SONY

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420489162

Trinitron Colour Television

Instruction Manual

GB

KV-28DS20U
KV-32DS20U

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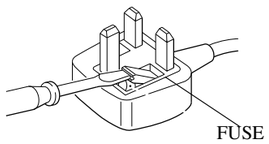
This Instruction Manual has been produced using Totally chlorine free (TCF) 100% Re-cycled paper to comply with our commitment to the use of environmentally friendly materials in our products.

NOTICE FOR CUSTOMERS IN THE UNITED KINGDOM

A molded plug complying with BS1363 is fitted to this equipment for your safety and convenience.
Should the fuse in the plug supplied need to be replaced, a 5 AMP fuse approved by ASTA or BSI to BS 1362 (i.e. marked with ⓐ or ♡) must be used.
When an alternative type of plug is used it should be fitted with a 5 AMP FUSE, otherwise the circuit should be protected by a 5 AMP FUSE at the distribution board.
If the plug supplied with this equipment has a detachable fuse cover, be sure to attach the fuse cover after you change the fuse. Never use the plug without the fuse cover. If you should lose the fuse cover, please contact your nearest Sony service station.



How to replace the Fuse

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

- **IMPORTANT**

  If the plug supplied is not suitable for the socket outlet in your home, it should be cut off and an appropriate plug fitted in accordance with the following instructions:
  The wires in this mains lead are coloured in accordance with the following code:
  Blue Neutral
  Brown Live
  As the colours of the wires in the mains lead of this apparatus may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:
  The wire which is coloured blue must be connected to the terminal which is marked with the letter N or coloured black. The wire which is coloured brown must be connected to the terminal which is marked with the letter L or coloured red. Do not connect either wire to the earth terminal in the plug which is marked by the letter E or by the safety earth symbol ⏚ or coloured green or green and yellow.

WARNING

- To prevent shock hazard, do not insert the plug cut off from the mains lead into a socket outlet. This plug cannot be used and should be destroyed.
- To prevent fire or shock hazard, do not expose the unit to rain or moisture.
- Dangerously high voltages are present inside the set. Do not open the cabinet. Refer servicing to qualified personnel only.

Instruction Manual GB

For your safety

All TVs operate on extremely high voltages. To prevent fire or electric shock, please follow the safety procedures indicated below.

For General Safety

- Do not expose the TV set to rain or moisture.
- Do not remove the rear cover.
- For your protection, refer all servicing to qualified personnel only.

For Safe Installation

- Do not install the TV in hot, humid or excessively dusty places.
- Do not block or cover the ventilation openings. For ventilation, leave a space of at least 10 cm all around the set.
- Do not install the TV where it may be exposed to mechanical vibrations.
- Place the TV set only on a stable stand designed for the weight and dimensions of the TV.

For Safe Operation

- Do not operate the TV set on anything other than a 220-240V AC, 50Hz supply.
- Do not operate the TV if any liquid or solid objects fall in through the ventilation slots. Have it checked immediately.
- For environmental and safety reasons, it is recommended that the TV set is not left in standby mode when not in use. Switch off at the mains.
- Do not disconnect the TV by pulling on the power cable. Disconnect by removing the mains plug.
- In case of a thunderstorm, disconnect the TV set from the main supply and the aerial. Otherwise the set may be damaged by a stroke of lightning.

For Maintenance

- When the TV is switched off, clean the TV screen with a soft dampened cloth. Do not use any abrasive cleaners.
- Dust and nicotine deposits may cause heat accumulation inside the TV set. In the long term this could be a safety risk and may shorten the lifetime of your TV set. Therefore have your set serviced about every five years.

Table of Contents

Quick Start Guide

Checking the accessories supplied	4
Inserting batteries into the remote control	4
Connecting the speakers	5
Connecting the aerial	7
Switching on the TV	7
Automatically tuning the TV	8

Overview

Overview of the TV set buttons	9
Overview of the remote control buttons	10

Additional TV Features

Choosing a language for the TV menu screens	11
Automatically tuning the TV	12
Re-arranging the TV channels	13
Adjusting the picture	14
Changing picture and sound modes quickly	14
Adjusting the sound	15
Setting up Dolby Pro Logic	16
Changing the screen mode	17
Displaying subtitles for digital channels	18
Using the ‘Further Programme Preset’ feature	19
Adjusting the picture rotation	20
Using the parental lock	21
Using the sleep timer	22
Manually tuning the TV	23
Skipping programme positions	24
Naming a channel	25

Teletext

Viewing standard teletext	26
Viewing digital teletext	27

Electronic Programme Guide (EPG)

Displaying the EPG	28
Viewing information on the EPG	28
Recording programmes	29
Setting the manual timer	30

Optional Equipment

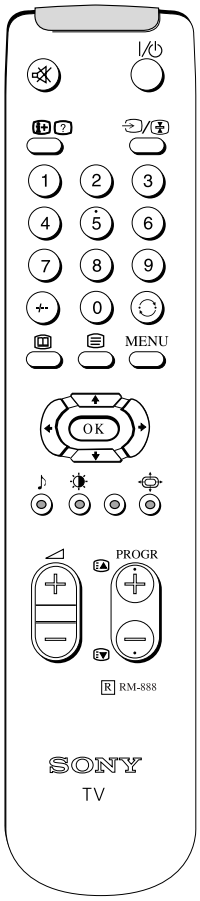
Connecting equipment to the TV	31
Additional information when connecting equipment	31
Selecting the output source for the scart sockets G or H	32
Using the ‘AV Label Preset’ feature	33

Additional Information

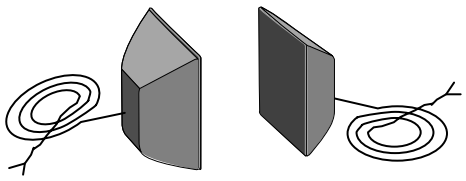
Specifications	34
Troubleshooting	35

Follow steps 1-6 to:
Check the accessories supplied
Insert batteries into your remote control
Connect the aerial to your TV
Plug in and switch on the TV
View programmes on your TV

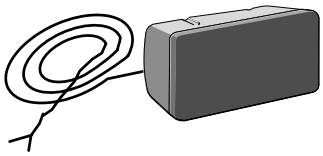
1. Checking the accessories supplied



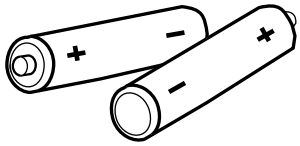
Remote control



Surround Speakers

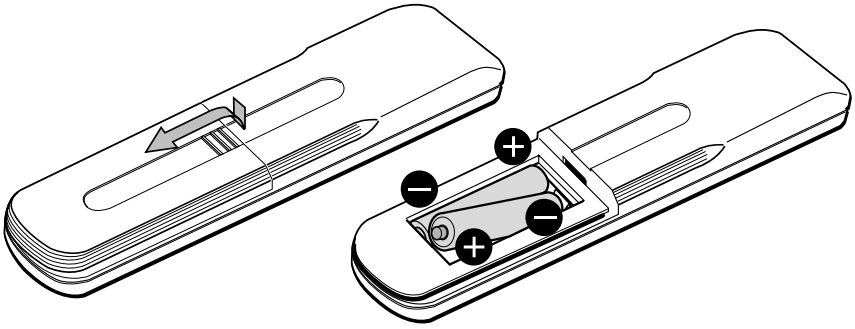


Centre Speaker



Batteries

2. Inserting batteries into the remote control



Always remember to dispose of used batteries in an environmentally friendly way.

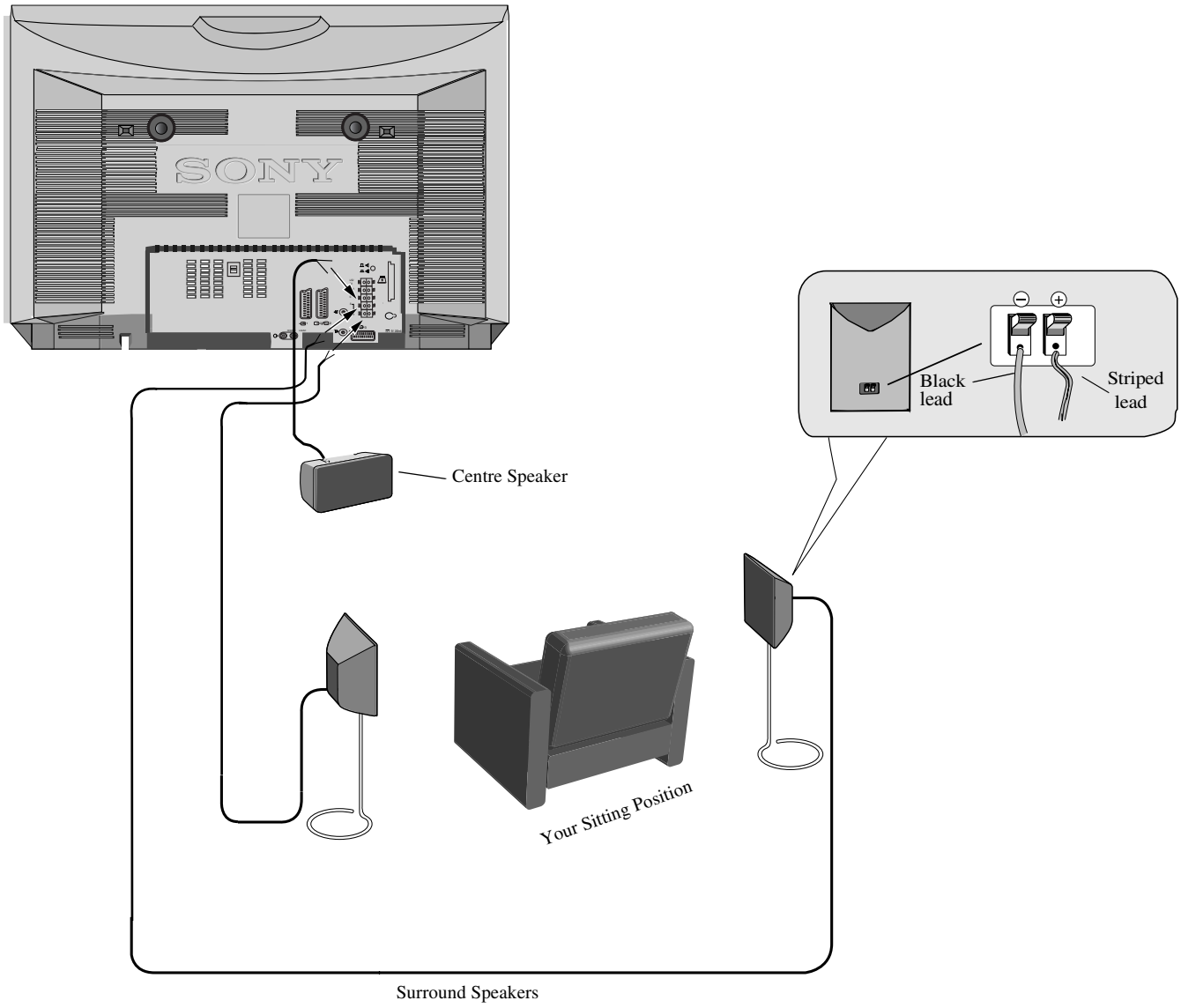
3.1. Connecting the speakers

Before switching on the TV, please connect the speakers to the TV using the leads provided. Connect the striped lead to the red terminals and the black lead to the black terminals.

Dolby* ProLogic Surround normally requires 5 speakers:

Centre Speaker - to anchor the fixed sounds, like dialogues, to the screen.
Left and Right Front Speakers (incorporated in the TV) - for the normal two channel stereo or bilingual broadcasts.
Surround Speakers - for the special effects created by the surround channels.

To connect the speakers provided:

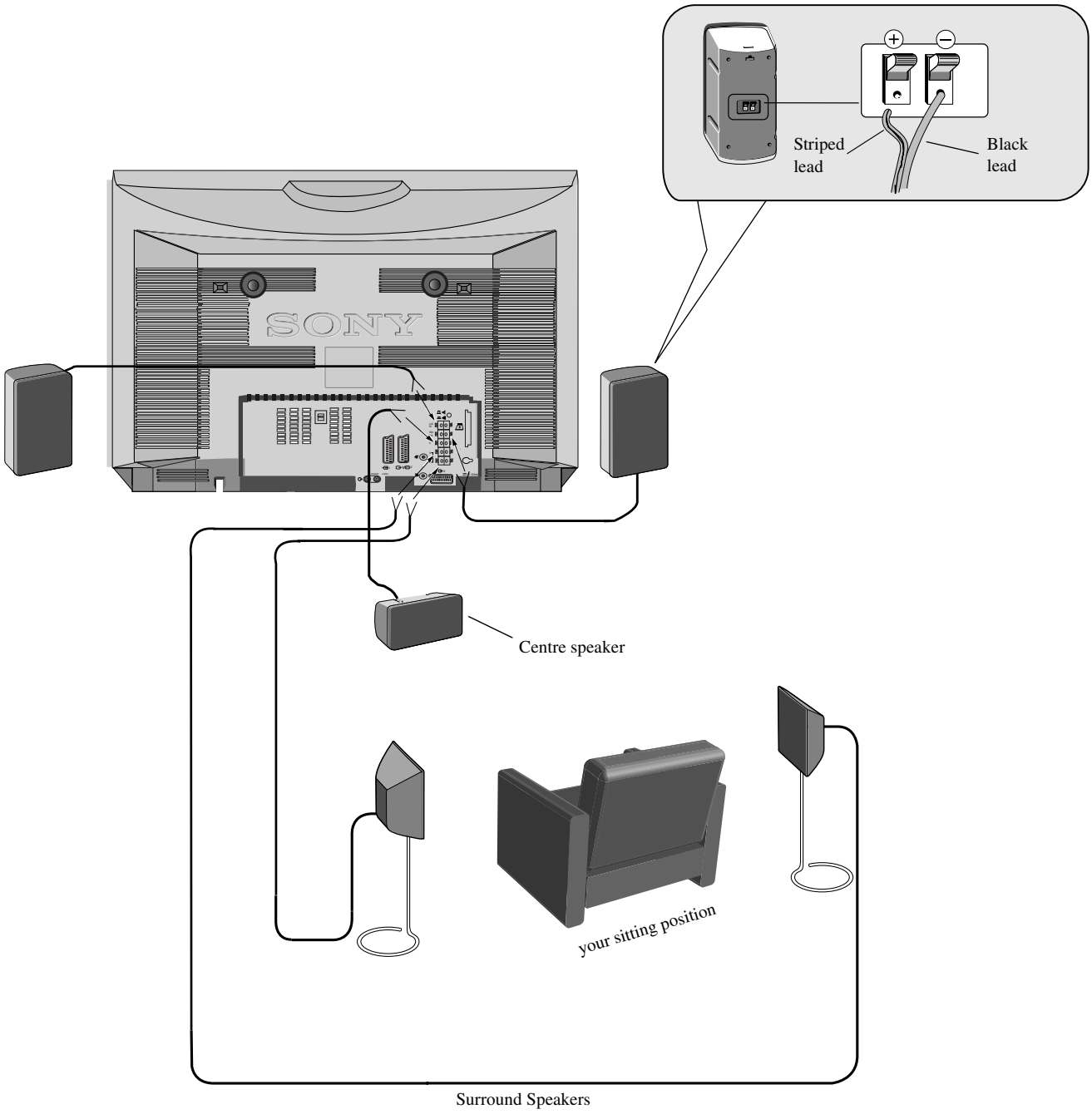


* Manufactured under licence from Dolby laboratories Licensing Corporation. 'Dolby', 'ProLogic', and the double -D symbol are trademarks of the Dolby Laboratories Licencing Corporation.

** For the best sound effects, place the surround speakers one meter above your listening position.

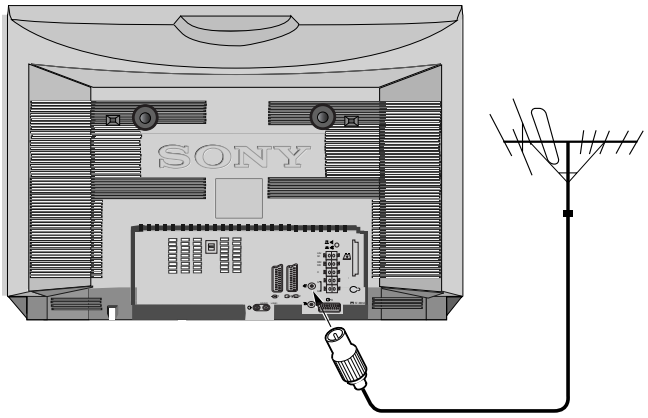
3.2. Connecting the speakers

To connect your own speakers (when using your own speakers, make sure they are at least 4 ohms impedance and magnetically shielded)



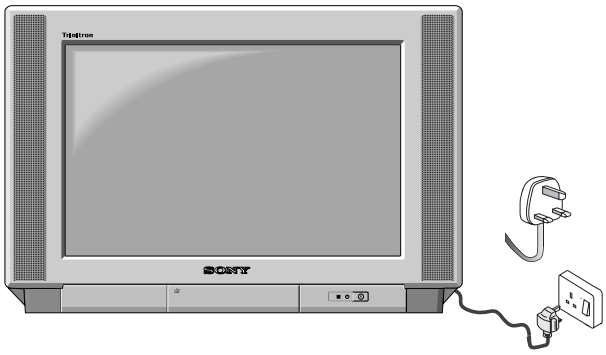
Note: When you connect your own external left and right speakers you must mute the internal speakers by pressing in the button marked on the rear of the TV.

4. Connecting the aerial

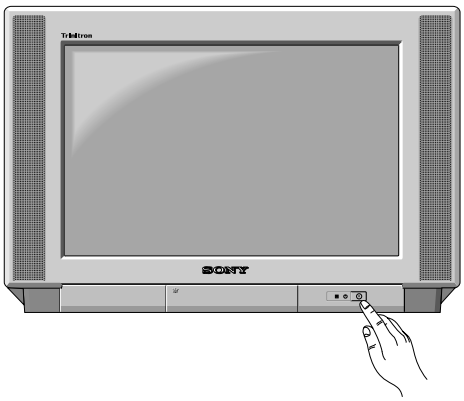


Connect a conventional aerial to the socket marked ⊣⊢ on the rear of the TV.

5. Switching on the TV



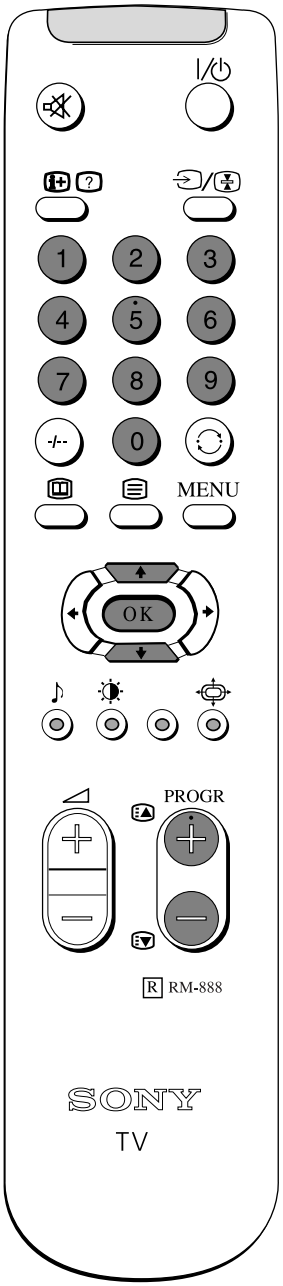
Connect the TV plug to the mains socket (220-240V AC, 50Hz) and switch on.



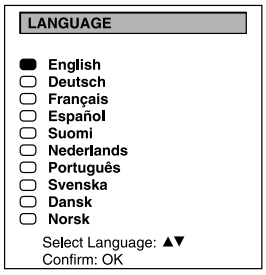
Push in the on/off switch on the front of the TV.

6. Automatically tuning the TV

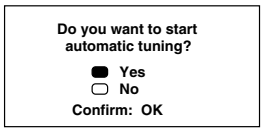
When you first switch on the TV, the following sequence of menu screens appear on the TV enabling you to 1) choose a language for the TV menu screens, 2) tune channels to the TV, 3) arrange the channels.



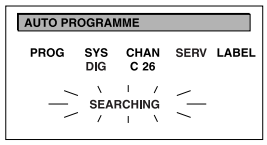
1. When switching on the TV for the first time, the 'LANGUAGE' menu appears automatically on the TV screen enabling you to select in which language you wish to read the TV menu screens. Press the ↑ or ↓ buttons on the remote control to select your chosen language then press the OK button to confirm your selection.



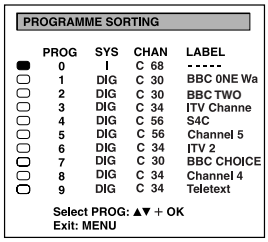
2. The 'AUTO TUNE' menu appears on the TV screen in your selected language. Press the ↑ or ↓ buttons to select 'YES' then press the OK button to confirm.

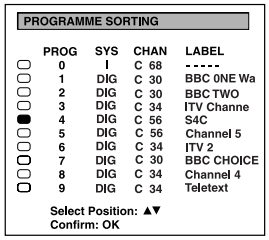


3. Ensure the antenna is connected as instructed, then press the OK button to confirm. The TV starts to automatically search and store all available channels for you. Please be patient and do not press any buttons.
The digital channels will be stored on programme numbers 1-90 and the analogue channels on programme numbers 91-99.
Note: If any digital channels are stored on programme numbers 91-99 during the Automatic Tuning procedure, then no analogue channels will be allocated. If this happens, please refer to the section 'Manually Tuning the TV' on page 23 of this manual to tune in and store the analogue channels.



4. When the TV has finished tuning in all available channels, the 'PROGRAMME SORTING' menu appears on the TV screen enabling you to change the order of the channels on your TV. If you wish to change the channel order, press the ↑ or ↓ buttons on your remote control to select the channel you want to move, then press the OK button. Press the ↑ or ↓ buttons to select the new programme number position for your selected channel then press the OK button to confirm. The selected channel now moves to its new programme position and the other channels move accordingly. Repeat this procedure if you wish to sort the order of other channels on your TV.

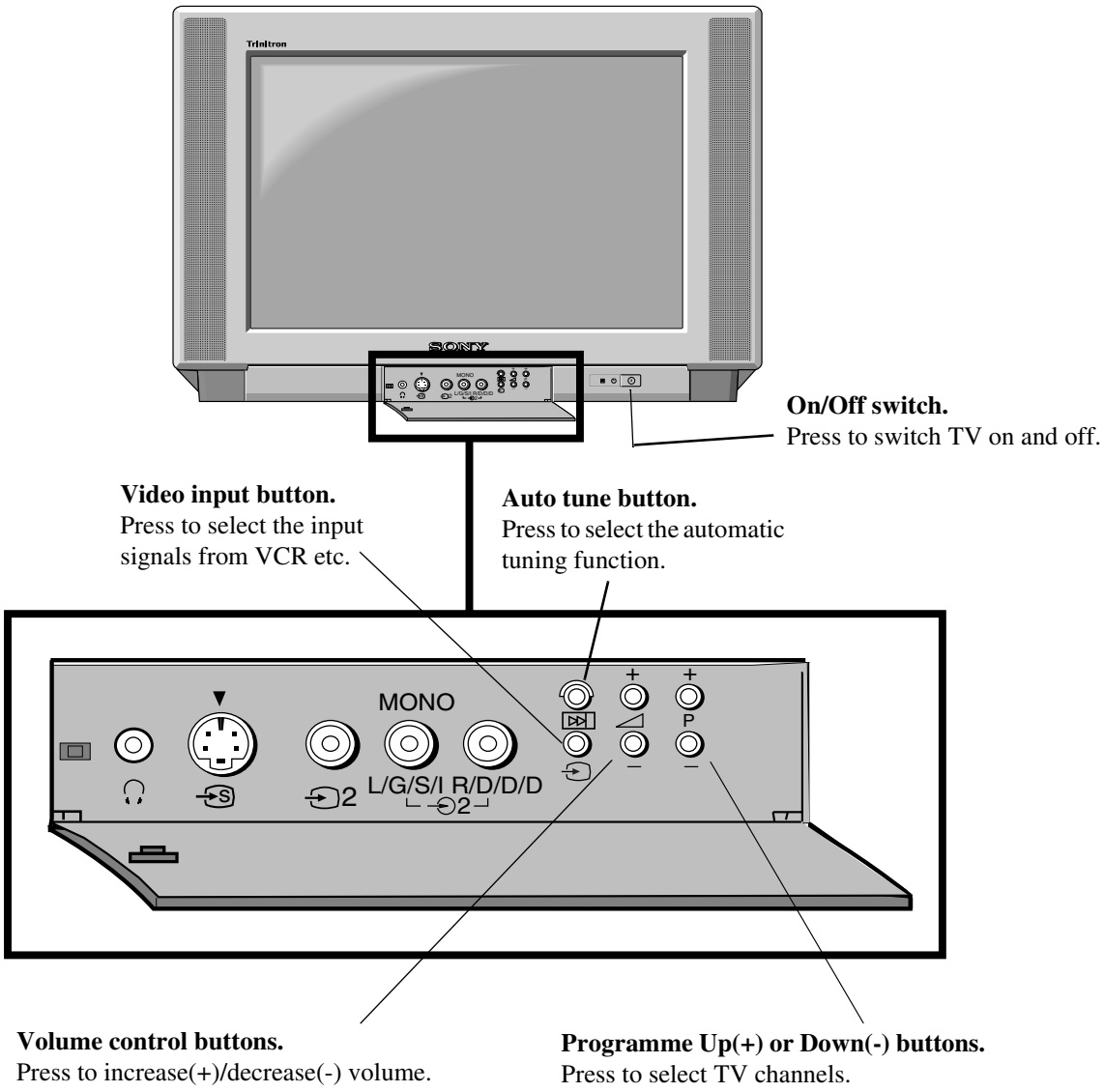




5. Press the MENU button to remove the menu from the TV screen.

6. Press the PROGR+/- or the numbered buttons on the remote control to view the TV channels.

Overview of the TV set buttons



On/Off switch.
Press to switch TV on and off.

Video input button.
Press to select the input signals from VCR etc.

Auto tune button.
Press to select the automatic tuning function.

Volume control buttons.
Press to increase(+)/decrease(-) volume.

Programme Up(+) or Down(-) buttons.
Press to select TV channels.

Overview of the remote control buttons

To mute sound
Press to mute TV sound. Press again to restore the sound.

To reveal on screen information
Press to reveal all on-screen indications. Press again to cancel. In teletext mode, press to reveal concealed information (eg answers to a quiz) then press again to cancel.

To select channels
Press the numbered buttons to select channels.

For double digit programme numbers, e.g.23, press -/-- first, then the buttons 2 and 3. If you enter an incorrect first digit, select -/-- button again to enter the programme number of your choice.

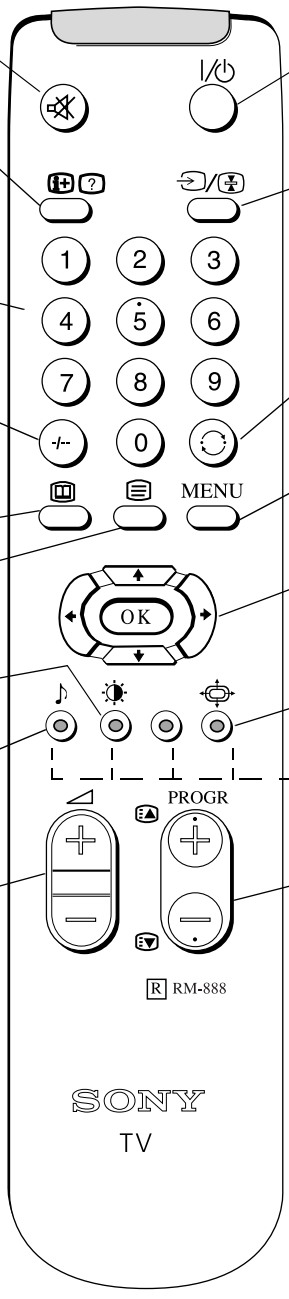
To select EPG
Press to display the Electronic Programme Guide. Press again to remove display.

To select Teletext
Press to switch on Teletext.

To display picture menu
Press to change the picture settings. Press the OK button to remove the display.

To display sound menu
Press to change the sound settings. Press the OK button to remove the display.

To adjust TV volume
Press to adjust the volume of the TV.



To temporarily switch off TV
Press to temporarily switch off TV. Press again to switch on from standby mode. To save energy, we recommend switching off completely when TV is not in use.
NOTE: After 15-30 minutes without a TV signal and without any button being pressed, the TV switches automatically into standby mode.

To select input signal or freeze teletext
Press to select inputs from the TV sockets (see Using Optional Equipment section). In teletext mode, press to freeze the displayed page. Press once again to cancel.

To return to previous channel
Press to return to the previous channel you were watching. Note: This can be done only after watching the present channel for 5 seconds.

To display the menu
Press if you wish to use the TV menu system. Press again to remove the menu from the TV screen.

To select menu items
Use these buttons and the OK button to select the options available in the menu system of this TV.

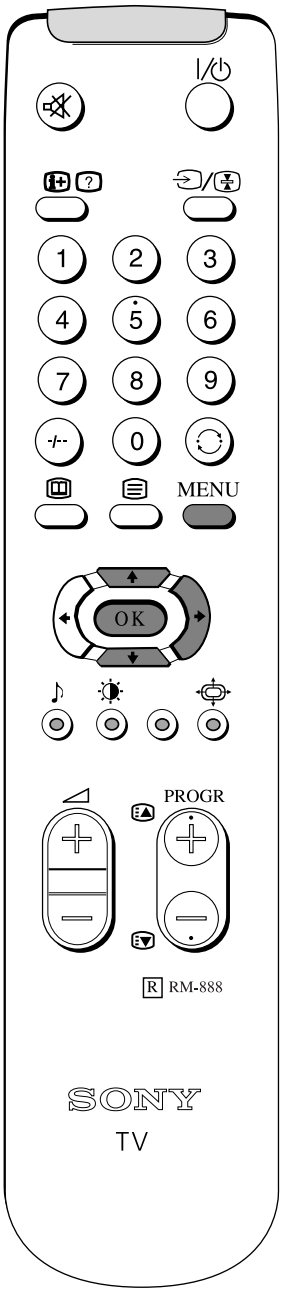
To change screen format
Press to change the size of the screen.

See Teletext section of manual for details.

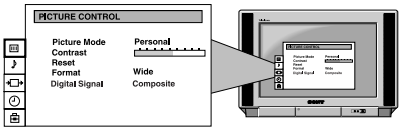
To select channels
Press to select channels.

Choosing a language for the TV menu screens

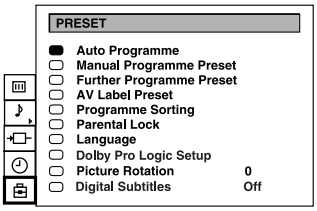
The TV consists of a menu system which can appear on screen in a variety of languages. Use the following feature to select the language that best suits you.



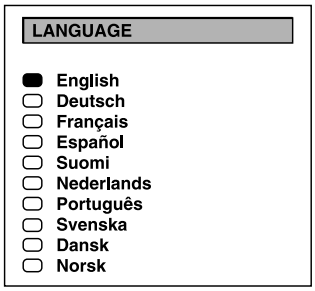
1. Press the MENU button on the remote control to display the menu on the TV screen.



2. Press the ↑ or ↓ buttons to select the symbol on the menu screen then press the → button to enter the 'PRESET' menu.



3. Press the ↑ or ↓ buttons to select 'Language' on the menu screen then press the → button to enter the 'LANGUAGE' menu.



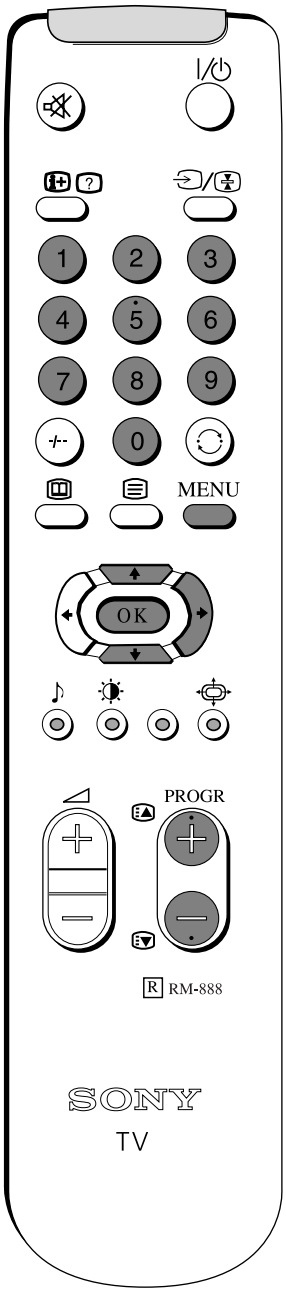
4. Press the ↑ or ↓ buttons to select your chosen language.

5. Press the OK button to confirm your selection.

6. Press the MENU button to remove the display from the TV screen.

Automatically tuning the TV

You have already tuned in all available channels using the ‘Automatically tuning the TV’ section at the start of this manual. If you need to repeat the tuning procedure however, follow the instructions below and the TV automatically searches and stores all available channels for you.



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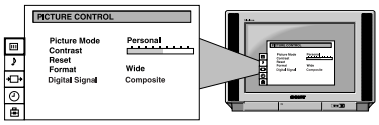
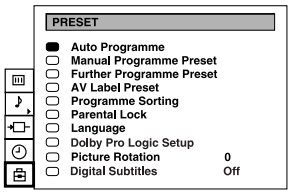
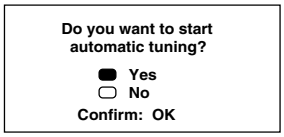


2. Press the ↑ or ↓ buttons on the remote control to select the symbol on the menu screen then press the → button to enter the ‘PRESET’’ menu.



3. Press the ↑ or ↓ buttons to select ‘Auto Programme’ then press the → button to display the autotune menu.

4. Press the ↑ or ↓ buttons to select ‘YES’ then press the OK button to confirm.



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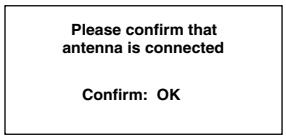
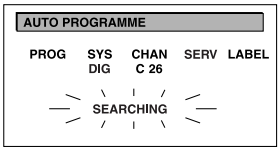


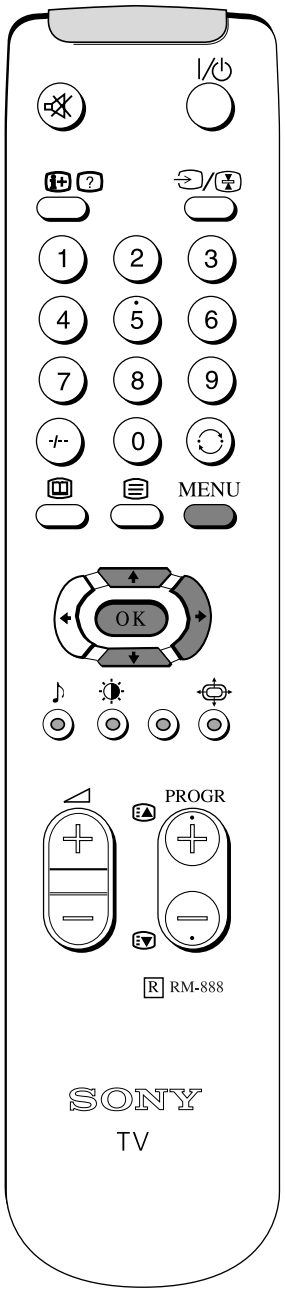


6. When the automatic tuning procedure is complete, the menu disappears from the TV screen. Press the PROGR+/- or the numbered buttons on the remote control to view the TV channels.

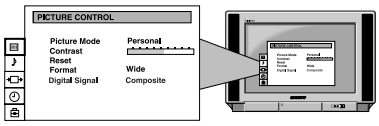
Note: Press the MENU button if you wish to stop the automatic tuning procedure.

Re-arranging the TV channels

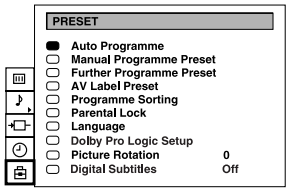
After tuning the TV, you can use this feature to change the channel order.



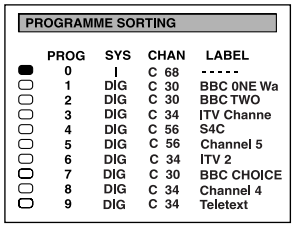
1. Press the MENU button on the remote control to display the menu on the TV screen.



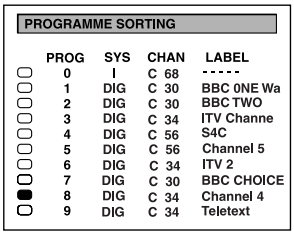
2. Press the ↑ or ↓ buttons on the remote control to select the symbol on the menu screen then press the → button to enter the 'PRESET' menu.



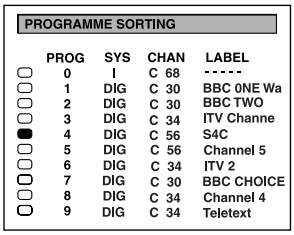
3. Press the ↓ buttons to select 'Programme Sorting' then press the → button to enter the 'PROGRAMME SORTING' menu.



4. Press the ↑ or ↓ buttons to select the channel you want to move then press the OK button to confirm.



5. Press the ↑ or ↓ buttons to select the new programme position (eg PROG 4) for your selected channel then press the OK button to confirm. The selected channel now moves to its new programme position and the other channels move accordingly.

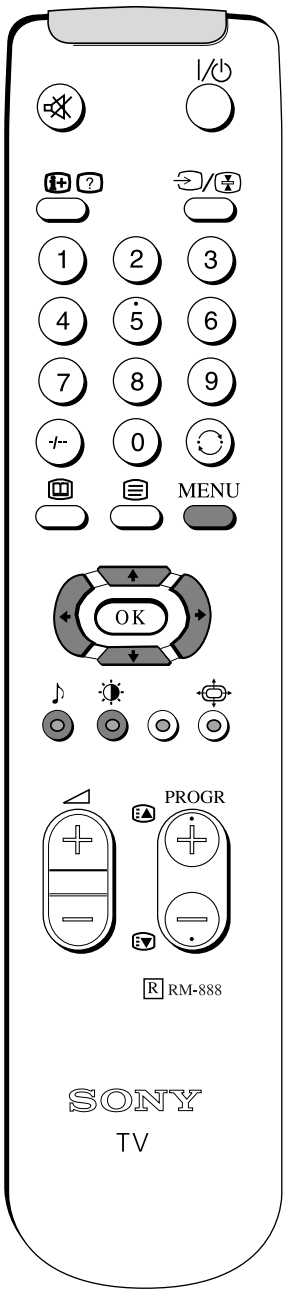


6. Repeat steps 4 and 5 if you wish to sort other channels.

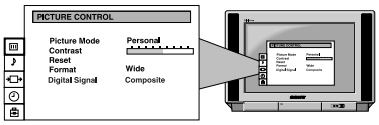
7. Press the MENU button to remove the menu from the TV screen.

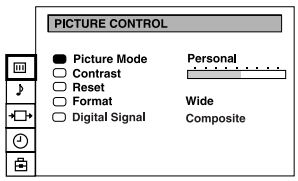
Adjusting the picture

Although the picture is adjusted at the factory, you can modify it to suit your own taste.



1. Press the MENU button on the remote control to display the menu on the TV screen.
2. Press the ↑ or ↓ buttons on the remote control to select the symbol on the menu screen then press the → button to enter the 'PICTURE CONTROL' menu.
3. Press the ↑ or ↓ buttons to select the item on the screen you wish to adjust then press the → button to confirm. For a description of the menu items and their effects, see the table below.
4. If you selected 'Picture Mode' or 'Format' in step 3, press the ↑ or ↓ buttons to select the item on the screen you wish to adjust then press the → button to confirm.
5. Press the → or ← buttons to adjust your selected item.
6. As soon as you have adjusted the item, press the OK button to store the new setting.
7. If you selected 'Picture Mode' or 'Format' in step 3, press the ← buttons to return to the 'PICTURE CONTROL' menu.
8. Repeat steps 3-7 to adjust the other items.
9. Press the MENU button to remove the menu from the TV screen.





Picture Mode

Picture Mode→	Personal (for individual settings)
	Movie (for films)
←	Live (for live broadcasts)
Brightness*	
Colour*	
Sharpness*	
Hue**	

Contrast

Reset — Resets picture to factory preset levels

Format

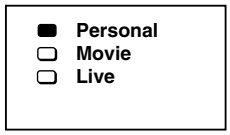
Format	(refer to page 17 for details)	
Scroll		
Auto 16:9	→ Off	← On

Digital Signal — *** Set to Composite or RGB. Choose the option that gives you the picture quality you prefer

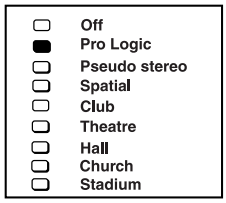
*Only if you select 'Personal' in 'Picture Mode'.
** Available for NTSC colour system only.
*** If you select the RGB option, any changes made to the Colour, Sharpness and Hue levels will have no effect.

Changing picture and sound modes quickly

You can quickly change the Picture Mode or the Sound Effects Mode without entering the 'PICTURE CONTROL' or the 'SOUND CONTROL' menu screens.

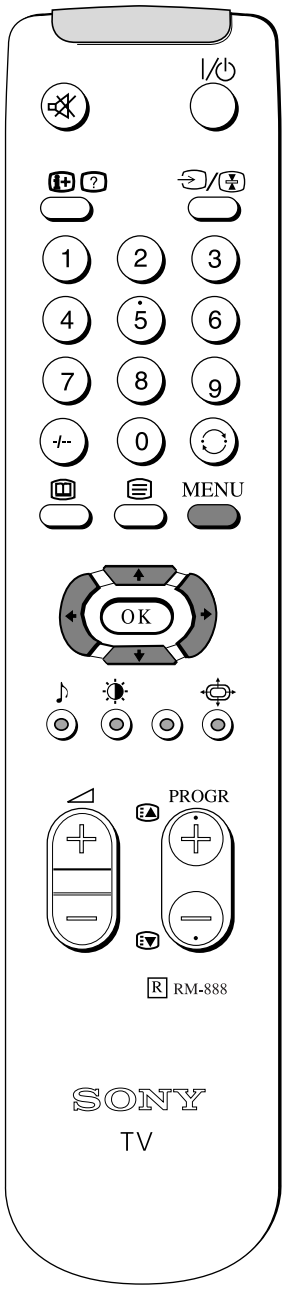


1. Press the ☼ symbol on the remote control for picture modes or the ♪ symbol for sound effect modes.
2. Press the ↑ or ↓ buttons to select the desired mode.
3. Press the OK button to remove the display from the TV screen.

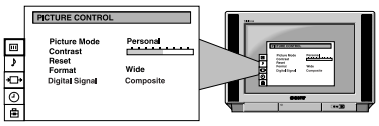


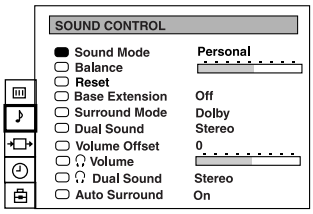
Adjusting the sound

Although the sound is adjusted at the factory, you can modify it to suit your own taste.



1. Press the MENU button on the remote control to display the menu on the TV screen.
2. Press the ↑ or ↓ buttons on the remote control to select the ♪ symbol on the menu screen then press the → button to enter the 'SOUND CONTROL' menu.
3. Press the ↑ or ↓ buttons to select the item on the screen you wish to adjust then press the → button to confirm. For a description of the menu items and their effects, see the table below.
4. If you selected 'Sound Mode' in step 3, press the ↑ or ↓ buttons to select the item on the screen you wish to adjust then press the → button to confirm.
5. Press the → or ← buttons to adjust your selected item.
6. As soon as you have adjusted the item, press the OK button to store the new setting.
7. If you selected 'Sound Mode' in step 3, press the ← buttons to return to the 'SOUND CONTROL' menu.
8. Repeat steps 3-7 to adjust the other items.
9. Press the MENU button to remove the menu from the TV screen.





Sound Mode
→ Personal
Rock
Jazz
← Pop

Balance

Reset
Resets sound to factory preset levels

Base Extension
Boosts base by a fixed amount

Surround Mode
Choose from the special sound effects:
Pro Logic --> Pseudo Stereo --> Spatial --> Club --> Theatre --> Hall --> Church --> Stadium --> Off

Dual Sound
Stereo← → Mono (for a stereo broadcast)
A for channel 1← → B for channel 2 (for a bilingual broadcast)

Volume Offset
← The channel volume level can be → adjusted over a range of -12 to +12.

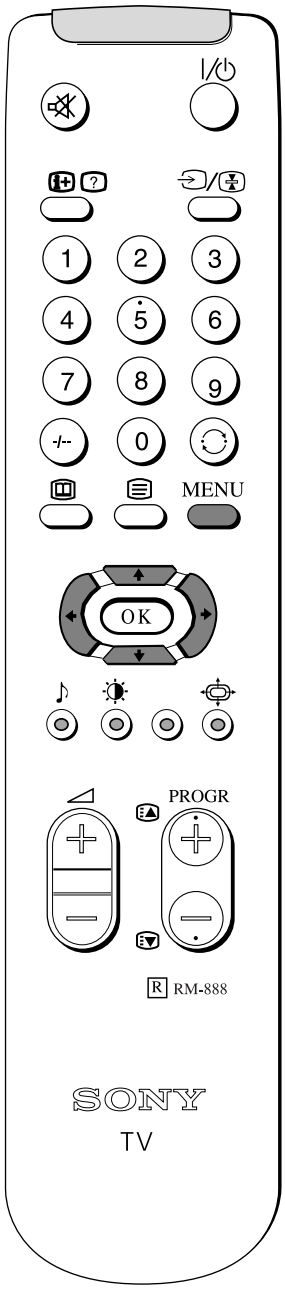
Headphones
🎧 Volume
🎧 Dual Sound

Stereo ← → Mono (for a stereo broadcast)
A for channel 1 ← → B for channel 2 (for a bilingual broadcast)

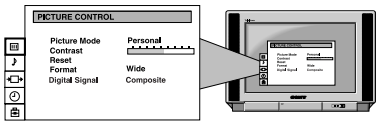
Auto Surround
Set to 'On' to automatically select Pro Logic Surround sound when transmitted.

Setting Up Dolby Pro Logic

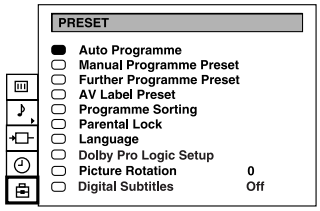
Before listening to Dolby Pro Logic encoded programmes, you can adapt the Dolby features to suit your own taste. Normally this is only required when you install the TV and the speakers, or when changing the speaker positions.



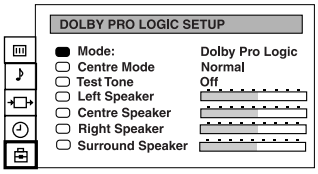
1. Press the MENU button on the remote control to display the menu on the TV screen.



2. Press the ↓ button on the remote control to select the symbol on the menu screen then press the → button to enter the 'PRESET' menu.



3. Press the ↓ button to select 'Dolby Pro Logic Setup' on the menu screen then press the → button to enter the 'DOLBY PRO LOGIC SETUP' menu.



4. Press the ↑ or ↓ buttons to select 'Mode', then press the → button to enter. Press the → or ← buttons to select one of the following modes then press the OK button to store the chosen mode:
   Dolby Pro Logic: all 5 speakers are activated
   Dolby 3 stereo: surround speakers are not used

5. Press the ↓ button to select 'Centre Mode', then push the → button to enter. Press the → or ← buttons to select one of the following modes then press the OK button to store the chosen mode:
   Normal: all 5 speakers are activated
   Wide: wider bandwidth for centre speaker
   Phantom: centre speaker is not used

6. Press the ↓ button to select 'Test Tone' then push the → button to enter. Press the → or ← buttons to select 'On', then press the OK button.
   The test tone will cycle through all the speakers.

7. Press the ↓ button to select the 'Left Speaker', then press the → button to confirm. The tone remains at the left speaker.

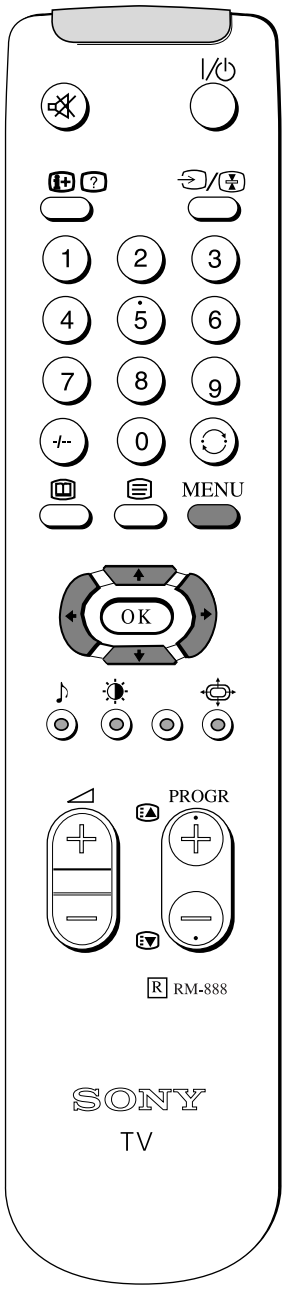
8. Press the ↑ or ↓ buttons to alter the sound level, then press the OK button.

9. Repeat steps 7 and 8 to select and adjust the 'Centre', 'Right', and 'Surround' speakers, so that the sound output from all speakers are balanced in relation to your sitting position.

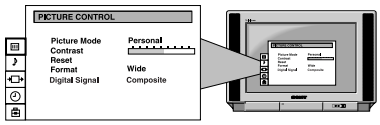
10. Press the MENU button to remove the display from the TV screen.

Changing the screen mode

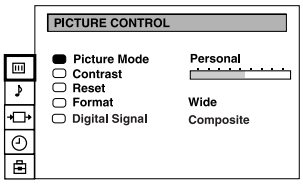
Using this Screen Mode feature you can change the aspect ratio of the screen.



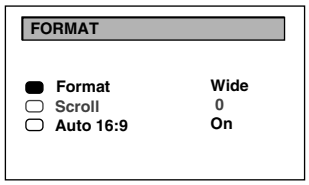
1. Press the MENU button on the remote control to display the menu on the TV screen.



2. Press the ↑ or ↓ buttons on the remote control to select the symbol on the menu screen then press the → button to enter the 'PICTURE CONTROL' menu.

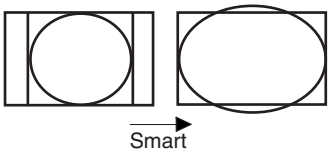


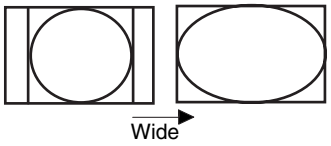
3. Press the ↓ button to select 'Format' on the menu screen then press the → button to enter the 'FORMAT' menu.

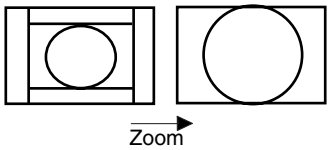


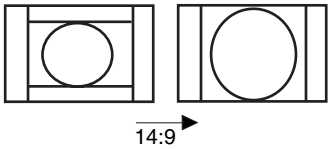
4. **Format**
   Press the ↑ or ↓ button to select 'Format' then press the → button to enter. Press the → or ← button repeatedly to select one of the following modes then press the OK button to store the chosen mode:

- smart - imitation of wide screen effect (16:9) for 4:3 broadcasts
- wide - for 16:9 broadcasts
- zoom - imitation of wide screen effect (16:9) for movies broadcast in cinemascopic format
- 14:9 - compromise between 4:3 and 16:9 format - for conventional 14:9 picture
- 4:3 - conventional 4:3 picture



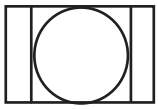






5. **Scroll**
   Press the ↓ button to select 'Scroll'. If you selected zoom mode, 14:9 mode or smart mode in step 4, you can use 'Scroll' to move the screen up- or downwards in order to see the cut-off parts (eg to read subtitles). Press the → button to highlight the options then press the ← or → buttons to adjust the screen position over a range of -5 to +5. Press the OK button to store.

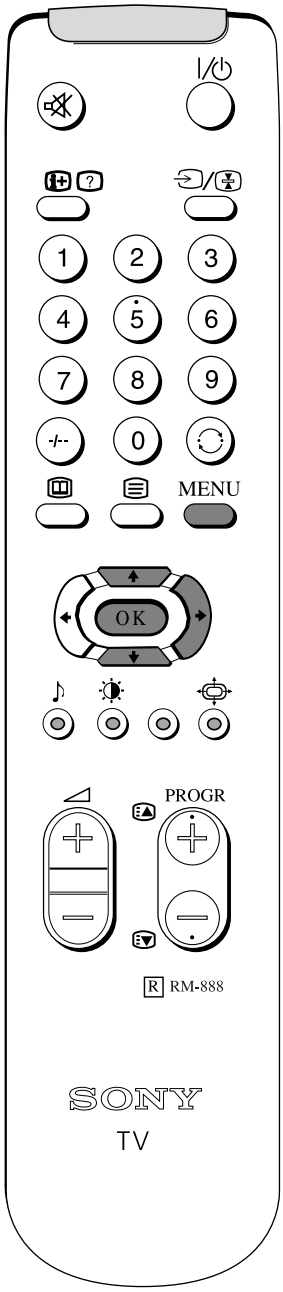
6. **Auto 16:9**
   Press the ↓ button to select 'Auto 16:9' then press the → button to enter. Press the ← or → button to select 'On' if you wish the TV set to switch automatically to wide format if a 16:9 broadcast is detected or 'Off' for normal mode. Press the OK button to store.



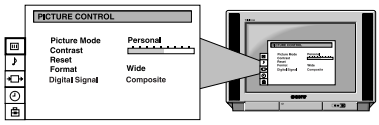
7. Press the MENU button to remove the menu from the TV screen.

Displaying subtitles for digital channels

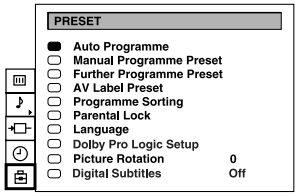
With this feature you can view subtitles on the TV screen when watching digital channels.
When watching analogue channels you can view subtitles via the teletext menu (see the teletext section of this instruction manual for details).



1. Press the MENU button on the remote control to display the menu on the TV screen.



2. Press the ↓ button to select the symbol on the menu screen then press the → button to enter the 'PRESET' menu.



3. Press the ↓ button to select 'Digital Subtitles' then press the → button to enter.

4. Press the → or ← buttons to select the language in which you wish the subtitles to appear. You can choose from English, Welsh or Gaelic (when transmitted by broadcaster).

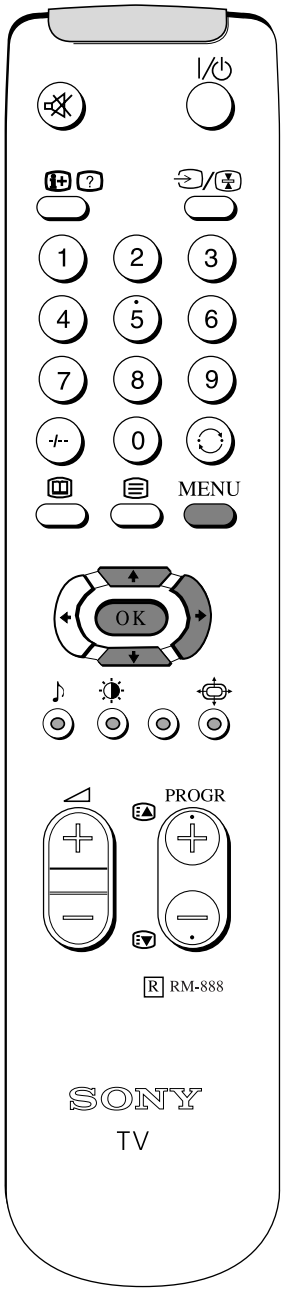
5. Press the OK button to confirm your selection.

6. Press the MENU button to remove the menu from the TV screen.

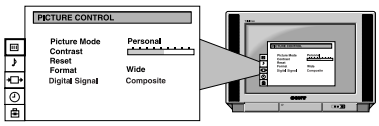
7. When you wish to cancel subtitles, repeat steps 1 - 6 and set to OFF in step 4.

Using the further programme preset feature

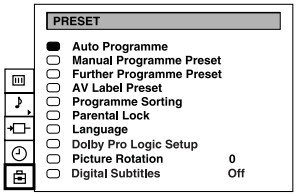
With this feature you can a) manually fine-tune the TV to obtain a better picture reception if the picture is distorted or b) preset the AV output for the programme positions of channels with scrambled signals (eg from a pay TV decoder). In this way a connected VCR records the unscrambled signal.



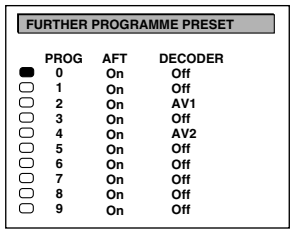
1. Press the MENU button on the remote control to display the menu on the TV screen.



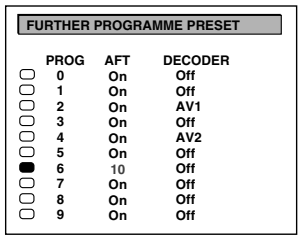
2. Press the ↓ button to select the symbol on the menu screen then press the → button to enter the 'PRESET' menu.



3. Press the ↓ button to select 'Further Programme Preset' then press the → button to enter the 'FURTHER PROGRAMME PRESET' menu.



4. Press the ↑ or ↓ buttons to select the relevant programme number then press the → button repeatedly to select a) AFT or b) DECODER. The selected item changes colour.
   Note: AFT will only be available on analoge channels.



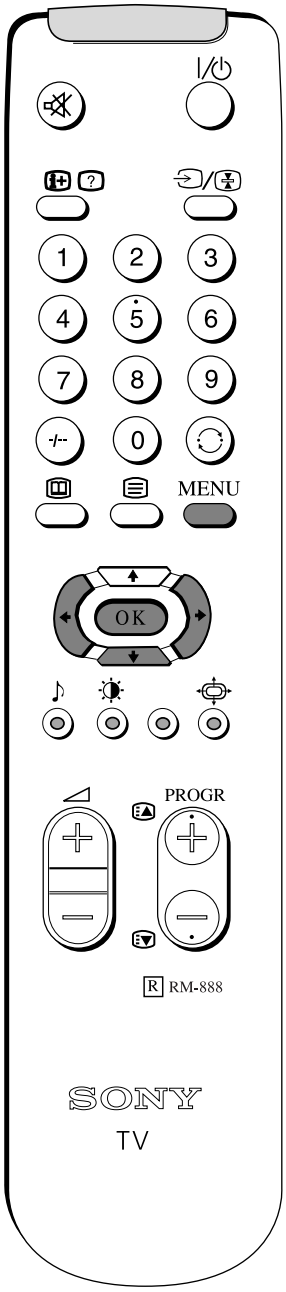
5. a) **AFT**
   Press the ↑ or ↓ buttons to fine tune the channel frequency over a range of -15 to +15. Press the OK button to confirm. Repeat steps 4 and 5a if you wish to fine tune other channels.

   b) **DECODER**
   Press the ↑ or ↓ buttons to select AV1, AV2 or AV3 for the programme position and press the OK button to confirm. You can now attach a decoder to the AV1, AV2 or the AV3 socket on the back of the TV and the picture from that decoder will appear on this programme number. Repeat steps 4 and 5b to preset the AV output for other programme positions.

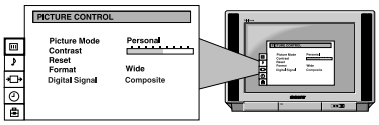
6. Press the MENU button to remove the menu from the TV screen.

Adjusting the picture rotation

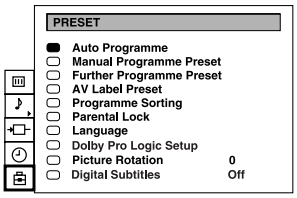
If, due to the earth's magnetic field, the picture slants, you can use this feature to readjust the picture.



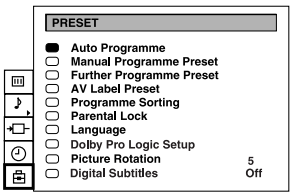
1. Press the MENU button on the remote control to display the menu on the TV screen.



2. Press the ↓ button to select the symbol on the menu screen then press the → button to enter the 'PRESET' menu.



3. Press the ↓ button to select 'Picture Rotation' then press the → button to highlight the 0 (zero) on the right of the menu.



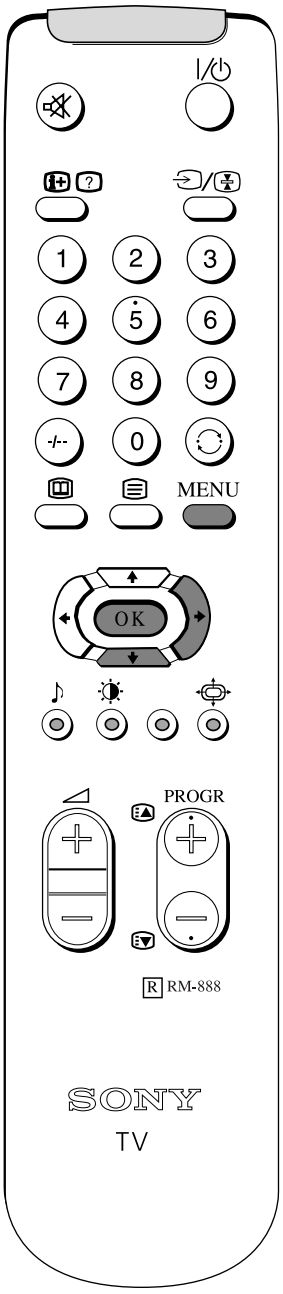
4. Press the → or ← buttons to adjust the picture rotation. The adjusting range is -5 to +5.

5. Press the OK button to store the new range.

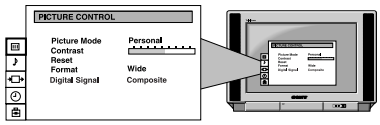
6. Press the MENU button to remove the menu from the TV screen.

Using the parental lock

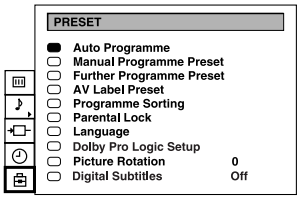
This feature enables you to prevent undesirable broadcasts appearing on the TV.



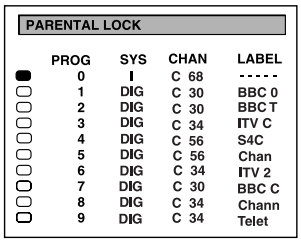
1. Press the MENU button on the remote control to display the menu on the TV screen.



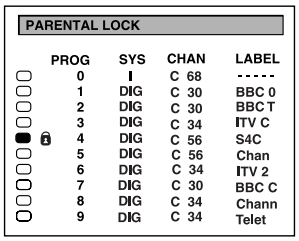
2. Press the ↓ button on the remote control to select the symbol on the menu screen then press the → button to enter the ‘PRESET’ menu.



3. Press the ↓ button to select ‘Parental Lock’ then press the → button to enter the ‘PARENTAL LOCK’ menu.



4. Press the ↓ button to select the channel you wish to block then press the OK button to confirm your selection. The symbol appears before the programme position to indicate this channel is now blocked. To unblock the channel, press the OK button again. The symbol disappears.

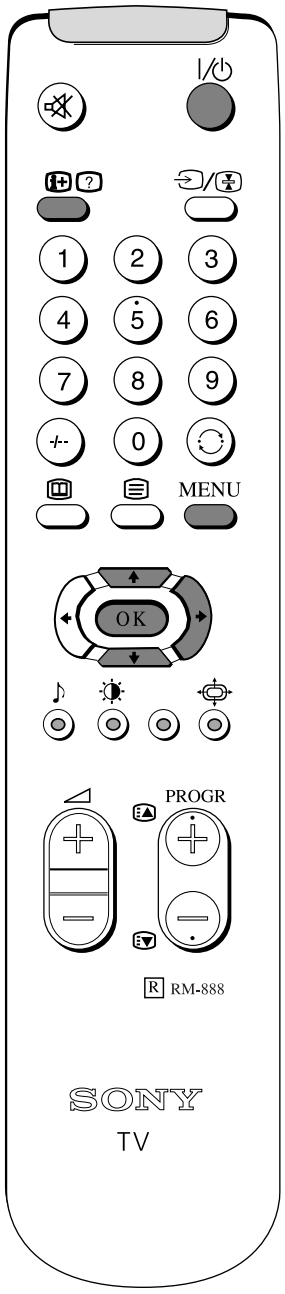


5. Repeat step 4 if you wish to block other channels.

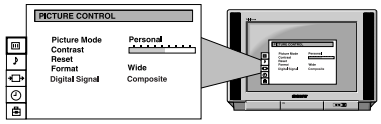
6. Press the MENU button to remove the menu from the TV screen.

Using the sleep timer

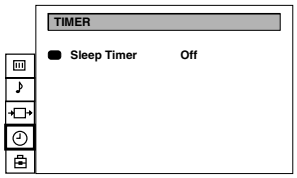
The TV can be set to switch automatically to standby mode after a length of time chosen by you. You may set the time in 30 minute steps up to 4 hours.



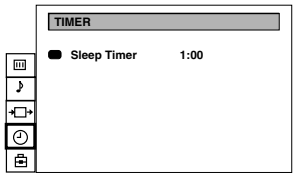
1. Press the MENU button on the remote control to display the menu on the TV screen.



2. Press the ↓ button on the remote control to select the ◷ symbol on the TV screen then press the → button twice.



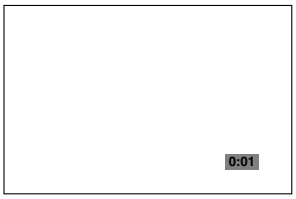
3. Press the → or ← buttons repeatedly until the required amount of time delay appears on the screen.



4. Once the time delay has been selected, press the OK button to enter.

5. Press the MENU button to remove the menu from the TV screen.

   One minute before standby, the display shown appears on the screen.

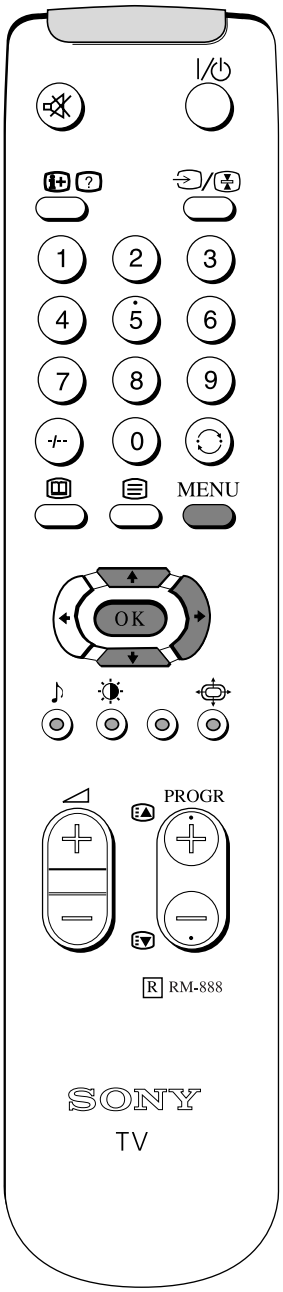


Notes: When watching TV, press the ⓘ button if you wish to see the time remaining.

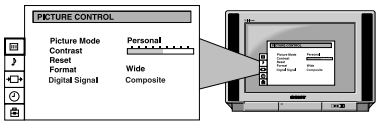
To return to normal operation from standby mode, press the I/⏻ button.

Manually tuning the TV

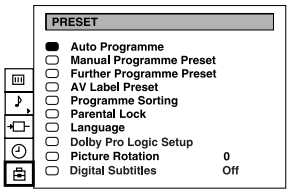
You have already tuned the TV automatically using the instructions at the start of this manual. You can however carry out this operation manually, adding channels to the TV, one at a time.



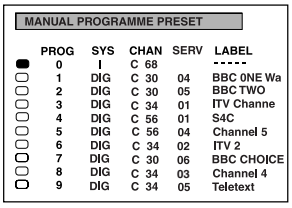
1. Press the MENU button on the remote control to display the menu on the TV screen.



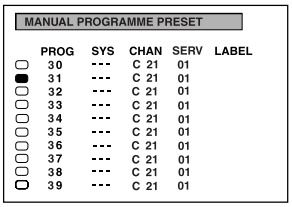
2. Press the ↓ button to select the symbol on the TV screen then press the → button to enter the PRESET menu.



3. Press the ↓ button to select 'Manual Programme Preset' on the menu screen then press the → button to enter the 'MANUAL PROGRAMME PRESET' menu.



4. Press the ↑ or ↓ buttons to select an unused programme number for your channel then press the → button to enter.



5. Press the ↑ or ↓ buttons to select the TV broadcast system (I for analogue or DIG for digital) or a video input source (AV1, AV2 ...) then press the → button to confirm.

6. Select the first number digit of 'CHAN' (channel) then the second number digit of 'CHAN' with the number buttons on the remote control
   or
   Press the ↑ or ↓ buttons to search for the next available channel.

7. If you wish to change the 'SERV' service number, select each digit in turn and press the numbered buttons on the remote control to change to your desired service

8. If you do not wish to store this channel on the programme number you selected, press the ↑ or ↓ buttons on the remote control to continue searching for the desired channel.

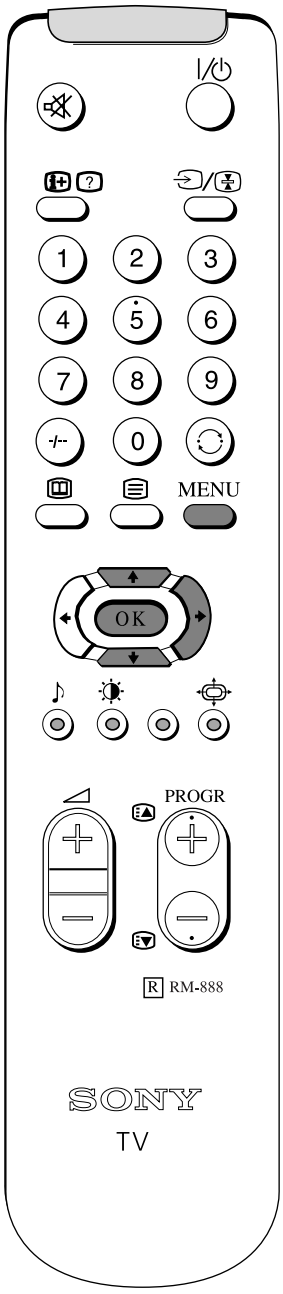
9. If this is the channel you wish to store, press the OK button.

10. Repeat steps 4-8 if you wish to store more channels then press the MENU button to remove the menu from the TV screen.

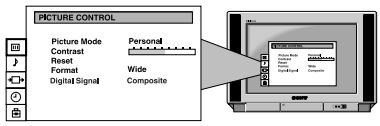
NOTE: After manually tuning in the channels you require, you can sort the channels into the order you prefer by following the procedure 'Re-arranging the TV channels' on page 13.

Skipping programme positions

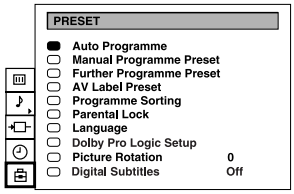
This function enables you to skip unused programme positions when selecting them with the PROGR+/- buttons. However, by using the number buttons you can still select the skipped programme position.



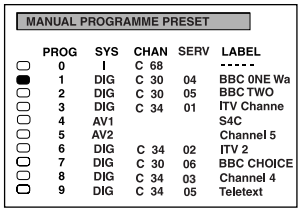
1. Press the MENU button on the remote control to display the menu on the TV screen.



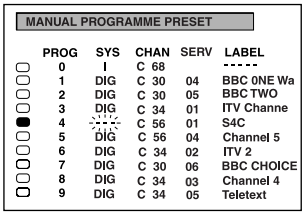
2. Press the ↓ button on the remote control to select the symbol on the menu screen then press the → button to enter the 'PRESET' menu.



3. Press the ↓ button to select 'Manual Programme Preset' then press the → button to enter the 'MANUAL PROGRAMME PRESET' menu.



4. Press the ↑ or ↓ buttons to select the programme position you want to skip then press the → button to enter the 'SYS' column.



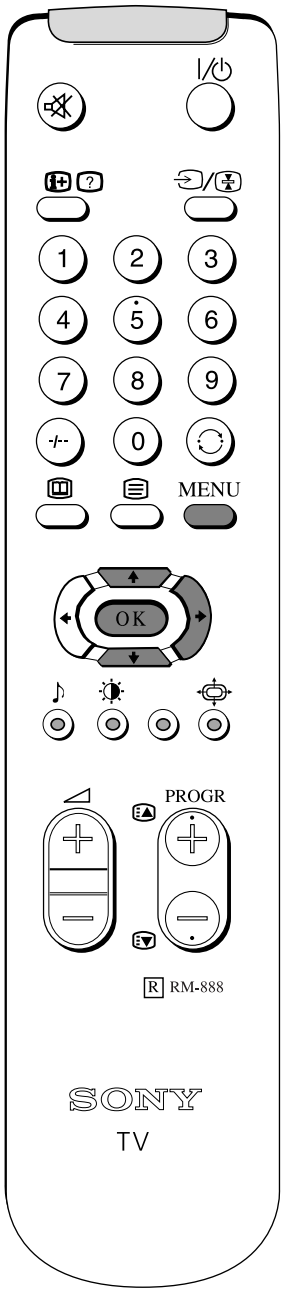
5. Press the ↓ button to select '---' then press the OK button to store.

6. Repeat steps 4 and 5 to skip other programme positions.

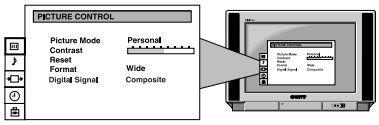
7. Press the MENU button to remove the menu from the TV screen.

Naming a channel (Analogue channels only)

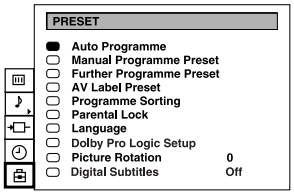
Names for channels are usually taken automatically from Teletext if available. You can however name a channel or an input video source using up to five characters (letters or numbers).



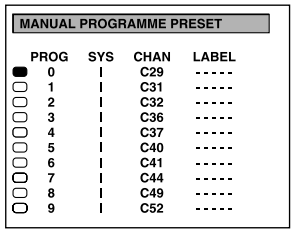
1. Press the MENU button on the remote control to display the menu on the TV screen.



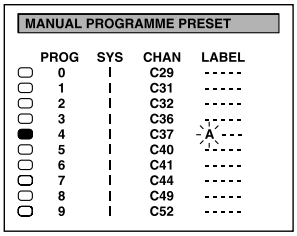
2. Press the ↓ button to select the symbol on the menu screen then press the → button to enter the 'PRESET' menu.



3. Press the ↓ button to select 'Manual Programme Preset' then press the → button to enter the 'MANUAL PROGRAMME PRESET' menu.



4. Press the ↑ or ↓ buttons to select the channel you wish to name.



5. Press the → button repeatedly until the first element of the 'LABEL' column is highlighted.

6. Press the ↑ or ↓ buttons to select a letter or number (select '-' for a blank) then press the → button to confirm. Select the other four characters in the same way.

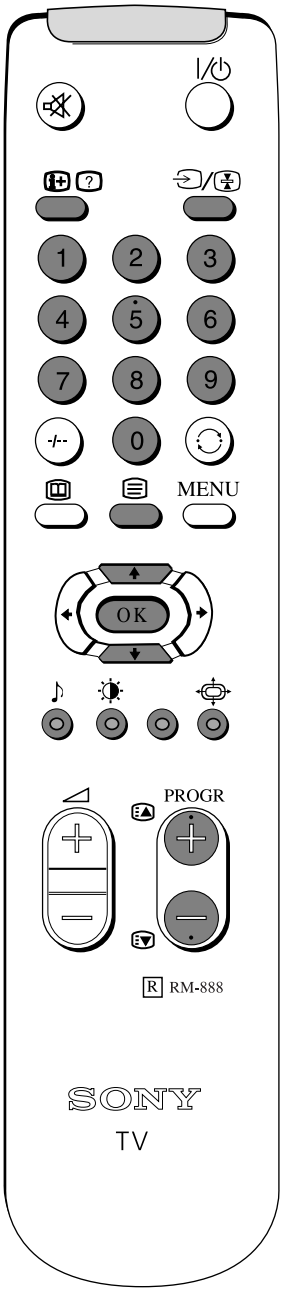
7. After selecting all the characters, press the OK button.

8. Repeat steps 4 to 7 if you wish to label other channels.

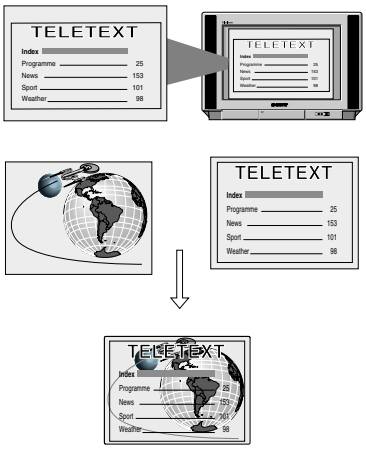
9. Press the MENU button to remove the menu from the TV screen.

Viewing Standard Teletext

Teletext is an information service transmitted by most TV stations.



Selecting Teletext



1. When viewing analogue channels press a numbered button on the remote control to select the channel which carries the teletext service you wish to receive.

2. Press the ☰ on the remote control to switch on teletext. Press the ☰ button again if you wish to superimpose teletext on to the TV screen.

3. Select your required page using the numbered buttons on the remote control. If you make an error, complete the number, then reenter the correct page number.

Using Other Standard Teletext Functions

To move to the next or preceding page

Press the ▽ or △ buttons to select the previous or next page.

To freeze a Teletext page

Press the ⊟ button to freeze the page. Press again to cancel the freeze.

Revealing concealed information (eg:answers to a quiz).

Press the ? button to reveal information. Press again to conceal the information.

Using colour buttons to access pages (Fastext)

When the colour coded menu appears at the bottom of a page, press the colour buttons (red, green, yellow or blue) on the control to access the corresponding page.

Displaying TOP-Text (when available)

With TOP-Text you can access pages easily by selecting blocks or groups of pages. The block is a category (for example Sports) which includes the groups (for example Football). When TOP-Text is broadcast, a colour coded menu appears at the bottom of the screen. The colours of this menu correspond to the red, green, yellow and blue buttons on the remote control. Press these coloured buttons to displayed the desired pages.

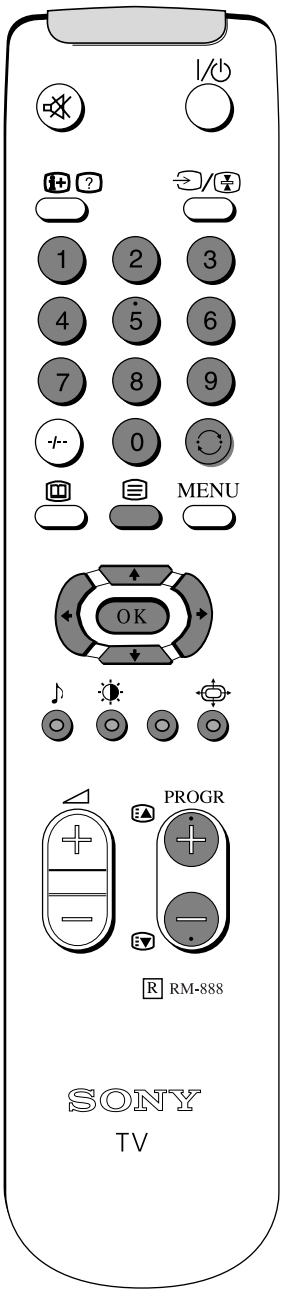
1. Press the ☰ button to display teletext.

2. Press the coloured buttons to search for the page you desire:
   Red: to go back to the previous page
   Green: to proceed to the next page.
   Yellow: to proceed to the first page of the next group.
   Blue: to proceed to the first page of the next block.

Press the ☰ button twice to return to normal TV.

Viewing Digital Teletext

Most of the digital TV channels broadcast information via teletext. This digital service includes high quality text and graphics as well as advanced navigational options. Additionally, this television set has access to a dedicated digital teletext channel.



Selecting the dedicated digital teletext channel

1. To view the dedicated digital teletext service, press the numbered buttons on your remote control to select the relevant channel number. If you do not know the channel number, press the OK button to look for this channel in the channel table.

2. Once the teletext channel is displayed, follow the instructions on-screen to display the teletext information, then press the ↑, ↓, ← or → buttons to guide the on-screen cursor to the required area of the screen then press the OK button to display the chosen information.

3. Alternatively, you can use the number and colour buttons on the remote control to directly enter the page number required and to display the various pages of text information.

4. If when viewing the teletext pages, you are requested to select 'OK' or 'Cancel', press the OK button for 'OK' or the ⟳ button for 'Cancel'.

5. When you have finished viewing teletext, press the ☰ button or the PROG +/- buttons, and then select an alternative digital channel.

Selecting teletext from the other digital channels

Normal teletext services may also be available on other digital channels. Sometimes this is indicated by a small symbol or text display on your TV screen, superimposed on the channel you are watching.

1. Press the ↑, ↓, ← or → buttons to select the symbol then press the OK button to display the chosen information.

2. Alternatively, you may be requested to use the number and colour buttons on your remote control to display the various pages of text information. If when viewing the teletext pages, you are requested to select 'OK' or 'Cancel', press the OK button for 'OK' or the ⟳ button for 'Cancel'.

3. Once the text information is displayed on screen, use the ↑, ↓, ← or → buttons, the colour buttons and/or the number buttons to access the chosen information.

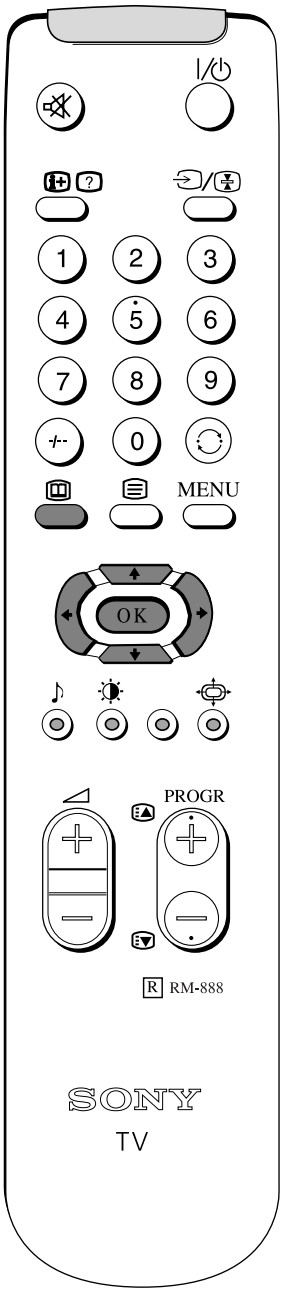
4. When you have finished viewing teletext, press the ☰ button and then select an alternative digital channel.

On other channels there may be no on-screen symbol, but you can see if there is a digital service as follows:

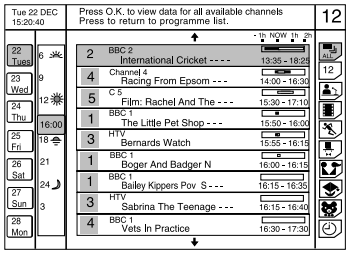
1. When watching a digital TV channel, press the ☰ button on your remote control to display any text service which may be available.
2. Press the number buttons to select the various pages of information available and/or the colour buttons for the functions shown on screen.
3. When you have finished using the text service, press the ☰ button to return to normal TV.

Electronic Programme Guide (EPG)

The Electronic Programme Guide (EPG) is a guide which provides programme information for all digital channels supporting EPG.



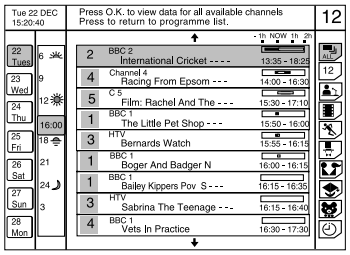
Displaying the EPG



1. Press the button on the remote control to display the programme guide on the TV screen. You may see the message 'EPG INFORMATION IS TEMPORARILY UNAVAILABLE' whilst waiting for the EPG to appear on screen.
2. Press the ↑, ↓, ← or → buttons on the remote control to move the on-screen cursor around the guide.
3. Press the button again to remove the programme guide from the TV screen.

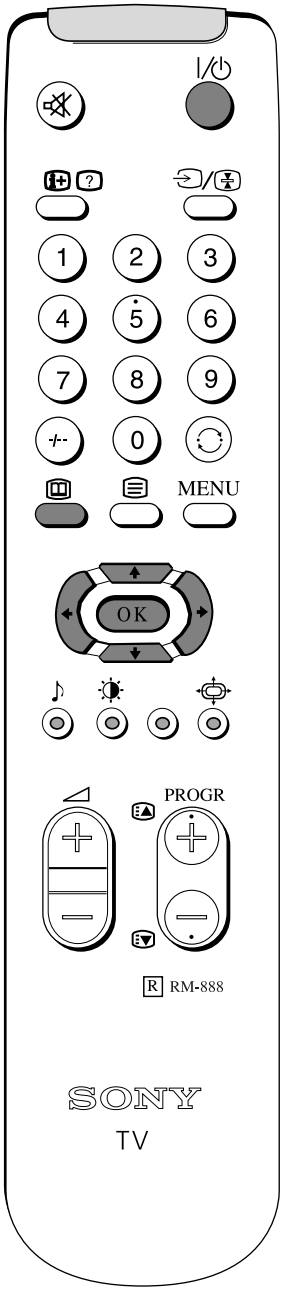
Viewing Information on the EPG

You can alter the type of information presented on the EPG by changing data in each of the EPG columns. You can for example display information for all sports programmes being shown tomorrow from 5.00pm onwards.



1. Press the button on the remote control to display the EPG on the TV screen.
2. Press the ← or → buttons to highlight the 'date' column then press the ↑ or ↓ buttons to select your chosen date.
3. Press the ← or → buttons to highlight the 'time' column then press the ↑ or ↓ button to select your chosen time.
4. Press the → button or press the OK button. The EPG will display programme information according to the date and time you selected.
5. Press the → button to highlight the 'programme type' column then press the ↑ or ↓ button to select News, Films, Sport, Entertainment, Lifestyle, Education or Childrens Programmes.
6. Press the ← or → buttons or press the OK button to update the programme information accordingly. If you selected tomorrow's date, 17:00 and Sport, you should now be able to view all the sports programmes being shown tomorrow from 5.00 pm onwards.
7. Press the button on the remote control to remove the EPG from the TV screen.

Electronic Programme Guide (EPG)



Recording Programmes

1 Press the button on the remote control to display the EPG on the TV screen.

2 Press the ◄ or ► buttons to highlight the 'programme' column then press the ▲ or ▼ button to select your desired programme.

3 Press the OK button. If the programme is currently being broadcast, it will be displayed on your TV. If not, the 'TIMER' menu will be displayed on the TV screen.

4 At the bottom of the timer page you can see the symbols Return (back to EPG), Event Rec (to record a programme) or Wake Up (to set the programme to switch on automatically).

5 Press the ◄ or ► buttons to select one of these symbols then press the OK button to confirm your selection. The EPG appears on screen with the relevant icon appearing next to the programme you selected in step 2.

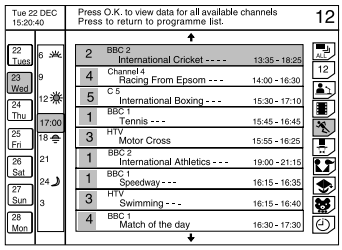
6 If you wish to cancel a recording, select the relevant programme and press the OK button. A menu is displayed on screen requesting you to select 'Return' if you wish to continue to record the programme or 'Delete' if you wish to cancel the recording request.

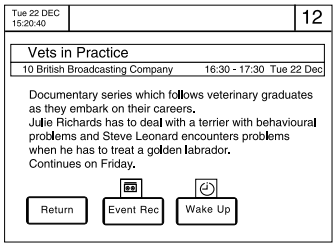
7 After making your selection, press the OK button to confirm. The record icon disappears from the EPG if 'Delete' was selected in step 6.

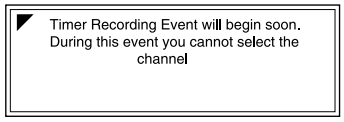
8 If you have finished viewing programmes on your TV, press the I/⏻ button before the timer recording starts to leave your TV in standby mode for the timer settings to be activated. If, however, you wish to continue watching other programmes after setting the timer, you can do so by changing programmes in the normal way. If you are watching another programme when the timer is due to start, a display will appear on screen advising you that, if you change channels, you automatically cancel the recording.

9 If you do not wish to cancel or view the recording, press the I/⏻ button whilst one of the displays are still on screen to leave your TV in standby mode. The standby indicator on the front of the TV will flash to show that the timer record operation is active. If, however, you choose to change programmes, you automatically cancel the recording.

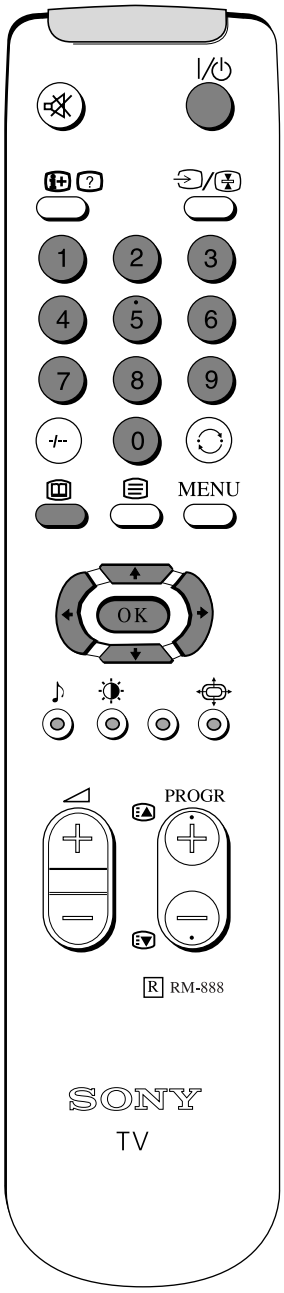
Notes: If your video recorder (VCR) is not Smartlink-compatible, you will need to set your VCR to switch on and off automatically after setting the timer on the EPG. If you want to change channel once a digital programme has started recording, select the channel by using the remote control buttons as normal. The message 'STOP RECORDING' will be displayed on screen. Either do nothing to allow the recording to continue or select the required channel once more while the message is still displayed on screen. The recording will then be cancelled.





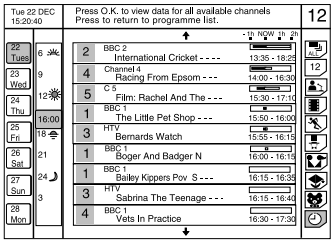


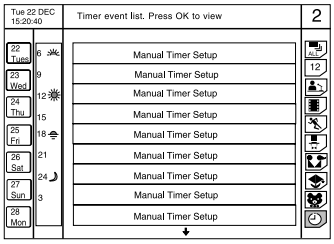
Electronic Programme Guide (EPG)

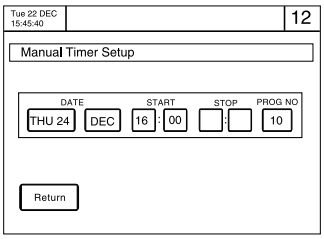


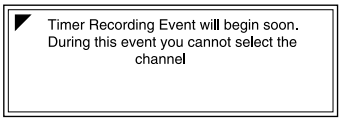
Setting The Manual Timer

1 Press the button on the remote control to display the EPG on the TV screen.
2 Press the ◄ or ► button to highlight the 'programme type' column then press the ▼ button to select the timer symbol .
3 Press the OK button to display a screen of 9 programme slots, each one indicating that it is either free for programming, or that it has a programme already stored in it.
4 Press the ◄ button to enter the 'programme' column.
5 Press the ▲ or ▼ button to select a free row then press the OK button to display the Set Timer screen. This screen asks you to confirm the date, programme number, start time and end time.
6 Press the ▲ button to select the date area then press the number buttons on the remote control to enter the date.
7 Press the ► button to confirm the date then press the ▲ or ▼ button to select the month.
8 Press the ► button to confirm the month and to enter the start time.
9 Press the number buttons to enter the time when you want the timer to switch on, preferably several minutes before you set your video recorder to start recording. If you wish to switch on at 8.25 pm, enter 2025.
10 Press the ► button to confirm the entry and to enter the switch-off time.
11 Press the number buttons to enter the time you want the timer to switch off, preferably after your video has stopped recording. Again, you should enter 4 digits using the 24 hour format.
12 Press the ► button to confirm the entry and to enter the programme number.
13 Press the OK button to save the settings then select Return and press OK button to return to the Manual Timer Setup menu.
14 Select another available slot if you wish to record a further programme. Otherwise, press the ► button to enter the 'programme type' column then press the OK button to return to the EPG.
15 If you have finished viewing programmes on your TV, press the I/⏻ button before the timer recording starts to leave your TV in standby mode for the timer settings to be activated. If, however, you wish to continue watching other programmes after setting a timer, you can do so by changing programmes in the normal way. If you are watching another programme when the timer is due to start a display will appear on screen advising you that, if you change channels now, you automatically cancel the recording.
16 If you do not wish to cancel or view the recording, press the I/⏻ button whilst the display is still on screen to leave your TV in standby mode. The standby indicator on the front of the TV will flash to show that the timer record operation is active. If, however, you choose to change programmes, you automatically cancel the recording.





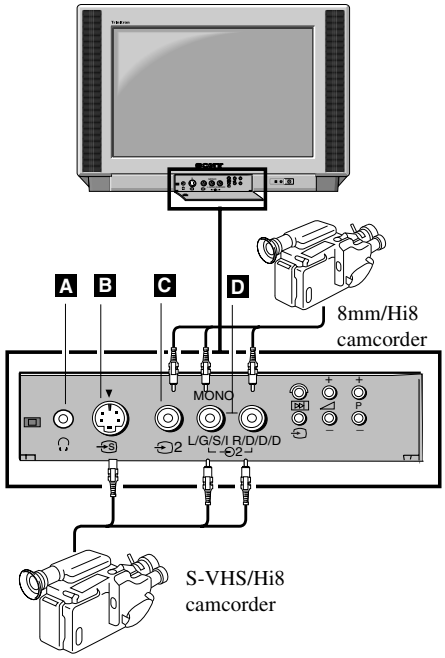




Connecting equipment to the TV

Using the following instructions, you can connect a wide range of optional equipment to your TV.

Connecting equipment to the TV



1. Connect your equipment to the designated TV socket.

2. Press the ⊖ button repeatedly on the remote control until the correct input symbol for your equipment appears on the TV screen:

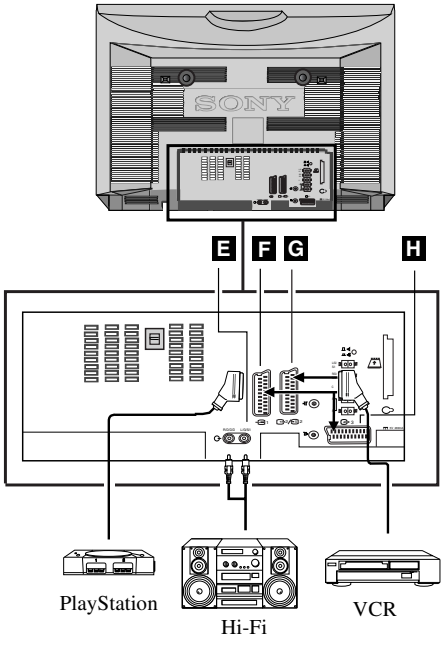
Symbol	Input signals
⊖1	• Audio/video input signal through the scart connector **F**
→⋯	• RGB input signal through the scart connector **F**
⊖2	• Audio/video input signal through the scart connector **G** or the phono sockets **C** and **D**
Ⓢ⊖2	• S video input signal through the scart connector **G** or the phono sockets **B** and **D**
⊖3	• Audio/video input signal through the scart connector **H**

3. Switch on the connected equipment.

4. To return to normal TV operation, keep pressing the ⊖ button on the remote control until the TV picture appears.

Note: To avoid picture distortion, do not connect equipment to the **B** , **C** , **D** and **G** sockets at the same time.

Additional information when connecting equipment



Connecting a VCR

We recommend you connect your VCR to the **H** socket using a scart lead. If you do not have a scart lead, use the 'Manually Tuning the TV' section of this instruction manual to tune in the VCR signal to TV programme number'0'.

Connecting headphones

Plug in your headphones to the **A** socket on the front of the TV set.

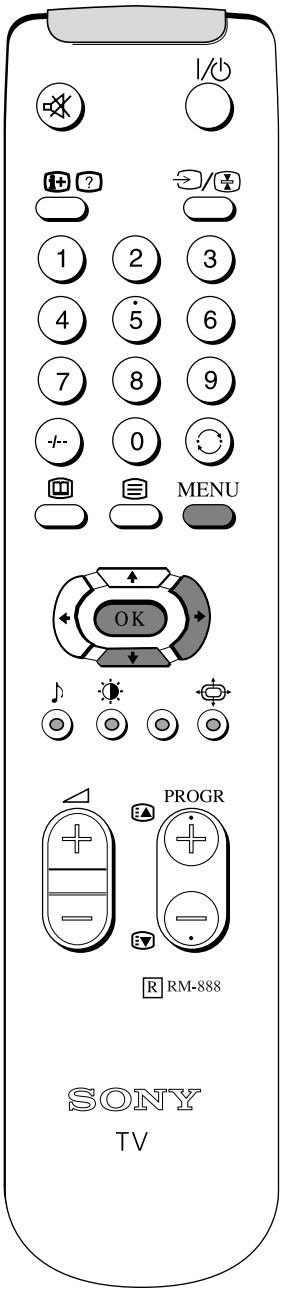
Connecting to external audio equipment

Plug in your hi-fi equipment to the **E** sockets on the rear of the TV if you wish to amplify the audio output from the TV. The output level from the **E** sockets can be varied by adjusting the volume of the headphones (refer to the 'Adjusting the sound' section of this manual).

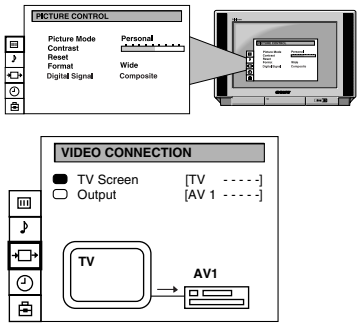
For mono equipment

Connect the phono plug to the L/G/S/I socket on the front of the TV and select the ⊖2 input signal using the instructions on this page. Finally, refer to the 'Adjusting the sound' section of this manual and select 'A' on the sound menu screen.

Connecting equipment to the TV



Selecting the output source for the scart socket G or H



1. Press the MENU button on the remote control to display the menu on the TV screen.

2. Press the ↓ button to select the → symbol on the menu screen then press the → button to enter the 'VIDEO CONNECTION' menu screen.

3. Press the ↓ button to highlight 'TV Screen' (input source for the TV screen) or 'Output' (output source for 2/S2 or 3 socket) then press the → button to confirm.

4. Press the ← or → button to select the desired source (see below) then press the OK button to confirm:

TV Screen	TV, AV1, RGB, AV2, YC2, AV3
Output	TV, AV1, AV2, YC2, AV3, AUTO

5. Press the MENU button to remove the menu from the TV screen.

Smartlink

Smartlink is a direct link between your TV set and VCR.

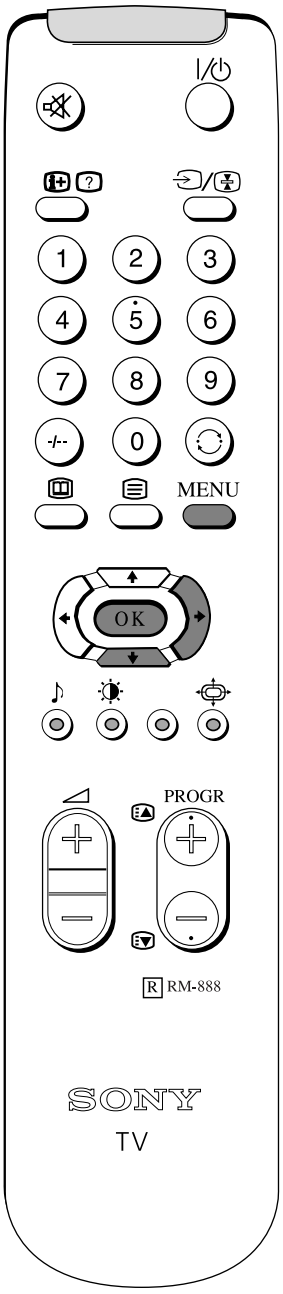
For Smartlink you need:
- a VCR which supports Smartlink, NexTView Link or Megalogic.
- A fully-wired 21-pin scart cable to connect your VCR to scart connector 3 .

The features of Smartlink are:
- tuning information such as the channel overview are downloaded from the TV set to the VCR.
- direct TV recording : While watching TV you need to press just one button on the VCR to record this programme.

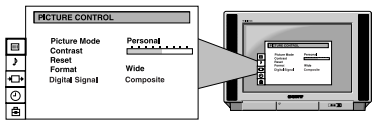
For more information on Smartlink please refer to your VCR instruction manual.

Using the AV Label Preset feature

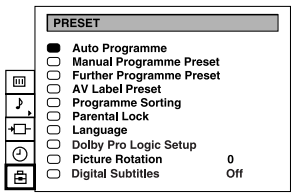
This function enables you to designate a name to the optional equipment you have connected to the sockets of this TV. This name can be up to 5 characters (letters or numbers) and will appear on screen whenever the equipment is selected for use.



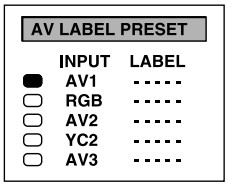
1. Press the MENU button on the remote control to display the menu on the TV screen.



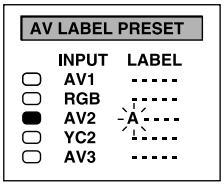
2. Press the ↓ button to select the symbol on the menu screen then press the → button to enter the 'PRESET' menu.



3. Press the ↓ button to select 'AV Label Preset' then press the → button to enter the 'AV LABEL PRESET' menu.



4. Press the ↑ or ↓ buttons to select the input source you wish to name (eg AV2) then press the → button to highlight the first element of the 'LABEL' column.



5. Press the ↑ or ↓ buttons to select a letter or number (select '-' for a blank) then press the → button to confirm. Select the other four characters in the same way.

6. After selecting all the characters, press the OK button.

7. Repeat steps 4 to 6 if you wish to label other input sources.

8. Press the MENU button to remove the menu from the TV screen.

Specifications

TV system
I/DVB-T

Colour system
PAL
NTSC 3.58, 4.43 (only Video in)

Channel coverage
UHF:B21-B69

Picture tube
KV-28DS20U
FD Trinitron WIDE
Approx 71cm (28inches) (Approx 66cm picture measured diagonally), 102° deflection
KV-32DS20U
FD Trinitron WIDE
Approx 82cm (32 inches) (Approx 76cm picture measured diagonally), 102° deflection

Rear Terminals

1	21-pin Euro connector (CENELEC standard) including audio/video input, RGB input, TV audio/video output.
2 / S2	21-pin Euro connector (CENELEC standard) including audio/video input, S-video input, selectable audio/video output.
3	21-pin Euro connector (CENELEC standard) including audio/video input, selectable audio/video output.
	Audio outputs - phono jacks
	Modem connection

Front Terminals

2	Video input -phono jack
2	Audio inputs - phono jacks
S	S video input - 4 pin DIN
	Headphones jack - minijack stereo

Sound output

Left/Right:	2x20W (music power)
Centre:	10W (music power)
Sub woofer:	20W (music power)
Surround	2x5W (music power)

Power consumption

KV-28DS20U:	222W
KV-32DS20U:	209W

Dimensions (wxhxd)

KV-28DS20U:	Approx. 761x496x525mm
KV-32DS20U:	Approx. 874x563x571mm

Weight

KV-28DS20U:	Approx. 44.0kg
KV-32DS20U:	Approx. 62.0kg

Accessories supplied
RM-888 remote control (1)
IEC designated size AA battery (2)
Surround Speakers (2) Centre Speaker (1)

Other features
Teletext
Dolby ProLogic Surround System
Smartlink

Design and specifications are subject to change without notice.

Troubleshooting

Here are some simple solutions to problems which may affect the picture and sound.

Problem	Cause
No picture , no sound	• Power off. • TV in standby. • Aerial disconnected
Poor or no picture (screen is dark), but good sound.	• Picture preset level adjustment.
No picture on any channel after digital tuning.	• No digital transmissions in your area. • No digital transmissions from the transmitter you are currently using. • Weak signal. • Unsuitable aerial
Some channels are blank.	• Scrambled/subscription-only channel. • Programme used only for data (no picture or sound). • Programme not being transmitted.
Standby indicator flashing.	• Digital mode Timer Record active (regular flash). • Fault (irregular flash).
Good Picture, no sound.	• Volume control
Poor picture quality	• Wrong external mode selected on an RGB video source.
No colour on colour programmes.	• Colour level setting.
Remote control does not function.	• Batteries low.
Distorted picture when changing programmes or selecting Teletext.	• Inputs from external equipment not switched off.

Cause	• Solution
Power off. TV in standby.	• Plug in the TV. • Press the ⏻ button on the front of the TV • If the ⏻ indicator is on press the I/⏻ button or a numbered button on the remote control.
Aerial disconnected	• Check the aerial connection.
Picture level adjustment	• Select on the TV menu system then adjust the brightness, picture and colour balance levels
No digital transmissions in your area.	• Tune in the analogue channels available using the ‘Manually tuning the TV’ instruction in this manual, then contact a local installer to find out when digital transmissions begin in your area.
No digital transmissions from the transmitter you are currently using.	• Contact a local installer to find out which transmitter you should be pointing your aerial at.
Unsuitable aerial.	• Change your aerial to to cover the channels used by digital programmes (Contact a local installer)
Weak signal.	• Ensure aerial is correctly aligned to transmitter. • Ensure aerial is plugged directly into the TV (not through other equipment). • Upgrade to a higher gain aerial.
Scrambled/subscription-only channel.	• Subscribe to pay-per-view broadcaster.
Programme information without picture or sound.	• See ‘Skipping programme positions’ section. • See ‘Re-arranging the TV channels’ section.
Fault.	• Do not open the cabinet, refer to qualified personnel. • Contact your nearest Sony Service Centre.
Volume control.	• Press the + button on the remote control. • If is displayed on the screen, press the button on the remote control.
Wrong external mode selected.	• Press the button repeatedly until the RGB symbol is displayed on screen.
Colour level setting.	• Select on the TV menu system then adjust the colour setting

- **If you continue to have these problems, have your TV serviced by qualified personnel or you can contact the Sony UK Digital HelpLine on 0870 600 1717.**
- **NEVER open the casing yourself.**