

Users Guide

C21F45N - C29F45N

NICAM DIGITAL STEREO

PURE FLAT

COLOUR TELEVISION

HITACHI



HITA -03069



HITACHI

Dear Hitachi Customer,

Congratulations on your purchase of the very latest 'state of the art' television from HITACHI. At Hitachi we pride ourselves on producing high quality televisions with outstanding picture and audio capabilities, coupled with Hitachi's reputation for superior reliability.

You should enjoy many years of trouble free operation from your TV. Take some time to read the Operating Guide thoroughly, and if you encounter any difficulty, firstly refer to the Trouble Shooting guide at the rear of this manual. In the unlikely event of a problem occurring on your TV, contact your dealer immediately. Please read the Guarantee carefully.

Software Notice

It is prohibited for the end user of this product to copy, reverse engineer or reverse compile the software included therein, save to the extent permitted by law.

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This television has been designed and manufactured to meet international safety standards, but like any electrical equipment, care must be taken if you are to obtain the best results and safety is to be assured.



DO read the operating instructions before you attempt to use the equipment.





DO ensure that all connections, (including the mains plug, extension leads and inter-connections between the pieces of equipment), are properly made and in accordance with the manufacturers instructions. Switch off and withdraw the mains plug before making or changing connections.



DO consult your dealer if you are in any doubt about installation, operation or safety of your equipment.



DO observe the manufacturers instructions when connecting extension leads to your TV. The fuse should be a 5 Amp fuse with the safety symbols  and  displayed. If you are in any doubt about the extension installation, please consult a competent electrician.



Should you require to replace the fuse in the moulded mains plug with a new fuse then please replace with one of the same value, type and approval as the original. Ensure the fuse cover is returned to its original position.



DO be careful with any glass panels or doors on equipment.



DO place your TV on a flat surface, or if supplied, the stand accessory.



IF you intend placing this TV into a cabinet or a wall alcove, please ensure there is at least a 100mm (10cm) gap to the sides, rear and top of the TV. This is to allow for adequate ventilation during your TV's operation.



DO NOT remove any fixed cover as this may expose dangerous voltages.



DO NOT cut off fitted mains plug as it may contain a special radio interference filter, the removal of which could lead to impaired performance. If you wish to extend the lead, obtain an appropriate extension lead or consult your dealer.



DO NOT continue to operate the equipment if you are in any doubt about it working normally or if it is damaged in any way - switch off, withdraw the mains plug and consult your dealer.



DO NOT leave equipment switched on when it is unattended unless it is specifically stated that it is designed for unattended operation or has a stand-by mode. Switch off using the switch on the equipment and show your family how to do this. Make special arrangements for infirm or handicapped people.



DO NOT obstruct the ventilation of the equipment, for example with curtains or soft furnishings. Overheating will cause damage and shorten the lifespan of your equipment.



DO NOT use makeshift stands and NEVER fix legs with wood screws - to ensure complete safety, always fit the manufacturers approved stand or legs with the fixings provided according to the instructions.



DO NOT allow electrical equipment to be exposed to rain or moisture.



DO NOT place hot objects such as candles or nightlights on, or close to, equipment. High temperatures can melt plastic and lead to fires.



DO NOT listen to headphones at high volume, as such use can permanently damage your hearing.



DO NOT use equipment such as personal stereos or radios so that you are distracted from the requirements of traffic safety. It is illegal to watch television whilst driving.

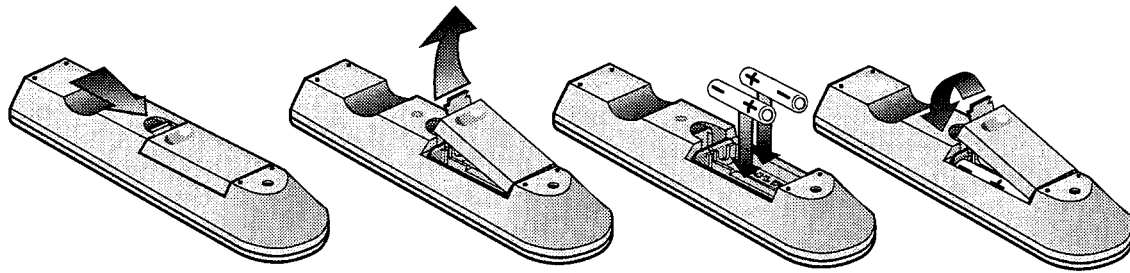


NEVER let anyone, especially children, push anything into holes, slots, or any other opening in the case - this could result in a fatal electrical shock.



NEVER guess or take chances with electrical equipment of any kind - it is better to be safe than sorry!

Battery Installation



1 Remove cover of handset by lifting up the cover at the recess.

2 Insert batteries into handset as shown and replace cover.

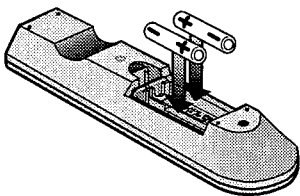


1. When inserting the batteries make sure the polarities are correct, that is, '+' to '+', '-' to '-'.
2. Replace the batteries with the equivalent 'AA' type.
3. Discard old batteries safely, following the battery safety guidelines.

Battery Safety Guidelines

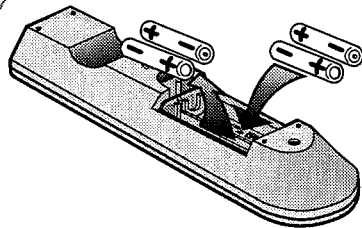
Used correctly, batteries are a safe and dependable source of portable power. However, problems can occur if they are misused or abused - resulting in leakage, or in extreme cases, fire or explosion. Here are some simple guidelines to safe battery use designed to eliminate any such problems.

always



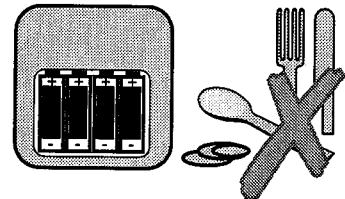
Take care to fit your batteries correctly, observing the plus '+' and minus '-' marks on the battery and appliance. Incorrect fitting can cause leakage, or in extreme cases, fire or explosion.

always



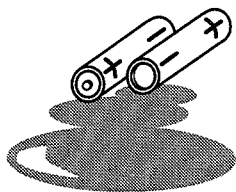
Replace the whole set of batteries at the same time, taking care not to mix old and new batteries of different types, since this can result in leakage, or in extreme cases, fire or explosion.

always



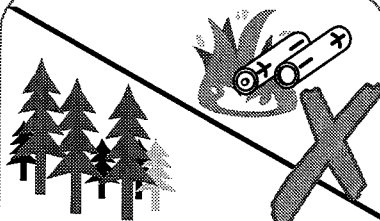
Store unused batteries in their packaging and away from metal objects which may cause a short circuit resulting in leakage, or in extreme cases, fire or explosion.

always



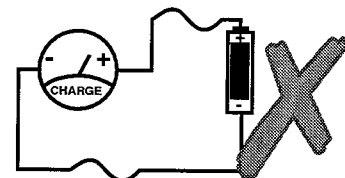
Remove dead batteries from equipment, and all batteries from equipment that is to be left for long periods of time without any use. Otherwise the batteries may leak and cause damage.

never!



Never dispose of batteries in a fire as this can cause an explosion. Respect the environment - always dispose of batteries in an environmentally friendly manner.

never!



Never attempt to recharge ordinary batteries, either in a charger or by applying heat to them. They may leak, cause fire or even explode. Rechargeable NiCAD batteries and chargers can be purchased from any good High Street electrical retailer.



Before installing your TV please read the following important notes:

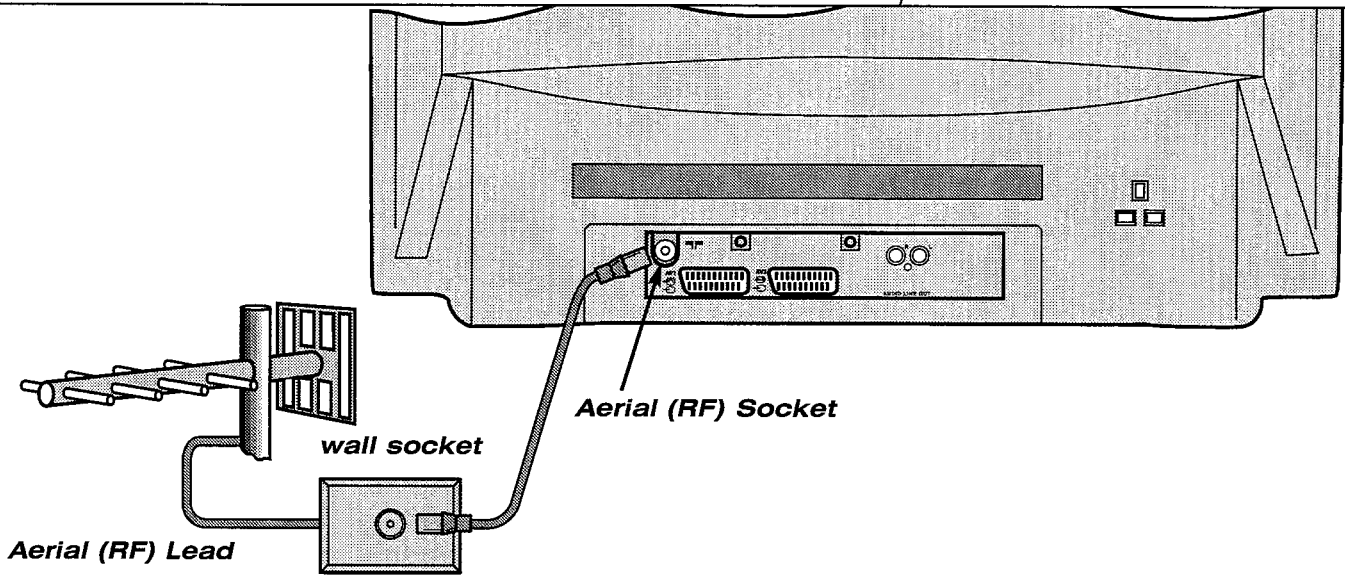
If you intend placing this TV into a cabinet or a wall alcove, please ensure there is at least a 100mm (10cm) gap to the sides, rear and top of the Television. This is to allow for adequate ventilation during TV operation.

Don't allow soft furnishings such as curtains to be draped over the TV whilst in operation.

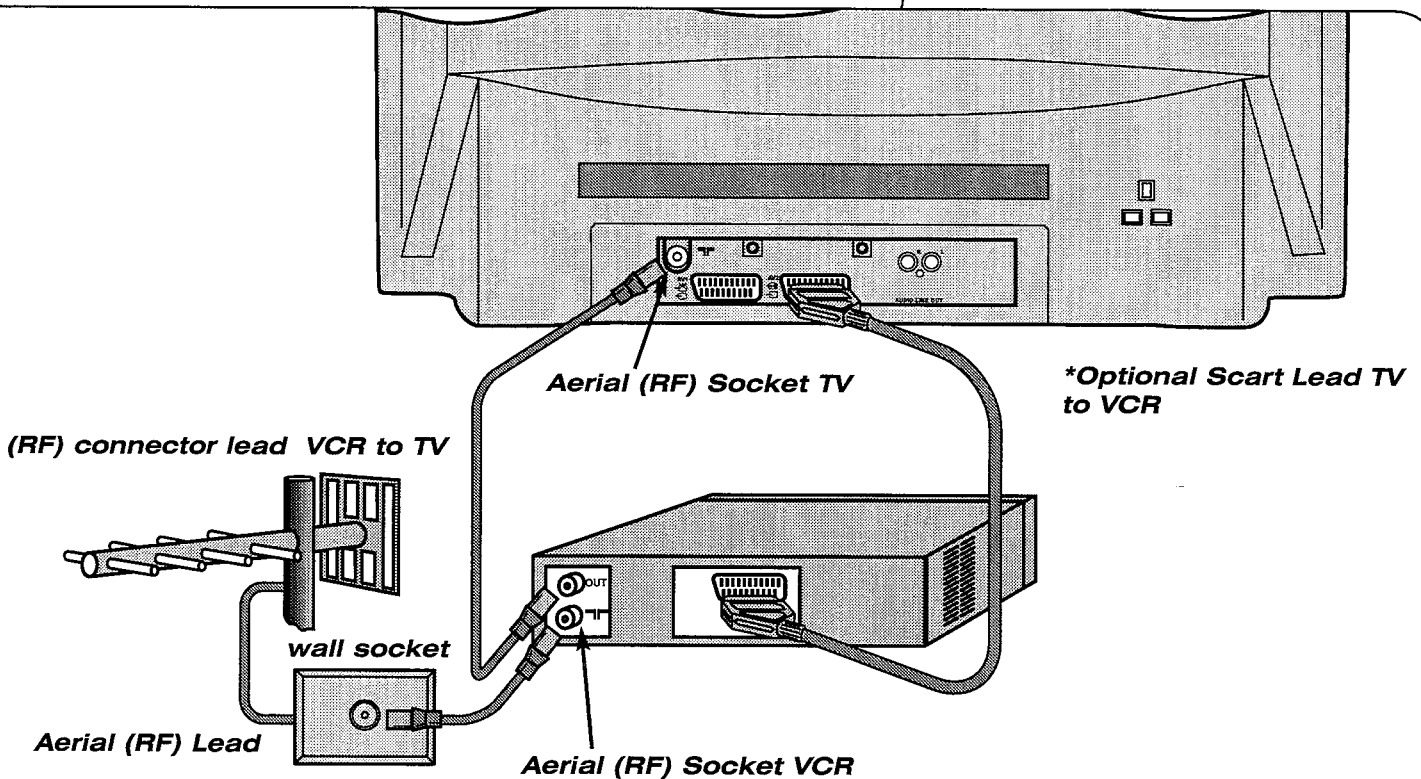
Never place the TV on to a carpet during normal operation - this could obstruct ventilation slots on the base of the TV. Always place the TV on a flat surface, or if supplied, the stand accessory.

Failure to observe the above guidelines could result in serious overheating of your TV, or even, in extreme cases, fire.

TV ONLY INSTALLATION.

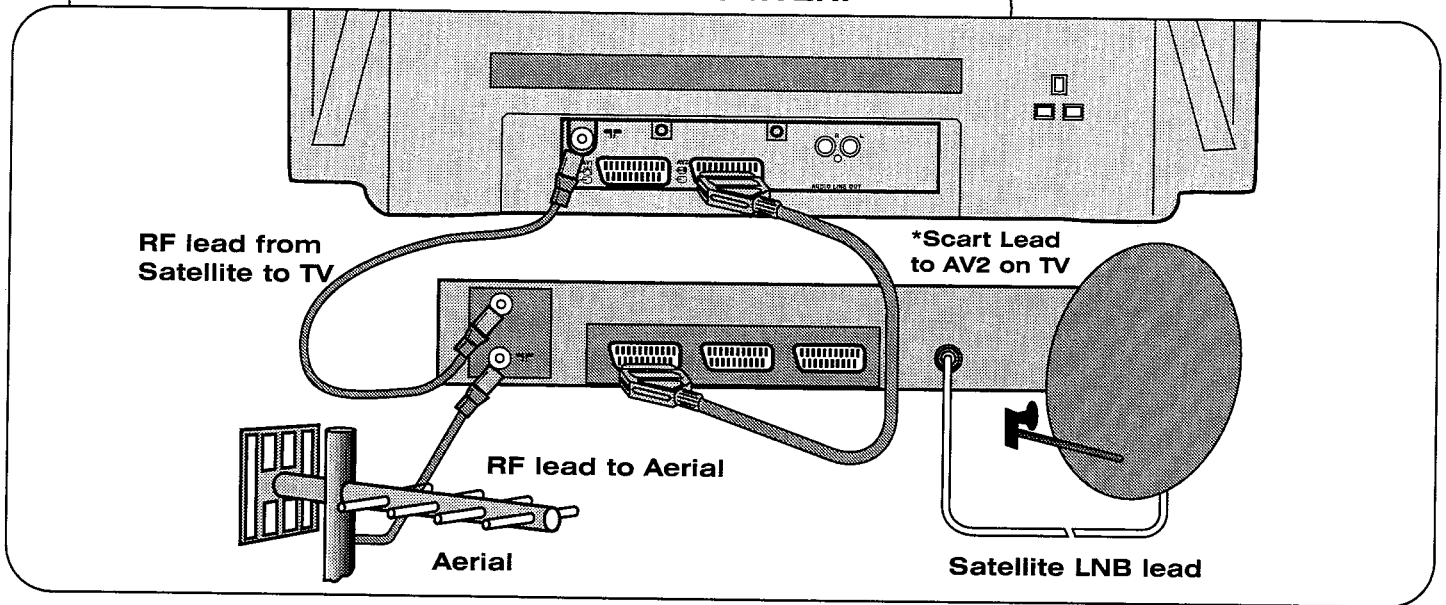


INSTALLATION VIA A VCR.

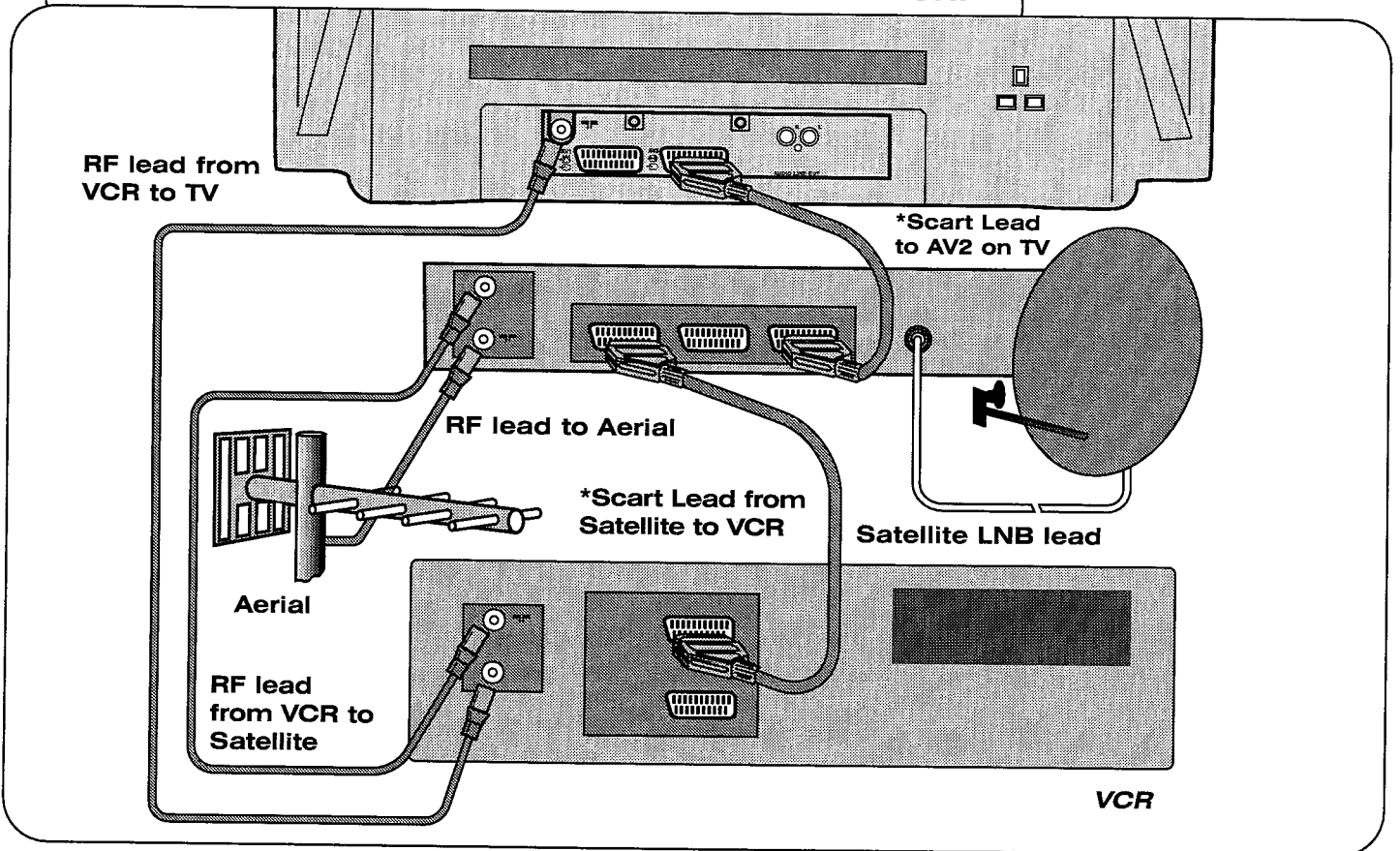



*A scart lead should be fitted between your TV and VCR to enhance your picture and sound quality. Scart leads are essential if you have a stereo TV and VCR and wish to obtain stereo sound from your equipment. These leads can be purchased from your Hitachi dealer or any good 'High Street' electrical retailer.

INSTALLATION VIA A SATELLITE RECEIVER.



INSTALLATION VIA A SATELLITE RECEIVER AND VCR.



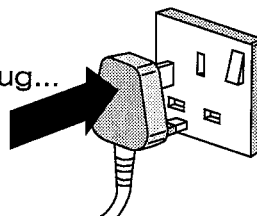
NOTE: S-VHS video equipment should be connected to the AV2 Scart socket located on the rear of the TV. A dedicated program number may then be assigned to AV2, allowing easier access to view external equipment broadcasts. Alternatively, repeatedly press the TV/AV button  on your handset until SAV2 is displayed on-screen, then begin playback operation of your equipment.

CONNECTING TO THE MAINS SOCKET

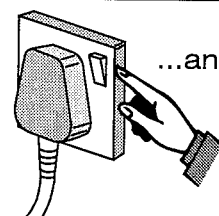


IMPORTANT - If you have not already done so, please read the **TELEVISION SAFETY** section before connecting your television and external equipment.

Insert Plug...

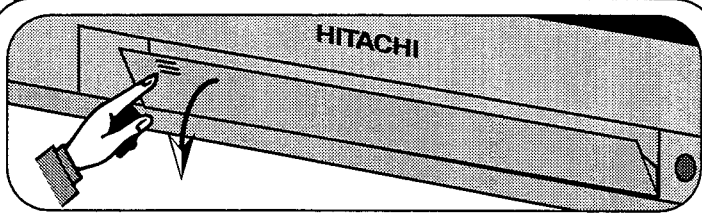


...and Switch on

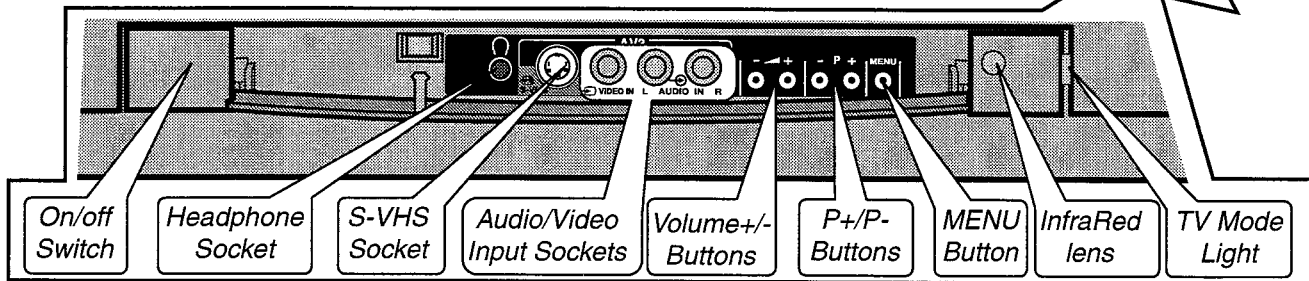
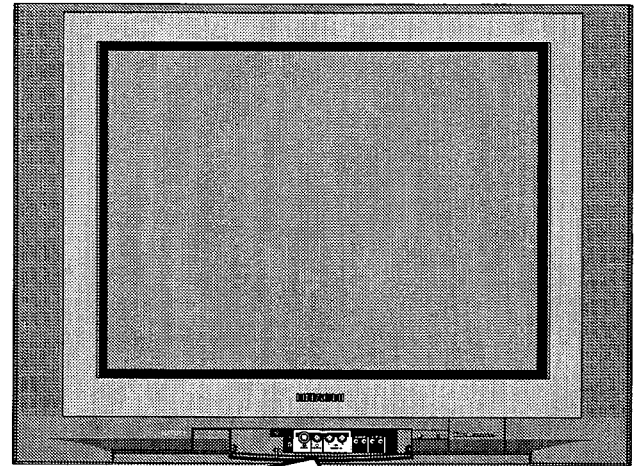


PLEASE NOTE : The television illustrated throughout this manual is the C29F45N. Other models differ in appearance, but controls and functions remain the same, unless otherwise stated.

FRONT CONTROL PANEL

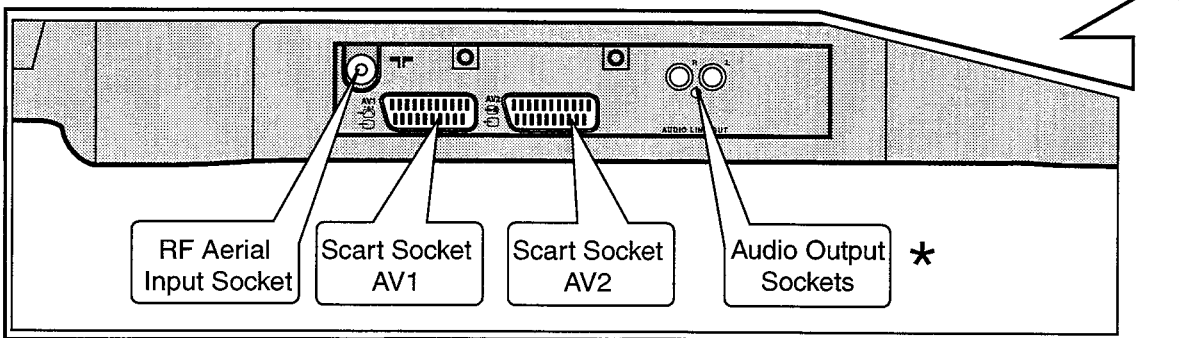
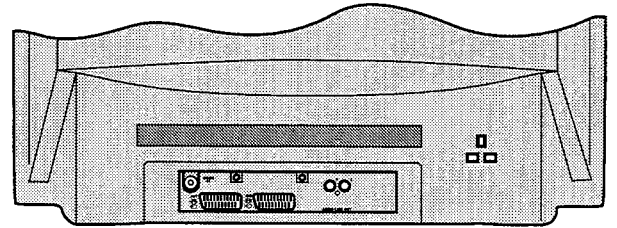


Access to the front control panel is gained by pushing the door in and releasing. The front control panel contains items such as the Headphone socket, Audio/Video sockets, Programme +/- and Volume +/- buttons. Also located on the front are the ON/OFF button, Infra Red Lens and TV Mode Light.



REAR CONNECTING SOCKETS

The rear of your TV contains an aerial RF input and two scart sockets, AV1 and AV2. The RF/aerial socket is permanently connected to an RF source i.e. an aerial antenna, shown in the TV installation section. The scart sockets are used to connect external equipment such as VCRs, Satellite Receivers/Decoders etc. Connection of this equipment is explained in greater detail in the Connecting External AV Equipment section of this manual. Consult your **HITACHI** dealer with regards to purchasing **HITACHI** auxiliary equipment.

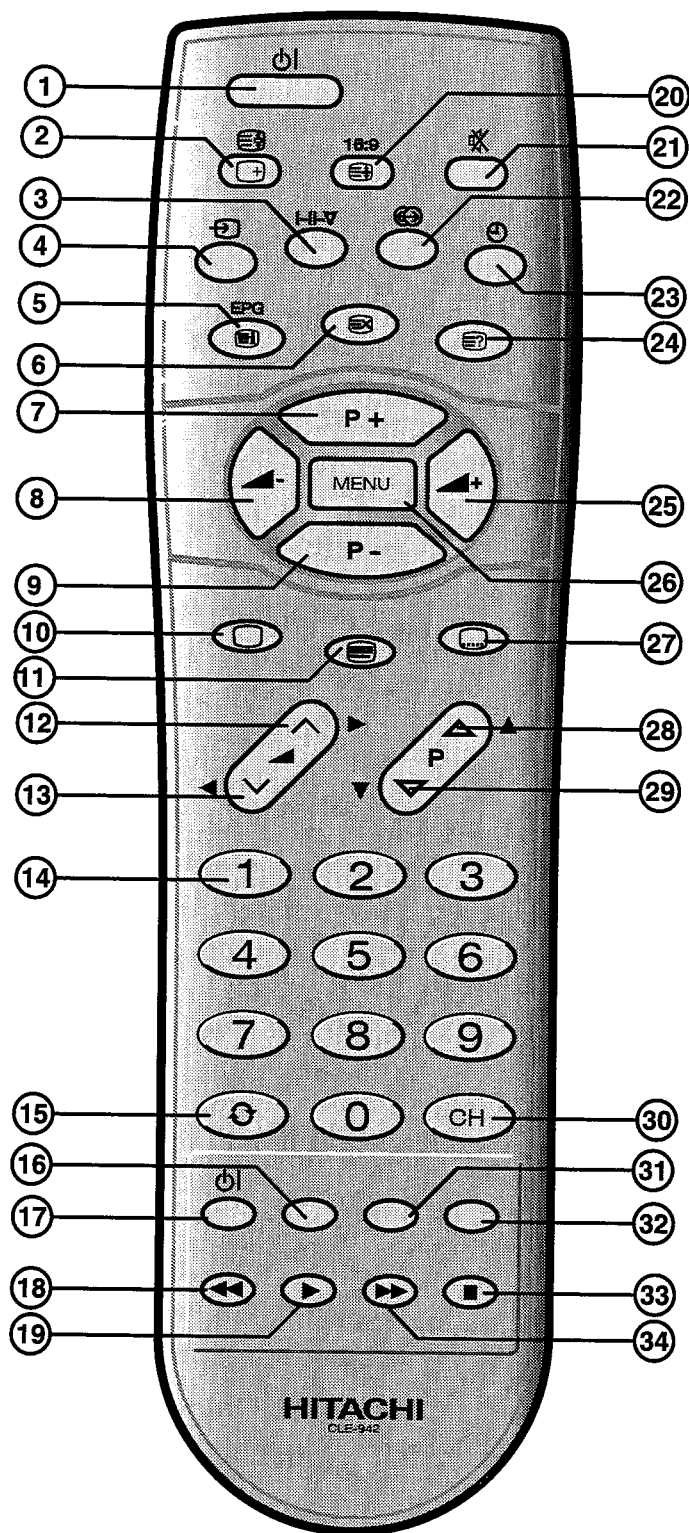


* Available on 29" only

SWITCHING ON

To switch your TV on, press the ON/OFF button shown above. If the TV fails to display anything on the screen, but the red TV mode light appears bright, then the TV is in Stand-by mode. Press the Stand-by button on your handset to activate the TV. The red TV mode light will then dim and you should allow the TV a few seconds for a picture to appear.

Handset layout



The remote control handset supplied has several different functions. These functions are mainly used for operations whilst in teletext mode. The Teletext modes and functions are in ***bold italic type*** and all functions are briefly explained in the Handset Functions section.

BUTTON NUMBER	DESCRIPTION	FUNCTIONS
1	Stand-by button	Used to switch the TV on and off for short periods of time.
2	Recall/Hold	Press Recall to view current TV status. Press Hold to freeze Teletext page.
3	Dual Language	This button allows the user to select a dual language function (subject to availability) and switches from Mono to Stereo reception, also has a colour coded Teletext function and OSD† function.
4	AV Input	The TV/AV button allows the user to select either a TV or external source signal i.e. a camcorder etc.. This button also has a colour coded Teletext function and OSD† function.
5	EPG/Index	The INDEX function is used whilst in Fastext mode and displays the magazine page on view. The EPG function is not available on this model.
6	Update	The Update button restores the TV screen whilst a Teletext page is searched.
7	P+/Cursor up	When in normal TV operation this button allows the user to step up programme numbers in sequence. In MENU mode this button is the cursor up key.
8	Vol-/Cursor left	When in normal TV operation this button allows the user to reduce the TV volume. In MENU mode this button is the cursor left key.
9	P-/Cursor Down	When in normal TV operation this button allows the user to step down programme numbers in sequence. In MENU mode this button is the cursor down key.
10	Television	This enables the viewer to return to normal TV operation.
11	Teletext	When pressed this button enables the Teletext service.
12	Volume up	When in normal TV operation this button allows the user to increase the TV volume. In MENU mode this button is the cursor right key.
13	Volume down	When in normal TV operation this button allows the user to decrease the TV volume. In MENU mode this button is the cursor left key.
14	Digits 0 to 9	Used for direct programme selection (enter a second digit within 2 seconds for programme numbers above 10 i.e. to obtain programme number 29 enter 2 and then 9). Teletext 3 digit entry.
15	Swap	In TV mode this swaps between previous and current programme numbers. In Teletext mode this feature allows the user to recall the last 4 Teletext pages.
16		No Function.
17	Video Stand-by	Used to switch the VCR on and off for short periods of time.
18	Rewind	Press to rewind a VCR tape.
19	Play	Press to play a VCR tape.
20	16:9/Expand	Used to select between Wide Screen formats. Used to expand text pages.
21	Mute	This feature allows the user to mute the sound temporarily.
22	Stereo	Press to select between Stereo Normal and Stereo Wide modes, also has a colour coded Teletext function and OSD† function.
23	Clock	This button allows the user to display the current time on-screen, also has a colour coded Teletext function and OSD† function.
24	Reveal	Used whilst in Teletext mode to reveal hidden pages i.e. quiz pages etc.
25	Vol+/Cursor Right	When in normal TV operation this button allows the user to increase the TV volume. In MENU mode this button is the cursor right key.
26	Menu	The MENU button when pressed allows the user to access the TV's menu system.
27	Subtitles	Allows the user to access a Subtitle service directly (subject to Subtitle service broadcasting).
28	Programme up	When in normal TV operation this button allows the user to step up programme numbers in sequence. In MENU mode this button is the cursor up key.
29	Programme Down	When in normal TV operation this button allows the user to step down programme numbers in sequence. In MENU mode this button is the cursor down key.
30	Channel	Allows the user to directly input known broadcasting CH numbers.
31		No Function.
32		No Function.
33	Stop	Press to stop a VCR tape.
34	Fast Forward	Press to fast forward a VCR tape.

† OSD (On Screen Display).

Automatic Tuning Procedure


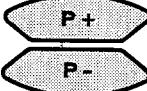
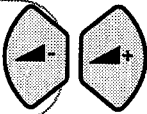
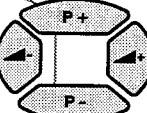
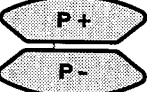
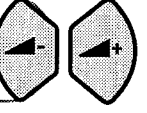

To automatically tune this TV to your local broadcasting stations follow the step by step guide below. Once the TV has found all your local stations, they are then automatically assigned into the following order: **1: BBC1; 2: BBC2; 3: ITV; 4: CH4/S4C; 5: CH5 (subject to availability); 6: Satellite.**

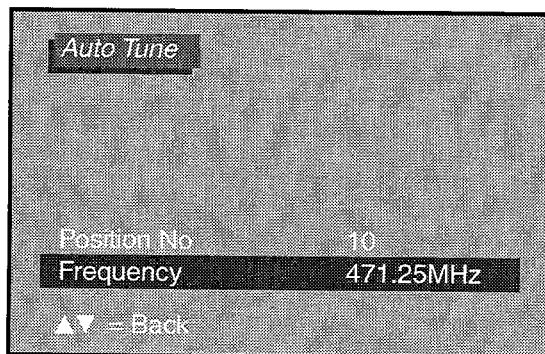
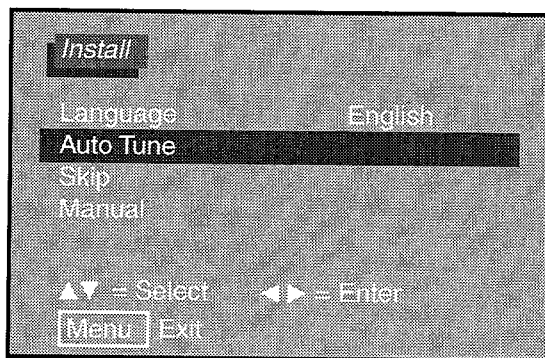
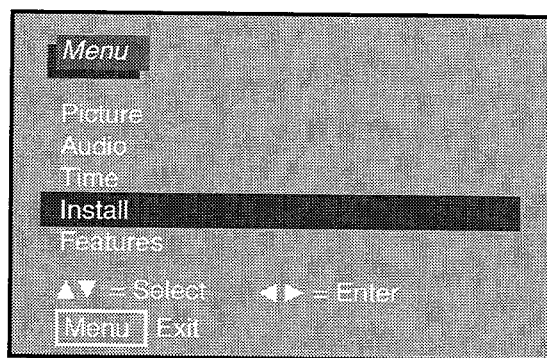
Alternatively, if you are familiar with local broadcasting frequency or CH numbers, then these can be entered manually. Please refer to the Manual Tuning Procedure section of this booklet.



IMPORTANT NOTE: If you have a VCR or a Satellite receiver connected to this TV please ensure that they are switched on before Autotune commences. In the case of a VCR, insert a pre-recorded tape and begin playback of your equipment. With a Satellite receiver, select SKY NEWS. These measures ensure that all your equipment is tuned in during the AUTOTUNE procedure.

Note: The VCR programme number should always be set to 0.

- 1 Press the MENU button on your handset until the MAIN MENU appears. 
- 2 **Highlight** INSTALL using the up/down buttons. 
- 3 Press the left/right buttons to **select** INSTALL. The INSTALL menu is shown. 
- 4 If language setting is incorrect, use the up/down buttons to **highlight** LANGUAGE, and **select** using the left/right buttons. 
- 5 Use the up/down buttons to **highlight** AUTO TUNE. 
- 6 Use the left/right buttons to **select** and begin AUTO TUNE. 
- 7 Once complete, press the MENU button repeatedly to exit. 


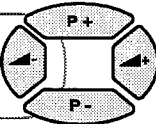
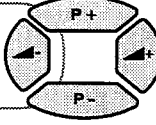
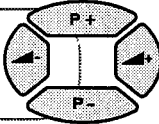

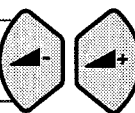



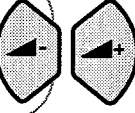
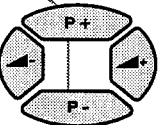

Auto tuning in progress

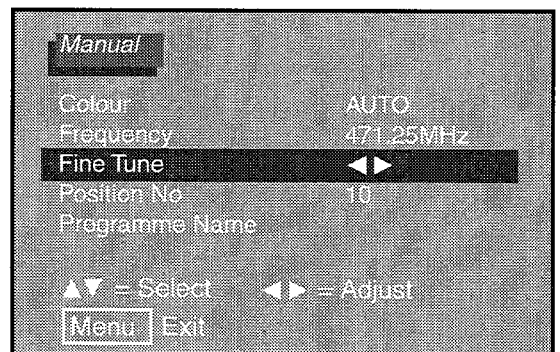
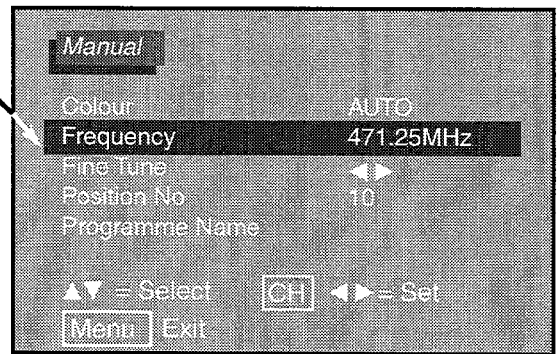
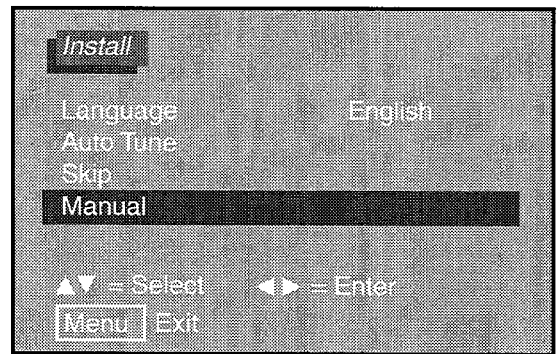
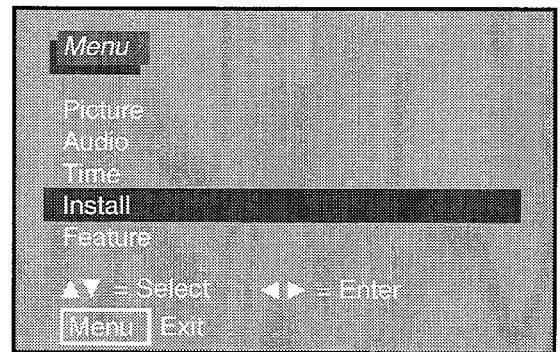
Search Tuning / Fine Tuning

If desired, you may manually tune this TV. There are several methods of Manual Tuning, these include Search Tuning/Fine Tuning and CH manual input (this requires you to know your local broadcasting CH number).

This section deals with locating broadcasting stations using the Search Tuning and combined Fine Tuning facility. Fine Tuning may be required after Search or Automatic Tuning is complete.

- 1 Press the MENU button until MAIN MENU with INSTALL is shown. 
- 2 Use the up/down buttons to **highlight** INSTALL and use the left/right buttons to **select**. 
- 3 Use the up/down buttons to **highlight** MANUAL and use the left/right buttons to **select**. 
- 4 The MANUAL TUNE menu is displayed.
- 5 Use the up/down/left/right buttons to **highlight** frequency bar of programme N° to Search Tune. 
- 6 Press 'CH' button to **select** FREQUENCY/CHANNEL. 
- 7 Press the left/right buttons to begin SEARCH TUNE. 
- 8 When a broadcast is found, either repeatedly press the MENU button to store and exit to TV. 


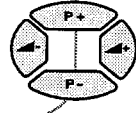
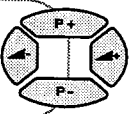
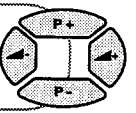



OR
- 9 To continue SEARCH TUNE simply press the left/right buttons the TV will start searching once more. 
- 10 To FINE TUNE press the up/down buttons to **select** FINE TUNE and press the Left/Right buttons until the picture becomes clear. 
- 11 When complete, repeatedly press the MENU button to exit, or repeat above to Search/Fine Tune other programme numbers if necessary. 

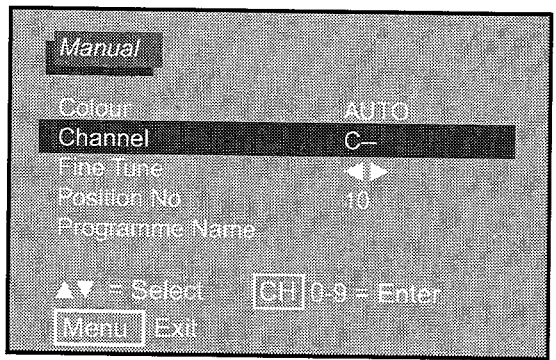
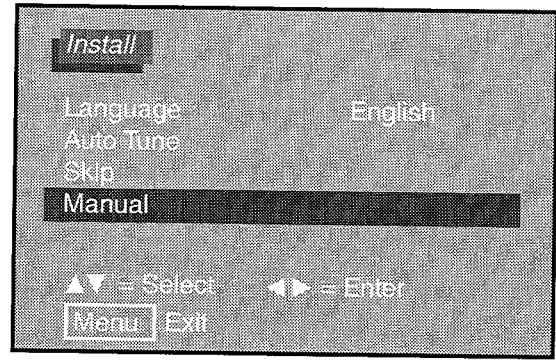


Manual Tuning Procedure

Entering Known Frequencies


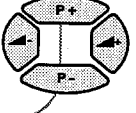
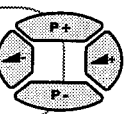
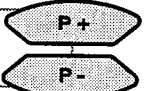

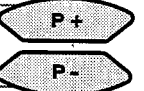


Broadcasting stations transmit the signal to your TV on a particular defined frequency e.g. 525.25MHz. In addition to frequency transmission a corresponding CHANNEL N° is also used e.g. CH34, and this too can be directly input to your TV if known. (The S-- number is available for BG sound systems only).

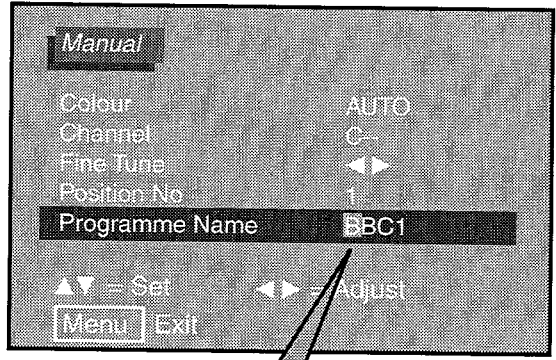
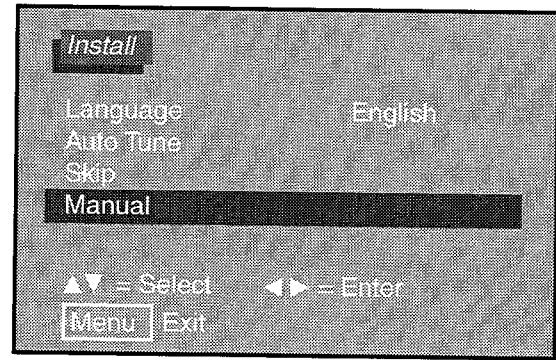
- 1 Press the MENU button  to view MAIN MENU. Use the up/down buttons to **highlight** INSTALL - **select** by pressing the left/right buttons. 
- 2 Use the up/down buttons to **highlight** MANUAL TUNE, **select** by using the left/right buttons. 
- 3 Use the left/right/up/down buttons to **highlight** the frequency of the programme number you wish to enter. 
- 4 Press the 'CH' button on your handset once - the column changes to CHANNEL bar. 
- 5 Press CH key to **select** C- - or S--.- and enter the known number using 0-9 keys. 
- 6 Once the number has been entered, press the MENU key once more. This is now stored. Press MENU repeatedly to exit. 



Programme Naming


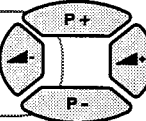
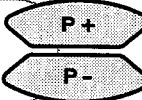
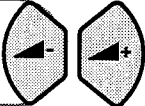

After Tuning in, most broadcasting station names appear on screen i.e. BBC1, BBC2, ITV etc.. However, you may change or add programme names whenever you desire. To add or change programme names follow the simple step by step guide below.

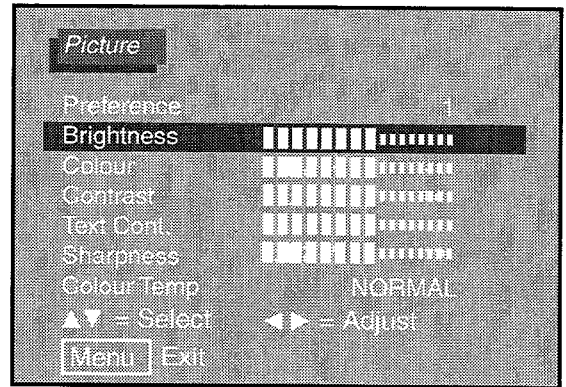
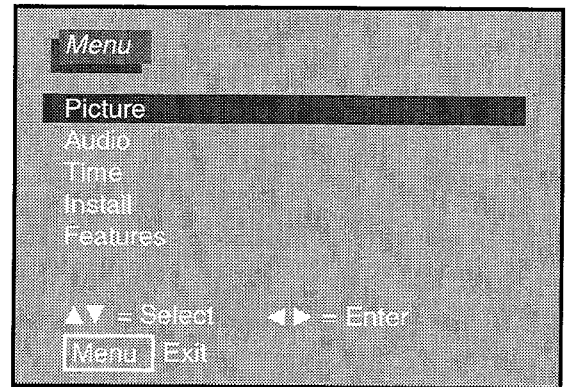
- 1 Press the MENU button  to view MAIN MENU. Use the up/down buttons to **highlight** INSTALL - **select** by pressing the left/right buttons. 
- 2 Use the up/down buttons to **highlight** MANUAL TUNE, **select** by using the left/right buttons. 
- 3 Use the up/down buttons to **highlight** the PROGRAMME NAME bar. 
- 4 Press the 'CH' button, the PROGRAMME NAME bar turns RED. (The first digit will blink). 
- 5 Use the up/down buttons to scroll through the characters. 
- 6 Once the first character has been entered **select** next digit using the right button and repeat above step. 
- 7 You may use up to 5 characters for any one Programme Name. Press MENU button to store. Repeatedly press MENU button to exit to TV mode. 
- 8 Select next channel. Repeat above steps to assign other Programme Names.



When selected the character will blink on and off.

Picture settings are controlled via the TV's on board Menu system. These levels have already been preset at the factory and should require no adjustment. However, your personal viewing preferences may vary from these settings and alteration should be performed as follows:-

- 1 Press the MENU button on your handset to view MAIN MENU. 
- 2 Use the up/down buttons to **highlight** PICTURE and use the left/right buttons to **select**. 
- 3 **Highlight** the control to be adjusted using the up/down buttons. 
- 4 Use the left/right buttons to adjust your selection. 
- 5 **Select** and adjust controls as necessary. Once complete, press MENU button repeatedly to exit. 



Picture Menu

FUNCTION CONTROLS

BRIGHTNESS:

COLOUR:

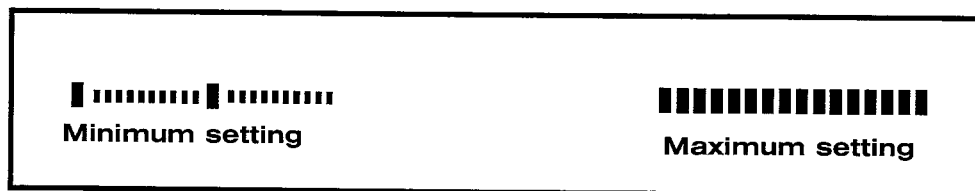
CONTRAST:

TEXT CONT.:

SHARPNESS:

***HUE:**

*(Hue control appears on-screen only if an NTSC signal is received via the AV sockets).



More Functions

COLOUR TEMP.: This feature controls the colour temperature displayed on the picture tube.

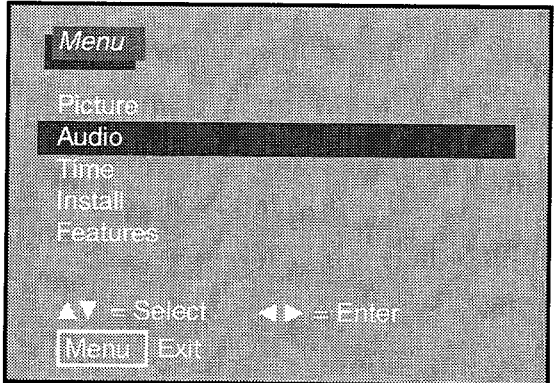
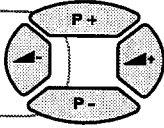
Picture and Audio Controls

The Sound Menu is accessed via the TV's on-board MENU system, and allows the user to control such features as Volume, Bass, Treble, Balance and Bass Boost. These settings have already been preset at the factory, however, your personal listening tastes may differ from those set. Please follow the guide below for adjustment and setting.

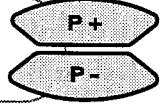
1 Press the MENU button on your handset until the MAIN MENU appears.



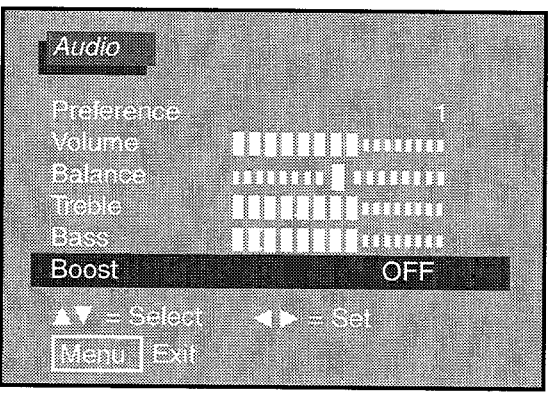
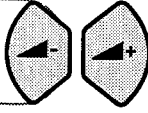
2 Use the up/down buttons to **highlight** AUDIO and use the left/right buttons to **select**.



4 **Highlight** the control to be adjusted using the up/down buttons.



5 Use the left/right buttons to adjust your selection.



6 **Select** and adjust controls as necessary. Once complete, press MENU button repeatedly to exit.



FUNCTION CONTROLS

VOLUME:

BASS:

TREBLE:



BALANCE:




BASS BOOST: When selected "ON" is displayed.

Skip Channel

The Skip Channel feature allows the user to 'skip' set channels when selecting the channel they wish to view.

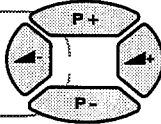
Example: If Skip is 'YES' for channel 8, when selecting channels by up/down buttons

buttons , in normal TV operation, channel 8 is ignored. This feature is explained in the step by step guide below.

- 1 Press the MENU button on your handset until the MAIN MENU appears.

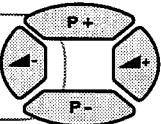


- 2 Use the up/down buttons to **highlight** INSTALL and use the left/right buttons to **select**.



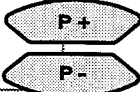
- 3 The INSTALL menu is now displayed.

- 4 Use the up/down buttons to **highlight** SKIP and use the left/right buttons to **select**.

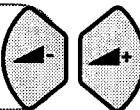


- 5 The SKIP menu is now displayed.

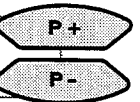
- 6 Use the up/down buttons to **highlight** CHANNEL.



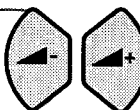
- 7 Use the left/right buttons to adjust your selection.



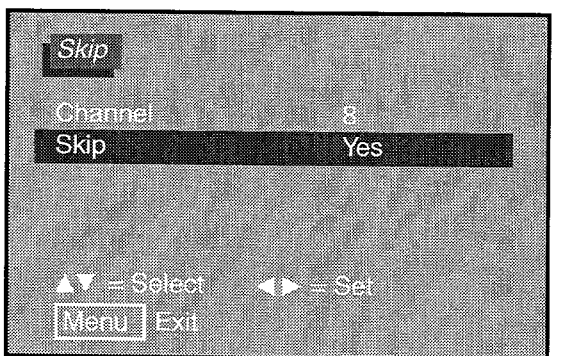
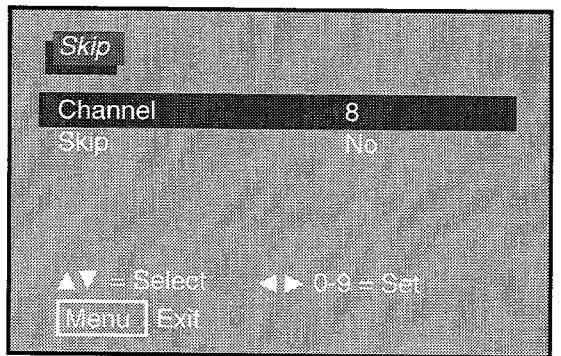
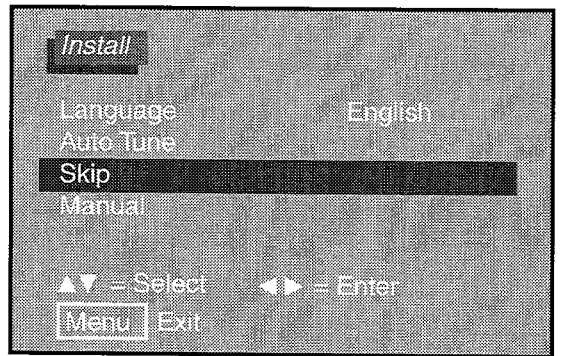
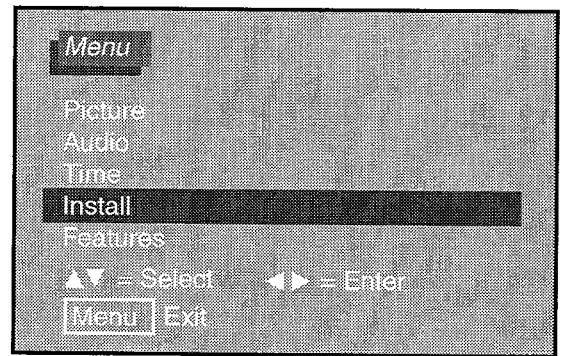
- 8 Use the up/down buttons to **highlight** SKIP.



- 9 Adjust SKIP to YES or NO using the left/right buttons.



- 10 When complete, press the MENU button repeatedly to exit or repeat above to skip other channels.


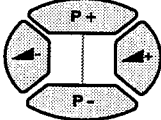
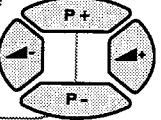




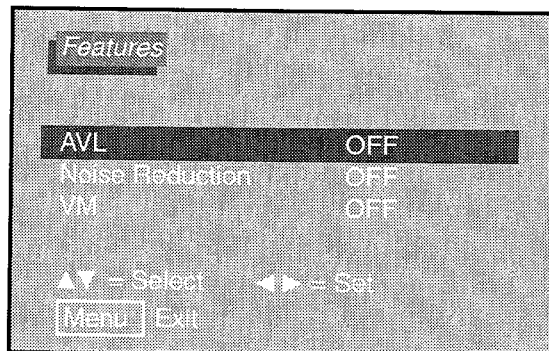
Features

AVL

The AVL (AUTOMATIC VOLUME LEVEL) feature helps maintain a constant sound level, as some programmes, especially advertisements, are broadcast louder than others. AVL reduces this difference, so the customer does not have to keep adjusting the volume.

There are two modes to select from and these are simply ON and OFF. Follow the guide below.

- 1 Press the MENU button on your handset until the MAIN MENU appears. 
- 2 Press the up/down buttons to **highlight** FEATURES and press the left/right buttons to view FEATURES menu. 
- 3 **Select** AVL mode by using the up/down buttons and adjust the controls ON or OFF using the left/right handset buttons. 
- 4 Press MENU repeatedly to exit. 



Other Features :


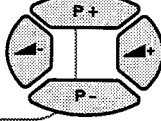
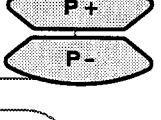
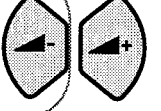
NOISE REDUCTION : Noise Reduction improves picture quality when a signal becomes weak or when viewing poorly recorded VCR tapes. When selected, "ON" is displayed.

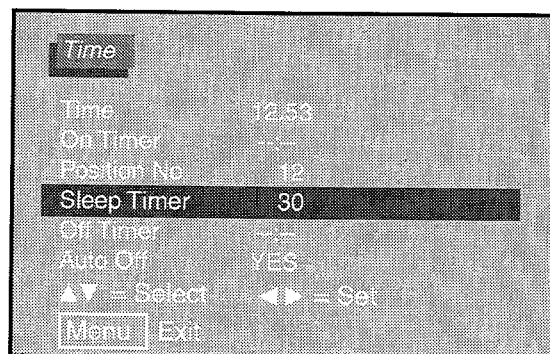
VM (VELOCITY MODULATION) : Velocity Modulation increases or decreases the sharpness of your television picture so it appears less blurred, especially in left and right edges of the screen. (This function is available on 29" models only.)

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Sleep Timer Function

Your television also incorporates a Sleep Timer Function which allows the user to input a set amount of time before the TV automatically shuts down into Stand-by mode. The amount of time is input in 15 minute intervals, to a maximum of 120 minutes (2 hours).

- 1 Press the MENU button on your handset until the MAIN MENU appears. 
- 2 Press the up/down buttons to **highlight** TIME and press the left/right buttons to **select** TIME menu. 
- 3 **Highlight** SLEEP TIMER mode by using the up/down buttons. 
- 4 Adjust the time value by using the left/right handset buttons. Press MENU repeatedly to exit. 



An example of the Sleep Timer function with 30 minutes entered is shown.

Other Features :

ON TIMER : TV set switches from Stand-by mode to 'ON' once the set time is reached.


POSITION : The preferred channel which the TV will switch on to once the set time is reached.

OFF TIMER : TV set switches to 'Stand-by' mode once the set time is reached.

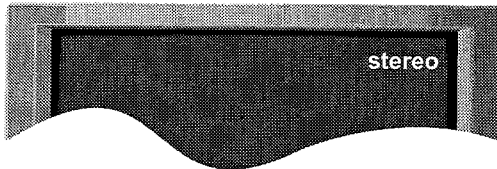
AUTO OFF : If the TV does not receive a signal for a period of 10 minutes, the TV will automatically power down into Stand-by mode.

In addition to the standard features found, your TV also has NICAM sound capabilities. NICAM transmitted signals provide stereo sound whilst viewing the TV in STEREO mode, thus giving the user even greater listening pleasure. The TV also provides 16:9 (Wide Screen Format) viewing capabilities, together with automatic wide screen detection software built in.

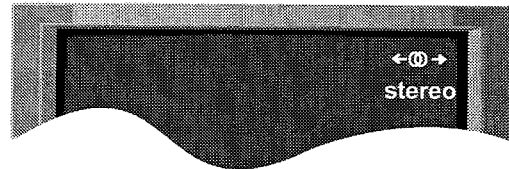
Nicam Features


The Nicam facility features two modes which provide the viewer with various sound effects. These features are activated by pressing the  key on the handset. When repeatedly pressed the TV will cycle through each mode and will display a particular on-screen symbol. The various modes and on-screen identification is explained below.

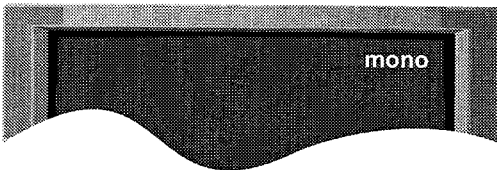
Stereo This option allows NICAM digital stereo sound to be output from the TV. Use this mode for the majority of TV viewing. When selected the word "STEREO" is displayed in the top right hand corner of the TV screen as shown.




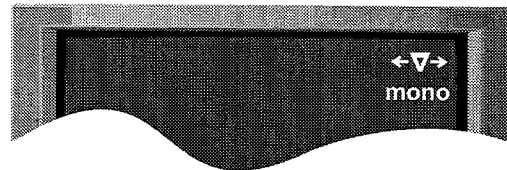
Wide Stereo This effect enhances NICAM digital stereo by forcing a wide area of sound from the TV. Use this mode when viewing action movies or sports events to obtain spatialising acoustic performance. When selected the symbol shown below appears at the top right hand corner of the screen.



Monaural In monaural mode, the TV outputs a single sound source through both speakers. The TV will automatically select this sound when a mono signal is found. Some stereo signals can become poor in adverse weather conditions, and mono should be selected to avoid poor sound. Use the  key to switch to mono (the word "MONO" appears when switched).



Pseudo Stereo Pseudo Stereo creates an ambient sound from mono signals imitating that of stereo sound. Use the  key to select Pseudo Stereo. When selected the symbol shown will appear in the top right hand corner of the screen.



16:9 Features



example 1

Various broadcasting stations now transmit movies and programmes in true wide screen format, especially some satellite broadcasts. Built into your TV is software that detects these signals and automatically switches your TV to the correct format. However, some broadcasters do not transmit the automatic sensing signal, and thus the TV will not recognize the format being transmitted.

The above problem may be overcome simply by pressing the 16:9 button on your handset.

First identify the type of signal being transmitted. If it is a 16 x 9 wide screen broadcast viewed on a 4 x 3 normal format, then objects or characters appear tall and narrow (see example 1).

By pressing the 16:9 button on your handset the screen is compressed to a 16 x 9 ratio. This is the correct ratio to view true wide screen broadcasts (see example 2).

If the 16:9 button is pressed once more the AUTO function is set. The TV will automatically detect the broadcast and switch to 4:3 or 16:9 ratio. We recommend AUTO is set for the majority of TV viewing.




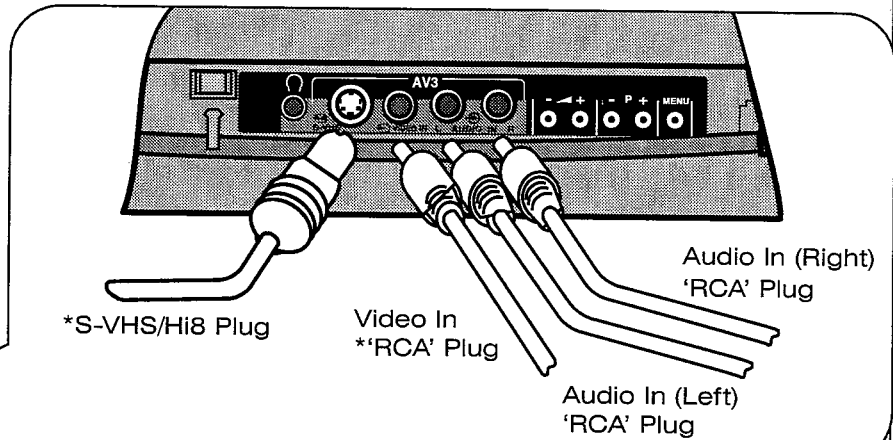
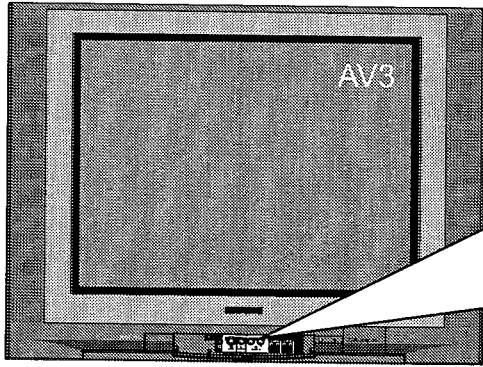
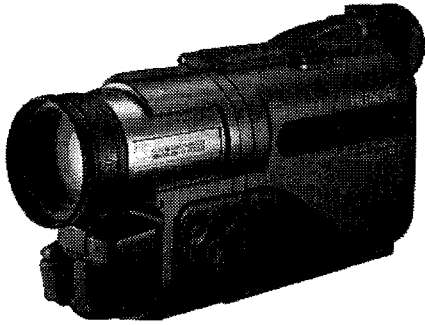
example 2

Connecting External AV Equipment

Your TV has various input sockets for external equipment such as Video Cassette Recorders, Satellite Receivers/Decoders, Camcorders, Computer Equipment etc.. Equipment that is connected temporarily, i.e. Camcorders, can be connected via the front control panel input sockets. However, equipment such as VCRs and Satellite IRDs, that are more or less permanently connected to your TV, are connected via the AV1 or AV2 scart sockets on the rear of the TV.

CAMCORDER CONNECTION

Connecting a camcorder to your TV is simple. Firstly, identify the type of camcorder and it's connecting plugs. If it is a standard 8mm type camera then it is likely to have 'RCA' type sockets. If, however, you have a S-VHS or Hi8 type camera then this may have a S-VHS/Hi8 plug, and this will have to be placed in the corresponding S-VHS/Hi8 socket on the TV. Open the front control panel door on the TV and connect your equipment as shown in the illustration below. Switch your TV on and repeatedly press the TV/AV button  on your handset until AV3 or SAV3 (for S-VHS equipment) is displayed on-screen. Now begin playback operation of your equipment.




* If your camcorder has both S-VHS/Hi8 and 'RCA' type plugs, then connect all plugs except the Video In 'RCA' plug.

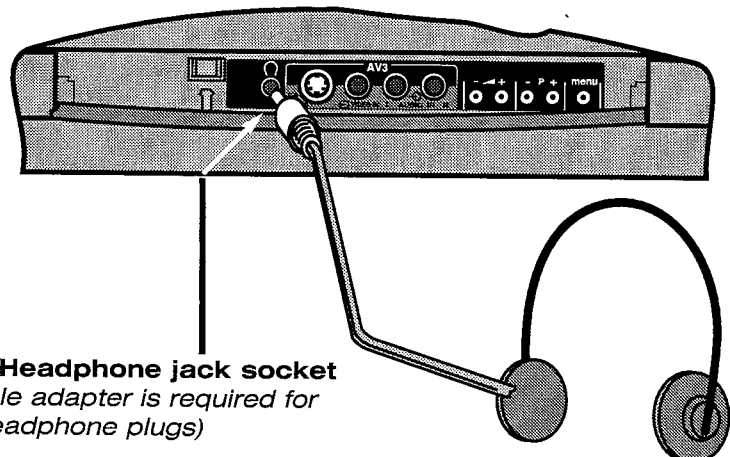
COMPUTER EQUIPMENT

If computer equipment is to be connected to this TV, use AV1 as the RGB input socket located on the rear of the TV and select RGB using the TV/AV button  on your handset.


PLEASE NOTE: Prolonged use of computer equipment or games on this TV may cause permanent damage to your picture tube. To avoid such damage, reduce the brightness and contrast to an acceptable minimum level and limit the duration of equipment operation.

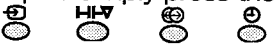
HEADPHONE CONNECTION

To use headphones with this TV, simply open the front control cover door and insert the headphone jack plug (3.5mm) into the corresponding socket marked . The TV sound will then be switched to the headphones.



TELETEXT OPERATION

Teletext operation is entered by pressing the TEXT button on your handset.  A page similar to the one shown on the right will appear. The main page contains numbered topics that are accessed by entering the corresponding three digit code on your handset.

In addition to the above system, at the bottom of the page there are four colour coded popular topics, i.e. TV Guides, Weather, Sport etc., however, these may vary between each broadcasting station. To access these topics simply press the corresponding colour coded keys on your handset.  By pressing the P+ or P- keys you may step up or down a page respectively. If a mistake occurs while entering a number then simply re-enter the desired number.





P100 CEEFAX 2 100 Wed 19 Mar 15:49/06				
BBC CEEFAX				
CEEFAX AT-A-GLANCE PRESS HOLD				
NEWS HEADLINES	101	LOTTERY	555	
NEWS INDEX	102	BACKBEAT	560	
ELECTION	97	FREE TIME	570	
NEWS EXTRA	140	CRACKING	575	
CITY	BBC2	200	COOKBOOK	580
SPORT	300	ON THE BOX	590	
WEATHER	400	TV GUIDE	600	
TRAVEL	430	TV LINKS	615	
CBBC INDEX	500	RADIO	BBC1 640	
SUB ZERO	501	EDUCATION	BBC2 630	
NEWSROUND	510	READ HEAR	BBC2 640	
SHOWTIME	520	COMMUNITY	BBC2 650	
SWITCHED ON	540	RACING	660	
			>>>>	
News Heads Sport TV/Radio Weather				

The 4 Fastext Topics are shown on the bottom of the screen

FAVOURITE PAGE OPTIONS

The TV is capable of storing up to 4 Favourite Pages. These pages could be your favourite sport or TV page etc., and are accessed by pressing one of the Colour Coded keys on your handset.

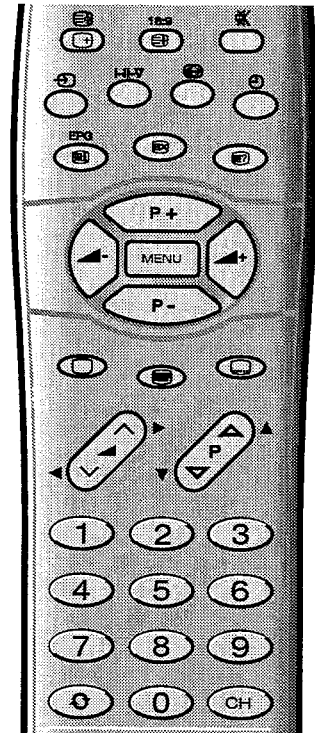
To enter a Favourite Page first access the TEXT mode by pressing the TEXT key on the handset.  Now enter the Favourite Page mode by pressing the MENU button on your handset (the MENU button allows the user to toggle between FASTEXT and FAVOURITE PAGE modes).  Enter the Colour Coded key you wish to use as the first favourite page.

Now enter the page number you wish to assign to the desired Colour Coded key using the 0-9 buttons on your handset.

Once you have completed this step you must now store your selection in the TV's memory. Simply press and hold the selected Colour Coded key until the entire bottom fastext bar turns white. This is now stored.

If desired, another three favourite pages may be entered by following the above method, utilizing the existing colour coded keys.


To view a Favourite Page simply press the MENU key whilst in FASTEXT and press the desired stored page using the Colour Coded keys on the handset.




VCR OPERATION

Your handset incorporates controls for operation of HITACHI Video Cassette Recorders. These controls are STANDBY, PLAY, STOP, FAST FORWARD and REVERSE and are located on the bottom of the handset.

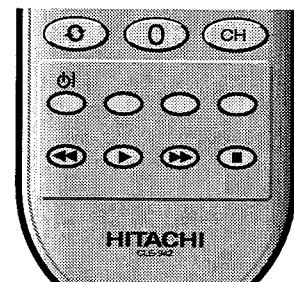
To switch your VCR on or off simply press the VCR Standby button. 

To halt a cassette tape press the STOP button. 

To rewind a cassette tape press REW button. 

To begin playback of a cassette tape press the PLAY button. 

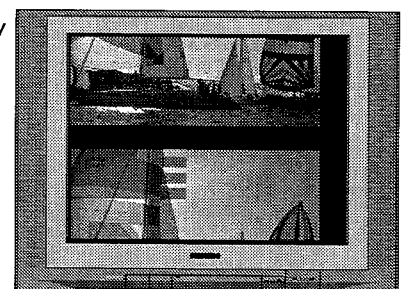
To fast advance a cassette tape press F/FWD button. 



SET TOP BOX OPERATION

If you are watching a Digital TV broadcast and you wish to change to a normal TV broadcast, press the TV button* on your Set Top Box handset to revert to normal TV operation. If you do not, you may experience a "rolling" of the picture on your TV. (An example is shown in the illustration opposite).

*** PLEASE NOTE:** The TV button on your Set Top Box handset will be labelled "TV, TV/SAT or TV/DTV", whichever is appropriate to your type of Set Top Box.



Example of picture "rolling"

Trouble Shooting Guide

The guide below is intended to help the user to identify common problems which may be encountered during the setup of this TV. If a problem still exists after referring to this guide, please consult your dealer immediately. Under no circumstances remove the rear cover of this TV. There are no user serviceable parts inside and you will be exposed to high voltages, which could cause a severe or fatal electric shock.

Q) My TV fails to switch on.

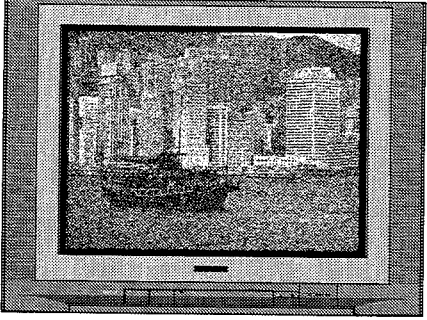
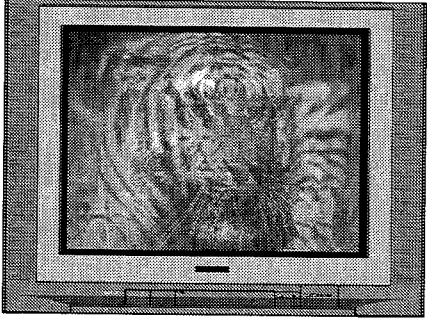
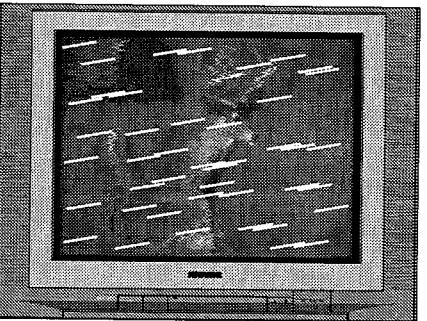
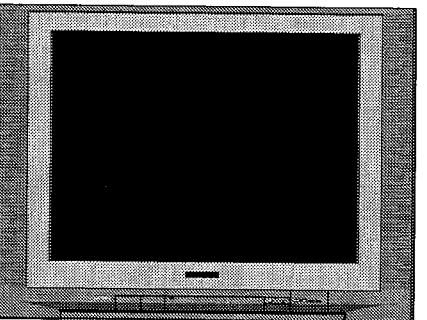

A) Check that plug is connected to socket and switched on. Check fuse and make sure TV is not in Stand-by mode (see below).

Q) My remote control handset does not work.

A) Ensure there are no obstructions between the handset and the TV infra red lens, or the batteries may be exhausted - replace with new.

Q) The handset won't control my VCR.

A) The handset is only programmed to operate Hitachi VCRs.

Problem Identification	Possible Reason	Remedy
 <p>Snowy Picture - Poor Sound</p>	<p><i>Aerial has moved out of position.</i></p> <p><i>Corroded or poor aerial connections.</i></p> <p><i>Connection of RF lead to TV poor.</i></p> <p><i>Adverse weather conditions.</i></p> <p><i>Transmitter problems.</i></p>	<p><i>Re-align aerial.</i></p> <p><i>Make new connections or renew lead.</i></p> <p><i>Make new connection and/or change RF plug.</i></p> <p><i>None.</i></p> <p><i>Check with local Operator.</i></p>
 <p>Multiple Images - Sound OK</p>	<p><i>Aerial has moved out of position.</i></p> <p><i>TV not tuned correctly.</i></p> <p><i>Adverse weather conditions.</i></p> <p><i>Transmitter problems.</i></p>	<p><i>Re-align aerial.</i></p> <p><i>Re-tune or Fine tune TV.</i></p> <p><i>None.</i></p> <p><i>Check with local Operator.</i></p>
 <p>Intermittent Interference</p>	<p><i>Magnetic interference from electrical or mechanical motors, fluorescent lights, portable radios etc..</i></p>	<p><i>Check devices for shielding and renew if necessary or move further from TV.</i></p>
 <p>No Picture and/or No Sound</p>	<p><i>TV may be in AV mode.</i></p> <p><i>TV in Stand-by.</i></p> <p><i>Picture/Audio controls set to minimum.</i></p> <p><i>Aerial plug removed from TV socket.</i></p>	<p><i>Press TV/AV button  repeatedly or 0-9 buttons to return to TV mode.</i></p> <p><i>Press Stand-by button.</i></p> <p><i>Check Picture/Audio controls.</i></p> <p><i>Re-plug aerial lead to socket.</i></p>

Guarantee

Thank You for purchasing this Hitachi Television.

In the unlikely event that this product should develop a fault, we undertake to repair or replace any part of the product which fails due to a manufacturing defect within 12 months of the date of purchase provided that...

1. the product has been installed and used only in accordance with the instructions supplied with the product.
 2. the product has not been repaired, maintained, or modified by any person other than a Hitachi authorized dealer.
 3. the product serial number has not been removed or altered.
- This guarantee does not apply to a product acquired second hand or for commercial or communal use.
 - This guarantee does not cover the replacement of exhausted batteries, the adjustment of user controls, or aerial alignment.
 - Any parts replaced under this guarantee shall become the property of Hitachi Home Electronics (Europe) Ltd.
 - Please note that evidence of the date of purchase will be required before any service under this guarantee is carried out.

Use the boxes provided below to record your TV's Model and Serial Number - these are found on the rating plate located on the rear of the TV. Also, record where and when you purchased this TV. This information will help any future queries you may have and should be used in all correspondence with Hitachi service centres.

MODEL

SERIAL
NUMBER

DEALER/STORE

DATE
PURCHASED

This guarantee does not affect your statutory rights.

In all cases of difficulty please

consult your Hitachi dealer.

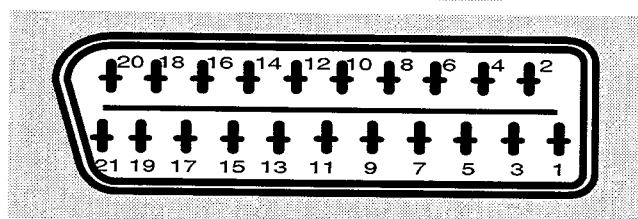
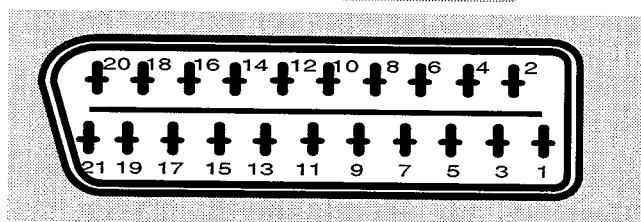
Technical Specifications

TV Standard.....	625 line single standard
Channel Coverage.....	UHF channels
Aerial Impedance.....	75 Ω unbalanced
Picture Tubes.....	51 and 68cm type
Mains Voltage.....	220 - 240V AC 50 Hz
Internal Speakers.....	6 x 12 cm type x 2
Power Consumption..... (All Models Stand by <6W)	51cm models 62W approx. 68cm models 100W approx.
Weight.....	51cm models 24.5kg approx 68cm models 44.5Kg approx
Dimensions (W x D x H).....	51cm models 615 x 497 x 467 68cm models 774 x 497 x 575
Remote Control Batteries.....	2 x HITACHI SUM-3 /equivalent AA

Due to the continual development of Hitachi products, the features, functions and specifications of the television models in this guide are subject to change without notice. Weights and dimensions shown are approximate.

SCART SOCKET AV1

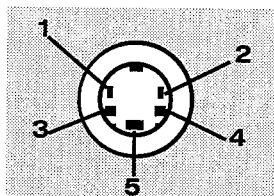
SCART SOCKET AV2



PIN No.	FUNCTION
1	AUDIO OUT (RIGHT)
2	AUDIO INPUT (RIGHT)
3	AUDIO OUT (LEFT)
4	GROUND (AUDIO)
5	GROUND (BLUE)
6	AUDIO INPUT (LEFT)
7	BLUE INPUT
8	SWITCHING INPUT
9	GROUND (GREEN)
10	NOT USED
11	GREEN INPUT
12	NOT USED
13	GROUND (RED)
14	GROUND (BLANKING)
15	RED INPUT
16	STATUS (BLANKING) INPUT
17	GROUND (VIDEO)
18	GROUND (VIDEO)
19	COMPOSITE VIDEO OUTPUT
20	COMPOSITE VIDEO INPUT
21	GROUND

PIN No.	FUNCTION
1	AUDIO OUT (RIGHT)
2	AUDIO INPUT (RIGHT)
3	AUDIO OUT (LEFT)
4	GROUND (AUDIO)
5	NOT USED
6	AUDIO INPUT (LEFT)
7	NOT USED
8	SWITCHING INPUT
9	NOT USED
10	NOT USED
11	NOT USED
12	NOT USED
13	CHROMINANCE GROUND
14	NOT USED
15	CHROMINANCE INPUT S-VHS
16	NOT USED
17	GROUND (VIDEO)
18	GROUND (VIDEO)
19	COMPOSITE VIDEO OUTPUT
20	COMPOSITE VIDEO OR
21	COMPOSITE LUMINANCE S-VHS
	GROUND

S-VHS SOCKET



PIN	FUNCTION
1	Chrominance input
2	Luminance input
3	Chrominance ground
4	Luminance ground
5	Frame ground

HITACHI

Environmental Notice

Hitachi are signatories to the commitment made by the consumer electronics industry on reducing energy consumption by televisions and video recorders on standby.

Even though your TV has a low power consumption, you can reduce waste to zero if you switch off the set at the mains after use. Your TV should certainly be switched off overnight or when you are away from home. Other factors should also be considered when operating your TV. Reducing volume settings to sensible levels can reduce power consumption as well as reducing noise pollution, and reducing contrast can provide a more pleasing picture as well as reducing power consumption.

Hitachi Home Electronics (Europe) Ltd. manufacturing site in Wales is a BSI Registered Company, and has been assessed to ISO 9001 Quality Management Standard, certificate FM32366. Your television has been manufactured under the Environmental Quality Management Standard ISO14001, certificate EMS 36168.

The paper used for this Users Guide has been produced from sustainable forests, part of Hitachi's ongoing commitment to the global environment.

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