Panasonic®

Operating Instructions

FULL HD LCD Display

English

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

HDMI

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

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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.

Important Safety Notice

WARNING

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

CAUTION

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

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 ⬦ 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.
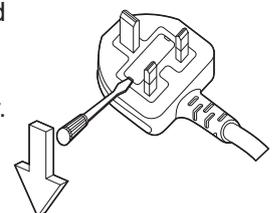
Safety Precautions

WARNING

■ Setup

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

(All of the following accessories are manufactured by Panasonic Corporation.)

- Pedestal .... TY-ST58P20 (for TH-70LF50E)
  TY-ST65P20 (for TH-80LF50E)
- Wall-hanging bracket (vertical).................... TY-WK70PV50
- HD-SDI Terminal Board with audio TY-FB10HD
- Protective Glass .... TY-PG70LF50 (for TH-70LF50E)
  TY-PG80LF50 (for TH-80LF50E)

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 the Display on sloped or unstable surfaces, and ensure that the Display does not hang over the edge of the base.
- The Display may fall off or tip over.

Do not place any objects on top of the Display.
- If water is spills onto the Display or foreign objects get inside it, a short-circuit may occur which could result in fire or electric shock. If any foreign objects get inside the 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.

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

For sufficient ventilation;
Leave a space of 10 cm or more at the top, left and right, and 7 cm or more at the rear, and also keep the space between the bottom of the display and the floor surface.

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. Use the specified accessories.
- When installing the Display vertically, be sure to install the power indicator onto the top of the Display.

Caution for Ceiling Suspension
- Ceiling suspension should be performed by an installation professional. Installing the Display incorrectly may lead to an accident that results in death or serious injury.

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 using the LCD Display

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

Do not cover the ventilation holes.
• Doing so may cause the Display to overheat, which can cause fire or damage to the Display.

Do not stick any foreign objects into the Display.
• Do not insert any metal or flammable objects into the ventilations holes 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 water or 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.

Safety Precautions

⚠ CAUTION

■ When using the LCD Display

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

Be sure to disconnect all cables before moving the 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.

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.

Usage of a chemical cloth
- Do not use a chemical cloth for the panel surface.
- Follow the instructions for the chemical cloth to use it for the cabinet.
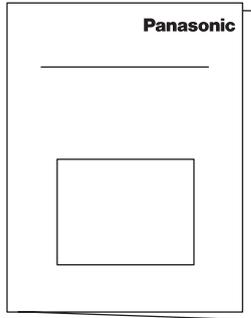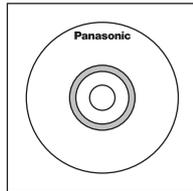
Accessories

Accessories Supply

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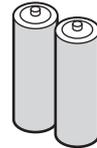
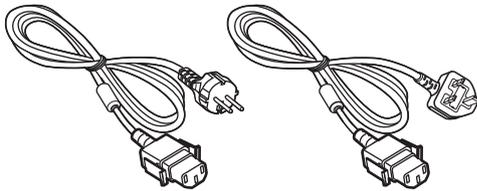☐ Operating Instruction book

Panasonic

☐ CD-ROM (Operating instructions)

Panasonic

☐ Remote Control Transmitter N2QAYB000691

Panasonic DISPLAY

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

☐ Power supply cord

☐ Clamper × 1 TMME289
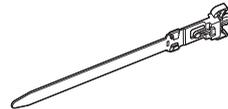
Remote Control Batteries

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.
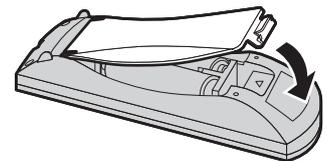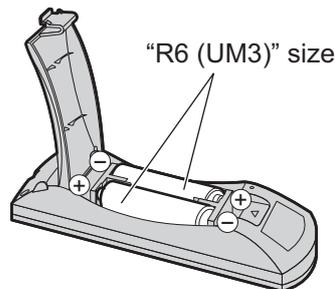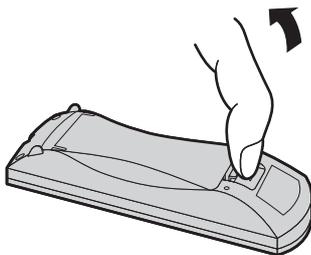
Helpful Hint:

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.

Ceiling Suspension

You can install the Display by attaching commercially available eyebolts (M10) to it and suspending it from the ceiling, etc.

Eyebolt mounting positions
(for horizontal installation)

Eyebolt mounting positions
(for vertical installation)
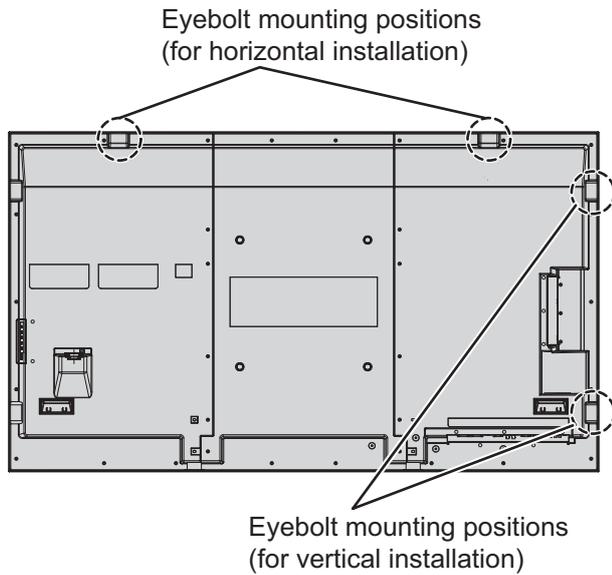
Notes:
- Suspension and installation should be performed by an installation professional.
- Do not install it using only one eyebolt.
- When the Display is installed horizontally, make sure to place the power Indicator side down and, face up the power Indicator side, when it is installed vertically.
- Install the wire along the vertical side when suspending the Display.

Connections

AC cord connection and fixing, cable fixing

AC cord fixing
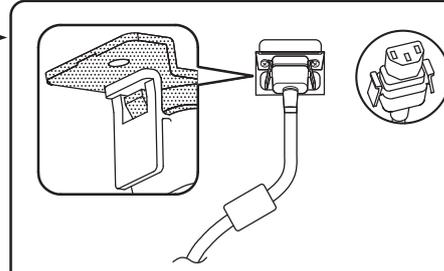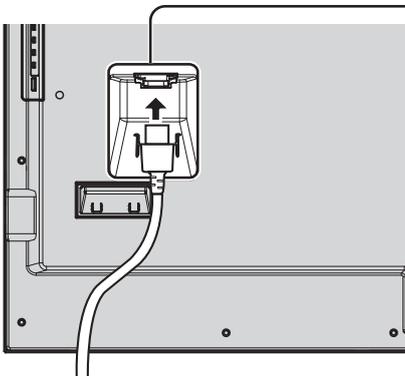
Unplug the AC cord

Plug the AC cord into the display unit.
Plug the AC cord until it clicks.
Note:
Make sure that the AC cord is locked on both the left and right sides.
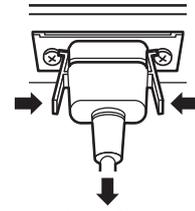
Unplug the AC cord pressing the two knobs.
Note:
When disconnecting the AC cord, be absolutely sure to disconnect the AC cord plug at the socket outlet first.

Using the clamper
Secure any excess cables with clamper as required.
Note:
One clamper is supplied with this unit. In case of securing cables at four positions, please purchase it separately.

TH-70LF50E   TH-80LF50E
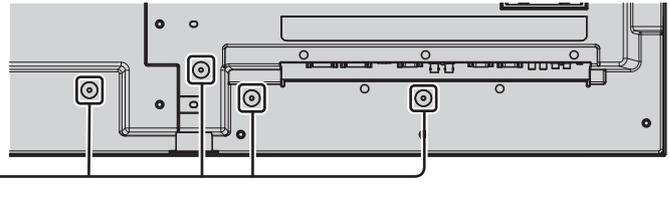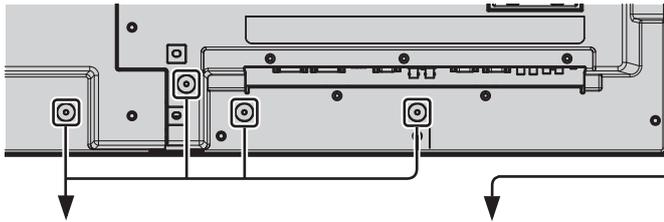
1 **Attach the clamper**   To remove from the unit:
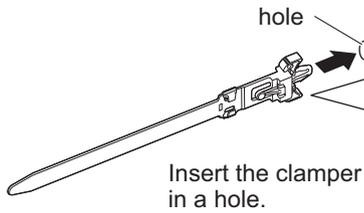
hole

snaps

Insert the clamper in a hole.
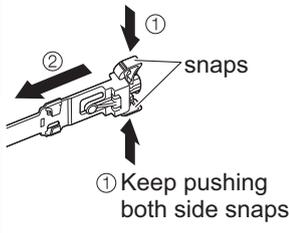
① Keep pushing both side snaps

2 **Bundle the cables**   To loosen:
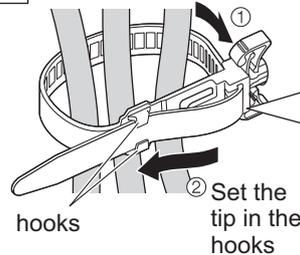
hooks

② Set the tip in the hooks
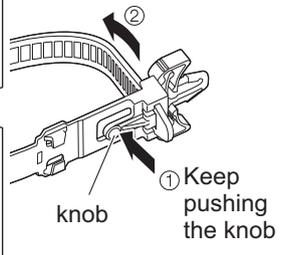
knob

① Keep pushing the knob

Video equipment connection

Ex. TH-80LF50E

SERIAL IN, SERIAL OUT
SERIAL Input/Output Terminal
Control the Display by
connecting to PC.
(see page 14)

AUDIO IN (COMPOSITE)
Connect the audio output of a device
connected to VIDEO.
(see page 11)

AUDIO IN (DVI-D / PC)
Connect the audio output
of a device connected to
DVI-D IN, PC IN.
(see page 12, 13)

AV IN
HDMI
HDMI Input Terminal
(see page 11)

DVI-D IN, DVI-D OUT
DVI-D Input/
Output Terminal
(see page 12)

PC IN
PC Input
Terminal
(see page 13)

LAN: Connect to
a network to
control the unit.
(see page 48)

VIDEO
Composite Video
Input Terminal
(see page 11)

COMPONENT/RGB IN
Component/RGB
Video Input Terminal
(see page 11)

AUDIO OUT
Connect to sound
equipment
(see page 10)

AUDIO IN (COMPONENT / RGB)
Connect the audio output
of a device connected to
COMPONENT/RGB IN.
(see page 11)

AUDIO OUT connection

Note:
Additional equipment and cables shown are not supplied with this set.

Stereophonic sound code

audio equipment

line-in
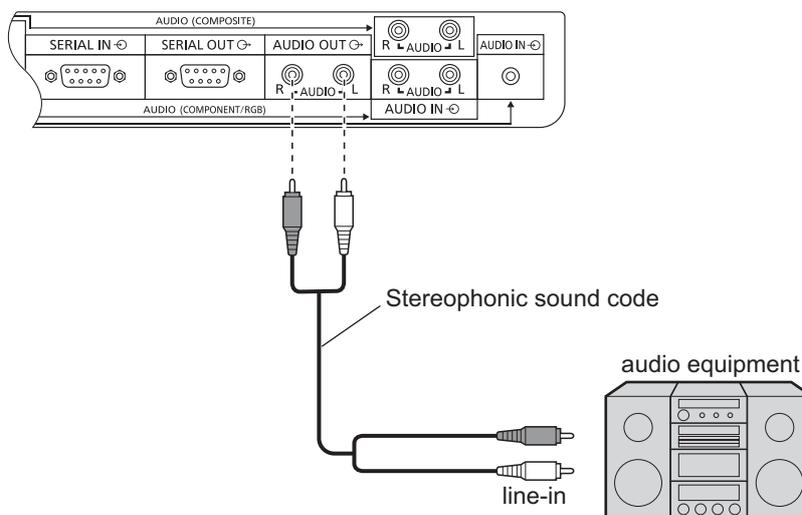
VIDEO, COMPONENT / RGB IN and HDMI connection

Note:
Additional equipment, cables and adapter plugs shown are not supplied with this set.
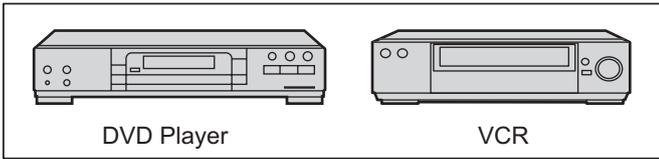
DVD Player

VCR

VIDEO OUT

AUDIO OUT
L   R

RCA-BNC
Adapter plug

[Pin assignments and signal names for HDMI terminal]

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

HDMI cables

HDMI
AV OUT

DVD player

RCA-BNC
Adapter plug

Y PB PR OUT
RGB OUT

L   R
AUDIO OUT
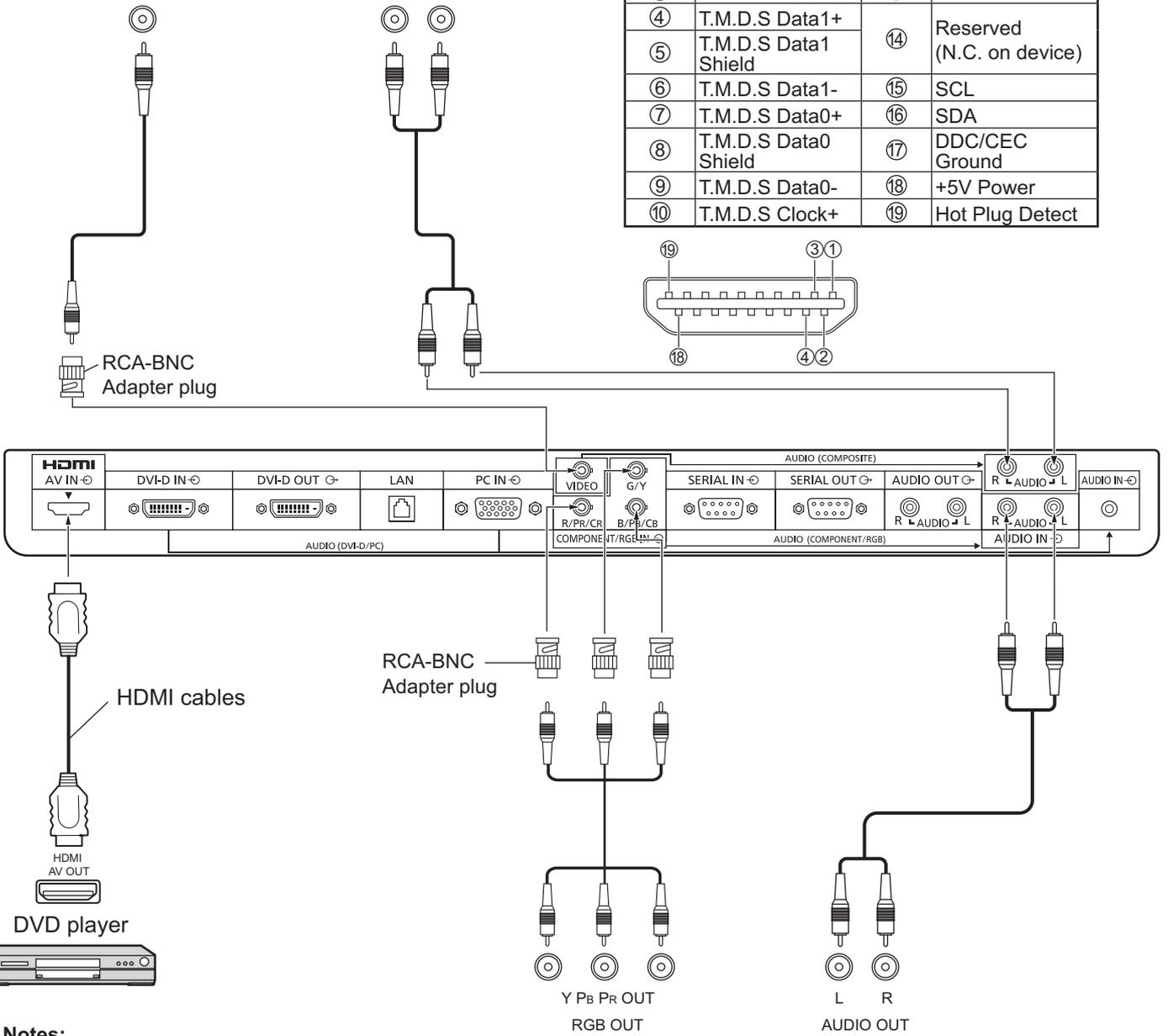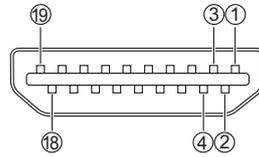
Notes:
• Change the "Component/RGB-in select" setting in the "Setup" menu to "Component" (when Component signal connection) or "RGB" (when RGB signal connection). (see page 39)
• Accepts only RGB signals from COMPONENT/RGB IN terminal with "Sync on G".
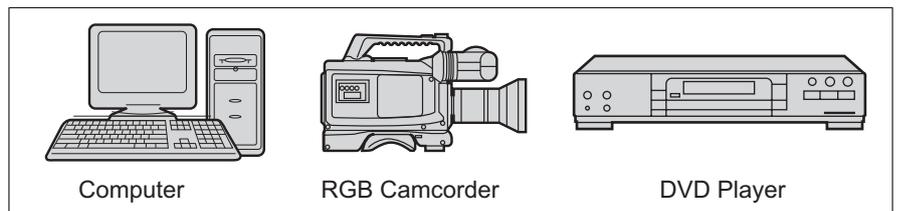
Computer   RGB Camcorder   DVD Player

11

DVI-D IN, DVI-D OUT connection

PC with DVI-D video out

Shared with PC IN.

DVI-video cable (Within 5 m)

Stereo mini plug (M3)
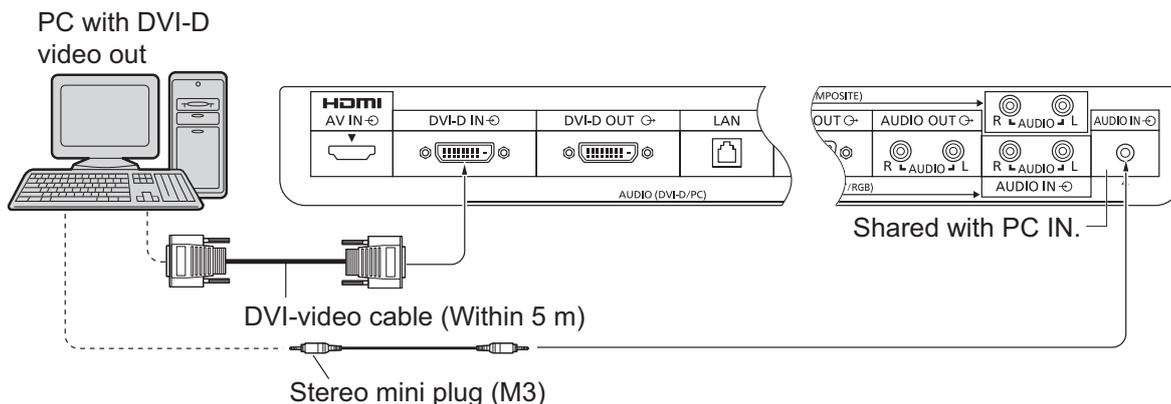
Daisy chain connection
When using the multi display, multiple LCD Displays can be daisy chained.

PC with DVI-D video out

First LCD Display

Second LCD Display

Third and subsequent LCD Displays
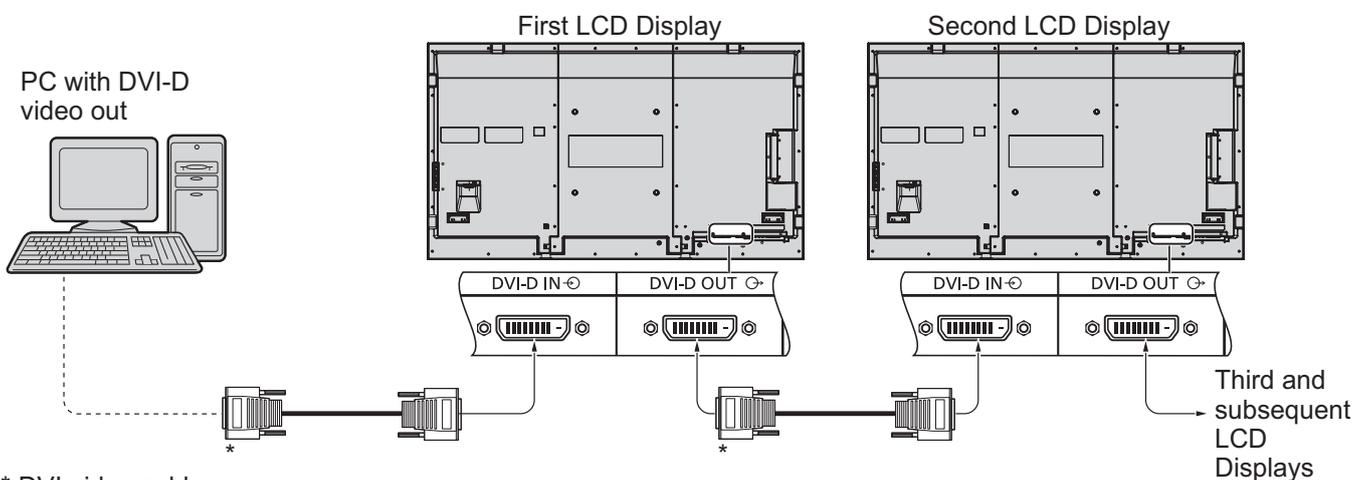
* DVI-video cable

Notes:
• Up to 10 displays can be connected with a daisy chain, but the number of the connected displays may be limited by a cable, signal or equipment to use.
• HDCP signals can be processed, with up to 8 displays connected via a daisy chain connection.

DVI-D Input/Output Connector Pin Layouts

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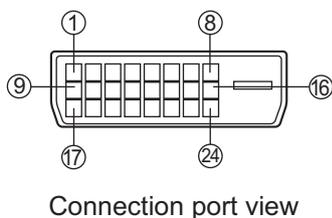
Pin No.	Signal Name	Pin No.	Signal Name
①	T.M.D.S. data 2-	⑬	—————
②	T.M.D.S. data 2+	⑭	+5 V DC
③	T.M.D.S. data 2 shield	⑮	Ground
④	—————	⑯	Hot plug detect
⑤	—————	⑰	T.M.D.S. data 0-
⑥	DDC clock	⑱	T.M.D.S. data 0+
⑦	DDC data	⑲	T.M.D.S. data 0 shield
⑧	—————	⑳	—————
⑨	T.M.D.S. data 1-	㉑	—————
⑩	T.M.D.S.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

Note:
• Additional equipment and cables shown are not supplied with this set.

PC Input Terminals connection

COMPUTER

(Female)

Conversion adapter
(if necessary)

RGB

(Male)

Mini D-sub 15p

Shared with DVI-D IN.

Audio

Stereo mini plug (M3)

Connect a cable which matches
the audio output terminal on the computer.
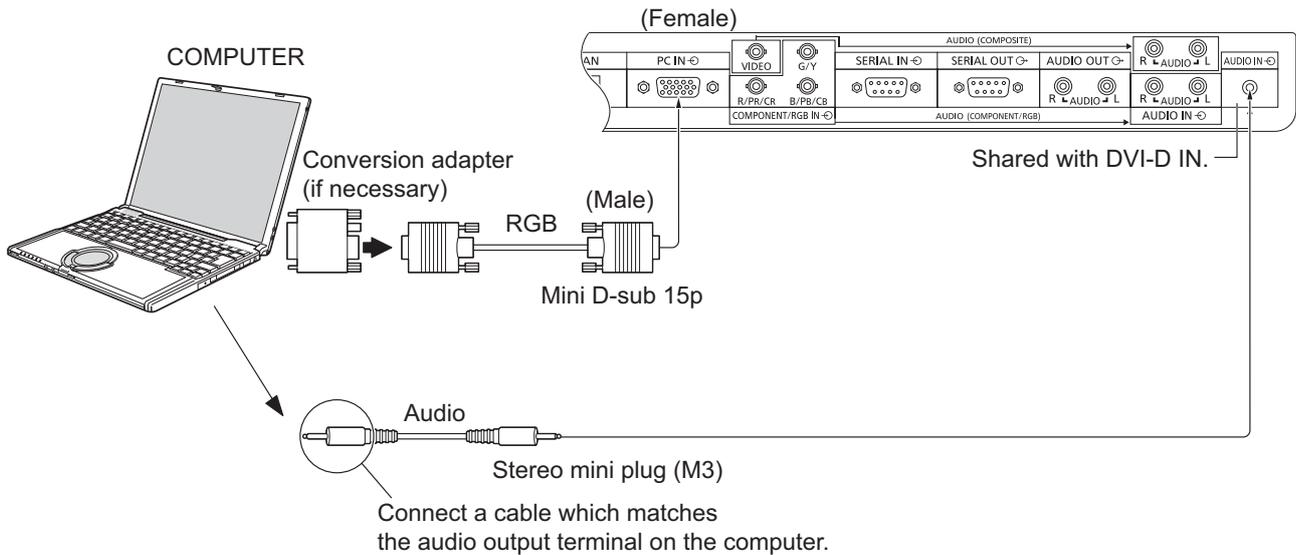
Notes:
* Computer signals which can be input are those with a horizontal scanning frequency of 30 to 110 kHz and vertical scanning frequency of 48 to 120 Hz. (However, the image will not be displayed properly if the signals exceed 1,200 lines.)
* The display resolution is a maximum of 1,440 × 1,080 dots 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.
* Do not set the horizontal and vertical scanning frequencies for PC signals which are above or below the specified frequency range.

Signal Names for Mini D-sub 15P Connector
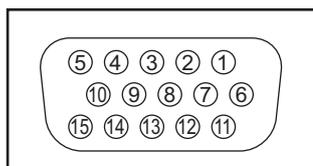
Pin Layout for PC Input Terminal

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.
Note: To use serial control for this unit, make sure to set the "Control I/F Select" in the "Network Setup" menu to
"RS-232C". (see page 44)

COMPUTER

RS-232C Straight cable

(Female)   (Male)

SERIAL IN   SERIAL OUT

AUDIO (COMPOSITE)

AUDIO (COMPONENT/RGB)

D-sub 9p
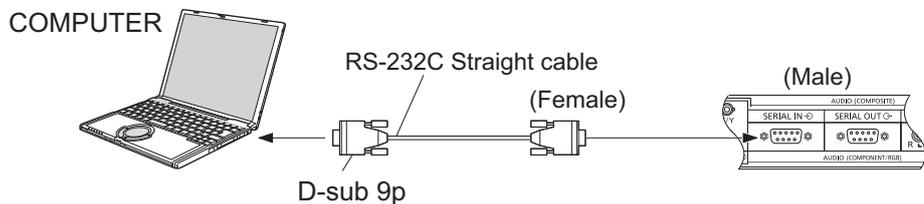
In addition, a particular LCD Display can be controlled with a PC while several LCD Displays are daisy chained.

COMPUTER

First LCD Display
(Male)

Second LCD Display
(Male)

(Female)   (Female) (Female)   (Female) (Female)

SERIAL IN SERIAL OUT   SERIAL IN SERIAL OUT

AUDIO (COMPOSITE)   AUDIO (COMPOSITE)

AUDIO (COMPONENT/RGB)   AUDIO (COMPONENT/RGB)

Third LCD
Display
(Male)

D-sub 9p   * RS-232C Straight cable
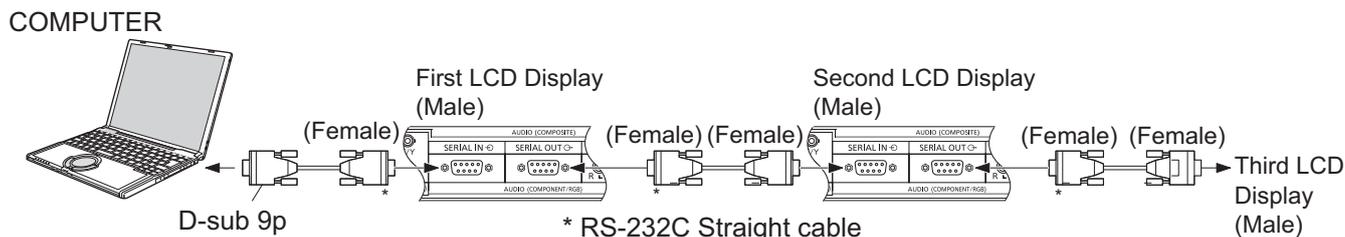
Notes:
* Use the RS-232C straight cable to connect the computer to the Display.
* The computer shown is for example purposes only.
* Additional equipment and cables shown are not supplied with this set.
* When using daisy chain, set "Serial Daisy Chain" in the Options menu. (see page 46)
* For daisy chain connection, use a straight cable connected to pins numbered ② through ⑧.

① ② ③ ④ ⑤
⑥ ⑦ ⑧ ⑨
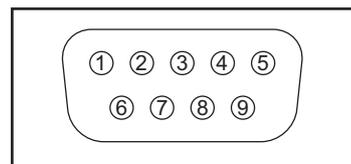
Pin layout for SERIAL Terminal

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	-

Signal names for SERIAL IN terminal

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

These signal names are those of computer specifications.

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)
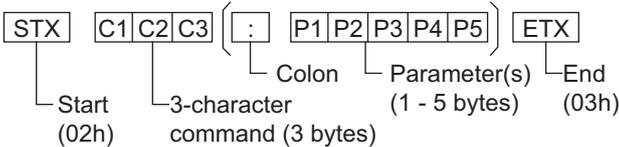
Notes:

- 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.
- S1A and S1B of Command IMS are available only when a dual input terminal board is attached.

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)
	SL1	SLOT input (SLOT INPUT)
	S1A	SLOT input (SLOT INPUT A)
	S1B	SLOT input (SLOT INPUT B)
	AV1	VIDEO input (VIDEO)
	AV2	COMPONENT/RGB IN input (Component)
	HM1	HDMI input (HDMI)
	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.
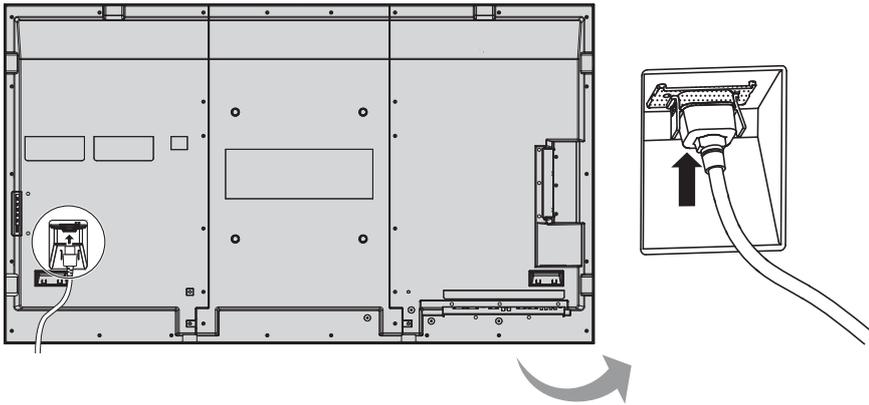
Connecting the plug to the Wall Outlet

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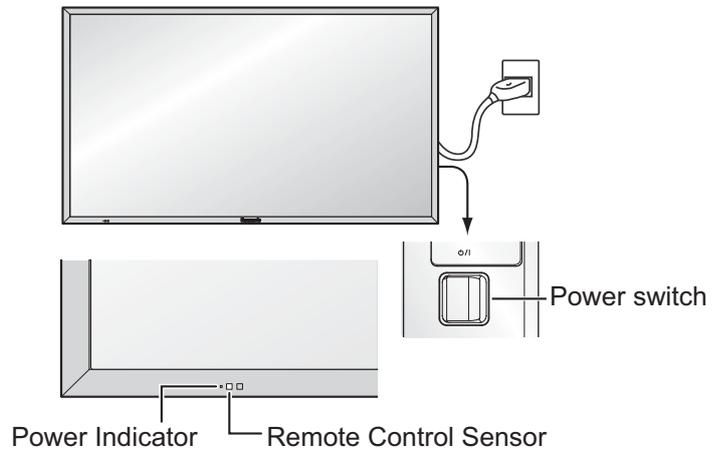
POWER

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

Power Indicator: Red (standby)

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

Power Indicator: Green

Turn the power to the Display off by pressing the ⏻/| 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.

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
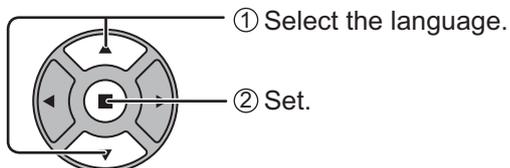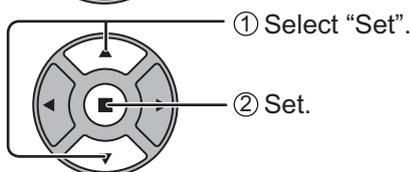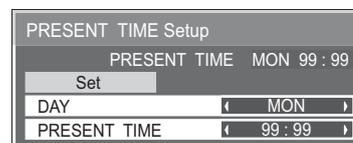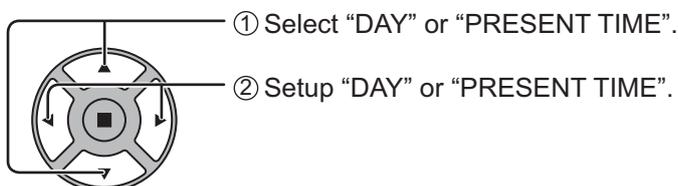
Notes:
• Once the items are set, the screens won't be displayed when switching on the unit next time.
• After the setting, the items can be changed in the following menus.
  OSD Language (see page 36)
  PRESENT TIME Setup (see page 29)

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 33)

This message display can be set with the following menu: Options menu
Power On Message (see page 47)

Selecting the input signal

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:

→ HDMI → VIDEO → Component* → PC → DVI

HDMI: HDMI input terminal in AV IN (HDMI).
VIDEO: Video input terminal in VIDEO.
Component*: Component or RGB input terminal in COMPONENT/RGB IN.
PC: PC input terminal in PC IN.
DVI: DVI input terminal in DVI-D IN.
* "Component" may be displayed as "RGB" depending on the setting of
  "Component/RGB-in select". (see page 39)

When an optional Terminal Board is installed:

→ HDMI → SLOT INPUT → VIDEO → Component → PC → DVI

SLOT INPUT: Input terminal in Terminal Board
Note:
When a Terminal Board incompatible with the Display is installed,
"Non-Compatible Function Board" is displayed.

When a Terminal Board with dual input terminals is installed:
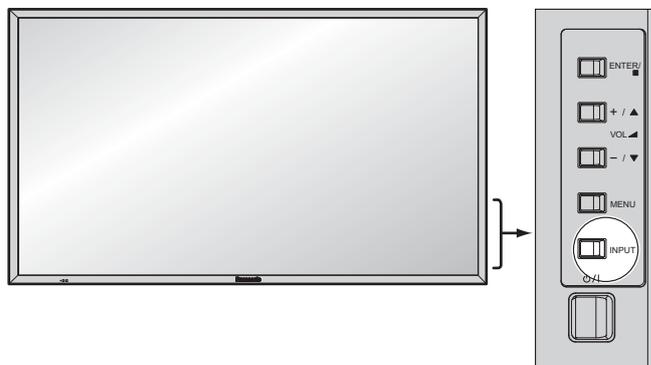
→ HDMI → SLOT INPUT A → SLOT INPUT B → VIDEO → Component → PC → DVI

SLOT INPUT A, SLOT INPUT B: Dual input terminal in Terminal Board.

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 39)

Basic Controls

Main Unit
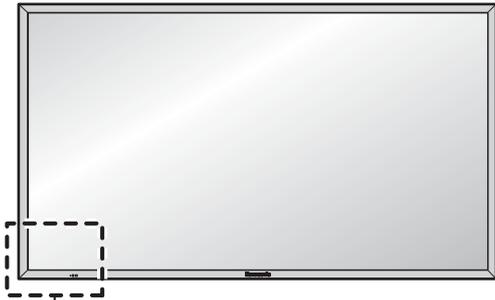
Power Indicator
The Power Indicator will light.
- Power-OFF .... Indicator not illuminated (The unit will still consume some power as long as the power cord is still inserted into the wall outlet.)
- Standby .... Red
  Orange (When "Slot power" is set to "On". See page 46)
  Orange (Depending on the type of the function board installed, when the power is supplied to the slot)
  Orange (When "Control I/F Select" is set to "LAN". See page 44)
- Power-ON ...... Green
- PC Power management (DPMS)
  ....Orange (With PC input signal. See page 34)
- DVI-D Power management
  ....Orange (With DVI input signal. See page 34)

Brightness Sensor
Detects the brightness in the viewing environment.

Remote control sensor
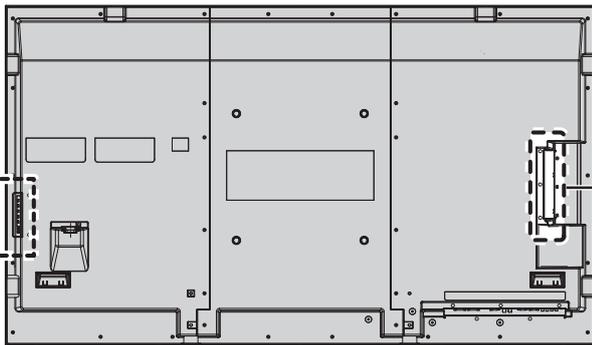
SLOT: Terminal board (optional accessories) insert slot (see page 4)
Note:
The upper side slot is for terminal board with 2-slot width. The terminal board with 1-slot width does not function when installed in the upper side slot.
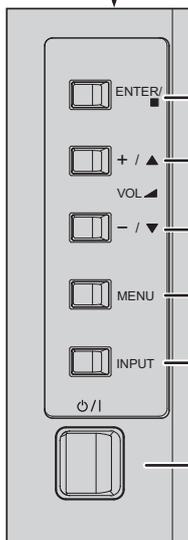
Enter / Aspect button
(see page 21, 23)

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 23)

MENU Screen ON / OFF
Each time the MENU button is pressed, the menu screen will switch. (see page 23)
⎯→ Normal Viewing ⎯→ Picture ⎯
⎿ Sound ⟵ Pos. /Size ⟵ Setup ⟵⎤

INPUT button (INPUT signal selection)
(see page 18)
Main Power On / Off Switch

ENTER/
+ / ▲
VOL ◢
– / ▼
MENU
INPUT
⏻/I

Remote Control Transmitter

ACTION button
Press to make selections.

ASPECT button
Press to adjust the aspect.
(see page 21)

Standby (ON / OFF) button
The Display must first be plugged into the wall outlet and turned on at the power switch (see page 16).
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 24, 25)

PICTURE button
(see page 26, 27)

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 25, 26, 27, 28)

POSITION buttons

INPUT button
Press to select Input signal sequentially. (see page 18)

ECO MODE (ECO)
Press to change the ECO MODE setup status. (see page 34)

FUNCTION buttons (FUNCTION)
(see page 47)

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.

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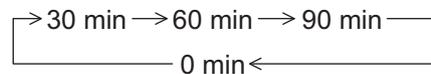
When three minutes remain, "Off timer 3 min" will flash.
The off timer is cancelled if a power interruption occurs.

AUTO SETUP button
Automatically adjusts the position/size of the screen. (see page 24)

SET UP button (see page 29 - 44)

SOUND button (see page 28)

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

R button (see page 23)
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 21)
③ Off timer
 The off timer indicator is displayed only when the off timer has been set.
④ Clock Display (see page 46)
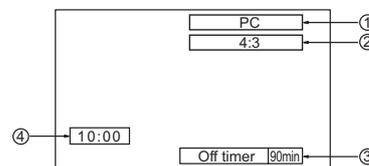
Digital Zoom (see page 22)
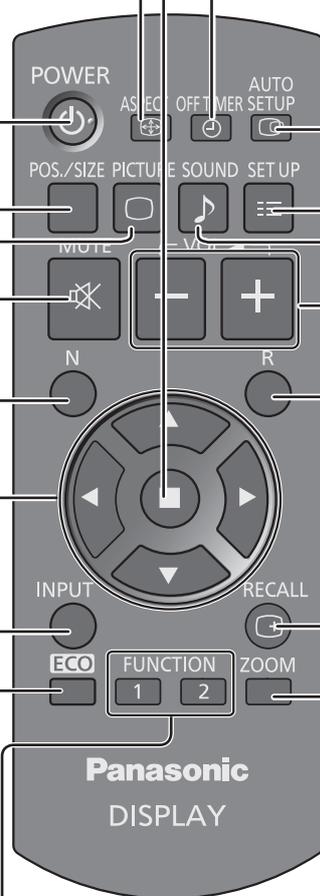
ASPECT Controls

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 ⟶
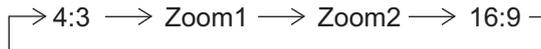
[from the unit]
Right side surface
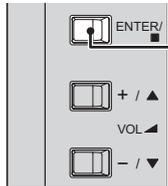
ENTER/■   The aspect mode changes each time the ENTER button is pressed.
+ / ▲
VOL ◢
− / ▼

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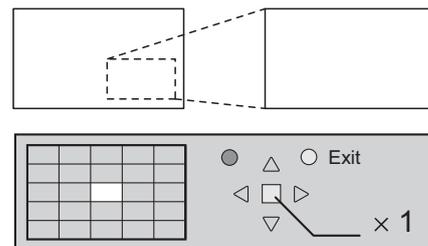
During Digital Zoom, only the following buttons can be operated.

[Remote control]

POSITION /
ACTION button

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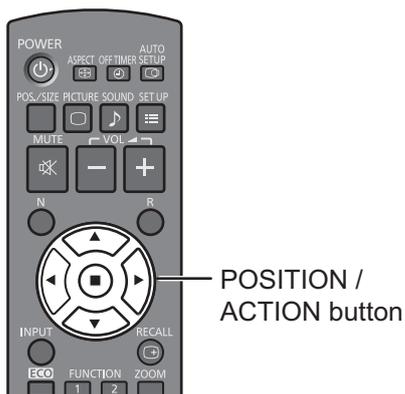
2 **Select the area of the image to be enlarged.**

Press on the enlargement location to select.

The cursor will move.

---
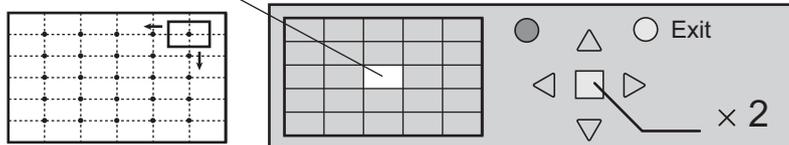
3 **Select the magnification required for the enlarged display.**

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

| ×1 | → | ×2 | → | ×3 | → | ×4 |

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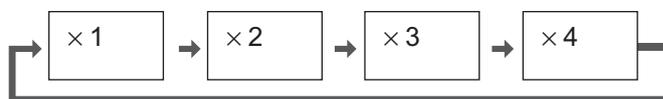
4 **Return to normal display (quit Digital Zoom).**

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 37).
  When Screensaver is running (see page 31)
- 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)

+ / ▲ VOL ◢

− / ▼

MENU —— Press several times.

Each time the MENU button is pressed, the menu screen will switch.
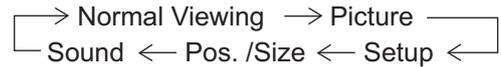
→ Normal Viewing → Picture ─
└ Sound ← Pos. /Size ← Setup ←

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.

ENTER/■ —— ❷ Press.

+ / ▲ VOL ◢ ┐
          ├ ❶ Select.
− / ▼ ┘

3 **Set.**

Adjust.

ENTER/■ —— ❷ Press.

+ / ▲ VOL ◢ ┐
          ├ ❶ Adjust.
− / ▼ ┘

4 **Exit the menu.**

POS./SIZE PICTURE SOUND SET UP
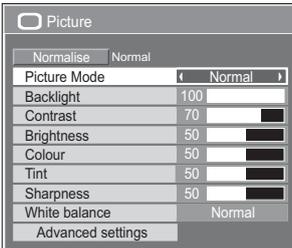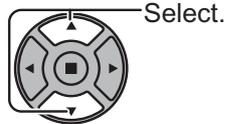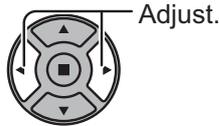
Press.

Press ◯ to return to the previous menu.
       R

+ / ▲ VOL ◢

− / ▼
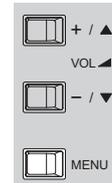
MENU —— Press several times.

Menu display list

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

Picture menu

◯ Picture

Normalise	Normal	
Picture Mode	◀ Normal ▶	
Backlight	100	
Contrast	70	
Brightness	50	
Colour	50	
Tint	50	
Sharpness	50	
White balance	◀ Normal ▶	
Advanced settings		
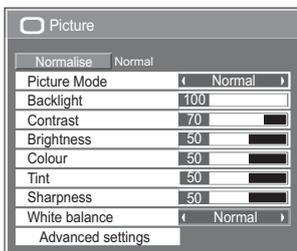
See page 26, 27

Setup menu

☷ Setup   1/2

Signal	
Screensaver	
Input label	
ECO Mode settings	
Wobbling	◀ Off ▶
Component/RGB-in select	
	RGB
No activity power off	
	◀ Disable ▶
OSD Language	◀ English(UK) ▶

☷ Setup   2/2

MULTI DISPLAY Setup	
Set up TIMER	
PRESENT TIME Setup	
Network Setup	
Menu Display Duration	◀ 15 S ▶
Menu Transparency	20

See page 29-44

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	
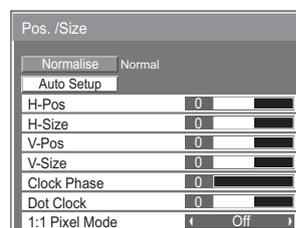
See page 24, 25

Sound menu

♪ Sound   1/2

Normalise	Normal	
Sound Mode	◀ Normal ▶	
Bass	0	
Treble	0	
Balance	0	
Surround	◀ Off ▶	

♪ SDI Sound Output   2/2

Left Channel	◀ Channel 1 ▶
Right Channel	◀ Channel 1 ▶
Sound Out	◀ Off ▶
Level Meter	◀ Off ▶
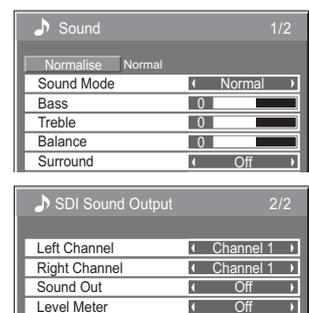
See page 28

Adjusting Pos. /Size

1 POS./SIZE ———————— Press to display the Pos. /Size menu.
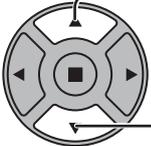
2 ———————— Press to select the menu to adjust.

3 ———————— Press to adjust the menu.

4 POS./SIZE ———————— Press to exit from adjust mode.

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 ▶	
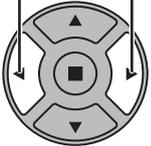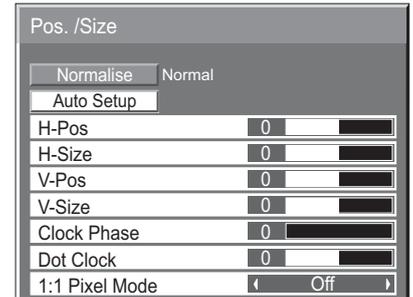
Notes:
Unadjustable items are grayed out.
Adjustable items differ depending on the input signal and the display mode.

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:
• 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 41) 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.
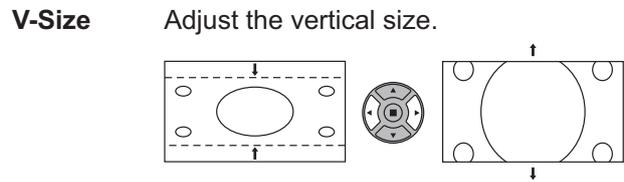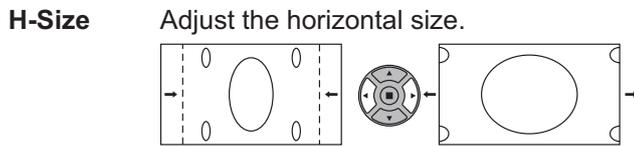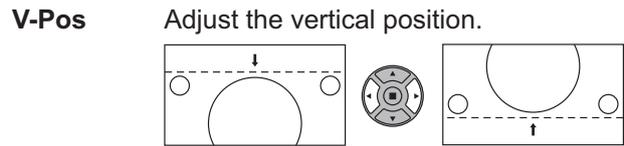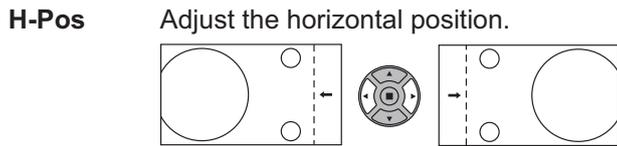
Clock Phase **(During RGB and PC input signal)**
Eliminate the flickering and distortion.

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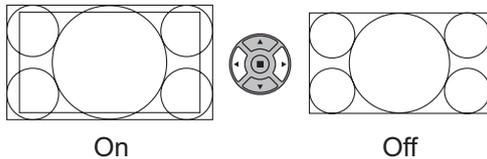
Notes:
• "Off" is effective during only "16:9" aspect mode.
• When "Off" is set, "H-Size" and "V-Size" cannot be adjusted.

1:1 Pixel Mode Adjusts the display size when 1125i or 1125p signal is input.
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
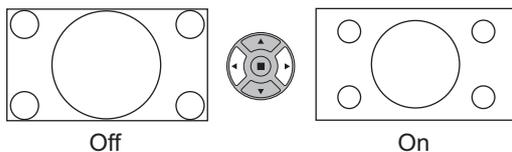
Helpful Hint (N / Normalise Normalisation)

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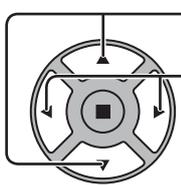
——— Press to select the menu to adjust.

——— 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		
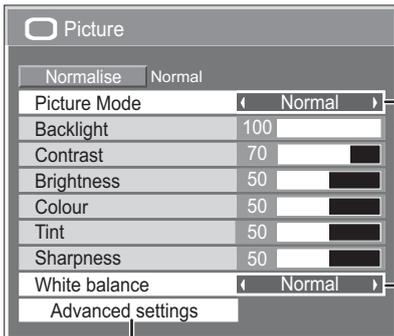
Press to enter Advanced settings .

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.
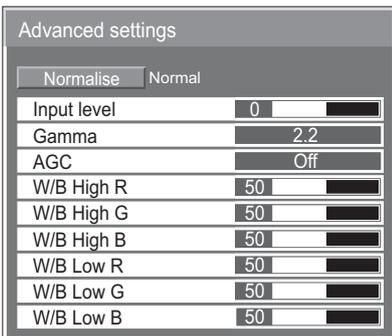
→ Normal ⟷ Dynamic ←
→ Cinema ←

Normal
For viewing in standard (evening lighting) environments.

Dynamic
For viewing in brighter environments.

Cinema
For use in viewing tone-focused pictures with brightness reduced.

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.
- "Backlight" can be adjusted when "ECO Mode" is set to "Custom" and "Power save" to "Off". (see page 34)

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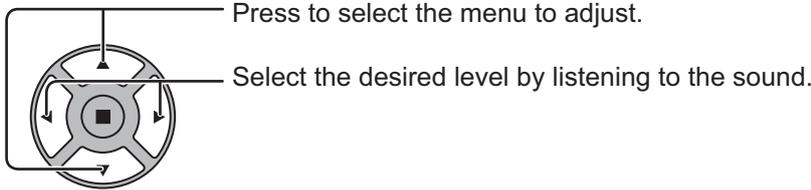♪ ————————— Press to display the Sound menu.

2 Select to adjust each item.

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

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

♪ Sound	1/2
Normalise Normal	
Sound Mode	◄ Normal ►
Bass	0
Treble	0
Balance	0
Surround	◄ Off ►

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.
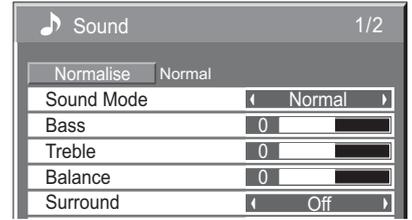
SDI Sound Output

This menu is available only when selecting a slot that the following terminal board is installed:
HD-SDI Terminal Board with audio (TY-FB10HD)

♪ SDI Sound Output	2/2
Left Channel	◄ Channel 1 ►
Right Channel	◄ Channel 1 ►
Sound Out	◄ Off ►
Level Meter	◄ Off ►

Item	Details
Left Channel	**Channel 1 to Channel 16** Selects left audio channel.
Right Channel	**Channel 1 to Channel 16** Selects right audio channel.
Sound Out	**On ⟷ Off** **On:** Enables audio output. **Off:** Disables audio output.
Level Meter	**Off ⟷ 1-8ch ⟷ 9-16ch** Sets audio channels to show in the audio level meter. 8 channels are displayed in the audio level meter; 4 channels each on both right and left sides of the display. **Off:** Hides the audio level meter. **1-8ch:** Displays the audio level meter (1-8ch) **9-16ch:** Displays the audio level meter (9-16ch)

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	
Network Setup	
Menu Display Duration	15 S
Menu Transparency	20

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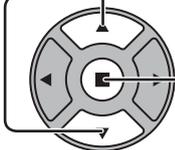
Press to select Set up TIMER or PRESENT TIME Setup.

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

PRESENT TIME Setup

1
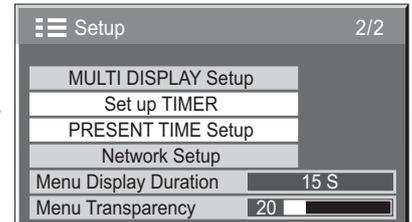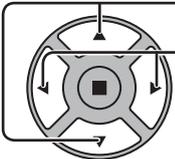
Press to select DAY or PRESENT TIME.

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
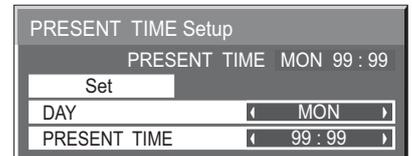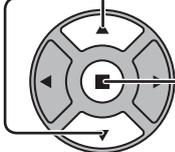
Press to select Set.

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
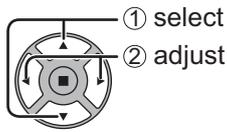
1 Set the program number.

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.
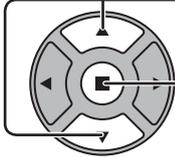
2 Press to select Screensaver.

Press to display Screensaver screen.

≣ Setup	1/2
Signal	
Screensaver	
Input label	
ECO Mode settings	
Wobbling	Off
Component/RGB-in select	
	RGB
No activity power off	
	Disable
OSD Language	English(UK)

Screensaver	
	PRESENT TIME MON 0 : 02
Start	
Mode	◀ Off ▶
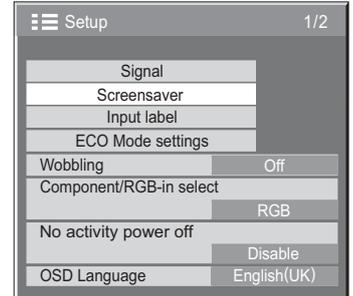
3 **Mode selection**
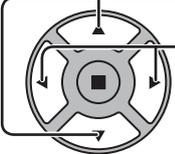
Press to select Mode.

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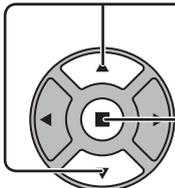
When the Mode is set to On, press to select Start.

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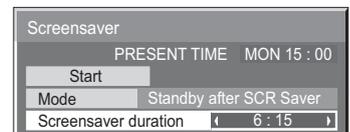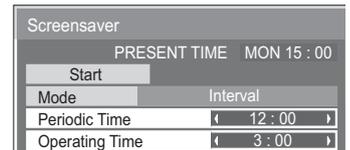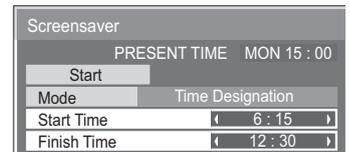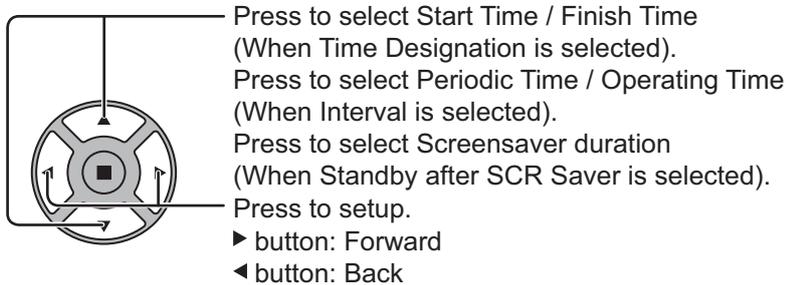 [However, switching occurs every 15 minutes when Periodic Time is selected.]
- Pressing "◀" or "▶" button continuously changes the Time by 15 minutes.
- "Screensaver duration" of the "Standby after SCR Saver" can be set from 0:00 to 23:59. When this is set to "0:00", " Standby after SCR Saver" will not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

☰ Setup	1/2
Signal	
Screensaver	
Input label	
ECO Mode settings	
Wobbling	◀ Off ▶
Component/RGB-in select	
	RGB
No activity power off	
	Disable
OSD Language	English(UK)

3 SET UP

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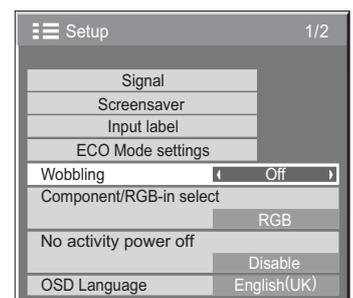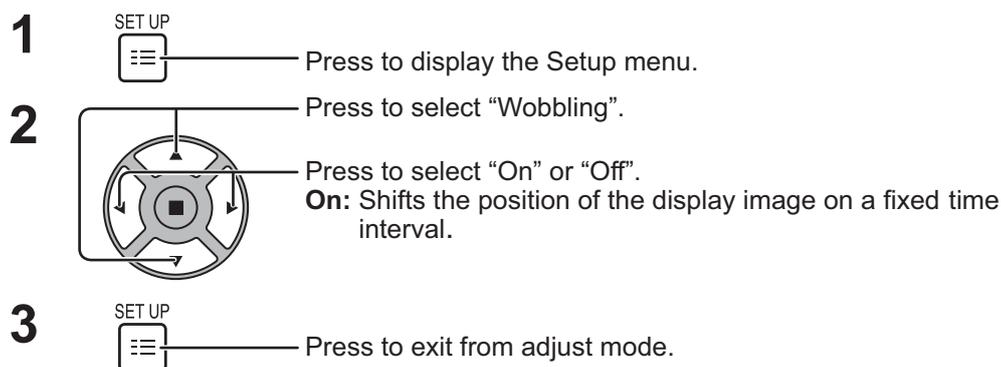
Notes:
- If "MULTI DISPLAY Setup" is set to "On", this function does not operate.
- When this function is operating, part of the screen may appear to be missing.

No activity power off

1   Press to select the menu to adjust.

⋮☰ Setup	1/2
Signal	
Screensaver	
Input label	
ECO Mode settings	
Wobbling	Off
Component/RGB-in select	
	RGB
No activity power off	
◀ Disable ▶	
OSD Language	English(UK)

2   Press to select "Enable" or "Disable".

3   SET UP   Press to exit from Setup.
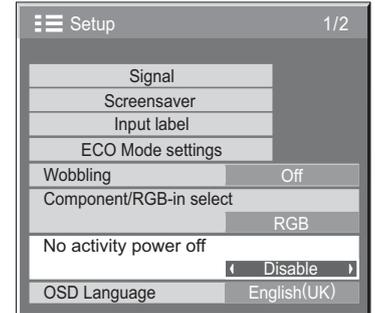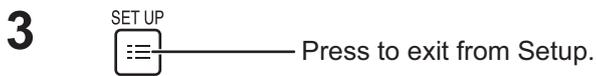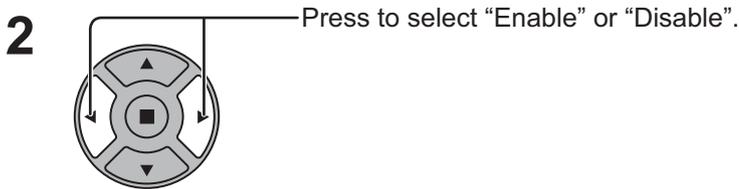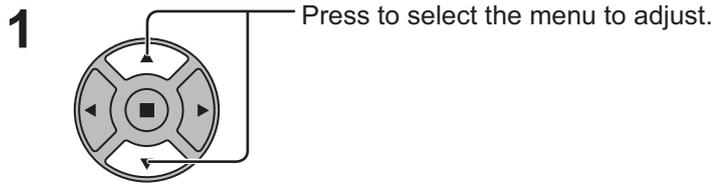
When this function is set to "Enable", the power is turned off (standby) automatically when there is no operation of the Display for 4 hours.
Starting from 3 minutes before the turn off, the remaining time will be displayed.

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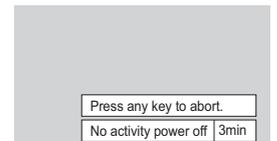
When the power is turned off due to this function, a message "Last turn off due to 'No activity power off'." is displayed next time the power is turned on.

Note:
During the screensaver is running, this function is disabled.

ECO Mode settings

	Setup	1/2
	Signal	
	Screensaver	
	Input label	
	ECO Mode settings	
Wobbling		Off
Component/RGB-in select		
		RGB
No activity power off		
		Disable
OSD Language		English(UK)

■

ECO Mode settings		
ECO Mode	◀ Custom ▶	
No Signal power off		
		Disable
PC Power management		
		Off
DVI-D Power management		
		Off
Power save		Off

① select
② adjust

ECO Mode

Custom: The menu of power consumption reduction is individually set.

On: The following fixed values are set to the menu of power consumption reduction. Individual setting is not available.

No Signal power off: Enable

PC Power management: On

DVI-D Power management: On

Power save: Sensor

Using Remote Control

When ECO is pressed, the "ECO Mode" setting changes.

ECO Mode	On

Custom settings

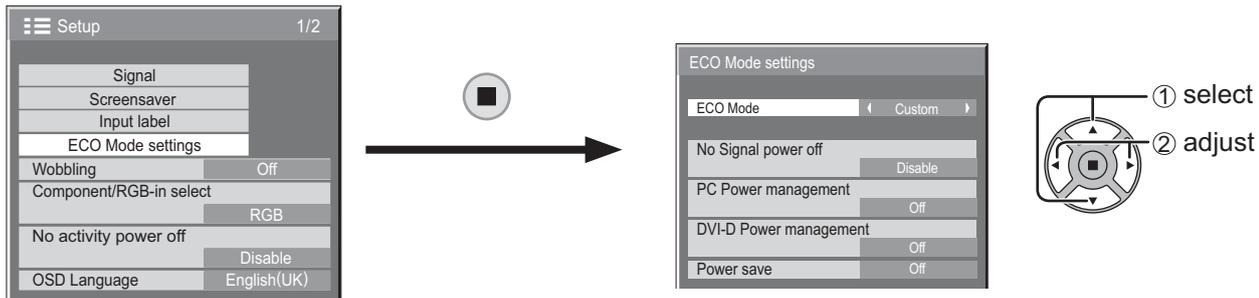The menu of the power consumption reduction is individually set. This setting is enabled when "ECO Mode" is set to "Custom".

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).

PC 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 PC signal input:

→ 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 terminal.

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

DVI-D 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 (sync signal) are detected for 30 or so seconds during DVI signal input:

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

When pictures (sync signal) are subsequently detected:

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

Note:

This function operates only during DVI signal input.

Power save

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

Off: This function does not operate.

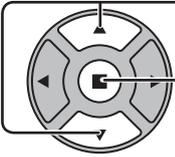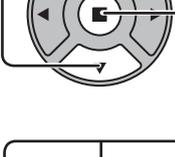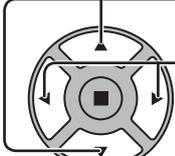**On:** Backlight brightness is reduced.

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.

Customizing the Input labels

This function can change the label of the Input signal to be displayed. (see page 18)

1

SET UP

Press to display the Setup menu.

Setup	1/2
Signal	
Screensaver	
Input label	
ECO Mode settings	
Wobbling	Off
Component/RGB-in select	
	RGB
No activity power off	
	Disable
OSD Language	English(UK)

2

Press to select Input label.

Press to display the Input label screen.

3
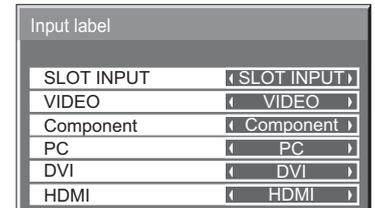
Press to select image input.
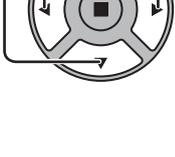
Press to change input label.

Input label	
SLOT INPUT	◄ SLOT INPUT ►
VIDEO	◄ VIDEO ►
Component	◄ Component ►
PC	◄ PC ►
DVI	◄ DVI ►
HDMI	◄ HDMI ►
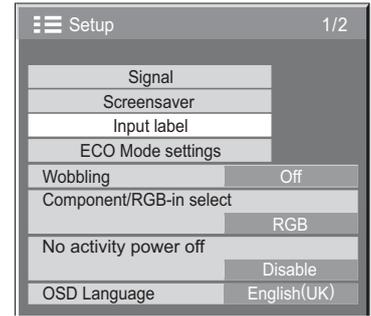
Image input	Input label
[SLOT INPUT]*1	SLOT INPUT / DVD1 / DVD2 / DVD3 / Blu-ray1 / Blu-ray2 / Blu-ray3 / CATV / VCR / STB / (Skip)
[VIDEO]	VIDEO / DVD1 / DVD2 / DVD3 / Blu-ray1 / Blu-ray2 / Blu-ray3 / CATV / VCR / STB / (Skip)
[Component]*2	Component / DVD1 / DVD2 / DVD3 / Blu-ray1 / Blu-ray2 / Blu-ray3 / 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)
[HDMI]	HDMI / DVD1 / DVD2 / DVD3 / Blu-ray1 / Blu-ray2 / Blu-ray3 / CATV / VCR / STB / (Skip)

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

*1 "SLOT INPUT" is displayed when a Terminal Board is installed.

*2 "Component" may be displayed as "RGB" depending on the setting of "Component/RGB-in select". (see page 39)

When a Terminal Board with dual input terminals is installed

"SLOT INPUT" is displayed as "SLOT INPUT A" and "SLOT INPUT B" and independent settings are available.

[SLOT INPUT A]	SLOT INPUT A / DVD1 / DVD2 / DVD3 / Blu-ray1 / Blu-ray2 / Blu-ray3 / CATV / VCR / STB / (Skip)
[SLOT INPUT B]	SLOT INPUT B / DVD1 / DVD2 / DVD3 / Blu-ray1 / Blu-ray2 / Blu-ray3 / CATV / VCR / STB / (Skip)

Selecting the On-Screen Menu Language

1 SET UP

Press to display the Setup menu.

2
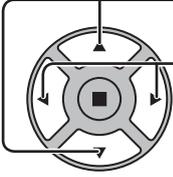
Press to select the OSD Language.
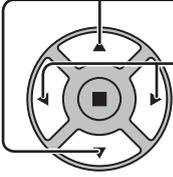
Press to select your preferred language.

■ 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
         ECO Mode settings
 Wobbling                      Off
 Component/RGB-in select
                               RGB
 No activity power off
                               Disable
 OSD Language          ◄ English(UK) ►
```
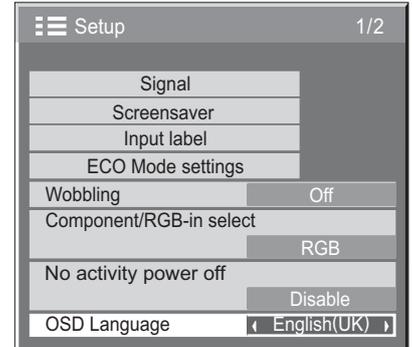
Customizing the On-Screen Menu Display

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

1 SET UP

Press to display the Setup menu.

2
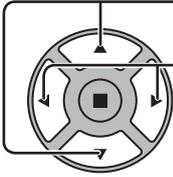
Press to select "Menu Display Duration".
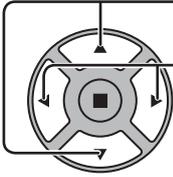
Press to adjust the display duration.

```
≣ Setup                              2/2

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

3
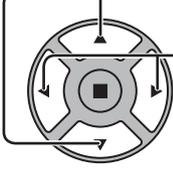
Press to select "Menu Transparency".
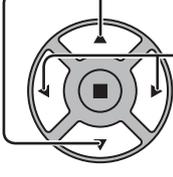
Press to adjust the transparency.

4 SET UP

Press to exit from adjust mode.
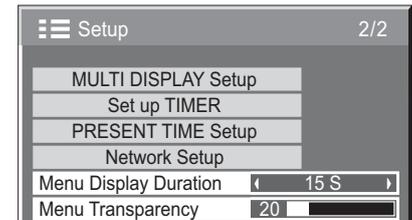
Setup for MULTI DISPLAY

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.
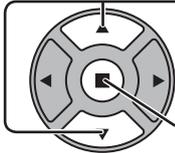
2   Press to select the MULTI DISPLAY Setup.

Press to display the "MULTI DISPLAY Setup" menu.

3   Press to select the MULTI DISPLAY Setup.

Press to select "On" or "Off".

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

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

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. Setting value: 0 / Suitable for moving image display. Setting value: 100
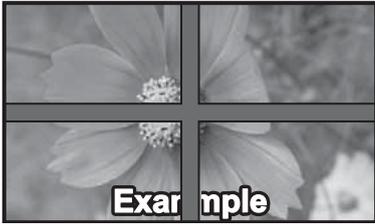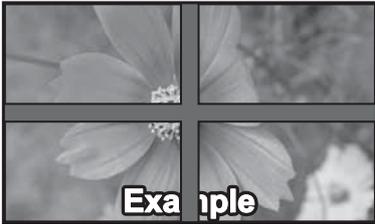
Setup for MULTI DISPLAY

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.

ID Remote Control Function

You can set the remote control ID when you want to use this remote control on one of several different displays.

Note:
To operate this function, please purchase ID remote controller sold separately.
Object model : EUR7636090R

1 Switch NORMAL ID to NORMAL ID on the right side.

2 Press the ID SET C button on the remote control.

3 Press one of 1 - 9 , 0 for the tens digit setting.

4 Press one of 1 - 9 , 0 for the units digit setting.

Notes:
• The numbers in 2, 3 and 4 should be set up quickly.
• Adjustable ID number range is 0 - 99.
• If a number button is pressed more than two times, the first two numbers become the ID number for the remote control.

ID remote control button operation

The operation is the same as normal remote control except for the CH ∧ ∨ button.

ID Cancellation

Press ID ALL -/-- button on remote control. (This has the same effect as pressing the ID SET C , 0 , 0 buttons at the same time.)

Notes:
• Set the Remote ID "On" to operate the ID remote control.
  If Remote ID is set to "On", you can use the remote control without identical ID number during option menu display. (see page 46)
• The ID remote control cannot be used when ID select is set to anything other than 0, and the remote control ID is not the same as the ID select number (see page 46).

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.
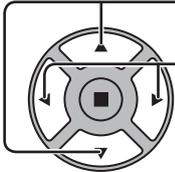
2 — Press to select the "Component / RGB-in select".

— Press to select the desired input signal.

Component ⟷ RGB

3 SET UP — Press to exit from adjust mode.

Setup	1/2
Signal	
Screensaver	
Input label	
ECO Mode settings	
Wobbling	Off
Component/RGB-in select	RGB
No activity power off	Disable
OSD Language	English(UK)
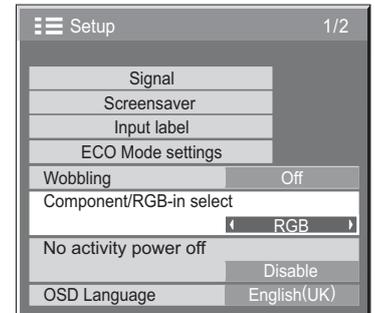
Note:
Make setting of the selected input terminal (COMPONENT/RGB IN).

YUV / RGB-in select

Select to match the signals from the source connected to DVI-D IN terminal.
YUV signals ⇒ "YUV"
RGB signals ⇒ "RGB"

1 SET UP — Press to display the Setup menu.
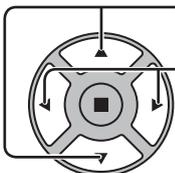
2 — Press to select the "YUV / RGB-in select".

— Press to select the desired mode.

YUV ⟷ RGB

3 SET UP — Press to exit from adjust mode.

Setup	1/2
Signal	
Screensaver	
Input label	
ECO Mode settings	
Wobbling	Off
YUV/RGB-in select	RGB
No activity power off	Disable
OSD Language	English(UK)
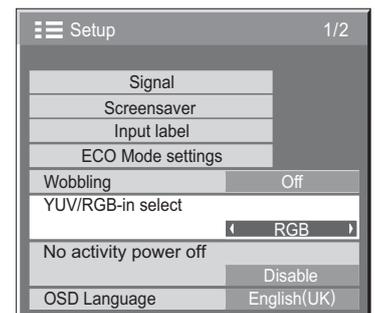
Signal menu

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

Setup	1/2
Signal	
Screensaver	
Input label	
ECO Mode settings	
Wobbling	Off
Component/RGB-in select	
	RGB
No activity power off	
	Disable
OSD Language	English(UK)

1 SET UP — Press to display the Setup menu.
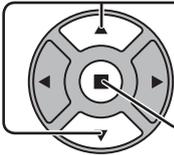
2 — Press to select the "Signal".
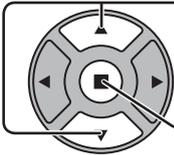
— Press to display the Signal menu.
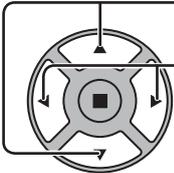
3 — Press to select the menu to adjust.
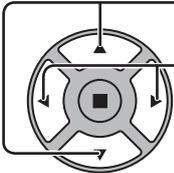
— Press to adjust the menu.
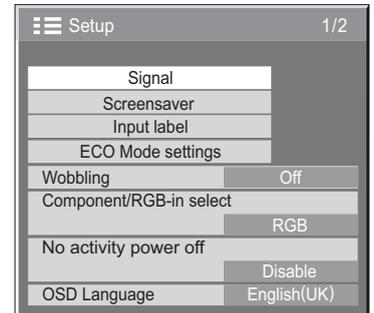
⇩ Press ACTION (■) button

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

4 SET UP — Press to exit from adjust mode.

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
HDMI Range	Auto
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 input signal. ("Signal [AV]" menu is displayed.)
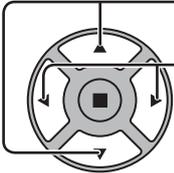
— Press to select the "3D Y/C Filter"

— Press to set On / Off.

3D Y/C Filter	◀ On ▶
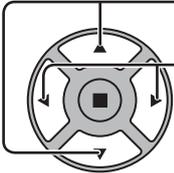
Colour system

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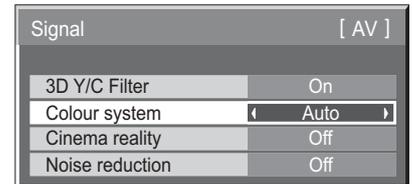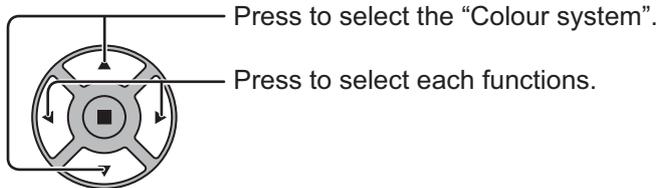
If the picture image becomes unstable:
With the system set on Auto, under conditions of low level or noisy input signals the image may in rare cases become unstable. Should this occur, set the system to match the format of the input signal.

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 ▶
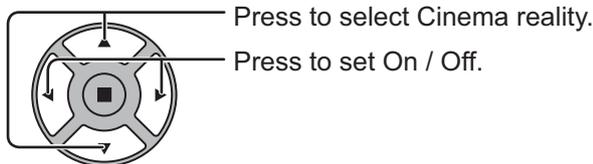
XGA Mode

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 ▶
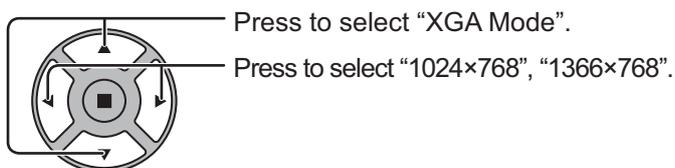
Note:
After making this setting, be sure to make each adjustment (such as "Auto Setup") on the "Pos. /Size" menu as necessary. (see page 24, 25)

Noise reduction
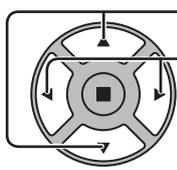
Press to select "Noise reduction".

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.
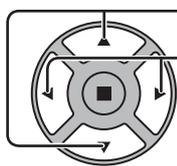
Press to select the "Sync".

Press to adjust.

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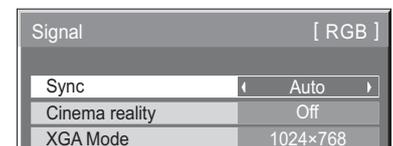
Confirm that the input is set to RGB input (this setting is valid only for RGB input signal).

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"

HDMI Range

Switches the dynamic range according to the input signal from HDMI terminal.
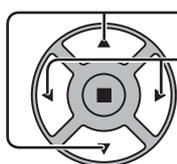
Press to select "HDMI Range".

Press to select "Video(16-235)", "Full(0-255)", "Auto".

Signal	[Digital]
Cinema reality	Off
Noise reduction	Off
HDMI Range	◄ Auto ►
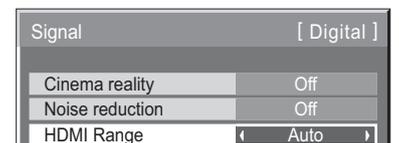
Video(16-235): If the input signal is the video range, Example: HDMI terminal output for DVD player
Full(0-255): If the input signal is full range, Example: HDMI terminal output for personal computer
Auto: Switches the dynamic range automatically between "Video(16-235)" and "Full(0-255)" according to the input signal.
Note:
This function can be set only for HDMI signal input.

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	

Network Setup

Make the various settings to use the network function.

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

Network Setup

Save	
DHCP	◀ Off ▶
IP address	192.168. 0. 8
Subnet mask	255.255.255. 0
Gateway	192.168. 0. 1
Port	1024
LAN Speed	Auto
Network ID	0
Control I/F Select	
	RS-232C
MAC address	--:--:--:--:--:--
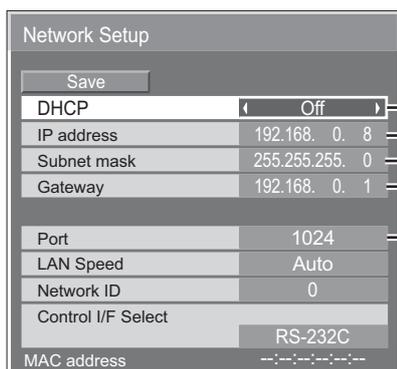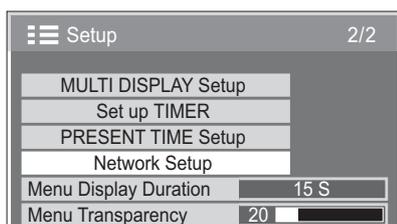
DHCP, IP address, Subnet mask, and Gateway settings

1 Set DHCP.
When "Off" is selected, IP address and other settings can be set manually.

2 Select the item and press ■.

3 Enter an address.

IP address
192.168. 0. 8

① Use ◀▶ to select a digit.
② Use ▲▼ to change a number.
③ Press ■.

Pressing R ○ will cancel the address change.

4 Select "Save" and press ■.

Port setting

1 Select "Port" and press ■.

2 Enter a port number.

Port
1024

① Use ◀▶ to select a digit.
② Use ▲▼ to change a number.
③ Press ■.

Pressing R ○ will cancel the port number change.

Save
Save the current network Setup. Each value set for DHCP, IP address, Subnet mask, and Gateway will be saved. If "NG" is displayed, check the same IP address is not used within the same network.

DHCP (DHCP client function)
To obtain an IP address automatically using a DHCP server, set this to "On". If DHCP server is not used, set this to "Off".

IP address (IP address display and setting)
Enter an IP address if DHCP server is not used.

Subnet mask (Subnet mask display and setting)
Enter a subnet mask if DHCP server is not used.

Gateway (Gateway address display and setting)
Enter a gateway address if DHCP server is not used.

Port
Set the port number used for command control.
The available setting range is 1024 – 65535.
When the PJLink™ protocol is used, the port setting is not necessary.

LAN Speed
Set the connection speed of the LAN environment.
Select the value from Auto, 10 Half, 10 Full, 100 Half or 100 Full.

Network ID
Set the ID to identify this unit.
The available setting range is 0 – 99.

Control I/F Select
Set whether to control with RS-232C (serial) or LAN.
When "LAN" is set, power indicator lights orange under the condition of power "Off" with remote control (stand-by state).

MAC address
Display the MAC address of this unit. However, the MAC address is not displayed when the "Control I/F Select" is set to "RS-232C".

Notes:
• To use a DHCP server, make sure the DHCP server is started.
• Contact your network administrator for details on settings.

Options Adjustments

1 SET UP [≡] —— Press to display the Setup menu.
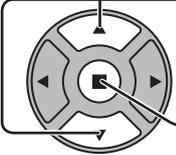
2 —— Press to select "OSD Language".
—— Press for more than 3 seconds.
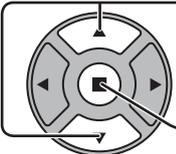
3 —— Press to select "Options".
Options
Shipping
—— Press to display the Options menu.
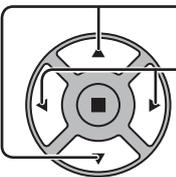
4 —— Press to select your preferred menu.
—— Press to adjust the menu.

5 SET UP [≡] —— Press to exit from Options menu.

Options	1/3
Input Search	
On screen display	◄ On ►
Initial input	◄ Off ►
Initial VOL level	◄ Off 0 ►
Maximum VOL level	◄ Off 0 ►
Input lock	◄ Off ►
Button lock	◄ Off ►
Remocon User level	◄ Off ►

Options	2/3
Off-timer function	Enable ►
Initial Power Mode	◄ Normal ►
ID select	◄ 0 ►
Remote ID	Off ►
Serial ID	Off ►
Serial Daisy Chain	◄ --- ►
Studio W/B	Off ►

Options	3/3
Slot power	◄ Off ►
Power ON Screen Delay	Off ►
Clock Display	◄ Off ►
Power On Message (No activity power off)	
	On ►
Function button assign 1	◄ Signal ►
Function button assign 2	◄ Screensaver ►

Item	Adjustments
Input Search	Set auto input switching for when there is no signal. (see page 47)
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 ↔ SLOT INPUT* ↔ VIDEO ↔ Component/RGB ↔ PC ↔ DVI ↔ HDMI ↔ Off** * "SLOT INPUT" is displayed when an optional Terminal Board is installed. When a Terminal Board with dual input terminals is installed, "SLOT INPUT A" and "SLOT INPUT B" are displayed. **Notes:** • Only the adjusted signal is displayed. (see page 18) • This menu is available only when "Input lock" is "Off".
Initial VOL level	Press [−] [+] 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 [−] [+] 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.

Input lock	Locks the input switch operation. **Off ↔ SLOT INPUT* ↔ VIDEO ↔ Component/RGB ↔ PC ↔ DVI ↔ HDMI ↔ Off** * "SLOT INPUT" is displayed when an optional Terminal Board is installed. When a Terminal Board with dual input terminals is installed, "SLOT INPUT A" and "SLOT INPUT B" are displayed. **Notes:** • Only the adjusted signal is displayed (see page 18). • Input switch can be used when this is set to "Off".

Options Adjustments

Item	Adjustments
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 except the Power switch. 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 POWER, INPUT, RECALL, MUTE, – + buttons on the remote control. **User2:** You can only use POWER 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.
ID select	Sets panel ID number when panel is used in "Remote ID" or "Serial ID". Set value range: 0 - 100 (Standard value: 0)
Remote ID	The setting of this menu is valid only when using ID remote control. **Off:** Disables ID remote control functions. You can use normal remote control operations. **On:** Enable ID remote control functions. **Note:** To use the ID remote control function, it is necessary to set each ID number of remote control and display unit. About the setting method, please refer to "ID Remote Control Function" (see page 38) and "ID select" (above-mentioned).
Serial ID	Sets the panel ID Control. **Off:** Disables external control by the ID. **On:** Enables the external control by the ID.
Serial Daisy Chain	Sets the top and end of a daisy chain when the SERIAL terminal of Display is daisy chained. **---:** When the Display is under SERIAL control on a standalone basis, or if not at the top or end of daisy chain. **Top:** To connect to the top of daisy chain. **End:** To connect to the end of daisy chain.
Studio W/B	**Off:** Nullify all the settings adjusted. **On:** Sets the colour temperature for TV studio. **Note:** Valid only when the "Warm" is set as "White balance" in Picture menu.
Slot power	**Off** ⟷ **Auto** ⟷ **On** **Off:** Power is not transmitted to the slot power. **Auto:** Power is transmitted to the slot power only when main power is on. **On:** Power is transmitted to the slot power when main power is on or in the standby state. **Note:** In some cases, power is transmitted to the slot power when main power is on or in the standby state regardless of the slot power setting.
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 29)
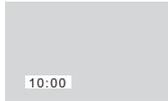
Item	Adjustments
Power On Message (No activity power off)	Whether to show/hide No activity power off Precautions at the time of power ON is set. **On:** The warning precautions are shown at the time of power ON. **Off:** The warning precautions are not shown at the time of power ON. **Note:** This setting is enabled only if "No activity power off" is "Enable" (see page 33).
Function button assign 1 Function button assign 2	Set the functions that operates when FUNCTION 1 2 is pressed. **Signal:** The "Signal" menu is displayed. **Screensaver:** The "Screensaver" menu is displayed. **ECO menu:** The "ECO Mode settings" menu is displayed. **Set up TIMER:** The "Set up TIMER" menu is displayed. **Note:** Factory settings are as follows. FUNCTION1 button: Signal FUNCTION2 button: Screensaver **Use the FUNCTION button** The menu screen is displayed. (Example: Signal) FUNCTION 1 2 → | Signal	[AV]
3D Y/C Filter	◄ On ►
Colour system	Auto
Cinema reality	Off
Noise reduction	Off | Press the FUNCTION button to exit from the menu.
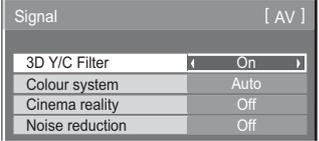
Normalisation

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

Press the ▯−/▼ button on main unit together with ◯ᴿ 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.

Input Search

When a signal is not detected, another input with a signal is automatically selected.

Options	1/3
Input Search	
On screen display	On
Initial input	Off

Press ACTION (■) button

Input Search	
Input Search	◄ Off ►
Primary Input	
Secondary Input	

① select
② adjust
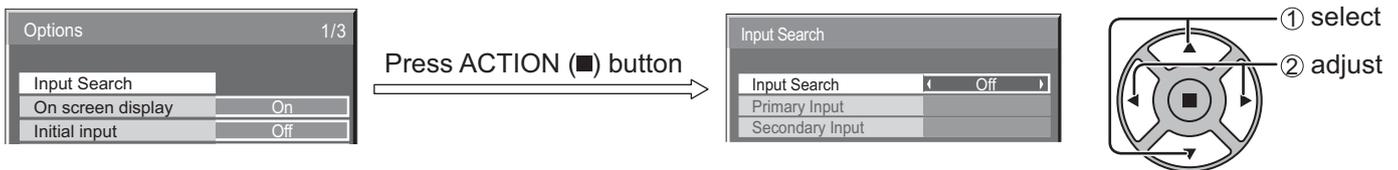
Input Search

> **Off:** When there is no signal, the input is not switched automatically.
> **All Inputs:** Searches all inputs and switches to an input with a signal.
> **Priority:** Searches "Primary Input" and "Secondary Input" in order and switches to an input with a signal.
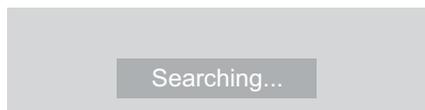
Searching...

"Searching..." is displayed during the input search.

Primary Input, Secondary Input

Set the input to search when "Priority" is selected.

(NONE) ⇔**SLOT INPUT*** ⇔ **VIDEO** ⇔ **Component/RGB** ⇔ **PC** ⇔ **DVI** ⇔ **HDMI**

* "SLOT INPUT" is displayed when an optional Terminal Board is installed.

  When a Terminal Board with dual input terminals is installed, "SLOT INPUT A" and "SLOT INPUT B" are displayed.

Note:

• This menu is available only when "Input lock" is "Off". (see page 45)

Using Network Function

This unit has a network function to control the network connected display with your computer.

Note:

To use the network function, set each "Network Setup" setting and make sure to set the "Control I/F Select" to "LAN". (see page 44)

When "LAN" is set, power indicator lights orange under the condition of power "Off" with remote control (stand-by state).

Example of Network Connection

COMPUTER   **Display (main unit, rear)**

LAN cable
(not supplied)

LAN

Hub or broadband router
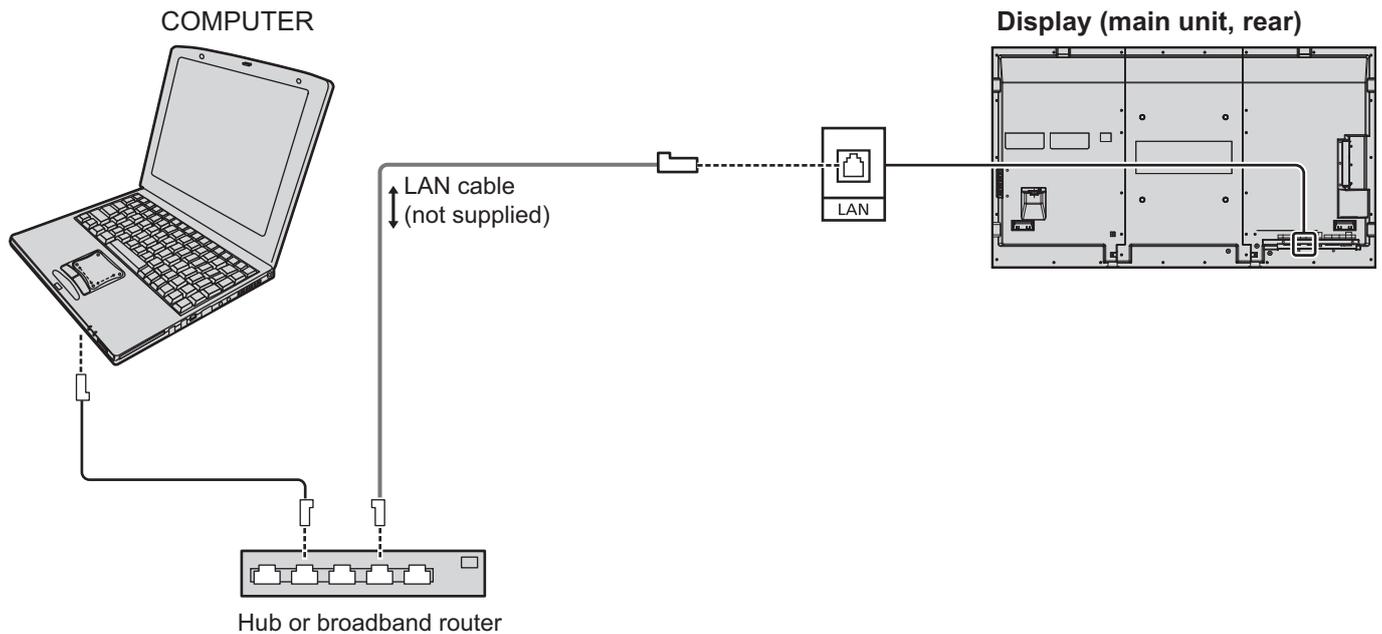
Notes:

• Make sure the broadband router or hub supports 10BASE-T/100BASE-TX.
• To connect a device using 100BASE-TX, use "category 5" LAN cable.
• Touching the LAN terminal with a statically charged hand (body) may cause damage due to its discharge.
  Do not touch the LAN terminal or a metal part of the LAN cable.
• For instructions on how to connect, consult your network administrator.

Command Control

Network function of the unit can control the unit in the same way as serial control from a network.

Supported commands

Commands used in the serial control are supported. (see page 15)

Note:

Consult your local Panasonic dealer for detail instructions on command usage.

PJLink™ Protocol

The network function of the unit conforms with PJLink™ class 1 and you can operate the following actions from your computer using PJLink™ protocol.
• Display setup
• Display status query

Supported commands
Commands to control the unit with PJLink™ protocol are shown in the table below.

Command	Control	Remark
POWR	Power control	Parameter 0 = Standby 1 = Power "On"
POWR ?	Power status query	Parameter 0 = Standby 1 = Power "On"
INPT	Input switch	Parameter See the parameter for command INST ?
INPT ?	Input switch query	
AVMT	Shutter control	Parameter 10 = Picture On (picture mute deactivated), 11 = Picture Off (picture on mute) 20 = Audio On (audio mute deactivated), 21 = Audio Off (audio on mute) 30 = Shutter mode Off (picture and audio mute deactivated) 31 = Shutter mode On (picture and audio on mute)
AVMT ?	Shutter control query	Parameter 11 = Picture Off (picture on mute) 21 = Audio Off (audio on mute) 30 = Shutter mode Off (picture and audio mute deactivated) 31 = Shutter mode On (picture and audio on mute)
ERST ?	Error status query	Parameter First byte: Means fan error. 0 or 2. Second byte: 0 Third byte: 0 Fourth byte: 0 Fifth byte: 0 Sixth byte: Means other error. 0 or 2. Meaning of the 0 – 2 settings: 0 = Error is not detected, 2 = Error
LAMP ?	Lamp status query	Not supported
INST ?	Input switch list query	Parameter Numbers 11 to 13 are depending on the slot installation condition 11: PC IN input (PC) When a single input terminal board is attached 11: SLOT input (SLOT INPUT) 12: PC IN input (PC) 21: VIDEO input (VIDEO) 31: HDMI input (HDMI) When a dual input terminal board is attached 11: SLOT input (SLOT INPUT A) 12: SLOT input (SLOT INPUT B) 13: PC IN input (PC) 22: COMPONENT/RGB IN input (COMPONENT) 32: DVI-D IN input (DVI)
NAME ?	Projector name query	Returns empty character (no name information)
INF1 ?	Manufacturer name query	Returns "Panasonic"
INF2 ?	Model name query	Returns "TH-70/80LF50"
INFO ?	Other information query	Returns version number
CLSS ?	Class information query	Returns "1"

PJLink™ security authentication
Set "Panasonic" for the PJLink™ password.

• PJLink™ is a pending trademark in Japan, the United States, and other countries or areas.

Using Web Browser Control

You can use a Web browser to control the unit and set up a network and password.

Before Using Web Browser Control

To use the Web browser control, the unit and computer setups are required.

Unit Setup

Set each "Network Setup" setting and make sure to set the "Control I/F Select" to "LAN". (see page 44)

Computer Setup

Disable the proxy server settings and enable JavaScript.

(Windows)

Disable proxy server settings

1 Display [Internet Properties] window.
Click [Start] – [Control Panel] – [Network and Internet Connections] – [Internet Options].
2 Click the [Connections] tab and then [LAN Settings].
3 Deselect the [Use automatic configuration script] and [Use a proxy server for your LAN] boxes.
4 Click [OK].

Enable JavaScript

1 Display [Internet Properties] window.
Click [Start] – [Control Panel] – [Network and Internet Connections] – [Internet Options].
2 Set the security level on the [Security] tab to [Default Level]. Alternatively enable [Active scripting] from the [Custom Level] button.

(Macintosh)

Disable proxy server settings

1 From the [Safari] menu, click [Preferences]. General screen is displayed.
2 From the [Advanced] tab, click the [Change Settings…] button next to [Proxies]. Click [Proxies] and set up a proxy server.
3 Deselect the [Web Proxy] and [Automatic Proxy Configuration] boxes.
4 Click [Apply Now].

Enable JavaScript

1 Display [Security] of Safari.
2 Select [Enable JavaScript] under [Web content].

Access from Web Browser

Access to the TOP screen of the Web browser control using a Web browser.

1 Start your Web browser.
2 Enter the IP address set with the "Network Setup" of the unit. (see page 44)

| Address | http://192.168.0.8 | ▼ | → Go |
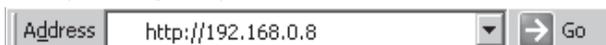
3 Enter the user name and password when the Authentication screen is displayed.

Authentication screen

4 Click [OK].
After logged in, the TOP screen of the Web browser control is displayed. (see page 51)

Notes:

• The password used here is the same password used for command control and the PJLink™ security authentication.
• Default user name and password are as follows:
  User name: user1
  Password: Panasonic
• The password can be changed on the Password Setup screen after logging in (see page 52). The user name cannot be changed.
• Under no circumstances, Panasonic Corporation or it's associated companies will ask customers their password directly.
  Even if you are asked directly, please do not reveal your password.

TOP screen structure of the Web browser control

After logging in, the TOP screen of the Web browser control is displayed.
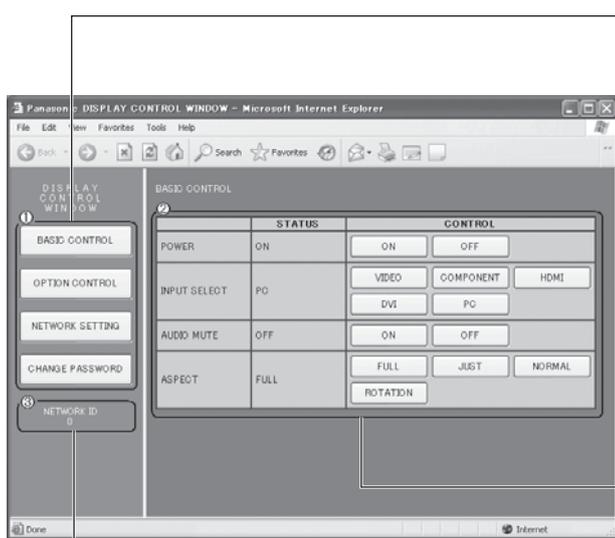
① **Menu**

Menu items are displayed. When a button is clicked, setup screen of each item is displayed.

Item	Details
BASIC CONTROL	BASIC CONTROL screen is displayed. (see below)
OPTION CONTROL	OPTION CONTROL screen is displayed. (see below)
NETWORK SETTING	Network Setup screen is displayed. (see page 52)
CHANGE PASSWORD	Password setup screen is displayed. (see page 52)

② According to the selected item from the menu, setup status or set items are displayed.

③ **Network ID information**

ID to identify the unit is displayed.

Display Control (BASIC CONTROL/OPTION CONTROL Screen)

Click BASIC CONTROL or OPTION CONTROL from the menu. Various controls of the unit can be set.

BASIC CONTROL screen

Click BASIC CONTROL from the menu. Unit status and buttons to change settings are displayed.

Item	Details
POWER	Switch ON/OFF of the unit power.
INPUT SELECT	Switch the input signals. Displayed buttons vary according to the connection status of the video device.
AUDIO MUTE	Switch ON/OFF of the sound mute.
ASPECT	Switch the screen modes

OPTION CONTROL screen

Click OPTION CONTROL from the menu. Command input field for command control of the unit is displayed.

Item	Details
COMMAND	Enter a command. Use the same command used for the serial control. (see page 15)
RESPONSE	Response from the unit is displayed.
SEND	Command is sent and run.

Note:

After the settings are changed, it may take a while till the display's response is displayed.

NETWORK SETTING (Network Setup Screen)

Click NETWORK SETTING from the menu. Various settings of a network can be set. For the details of the setting items, please check Network Setup under the Set up of the unit. (see page 44)

DHCP	⊙ OFF ○ ON
IP ADDRESS	192.168.0.8
SUBNET MASK	255.255.255.0
GATEWAY	192.168.0.1
PORT	1024
LAN SPEED	⊙ AUTO ○ 10 HALF ○ 10 FULL ○ 100 HALF ○ 100 FULL
NETWORK ID	0
	SAVE

Notes:
- To use a DHCP server, make sure the DHCP server is started.
- During a DHCP server is used, IP ADDRESS, SUBNET MASK, and GATEWAY values cannot be entered.
- When the set values are changed properly, "NETWORK SETTING CHANGED." message and the changed set items are displayed.

Item	Details
DHCP	Set to ON when a DHCP server is used, or OFF when it is not used.
IP ADDRESS	Enter an IP address.
SUBNET MASK	Enter a subnet mask.
GATEWAY	Enter a gateway address.
PORT	Enter the port number used for command control. The available setting range is 1024 - 65535.
LAN SPEED	Set the connection speed of the LAN environment.
NETWORK ID	Set the ID to identify this unit. The available setting range is 0 - 99.
SAVE	Save the each set value.

Password Setting (Password Setup Screen)

Click CHANGE PASSWORD from the menu. Password to access the Web browser control can be set. When the password is changed in this screen, the password used for command control and the PJLink™ security authentication is also changed.

OLD PASSWORD	••••••
NEW PASSWORD	••••••••
NEW PASSWORD (RETYPE)	••••••••
	SAVE

Notes:
- The default password is "Panasonic".
- Up to 32 alphanumeric characters can be used for a password.
- When the password is changed properly, "Password has changed." message is displayed.
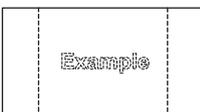
Item	Details
OLD PASSWORD	Enter the old password.
NEW PASSWORD	Enter the new password.
NEW PASSWORD (RETYPE)	Enter the password entered in "NEW PASSWORD" for confirmation.
SAVE	Save the new password. The confirmation screen is displayed. Click OK to change the password.

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 26, 27) Colour system (see page 41)
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 "No signal power off", "PC Power management", "DVI-D Power management" and "No activity power off". Any of them may be set to "On (Enable)". (see page 33, 34)
There is no picture displayed or sound output sometimes.		When HDMI or DVI signals are input to the Display using a selector or distributor, sound or images may not be output in the normal fashion depending on the selector or distributor used. The symptoms may be improved by turning the power off and on again, or by replacing the selector or distributor.
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.

Applicable Input Signals

PC 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))	HDMI
1	640x400@70Hz	31.46	70.07	* (25.17)	* (25.17)		
2	640x480@60Hz	31.47	59.94	* (25.18)	* (25.18)	* (25.18)	*
3	640x480@72Hz	37.86	72.81	* (31.5)	* (31.5)		
4	640x480@75Hz	37.50	75.00	* (31.5)	* (31.5)		
5	640x480@85Hz	43.27	85.01	* (36.0)	* (36.0)		
6	800x600@56Hz	35.16	56.25	* (36.0)	* (36.0)		
7	800x600@60Hz	37.88	60.32	* (40.0)	* (40.0)	* (40.0)	*
8	800x600@72Hz	48.08	72.19	* (50.0)	* (50.0)		
9	800x600@75Hz	46.88	75.00	* (49.5)	* (49.5)		
10	800x600@85Hz	53.67	85.06	* (56.25)	* (56.25)		
11	852x480@60Hz	31.47	59.94			* (33.24)	*
12	1024x768@50Hz	39.55	50.00			* (51.89)	*
13	1024x768@60Hz	48.36	60.00	* (65.0)	* (65.0)	* (65.0)	*
14	1024x768@70Hz	56.48	70.07	* (75.0)	* (75.0)		
15	1024x768@75Hz	60.02	75.03	* (78.75)	* (78.75)		
16	1024x768@85Hz	68.68	85.00	* (94.5)	* (94.5)		
17	1066x600@60Hz	37.64	59.94			* (53.0)	*
18	1152x864@60Hz	53.70	60.00			* (81.62)	*
19	1152x864@75Hz	67.50	75.00	* (108.0)	* (108.0)		
20	1280x768@60Hz	47.70	60.00	* (80.14)	* (80.14)		
21	1280x960@60Hz	60.00	60.00	* (108.0)	* (108.0)		
22	1280x960@85Hz	85.94	85.00	* (148.5)	* (148.5)		
23	1280x1024@60Hz	63.98	60.02	* (108.0)	* (108.0)	* (108.0)	*
24	1280x1024@75Hz	79.98	75.02	* (135.0)	* (135.0)		
25	1280x1024@85Hz	91.15	85.02		* (157.5) *1		
26	1366x768@50Hz	39.55	50.00			* (69.92)	*
27	1366x768@60Hz	48.36	60.00	* (86.71)	* (86.71)	* (87.44)	*
28	1400x1050@60Hz	65.22	60.00			* (122.61)	*
29	1600x1200@60Hz	75.00	60.00	* (162.0)	* (162.0)	* (162.0)	*
30	1920x1080@60Hz	67.50	60.00	* (148.5)	* (148.5)	* (148.5)	*
31	1920x1200@60Hz	74.04	59.95			* (154.0)	*
32	Macintosh13"(640x480)	35.00	66.67	* (30.24)	* (30.24)		
33	Macintosh16"(832x624)	49.72	74.55	* (57.28)	* (57.28)		
34	Macintosh21"(1152x870)	68.68	75.06	* (100.0)	* (100.0)		

*1 Not compatible with Sync on G.

• The signal format automatically detected may differ from the actual input signal in display.

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))	HDMI
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	
ECO Mode settings	
Wobbling	Off
Component/RGB-in select	
	RGB
No activity power off	
	Disable
OSD Language	◀ English(UK) ▶
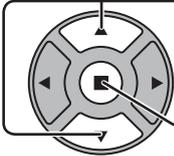
2 Press to select "OSD Language".

Press for more than 3 seconds.
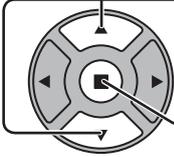
3 Press to select "Shipping".

Options
Shipping

Press to display the Shipping menu.
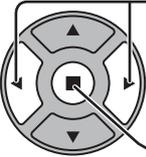
4 Press to select "YES".

Shipping	
YES	NO

Press to confirm.

5 Wait for 10 seconds.

6 ⏻/|
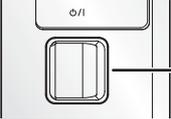
Press the power switch (⏻/|) on main unit to turn the power off.
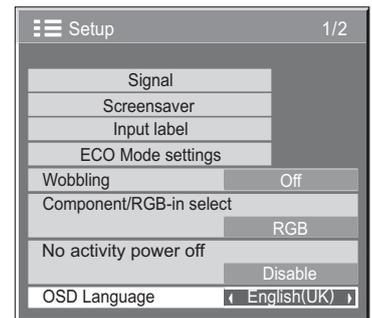
[from the unit]
1 Press the MENU button till the Setup menu is displayed.
2 Press the Volume Up"+" or Down"–" button to select "OSD Language".
3 Press and hold the ENTER button till the Shipping menu is displayed.
4 Press the Volume Up"+" or Down"–" button to select "YES".
5 Press the ENTER button and wait for 10 sec.
6 Press the power switch (⏻/|) on main unit to turn the power off.

Specifications

	TH-70LF50E	TH-80LF50E
Power Source	220 - 240 V AC, 50/60Hz	
Power Consumption		
Power on	260 W	380 W
Stand-by condition	0.5 W	0.5 W
Power off condition	0.3 W	0.3 W
LCD Display panel	70-inch VA panel (LED backlight), 16:9 aspect ratio	80-inch VA panel (LED backlight), 16:9 aspect ratio
Screen size	1,538 mm (W) × 865 mm (H) × 1,765 mm (diagonal)	1,771 mm (W) × 996 mm (H) × 2,032 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	0 °C - 40 °C	
Humidity	20 % - 80 %	
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		
LAN	RJ45 10BASE-T/100BASE-TX, compatible with PJLink™	

VIDEO		BNC	1.0 Vp-p (75 Ω)
	AUDIO L-R	RCA Pin jack × 2	0.5 Vrms
HDMI		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 OUT		DVI-D 24 Pin × 2	Compliance with DVI Revision 1.0
		Content Protection	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 IN SERIAL OUT		External Control Terminal D-sub 9 Pin × 2	RS-232C compatible
AUDIO OUT	L-R	RCA PIN JACK × 2 (L / R) Output level: Variable (-∞ — 0 dB)	[INPUT 1 kHz / 0 dB, 10 kΩ Load]

	TH-70LF50E	TH-80LF50E
Dimensions (W × H × D)	1,604 mm × 931 mm × 89 mm	1,848 mm × 1,073 mm × 89 mm
Mass (weight)	approx. 47.0 kg	approx. 60.0 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.

Cd

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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