

SONY®

LCD Digital Colour TV

Operating Instructions

KDL-52EX1

KDL-46EX1

KDL-40EX1

BRAVIA

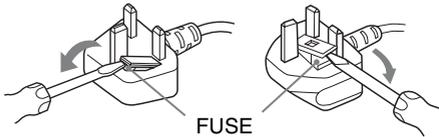
NOTICE FOR CUSTOMERS IN THE UNITED KINGDOM

A moulded plug complying with BS1363 is fitted to this equipment for your safety and convenience.

Should the fuse in the plug supplied need to be replaced with the same rating of fuse approved by ASTA or BSI to BS 1362 (i.e., marked with  or ) must be used.

When an alternative type of plug is used it should be fitted with the same rating of fuse, otherwise the circuit should be protected by a 13 AMP FUSE at the distribution board.

If the plug supplied with this equipment has a detachable fuse cover, be sure to attach the fuse cover after you change the fuse. Never use the plug without the fuse cover. If you should lose the fuse cover, please contact your nearest Sony service station.



How to replace the fuse

Open the fuse compartment with a blade screwdriver, and replace the fuse.

Please refer to the illustration that actually equipped with the product.

Introduction

Thank you for choosing this Sony product.

Before operating the TV, please read this manual thoroughly and retain it for future reference.

The manufacturer of this product is Sony Corporation, 1-7-1 Konan Minato-ku Tokyo, 108-0075 Japan. The Authorized Representative for EMC and product safety is Sony Deutschland GmbH, Hedelfinger Strasse 61, 70327 Stuttgart, Germany. For any service or guarantee matters please refer to the addresses given in separate service or guarantee documents.

Notice for Digital TV function

- Any functions related to Digital TV (**DVB**) will only work in countries or areas where DVB-T (MPEG-2 and H.264/MPEG-4 AVC) digital terrestrial signals are broadcast or where you have access to a compatible DVB-C (MPEG-2 and H.264/MPEG-4 AVC) cable service. Please confirm with your local dealer if you can receive a DVB-T signal where you live or ask your cable provider if their DVB-C cable service is suitable for integrated operation with this TV.
- The cable provider may charge an additional fee for such a service and you may be required to agree to their terms and conditions of business.
- Although this TV set follows DVB-T and DVB-C specifications, compatibility with future DVB-T digital terrestrial and DVB-C digital cable broadcasts cannot be guaranteed.
- Some Digital TV functions may not be available in some countries/regions and DVB-C cable may not operate correctly with all providers.
- For more information about DVB-C functionality please see our cable support site:
<http://support.sony-europe.com/TV/DVBC/>

Notice for Wireless Signal

1. Hereby, Sony, declares that this unit is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC.

To obtain the declaration of conformity (DoC) for R&TTE Directive, please access the following URL address.

<http://www.compliance.sony.de/>

2. TV wireless system can only be used in the following countries:

Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Liechtenstein, Lithuania, Luxembourg, Malta, The Netherlands, Norway, Poland, Portugal, Slovak Republic, Romania, Slovenia, Spain, Sweden, Switzerland, Turkey, and The United Kingdom.

When using the TV wireless system, channels 36 to 48 (5.15-5.25GHz) are selectable for indoor use only.

Trademark information

- DVB** is a registered trademark of the DVB Project
- Manufactured under license from Dolby Laboratories. Dolby and the double-D symbol are trademarks of Dolby Laboratories.
- HDMI, the HDMI logo and High-Definition Multimedia Interface are trademarks or registered trademarks of HDMI Licensing LLC.
- "BRAVIA" and BRAVIA are trademarks of Sony Corporation.
- "XMB" and "xross media bar" are the trademarks of Sony Corporation and Sony Computer Entertainment Inc.

 **DOLBY**
DIGITAL PLUS

 **HDMI**
HIGH-DEFINITION MULTIMEDIA INTERFACE



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DVB : for digital channels only

 Before operating the TV, please read the "Safety information" section of this manual.
Retain this manual for future reference.

Start-up Guide

1: Checking the unit and accessories

Monitor (1)



Media receiver (1)



Mains lead for monitor (1)

Mains lead for mains adaptor (1)

Mains adaptor for media receiver (1)

Mains lead holder (1)

Screws (PSW 4x8) (2)

Remote RMF-ED001W (1)

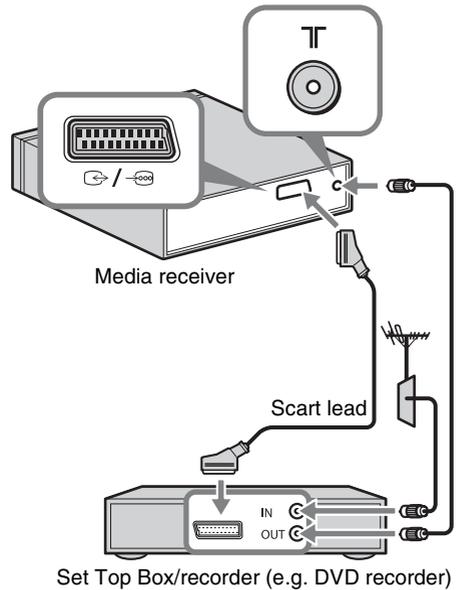
Size AA batteries (R6 type) (2)

IR Blaster (Y-cable) (2)

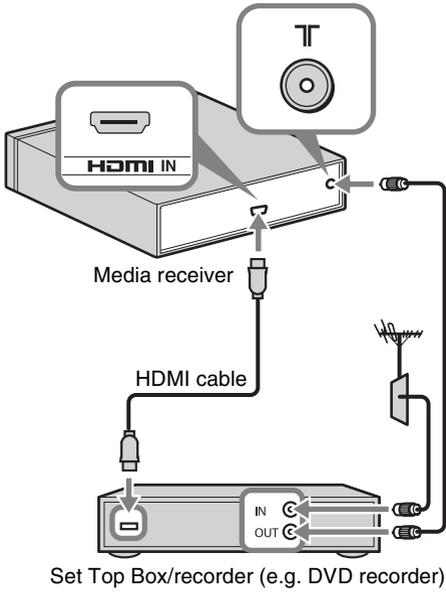
Stand for media receiver (1)

2: Connecting an aerial/Set Top Box/recorder (e.g. DVD recorder) to the media receiver

Connecting a Set Top Box/recorder (e.g. DVD recorder) with SCART

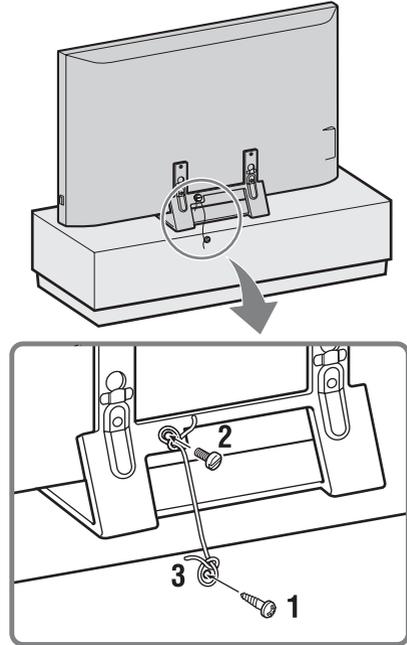


Connecting a Set Top Box/recorder (e.g. DVD recorder) with HDMI



- You can also connect equipment to the HDMI input on the left side of the monitor.

3: Preventing the monitor from toppling over

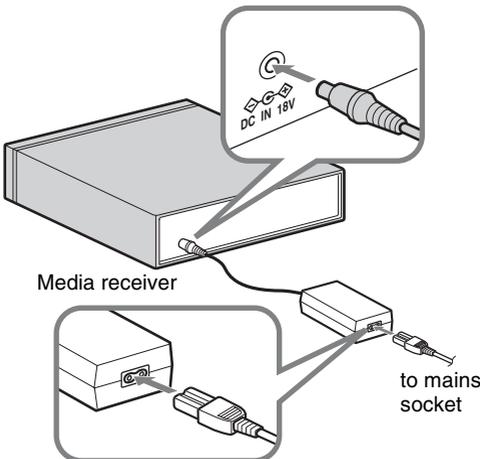
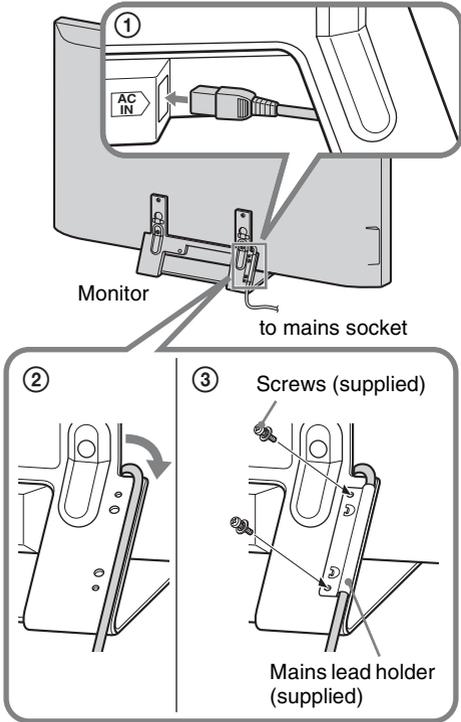


- 1** Install a wood screw (4 mm in diameter, not supplied) in the monitor stand.
- 2** Install a machine screw (M6 x 12-15, not supplied) into the screw hole of the monitor.
- 3** Tie the wood screw and the machine screw with a strong cord.

4: Connecting the mains lead



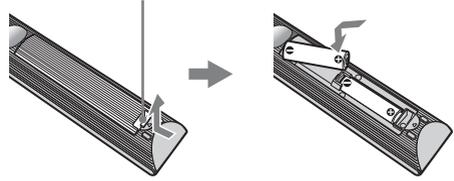
- Make sure to secure the mains lead.
- To ensure compliance with current EMC legislation, ensure the following conditions are met.
- Fix the mains lead holder (supplied) after checking the mains lead is in the groove of the mains lead holder (supplied) to avoid scratching the mains lead.



5: Performing the initial set-up

Inserting batteries into the remote

Push and lift the cover to open.



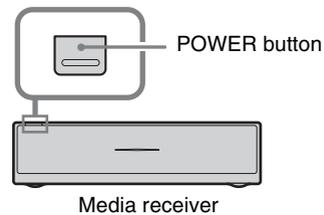
- Observe the correct polarity when inserting batteries.
- Do not use different types of batteries together or mix old and new batteries.
- Dispose of batteries in an environmentally friendly way. Certain regions may regulate the disposal of batteries. Please consult your local authority.
- Handle the remote with care. Do not drop or step on it, or spill liquid of any kind onto it.
- Do not place the remote in a location near a heat source, a place subject to direct sunlight, or a damp room.

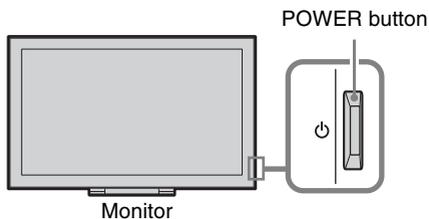
Establishing the wireless communication between the unit



- Keep about 30 cm to 20 m distance between the monitor and media receiver when installing.
- Keep clear the area between the monitor and media receiver. Otherwise the picture may deteriorate.
- Rearrange the installation position of the monitor and media receiver in case of fuzzy picture.
- Do not place either unit on a metallic rack.
- Do not use two units or more at the same time in an area of radio interference.

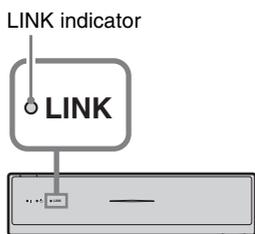
- 1 Press  to turn on the unit power.



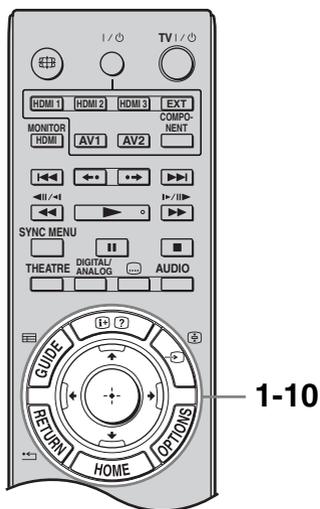


2 Check the LINK indicator on the media receiver.

If wireless communication between the media receiver and monitor is established, this indicator lights up.



Performing the initial set-up



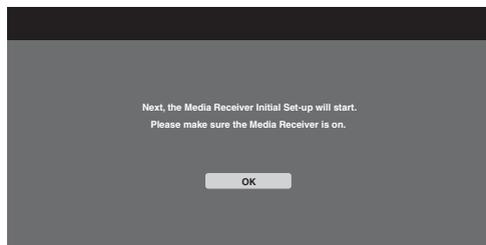
When you switch on the unit for the first time, the Language menu appears on the screen.

1 Press $\uparrow/\downarrow/\leftarrow/\rightarrow$ to select the language displayed on the menu screens, then press \oplus .

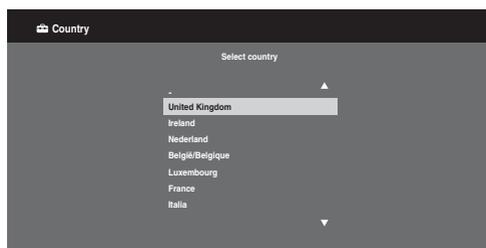


• If the remote does not work, press $\uparrow/\downarrow/\leftarrow/\rightarrow/\oplus$ on the media receiver (page 18) to select the language.

2 Select “OK” then press \oplus .



3 Press \uparrow/\downarrow to select the country in which you will operate the unit, then press \oplus .

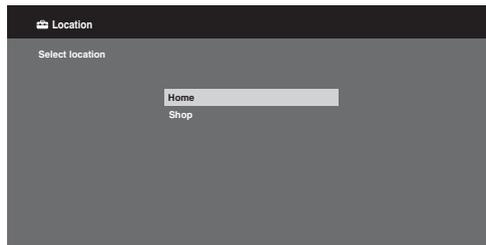


If the country in which you want to use the unit does not appear in the list, select “-” instead of a country.

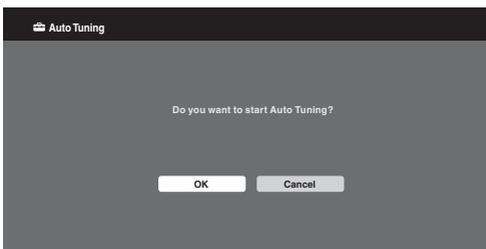
4 Press \uparrow/\downarrow to select the location type in which you will operate the unit, then press \oplus .



• Select “Home” for the best monitor settings to use the monitor in the home.



5 Select “OK” then press \oplus .



- 6 Press \uparrow/\downarrow to select “Antenna” or “Cable”, then press \oplus .

If you select “Cable”, the screen for selecting the scan type appears. See “To tune the unit for Cable connection” (page 8).

The unit starts searching for all available digital channels, followed by all available analogue channels. This may take some time, so do not press any buttons on the unit or remote while proceeding.

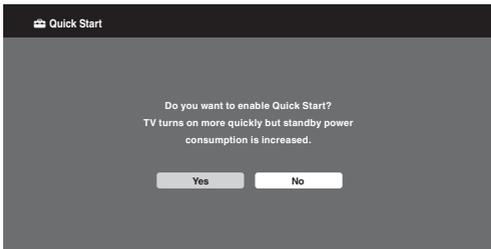
If a message appears for you to confirm the aerial connection

No digital or analogue channels were found. Check all the aerial/cable connection and then press \oplus to start auto-tuning again.

- 7 When the “Programme Sorting” menu appears on the screen, follow the steps of “Programme Sorting” (page 34).

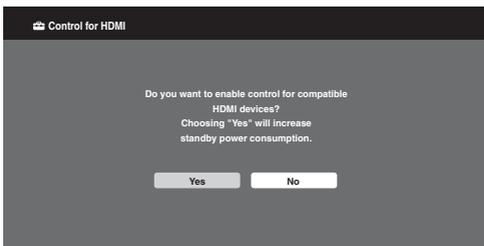
If you do not change the order in which the analogue channels are stored on the unit, press \leftarrow **RETURN** to go to step 8.

8



For details, see page 30.

9



For details, see page 28.

- 10 Press \oplus .

The unit has now tuned in all the available channels.



- When a digital broadcast channel cannot be received, or when selecting a country in which there are no digital broadcasts in step 3, the time must be set after performing step 7.

To tune the unit for Cable connection

- 1 Press \oplus .
- 2 Press \uparrow/\downarrow to select “Quick Scan” or “Full Scan”, then press \oplus .

“Quick Scan” : channels are tuned according to the cable operator information within the broadcast signal. Recommended setting for “Frequency”, “Network ID” and “Symbol Rate” is “Auto.”

This option is recommended for fast tuning when supported by your cable operator.

If the “Quick Scan” does not tune, please use the “Full Scan” method below.

“Full Scan” : All available channels are tuned and stored. This procedure may take some time.

This option is recommended when “Quick Scan” is not supported by your cable provider.

For further information about supported cable providers, refer to support web site: <http://support.sony-europe.com/TV/DVBC/>

- 3 Press \downarrow to select “Start”, then press \oplus .

The unit starts searching for channels. Do not press any buttons on the unit or remote.



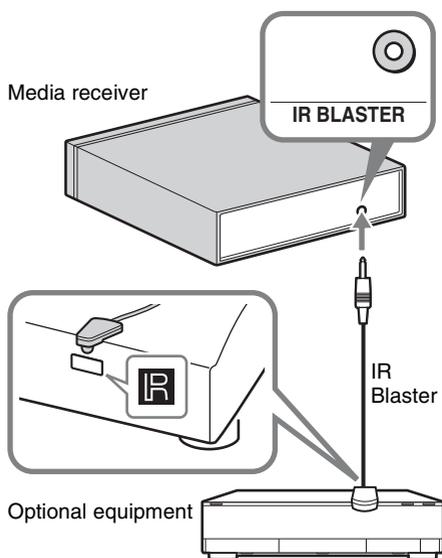
- Some cable providers do not support “Quick Scan.” If no channels are detected using “Quick Scan”, perform “Full Scan.”

6: Operating optional equipment using the remote

Connecting IR Blaster to the optional equipment

Turn the power of the media receiver off before connecting the IR Blaster.

Attach the IR Blaster near the remote sensor (IR) of the equipment.



Performing the IR Blaster Set-up

By setting “IR Blaster Set-up”, this remote can control most Sony Blu-ray Disc players, DVD players, DVD recorders, and AV receivers, or those of other manufacturers. Follow the steps below to programme the remote.

- 1 Press **HOME** on the remote.
- 2 Press \uparrow/\downarrow to select “Settings”, then press \oplus .
- 3 Press \uparrow/\downarrow to select “Media Receiver Set-up”, then press \oplus .

- 4 Press \uparrow/\downarrow to select “IR Blaster Set-up”, then press \oplus .
The “IR Blaster Set-up” screen appears.

IR Blaster Set-up			
Inputs	Type	Make	Code
AV1	-	-	-
AV2	-	-	-
HDMI 1	Blu-ray Disc	Sony	1
HDMI 2	-	-	-
HDMI 3	-	-	-
Component	-	-	-

- 5 Press \uparrow/\downarrow to select “Inputs” to register the remote, then select the following items:

Type: Connected equipment category.

Make: Maker of the equipment.

Code: IR code.

Test: Tests the power of the equipment currently being set. Make sure the power of the equipment turns on and off.

If the equipment is not working, or some of the functions do not work

Enter the correct code or its alternatives (if available) shown in the list in step 5. Note that the list may not include codes for all models of all brands.



- Only Sony equipment is guaranteed to properly operate.

Using optional equipment

For details, refer to the operating instructions supplied with the connected equipment. Some buttons may not work depending on the connected equipment.

- 1 Press **HDMI 1, HDMI 2, HDMI 3, AV1, AV2** or **COMPONENT**.
- 2 Press **EXT**.
- 3 While the **EXT** button lights up, press **I/⏻** to turn the equipment on, then operate the equipment using the following buttons.



- The **▶** button has a tactile dot. Use the tactile dot as a reference when operating other equipment.

Item	Description
1 BD/DVD operating buttons	<ul style="list-style-type: none"> • ◀◀/▶▶: Goes to the beginning of the previous/next title/chapter/scene/track. • ◀•/•▶: Replays the scene/briefly fast forwards the scene. • ◀◀/▶▶: Fast reverses/fast forwards the disc when pressed during playback. • ▶: Plays a disc at normal speed. • ⏸: Pauses the playback. • ■: Stops the playback.
2 ◀/▶/◀/▶/⊕	Selects / confirms an item.
3 HOME	Opens the menu.
4 DVD record buttons	<ul style="list-style-type: none"> • ● REC: Starts the recording. • ⏸ REC PAUSE: Pauses the recording. • ■ REC STOP: Stops the recording.
5 F1/F2	Selects a function when using a combination unit (e.g. a DVD/HDD).
6 BD/DVD MENU	Displays the BD/DVD disc menu.
7 BD/DVD TOP MENU	Displays the top menu of the BD/DVD disc.

Detaching the Table-Top Stand from the Monitor

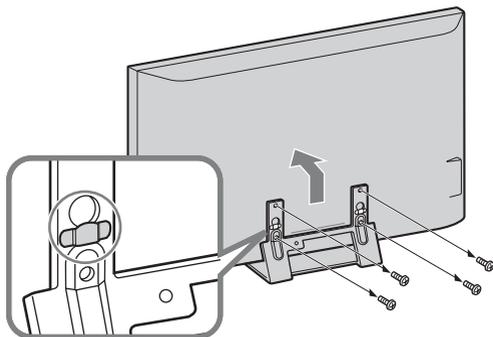
Disconnect the mains lead from the monitor before detaching the Table-Top Stand.



- Remove the screws guided by the arrow marks  of the monitor.

Do not remove the Table-Top Stand for any reason other than listed below.

- To wall-mount the monitor.

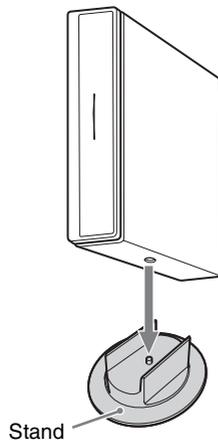


Do not remove the plastic cover on the Table-Top Stand.

Attaching the Stand for Media Receiver

The media receiver can also be used vertically with the supplied stand.

- 1 Match the lug on the centre of the stand and the hole on the right side of the media receiver.



Safety Information

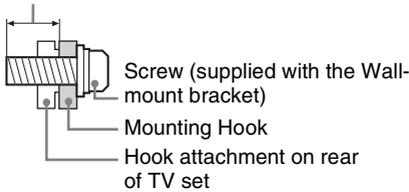
Installation/Set-up

Install and use the TV set in accordance with the instructions below in order to avoid any risk of fire, electrical shock or damage and/or injuries.

Installation

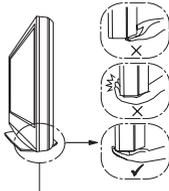
- The TV set should be installed near an easily accessible mains socket.
- Place the TV set on a stable, level surface.
- Only qualified service personnel should carry out wall installations.
- For safety reasons, it is strongly recommended that you use Sony accessories, including:
 - Wall-mount bracket SU-WL500/SU-WL700
- Be sure to use the screws supplied with the Wall-mount bracket when attaching the mounting hooks to the TV set. The supplied screws are designed so that they are 8 mm to 12 mm in length when measured from the attaching surface of the mounting hook. The diameter and length of the screws differ depending on the Wall-mount bracket model. Use of screws other than those supplied may result in internal damage to the TV set or cause it to fall, etc.

8mm – 12mm



Transporting

- Before transporting the TV set, disconnect all cables.
- Two or three people are needed to transport a large TV set.
- When transporting the TV set by hand, hold it as shown on the right. Do not put stress on the LCD panel and the frame around the screen.
- When lifting or moving the TV set, hold it firmly from the bottom.
- When transporting the TV set, do not subject it to jolts or excessive vibration.
- When transporting the TV set for repairs or when moving, pack it using the original carton and packing material.



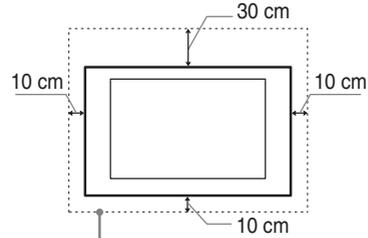
Be sure to hold the bottom of the panel, not the front part.

Ventilation

- Never cover the ventilation holes or insert anything in the cabinet.
- Leave space around the TV set as shown below.
- It is strongly recommended that you use a Sony wall-mount bracket in order to provide adequate air-circulation.

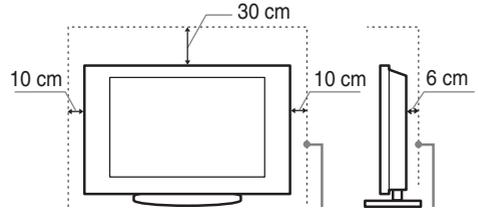
Monitor

Installed on the wall



Leave at least this space around the set.

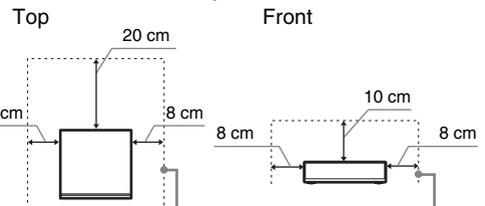
Installed with stand



Leave at least this space around the set.

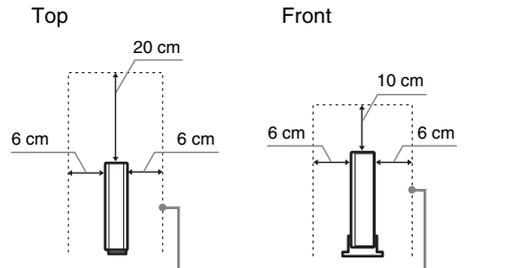
Media receiver

Installed horizontally



Leave at least this space around the set.

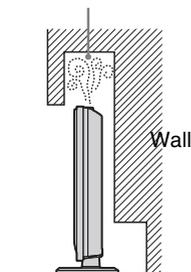
Installed vertically



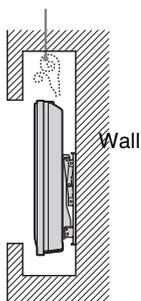
Leave at least this space around the set.

- To ensure proper ventilation and prevent the collection of dirt or dust:
 - Do not lay the TV set flat, install upside down, backwards, or sideways.
 - Do not place the TV set on a shelf, rug, bed or in a closet.
 - Do not cover the TV set with a cloth, such as curtains, or items such as newspapers, etc.
 - Do not install the TV set as shown below.

Air circulation is blocked.



Air circulation is blocked.



Mains lead

Handle the mains lead and socket as follows in order to avoid any risk of fire, electrical shock or damage and/or injuries:

- Connect the TV set using a three-wire grounding type mains plug to a mains socket with a protective earthing connection.
- Use only mains leads supplied by Sony, not other suppliers.
- Insert the plug fully into the mains socket.
- Operate the TV set on a 220-240 V AC supply only.
- When wiring cables, be sure to unplug the mains lead for your safety and take care not to catch your feet on the cables.
- Disconnect the mains lead from the mains socket before working on or moving the TV set.
- Keep the mains lead away from heat sources.
- Unplug the mains plug and clean it regularly. If the plug is covered with dust and it picks up moisture, its insulation may deteriorate, which could result in a fire.

Notes

- Do not use the supplied mains lead on any other equipment.
- Do not pinch, bend, or twist the mains lead excessively. The core conductors may be exposed or broken.
- Do not modify the mains lead.
- Do not put anything heavy on the mains lead.
- Do not pull on the mains lead itself when disconnecting the mains lead.
- Do not connect too many appliances to the same mains socket.
- Do not use a poor fitting mains socket.

Prohibited Usage

Do not install/use the TV set in locations, environments or situations such as those listed below, or the TV set may malfunction and cause a fire, electrical shock, damage and/or injuries.

Location:

Outdoors (in direct sunlight), at the seashore, on a ship or other vessel, inside a vehicle, in medical institutions, unstable locations, near water, rain, moisture or smoke.

Environment:

Places that are hot, humid, or excessively dusty; where insects may enter; where it might be exposed to mechanical vibration, near flammable objects (candles, etc).

The TV set shall not be exposed to dripping or splashing and no objects filled with liquids, such as vases, shall be placed on the TV.

Situation:

Do not use when your hands are wet, with the cabinet removed, or with attachments not recommended by the manufacturer. Disconnect the TV set from mains socket and aerial during lightning storms.

Broken pieces:

- Do not throw anything at the TV set. The screen glass may break by the impact and cause serious injury.
- If the surface of the TV set cracks, do not touch it until you have unplugged the mains lead. Otherwise electric shock may result.

When not in use

- If you will not be using the TV set for several days, the TV set should be disconnected from the mains for environmental and safety reasons.
- As the TV set is not disconnected from the mains when the TV set is just turned off, pull the plug from the mains to disconnect the TV set completely.
- However, some TV sets may have features that require the TV set to be left in standby to work correctly.

For children

- Do not allow children to climb on the TV set.
- Keep small accessories out of the reach of children, so that they are not mistakenly swallowed.

If the following problems occur...

Turn off the TV set and unplug the mains lead immediately if any of the following problems occur.

Ask your dealer or Sony service centre to have it checked by qualified service personnel.

When:

- Mains lead is damaged.
- Poor fitting of mains socket.
- TV set is damaged by being dropped, hit or having something thrown at it.
- Any liquid or solid object falls through openings in the cabinet.

NOTE ON MAINS ADAPTOR

Warning

To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture.

To prevent fire or shock hazard, do not place objects filled with liquids, such as vases, on the apparatus.

Do not install this equipment in a confined space, such as a bookshelf or similar unit.

- Please ensure that the mains socket is installed near the equipment and shall be easily accessible.
- Be sure to use the supplied mains adaptor and mains lead.
- Do not use any other mains adaptor. It may cause a malfunction.
- Connect the mains adaptor to an easily accessible mains socket.
- Do not coil the mains lead around the mains adaptor. The core wire may be cut and/or it may cause a malfunction of the media receiver.
- Do not touch the mains adaptor with wet hands.
- If you notice an abnormality in the mains adaptor, disconnect it from the mains socket immediately.
- The set is not disconnected from the mains source as long as it is connected to the mains socket, even if the set itself has been turned off.



Precautions

Viewing the TV

- View the TV in moderate light, as viewing the TV in poor light or during long period of time, strains your eyes.
- When using headphones, adjust the volume so as to avoid excessive levels, as hearing damage may result.

LCD Screen

- Although the LCD screen is made with high-precision technology and 99.99% or more of the pixels are effective, black dots may appear or bright points of light (red, blue, or green) may appear constantly on the LCD screen. This is a structural property of the LCD screen and is not a malfunction.
- Do not push or scratch the front filter, or place objects on top of this TV set. The image may be uneven or the LCD screen may be damaged.
- If this TV set is used in a cold place, a smear may occur in the picture or the picture may become dark. This does not indicate a failure. These phenomena disappear as the temperature rises.
- Ghosting may occur when still pictures are displayed continuously. It may disappear after a few moments.
- The screen and cabinet get warm when this TV set is in use. This is not a malfunction.
- The LCD screen contains a small amount of liquid crystal. Some fluorescent tubes used in this TV set also contain mercury. Follow your local ordinances and regulations for disposal.

Handling and cleaning the screen surface/cabinet of the TV set

Be sure to unplug the mains lead connected to the TV set from mains socket before cleaning.

To avoid material degradation or screen coating degradation, observe the following precautions.

- To remove dust from the screen surface/cabinet, wipe gently with a soft cloth. If dust is persistent, wipe with a soft cloth slightly moistened with a diluted mild detergent solution.
- Never use any type of abrasive pad, alkaline/acid cleaner, scouring powder, or volatile solvent, such as alcohol, benzene, thinner or insecticide. Using such materials or maintaining prolonged contact with rubber or vinyl materials may result in damage to the screen surface and cabinet material.
- Periodic vacuuming of the ventilation opening is recommended to ensure to proper ventilation.

Optional Equipment

- Keep optional components or any equipment emitting electromagnetic radiation away from the TV set. Otherwise picture distortion and/or noisy sound may occur.
- This equipment has been tested and found to comply with the limits set out in the EMC Directive using a connection signal cable shorter than 3 meters.

Wireless Function of the unit

- If wireless equipment using the same frequency (5GHz band) as the unit is working near the unit, noise may appear in pictures or sound, or no picture may result. Also, other wireless or radio equipment may cause interference. Keep 5GHz band wireless equipment, such as a wireless LAN or cordless phones, away from the unit.
- The picture may be influenced depending on the installation environment or situation of the monitor and media receiver (page 4).
- As the media receiver and monitor communicate wirelessly, pictures from the media receiver may deteriorate compared to those from the equipment connected to the monitor with HDMI.
- It may take time to transmit pictures depending on the types of signal, fast motion, such as game pictures, etc.
- If pictures from a PC or still images, such as EPG, are displayed, flickering or blurring may occur.
- This unit can be used only in combination with the supplied monitor and media receiver.

RF Remote

- If wireless equipment using the same frequency (2.4GHz band) as the unit is working near the unit, the remote may not operate properly.
Also, microwave ovens or radio equipment may cause interference. Keep 2.4 GHz band wireless equipment away from the unit.

Disposal of the TV set



Disposal of Old Electrical & Electronic Equipment (Applicable in the European Union and other European countries with separate collection systems)

This symbol on the product or on its packaging indicates that this product shall not be treated as household waste. Instead it shall be handed over to the applicable collection point for the recycling of electrical and electronic equipment. By ensuring this product is disposed of correctly, you will help prevent potential negative consequences for the environment and human health, which could otherwise be caused by inappropriate waste handling of this product. The recycling of materials will help to conserve natural resources. For more detailed information about recycling of this product, please contact your local Civic Office, your household waste disposal service or the shop where you purchased the product.



Disposal of waste batteries (applicable in the European Union and other European countries with separate collection systems)

This symbol on the battery or on the packaging indicates that the battery provided with this product shall not be treated as household waste. By ensuring these batteries are disposed of correctly, you will help prevent potentially negative consequences for the environment and human health which could otherwise be caused by inappropriate waste handling of the battery. The recycling of the materials will help to conserve natural resources. In case of products that for safety, performance or data integrity reasons require a permanent connection with an incorporated battery, this battery should be replaced by qualified service staff only. To ensure that the battery will be treated properly, hand over the product at end-of-life to the applicable collection point for the recycling of electrical and electronic equipment. For all other batteries, please view the section on how to remove the battery from the product safely. Hand the battery over to the applicable collection point for the recycling of waste batteries. For more detailed information about recycling of this product or battery, please contact your local Civic Office, your household waste disposal service or the shop where you purchased the product.

Remote and Unit Controls/Indicators

Remote

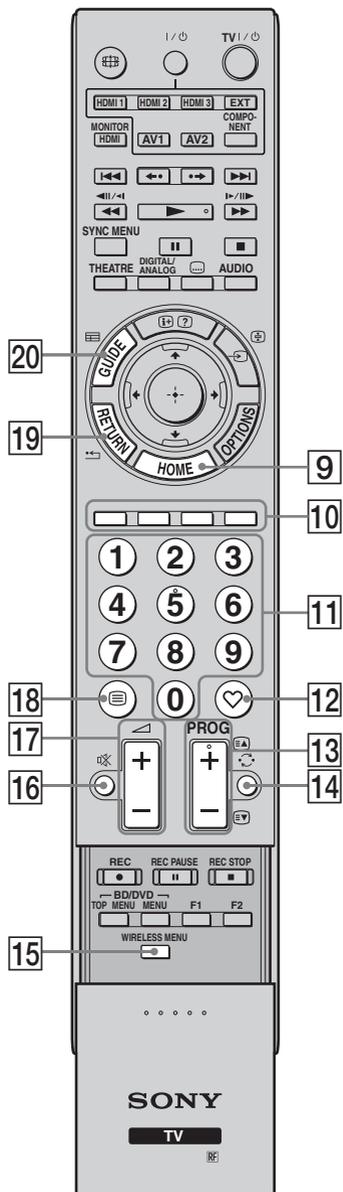
As the unit and the supplied remote communicate by radio frequency, you can operate the unit without aiming the remote at the unit.



Button	Description
1 TV I/Off (TV standby)	Press to turn the unit on and off from standby mode.
2 EXT	Press to operate equipment with the IR Blaster attached, by the remote (page 10).
3 ... (Subtitle setting)	Press to change the subtitle language (page 36) (in digital mode only).
4 AUDIO	In analogue mode: Press to change the dual sound mode (page 32). In digital mode: Press to change the language to be used for the programme currently being viewed (page 36).
5 +/? (Info/Text reveal)	In digital mode: Displays details of the programme currently being viewed. In analogue mode: Displays information. Press once to display the current channel number and screen mode. Press again to display clock information. Press a third time to remove the display from the screen. In Text mode (page 21): Reveals hidden information (e.g. answers to a quiz).
6 →/☐ (Input select/Text hold)	Press to display a list of inputs (page 25). In Text mode: Press to hold the current page.
7 ↔/↔/☐/☐	Press ↔/↔/☐/☐ to move the on-screen cursor. Press ☐ to select/confirm the highlighted item. When playing a photo file: Press ☐ to pause/start a slideshow. Press ↔/↔ to select the previous file. Press ↔/↔ to select the next file.
8 OPTIONS	Press to display a list that contains “Device Control”, or shortcuts to some setting menus. Use the “Device Control” menu to operate equipment that is compatible with control for HDMI. The listed options vary depending on the input source.



- The number 5, **PROG +**, **AUDIO** and **▶** buttons have tactile dots. Use the tactile dots as references when operating the TV.



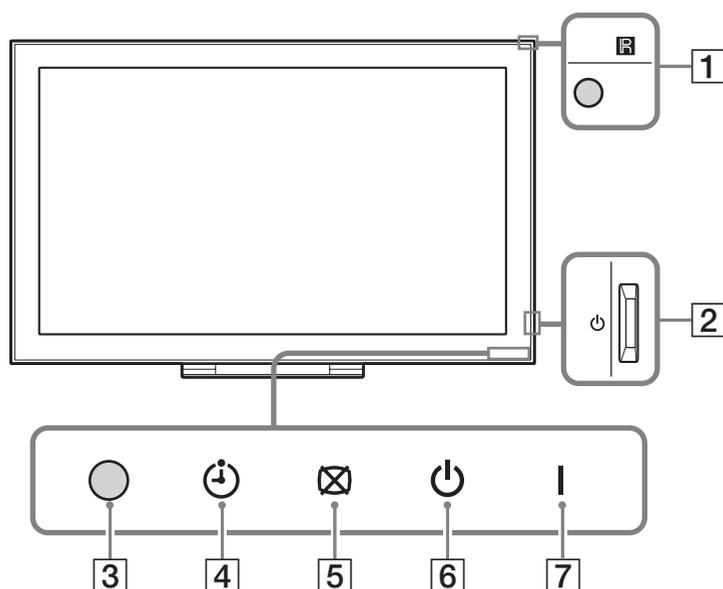
Button	Description
9 HOME	Press to display the media receiver Home menu in the media receiver mode (page 29), or monitor Home menu in the monitor mode (page 38).
10 Coloured buttons	When the coloured buttons are available, an operation guide appears on the screen. Follow the operation guide to perform a selected operation (page 21, 22, 23).
11 Number buttons	In TV mode: Press to select channels. For channel numbers 10 and above, press the second and third digits in quick succession. In Text mode: Press to enter a page number.
12 ♡ (Favourite)	Press to display the digital favourite list that you have specified (page 23).
13 PROG+/-/EA/EV	In TV mode: Press to select the next (+) or previous (-) channel. In Text mode: Press to select the next (EA) or previous (EV) page.
14 ↻ (Previous channel)	Press to return to the channel that was last viewed (for more than five seconds).
15 WIRELESS MENU	Press to display "Wireless Channel Set-up" (page 43).
16 ✖ (Mute)	Press to mute the sound. Press again to restore the sound.  • In standby mode, if you want to turn on the monitor without sound, press this button.
17 ↕/+/- (Volume)	Press to adjust the volume.
18 ☰ (Text)	Press to display text information (page 21).
19 RETURN / ↶	Press to return to the previous screen of the displayed menu. When playing a photo file: Press to stop the playback. (The display returns to the file or folder list.)
20 GUIDE / ≡ (EPG)	Press to display the Digital Electronic Programme Guide (EPG) (page 22).



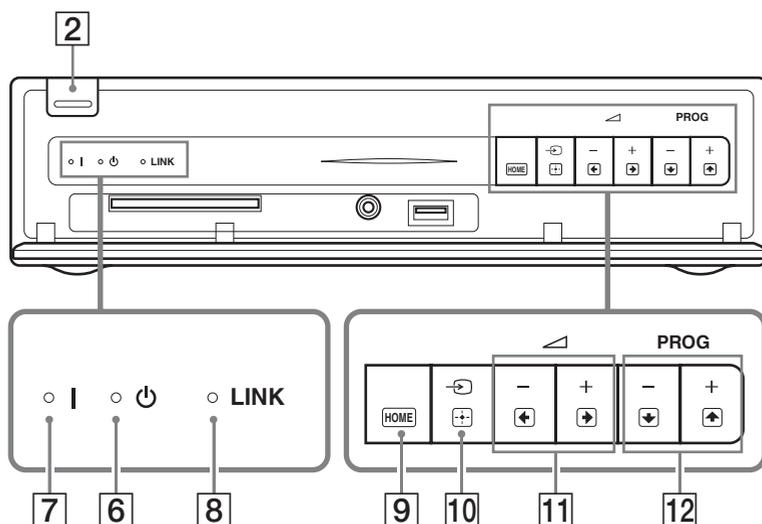
Button	Description
21 ANALOG/DIGITAL	Press to display the analogue or digital channel that was last viewed.
22 THEATRE	You can set Theatre Mode to on or off. When Theatre Mode is set to on, the optimum audio output (if the unit is connected with an audio system using an HDMI cable) and picture quality for film-based contents are automatically set.  <ul style="list-style-type: none"> • If you turn the unit off, Theatre Mode is also turned off. • “Control for HDMI” (BRAVIA Sync) is only available with the connected Sony equipment that has the BRAVIA Sync or BRAVIA Theatre Sync logo or is compatible with control for HDMI.
23 SYNC MENU	Displays the menu of connected HDMI equipment. While viewing other input screens or TV programmes, “HDMI Device Selection” is displayed when the button is pressed.  <ul style="list-style-type: none"> • “Control for HDMI” (BRAVIA Sync) is only available with the connected Sony equipment that has the BRAVIA Sync logo or is compatible with control for HDMI.
24  (Screen mode)	Press to change the screen format (page 21).
25 Buttons for using optional equipment	You can operate the equipment connected to the unit (page 10).
26 HDMI1/2/3, MONITOR, AV1/2, COMPONENT	Press to select the input source.
27 	Press to turn equipment connected to the unit on or off (page 10).

Media Receiver Buttons and Unit Indicators

Monitor



Media Receiver



Item	Description
1 Remote control sensor	Receives IR signals from the remote (if using an IR remote, not supplied). Do not put anything over the sensor, as its function may be affected.
2  (Power)	Turns the unit on or off.  • To disconnect the unit completely, pull the plug from the mains.
3 Light Sensor	Do not put anything over the sensor, as its function may be affected.
4  (Timer indicator)	Lights up in orange when the reminder is set (page 22) or the timer is set (page 30).

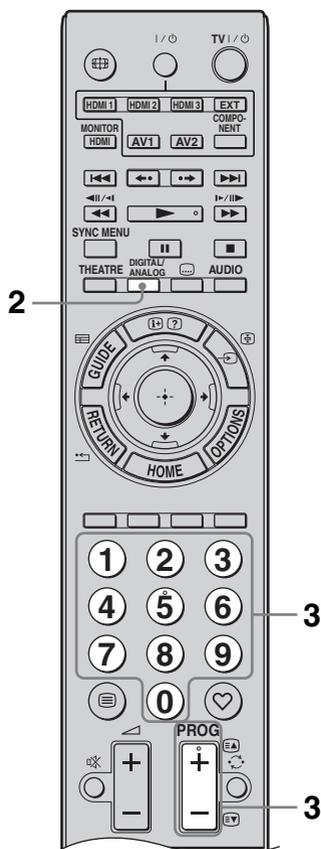
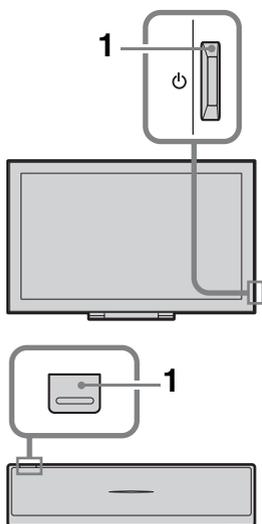
Item	Description
5  (Picture Off indicator)	Lights up in green when the picture is switched off (page 43).
6  (Standby indicator)	Lights up in red when the unit is in standby mode.
7 I (Power indicator)	Lights up in green when the unit is turned on.
8 LINK indicator	Lights up when the wireless connection between the media receiver and monitor is stable.
9  (HOME)	Displays the media receiver Home menu in the media receiver mode (page 29), or monitor Home menu in the monitor mode (page 38).
10  (Input select/OK)	In monitor mode: Selects the input source from equipment connected to the unit sockets (page 24). In unit menu: Selects the menu or option, and confirms the setting.
11 	In monitor mode: Increases (+) or decreases (-) the volume. In unit menu: Moves through the options right () or left ()
12 PROG +/- ( / 	In TV mode: Selects the next (+) or previous (-) channel. In unit menu: Moves through the options up () or down ()



- Make sure that the unit is completely turned off before unplugging the mains lead. Unplugging the mains lead while the unit is turned on may cause the indicator to remain lit or may cause the unit to malfunction.
- Do not put anything over the indicators as their functions may be affected.
- When the media receiver is used vertically with the stand attached, the **11** and **12** button functions (in the unit menu) are exchanged.

Watching TV

Watching TV



- 1 Press on the media receiver or monitor to switch on.



- When either unit is switched on, the other is also switched on in tandem.

When the unit is in standby mode (the (standby) indicator on the unit (front) is red), press **TV I/O** on the remote to switch on the unit.

- 2 Press **DIGITAL/ANALOG** to toggle between digital mode and analogue mode.

The channels available vary depending on the mode.

- 3 Press the number buttons or **PROG +/-** to select a TV channel.

To select channel numbers 10 and above using the number buttons, enter the second and third digits within two seconds.

To select a digital channel using the Guide, see page 22.

In digital mode

An information banner appears briefly. The following icons may be indicated on the banner.

- : Radio service
- : Scrambled/Subscription service
- : Multiple audio languages available
- : Subtitles available
- : Subtitles available for the hearing impaired
- : Recommended minimum age for current programme (from 4 to 18 years)
- : Parental Lock

Additional operations

To	Do this
Turn on the monitor from standby mode without sound	Press . Press +/- to set the volume level.
Adjust the volume	Press + (increase)/ - (decrease).

To access Text

Press . Each time you press , the display changes cyclically as follows:

Text → Text over the TV picture (mix mode)
→ No Text (exit the Text service)

To select a page, press the number buttons or **PROG +/-**.

To hold a page, press / .

To reveal hidden information, press / .

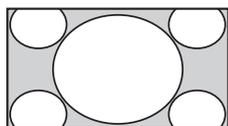


- When four coloured items appear at the bottom of the Text page, Fasttext is available. Fasttext allows you to access pages quickly and easily. Press the corresponding coloured button to access the page.

To change the screen format manually

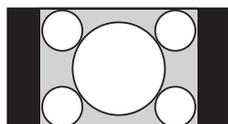
Press repeatedly to select the desired screen format.

Smart*



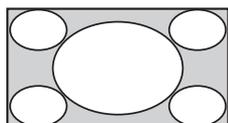
Displays conventional 4:3 broadcasts with an imitation wide screen effect. The 4:3 picture is stretched to fill the screen.

4:3



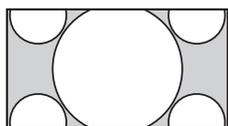
Displays conventional 4:3 broadcasts (e.g. non-wide screen TV) in the correct proportions.

Wide



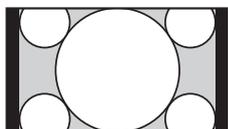
Displays wide screen (16:9) broadcasts in the correct proportions.

Zoom*



Displays cinemascopic (letter box format) broadcasts in the correct proportions.

14:9* (for media receiver inputs only)



Displays 14:9 broadcasts in the correct proportions. As a result, black border areas are visible on the screen.

* Parts of the top and bottom of the picture may be cut off.



- Some characters and/or letters at the top and the bottom of the picture may not be visible in “Smart” mode. In such a case, you can select “Vertical Size” using the “Screen Settings” (page 31) menu and adjust vertical size to make it visible.



- When “Auto Format” is set to “On”, the unit will automatically select the best mode to suit the broadcast (page 31).
- You can adjust the position of the picture when selecting “Smart”, “14:9” or “Zoom.” Press to move up or down (e.g. to read subtitles).

Using the Options menu

Press **OPTIONS** to display the following options when viewing a TV programme.

Options	Description
Picture Mode	See page 39.
Sound Mode	See page 41.
Speaker	See page 32.
Motionflow	See page 40.
Subtitle Setting (in digital mode only)	See page 36.
Sleep Timer	See page 30.
Power Saving	See page 43.
Use MONITOR HDMI	Switch to MONITOR HDMI input.
System Information (in digital mode only)	See page 37.

Using the Digital Electronic Programme Guide (EPG) DVBS*



- 1 In digital mode, press **GUIDE**.
- 2 Perform the desired operation as shown in the following table or displayed on the screen.

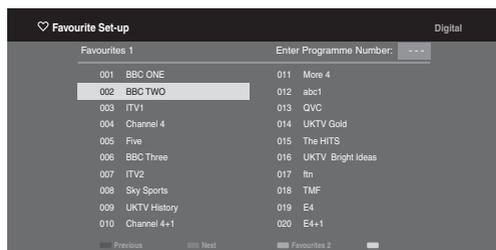
* This function may not be available in some countries.

To	Do this
Watch a programme	Press /// to select the programme, then press .
Turn off the Guide	Press GUIDE .
Sort the programme information by category – Category list	<ol style="list-style-type: none"> 1 Press the blue button. 2 Press / to select a category, then press .
Set a programme to be displayed automatically on the screen when it starts – Reminder	<ol style="list-style-type: none"> 1 Press /// to select the future programme you want to display, then press /. 2 Press / to select “Reminder”, then press . <p>A symbol appears by that programme’s information. The indicator on the monitor front panel lights up in orange.</p> <p> If you switch the monitor to standby mode, it will automatically turn itself on when the programme is about to start.</p>
Cancel a reminder – Timer list	<ol style="list-style-type: none"> 1 Press /. 2 Press / to select “Timer list”, then press . 3 Press / to select the programme you want to cancel, then press . 4 Press / to select “Cancel Timer”, then press . <p>A display appears to confirm that you want to cancel the programme.</p> <ol style="list-style-type: none"> 5 Press / to select “Yes”, then press to confirm.



- If an age restriction for programmes has been selected, a message asking for a PIN Code will appear on the screen. For details, see “Parental Lock” (page 36).

Using the Digital Favourite list **DVB***



Digital Favourite list

* This function may not be available in some countries.

- 1 In digital mode, press ♥.
- 2 Perform the desired operation as shown in the following table or displayed on the screen.

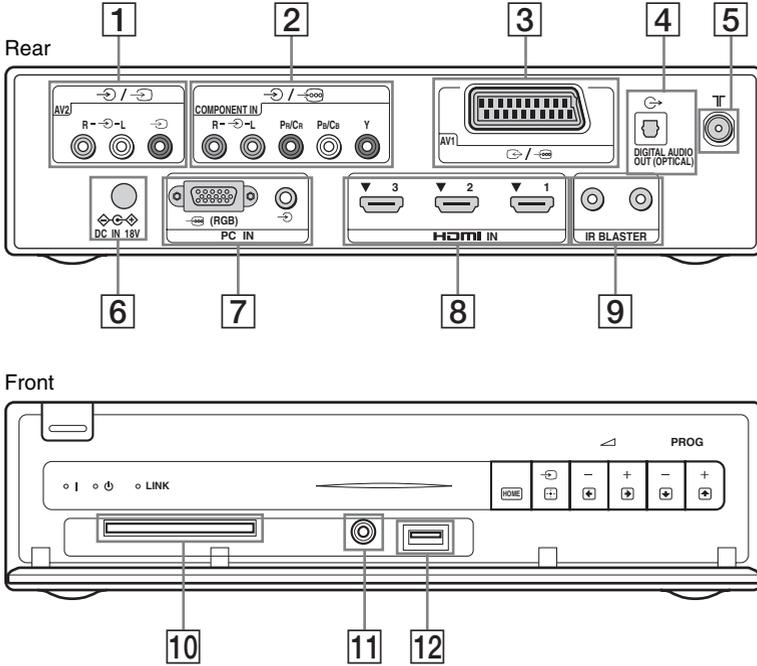
To	Do this
Create your Favourite list for the first time	<ol style="list-style-type: none"> 1 Press $\uparrow/\downarrow/\leftarrow/\rightarrow$ to select the channel you want to add, then press \oplus. Channels that are stored in the Favourite list are indicated by a ♥ symbol. 2 Press yellow key to select "Favourites 2" or "Favourites 3".
Watch a channel	<ol style="list-style-type: none"> 1 Press yellow key to navigate through favourite lists. 2 Press \uparrow/\downarrow to select the channel, then press \oplus.
Turn off the Favourite list	Press \leftarrow RETURN .
Add or remove channels in the currently edited Favourite list	<ol style="list-style-type: none"> 1 Press the blue button. 2 Press the yellow button to choose the list you want to edit. 3 Press $\uparrow/\downarrow/\leftarrow/\rightarrow$ to select the channel you want to add or remove, then press \oplus.
Remove all channels from the current Favourite list	<ol style="list-style-type: none"> 1 Press the blue button. 2 Press the yellow button to select the favourite list you want to edit. 3 Press the blue button. 4 Press \leftarrow/\rightarrow to select "Yes", then press \oplus to confirm.

Using Optional Equipment

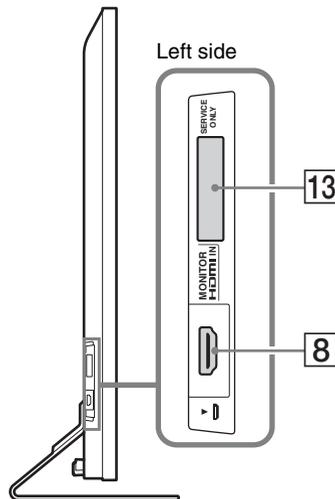
Connecting Chart

You can connect a wide range of optional equipment to your unit. Connecting cables are not supplied.

Media receiver



Monitor



Connect to	Input symbol on screen	Description
1  AV2	 AV2	When connecting mono equipment, connect to the  L socket.
2  COMPONENT IN	 Component	The component video sockets support the following video inputs only: 480i, 480p, 576i, 576p, 720p, 1080i and 1080p.
3  AV1	 AV1	When you connect a decoder, the TV tuner outputs scrambled signals to the decoder, and the decoder unscrambles the signals before outputting them.
4  DIGITAL AUDIO OUT (OPTICAL)		Use an optical audio cable.
5 		RF input that connects to your cable TV system or VHF/UHF.
6  DC IN 18V		Connects the supplied mains adaptor.
7  (RGB)/ PC IN	PC	It is recommended to use a PC cable with ferrites, such as the “Connector, D-sub 15” (ref. 1-793-504-13, available in Sony Service Centre) or equivalent.
8 HDMI IN 1/2/3, MONITOR HDMI IN	 HDMI 1/  HDMI 2/  HDMI 3/  Monitor HDMI	Digital video and audio signals are input from the connected equipment. In addition, when you connect the equipment that is compatible with control for HDMI, communication with the connected equipment is supported. Refer to page 33 to set up this communication.  <ul style="list-style-type: none"> • The HDMI sockets support the following video inputs only: 480i, 480p, 576i, 576p, 720p, 1080i, 1080p and 1080/24p (1080/24p is for MONITOR HDMI only). For PC video inputs, see page 48. • Be sure to use only an authorised HDMI cable bearing the HDMI logo. We recommend that you use a Sony HDMI cable (high speed type). • For HDMI 1/2/3, when connecting an audio system that is compatible with control for HDMI, be sure to also connect it to the DIGITAL AUDIO OUT (OPTICAL) socket.
9 IR BLASTER		Connects the supplied IR Blaster cables.
10  CAM (Conditional Access Module)		To use Pay Per View services. For details, refer to the instruction manual supplied with your CAM. To use the CAM, remove the “dummy” card from the CAM slot, then turn off the monitor and insert your CAM card into the slot. When you are not using the CAM, we recommend that you keep the “dummy” card in the CAM slot.  <ul style="list-style-type: none"> • CAM is not supported in all countries. Please check with your authorised dealer. • If the CAM card becomes jammed while inserting, try again. Do not insert forcefully.
11  Headphones		You can listen to monitor sound through headphones.
12  USB		You can enjoy photo files stored in a Sony digital still camera or camcorder through a USB cable or USB storage device on your unit (page 27).
13 SERVICE ONLY		For service use only.

Viewing Pictures from Connected Equipment

Switch on the connected equipment, then perform one of the following operation.

For equipment connected to the scart sockets using a fully-wired 21-pin scart lead

Start playback on the connected equipment. The picture from the connected equipment appears on the screen.

For an auto-tuned VCR/ DVD recorder

In analogue mode, press **PROG +/-**, or the number buttons, to select the video channel.

For equipment connected to MONITOR HDMI socket

Press **MONITOR HDMI**.

For other connected equipment

Press \rightarrow / \leftarrow to display a list of connected equipment. Press \uparrow / \downarrow to select the desired input source, then press \oplus .

The highlighted item is automatically selected if you do not perform any operation for two seconds after pressing \uparrow / \downarrow .

If you have set an input source to “Skip” in the “AV Preset” menu (page 32), that input source does not appear in the list.



- To return to normal TV mode, press **DIGITAL/ANALOG**.

Using the Options menu

Press **OPTIONS** to display the following options when viewing pictures from connected equipment.

When equipment is connected to the media receiver sockets

Option	Description
Picture Mode (except PC/HDMI PC input mode)	See page 39.
Sound Mode	See page 41.
Speaker	See page 32.
Motionflow (except PC/HDMI PC input mode)	See page 40.

Option	Description
Sleep Timer (except PC/HDMI PC input mode)	See page 30.
Power Saving	See page 43.
Use MONITOR HDMI	Switch to MONITOR HDMI input.
Auto Adjustment (in PC/HDMI PC input mode only)	See page 31.
Horizontal Shift (in PC/HDMI PC input mode only)	See page 31.
Device Control (in HDMI input mode only)	See page 28.

When equipment is connected to the MONITOR HDMI socket

Option	Description
Picture Adjustment	See page 39.
Sound	See page 41.
Power Saving	See page 43.
Motionflow (except HDMI PC input mode)	See page 40.
Horizontal Shift (in HDMI PC input mode only)	See page 42.
Vertical Shift (in HDMI PC input mode only)	See page 42.
Device Control	See page 28.
HDMI Device Selection	See page 17.
Use Media Receiver	Switch to media receiver inputs.

If wireless communication is not successful

Option	Description
Wireless Channel Set-up	See page 43.
Use MONITOR HDMI	Switch to MONITOR HDMI input.

Using USB Photo Viewer

You can enjoy photo files stored in a Sony digital still camera or camcorder through a USB cable or USB storage media on your unit.

- 1 Connect a supported USB device to the media receiver.
- 2 Press **HOME**.
- 3 Press \leftarrow/\rightarrow to select “Photo”, then press \uparrow/\downarrow to select “USB Photo Viewer” and press \oplus .
The thumbnail screen appears.
- 4 Press $\uparrow/\downarrow/\leftarrow/\rightarrow$ to select a file or folder, then press \oplus .
When you select a folder, select a file, then press \oplus .
Playback starts.
- 5 Press **RETURN** to go back to the thumbnail screen.

Additional operations

Option	Description
Device Selection	Press \leftarrow/\rightarrow to select a device when multiple devices are connected. BRAVIA images are predefined device.
Slideshow	Displays the photographs one by one.
Set-up	You can make advanced settings for a slide show, and set the display sequence of the thumbnails.

(Photo) Available Options

Option	Description
Picture Mode	See page 39.
Sleep Timer	See page 30.
Power Saving	See page 43.



- Picture quality may appear coarse when using  (Photo) because images may be enlarged depending on the file. Also, images may not fill the entire screen depending on the image size and aspect ratio.
- Some photo files may take some time to be displayed when using  (Photo).

- While the unit is accessing the data on the USB device, observe the following:
 - Do not turn off the unit or connected USB device.
 - Do not disconnect the USB cable.
 - Do not remove the USB device.
 The data on the USB device may be damaged.
- Sony will not be held liable for any damage to, or loss of, data on the recording media due to a malfunction of any connected devices or the unit.
- USB photo viewer supports DCF-compliant JPEG photographs only.
- When you connect a Sony digital still camera, set the camera’s USB connection mode to Auto or “Mass Storage.” For more information about USB connection mode, refer to the instructions supplied with your digital camera.
- USB Photo Viewer supports FAT32 file system only.
- Depending on the exact file specifications, some files, including those modified on a PC, cannot be played even if the file format is supported.
- Check the website below for updated information about compatible USB devices.
<http://support.sony-europe.com/TV/compatibility/>

To display a photograph — Picture Frame

You can display a photograph on the screen for a selected period of time. After that period, the unit automatically switches itself into standby mode.

- 1 Press **HOME**.
- 2 Press \leftarrow/\rightarrow to select “Photo”, then press \uparrow/\downarrow to select “Picture Frame” and press \oplus .

To select a photograph

Press **OPTIONS**, then select “Image Selection” and press \oplus . Then, select a photograph, and press \heartsuit to set.

To set the duration of displaying a photograph

Press **OPTIONS**, then select “Duration” and press \oplus . Then, select the duration, and press \oplus .

The counter appears on the screen.

To return to the XMB™

Press **RETURN**.



- If the photograph is selected from a USB device, it must remain connected to the unit.
- If “Sleep Timer” is activated, the unit automatically will switch into standby mode.

Using BRAVIA Sync with Control for HDMI

The control for HDMI function enables the unit to communicate with the connected equipment that is compatible with the function, using HDMI CEC (Consumer Electronics Control).

For example, by connecting Sony equipment that is compatible with control for HDMI (with HDMI cables), you can control them together.

Be sure to connect the equipment correctly, and make the necessary settings.

Control for HDMI

- Automatically turns the connected equipment off when you switch the unit to standby mode using the remote.
- Automatically turns the unit on and switches the input to the connected equipment when the equipment starts to play.
- If you turn on a connected audio system while the unit is on, the sound output switches from the monitor speaker to the audio system.*
- Adjusts the volume (◀ +/-) and mutes the sound (⊗) of a connected audio system.*
- You can operate the connected Sony equipment that has the BRAVIA Sync logo by the supplied remote by pressing:
 - **▶/■/II/◀◀/▶▶** to operate the connected equipment directly.
 - **SYNC MENU** to display the menu of the connected HDMI equipment on the screen. After displaying the menu, you can operate the menu screen by using **↔/↔/↔** and **⊕**.
 - **OPTIONS** to display “Device Control”, then select options from “Menu”, “Options”, and “Content List” to operate the equipment.
 - Refer to the instruction manual of the equipment for available control.

To connect the equipment that is compatible with control for HDMI

Connect the compatible equipment and the unit with an HDMI cable. When connecting an audio system*, be sure to also connect the DIGITAL AUDIO OUT (OPTICAL) socket of the media receiver and the audio system using an optical audio cable. For details, see page 25.

To make the control for HDMI settings

The control for HDMI settings must be set on both the unit side and connected equipment side. See “HDMI Set-up” on page 33 for the unit side settings. For settings on the connected equipment, refer to the operating instructions for that equipment.

* Function only available when connected to HDMI 1/2/3.

Using MENU Functions

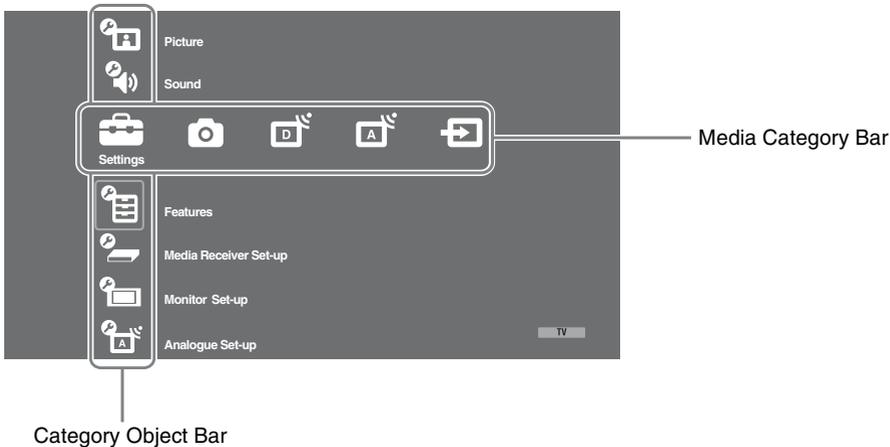
Navigating through Media Receiver Home Menu (XMB™)

For setting the menu of the media receiver, switch to the media receiver mode by pressing one of the function buttons (page 10).

The XMB™ (XrossMediaBar) is a menu of BRAVIA features and input sources displayed on the monitor screen. The XMB™ is an easy way to select programming and adjust settings on your media receiver.

1 Press **HOME**.

The media receiver Home menu appears on the screen.



2 Press \leftarrow/\rightarrow to select the category.

Media category icon	Description
 Settings	You can make advanced settings and adjustments. For details about settings, see page 30.
 Photo	You can enjoy photo files via USB devices (page 27).
 Digital	You can select a digital channel, Favourite list (page 23), or Guide (page 22). You can also select a channel using the number buttons or PROG +/- .
 Analogue	You can select an analogue channel. You can also select a channel using the number buttons or PROG +/- . To hide the list of analogue channels, set “Programme List Display” to “Off” (page 33).
 External Inputs	You can select equipment connected to the media receiver. To assign a label to an external input, see “AV Preset” (page 32).

3 Press \uparrow/\downarrow to select the item, then press \odot .

4 Follow the instructions on the screen.

5 Press **HOME** to exit.



- The options you can adjust vary depending on the situation.
- Unavailable options are greyed out or not displayed.

Settings

Picture

See the “Picture” setting for monitor (page 39).

Sound

See the “Sound” setting for monitor (page 41).

Features

Quick Start	The unit turns on faster than usual within two hours after switching to standby mode. However, power consumption in standby mode is 38 watt higher than usual.								
Timer Settings	Sets the timer to turn on/off the unit.								
Sleep Timer	<p>Sets a period of time after which the unit automatically switches itself into standby mode.</p> <p>When the “Sleep Timer” is activated, the ⏰ (Timer) indicator on the monitor (front panel) lights up in orange.</p>  <ul style="list-style-type: none">• If you turn off the unit and turn it on again or switch to the monitor mode from the media receiver mode, “Sleep Timer” is reset to “Off.”• A notification message appears on the screen one minute before the unit switches to standby mode.								
On Timer Settings	<table><tr><td>On Timer</td><td>Sets the timer to turn on the unit from standby mode.</td></tr><tr><td>Timer Mode</td><td>Sets the desired day(s) of the week you want the timer to turn on the unit.</td></tr><tr><td>Time</td><td>Sets the time to turn on the unit.</td></tr><tr><td>Duration</td><td>Sets how long you want the unit to stay on before switching to standby mode again.</td></tr></table>  <ul style="list-style-type: none">• If you switch to the monitor mode from the media receiver mode, “Duration” is cancelled.	On Timer	Sets the timer to turn on the unit from standby mode.	Timer Mode	Sets the desired day(s) of the week you want the timer to turn on the unit.	Time	Sets the time to turn on the unit.	Duration	Sets how long you want the unit to stay on before switching to standby mode again.
On Timer	Sets the timer to turn on the unit from standby mode.								
Timer Mode	Sets the desired day(s) of the week you want the timer to turn on the unit.								
Time	Sets the time to turn on the unit.								
Duration	Sets how long you want the unit to stay on before switching to standby mode again.								
Clock Set	Allows you to adjust the clock manually. When the unit is receiving digital channels, the clock cannot be adjusted manually since it is set to the time code of the broadcasted signal.								



Media Receiver Set-up

Auto Start-up	Starts the “first time operation menu” to select the language, country and location, and tune in all available digital and analogue channels. Usually, you do not need to do this operation because the language and country will have been selected and channels already tuned when the unit was first installed (page 7). However, this option allows you to repeat the process (e.g., to retune the unit after moving house, or to search for new channels that have been launched by broadcasters).	
Screen Settings	Screen Format	See “To change the screen format manually” on page 21.
	Auto Format	Automatically changes the screen format according to the input signal. To keep your setting, select “Off.”
	Display Area	Adjusts the picture display area in 1080i/p and 720p sources when “Screen Format” is set to “Wide.”
	Auto	During digital broadcasts, displays pictures in accordance with the settings recommended by the broadcast station.
	Full Pixel	Displays pictures in their original size.
	Normal	Displays pictures in their recommended size.
	Horizontal Shift	Adjusts the horizontal position of the picture.
	Vertical Shift	Adjusts the vertical position of the picture when “Screen Format” is set to “Smart”, “Zoom” or “14:9.”
	Vertical Size	Adjusts the vertical size of the picture when “Screen Format” is set to “Smart”, “Zoom” or “14:9.”
	PC Settings	Screen Format
Full 1		Enlarges the picture to fill the vertical display area, keeping its original horizontal-to-vertical aspect ratio.
Full 2		Enlarges the picture to fill the display area.
Reset		Resets the PC screen settings to the factory settings.
Auto Adjustment		Automatically adjusts the display position, phase and pitch of the picture when the unit receives an input signal from the connected PC.
		<ul style="list-style-type: none"> • “Auto Adjustment” may not work well with certain input signals. In such cases, manually adjust “Phase”, “Pitch” and “Horizontal Shift.”
Phase		Adjusts the phase when the screen flickers.
Pitch		Adjusts the pitch when the picture has unwanted vertical stripes.
Horizontal Shift		Adjusts the horizontal position of the picture.
Power Management		Switches the unit to standby mode if no signal is received for 30 seconds in the PC input.

AV Set-up	AV Preset	<p>Assigns a name to any equipment connected to the media receiver. The name will be displayed briefly on the screen when the equipment is selected. You can skip an input source that is not connected to any equipment.</p>
		<ol style="list-style-type: none"> 1 Press \leftarrow/\rightarrow to select the desired input source, then press \oplus. 2 Press \leftarrow/\rightarrow to select the desired option below, then press \oplus.
		<p>-, CABLE, SAT, VCR, DVD/BD, GAME, AUDIO SYSTEM, CAM, PC Uses one of the preset labels to assign a name to connected equipment.</p>
		<p>Edit: Creates your own label.</p> <ol style="list-style-type: none"> 1 Press \leftarrow/\rightarrow to select the desired letter or number (“_” for a blank space), then press \Rightarrow. <p>If you input a wrong character Press \leftarrow/\rightarrow to select the wrong character. Then, press \leftarrow/\rightarrow to select the correct character.</p> <ol style="list-style-type: none"> 2 Repeat the procedure in step 1 until the name is completed. 3 Select “OK”, then press \oplus.
		<p>Skip Skips an input source that is not connected to any equipment when you press \leftarrow/\rightarrow to select the input source.</p>
	Speaker	<p>Turns on/off the monitor’s internal speakers.</p>
		<p>TV Speaker The monitor speakers are turned on in order to listen to the TV’s sound through the monitor speakers.</p>
		<p>Audio System The monitor speakers are turned off in order to listen to the TV’s sound only through your external audio equipment connected to the audio output sockets. When connected with “Control for HDMI” compatible equipment, you can turn the connected equipment on interlocked with the monitor. This setting must be made after connecting the equipment.</p>
Dual Sound		<p>Selects the sound from the speaker for a stereo or bilingual broadcast.</p>
		<p>Stereo/Mono For a stereo broadcast.</p>
		<p>A/B/Mono For a bilingual broadcast, select “A” for sound channel 1, “B” for sound channel 2, or “Mono” for a mono channel, if available.</p>
		<p> • If you select other equipment connected to the unit, set “Dual Sound” to “Stereo”, “A” or “B.”</p>
IR Blaster Set-up		<p>See page 9 for the “IR Blaster Set-up” setting.</p>

HDMI Set-up	This is used to set the “Control for HDMI” compatible equipment connected to the HDMI sockets. Note that the interlock setting must also be made on the connected “Control for HDMI” compatible equipment side.
Control for HDMI	This sets whether to interlock the “Control for HDMI” compatible equipment and the unit. When set to “On”, the following menu items can be performed. However, power consumption in standby mode is higher than usual. If the specific Sony equipment that is compatible with “Control for HDMI” is connected, this setting is applied to the connected equipment automatically when the “Control for HDMI” is set to “On” using the unit.
Auto Devices Off	When this is set to “On”, the “Control for HDMI” compatible equipment turns off when you switch the unit to standby mode using the remote.
Auto TV On	When this is set to “On” and if the connected HDMI control compatible equipment is turned on, the unit automatically turns on, and the displays the HDMI input from the connected equipment.
Device List Update	Creates or updates the “HDMI Device List.” Up to 14 “Control for HDMI” compatible equipment can be connected, and up to 4 equipment can be connected to a single socket. Be sure to update the “HDMI Device List” when you change the “Control for HDMI” compatible equipment connections or settings. Select them manually one by one until getting a correct picture for several seconds.
HDMI Device List	Displays the connected “Control for HDMI” compatible equipment.
Product Information	Displays your media receiver’s product information. Select “Monitor Product Information” to display your monitor’s product information.
All Reset	Resets all settings to the factory settings and then displays the “Auto Start-up” screen.  <ul style="list-style-type: none"> • Be sure not to turn the unit off during this period (it takes about 30 seconds) or press any buttons. • All settings, including digital favourite list, country, language, auto tuned channels, etc. will be reset.



Monitor Set-up

See the “Monitor Set-up” setting for monitor (page 43).



Analogue Set-up

Programme List Display	Select “Off” to hide the list of analogue channels from the XMB™ (XrossMediaBar).
Auto Tuning	Tunes in all the available analogue channels. This option allows you to retune the unit after moving house, or to search for new channels that have been launched by broadcasters.

Programme Sorting	Changes the order in which the analogue channels are stored on the unit. 1 Press \uparrow/\downarrow to select the channel you want to move to a new position, then press \oplus . 2 Press \uparrow/\downarrow to select the new position for your channel, then press \oplus .
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Manual Programme Preset	Before selecting “Label/AFT/Audio Filter/LNA/Skip”, press PROG +/- to select the programme number with the channel. You cannot select a programme number that is set to “Skip” (page 32).
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Programme/System/Channel	Presets programme channels manually. 1 Press \uparrow/\downarrow to select “Programme”, then press \oplus . 2 Press \uparrow/\downarrow to select the programme number you want to manually tune (if tuning a VCR/ DVD recorder, select channel 00), then press RETURN . 3 Press \uparrow/\downarrow to select “System”, then press \oplus . 4 Press \uparrow/\downarrow to select one of the following TV broadcast systems, then press RETURN . B/G: For western European countries I: For the United Kingdom D/K: For eastern European countries L: For France 5 Press \uparrow/\downarrow to select “Channel”, then press \oplus . 6 Press \uparrow/\downarrow to select “S” (for cable channels) or “C” (for terrestrial channels), then press \rightleftarrows . 7 Tune the channels as follows: If you do not know the channel number (frequency) Press \uparrow/\downarrow to search for the next available channel. When a channel has been found, the search will stop. To continue searching, press \uparrow/\downarrow . If you know the channel number (frequency) Press the number buttons to enter the channel number of the broadcast you want or your VCR/DVD recorder channel number. 8 Press \oplus to jump to “Confirm”, then press \oplus . 9 Press \downarrow to select “OK”, then press \oplus . Repeat the procedure above to preset other channels manually.
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Label	Assigns a name of your choice, up to five letters or numbers, to the selected channel. This name will be displayed briefly on the screen when the channel is selected. To input characters, follow steps 1 to 3 of “Edit:” (page 32).
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AFT	Allows you to fine-tune the selected programme number manually if you feel that a slight tuning adjustment will improve the picture quality. You can adjust the fine tuning over a range of -15 to +15. When “On” is selected, the fine tuning is performed automatically.
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Audio Filter	Improves the sound for individual channels in the case of distortion in mono broadcasts. Sometimes a non-standard broadcast signal can cause sound distortion or intermittent sound muting when watching mono programmes. If you do not experience any sound distortion, we recommend that you leave this option set to the factory setting “Off.”  • You cannot receive stereo or dual sound when “Low” or “High” is selected.
LNA	Improves the picture quality for individual channels in the case of very weak broadcast signals (noisy picture). If you cannot see any improvement in the picture quality even if you set to “On”, set this option to “Off” (factory setting).
Skip	Skips unused analogue channels when you press PROG +/- to select channels. (You can still select a skipped channel using the number buttons.)
Confirm	Saves changes made to the “Manual Programme Preset” settings.



Digital Set-up DVB

Digital Tuning	Digital Auto Tuning	Tunes in the available digital channels. This option allows you to retune the unit after moving house, or to search for new channels that have been launched by broadcasters. For details, see step 6 of “Performing the initial set-up” (page 8).
	Programme Sorting	Removes any unwanted digital channels stored on the unit, and changes the order of the digital channels stored on the unit. 1 Press \leftarrow/\rightarrow to select the channel you want to remove or move to a new position. You can also select a channel by pressing the number buttons to enter its three-digit channel number. 2 Remove or change the order of the digital channels as follows: To remove the digital channel Press \oplus . After a confirmation message appears, press \leftarrow to select “Yes”, then press \oplus . To change the order of the digital channels Press \rightleftarrows , then press \leftarrow/\rightarrow to select the new position for the channel and press \leftarrow . 3 Press \leftarrow RETURN.
	Digital Manual Tuning	Tunes the digital channels manually. This feature is available when “Digital Auto Tuning” is set to “Antenna.” 1 Press the number button to select the channel number you want to manually tune, then press \leftarrow/\rightarrow to tune the channel. 2 When the available channels are found, press \leftarrow/\rightarrow to select the channel you want to store, then press \oplus . 3 Press \leftarrow/\rightarrow to select the programme number where you want to store the new channel, then press \oplus . Repeat the above procedure to manually tune other channels.

Subtitle Set-up	Subtitle Setting	When “For Hard Of Hearing” is selected, some visual aids may also be displayed with the subtitles (if TV channels broadcast such information).
	Subtitle Language	Allows you to select the language of the subtitles.
Audio Set-up	Audio Type	Switches to broadcast for the hearing impaired when “For Hard Of Hearing” is selected.
	Audio Language	Selects the language used for a programme. Some digital channels may broadcast several audio languages for a programme.
	Audio Description	Provides audio description (narration) of visual information if TV channels broadcast such information.
	Mixing Level*	Adjusts the unit main audio and Audio Description output levels.
	Dynamic Range	Compensates for differences in the audio level between different channels. Note that this function may have no effect for some channels.
	Optical Out	Selects the audio signal that is output from the DIGITAL AUDIO OUT (OPTICAL) terminal on the rear of the media receiver. Set to “Auto” when equipment compatible with Dolby Digital is connected, and set to “PCM” when non-compatible equipment is connected.
		
	* This option is only available when “Audio Description” is set to “On.”	
Radio Display	Displays the screen wallpaper when you listen to a radio broadcast after 20 seconds without pressing any buttons. You can select the screen wallpaper colour, display a random colour or view a slide show (page 27). To cancel the screen wallpaper display temporarily, press any button.	
Parental Lock	Sets an age restriction for programmes. Any programme that exceeds the age restriction can only be watched after a PIN Code is entered correctly. 1 Press the number buttons to enter your existing PIN Code. If you have not previously set a PIN, a PIN Code entry screen appears. Follow the instructions of “PIN Code” below. 2 Press  to select the age restriction or “None” (for unrestricted watching), then press  . 3 Press  RETURN .	
PIN Code	To set your PIN for the first time 1 Press the number buttons to enter the new PIN Code. 2 Press  RETURN . To change your PIN 1 Press the number buttons to enter your existing PIN Code. 2 Press the number buttons to enter the new PIN Code. 3 Press  RETURN .	
		
	• PIN Code 9999 is always accepted.	
Technical Set-up	Auto Service Update	Enables the unit to detect and store new digital services as they become available.
		
	• For the service update to be able to take place the unit should be left in standby mode from time to time.	

Software Download Enables the unit to automatically receive software updates free through your existing aerial/cable (when issued). We recommend that you leave the setting to “On” at all times. If you do not want your software to be updated, set this option to “Off.”



- For the software upgrade to be able to take place the unit should be left in standby mode from time to time.

System Information Displays the current software version and the signal level.



- If signal bar is red (no signal) or amber (low signal), check the aerial/cable connection.

Time Zone Allows you to manually select the time zone you are in, if it is not the same as the default time zone setting for your country.

Auto DST Sets whether or not to automatically switch between summer time and winter time.

On Automatically switches between summer time and winter time according to the calendar.

Off The time is displayed according to the time difference set by “Time Zone.”

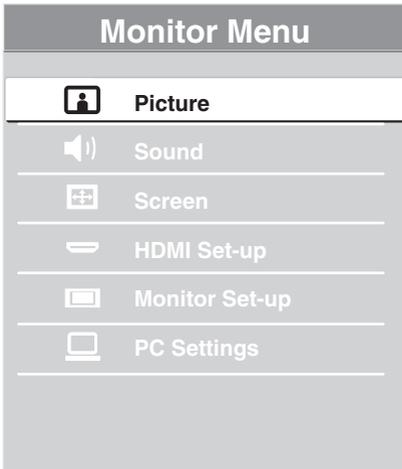
CA Module Set-up Allows you to access a pay TV service once you obtain a Conditional Access Module (CAM) and a view card. See page 25 for the location of the  (PCMCIA) socket.

Navigating through Monitor Home Menu

For setting the menu of the monitor, switch to the monitor mode by pressing **MONITOR HDMI** on the remote.

- 1 Press **HOME**.

The monitor Home menu appears on the screen.



- 2 Press \uparrow/\downarrow to select the item, then press \oplus .
- 3 Follow the instructions on the screen.
- 4 Press **HOME** to exit.



- The options you can adjust vary depending on the situation.
- Unavailable options are greyed out or not displayed.



Picture Adjustment	Picture Mode	Selects the picture mode except for PC input source. “Picture Mode” includes options best suited for video and photographs, respectively. The options that can be selected differ depending on the input source.
	Vivid	For enhanced picture contrast and sharpness.
	Standard	For standard picture. Recommended for home entertainment.
	Cinema	For viewing film-based content. Most suitable for viewing in a theatre-like environment.
	Custom	Allows you to store your preferred settings.
	Photo-Vivid	For viewing photographs. Enhances picture contrast and sharpness.
	Photo-Standard	For viewing photographs. Provides the optimum picture quality for viewing in the home.
	Photo-Original	For viewing photographs. Represents the picture quality used when imaging developed photographs.
	Photo-Custom	Allows you to store your preferred settings.
	Reset	Resets all picture settings except “Picture Mode” to the factory settings.
	Backlight	Adjusts the brightness of the backlight.
	Contrast	Increases or decreases picture contrast.
	Brightness	Brightens or darkens the picture.
	Colour	Increases or decreases colour intensity.
	Hue	Increases or decreases the green and red tones.  <ul style="list-style-type: none"> • “Hue” can only be adjusted for an NTSC colour signal (e.g., U.S.A. video tapes).
	Colour Temperature	Adjusts the whiteness of the picture.  <ul style="list-style-type: none"> • “Warm 1” and “Warm 2” are not available when “Picture Mode” is set to “Vivid” (or “Photo-Vivid”).
	Sharpness	Sharpens or softens the picture.

Noise Reduction	Reduces the picture noise (snowy picture) in a weak broadcast signal.
Auto	Automatically reduces the picture noise (in analogue mode only).
High/Medium/Low	Modifies the effect of the noise reduction.
Off	Turns off the “Noise Reduction” feature.
MPEG Noise Reduction	Reduces picture noise in MPEG-compressed videos. This is effective when viewing a DVD or digital broadcast.
Advanced Settings	Allows you to set “Picture” settings in more detail. These settings are not available when “Picture Mode” is set to “Vivid” (or “Photo-Vivid”).
Reset	Resets all the advanced settings to the factory settings.
Black Corrector	Enhances black areas of the picture for stronger contrast.
Adv. Contrast Enhancer	Automatically adjusts “Backlight” and “Contrast” to the most suitable settings judging from the brightness of the screen. This setting is especially effective for dark images scenes. It will increase the contrast distinction of the darker picture scenes.
Gamma	Adjusts the balance between light and dark areas of the picture.
Clear White	Emphasises white and light colours.
Colour Space	Changes the colour reproduction gamut. “Wide” reproduces the vivid colour and “Standard” reproduces the standard colour.
Live Colour	Makes colours more vivid.
White Balance	Adjusts the colour temperature in detail.



- “Live Colour” is not available when “Colour Space” is set to “Standard.”

Motionflow	Provides smoother picture movement and reduces picture blur.
High	Provides smoother picture movement such as for film-based contents.
Standard	Provides smooth picture movement. Use this setting for standard use.
Off	Use this setting when the “High” and “Standard” settings result in noise.



- Depending on the video, you may not see the effect visually, even if you have changed the setting.

Film Mode	Provides an improved picture quality which is optimised for film when playing DVD images taken on film.
Auto 1/Auto 2	“Auto 1” provides smoother picture movement than the original film-based content. “Auto 2” provides the original film-based content as is.
Off	Turns off the “Film Mode” feature.
	 <ul style="list-style-type: none"> • If the image contains irregular signals or too much noise, “Film Mode” will be automatically turned off even if “Auto 1/Auto 2” is selected. • “Film Mode” is not available when “Video/Photo” is set to “Photo” or when photograph is detected if “Video-A” is set.
Game Mode	Provides the optimum screen for viewing images with fine lines and characters that are input from video game equipment and PCs. Set to “On” for the sharp display of fine lines or characters.
Video/Photo	Provides suitable image quality by selecting the option depending on the input source (video or photograph data).
Video-A	Sets suitable image quality, depending on the input source, video data or photograph data when directly connecting Sony HDMI output-capable equipment that supports “Video-A” mode.
Video	Produces suitable image quality for moving pictures.
Photo	Produces suitable image quality for still images.
	 <ul style="list-style-type: none"> • The setting is fixed to “Video” when “Video-A” mode is not supported on the connected equipment, even if “Video-A” is selected. • Only available for HDMI 1, HDMI 2, HDMI 3, MONITOR HDMI and Component in format 1080i or 1080p.



- Some options are not available in PC/HDMI PC input mode.

Sound

Sound Mode	Selects the sound mode.
Dynamic	Enhances the treble and bass sounds.
Standard	For standard sounds.
Clear Voice	Makes voice sound clearer.
Reset	Resets all the sound settings to the factory settings excluding “Dual Sound.”
Treble	Adjusts higher-pitched sounds.
Bass	Adjusts lower-pitched sounds.
Balance	Emphasises left or right speaker balance.
Surround	S-FORCE Front Surround Provides a virtual surround sound experience made possible using just two front speakers. Off Selects for normal stereo or mono reception.
Voice Zoom	Adjusts the sound level of human voices. For example, if the voice of a news announcer is indistinct, you can turn up this setting to make the voice louder. Conversely, if you are watching a sports programme, you can turn down this setting to soften the voice of the commentator.
Sound Booster	Produces a fuller sound for more impact, by emphasising the treble and bass sounds.

Auto Volume	Keeps a constant volume level even when volume level gaps occur (e.g., adverts tend to be louder than programmes).
Volume Offset	Adjusts the volume level of the current input relative to other inputs.



- Some options are not available when “Speaker” is set to “Audio System” or headphones are connected.



Screen

Screen Format	See “To change the screen format manually” on page 21.
Auto Format	Automatically changes the screen format according to the input signal. To keep your setting, select “Off.”
4:3 Default	Selects the default screen format for use with 4:3 broadcasts.
Smart	Displays conventional 4:3 broadcasts with an imitation wide screen effect.
4:3	Displays conventional 4:3 broadcasts in the correct proportions.
Off	Keeps the current “Screen Format” setting when the channel or input is changed.
Display Area	Adjusts the picture display area in 1080i/p and 720p sources when “Screen Format” is set to “Wide.”
Full Pixel	Displays pictures in their original size if the input source is 1080i/p.
Normal	Displays pictures in their recommended size.
-1/-2	Enlarges the picture to hide the edges of the picture.
Horizontal Shift	Adjusts the horizontal position of the picture.
Vertical Shift	Adjusts the vertical position of the picture when “Screen Format” is set to “Zoom.”
Vertical Size	Adjusts the vertical size of the picture when “Screen Format” is set to “Smart” or “Zoom.”



HDMI Set-up

This is used to set the “Control for HDMI” compatible equipment connected to the HDMI sockets. Note that the interlock setting must also be made on the connected “Control for HDMI” compatible equipment side.

Control for HDMI	This sets whether to interlock the “Control for HDMI” compatible equipment and the unit. When set to “On”, the following menu items can be performed. However, power consumption in standby mode is higher than usual.
Auto Devices Off	When this is set to “On”, the “Control for HDMI” compatible equipment turns off when you switch the unit to standby mode using the remote.
Auto TV On	When this is set to “On” and if the connected HDMI, control compatible equipment is turned on, the unit automatically turns on, and the displays the HDMI input from the connected equipment.
Device List Update	Creates or updates the “HDMI Device List.” Up to 14 “Control for HDMI” compatible equipment can be connected, and up to 4 equipment can be connected to a single socket. Be sure to update the “HDMI Device List” when you change the “Control for HDMI” compatible equipment connections or settings. Select them manually one by one until getting a correct picture for several seconds.
HDMI Device List	Displays the connected “Control for HDMI” compatible equipment.



Monitor Set-up

Power Saving	Reduces the power consumption by adjusting the backlight brightness. This also enhances the black level. Select from “Off”, “Low”, “High” and “Picture Off”.	
Light Sensor	On	Automatically optimises the picture settings according to the ambient light in the room.
	Off	Turns off the “Light Sensor” feature.
		<ul style="list-style-type: none"> • Be sure not to put anything over the sensor, as its function may be affected. See page 18 for the location of the light sensor.
Product Information	Displays your monitor’s product information.	
Remote Control Set-up	Registers a remote to the unit, otherwise the remote cannot be used with the unit. Instruction screens appear if you register or delete a remote. Follow the instructions to register or delete.	
		<ul style="list-style-type: none"> • The remote can only be registered to only one unit.
Wireless Channel Set-up	Wireless Channel Selection	Selects a wireless channel from “Auto”, “36ch”, “40ch”, “44ch” or “48ch”. If the wireless channel is uncertain, select “Auto” to search an available channel.
	Wireless Information	Displays information about the current wireless channel.
Language	Selects the language in which the menus are displayed.	
Logo Illumination	Lights up and turns off the Sony logo on the front of the monitor.	



PC Settings

Screen Format	Selects a screen format for displaying input from your PC.	
	Normal	Displays the picture in its original size.
	Full 1	Enlarges the picture to fill the vertical display area, keeping its original horizontal-to-vertical aspect ratio.
	Full 2	Enlarges the picture to fill the display area.
Reset	Resets the PC screen settings to the factory settings.	
Horizontal Shift	Adjusts the horizontal position of the picture.	
Vertical Shift	Adjusts the vertical position of the picture.	

Additional Information

Installing the Accessories (Wall-Mount Bracket)

To Customers:

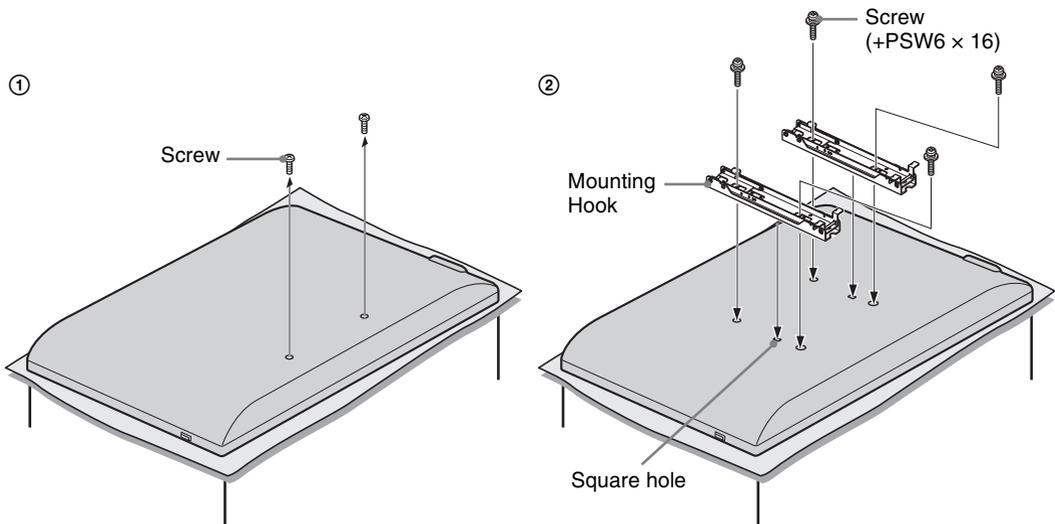
For product protection and safety reasons, Sony strongly recommends that installing of your monitor be performed by Sony dealers or licenced contractors. Do not attempt to install it yourself.

To Sony Dealers and Contractors:

Provide full attention to safety during the installation, periodic maintenance and examination of this product.

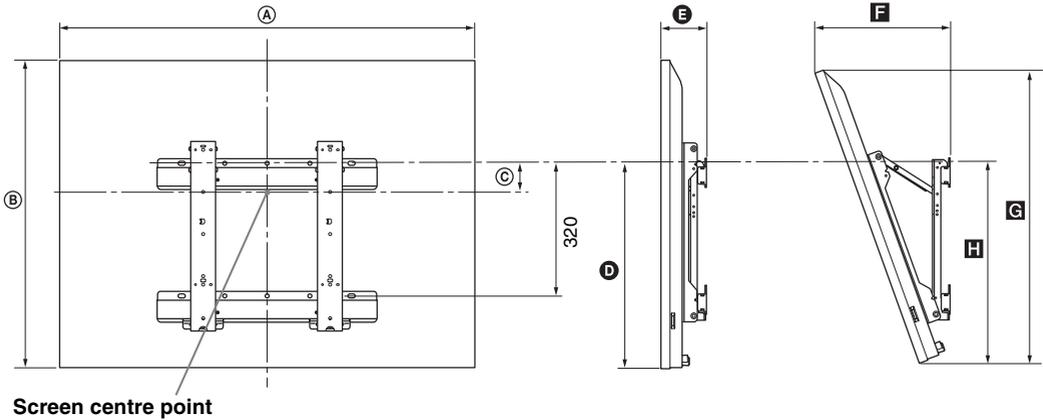
Your monitor can be installed using the Wall-Mount Bracket SU-WL500/SU-WL700 (sold separately). For SU-WL500, install as illustrated below. For SU-WL700, see the manual supplied with SU-WL700.

- Refer to the Instructions supplied with the Wall-Mount Bracket to properly carry out the installation.
- Refer to “Detaching the Table-Top Stand from the Monitor” (page 11).
- Refer to “Monitor installation dimensions table” (page 45).
- Refer to “Screw and Hook locations diagram/table” (page 45).



Sufficient expertise is required for installing this product, especially to determine the strength of the wall for withstanding the monitor's weight. Be sure to entrust the attachment of this product to the wall to Sony dealers or licenced contractors and pay adequate attention to safety during the installation. Sony is not liable for any damage or injury caused by mishandling or improper installation.

Monitor installation dimensions table



Unit: mm

Model Name	Display dimensions		Screen centre dimension C	Length for each mounting angle				
	A	B		Angle (0°)		Angle (20°)		
				D	E	F	G	H
KDL-52EX1	1,312	806	80	486	114	351	765	508
KDL-46EX1	1,156	709	107	464	110	321	674	486
KDL-40EX1	1,024	635	144	464	110	296	604	486

Figures in the above table may differ slightly depending on the installation.

WARNING

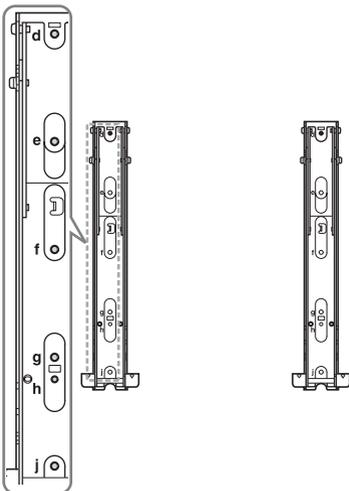
The wall that the monitor will be installed on should be capable of supporting a weight of at least four times that of the monitor. Refer to “Specifications” on page 46 for its weight.

Screw and Hook locations diagram/table

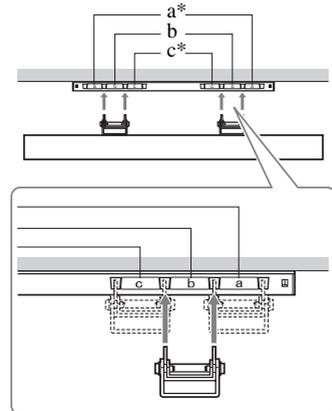
Model Name	Screw location	Hook location
KDL-52EX1/46EX1/40EX1	e, j	b

* Hook position “a” and “c” cannot be used for the models in the table above.

Screw location

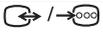


Hook location



Specifications

Media receiver

Model name		MBT-W1
System		
TV system	Analogue: Depending on your country selection: B/G/H, D/K, L, I Digital: DVB-T/DVB-C	
Colour/video system	Analogue: PAL, SECAM NTSC 3.58, 4.43 (only Video In) Digital: MPEG-2 MP@ML/HL, H.264/MPEG-4 AVC HP@L4.0, MP@L3.0	
Channel coverage	Analogue: VHF: E2–E12/UHF: E21–E69/CATV: S1–S20/HYPER: S21–S41 D/K: R1–R12, R21–R69/L: F2–F10, B–Q, F21–F69/I: UHF B21–B69 Digital: VHF/UHF	
Input/Output jacks		
Aerial	75 ohm external terminal for VHF/UHF	
 AV1	21-pin Scart connector (CENELEC standard) including audio/video input, RGB input and unit audio/video output.	
 AV2	Video input (phono jack)	
 AV2	Audio input (phono jacks)	
	DIGITAL AUDIO OUT (OPTICAL)(digital optical jack)	
 COMPONENT IN	Supported formats: 1080p, 1080i, 720p, 576p, 576i, 480p, 480i Y: 1 Vp-p, 75 ohms, 0.3V negative sync PB/CB: 0.7 Vp-p, 75 ohms PR/CR: 0.7 Vp-p, 75 ohms	
 COMPONENT IN	Audio input (phono jacks) 500 mVrms	
HDMI IN 1, 2, 3	Video: 1080p, 1080i, 720p, 576p, 576i, 480p, 480i Audio: Two channel linear PCM 32, 44.1 and 48 kHz, 16, 20 and 24 bits PC Input (see page 48)	
PC IN 	PC Input (D-sub 15-pin) G: 0.7 Vp-p, 75 ohms, non Sync on Green B: 0.7 Vp-p, 75 ohms, non Sync on Green R: 0.7 Vp-p, 75 ohms, non Sync on Green HD: 1-5 Vp-p VD: 1-5 Vp-p  PC audio input (minijack)	
	CAM (Conditional Access Module) slot	
	Headphones jack	
	USB port	
Power and others		
Power requirements	220–240 V AC, 50 Hz	
Power consumption	20 W	
Standby power consumption*	3.5 W or less (19 W when Quick Start is ON)	
Dimensions (Approx.) (w × h × d)	for vertical placement with stand	13.1 × 30.2 × 28.6 cm
	for horizontal placement	28.0 × 7.2 × 28.6 cm
Mass (Approx.)	for vertical placement with stand	2.5 kg
	for horizontal placement	2.4 kg

Monitor

Model name		LDM-E521	LDM-E461	LDM-E401
System				
Panel system		LCD (Liquid Crystal Display) Panel		
Sound output		8 W + 8 W		
Input/Output jacks				
MONITOR HDMI IN		Video: 1080/24p, 1080p, 1080i, 720p, 576p, 576i, 480p, 480i Audio: Two channel linear PCM 32, 44.1 and 48 kHz, 16, 20 and 24 bits PC Input (see page 48)		
Power and others				
Power requirements		220–240 V AC, 50 Hz		
Screen size (measured diagonally)		52 inches (Approx. 132.2 cm)	46 inches (Approx. 116.8 cm)	40 inches (Approx. 101.6 cm)
Display resolution		1,920 dots (horizontal) × 1,080 lines (vertical)		
Power consumption	in “Home”/“Standard” mode	295 W	220 W	180 W
	in “Shop”/“Vivid” mode	324 W	247 W	221 W
Standby power consumption*		0.5 W or less (19 W when Quick Start is ON)		
Dimensions (Approx.) (w × h × d)	with Table-Top Stand	131.2 × 83.9 × 34.4 cm	115.6 × 74.2 × 25.5 cm	102.4 × 66.8 × 25.5 cm
	without Table-Top Stand	131.2 × 80.6 × 5.7 cm	115.6 × 70.9 × 5.7 cm	102.4 × 63.5 × 5.7 cm
Mass (Approx.)	with Table-Top Stand	43.0 kg	26.0 kg	24.0 kg
	without Table-Top Stand	33.0 kg	19.0 kg	17.0 kg
Supplied accessories		See “1: Checking the unit and accessories” on page 4.		
Optional accessories		SU-WL500/SU-WL700 Wall-Mount Bracket		

* Specified standby power is reached after the unit finishes necessary internal processes.

Wireless system	
Transmission system	OFDM
Carrier frequency	5.15 to 5.25 GHz
Transmission distance	30 cm to 20 m (depending on installation / usage)

PC Input Signal Reference Chart for PC

Resolution			Horizontal frequency (kHz)	Vertical frequency (Hz)	Standard
Signals	Horizontal (Pixel)	× Vertical (Line)			
VGA	640	× 480	31.5	60	VGA
	640	× 480	37.5	75	VESA
	720	× 400	31.5	70	VGA-T
SVGA	800	× 600	37.9	60	VESA Guidelines
	800	× 600	46.9	75	VESA
XGA	1024	× 768	48.4	60	VESA Guidelines
	1024	× 768	56.5	70	VESA
	1024	× 768	60.0	75	VESA
WXGA	1280	× 768	47.4	60	VESA
	1280	× 768	47.8	60	VESA
	1280	× 768	60.3	75	
	1360	× 768	47.7	60	VESA
SXGA	1280	× 1024	64.0	60	VESA

- This unit's PC input does not support Sync on Green or Composite Sync.
- This unit's PC input does not support interlaced signals.
- This unit's PC input supports signals in the above chart with a 60 Hz vertical frequency. For other signals, you will see the message "No signal."

PC Input Signal Reference Chart for HDMI IN 1, 2, 3

Resolution			Horizontal frequency (kHz)	Vertical frequency (Hz)	Standard
Signals	Horizontal (Pixel)	× Vertical (Line)			
VGA	640	× 480	31.5	60	VGA
SVGA	800	× 600	37.9	60	VESA Guidelines
XGA	1024	× 768	48.4	60	VESA Guidelines
WXGA	1280	× 768	47.4	60	VESA
WXGA	1280	× 768	47.8	60	VESA
SXGA	1280	× 1024	64.0	60	VESA

Troubleshooting

Check whether the  (standby) indicator is flashing in red.

When it is flashing

The self-diagnosis function is activated.

- Count how many  (standby) indicator flashes between each two second break.
For example, the indicator flashes three times, then there is a two second break, followed by another three flashes, etc.
- Press  on the unit to turn it off, disconnect the mains lead, and inform your dealer or Sony service centre of how the indicator flashes (number of flashes).

When it is not flashing

- Check the items in the tables below.
- If the problem still persists, have your unit serviced by qualified service personnel.

Condition	Explanation/Solution
Picture	
No picture (screen is dark) and no sound	<ul style="list-style-type: none"> • Check the aerial/cable connection. • Connect the unit to the mains, and press  on the unit. • If the  (standby) indicator lights up in red, press TV I/.
No picture or no menu information from equipment connected to the scart connector	<ul style="list-style-type: none"> • Press / to display the connected equipment list, then select the desired input. • Check the connection between the optional equipment and the unit.
Double images or ghosting (only in analogue mode)	<ul style="list-style-type: none"> • Check the aerial/cable connection. • Check the aerial location and direction.
Only snow and noise appear on the screen (only in analogue mode)	<ul style="list-style-type: none"> • Check if the aerial is broken or bent. • Check if the aerial has reached the end of its serviceable life (three to five years in normal use, one to two years at the seaside).
Picture or sound noise when viewing a TV channel (only in analogue mode)	<ul style="list-style-type: none"> • Adjust “AFT” (Automatic Fine Tuning) to obtain better picture reception (page 34).
Some tiny black points and/or bright points appear on the screen	<ul style="list-style-type: none"> • The picture of a display unit is composed of pixels. Tiny black points and/or bright points (pixels) on the screen do not indicate a malfunction.
No colour on programmes	<ul style="list-style-type: none"> • Select “Reset” (page 39).
No colour or irregular colour when viewing a signal from the  /  COMPONENT IN sockets	<ul style="list-style-type: none"> • Check the connection of the / COMPONENT IN sockets and check if each sockets are firmly seated in their respective sockets.
Picture freezes or contains blocks on the screen	<ul style="list-style-type: none"> • Check signal level (page 37). If signal bar is red (no signal) or amber (low signal), check the aerial/cable connection. • Remove the connected USB device. It can be damaged or not supported by the unit. Check the website below for updated information about compatible USB devices: http://support.sony-europe.com/TV/compatibility/
Sound	
No sound, but good picture	<ul style="list-style-type: none"> • Press  +/- or  (Mute). • Check if the “Speaker” is set to “TV Speaker” (page 32). • When using HDMI input with Super Audio CD or DVD-Audio, DIGITAL AUDIO OUT (OPTICAL) may not output audio signals.

Condition	Explanation/Solution
Channels	
The desired channel cannot be selected	<ul style="list-style-type: none"> • Switch between digital and analogue mode and select the desired digital/analogue channel.
Some channels are blank	<ul style="list-style-type: none"> • Scrambled/Subscription only channel. Subscribe to the pay TV service. • Channel is used only for data (no picture or sound). • Contact the broadcaster for transmission details.
Digital channels are not displayed	<ul style="list-style-type: none"> • Contact a local installer to find out if digital transmissions are provided in your area. • Upgrade to a higher gain aerial.
Wireless communication	
Delay pictures	<ul style="list-style-type: none"> • Wireless communication takes time to establish after turning the power on. About 20 seconds are needed to display pictures. Selecting “Quick Start” may shorten the waiting time (page 30).
“Wireless communication in progress.” does not disappear, or “Wireless communication failed.” is displayed	<ul style="list-style-type: none"> • When the wireless communication is disturbed, it takes about 15 seconds to display pictures again. “Wireless communication in progress.” is displayed until pictures come back. • Check the installation situation of the monitor and media receiver (page 4). • Check whether wireless equipment using the same radio frequency as this unit is working near by, or something disturbing wireless communication of this unit is close to the unit. In such cases, keep such equipment away from the unit or turn off the power of that equipment.
Noisy or interrupted picture or sound	<ul style="list-style-type: none"> • Check the installation situation of the monitor and media receiver (page 4). • Pictures may be distorted if somebody walks across between the monitor and media receiver. • Check whether wireless equipment using the same radio frequency as this unit is working near by, or something disturbing wireless communication of this unit is close to the unit. In such cases, keep such equipment away from the unit or turn off the power of that equipment.
General	
Distorted picture and/or sound	<ul style="list-style-type: none"> • Keep the unit away from electrical noise sources such as cars, motorcycles, hair-dryers or optical equipment. • When installing optional equipment, leave some space between the optional equipment and the unit. • Check the aerial/cable connection. • Keep the aerial/cable TV cable away from other connecting cables.
The unit turns off automatically (the unit enters standby mode)	<ul style="list-style-type: none"> • Check if the “Sleep Timer” is activated, or confirm the “Duration” setting of “On Timer Settings” (page 30). • If no signal is received and no operation is performed in the TV mode for 10 minutes, the monitor automatically switches to standby mode.
The unit turns on automatically	<ul style="list-style-type: none"> • Check if the “On Timer” is activated (page 30).
Some input sources cannot be selected	<ul style="list-style-type: none"> • Select “AV Preset” and cancel “Skip” of the input source (page 32).
The remote does not function	<ul style="list-style-type: none"> • Replace the batteries.
A channel cannot be added to the Favourite list	<ul style="list-style-type: none"> • Up to 999 channels can be stored in the Favourite list.
HDMI equipment does not appear on “HDMI Device List”	<ul style="list-style-type: none"> • Check that your equipment is “Control for HDMI” compatible equipment.
Not all channels are tuned	<ul style="list-style-type: none"> • Check support web site for cable provide information. http://support.sony-europe.com/TV/DVBC/
You cannot select “Off” in “Control for HDMI”	<ul style="list-style-type: none"> • If any “Control for HDMI” compatible audio equipment is connected to the unit, you cannot select “Off” in this menu. If you want to change the audio output to the monitor speaker, select “TV Speaker” in the “Speaker” menu (page 32).
The “Store Display Mode: On” message appears on the screen	<ul style="list-style-type: none"> • Select “All Reset” in the “Media Receiver Set-up” menu (page 33).



For useful information about Sony products

<http://www.sony-europe.com/myproduct/>



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