JVC

HDMI™
HIGH DEFINITION MULTIMEDIA INTERFACE

LT-20BW7BJ

WIDE LCD PANEL TV INSTRUCTIONS

Dear Customer,

This apparatus is in conformance with the valid European directives and standards regarding electromagnetic compatibility and electrical safety.

European representative of Victor Company of Japan, Limited is:
JVC Technology Centre Europe GmbH
Postfach 10 05 52
61145 Friedberg
Germany

■ Warning

DO NOT cut off the mains plug from this equipment. If the plug fitted is not suitable for the power points in your home or the cable is too short to reach a power point, then obtain an appropriate safety approved extension lead or adaptor or consult your dealer.

If nonetheless the mains plug is cut off, remove the fuse and dispose of the plug immediately, to avoid a possible shock hazard by inadvertent connection to the mains supply.

If a new mains plug has to be fitted, then follow the instruction given below:

Important

Do not make any connection to the larger terminal which is marked with the letter E or by the safety earth symbol $\perp$ or coloured green or green-and-yellow.

The wires in the mains lead on this product are coloured in accordance with the following code:
Blue: Neutral
Brown: Live

As these colours may not correspond with the coloured marking identifying the terminals in your plug proceed as follows:

The wire which is coloured blue must be connected to the terminal which is marked with the letter N or coloured black.
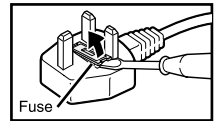
The wire which is coloured brown must be connected to the terminal which is marked with the letter L or coloured red.

When replacing the fuse, use only a correctly rated approved type and always re-fit the fuse cover.

■ If in doubt — consult a competent electrician.

How to replace the fuse

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

Fuse

■ Guidelines for safe operation

This equipment has been designed and manufactured to comply with international safety standards. However, as with any electrical appliance, care must be taken to ensure optimal results and operational safety.

- Before attempting to use this equipment, read the operating instructions thoroughly.
- Ensure that all electrical connections (including the mains plug, extension leads, etc.) have been made in accordance with the manufacturer's instructions.
- If ever in doubt about the installation, operation or safety of this equipment, consult your dealer.
- Handle all glass panels or covers with care.
- Never operate this equipment if it appears damaged or operates abnormally. Turn the power off, disconnect the main power plug and consult your dealer.
- Never remove any affixed panels or covers. Doing so may result in electrical shock.
- Never leave this equipment operating unattended unless otherwise specifically stated that it is designed to do so or in standby mode. Only use the designated power switch to turn off the power and ensure that all potential users are instructed how to do so. Make special arrangements for infirm or handicapped persons.
- Never watch TV while operating a motor vehicle. It is illegal to watch TV while driving.
- Never listen to headphones at high volume. Doing so may damage your hearing.
- Never obstruct the ventilation of this equipment. Doing so may cause overheating and result in a malfunction or damage.
- Never use makeshift stands or attempt to affix legs with wood screws. When using a manufacturer's approved stand or legs, use only the fixtures provided and follow the installation instructions.
- Never allow this equipment to be exposed to rain or moisture.
- Never allow anyone, especially children, to insert anything into an opening in the case. Doing so may result in a fatal electrical shock.
- Never guess or take chances with electrical equipment of any kind. It is better to be safe than sorry.

Thank you for buying this JVC LCD flat television.
To make sure you understand how to use your new TV, please read this manual thoroughly before you begin. ("LCD" stands for Liquid Crystal Display.)

## WARNING: TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

WARNING

• Fingers may be trapped under the TV causing injuries. Hold the TV at the bottom in the middle, and do not allow it to tilt up or down.
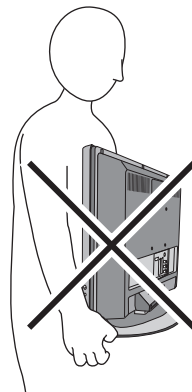
WARNING

• The TV may fall causing injuries. Hold the bottom of the stand with your hand and tilt the TV up and down.
• Do not allow children to hang from the TV, place their elbows on the TV or lean against the TV. Doing so may cause the TV to fall over and lead to injuries.
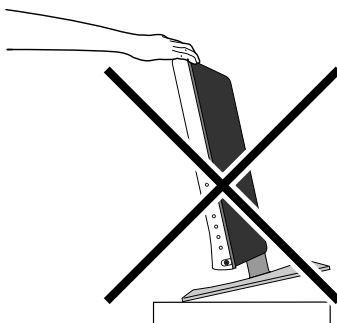
CAUTION

• The TV screen may be damaged if the TV is carried as shown in the diagram on the right.

Pixel defects

LCDs use collections of fine points ("pixels") to display images. While there is no problem with more than 99.99% of these pixels, please understand that a very small number of pixels may not light, or may light all the time.

Distance recommendations

Avoid improper installation and never position the unit where good ventilation is impossible.
When installing this TV, distance recommendations must be maintained between the set and the wall, as well as inside a tightly enclosed area or piece of furniture.
Keep to the minimum distance guidelines shown for safe operation.
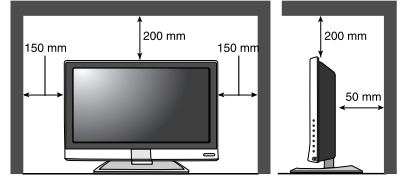
Failure to take the following precautions may cause damage to the television or remote control.

DO NOT block the TV's ventilation openings or holes.
(If the ventilation openings or holes are blocked by a newspaper or cloth, etc., the heat may not be able to get out.)
DO NOT place anything on top of the TV.
(such as cosmetics or medicines, flower vases, potted plants, cups, etc.)
DO NOT allow objects or liquid into the cabinet openings.
(If water or liquid is allowed to enter this equipment, fire or electric shock may be caused.)
DO NOT place any naked flame sources, such as lighted candles, on the TV.
DO NOT subject the TV to direct sunlight.
Make enough room for inserting and removing the power plug! Place the TV as close to the outlet as possible.
The main power supply for this TV is controlled by inserting or removing the power plug.

The surface of the TV screen is easily damaged. Be very careful with it when handling the TV.
Should the TV screen become soiled, wipe it with a soft dry cloth. Never rub it forcefully.
Never use any cleaner or detergent on it.

If there is a fault, unplug the unit and call a service technician. Do not attempt to repair it yourself or remove the rear cover.

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■ Cleaning the screen

The screen is coated with a special thin film to reduce reflection. If this film is damaged, uneven colors, discoloration, scratches, and other problems that cannot be repaired may occur. Pay attention to the following when handling the screen.

- Do not use glue or adhesive tape on the screen.
- Do not write on the screen.
- Do not allow the screen to come in contact with any hard objects.
- Do not allow condensation to form on the screen.
- Do not use alcohol, thinner, benzene or other solvents on the screen.
- Do not rub the screen hard.

CAUTION:

- Operate only from the power source specified (AC 220 – 240 V, 50/60 Hz) on the unit.
- Avoid damaging the AC plug and power cord.
- When you are not using this unit for a long period of time, it is recommended that you disconnect the power cord from the main outlet.

Information for Users on Disposal of Old Equipment

[European Union]

This symbol indicates that the electrical and electronic equipment should not be disposed as general household waste at its end-of-life. Instead, the product should be handed over to the applicable collection point for the recycling of electrical and electronic equipment for proper treatment, recovery and recycling in accordance with your national legislation.

By disposing of this product correctly, you will help to conserve natural resources and will help prevent potential negative effects on the environment and human health which could otherwise be caused by inappropriate waste handling of this product. For more information about collection point and recycling of this product, please contact your local municipal office, your household waste disposal service or the shop where you purchased the product.

Attention:
This symbol is only valid in the European Union.

Penalties may be applicable for incorrect disposal of this waste, in accordance with national legislation.

(Business users)

If you wish to dispose of this product, please visit our web page www.jvc-europe.com to obtain information about the take-back of the product.

[Other Countries outside the European Union]

If you wish to dispose of this product, please do so in accordance with applicable national legislation or other rules in your country for the treatment of old electrical and electronic equipment.

CONTENTS

Setting up your TV

- When you install the TV on the wall, only use a JVC wall mounting unit (optional) which is designed for this TV.
- Make sure that the TV is installed on the wall by a skilled installer.

Installation

Cautions for installation
- Install the TV in a corner on a wall or on the floor so as to keep cords out of the way.
- The TV will generate a slight amount of heat during operation. Ensure that sufficient space is available around the TV to allow satisfactory cooling. See "Distance recommendations" on page 2.

Using the stand

This TV comes with a table top stand already attached.
This stand can be used to adjust the direction of the TV screen up and down.

■ Tilt the TV backwards and forward:
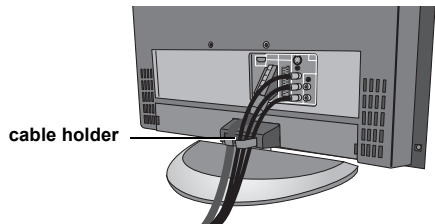While holding the bottom of the stand with one hand, push the top side of the TV to tilt it backward. To tilt the TV forward, pull the top side of the TV toward yourself.

■ Cable holder
A cable holder which is used to keep the connection cables tidy is attached to the back of the stand. Put the cables in the cable holder and make sure that they are properly routed.

cable holder

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Connecting the aerial and video cassette recorder (VCR)

• The connecting cables are not provided.
• For further details, refer to the manuals provided with the devices to be connected.

Caution
   • Turn off all the equipment including the TV before connecting anything.
   • Aerial cable is not supplied. Use a good quality 75-ohm coaxial cable.
   • Read the manual that came with the VCR before connecting.

■ **If you are connecting a VCR, follow Ⓐ → Ⓑ → Ⓒ in the next diagram.**

■ **If you are not connecting a VCR, follow ①.**
   • You can watch a video using the VCR without doing Ⓒ. For details, see your VCR instruction manual.
   • To connect additional external devices, please see "Connecting external equipment" on page 30.

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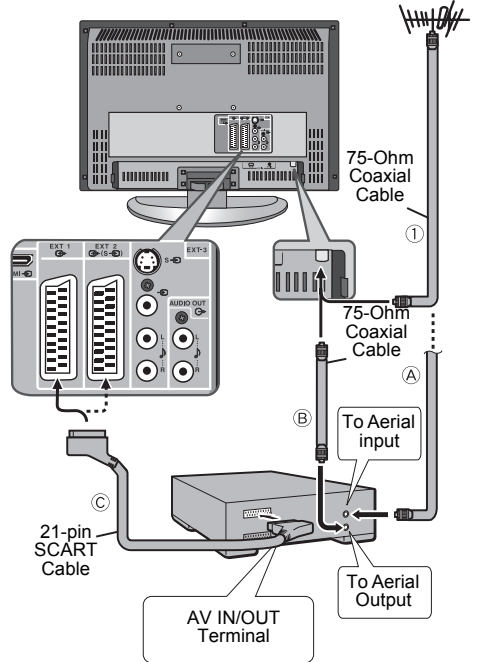
Connecting the power cord to the AC outlet

Insert the AC plug on the power cord from the TV into an AC outlet.

Caution

- Operate only from the power source specified (AC 220 – 240 V, 50/60 Hz) on the unit.

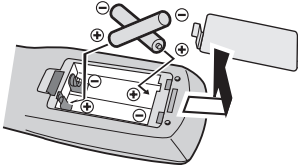- Remove the AC plug from the outlet to completely disconnect the TV from the power supply.

## Putting the batteries into the remote control

Use two AA/R6 dry cell batteries.
Insert the batteries from the ⊖ end, making sure the ⊕ and ⊖ polarities are correct.

- Follow the warnings printed on the batteries.
- Battery life is about six months to one year, depending on how much you use the remote control.
- The batteries we supply are only for setting up and testing your TV, please replace them as soon as you need to.
- If the remote control does not work properly, replace the batteries.

Initial settings (Setup tour)

When the TV is first turned on, it goes into the initial settings mode and the Quick Setup menu will appear. Follow the instructions on the screen display to make the initial settings.

⏻/| button

PICTURE/OK button

MENU button
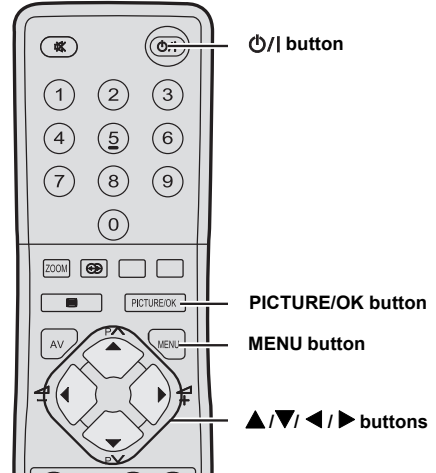
▲ /▼/ ◄ / ► buttons

1 Press the ⏻/| button on the remote control

The TV turns on from standby mode.

- Check that the AC plug on the power cord from the TV is connected to AC outlet.

Remote control sensor

Power lamp
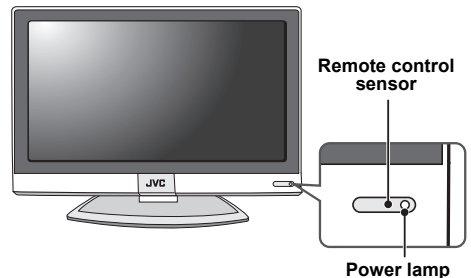
- If the Quick Setup menu does not appear this is because your TV has already been turned on for the first time. Use the "Language" and "Auto Program" functions to make the initial settings. For details, see "Language" on page 27 and "Auto Program" on page 23.

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2 Press the ◄ and ► buttons to choose English. Then press the ▼ button

Quick Setup	
Language	English
Country	U.K.
Sound System	I
Search >	100%

♦ ◊ MENU: ⤴
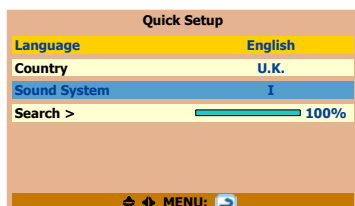
The on-screen display will then be in English.

3 Press the ◄ and ► buttons to choose the country where you are. Then press the ▼ button
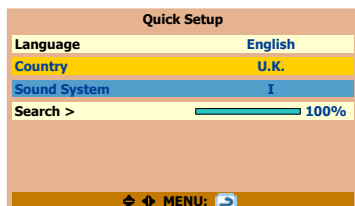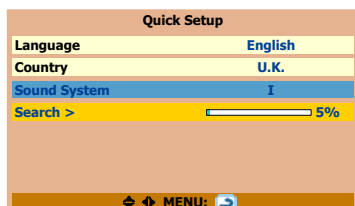
Quick Setup	
Language	English
Country	U.K.
Sound System	I
Search >	100%

♦ ◊ MENU: ⤴

When your country is selected, the Sound System will change automatically to suit.

4 Press the PICTURE/OK or ► button to start the Search function

Quick Setup	
Language	English
Country	U.K.
Sound System	I
Search >	5%

♦ ◊ MENU: ⤴

The TV channels you receive are automatically stored in the Programme numbers (Pr.).

- To stop the Search function:
  Press the **MENU** button.

After the TV channels have been registered in the Programme numbers (Pr.), the first stored TV channel will be displayed

- If you want to, you can now edit the Programme numbers (Pr.) using the Program Edit function. For details, see "Program Edit" on page 24.
- If a TV channel you want to view is not set to a Programme number (Pr.), you can set it using the Manual Program function. For details, see "Manual Program" on page 23.
- The Search function does not set the Programme number Pr. 0 for your video cassette recorder. You will need to set this using the Manual Program function.

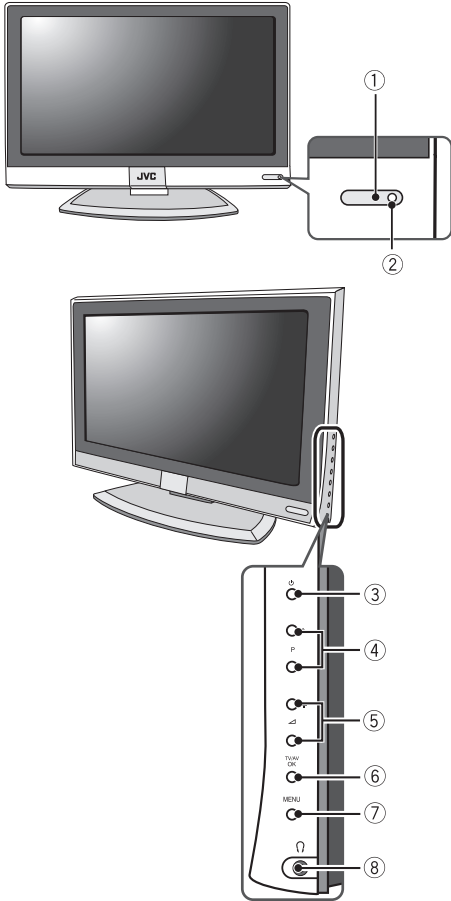**Now, setting up is complete. Please enjoy your new JVC TV!**

For users in the UK:
If you have any problems setting up your new TV, please call the **JVC** Helpline on **0870 330 5000**.

For users in the Republic of Ireland:
If you have any problems setting up your new TV, please call the **JVC** Helpline on **1890-582500**.

TV buttons and functions

Refer to the pages in parentheses for details.

① Remote control sensor
② Power lamp (page 7)
③ ⏻ (Stand by) button (page 9)
④ **P** ∨/∧ buttons (page 9)
⑤ ◢ (Volume) −/+ buttons (page 10)
⑥ **TV/AV/OK** button (page 9)
⑦ **MENU** button (pages 10, 19)
⑧ Headphone jack (mini jack) (page 30)

Turn the TV on from standby mode

Press the ⏻ button to turn the TV on from standby mode

When the TV is turned on, the power lamp lights green.

To turn the TV off:

Press the ⏻ button again. The power lamp lights red.

• The TV will turn off automatically when no TV input signal (not EXT input signals) is detected for 5 minutes.

Caution

• The ⏻ button on the TV does not fully isolate the TV from the AC supply. If you are not going to use the TV for a long period, be sure to disconnect the AC plug from the AC socket.

Choose a TV channel

Press the P ∨/∧ buttons to choose a Programme number (Pr.)

Watch images from external devices

Press the TV/AV/OK button to choose an EXT terminal

TV mode   EXT modes

Last Programme number

EXT-1 → EXT1
EXT-2 → EXT2
EXT-2 S-VIDEO → EXT2-S
EXT-3 → EXT3
EXT-3 S-VIDEO → EXT3-S
PC IN → PC
HDMI → HDMI

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Adjust the volume

Press the ◿ (Volume) −/+ buttons
The volume level indicator appears.

Using the Menu

Use the MENU button
Refer to "Using the TV's menu" (see
page 19) for details of using the menu.

Remote control buttons and functions
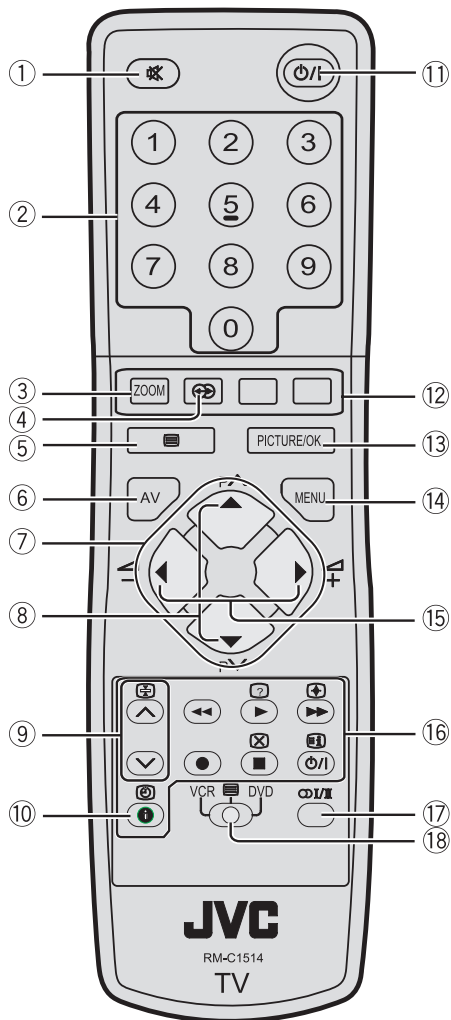
① Muting button
② Number buttons
③ **ZOOM** button
④ ⊕ button
⑤ ▤ (Text) button
⑥ **AV** button
⑦ ◀ / ▶ / ▲ / ▼ buttons
⑧ **P** ∨/∧ buttons
⑨ ∨/∧ buttons
⑩ Information button
⑪ ⏻/❘ (Standby) button
⑫ Colour buttons
⑬ **PICTURE/OK** button
⑭ **MENU** button
⑮ ◢ (Volume) −/+ buttons
⑯ VCR/DVD/Teletext control buttons
⑰ Stereo/Bilingual button
⑱ **VCR/TELETEXT/DVD** switch

Turn the TV on or off from standby mode

Press the ⏻/❘ (standby) button to turn the TV on or off
When the TV is turned on, the power lamp lights green.
• The power can also be turned on by pressing the **AV** button, **P** ∨/∧ buttons or Number buttons.
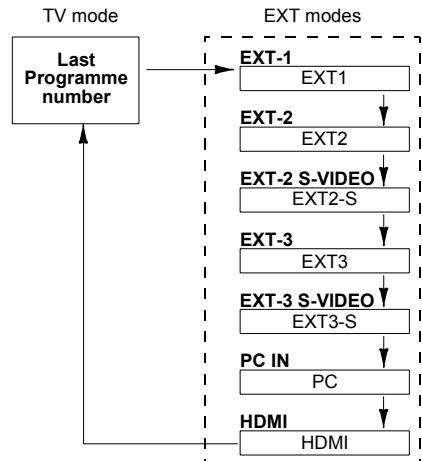• The TV will turn off automatically when no TV input signal (not EXT input signals) is detected for 5 minutes.

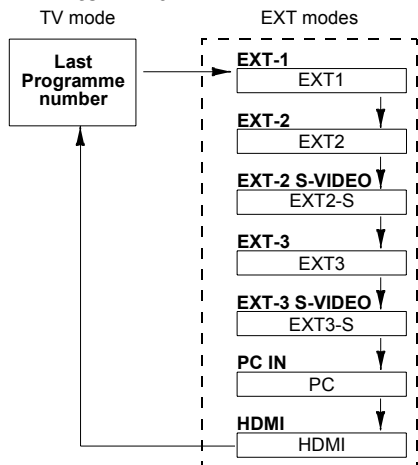## Choose a TV channel and watch images from external devices

■ **Use the number buttons: Enter the Programme number (Pr.) of the channel using the number buttons**
Example:
• Pr. 6 → press 0 and 6
• Pr. 12 → press 1 and 2

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■ **Use the P ∨/∧ buttons:**
Press the P ∨/∧ buttons to choose the Programme number (Pr.) you want

■ **Use the AV button:**
Press the AV button to choose an EXT terminal

TV mode   EXT modes

• If you choose an EXT terminal with no input signal, the EXT terminal name becomes fixed on the screen.
• If you do not have a clear picture or no colour appears, change the colour system manually. See "Colour System" on page 26.
• If you cannot hear the normal sound even if the picture of the TV channel appears normally, follow the description "Manual Program" on page 23 to use the Sound System function to change the Sound System setting.

To return to a TV channel:
Press the **P** ∨/∧ buttons or Number buttons.

To use the Programme number Pr. 0:
When the TV and VCR are connected only by the aerial cable, choosing the Programme number Pr. 0 allows you to view images from the VCR. Set the VCR RF channel to the Programme number Pr. 0 manually. For details, see "Manual Program" on page 23.

Adjust the volume

Press the ⊿ −/+ buttons to adjust the volume.
The volume level indicator appears and the volume changes as you press the ⊿ −/+ buttons.

■ **Muting the sound**

Press the ⊠ (muting) button to turn off the sound

Pressing the ⊠ (muting) button again restores the previous volume level.

Information function

You can see the channel number of the programme you are watching. The channel number and channel name (when the channel name is registered) of the programme you are watching or the EXT terminal name is displayed.

Press the ❶ (Information) button to display the information you want to see.

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ZOOM function

You can change the screen size according to the picture aspect ratio. Choose the optimum one from the following ZOOM modes.

• The ZOOM mode is fixed at Full when 1080i or 720p component video (HDMI) signal is displayed.
• Only Full and Regular can be selected when you are using the TV as a PC screen.

Auto:
When a WSS (Wide Screen Signalling) signal, which shows the aspect ratio of the picture, is included in the broadcast signal or the signal from an external device, the TV automatically changes the ZOOM mode to 16:9 Zoom mode or Full mode according to the WSS signal.

• When the Auto (WSS) mode does not function correctly due to poor WSS signal quality or when you want to change the ZOOM mode, press the **ZOOM** button and change to another ZOOM mode.
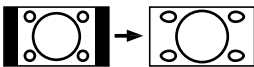
Regular:
Use to view a normal picture (4:3 aspect ratio) as this is its original shape.

Panoramic:
This stretches the left and right sides of a normal picture (4:3 aspect ratio) to fill the screen, without making the picture appear unnatural.

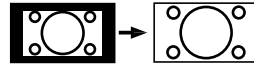• The top and bottom of the picture are slightly cut off.

14:9 Zoom:
This zooms up the wide picture (14:9 aspect ratio) to the upper and lower limits of the screen.

16:9 Zoom:
This zooms up the wide picture (16:9 aspect ratio) to the full screen.

16:9 Zoom Subtitle:
This zooms up the wide picture (16:9 aspect ratio) with subtitles to the full screen.
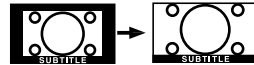
Full:
This uniformly stretches the left and right sides of a normal picture (4:3 aspect ratio) to fill the wide TV screen.
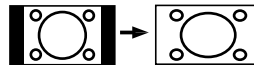
• For 16:9 aspect ratio pictures that have been squeezed into a normal picture (4:3 aspect ratio), use the Full mode to restore the picture to its original shape.

■ Choose the ZOOM mode

Press the ZOOM button to choose a ZOOM mode

The picture expands and the chosen ZOOM mode is displayed instantly. To select other ZOOM modes, press the **ZOOM** button several times.

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Hyper Sound function

You can enjoy sounds with a wider ambience.

• This function also works for the sound from headphones.

Press the ⊕ button to turn on or off the Hyper Sound function

```
┌─────────────────┐     ┌─────────────────┐
│ Hyper Sound On  │────▶│ Hyper Sound Off │
└─────────────────┘     └─────────────────┘
        ▲                        │
        └────────────────────────┘
```

• You can also turn on or off the Hyper Sound function with the "Sound menu" (see page 22).
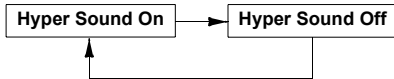
Sleep Timer function

You can set the TV to automatically turn off after a set period of time.

Press the yellow button several times to turn on the Sleep Timer function and set the period of time

You can set the period of time for up to 120 minutes (2 hours) in 10 minute steps.

Off Minutes	**Sleep Timer Off**
↓	
10 Minutes	**Sleep Timer (10 Minutes)**
↓	
20 Minutes	**Sleep Timer (20 Minutes)**
⋮	
120 Minutes	**Sleep Timer (120 Minutes)**
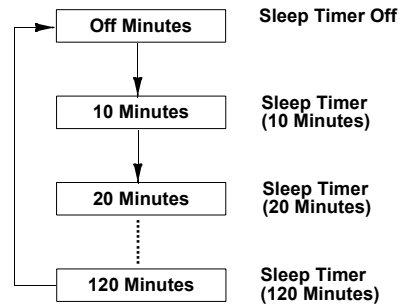
To cancel the Sleep Timer function:
Press the yellow button to set the period of time to "Off".

• The Sleep Timer function cannot be used to turn off the TV's main power.
• When the Sleep Timer function is on, you can press the yellow button to display the remaining period of time of the Sleep Timer function.

• You can also set the Sleep Timer function with the "Feature menu" (see page 27).

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Sound Mode function

When you are viewing a bilingual broadcast programme, you can choose the sound from Dual I (sub I) or Dual II (sub II). If you have poor reception on a stereo broadcast, you can change from stereo to mono sound so that you can hear the broadcast more clearly and easily.

When you are viewing video from an EXT terminal, you can also choose the sound from the left channel, right channel or both.

Stereo   : stereo sound

Mono   : mono sound

Dual I   : sub I sound

Dual II   : sub II sound

Dual I + II : sub I and sub II sounds

L+L   : left channel sound

R+R   : right channel sound

L+R   : left and right channel sounds

Press the ⊙I/II button to choose a Sound Mode

• The sound mode you can choose differs depending on the TV programme and input video.
• You can also choose a Sound Mode with the "Sound menu" (see page 22).

Picture Mode function

You can choose one of the Picture Modes to adjust the picture settings automatically.

Press the PICTURE/OK button several times to select a suitable Picture Mode
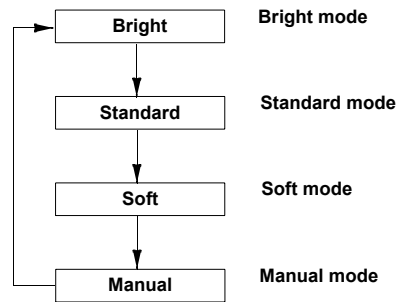
Bright	→ Bright mode
Standard	→ Standard mode
Soft	→ Soft mode
Manual	→ Manual mode

Bright:
Heightens contrast and sharpness.

Standard:
Standardizes picture adjustment.

Soft:
Softens contrast and sharpness.

Manual:
Your own customised picture mode.

• You can also choose a Picture Mode and customise the Manual mode with the "Picture menu" (see page 20).

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Operating a JVC brand VCR or DVD player

These buttons will operate a JVC brand VCR or DVD player. Pressing a button that looks the same as the device's original remote control button has the same effect as the original remote control.

1 Set the VCR/TELETEXT/DVD Switch to the VCR or DVD position

VCR:

When you are operating the VCR, set the switch to the VCR position.

• You can turn the VCR on or off with the ⏻/❘ (standby) button.

DVD:

When you are operating the DVD player, set the switch to the DVD position.

• You can turn the DVD player on or off with the ⏻/❘ (standby) button.

2 Set the VCR/DVD control buttons to control your VCR or DVD player

• If your device is not made by JVC, these buttons will not work.
• Even if your device is made by JVC, some of these buttons may not work, depending on the device you are using.
• You can use the ∨/∧ buttons to choose a TV channel the VCR will receive, or choose the chapter the DVD player plays back.
• Some models of DVD player use the ∨/∧ buttons for both operating the fast forward/backward functions and for choosing the chapter. In this case, the ◀◀/▶▶ buttons do not work.

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Teletext function
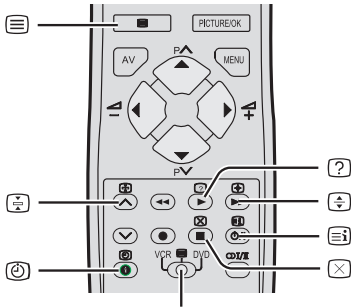
VCR/TELETEXT/DVD switch

Basic operation

1 Choose a TV channel with a teletext broadcast

2 Set the VCR/TELETEXT/DVD switch to the ▤ (TELETEXT) position

3 Press ▤ (Text) button to display the teletext

Pressing ▤ (Text) button changes the mode as follows:

TV mode   **Text mode**

4 Choose a teletext page by pressing the P ∨/∧ buttons, number buttons or colour buttons

To return to the TV mode:
Press the ▤ (Text) button.

- If you have trouble receiving teletext broadcasts, consult your local dealer or the teletext station.
- The ZOOM function will not work in the Text mode.
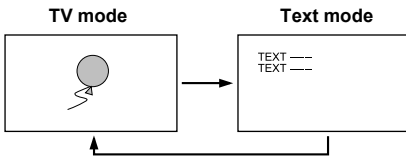- You cannot operate menus when viewing a teletext programme.

Hold

You can hold a teletext page on the screen for as long as you want, even while several other teletext pages are being received.

Press the ⊕ (Hold) button

Hold indication ⎯⎯ HOLD

100 101 102 103
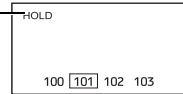
To cancel the Hold function:
Press the ⊕ (Hold) button again.

Sub-page

Some teletext pages include sub-pages that are automatically displayed.

1 Choose a teletext page that includes sub-pages
Sub-page numbers that can be viewed are automatically displayed at the top of the screen.

2 Press the ◎ (Subpage) button

3 Press the number buttons to enter sub-page number

Reveal

Some teletext pages include hidden text (such as answers to a quiz).
You can display the hidden text.

Each time you press the ? (Reveal) button, text is hidden or revealed

1 + 2 =
2 x 3 =

100 101 102 103

1 + 2 = 3
2 x 3 = 6

100 101 102 103
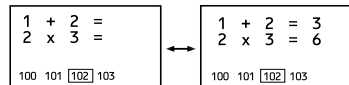
Size

You can double the height of the teletext display.

Press the ⊕ (Size) button
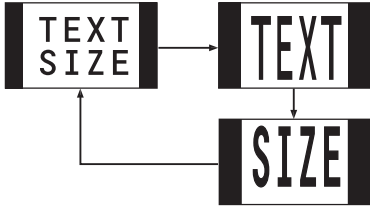
Index

You can return to the index page instantly.

Press the 🗐 (Index) button

Returns to page 100 or a previously specified page.

Cancel

You can search for a teletext page while watching TV.

1 Press the number button to enter a page number, or press a colour button

The TV searches for a teletext page.

2 Press ⊠ (Cancel) button

The TV programme appears. When the TV finds the teletext page, its page number appears in the upper left of the screen.

3 Press ⊠ (Cancel) button to return to a teletext page when the page number is on the screen

• The TV mode cannot be resumed by pressing the ⊠ (Cancel) button. To return to the TV mode press the 🗐 **(Text)** button.

Using the TV's menu

This TV has a number of functions you can operate using menus. To use all your TV's functions, you need to understand the basic menu operating techniques fully.

Buttons used to operate the menus

PICTURE/OK button

MENU button
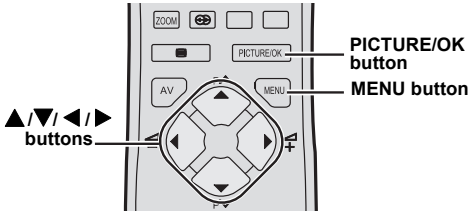
▲/▼/◀/▶ buttons

Basic operation

1 Press the MENU button to display the menu

Picture	
Picture Mode	**Manual**
Bright-1	**32**
Contrast	**44**
Colour	**32**
Sharpness	**0**
Picture Advanced Setting >	
Picture Reset	
◆ ▶ MENU: ↵ OK: ↵	
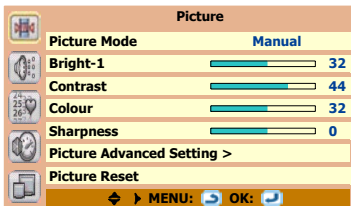
2 Press the ▲ and ▼ buttons to choose the menu you want to use and then press the PICTURE/OK or ▶ button

Chosen menu name

Chosen menu

Sound	
Bass	**-2**
Treble	**0**
Balance	**0**
Hyper Sound	**Off**
Sound Mode	**Stereo**
Sound Reset	
◆ ▶ MENU: ↵ OK: ↵	

3 Press the ▲ and ▼ buttons to choose the item to be set, press the ◀ and ▶ buttons to set the item, or press the PICTURE/OK button to confirm

Items with a '>' symbol behind their names have submenus. Press the **PICTURE/OK** or ▶ button to enter the submenu.

- Press the **MENU** button to return to the previous menu or exit from the menu.
- Some menu items may not be operated or set depending on the TV status or other menu item settings. Menu items that cannot be operated or set are displayed in blue in the menu and cannot be chosen.

Types of menu

 Picture menu
Choose to set the screen settings.

 Sound menu
Choose to set the sound settings.

 Install menu
Choose to edit the channels.

 Feature menu
Choose to set the display language, sleep timer and child lock settings.

 PC Setting menu
Choose to set the PC screen settings.

- The menu will disappear after about 15 seconds if no operation is performed.

Operation with the buttons on the TV
You can also operate the menus using the buttons on the front panel of the TV.

▲/▼ buttons

◀/▶ buttons

TV/AV/OK button

MENU button

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Picture menu

Picture	
Picture Mode	Manual
Bright-1	▭▭▭ 32
Contrast	▭▭▭ 44
Colour	▭▭▭ 32
Sharpness	▭ 0
Picture Advanced Setting >	
Picture Reset	
◆ ▶ MENU: ↰ OK: ↵	
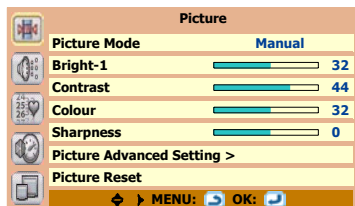
• In the Picture menu, the last setting made for each item is memorised.

Picture Mode

You can choose one of the Picture Modes to adjust the picture settings automatically or customise your own Picture Mode by adjusting the Picture settings.

Bright:
Heightens contrast and sharpness.

Standard:
Standardizes picture adjustment.

Soft:
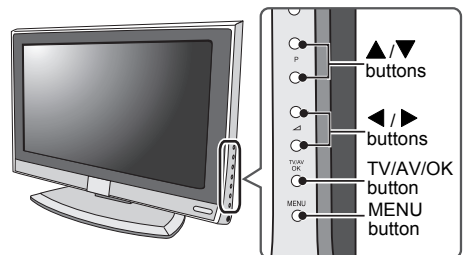Softens contrast and sharpness.

Manual:
Your own customised Picture Mode. When this mode is chosen, you can change the Bright-1, Contrast, Colour and Sharpness settings to suit your preferences.

Bright-1

You can adjust the picture brightness.
◀ : darker
▶ : brighter

Contrast

You can adjust the picture contrast.
◀ : lower
▶ : higher

Colour

You can adjust the picture colour.
◀ : lighter
▶ : deeper

Sharpness

You can adjust the picture sharpness.
◀ : softer
▶ : sharper

Picture Reset

You can reset all settings in the Picture menu using this function.

Press the PICTURE/OK or ▶ button to reset the settings

• This function is only available when the Picture Mode is set to Manual.

Picture Advanced Setting

Choose Picture Advanced Setting and press the **PICTURE/OK** or ▶ button to display the sub-menu.

Picture Advanced Setting	
Hue	▭▭▭ 0
Noise Reduction	Low
Colour Temperature	Cool
Bright-2	Bright
◆ ◈ MENU: ↰	
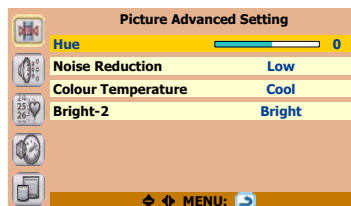
■ Hue
You can adjust the picture hue.
◀ : reddish
▶ : greenish
• You can change the Hue setting (picture hue) when the Colour System is NTSC3.58, or NTSC4.43.

■ Noise Reduction
The Noise Reduction function cuts down the amount of 'noise' ('snow' or interference) in the original picture.
You can choose from the four Noise Reduction function settings of Low, Middle, High and Off.

Low:
The TV will automatically adjust the level of the Noise Reduction effect to match the amount of noise in the picture, giving you the best possible picture.
• If you set the Noise Reduction effect too high it can make the picture less sharp. It is recommended you use the Low setting if you can. If you set the Noise Reduction function to Low but still notice some noise, change the setting from Low to Middle.

Middle:
The level of the Noise Reduction effect is set to the medium. If you set the Noise Reduction function to Low but feel that the sharpness of the original picture has not been reproduced fully, change the setting from Low to Middle.
• The Middle setting is not suitable for low-quality pictures which contain a lot of noise.

High:
The level of the Noise Reduction effect is set to the maximum. If you set the Noise Reduction function to Middle but still notice some noise, change the setting from Middle to High.
• The High setting is not suitable for high-quality pictures which contain very little noise.

Off:
Turns off the Noise Reduction function.

■ **Colour Temperature**
You can select one of three Colour Temperature modes (three tones of white) to adjust the white balance of the picture. Since white is the colour which is used as a reference for all the other colours, changing the Colour Temperature mode affects the appearance of all the other colours on the screen.

Cool:
A bluish white. Using this mode when watching bright pictures allows you to enjoy a more vivid and bright picture.

Normal:
The normal white colour.

Warm:
A reddish white. Using this mode when watching films allows you to enjoy colours that are characteristic of films.

■ **Bright-2**
You can adjust the back light.

Normal:
For viewing in normal conditions.

Bright:
For viewing in environments with bright ambient lighting.

Power Save:
For viewing in darker environments.

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Sound menu

Sound	
Bass	-2
Treble	0
Balance	0
Hyper Sound	Off
Sound Mode	Stereo
Sound Reset	

◆ ▶ MENU: ↩ OK: ↵
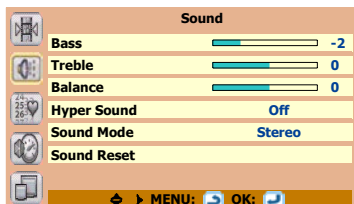
- In the Sound menu, the last setting made for each item is memorised.

Bass

You can adjust the low tone of the sound.
◄ : weaker
► : stronger

Treble

You can adjust the high tone of the sound.
◄ : weaker
► : stronger

Balance

You can adjust the volume balance between the left and right speaker.
◄ : decrease the right speaker's volume level.
► : decrease the left speaker's volume level.

Hyper Sound

You can enjoy Surround sound with a "live" effect by using the Hyper Sound function.

- You can choose to turn on or off the Hyper Sound function. For details, see "Hyper Sound function" on page 14.
- You can also operate the Hyper Sound function with the ⊕ button. For details, see "Hyper Sound function" on page 14.

Sound Mode

When you are viewing a bilingual broadcast programme or input video from an EXT terminal, you can choose a suitable sound mode.

- For details, see "Sound Mode function" on page 15.
- You can also operate the Sound Mode function with the ⊙I/II button. For details, see "Sound Mode function" on page 15.

Sound Reset

You can reset all settings in the Sound menu using this function.

Press the PICTURE/OK or ► button to reset the settings

Install menu
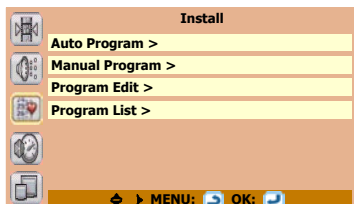
Auto Program

You can again perform the Auto Program function TV channel automatic registration which was performed in the "Initial settings (Setup tour)" (page 7).

1 Choose Auto Program, then press the PICTURE/OK or ▶ button

The Auto Program menu appears.

2 Press the ◀ and ▶ buttons to choose the country where you are, then press the ▼ button

3 Press the PICTURE/OK or ▶ button to start the Search function

The TV channels you receive are automatically stored in the Programme numbers (Pr.).

• To stop the Search function:
Press the **MENU** button.

4 After the TV channels have been registered in the Programme numbers (Pr.), the first stored TV channel will be displayed

Manual Program

With the Manual Program function, you can manually store a new TV channel on a particular Programme number (Pr.).

1 Choose Manual Program, then press the PICTURE/OK or ▶ button

The Manual Program menu appears.
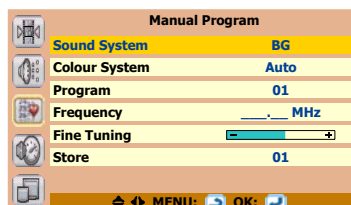
**2 Press the ◀ and ▶ buttons to choose the Sound System (broadcasting system) for a TV channel you want to register**

For the Sound Systems in each country or region, refer to the table below:

Area	Country or Region	System
Asia, Middle East	Bahrain, Kuwait, Oman, Qatar, United Arab Emirates, Yemen, etc. Indonesia, Malaysia, Singapore, Thailand, India, etc.	BG
	China, Vietnam, etc.	DK
	Hong Kong, etc.	I
	Islamic Republic of Iran, Lebanon, Saudi Arabia, etc.	BG
	Philippines, Taiwan, Myanmar, etc.	M
Europe	Russia, etc.	DK
	Czech Republic, Poland, etc.	DK
	Germany, Holland, Belgium, etc.	BG
	UK, etc.	I
Oceania	Australia, New Zealand, etc.	BG
Africa	Republic of South Africa, etc.	I
	Nigeria, etc.	BG
	Egypt, Morocco, etc.	BG

3 Press the ▼ button to choose Program, then press the ◄ and ► buttons to choose a Programme number (Pr.) for a new TV channel

4 Press the ▼ button to choose Frequency, then press the ◄ and ► buttons to search for a TV channel
Scanning stops when the TV finds a TV channel. Then the TV channel is displayed.

• If you know the exact frequency of the new channel, you can also enter the frequency using the number buttons.

5 Press the ▼ button to choose Fine Tuning, then press the ◄ and ► buttons to fine-tune the reception of TV signal

• Fine-tuning is necessary only when the TV channel reception is poor.

6 Press the ▼ button to choose Store, then press the PICTURE/OK button to register the TV channel to a Programme number (Pr.)
The Programme number (Pr.) stops blinking, indicating that the TV channel has been successfully registered.

Program Edit

With the Program Edit function, you can perform the following operations to existing TV channels:

Name:
This function registers a channel name (ID) to a TV channel.

Swap:
This function changes the programme number (Pr.) of a TV channel.

Delete:
This function deletes a TV channel you do not want to list.

Caution

• Using the Name, Swap or Delete functions rewrites the current Programme numbers (Pr.) list. Therefore, the Programme numbers (Pr.) of some of the TV channels will change.

■ Basic operation

1 Choose Program Edit, then press the PICTURE/OK or ► button
The Program Edit menu appears.

2 Follow the description for the function you want to use

■ Name

1 Press the ◄ and ► buttons to choose a Programme number (Pr.), then press the ▼ button to choose Name

• You can also press the number buttons to choose a Programme number (Pr.) directly.

2 Press the ► button to start editing the name

3 Press the ◀ and ▶ buttons to move the cursor, and press the ▲ and ▼ buttons to choose each character of the channel name

4 Press the PICTURE/OK button to store the name

■ **Swap**

1 Press the ◀ and ▶ buttons (or the number buttons) to choose a Programme number (Pr.), then press the ▼ button to choose Swap

2 Press the number buttons to choose a new Programme number (Pr.)

To cancel the Swap function:
Press the **MENU** button.

3 Press the PICTURE/OK button to change the Programme number (Pr.) of a TV channel to a new Programme number (Pr.)

■ **Delete**

1 Press the ◀ and ▶ buttons (or the number buttons) to choose a TV channel

2 Press the PICTURE/OK button to delete the TV channel

The TV channel is deleted from the Programme numbers (Pr.) list.

Program List

With the Program List function, you can quickly jump to a TV channel directly.

1 Choose Program List, then press the PICTURE/OK or ▶ button

The Program List appears.

Program List			
01	------	08	------
02	------	09	------
03	------	10	------
04	------	11	------
05	------	12	------
06	------	13	------
07	------	14	------
⬦ ⬦ MENU: ↩ OK: ↵			

• An EXT terminal number does not appear in the Programme numbers (Pr.) list.

2 Press the ▲ / ▼ / ◀ / ▶ buttons to choose a TV channel

The chosen TV channel picture is displayed in the background.

3 Press the MENU button to remove the Program List

Colour System

The colour system is chosen automatically. However, if the picture is not clear or no colour appears, choose the colour system manually.

Choose Colour System, then press the ◄ and ► buttons to choose the appropriate colour system

PAL:
PAL system
SECAM:
SECAM system
NTSC3.58:
NTSC3.58 MHz system
NTSC4.43:
NTSC4.43 MHz system
Auto:
This function detects a colour system from the input signal.

- The Auto function may not function properly if you have poor signal quality. If the picture is abnormal in the Auto function, choose another colour system manually.
- Colour System cannot be chosen when you are watching the PC picture.
- Available Colour System options vary according to current selected input signal type.

For colour system in your country or region, refer to the table below:

Area	Country or Region	System
Asia, Middle East	Bahrain, Kuwait, Oman, Qatar, United Arab Emirates, Yemen, etc. Indonesia, Malaysia, Singapore, Thailand, India, etc.	PAL
	China, Vietnam, etc.	PAL
	Hong Kong, etc.	PAL
	Islamic Republic of Iran, Lebanon, Saudi Arabia, etc.	SECAM
	Philippines, Taiwan, Myanmar, etc.	NTSC
Europe	Russia, etc.	SECAM
	Czech Republic, Poland, etc.	PAL
	Germany, Holland, Belgium, etc.	PAL
	UK, etc.	PAL
Oceania	Australia, New Zealand, etc.	PAL
Africa	Republic of South Africa, etc.	PAL
	Nigeria, etc.	PAL
	Egypt, Morocco, etc.	SECAM

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Feature menu

Feature	
Language	English
Aspect Ratio	Full
Sleep Timer	Off Minutes
Child Lock	Off
Blue Back	On

♦ ▶ MENU: ↩ OK: ↵

• In the Feature menu, the last setting made for each item is memorised.

Language

The Language setting which was performed in the "Initial settings (Setup tour)" (page 7)

Press the ◀ and ▶ buttons to choose a language

Aspect Ratio

You can change the screen size according to the picture aspect ratio. For details about the Aspect Ratio settings, see "ZOOM function" on page 13.

Press the ◀ and ▶ buttons to choose a setting

Sleep Timer

You can set the TV to automatically turn off after a set period of time. For details, see "Sleep Timer function" on page 14.

Press the ◀ and ▶ buttons to set the period of time

Child Lock

You can use this function to prevent children changing programmes or adjustments etc. without remote control.

**Press the ◀ and ▶ buttons to turn the function on or off**

When "Off" is selected, there will be no difference in the operation of your TV. When "On" is selected, the TV can only be controlled by the remote control handset. In this case the control panel buttons, except ⏻ button, on the TV will not work.

Blue Back

You can set the TV to automatically change to a blue screen and mute the sound if the signal is weak or absent, or when there is no input from an external device.

Press the ◀ and ▶ buttons to turn the function on or off

PC Setting menu

PC Setting	
Auto	
Dot Clock	0
Clock Phase	-7
H. Position	
V. Position	
◆ ▶ MENU: ⟲ OK: ⏎	
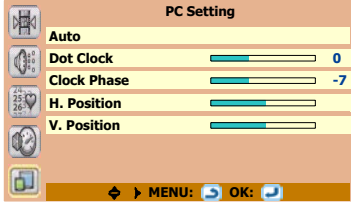
- This menu is only available when the TV is displaying a computer screen. For details about how to display a computer screen, see "Displaying a computer screen" on page 29.
- In the PC Setting menu, the last setting made for each item is memorised.

Auto

If you shift the picture horizontally or vertically to an unwanted position, use this function to put the picture into correct place automatically.

Press the PICTURE/OK button to begin auto adjustment

Dot Clock

This function corrects interference that may appear as vertical banding in dot intensive presentations like spreadsheets or paragraphs or text in smaller fonts.

Press the ◄ and ► buttons to adjust the value

Clock Phase

Depending on the resolution and scan frequency of the PC input. you may see a muddy or noisy picture on the screen. In such case you can use this function to get a clear picture.

Press the ◄ and ► buttons to adjust the value

H. Position

This function shifts the image horizontally to right hand side or left hand side of the screen.

Press the ◄ and ► buttons to adjust the value

V. Position

This function shifts the image vertically towards the top or bottom of the screen.

**Press the ◄ and ► buttons to adjust the value**

Displaying a computer screen

This TV can be used as a computer screen.

Connecting to the computer

Use a D-SUB cable to connect the TV's PC IN RGB terminal to the computer's analogue RGB output terminal.
If you want to listen to the sound from the computer, use an audio cable to connect the TV's PC IN AUDIO terminal to the computer's sound output terminal.
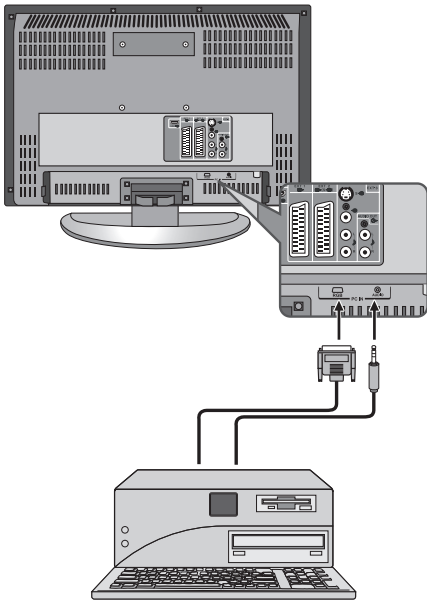
- Refer to the computer manual for a detailed explanation of the connections at the computer side.
- Ensure that the connectors are facing the correct way when connecting.
- After connecting the D-SUB cable, tighten the two screws to fix the connector in place.

Watching images from a computer

After starting the computer, press the AV button to choose "PC"

You can listen to the sound when the sound from the computer is connected to the PC IN AUDIO terminal.

Table of signals for each type of computer

Resolution	Vertical frequency (Hz)	Horizontal frequency (kHz)
720 × 400 (VGA70)	70.08	31.47
640 × 480 (VGA)	60	31.5
640 × 480 (VGA)	67	35
640 × 480 (VGA)	75	37.5
640 × 480 (VGA)	72.81	37.86
800 × 600 (SVGA)	56.25	35.16
800 × 600 (SVGA)	60.32	37.9
800 × 600 (SVGA)	75	46.9
800 × 600 (SVGA)	72.19	48.08
1024 × 768 (XGA)	60	48.4
1024 × 768 (XGA)	70	56.5
1024 × 768 (XGA)	75	60
1360 × 768 (WXGA)	60	47.7

* Only the above formats are supported.
* Even with the above formats, some problems may be experienced depending on the quality of the synchronous signal. (Depending on the quality, some pictures may not be displayed properly.)

When a picture is not displayed
Check the computer's refresh rate and set it according to the table above. Refer to the computer's instruction manual.
Computers which cannot have compatible refresh rates cannot be used with this unit.

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Additional preparation

Connecting external equipment

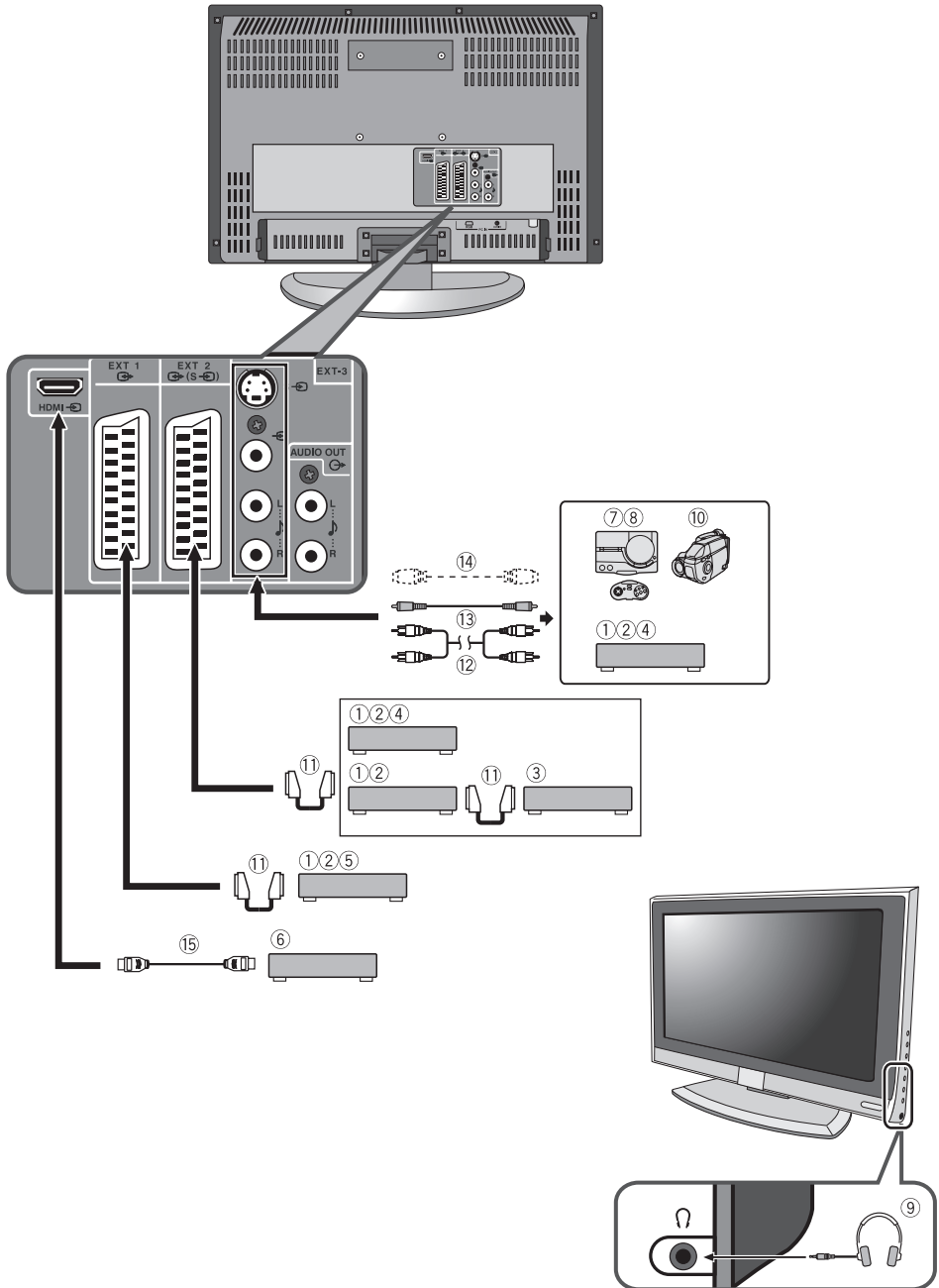Connect the equipment to the TV, making the correct connections.

Before connecting anything:

• Read the manuals that came with the equipment.
  Depending on the equipment, the connection method may be different from the diagram. Also, the equipment settings may need to change depending on the connection method.

• Turn off all the equipment including the TV.

• The "Specifications" on page 35 give the details of the EXT terminals. If you are connecting equipment not listed in the following connection diagram, see the table to choose the best EXT terminal.

• Connecting cables are not supplied.

■ **Connecting the PC**
  For details, see "Connecting to the computer" on page 29.

① VCR (composite signal)
② VCR (composite signal/S-VIDEO signal)
③ Decoder
④ DVD player (composite signal/S-VIDEO signal)
⑤ DVD player (composite signal/RGB signal)
⑥ DVD player (digital audio/video signal; HDMI)
⑦ TV game (composite signal/RGB signal)
⑧ TV game (composite signal/S-VIDEO signal)
⑨ Headphones
⑩ Camcorder (composite signal/S-VIDEO signal)
⑪ SCART cable
⑫ Audio cable
⑬ Video cable
⑭ S-VIDEO cable
⑮ HDMI cable

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■ **Equipment which can output the composite signal such as a VCR**

Connect the equipment to the EXT-1, EXT-2 or EXT-3 ⊸ terminal.

■ **Equipment which can output the S-VIDEO signal (Y/C signal) such as an S-VHS VCR**

Connect the equipment to the EXT-2 or EXT-3 **S** ⊸ terminal.

■ **Equipment which can output the digital audio/video signal (HDMI) such as a DVD player**

Connect the equipment to the HDMI ⊸ terminal.

■ **Connecting headphones**

Connect the headphones with a stereo mini-jack (3.5 mm diameter) to the headphone socket at the TV rear panel.

• No sound comes from the TV speakers when the headphones are connected.

■ **TV output from the EXT-1 terminal**

The video/sound signal of a TV channel you are viewing is always output from the EXT-1 terminal.

• Changing over a Programme number (Pr.) also changes over the TV output from the EXT-1 terminal.
• Teletext programmes cannot be output.

■ **TV and video output from the EXT-2 terminal**

The video/sound signal of a TV channel is output from the EXT-2 terminal when viewing the TV and EXT3-S inputs.

When viewing composite video input from the EXT-1 or EXT-3 ⊸ terminal, the video/sound signal is also output from the EXT-2 terminal.
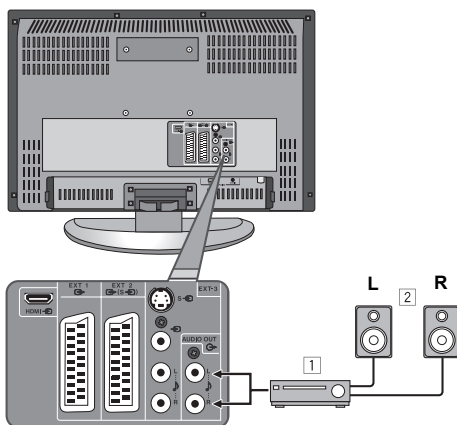
■ **Connecting speakers/amplifier**

While referring to the audio equipment connection diagram, connect the audio equipment you want to the TV.

You can use external front speakers to listen to the TV sound instead of the TV speakers.

Before connecting anything:

• Read the manuals provided with the amplifier and speakers.
• Turn the TV and amplifier off.
• Note that connecting cables are not supplied.

1 Amplifier
2 External speakers (Magnetic-shielded type)

• The output from the AUDIO OUT terminal is not interrupted by headphone connection to the TV. You cannot cut the sound from the front speaker even if you connect a headphone to the TV.
• Adjust the volume of the external speakers with the amplifier.

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Troubleshooting

If a problem arises while you are using the TV, please read this troubleshooting guide carefully before you ask to have the TV repaired. You may be able to fix it easily by yourself. For example, if the mains plug is disconnected from the mains outlet, or the TV aerial has problems, you may think there is a problem with the TV itself.

Important:
- This troubleshooting guide only covers problems whose causes are not easy to decide. If you have a question when you are operating a function, read the page(s) for that function carefully, not this troubleshooting guide.
- If you follow the advice in this troubleshooting guide without any success, unplug the mains plug and ask for your TV to be repaired. Do not attempt to repair the TV by yourself or to remove the rear cover of the TV.

■ If you cannot turn on the TV
- Is the mains plug connected to the mains outlet?
- Is the power lamp lit? If not, press the ⏻ button on the TV.

■ No picture or no sound
- Have you chosen a TV channel with very poor reception? If so, the Blue Back function will be activated: the entire screen becomes blue, and the sound is muted. If you still want to view the TV channel, follow the description "Blue Back" on page 27 to change the Blue Back function setting to Off.
- If the Sound System setting for a TV channel is incorrect, it may prevent the sound from being issued. Follow the description "Manual Program" on page 23 to use the Manual Program function to try to change the Sound System setting.

■ Poor picture
- If noise (snow) totally blocks out the picture, there may be a problem with the aerial or aerial cable. Check the following to try to solve the problem:
  - Have the TV and aerial been connected properly?
  - Has the aerial cable been damaged?
  - Is the aerial pointing in the right direction?
  - Is the aerial itself faulty?
- If the TV or aerial suffers interference from other equipment, stripes or noise may appear in the picture. Move any equipment such as an amplifier, personal computer, or a hair drier, that can cause interference away from your TV. Or try moving the TV. If the aerial suffers interference from a radio tower or high-voltage wire, please contact your local dealer.
- If the TV suffers interference from signals reflecting from mountains or buildings, double-pictures (ghosting) will occur. Try to change the aerial's direction or replace it with one with better directionality.
- Are your Colour System settings correct? Follow the description "Colour System" on page 26 to try to solve the trouble.
- Have the Colour and Bright-1 settings been adjusted properly? Follow the description "Colour" and "Bright-1" on page 20 to try to adjust them properly.
- Videotaping teletext is not recommended because it may not record correctly.
- When viewing images from commercially available video software products, or videos from videotapes which have been recorded improperly, the top of the image may be distorted. This is due to the condition of the video signal. There is nothing wrong with the TV.

■ Poor sound
- Have you adjusted Bass or Treble properly? If not, follow the description "Bass" or "Treble" on page 22.
- When TV channel reception is poor, it can be hard to hear stereo or bilingual sound. In this case, follow the description "Sound Mode" on page 22 to hear the sound more easily by changing it to a mono sound.

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■ If the TV does not respond to the remote control

- Have the batteries of the remote control worn out? Follow the description "Putting the batteries into the remote control" on page 7 and replace them with new batteries.
- Have you attempted to use the remote control from the sides or rear of the TV or from more than seven metres away from the TV? Use the remote control in front of your TV or from less than seven metres away.
- When you are viewing a teletext programme, you cannot operate the menus. Press the ▤ (Text) button to return to the ordinary TV programme, and then try operating the menus.
- If the TV suddenly stops responding, disconnect the power cord of the TV from the AC outlet. Connect them to the AC outlet again to turn on the TV. If the TV returns to a normal state, it is not a failure.

■ Other issues

- When the Sleep Timer function operates, the TV is automatically turned off. If the TV suddenly turns off, try to press the ⏻/❙ (standby) button to turn on the TV once again. If the TV goes back to normal, there is no problem.
- It takes a short period of time from the time an operation such as changing channels is performed until an image is displayed. This is not a fault. This is the time needed for the image to stabilize before it can be displayed.
- The TV may make a crackling sound due to a sudden change in temperature. The picture or sound may be normal. If you hear crackling sounds frequently while you are viewing the TV, there may be other causes. As a precaution, ask your service technician to inspect it.
- The top of the TV and the screen may become hot during use but this has no affect on the performance of the TV. Make sure that the ventilation holes are not blocked.

- When the picture is unstable, the screen may become white for a moment. This happens when the signal which drives the liquid crystal is missing. This is not a fault.
- When a still image has been displayed for a long period, a faint residual image may remain on the screen for a short time after the power has been turned off or when another image is displayed. This is not a fault and the image will eventually disappear.

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Specifications

Model	LT-20BW7BJ
Broadcasting systems	I (UHF / VHF)
Colour systems	PAL • The EXT terminals also support the NTSC3.58 and NTSC4.43 systems
Channels and frequencies	47-862MHz
Sound-multiplex systems	NICAM (I) system
Teletext systems	FLOF (Fastext)
Power requirements	220 - 240 V AC, 50/60 Hz
Power consumption	70 W (Standby: < 1 W)
Screen size	Viewable area 50.8 cm (measured diagonally)
Audio output	Rated Power output: 3 W + 3 W
Speakers	2.5 cm round × 2
EXT-1 terminal	Euroconnector (21-pin, SCART) • Video input, Audio L/R inputs and RGB inputs are available. • TV broadcast outputs (Video and Audio L/R) are available.
EXT-2 terminal	Euroconnector (21-pin, SCART) • Video input, S-VIDEO (Y/C) input and Audio L/R inputs are available. • Video and Audio L/R outputs are available.
EXT-3 terminal	RCA connectors × 3 (composite input) S-VIDEO connector × 1
HDMI terminal	HDMI connector × 1 • 480p, 576p, 720p and 1080i signals are available.
AUDIO OUT terminal	RCA connectors × 2 • Audio L/R outputs are available. • Output level 500 Vrms.
PC INPUT terminal	Analog RGB D-SUB (15 pin) × 1 • PC signal is available. Refer to page 29 for details of the signals which can be input. PC audio stereo mini-jack (3.5 mm in diameter) × 1
Headphone jack	Stereo mini-jack (3.5 mm in diameter)
Dimensions (W × H × D)	533 mm × 348 mm × 107 mm (TV only) 533 mm × 386 mm × 236 mm (with stand)
Weight	6.76 kg (TV only) 7.51 kg (with stand)
Accessories	Remote control unit × 1 (RM-C1514) AA/R6 dry cell battery × 2

We may change the design and specifications without notice.
Pictures displayed on the screen using this TV's ZOOM functions should not be shown for any commercial or demonstration purpose in public places (cafes, hotels, etc.) without the consent of the owners of copyright of the original picture sources, as this would be an infringement of copyright.

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