

ENGLISH DEUTSCH FRANÇAIS NEDERLANDS CASTELLANO ITALIANO PORTUGUÊS



JVC

InteriArt

LT-32C50BU LT-26C50BU LT-32C50SU LT-26C50SU



INSTRUCTIONS

WIDE LCD PANEL TV

16:9 LCD TV	BEDIENUNGSANLEITUNG
TELEVISEUR A ECRAN LCD PANORAMIQUE	MANUEL D'INSTRUCTIONS
BREEDBEELD LCD TV	GEBRUIKSAANWIJZING
TELEVISOR CON PANEL LCD PANORÁMICO	MANUAL DE INSTRUCCIONES
TV LCD WIDESCREEN	ISTRUZIONI
TELEVISOR COM ECRÃ PANORÂMICO DE CRISTAL LÍQUIDO	INSTRUÇÕES



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.

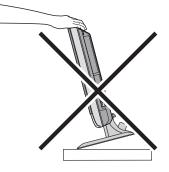
WARNING

• 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 below. The TV should always be carried by two people.



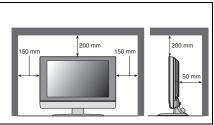
Pixel defects

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.

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.

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 110 240 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.

D.I.S.T. demonstration

To start the D.I.S.T. demonstration:

Press the **MENU** button to display the menu bar. Then press the yellow button.

A picture split in two (D.I.S.T. turned on and D.I.S.T. turned off) will appear on the screen.

To quit the D.I.S.T. demonstration:

Press the yellow button, **TV** button, **P** \vee / \wedge buttons or any of the number buttons.

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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 5° up, 10° down, and 20° to the left or right.

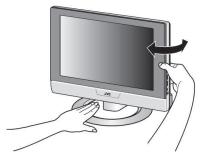
■ Tilt the TV up and down:

While holding the bottom of the stand with one hand, use your other hand to hold the middle of the top of the TV and slowly tilt the TV up and down.

• As a safety measure, the stand needs a certain amount of force to tilt the TV.

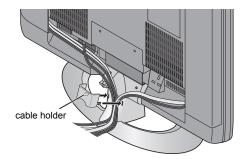


Rotate the TV to the left and right: While holding the bottom of the stand with one hand, use your other hand to hold the edge of the panel and slowly adjust the direction of the TV screen.



Cable holder

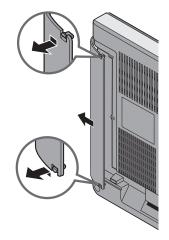
A cable holder which is used to keep the connection cables tidy is attached to the back of the stand. Gently squeeze the left and right of the cable holder and pull it to remove it from the stand. After putting the cables in the cable holder, attach it to the back of the stand again.



Removing the terminal covers

There are connection terminals behind the covers on the left and right of the rear of the TV. Remove these two covers before connecting an antenna or VCR.

Remove the covers by removing the hooks. When replacing the covers, place the side of the covers against the TV and insert the hooks.



• Leave the covers off if they do not fit properly. Do not force to replace the covers. Doing so may cause damage to the connection cables and the covers.

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.
- If you are connecting a VCR, follow (A) → (B) → (C) in the diagram opposite.
- If you are not connecting a VCR, follow ①.

To use the T-V LINK functions, you must have a T-V LINK compatible VCR connected by a SCART cable © to the EXT-2 terminal on the TV. For details about T-V LINK functions, see "T-V LINK functions" on page 11.

- You can watch a video using the VCR without doing ©. For details, see your VCR instruction manual.
- To connect more equipment, please see "Connecting external equipment" on page 46.
- To connect additional audio equipment, see "Connecting speakers/amplifier" on page 49.
- If you connect a decoder to a T-V LINK compatible VCR, set the DECODER (EXT-2) function to ON. For details, see "DECODER (EXT-2)" on page 41. Otherwise, you will not be able to watch scrambled channels.

without terminal covers Aerial 75-ohm Coaxial Cable 1 75-ohm Coaxial Cable 21-pin SCART (B) Cable To Aerial VCR Input To Aerial Output AV IN/OUT Terminal



Connecting the power cord to the AC outlet

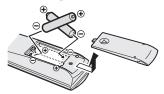
Insert the AC plug on the power cord from the TV into an AC outlet.

Caution

- Operate only from the power source specified (AC 110 – 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

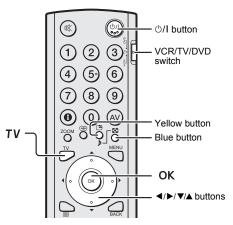
Use two AA/R6 dry cell batteries. Insert the batteries from the \bigcirc end, making sure the \oplus and \bigcirc polarities are correct.



- 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

When the TV is first turned on, it goes into the initial settings mode, and you will see the JVC logo. Follow the instructions on the screen display to make the initial settings.



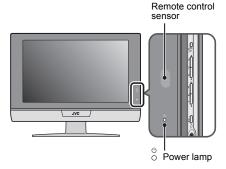
1 Make sure to set the VCR/TV/DVD switch on the remote control to the TV position

• You cannot turn the TV on when the VCR/TV/DVD switch is set to the VCR or DVD position.

2 Press the [⊕]/l button on the remote control

The TV turns on from standby mode and the JVC logo is displayed.

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



• If the JVC logo 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 "SET UP menu" on page 37.

3 Press the OK button

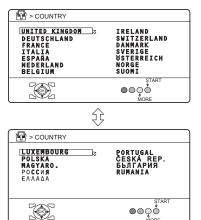
The LANGUAGE menu appears.



4 Press the V/▲ buttons to choose ENGLISH. Then press the OK button

The on-screen display will then be in English.

The COUNTRY menu appears as a submenu of the AUTO PROGRAM function. There are two COUNTRY menus. Pressing the yellow button changes the COUNTRY menu as follows:

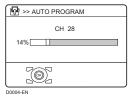


D0003-EM

5 Press the ◀/▶ and ▼/▲ buttons to choose the country where you are

6 Press the blue button to start the AUTO PROGRAM function

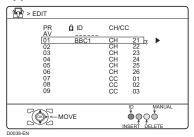
The AUTO PROGRAM menu appears and received TV channels are automatically stored in the programme numbers (PR).



- Perform the "ACI function" operation (see page 10) when "ACI START/ACI SKIP" is displayed.
- To cancel the AUTO PROGRAM function:

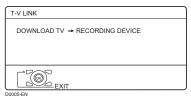
Press the **TV** button.

After the TV channels have been registered in the programme numbers (PR), the EDIT menu appears



- If you want to, you can now edit the programme numbers (PR) using the EDIT/MANUAL function. For details, see "EDIT/MANUAL" on page 37.
- If you do not want to edit programme numbers (PR), go to the next step.

7 Press the **OK** button to display the T-V LINK menu



If you do not have a T-V LINK compatible VCR connected:

Press the **TV** button to exit the T-V LINK menu.

The T-V LINK menu disappears.

If you have a T-V LINK compatible VCR connected to the EXT-2 terminal:

Follow the operating procedure "Downloading the data to VCR" on page 11 to transmit the Programme number (PR) data.

Now, the initial settings are complete, and you can watch the TV

- If your TV can detect the TV channel name from the TV channel broadcast signal, the TV channel name is assigned to the programme number (PR) to which the TV channel has been set. However, which TV channels are set to which programme numbers (PR) will depend on the area in which you live.
- If a TV channel you want to view is not set to a programme number (PR), you can set it using the MANUAL function. For details, see "EDIT/MANUAL" on page 37.
- The AUTO PROGRAM function does not set the programme number PR 0 (AV) for your video cassette recorder. You will need to set this using the MANUAL function.

ACI function

This TV has an ACI function which decodes the ACI (Automatic Channel Installation) data.

Using the ACI function allows all TV channels transmitted from the cable TV station to be properly registered quickly according to the data from the cable TV station.

If "ACI START/ACI SKIP" appears in the AUTO PROGRAM menu:

You can use the ACI (Automatic Channel Installation) function to decode the ACI data and complete the registration of all the TV channels in a short period of time.

Press the ▼/▲ buttons to choose ACI START. Then press the OK button to start the ACI function

Depending on your cable TV station, there may be a broadcast selection menu set up by the cable TV station.

Follow the menu instructions and use the $\triangleleft/\triangleright$ and \forall/\blacktriangle buttons to operate the menu. After you have made the setting, press the **OK** button.

- If you have any questions about the items in the Broadcast Selection menu or how to operate the menu, please contact your cable TV station.
- If you do not want to use the ACI function, press the V/▲ buttons to choose ACI SKIP and then press OK.
- When the cable TV broadcast reception is poor, the ACI function will not work properly.
- If there is an error in the ACI data itself, the TV channel cannot be registered properly. If this happens, turn the ACI function off (ACI SKIP) and use the AUTO PROGRAM function. Alternatively, use the EDIT/MANUAL function to correct the Programme number (PR) setting.

If "ACI ERROR" is displayed in the AUTO PROGRAM menu:

"ACI ERROR" means that the ACI function is not working properly. Press the ◀ button to start the ACI function again.

If "ACI ERROR" still appears even after you have tried to start the ACI function several times, press the ▶ button to start the AUTO PROGRAM function. It does not cause any problem because all the TV channels are registered to the Programme numbers (PR) by the AUTO PROGRAM function.

Downloading the data to VCR

You can transmit to the latest Programme numbers (PR) data to a VCR with the T-V LINK function.

Caution

- This only works when a T-V LINK compatible VCR is connected to the EXT-2 terminal.
- This only works when the T-V LINK menu is being displayed.

T-V LINK	٦
DOWNLOAD TV → RECORDING DEVICE	
D0005-EN	

1 Turn on the VCR

2 Press the OK button

The data transmission begins.

TV → RECORDING DEVICE	
TRANSFER	
D0037-EN	

The T-V LINK menu disappears once the data transmission ends.

When the T-V LINK menu is changed over to another menu:

The TV has finished its menu. This new menu is operated from the VCR. See the VCR instruction manual for what to do next.

If "FEATURE NOT AVAILABLE" appears at the T-V LINK menu:

Check the following three items. Then press the ◀ button to retry data transmission.

- Has a T-V LINK compatible VCR been connected to the EXT-2 terminal?
- Has the VCR power been turned on?
- Does the SCART cable that is connected to the EXT-2 terminal to T-V LINK compatible VCR have all its proper connections?

T-V LINK functions

When you have a T-V LINK compatible VCR connected to the EXT-2 Terminal on the TV, it is easier to set up the VCR and to view videos. T-V LINK uses the following features:

To use T-V LINK functions:

A "T-V LINK compatible VCR" means a JVC video cassette recorder with the T-V LINK logo, or with one of the following logos. However, these VCRs may support some or all of the features described earlier. For details, see your VCR instruction manual.

"Q-LINK" (a trademark of Panasonic Corporation)

"Data Logic" (a trademark of Metz Corporation)

"Easy Link" (a trademark of Phillips Corporation)

"Megalogic" (a trademark of Grundig Corporation)

"SMARTLINK" (a trademark of Sony Corporation).

Pre-set download

The VCR will automatically download the registered data on the TV channels from the TV. This means you do not need to set up the program channels on your VCR manually. The preset download function automatically begins when the initial setting is complete or whenever you carry out the AUTO PROGRAM or EDIT/MANUAL functions.

You can also carry out this function using your VCR controls.

When "FEATURE NOT AVAILABLE" is displayed:

If "FEATURE NOT AVAILABLE" is displayed, the download was not performed correctly. Before trying to download again, check that:

- the VCR power is turned on
- the VCR is T-V LINK compatible
- the VCR is connected to the EXT-2 terminal
- the SCART cable is fully wired.

Direct Rec

"What You See Is What You Record" You can easily record to VCR the images that you are watching on the TV.

For details, read the manual for your VCR. Use your VCR controls. "DEVICE IS RECORDING" is displayed.

In the following situations, the VCR will stop recording if the TV is turned off, if the TV channel or input is changed, or if the menu is displayed on the TV:

- when recording images from an external device connected to the TV (for example a camcorder)
- when recording a TV channel after it has been unscrambled on a decoder
- when recording a TV channel by using the TV's output because the VCR's own tuner cannot properly receive that channel.

You cannot carry out Direct Rec using your TV's control.

Generally, the VCR cannot record a TV channel that it cannot receive properly on its own tuner, even if you can view that TV channel on the TV. However, some VCRs can record a TV channel by using the TV's output if that channel can be viewed on the TV. For details, see your VCR instruction manual.

When the VCR is not ready, the following messages are displayed.

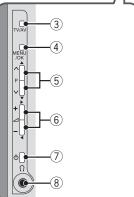
ERROR MESSAGE	Cause and countermeasure
NO RECORDING	The VCR is not able to record. Check the VCR.
NO RECORDING POSSIBLE	The TV input is set to EXT-4 or PC. Since the EXT-4 picture or PC picture cannot be output to EXT-2, DIRECT REC is not possible.
NO RECORDING, MEDIA PROBLEM	The recording device is not ready to record. Check the VCR tape.
NO RECORDING, DEVICE BUSY	The recording device cannot record as it is recording or playing. Check the VCR.

Refer to the VCR instruction manual.

TV buttons and functions







Refer to the pages in parentheses for details.

- 1 Remote control sensor
- 2 Power lamp (page 8)
- ③ TV/AV button (page 13)
- ④ MENU/OK button (pages 14, 28)
- ⑤ P ∨/∧ buttons (page 13)
- ⑥ ∠ (Volume) -/+ buttons (page 14)
- ⑦ ⁽) (Stand by) button (page 13)
- ⑧ Headphone jack (mini jack) (page 46)

Turn the TV on from standby mode

Press the \bigcirc button or the P \lor // buttons to turn the TV on from standby mode.

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

To turn the TV off:

Press the \bigcirc button again. The power lamp goes off.

Caution

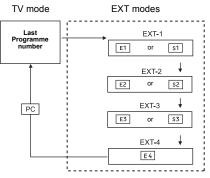
 The ⁽⁾ button on the TV does not fully isolate the TV from the AC supply. If you are not going to use the TV for a long period, be sure to disconnect the AC plug from the AC socket.

Choose a TV channel

Press the P V/A buttons to choose a programme number (PR) or an EXT terminal

Watch images from external devices

Press the TV/AV button to choose an EXT terminal



Adjust the volume

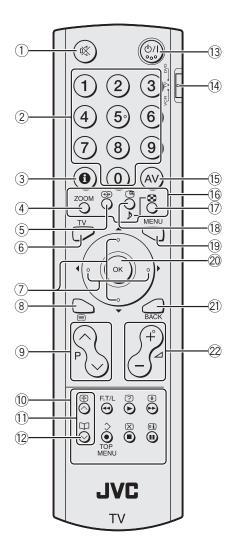
Press the \checkmark (Volume) -/+ buttons The volume level indicator appears.

Using the Menu

Use the MENU/OK button

Refer to "Using the TV's menu" (see page 27) for details of using the menu.

Remote control buttons and functions



- 1 Muting button
- ② Number buttons
- ③ Information button
- ④ **ZOOM** button
- ⑤ ⊕ button
- 6 **TV** button
- ⑦ ◀/►/▼/▲ buttons
- $\textcircled{9} ~ \textbf{P} ~ \lor \land \land buttons \\$
- 10 VCR/DVD/Teletext control buttons
- ∨/∧ buttons
- 12 C (Favourite) button
- (3) Ů/I (Standby) button
- 14 VCR/TV/DVD switch
- 15 AV button
- 16 Colour buttons
- 17 🕑 (Multi) button
- 18 ^(B)/♪ (Freeze/Select) button
- 19 MENU button
- 20 OK button
- 2 BACK button
- 22 ∠ (Volume) –/+ buttons

Turn the TV on or off from standby mode

Press the \bigcirc/I (standby) button to turn the TV on or off

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

 The power can be turned on by pressing the **TV** button, **P** ∨/∧ buttons or Number buttons.

To turn the TV on or off, set the VCR/TV/ DVD switch on the remote control to the TV position and press the \bigcirc/I button. If the VCR/TV/DVD switch on the remote control is set to a position other than TV, the TV will not be turned on or off even if the \bigcirc/I button is pressed.

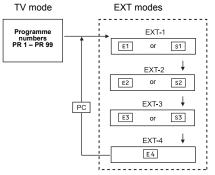
Choose a TV channel and watch images from external devices

Use the number buttons: Enter the programme number (PR) of the channel using the number buttons.

Example:

- PR 6 \rightarrow press **6**
- PR 12 \rightarrow press **1** and **2**
- Use the P ∨/∧ buttons: Press the P ∨/∧ buttons to choose the programme number (PR) you want or an EXT terminal.

Use the AV button: Press the AV button to choose an EXT terminal.



- You can choose a video input signal from the S-VIDEO signal (Y/C signal) and regular video signal (composite signal). For details, see "S-IN (S-VIDEO input)" on page 42.
- If you do not have a clear picture or no colour appears, change the colour system manually. See "COLOUR SYSTEM" on page 32.
- If you choose an EXT terminal with no input signal, the EXT terminal number becomes fixed on the screen.

- This TV set has a function which can automatically change over the input according to a special signal output from an external device. (The EXT-3 terminal does not support this function.)
 - When EXT-4 is chosen, motion differs according to the "COMPONENT AUTO SELECT" setting in the SET UP menu.
 For details, see "COMPONENT AUTO SELECT" on page 42.
- Since this TV is designed to make full use of the resolution of the original video source, the motion may appear unnatural when the video source is input with progressive-scanning component signals. If this happens, change the output setting of the connected device to interlacescanning component signal output. See the instructions that came with the device for more information.
- The PC sound is the same as the EXT-3 sound.

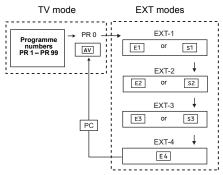
To return to a TV channel:

Press the **TV** button, the $\mathbf{\nabla}/\mathbf{\Delta}$ buttons or the number buttons.

To use the programme number PR 0 (AV):

When the TV and VCR are connected only by the aerial cable, choosing the programme number PR 0 (AV) allows you to view images from the VCR. Set the VCR RF channel to the programme number PR 0 (AV) manually. For details, see "EDIT/ MANUAL" on page 37.

Pressing the **AV** button changes the choice as follows:



- The VCR sends its playback image along the aerial cable as an RF (radio frequency) signal.
- Also see your VCR instruction manual.

Adjust the volume

Press the \checkmark –/+ 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 \ll (muting) button again restores the previous volume level.

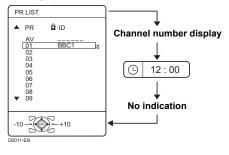
Information function

You can see the channel number of the programme you are watching, the current time or the PR LIST.

From the PR LIST, you can choose a channel or EXT terminal.

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

Pressing the (1) (Information) button changes the display as follows:



Channel number display:

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

Time display:

The current time of the teletext data is displayed.

If the TV has not received a TV channel that has teletext programmes since it was turned on, the time display is blank. To view the current time, choose a TV channel that has teletext programmes.

• An incorrect current time is sometimes displayed when watching videos.

PR LIST:

The programme number (PR) and EXT terminal list is displayed.

Pressing the **OK** button after choosing the programme number (PR) or EXT terminal with the $\blacktriangleleft/\blacktriangleright/\blacktriangledown/\blacktriangle$ buttons will display the chosen programme or EXT terminal.

- For programme numbers (PR) for which the CHILD LOCK function is set, the û (CHILD LOCK) mark is displayed. For details see "CHILD LOCK" on page 34.
- For programme numbers (PR) which is registered as a favourite channel, the the (favourite) mark is displayed. For details see "Favourite channel function" on page 22.

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 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.

If a WSS signal is not included, the picture is displayed according to the ZOOM mode set with the 4:3 AUTO ASPECT function.

- For details of the 4:3 AUTO ASPECT function, see "4:3 AUTO ASPECT" on page 32.
- 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.

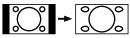
REGULAR:

Use to view a normal picture (4:3 aspect ratio) as this is its original shape.



PANORAMIC:

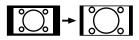
This stretches the left and right sides of a normal picture (4:3 aspect ratio) to fill the screen, without making the picture appear unnatural.



• 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.



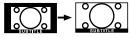
16:9 ZOOM:

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



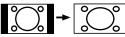
16:9 ZOOM SUBTITLE:

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



FULL:

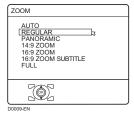
This uniformly stretches the left and right sides of a normal picture (4:3 aspect ratio) to fill the wide TV screen.



• 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

1 Press the **ZOOM** button to display the ZOOM menu



2 Press the V/▲ buttons to choose a ZOOM mode. Then press the OK button

The picture expands and the chosen ZOOM mode is displayed in about 5 seconds.

• The ZOOM mode may be automatically changed by the control signal from an external device. When you want to return to the previous ZOOM mode, choose the ZOOM mode again.

Adjusting the visible area of the picture

If subtitles or the top (or bottom) of the picture are cut off, you can adjust the visible area of the picture manually.

- **1 Press the ZOOM button** The ZOOM menu appears.
- 2 Press the **OK** button to display the ZOOM mode indicator

The indicator appears.



- 3 While it is displayed, press the ▼/▲ buttons to change the position of the picture
 - You cannot adjust the visible area in REGULAR or FULL mode.

The visible area adjustment is saved even after the TV channel is changed. However, it is cancelled if the following operations are performed.

- The power is turned off/on
- The ZOOM mode is changed
- The 💽 (Multi) button, 🕒 (Freeze) button, or 🗐 (Text) button is pressed
- The TV is switched between TV mode and EXT mode

3D SOUND function

You can enjoy sounds with a wider ambience.

• This function does not work for the sound from headphones.

Press the ⊕ button to select one of 3D SOUND modes

HIGH/LOW:

When you listen to stereo sound, please select HIGH or LOW mode. You can enjoy sound similar to the experience at the theatre. When you combine the functions of A.H.B. and BBE, you can enjoy more powerful sound. • When you set the 3D SOUND function to HIGH mode, there may be slight volume distortion. If that occurs, please switch to LOW mode. The effect of 3D SOUND functions will be less noticeable, but the volume distortion will be corrected.

MONO:

Select the MONO mode, when you listen to the mono sound.

You can enjoy the sound for a wider audience similar to stereo sound.

OFF:

The 3D SOUND function switches off.

• You can choose the 3D SOUND mode with the "SOUND menu" (see page 33).

Return to TV channel instantly

You can return to a TV channel instantly.

Press the TV button

The TV returns to the TV mode and a TV channel appears.

Using the "Freeze" function

You can view the current programme as a still picture.

1 Press the 🖱 button

The still picture of the current picture will appear.



To cancel the "Freeze" function:

Press the P button, the $\textcircled{P} \lor \land \land$ buttons or the number buttons.

- The "Freeze" function does not work while a sub-picture is displayed.
- The still picture cannot be output from the TV.
- The "Freeze" function does not work for picture of PC signal.

Using the "Multi-picture" function

1 Press the 🖸 button

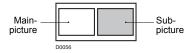
The "Multi-picture" menu appears.

	1	R	2	12
D0101-E	N			

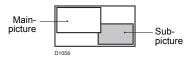
2 Press the ◀/▶ buttons to choose the number of screens and then press the OK button

	Choose to return to one screen.
D0102	
2 3	Choose to change to 2-pictures multi.
D0103	
12 3	Choose to change to 12-pictures multi.
D0104	

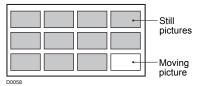
2-pictures multi:



With 1125i and 750p signals, the screen is split into two as shown below.



12-pictures multi:



- When set to 2-pictures multi, you can view a TV picture and a picture from an external device. You cannot view a TV picture on more than one screen at the same time.
- When 12-pictures multi is set, pictures from external devices are not displayed.
- When set to 2-pictures multi, the main-picture can be changed by pressing the
 P ∨/∧ buttons. The sub-picture screen
 can be changed by pressing the ∨/∧
 buttons.

When set to 12-pictures multi and there are more than 12 pictures, the next or previous 12 screens can be displayed by pressing the \vee/\wedge buttons.

Changing the sub-picture Displaying the next or previous 12 screens



- When set to 2-pictures multi, the main-picture sound from the TV speaker can be changed to the sub-picture sound by pressing the *▷* button. (The speaker mark moves from the main-picture to the sub-picture.) The sound changes to the main-picture sound if the *▷* button is pressed again. When the headphones are connected, you can listen to the sound from the side at which the speaker mark is displayed. No sound comes from the TV speaker.
- A picture of EXT-4 cannot be displayed as the sub-picture.
- The "Multi-picture" function does not work for a PC signal.
- You cannot view a scrambled channel in the sub-picture.
- When set to 12-pictures multi, press the ◄/►/▼/▲ buttons to choose the screen you want to view and the press the OK button to display that picture on the whole screen.
- The BLUE BACK function does not work when the "Multi-picture" function is being used.
- The ZOOM function does not work when the "Multi-picture" function is being used.

To return the "Multi-picture" to one screen:

Press the O button, press the \checkmark buttons to choose one screen, and then press the **OK** button.

• Pressing the **TV** button will also return the display to one screen.

Favourite channel function

You can register your favourite TV channels (PR 1 – PR 99) in the number buttons 1 to 4. After registering, the channel can be called by pressing the \square (favourite) button and a number button 1 to 4.

Favourite channel registration

1 In the normal screen, choose a TV channel (PR 1 – PR 99) that you want to register

For details, refer to "Choose a TV channel and watch images from external devices" on page 16.

2 Press and hold the (favourite) button for three seconds or more Then "SET 1-4?" appears on the screen.

3 Press one of the number buttons 1 to 4

The current channel is registered in the pressed number button.

After "PROGRAMMED!" appears on the screen, the favourite channel icon appears at the top-right of the screen.

- If the channel you are trying to register is already registered in one of the other number buttons 1 to 4, "NOT AVAILABLE" appears on the screen.
- Channels locked with the CHILD LOCK function cannot be registered.
- If AUTO PROGRAM is performed, the registered favourite channels are reset.

• When you want to delete a favourite channel, delete the set channel and set contents with FAVOURITE SETTING (see page 36) in the FEATURES menu.

Calling the favourite channel

1 In the normal screen, press the D (favourite) button

Then "FAVORITE1-4?" appears.

2 Press one of the number buttons 1 to 4

The called favourite channel appears on the screen.

• If a number button in which no channel is registered is pressed, "NO MEMORY" appears on the screen.

Setting the picture effect

When a favourite channel has been chosen with the D (favourite) button and number buttons 1 to 4, picture effect settings can be memorised for each favourite channel by setting the picture effects in the PICTURE menu (see page 29).

The following items in the PICTURE menu (see page 29) are memorised.

PICTURE MODE BRIGHT-1 CONTRAST BRIGHT-2 SHARP COLOUR HUE COLOUR TEMP. DIGITAL VNR COLOUR SYSTEM The last setting made for each item is memorised.

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/TV/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 $\bigcirc/1$ (standby) button.

DVD:

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

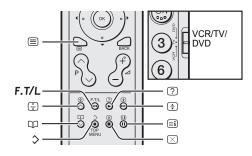
- You can turn the DVD player on or off with the \bigcirc/I (standby) button.
- You can also press the MENU or TOP MENU button and display the DVD disc menu screen, and then operate by pressing the ◄/►/▼/▲ buttons.

2 Press the VCR/DVD Control Button 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 V/A 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.

You cannot turn the TV on or off when the VCR/TV/DVD switch is set to the VCR or DVD position. When you turn the TV on or off, set the

VCR/TV/DVD switch to the TV position.

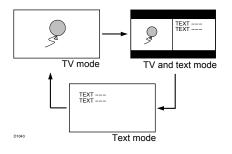


Basic operation

- 1 Choose a TV channel with a teletext broadcast
- 2 Set the VCR/TV/DVD switch to the TV position



Pressing \blacksquare (Text) button changes the mode as follows:



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

To return to the TV mode:

Press the **TV** button or \blacksquare (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 TV and text mode or Text mode.
- You cannot operate menus when viewing a teletext programme.
- Language display depends on the country which was set on the COUNTRY menu. If characters on a Teletext programme do not appear properly, change the COUNTRY setting to other country's. To change the COUNTRY setting, perform steps 1 and 2 of the "AUTO PROGRAM" procedure on page 37 and then press the **OK** button.

Using the List Mode

You can store the numbers of your favourite teletext pages in memory and call them up quickly using the colour buttons.

To store the page numbers:

1 Press **F.T/L** button to go into the List mode

The page numbers you have stored are displayed at the bottom of the screen.

2 Press a colour button to choose a position. Then press the number buttons to enter the page number



3 Press and hold down the ≎ (Store) button

The four page numbers blink white to show that they are stored in memory.

To call up a stored page:

- 1 Press the **F.T/L** button to enter the List mode
- 2 Press a colour button having a stored page

To exit the List mode: Press the **F.T/L** button again.

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



To cancel the Hold function:

Press 🔄 (Hold) button again.

Sub-page

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

1 Choose a teletext page that includes sub-pages

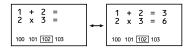
Sub-page numbers that can be viewed are automatically displayed at the top of the screen.

2 Press the ◀/▶ buttons to choose a sub-page number

Reveal

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

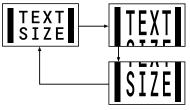
Each time you press the ② (Reveal) button, text is hidden or revealed



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

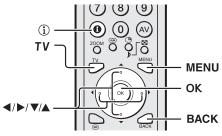
The TV programme appears. When the TV finds the teletext page, its page number appears in the upper left of the screen.

- 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 **TV**.

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



Basic operation

1 Press the **MENU** button to display the menu bar

$\overline{}$	©	Þ	PICTURE	
D0105-EN				

2 Press the ◀/▶ buttons to choose the menu you want to use and then press the OK button



3 Press the V/▲ buttons to choose the item to be set, press the </ >→ buttons to set the item, and then press the OK button

If there are sub-menus, use the $\triangleleft/\triangleright/\lor/\triangleleft$ buttons to operate them.

- Press the **BACK** button to return to the previous menu.
- Press the **TV** or **MENU** button to 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 grey in the menu and cannot be chosen.

Types of menu



PICTURE menu

Choose to set the screen settings.

FEATURES menu



SOUND menu

Choose to set the sound settings.





D0109

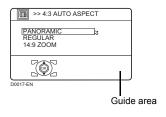
SET UP menu

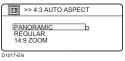
Choose to edit the channels or set the display language settings.

Choose to set the sleep timer and child lock settings.

• The menu will disappear after about one minute if no operation is performed.

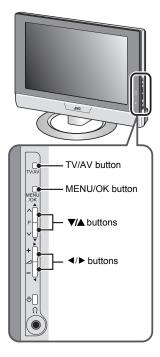
The menu guide area can be made to appear and disappear for some menus. While the menu is displayed, press the button to change between the guide area being displayed and not displayed.

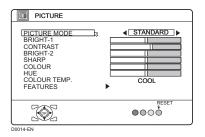




• The guide area for some menus will still be displayed even if the (1) button is pressed. This is not a fault.

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





- While the PICTURE menu is displayed, pressing the blue button will set the BRIGHT-1, CONTRAST, BRIGHT-2, SHARP, COLOUR, HUE settings to their default settings.
- When watching the picture from EXT-1 to EXT-4 or the PC, picture effect settings can be memorised for each external input by setting the picture effects in the PICTURE menu. The following items in the PICTURE menu are memorised. PICTURE MODE BRIGHT-1 CONTRAST **BRIGHT-2** SHARP COLOUR HUE COLOUR TEMP. DIGITAL VNR COLOUR SYSTEM The last setting made for each item is memorised.

PICTURE MODE

You can choose one of three PICTURE MODEs to adjust the picture settings automatically.

BRIGHT:

Heightens contrast and sharpness.

STANDARD:

Standardizes picture adjustment.

SOFT:

Softens contrast and sharpness.

BRIGHT-1

You can adjust the back light.

- ◀ : darker
- ► : brighter

CONTRAST

You can adjust the picture contrast.

- ◄ : lower
- ► : higher

BRIGHT-2

- You can adjust the picture brightness.
- ◀ : darker
- ► : brighter

SHARP

- You can adjust the picture sharpness.
- ◀ : softer
- ► : sharper

COLOUR

- You can adjust the picture colour.
- ◀ : lighter
- ► : deeper

HUE

You can adjust the picture tint.

- :reddish
- ► : greenish
- You can change the HUE setting (picture hue) when the colour system is NTSC 3.58, or NTSC 4.43.

COLOUR TEMP.

You can select one of three COLOUR TEMP. 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 TEMP. 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:

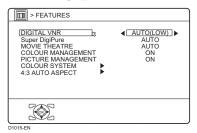
The normal white colour.

WARM:

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

FEATURES

Choose FEATURES and press the **OK** or ► button to display the sub-menu.



DIGITAL VNR

The DIGITAL VNR function cuts down the amount of 'noise' ('snow' or interference) in the original picture.

You can choose from the three DIGITAL VNR function settings of AUTO, MIN and MAX.

AUTO(LOW)/AUTO(HIGH):

The TV will automatically adjust the level of the DIGITAL VNR effect to match the amount of noise in the picture, giving you the best possible picture.

• If you set the DIGITAL VNR effect too high it can make the picture less sharp. It is recommended you use the AUTO(LOW) setting if you can. If you set the DIGITAL VNR function to AUTO(LOW) but still notice some noise, change the setting from AUTO(LOW) to AUTO(HIGH).

MIN:

The level of the DIGITAL VNR effect is set to the minimum. If you set the DIGITAL VNR function to AUTO(LOW) but feel that the sharpness of the original picture has not been reproduced fully, change the setting from AUTO(LOW) to MIN.

• The MIN setting is not suitable for lowquality pictures which contain a lot of noise.

MAX:

The level of the DIGITAL VNR effect is set to the maximum. If you set the DIGITAL VNR function to AUTO(HIGH) but still notice some noise, change the setting from AUTO(HIGH) to MAX.

• The MAX setting is not suitable for highquality pictures which contain very little noise.

Super DigiPure

The Super DigiPure function uses the latest in digital technology to give you a naturallooking picture. The Super DigiPure function includes the following two functions.

DigiPure function:

This function helps to create a naturallooking picture by eliminating unnecessary edges from high-contrast and crisp images. For images with low-contrast, edges are added to produce a sharper, more detailed picture.

You can choose from the three DigiPure function settings of AUTO, MIN and MAX.

• If you set the DigiPure effect too high on a low-quality picture that contains a lot of noise, this may actually make the noise worse. We recommend you use the AUTO setting if you can.

Picture motion compensation function:

This function displays fast-moving pictures (for example, the players or ball in a football game) more smoothly and naturally on the screen.

• The effect level of the picture motion compensation function cannot be changed. The effect level is the same no matter which of the AUTO, MIN or MAX settings is used.

AUTO:

The TV will automatically adjust the level of the DigiPure effect to match the amount of noise in the picture, giving the best possible picture.

MIN:

The level of DigiPure effect is set to the minimum. When you set the Super DigiPure function to AUTO and notice some noise, change the setting from AUTO to MIN.

• The MIN setting is not suitable for highquality pictures which contain very little noise.

MAX:

The level of DigiPure effect is set to the maximum. If you set the Super DigiPure function to AUTO but feel that the original picture quality has not been reproduced fully, change the setting from AUTO to MAX.

• The MAX setting is not suitable for lowquality pictures which contain a lot of noise.

OFF:

The Super DigiPure function is turned off.

MOVIE THEATRE

The MOVIE THEATRE function displays a cinema film picture more smoothly and naturally on the screen.

AUTO:

The television automatically recognizes the type of signal and turns the function on and off.

ON:

This function is turned on.

OFF:

This function is turned off.

COLOUR MANAGEMENT

This TV supports the COLOUR MANAGEMENT function to ensure dull colours are compensated to produce natural hues.

The COLOUR MANAGEMENT function is on by default.

ON:

COLOUR MANAGEMENT function is turned on.

OFF:

COLOUR MANAGEMENT function is turned off.

• Set this function to ON under normal conditions.

PICTURE MANAGEMENT

The PICTURE MANAGEMENT function makes it easier to see the dark areas when a picture has many dark areas, and makes it easier to see the bright areas when a picture has many bright areas.

Normally use with this function on.

ON:

PICTURE MANAGEMENT function is turned on.

OFF:

PICTURE MANAGEMENT function is turned off.

COLOUR SYSTEM

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

1 Choose COLOUR SYSTEM. Then press the **OK** or **▶** button

The sub-menu of the COLOUR SYSTEM function appears.

>> COLOUR SYSTEM		
MAIN 3	SUB	
D0016-EN		

2 Press the **◄/**► buttons to choose MAIN or SUB

MAIN:

You can change the colour system of the main-picture.

SUB:

You can change the colour system of the sub-picture.

- Choose MAIN when a sub-picture is not displayed.
- 3 Press the V/▲ buttons to choose the appropriate colour system. Then press the OK button

PAL:

PAL system

SECAM:

SECAM system

NTSC 3.58: NTSC 3.58 MHz system

NTSC 4.43:

NTSC 4.43 MHz system

AUTO:

This function detects a colour system from the input signal. You can only use this when you are viewing a picture from programme number PR 0 (AV), or an EXT terminal.

- 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.
- When in the Programme numbers PR 0 (AV) to PR 99, you cannot choose NTSC 3.58 or NTSC 4.43.
- COLOUR SYSTEM cannot be chosen when you are watching the EXT-4 picture or PC picture.

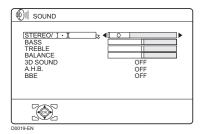
4:3 AUTO ASPECT

You can choose one of three ZOOM modes, REGULAR, PANORAMIC or 14:9 ZOOM, as the ZOOM mode for the normal picture (4:3 aspect ratio).

1 Choose 4:3 AUTO ASPECT then press the **OK** button

>> 4:3 AUTO ASPECT	
PANORAMIC REGULAR 14:9 ZOOM	
D0017-EN	

2 Press the V/▲ buttons to choose a ZOOM mode



• When the headphones are connected, only "STEREO / I • II" can be used.

STEREO / I • II

When you are viewing a bilingual broadcast programme, you can choose the sound from Bilingual I (Sub I) or Bilingual 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.

- C: Stereo sound
- O : mono sound
- I : Bilingual I (sub I)
- I : Bilingual II (sub II)
- The sound mode you can choose differs depending on the TV programme.
- This function does not work in the EXT modes.

BASS

You can adjust the low tone of the sound. ◀ : weaker

► : strong

TREBLE

You can adjust the high tone of the sound. ◀ : weaker

► : strong

BALANCE

You can adjust the volume balance between the left and right speaker.

- ► : turn the right speaker's volume level up.

3D SOUND

You can enjoy Surround sound with a "live" effect by using the 3D SOUND function.

- You can choose a 3D SOUND mode from HIGH, LOW, MONO and OFF modes. For details, see "3D SOUND function" on page 19.
- You can also operate the 3D SOUND function with the 💬 button. For details, see "3D SOUND function" on page 19.

A.H.B. (Active Hyper Bass)

Used when you want to emphasize the bass sound.

ON:

This function is turned on.

OFF:

This function is turned off.

BBE

BBE function restores clarity and presence for better speech intelligibility and musical realism.

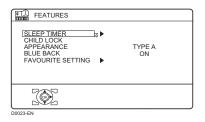
ON:

This function is turned on.

OFF:

This function is turned off.

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SLEEP TIMER

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

1 Choose SLEEP TIMER. Then press the **OK** or **▶** button

A Sub-menu of the SLEEP TIMER function appears.

SLEEP TIMER	
OFF	120
D0024-EN	

2 Press the **◄**/**▶** buttons to set the period of time. Then press the **OK** button

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

- One minute before the SLEEP TIMER function turns off the TV, "GOODNIGHT!" appears.
- The SLEEP TIMER function cannot be used to turn off the TV's main power.
- When the SLEEP TIMER function is on, you can display the sub-menu of the SLEEP TIMER function again to confirm or change the remaining period of time of the SLEEP TIMER function. Press the **OK** button to leave the menu after confirming or changing the remaining time.

To cancel the SLEEP TIMER function:

Press the \blacktriangleleft button to set the period of time to "OFF".

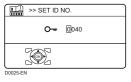
CHILD LOCK

When there is a TV channel you do not want your children to watch, you can use the CHILD LOCK function to lock out the TV channel. Even when a child chooses a programme number (PR) for a locked TV channel the screen will change to blue and display $\hat{\mathbf{n}}$ (CHILD LOCK) so the TV channel cannot be viewed. Unless you enter a pre-set ID number by a special operation, the lock cannot be released and the child cannot view the TV channel.

To set the CHILD LOCK function

1 Choose CHILD LOCK, then press the **0** button

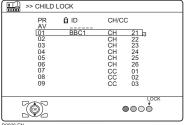
"SET ID NO." (ID number setting screen) appears.



- 2 Set the ID number to your liking
 - 1 Press the V/▲ buttons to choose a number.
 - 2 Press the ◀/► buttons to move the cursor.

3 Press the OK button

The Sub-menu of CHILD LOCK appears.



D0026-EN

4 Press the V/▲ buttons to choose a TV channel

Every time you press the $\bigvee \land \triangle$ buttons, the Programme number (PR) changes, and the picture of the TV channel registered in the Programme number (PR) is displayed on the screen.

5 Press the blue button and set the CHILD LOCK function. Then press the **OK** button

 $\hat{\mathbf{u}}$ (CHILD LOCK) appears and the TV channel is locked.

To reset the CHILD LOCK function:

Press the blue button again. $\hat{\mathbf{\Omega}}$ (CHILD LOCK) disappears.

To disable easy resetting of the CHILD LOCK function, the menu disappears if you choose the CHILD LOCK function and press the **OK** button.

■ To view a locked TV channel

1 Choose a programme number (PR) of a locked TV channel with the number buttons or PR LIST

The screen changes to blue and the $\hat{\Omega}$ (CHILD LOCK) appears. You cannot view the TV channel.

â	5	
D0027	-EN	

2 Press the (i) (Information) button to display "ID NO." (ID No. input screen)

â	5	
ID NO. :		
D0028	-EN	

3 Press the number buttons to enter the ID number

The lock is temporarily released so you can view the TV channel.

If you have forgotten the ID number:

Perform step 1 of "To set the CHILD LOCK function". After confirming the ID number, press the **TV** button to exit the menu.

- Even if you reset the lock temporarily, it does not mean that the CHILD LOCK function set for the TV channel is cancelled. The next time anyone tries to view the TV channel, it will be locked again.
- When you want to cancel the CHILD LOCK function, you must perform the operation "To set the CHILD LOCK function" again.
- To stop it being easy to choose the programme number (PR) of a locked TV channel, the programme number (PR) has been set so that it cannot be chosen with the **V**/**△** buttons or the buttons of the TV.
- To stop it being easy to reset the lock, "ID NO." (ID No. input screen) is set so that it cannot appear unless you press the ① (Information) button.

APPEARANCE

Press the $\triangleleft/\triangleright$ button and choose the format in which the channel number is displayed from the four types: TYPE A, TYPE B, TYPE C, and TYPE D.

• Set to TYPE D when shipped from factory. TYPE D sets all screens to semitransparent. The menu screens are not semitransparent when set to a type other than TYPE D.

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.

ON:

This function is turned on.

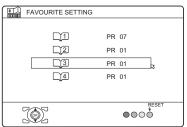
OFF:

This function is turned off.

FAVOURITE SETTING

Chose when deleting the favourite channels registered in the buttons 1 to 4.

1 Choose FAVOURITE SETTING, then press the OK or ► button The FAVOURITE SETTING menu appears.



D0112-EN

- 2 Press the V/▲ buttons and chose the favourite channel that you want to delete
- **3 Press the blue button** The chosen favourite channel and set contents are deleted.
- For details of the favourite channels, see "Favourite channel function" on page 22.

SET UP menu

AUTO PROGRAM
LANGUAGE OFF DECODER(EXT-2) OFF COMPONENT AUTO SELECT OFF EXT SETTING
TO S

AUTO PROGRAM

You can again perform the AUTO PROGRAM function TV channel automatic registration which was performed in the "Initial settings" (page 8).

1 Choose AUTO PROGRAM, then press the **OK** or **▶** button

The COUNTRY menu appears as a submenu of the AUTO PROGRAM function. There are two COUNTRY menus. Pressing the yellow button changes the COUNTRY menu as follows:





- 2 Press the ◀/▶ and ▼/▲ buttons to choose the country where you are
- 3 Perform steps 5 and 6 of the "Initial settings" (page 9)

EDIT/MANUAL

The EDIT/MANUAL functions are divided into two types:

- editing the current programme numbers (PR) (EDIT functions); and
- manually storing a TV channel you want to view on a particular programme number (PR) (MANUAL function).

Here are the details about these functions:

MOVE:

This function changes the programme number (PR) of a TV channel.

ID:

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

INSERT:

This function adds a new TV channel in the current programme numbers (PR) list by using the CH/CC number.

• You cannot use the INSERT function if you do not know the channel number of a TV channel. Use the MANUAL function to register a TV channel in the programme number (PR).

DELETE:

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

MANUAL:

This function manually stores a new TV channel in a programme number (PR).

Caution

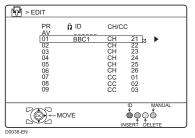
- Using the MOVE, DELETE or INSERT functions rewrites the current programme numbers (PR) list. Therefore, the programme numbers (PR) of some of the TV channels will change.
- Using the MANUAL function for a TV channel for which the CHILD LOCK function has been set cancels the CHILD LOCK function for that channel.

- Using the MANUAL function for a TV channel for which the DECODER (EXT-2) function has been set to ON returns the setting of the DECODER (EXT-2) function for that channel to OFF.
- When a TV channel has already been registered in PR 99, using the INSERT function deletes that TV channel.

Basic operation

1 Choose EDIT/MANUAL, then press the **OK** or **▶** button

The EDIT menu appears.



- 2 Follow the description for the function you want to use
- 3 Press the **OK** button to complete the settings

The T-V LINK menu appears.



If you do not have a T-V LINK compatible VCR connected:

Press the **TV** button to exit the T-V LINK menu.

The T-V LINK menu disappears.

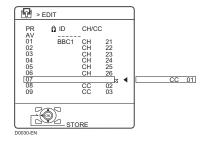
If you have a T-V LINK compatible VCR connected to the EXT-2 terminal:

Follow "Downloading the data to VCR" on page 11 to transmit the programme number (PR) data.

- For programme number PR 0, "AV" appears in the programme numbers (PR) list.
- An EXT terminal number does not appear in the programme numbers (PR) list.

MOVE

- 1 Press the V/▲ buttons to choose a TV channel
- 2 Press the ► button to start the MOVE function



3 Press the V/▲ buttons to choose a new programme number (PR)

To cancel the MOVE function: Press the **BACK** button.

4 Press the ◀ button to change the programme number (PR) of a TV channel to a new programme number (PR)

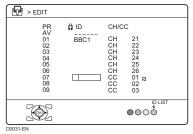
DELETE

- 1 Press the V/▲ buttons to choose a TV channel
- 2 Press the yellow button to delete the TV channel

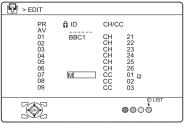
The TV channel is deleted from the programme numbers (PR) list.

∎ ID

- 1 Press the V/▲ buttons to choose a TV channel
- 2 Press the red button to start the ID function

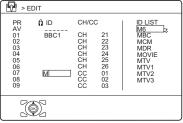


3 Press the ▼/▲ buttons to choose the first character of a channel name (ID) you want to give the TV channel



D0032-EN

4 Press the blue button to display the ID LIST (channel name list)



D0033-EN

5 Press the V/▲ buttons to choose the channel name (ID)

To cancel the ID function: Press the **BACK** button.

6 Press the **OK** button to give a channel name (ID) to a TV channel

 You can give your own unique channel name (ID) to the TV channel. When you have finished step 3, do not go to step 4. Press the </>

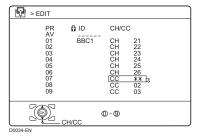
 buttons to move the cursor, and press the
 buttons to choose each character of the channel name (ID). Then press the OK button to register the channel name (ID) to the TV channel.

Before performing INSERT or MANUAL operation

- If you register the TV channel (SECAM-L system) from a French station, be sure to set the COUNTRY setting to FRANCE. If the COUNTRY setting is not set to FRANCE, perform steps 1 and 2 of the "AUTO PROGRAM" (page 37) procedure and set the COUNTRY setting to FRANCE before pressing the **OK** button.
- A CH/CC number unique to this TV and corresponding to the Channel number of a TV channel is required. Find the corresponding CH/CC number from a table "CH/CC numbers" on page 50 based on the Channel number of the TV channel.
- When the COUNTRY setting is not FRANCE, use a two-digit CH/CC number. When the COUNTRY setting is FRANCE, use a three-digit CH/CC number.

INSERT

- Press the V/▲ buttons to choose a programme number (PR) for which you will register a new TV channel
- 2 Press the green button and start the INSERT function



To cancel the INSERT function: Press the **BACK** button.

3 Press the V/▲ buttons to choose "CH" or "CC", then enter the remaining CH or CC number

When the COUNTRY setting is FRANCE:

Choose "CH1", "CH2", "CC1" or "CC2".

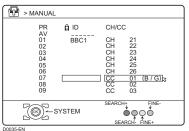
The TV shifts to registration mode. When the registration is completed, the picture of the TV channel appears on the screen.

• The CH/CC number is a number given to each broadcast frequency that carries a TV channel. If the TV cannot detect the TV channel corresponding to the broadcast frequency indicated by the CH/CC number, a "no-signal" picture appears.

MANUAL

- 1 Press the V/▲ buttons to choose a programme number (PR) for a new TV channel
- 2 Press the blue button to activate the MANUAL function

At the right side following the CH/CC number, the SYSTEM (broadcasting system) of the TV channel appears.



To cancel the MANUAL function: Press the **BACK** button.

3 Press the ▶ button to choose the SYSTEM (broadcasting system) for a TV channel you want to register

TV channel (SECAM-L system) from a French station:

Set the SYSTEM to "L". If it is set to one other than "L", you cannot receive the TV channel of the SECAM-L system.

Other TV channels:

If you do not know the correct broadcasting system, set the SYSTEM to "B/G". If "B/G" is not correct, you will not hear the sound normally when the TV detects a TV channel. In this case, retry to set the SYSTEM correctly so that no problem arises. 4 Press the green or red button to search for a TV channel

Scanning stops when the TV finds a TV channel. Then the TV channel is displayed.

5 Press the green or red button repeatedly until the TV channel you want appears

If the TV channel reception is poor: Press the blue or yellow button to finetune the TV channel.

6 Press the **OK** button and register the TV channel to a Programme number (PR)

The normal EDIT menu is resumed.

LANGUAGE

The LANGUAGE setting which was performed in the "Initial settings" (page 8) can be changed.

1 Choose LANGUAGE, then press the OK or ▶ button

A sub-menu of the LANGUAGE function appears.



2 Press the ◀/▶ and ▼/▲ buttons to choose a language. Then press the OK button

DECODER (EXT-2)

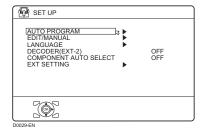
If you have a decoder connected to a T-V LINK compatible VCR, which in turn is connected to the EXT-2 terminal, use the DECODER (EXT-2) function to unscramble the scrambled TV channels.

1 Turn on the decoder power

2 Display the scrambled TV channel on the TV

Even if the decoder is working, a scrambled picture appears.

3 Display the SET UP menu and choose DECODER (EXT-2)



4 Press the ◀/▶ buttons to choose ON

An unscrambled picture appears.

To cancel the DECODER (EXT-2) function:

Press the $\triangleleft/\triangleright$ buttons to choose OFF.

5 Press the **OK** button to complete the setting

The T-V LINK menu appears.

T-V LINK
DOWNLOAD TV → RECORDING DEVICE
D0005-EN

You can send the programme numbers data to a VCR with the T-V LINK function.

6 Turn on the VCR, and then press the **OK** button to transmit the data to VCR

The T-V LINK menu disappears once the data transmission ends.

If the DECODER (EXT-2) function has been set to "ON" but the TV channel cannot be unscrambled, check the following:

- Has the decoder been connected to the VCR properly according to the VCR and decoder instruction manuals?
- Has the decoder power been turned on?
- Can the TV channel be unscrambled with a decoder?
- Do you need to change the VCR settings in order to connect the decoder? Confirm that the VCR is set properly by rechecking the VCR instruction manual.

COMPONENT AUTO SELECT

When a external device that can output a component signal is connected to the EXT-4 component terminal and the connected device is played back, the TV input is automatically changed to EXT-4.

ON:

When the device connected to EXT-4 is played back, the TV input is automatically changed to EXT-4.

OFF:

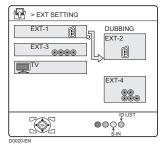
Even when the device connected to EXT-4 is played back, the TV input is not changed. (Set to OFF when shipped from the factory.)

- This function automatically changes the TV input to EXT-4 when the TV detects a component input signal from the device connected to the EXT-4.
- When set to ON, the TV input may be automatically changed to EXT-4 just by an operation such as turning the power on, removing a disc, or another operation with a device (such as a DVD player).

EXT SETTING

1 Choose EXT SETTING, then press the OK or ▶ button

The EXT SETTING menu appears.



2 Follow the instructions for the function you want to use and operate the function S-IN-

You can enjoy the high-quality picture of the S-VIDEO signal (Y/C signal).

ID LIST:

You can have a name for each of the devices connected for each EXT terminal.

DUBBING:

You can choose a signal source to be output from an EXT-2 terminal.

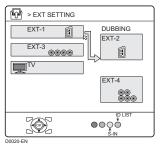
■ S-IN (S-VIDEO input)

You can connect a device (such as an S-VHS VCR) to enjoy the high-quality picture of the S-VIDEO signal (Y/C signal).

Preparation:

- First read the device's instruction manual and "Additional preparation" on page 46 to connect the device to the TV properly. Second, follow the device's instruction manual to set the device so that it sends an S-VIDEO signal (Y/C signal) to the TV.
- Do not set S-IN (S-VIDEO input) to an EXT terminal connected to a device which cannot output an S-VIDEO (Y/C signal).

1 Press the **◄/**► or **▼/**▲ buttons to choose an EXT terminal



2 Press the yellow button and set the S-IN (S-VIDEO input). Then press the **OK** button

An S-IN (S-VIDEO input) mark is displayed. You can view an S-VIDEO signal (Y/C signal) instead of the regular video signal (composite signal).

To cancel the S-IN (S-VIDEO input) setting:

Press the yellow button and turn off S-IN (S-VIDEO input) mark. The regular video signal (composite signal) pictures are resumed.

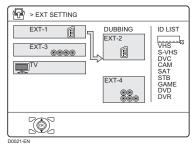
- Setting S-IN (S-VIDEO input) changes the head character from "E" to "S". When an EXT terminal receives a normal video signal, "E1", "E2" or "E3" appears on the display. This changes to "S1", "S2" or "S3" when it receives an S-VIDEO signal.
- Even a device which can output an S-VIDEO signal (Y/C signal) may output a regular video signal (composite signal) depending on the device setting. If a picture cannot appear because the S-IN (S-VIDEO input) setting has been made, read the device instruction manual carefully again to check for the device settings.

ID LIST

You can store a name for each of the devices connected to each EXT terminal. Giving a name to an EXT terminal makes the EXT terminal number appear on the screen, together with its name.

1 Press the **◄**/**▶** or **▼**/**▲** buttons to choose an EXT terminal

2 Press the blue button to display the name list (ID LIST)



3 Press the V/▲ buttons to choose a name. Then press the OK button

The ID LIST disappears and the name is assigned to the EXT terminal.

• You cannot assign an EXT terminal name not found in the name list (ID LIST).

To erase a name assigned to the EXT terminal:

Choose a blank space.

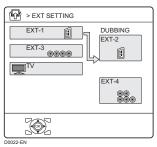
4 Press the **OK** button to complete the setting

DUBBING

You can choose a signal source to be output from the EXT-2 terminal.

You can do this with the output signals of the devices connected to other EXT terminals, or with the picture and sound from a TV channel you are currently viewing.

1 Press the **◄**/**▶** buttons to choose the arrow from the menu



2 Press the V/▲ buttons to choose an EXT terminal or TV. Then press the OK button

The arrow in the menu represents a signal flow. The left side of the arrow shows a signal source output from the EXT-2 terminal.

EXT-1/EXT-3:

The output signal of the device connected to an EXT terminal passes through the TV and is output from the EXT-2 terminal.

TV:

The picture and sound of the TV channel you are currently viewing are output from the EXT-2 terminal.

- During dubbing, you cannot turn off the TV. Turning off the TV also turns off the output from the EXT-2 terminal.
- When you choose an EXT terminal as an output, you can view a TV programme or a picture from the other EXT terminal while dubbing the picture from a device connected to the EXT terminal onto a VCR connected to the EXT-2 terminal.
- The RGB signals from TV games cannot be output. Teletext programmes cannot be output.

Displaying a computer screen

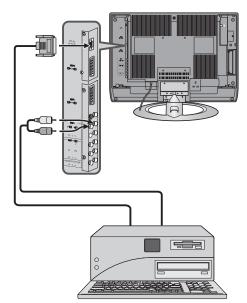
This TV can be used as a computer screen.

Connecting to the computer

Use a D-SUB cable to connect the TV's PC IN 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 EXT-3 L/R terminal to the computer's sound output terminal.

When the sound from the computer is mono, connect to the EXT-3 L 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** or **P** \vee/\wedge buttons to choose "PC"

"PC" is after EXT-4. You can listen to the sound when the sound from the computer is connected to the EXT-3 L/R terminal.

• When the sound from the computer is connected to EXT-3, by choosing external input EXT-3 the sound from the computer can be listened to, but the images from the computer cannot be seen.

Table of signals for each type of computer

Resolution	Vertical frequency (Hz)	Horizontal frequency (kHz)
640 × 480 (VGA)	60.0	31.5
1024 × 768 (XGA)	60.0	42.0

- * Only the above formats are supported.
- * Even with the above formats and at 60 Hz, some problems may be experienced depending on the quality of the synchronous signal. (Depending on the quality, some pictures may not be displayed properly.)
- * Apple Macintosh* computers are not supported.

When a picture is not displayed

Check the computer's refresh rate and set it to 60 Hz. Refer to the computer's instruction manual.

Computers which cannot have their refresh rate set to 60 Hz cannot be used with this unit.

* Apple Macintosh is a registered trademark of Apple Computer, Inc.

Connecting external equipment

Connect the equipment to the TV, making the correct rear panel and front panel connections.

Before connecting anything:

• Read the manuals that came with the equipment.

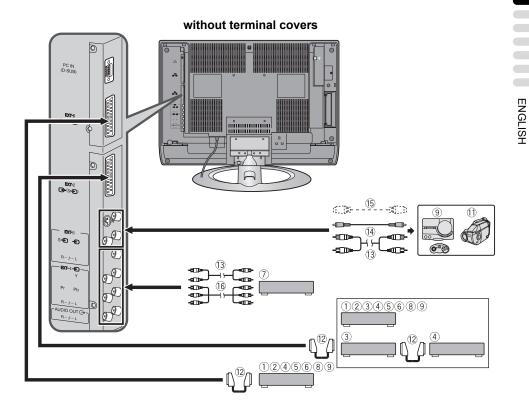
Depending on the equipment, the connection method may be different from the diagram. Also, the equipment settings may need to change depending on the connection method.

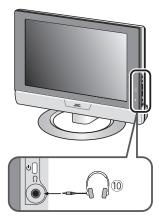
- Turn off all the equipment including the TV.
- The "Specifications" on page 55 give the details of the EXT terminals. If you are connecting equipment not listed in the following connection diagram, see the table to choose the best EXT terminal.
- Connecting cables are not supplied.
- When a device that can output component signals is connected to the EXT-4 component terminal, the TV input can be automatically changed to EXT-4 by just turning the power supply of the connected device on. For details, see "COMPONENT AUTO SELECT" in the SET UP menu on page 42.

Connecting the PC

For details, see "Connecting to the computer" on page 45.

- ① VCR (composite signal)
- 2 VCR (composite signal/S-VIDEO signal)
- ③ T-V LINK compatible VCR (composite signal/S-VIDEO signal)
- ④ Decoder
- 5 DVD player (composite signal/S-VIDEO signal)
- DVD player (composite signal/RGB signal)
- DVD player (component video signals; Y/Pb/Pr)
- (8) TV game (composite signal/RGB signal)
- IV game (composite signal/S-VIDEO signal)
- 10 Headphones
- Camcorder (composite signal/S-VIDEO signal)
- 12 SČART cable
- 13 Audio cable
- Wideo cable
- 15 S-VIDEO cable
- 16 Component cable





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

Connect the equipment to an EXT terminal other than EXT-4.

You can choose between an S-VIDEO signal (Y/C signal) and a regular video signal (composite signal). For details of how to operate the equipment, see "S-IN (S-VIDEO input)" on page 42.

■ T-V LINK compatible VCR

Be sure to connect the T-V LINK compatible VCR to the EXT-2 terminal. If not, the T-V LINK function will not work properly.

- When connecting a T-V LINK compatible VCR to the EXT-2 terminal, be sure to connect the decoder to the VCR. If not, the T-V LINK function may not work properly.
- When you connect the decoder to the VCR, after you have stored TV channels in the programme numbers (PR) list, set the DECODER (EXT-2) function for the programme number (PR) to ON to unscramble a scrambled TV channel. For details, see "DECODER (EXT-2)" on page 41.

Connecting headphones

Connect the headphones with a stereo minijack (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.

Video or sound signal output from the EXT-2 terminal

You can change over the output of the video/ sound signal from the EXT-2 terminal. This is useful when you want to dub the video/ sound from another device onto the VCR connected to the EXT-2 terminal. For details on how to do this, see "DUBBING" on page 44.

• The signals from EXT-4 and PC IN terminal cannot be output from EXT-2.

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.
- The video/sound signal from an EXT terminal cannot be output.
- Teletext programmes cannot be output.

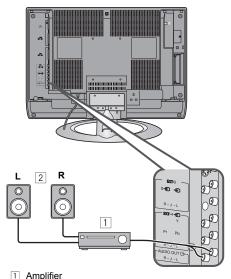
Connecting speakers/amplifier

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.

without terminal covers



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.

CH/CC numbers

When you want to use the INSERT function on page 40, find the CH/CC number corresponding to the Channel number of the TV channel from this table.

сн	Channel	сн	Channel	сс	Channel	сс	Channel
CH 02 / CH 202	E2, R1	CH 40 / CH 240	E40, R40	CC 01 / CC 201	S1	CC 31 / CC 231	S31
CH 03 / CH 203	E3, ITALY A	CH 41 / CH 241	E41, R41	CC 02 / CC 202	S2	CC 32 / CC 232	S32
CH 04 / CH 204	E4, ITALY B, R2	CH 42 / CH 242	E42, R42	CC 03 / CC 203	S3	CC 33 / CC 233	S33
CH 05 / CH 205	E5, ITALY D, R6	CH 43 / CH 243	E43, R43	CC 04 / CC 204	S4	CC 34 / CC 234	S34
CH 06 / CH 206	E6, ITALY E, R7	CH 44 / CH 244	E44, R44	CC 05 / CC 205	S5	CC 35 / CC 235	S35
CH 07 / CH 207	E7, ITALY F, R8	CH 45 / CH 245	E45, R45	CC 06 / CC 206	S6	CC 36 / CC 236	S36
CH 08 / CH 208	E8, R9	CH 46 / CH 246	E46, R46	CC 07 / CC 207	S7	CC 37 / CC 237	S37
CH 09 / CH 209	E9, ITALY G	CH 47 / CH 247	E47, R47	CC 08 / CC 208	S8	CC 38 / CC 238	S38
CH 10 / CH 210	E10, ITALY H, R10	CH 48 / CH 248	E48, R48	CC 09 / CC 209	S9	CC 39 / CC 239	S39
CH 11 / CH 211	E11, ITALY H+1, R11	CH 49 / CH 249	E49, R49	CC 10 / CC 210	S10	CC 40 / CC 240	S40
CH 12 / CH 212	E12, ITALY H+2, R12	CH 50 / CH 250	E50, R50	CC 11 / CC 211	S11	CC 41 / CC 241	S41
CH 21 / CH 221	E21, R21	CH 51 / CH 251	E51, R51	CC 12 / CC 212	S12	CC 75 / CC 275	Х
CH 22 / CH 222	E22, R22	CH 52 / CH 252	E52, R52	CC 13 / CC 213	S13	CC 76 / CC 276	Y, R3
CH 23 / CH 223	E23, R23	CH 53 / CH 253	E53, R53	CC 14 / CC 214	S14	CC 77 / CC 277	Z, ITALY C, R4
CH 24 / CH 224	E24, R24	CH 54 / CH 254	E54, R54	CC 15 / CC 215	S15	CC 78 / CC 278	Z+1, R5
CH 25 / CH 225	E25, R25	CH 55 / CH 255	E55, R55	CC 16 / CC 216	S16	CC 79 / CC 279	Z+2
CH 26 / CH 226	E26, R26	CH 56 / CH 256	E56, R56	CC 17 / CC 217	S17		
CH 27 / CH 227	E27, R27	CH 57 / CH 257	E57, R57	CC 18 / CC 218	S18		
CH 28 / CH 228	E28, R28	CH 58 / CH 258	E58, R58	CC 19 / CC 219	S19		
CH 29 / CH 229	E29, R29	CH 59 / CH 259	E59, R59	CC 20 / CC 220	S20		
CH 30 / CH 230	E30, R30	CH 60 / CH 260	E60, R60	CC 21 / CC 221	S21		
CH 31 / CH 231	E31, R31	CH 61 / CH 261	E61, R61	CC 22 / CC 222	S22		
CH 32 / CH 232	E32, R32	CH 62 / CH 262	E62, R62	CC 23 / CC 223	S23		
CH 33 / CH 233	E33, R33	CH 63 / CH 263	E63, R63	CC 24 / CC 224	S24		
CH 34 / CH 234	E34, R34	CH 64 / CH 264	E64, R64	CC 25 / CC 225	S25		
CH 35 / CH 235	E35, R35	CH 65 / CH 265	E65, R65	CC 26 / CC 226	S26		
CH 36 / CH 236	E36, R36	CH 66 / CH 266	E66, R66	CC 27 / CC 227	S27		
CH 37 / CH 237	E37, R37	CH 67 / CH 267	E67, R67	CC 28 / CC 228	S28		
CH 38 / CH 238	E38, R38	CH 68 / CH 268	E68, R68	CC 29 / CC 229	S29		
CH 39 / CH 239	E39, R39	CH 69 / CH 269	E69, R69	CC 30 / CC 230	S30		
				-			
C11	Channel		Channel			6 0	
СН	Channel	СН	Channel	сс	Frequency (MHz)	<u>cc</u>	Frequency (MHz)
CH 102	F2	CH 141	F41	CC CC 110	116 - 124	CC 152	391 - 399
CH 102 CH 103	F2 F3	CH 141 CH 142	F41 F42	CC 110 CC 111	116 - 124 124 - 132	CC 152 CC 153	391 - 399 399 - 407
CH 102 CH 103 CH 104	F2 F3 F4	CH 141 CH 142 CH 143	F41 F42 F43	CC 110 CC 111 CC 112	116 - 124 124 - 132 132 - 140	CC 152 CC 153 CC 154	391 - 399 399 - 407 407 - 415
CH 102 CH 103 CH 104 CH 105	F2 F3 F4 F5	CH 141 CH 142 CH 143 CH 144	F41 F42 F43 F44	CC 110 CC 111 CC 112 CC 113	116 - 124 124 - 132 132 - 140 140 - 148	CC 152 CC 153 CC 154 CC 155	391 - 399 399 - 407 407 - 415 415 - 423
CH 102 CH 103 CH 104 CH 105 CH 106	F2 F3 F4 F5 F6	CH 141 CH 142 CH 143 CH 144 CH 144 CH 145	F41 F42 F43 F44 F45	CC 110 CC 111 CC 112 CC 113 CC 114	116 - 124 124 - 132 132 - 140 140 - 148 148 - 156	CC 152 CC 153 CC 154 CC 155 CC 155 CC 156	391 - 399 399 - 407 407 - 415 415 - 423 423 - 431
CH 102 CH 103 CH 104 CH 105 CH 106 CH 107	F2 F3 F4 F5 F6 F7	CH 141 CH 142 CH 143 CH 144 CH 144 CH 145 CH 146	F41 F42 F43 F44 F45 F46	CC 110 CC 111 CC 112 CC 113 CC 113 CC 114 CC 115	116 - 124 124 - 132 132 - 140 140 - 148 148 - 156 156 - 164	CC 152 CC 153 CC 154 CC 155 CC 155 CC 156 CC 157	391 - 399 399 - 407 407 - 415 415 - 423 423 - 431 431 - 439
CH 102 CH 103 CH 104 CH 105 CH 106 CH 107 CH 108	F2 F3 F4 F5 F6 F7 F8	CH 141 CH 142 CH 143 CH 144 CH 144 CH 145 CH 146 CH 147	F41 F42 F43 F44 F45 F46 F46 F47	CC 110 CC 111 CC 112 CC 113 CC 113 CC 114 CC 115 CC 116 CC 116	116 - 124 124 - 132 132 - 140 140 - 148 148 - 156 156 - 164 164 - 172	CC 152 CC 153 CC 154 CC 155 CC 156 CC 156 CC 157 CC 158	391 - 399 399 - 407 407 - 415 415 - 423 423 - 431 431 - 439 439 - 447
CH 102 CH 103 CH 104 CH 105 CH 105 CH 106 CH 107 CH 108 CH 109	F2 F3 F4 F5 F6 F7 F8 F9	CH 141 CH 142 CH 143 CH 144 CH 145 CH 145 CH 146 CH 147 CH 148	F41 F42 F43 F44 F45 F45 F46 F46 F47 F48	CC CC 110 CC 111 CC 112 CC 113 CC 114 CC 115 CC 116 CC 123	116 - 124 124 - 132 132 - 140 140 - 148 148 - 156 156 - 164 164 - 172 220 - 228	CC 152 CC 153 CC 154 CC 155 CC 155 CC 156 CC 157 CC 158 CC 159	391 - 399 399 - 407 407 - 415 415 - 423 423 - 431 431 - 439 439 - 447 447 - 455
CH 102 CH 103 CH 104 CH 105 CH 105 CH 106 CH 107 CH 108 CH 109 CH 110	F2 F3 F4 F5 F6 F7 F8 F9 F10	CH 141 CH 142 CH 143 CH 144 CH 145 CH 145 CH 146 CH 147 CH 148 CH 149	F41 F42 F43 F44 F45 F46 F47 F48 F49	cc CC 110 CC 111 CC 112 CC 113 CC 114 CC 115 CC 116 CC 123 CC 124	116 - 124 124 - 132 132 - 140 140 - 148 148 - 156 156 - 164 164 - 172 220 - 228 228 - 236	CC 152 CC 153 CC 154 CC 155 CC 156 CC 157 CC 158 CC 159 CC 160	391 - 399 399 - 407 407 - 415 415 - 423 423 - 431 431 - 439 439 - 447 447 - 455 455 - 463
CH 102 CH 103 CH 104 CH 105 CH 105 CH 106 CH 107 CH 108 CH 109 CH 109 CH 110 CH 121	F2 F3 F4 F5 F6 F7 F8 F9 F10 F21	CH 141 CH 142 CH 143 CH 144 CH 145 CH 146 CH 146 CH 146 CH 147 CH 148 CH 149 CH 150	F41 F42 F43 F44 F45 F46 F47 F46 F47 F48 F49 F50	CC CC 110 CC 111 CC 112 CC 113 CC 114 CC 115 CC 116 CC 123 CC 124 CC 125	116 - 124 124 - 132 132 - 140 140 - 148 148 - 156 156 - 164 164 - 172 220 - 228 228 - 236 236 - 244	CC 152 CC 153 CC 154 CC 155 CC 155 CC 156 CC 157 CC 158 CC 159	391 - 399 399 - 407 407 - 415 415 - 423 423 - 431 431 - 439 439 - 447 447 - 455
CH 102 CH 103 CH 104 CH 105 CH 106 CH 106 CH 107 CH 108 CH 109 CH 110 CH 110 CH 121 CH 122	F2 F3 F4 F5 F6 F7 F8 F9 F10 F21 F21 F22	CH 141 CH 142 CH 143 CH 143 CH 144 CH 145 CH 145 CH 146 CH 147 CH 148 CH 149 CH 150 CH 151	F41 F42 F43 F44 F45 F46 F47 F48 F49 F50 F51	CC 110 CC 111 CC CC 112 CC CC 113 CC CC 114 CC CC 115 CC CC 123 CC CC 124 CC CC 125 CC	116 - 124 124 - 132 132 - 140 140 - 148 148 - 156 156 - 164 164 - 172 220 - 228 228 - 236 2236 - 244 244 - 252	CC 152 CC 153 CC 154 CC 155 CC 156 CC 157 CC 158 CC 159 CC 160	391 - 399 399 - 407 407 - 415 415 - 423 423 - 431 431 - 439 439 - 447 447 - 455 455 - 463
CH 102 CH 103 CH 104 CH 105 CH 106 CH 107 CH 108 CH 109 CH 110 CH 121 CH 122 CH 122 CH 123	F2 F3 F4 F5 F6 F7 F8 F9 F10 F21 F22 F23	CH 141 CH 142 CH 143 CH 143 CH 144 CH 145 CH 146 CH 146 CH 147 CH 148 CH 149 CH 150 CH 151 CH 152	F41 F42 F43 F44 F45 F46 F47 F48 F49 F51 F52	CC 110 CC 111 CC CC 112 CC CC 113 CC CC 114 CC CC 115 CC CC 123 CC CC 124 CC CC 125 CC CC 126 CC CC 127 CC	116 - 124 124 - 132 132 - 140 140 - 148 148 - 156 156 - 164 164 - 172 220 - 228 228 - 236 236 - 244 244 - 252 252 - 260	CC 152 CC 153 CC 154 CC 155 CC 156 CC 157 CC 158 CC 159 CC 160	391 - 399 399 - 407 407 - 415 415 - 423 423 - 431 431 - 439 439 - 447 447 - 455 455 - 463
CH 102 CH 103 CH 104 CH 105 CH 106 CH 107 CH 108 CH 107 CH 108 CH 109 CH 110 CH 121 CH 122 CH 122 CH 122 CH 122 CH 124	F2 F3 F4 F5 F6 F7 F8 F9 F10 F21 F22 F23 F24	CH 141 CH 142 CH 143 CH 144 CH 145 CH 146 CH 146 CH 147 CH 148 CH 149 CH 150 CH 151 CH 151 CH 152 CH 153	F41 F42 F43 F44 F45 F46 F47 F48 F49 F50 F51 F52 F53	CC 110 CC 110 CC 111 CC 113 CC 113 CC 114 CC 115 CC 116 CC 123 CC 124 CC 125 CC 126 CC 127 CC 128 CC 128	116 - 124 124 - 132 132 - 140 140 - 148 148 - 156 156 - 164 164 - 172 220 - 228 228 - 236 236 - 244 244 - 252 252 - 260 260 - 268	CC 152 CC 153 CC 154 CC 155 CC 156 CC 157 CC 158 CC 159 CC 160	391 - 399 399 - 407 407 - 415 415 - 423 423 - 431 431 - 439 439 - 447 447 - 455 455 - 463
CH 102 CH 103 CH 104 CH 105 CH 106 CH 107 CH 108 CH 109 CH 109 CH 110 CH 121 CH 122 CH 122 CH 123 CH 124 CH 125	F2 F3 F4 F5 F6 F7 F8 F9 F10 F21 F22 F23 F24 F25	CH 141 CH 142 CH 143 CH 143 CH 145 CH 146 CH 146 CH 147 CH 148 CH 147 CH 148 CH 149 CH 150 CH 150 CH 151 CH 152 CH 152 CH 154	F41 F42 F43 F44 F45 F46 F47 F48 F49 F50 F51 F52 F53 F54	CC 110 CC 110 CC CC 112 CC CC 113 CC CC 114 CC CC 115 CC CC 123 CC CC 124 CC CC 125 CC CC 126 CC CC 127 CC CC 128 CC CC 129 C	116 - 124 124 - 132 132 - 140 140 - 148 146 - 156 156 - 164 164 - 172 220 - 228 228 - 236 236 - 244 242 - 252 260 - 288 268 - 276	CC 152 CC 153 CC 154 CC 155 CC 156 CC 157 CC 158 CC 159 CC 160	391 - 399 399 - 407 407 - 415 415 - 423 423 - 431 431 - 439 439 - 447 447 - 455 455 - 463
CH 102 CH 103 CH 104 CH 105 CH 106 CH 106 CH 107 CH 108 CH 109 CH 110 CH 121 CH 122 CH 122 CH 123 CH 123 CH 124 CH 125 CH 126	F2 F3 F4 F5 F6 F7 F7 F8 F9 F10 F21 F22 F22 F22 F22 F22 F25 F25 F26	CH 141 CH 142 CH 143 CH 144 CH 145 CH 146 CH 146 CH 146 CH 147 CH 148 CH 149 CH 150 CH 150 CH 151 CH 152 CH 153 CH 153 CH 155	F41 F42 F43 F44 F45 F46 F47 F48 F49 F50 F51 F53 F54 F55	CC 110 CC 110 CC 111 CC 112 CC 113 CC 114 CC 115 CC 115 CC 116 CC 123 CC 124 CC 125 CC 126 CC 127 CC 128 CC 128 CC 129 CC 130 CC 130	116 - 124 124 - 132 132 - 140 140 - 148 148 - 156 156 - 164 164 - 172 220 - 228 226 - 228 226 - 228 226 - 228 226 - 228 226 - 228 226 - 228 226 - 228 226 - 228 226 - 226 262 - 260 268 - 276 276 - 284	CC 152 CC 153 CC 154 CC 155 CC 156 CC 157 CC 158 CC 159 CC 160	391 - 399 399 - 407 407 - 415 415 - 423 423 - 431 431 - 439 439 - 447 447 - 455 455 - 463
CH 102 CH 103 CH 104 CH 105 CH 106 CH 106 CH 107 CH 108 CH 109 CH 110 CH 121 CH 122 CH 123 CH 124 CH 125 CH 126 CH 127	F2 F3 F4 F5 F6 F7 F8 F9 F10 F21 F22 F23 F24 F25 F26 F26 F27	CH 141 CH 142 CH 143 CH 144 CH 145 CH 146 CH 147 CH 148 CH 149 CH 150 CH 152 CH 153 CH 155 CH 156	F41 F42 F43 F44 F45 F46 F47 F48 F49 F50 F51 F52 F53 F55 F56	CC 110 CC 110 CC 111 CC 112 CC 113 CC 114 CC 115 CC 115 CC 124 CC 125 CC 125 CC 128 CC 128 CC 129 CC 130 CC 131 CC 131	116 - 124 124 - 132 132 - 140 140 - 148 148 - 156 156 - 164 164 - 172 220 - 228 228 - 236 236 - 244 244 - 252 252 - 260 260 - 288 268 - 276 276 - 284 284 - 292	CC 152 CC 153 CC 154 CC 155 CC 156 CC 157 CC 158 CC 159 CC 160	391 - 399 399 - 407 407 - 415 415 - 423 423 - 431 431 - 439 439 - 447 447 - 455 455 - 463
CH 102 CH 103 CH 104 CH 105 CH 106 CH 106 CH 107 CH 108 CH 107 CH 108 CH 110 CH 121 CH 122 CH 122 CH 122 CH 124 CH 125 CH 126 CH 125 CH 126 CH 127 CH 128	F2 F3 F4 F5 F6 F7 F8 F9 F10 F21 F22 F23 F24 F25 F26 F27 F27 F28	CH 141 CH 142 CH 143 CH 144 CH 145 CH 146 CH 146 CH 147 CH 148 CH 149 CH 150 CH 151 CH 151 CH 152 CH 153 CH 155 CH 155 CH 157	F41 F42 F43 F44 F45 F46 F47 F48 F49 F50 F51 F52 F53 F56 F57	CC CC 110 CC 111 CC 112 CC 113 CC 114 CC 115 CC 116 CC 123 CC 125 CC 126 CC 127 CC 128 CC 129 CC 130 CC 131 CC 132	116 - 124 124 - 132 132 - 140 140 - 148 148 - 156 156 - 164 164 - 172 220 - 228 228 - 236 236 - 244 244 - 252 252 - 260 260 - 268 276 - 284 284 - 292 292 - 300	CC 152 CC 153 CC 154 CC 155 CC 156 CC 157 CC 158 CC 159 CC 160	391 - 399 399 - 407 407 - 415 415 - 423 423 - 431 431 - 439 439 - 447 447 - 455 455 - 463
CH 102 CH 103 CH 104 CH 105 CH 106 CH 107 CH 108 CH 109 CH 110 CH 121 CH 122 CH 123 CH 124 CH 125 CH 126 CH 127 CH 128 CH 128 CH 129	F2 F3 F4 F5 F6 F7 F8 F9 F10 F21 F22 F23 F24 F25 F26 F27 F28 F29	CH 141 CH 142 CH 143 CH 143 CH 144 CH 145 CH 146 CH 147 CH 148 CH 147 CH 148 CH 149 CH 150 CH 150 CH 151 CH 152 CH 152 CH 155 CH 156 CH 156 CH 157 CH 158	F41 F42 F43 F44 F45 F46 F47 F48 F49 F50 F51 F52 F53 F54 F55 F56 F57 F58	CC 110 CC 110 CC 112 CC 112 CC 113 CC 114 CC 115 CC 115 CC 123 CC 124 CC 124 CC 125 CC 126 CC 128 CC 128 CC 129 CC 130 CC 131 CC 131 CC 133 CC 133	116 - 124 124 - 132 132 - 140 140 - 148 148 - 156 156 - 164 164 - 172 220 - 228 228 - 236 236 - 244 242 - 252 260 - 268 268 - 276 276 - 284 284 - 292 292 - 300 300 - 306	CC 152 CC 153 CC 154 CC 155 CC 156 CC 157 CC 158 CC 159 CC 160	391 - 399 399 - 407 407 - 415 415 - 423 423 - 431 431 - 439 439 - 447 447 - 455 455 - 463
CH 102 CH 103 CH 104 CH 105 CH 106 CH 107 CH 108 CH 109 CH 110 CH 121 CH 122 CH 123 CH 124 CH 125 CH 127 CH 128 CH 129 CH 130	F2 F3 F4 F5 F6 F7 F8 F9 F10 F21 F22 F23 F24 F25 F26 F27 F28 F29 F30	CH 141 CH 142 CH 143 CH 144 CH 145 CH 146 CH 147 CH 148 CH 148 CH 149 CH 148 CH 149 CH 150 CH 151 CH 152 CH 153 CH 154 CH 155 CH 156 CH 157 CH 158 CH 159	F41 F42 F43 F44 F45 F46 F47 F48 F49 F50 F51 F52 F53 F55 F56 F57 F58 F59	CC 110 CC 110 CC 111 CC 112 CC 113 CC 114 CC 115 CC 115 CC 124 CC 125 CC 126 CC 128 CC 128 CC 129 CC 130 CC 131 CC 132 CC 133 CC 133	116 - 124 124 - 132 132 - 140 140 - 148 148 - 156 156 - 164 156 - 228 220 - 228 220 - 228 226 - 228 226 - 228 226 - 228 226 - 228 226 - 228 226 - 228 226 - 228 226 - 228 226 - 228 226 - 228 226 - 228 226 - 228 226 - 228 226 - 228 226 - 228 2276 - 284 284 - 292 292 - 300 300 - 306 300 - 311	CC 152 CC 153 CC 154 CC 155 CC 156 CC 157 CC 158 CC 159 CC 160	391 - 399 399 - 407 407 - 415 415 - 423 423 - 431 431 - 439 439 - 447 447 - 455 455 - 463
CH 102 CH 103 CH 104 CH 105 CH 106 CH 107 CH 108 CH 110 CH 121 CH 122 CH 123 CH 124 CH 125 CH 128 CH 128 CH 129 CH 131	F2 F3 F4 F5 F6 F7 F8 F9 F10 F21 F22 F23 F24 F25 F26 F27 F28 F29 F30 F31	CH 141 CH 142 CH 143 CH 144 CH 144 CH 145 CH 146 CH 147 CH 148 CH 149 CH 150 CH 151 CH 152 CH 153 CH 154 CH 155 CH 157 CH 158 CH 160 CH 160	F41 F42 F43 F44 F45 F46 F47 F48 F49 F50 F51 F52 F55 F56 F57 F58 F59 F60	CC 110 CC 110 CC 111 CC 112 CC 113 CC 114 CC 115 CC 115 CC 124 CC 125 CC 125 CC 128 CC 126 CC 129 CC 130 CC 130 CC 132 CC 132 CC 132 CC 133 CC 141 CC 142 C142	116 - 124 124 - 132 132 - 140 140 - 148 148 - 156 155 - 164 164 - 172 220 - 228 228 - 236 236 - 244 244 - 252 252 - 260 266 - 268 268 - 276 276 - 284 284 - 292 292 - 300 300 - 306 306 - 311 311 - 319	CC 152 CC 153 CC 154 CC 155 CC 156 CC 157 CC 158 CC 159 CC 160	391 - 399 399 - 407 407 - 415 415 - 423 423 - 431 431 - 439 439 - 447 447 - 455 455 - 463
CH 102 CH 103 CH 104 CH 105 CH 106 CH 107 CH 108 CH 110 CH 121 CH 122 CH 123 CH 126 CH 127 CH 128 CH 129 CH 129 CH 129 CH 131 CH 132	F2 F3 F4 F5 F6 F7 F8 F9 F10 F21 F22 F23 F24 F25 F26 F27 F28 F29 F30 F31 F32	CH 141 CH 142 CH 143 CH 144 CH 145 CH 146 CH 147 CH 148 CH 150 CH 151 CH 153 CH 154 CH 155 CH 156 CH 157 CH 158 CH 159 CH 160 CH 161	F41 F42 F43 F44 F45 F46 F47 F48 F49 F50 F51 F52 F53 F54 F55 F56 F57 F58 F60 F61	CC CC 110 CC 111 CC 112 CC 113 CC 114 CC 115 CC 116 CC 123 CC 124 CC 125 CC 126 CC 127 CC 128 CC 129 CC 130 CC 133 CC 133 CC 144 CC 133 CC 142 CC 143	116 - 124 124 - 132 132 - 140 140 - 148 148 - 156 156 - 164 164 - 172 220 - 228 228 - 236 236 - 244 244 - 252 252 - 260 260 - 268 268 - 276 276 - 284 284 - 292 292 - 300 300 - 306 306 - 311 311 - 319 319 - 327	CC 152 CC 153 CC 154 CC 155 CC 156 CC 157 CC 158 CC 159 CC 160	391 - 399 399 - 407 407 - 415 415 - 423 423 - 431 431 - 439 439 - 447 447 - 455 455 - 463
CH 102 CH 103 CH 104 CH 105 CH 106 CH 107 CH 108 CH 109 CH 110 CH 121 CH 122 CH 123 CH 124 CH 125 CH 126 CH 127 CH 128 CH 129 CH 130 CH 131 CH 133	F2 F3 F4 F5 F6 F7 F8 F9 F10 F21 F22 F23 F24 F25 F26 F27 F28 F29 F30 F31 F32 F33	CH 141 CH 142 CH 143 CH 144 CH 145 CH 146 CH 147 CH 148 CH 149 CH 149 CH 150 CH 152 CH 153 CH 155 CH 156 CH 157 CH 158 CH 159 CH 150 CH 157 CH 158 CH 159 CH 160 CH 161 CH 162	F41 F42 F43 F44 F45 F46 F47 F48 F49 F50 F51 F53 F55 F56 F57 F58 F59 F61 F62	CC CC 110 CC 111 CC 112 CC 113 CC 114 CC 115 CC 116 CC 123 CC 124 CC 125 CC 126 CC 127 CC 128 CC 128 CC 130 CC 131 CC 133 CC 141 CC 142 CC 143 CC 144	116 - 124 124 - 132 132 - 140 140 - 148 148 - 156 156 - 164 164 - 172 220 - 228 226 - 228 226 - 228 226 - 228 226 - 228 226 - 228 226 - 228 226 - 226 262 - 260 268 - 276 276 - 284 284 - 292 300 - 306 300 - 3311 311 - 319 318 - 327 327 - 335	CC 152 CC 153 CC 154 CC 155 CC 156 CC 157 CC 158 CC 159 CC 160	391 - 399 399 - 407 407 - 415 415 - 423 423 - 431 431 - 439 439 - 447 447 - 455 455 - 463
CH 102 CH 103 CH 104 CH 105 CH 106 CH 107 CH 108 CH 109 CH 110 CH 121 CH 122 CH 123 CH 124 CH 125 CH 126 CH 127 CH 128 CH 130 CH 131 CH 133 CH 134	F2 F3 F4 F5 F6 F7 F8 F9 F10 F21 F22 F23 F24 F25 F26 F27 F28 F29 F30 F31 F32 F33 F34	CH 141 CH 142 CH 143 CH 144 CH 145 CH 146 CH 147 CH 148 CH 148 CH 149 CH 148 CH 149 CH 150 CH 152 CH 153 CH 154 CH 155 CH 156 CH 157 CH 158 CH 160 CH 161 CH 162 CH 163	F41 F42 F43 F44 F45 F46 F47 F48 F49 F51 F52 F53 F55 F56 F57 F58 F59 F60 F61 F62 F63	CC CC 110 CC 111 CC 112 CC 113 CC 114 CC 115 CC 123 CC 124 CC 125 CC 126 CC 127 CC 128 CC 129 CC 130 CC 131 CC 132 CC 133 CC 141 CC 142 CC 143 CC 144 CC 145	116 - 124 124 - 132 132 - 140 140 - 148 148 - 156 156 - 164 164 - 172 220 - 228 228 - 236 236 - 244 244 - 252 252 - 260 260 - 268 268 - 276 276 - 284 284 - 292 292 - 300 300 - 306 306 - 311 311 - 319 312 - 335 335 - 343	CC 152 CC 153 CC 154 CC 155 CC 156 CC 157 CC 158 CC 159 CC 160	391 - 399 399 - 407 407 - 415 415 - 423 423 - 431 431 - 439 439 - 447 447 - 455 455 - 463
CH 102 CH 103 CH 104 CH 105 CH 106 CH 107 CH 108 CH 109 CH 110 CH 121 CH 122 CH 123 CH 124 CH 125 CH 128 CH 128 CH 129 CH 130 CH 131 CH 132 CH 133 CH 134 CH 135	F2 F3 F4 F5 F6 F7 F8 F9 F10 F21 F22 F23 F24 F25 F26 F27 F28 F29 F30 F31 F32 F34 F35	CH 141 CH 142 CH 143 CH 144 CH 145 CH 146 CH 147 CH 148 CH 149 CH 150 CH 151 CH 153 CH 154 CH 155 CH 156 CH 157 CH 158 CH 160 CH 161 CH 163 CH 161 CH 162 CH 163 CH 164	F41 F42 F43 F44 F45 F46 F47 F48 F49 F50 F51 F52 F53 F54 F55 F56 F57 F58 F59 F60 F61 F62 F63 F64	CC CC 110 CC 111 CC 111 CC 113 CC 114 CC 115 CC 116 CC 123 CC 125 CC 126 CC 127 CC 128 CC 129 CC 130 CC 131 CC 132 CC 133 CC 141 CC 143 CC 143 CC 144 CC 145 CC 146	116 - 124 124 - 132 132 - 140 140 - 148 148 - 156 155 - 164 164 - 172 220 - 228 228 - 236 236 - 244 244 - 252 252 - 260 260 - 268 268 - 276 278 - 292 292 - 300 300 - 306 300 - 301 311 - 319 319 - 327 327 - 335 335 - 343 343 - 3551	CC 152 CC 153 CC 154 CC 155 CC 156 CC 157 CC 158 CC 159 CC 160	391 - 399 399 - 407 407 - 415 415 - 423 423 - 431 431 - 439 439 - 447 447 - 455 455 - 463
CH 102 CH 103 CH 104 CH 105 CH 106 CH 107 CH 108 CH 109 CH 110 CH 121 CH 122 CH 123 CH 126 CH 127 CH 128 CH 129 CH 130 CH 133 CH 133 CH 133 CH 134 CH 135 CH 136	F2 F3 F4 F5 F6 F7 F8 F9 F10 F21 F22 F23 F24 F25 F26 F27 F28 F29 F30 F31 F32 F33 F34 F35 F36	CH 141 CH 142 CH 143 CH 144 CH 145 CH 146 CH 147 CH 148 CH 150 CH 151 CH 155 CH 155 CH 156 CH 157 CH 158 CH 159 CH 161 CH 162 CH 163 CH 165	F41 F42 F43 F44 F45 F46 F47 F48 F49 F50 F51 F52 F53 F54 F55 F56 F57 F58 F60 F61 F62 F63 F64 F65 F67 F68 F64 F65 F66 F64 F65	CC CC 110 CC 111 CC 112 CC 113 CC 114 CC 115 CC 116 CC 123 CC 124 CC 125 CC 126 CC 127 CC 128 CC 129 CC 130 CC 131 CC 132 CC 133 CC 141 CC 142 CC 144 CC 145 CC 146 CC 147	116 - 124 124 - 132 132 - 140 140 - 148 148 - 156 156 - 164 164 - 172 220 - 228 228 - 236 236 - 244 244 - 252 252 - 260 260 - 268 268 - 276 276 - 284 284 - 292 292 - 300 300 - 306 311 - 319 311 - 319 313 - 351 335 - 343 343 - 351 351 - 3559	CC 152 CC 153 CC 154 CC 155 CC 156 CC 157 CC 158 CC 159 CC 160	391 - 399 399 - 407 407 - 415 415 - 423 423 - 431 431 - 439 439 - 447 447 - 455 455 - 463
CH 102 CH 103 CH 104 CH 105 CH 106 CH 107 CH 108 CH 109 CH 110 CH 121 CH 122 CH 123 CH 124 CH 125 CH 126 CH 127 CH 128 CH 129 CH 131 CH 132 CH 133 CH 134 CH 135 CH 136 CH 137	F2 F3 F4 F5 F6 F7 F8 F9 F10 F21 F22 F23 F24 F25 F26 F27 F28 F29 F30 F31 F32 F33 F34 F36 F37	CH 141 CH 142 CH 143 CH 144 CH 145 CH 146 CH 147 CH 148 CH 148 CH 149 CH 148 CH 149 CH 150 CH 151 CH 152 CH 155 CH 155 CH 156 CH 157 CH 159 CH 160 CH 161 CH 163 CH 163 CH 164 CH 166 CH 168	F41 F42 F43 F44 F45 F46 F47 F48 F49 F50 F51 F52 F53 F55 F56 F57 F58 F59 F60 F61 F62 F63 F64 F65 F66	CC CC 110 CC 111 CC 112 CC 113 CC 114 CC 115 CC 123 CC 124 CC 125 CC 126 CC 127 CC 128 CC 128 CC 130 CC 131 CC 132 CC 133 CC 141 CC 142 CC 143 CC 144 CC 145 CC 146 CC 147 CC 148	116 - 124 124 - 132 132 - 140 140 - 148 148 - 156 156 - 164 164 - 172 220 - 228 226 - 228 226 - 228 226 - 228 226 - 244 224 - 252 252 - 260 266 - 276 276 - 284 284 - 292 292 - 300 300 - 306 300 - 306 300 - 335 335 - 343 343 - 351 351 - 359 356 - 367	CC 152 CC 153 CC 154 CC 155 CC 156 CC 157 CC 158 CC 159 CC 160	391 - 399 399 - 407 407 - 415 415 - 423 423 - 431 431 - 439 439 - 447 447 - 455 455 - 463
CH 102 CH 103 CH 104 CH 105 CH 106 CH 107 CH 108 CH 109 CH 110 CH 121 CH 122 CH 123 CH 124 CH 125 CH 126 CH 127 CH 128 CH 130 CH 131 CH 133 CH 134 CH 135 CH 136 CH 137 CH 138	F2 F3 F4 F5 F6 F7 F8 F9 F10 F21 F22 F23 F24 F25 F26 F27 F28 F29 F30 F31 F32 F34 F35 F36 F37 F38	CH 141 CH 142 CH 143 CH 144 CH 145 CH 146 CH 147 CH 148 CH 148 CH 149 CH 148 CH 150 CH 151 CH 152 CH 153 CH 156 CH 157 CH 158 CH 161 CH 162 CH 163 CH 164 CH 165 CH 166 CH 166 CH 167	F41 F42 F43 F44 F45 F46 F47 F48 F49 F50 F51 F55 F56 F57 F58 F59 F60 F61 F62 F55 F56 F57 F68 F69 F64 F65 F66 F66 F66 F66 F67	CC CC 110 CC 111 CC 112 CC 113 CC 114 CC 115 CC 123 CC 124 CC 125 CC 126 CC 127 CC 128 CC 129 CC 131 CC 132 CC 133 CC 144 CC 142 CC 143 CC 144 CC 145 CC 146 CC 147 CC 148 CC 148 CC 147	116 - 124 124 - 132 132 - 140 140 - 148 148 - 156 156 - 164 164 - 172 220 - 228 228 - 236 236 - 244 244 - 252 252 - 260 260 - 268 268 - 276 276 - 284 284 - 292 292 - 300 300 - 306 300 - 306 300 - 303 311 - 319 311 - 319 312 - 335 333 - 343 343 - 351 351 - 359 367 - 375	CC 152 CC 153 CC 154 CC 155 CC 156 CC 157 CC 158 CC 159 CC 160	391 - 399 399 - 407 407 - 415 415 - 423 423 - 431 431 - 439 439 - 447 447 - 455 455 - 463
CH 102 CH 103 CH 104 CH 105 CH 106 CH 107 CH 108 CH 109 CH 110 CH 121 CH 122 CH 123 CH 124 CH 125 CH 126 CH 127 CH 128 CH 129 CH 131 CH 132 CH 133 CH 134 CH 135 CH 136 CH 137	F2 F3 F4 F5 F6 F7 F8 F9 F10 F21 F22 F23 F24 F25 F26 F27 F28 F29 F30 F31 F32 F33 F34 F36 F37	CH 141 CH 142 CH 143 CH 144 CH 145 CH 146 CH 147 CH 148 CH 148 CH 149 CH 148 CH 149 CH 150 CH 151 CH 152 CH 155 CH 155 CH 156 CH 157 CH 159 CH 160 CH 161 CH 163 CH 163 CH 164 CH 166 CH 168	F41 F42 F43 F44 F45 F46 F47 F48 F49 F50 F51 F52 F53 F55 F56 F57 F58 F59 F60 F61 F62 F63 F64 F65 F66	CC CC 110 CC 111 CC 112 CC 113 CC 114 CC 115 CC 123 CC 124 CC 125 CC 126 CC 127 CC 128 CC 128 CC 130 CC 131 CC 132 CC 133 CC 141 CC 142 CC 143 CC 144 CC 145 CC 146 CC 147 CC 148	116 - 124 124 - 132 132 - 140 140 - 148 148 - 156 156 - 164 164 - 172 220 - 228 226 - 228 226 - 228 226 - 228 226 - 244 224 - 252 252 - 260 266 - 276 276 - 284 284 - 292 292 - 300 300 - 306 300 - 306 300 - 335 335 - 343 343 - 351 351 - 359 356 - 367	CC 152 CC 153 CC 154 CC 155 CC 156 CC 157 CC 158 CC 159 CC 160	391 - 399 399 - 407 407 - 415 415 - 423 423 - 431 431 - 439 439 - 447 447 - 455 455 - 463

- When two CH/CC numbers correspond to one Channel number, choose either one according to the current COUNTRY setting. When the COUNTRY setting is other than FRANCE, choose a two-digit CH/CC number. When the COUNTRY setting is FRANCE, choose a three-digit CH/ CC number.
- Find the CH/CC number (CC110 to CC161) corresponding to the TV channel (SECAM-L system) from a French cable TV station, based on the broadcast frequency of the TV channel. When you do not know the broadcast frequency, please contact the cable TV station.
- The CH/CC numbers of CH102-CH169 and CC110-CC161 correspond to the TV channels being broadcast by a SECAM-L system. The other CH/CC numbers correspond to the TV channels being broadcast by a method other than a SECAM-L system.

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 \bigcirc button on the TV.
- Make sure you set the VCR/TV/DVD switch to the TV position. You cannot turn the TV on when the VCR/TV/DVD switch is set to the VCR or DVD position.

■ If you cannot turn off the TV

 Make sure you set the VCR/TV/DVD switch to the TV position. You cannot turn the TV off when the VCR/TV/DVD switch is set to the VCR or DVD position.

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 35 to change the BLUE BACK function setting to OFF.
- If the SYSTEM setting for a TV channel is incorrect, it may prevent the sound from being issued. Follow the description "EDIT/MANUAL" on page 37 to use the MANUAL function to try to change the 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 highvoltage 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 32 to try to solve the trouble.
- Have the COLOUR and BRIGHT settings been adjusted properly? Follow the description "BRIGHT-2" and "COLOUR" on page 29 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.
- Since this TV is designed to make full use of the resolution of the original video source, the motion may appear unnatural when the video source is input with progressive-scanning component signals. If this occurs, change the output setting of the connected device to interlacescanning component signal output. See the instructions that came with the device for more information.

Poor sound

- Have you adjusted BASS or TREBLE properly? If not, follow the description "BASS" or "TREBLE" on page 33.
- When TV channel reception is poor, it can be hard to hear stereo or bilingual sound. In this case, follow the description "STEREO / I • II" on page 33 to hear the sound more easily by changing it to a mono sound.

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 8 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 **TV** 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 ^(b)/I (standby) button to turn on the TV once again. If the TV goes back to normal, there is no problem.
- When the TV is receiving a wide-screen signal (WSS) or a signal from an external device affecting the screen size, the ZOOM mode automatically changes. When you want to resume the previous ZOOM mode, press the **ZOOM** button again.
- 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.

Specifications

Model	LT-32C50BU/LT-32C50SU				
Broadcasting systems	CCIR B/G, I, D/K, L				
Colour systems	PAL, SECAM • The EXT terminals also support the NTSC 3.58/4.43 MHz system.				
Channels and frequencies	F2-F10, F21-F69, 116-172, E2-E12, E21-E69, S1-S41, X, Y, Z, Z+1, Z+2, A-H, H+1, H+2, R1-R12, R21-R69 • French cable TV channel of broadcast frequencies 116 - 172 MHz and 220 -				
	469 MHz.				
Sound-multiplex systems	NICAM (B/G, I, D/K, L) system, A2 (B/G, D/K) system				
Teletext systems	FLOF (Fastext), TOP, WST (World Standard System)				
Power requirements	110 - 240 V AC, 50/60 Hz				
Power consumption	161 W (Standby: 2.8 W)				
Screen size	Viewable area 80 cm (measured diagonally)				
Audio output	Rated Power output: 10 W + 10 W				
Speakers	6.6 cm round × 2				
EXT-1 terminal	 Euroconnector (21-pin, SCART) Video input, S-VIDEO (Y/C) 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, Audio L/R inputs and RGB inputs are available. Video and Audio L/R outputs are available. T-V LINK functions are available. 				
EXT-3 terminal	RCA connectors × 3 S-VIDEO connector × 1 • Video input, S-VIDEO (Y/C) input and Audio L/R inputs are available.				
EXT-4 terminal	 RCA connectors × 5 Component video (Y, Pb, Pr) input and Audio L/R inputs are available. 625p, 525p, 1125i and 750p signals are available. 750p signal is only available for 60Hz. Some DVD players can output 625p, 525p and 750p signals. 1125i and 750p are new high-definition signals. 				
AUDIO OUT terminal	RCA connectors × 2 • Audio L/R outputs are available. • Output level 0.5 Vrms.				
PC INPUT terminal	 Analog RGB D-SUB (15 pin) × 1 PC signal is available. Refer to page 45 for details of the signals which can be input. 				
Headphone jack	Stereo mini-jack (3.5 mm in diameter)				
Dimensions (W \times H \times D)	834 mm × 568 mm × 108 mm (TV only)				
Weight	17.3 kg (TV only)				
Accessories	Remote control unit × 1 (RM-C1811H) 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.

Model	LT-26C50BU/LT-26C50SU
Broadcasting systems	CCIR B/G, I, D/K, L
Colour systems	PAL, SECAM The EXT terminals also support the NTSC 3.58/4.43 MHz system.
Channels and frequencies	F2-F10, F21-F69, 116-172, E2-E12, E21-E69, S1-S41, X, Y, Z, Z+1, Z+2, A-H, H+1, H+2, R1-R12, R21-R69 • French cable TV channel of broadcast frequencies 116 - 172 MHz and 220 - 469 MHz.
Sound-multiplex systems	NICAM (B/G, I, D/K, L) system, A2 (B/G, D/K) system
Teletext systems	FLOF (Fastext), TOP, WST (World Standard System)
Power requirements	110 - 240 V AC, 50/60 Hz
Power consumption	125 W (Standby: 2.8 W)
Screen size	Viewable area 64.8 cm (measured diagonally)
Audio output	Rated Power output: 10 W + 10 W
Speakers	6.6 cm round × 2
EXT-1 terminal	 Euroconnector (21-pin, SCART) Video input, S-VIDEO (Y/C) 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, Audio L/R inputs and RGB inputs are available. Video and Audio L/R outputs are available. T-V LINK functions are available.
EXT-3 terminal	RCA connectors × 3 S-VIDEO connector × 1 • Video input, S-VIDEO (Y/C) input and Audio L/R inputs are available.
EXT-4 terminal	 RCA connectors × 5 Component video (Y, Pb, Pr) input and Audio L/R inputs are available. 625p, 525p, 1125i and 750p signals are available. 750p signal is only available for 60Hz. Some DVD players can output 625p, 525p and 750p signals. 1125i and 750p are new high-definition signals.
AUDIO OUT terminal	RCA connectors × 2 Audio L/R outputs are available. Output level 0.5 Vrms.
PC INPUT terminal	 Analog RGB D-SUB (15 pin) × 1 PC signal is available. Refer to page 45 for details of the signals which can be input.
Headphone jack	Stereo mini-jack (3.5 mm in diameter)
Dimensions (W \times H \times D)	703 mm × 491 mm × 107 mm (TV only)
Weight	13.0 kg (TV only)
Accessories	Remote control unit × 1 (RM-C1811H) AA/R6 dry cell battery × 2

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