function is turned On, luminous level of the LCD Display is suppressed, so power consumption is reduced.
- **Standby save:** When this function is turned On, power consumption of the microcomputer is reduced during power supply standby (see page 12, 14-15), so standby power of the set is reduced.
- **Power management:** The unit power supply is turned On or Off depending on whether or not there is a signal during PC input mode. This function is enabled when it is turned On. (Only during input from PC (MiniD-sub) terminal)
- **Auto power off:** Equipment power supply is turned Off when there is no signal. When this is set to On, the power supply of the unit goes Off 10 minutes after the input signals stop. This function is effective for input signals except input from PC (Mini D-sub) terminal.



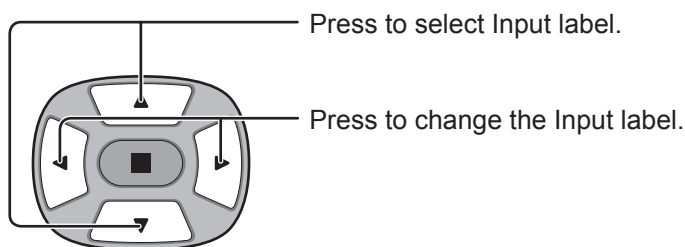
Setup 1/2	
Signal	
Component/RGB-in select	
Input label	RGB
Power save	PC
Standby save	Off
Power management	Off
Auto power off	Off
OSD Language	English (UK)

Note:

"Power management" and "Auto power off" are effective during normal viewing (one picture screen) only.

Customizing the Input labels

This function can change the label of the Input signal to be displayed.



Setup 1/2	
Signal	
Component/RGB-in select	
Input label	RGB
Power save	PC
Standby save	Off
Power management	Off
Auto power off	Off
OSD Language	English (UK)

Note:

While selecting an Input signal through Optional Terminal Board connected to Slot1 and Slot2, the Input label will depend on each Optional Terminal Board.

Input labels for Slot1, Slot2 and miniD-sub:

[Slot1 Input] INPUT1 / VIDEO1 / COMPONENT1 / RGB1 / DIGITAL1 / PC1 / DVD1 / CATV1 / VCR1 / STB1

[Slot2 Input] INPUT2 / VIDEO2 / COMPONENT2 / RGB2 / DIGITAL2 / PC2 / DVD2 / CATV2 / VCR2 / STB2

[PC (MiniD-sub) input] PC / COMPONENT / RGB / DVD / STB

Setup for Input Signals

Component / RGB-in select


Select the input signals to be connected by installing the Optional Terminal Board.

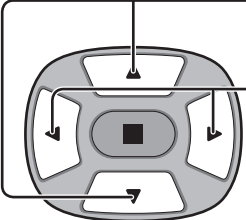
(Refer to the Operating Instructions for the optional Terminal Board.)


Select to match the signals from the source connected to the Component / RGB input terminals.

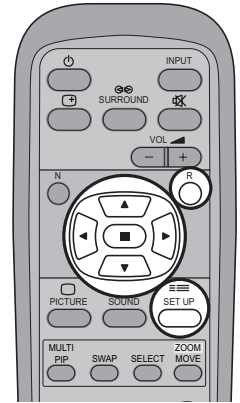
Y, P_B, P_R signals ⇔ "Component"

R, G, B, HD, VD signals ⇔ "RGB"

1  Press to display the Setup menu.

2  Press to select the "Component / RGB-in select".
Press to select the desired input signal.
Component ← → RGB

3  Press to exit from adjust mode.



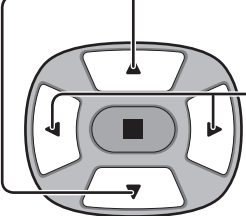
Setup 1/2	
Signal	
Component/RGB-in select	RGB
Input label	PC
Power save	Off
Standby save	Off
Power management	Off
Auto power off	Off
OSD Language	English (UK)


Notes:

- Selection may not be possible, depending on which optional board is installed.

3D Y/C Filter – For NTSC AV images

Select "Signal" from the "Setup" menu during AV(S Video) input signal. ("Signal [AV]" menu is displayed.)

1  Press to select the "3D Y/C Filter (NTSC)".
Press to set On / Off.

2  Press to exit from adjust mode.

Setup 1/2	
Signal	
Component/RGB-in select	RGB
Input label	PC
Power save	Off
Standby save	Off
Power management	Off
Auto power off	Off
OSD Language	English (UK)

↓ Press ACTION (■) button

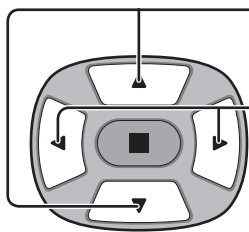
Signal [AV]	
3D Y/C Filter (NTSC)	On
Colour system	Auto
Cinema reality	Off
Panasonic Auto (4 : 3)	4 : 3
P-NR	Off

Note:

When On, this setting only affects NTSC input signals.

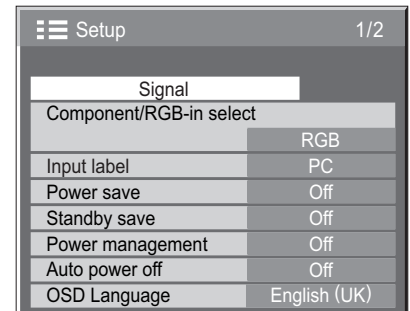
Colour system / Panasonic Auto

Select Signal from the "Setup" menu during AV(S Video) input signal. ("Signal [AV]" menu is displayed.)

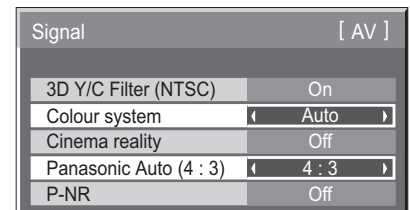


Press to select the "Colour system" or "Panasonic Auto".

Press to select each functions.



Press ACTION (■) button



If the picture image becomes unstable:

With the system set on Auto, under conditions of low level or noisy input signals the image may in rare cases become unstable. Should this occur, set the system to match the format of the input signal.

Mode	Function
Colour system	Set the colour system to match the input signal. If set to "Auto", the colour system is determined automatically. <div style="text-align: center;"> → Auto ↔ PAL ↔ SECAM ↔ M.NTSC ↔ NTSC ← </div>
Panasonic Auto (4:3)	Set to "4 : 3" to view 4:3 images in an unchanged format when Panasonic Auto is selected. If you would like to view 4:3 images in Just format, set to "Just".

Cinema reality / P-NR

Cinema reality:

When on, the display attempts to reproduce a more natural interpretation of sources such as movie pictures, which are recorded at 24 frames per second.

If the picture is not stable, turn the setting to off.

Note:

When On, this setting only affects the following signal input:

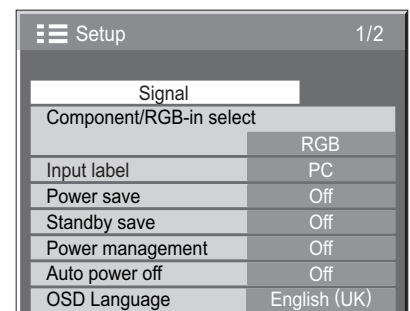
- NTSC / PAL signal input during "AV(S Video)" input signal.
- 525i(480i) 625i(575i), 1125(1080) / 60i signal input during "Component" input signal.

P-NR:

Automatically reduces unwanted picture noise.

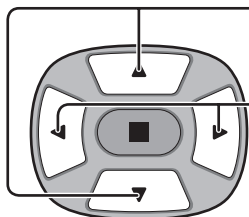
Note:

P-NR cannot be adjusted while a PC signal is being applied.



Press ACTION (■) button

1 Press to select Cinema reality or P-NR.

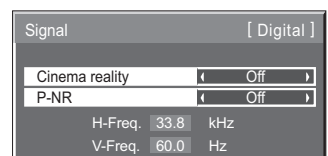
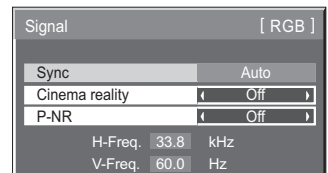
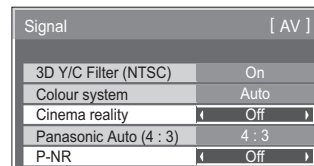


Press to set On / Off.

2

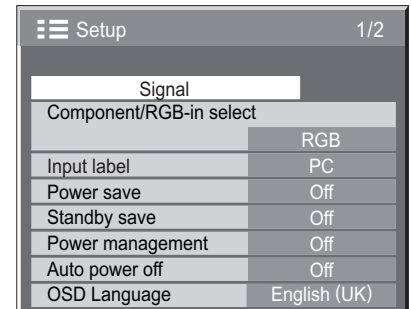
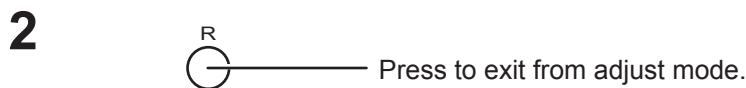
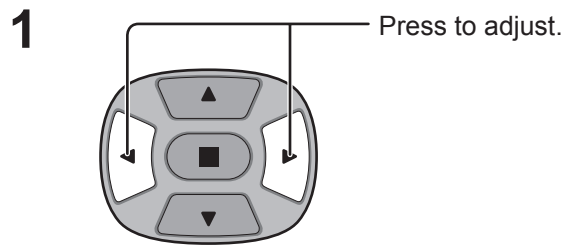


Press to exit from adjust mode.

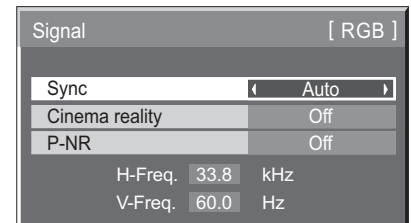


Sync

Select Signal from the “Setup” menu during RGB input signal.



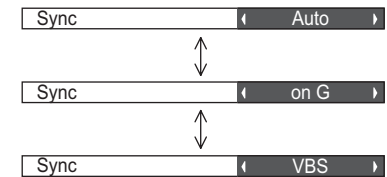
↓ Press ACTION (■) button



Setting RGB sync signal:

Confirm that the input is set to RGB input (this setting is valid only for RGB input signal).

- Auto: The H and V sync or synchronized signal are automatically selected. If both input, it is selected the H and V sync.
- on G: Uses a synchronized signal on the Video G signal, which is input from the G connector.
- VBS: Uses a synchronized signal of Composite Sync input, which is input from the HD connector.



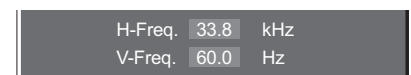
H-Freq. (kHz) / V-Freq. (Hz)

Displays the H (Horizontal) / V (Vertical) frequencies.

This display is valid only for RGB / PC and DVI input signal.


Display range:

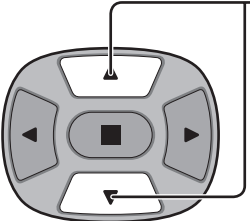
- Horizontal 15 - 110 kHz
- Vertical 48 - 120 Hz

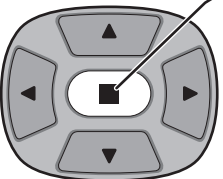


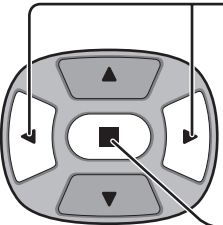

Shipping condition

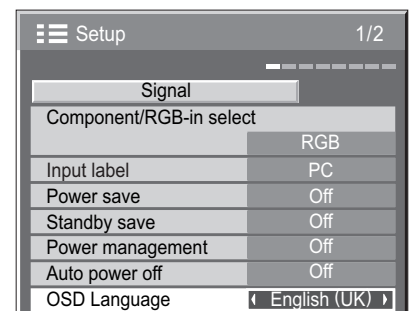
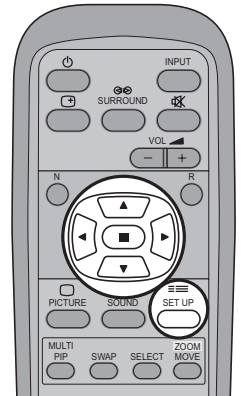
This function allows you to reset the unit to the factory setting.

1  Press to display the Setup menu.

2  Press to select "OSD Language".

3  Press and hold till the SHIPPING menu is displayed.

4  Press to select "YES".
 Press to confirm.



[from the unit]












- 1 Press the MENU button till the Setup menu is displayed.
- 2 Press the Volume Up "+" or Down "-" button to select "OSD Language".
- 3 Press and hold the ENTER button till the SHIPPING menu is displayed.
- 4 Press the Volume Up "+" or Down "-" button to select "YES".
- 5 Press the ENTER button.

Note:

Press the R button to return to Setup menu when SHIPPING menu is displayed.

Troubleshooting

Before you call for service, determine the symptoms and make a few simple checks as shown below.

Symptoms		Checks
Picture	Sound	
 Interference	 Noisy Sound	Electrical Appliances Cars / Motorcycles Fluorescent light
 Normal Picture	 No Sound	Volume (Check whether the mute function has been activated on the remote control.)
 No Picture	 No Sound	Not plugged into AC outlet Not switched on Picture and Brightness/Volume setting (Check by pressing the power switch or stand-by button on the remote control.)
 No Picture	 Normal Sound	If a signal with a non-applicable colour system format, or frequency is input, only the input terminal indication is displayed.
 No Colour	 Normal Sound	Colour controls set at minimum level (see page 21, 22) Colour system (see page 29)
There may be red spots, blue spots and green spots on the screen.	 Normal Sound	This is a characteristic of liquid crystal panels and is not a problem. The liquid crystal panel is built with very high precision technology giving you fine picture details. Occasionally, a few non-active pixels may appear on the screen as a fixed point of blue, green, or red. Please note this does not affect the performance of your LCD.
No remote control operations can be performed.		Check whether the batteries have discharged completely and, if they have not, whether they were inserted properly. Check whether the remote control sensor is exposed to an outdoor light or a strong fluorescent light. Check whether the remote control designed specifically for use with the unit is being used. (The unit cannot be operated by any other remote control.)
A cracking sound is sometimes heard from the unit.		If there is nothing wrong with the picture or sound, this is the sound of the cabinet undergoing very slight contractions in response to changes in the room temperature. There are no adverse effects on the performance or other aspects.
The top or bottom of the picture on the screen is cut off when I use the zoom function.		Adjust the position of the picture on the screen.
Areas at the top and bottom of the screen where the image is missing appear when I use the zoom function.		When using a video software program (such as a cinema size program) with a screen wider than one in the 16:9 mode, blank areas separate from the images are formed at the top and bottom of the screen.
I can hear sounds coming from inside the unit.		When the power is turned on, a sound of the display panel being driven may be heard: This is normal and not indicative of malfunctioning.
The main unit is hot.		The main unit radiates heat and some of the parts may become hot. This is not a problem for performance or quality. Set up at a location with good ventilation. Do not cover the ventilation holes of the Display with a tablecloth etc., and do not place on top of other equipment.
This LCD Display uses special image processing. Hence a slight time lag may occur between image and audio, depending on the type of input signal. However, this is not a malfunction.		

LCD Display panel

Symptoms	Check
It takes a while for the picture to appear.	The unit digitally processes the various signals in order to reproduce esthetically pleasing images. As such, it sometimes takes a few moments for the picture to appear when the power has been turned on, when the input has been switched or when the images for the main picture and sub picture on the two screens are swapped.
Whirring sounds can be heard from the display unit.	The display unit is fitted with a cooling fan to dissipate heat generated during normal use. The whirring sound is caused by rotation of the fan and is not a malfunction.

VIDEO/COMPONENT/RGB/PC input signals

VIDEO input [Applicable when Multi Screen and Digital Zoom]

	Signal name	Horizontal frequency(kHz)	Vertical frequency(Hz)
1	NTSC	15.73	59.94
2	PAL	15.63	50.00
3	PAL60	15.73	59.94
4	SECAM	15.63	50.00
5	Modified NTSC	15.73	59.94

Applicable input signals for PC Input (D-sub 15P) (*Mark)

	Signal name	Horizontal frequency (kHz)	Vertical frequency (Hz)	RGB	When Multi Screen and Digital Zoom
1	525 (480) / 60i	15.73	59.94	*	*
2	525 (480) / 60p	31.47	59.94	*	*
3	625 (575) / 50i	15.63	50.00	*	*
4	625 (575) / 50p	31.25	50.00	*	*
5	750 (720) / 60p	45.00	60.00	*	*
6	750 (720) / 50p	37.50	50.00	*	*
7	1,125 (1,080) / 60i	33.75	60.00	*	*
8	1,125 (1,080) / 50i	28.13	50.00	*	*
9	1,125 (1,080) / 24p	27.00	47.92	*	*
10	1,125 (1,080) / 24sF	33.75	30.00	*	*
11	1,125 (1,080) / 25p	28.13	25.00	*	*
12	1,125 (1,080) / 30p	27.00	24.00	*	*
13	1,250 (1,080) / 50i	31.25	50.00	*	*
14	640 × 400 @70 Hz	31.46	70.07	*	*
15	640 × 480 @60 Hz	31.47	59.94	*	*
16	640 × 480 @72 Hz	37.86	72.81	*	*
17	640 × 480 @75 Hz	37.50	75.00	*	*
18	640 × 480 @85 Hz	43.27	85.01	*	*
19	852 × 480 @60 Hz	31.47	59.94	*	*
20	800 × 600 @56 Hz	35.16	56.25	*	*
21	800 × 600 @60 Hz	37.88	60.32	*	*
22	800 × 600 @72 Hz	48.08	72.19	*	*
23	800 × 600 @75 Hz	46.88	75.00	*	*
24	800 × 600 @85 Hz	53.67	85.06	*	*
25	1,024 × 768 @60 Hz	48.36	60.00	*	*
26	1,024 × 768 @70 Hz	56.48	70.07	*	*
27	1,024 × 768 @75 Hz	60.02	75.03	*	*
28	1,024 × 768 @85 Hz	68.68	85.00	*	*
29	1,152 × 864 @75 Hz	67.50	75.00	*	*
30	1,280 × 960 @60 Hz	60.00	60.00	*	*
31	1,280 × 960 @85 Hz	85.94	85.00	*	*
32	1,280 × 1,024 @60 Hz	63.98	60.02	*	*
33	1,280 × 1,024 @75 Hz	79.98	75.03	*	*
34	1,280 × 1,024 @85 Hz	91.15	85.02	*	*
35	1,600 × 1,200 @60 Hz	75.00	60.00	*	*
36	1,600 × 1,200 @65 Hz	81.25	65.00	*	*
37	1,066 × 600 @60 Hz	37.88	60.32	*	*
38	1,366 × 768 @60 Hz	48.36	60.00	*	*
39	Macintosh13" (640 × 480)	35.00	66.67	*	*
40	Macintosh16" (832 × 624)	49.72	74.54	*	*
41	Macintosh21" (1,152 × 870)	68.68	75.06	*	*

Note: Signals without above specification may not be displayed properly.

Specifications

		TH-32LHD7B
Power Source	220 - 240 V AC, 50/60 Hz	
Power Consumption		
Normal use	165 W	
Stand-by condition	Save off 1.0 W, Save on 0.8 W	
Power off condition	0.4 W	
LCD Display panel	1,366 × 768 pixels widescreen LCD panel.	
Contrast Ratio	800:1	
Screen size	697.7 mm (W) × 392.3 mm (H) × 800.4 mm (diagonal)	
(No. of pixels)	1,049,088 (1,366 (W) × 768 (H)) [4,096 × 768 dots]	
Operating condition		
Temperature	0 °C - 40 °C	
Humidity	20 % - 80 %	
Applicable signals		
Colour System	NTSC, PAL, PAL60, SECAM, Modified NTSC	
Scanning format	525 (480) / 60i · 60p, 625 (575) / 50i · 50p, 750 (720) / 60p · 50p, 1125 (1080) / 60i · 50i · 24p · 25p · 30p · 24sF ··· SMPTE274M, 1250 (1080) / 50i	
PC signals	WXGA display SVGA, XGA, SXGA, UXGA ··· (compressed) Horizontal scanning frequency 15 - 110 kHz Vertical scanning frequency 48 - 120 Hz	
Connection terminals		
AV	VIDEO IN VIDEO OUT S VIDEO IN (MINI DIN 4PIN) AUDIO IN (RCA PIN JACK × 2)	1.0 Vp-p (75-ohm or high impedance) 1.0 Vp-p (low impedance) Y:1 Vp-p (75-ohm), C:0.286 Vp-p (75-ohm) 0.5 Vrms (high impedance)
COMPONENT/RGB	Y/G (BNC) Rb/B (BNC), Pr/R (BNC) AUDIO IN (RCA PIN JACK × 2)	Y or G with/sync 1.0 Vp-p (75-ohm) G without/sync 0.7 Vp-p (75-ohm) 0.7 Vp-p (75-ohm) 0.5 Vrms (high impedance)
PC	(HIGH-DENSITY D-SUB 15PIN) Component Y : Pb·Pr / Cb·Cr : AUDIO IN (M3 JACK)	R,G,B/0.7 Vp-p (75-ohm) Y : 1.0 Vp-p (75-ohm) 0.7 Vp-p (75-ohm) HD, VD/1.0 - 5.0 Vp-p (high impedance) 0.5 Vrms (high impedance)
SERIAL	EXTERNAL CONTROL TERMINAL (D-SUB 9PIN)	RS-232C COMPATIBLE
SPEAKERS (6 Ω)	16W [8 W + 8 W] (10 % THD)	
Accessories Supplied		
Remote Control Transmitter	EUR646538	
Batteries	2 × R6 Size	
Fixing bands	(TMME203) × 2	
Ferrite core	J0KF00000018 × 2, J0KG00000054 × 2	
Dimensions (W × H × D)	805 mm × 499.6 mm × 102 mm (exclusive of protruding portion)	
Mass (weight)		
main unit only	approx. 17.0 kg net	
with speakers	approx. 21.0 kg	

Notes:

- Design and specifications are subject to change without notice. Mass and dimensions shown are approximate.
- This equipment complies with the EMC standards listed below.
EN55013, EN55020, EN55022, EN55024, EN61000-3-2, EN61000-3-3.

Information on Disposal for Users of Waste Electrical & Electronic Equipment (private households)



This symbol on the products and/or accompanying documents means that used electrical and electronic products should not be mixed with general household waste. For proper treatment, recovery and recycling, please take these products to designated collection points, where they will be accepted on a free of charge basis. Alternatively, in some countries you may be able to return your products to your local retailer upon the purchase of an equivalent new product.

Disposing of this product correctly will help to save valuable resources and prevent any potential negative effects on human health and the environment which could otherwise arise from inappropriate waste handling. Please contact your local authority for further details of your nearest designated collection point. Penalties may be applicable for incorrect disposal of this waste, in accordance with national legislation.

For business users in the European Union

If you wish to discard electrical and electronic equipment, please contact your dealer or supplier for further information.

Information on Disposal in other Countries outside the European Union

This symbol is only valid in the European Union.

If you wish to discard this product, please contact your local authorities or dealer and ask for the correct method of disposal.

Customer's Record

The model number and serial number of this product can be found on its back cover. You should note this serial number in the space provided below and retain this book, plus your purchase receipt, as a permanent record of your purchase to aid in identification in the event of theft or loss, and for Warranty Service purposes.

Model Number

Serial Number

Matsushita Electric Industrial Co., Ltd.

Web Site : <http://www.panasonic.co.jp/global/>

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