Panasonic®

Operating Instructions
FULL HD LCD Display

HDMI

English

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

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://panasonic.net

Precautions for Installation

- Do not install by yourself. Please ask a installation professional or your dealer to install.
- This product complies with IP66 dust and water protection standard. Do not change or damage dust or water resistance of the product.
- Please note the dust and water resistance of this product does not guarantee damage or fault free.

⚠ **CAUTION**   **Using with dust or water resistance degraded causes fire, electric shock, or product damage.**

This product complies with international standard IP rating (Ingress Protection) dust ingress protection level 6 and water ingress protection level 6.

■ Precautions for handling pressure-adjusting caps

Do not loosen or remove the pressure-adjusting caps (2) for the terminal cover. This will damage the cabinet airtightness.

Do not block the ventilation such as covering the pressure-adjusting caps.
- The pressure-adjusting caps are used to adjust the air pressure inside of the product. Special material is used so that they let air pass but not liquid such as water.

Pressure-adjusting caps
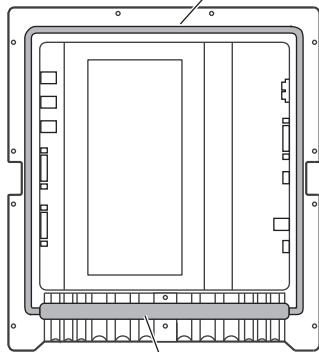**Terminal cover**
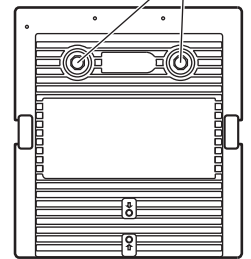
■ Terminal cover

After connecting cable etc. of the device to the terminals, check if the terminal cover is sealed correctly and closed firmly using all the fixing screws when attaching the terminal cover.
To seal the terminal cover correctly, be aware of the following points:

Check if the fixing sealant is fixed in the correct position in the cover. Fixing sealant is an important part to seal the cable part.
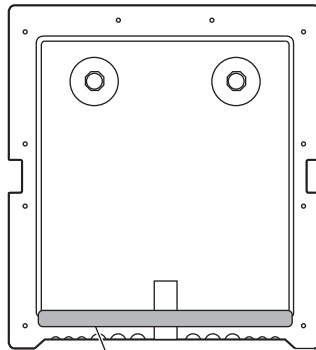
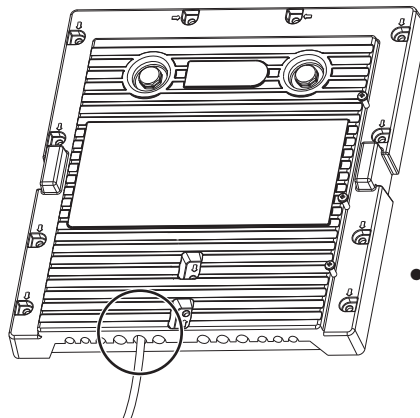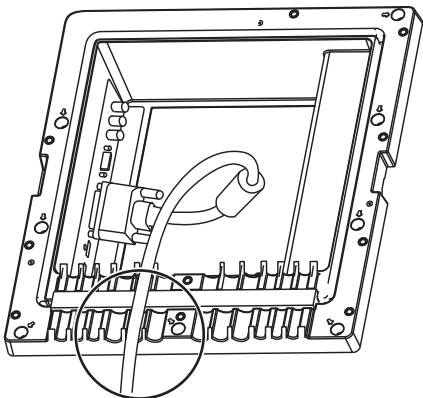**Terminal part on main unit rear side**   **Fixing sealant**

Terminal cover rear side

Fixing sealant   **Fixing sealant**

**Stick the cable to the shape of the dent on the terminal strip base tightly.**

- The structure is to keep the airtightness by tucking the cable pulled out along the dent on the terminal strip base with both fixing sealant of the terminal strip base and terminal cover.

■ **Power cable**

To keep the waterproof property, do not loosen the part fixing the power cable to the rear plate.

Do not force to bend the protruding part of the power cable. This may cause disconnection.
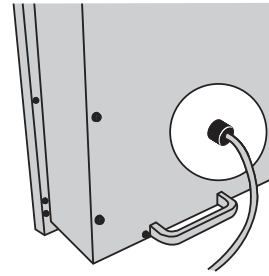
■ **Protective coating**

Cabinet aluminum parts and rear plate are protected from corrosion wth coating. Be careful not to damage the surface. In case the surface is damaged, corrosion may occur from there.

■ **Installation position**

Do not install the product to a place where the product is exposed to direct sunlight.
- If the screen is exposed to direct sunlight, the liquid crystal panel may have adverse effect.
- When direct sunlight is on the screen, black shadow may appear. This will disappear when the temperature drops.
- To avoid direct sunlight, installing a "canopy" above this product is recommended.
- To install the product long term in a special environment such as near a swimming pool, hot spring, or ocean, or in a factory uses chemicals or gases, please consult your local Panasonic dealer beforehand.

■ **Installation conditions**

**To use the product in an environment where outdoor air temperature is lower than 39 °F (4 °C), make sure to set the "Winter Mode" to "On". The inside temperature is kept constant and the startup can be performed smoothly. **

Do not exhibit or use this product in a condition where water splashes on to it continuously for long time.

■ **To install on a wall etc.**

- Consult your dealer about fittings etc. beforehand.
- Choose a permanent position where the total weight of the product and fittings can be hold permanently. If the strength of the position is not sufficient, a serious accident such as fall may be caused.
- Do not install the product where a person can be hang or lean on, or a passer may collide into. Accident may be caused.
- Take measures for tipping over and fall with an assumption of a fitting or installation location failure.
- Installation strength may be degraded due to aging depends on the environment. Ask a installation professional to inspect or repair regularly.
- When an abnormality or fault such as loose screw is detected, ask an installation professional or your dealer immediately for repair.
- Panasonic will not be responsible for any damages from an accident such as defect of installation, improper use, modification, or natural disaster.

v

Important Safety Instructions

1) Read these instructions.

2) Keep these instructions.

3) Heed all warnings.

4) Follow all instructions.

5) Do not use this apparatus near water.

6) Clean only with dry cloth.

7) Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.

8) Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.

9) Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.

10) Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.

11) Only use attachments / accessories specified by the manufacturer.

12) Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart / apparatus combination to avoid injury from tip-over.

13) Unplug this apparatus during lightning storms or when unused for long periods of time.

14) Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

15) To prevent electric shock, ensure the grounding pin on the AC cord power plug is securely connected.

FCC STATEMENT

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

  • Reorient or relocate the receiving antenna.
  • Increase the separation between the equipment and receiver.
  • Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
  • Consult the dealer or an experienced technician for help.

This device complies with Part15 of the FCC Rules. Operation is subject to the following two conditions:(1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

FCC CAUTION:
To assure continued compliance, follow the attached installation instructions and use only shielded interface cables when connecting to computer or peripheral devices. Any changes or modifications not expressly approved by Panasonic Corp. of North America could void the user's authority to operate this device.

FCC Declaration of Conformity

Model No. TH-42LFP30W, TH-47LFP30W

Responsible Party: Panasonic Corporation of North America
                      Three Panasonic Way 2F-5, Secaucus, NJ 07094
Contact Source: Panasonic Solutions Company
                      Panasonic Plasma Concierge 1-800-973-4390

CANADIAN NOTICE:
This Class B digital apparatus complies with Canadian ICES-003.

Important Safety Notice

WARNING

1) 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.

IMPORTANT: THE MOULDED PLUG

FOR YOUR SAFETY, PLEASE READ THE FOLLOWING TEXT CAREFULLY.

This display is supplied with a moulded three pin mains plug for your safety and convenience. A 10 amp fuse is fitted in this plug. Shall the fuse need to be replaced, please ensure that the replacement fuse has a rating of 10 amps and that it is approved by ASTA or BSI to BS1362.

Check for the ASTA mark ⟨ASA⟩ 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.

Do not cut off the mains plug.
Do not use any other type of mains lead except the one supplied with this display.
The supplied mains lead and moulded plug are designed to be used with this display to avoid interference and for your safety.
If the socket outlet in your home is not suitable, get it changed by a qualified electrician.
If the plug or mains lead becomes damaged, purchase a replacement from an authorized dealer.

WARNING : — THIS DISPLAY MUST BE EARTHED.

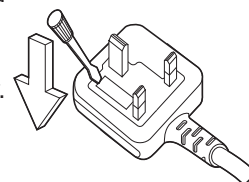How to replace the fuse. Open the fuse compartment with a screwdriver and replace the fuse.

Table of Contents

Trademark Credits
- VGA is a trademark of International Business Machines Corporation.
- Macintosh is a registered trademark of Apple Inc., USA.
- SVGA, XGA, SXGA and UXGA are registered trademarks of the Video Electronics Standard Association.
  Even if no special notation has been made of company or product trademarks, these trademarks have been fully respected.
- HDMI, the HDMI Logo, and High-Definition Multimedia Interface are trademarks or registered trademarks of HDMI Licensing LLC in the United States and other countries.

Note:
Image retention may occur. If you display a still picture for an extended period, the image might remain on the screen. However, it will disappear after a while.

Safety Precautions

WARNING

■ Setup

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

Small parts can present choking hazard if accidentally swallowed. Keep small parts away from young children. Discard unneeded small parts and other objects, including packaging materials and plastic bags/sheets to prevent them from being played with by young children, creating the potential risk of suffocation.

Do not place any objects on top of the Display.
- If any foreign objects get inside the Display, please consult your local Panasonic dealer.

Transport only in upright position!
- Transporting the unit with its display panel facing upright or downward may cause damage to the internal circuitry.

Releasing heat should not be impeded by covering the surface of this display with items such as newspapers, table cloths and curtains.

For sufficient heat release;
Leave a space of 3 15/16” (10 cm) or more at the top, left and right, and 1 31/32” (5 cm) or more at the rear, and also keep the space between the bottom of the display and the floor surface.
- This product has a structure to let the heat out from the cabinet surface.
- Use the product within the operating condition temperature range.

Cautions for Wall Installation
- Wall installation should be performed by an installation professional. Installing the Display incorrectly may lead to an accident that results in death or serious injury. Furthermore, when installing on a wall, a wall hanging bracket that conforms to VESA standards (VESA 400 × 400) must be used.
- When installing the Display vertically, turn up the power indicator for the upward direction.

■ When using the LCD Display

The Display is designed to operate on 110 - 127 or 220 - 240 V AC, 50/60 Hz.

Attach the terminal cover firmly to use.
- Otherwise the dust and water resistance is damaged and may cause fire, electric shock or product damage.

Do not stick any foreign objects into the Display.
- Do not insert any metal or flammable objects into the Display or drop them onto the 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 Display. For any inspection, adjustment and repair work, please contact your local Panasonic dealer.

Ensure that the mains plug is easily accessible.

An apparatus with CLASS I construction shall be connected to a mains socket outlet with a protective earthing connection.

Do not use any power supply cord other than that provided with this unit.
- Doing so may cause fire or electric shocks.

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

To prevent the spread of fire, keep candles or other open flames away from this product at all times.

■ 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 Display, immediately unplug the power supply plug from the wall outlet.
- If you continue to use the 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 Display yourself is extremely dangerous, and shall never be done.

If foreign objects get inside the Display, if the 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.

⚠ CAUTION

■ When using the LCD Display

Be sure to disconnect all cables before moving the Display.
 • If the 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.

Do not burn or breakup batteries.
 • Batteries must not be exposed to excessive heat such as sunshine, fire or the like.

Power supply
 • Install the product near an electrical outlet so that the plug can be unplugged immediately when an abnormality occurs.
 • For a wall installation, used a power outlet which can be unplugged immediately when an abnormality occurs.
 • This product is energized when the power plug is inserted to a socket. To cut off the power completely, the power plug must be unplugged from the socket.

Cabinet
 • Corner part of the metal cabinet is a potential injury hazard.
 • To lift the product, hold the handles for the precaution of fall. Injury or damage may be caused.

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 in which neutral detergent has been diluted 100 times, 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 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.
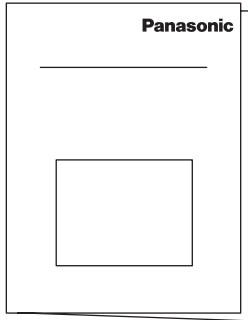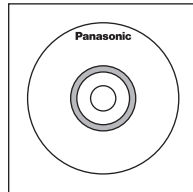
Accessories

Accessories Supply

Check that you have the accessories and items shown ☑
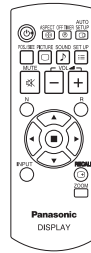
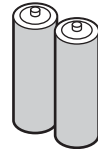☐ Operating Instruction book

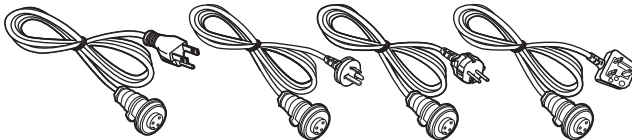☐ CD-ROM (Operating instructions)

☐ Remote Control Transmitter N2QAYB000535

☐ Batteries for the Remote Control Transmitter (R6 (UM3) Size × 2)
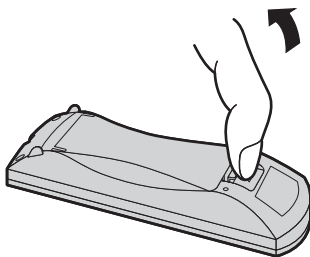
☐ Power supply cord

Note:
Remote Control Transmitter is not water protection type.

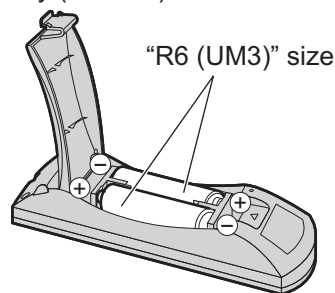Main plug types vary between countries. Make sure to use the power supply cord with the voltage and shape appropriate to your country and region. (see page 6)

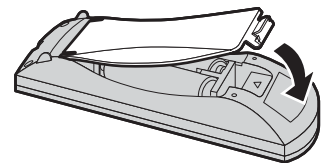## Remote Control Batteries

Requires two R6 batteries.

1. Pull and hold the hook, then open the battery cover.

2. Insert batteries - note correct polarity (+ and -).

"R6 (UM3)" size

3. Replace the cover.

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 Display set.
6. Do not burn or breakup batteries.
   Batteries must not be exposed to excessive heat such as sunshine, fire or the like.

About Power Supply Cord

Main plug types vary between countries. Check the shape of the power plugs to choose the appropriate cable for you.

Country Name		Appropriate AC Cables
Asia		
	India	Cable B or Cable C
	Indonesia	
	Philippine	
	Malaysia	
	Singapore	Cable C
	Hong Kong	
Middle East		
	United Arab Emirates	Cable B or Cable C
	Iraq	
	Iran	
	Oman	
	Syria	
	Lebanon	
	Qatar	
	Kuwait	Cable C
	Saudi Arabia	
Africa		
	Egypt	Cable B or Cable C
	Ethiopia	
	South Africa	
Middle/South America		
	Uruguay	Cable A or Cable B
	Ecuador	
	Colombia	
	Chili	
	Panama	**Caution:**
	Paraguay	110-127 V AC: Cable A is adaptable
	Puerto Rico	220-240 V AC: Cable B is adaptable
	Venezuela	
	Peru	
	Bolivia	
	Honduras	
North America		
	USA	Cable A (110-127 V AC Compatible)
	Canada	
Europe		
	Italy	
	Austria	
	Netherlands	
	Greece	
	Switzerland	
	Sweden	
	Spain	
	Czech	
	Denmark	
	Germany	
	Norway	
	Hungary	Cable B
	Finland	
	France	
	Bulgaria	
	Belgium	
	Portugal	
	Poland	
	Monaco	
	Luxembourg	
	Russia	
	Kazakhstan	
	Ukraine	
	Belarus	
	UK	Cable C
Oceania		
	Australia	Cable D
	New Zealand	

Cable A
Plug Type : A
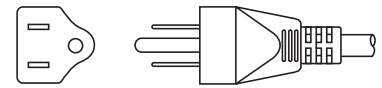
Cable B
Plug Type : SE

16A 250V~
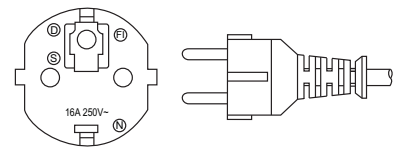
Cable C
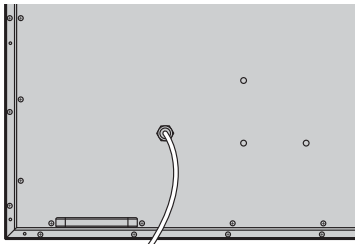Plug Type : BF

Cable D
Plug Type : O
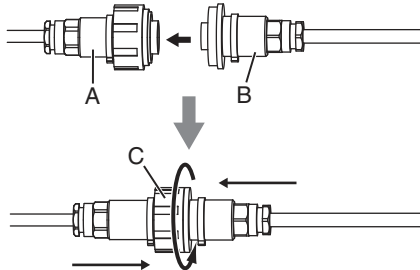
N   L
10A 250V~
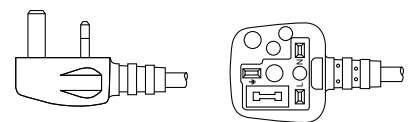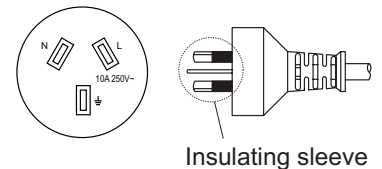
Insulating sleeve
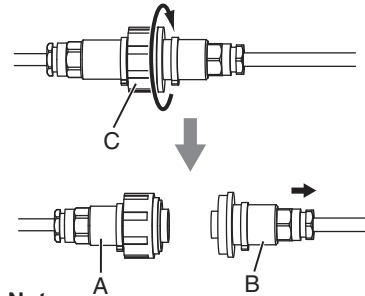
Connections

AC cord connection
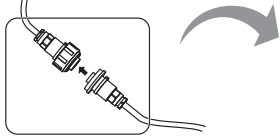
Connect the AC cord
Line up and push together connectors A and B so they are tight and then twist C until A and B cannot be pulled apart.

Disconnect the AC cord
Unscrew C and pull connector A and B apart.

Note:
When disconnecting the AC cord, be absolutely sure to disconnect the AC cord plug at the socket outlet first.

How to remove terminal cover

To remove the terminal cover to connect a cable or other item, remove all 12 screws in bottom, middle, then top order to prevent the terminal cover dropping off. Opening the terminal cover with some screws left on damages the terminal cover.
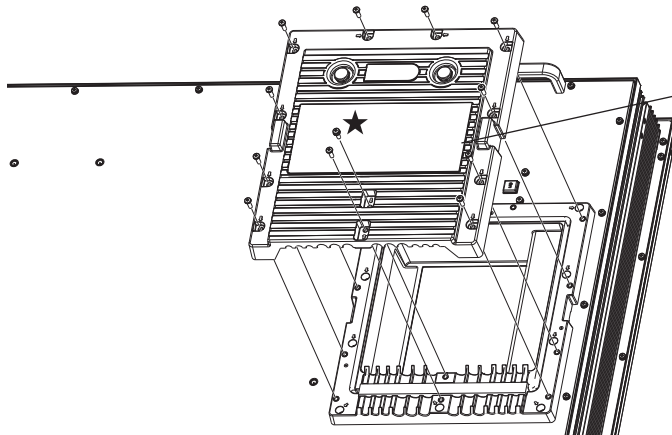
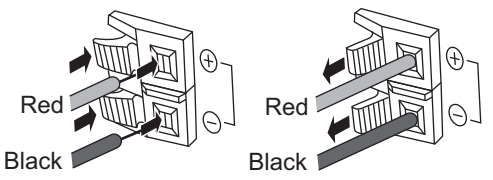Remove the screws (12) to take out the terminal cover.

Notes:
• After connection, check the cable is pulled out along the groove without overlapping, then tighten the all 12 screws to attach the terminal cover correctly. Otherwise water enters inside and causes fire, electric shock and product damage.
• Water-proof washer is used for one screw with ★ marked. To attach the terminal cover, let the water-proof washer through to attach the ★ marked screw.
• Make sure to read the "Terminal cover" (page iii) section for the correct handling of the terminal cover to use the product properly.

Video equipment connection
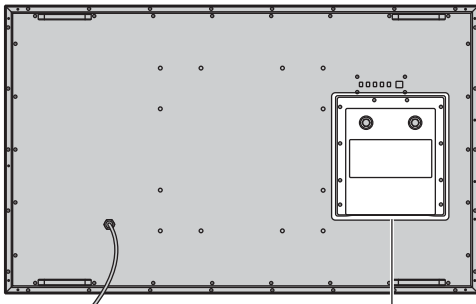
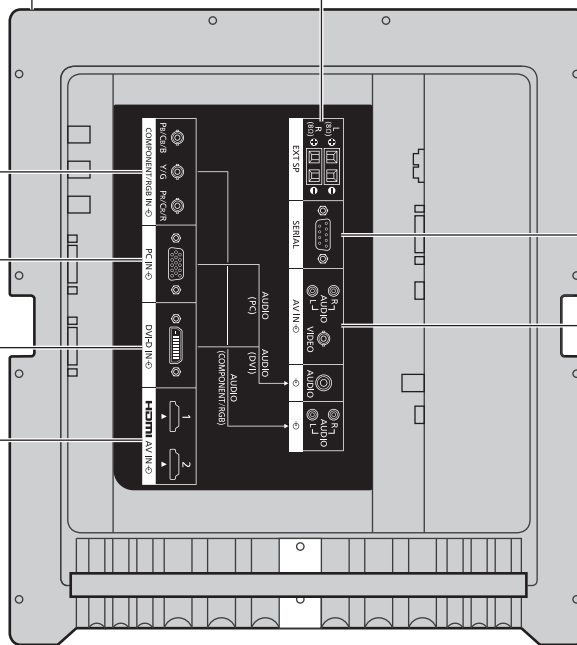Remove the terminal cover

EXT SP
Speaker output terminal

Red

Black

Red

Black

①While pressing the lever, insert the core wire.

②Return the lever.

COMPONENT/RGB IN
Component/RGB Video Input Terminal (see page 9)

PC IN
PC Input Terminal (see page 11)

DVI-D IN
DVI-D Input Terminal (see page 10)

AV IN
  HDMI1, HDMI2
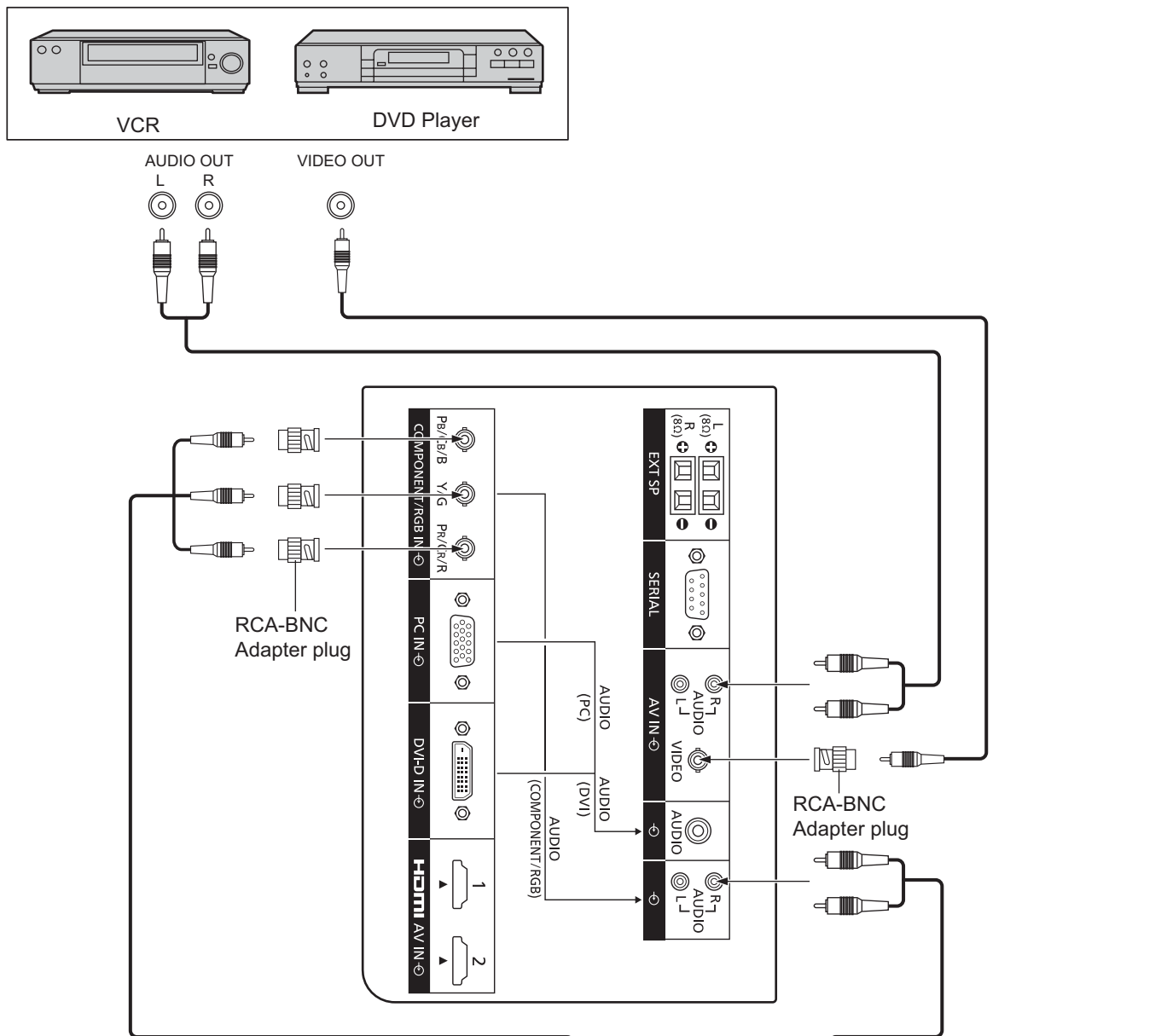 HDMI Input Terminal (see page 10)

SERIAL
Control the Display by connecting to PC (see page 12)

AV IN
  VIDEO
  Composite Video Input Terminal (see page 9)

VIDEO and COMPONENT / RGB IN connection

Note:

Additional equipment, cables and adapter plugs shown are not supplied with this set.


VCR

DVD Player

AUDIO OUT
L   R

VIDEO OUT

RCA-BNC
Adapter plug

RCA-BNC
Adapter plug

Notes:

• Change the "Component/RGB-in select" setting in the "Setup" menu to "Component" (when Component signal connection) or "RGB" (when RGB signal connection). (see page 36)

• Accepts only RGB signals from COMPONENT/RGB IN terminal with "Sync on G".

Y PB PR OUT

RGB OUT

L   R

AUDIO OUT

Computer

RGB Camcorder

DVD Player

9
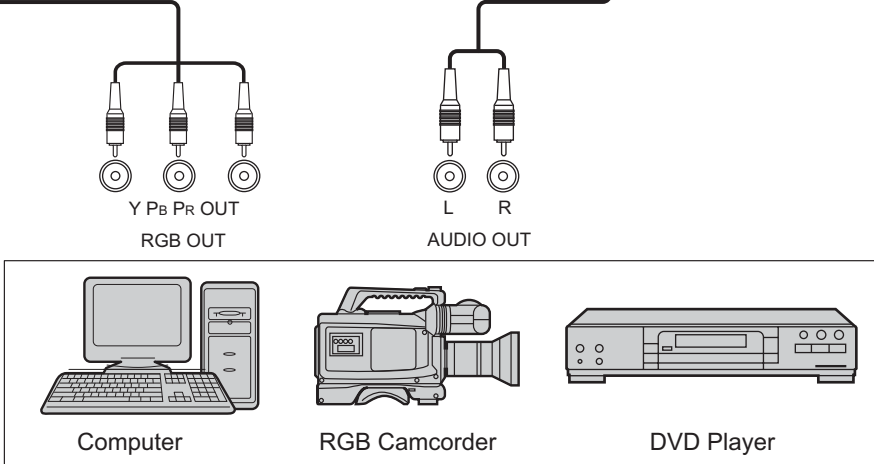
HDMI connection

[Pin assignments and signal names]

Pin No.	Signal Name	Pin No.	Signal Name
①	T.M.D.S Data2+	⑪	T.M.D.S Clock Shield
②	T.M.D.S Data2 Shield	⑫	T.M.D.S Clock-
③	T.M.D.S Data2-	⑬	CEC
④	T.M.D.S Data1+	⑭	Reserved (N.C. on device)
⑤	T.M.D.S Data1 Shield		
⑥	T.M.D.S Data1-	⑮	SCL
⑦	T.M.D.S Data0+	⑯	SDA
⑧	T.M.D.S Data0 Shield	⑰	DDC/CEC Ground
⑨	T.M.D.S Data0-	⑱	+5V Power
⑩	T.M.D.S Clock+	⑲	Hot Plug Detect

DVD player   DVD player
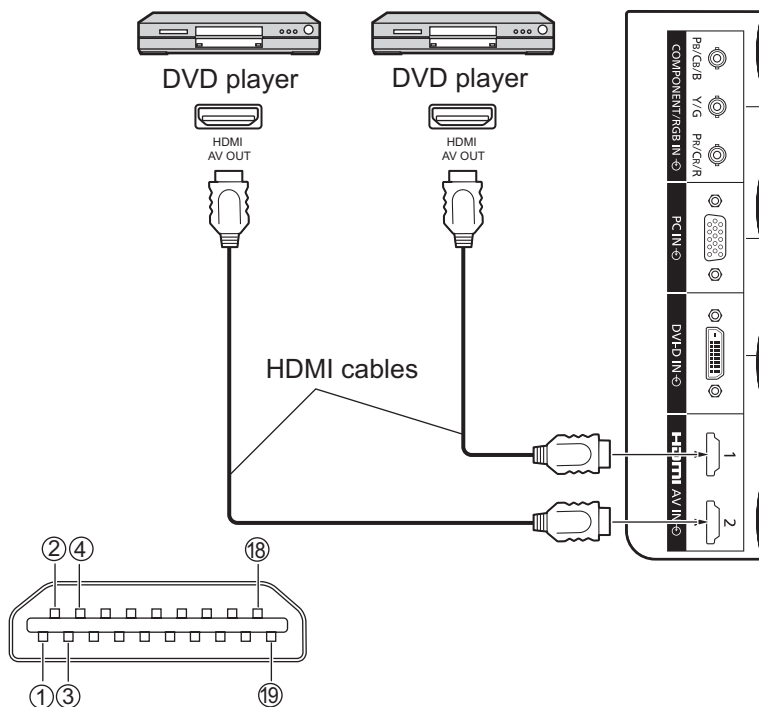
HDMI cables

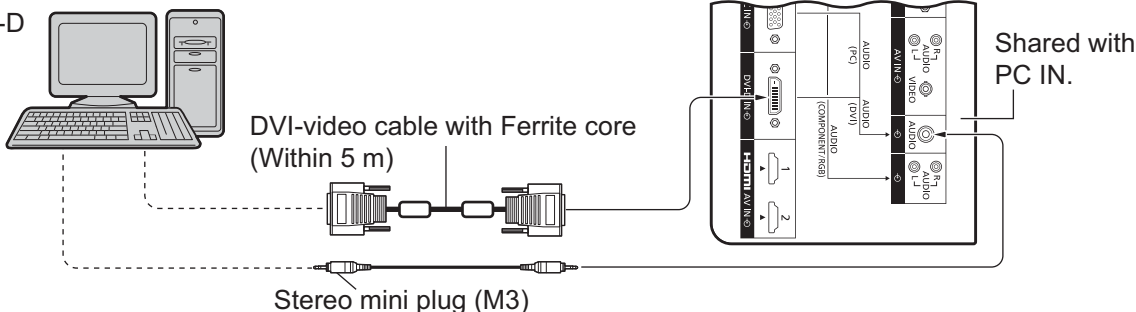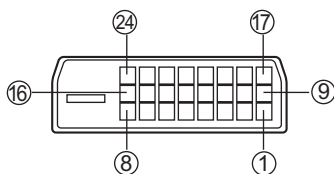**Note:**
Additional equipment and HDMI cable shown are not supplied with this set.

# DVI-D IN connection

PC with DVI-D video out

DVI-video cable with Ferrite core (Within 5 m)

Shared with PC IN.

Stereo mini plug (M3)

DVI-D Input Connector Pin Layouts

Connection port view

Pin No.	Signal Name	Pin No.	Signal Name
①	T.M.D.S. data 2-	⑬	———
②	T.M.D.S. data 2+	⑭	+5 V DC
③	T.M.D.S. data 2 shield	⑮	Ground
④	———	⑯	Hot plug detect
⑤	———	⑰	T.M.D.S. data 0-
⑥	DDC clock	⑱	T.M.D.S. data 0+
⑦	DDC data	⑲	T.M.D.S. data 0 shield
⑧	———	⑳	———
⑨	T.M.D.S. data 1-	㉑	———
⑩	T.M.D.S. data 1+	㉒	T.M.D.S. clock shield
⑪	T.M.D.S. data 1 shield	㉓	T.M.D.S. clock+
⑫	———	㉔	T.M.D.S. clock-

Notes:
• Additional equipment and cables shown are not supplied with this set.
• Use the DVI-D cable with Ferrite core complying with the DVI standard. Image deterioration may occur depending on the length or the quality of the cable.
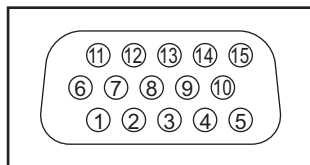
PC Input Terminals connection
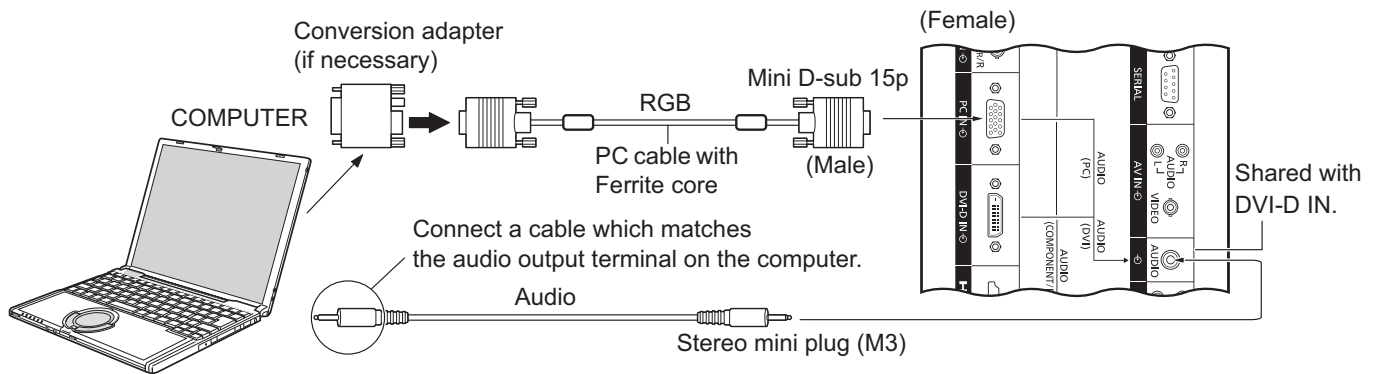
Notes:

• Computer signals which can be input are those with a horizontal scanning frequency of 30 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 1,440 × 1,080 dots when the aspect mode is set to "4:3", and 1,920 × 1,080 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 DDC2B-compatible. If the computer being connected is not DDC2B-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 Mini 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.
• Panasonic recommends using a PC cable that includes a Ferrite core.
• Do not set the horizontal and vertical scanning frequencies for PC signals which are above or below the specified frequency range.
• Component Input is possible with the pin 1, 2, 3 of the Mini D-sub 15P Connector.

Signal Names for Mini D-sub 15P Connector

Pin Layout for PC Input Terminal

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

SERIAL Terminals connection

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

COMPUTER

RS-232C Straight cable

(Female)   (Male)

D-sub 9p

Pin layout for SERIAL Terminal
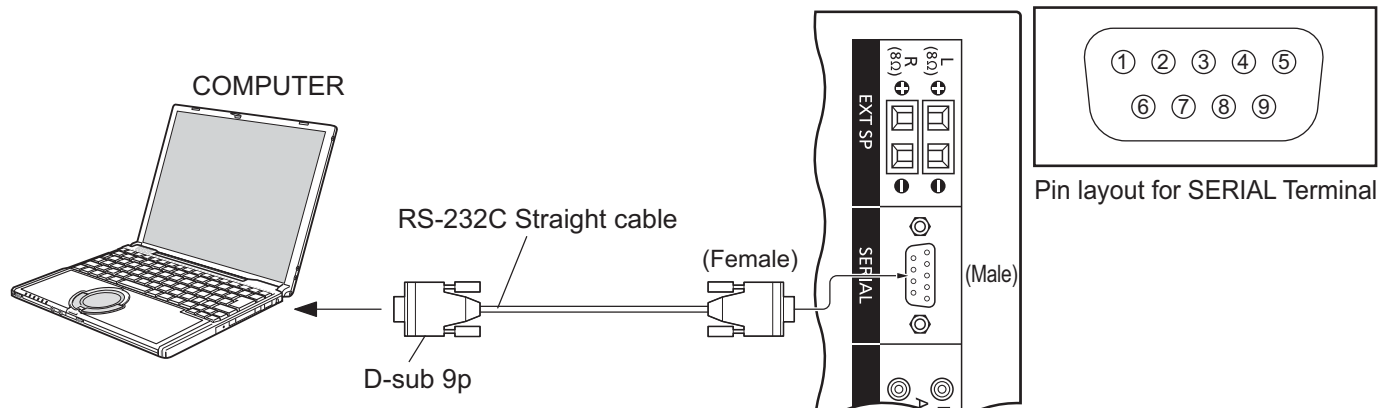
Notes:
- Use the RS-232C straight cable to connect the computer to the Display.
- The computer shown is for example purposes only.
- Additional equipment and cables shown are not supplied with this set.

The SERIAL terminal conforms to the RS-232C interface specification, so that the 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	-

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.

| STX | C1 | C2 | C3 | : | P1 | P2 | P3 | P4 | P5 | | ETX |

Start (02h) · 3-character command (3 bytes) · Colon · Parameter(s) (1 - 5 bytes) · End (03h)
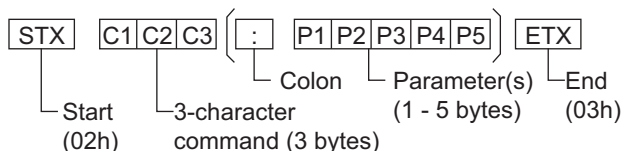
Notes:
- If multiple commands are transmitted, be sure to wait for the response for the first command to come from this unit before sending the next command.
- If an incorrect command is sent by mistake, this unit will send an "ER401" command back to the computer.
- Consult an Authorized Service Center for detail instructions on command usage.

Signal names for D-sub 9P connector

Pin No.	Details
②	R X D
③	T X D
⑤	GND
④ · ⑥	Non use
⑦	(Shorted in this set)
⑧	
① · ⑨	NC

These signal names are those of computer specifications.

Command

Command	Parameter	Control details
PON	None	Power ON
POF	None	Power OFF
AVL	**	Volume 000 - 100
AMT	0	Audio MUTE OFF
	1	Audio MUTE ON
IMS	None	Input select (toggle)
	AV1	VIDEO input (VIDEO)
	AV2	COMPONENT/RGB IN input (Component)
	HM1	HDMI1 input (HDMI1)
	HM2	HDMI2 input (HDMI2)
	DV1	DVI-D IN input (DVI)
	PC1	PC IN input (PC)
DAM	None	Screen mode select (toggle)
	ZOOM	Zoom1
	FULL	16:9
	NORM	4:3
	ZOM2	Zoom2

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

Power On / Off

**Connecting the AC cord plug to the Display. (see page 7)**
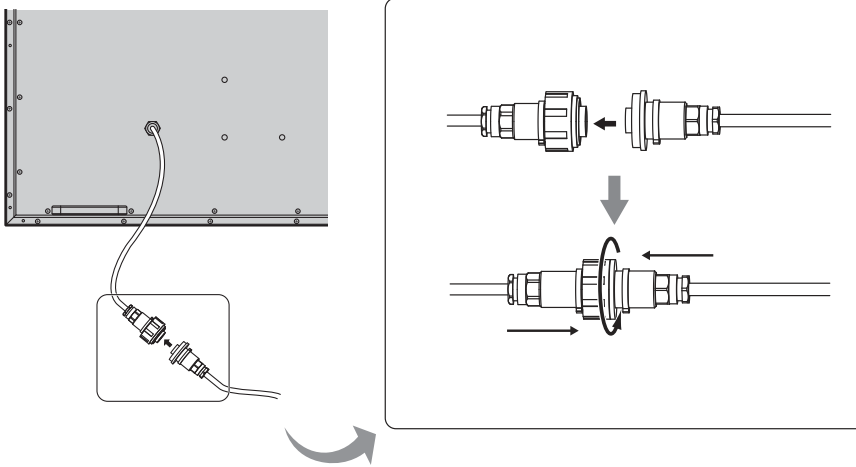
Connecting the plug to the Wall Outlet

Notes:
- Main plug types vary between countries. The power plug shown at right may, therefore, not be the type fitted to your set. (see page 6)
- When disconnecting the AC cord, be absolutely sure to disconnect the AC cord plug at the socket outlet first.

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

| Power Indicator: Green |

Power switch

Power Indicator   Remote Control Sensor
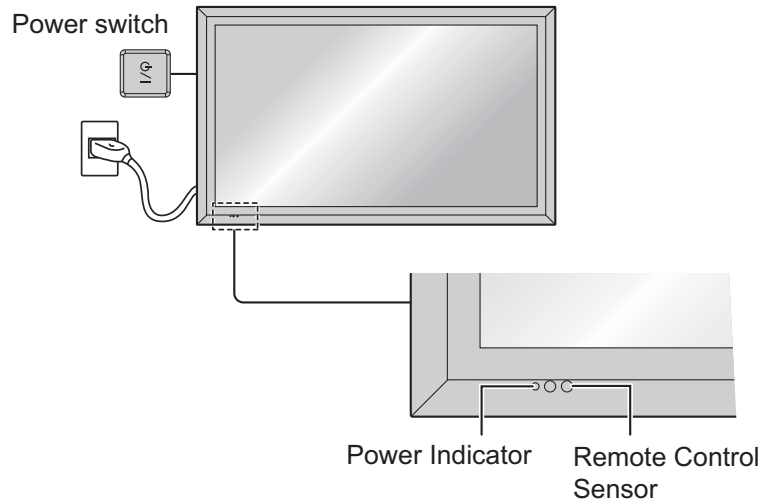
Press the ⏻ button on the remote control to turn the Display off.

| Power Indicator: Red (standby) |

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

| Power Indicator: Green |

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

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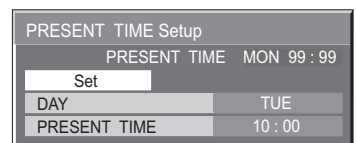During operation of the power management function, the power indicator turns orange in the power off state.
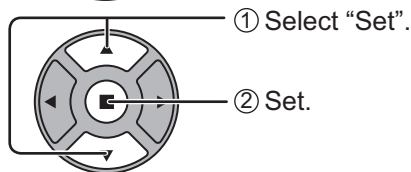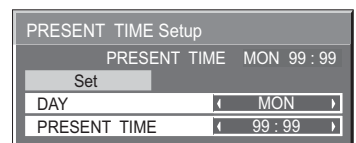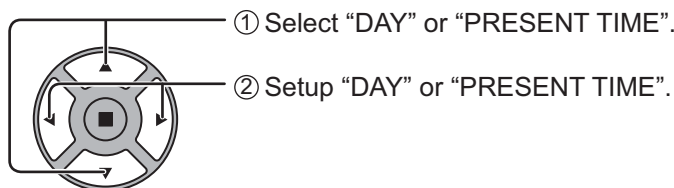

13
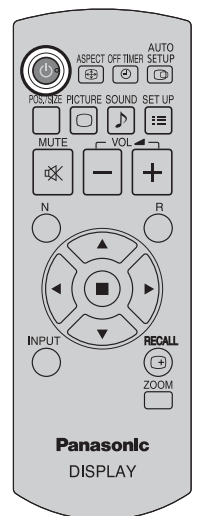
When first switching on the unit

Following screen will be displayed when the unit is turned on for the first time.
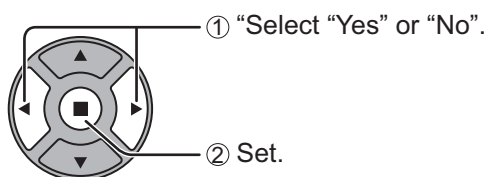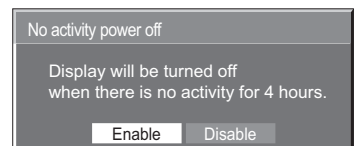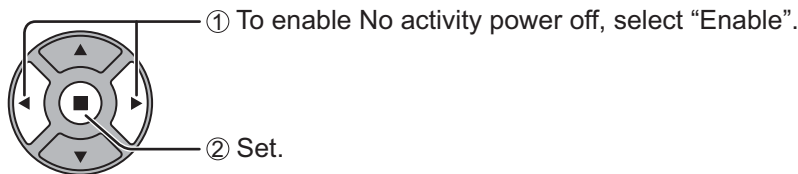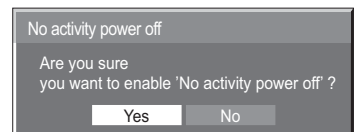Select the items with the remote control. Unit buttons are invalid.

OSD Language

① Select the language.

② Set.

OSD Language
English (UK)
Deutsch
Français
Italiano
Español
ENGLISH (US)
中文
日本語
Русский

PRESENT TIME Setup

① Select "DAY" or "PRESENT TIME".

② Setup "DAY" or "PRESENT TIME".

① Select "Set".

② Set.

PRESENT TIME Setup

PRESENT TIME   MON 99 : 99

Set

DAY   ◄   MON   ►
PRESENT TIME   ◄   99 : 99   ►

PRESENT TIME Setup

PRESENT TIME   MON 99 : 99

Set

DAY   TUE
PRESENT TIME   10 : 00

No activity power off

① To enable No activity power off, select "Enable".

② Set.

① "Select "Yes" or "No".

② Set.

No activity power off

Display will be turned off
when there is no activity for 4 hours.

Enable   Disable

If selecting "Enable", a
confirmation window appears.

No activity power off

Are you sure
you want to enable 'No activity power off' ?

Yes   No

Notes:
• Once the items are set, the screens won't be displayed when switching on the unit next time.
• After the setting, the items can be changed in the following menus.
  OSD Language (see page 33)
  PRESENT TIME Setup (see page 27)
  No activity power off (see page 31)

Power ON warning message

The following message may be displayed when turning the unit power ON:

No activity power off Precautions

'No activity power off' is enabled.

If "No activity power off" in Setup menu is set to "Enable", a warning message is displayed every time the power is turned ON. (see page 31)
This message display can be set with the following menu: Options menu

Selecting the input signal

INPUT

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

Input signals will change as follows:

$\rightarrow$ PC $\rightarrow$ DVI $\rightarrow$ HDMI1 $\rightarrow$ HDMI2 $\rightarrow$ VIDEO $\rightarrow$ Component* $\rightarrow$

PC: PC input terminal in PC IN.
DVI: DVI input terminal in DVI-D IN.
HDMI1: HDMI input terminal in AV IN (HDMI1).
HDMI2: HDMI input terminal in AV IN (HDMI2).
VIDEO: Video input terminal in AV IN (VIDEO/S-VIDEO).
Component*: Component or RGB input terminal in COMPONENT/RGB IN.
* "Component" may be displayed as "RGB" depending on the setting of "Component/RGB-in select". (see page 36)

Notes:
• Selecting is also possible by pressing the INPUT button on the unit.
• Select to match the signals from the source connected to the component/RGB input terminals. (see page 36)
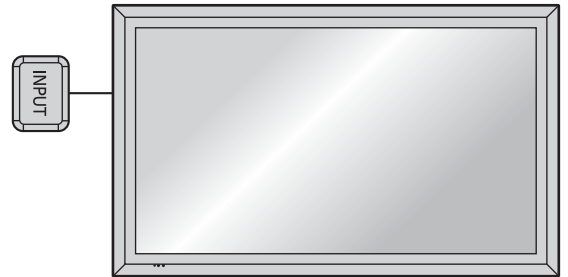
Basic Controls

Main Unit

Power Indicator
The Power Indicator will light.
• Power-OFF .... Indicator not illuminated (The unit will still consume some power as long as the power cord is still inserted into the wall outlet.)
• Standby .... Red
• Power-ON ...... Green
• Power management (DPMS)
.... Orange (PC IN or DVI-D IN signal. See page 31)

Remote control sensor
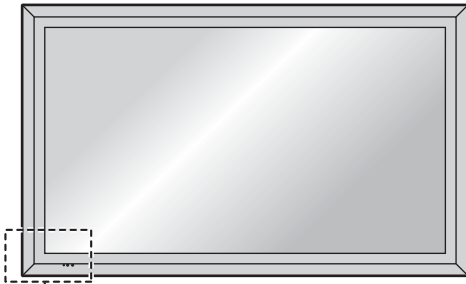
Brightness Sensor
Detects the brightness in the viewing environment.

Main Power On / Off Switch
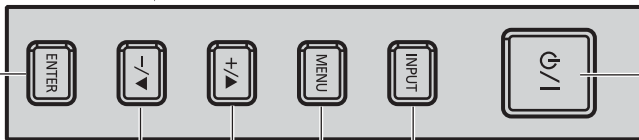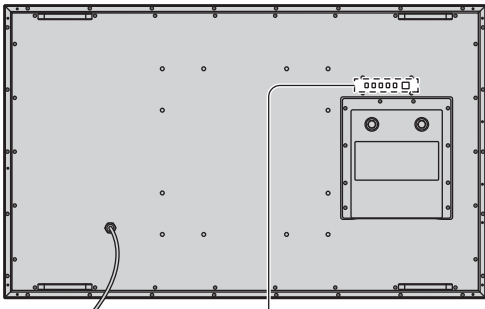
Enter / Aspect button
(see page 18, 20)

**INPUT button
(INPUT signal selection)**
(see page 15)

MENU Screen ON / OFF
Each time the MENU button is pressed, the menu screen will switch. (see page 20)

→ Normal Viewing → Picture ─┐
└─ Sound ← Pos. /Size ← Setup ←

Volume Adjustment
Volume Up "+" Down "−"
When the menu screen is displayed:
"+": press to move the cursor up
"−": press to move the cursor down
(see page 20)
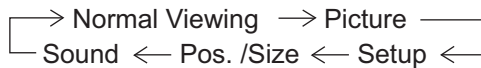
Remote Control Transmitter

ACTION button
Press to make selections.

ASPECT button
Press to adjust the aspect.
(see page 18)

Standby (ON / OFF) button
The Display must first be plugged into the wall outlet and turned on at the power switch (see page 13).
Press this button to turn the Display On, from Standby mode. Press it again to turn the Display Off to Standby mode.

POS. /SIZE button
(see page 22)

PICTURE button
(see page 24)

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

N button
(see page 23, 24, 25, 26)

POSITION buttons

INPUT button
Press to select Input signal sequentially. (see page 15)

OFF TIMER button
The 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.

$$30 \text{ min} \longrightarrow 60 \text{ min} \longrightarrow 90 \text{ min}$$
$$0 \text{ min}$$
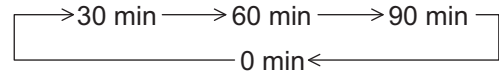
When three minutes remain, "Off timer 3 min" will flash.
The off timer is cancelled if a power interruption occurs.

AUTO SETUP button
Automatically adjusts the position/size of the screen. (see page 22)

SET UP button (see page 20)

SOUND button (see page 26)

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

R button (see page 20)
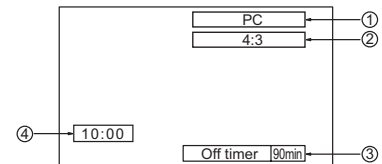Press the R button to return to previous menu screen.

RECALL button
Press the "RECALL" button to display the current system status.
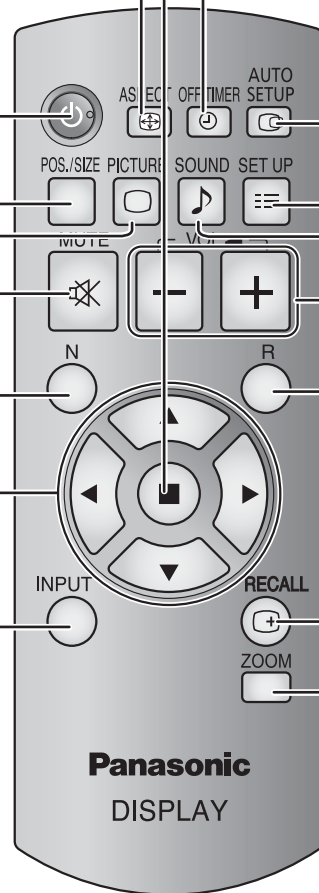① Input label
② Aspect mode (see page 18)
③ Off timer
The off timer indicator is displayed only when the off timer has been set.
④ Clock display (see page 42)

PC	①
4:3	②
④ → 10:00	
Off timer 90min	③

Digital Zoom (see page 19)

Panasonic
DISPLAY

17

ASPECT Controls

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

Note:
Be aware that if you put the display in a public place for commercial purposes or a public showing and then use the aspect mode select function to shrink or expand the picture, you may be violating the copyright under copyright law. It is prohibited to show or alter the copyrighted materials of other people for commercial purposes without the prior permission of the copyright holder.
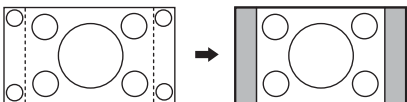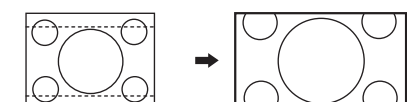
ASPECT
Press repeatedly to move through the aspect options:
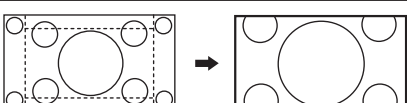
4:3 ⟶ Zoom1 ⟶ Zoom2 ⟶ 16:9
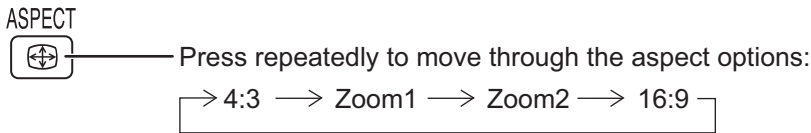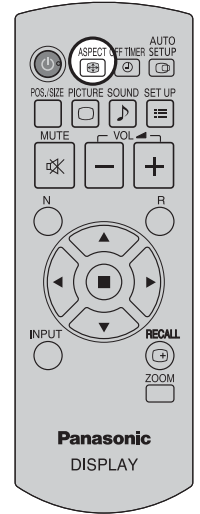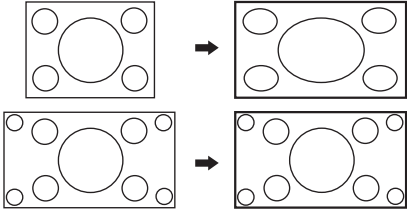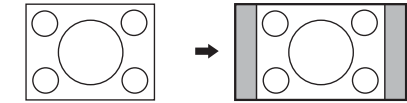
[from the unit]

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

Note:
The aspect mode is memorized separately for each input terminal.

Aspect mode	Picture ➡ Enlarged screen	Description
16:9		The display of the pictures fills the screen. In the case of SD signals, pictures with a 4:3 aspect ratio are enlarged horizontally, and displayed. This mode is suited to displaying anamorphic pictures with a 16:9 aspect ratio.
4:3		Pictures with a 4:3 aspect ratio are displayed with their original aspect ratio. Side panels are displayed at the left and right edges of the screen.
		The pictures with a 4:3 aspect ratio among the 16:9 aspect ratio signals are displayed with their original aspect ratio. The left and right edges of the pictures are masked with side panels.
Zoom1		Letterbox pictures with a 16:9 aspect ratio are enlarged vertically and horizontally so that their display fills the screen. The top and bottom edges of the pictures are cut off.
Zoom2		Letterbox pictures with a 16:9 aspect ratio are enlarged vertically and horizontally so that their display fills the screen. The top and bottom edges as well as the left and right edges of the pictures are cut off.

Digital Zoom

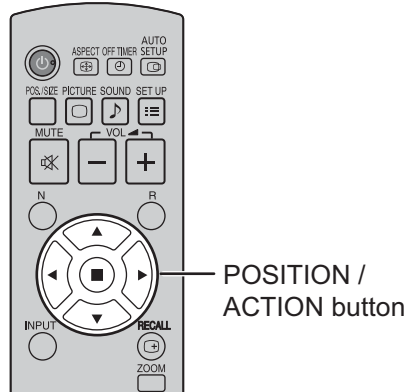This displays an enlargement of the designated part of the displayed image.

1 **Display the operation guide.**

ZOOM

Press to access Digital Zoom.
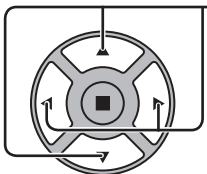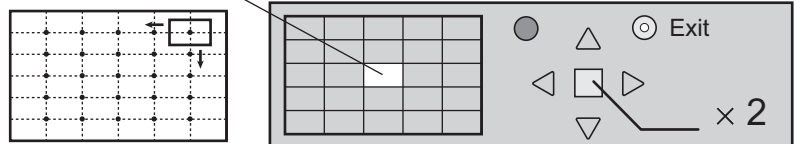The operation guide will be displayed.

⊙ Exit
× 1
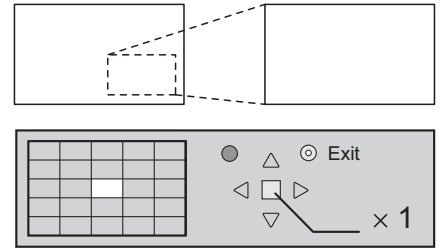
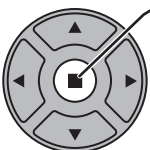**During Digital Zoom, only the following buttons can be operated.**

[Remote control]

POSITION /
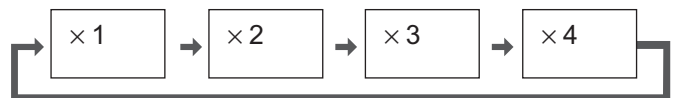ACTION button

---

2 **Select the area of the image to be enlarged.**

Press on the enlargement location to select.

The cursor will move.

⊙ Exit
× 2

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.

| × 1 | → | × 2 | → | × 3 | → | × 4 |

4 **Return to normal display (quit Digital Zoom).**

R

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:
  When MULTI DISPLAY Setup is On (see page 34).
  When Screensaver is running (see page 29)
• While Digital Zoom is in operation, "Adjusting Pos. / Size" cannot be used.

On-Screen Menu Displays

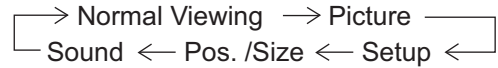|	**Remote Control**	**Unit**
1 **Display the menu screen.**	POS./SIZE PICTURE SOUND SET UP Press to select. (Example: Picture menu)	 Press several times. Each time the MENU button is pressed, the menu screen will switch. → Normal Viewing → Picture — └ Sound ← Pos. /Size ← Setup ←

2 Select the item.

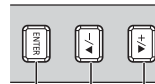| Picture	
Normalise Normal	
Picture Mode	◄ Normal ►
Backlight	100
Contrast	70
Brightness	50
Colour	50
Tint	50
Sharpness	50
White balance	Normal
Advanced settings	
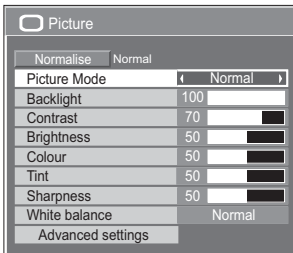
(Example: Picture menu)

Select.

❶ Select.
❷ Press.

3 Set.

Adjust.

❶ Adjust.
❷ Press.

4 Exit the menu.

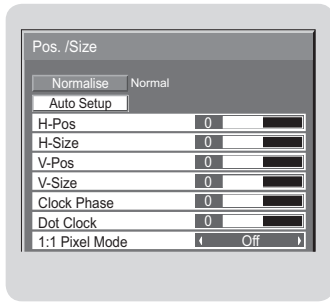POS./SIZE PICTURE SOUND SET UP
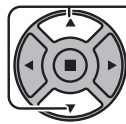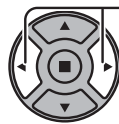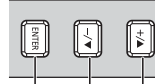
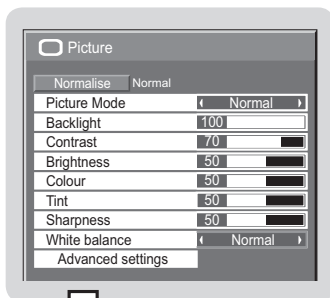Press.
Press ◯ to return to the previous menu.
R

Press several times.

Overview

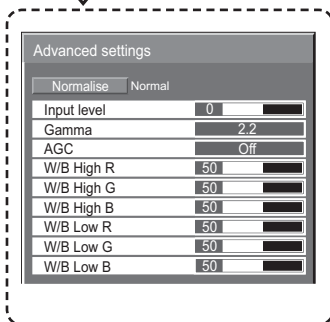**Note:** Menu that cannot be adjusted is grayout. Adjustable menu changes depending on signal, input and menu setting.
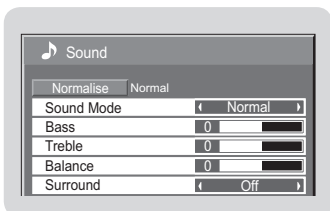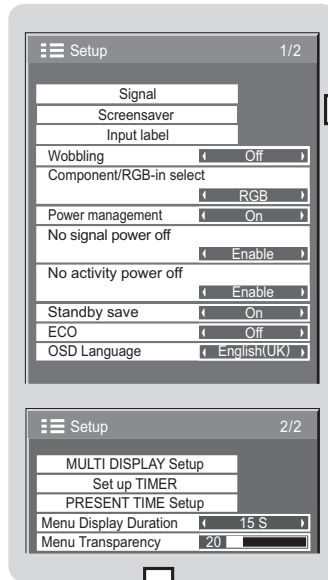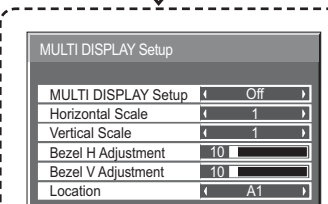
Pos. /Size	
Normalise	Normal
Auto Setup	
H-Pos	0
H-Size	0
V-Pos	0
V-Size	0
Clock Phase	0
Dot Clock	0
1:1 Pixel Mode	◄ Off ►

Page 22, 23

Picture	
Normalise	Normal
Picture Mode	◄ Normal ►
Backlight	100
Contrast	70
Brightness	50
Colour	50
Tint	50
Sharpness	50
White balance	◄ Normal ►
Advanced settings	

Page 24, 25

Advanced settings	
Normalise	Normal
Input level	0
Gamma	2.2
AGC	Off
W/B High R	50
W/B High G	50
W/B High B	50
W/B Low R	50
W/B Low G	50
W/B Low B	50

Page 24, 25

♪ Sound	
Normalise	Normal
Sound Mode	◄ Normal ►
Bass	0
Treble	0
Balance	0
Surround	◄ Off ►

Page 26

Setup	1/2
Signal	
Screensaver	
Input label	
Wobbling	◄ Off ►
Component/RGB-in select	
	◄ RGB ►
Power management	◄ On ►
No signal power off	
	◄ Enable ►
No activity power off	
	◄ Enable ►
Standby save	◄ On ►
ECO	◄ Off ►
OSD Language	◄ English(UK) ►

Setup	2/2
MULTI DISPLAY Setup	
Set up TIMER	
PRESENT TIME Setup	
Menu Display Duration	◄ 15 S ►
Menu Transparency	20

Page 27-40

MULTI DISPLAY Setup	
MULTI DISPLAY Setup	◄ Off ►
Horizontal Scale	◄ 1 ►
Vertical Scale	◄ 1 ►
Bezel H Adjustment	10
Bezel V Adjustment	10
Location	◄ A1 ►

Page 34, 35

Set up TIMER	
PRESENT TIME	MON 0 : 03
Program	◄ 1 ►
Timer Function	◄ Off ►
Day	◄ MON ►
Power Mode	◄ Power On ►
Time	0 : 00
Input	◄ VIDEO ►

Page 28

PRESENT TIME Setup	
PRESENT TIME	MON 99 : 99
Set	
DAY	◄ MON ►
PRESENT TIME	◄ 99 : 99 ►

Page 27

Signal	[AV]
3D Y/C Filter	◄ On ►
Colour system	◄ Auto ►
Cinema reality	◄ Off ►
Noise reduction	◄ Off ►

Page 37-40

Screensaver	
PRESENT TIME	MON 0 : 02
Start	
Mode	◄ Off ►

Page 29, 30

Input label	
VIDEO	◄ VIDEO ►
Component	◄ Component ►
PC	◄ PC ►
DVI	◄ DVI ►
HDMI1	◄ HDMI1 ►
HDMI2	◄ HDMI2 ►

Page 32

Adjusting Pos. /Size

1 POS./SIZE

Press to display the Pos. /Size menu.

Pos. /Size		
Normalise	Normal	
Auto Setup		
H-Pos	0	
H-Size	0	
V-Pos	0	
V-Size	0	
Clock Phase	0	
Dot Clock	0	
1:1 Pixel Mode	◀ Off ▶	

2 Press to select the menu to adjust.

3 Press to adjust the menu.
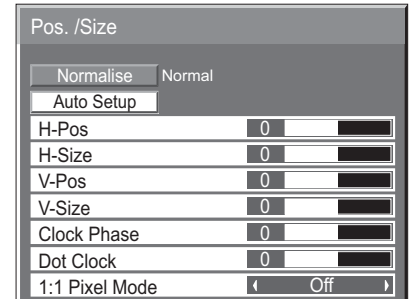
Notes:
Unadjustable items are grayed out.
Adjustable items differ depending on the input signal and the display mode.

**4** POS./SIZE

Press to exit from adjust mode.

Note:
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.

Auto Setup H-Pos/V-Pos, H-Size/V-Size, Dot Clock and Clock Phase are automatically adjusted when the RGB or PC signal is received.
This setting only operates when a PC signal or RGB signal is input, and the aspect is "16:9".
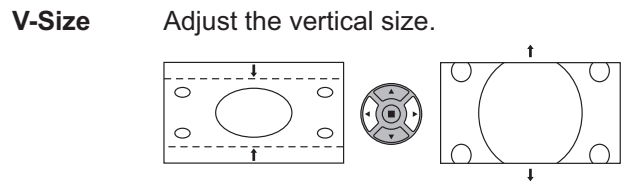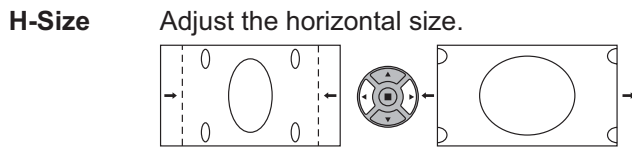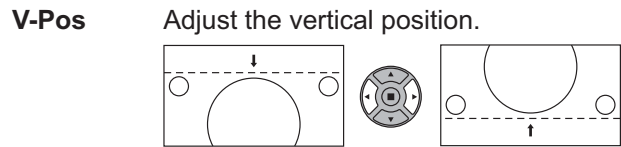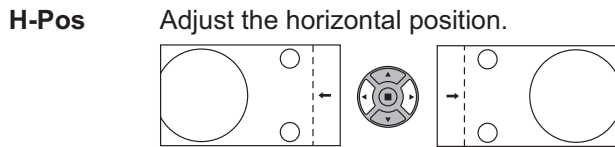
Using Remote Control
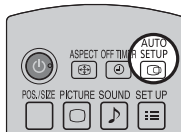
When [AUTO SETUP] on the remote control is pressed, "Auto Setup" will be executed.

When Auto Setup does not work, "Invalid" is displayed.

Notes:
• When digital RGB signal input, Dot Clock and Clock Phase cannot be made.
• Auto Setup may not work when a cropped or dark image is input. In such case, switch to a bright image with borders and other objects are clearly shown, and then try auto setup again.
• Depending on the signal, out of alignment may occur after Auto Setup. Carry out fine tuning for the position/size as required.
• If Auto Setup cannot set properly for vertical frequency 60Hz XGA signal (1024×768@60Hz and 1366×768@60Hz), pre-selecting the individual signal in "XGA Mode" (see page 38) may results in correct Auto Setup.
• Auto Setup does not work well when a signal such as additional information is superimposed out of valid image period or intervals between synchronizing and image signals are short.
• If Auto Setup cannot adjust correctly, select "Normalise" once and press ACTION (■), then adjust Pos. /Size manually.
• If the picture goes off screen in the horizontal direction as a result of performing Auto Setup, perform Dot Clock adjustment.

H-Pos   Adjust the horizontal position.   **V-Pos**   Adjust the vertical position.

H-Size   Adjust the horizontal size.   **V-Size**   Adjust the vertical size.

Clock   **(During Component, RGB and PC input signal)**
Phase   Eliminate the flickering and distortion.

Dot Clock   **(During Component, RGB and PC input signal)**
Periodic striped pattern interference (noise) may occur when a striped pattern is displayed. If this happens, adjust so that any such noise is minimized.

Over scan   Turn image over scan On/Off.
Configurable signals are as follows:
525i, 525p, 625i, 625p, 750/60p, 750/50p (Component Video, DVI, HDMI)

On   Off
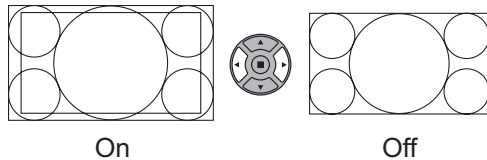
Notes:
• "Off" is effective during only "16:9" aspect mode.
• When "Off" is set, "H-Size" and "V-Size" cannot be adjusted.

1:1 Pixel   Adjusts the display size when 1125i or 1125p signal is input.
Mode   **Notes:**
• "On" is effective during only "16:9" aspect mode.
• Select On when you would like to replay 1920 × 1080 input signal.
• Applicable input signal;
1125 (1080) / 50i · 60i · 24sF · 24p · 25p · 30p · 50p · 60p
• Select Off when flickering is shown around the image.
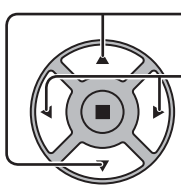• H-Size and V-Size cannot be adjusted when On is selected.

Off   On
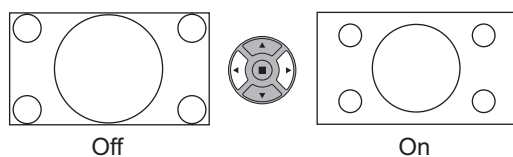
Helpful Hint (N / ☐Normalise☐ Normalisation)

While the 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 (except "Clock Phase" and "Dot Clock") are returned to the factory settings.
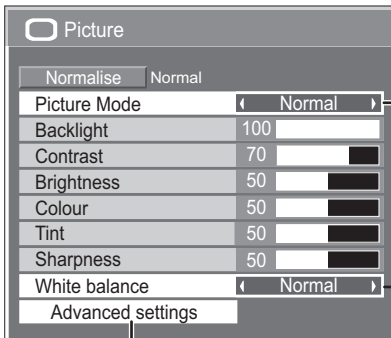
Picture Adjustments

1 PICTURE ⬜ ——— Press to display the Picture menu.

2 Select to adjust each item.

——— Press to select the menu to adjust.

——— Select the desired level by looking at the picture behind the menu.

Note:
Menu that cannot be adjusted is grayout. Adjustable menu changes depending on signal, input and menu setting.

Picture		
Normalise Normal		
Picture Mode	◄ Normal ►	
Backlight	100	
Contrast	70	
Brightness	50	
Colour	50	
Tint	50	
Sharpness	50	
White balance	◄ Normal ►	
Advanced settings		

Press to enter
Advanced settings .

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

Advanced settings		
Normalise Normal		
Input level	0	
Gamma	2.2	
AGC	Off	
W/B High R	50	
W/B High G	50	
W/B High B	50	
W/B Low R	50	
W/B Low G	50	
W/B Low B	50	

Press "◄" or "►" button to switch between modes.

Normal ⟷ Dynamic ⟵
Cinema ⟵

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
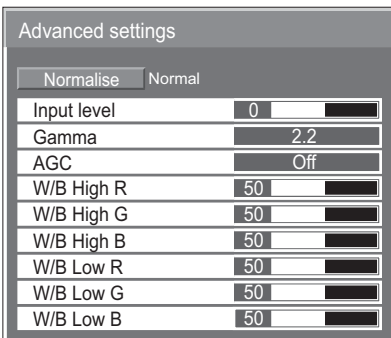Ideal for movies.

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)
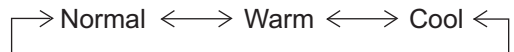
Press "◄" or "►" button to switch between modes.

Normal ⟷ Warm ⟷ Cool ⟵

Helpful Hint (⬚ N / 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.

Item	Effect	Adjustments
Backlight	◄ Darker ► Brighter	Adjusts luminance of the back light.
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" setting can be adjusted for Video input signal.
- You can change the level of each function (Backlight, Contrast, Brightness, Colour, Tint, Sharpness) for each Picture Mode.
- The setting details for normal, dynamic and cinema respectively are memorized separately for each input terminal.
- The "Tint" setting can be adjusted for NTSC signal only during Video input signal.
- In Contrast, there is not a noticeable change even when contrast is increased with a bright picture or reduced with a dark picture.

Advanced settings

Item	Effect	Details
Input level	◄ Less ► More	Adjustment of parts which are extremely bright and hard to see.
Gamma	◄ Down ► Up	S Curve ⟷ 2.0 ⟷ 2.2 ⟷ 2.6
AGC	◄ Off ► On	Increases the brightness of dark signal automatically.
W/B High R	◄ Less ► More	Adjusts the white balance for light red areas.
W/B High G	◄ Less ► More	Adjusts the white balance for light green 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 G	◄ Less ► More	Adjusts the white balance for dark green areas.
W/B Low B	◄ Less ► More	Adjusts the white balance for dark blue areas.

Notes:
- Carry out "W/B" adjustment as follows.
  1. Adjust the white balance of the bright sections using the "W/B High R", "W/B High G" and "W/B High B" settings.
  2. Adjust the white balance of the dark sections using the "W/B Low R", "W/B Low G" 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 terminal.
- The adjustment range values should be used as an adjustment reference.
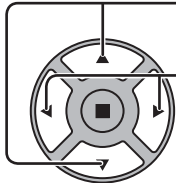
Helpful Hint (N ⃝ / [Normalise] **Normalisation)**

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.
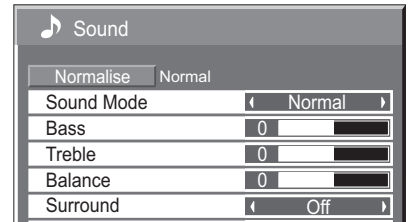
Sound Adjustment

1

SOUND
♪ ———————————— Press to display the Sound menu.

Sound menu:

♪ Sound		
Normalise	Normal	
Sound Mode	◄ Normal ►	
Bass	0	■
Treble	0	■
Balance	0	■
Surround	◄ Off ►	

2 Select to adjust each item.

———————————— Press to select the menu to adjust.

———————————— Select the desired level by listening to the sound.

3

SOUND
♪ ———————————— Press to exit from adjust mode.

Item	Details
Sound Mode	**Normal:** Emits the original sound. **Dynamic:** Accentuates sharp sound. **Clear:** Attenuates human voice.
Bass	Adjusts low pitch sounds.
Treble	Adjusts high pitch sounds.
Balance	Adjusts left and right volumes.
Surround	Select On or Off.

Note: Bass, Treble and Surround settings are memorized separately for each Sound Mode.

Helpful Hint (N○ / Normalise Normalisation)
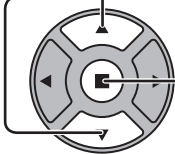
While the "Sound" menu is displayed, if either the N button on the remote control is pressed at any time or the ACTION (■) button is pressed during "Normalise", then all adjustment values are returned to the factory settings.
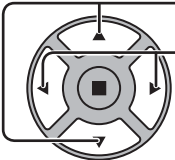
26

PRESENT TIME Setup / Set up TIMER

The timer can switch the 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 SET UP — Press to display the Setup menu.

☰ Setup	2/2
MULTI DISPLAY Setup	
Set up TIMER	
PRESENT TIME Setup	
Menu Display Duration	15 S
Menu Transparency	20

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

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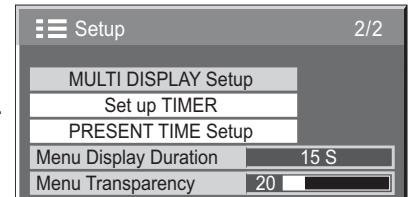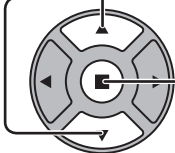
PRESENT TIME Setup

1 Press to select DAY or PRESENT TIME.

Press to setup DAY or PRESENT TIME.
► button: Forward
◄ button: Back

Notes:
• Pressing "◄" or "►" button once changes PRESENT TIME 1 minute.
• Pressing "◄" or "►" button continuously changes PRESENT TIME by 15 minutes.

PRESENT TIME Setup	
PRESENT TIME	MON 99 : 99
Set	
DAY	◄ MON ►
PRESENT TIME	◄ 99 : 99 ►
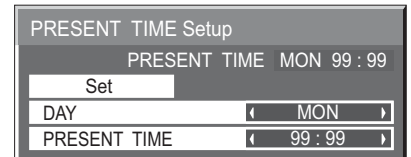
2 Press to select Set.

Press to store PRESENT TIME Setup.

Notes:
• Set cannot be selected unless PRESENT TIME is set.
• Unless setting the present time other than "99:99", "DAY" and "PRESENT TIME" can not be set.
• The settings of "DAY" and "PRESENT TIME" are reset when leaving the display turned off for about 7 days for the following reasons:
  Pressing ⏻/| switch of the unit to turn off the display.
 Disconnecting the AC cord.
  Interruption of power supply.

Set up TIMER

Set the program for turning the power On/Off and select the input signal at the specified time. Up to 20 programs can be set.

[Setting Example]
Program 1, Every Monday, 12:00, Power On, Input: VIDEO

Set up TIMER	
PRESENT TIME MON 0 : 03	
Program	◄ 1 ►
Timer Function	◄ On ►
Day	◄ MON ►
Power Mode	◄ Power On ►
Time	◄ 12 : 00 ►
Input	◄ VIDEO ►

① select
② adjust
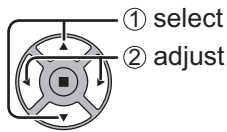
1 Set the program number.

2 To execute the program, set to "On".
The program is disabled when "Off" is set.

3 Set the day.
The program is executed every day when "Everyday" is set.

4 Set the power On/Off.

5 Set the time.
Pressing "◄" or "►" button once changes "Time" 1 minute.
Pressing "◄" or "►" button continuously changes "Time" by 15 minutes.

6 Set the input.

Notes:

• This function cannot be set unless "PRESENT TIME Setup" is set.

• If more than one programs are set for the same time, only the program with the smallest program number is enabled.

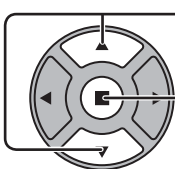# Screensaver (For preventing image retention)

Do not display a still picture, especially in 4:3 mode, for any length of time.
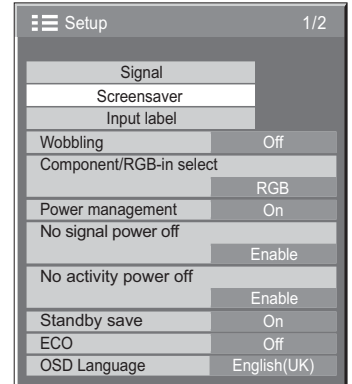If the display must remain on, a Screensaver should be used.
When the screen saver is operating, the following 5 patterns are displayed full screen for 5 seconds each.
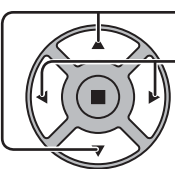
Black→Dark Gray→Gray→Light Gray→White

1 SET UP ⊟ ——— Press to display the Setup menu.

☰ Setup	1/2
Signal	
Screensaver	
Input label	
Wobbling	Off
Component/RGB-in select	
	RGB
Power management	On
No signal power off	
	Enable
No activity power off	
	Enable
Standby save	On
ECO	Off
OSD Language	English(UK)

2 ——— Press to select Screensaver.

——— Press to display Screensaver screen.

Screensaver	
PRESENT TIME	MON 0 : 02
Start	
Mode	◀ Off ▶
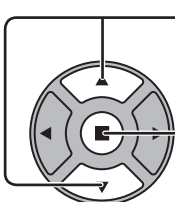
3 **Mode selection**

——— Press to select Mode.

Press to select each mode items.

→ Off
↕
Interval : Operates when Periodic Time and Operating Time are setup and those times arrive.
↕
Time Designation : Operates when Start Time and Finish Time are setup and those times arrive.
↕
Standby after SCR Saver: Operates while Screensaver duration, and display enters standby mode.
↕
→ On : Operates when Start is selected and the ACTION (■) button is pressed.
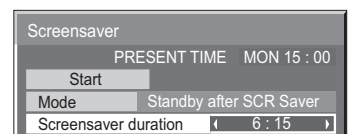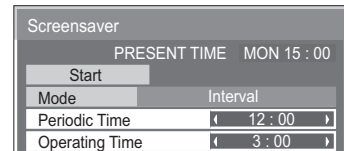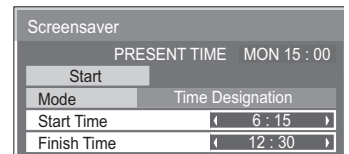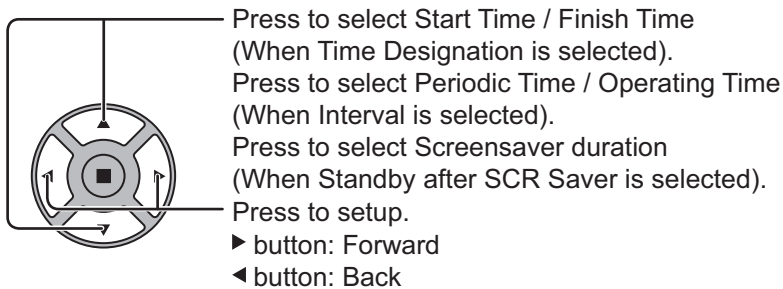
4 **Start setting**

——— When the Mode is set to On, press to select Start.

——— Press to start Screensaver.
The menu screen will disappear and the Screensaver will be activated. **To stop the Screensaver under On, press the R button or any buttons on the main unit.**

Note: When the display is turned off, the Screensaver will be deactivated.

Setup of Screensaver Time

After selecting Time Designation, Interval or Standby after SCR Saver, the relevant Time Setup will become available for selection and the Operating Time may be set. (Time cannot be set when "Mode" is "On" or "Off".)
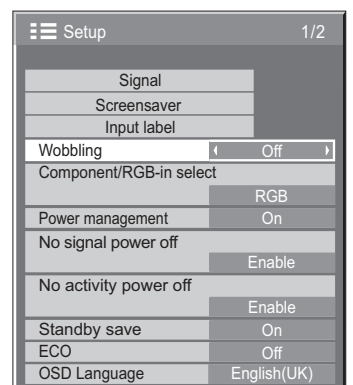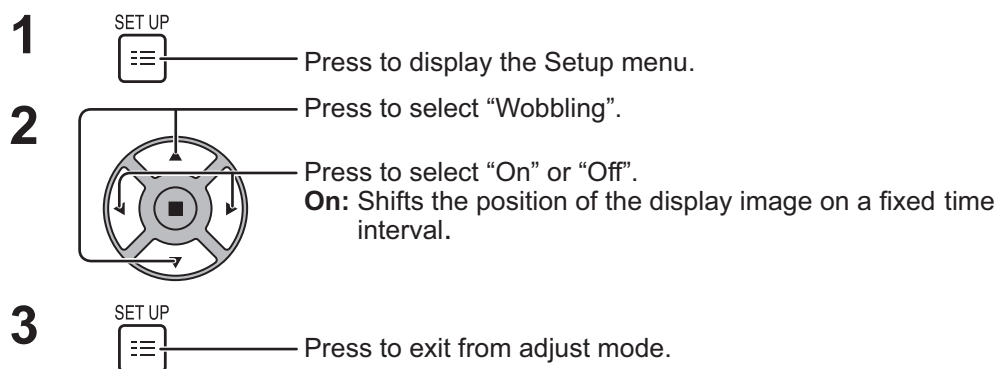
Press to select Start Time / Finish Time
(When Time Designation is selected).
Press to select Periodic Time / Operating Time
(When Interval is selected).
Press to select Screensaver duration
(When Standby after SCR Saver is selected).
Press to setup.
▶ button: Forward
◀ button: Back

Screensaver	
PRESENT TIME MON 15 : 00	
Start	
Mode	Time Designation
Start Time	◀ 6 : 15 ▶
Finish Time	◀ 12 : 30 ▶

Screensaver	
PRESENT TIME MON 15 : 00	
Start	
Mode	Interval
Periodic Time	◀ 12 : 00 ▶
Operating Time	◀ 3 : 00 ▶

Screensaver	
PRESENT TIME MON 15 : 00	
Start	
Mode	Standby after SCR Saver
Screensaver duration	◀ 6 : 15 ▶

Notes:
• Pressing "◀" or "▶" button once changes the Time 1 minute.
  [However, switching occurs every 15 minutes when Periodic Time is selected.]
• Pressing "◀" or "▶" button continuously changes the Time by 15 minutes.
• "Screensaver duration" of the "Standby after SCR Saver" can be set from 0:00 to
  23:59. When this is set to "0:00", " Standby after SCR Saver" will not be activated.

Note: Timer function will not work unless "PRESENT TIME" is set.

Wobbling

Automatically shifts the display image (therefore unnoticeable to the eye) to prevent image retention of sharper contour of image.

1 SET UP
Press to display the Setup menu.

2 Press to select "Wobbling".

Press to select "On" or "Off".
On: Shifts the position of the display image on a fixed time interval.

3 SET UP
Press to exit from adjust mode.

Setup	1/2
Signal	
Screensaver	
Input label	
Wobbling	◀ Off ▶
Component/RGB-in select	
	RGB
Power management	On
No signal power off	
	Enable
No activity power off	
	Enable
Standby save	On
ECO	Off
OSD Language	English(UK)

Notes:
• If "MULTI DISPLAY Setup" is set to "On", this function does not operate.
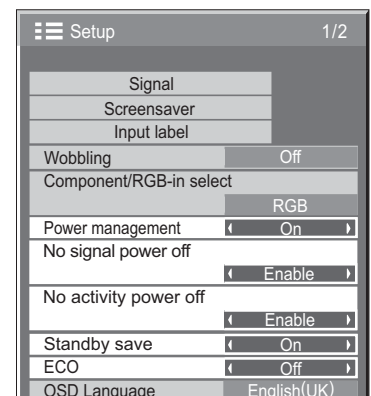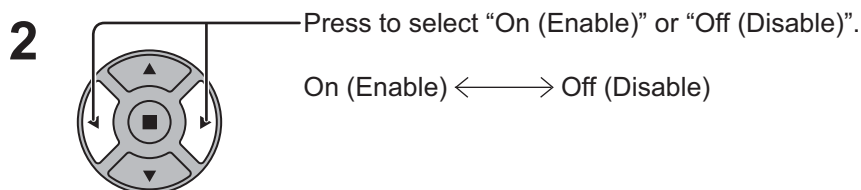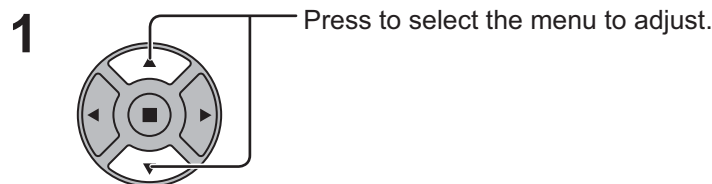• When this function is operating, part of the screen may appear to be missing.

Reduces power consumption

• Power management: When this function is set to On, it operates under the following conditions to turn the power on or off automatically.

When no pictures are detected for 30 or so seconds during input from PC IN or DVI-D IN terminal:

→ Power is turned off (standby); the power indicator lights up orange.

When pictures are subsequently detected:

→ Power is turned on; the power indicator lights up green.

Notes:

• This function operates only during input from PC IN or DVI-D IN terminal.

• This function is effective when "Sync" is set to "Auto" and during normal viewing (one picture screen).

• No signal power off: Equipment power supply is turned Off when there is no signal.

When this is set to "Enable", the power supply of the unit goes Off 10 minutes after the input signals stop.

Note:

This function is effective during normal viewing (one picture screen).

• No activity power off: When this function is set to "Enable", the power is turned off (standby) automatically when there is no operation of the Display for 4 hours.

Starting from 3 minutes before the turn off, the remaining time will be displayed.
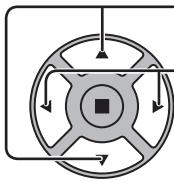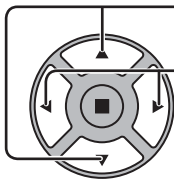
Press any key to abort.
No activity power off   3min
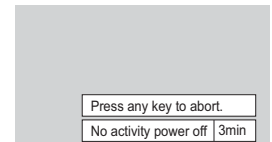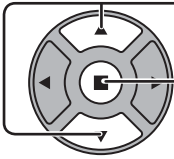
When the power is turned off due to this function, a message "Last turn off due to 'No activity power off'." is displayed next time the power is turned on.

Note:

During the screensaver is running, this function is disabled.

• Standby save: When this function is set to "On", serial communication is disabled during standby mode, reducing the power consumption during standby.

To perform serial communication while in standby, set this function to "Off(SERIAL)". However, the standby power consumption is greater than when it is set to "On".

Note:

The factory setting is "On".

• ECO: This function adjusts the brightness of the backlight to reduce power consumption.

Off: This function does not operate.

On: Backlight brightness is reduced.

Sensor: The backlight brightness is automatically adjusted according to the viewing environment.

Note:

When this function is set to "On" or "Sensor", the "Backlight" setting in the Picture menu is disabled.

1 Press to select the menu to adjust.

☰ Setup	1/2
Signal	
Screensaver	
Input label	
Wobbling	Off
Component/RGB-in select	
	RGB
Power management	◄ On ►
No signal power off	
	◄ Enable ►
No activity power off	
	◄ Enable ►
Standby save	On
ECO	◄ Off ►
OSD Language	English(UK)

2 Press to select "On (Enable)" or "Off (Disable)".

On (Enable) ⟵⟶ Off (Disable)

3 SET UP

Press to exit from Setup.

Customizing the Input labels

This function can change the label of the Input signal to be displayed. (see page 15)

1 SET UP ⚏ ———— Press to display the Setup menu.

2 ———— Press to select Input label.

———— Press to display the Input label screen.

3 ———— Press to select image input.

———— Press to change input label.

☰ Setup	1/2
Signal	
Screensaver	
Input label	
Wobbling	Off
Component/RGB-in select	
	RGB
Power management	On
No signal power off	
	Enable
No activity power off	
	Enable
Standby save	On
ECO	Off
OSD Language	English(UK)
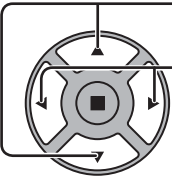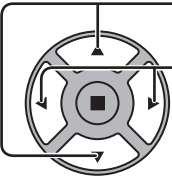
Input label	
VIDEO	◄ VIDEO ►
Component	◄ Component ►
PC	◄ PC ►
DVI	◄ DVI ►
HDMI1	◄ HDMI1 ►
HDMI2	◄ HDMI2 ►

Image input	Input label
[VIDEO]	VIDEO / DVD1 / DVD2 / DVD3 / Blu-ray1 / Blu-ray2 / Blu-ray3 / CATV / VCR / STB / (Skip)
[Component]*	Component / DVD1 / DVD2 / DVD3 / Blu-ray1 / Blu-ray2 / Blu-ray3 / CATV / VCR / STB / (Skip)
[PC]	PC / DVD1 / DVD2 / DVD3 / Blu-ray1 / Blu-ray2 / Blu-ray3 / CATV / VCR / STB / (Skip)
[DVI]	DVI / DVD1 / DVD2 / DVD3 / Blu-ray1 / Blu-ray2 / Blu-ray3 / CATV / VCR / STB / (Skip)
[HDMI1]	HDMI1 / DVD1 / DVD2 / DVD3 / Blu-ray1 / Blu-ray2 / Blu-ray3 / CATV / VCR / STB / (Skip)
[HDMI2]	HDMI2 / DVD1 / DVD2 / DVD3 / Blu-ray1 / Blu-ray2 / Blu-ray3 / CATV / VCR / STB / (Skip)

(Skip): The INPUT button press will skip its input.

* "Component" may be displayed as "RGB" depending on the setting of "Component/RGB-in select". (see page 36)
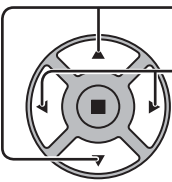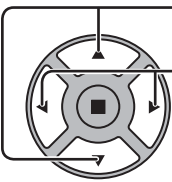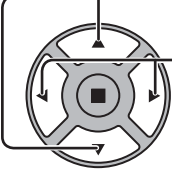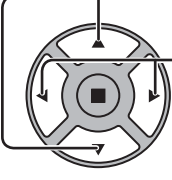
Selecting the On-Screen Menu Language

1 SET UP

Press to display the Setup menu.

2

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)
↕
Русский.......(Russian)

Setup	1/2
Signal	
Screensaver	
Input label	
Wobbling	Off
Component/RGB-in select	
	RGB
Power management	On
No signal power off	
	Enable
No activity power off	
	Enable
Standby save	On
ECO	Off
OSD Language	◄ English(UK) ►
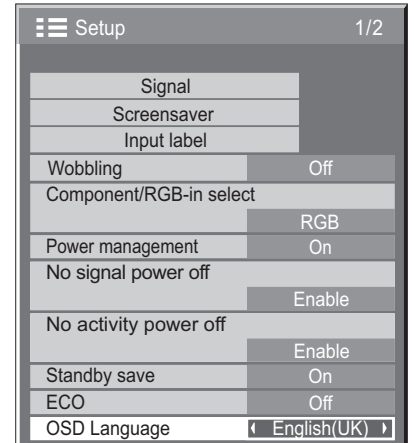
Customizing the On-Screen Menu Display

Set the display time and background transparency of the on-screen menu display.

1 SET UP

Press to display the Setup menu.

2

Press to select "Menu Display Duration".

Press to adjust the display duration.

Setup	2/2
MULTI DISPLAY Setup	
Set up TIMER	
PRESENT TIME Setup	
Menu Display Duration	◄ 15 S ►
Menu Transparency	20

3

Press to select "Menu Transparency".

Press to adjust the transparency.

4 SET UP

Press to exit from adjust mode.
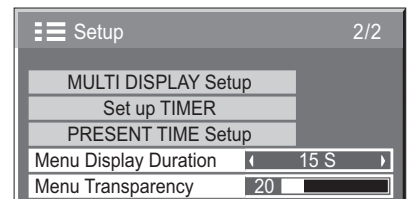
Setup for MULTI DISPLAY

By lining up the Displays in groups, for example, as illustrated below, an enlarged picture may be displayed across all screens.
For this mode of operation, each display has to be set up with a Display number to determine its location.

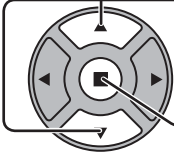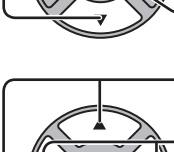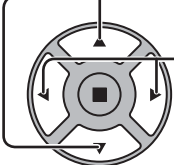(Example)

group of 4 (2 × 2)   group of 9 (3 × 3)   group of 16 (4 × 4)   group of 25 (5 × 5)
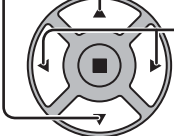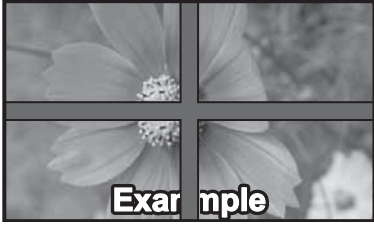
How to Setup MULTI DISPLAY

1 SET UP — Press to display the Setup menu.

Setup	2/2
MULTI DISPLAY Setup	
Set up TIMER	
PRESENT TIME Setup	
Menu Display Duration	15 S
Menu Transparency	20

2 Press to select the MULTI DISPLAY Setup.

Press to display the "MULTI DISPLAY Setup" menu.

MULTI DISPLAY Setup	
MULTI DISPLAY Setup	Off
Horizontal Scale	1
Vertical Scale	1
Bezel H Adjustment	10
Bezel V Adjustment	10
Location	A1

3 Press to select the MULTI DISPLAY Setup.

Press to select "On" or "Off".

Item	Details
MULTI DISPLAY Setup	Select "On" or "Off".
Horizontal Scale	Select "1", "2", "3", "4", "5".
Vertical Scale	Select "1", "2", "3", "4", "5".
Bezel H Adjustment **Bezel V Adjustment**	Areas of the image that are hidden by the joint sections are adjusted both horizontally and vertically (0~100). To show joints between displays. / To hide joints between displays. Suitable for still image display. / Suitable for moving image display. Setting value: 0 / Setting value: 100

Item	Details
Location	Select the required arrangement number. (A1-E5 : Refer to the following) **Display Number locations for each arrangement.** **(Examples)**

(2 × 1)

A1	A2

(2 × 3)

A1	A2
B1	B2
C1	C2

(4 × 2)

A1	A2	A3	A4
B1	B2	B3	B4

(4 × 4)

A1	A2	A3	A4
B1	B2	B3	B4
C1	C2	C3	C4
D1	D2	D3	D4

(5 × 5)

A1	A2	A3	A4	A5
B1	B2	B3	B4	B5
C1	C2	C3	C4	C5
D1	D2	D3	D4	D5
E1	E2	E3	E4	E5

4   SET UP   Press to exit from Setup.

Setup for Input Signals
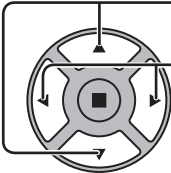
Component / RGB-in select

Select to match the signals from the source connected to the COMPONENT/RGB IN terminal.
Y, P$_B$, P$_R$ signals ⇨ "Component"
RGB signals ⇨ "RGB"

1 SET UP — 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 SET UP — Press to exit from adjust mode.
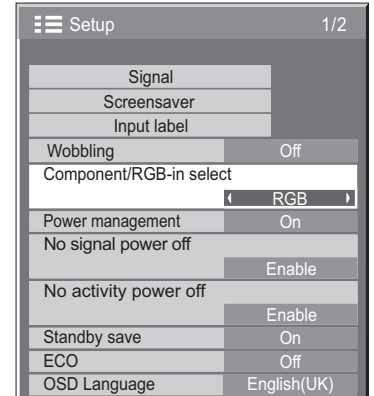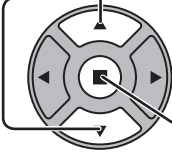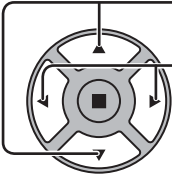
Note:
Make setting of the selected input terminal (COMPONENT/RGB IN).

Setup	1/2
Signal	
Screensaver	
Input label	
Wobbling	Off
Component/RGB-in select	
	◄ RGB ►
Power management	On
No signal power off	
	Enable
No activity power off	
	Enable
Standby save	On
ECO	Off
OSD Language	English(UK)

Signal menu

Note:
"Signal" setup menu displays a different setting condition for each input signal.

1   SET UP
        [⊟] ———————— Press to display the Setup menu.

2   ———— Press to select the "Signal".

        ———— Press to display the Signal menu.

3   ———— Press to select the menu to adjust.

        ———— Press to adjust the menu.

4   SET UP
        [⊟] ———————— Press to exit from adjust mode.

⋮≣ Setup	1/2
Signal	
Screensaver	
Input label	
Wobbling	Off
Component/RGB-in select	
	RGB
Power management	On
No signal power off	
	Enable
No activity power off	
	Enable
Standby save	On
ECO	Off
OSD Language	English(UK)

⇩ Press ACTION (■) button

For Video

Signal	[AV]
3D Y/C Filter	◄ On ►
Colour system	Auto
Cinema reality	Off
Noise reduction	Off

For RGB

Signal	[RGB]
Sync	◄ Auto ►
Cinema reality	Off
XGA Mode	1024×768
Noise reduction	Off
H-Freq.	63.98 kHz
V-Freq.	60.02 Hz
Signal Format	1280×1024/60

For Component
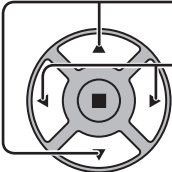
Signal	[Component]
Cinema reality	◄ Off ►
XGA Mode	1024×768
Noise reduction	Off
H-Freq.	63.98 kHz
V-Freq.	60.02 Hz
Signal Format	1280×1024/60

For Digital

Signal	[Digital]
Cinema reality	◄ Off ►
Noise reduction	Off
H-Freq.	63.98 kHz
V-Freq.	60.02 Hz
Dot Clock Freq.	108.0 MHz
Signal Format	1280×1024/60

3D Y/C Filter

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

———— Press to select the "3D Y/C Filter"

———— Press to set On / Off.

3D Y/C Filter	◄ On ►

Colour system

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

Press to select the "Colour system".

Press to select each functions.

Signal	[AV]
3D Y/C Filter	On
Colour system	◀ Auto ▶
Cinema reality	Off
Noise reduction	Off

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.
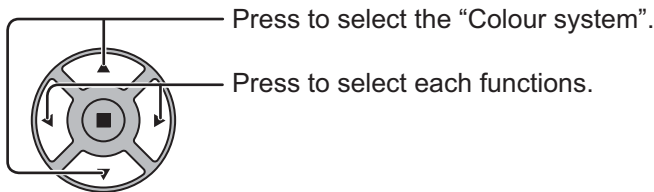
Colour system: Set the colour system to match the input signal. When "Auto" is set, Colour system will be automatically selected from NTSC/PAL/SECAM/NTSC 4.43/PAL M/PAL N.
To display PAL60 signal, select "Auto".

→Auto ←→ PAL ←→ SECAM ←→ NTSC ←→ NTSC 4.43 ←→ PAL M ←→ PAL N ←
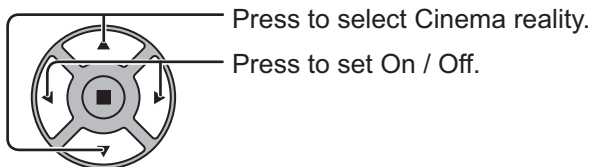
Cinema reality

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 Video input signal.
• 525i (480i), 625i (575i), 1125 (1080) / 60i signal input during Component input signal.

Press to select Cinema reality.

Press to set On / Off.

Cinema reality	◀ Off ▶

XGA Mode

This menu is displayed when the input signal is analog (Component/PC). This menu sets two types of XGA signals with 60Hz vertical frequency having different aspect ratios and sampling rates (1,024 × 768 @ 60Hz and 1,366 × 768 @ 60Hz).
When a 1,280 x 768 @ 60Hz input signal is automatically detected, the image is processed as a 1,280 x 768 @ 60Hz XGA input signal irrespective of this setting.

Press to select "XGA Mode".

Press to select "1024×768", "1366×768".
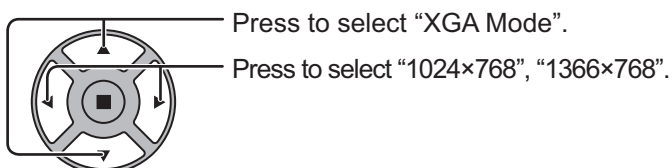
XGA Mode	◀ 1024 × 768 ▶

Note:
After making this setting, be sure to make each adjustment (such as "Auto Setup") on the "Pos. /Size" menu as necessary. (see page 22)

Noise reduction

Press to select "Noise reduction".

Press to select "Off", "Auto", "Min", "Mid", "Max".
Auto: Noise reduction will be automatically selected from "Min",
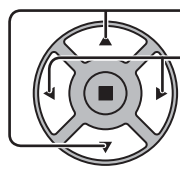"Mid" or "Max".

| Noise reduction | ◄ | Off | ► |

Note:
Noise reduction can be adjusted while a Video or Component signal is being applied.

Sync

This function operates only during input from PC IN terminal.
Select Signal from the "Setup" menu during Component input signal.
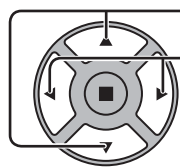
Press to select the "Sync".

Press to adjust.

Signal	[RGB]
Sync	◄ Auto ►
Cinema reality	Off
XGA Mode	1024×768
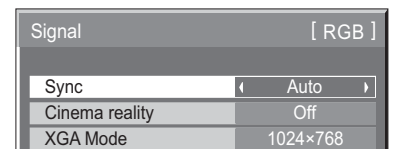
Confirm that the input is set to RGB input (this setting is valid only for RGB input signal).

Auto: The H and V sync or synchronized signal is automatically selected. If both input, it is selected the H and V sync.
However, the synchronized signal that is input first is selected.

⇕

on G: Uses a synchronized signal on the Video G signal, which is input from the G connector.

Note:
Accepts only RGB signals from COMPONENT/RGB IN terminal with "Sync on G"

Input signal display

Displays the frequency and the type of the current input signal.

This display is valid only for Component / RGB / PC and Digital input signal.
Display range:
    Horizontal 30 - 110 kHz
    Vertical 48 - 120 Hz

H-Freq.	63.98	kHz
V-Freq.	60.02	Hz
Signal Format	1280×1024/60	
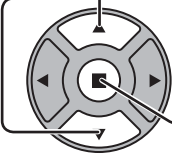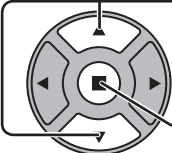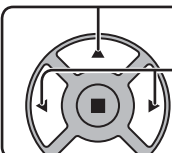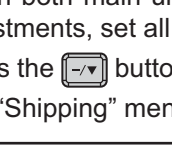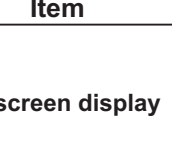
The dot clock frequency is displayed during digital signal input.

Note:
The automatically detected signal format may be displayed differently than the actual input signal.

H-Freq.	63.98	kHz
V-Freq.	60.02	Hz
Dot Clock Freq.	108.0	MHz
Signal Format	1280×1024/60	

Options Adjustments

1 SET UP
⊟ ──── Press to display the Setup menu.

2 ──── Press to select "OSD Language".

──── Press for more than 3 seconds.

3 ──── Press to select "Options".

| Options |
| Shipping |

──── Press to display the Options menu.

4 ──── Press to select your preferred menu.

──── Press to adjust the menu.

5 SET UP
⊟ ──── Press to exit from Options menu.

Options			1/2
On screen display	◀	On	▶
Initial input	◀	Off	▶
Failover input	◀	Off	▶
Initial VOL level	◀	Off	0 ▶
Maximum VOL level	◀	Off	0 ▶
Input lock	◀	Off	▶
Button lock	◀	Off	▶
Remocon User level	◀	Off	▶

Options		2/2
Off-timer function	◀	Enable ▶
Initial Power Mode	◀	Normal ▶
Power On Screen Delay	◀	Off ▶
Clock Display	◀	Off ▶
Power On Message (No activity power off)		
	◀	On ▶
Winter Mode	◀	Off ▶
Power Switch Lock	◀	Off ▶

Normalisation

When both main unit buttons and remote control are disabled due to the "Button lock" or "Remocon User level" adjustments, set all the values "Off" so that all the buttons are enabled again.

Press the [-/▼] button on main unit together with ◯ⁿ button on the remote control and hold for more than 5 seconds.

The "Shipping" menu is displayed and the lock is released when it disappears.
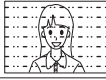
Item	Adjustments
On screen display	**On:** Displays all the following on screen. • Power on display • Input signal switch display • No signal display • Mute and the remaining time of off-timer after ⊙ᴿᴱᶜᴬᴸᴸ was pressed. **Off:** Hides all the items above from view.
Initial input	Adjusts the input signal when the unit is turned on. **Off ⟷ VIDEO ⟷ Component/RGB ⟷ PC ⟷ DVI ⟷ HDMI1 ⟷ HDMI2 ⟷ Off** **Notes:** • Only the adjusted signal is displayed. (see page 15) • This menu is available only when "Input lock" is "Off".
Failover input	When there is no signal, the specified input signal is automatically switched to. **Off ⟷ VIDEO ⟷ Component/RGB ⟷ PC ⟷ DVI ⟷ HDMI1 ⟷ HDMI2 ⟷ Off** **Notes:** • When other than "Off" is set, "Input lock" will be grayed out and cannot be set. • When "Input lock" is set to other than "Off", this setting will be grayed out and cannot be set.
Initial VOL level	Press ⊖ ⊕ᵛᴼᴸ button to adjust the volume when the unit is turned on. **Off ⟷ On** **Off:** Sets normal volume. **On:** Sets your preferred volume. **Notes:** • When "Maximum VOL level" is "On", the volume can only be adjusted between 0 and your maximum range. • You can hear the changed volume regardless of your volume setting before opening the options menu if you adjust the volume when "Initial VOL level" is "On" and cursor is on the menu.
Maximum VOL level	Press ⊖ ⊕ᵛᴼᴸ button to adjust the maximum volume. **Off ⟷ On** **Off:** Sets auto maximum volume. **On:** Sets your preferred maximum volume. **Notes:** • If the "Maximum VOL level" is set lower than the "Initial VOL level", the "Initial VOL level" automatically becomes the same as the "Maximum VOL level". • The volume display can go up to 100 regardless of the settings. • You can hear the changed volume regardless of your volume setting before opening the options menu if you adjust the volume when "Maximum VOL level" is "On" and cursor is on the menu.

Options Adjustments

Item	Adjustments
Input lock	Locks the input switch operation. **Off ⟷ VIDEO ⟷ Component/RGB ⟷ PC ⟷ DVI ⟷ HDMI1 ⟷ HDMI2 ⟷ Off** **Notes:** • Only the adjusted signal is displayed (see page 15). • Input switch can be used when this is set to "Off".
Button lock	**Off ⟷ On ⟷ MENU&ENTER** **Off:** All the buttons on main unit can be used. **MENU&ENTER:** Locks [MENU] and [ENTER] buttons on main unit. **On:** Locks all the button on main unit. Sets Button lock with the unit buttons in the following procedure. **Off:** Press [+/▲] four times→Press [INPUT] four times→Press [−/▼] four times→Press [ENTER] **MENU&ENTER:** Press [ENTER] four times→Press [+/▲] four times→Press [INPUT] four times→Press [ENTER] **On:** Press [−/▼] four times→Press [ENTER] four times→Press [+/▲] four times→Press [ENTER]
Remocon User level	**Off ⟷ User1 ⟷ User2 ⟷ User3** **Off:** You can use all of the buttons on the remote control. **User1:** You can only use ⊙, INPUT ○, RECALL ⊙, MUTE 🔇, −VOL+ buttons on the remote control. **User2:** You can only use ⊙ button on the remote control. **User3:** Locks all the buttons on remote control.
Off-timer function	**Enable:** Enables the "Off-timer function". **Disable:** Disables the "Off-timer function". **Note:** When "Disable" is set, the Off-timer is cancelled.
Initial Power Mode	**Normal ⟷ On ⟷ Standby** Sets the power mode of the unit for when the power recovers from failure or after plugging off and in again. **Normal:** Power returns in as the same state as before the power interruption. **Standby:** Power returns in standby mode. (Power Indicator : red/orange) **On:** Power returns in power On. (Power Indicator : green) **Note:** When using multiple displays, "Standby" is preferred to be set in order to reduce a power load.
Power On Screen Delay	**Off ⟷ 1 ⟷ 2 ⟷ 3.... ⟷ 30** You can set the power-on delay time of the displays to reduce the power load, when you press ⏻/❘ to turn on the multiple displays that are set together, for example, on MULTI DISPLAY system. Set each display's setting individually. **Off:** The display will be turned on at the same time as ⏻/❘ is pressed. **1 to 30 (sec.):** Set the power-on delay time (second). After pressing ⏻/❘, the display will be powered on with time delay depending on this setting. **Notes:** • During this function is working, the power indicator is blinking green. • This function also works when the power recovers from failure or after plugging off and in again the power cord.
Clock Display	**Off:** Not display the clock. **On:** Display the clock. The clock is displayed at the lower left of the screen when RECALL ⊙ button is pressed. 10:00　**Note:** When "PRESENT TIME Setup" is not set, the clock is not displayed even if "Clock Display" is "On". (see page 27)
Power On Message (No activity power off)	Whether to show/hide No activity power off Precautions at the time of power ON is set. **On:** The warning precautions are shown at the time of power ON. **Off:** The warning precautions are not shown at the time of power ON. **Note:** This setting is enabled only if "No activity power off" is "Enable" (see page 31).
Winter Mode	Set this function to maintain the image quality when the product is used in a low temperature environment of 39 °F/4 °C or lower. **Off:** Normal standby operation **On:** Image is muted at standby and backlight is turned on when the inside temperature of the display is 32 °F/0 °C or lower to prevent decreasing the temperature. Backlight is turned off when the inside temperature is 50 °F/10 °C or higher. When this function is set to "On", the following message appears at standby. Winter mode is active. **Notes:** • Do not unplug the power cable while using the product with this function "On". • When this function is set to "On", the power consumption at standby is approx. 100 W. • Turn this function "Off" to use this product in an environment of 39 °F/4 °C or higher.
Power Switch Lock	Sets the lock setting for the display Power switch. **On:** Power switch operation is disabled. **Off:** Power switch operation is enabled.

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 24, 25) Colour system (see page 38)
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.
Parts of the unit become hot.		Even when the temperature of parts of the front, top and rear panels has risen, these temperature rises will not pose any problems in terms of performance or quality.
Power automatically turns off unexpectedly.		Check the settings of "Power management", "No signal power off" and "No activity power off" in the Setup menu. Any of them may be set to "On (Enable)". (see page 31)
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
The screen darkens slightly when bright pictures with minimal movements are shown.	The screen will darken slightly when photos, still images of a computer or other pictures with minimal movements are shown for an extended period. This is done to reduce image retention on the screen and the shortening of the screen's service life: It is normal and not indicative of malfunctioning.
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.
The edges of the images flicker.	Due to the characteristics of the system used to drive the panel, the edges may appear to flicker in the fast-moving parts of the images: This is normal and not indicative of malfunctioning.
There may be red spots, blue spots, green spots and black spots on the screen.	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 fixed points of red, blue, green, or black. Please note this does not affect the performance of your LCD.
Example Image retention appears	Image retention may occur. If you display a still picture for an extended period, the image might remain on the screen. However, it will disappear after a while. This is not considered as malfunction.
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.

Applicable Input Signals

*Mark: Applicable input signal

	Signal name	Horizontal frequency (kHz)	Vertical frequency (Hz)	RGB IN (Dot clock (MHz))	PC IN (Dot clock (MHz))	DVI-D IN (Dot clock (MHz))	HDMI1 HDMI2
1	640x400@70Hz	31.46	70.07	* (25.17)	* (25.17)	* (25.17)	
2	640x400@85Hz	37.86	85.08	* (31.5)	* (31.5)	* (31.5)	
3	640x480@60Hz	31.43	59.88	* (25.15)	* (25.15)	* (25.15)	
4	640x480@60Hz	31.47	59.94	* (25.18)	* (25.18)	* (25.18)	*
5	640x480@67Hz	35.00	66.67	* (30.24)	* (30.24)	* (30.24)	
6	640x480@72Hz	37.86	72.81	* (31.5)	* (31.5)	* (31.5)	
7	640x480@75Hz	37.50	75.00	* (31.5)	* (31.5)	* (31.5)	
8	640x480@85Hz	43.27	85.01	* (36.0)	* (36.0)	* (36.0)	
9	720x400@70Hz	31.47	70.08	* (28.32)	* (28.32)	* (28.32)	
10	800x600@55Hz	34.50	55.38	* (35.33)	* (35.33)	* (35.33)	
11	800x600@56Hz	35.16	56.25	* (36.0)	* (36.0)	* (36.0)	
12	800x600@60Hz	37.88	60.32	* (40.0)	* (40.0)	* (40.0)	*
13	800x600@60Hz	38.00	60.51	* (40.13)	* (40.13)	* (40.13)	
14	800x600@72Hz	48.08	72.19	* (50.0)	* (50.0)	* (50.0)	
15	800x600@75Hz	46.88	75.00	* (49.5)	* (49.5)	* (49.5)	
16	800x600@85Hz	53.67	85.06	* (56.25)	* (56.25)	* (56.25)	
17	852x480@60Hz	31.47	59.94	* (33.54)	* (33.54)	* (34.24)	
18	1,024x768@50Hz	39.55	50.00	* (51.89)	* (51.89)	* (51.89)	
19	1,024x768@60Hz	48.36	60.00	* (65.0)	* (65.0)	* (65.0)	*
20	1,024x768@60Hz	48.50	60.02	* (64.99)	* (64.99)	* (65.18)	
21	1,024x768@70Hz	56.48	70.07	* (75.0)	* (75.0)	* (75.0)	
22	1,024x768@75Hz	60.24	74.93	* (80.0)	* (80.0)	* (80.0)	
23	1,024x768@75Hz	60.02	75.03	* (78.75)	* (78.75)	* (78.75)	
24	1,024x768@75Hz	61.01	75.70	* (80.05)	* (80.05)	* (81.0)	
25	1,024x768@85Hz	68.68	85.00	* (94.5)	* (94.5)	* (94.5)	
26	1,024x768@120Hz	97.55	119.99		* (115.5)	* (115.5)	
27	1,066x600@60Hz	37.64	59.94	* (53.0)	* (53.0)	* (53.0)	
28	1,152x864@60Hz	53.70	60.00	* (81.62)	* (81.62)	* (81.62)	
29	1,152x864@75Hz	67.50	75.00	* (108.0)	* (108.0)	* (108.0)	
30	1,152x900@65Hz	61.20	65.20	* (92.0)	* (92.0)	* (92.0)	
31	1,152x900@66Hz	61.85	66.00	* (94.5)	* (94.5)	* (94.5)	
32	1,152x900@75Hz	71.40	75.60	* (105.1)	* (105.1)	* (105.1)	
33	1,280x768@60Hz	47.78	59.87	* (79.50)	* (79.50)	* (79.50)	
34	1,280x800@50Hz	41.20	50.00	* (68.55)	* (68.55)	* (68.55)	
35	1,280x960@60Hz	60.00	60.00	* (108.0)	* (108.0)	* (108.0)	
36	1,280x960@85Hz	85.94	85.00	* (148.5)	* (148.5)	* (148.5)	
37	1,280x1,024@50Hz	52.70	50.00	* (89.38)	* (89.38)	* (89.38)	
38	1,280x1,024@60Hz	63.34	59.98	* (108.18)	* (108.18)	* (108.18)	
39	1,280x1,024@60Hz	63.90	60.00	* (107.35)	* (107.35)	* (107.35)	
40	1,280x1,024@60Hz	63.37	60.01	* (107.5)	* (107.5)	* (107.5)	
41	1,280x1,024@60Hz	63.74	60.02	* (108.1)	* (108.1)	* (108.1)	
42	1,280x1,024@60Hz	63.98	60.02	* (108.0)	* (108.0)	* (108.0)	*
43	1,280x1,024@60Hz	63.79	60.18	* (108.19)	* (108.19)	* (108.19)	
44	1,280x1,024@66Hz	70.66	66.47	* (119.84)	* (119.84)	* (119.84)	
45	1,280x1,024@75Hz	79.98	75.02	* (135.0)	* (135.0)	* (135.0)	
46	1,280x1,024@76Hz	81.13	76.11	* (135.0)	* (135.0)	* (135.0)	
47	1,280x1,024@85Hz	91.15	85.02		* (157.5)	* (157.5)	
48	1,360x768@60Hz	47.71	60.02	* (85.5)	* (85.5)	* (85.5)	
49	1,366x768@50Hz	39.55	50.00	* (69.92)	* (69.92)	* (69.92)	
50	1,366x768@60Hz	48.36	60.00	* (86.71)	* (86.71)	* (87.44)	
51	1,400x1,050@60Hz	65.12	59.91	* (121.38)	* (121.38)	* (122.43)	
52	1,400x1,050@60Hz	65.32	59.98	* (121.75)	* (121.75)	* (121.75)	
53	1,400x1,050@60Hz	65.35	60.12	* (121.81)	* (121.81)	* (121.85)	
54	1,400x1,050@75Hz	82.28	74.87	* (156.0)	* (156.0)	* (156.0)	
55	1,600x1,200@60Hz	75.00	60.00	* (162.0)	* (162.0)	* (162.0)	
56	1,920x1,080@60Hz	67.50	60.00	* (148.5)	* (148.5)	* (148.5)	
57	1,920x1,200@60Hz	74.04	59.95		* (154.0)	* (154.0)	
58	Macintosh13" (640x480)	35.00	66.67	* (30.24)	* (30.24)	* (30.24)	
59	MacintoshLC13" (640x480)	34.97	66.60	* (31.33)	* (31.33)	* (31.33)	
60	Macintosh16" (832x624)	49.72	74.55	* (57.28)	* (57.28)	* (57.28)	
61	Macintosh19" (1,024x768)	60.24	75.08	* (80.0)	* (80.0)	* (80.0)	
62	Macintosh21" (1,152x870)	68.68	75.06	* (100.0)	* (100.0)	* (100.0)	
63	Macintosh II (1,280x1,024)	80.00	75.00	* (134.4)	* (134.4)	* (135.2)	

Component signals   *Mark: Applicable input signal

	Signal name	Horizontal frequency (kHz)	Vertical frequency (Hz)	COMPONENT IN (Dot clock (MHz))	DVI-D IN (Dot clock (MHz))	HDMI1 HDMI2
1	525(480)/60i	15.73	59.94	* (13.5)	* (27.0)	*
2	525(480)/60p	31.47	59.94	* (27.0)	* (27.0)	*
3	625(575)/50i	15.63	50.00	* (13.5)		
4	625(576)/50i	15.63	50.00		* (27.0)	*
5	625(575)/50p	31.25	50.00	* (27.0)		*
6	625(576)/50p	31.25	50.00		* (27.0)	*
7	750(720)/60p	45.00	60.00	* (74.25)	* (74.25)	*
8	750(720)/50p	37.50	50.00	* (74.25)	* (74.25)	*
9	1,125(1,080)/60p	67.50	60.00	* (148.5)*1	* (148.5)	*
10	1,125(1,080)/60i	33.75	60.00	* (74.25)*1	* (74.25)	*
11	1,125(1,080)/50p	56.25	50.00	* (148.5)*1	* (148.5)	*
12	1,125(1,080)/50i	28.13	50.00	* (74.25)*1	* (74.25)	*
13	1,125(1,080)/24sF	27.00	48.00	* (74.25)*2		
14	1,125(1,080)/30p	33.75	30.00	* (74.25)*1	* (74.25)	*
15	1,125(1,080)/25p	28.13	25.00	* (74.25)*1	* (74.25)	*
16	1,125(1,080)/24p	27.00	24.00	* (74.25)*1	* (74.25)	*

*1: Based on SMPTE 274M standard.   *2: Based on SMPTE RP211 standard.
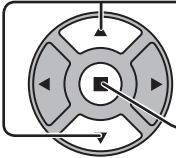
Video signals (VIDEO)
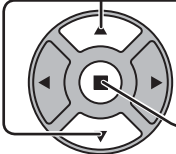
	Signal name	Horizontal frequency(kHz)	Vertical frequency(Hz)
1	NTSC	15.73	59.94
2	PAL	15.63	50.00
3	PAL60	15.73	59.94
4	SECAM	15.63	50.00
5	NTSC 4.43	15.73	59.94
6	PAL N	15.63	50.00
7	PAL M	15.73	59.94
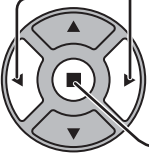
Shipping condition

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

1 SET UP

Press to display the Setup menu.

Setup	1/2
Signal	
Screensaver	
Input label	
Wobbling	Off
Component/RGB-in select	
	RGB
Power management	On
No signal power off	
	Enable
No activity power off	
	Enable
Standby save	On
ECO	Off
OSD Language	◀ English(UK) ▶

2 Press to select "OSD Language".

Press for more than 3 seconds.

Options
Shipping

3 Press to select "Shipping".

Press to display the Shipping menu.

4 Press to select "YES".

Press to confirm.

Shipping
YES NO

5 Wait for 10 seconds.

6 ⏻/|

Press the power switch (⏻/|) on main unit to turn the power off.
* If the power switch is locked, please disconnect the AC cord plug from the wall outlet.
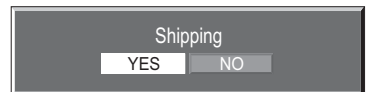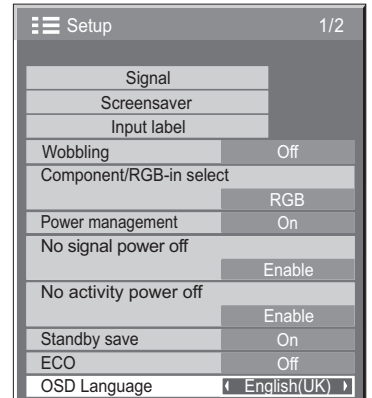
[from the unit]
1 Press the MENU button till the Setup menu is displayed.
2 Press the Volume Up"+" or Down"−" button to select "OSD Language".
3 Press and hold the ENTER button till the Shipping menu is displayed.
4 Press the Volume Up"+" or Down"−" button to select "YES".
5 Press the ENTER button and wait for 10 sec.
6 Press the power switch (⏻/|) on main unit to turn the power off.
   * If the power switch is locked, please disconnect the AC cord plug from the wall outlet.

Specifications

	TH-42LFP30W		TH-47LFP30W	
	For USA, Canada and Mexico	**For Europe and Asia**	**For USA, Canada and Mexico**	**For Europe and Asia**
Power Source	110 - 127 V AC, 50/60 Hz	220 - 240 V AC, 50/60 Hz	110 - 127 V AC, 50/60 Hz	220 - 240 V AC, 50/60 Hz
Power Consumption				
Power on	250 W	240 W	300 W	290 W
Stand-by condition (Winter Mode: Off)	Save off 0.2 W, Save on 0.1 W	Save off 0.3 W, Save on 0.2 W	Save off 0.2 W, Save on 0.1 W	Save off 0.3 W, Save on 0.2 W
Stand-by condition (Winter Mode: On)	Backlight Off 40 W Backlight On 80 W	Backlight Off 40 W Backlight On 80 W	Backlight Off 40 W Backlight On 100 W	Backlight Off 40 W Backlight On 100 W
Power off condition	0.1 W	0.2 W	0.1 W	0.2 W
LCD Display panel	42-inch IPS panel, 16:9 aspect ratio		47-inch IPS panel, 16:9 aspect ratio	
Screen size	36.6" (W) × 20.5" (H) × 42.0" (diagonal) / 930 mm (W) × 523 mm (H) × 1,067 mm (diagonal)		40.9" (W) × 23.0" (H) × 46.9" (diagonal) / 1,039 mm (W) × 584 mm (H) × 1,192 mm (diagonal)	
(No.of pixels)	2,073,600 (1,920 (W) × 1,080 (H)) [5,760 × 1,080 dots]		2,073,600 (1,920 (W) × 1,080 (H)) [5,760 × 1,080 dots]	
Operating condition				
Temperature	32 °F - 104 °F / 0 °C - 40 °C (during Winter Mode: -4 °F - 104 °F / -20 °C - 40 °C)			
Applicable signals				
Colour System	NTSC, PAL, PAL60, SECAM, NTSC 4.43, PAL M, PAL N			
Scanning format	525 (480) / 60i · 60p, 625 (575) / 50i · 50p, 750 (720) / 60p · 50p, 1125 (1080) / 60i · 60p · 50i · 50p · 24p · 25p · 30p · 24sF			
PC signals	VGA, SVGA, XGA, SXGA UXGA ···· (compressed) Horizontal scanning frequency 30 - 110 kHz Vertical scanning frequency 48 - 120 Hz			

Connection terminals				
AV IN	VIDEO	BNC	1.0 Vp-p (75 Ω)	
	AUDIO L-R	RCA Pin jack × 2	0.5 Vrms	
HDMI 1/2		TYPE A Connector		
COMPONENT/RGB IN				
	G/Y	BNC	with sync 1.0 Vp-p (75 Ω)	
	B/P$_B$/C$_B$	BNC	0.7 Vp-p (75 Ω)	
	R/P$_R$/C$_R$	BNC	0.7 Vp-p (75 Ω)	
	AUDIO L-R	RCA Pin jack × 2	0.5 Vrms	
DVI-D IN		DVI-D 24 Pin Content Protection	Compliance with DVI Revision 1.0 Compatible with HDCP 1.1	
	AUDIO	Stereo mini jack (M3) × 1	0.5 Vrms, Shared with PC IN	
PC IN		High-Density Mini D-sub 15 Pin	G with sync 1.0 Vp-p (75 Ω) G without sync 0.7 Vp-p (75 Ω) B: 0.7 Vp-p (75 Ω) R: 0.7 Vp-p (75 Ω) HD/VD: 1.0 - 5.0 Vp-p (high impedance)	
	AUDIO	Stereo mini jack (M3) × 1	0.5 Vrms, Shared with DVI-D IN	
SERIAL		External Control Terminal D-sub 9 Pin	RS-232C compatible	
EXT SP		8 Ω, 10 W [5 W + 5 W] (10 % THD)		
Dimensions (W × H × D)		41.3" × 25.3" × 6.3" / 1,049 mm × 642 mm × 158 mm	45.8" × 27.8" × 6.3" / 1,162 mm × 706 mm × 158 mm	
Mass (weight)		approx. 83.8 lbs / 38.0 kg	approx. 99.2 lbs / 45.0 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.
  EN55022, EN55024, EN61000-3-2, EN61000-3-3.

Information for Users on Collection and Disposal of Old Equipment and used Batteries

These symbols on the products, packaging, and/or accompanying documents mean that used electrical and electronic products and batteries should not be mixed with general household waste. For proper treatment, recovery and recycling of old products and used batteries, please take them to applicable collection points, in accordance with your national legislation and the Directives 2002/96/EC and 2006/66/EC.

By disposing of these products and batteries correctly, you 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.

For more information about collection and recycling of old products and batteries, please contact your local municipality, your waste disposal service or the point of sale where you purchased the items. 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]

These symbols are only valid in the European Union. If you wish to discard these items, please contact your local authorities or dealer and ask for the correct method of disposal.

Note for the battery symbol (bottom two symbol examples):

This symbol might be used in combination with a chemical symbol. In this case it complies with the requirement set by the Directive for the chemical involved.

USA only: This product has a fluorescent lamp that contains mercury. Disposal may be regulated in your community due to environmental considerations. For disposal or recycling information, please visit Panasonic website: http://www.panasonic.com/environmental or call 1-888-769-0149.

Customer's Record

The model number and serial number of this product can be found on its rear panel. 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 _____

Panasonic Corporation

Web Site : http://panasonic.net

© Panasonic Corporation 2011