

Panasonic

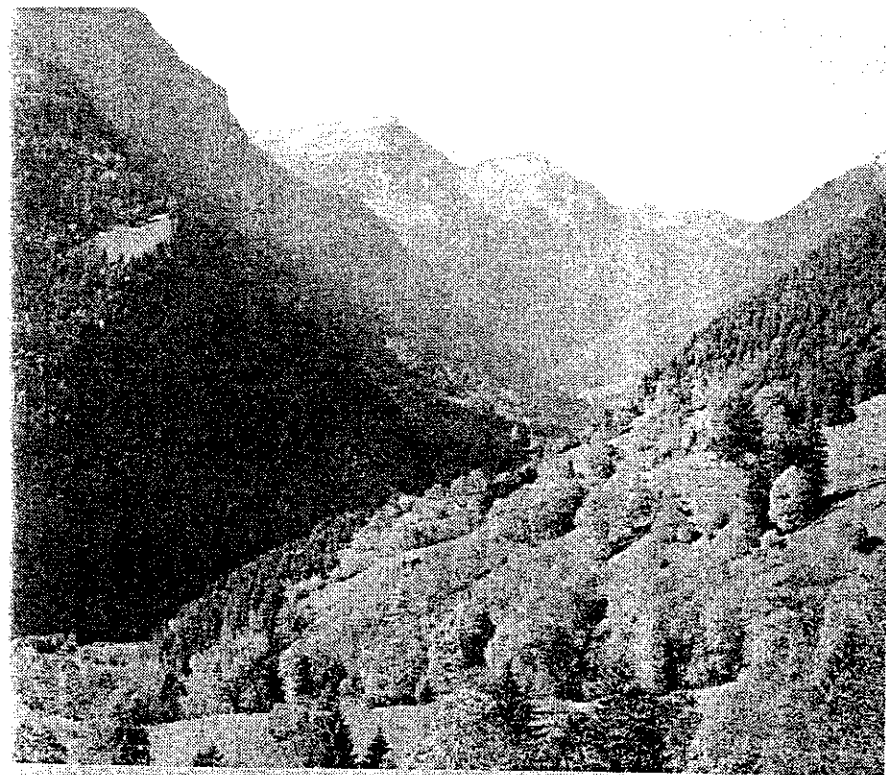
Projection Television

Operating Instructions

Model No.

TC-51P250 Series

TX-51P250 Series



[tau]

FLAT
DIGITAL

This is a combined Operating Instruction manual for all the above series of models.

Please read these instructions before operating your set and retain them for future reference.

Dear Panasonic Customer

Welcome to the Panasonic family of customers. We hope that you will have many years of enjoyment from your new colour television set.

To obtain maximum benefit from your set, please read these Instructions before making any adjustments, and retain them for future reference.

Retain your purchase receipt also, and note down the Model Number and Serial Number of your set in the space provided on the rear cover of these Instructions.

Visit our Panasonic Web Site <http://www.panasonic.co.jp/global/>

Important Information

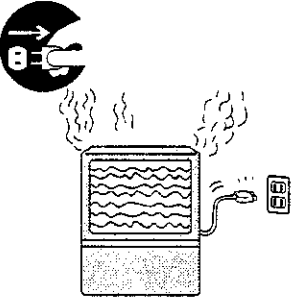
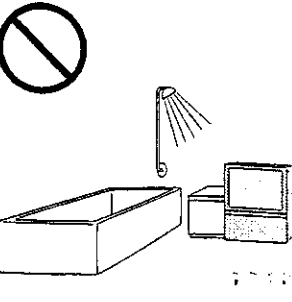
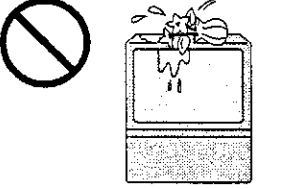
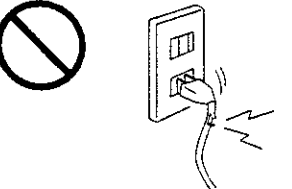
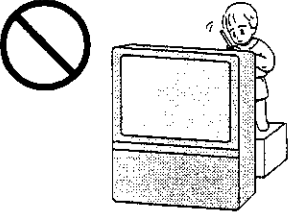
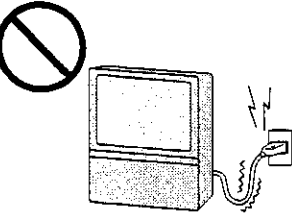
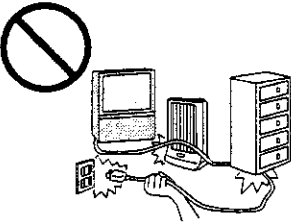
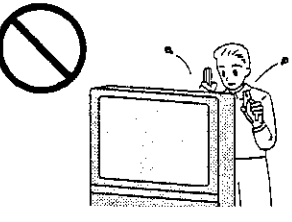
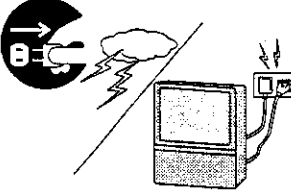
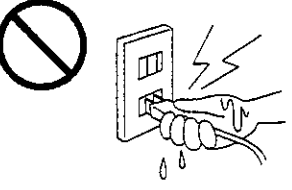
- (1) The long time (max. 2 hours) use of TV game on the set is not recommended since the signal from TV game may be the cause of damage on picture projection tubes on the set.
- (2) Do not allow a still picture to be displayed for an extended period, as this can cause a permanent after-image to remain on the Projection TV screen.
Examples of still pictures include logos, video games, computer images, teletext and images displayed in 16 : 9 mode.
If still picture cannot be avoided, reduce the brightness and contrast levels of the picture to minimize any damage that might occur.
- (3) In order to minimize any damage to the projection tubes, this set uses the PICTURE SHIFT function (Refer to page 35) to change (shift) the entire picture approximately 2 mm every 15 minutes.

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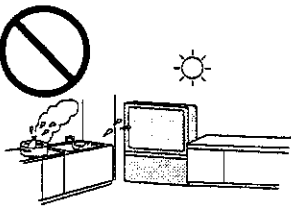
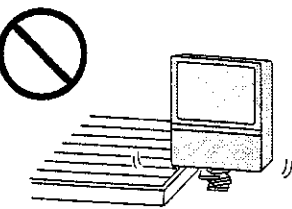
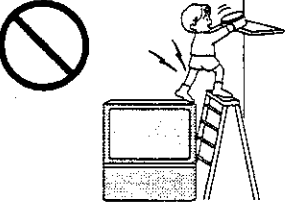
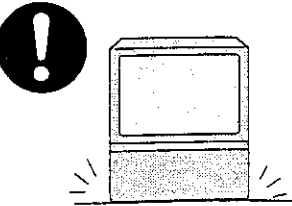
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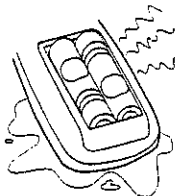

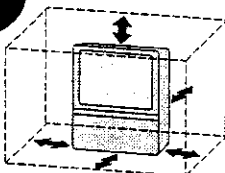

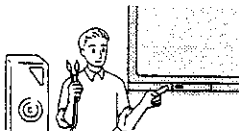

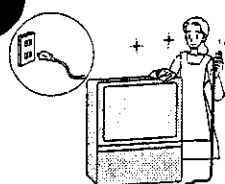

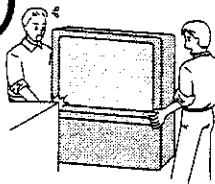

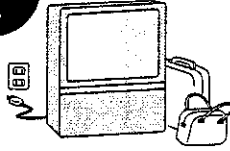

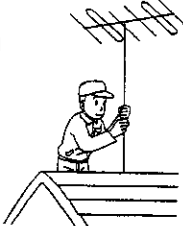
Warnings and Cautions

⚠ Warnings

	<p>Unplug the power cord in the event of any malfunction (screen goes blank, no sound, odd sounds, smoke or unusual odors coming from the unit). Unplug the power cord if foreign matter or water falls into the unit, or if the unit is dropped or the cabinet is damaged.</p>		<p>DO NOT use this unit near water. (Near a bath tub, etc.)</p>
	<p>DO NOT place any of the following on the unit: Flower vases, flower pots, cups, small metal objects, or cosmetics containers, chemicals or water.</p>		<p>DO NOT use if the power cord or power plug is damaged, or if the plug does not fit tightly into the socket.</p>
	<p>DO NOT insert foreign objects (metal or easily flammable objects).</p>		<p>DO NOT use at a voltage other than indicated</p>
	<p>TAKE CARE NOT to damage the power cord.</p>		<p>DO NOT remove the rear cover as live parts and High Voltage components are accessible when the rear cover is removed.</p>
	<p>DO NOT touch the aerial cable and this unit when there is lightning.</p>		<p>DO NOT touch the power plug if your hands are wet.</p>


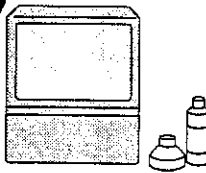
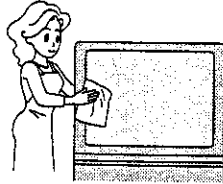

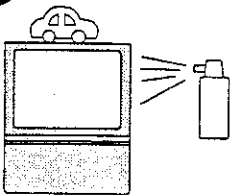
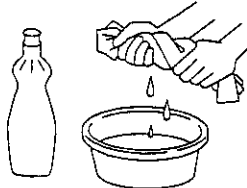
⚠ Cautions

	<p>DO NOT place in humid or dusty location, or areas exposed to smoke or steam. DO NOT place in direct sunlight and other sources of direct heat.</p>		<p>DO NOT place in an unstable location.</p>
	<p>DO NOT stand, or place heavy objects on the unit. Particular care should be taken by families with small children.</p>		<p>Place in a safe location. Fix the TV to a wall. (refer to page 8)</p>

 Cautions			
 	<p>When inserting batteries, ensure that the polarities (positive and negative) are correctly aligned. Insert as shown on remote control. If inserted incorrectly, battery fluid may leak, and fire, injury, or damage to surrounding components may result.</p>	 	<p>Do not mix new and old batteries. Use only the specified batteries. Failure to follow this precaution may result in leakage of battery fluid. Fire, injury, or damage to surrounding components may also result.</p>
 	<p>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 unit even when it is placed inside a cabinet or between shelves.</p>	 	<p>Turn the power "Off" before connecting other electrical equipment.</p>
 	<p>Before cleaning, unplug the power plug from the socket.</p>	 	<p>DO NOT joint the unit.</p>
 	<p>Unplug the power plug from the socket if you are not going to use the unit for an extended period.</p>	 	<p>Ask your sales outlet to install the aerial.</p>

Cleaning

————— To ensure continued excellent performance by this product, periodic cleaning is recommended.

 	<p>The unit contains many plastic parts. For this reason DO NOT use benzine, thinner or other chemicals to clean the unit.</p>		<p>Dust will accumulate on the picture screen. Please wipe with the supplied soft cloth from time to time. If you use a chemically treated cloth, please be careful to follow the instructions that come with the cloth.</p>
 	<p>DO NOT bring into contact with insecticide or other volatile substances. DO NOT allow the unit to come into contact for extended periods with rubber or vinyl products.</p>		<p>Remove dirt and soiling by wiping with a light cloth. Even if the unit is heavily soiled, do not apply cleaner directly to the unit. Soak a cloth in a solution of neutral cleanser thinned with water. Then wring out the cloth, wipe the unit clean, and finish by wiping with a dry cloth. Do not use any type of cleansers on the picture screen.</p>

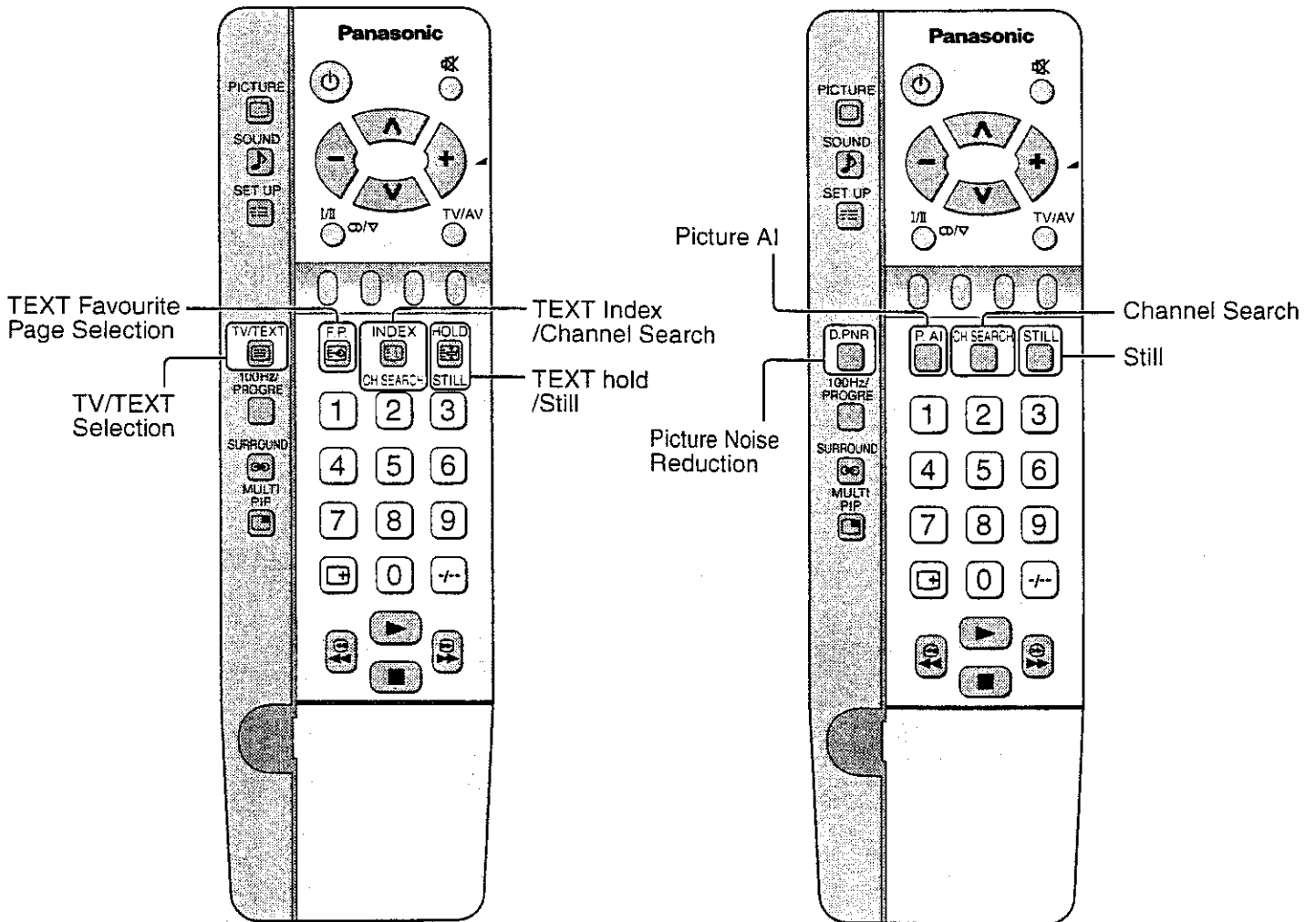
Before Operating This Set

How to Use This Manual

Check the Model Number of your TV set; the Model Number is shown on the rear cover name plate on the set. Use the table on the opposite page to confirm which features your particular Model is equipped with. This will help you to know which sections of the manual apply to your set.

TX-51P250
Series

TC-51P250
Series



Note:

- Mainly the remote control for TX-51P250 Series is used as an example in the Operating Instructions.

Quick Reference Guide for your TV Set

Please check the model number of your set.
This Manual applies to several Models and there are slight differences among them.

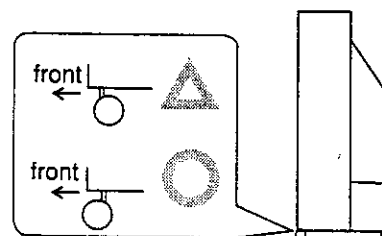
Please check the table below to see what your TV is equipped with before you begin using these Operating Instructions. Instructions are given for all functions, please disregard these which do not apply to your TV.

		Model Number	TC-51P250H	TX-51P250H	TX-51P250X
Destination	China				
	Hong Kong	*			
	Southeast Asia		*		
	Australia		*		
	NZ		*		
	Middle East				*
Multi Language	English	*	*	*	
	Chinese	*	*		
	Arabic			*	
Power Source	AC 110-240 V 50 / 60 Hz			*	
	AC 220-240 V 50 / 60 Hz	*	*		

* : Function available

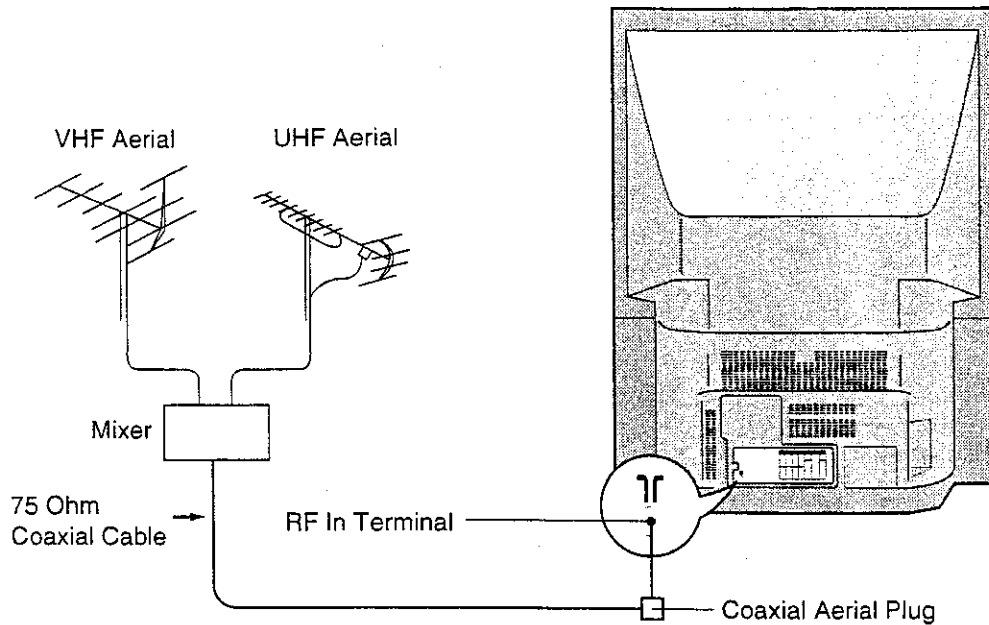
Securing the casters

To prevent the set from tipping forward, turn the two casters on the front of the TV so they face forward, as shown in the picture.



Before Operating This Set

Connecting the Aerial Cable to the RF In Terminal

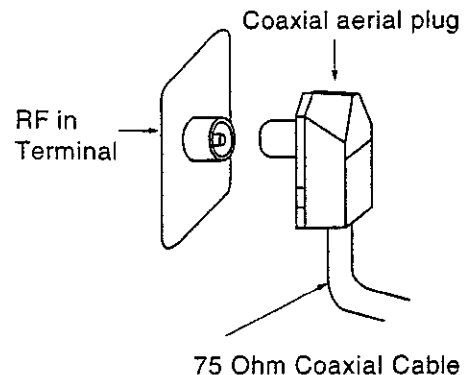


To obtain optimum quality picture and sound, an Aerial, the correct cable (75 Ohm coaxial) and the correct terminating plug are required.

If a communal Aerial system is used, you may require the correct connection cable and plug between the wall Aerial socket and your set.

Your local Television Service Centre or Dealer may be able to assist you in obtaining the correct Aerial system for your particular area and accessories required.

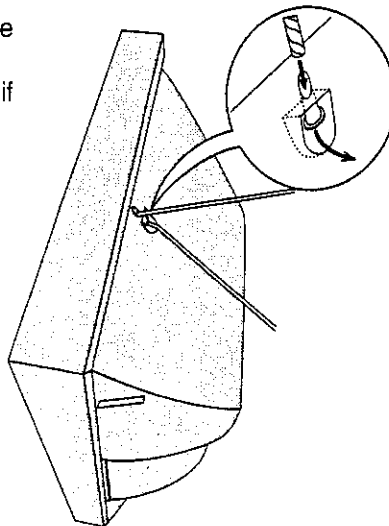
Any matters regarding Aerial installation, upgrading of existing systems or accessories required, and the costs incurred, are the responsibility of you, the Customer.



Safety Precaution

Please take safety precautions to prevent the unit from falling over.

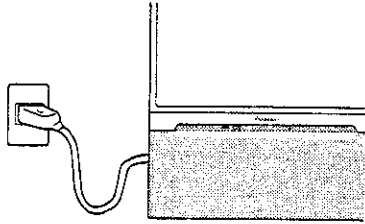
The unit may fall over during earthquakes, or if someone stands on or shakes the TV.



Fixing to a wall

Use a strong rope or a chain to fasten the TV firmly to a strong support such as a wall or a pillar.

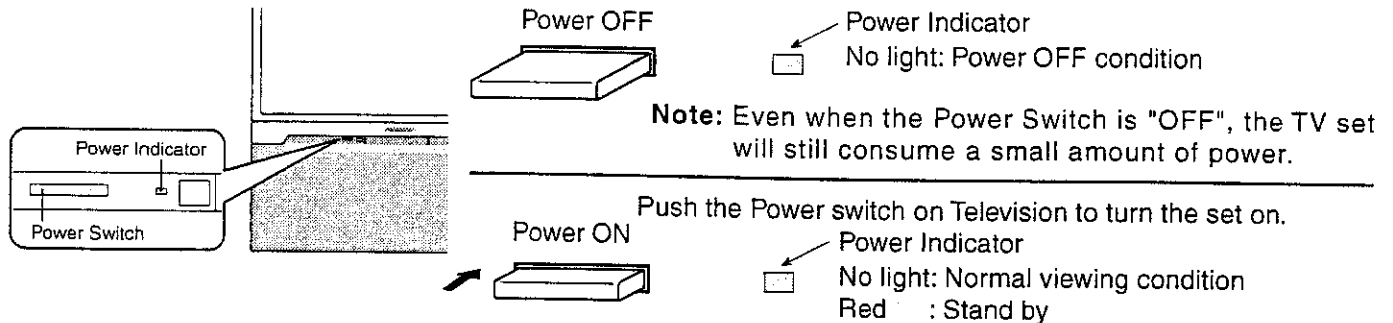
Connecting the Plug to the Wall Outlet



Note:

Main plug types vary between countries. The main plug shown at left may therefore not be the type fitted to your set.

How to Turn the Power On

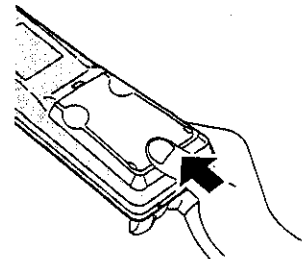
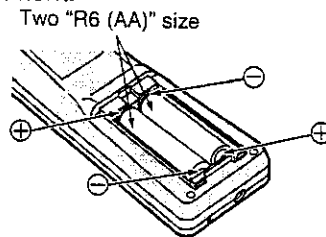
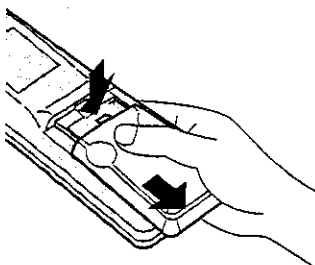


Notes:

- When in the Stand-by condition (Refer to page 15), it is also possible to turn the TV set on by pressing any of the "Direct Programme Number Selection buttons" (0-9) or "Programme Number Up or Down buttons" on the TV set or on the Remote Control.
- If the Wall Outlet is switched OFF or the Main Plug is unplugged, when the TV set is again turned ON (by either connecting the Main Plug to the Wall Outlet or switching the Wall Outlet ON), it will have returned to the original state.

Battery Installation

- 1 Open the cover.**
Apply slight downward pressure while pulling towards the bottom.
- 2 Batteries: Use two "R6 (AA)" size batteries.**
Insert the batteries ensuring the correct polarities. This is identifiable by the "+" and "-" symbols on the batteries and inside the battery compartment.
- 3 Replace the cover.**

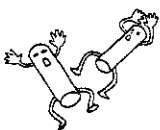


Do not use rechargeable (Ni-Cd) batteries. They are different in shape and performance and may fail to ensure correct operation.

Battery cautions

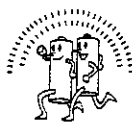
The incorrect use of batteries can cause electrolyte leakage which will corrode the Remote Control or cause the batteries to burst.

Old Batteries

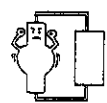


Replace both batteries at the same time.

New Batteries



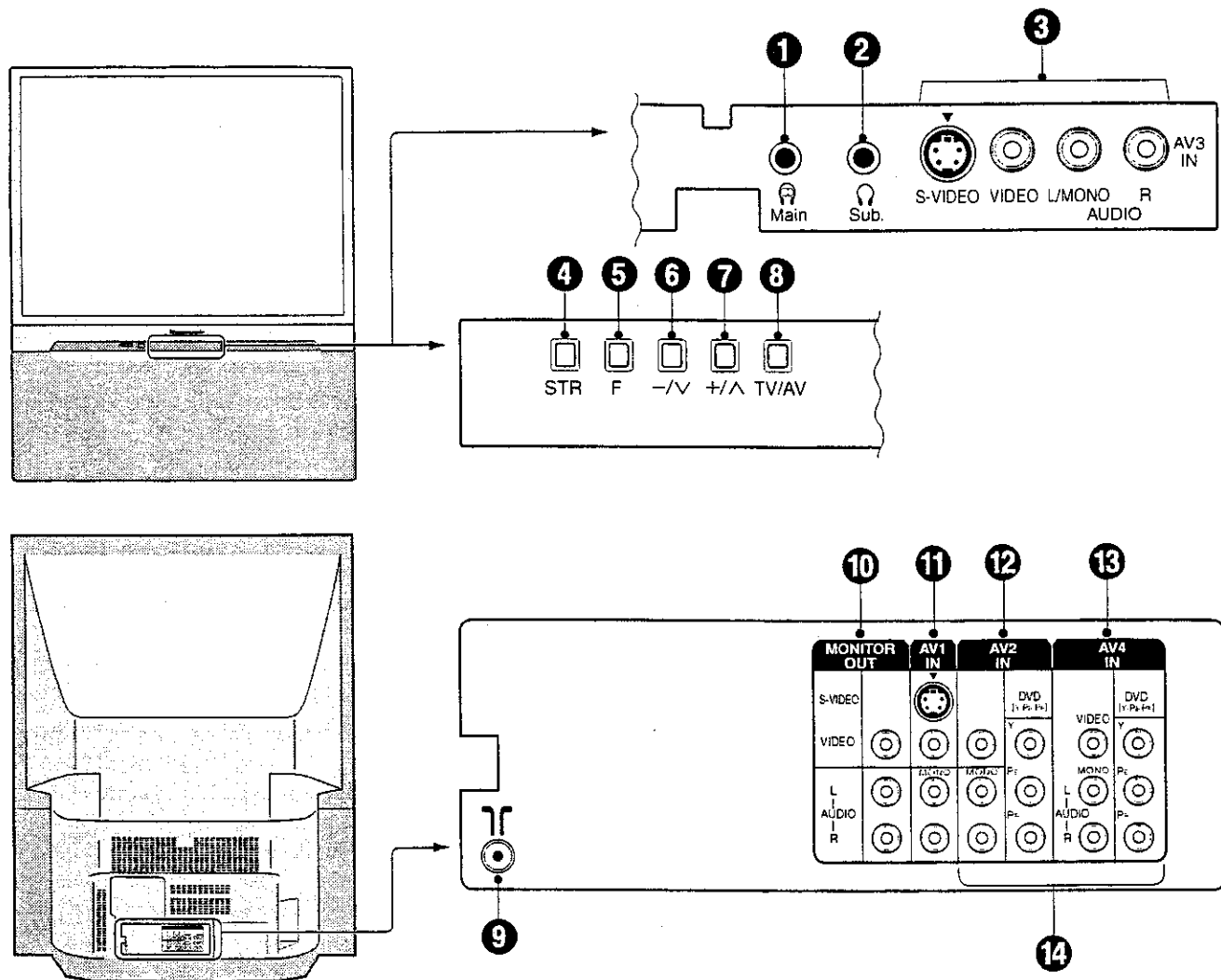
Don't mix different battery types (alkaline with carbon zinc, etc.)



Don't Recharge.

Location of Controls

Controls and Terminals on the TV

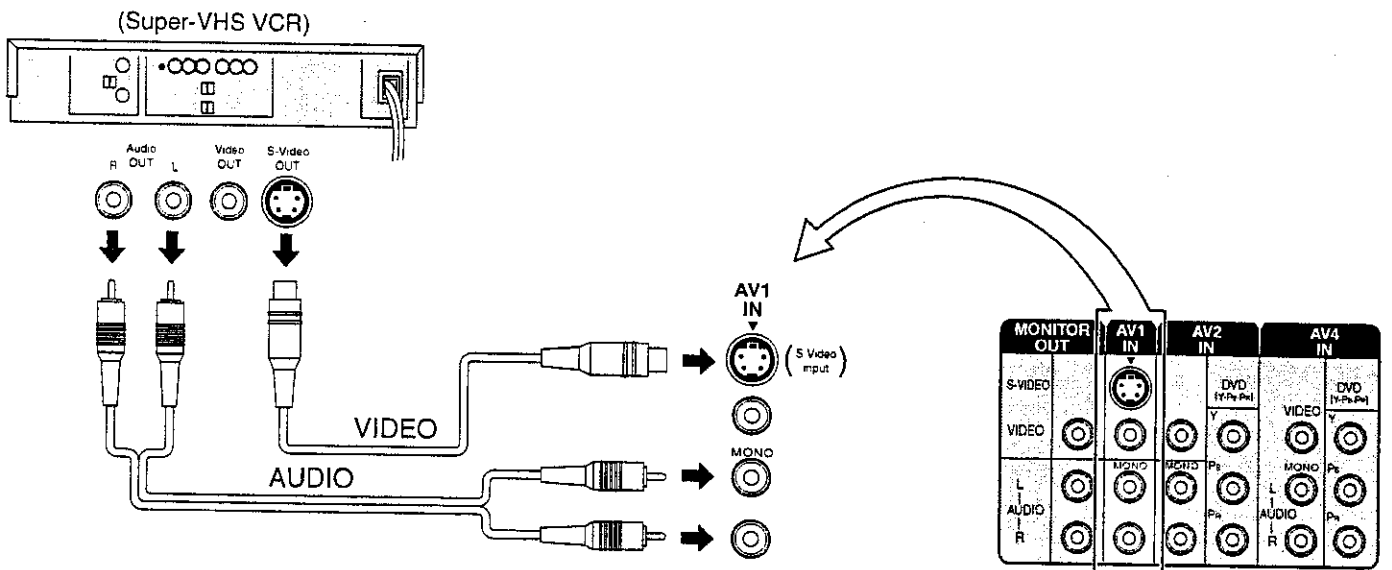
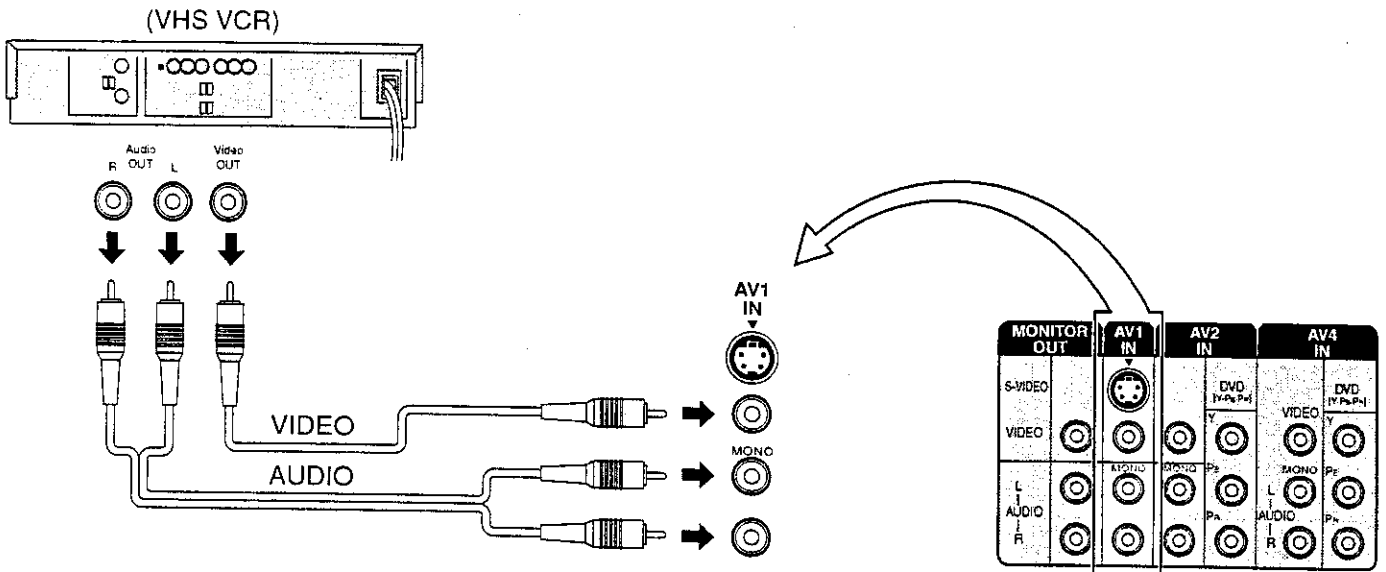


Item No.	Function	Refer to Page	Item No.	Function	Refer to Page
1	Main Headphones Jack	13	8	TV/AV Selection	14
2	Sub Headphones Jack	13	9	Aerial Terminal (RF In Terminal)	8
3	AV3 Input Terminals	11	10	Monitor Output Terminals	12
4	STR	14	11	AV1 Input Terminals	11
5	Function	14	12	AV2 Input Terminals	11
6	Volume Down (-) / Programme Number Down (V)	14	13	AV4 Input Terminals	11
7	Volume Up (+) / Programme Number Up (A)	14	14	DVD (Y, Pb, Pr) Input	12

Connections

How to connect the "AV1, 2, 3 or 4" Input Terminals

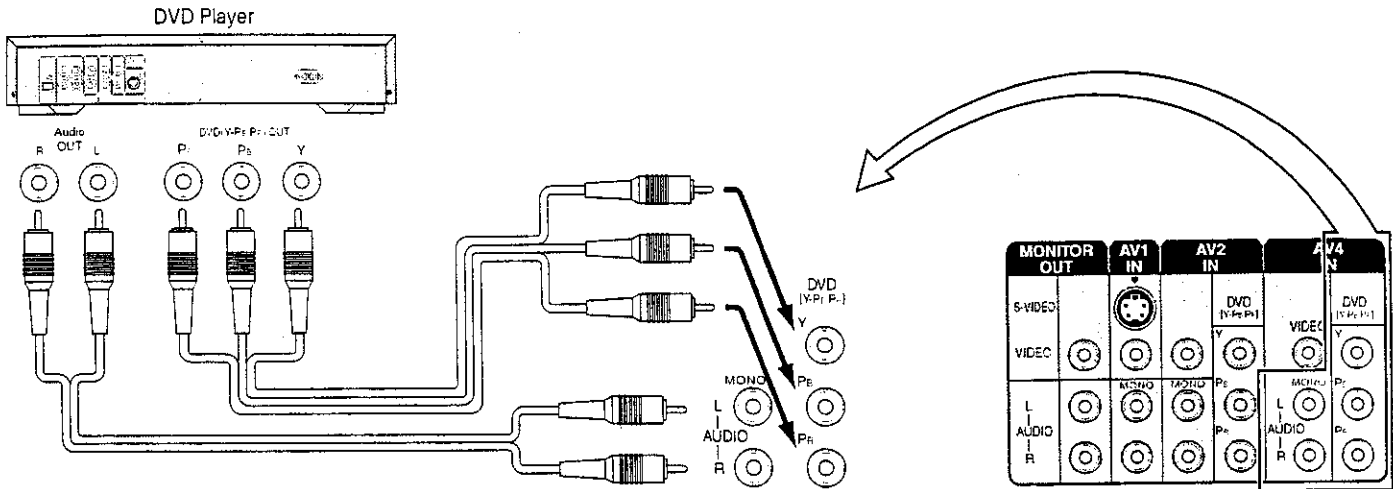
Connect VCRs and other peripheral equipment



Notes:

- When an S-Video cable is connected to the S-Video terminal, the Video input will be automatically switched off AV mode.
- When a Monaural VCR is used, connect the Monaural Audio cable to the Audio "L" (Left) terminal.
- Select the desired AV input position by pressing the TV/AV button. (Refer to page 15)
- Input 3 is located on the front of the unit.
- The AV2 and AV4 audio input terminals serve as the audio input terminal for both the Video input and the DVD input.

How to connect the DVD Input Terminals

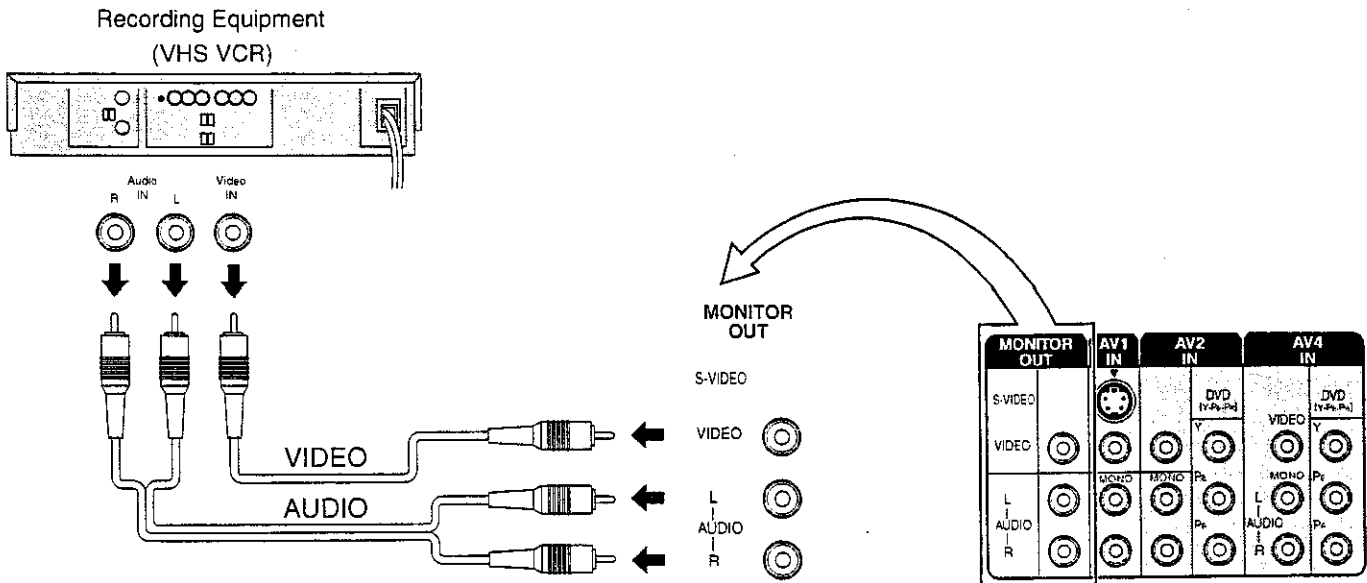


Notes:

- The AV4 audio signal is common for both AV4 and DVD input signal terminals.
- The DVD signal input terminal takes priority over the AV4 video signal input terminal.
- Similar connection are available at the COMPONENT VIDEO input 2 terminal.

How to connect the AV Monitor Output Terminals to other equipment

The "Monitor Out" Terminals output the same signals as main picture on the TV screen and sound from the speaker at that time, e.g. TV programmes or signals from AV1, AV2, AV3 or AV4 input.



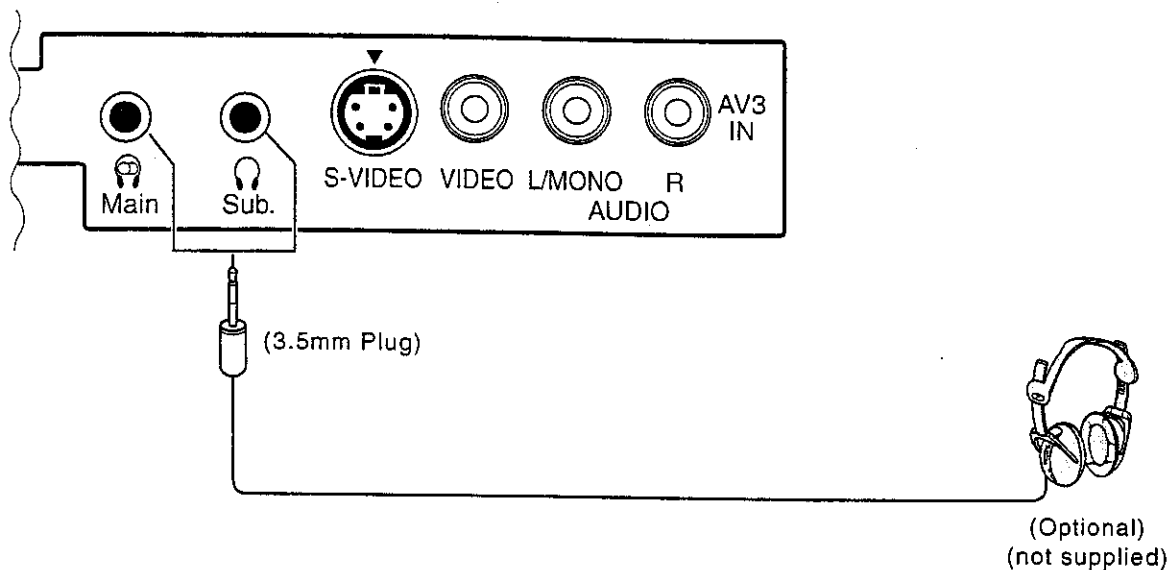
Notes:

- Never connect the same video recorder with both the VIDEO IN and MONITOR OUT terminals on this TV set, as this could cause incorrect operation.
- The monitor output emits the main picture normal video and audio signals.
- Teletext display on screen will not be output at the MONITOR OUT terminals.
- Even if the television is in picture-in-picture condition, MONITOR OUT terminals output the same signals as main picture on the screen and sound from speakers. Sub picture including strobe, still, channel search, etc. will not be output at the MONITOR OUT terminals.
- The DVD signal (Y, P₁, P₂) is not output at the MONITOR out terminals.

Connections

Connecting Headphones

Connect headphones as follows.



You can listen to sound from each of the headphones plugs as shown below.

Screen condition	Speaker Sound	Main Headphones	Sub Headphones	Monitor Output
Single picture/ Teletext	A	A (Stereo)	A (Mono)	A (Stereo)
Picture in Picture	A B	A (Stereo)	B (Mono)	A (Stereo)
Picture in Picture/ CHANGE	B A	B (Stereo)	A (Mono)	B (Stereo)

Main Headphones plug:

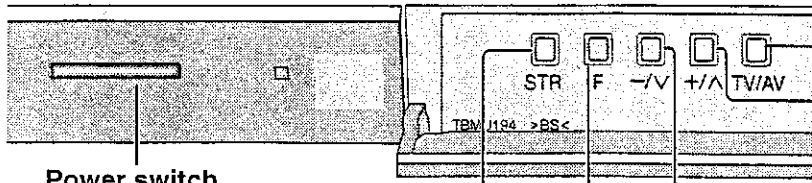
When a Main Headphones plug is inserted into the Headphones socket, all speakers will be automatically disconnected; only the Main Headphones will function.

Use Volume Up "+" or Down "-" button to control volume level.

Sub Headphones plug:

For the sub Headphones volume control, refer to page 32.

General Operation



Power switch

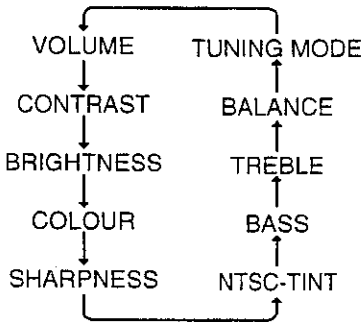
STR

Used to store tuning and other function settings. Also used to start the menu demonstration.

Function selection

Displays the on screen display functions, use repeatedly to select from the available functions.

The following adjustments can be accessed directly.



Notes:

- NTSC-TINT: Displayed when receiving NTSC signals.
- TUNING MODE : Not displayed during AV mode.

TV/AV Selection

Volume Up (+) /
Programme Number Up (Λ)

Volume Down (-) / Programme Number Down (V)

Picture Menu (see page 16, 30)

Sound Menu (see page 16, 32)

Set up Menu (see page 17, 34)

Stereo/Bilingual Sound Selection
(see page 41)

TEXT Favourite Page Selection
(see page 39)

TV/TEXT Selection (see page 37, 38)

100Hz/PROGRE (see page 31)

Surround (see page 32, 33)

Picture in Picture Selection
(see page 36)

Recall

Press to display the current system status, for example, Programme number, Channel number, Stereo mode, Picture menu, Sound menu, Scan mode, Sound system and colour system.

VCR/LD/DVD Rewind/Review

Normalization (see page 31, 33)

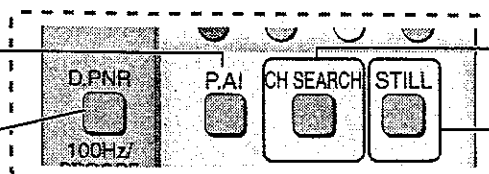
Store (see page 28, 29, 39)

Stores some settings in TUNING menus and TELE TEXT.

TC-51P250 Series

Picture AI (see page 31)

Picture Noise Reduction (see page 31)



Channel Search
(see page 37)

Still (see page 37)

General Operation

Power (Stand-by) (see page 9)

The TV set must first be plugged into the wall outlet and turned on at the power switch. Press this button to turn the TV set On from Standby mode, Press it again to turn the TV set OFF to Standby mode.

Note:

- It is also possible to turn the TV set on from STANDBY mode by pressing the "Direct Programme Number Selection" Buttons (0-9) and the "Programme Number Up or Down" Button, either on the set or on the Remote Control.

Sound Mute

Press to mute the sound completely the "Mute" symbol will appear. Press again to restore the previous sound level, and cancel the mute.

Programme Number Selection

Press to select the next higher or lower Programme number.

Volume Adjustment

Press to increase or decrease the sound volume level.



TV/AV Mode Selection

Press to select TV, AV1, AV2, AV3 and AV4 input signal modes sequentially.

Remote control :



Press to display AV1 - AV4 at the bottom of the screen. Each coloured button corresponds to each input signals. For example, pressing the Red button selects AV1.

Coloured buttons used for Multi Screen functions

(see page 36)

Teletext functions (see page 38)

AV selection (see page 15)

TEXT Index (see page 40)
/Channel Search (see page 37)

TEXT hold (see page 39)
/Still (see page 37)

Direct programme Number

• Direct Programme Number Selection (CH SELECT = DIRECT)

You can select the number directly by pressing the corresponding programme number buttons.

Programme Number 8.....

Programme Number 36.....

Programme Number 124...

• Direct Programme Number Selection (CH SELECT = POSITION)

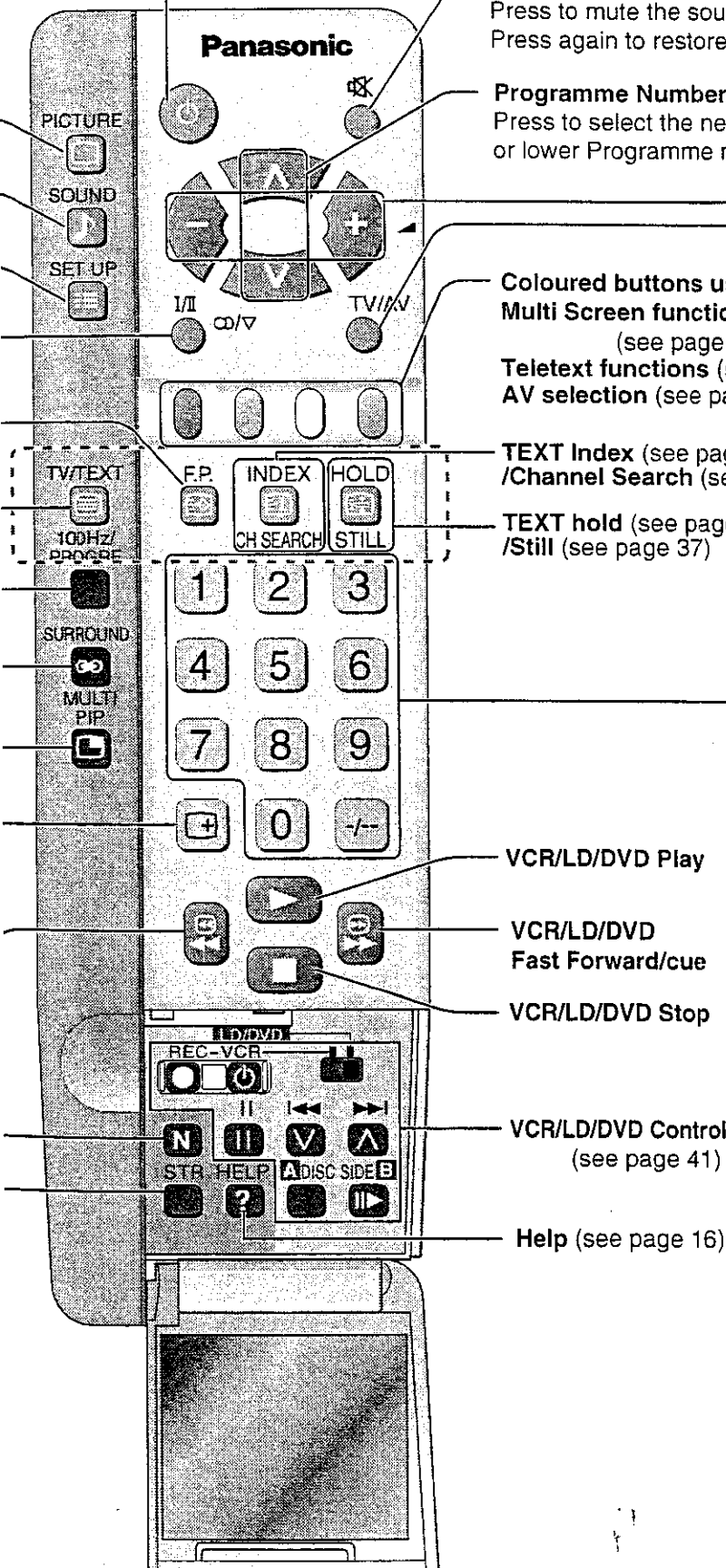
You can select the numbers directly by pressing "Number 0-9" buttons or by pressing "Two Digit" and "Number 0-9" buttons.

Programme Number 8

Programme Number 12....

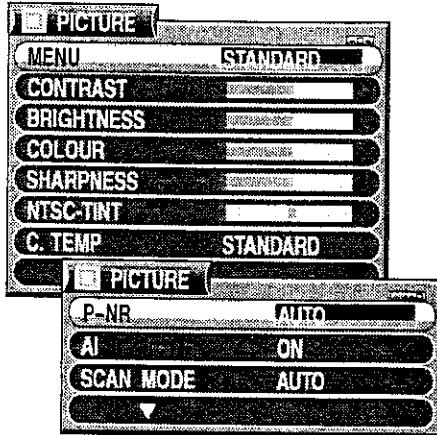
Note:

- When the Skip setting for Programme Number 100 through 125 is on, the channel selection time will be shortened, and thus you can not input three digits at a time.

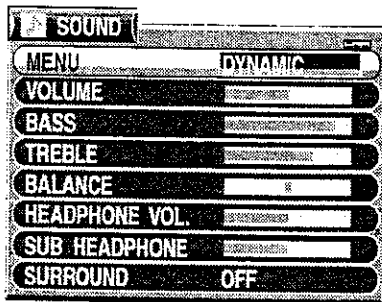


On-Screen menu Display from Remote Control

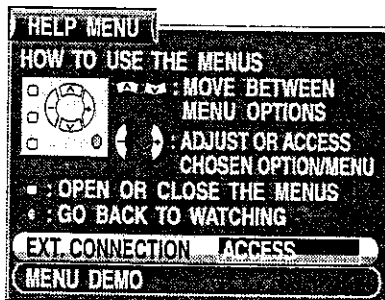
To PICTURE adjust menu
(see page 30)



To SOUND adjust menu
(see page 32)



To HELP MENU



The **HELP** button runs a demonstration of on screen display menus available. Press the **HELP** button and select one of the options.

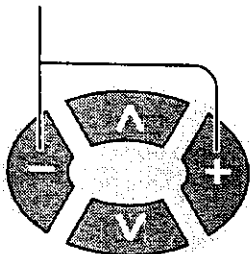


On-Screen menu Display from Remote Control

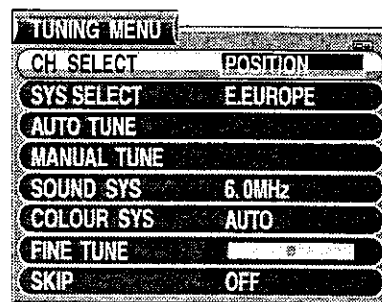
To SETUP MENU
(see page 34)



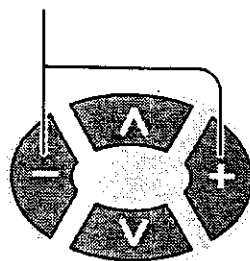
Press to access to TUNING MENU



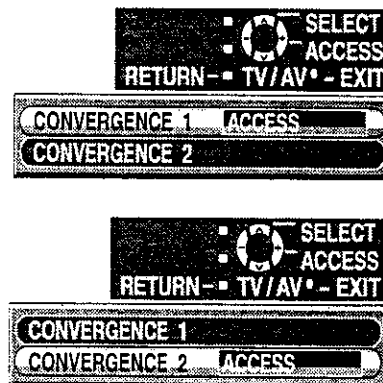
To TUNING MENU
(see page 21)



Press to access to CONVERGENCE

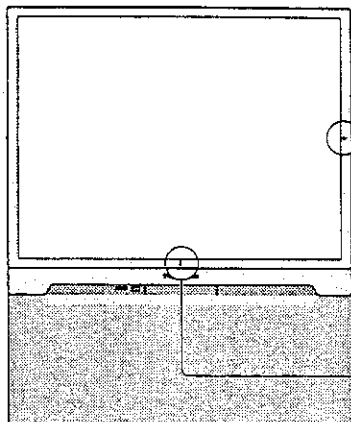


To CONVERGENCE
(see page 18)



Convergence Adjustment

Convergence Adjustment mode



Prior to adjustment, tune the broadcast signal to the video input signal and operate the set for more than 60 minutes. If the location or direction of the set is changed or moved, the display may be out of alignment.

If necessary, carry out the following procedures once with PAL signal and again with the NTSC signal.

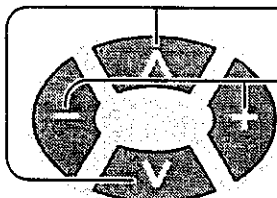
1

SET UP



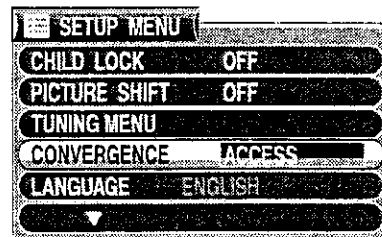
Press to display the Setup Menu.

2

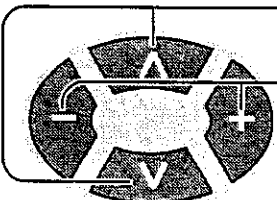


Press to select the "CONVERGENCE".

Press to access to the "CONVERGENCE" menu.

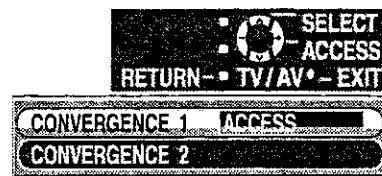


3



Press to select the "CONVERGENCE1" or the "CONVERGENCE2".

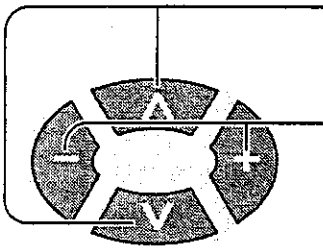
Press to access to the function.



Example: CONVERGENCE1 is selected.

Convergence1 Adjustment for RED, BLUE and GREEN

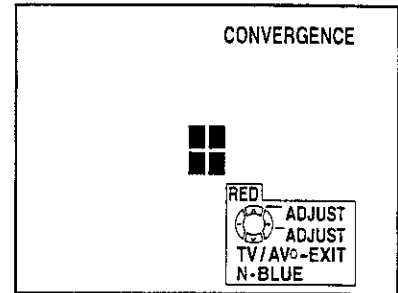
RED



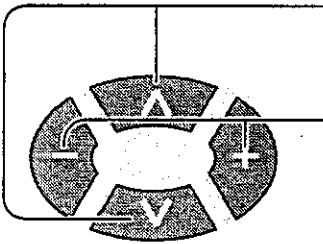
Press to align the horizontal red line with the horizontal blue line.
(Becomes a white line)

Press to align the vertical red line with the vertical blue line.
(Becomes a white line)

Press **(N)** button to adjust the blue mode.
(Stores RED)



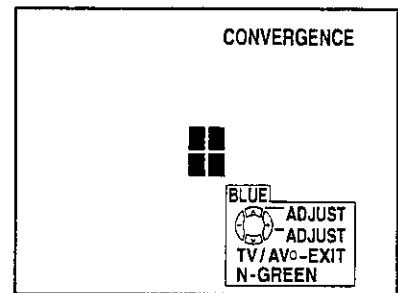
BLUE



Press to align the horizontal blue line with the horizontal yellow line.
(Becomes a white line)

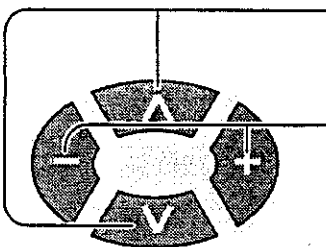
Press to align the vertical blue line with the vertical yellow line.
(Becomes a white line)

Press **(N)** button to adjust the green mode.
(Stores BLUE)



Only when cannot adjust with RED and BLUE, proceed to the following GREEN Adjustment.

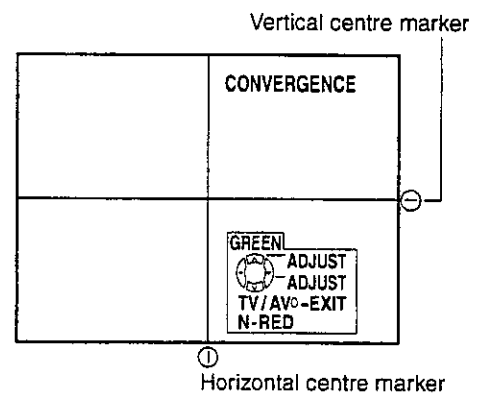
GREEN



Press to align the horizontal green line with the vertical centre maker.

Press to align the vertical green line with the horizontal centre maker.

Press **(N)** button to adjust the red mode.
(Stores GREEN)



TV/AV

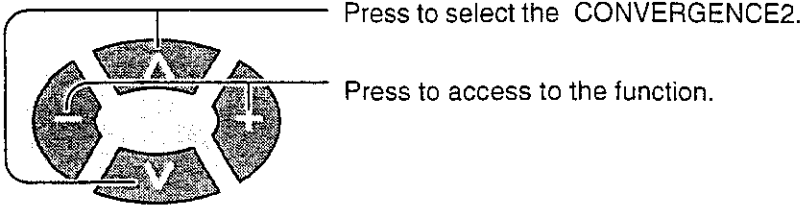


Press at any time to return to the normal viewing.

Convergence Adjustment

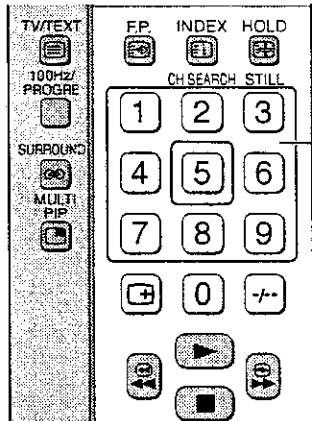
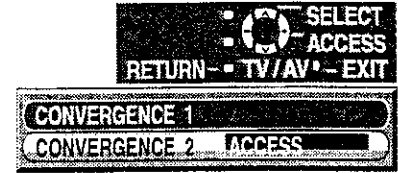
Convergence2 Adjustment for RED and BLUE

This function adjust the convergence of the side part of the screen.



Press to select the CONVERGENCE2.

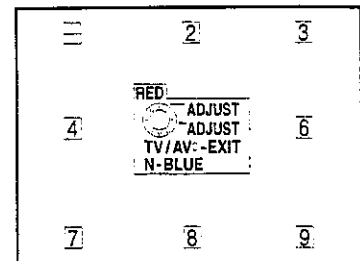
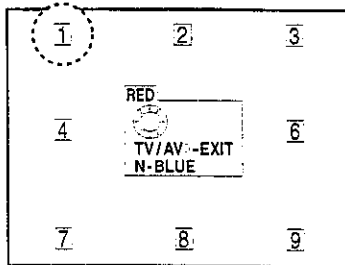
Press to access to the function.



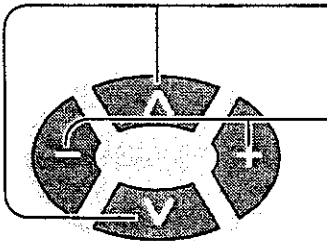
Remoto control

Press the Number button on the Remoe Control to select the position which you'd like to adjust.

(Example) Position **1** is selectd.



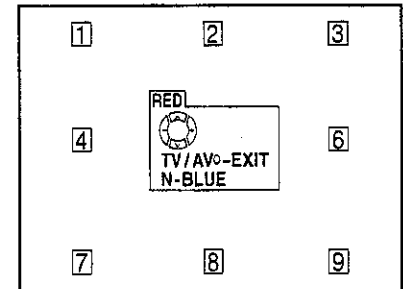
RED



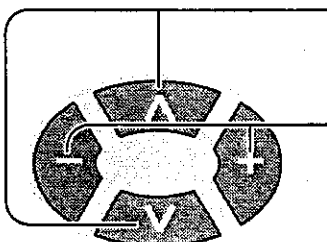
Press to align the horizontal red line with the horizontal blue line.
(Becomes a white line)

Press to align the vertical red line with the vertical blue line.
(Becomes a white line)

Press **N** button to adjust the blue mode.
(Stores RED)



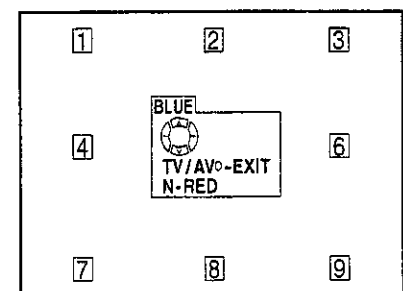
BLUE



Press to align the horizontal blue line with the horizontal yellow line.
(Becomes a white line)

Press to align the vertical blue line with the vertical yellow line.
(Becomes a white line)

Repeat above adjustment for each position.



TV/AV



Press to return to the normal viewing. (Stores BLUE)

Note:


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

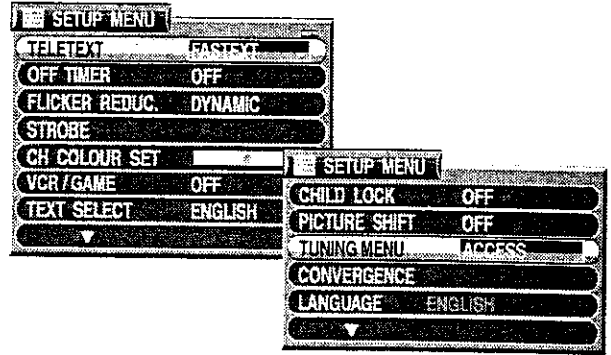
Tuning Channels

1 Display the TUNING MENU

1  Press to display the SETUP MENU.

2  Press to select the TUNING MENU.

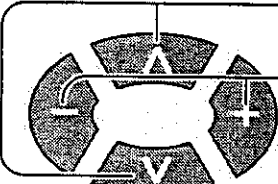
 Press to display the TUNING MENU.




2

1 Select the "POSITION" or the "DIRECT"

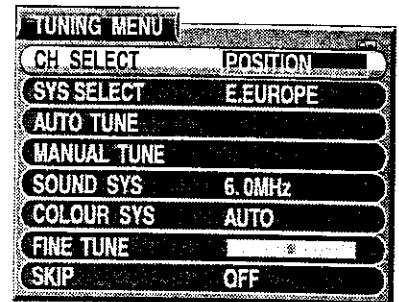
CH SELECT

 Press to select the "CH SELECT (Channel Select)" Mode.

 Press to select the "POSITION" or the "DIRECT".

Setting range when the "POS." (Position) has been selected: Position 0-99

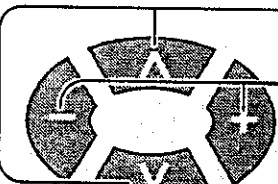
Setting range when the "DIRECT" has been selected: Channel 0-125




The channel select indicator will change as follows. DIRECT \longleftrightarrow POSITON

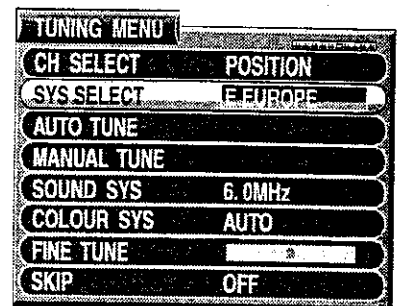
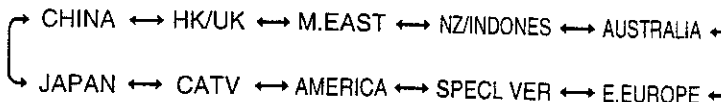
2 Regional System Selection

SYS SELECT (Before AUTO tuning and MANUAL tuning, set the "SYS SELECT" mode, as detailed below.)

 Press to select the "SYS SELECT".

 Press to select the appropriate system.

The system select indicator will change as follows.



System Select by Regional

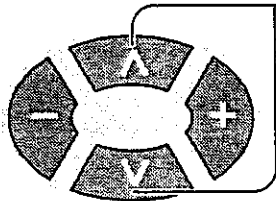
SYSTEM SELECT	Region
CHINA	China
HK / UK	Hong Kong, United Kingdom
ASIA/M.EAST	Malaysia, Singapore, Thailand, Asia countries, Kuwait, Saudi Arabia, United Arab Emirates, Middle East countries, etc.
NZ / INDONES	New Zealand, Indonesia, etc.
AUSTRALIA	Australia
E.EUROPE	CIS, Poland, etc.
SPECL VER	South Africa
AMERICA	U.S.A., Chile, Mexico, Panama, Peru, Philippines, Taiwan, Venezuela, etc.
CATV	USA CATV
JAPAN	Japan

Tuning Channels

Sound System Selection (Different region use differing systems)

This function is used only in the TV mode when the sound is not clear or no sound is produced on a Programme Number, and is not applicable in AV mode .

1

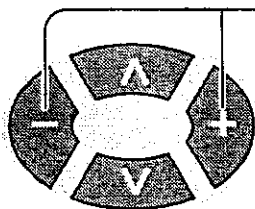


Press to select the "SOUND SYS".

TUNING MENU	
CH SELECT	POSITION
SYS SELECT	JAPAN
AUTO TUNE	
MANUAL TUNE	
SOUND SYS	6.0MHz
COLOUR SYS	AUTO
FINE TUNE	
SKIP	OFF

Sound System Condition.

2



Press until the optimum sound is obtained.

The sound system will change as shown.

4.5MHz ↔ 5.5MHz
↕ ↕
6.5MHz ↔ 6.0MHz

TUNING MENU	
CH SELECT	POSITION
SYS SELECT	JAPAN
AUTO TUNE	
MANUAL TUNE	
SOUND SYS	6.0MHz
COLOUR SYS	AUTO
FINE TUNE	
SKIP	OFF

Note:

These are different sound broadcast transmission systems applicable to differing countries.

3



Press to exit from the "SOUND SYS".

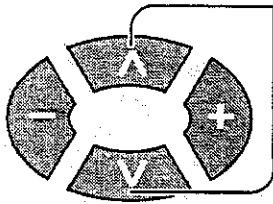
This returns the set to the normal viewing condition.

The selected Sound System is automatically memorised.

Colour System Selection (Different region use differing systems)

If a clear picture with current colours cannot be obtained when a Broadcast or AV signal is received.

1

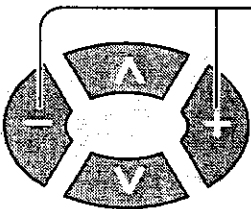


Press to select the "COLOUR SYS".

TUNING MENU	
CH SELECT	POSITION
SYS SELECT	JAPAN
AUTO TUNE	
MANUAL TUNE	
SOUND SYS	6.0MHz
COLOUR SYS	AUTO
FINE TUNE	
SKIP	OFF

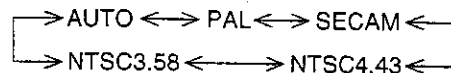
Colour System Condition.

2



Press to produce the optimum image.

The colour system will change as shown.



TUNING MENU	
CH SELECT	POSITION
SYS SELECT	JAPAN
AUTO TUNE	
MANUAL TUNE	
SOUND SYS	6.0MHz
COLOUR SYS	AUTO
FINE TUNE	
SKIP	OFF

Note:

PAL, SECAM and NTSC 3.58 are different colour signal broadcast transmission systems applicable to differing countries. NTSC 4.43 is a trick playback mode used in special VCR to playback NTSC recorded video tapes through PAL television equipment.

3



Press to exit from the "COLOUR SYS".

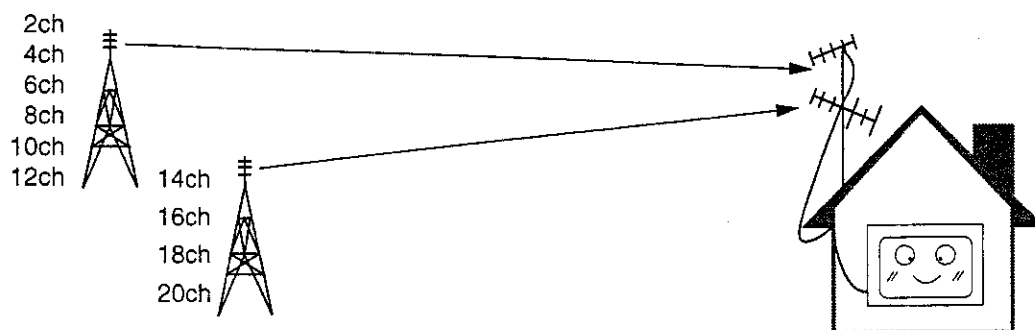
This returns the set to the normal viewing condition.

The selected Colour System is automatically memorised.

Tuning Channels

Channel Selection

Select the most easily viewed channel selection method.



POSITION SELECT

When the Channel Selection is on POS. (Position), and Auto Tune is performed, the unit memories the channels tuned in order from programme No.1.

Press the button **1** to view channel 2.

Press the button **2** to view channel 4.

Press the button **3** to view channel 6.

During position mode various reception channels can be viewed.

Example

Programme Number	Channel Display	Received Channel
1	2	2
2	4	4
3	6	6
4	8	8
5	10	10
6	12	12
7	14	14
8	16	16
9	18	18
10	20	20

DIRECT SELECT

When the Channel Selection is on DIRECT, and Auto Tune is performed, the unit memories the programme number which is the same as the channel tuned.

This method allows you to select the desired channel by pushing the channel display number directly on the remote control to select the station. The channel display numbers for the broadcast stations in each region are listed on page 25.

Example

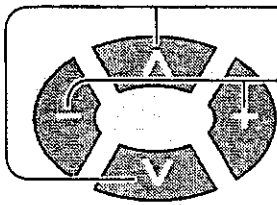
Programme Number	Channel Display	Received Channel
1	—	—
2	2	2
3	—	—
4	4	4
5	—	—
6	6	6
7	—	—
8	8	8
9	—	—
10	10	10
⋮	⋮	⋮
20	20	20
⋮	⋮	⋮

Tuning Channels

Automatic Tune (Channel Select and Regional System must already be set; Refer to pages 21)

This TV uses automatic tuning to determine whether or not a broadcast signal is being sent which it can receive, and automatically prepares so that the channel selection can respond to both the position select and direct select modes.

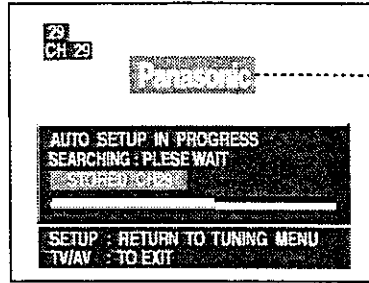
1 AUTO TUNE



Press to select the "AUTO TUNE".

Press to access to the "AUTO TUNE".

↓ Search Start.



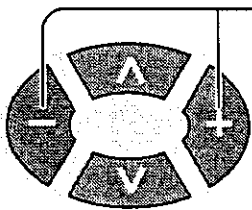
When found a station.

The best tuning position is automatically memorized.

TUNING MENU	
CH SELECT	POSITION
SYS SELECT	JAPAN
AUTO TUNE	ACCESS
MANUAL TUNE	
SOUND SYS	6.0MHz
COLOUR SYS	AUTO
FINE TUNE	
SKIP	OFF

2 SOUND SYS

After all stations are tuned, the on-screen display will automatically change from "AUTO TUNE" to "SOUND SYS" Position.



Press to improve the Sound quality, if the Sound is not clear or no sound is produced on a programme Number Position.

4.5MHz ↔ 5.5MHz

6.5MHz ↔ 6.0MHz

TV/AV



Press to exit from the Tuning Menu.

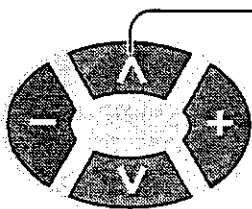
This returns the set to the normal viewing condition.

TUNING MENU	
CH SELECT	POSITION
SYS SELECT	JAPAN
AUTO TUNE	
MANUAL TUNE	
SOUND SYS	6.0MHz
COLOUR SYS	AUTO
FINE TUNE	
SKIP	OFF

Note:

When sound volume is too small to confirm, tune it up by using the sound volume button on the remote control.

3



Press to check each station sequentially.



If necessary, repeat steps 1 to 2 for each Programme Number.

4

TV/AV



Press to exit from the Tuning Menu.

This returns the set to the normal viewing condition.

Helpful Hint

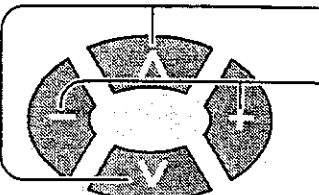
(1) If a clear picture with correct colours cannot be obtained when a Broadcast or AV signal is received, refer to the "Colour System Selection" operation on page 23.

(2) After the Automatic tune is finished, press this button to confirm the tuning condition for each Programme Number. If some Programme Numbers are unused (no TV stations), it is possible to skip such Programme Numbers. Please refer to the Programme Number Skip operation on page 29.

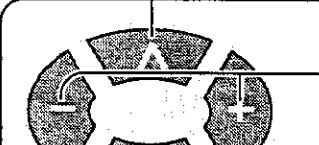


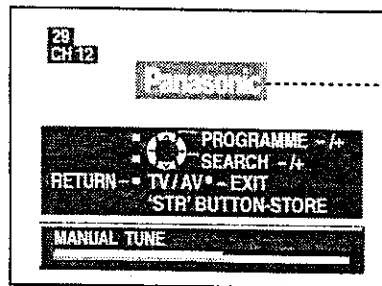
Manual Tune (Channel Select and Regional System must already be set; Refer to pages 21)

1 MANUAL TUNE

①  Press to select the MANUAL TUNE.
Press to access to the MANUAL TUNE.

TUNING MENU	
CH SELECT	POSITION
SYS SELECT	JAPAN
AUTO TUNE	
MANUAL TUNE	ACCESS
SOUND SYS	6.0MHz
COLOUR SYS	AUTO
FINE TUNE	
SKIP	OFF

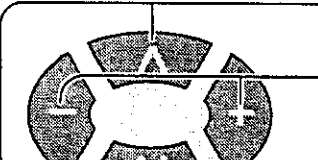
②  Press to select the desired Programme Number.
Press to select the higher or lower channel.
↓ Search Start.



When found a station.

The best tuning position is automatically memorized.

2 SOUND SYS

 Press to confirm the sound condition of each Programme Number.
Press to improve the Sound quality, if the Sound is not clear or no sound is produced on a programme Number Position.


4.5MHz ↔ 5.5MHz
↕
6.5MHz ↔ 6.0MHz

TUNING MENU	
CH SELECT	POSITION
SYS SELECT	JAPAN
AUTO TUNE	
MANUAL TUNE	
SOUND SYS	6.0MHz
COLOUR SYS	AUTO
FINE TUNE	
SKIP	OFF

Note:


When sound volume is too small to confirm, tune it up by using the sound volume button on the remote control.

3

 Press to exit from the Tuning Menu.
This returns the set to the normal viewing condition.

Helpful Hint

(1) If a clear picture with correct colours cannot be obtained when a Broadcast or AV signal is received, refer to the "Colour System Selection" operation on page 23.

(2)  After the Manual tune is finished, press this button to confirm the tuning condition for each Programme Number. If some Programme Numbers are unused, it is possible to skip such Programme Numbers. Please refer to the Programme Number Skip operation on page 29.

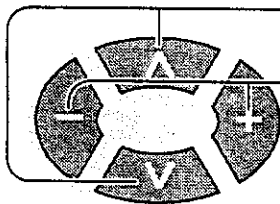
(3) When using a VCR without video and audio input/output terminals, it is convenient to connect the aerial cable as indicated in the instruction manual of VCR and to set the designated channel to programme No. "0". In that case, perform manual tune after setting the colour system and sound system in advance. Further, in multi-system VCR, it is more convenient to set the designated channel to several programme Numbers.

Tuning Channels

Fine Tuning

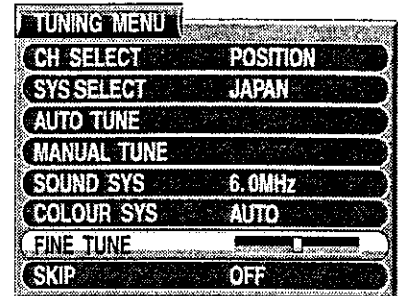
1 FINE TUNE

Under normal reception conditions this function is not required or necessary. However, in areas of poor reception or constant interference, a slight adjustment of the tuning may improve the picture and sound quality.



Press to select the FINE TUNE.

Press until the clear picture is received.



2

STR



Press to store the FINE TUNE.

This stores the FINE TUNE to the selected Programme Number.

3

TV/AV



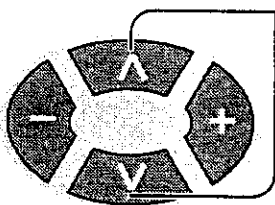
Press to exit from the FINE TUNE.

This returns the set to the normal viewing condition.

How to Cancel the Fine Tuning

Cancelling previously adjusted (manually) fine tuning, means re-activating the AFT (Automatic Fine Tuning). Re-activating the Automatic Fine Tuning means albarning the set to automatically tune to the optimum tuning position, for that programme Number.

1



Select the Programme Number which you want to return to Automatic Fine Tuning (cancel the manual fine tuning).

2

SET UP

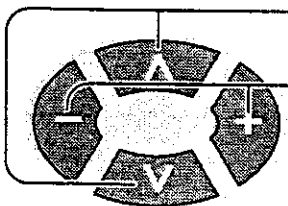


Press to display the SETUP MENU.



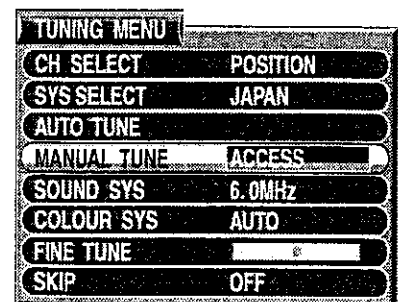
Proceed to the TUNING MENU (refer to page 21).

3



Press to select the MANUAL TUNE.

Press to access to MANUAL TUNE.
Press briefly to tune the best position.



4

STR



Press to store the AFT.

This stores the re-activated AFT.

5

TV/AV



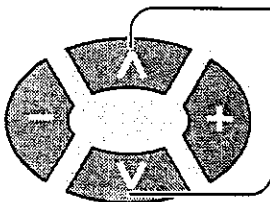
Press to exit from the MANUAL TUNE.

This returns the set to the normal viewing condition.

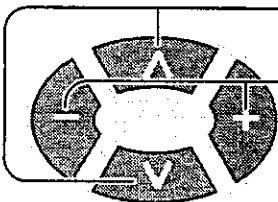
Programme Number Skip

It is possible to skip Programme Number on which no TV stations are tuned appearing on the screen. The function is only effective when selecting Programme Numbers by pressing the Programme Number Up or Down button either on the TV set or on the Remote control.

- 1 Press to select the Programme Number you'd like to skip.



- 2 Press to select the SKIP.
Press to change the mode to "ON".



TUNING MENU	
CH SELECT	POSITION
SYS SELECT	JAPAN
AUTO TUNE	
MANUAL TUNE	
SOUND SYS	6.0MHz
COLOUR SYS	AUTO
FINE TUNE	
SKIP	ON

- 3 STR Press to store the Skip function.



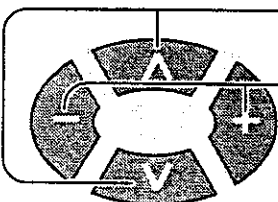
- Press to exit from the SKIP.
This returns the set to the normal viewing condition.

- 4 Repeat Step1 to 3 for each Programme Number for which the Skip function is desired.



How to Cancel the Skip Function

- 1 Press to select the SKIP.
Press to change the mode to "OFF".


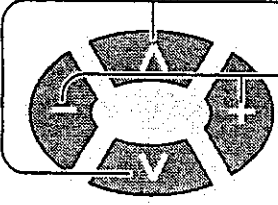



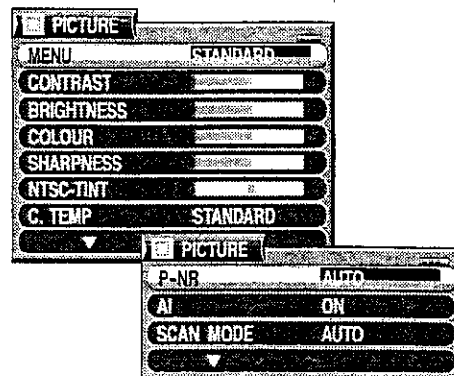
TUNING MENU	
CH SELECT	POSITION
SYS SELECT	JAPAN
AUTO TUNE	
MANUAL TUNE	
SOUND SYS	6.0MHz
COLOUR SYS	AUTO
FINE TUNE	
SKIP	OFF

- 2 STR Press to store the Skip function.



Picture Adjustment

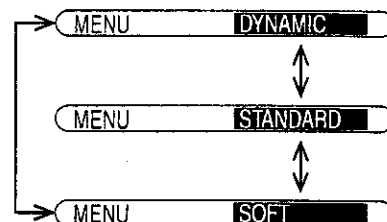
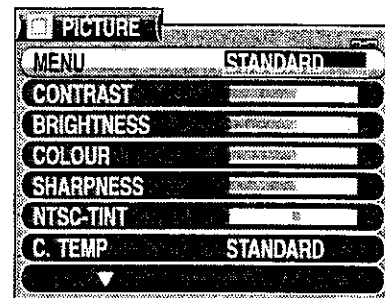
- 1  Press to display the Picture Menu.
- 2  Press to select the desired function.
Press to adjust or change the function.
- 3  Press to go back to watching TV.



MENU











You can change the level of each Function (CONTRAST, BRIGHTNESS, COLOUR, SHARPNESS, NTSC-TINT) for each Picture Menu. Picture menu mode will be memorized for each TV, AV1, AV2, AV3 and AV4 mode.

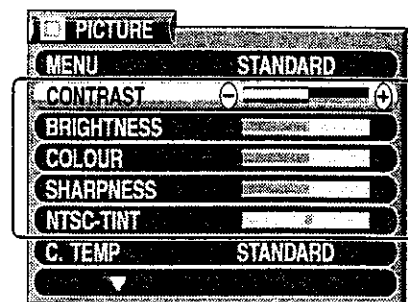
Picture Menu	Function
DYNAMIC	For viewing in brighter environments. This menu selects a higher than normal levels of Brightness and Contrast.
STANDARD	For viewing in normal (evening lighting) environments. This menu selects the normal levels of Brightness and Contrast.
SOFT	For viewing in a dark room. This menu selects reduced levels of Brightness and Contrast.



CONTRAST, BRIGHTNESS, COLOUR, SHARPNESS, NTSC-TINT

Increase or decrease the levels of CONTRAST, BRIGHTNESS, COLOUR and SHARPNESS options according to your personal preference. With an NTSC-TINT signal source connected to the TV, the picture hue can be adjusted to suit your taste.

Item	Effect	Function
CONTRAST	  Less More	Adjust for contrast.
BRIGHTNESS	  Darker Brighter	Adjusts for easier viewing of dark pictures such as night scenes and hair.
COLOUR	  Less More	Adjusts slightly to a lighter colour.
SHARPNESS	  Less More	Displays a sharp image.
NTSC-TINT	  Reddish Greenish	Adjust for proper skin colour.



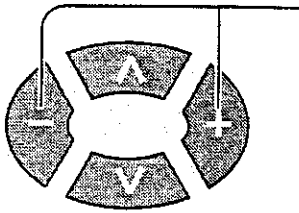
Notes:

- When set to Multi PIP mode, the main and sub pictures are both adjusted simultaneously.
- When the TV is receiving NTSC signals, NTSC-TINT is displayed and level adjustment would be possible.
- Only CONTRAST will be displayed during TEXT mode.

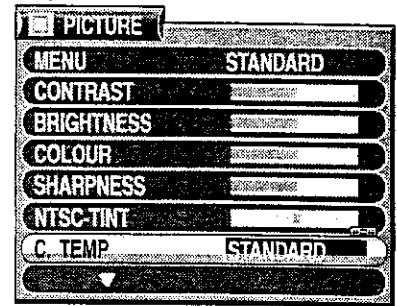
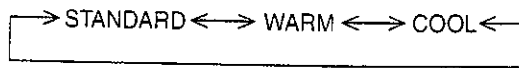
Picture Adjustment

C. TEMP (Colour Temperature)

Set the overall colour tone of the picture.

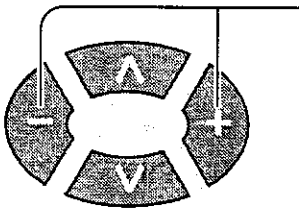


Press to switch between modes

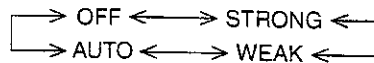



P-NR (Picture Noise Reduction)

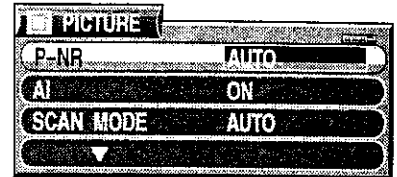
Automatically reduces undesired picture noise.



Press to switch between modes




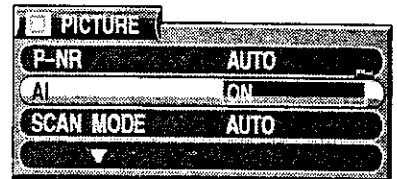
TC-51P250 Series: Switching is also possible using  on the remote control.



AI

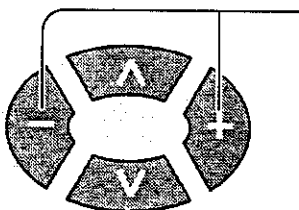
Automatically analyses the incoming picture and processes it to give improved contrast and optimum depth of field.

TC-51P250 Series: Switching is also possible using  on the remote control.

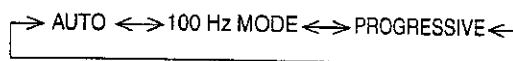


SCAN MODE

Choose the screen refresh method:

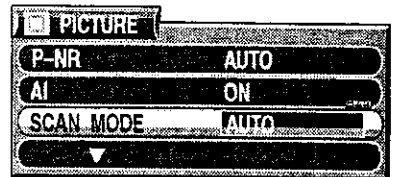


Press to switch between modes



MODE	Function
AUTO	The TV software will select the best mode for the signal being viewed.
100 Hz MODE	100Hz will give a steady picture for most signal transmission.
PROGRESSIVE	Recommended when receiving NTSC signals.

Switching is also possible using  on the remote control.



Note:

We recommend that you set **Scan mode** to **Progressive** when viewing a PAL 60 or NTSC transmission. When viewing a PAL transmission (other than PAL 60) with **Scan mode** set to **Progressive**, the screen will flicker, this is not a fault.


Helpful Hint (N Normalization)

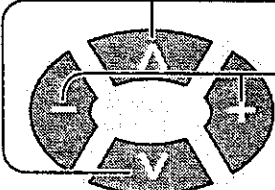
By pressing the Normal "N" Button on the Remote Control while the Picture menu is displayed, the selected menu will be changed to the Normal Mode.


Normalization will not occur if the menu is not displayed when the "N" Button is pressed.

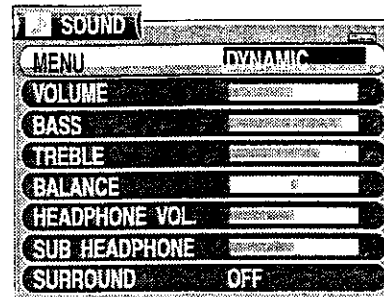
The Normal mode is the factory preset condition. Returning to this original condition is called "Normalization".


Sound Adjustment

1  Press to display the Sound Menu.

2  Press to select the desired function.
Press to adjust or change the function.

3  Press to go back to watching TV.

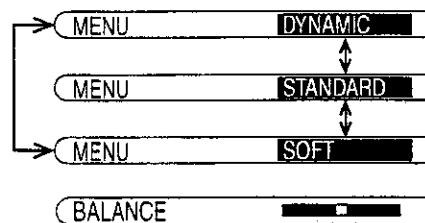
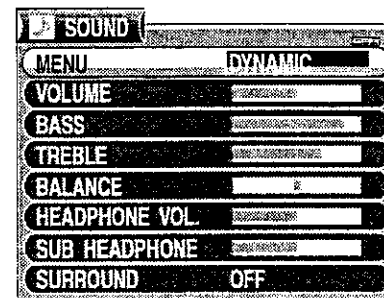


Note: Some features are only available with the Surround feature switched off. Press  to switch between On and Off.













MENU

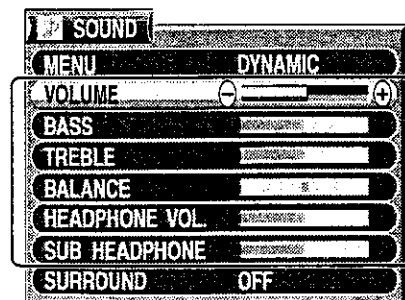
You can change the level of each Function (VOLUME, BASS, TREBLE, BALANCE, HEADPHONE VOL, SUB HEADPHONE) for each Sound Menu. Sound menu mode will be memorized for each TV, AV1, AV2, AV3 and AV4 mode.

Sound Menu	Function
DYNAMIC	Amplifies the Low frequencies and outputs optimum sound. For music programmes for example.
STANDARD	For Normal use.
SOFT	Human voices (middle pitch sounds) will sound more clear.



VOLUME, BASS, TREBLE, BALANCE, HEADPHONE VOL., SUB HEADPHONE

Item	Effect	Function
VOLUME	 	Adjusts output volume.
BASS	 	Adjusts low sounds.
TREBLE	 	Adjusts high sounds.
BALANCE	 	Adjust left and right volumes.
HEADPHONE VOL.	 	Adjust Headphone volume.
SUB HEADPHONE	 	Adjust Sub Headphone volume.



Notes:

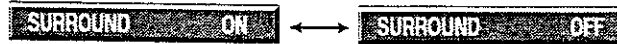
- When set to Multi PIP mode, the main and sub sound are both adjusted simultaneously.
- When using one of the double window features, note that the headphones will relay the soundtrack for the programme in the main window, not the smaller window.

SURROUND MENU

SURROUND



Press to switch between ON and OFF.

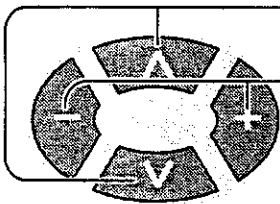
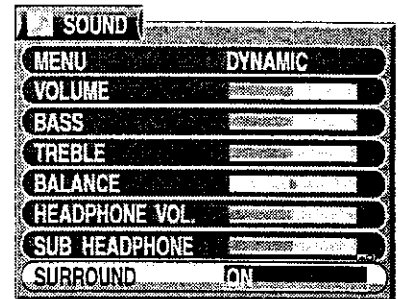


OR

SOUND



Press to display the Sound Menu.



Press to select the SURROUND function.

Press to switch between ON and OFF.

The benefits of surround sound are enormous. You can be completely enveloped in sound; just as if you were at a concert hall or cinema.

The surround effect can be obtained without the use of external surround speakers.


Helpful Hint (N Normalization)

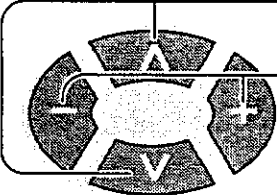
By pressing the Normal "N" Button on the Remote Control while the Sound menu is displayed, the selected menu will be changed to the Normal Mode.


Normalization will not occur if the menu is not displayed when the "N" Button is pressed.

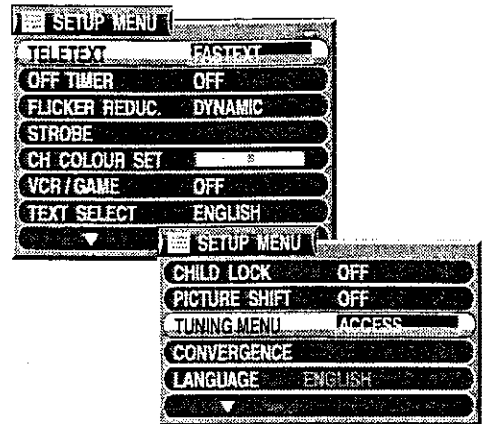
The Normal mode is the factory preset condition. Returning to this original condition is called "Normalization".

Setup Adjustment

1  Press to display the SETUP MENU.

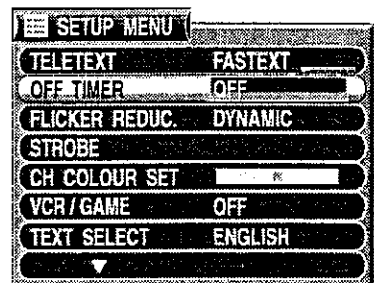
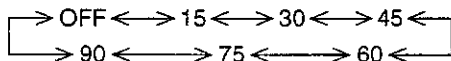
2  Press to select the desired function.
Press to adjust or change the function.

3  Press to go back to watching TV.



OFF TIMER

Switches the TV off within a preset time which you can choose from between 0 to 90 minutes in 15 minute intervals.

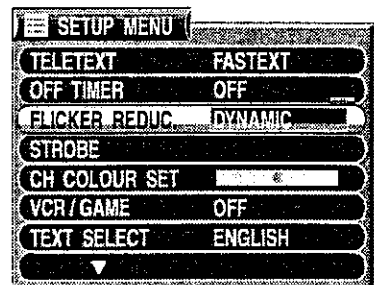


FLICKER REDUCTION

Lets you control any picture movement. Set to Dynamic to activate motion compensation, to smooth the image and get rid of picture movement. Set to Normal to correct minor picture movement, or if slight ghosting of figures occurs when using the Dynamic setting. Set to Off to have no flicker reduction at all, occasional broadcasts may benefit from using this setting.

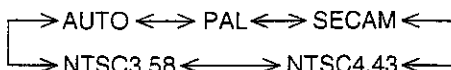


Note:
In NTSC when set the SCAN MODE to 100Hz MODE, this function is not available.

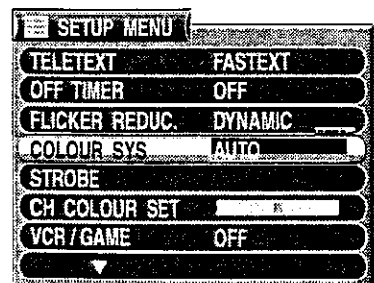


COLOUR SYSTEM

During AV mode, COLOUR SYSTEM is displayed. If a clear picture with current colours cannot be obtained when a Broadcast or AV signal is received. The colour system will change as shown.

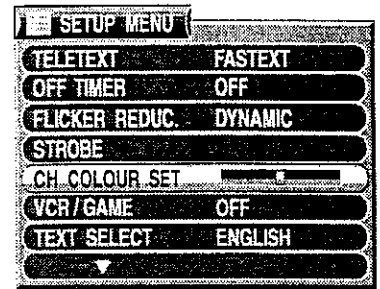


PAL, SECAM and NTSC 3.58 are different colour signal broadcast transmission systems applicable to differing countries. NTSC 4.43 is a trick playback mode used in special VCR to playback NTSC recorded video tapes through PAL television equipment.



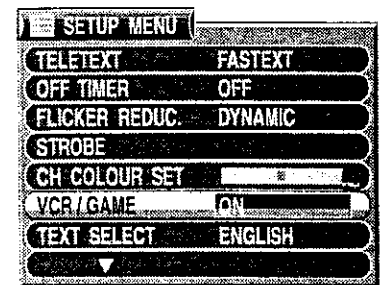
CH COLOUR SET

Colour density varying between broadcast channels can be adjusted to three levels for each reception channel.



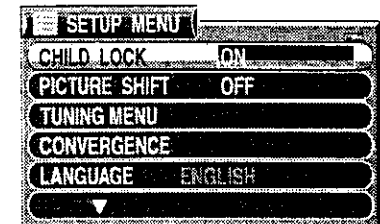
VCR/GAME

Reproduction of irregular signals, such as certain TV games and rental video tapes, may be improved.



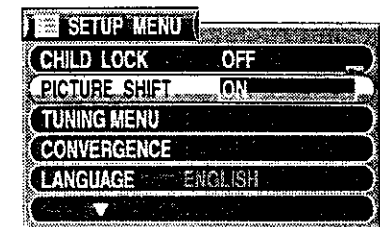
CHILD LOCK

If the Child-Lock function is set ON, picture and sound of the TV/AV mode being viewed will disappear and a Black screen will appear.



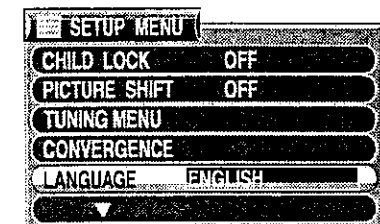
PICTURE SHIFT

For use as a screen saver, this function changes the entire picture position (shift) approximately 2 mm every 15 minutes.



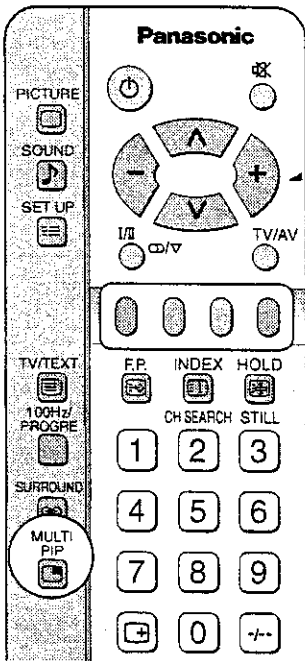
LANGUAGE


When you first install the TV, the On Screen Display language is set according to your choice of region. LANGUAGE lets you change the language used for On Screen Displays.




Multi Screen

Multi PIP



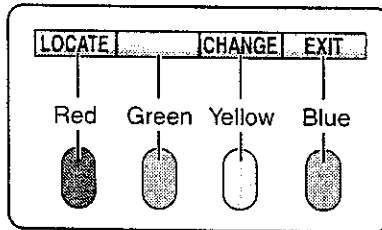
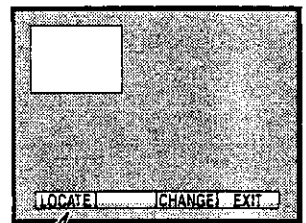
Press  to select the current programme, the **picture in picture** feature, or the **picture and picture** feature.

The on screen selector keys for the features (corresponding to the four coloured buttons on the remote control) appear and disappear after a few seconds. If you'd like to select an operation when the keys are not shown, press  once more and the keys will reappear.

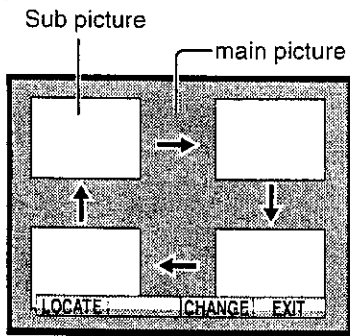
Picture in Picture (PIP)



Press to view two pictures (sub picture in main picture) at the same time.



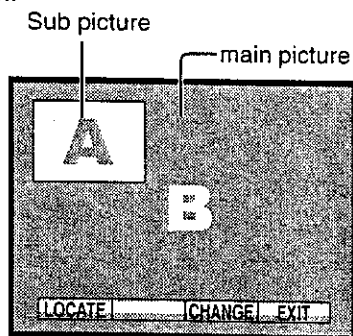
Press the Red button:



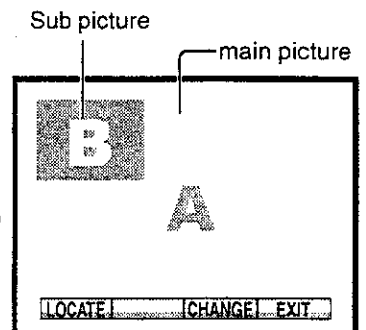
Each time the location of the sub picture is changed



Press the Yellow button:



Each time the main picture and the sub picture are swapped.



Press the Blue button to exit from the PIP mode.

Picture and Picture



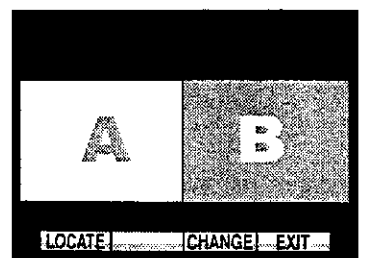
Press twice to view two pictures (picture and picture) at the same time.





Press the Yellow button: Each time the picture in the left and the picture in the right are swapped.





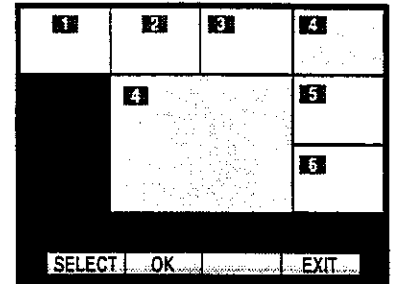
Press the Blue button to exit from the PIP mode.





Channel search





INDEX
 **CH SEARCH** ()
 Press to show freeze-frames of the programmes being broadcast on all of the stored channels. These images are displayed in series clockwise around the edge of the screen, starting from the top left.
 The current programme is displayed in the centre of the screen, still playing.

HOLD
 **STILL** ()
 Press to pause the search.




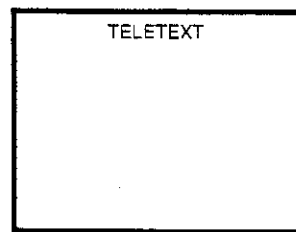
Channel search

INDEX
 **CH SEARCH** ()
 Press to exit from the feature.

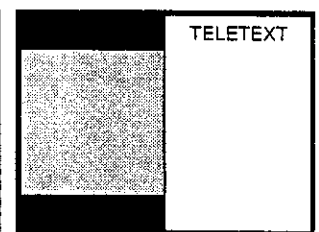
 **Red**
  **Green**
  **Yellow**
  **Blue**
 Press to watch the current programme (displayed centre screen), exiting the feature.
 Press to watch the selected channel, exiting the feature.
 Press to select each channel's freeze-frame in turn.

Picture and text (No indication for TC-51P250 Series)

TV/TEXT

 Press to select watching the current programme, the teletext or the **picture and text** feature.



TELETEXT mode





Picture and text mode

Note:

The remote control affects the teletext page; so select watching the current programme before making any changes to the programme.

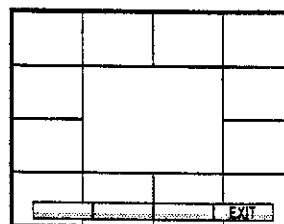
Still



HOLD
 **STILL** ()
 Press to freeze the picture, press again to return to watching the current programme.


Strobe

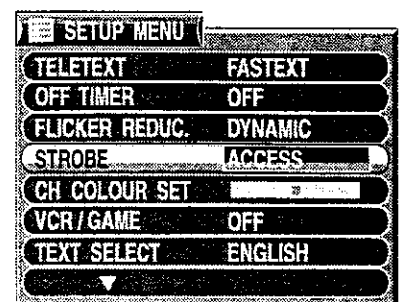
Lets you take a series of freeze-frame photos of a piece of action (for example: the finish of a race).

(Access **Strobe** via the **Setup** menu, see page 34).
 Takes a series of up to twelve freeze-frame images (one second delay between each image being taken) from the current programme watched.



HOLD
 **STILL** ()
 Press to pause (freeze) the Strobe, press again to continue taking the freeze-frames.

 **Blue**
 Press to exit from the **Strobe** feature and return to watching the current programme.

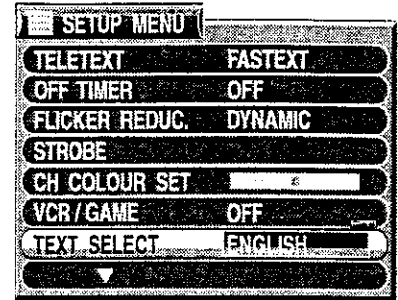
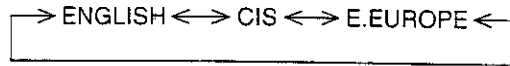


TELE TEXT (No indication for TC-51P250 Series)

Teletext features may vary depending on the Broadcasting Companies and are only available when the channel selected is transmitting Teletext.

TEXT SELECT
(No indication for TC-51P250 Series)

Select character set, so that all characters needed are available for text on teletext pages (eg: cyrillic characters, etc).



TV / Teletext mode

TV/TEXT



Press to select the current programme, the teletext and the picture or the teletext feature .

PICTURE

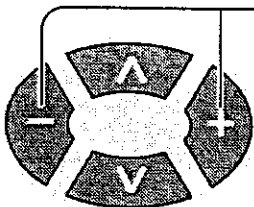


Press to display the contrast function with a cyan bar.

SOUND



Press to display the volume function with a green bar.



Press to alter the setting as required.

CONTRAST



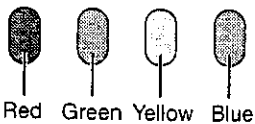
VOLUME



SET UP



Press to display special function options at the bottom of the screen.



Press to select the desired function.

LIST / FASTEXT mode

Choose 2 modes.

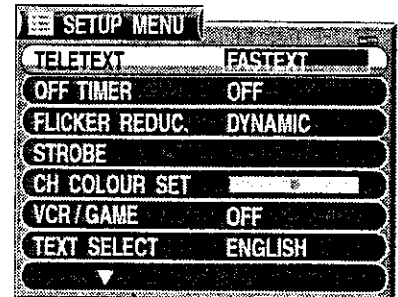
LIST ↔ FASTEXT

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.

FASTEXT mode:

Four differently coloured subjects are situated at the bottom of the display. To access more information , press the appropriately coloured button. This mode enables fast access to information on the subjects shown.

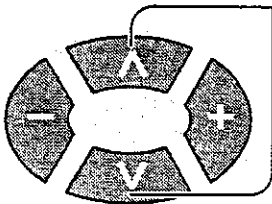


Note:

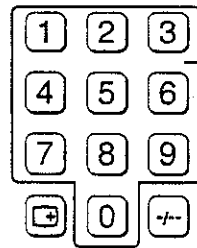
Characters will be illegible unless you select the Text Language which matches the text being received. Select the correct LANGUAGE (Refer to page 35).

Page Selection

(Two ways)

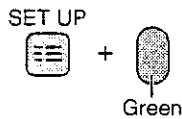


Press to increase or decrease the page number by one.



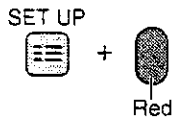
Enter the page number directly using 0-9 on the remote control.

Full / Bottom



Press to display special functions.
Press the **Green** button again to expand the **BOTTOM** half.
Press again to return to normal (**FULL**) size.

Reveal



Press to reveal hidden words e.g. quiz page answers. Press again to hide.

List Store

In **LIST** mode the four page numbers can be altered (programme positions 1 - 25 only). Press one of the four coloured buttons and enter the new page number.



Press and hold, the page numbers will change to white indication and the page is stored.

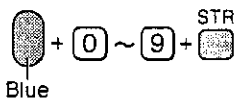
Hold



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

Favourite Page (F.P.)

Stores a favourite page in memory for instant recall. (programme positions 1 - 25 in List mode only).




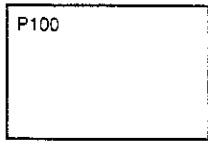



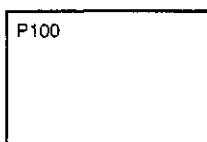




Press the **Blue** button, select the page number, then press and hold **STR**.
The page number is now stored.



Press to recall the stored page number.

TELE TEXT

	Teletext page	News Flash	Update
 +  Yellow	Press to display special functions to view the TV picture whilst searching for a Teletext page.  	Press to view the TV picture When a news flash page has been selected.  	Press to see the update of information on certain pages.  
 Yellow	Press to view the page.	Press to display the News Flash.	Press to view the page.
 TV/AV	Return to normal TV operation.		

Index



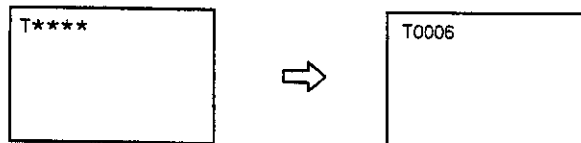
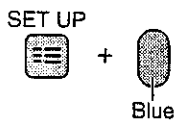
Press to return to the main index page. Depending on the way information is transmitted, this may have to be pressed more than once to return to the main index page.

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. If the top of the page indicates that sub pages are being transmitted yet the page does not change, then the number at the top of the page is there to indicate that the broadcaster has updated the page's contents, there are no sub pages.



Enter desired sub page number before the T"" disappears. To select page 6 enter 0, 0, 0 and 6.



Viewing a normal TV programme. \longleftrightarrow Viewing the Teletext page.



Select a new page number.



Press to return to normal TV operation.

Advanced Remoto Control Operation

Stereo Bilingual Sound Selection



When you receive the stereo/bilingual sound system, sound output modes can be selected by pressing the stereo/bilingual sound selection button.

Audio Signal	STEREO	MAIN I	SUB II	MONO
Mode Indicator		I	II	

NICAMused in Australia, Malaysia, Thailand, Indonesia etc.

Type of broadcast	Regular broadcast (Standard Audio)	Regular + NICAM MONO I (MAIN I)	NICAM STEREO	NICAM DUAL MONO (MAIN I / SUB II)
Mode Indicator	No Indicator \longleftrightarrow	I \longleftrightarrow	\longleftrightarrow	

A2(German)used in New Zealand, Malaysia, Singapore, China.

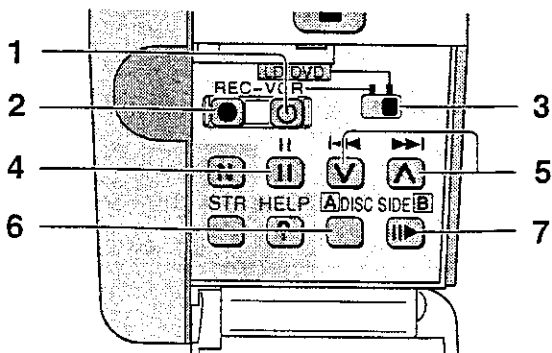
Type of broadcast	Regular broadcast (Standard Audio)	BILINGUAL or DUAL MONO: MAIN I / SUB II	STEREO
Mode Indicator	No Indicator \longleftrightarrow	I \longleftrightarrow II	\longleftrightarrow

Notes:

- If the stereo signal is poor or the receiving conditions are not optimum or if STEREO:MONO automatic switching occurs, it is recommended you switch from STEREO to MONO.
- Even when the contents of the receiving signal undergo changes, selection mode is kept intact.
- When the receiving conditions deteriorate, listening will be easier if the mode is set to the "MONO" position, using the stereo/bilingual sound selection button.
- "DUAL", also known as "DUAL MONO" or as "BILINGUAL" is not currently transmitted in some countries.

VCR / LD / DVD Control


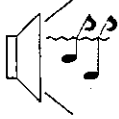
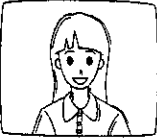
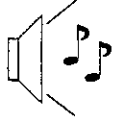

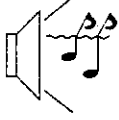
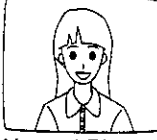
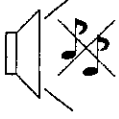

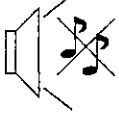

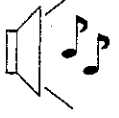



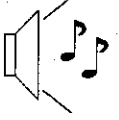


The Remote Control is capable of operating some functions of selected Panasonic VCRs, LD and DVD (Digital Versatile Disc) equipment. Some VCR, LD and DVD equipment have different functions. So to ensure compatibility please refer to the equipment's instruction book or consult your dealer for details.



Button	Function	
	VCR	LD/DVD
1	Power Switch	
2	REC (Record)	
3	VCR/LD, DVD Select button	
4	Pause/Still	
5	Programme Number Up and Down	Programme Skip
6		DISC SIDE A Selection
7	Still Advance	DISC SIDE B Selection

Troubleshooting

Before you call for service, determine the symptoms and make a few simple checks as shown below.

Symptoms		Checks
Picture	Sound	
 <p>Snowy Picture</p>	 <p>Noisy Sound</p>	Aerial Location, direction or Connections
 <p>Multiple Image</p>	 <p>Normal Sound</p>	Aerial Location, direction or Connections
 <p>Interference</p>	 <p>Noisy Sound</p>	Electrical Appliances Cars/Motorcycles Fluorescent Lamps
 <p>Normal Picture</p>	 <p>No Sound</p>	Volume (Check whether the mute function has been activated on the Remote Control.)
 <p>No Picture</p>	 <p>No Sound</p>	Not plugged into AC outlet Not switched on Contrast and Brightness/Volume setting (Check by pressing the Power Switch or Stand-by Button on the Remote Control.)
 <p>No Colour</p>	 <p>Normal Sound</p>	Colour Control Colour System
 <p>Scrambled</p>	 <p>Normal or Weak Sound</p>	Retune Channels
 <p>Coloured Patches</p>	 <p>Normal Sound</p>	Magnetic interference from unshielded equipment; TV set moved while "ON". Turn the TV set off for 30 minutes, using the "Power" Switch on the TV set.
 <p>No Colour</p>	 <p>Noisy Sound</p>	Sound Menu (Refer to page 32) Picture Menu (Refer to page 30)

Specifications

	TX-51P250H /TC-51P250H	TX-51P250X																																																						
Power Source	AC 220-240 V, 50/60 Hz	AC 110-240 V, 50/60 Hz																																																						
Power Consumption	228 W Stand-by condition 3.0 W	238 W Stand-by condition 3.0 W																																																						
Receiving System																																																								
<table border="1"> <thead> <tr> <th colspan="2">21 Systems</th> <th>Function</th> <th colspan="2">21 Systems</th> <th>Function</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>PAL B, G, H</td> <td rowspan="7">Reception of broadcast transmissions and Playback from Video Cassette Tape Recorders.</td> <td>15</td> <td>PAL 60 Hz/5.5 MHz</td> <td rowspan="7">Playback from Special Disc Players and Special VCR's</td> </tr> <tr> <td>2</td> <td>PAL I</td> <td>16</td> <td>PAL 60 Hz/6.0 MHz</td> </tr> <tr> <td>3</td> <td>PAL D, K</td> <td>17</td> <td>PAL 60 Hz/6.5 MHz</td> </tr> <tr> <td>4</td> <td>SECAM B, G</td> <td>18</td> <td>SECAM 60 Hz/5.5 MHz</td> </tr> <tr> <td>5</td> <td>SECAM D, K</td> <td>19</td> <td>SECAM 60 Hz/6.0 MHz</td> </tr> <tr> <td>6</td> <td>SECAM K1</td> <td>20</td> <td>SECAM 60 Hz/6.5 MHz</td> </tr> <tr> <td>7</td> <td>NTSC M (NTSC 3.58/4.5 MHz)</td> <td>21</td> <td>NTSC 50 Hz/4.5 MHz</td> </tr> <tr> <td>8</td> <td>NTSC 4.43/5.5 MHz</td> <td rowspan="7">Playback from Special VCR's</td> <td></td> <td></td> <td></td> </tr> <tr> <td>9</td> <td>NTSC 4.43/6.0 MHz</td> </tr> <tr> <td>10</td> <td>NTSC 4.43/6.5 MHz</td> </tr> <tr> <td>11</td> <td>NTSC 3.58/5.5 MHz</td> </tr> <tr> <td>12</td> <td>NTSC 3.58/6.0 MHz</td> </tr> <tr> <td>13</td> <td>NTSC 3.58/6.5 MHz</td> </tr> <tr> <td>14</td> <td>SECAM I</td> </tr> </tbody> </table>			21 Systems		Function	21 Systems		Function	1	PAL B, G, H	Reception of broadcast transmissions and Playback from Video Cassette Tape Recorders.	15	PAL 60 Hz/5.5 MHz	Playback from Special Disc Players and Special VCR's	2	PAL I	16	PAL 60 Hz/6.0 MHz	3	PAL D, K	17	PAL 60 Hz/6.5 MHz	4	SECAM B, G	18	SECAM 60 Hz/5.5 MHz	5	SECAM D, K	19	SECAM 60 Hz/6.0 MHz	6	SECAM K1	20	SECAM 60 Hz/6.5 MHz	7	NTSC M (NTSC 3.58/4.5 MHz)	21	NTSC 50 Hz/4.5 MHz	8	NTSC 4.43/5.5 MHz	Playback from Special VCR's				9	NTSC 4.43/6.0 MHz	10	NTSC 4.43/6.5 MHz	11	NTSC 3.58/5.5 MHz	12	NTSC 3.58/6.0 MHz	13	NTSC 3.58/6.5 MHz	14	SECAM I
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Receiving Channels	Regular TV VHF BAND 2-12 (PAL/SECAM B, K1) 0-12 (PAL B AUST.) 1-9 (PAL B N.Z) 1-12 (PAL/SECAM D) 1-12 (NTSC M Japan) 2-13 (NTSC M U.S.A)	UHF BAND 21-69 (PAL G, H, I/SECAM G, K, K1) 28-69 (PAL B AUST.) 13-57 (PAL D, K) 13-62 (NTSC M Japan) 14-69 (NTSC M U.S.A)	CATV S1-S20 (OSCAR) 1-125 (U.S.A CATV) C13-C49 (JAPAN) S21-S41 (HYPER) Z1-Z37 (CHINA) 5A, 9A (AUST.)																																																					
Receiving Stereo System	NICAM I, NICAM B/G, NICAM D, A2 (German)																																																							
Tuning System	Frequency synthesizer Auto Search Tuning POSITION : 100 Position DIRECT : 125 Position																																																							
Audio Output	24 W [2-way, 4-speakers ; 12 W + 12 W] (10 % THD)																																																							
Headphones	3.5 mm Plug																																																							
Video/Audio/Component Terminals	AV 1, 2, 3, 4 Monitor Out AV1 IN (Rear) : S-Video, Video, Audio L/R terminals AV2 IN (Rear) : Video or Y/P _B /P _R , Audio L/R terminals AV3 IN (Front) : S-Video, Video, Audio L/R terminals AV4 IN (Rear) : Video or Y/P _B /P _R , Audio L/R terminals	S-Video In DVD (Y/P _B /P _R) Video In Audio In Video Out	Y:1 Vp-p, 75 Ω C:0.3 Vp-p, 75 Ω 1 Vp-p, 75 Ω Approx. 0.4 V 47 KΩ 1 Vp-p, 75 Ω																																																					
Remote control Transmitter	EUR511250.....TX-51P250H/X R6 (AA) Battery x 2	EUR511251.....TC-51P250H																																																						
Dimensions (W x H x D)	1095 mm x 500 mm x 1385 mm																																																							
Mass (Weight)	58 kg (Net)																																																							

Note: Design and Specifications are subject to change without notice. Weight and Dimensions shown are approximate.

Customer's Record

The model number and serial number of this product can be found on its cabinet. 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 _____

Serial Number _____

Specifications

REFERENCE

		TX-43P250H/TC-43P250H	TX-43P250X
Power Source	AC 220 - 240 V , 50/60Hz		AC 110 - 240 V, 50/60Hz
Power Consumption	228W Stand-by condition 3.0W		238W Stand-by condition 3.0W
Receiving System			
21 Systems		Function	21 Systems
1	PAL B, G, H	Reception of broadcast transmissions and Playback from Video Cassette Tape Recorders.	15
2	PAL I		16
3	PAL D, K		17
4	SECAM B, G		18
5	SECAM D, K		19
6	SECAM K1		20
7	NTSC M (NTSC 3.58/4.5 MHz)		21
			Playback from Special Disc Players and Special VCR's
8	NTSC 4.43/5.5 MHz	Playback from Special VCR's	
9	NTSC 4.43/6.0 MHz		
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Receiving Channels		Regular TV VHF BAND 2-12 (PAL/SECAM B, K1) 0-12 (PAL B AUST.) 1-9 (PAL B N.Z) 1-12 (PAL/SECAM D) 1-12 (NTSC M Japan) 2-13 (NTSC M U.S.A)	UHF BAND 21-69 (PAL G, H, I/SECAM G, K, K1) 28-69 (PAL B AUST.) 13-57 (PAL D, K) 13-62 (NTSC M Japan) 14-69 (NTSC M U.S.A)
			CATV S1-S20 (OSCAR) 1-125 (U.S.A CATV) C13-C49 (JAPAN) S21-S41 (HYPER) Z1-Z37 (CHINA) 5A, 9A (AUST.)
Receiving Stereo System		NICAM I, NICAM B/G, NICAM D, A2 (German)	
Tuning System		Frequency synthesizer Auto Search Tuning POSITION : 100 Position DIRECT : 125 Position	
Audio Output			
		24W [2 speakers : 12W + 12W] (10 % THD)	
Headphones		3.5 mm Plug	
Aerial Impedance		75 Ω Unbalanced coaxial	
Video/Audio/Component Terminals		AV 1, 2, 3, 4	S-Video In Y:1 Vp-p, 75 Ω C:0.3 Vp-p, 75 Ω
		Monitor Out	DVD (Y/Pb/Pr) Video In : 1 Vp-p, 75 Ω Audio In : Approx. 0.4 V 47 KΩ Video Out : 1 Vp-p, 75 Ω Audio Out : Approx. 0.4 V 1 KΩ
		AV1 IN (Rear) : S-Video, Video, Audio L/R terminals AV3 IN (Front) : S-Video, Video, Audio L/R terminals	AV2 IN (Rear) : Video or Y/Pb/Pr, Audio L/R terminals AV4 IN (Rear) : Video or Y/Pb/Pr, Audio L/R terminals
Remote control Transmitter		EUR511z50TX-43P250 R6 (AA) Battery x 2 75 Ω coaxial aerial plug EUR511z51/.....TC-43P250H	
Dimensions (W x D x H)		932 mm x 500 mm x 1260 mm	
Weight (Mass)		54 kg (Net)	

Note: Design and Specifications are subject to change without notice. Weight and Dimensions shown are approximate.