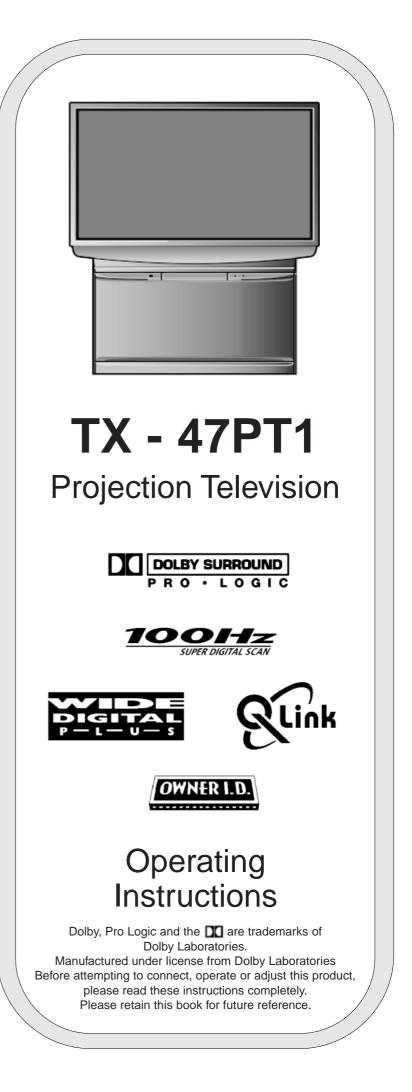
Panasonic



Dear Panasonic Customer,

Welcome to the Panasonic family of customers. We hope that you have many years of enjoyment from your new projection television. This is a very advanced television; however, the Quick Start Guide will allow you to use the TV as quickly as possible. You can then read the instructions completely and retain them for future reference.

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WARNINGS AND PRECAUTIONS

- This TV set is designed to operate on A.C. 220 240V, 50Hz.
- To prevent damage which might result in electric shock or fire, do not expose this TV set to rain or excessive moisture.
- WARNING: HIGH VOLTAGE!!! Do not remove the rear cover as live parts are accessible when it is removed. There are no user serviceable parts inside.
- Avoid exposing the TV set to direct sunlight and other sources of heat.
- The On/Off switch on this model does not fully disconnect the TV from the mains supply. Remove the mains plug from the wall socket if the Projection TV is not going to be used for any prolonged length of time.

• SCREEN CARE

Clean the screen using the cloth which is provided with the projection TV.

• CABINET CARE

Remove the mains plug from the wall socket. The cabinet can be cleaned with a soft cloth moistened with mild detergent and water. Do not use solutions containing benzol or petroleum. TV sets can produce static electricity, so care must be taken whenever touching the TV screen.

- Adequate ventilation is essential to prevent failure of electrical components, we recommend that a gap of at least 10 cm is left all around this television receiver even when it is placed inside a cabinet or between shelves.
- To get the best enjoyment from the dynamic picture and sound from your Projection TV, please sit at least 2.5 metres away.

WARNINGS AND PRECAUTIONS

Note:

- (1) Prolonged use (max. 2 hours) of TV games on the Projection TV is not recommended since the signal from the TV game may cause damage to the picture projection tubes of the Projection TV.
- (2) Do not allow any still picture or parts of picture that do not move on the screen for an extended length of time. These
 pictures can adversely affect your picture projection tubes.
 Some examples of still images are Television programming logos, Video games, Computers and Text programmes, etc. If
 still picture cannot be avoided, reduce the brightness and contrast levels of the picture to minimize any damage that might
 occur.
- (3) When changing the channel or selecting the input, the picture image will move around within a range of approximately 3 mm to prevent the image from burning into the picture tube.

FOR YOUR SAFETY PLEASE READ THE FOLLOWING TEXT CAREFULLY

This appliance is supplied with a fitted three pin mains plug for your safety and convenience. A 5 amp fuse is fitted in this plug. If the fuse is replaced then the replacement fuse must be 5 amp rated and should be approved by ASTA or BSI to BS1362.



If the fitted plug has a removable fuse cover you must ensure that it is refitted when the fuse is replaced. If you lose the fuse cover the plug must not be used until a replacement cover is obtained. Replacement fuse covers can be purchased through your local Panasonic dealer.

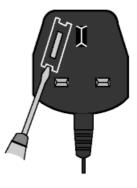
The plug fitted to this appliance incorporates a mains filter circuit. If this is removed or replaced with a non-filtered plug this television will no longer meet the European standards for Electromagnetic Compatibility (EMC). If the fitted plug is unsuitable for the socket outlet in your home an appropriate adapter should be used.

Nonetheless, if the fitted plug is replaced, the fuse should be taken out and the cut-off plug disposed of safely. There is danger of severe electrical shock if the cut off plug is inserted into any 13 amp. socket.

If a new plug is to be fitted please observe the wiring code as shown below. If in any doubt please consult a qualified electrician.

How to replace the fuse

Lift out the removable fuse compartment with a screwdriver and replace the fuse, then refit securely into the mains plug.



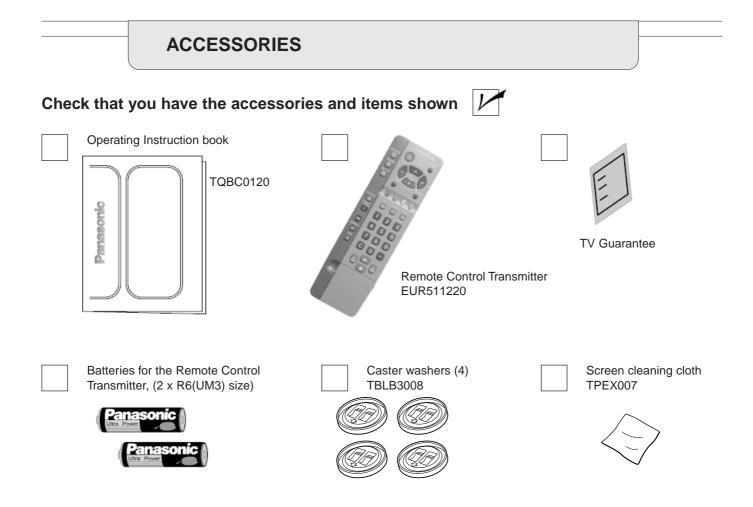
IMPORTANT:- The wires in the mains lead of this appliance are coloured in accordance with the following code :-BLUE : NEUTRAL BROWN : LIVE

As the colours of the wires in the mains lead of this appliance may not correspond to the markings identifying the terminals in your plug, proceed as follows : –

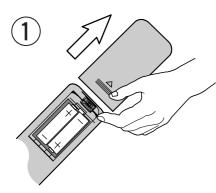
1. The <u>BLUE</u> wire must be connected to the terminal marked 'N' or coloured black.

2. The <u>BROWN</u> wire must be connected to the terminal marked 'L' or coloured red.

IMPORTANT NOTE: Under no circumstances should either these wires be connected to the Earth terminal of the three pin plug, marked with the letter 'E' or the earth symbol.



INSERTING THE REMOTE CONTROL BATTERIES



Slide off the battery cover

2 Reference of the second seco

Insert batteries - note correct polarlty (+ and -)



Replace the cover

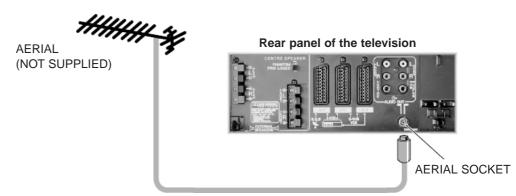
Notes:

- Make sure that the batteries are fitted the correct way round.
- Do not mix old batteries with new batteries. Remove old, exhausted batteries immediately.
- Do not mix different battery types, i, e, Alkaline and Manganese. Do not use rechargeable (Ni-Cad) batteries.



1. Connecting TV directly to aerial

Connect the Aerial lead into the TV Aerial socket ($\neg \Gamma$).



AERIAL LEAD

OR

2. Connection of TV and VCR using Scart and RF

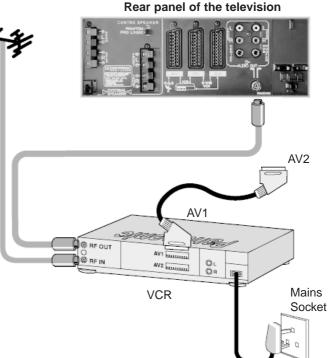
Connect the AERIAL to the Aerial in socket of the VCR and an RF cable from the VCR Aerial Out socket to the TV Aerial socket ($\neg \Gamma$).

######<u>*</u>*

Scart Connections The VCR can also be connected to the TV using a Scart cable if you are using a Scart equipped VCR.

Note:

It is essential to connect AV1 of the VCR to AV2 of the Projection TV if the VCR is Q-Link compatible.



OR

3. Connection of TV, VCR and Satellite Receiver using Scart and RF leads

Connect the RF Aerial lead to the Aerial in socket of the Satellite Receiver.

Connect an RF lead between the Aerial Out socket of the Satellite Receiver and The Aerial in socket of the VCR.

Connect an RF lead between the Aerial Out socket of the VCR and the TV Aerial socket (\neg [).

Connect a fully wired Scart lead between the VCR Scart socket on the Satellite Receiver and the AV2 Scart socket on the VCR.

Connect a fully wired Scart lead between the TV Scart socket on the Satellite Receiver and the AV1 Scart socket on the TV.

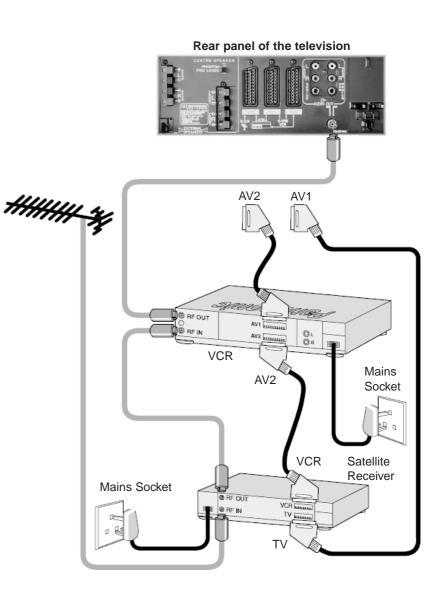
Connect a fully wired Scart lead between the AV1 Scart socket on the VCR and the AV2 Scart socket on the TV.

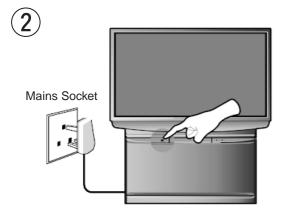
Note:

It is essential to connect AV1 of the VCR to AV2 of the Projection TV if the VCR is Q-Link compatible.

Note:

Switch on the Satellite Receiver and set the output to SKY ONE or SKY NEWS.





First, ensure that the VCR is in Standby mode.

Plug in T.V. and switch on



Auto setup will begin, your stations will be located and stored.

If a compatible VCR is connected to the AV2 socket, programme data will be downloaded to the VCR via Q-Link. See page 27.





If you are installing a new Q-Link compatible VCR, you can now switch if ON. Downloaded tuning data will match the television's.

If you are installing a new NEXTVIEWLINK compatible VCR, you will need to initiate download manually. See the VCR handbook for details.



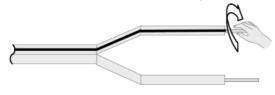


CONNECTING SURROUND SPEAKERS (OPTION)

5

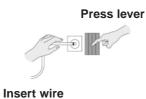
The TV must be switched Off.

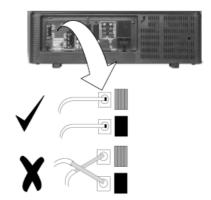
1. Twist the wire ends before inserting.



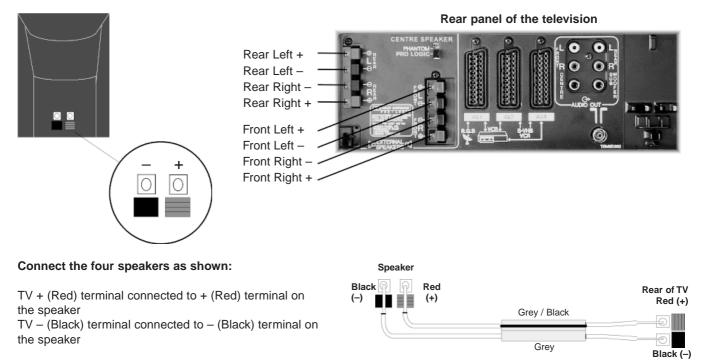
2. Insert into terminals.

Ensure that bare speaker wires are not touching.

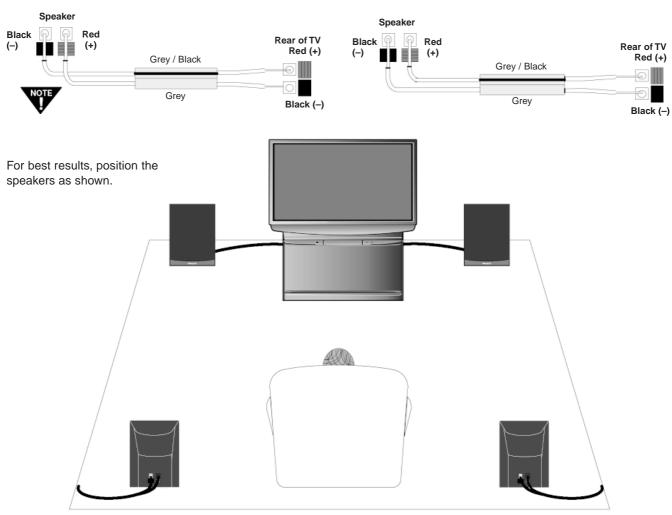




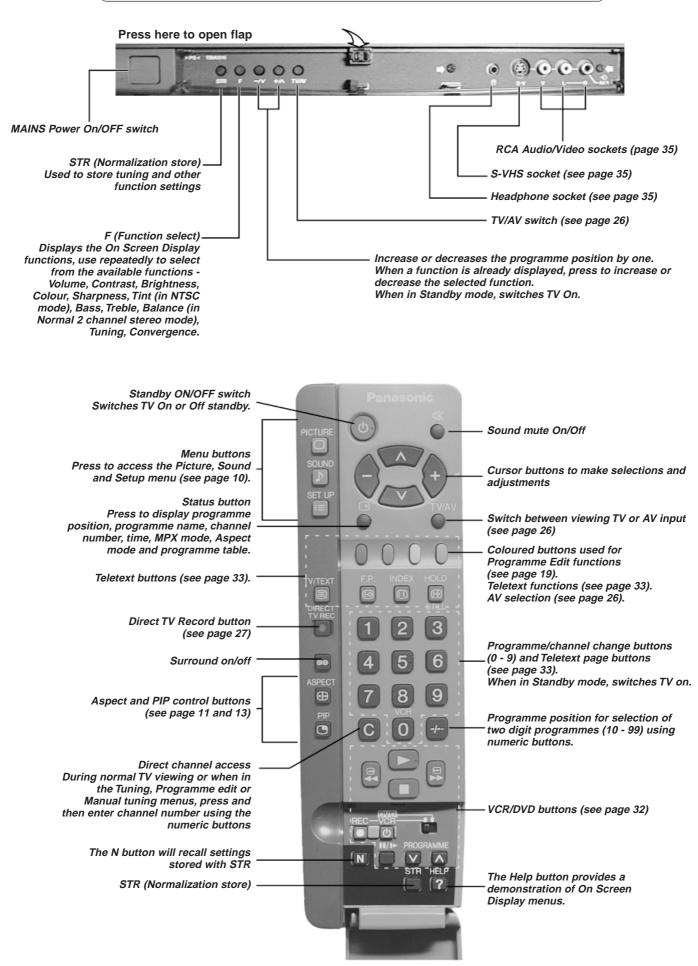
Connecting Surround Speakers (OPTION)



To create an artificial ambience effect the REAR speakers can be connected with the wiring to one speaker 'crossed over':

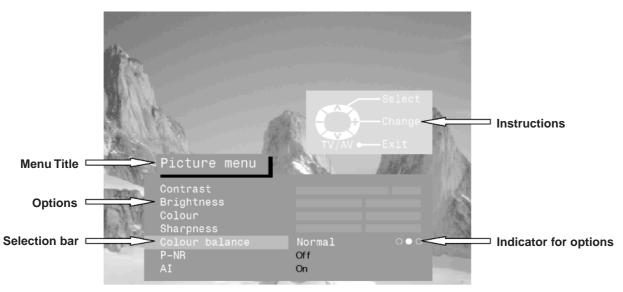


BASIC CONTROLS: FRONT PANEL AND REMOTE CONTROL



USING THE ON SCREEN DISPLAYS

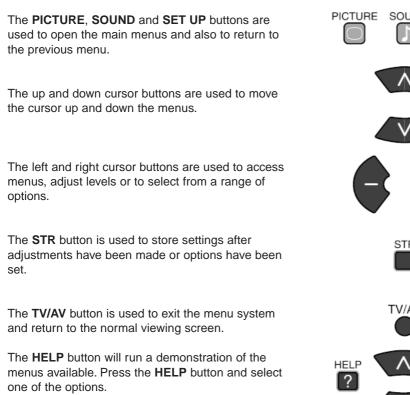
This TV has a comprehensive system of On Screen Display menus to access adjustments and options



Some selections, for example, Contrast, Brightness, Colour and Sharpness will allow you to increase or decrease their level.

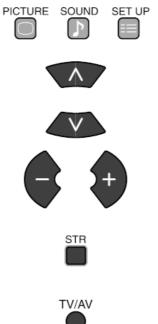
Some selections, for example, Off timer, allow a change of setting to be made.

Some selections, for example **Tuning menu**, will lead to a further menu.



Note:

If no operations are carried out, the menu display will be cleared after approximately 1 minute.







ASPECT CONTROLS

The widescreen TV will allow you to enjoy viewing the picture at its maximum size, including widescreen 'cinema format' pictures.

Press the ASPECT button to move through the six aspect options: Panasonic Auto, 4:3, Zoom, S-Zoom, 16:9 and Just



Panasonic Auto

Some broadcasts are transmitted together with a wide screen identification signal (WSS). If the TV receives this signal then it will automatically switch to wide screen 16:9 mode, maximum display.

The automatic widescreen switching depends upon reception conditions and the strength of the signal. If the signal is poor and therefore the WSS is weak then it is possible that the picture may not expand to full size and that the TV will display black areas around the edges. If the original source signal was a standard 4:3 aspect ratio then you might prefer to view it in its original size; the red and green keys that appear

will allow you to choose between viewing at standard **4:3** size or expanded in **Just** mode.



Panasonic Auto

4:3

4:3 will display a 4:3 picture at its standard 4:3 size and can be selected if you wish to view in this format.

Note:

After setting this mode, turn the power off and back on again to activate the Just mode setting.

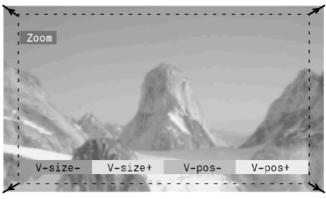


4:3

Zoom

Zoom mode magnifies the central section of the picture.

The picture can be moved and enlarged vertically using the colored keys. The former adjustment is useful for viewing any sub-titles which may appear outside the picture.



Zoom

ASPECT CONTROLS

The on screen selector keys that appear for some aspect functions will clear after a few seconds. If you subsequently wish to select an operation then press the Aspect key once more for the keys to reappear.



The widescreeen aspect ratios of different films and programmes can vary. If these are wider than a standard 16:9 aspect picture then a black band may be visible at the top and bottom of the screen.

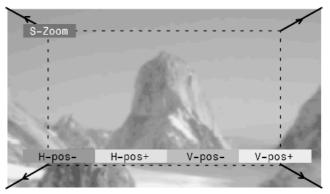
If, in Panasonic Auto mode, you experience problems with the screen display size when playing back widescreen format recordings from your VCR then it is possible that the tracking control of your VCR requires adjustment (your VCR instruction book will contain adjustment details).

S-Zoom

S-Zoom allows increased magnification and the ability to move the picture horizontally and vertically.



Blue key has been pressed to move picture upwards



Increased magnification with S-Zoom

16:9

16:9 will display the picture at its maximum size but with slight elongation.



16:9

Just

Just mode will display a 4:3 picture at maximum size but with aspect correction applied to the centre of the screen so that elongation is only apparent at the left and right edges of the screen. The size of the picture will depend on the original signal.



Just

PICTURE-IN-PICTURE (PIP) CONTROLS

PIP allows two pictures to be viewed at the same time. The PIP key will switch the PIP function On and Off.

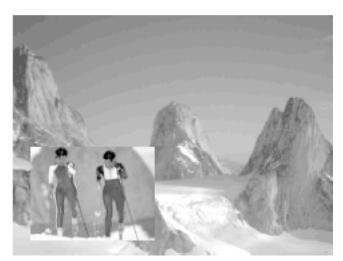


The red key (Locate) will allow you to select the position of the PIP picture.

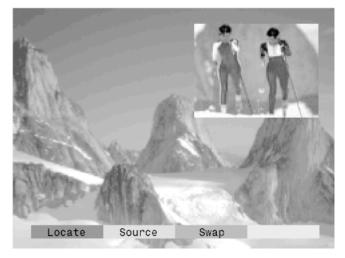
The green key (Source) will allow you to select the current TV screen or the input to **AV1**, **AV2**, **AV3** or **AV4** as the PIP picture.

The yellow key (Swap) will allow you to swap the PIP picture with the main picture and vice-versa.

Pressing the PIP button a second time while the Locate, Source and Swap reminder is displayed will turn off PIP mode. The options available on the reminder bar depend upon the current aspect mode selected.



Pressing the PIP key will display the PIP picture



Above, the PIP picture has been moved to an alternative position by pressing the red key.

STILL CONTROL

STILL Control

The STILL key allows you to freeze the picture at any time.



When using the STILL key with the PIP function press to freeze the main picture, press again to release the main picture and freeze the PIP picture, press again to release the PIP picture.



PICTURE MENU

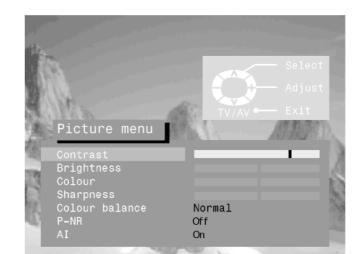
Open the Picture menu

Move to your choice

Increase or decrease levels or set options

Press the TV/AV button to exit the **Picture menu**

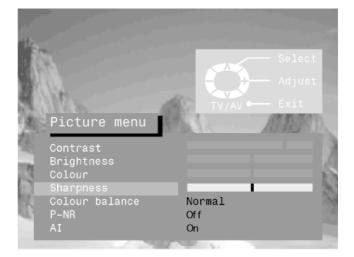






The Contrast, Brightness, Colour and Sharpness levels can be adjusted to suit your own preferences.

The Tint adjustment will only appear as a menu item if you have an NTSC signal source connected to the TV and will allow adjustment of the hue.





Colour balance The Colour balance setting allows you to set the overall colour tone of the picture.



AI

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P-NR will automatically reduce unwanted picture noise.

AI automatically analyses the incoming picture and processes it to give improved contrast and optimum depth of filed.



SOUND MENU

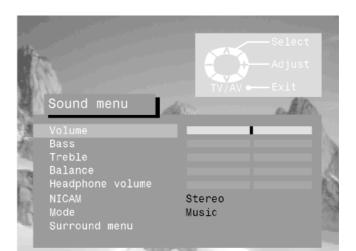
Open the Sound menu

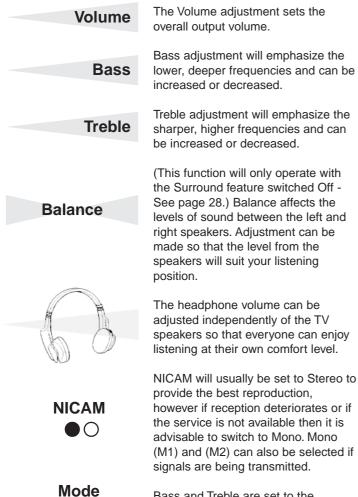
Move to your choice

Increase or decrease levels or set options

Press the TV/AV button to exit the Sound menu



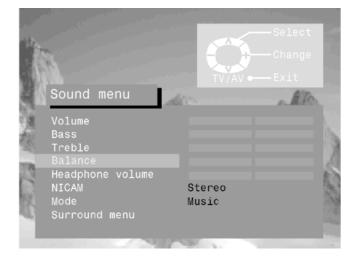




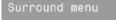
adjusted independently of the TV speakers so that everyone can enjoy listening at their own comfort level.

NICAM will usually be set to Stereo to provide the best reproduction, however if reception deteriorates or if the service is not available then it is advisable to switch to Mono. Mono (M1) and (M2) can also be selected if signals are being transmitted.

Bass and Treble are set to the optimum levels for Music or Speech.



Select Change V Exit
V Exit
Alla
o.M.C.



 \mathbf{O}

Leads to the Surround menu for Dolby Pro Logic and simulated modes of operation, as described on pages 28 to 30.

SETUP MENU

The Setup menu provides access to various advanced features and also to the Tuning menu

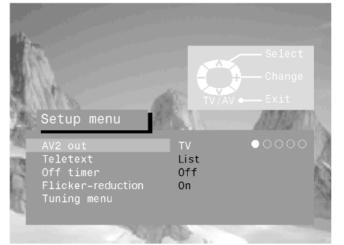
Open the Setup menu

Move to your choice

Increase or decrease levels, set options or access further menus

Press the TV/AV button to exit the Setup menu







AV2 offers you a choice of signals to send to the AV2 SCART socket. You can choose from the current TV programme position, the signal entering AV1/AV3/AV4 or Monitor the picture displayed on screen.



The Teletext option allows you to choose between FASTEXT or LIST mode. See page 33.



Off timer will switch the TV off within a present time which you can choose from between 0 to 90 minutes in 15 minute intervals.

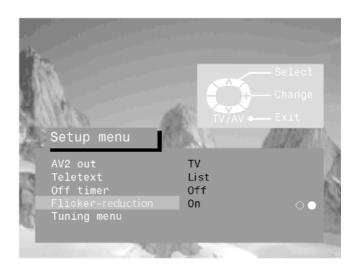


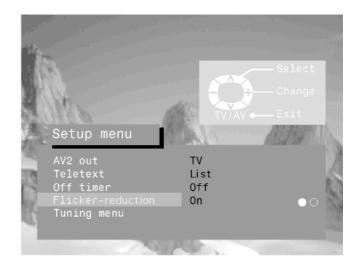
You will normally find the Flicker reduction is best set to **On** to reduce any slight picture movement. However, it is possible that some occasional broadcasts may benefit by selecting the Off position



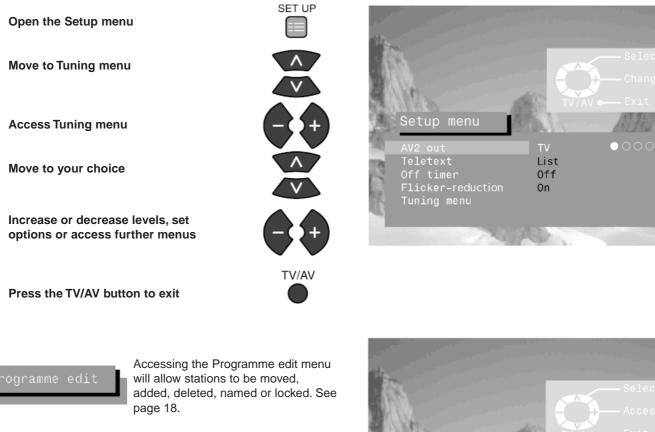
The Tunging menu provides an entry to meny other features including Programme edit and Auto setup. See page 17.

Volume correction (in AV mode only) Volume correction allows you to adjust the volume level of individual stations.





TUNING MENU - overview



Auto setup

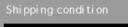
The Auto setup menu allows you to automatically retune the TV. See page 22.

Manual tuning

The Manual tuning menu allows individual programme positions to be tuned manually. see page 23.



This option is used when a decoder is connected via AV2. Set to On if a scrambled signal is to be processed by the decoder. Set to Off after use.

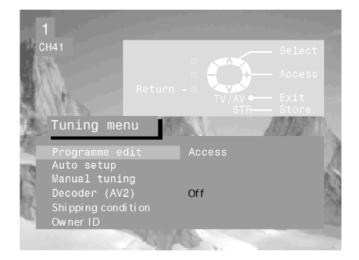


Allows you to clear all tuning information and reset all control levels back to factory settings. See page 24.

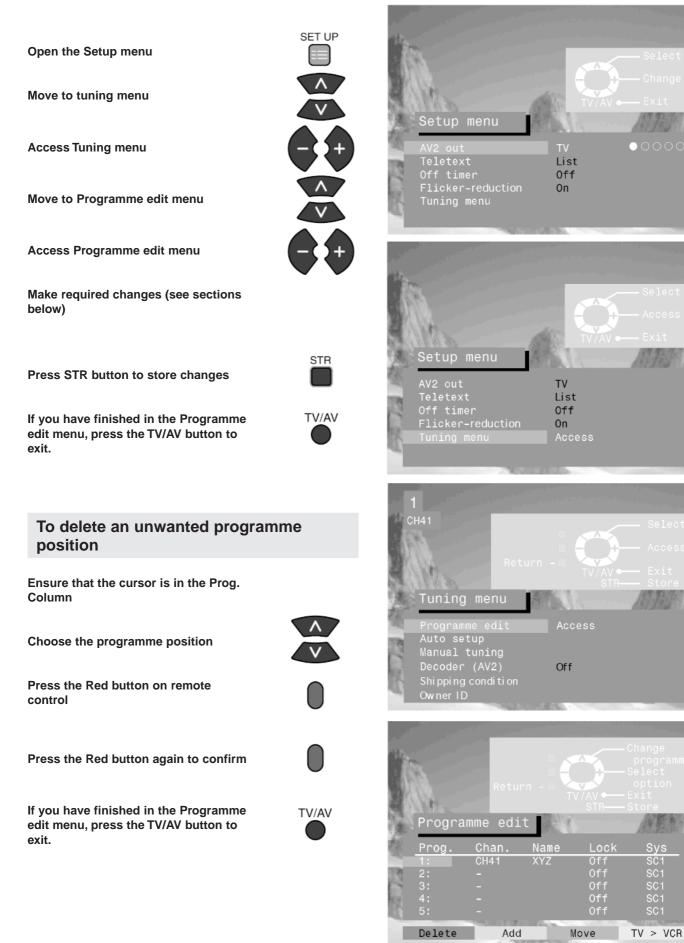
Owner ID

Allows you to enter a security code and address information. See page 25.





The Programme edit menu allows you to edit the programme position settings.



TUNING MENU - PROGRAMME EDIT

To add a programme position

Choose the programme position where the new programme is to be inserted.

Press the Green button

Press the Green button again to confirm.

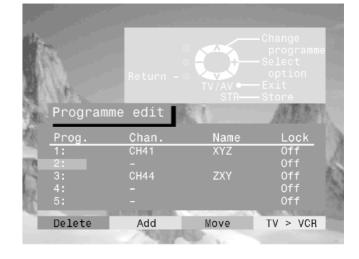
This blank programme can then be tuned, named or locked.

Press STR to store

If you have finished in the Programme edit menu, press the TV/AV button to exit.

_	
τv	/ ^ \ /
1 V/	AV

STR



To move a programme to another position

Choose the programme position to be moved



Press the Yellow button on remote control.



Choose new position.

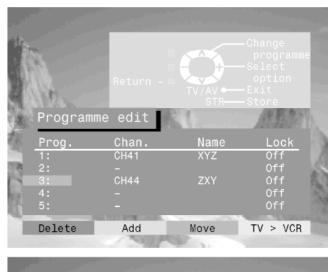


Press the Yellow button again to confirm.

 \bigcirc

If you have finished in the Programme edit menu, press the TV/AV button to exit.





1.1				
		Return	TV/AV STR	- Change programme - Select option - Exit - Store
	Programme	edit		AMERICAN.
411			-	
28	Prog.	Chan.	Name	Lock
55	Prog. 1:	Chan. CH41	Name XYZ	Off
22				Off Off
120 15	1:			Off Off Off
272	1: 2:			Off Off
2012 B	1: 2: 3:			Off Off Off

TUNING MENU - PROGRAMME EDIT

To tune a programme position

Choose the programme position.

Move the channel column

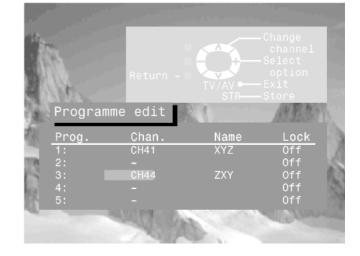
Increase or decrease channel number or use the 'C' key for Direct Channel Access (see page 9).

STR

TV/AV

Press STR to store.

If you have finished in the Programme edit menu, press the TV/AV button to exit.



To rename a programme position

Choose the programme position

Move the Name column

Choose the new character









TV/AV

If you have finished in the Programme edit menu, press the TV/AV button to exit.

Move to the next character position

Continue until renaming is done.

Press STR to store

		Return -	Se V/AV Ex	ange haracter lect ption it ore
	Programme	edit		100120
2	Prog.	Chan.	Name	Lock
3	1:	CH41	XYZ	Off
	2:			Off
8	3:	CH44		Off
5	4:			Off
	5:			Off
	ABCDEF		M KA	116.00
	N O P Q R S + 0 1		Z 8 9	(B) Carlos and
	+ UI	234567	0 9	

STR

TV/AV

TV/AV

To lock a programme position to prevent access

Choose the programme position.

Move to the lock column.

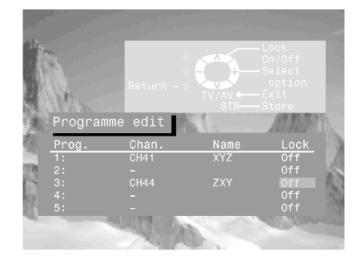
Choose between lock On or lock Off

Press STR to store.

If you have finished in the Programme edit menu, press the TV/AV button to exit.

Note:

When a programme position is locked, Direct Channel Access using the 'C' and numeric keys on the remote control is not available.



To copy programme information to a compatible VCR connected to AV2

Move to the Prog. Column.

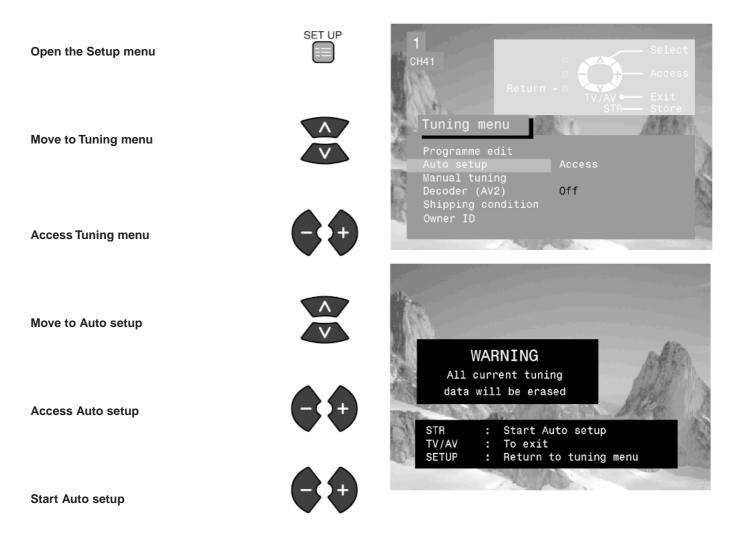
Press the Blue button on the remote control.

Programme data will now be sent to the VCR. This might take a few seconds, depending on the number of stations stored.

If you have finished in the Programme edit menu, press the TV/AV button to exit.



The Auto setup menu will allow you to automatically retune the TV to your local stations. It is useful if you move to a different region.



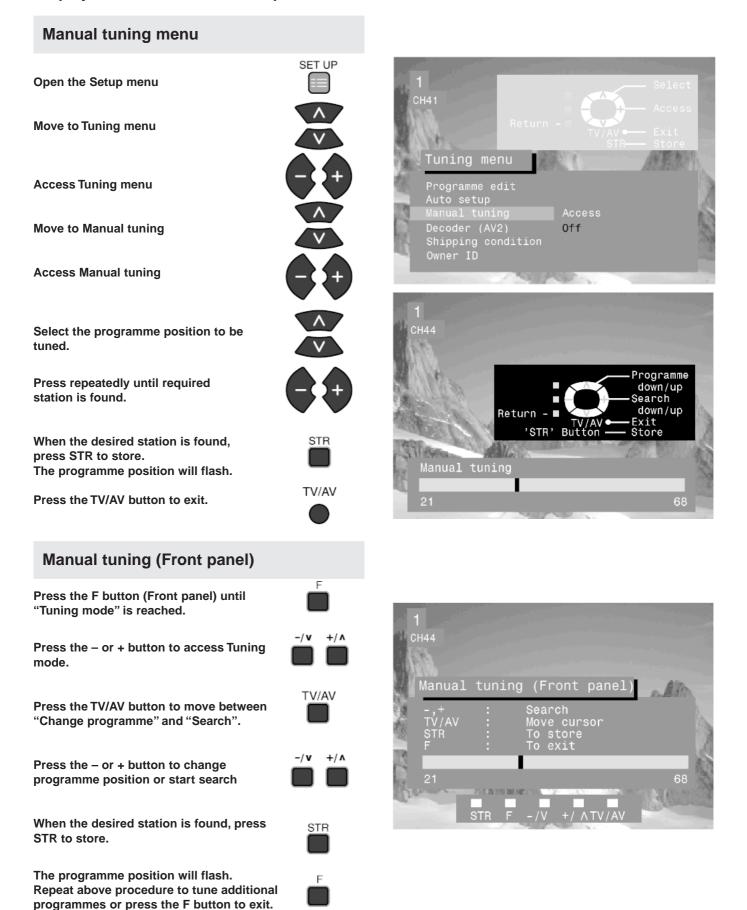
The TV will search for, locate and sort into order your local stations. If a compatible VCR is connected via the AV2 socket, programme data will be sent to the VCR via Q-Link (see page 27).

Once this operation is completed the TV will display programme position 1.



TUNING MENU - MANUAL TUNING

Manual tuning of the programme positions is available either from the On Screen Display menu or from the front panel controls.



23

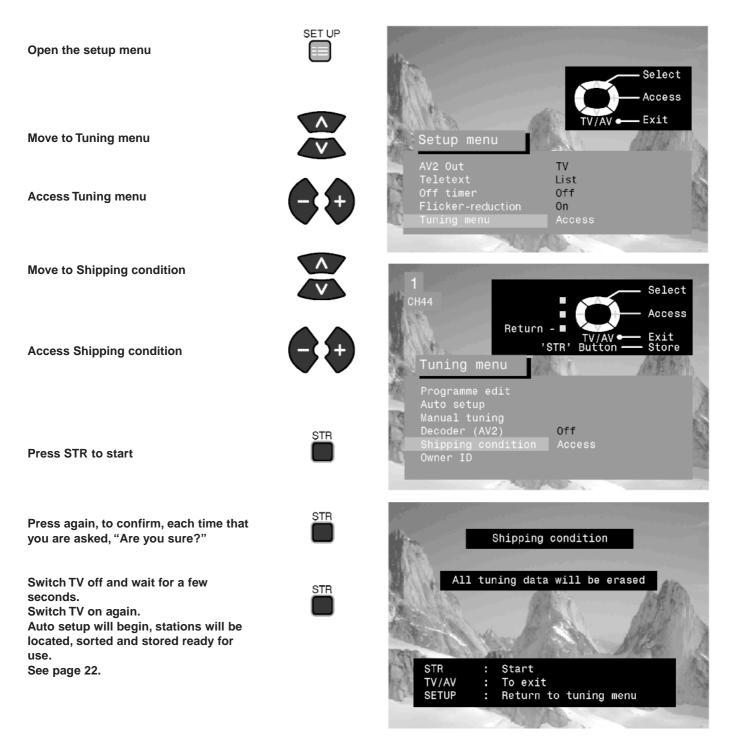
TUNING MENU - SHIPPING CONDITION

Shipping condition allows you to reset the TV to its original condition, i.e. no channels tuned in

This is useful, for example, if you move to a different area when you will probably want the TV to tune itself to your new local stations.

This can be done either through the Shipping condition menu or through the Auto setup menu.

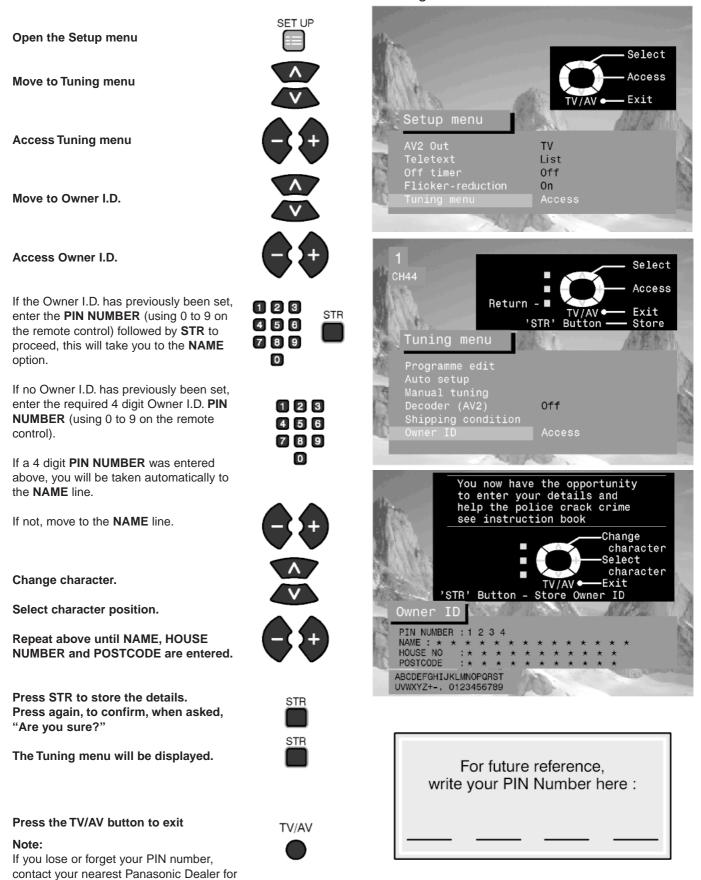
The **Shipping condition** menu will reset all data, clearing all tuning information and resetting all control levels back to factory settings. You may need to adjust your VCR or programme position "0" VCR after operating the **Shipping condition** menu - refer to page 31.



TUNING MENU - OWNER I.D.

Owner I.D. allows you to enter a security code and address information so that in the unfortunate event of theft it will help the Police to determine the owner.

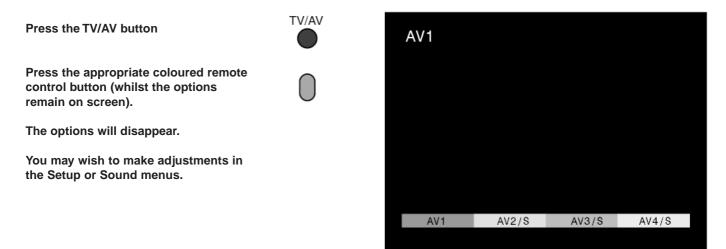
If the Owner I.D. information was not entered after Auto setup or it is necessary to alter some of the I.D. information it can be re-accessed via the Tuning menu.

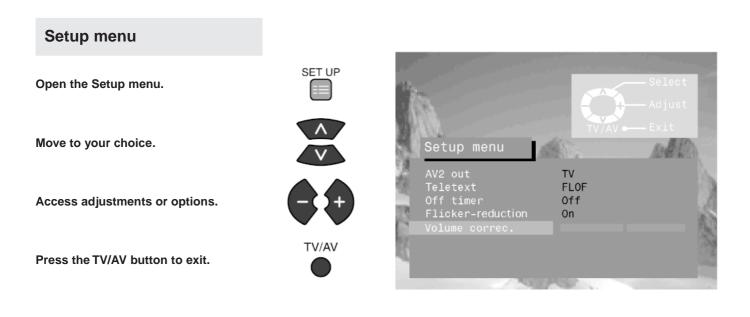


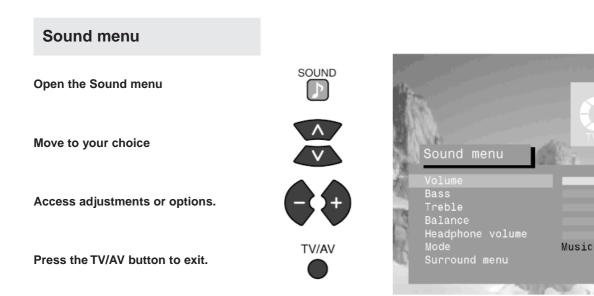
advice.

AV SELECT AND SETUP

The AV Select menu will allow you to choose which AV source to view.







Q-Link allows the television to communicate with your VCR.

The VCR must be connected with a SCART lead (Fully wired) attached between the AV2 socket of the television and the appropriate socket on your VCR. See the VCR handbook for further information. Q-Link, NEXTVIEWLINK or similar technology allows the television to instruct a **compatible VCR** to record the programme that is currently being displayed on screen, regardless of the programme position set on the VCR, thus simplifying the process of recording programmes.

To record the programme you are currently watching

Press the DIRECT TV REC button on the remote control.

DIRECT TV REC

If the VCR is off, it will automatically switch on when you press the DIRECT TV REC button. A message, sent from the VCR, will appear on screen showing what is being recorded, or if it is not possible to record;

VCR recording preset prog

VCR recording own tuner

VCR is recording the programme signal from its own tuner. If you wish you can switch off the TV and leave the VCR recording in the normal way.

VCR recording TV source

VCR is recording the programme signal from the television. You must not change programme position or switch off the TV: if you do, the VCR will automatically stop recording and switch off.

No recording TAPE IS PROTECTED

The write protection tab on the back of the cassette has been removed.

Examples of other messages that might be displayed are:

No recording NO TAPE	
No recording VCR IS PLAYING	
VCR Recording VCR external	

No recording VCR ALREADY RECORDING
No recording TAPE MAY BE DAMAGED

No recording NO SOURCE AVAILABLE

To share tuning information

To ensure correct recordings are made, the television and VCR should share tuning information - see page 22.

• Whenever the Auto setup (ATP) function is used, tuning data will be downloaded to the VCR.

Auto Power Functions

With Panasonic Q-Link VCRs these additional features available:

- If you insert a tape in your VCR and press the Play button, the television will automatically switch on and select the AV2 input so you can view the tape.
- If you switch off the television whilst the VCR is in Stop, Fast Forward or Rewind modes, the VCR will switch off automatically.

Important Note:

Not all VCRs support this type of data communication system. Some may support certain features, but not others. See the VCR handbook for further information.

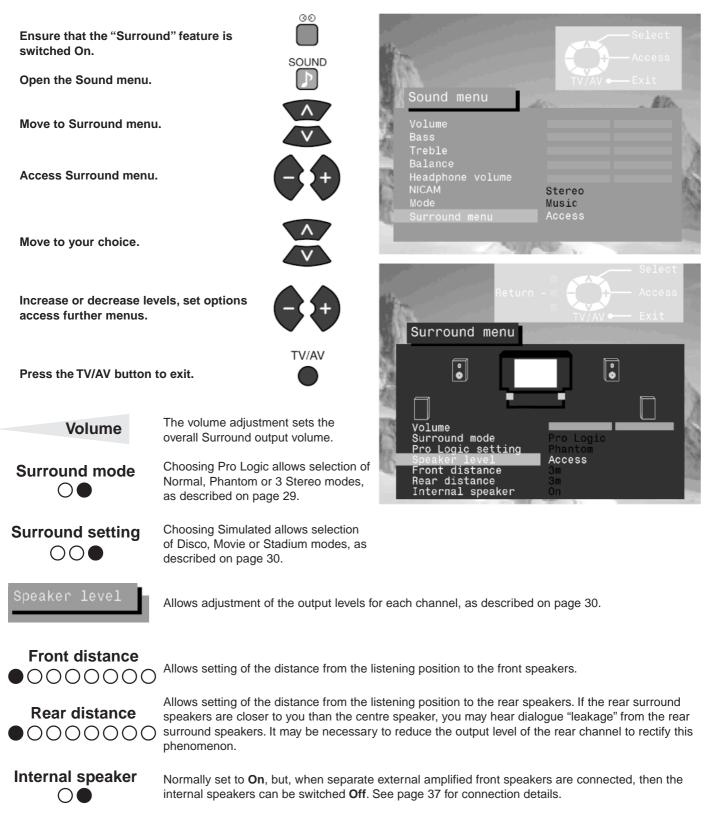
If Q-Link is inoperative, first confirm that your SCART lead is a full function type. Ask your dealer for further details.

SURROUND MENU

Normally stereo reproduction uses left and right speakers, but **Dolby Pro Logic Surround** also uses a centre channel and a rear channel. The centre channel sharpens sound perspective and dialogue clarity whilst the rear channel is used to immerse the viewer in ambience and special effects.

To use **Dolby Pro Logic Surround** when receiving television programmes that have been encoded with **Dolby Surround** information, you must be able to receive Stereo transmissions. If Stereo transmissions are not transmitted in your area then the **Dolby Surround** information will not be present and Pro Logic decoding will produce a centre channel only output (unless you are playing back from a stereo VCR, Digital Versatile Disc etc.).

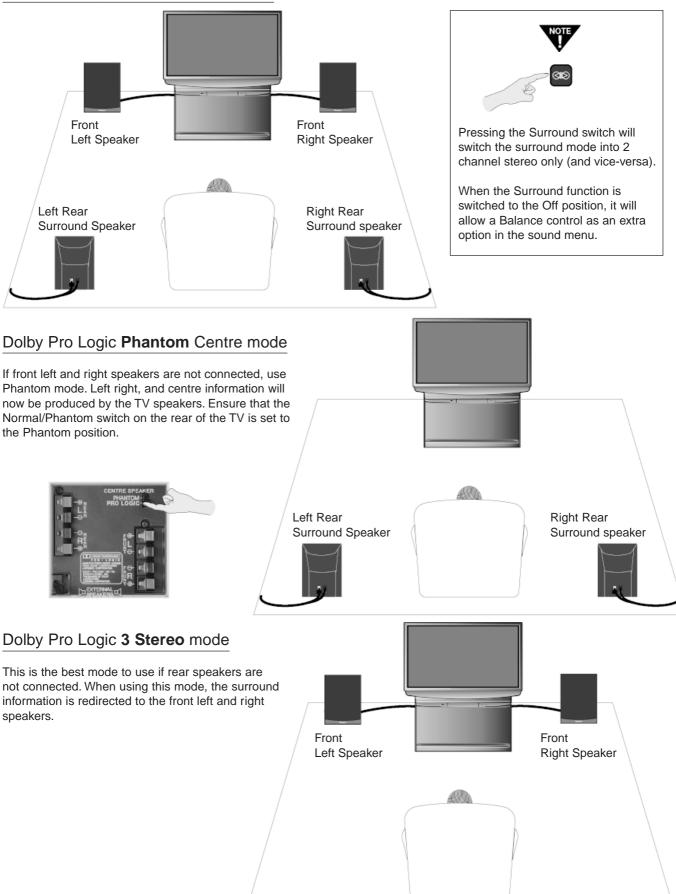
Dolby Pro Logic Surround operates best with videos, laser discs and TV programmes that bear the **Dolby Surround** logo, but can also be used to good effect with stereo sources not encoded in Dolby Surround and mono sources, affording compatibility with any source.



PRO LOGIC MODE

Choosing Surround Pro Logic mode allows three possible modes of operation: Normal, Phantom or 3 Stereo.

Dolby Pro Logic Normal Centre mode

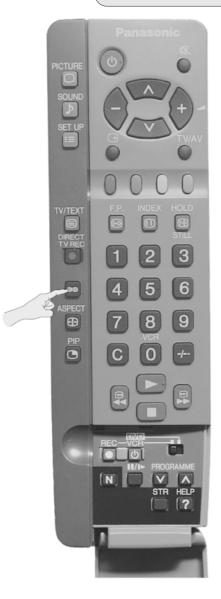


SIMULATED MODE

Simulated surround modes allow various types of surround effects to be produced by mimicking both the direct sounds, as heard by the audience, and the sound reflected back from the surrounding walls e.g. ceiling and floor space in a space such as a Disco. there are three different effects to choose from, each reflecting a different atmosphere.

Setting	Effect	Appropriate sources
Disco	A room so full of music that it seems to engulf the listener.	Disco, Dance or Jazz music
Movie	Playback of software (films) not encoded with Dolby Surround.	All movies or music software recorded without Dolby Surround.
Stadium	A large sports stadium packed for a live game	Any live sports occasion

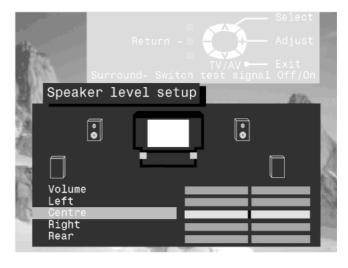
SPEAKER LEVEL SETUP



The speaker output levels from the different options, e.g. Left, Centre, Right and Rear should be adjusted, from your usual listening position, to obtain the best results. The level can be set using either the TV sound or the provided test-signal.

when using external stereo equipment, it is advisable to set the speaker levels to the midpoint position.

Speaker level setup shown in Pro Logic Normal mode, the adjustments available will vary according to the current mode chosen.



The adjustments available will vary according to the mode chosen.

VCR AND SATELLITE RECEIVER INSTALLATION

You new TV is supplied with programme position "0" set to receive an RF signal from your VCR, although a Scart connection is preferable if the VCR is so equipped.

However, if for some reason your VCR is tuned to a different RF channel then you will not receive any picture or sound from your VCR on programme position "0" of the TV. It will be necessary to either adjust the RF channel of your VCR (some VCR's allow adjustment of their RF channel via their remote control unit) or to adjust the tuning of the TV's programme position "0" or both until it receives the RF output channel of your VCR.

It is intended that this advice is used in conjunction with the instruction books for your additional equipment. Use the AV1 Scart terminal for a VCR.

Use the AV2S Scart terminal for an S-Video VCR.

Use the AV2S Scart terminal for a Q-Link, NEXTVIEWLINK or compatible VCR.

To tune your TV to the VCR

Switch on the VCR, inset and play a prerecorded tape with known content

Open the Setup menu

Move to Tuning menu



SET UP

Access Tuning menu

Move to Manual tuning

Access Manual tuning

Select programme position "0" VCR

A V

Start searching for the VCR playback of the known content tape

When the VCR playback is found, press STR to store

Press the TV/AV button to exit.

TV/AV

See below for installation of VCR and Satellite Receiver.

Notes:

- If picture patterning occurs on programme position "0" it may be necessary to adjust the RF output channel of the VCR, refer to the VCR instruction book.
- If a Satellite Receiver and a VCR are going to be used with RF cable connections it is important to avoid both units being set on the same channel.
- Refer to the Satellite Receiver and VCR instruction books for precise tuning information.







VCR/DVD OPERATION

The Remote Control is capable of operating some functions of selected Panasonic VCRs and DVD (Digital Versatile Disc) equipment. Some VCR and DVD equipment have different functions, so to ensure compatibility please refer to the equipment's instruction book or consult your dealer for details.

	Panasonic		
		DVD VCR	Standby Press to switch the VCR or DVD to standby mode. Press again to switch back on.
SET UP		ü	VCR/DVD switch Use this switch to select whether controls operate DVD equipment or your VCR.
TV/TEXT	F.P. INDEX HOLD		Play Press to playback the tape or DVD.
DIRECT TV REC	1 2 3 4 5 6		Stop Press to stop the tape or DVD.
ASPECT	7 8 9 C 0 +-		Skip/Fast Forward/Cue VCR: Press to fast forward the tape. In Play mode, press to view the picture rapidly forward (Cue). DVD: Press once to skip to the next track. In play mode press and hold to view the picture rapidly forward.
_			Skip/Rewind/Review VCR: Press to rewind the tape. In Play mode, press to view the picture rapidly in reverse (Review). DVD: Press once to skip to the previous track. In play mode press and hold to view the picture rapidly in reverse.
	N PROGRAMME N STR HELP		Pause/Still Press in playback mode, the picture will pause. Press again to restart play.
			Programme Up/Down Press to increase or decrease the VCR programme position by one.
	>SBA	REC	Record Press this button to start recording.

TELETEXT OPERATION

- Teletext features may vary depending on the Broadcasting Companies and is only available if the channel selected is transmitting Teletext.
- Pressing the Picture button whilst in Teletext operation will display the brightness function with a white bar. Press to alter the setting as required.
- Pressing the Setpu button whilst in Teletext operation will display special function options at the bottom of the screen.
- When in Teletext mode, the volume may still be altered to the desired listening level.

What is LIST mode?

In LIST mode, four differently coloured page numbers are situated at the bottom of the screen. Each of these numbers can be altered and stored in the TV's memory.

What is FASTEXT?

In FASTEXT mode, four differently coloured subjects are situated at the bottom of the display. To access more information about one of these subjects, press the appropriately coloured button. This facility enables fast access to information on the subjects shown.

> **TV/Teletext** mode TV/TEXT

Press the TV/TEXT button.

The screen will display the Teletext page. Press again when you wish to return to TV mode.



Page selection

Pages can be selected in two ways:

- a. Press the Up/Down buttons to increase or decrease the page number by one.
- b. By entering the page number, using 0 9 on the remote control.



Full/Top/Bottom

Press the SET UP button to display special functions, followed by the Green button to expand the TOP half. Press the Green button again to expand the BOTTOM half. Press again to return to normal (FULL) size.



Reveal

Press the SET UP button to display special functions, followed by the Red button to reveal hidden words e.g. quiz page answers. Press again to hide.



Red/Green/Yellow/Blue buttons

In FASTEXT mode these correspond to the differently coloured subjects. In LIST mode they correspond to the differently coloured page numbers.

STF 4 5 6 7 8 9 0

List Store

In LIST mode the four page numbers can be altered (programme positions 1 - 25 only). To do this, press one of the four coloured buttons and enter the new page number. Press and hold STR, the page numbers will change to white indicating that the page is stored.



Hold

To hold the Teletext page when viewing multi-page information. Press again to return to automatic page update.

TELETEXT OPERATION

It is not possible to change the programme position when in News flash, Update or Sub Coded Page Access operation.



Favourite Page (F.P.)

Stores a favourite page in memory for instant recall. To store such a page, the TV must be in LIST mode, and the programme position must be from 1 - 25. Press the **Blue** button, select the page number, then press and hold the **STR** button. The page number is now stored.

Press F.P. to recall this page.

Update Display

Press the **SET UP** button to display special functions, followed by the Yellow button to view the TV picture whilst searching for a Teletext page.

When found, the screen will display the page number at the top left.

Press the Yellow button to view the page.

Press TV/TEXT again to return to normal TV operation.



News Flash

When a new flash page has been selected, press **SET UP**, **Yellow**, to view the TV picture. When an update is received, the page number will be displayed on screen. Press the **Yellow** button to display the News Flash. Press **TV/TEXT** to return to normal TV operation.

Update

Press **SET UP**, **Yellow** to see the update of information on certain pages. When an update is received, the page number will be displayed at the top left of the screen. Press the **Yellow** button to view the page. Press **TV/TEXT** to return to normal TV operation.

Sub Coded Page Access

When Teletext information exceeds more than one page, it may take some time for the automatic changing of the sub pages to reach the sub page you require.

It is possible to enter your required sub page and continue watching the normal programme until the correct sub page is found.

Select the required page number using buttons 0 - 9.



Press the SET UP button to followed by the Blue button; T**** will be displayed at the top right of the screen.

1	2	3
4	5	6
7		9
	0	

INDEX

Enter desired sub page number before the T^{****} disappears. To select page 6 enter 0, 0, 0 and 6.

(If in LIST mode, a 'T' will appear in the current box at the bottom).

Press the Yellow button to view a normal TV programme. (Press SET UP, Yellow in LIST mode.)

When the page is available, press the Yellow button to view the page. To clear the page perform one of the following:

- Press SET UP.
- Select a new page number.
- Press TV/TEXT to return to normal TV operation.

Index

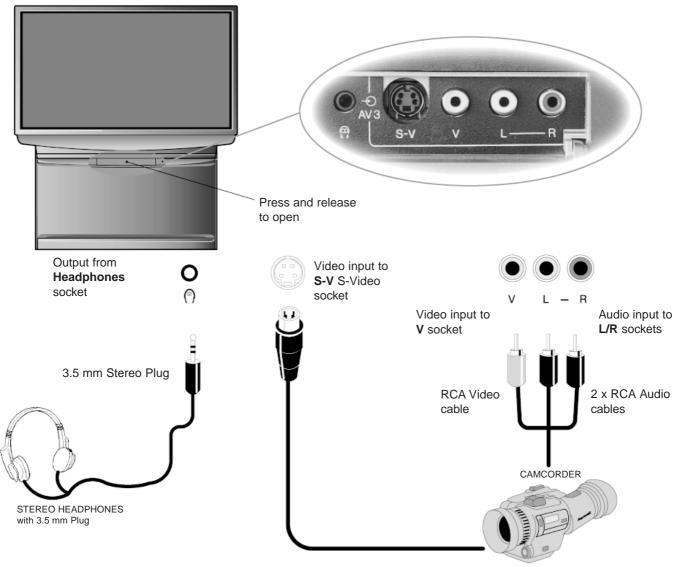
When in FASTEXT operation

Press INDEX to return to the main index page.

Depending on the way information is transmitted, this may have to be pressed more than once to return to the main index page.

AUDIO/VIDEO CONNECTIONS

Front AV3 4 pin S-Video, RCA Audio/Video and Headphone Sockets



Note:

Additional equipment and cables shown are not supplied with this TV set.

Scart and S-video socket information

AV1 and AV4 Scart sockets

Suitable inputs for **AV1** include RGB (Red/Green/Blue). **AV4** does not have RGB input capability.

AV2 Scart socket (S-Video, Q-Link)

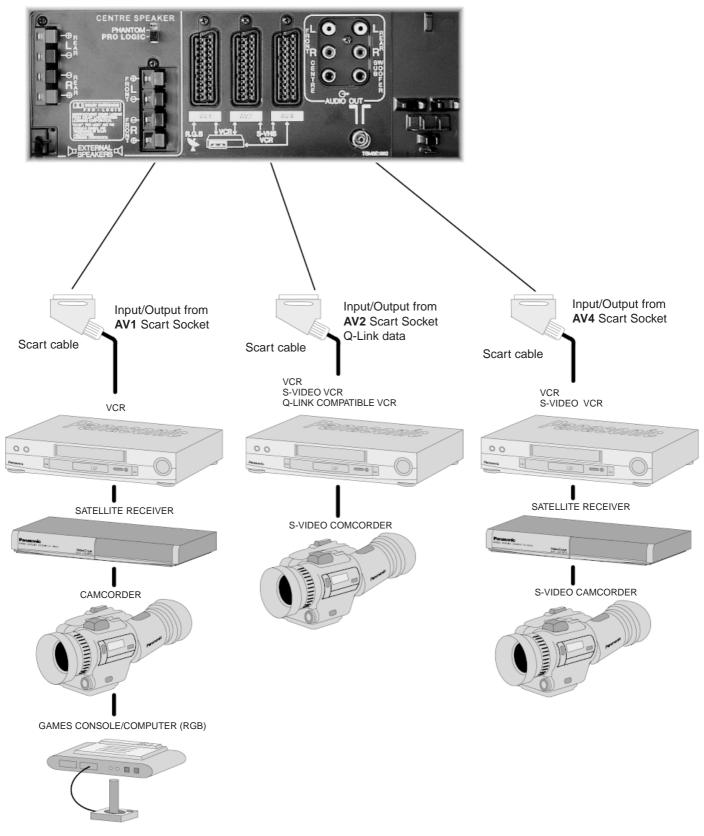


S-Video 4 pin socket

Chrominance in Chrominance earth

AUDIO/VIDEO CONNECTIONS

Rear AV1/AV2(S)/AV4(S) 21 Pin Scart and RCA Audio Out Terminals



Notes:

Additional equipment and cables shown are not supplied with this TV set. Do not connect a computer with TTL output (5V) to this set. The AV2 21 pin terminal can also be used as an output to Audio/Video equipment; see page 16 for details.

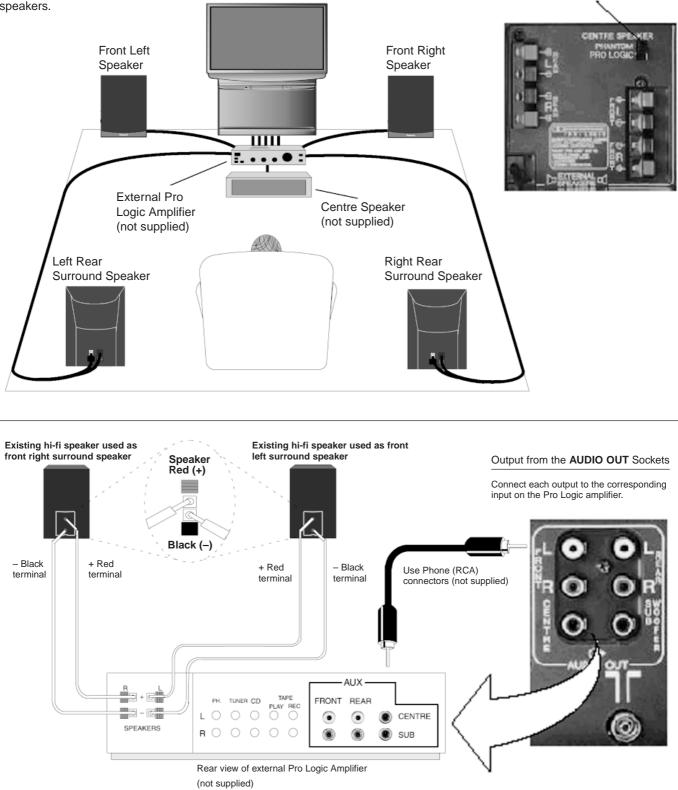
AUDIO/VIDEO CONNECTIONS

Audio out using external amplifiers and speakers

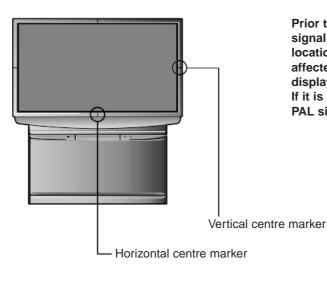
The **Audio Out** sockets on the rear of the TV allow you to create your own custom sound output system using additional external amplifiers and speakers. You may decide, for example, to use an external Pro Logic amplifier for the front speakers, rear surround speakers and centre speaker.

Centre Speaker switch:

When using external left and right front speakers, set this switch to the "Normal" position. Centre channel information will be reproduced by the TV's left and right speakers. If your installation does not include external left and right front speakers, set the switch to the "Phantom" position; left, right and centre speaker information will now be reproduced by the TV's left and right speakers.

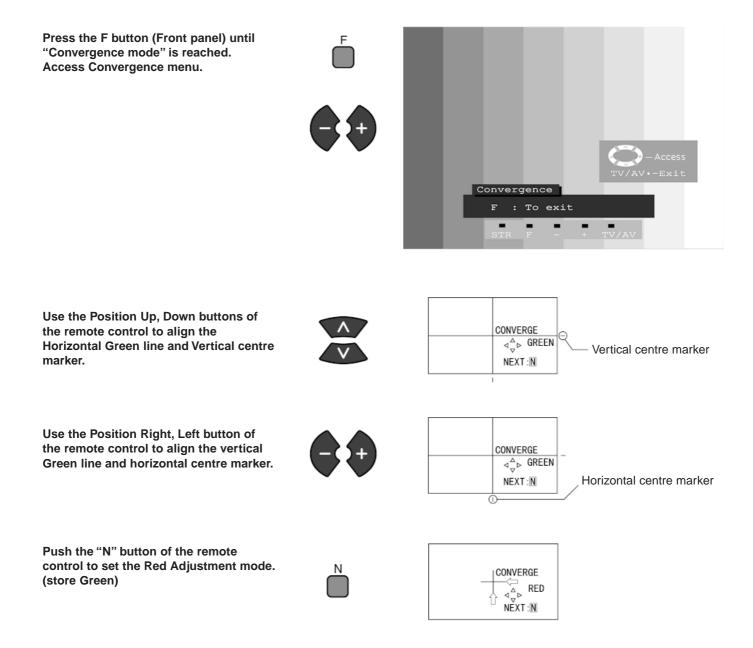


CONVERGENCE ADJUSTMENT



Prior to Adjustment, tune the broadcast signal or input a Video signal and operate the set for more than 60 minutes. If the set location or direction is changed or moved, the set may be affected by terrestrial magnetic fields, causing the colours displayed to be out of alignment.

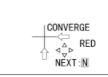
If it is needed, carry out the following procedure once with a PAL signal and once with an NTSC signal.



CONVERGENCE ADJUSTMENT

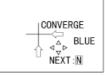
Use the Position Up, Down, Right and Left buttons of the remote control to align the Red and Green lines. (become Yellow line)





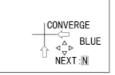
Push the "N" button of the remote control to set the Blue adjustment mode. (store Red)





Use the Position Up, Down, Right and Left buttons of the remote control to align the Blue and Yellow lines. (become White line)





Push the "N" button of the remote control to return to the original screen. (store Blue)



If you wish to view a video with a different colour system (PAL, SECAM, NTSC), repeat steps written above while the picture is being displayed.

TOUBLESHOOTING

Symptoms		
Picture	Sound	Checks
Snowy Picture	Noisy Sound	Aerial location, direction or connection
Onowy ricidie		
Multiple Images	Normal Sound	Aerial location, direction or connection
	Maine Samuel	Electrical appliances Cars/Motorcycles Fluorescent lights
Interference	Noisy Sound	
Normal Picture	No Sound	Volume level Sound mute switched on
Ro Picture	No Sound	TV set to AV mode Not plugged into A.C. outlet Not switched on Picture/Sound controls set at minimum levels Check if in standby mode
No Colour	Normal Sound	Colour controls set at minimum levels
Poor or Distorted Picture	Weak or No Sound	Retune Channel(s)
		Sound reception may be deteriorated. Switch MPX setting (Sound menu) to Off until reception improves.
Normal Picture	Weak or distorted sound	

Service

Before requesting service, please refer to the troubleshooting guide on previous page to determine the symptoms. To obtain service please contact your local Panasonic dealer quoting the model number and serial number (both are located at the rear of the TV).

TV Games/Home Computers

Extended use of TV games or home computers with any television set can cause a permanent 'shadow' on the screen. This type of irreversible picture tube damage, can be limited by observing the following points:

- Reduce the brightness and contrast levels to a minimum viewing level.
- Do not operate the television set for a continuous period of time while using TV games or home computers.
- This type of picture tube damage, is not an operating defect, • and as such is not covered by the Panasonic warranty.

Sleep Feature

If the set is not switched off when the TV station stops transmitting, it will automatically go to standby mode after 30 minutes. This function will not operate when the TV is in AV mode.

Last Position Memory

Certain functions have a last position memory, i.e. the setting at the time of switch - off will be the setting used when the receiver is switched on again:

Programme	Tint (M.NTSC/NTSC only)
Headphone volume	
AV position	Contrast
Volume	Sharpness
NICAM	Aspect (except 4:3)
Bass	Standby
Treble	Artificial Intelligence (AI) (Picture)
Balance	Flicker - R
Colour Balance	Colour
Status	Brightness
Teletext mode	P-NR
Decoder (AV2)	
Surround mode	Volume correction (in AV mode only)
Speaker distance	Speaker level setting

SPECIFICATIONS

		TX - 47PT1	
Power Source		220 - 240V 50Hz A.C.	
Power Consumption		239 W	
Standby Consumption		1, 1 W	
Screen Visible Diagonal		118,3 cm	
Audio Output Music Power		Front Left/Right 20W x 2, External Centre 15W x 2, surround 15W x 2 (RMS 10W x 2, 8W x 2, 8W x 2)	
Dimensions	H W D	1211 mm 1093 mm 560 mm	
Weight (kg)		62 Kg	
Receiving Systems/ Band name		PAL IUHF E21 - E69PAL 525/60Playback of NTSC tape from some PAL video recorder (VCR)M.NTSCPlayback from NTSC 4.43 MHz Videorecorders (VCR)NTSC (AV mode only)Playback from NTSC Videorecorders (VCR)	
Aerial - Rear		UHF	
Headphones - Front		3,5 mm., 8 Ω impedance	
AV - Rear		 AV1 21 pin terminal - Audio/Video in/out RGB in. AV2 - 21 pin terminal - Audio/Video in/out, S-Video in, Q-Link AV4 - 21 pin terminal - Audio/Video in/out, S-Video in 	
Dolby Surround Out - Rear		6 x Dolby Surround Out RCA External Speaker connections - 2 x Front, 2 x Rear	
AV - Front		AV3 - S-Video in, 1 x RCA Video in, 2 x RCA Audio in	

Specifications are subject to change without notice. Weight and dimensions shown are approximate. Dolby, Pro Logic and the DC are trademarks of Dolby Laboratories. Manufactured under license from Dolby Laboratories.

Customer's Record

The model number and serial number of this product can be found on its rear cover. You should note this serial number in the space provided below and retain this book plus your purchase receipt as a permanent record of your purchase to aid in identification in the event of theft or loss, and for Warranty Service purposes.

Model Number TX - 47PT1

Serial Number

Matsushita Electric Industrial Co., Ltd.

Central P.O. Box 288, Osaka 530 - 8692, Japan

Printed in Japan S1298-3079D