



Panasonic

Operating Instruction

Colour Television
TX-29F155A



Please read the operating instructions completely before operating this set.

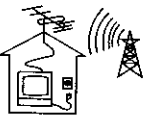
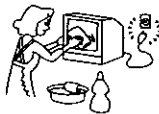

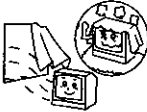



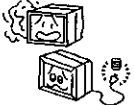


TQB4G2758

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.

Safety Instructions

	The TV set can be operated on AC SINGLE 230-240V, 50Hz.		The cabinet and picture tube can be kept in good condition by simply wiping with a clean, soft cloth moistened with mild detergent and water. Do not use solutions containing benzol, petroleum or a chemical cloth. For safety, remove the plug from the wall outlet.
	The apparatus shall not be exposed to dripping or splashing and that no objects filled with liquids, such as vases, shall be placed on the apparatus.		Adequate ventilation is essential to prevent failure of electrical components.
	Do not remove the rear cover, as live parts are accessible when it is removed.		Avoid exposing the TV set to direct sunlight and other source of heat.
	Remove the plug from the wall outlet (Power point) when the TV set is not used for a prolonged period of time.		Do not use this set if abnormal operation occurs. EX: smoke, odd sounds or smells, turn the power switch off and disconnect the AC power if you notice any unusual operation.

Before Operating This Set

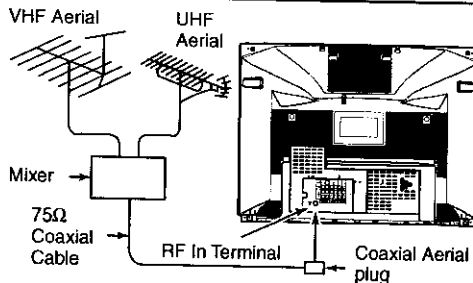
■ Connect the Aerial Cable to the RF In Terminal

To obtain the best quality picture and sound, an external antenna, the correct cables (75 Ohm coaxial) and the correct terminating plug will be required.

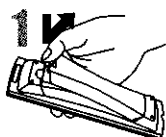
If a communal antenna system is used, you may require the correct connection cable and plugs between the wall antenna socket and your television receiver.

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

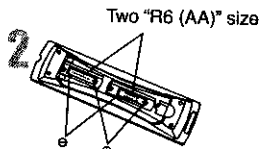
Any matters about antenna installation, upgrading of existing systems or accessories required, and the cost incurred, are the responsibility of the customer.



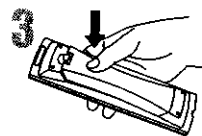
■ Battery Installation



Open the cover.



Insert the two batteries.



Close the cover.

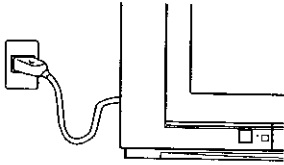
⚠ Cautions

Do not use rechargeable (Ni-Cd) batteries.

They are different in shape and performance and may fail to ensure correct operation. The incorrect use of batteries can cause electrolyte leakage which will corrode the Remote Control or cause the batteries to burst.

Before Operating This Set

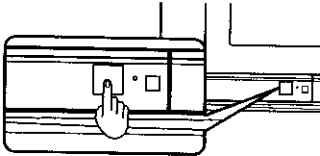
■ Connecting the Plug to the Wall Outlet



Note:

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

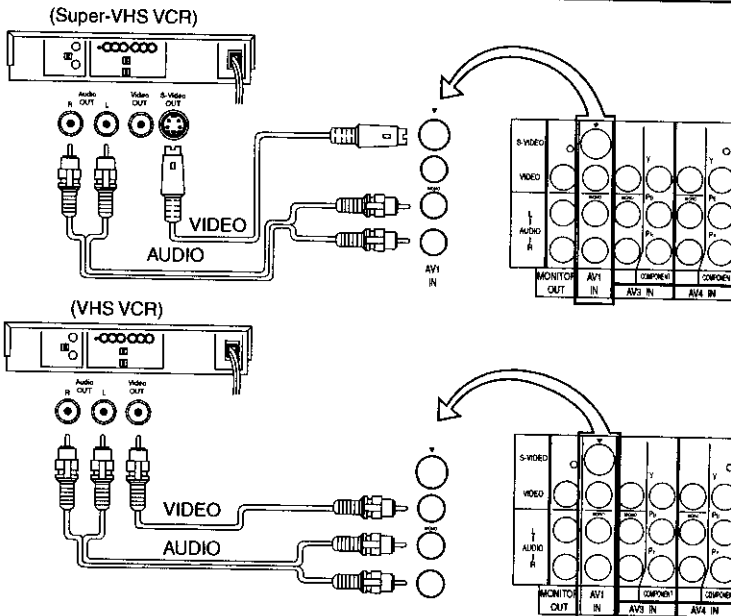
■ How to Turn the Power On



Press the Power switch on Television to turn the set on. (See page 6)

Connections

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

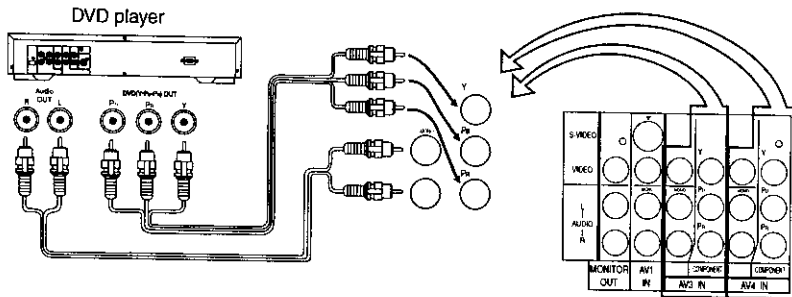


Notes:

1. When an S-Video cable is connected to the S-Video terminal, the Video input will be automatically switched off for the AV mode.
2. When a Monaural VCR is used, connect the Monaural Audio cable to the Audio "L" (left) terminal.
3. Select the desired AV input position by pressing the "TV/AV" button (refer to page 6).
4. The AV3 and AV4 audio input terminals serves as the audio input terminal for both the video input and for the DVD input.
5. Input 2 is located on the front of the unit.
6. When using "MONITOR OUT" function with source connected to "AV2 IN", please use "VIDEO" input (NOT "S-VIDEO" input).

Before Operating This Set

■ How to connect the DVD Input Terminals

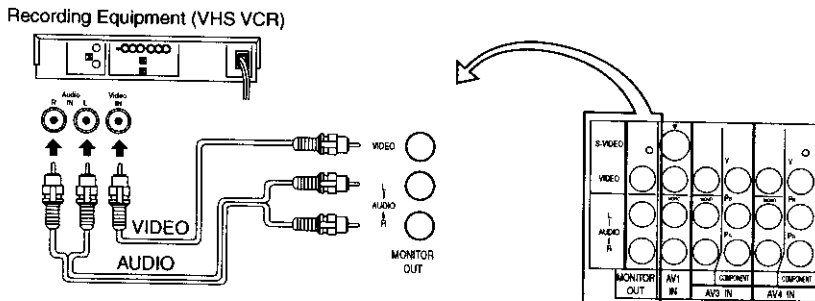


Notes:

1. The AV4 audio signal is common for both AV4 and DVD input signal terminals.
2. The DVD signal input terminal takes priority over the AV4 video signal input terminal.
3. Similar connections are available at the component video input 3 terminal.

■ How to connect the AV Monitor Output Terminals to other Equipment

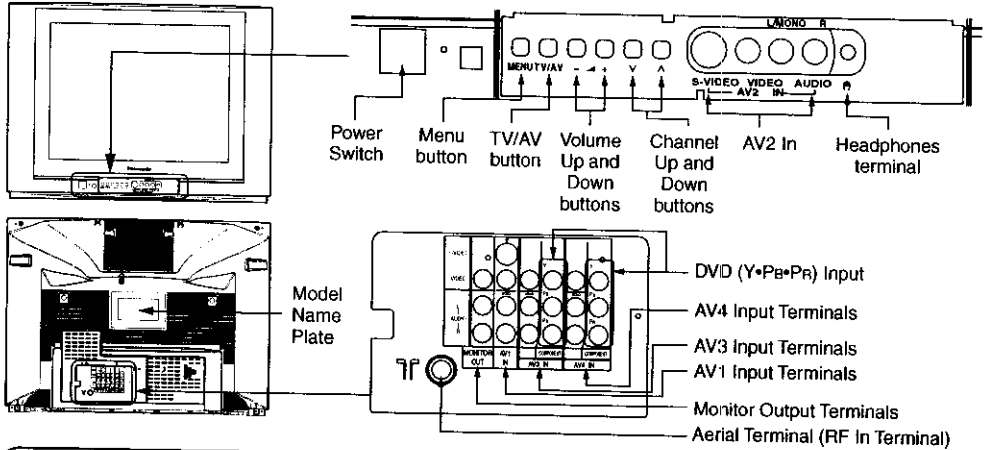
The "Monitor Out" terminal outputs the same signals as main picture on the TV screen and sound from the speaker at that time, e.g. TV programmes or signals from AV1, AV2, AV3 or AV4 input.



Notes:

1. 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.
2. The MONITOR OUT emits the main picture normal video and audio signals.
3. The DVD signal (Y•Pb•Pr) is not output at the MONITOR OUT terminals.
4. When using "MONITOR OUT" function with source connected to "AV2 IN", please use "VIDEO" input (NOT "S-VIDEO" input).

Location of Control (TV)



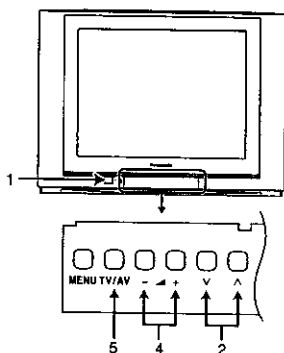
Flow Chart of Main Menu (Remote Control)

When the "MENU" (EXIT) button is pressed at the Main Menu screen, the screen display will return to the normal viewing condition.

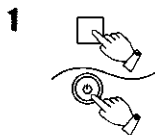
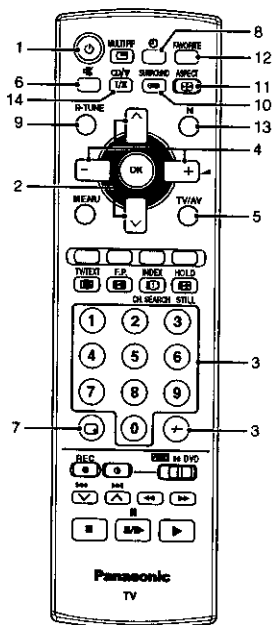
When the "MENU" (EXIT) button is pressed at each MENU screen (Picture, Sound, Setup menu, Language), the screen display will return to the Main Menu screen.

Menu	On Screen Indication	
Picture menu		
	* When NTSC signal is received.	
Sound menu		
Setup menu		
Language		

General Operation



(TV set)



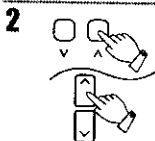
How to switch the power ON or OFF

The TV set must first be switched on at the wall outlet and at the Power Switch (refer to page 3). Press this button to turn the TV set ON, from STANDBY mode.

Press it again to turn the TV set OFF, STANDBY mode.

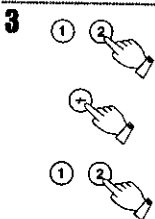
Power - indicator
STANDBY - Red
POWER ON - Green

Note: It is also possible to turn the TV set on STANDBY 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.



Programme Number Selection

Press the Programme Number Up "▲" or Down "▼" button to select the next higher or lower Programme Number.



Direct Programme Number Selection (Ch select = Position)

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

Programme Number 8.....**8**

Programme Number 12.....**12**

Direct Programme Number Selection (Ch select = Direct)

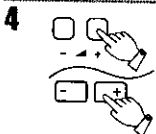
You can select the number directly by pressing the corresponding Programme Number button.

Programme Number 8.....**8**

Programme Number 36.....**36**

Programme Number 124.....**124**

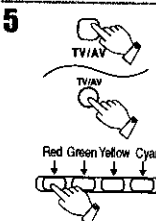
Note: When the Skip setting for Programme Number 100 through 125 is on, the channel selection time will be shortened, and thus you cannot input three digits at a time.



Volume Adjustment

Press the Volume Up "+" or Down "-" button to increase or decrease the sound volume level.

Volume - 13



TV/AV Mode Selection

Press the "TV/AV" button to select TV, AV1, AV2, AV3, AV4, input signal modes sequentially.

Remote control:

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

General Operation

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Mute Button

Press this button to mute the sound completely. The "MUTE" symbol will appear. (Colour will change to red.)
Press the button once again to restore the previous sound level and cancel the mute.

7



Recall Button

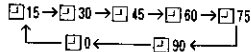
Press the "Recall" button to display the current system status. Press again to cancel.

8



Off Timer Button

The TV set may be preset to switch to stand-by after a fixed period.
By pressing "OFF-Timer" button, you can select the preset time; either "15", "30", "45", "60", "75" or "90" minutes.



9



Rapid Tune Button

Press the button to access previously viewed channel.

Present channel
being viewed



Last viewed channel

10



Surround Sound Operation

On-screen display during surround mode

Type of Broadcast	On-screen Display
TV/AV mode	Surround On ↓ Surround Off

11



Press to move through the Aspect options:

4:3 ← → 16:9

Notes:

- Simply press to display mode information on the center left of the screen.
- 16:9 picture has been used to illustrate all of the Aspect modes described in this section.

Mode	Picture	Explanation
4:3		4:3 will display a 4:3 picture at its standard 4:3 size without any stretching.
16:9		16:9 will display the picture at its maximum size but with slight stretching. Black stripes will be visible down the top and bottom of the picture.

12



How to use Favorite CH mode

Refer to page 15.

13



Normal (N) Button

By pressing the Normal "N" button on the Remote Control while Picture or Sound Control Function is displayed, the selected function will be changed to the Normal Mode. Normalization will not occur if the function 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".

General Operation

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Stereo/Bilingual Sound Selection Button

Sound output modes can be selected by pressing the "Sound Selection" button. STEREO, BILINGUAL (if transmitted) and MONO modes can be selected using this button.

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

	Type of broadcast	Mode Indicator
NICAM	Regular broadcast (Standard Audio)	No Indicator ↔ ▽
	Regular + NICAM MONO I (MAIN I)	I ↔ ▽
	NICAM STEREO	⊙ ↔ ▽
	NICAM DUAL MONO (MAIN I / SUB II)	I → II ↑ ▽ ↓
A2 (German)	Regular broadcast (Standard Audio)	No Indicator ↔ ▽
	BILINGUAL or DUAL MONO : MAIN I / SUB II	I ↔ II
	STEREO	⊙ ↔ ▽

Notes:

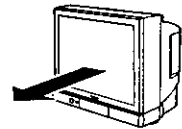
1. The "A2 (German)" stereo/bilingual TV sound transmission system is used in the following countries; Australia, Malaysia, Thailand, Indonesia, etc. The "NICAM" stereo TV sound transmission system is used in the following countries; New Zealand, Singapore, Hong Kong, Thailand, China and Malaysia.
2. 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. When the broadcasting mode changes to "STEREO", or "MONO" after you have selected "MONO" mode, change over "STEREO" mode will be made automatically.
3. Even when the contents of the receiving signal undergo changes, selection mode is kept intact.
4. 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.
5. "DUAL", also known as "DUAL MONO" or as "BILINGUAL" is not currently transmitted in some countries.

Geomagnetic Correction

Slight tilting of the picture may be noticeable or coloured patches may sometimes appear at the corners of the screen (colour purity). The Geomagnetic Correction feature can be used to eliminate them, if necessary.

- 1 The Power should be off when determining the installation location and direction.

At this time, please verify what direction the TV screen is to face (direction indicated by the arrow).

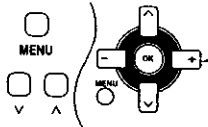


Geomagnetic corrections can be made from the remote control or the TV set.

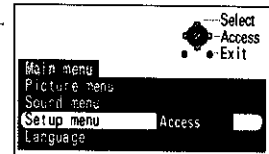
- 2 Press the "Main Power Switch".



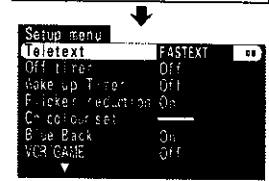
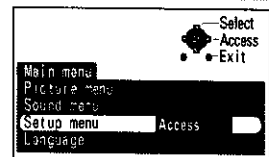
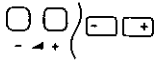
- 3 Press the "MENU" button.



Select the "Setup menu" by pressing the Channel Up " \wedge " or Down " \vee " button.



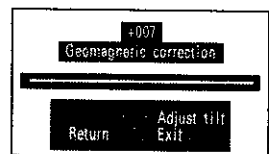
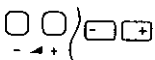
- 4 Select the "Setup menu" mode by pressing Volume Up " $+$ " or Down " $-$ " button.



- 5 Press the Channel Up " \wedge " or Down " \vee " button to select Geomagnetic.



- 6 Press the Volume Up " $+$ " or Down " $-$ " button to adjust the geomagnetic level, so that the colour patches in the four corners of the screen do not appear.

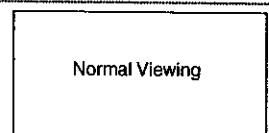


- 7 Press the "MENU" button 3 times.



OR

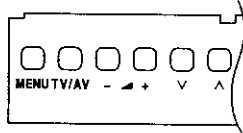
Press the TV/AV button to exit the Geomagnetic correction mode.



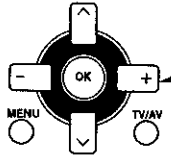
Helpful Hint

1. If Geomagnetic changes still cause colour patches on the screen even after the TV is installed, turn the power off and turn on again after about 30 minutes.
2. Adjustment for geomagnetism should be performed every time the location of the TV is changed.
3. In some cases, colour patches will not be completely eliminated even after adjustment, particularly in ferro-concrete buildings and other structures susceptible to geomagnetism. In these cases adjust by changing the installation location.

Picture menu



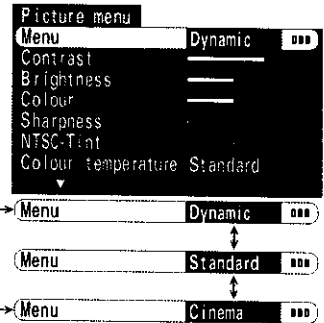
OR



- 1 Press the "MENU" button to select Main Menu.
- 2 Move to choose Picture menu by using Channel Up "▲" or Down "▼" button.
- 3 Access Picture menu mode by using the Volume Up "+" or Down "-" button.
- 4 Move to choose menu option by Channel Up "▲" or Down "▼" button.
- 5 Adjust chosen option or access menu chosen by using Volume Up "+" or Down "-" button.
- 6 Press the "MENU" button twice.
OR
Press "TV/AV" button at any time to go back to watching TV.

MENU You can change the level of each Function (Colour, NTSC-Tint, Brightness, Contrast, Sharpness) for each Picture menu. Picture menu mode will be memorized for each TV, AV1, AV2, AV3 and AV4 mode.

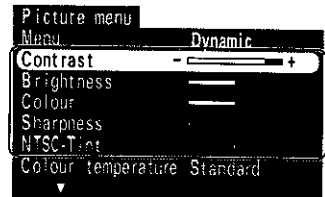
On-screen	Function
Dynamic	For viewing in brighter environments. This menu selects a higher than normal levels of Brightness and Contrast.
Standard	For viewing in normal (evening lighting) environments. This menu selects the normal levels of Brightness and Contrast.
Cinema	Ideal for movies. Can be selected for VIDEO/COMPONENT.



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	Adjust for easier viewing of dark pictures such as night scenes and hair.
Colour	Less More	Adjust slightly to a lighter colour.
Sharpness	Less More	Displays a sharp image.
NTSC-Tint	Reddish Greenish	Adjust for proper skin colour.

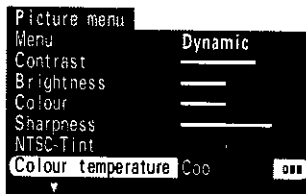


Note: When the TV is receiving NTSC signals, NTSC-Tint is displayed and level adjustment would be possible.

Picture menu

Colour temperature Allow you to set the overall colour tone of the picture.

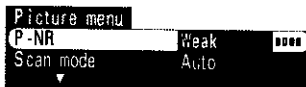
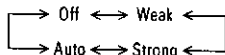
Press or to switch between modes.



P-NR
(Picture Noise Reduction)

Automatically reduces unwanted picture noise.

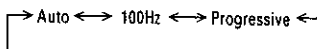
Press or to switch between modes.



Scan mode

Lets you choose the screen refresh method:

Press or to switch between modes.



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

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.

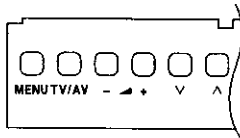
Helpful Hint (Normalization)

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.

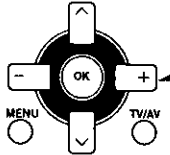
Normalization will not occur if the menu is not displayed when the "N" button is pressed.


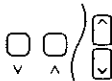
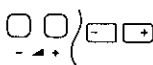

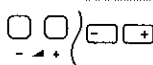

The Normal mode is the factory preset condition. Returning to this original condition is called "Normalization".

Sound menu



OR

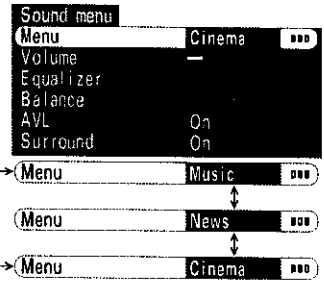


- 1  Press the "MENU" button to select Main Menu.
- 2  Move to choose Sound menu by using Channel Up "▲" or Down "▼" button.
- 3  Access Sound menu mode by using the Volume Up "+" or Down "-" button.
- 4  Move to choose menu option by Channel Up "▲" or Down "▼" button.
- 5  Adjust chosen option or access menu chosen by using Volume Up "+" or Down "-" button.
- 6  Press the "MENU" button twice.
OR
Press "TV/AV" button at any time to go back to watching TV.

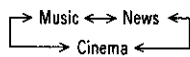

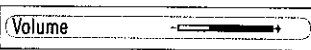

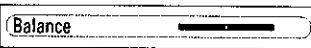


MENU You can change the level of each Function (Equalizer) for each Sound menu.

Sound menu mode will be memorized for each TV, AV1, AV2, AV3 and AV4 mode.

On-Screen	Function
Music	Recreates the acoustics feel on a live concert. Adds excitement to music videos, soundtracks and provide powerful sound presence.
News	Enable spoken voices to be heard more clearly. Perfect for news, documentaries and talk shows.
Cinema	Recreates the cinematic sound effect from your TV. This setting provides clear and crisp dialogue.



Volume, Equalizer, Balance, AVL, Surround

Item	Effect	Indicator
Menu		Menu
Volume		
Equalizer	Access	Equalizer
Balance		
AVL		AVL
Surround		Surround

Helpful Hint (**N** Normalization)

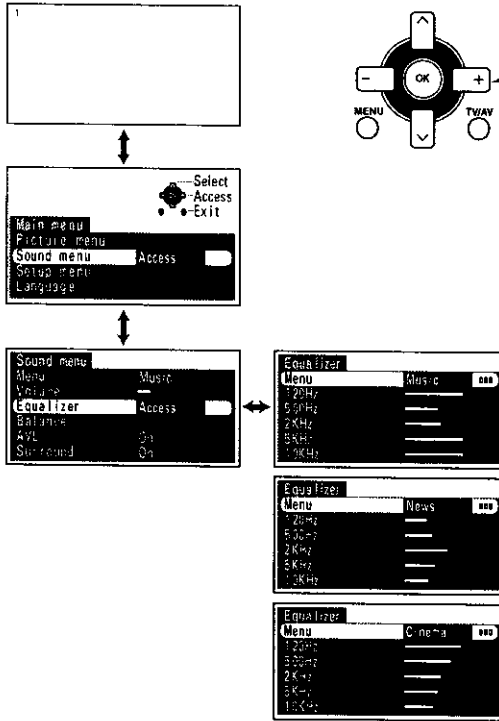
By pressing the Normal "N" button on the Remote Control while the Sound menu is displayed, the selected menu will be changed to the Normal mode.


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".

Sound menu

■ Equalizer mode

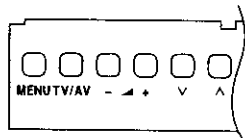


- 1 Press the "MENU" button and Channel Up "▲" or Down "▼" button until Sound menu is selected.
- 2 Press the Volume Up "+" or Down "-" button setting to Sound menu mode.
- 3 Press the Channel Up "▲" or Down "▼" button until Equalizer is selected.
- 4 Press the Volume Up "+" or Down "-" button to access Equalizer menu.
- 5 You can change the level of each frequency level by pressing the Volume Up "+" or Down "-" button.
- 6 Press  at any time to go back to watching TV.

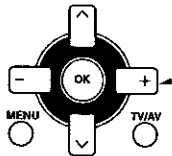
Note:



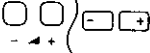
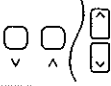
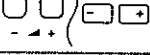

- 120Hz and 500Hz : for bass adjustment (low frequency).
- 5KHz and 10KHz : for treble adjustment (high frequency).

Setup menu



OR



- 1  Press the "MENU" button to select Main Menu mode.
- 2  Move to choose Setup menu by using Channel Up "^" or Down "v" button.
- 3  Access Setup menu mode by using the Volume Up "+" or Down "-" button.
- 4  Move to choose menu option by Channel Up "^" or Down "v" button.
- 5  Adjust chosen option or access menu chosen by using Volume Up "+" or Down "-" button.
- 6  Press the "MENU" button twice.
OR
Press "TV/AV" button at any time to go back to watching TV.

Teletext

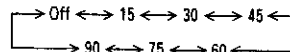
Allow you to choose 2 modes (see page 26).

FASTEXT ↔ List



Off timer

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



Wake up Timer

Switches the TV on within a preset time which you can choose from 0:10 to 12:00 hours in 10 minutes intervals.

Flicker reduction

The **Flicker reduction** will stop the flicker of the picture and vice versa when it is on.

Ch colour set

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

Blue Back

You can choose **Blue Back** display On or Off when there is no signal.

VCR/GAME

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

Favorite CH

Favorite CH allows you to store up to 9 programmes in preferred channel positions. (see page 15)

Text select

Select character set, so that all characters needed are available for text on teletext pages. (eg: cyrillic, characters, etc)
Mode languages: English / CIS / E. Europe / Persian.

Setup menu

- Child lock** To **Child lock** any channel, press the Volume Up “+” or Down “-” button.
1. When channel is “Lock”, sound is muted and screen becomes black screen colour.
 2. If any of the channels is Child Locked, Tuning menu selection on the front panel will not function and if the Volume Up “+” or Down “-” button on the front panel is pressed, Child lock icon will blinking.
 3. Main power On in Child Locked channel will display Child lock icon on screen to remind user that the Child lock is On and is in Child Locked channel.
 4. Each channel has its own memory for channels to be Child Locked.

- Geomagnetic** If you notice a slight tilt to the picture or if there are coloured patches at the corners of the screen, use this feature to eliminate them (see page 9).

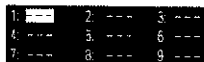
Favorite CH mode

After Auto Search, this feature allows you to store up to 9 programmes in preferred channel positions without researching again.

How to use Favorite CH mode



1. Press “MENU” button once, setting to “Main Menu”.
2. Press the Channel Up “^” or Down “v” button setting to **Setup menu**.
3. Press the Volume Up “+” or Down “-” button setting to **Setup menu** mode.
4. Press the Channel Up “^” or Down “v” button to select **Favorite CH**.
5. Press the Volume Up “+” or Down “-” button to select “Favorite CH” indication.

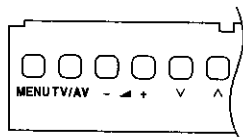


6. Key in the preferred channel number using direct Programme Number (0-9) or Channel Up “^” or Down “v” button. Press the Volume Up “+” or Down “-” button to select the 9 channels that you preferred.
7. After completed the preferred channel setting, press the TV/AV button to return the set to the normal viewing condition.
8. To view Favorite CH, press favorite button on the remote control.

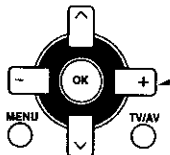
To Cancel Setting



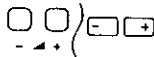
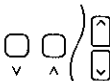
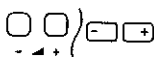

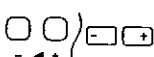


1. Press the “MENU” button once and Channel Up “^” or Down “v” button until Setup menu is selected.
2. Press the Volume Up “+” or Down “-” button on the Remote Control, setting to Setup menu mode.
3. Press the Channel Up “^” or Down “v” button until **Favorite CH** is selected.
4. Press the Volume Up “+” or Down “-” button to select the stored Programme Number that need to be cancelled and press “Normal” button.
5. Press “TV/AV” button to exit to normal viewing.

Tuning menu



OR



- 1**  Press the "MENU" button setting to Main Menu mode.
- 2**  Move to choose Setup menu by using Channel Up "^" or Down "v" button.
- 3**  Access Setup menu mode by using Volume Up "+" or Down "-" button.
- 4**  Move to choose Tuning menu option by Channel Up "^" or Down "v" button.
- 5**  Access Tuning menu by using Volume Up "+" or Down "-" button.
- 6**  Move to choose menu option by Channel Up "^" or Down "v" button.
- 7**  Adjust chosen option or access chosen menu by using the Volume Up "+" or Down "-" button.
- 8**  Press the "MENU" button three times.
OR
 Press "TV/AV" button at any time to go back to watching TV.

Tuning menu

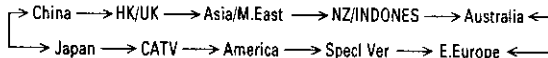
Ch select
(Channel Selection)

Select the most easily viewed channel selection method (see page 18).



Sys select
(System Selection)

Select the system.



System Select by Region

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.
Spec'l Ver	South Africa
America	U.S.A., Chile, Mexico, Panama, Peru, Philippines, Taiwan, Venezuela, etc.
CATV	USA CATV
Japan	Japan

Auto tuning

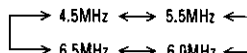
Allows you to automatically retune the TV. Useful if you move house and wish to retune your TV to the local stations. (See page 20)

Manual tuning

Allows individual programme positions to be turned, manually. (See page 21)

Sound system

You can change the Sound system used for a programme channel. Choose the required Sound system:



Colour system

Lets you select the correct transmission standard for the transmission signal being received.

Fine tuning

Use to make small adjustments to the tuning of an individual station (useful for example when weather conditions are affecting reception quality of a programme).

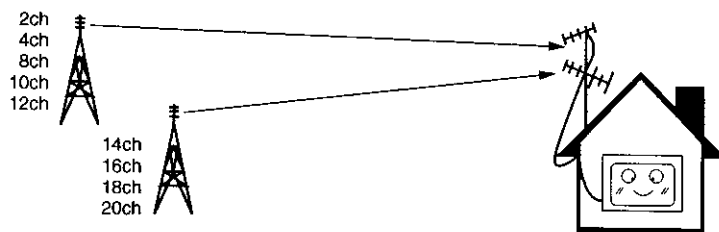
Skip

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 the Remote Control.

Tuning menu

■ Channel Selection

Select the most easily viewed channel selection method.



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

Position Select

When the Channel Selection is on 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
3	—	—
4	4	4
5	—	—
6	6	6
7	—	—
8	8	8
9	—	—
10	10	10
•	•	•
•	•	•
•	•	•
•	•	•
20	20	20
•	•	•
•	•	•
•	•	•

Direct Select

When the Channel Selection is on Direct, and Auto Tune is performed, the unit memorise the Programme Number which is the same as the channel tuned.

This method allows you to select the desired channel by pressing the Programme Number directly on the Remote Control to select the channel. The channel display numbers for the broadcast stations in each region are listed on page 19.

Tuning menu

■ Channel Allocation

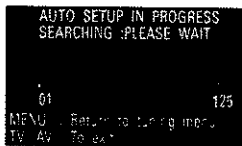
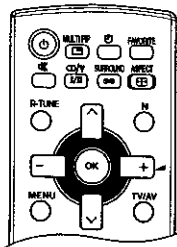
- CATV (USA CATV) channel numbers as recommended by the joint EIA/NCTA Engineering committee and published as EIA INTERIM STANDARD No.6-CABLE TELEVISION CHANNEL IDENTIFICATION PLAN-MAY 1983.
- The receiving channels are as follows:

SYS SELECT	China	HK/UK	Asia/M.East	NZ/INDONES	Australia	E.Europe	Specd Ver	America	CATV	Japan
CH DISPLAY	RECEIVE CHANNEL									
0	—	—	—	—	—	—	—	—	—	—
1	1	—	—	1	0	1	1	—	1	1
2	2	—	—	2	1	2	2	—	2	2
3	2	—	2	2	2	2	2	—	2	2
4	2	—	—	—	3	—	—	—	—	—
5	2	—	—	—	4	—	—	—	—	—
6	2	—	—	—	5	—	—	—	—	—
7	2	—	—	—	S2	—	—	—	—	—
8	2	—	—	—	—	—	—	—	—	—
11	—	—	—	—	—	—	—	—	—	—
12	12	—	11	11	—	11	11	—	—	12
13	13	—	12	—	—	12	12	—	—	13
14	—	—	—	—	—	—	13	—	—	—
15	—	—	—	—	—	—	14	—	—	—
16	—	—	—	—	S10	—	—	—	—	—
17	—	—	—	—	6	—	—	—	—	—
18	—	—	—	—	9	—	—	—	—	—
19	—	—	—	—	—	—	—	—	—	—
20	—	—	—	—	9A	—	—	—	—	—
21	—	21	21	21	10	21	21	—	—	—
22	—	—	—	—	11	—	—	—	—	—
23	—	—	—	—	12	—	—	—	—	—
24	—	—	—	—	S11	—	—	—	—	—
25	—	—	—	—	—	—	—	—	—	—
28	—	—	—	—	—	—	—	—	—	—
29	—	—	—	—	—	—	—	—	—	—
57	57	—	—	—	S44	—	—	—	—	—
58	—	—	—	—	20	—	—	—	—	—
59	—	—	—	—	21	—	—	—	—	—
60	—	—	—	—	—	—	—	—	—	—
62	—	62	62	62	—	62	62	62	62	62
63	—	63	63	63	—	63	63	63	63	63
64	—	—	—	—	—	—	—	—	—	—
69	—	69	69	69	—	69	69	69	69	62 C13
70	—	—	—	—	—	—	—	—	—	—
71	—	—	—	—	—	—	—	—	—	—
73	—	—	—	—	—	—	—	—	—	—
74	—	—	—	—	—	—	—	—	—	—
75	—	S'1	S'1	S'1	—	S'1	S'1	—	—	—
76	—	S'2	S'2	S'2	—	—	S'2	—	—	—
77	—	S'3	S'3	S'3	—	—	S'3	—	—	—
78	—	—	—	—	—	—	—	—	—	—
79	—	—	—	—	—	—	—	—	—	—
80	—	S1	S1	S1	—	S1	S1	—	—	—
81	Z1	S2	S2	S2	—	S2	S2	—	—	—
82	—	—	—	—	—	—	—	—	—	—
89	Z9	S10	S10	S10	—	S10	S10	—	—	—
90	Z10	S11	S11	S11	—	S11	—	—	—	—
91	Z11	S12	S12	S12	—	S12	—	—	—	—
92	Z12	S13	S13	S13	—	S13	—	—	—	—
93	Z13	S14	S14	S14	—	S14	—	—	—	—
94	Z14	S15	S15	S15	—	S15	S15	—	—	—
95	Z15	S16	S16	S16	—	S16	S16	—	—	—
96	Z16	S17	S17	S17	—	S17	S17	—	—	—
97	Z17	S18	S18	S18	—	S18	S18	—	—	—
98	Z18	S19	S19	S19	—	S19	S19	—	—	—
99	Z19	S20	S20	S20	—	S20	S20	—	99	C49
100	Z20	S21	S21	S21	—	S21	S21	—	100	—
101	—	—	—	—	—	—	—	—	—	—
117	Z37	—	—	—	—	—	—	—	—	—
118	—	—	—	—	—	—	—	—	—	—
119	—	—	—	—	—	—	—	—	—	—
120	—	S41	S41	S41	80	S41	S41	—	—	—
121	—	—	—	—	—	—	—	—	—	—
125	—	—	—	—	—	—	—	—	125	—

Tuning menu

■ Auto tuning (Via Remote control)

Before Auto tuning, set the "Sys select" and "Ch select" mode.



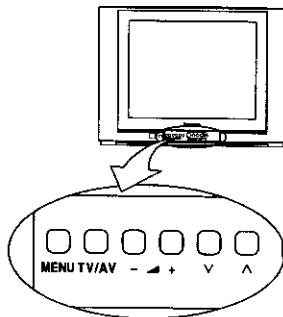
- 1 Press **MENU**.
- 2 Move to choose Setup menu option by using **↑** or **↓**.
- 3 Access Setup menu mode by using **-** or **+**.
- 4 Move to choose Tuning menu option by using **↑** or **↓**.
- 5 Access Tuning menu by using **-** or **+**.
- 6 Move to choose Auto tuning by **↑** or **↓**.
- 7 Access Auto tuning by using **-** or **+**.
Once this operation is completed, the TV will display the programme now stored on programme position 1.
- 8 Press **TV/AV** at any time to go back to watching TV.

OR

Press the **MENU** button three times.

■ Auto tuning (Via front panel)

It is also possible to use the control panel buttons on the front of the TV to tune individual programme positions.



- 1 Press **MENU** (front panel) setting to Main Menu mode.
- 2 Press **↓** or **↑** to select Setup menu in Main Menu.
- 3 Press **-** or **+** to access Setup menu.
- 4 Press **↓** or **↑** to select Tuning menu.
- 5 Press **-** or **+** to access Tuning menu mode.
- 6 Press **↓** or **↑** to select Auto tuning.
- 7 Press **-** or **+** to start search.
- 8 Press **MENU** button 3 times to exit the Tuning menu.

OR

Press **TV/AV** at any time to go back to watching TV.

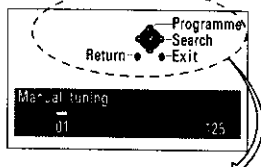
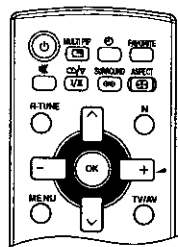
💡 Helpful Hint

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 17.
2. After the Auto tuning is finished, press the Programme Number "Up" 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 Skip function on page 17.

Tuning menu

Manual tuning (Via Remote control)

Before Manual tuning, set the "Sys select" and "Ch select" mode.



Not applicable for front panel

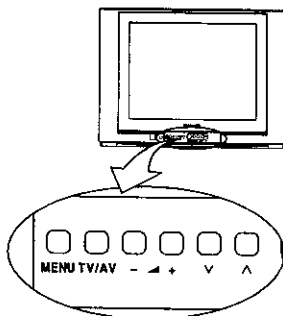
- 1 Press **MENU**.
- 2 Move to choose Setup menu option by using **▲** or **▼**.
- 3 Access Setup menu mode by using **←** or **→**.
- 4 Move to choose Tuning menu by using **▲** or **▼**.
- 5 Access Tuning menu by **←** or **→**.
- 6 Move to choose Manual tuning by **▲** or **▼**.
- 7 Access Manual tuning by using **←** or **→**.
- 8 Select the programme position to be tuned by using **▲** or **▼**.
- 9 Press repeatedly until required station is found by using **←** or **→**.
- 10 Press **TV/AV** at any time to go back to watching TV.

OR

Press the **MENU** button three times.

Manual tuning (via front panel)

It is also possible to use the control panel buttons on the front of the TV to tune individual programme positions.



- 1 Press **MENU** (front panel) setting to Main Menu mode.
- 2 Press **▼** or **▲** to select Setup menu in Main Menu.
- 3 Press **←** or **→** to access Setup menu.
- 4 Press **▼** or **▲** to select Tuning menu.
- 5 Press **←** or **→** to access Tuning menu mode.
- 6 Press **▼** or **▲** to select Manual tuning.
- 7 Press **←** or **→** to start search. Repeat above procedure to tune additional programme positions.
- 8 Press **MENU** button 3 times to exit the Tuning menu.

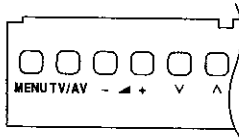
OR

Press **TV/AV** at any time to go back to watching TV.

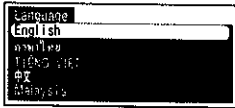
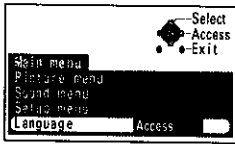
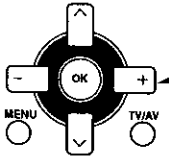
Helpful Hint

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 17.
2. After the Manual tuning is finished, press the Programme Number "Up" 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 Skip function on page 17.

Language menu



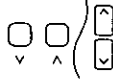
OR



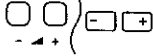
1 Press the "MENU" button to select Main Menu.



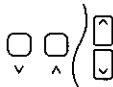
2 Move to choose Language menu by using Channel Up "^" or Down "V" button.



3 Access Language menu mode by using the Volume Up "+" or Down "-" button.



4 Move to choose language option by Channel Up "^" or Down "V" button.



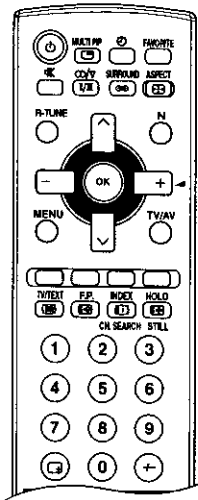
5 Press the "MENU" button twice.



OR

Press "TV/AV" button at any time to go back to watching TV.

Multi PIP



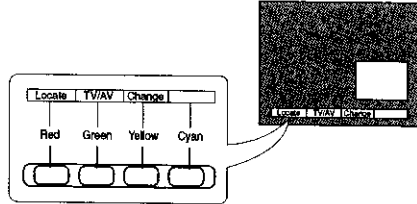
Press the "MULTI PIP" button to move between watching the current program, the picture in picture feature, picture and picture feature.

The on screen selector keys (corresponding to the four coloured buttons on the Remote Control) will disappear after a few seconds. If you want to select an operation when the keys are not shown, press the "MULTI PIP" button once more, the keys will reappear.

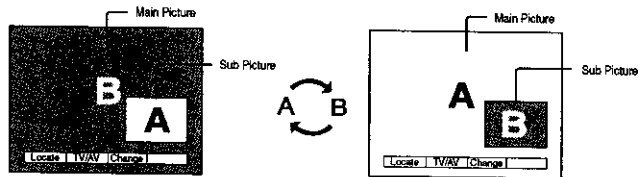
Picture in picture (PIP)



Press this button to view the two pictures at the same time (the sub picture contained in the main one)



Press the YELLOW button:



The Main picture and Sub picture will be exchanged each time you press the button.

Press the MULTI PIP button again to exit.



Multi PIP

Picture and picture (PAP)

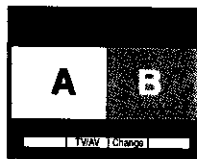


Press this button and then the corresponding coloured button to select the picture and picture (PAP).



Press the YELLOW button.
The left and right picture will be exchanged each time you press the button.

Picture and Picture mode



Press the MULTI PIP button to exit.

Channel Search



Press CH. SEARCH button to search all the programs stored on the screen.



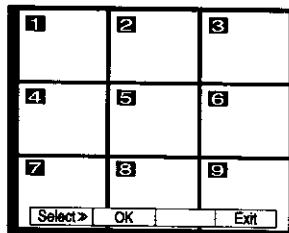
Press this button to select the pictures displayed on screen and searching is stopped then.



Press this button to view the selected channel and exit.



Press this button to view the current channel and exit.



Channel Search



Press this button to exit.

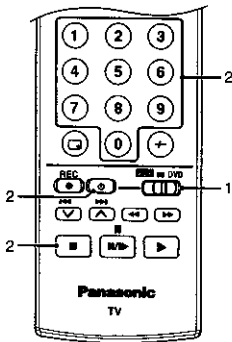
Still



Press this button to freeze the picture and press again to resume watching the current program.

Advanced Remote Control Transmitter Operation

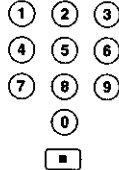
Remote control setting for VCR's and DVD's



Remote Control Operation is possible for the Panasonic VCR's and DVD's equipment.
After completion of setting, execute the various operations after pressing the VCR/DVD selection switch.

1 Switch to select VCR or DVD.

2 While pressing the VCR/DVD Power button, press the manufacturer code (enter the two digit code), and press the VCR/DVD Stop button.



VCR

Manufacturer	Code
Panasonic/National	10,11,12,13

DVD PLAYER

Manufacturer	Code
Panasonic	70,71

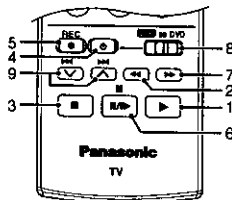
Note: After setting, execute operation confirmation. If there is no operation, set a different code.

Helpful Hint

1. The respective VCR/DVD code is cancelled when battery has been exchanged. Please set it again.
2. Depending on the model, operation of VCR's or DVD's of the manufacturers listed above may not be possible.
3. In some cases, new products may not be operative.
4. It will not operate with other than the above manufacturers.

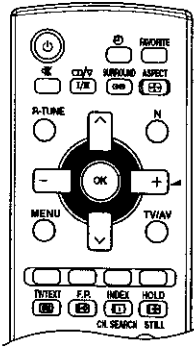
VCR / DVD

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



	Function (VCR/DVD)
1	Play button
2	Rew (Rewind) / Review button
3	Stop button
4	Power button
5	VCR REC (Record) button
6	Pause / Still button
7	FF (Fast Forward) / Cue button
8	VCR and DVD Select button
9	Programme Number Left and Right buttons for VCR Programme Skip button for DVD

Teletext Operation



- Teletext features may vary depending on the Broadcasting Companies and is only available if the channel selected is transmitting Teletext.
- When in teletext mode, the volume may still be altered to the desired listening level.

What is List mode?

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

What is FASTEXT?

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

What are the advantages?

- Page selection at the touch of a Colour-coded button.
- Easy to use step-by-step selection of the topics subject.
- Reduction of waiting time.
- Page status line at bottom of screen so you always know which button will take you to the desired information.

Note:

Characters will be illegible unless you select the Text Language which matches the text being received.

Select the correct Text Language (refer to page 14).

- While in Text mode, press menu key on remote once will display the text menu list in four colours which are Red, Green, Yellow and Cyan. The rotation of the displayed is as below:

First press: REVEAL (red) and F/T/B (green), Display Cancel (yellow) and TIME TEXT (cyan).

Second press: Contrast.

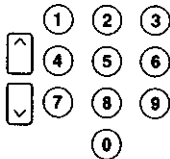
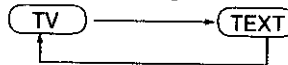
Third press: Normal Text.

- The Volume, Contrast and Fine Tuning control is same as normal TV mode. This menu adjustment also valid by used panel menu & Volume Up or Down key while in text mode.



TV/Teletext mode

By pressing the "TV/TEXT" button, to change the TV/Teletext mode as follows:



Page Selection

Page can be selected in two ways:

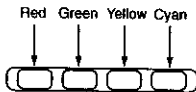
- Press or to increase or decrease the page number by one.
- By entering the page number, using 0 ~ 9 on the Remote Control.



Hold

Press to hold the current page.

Press again to cancel the hold.



Colour-coded Buttons

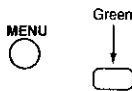
In FASTEXT mode these correspond to the differently coloured subjects. In List mode they correspond to the differently coloured page numbers.



Index

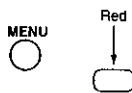
Press to return to the main index page.

Teletext Operation



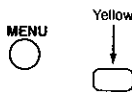
Full/Top/Bottom

Press to display special functions, followed by **Green** button.
Press the **Green** button again to expand the Top/Bottom half.
Press again to return to normal (FULL) size.



Reveal

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



Display Cancel

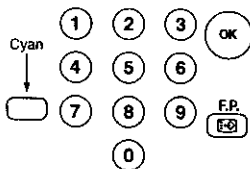
Press to display special functions, followed by **Yellow** button to view the normal TV programme. When the desired Sub-page is received, the page number will stop blinking.



Press to exit to the normal TV mode.

Notes:

- This feature is to cancel the Text display and to exit the display cancel function.
- During in text mode, Position Up or Down button can change the text page number.



Favourite Page (F.P.)

Stores a Favourite Page in memory for instant recall. To store such a page, the TV must be in List mode.

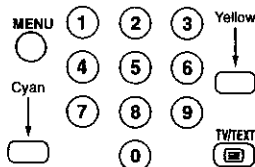
Press the **Cyan** button, select the page number, then press and hold .
The page number is now stored.

Press to recall this page.

■ Sub Coded Page Access

The TEXT Menu will be displayed in TEXT mode. 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.



Press followed by **Cyan** button to request Time Text Page.

T**** will be displayed at the top right of TV screen and enter desired Sub Page number before T**** disappears.



















To select page number 6, enter 0, 0 and 6.

Press Display Cancel (**Yellow** button) to view a normal TV programme and indication display on the top left of the screen.

During searching the sub page, the page number will be blinking at the top left of the screen. When the page is available, press the **Yellow** button (Display cancel) again to view the sub page.

Troubleshooting

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

Symptoms		Checks
Picture	Sound	
 Snowy Picture	 Noisy Sound	Aerial location, direction or connections
 Multiple Image	 Normal Sound	Aerial location, direction or connections
 Interference	 Noisy Sound	Electrical appliances Cars / Motorcycles Fluorescent lamps
 Normal Picture	 No Sound	Volume (Check whether the mute function has been activated on the Remote Control.)
 No Picture	 No Sound	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.)
 No Colour	 Normal Sound	Colour control
 Scrambled	 Normal or weak Sound	Retune channels
 Coloured Patches	 Normal Sound	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.
 No Colour	 Noisy Sound	Sound System Colour System

Specifications

Power Source : AC SINGLE 230-240V, 50Hz

Power Consumption : 164 W

Receiving System : 21 SYSTEMS

	SYSTEMS	FUNCTION
1.	PAL B,G,H	Reception of broadcast transmissions and playback from Video Cassette Tape Recorders.
2.	PAL I	
3.	PAL D,K	
4.	SECAM B,G	
5.	SECAM D,K	
6.	SECAM K1	
7.	NTSC M (NTSC 3.58 / 4.5MHz)	
8.	NTSC 4.43 / 5.5MHz	Playback from Special VCR's.
9.	NTSC 4.43 / 6.0MHz	
10.	NTSC 4.43 / 6.5MHz	
11.	NTSC 3.58 / 5.5MHz	
12.	NTSC 3.58 / 6.0MHz	
13.	NTSC 3.58 / 6.5MHz	
14.	SECAM I	
15.	PAL 60Hz / 5.5MHz	Playback from Special Disc Player and Special VCR's.
16.	PAL 60Hz / 6.0MHz	
17.	PAL 60Hz / 6.5MHz	
18.	SECAM 60Hz / 5.5 MHz	
19.	SECAM 60Hz / 6.0 MHz	
20.	SECAM 60Hz / 6.5 MHz	
21.	NTSC 50Hz / 4.5 MHz	

Receiving Channels :

VHF BAND		UHF BAND		CATV	
2 - 12	PAL / SECAM B,K1	21 - 69	PAL G,H,I / SECAM G,K,K1	S1 - S20	(OSCAR)
0 - 12	PAL B (AUST.)	28 - 69	PAL B (AUST.)	1 - 125	(U.S.A. CATV)
1 - 9	PAL B (N.Z.)	13 - 57	PAL D,K	C13 - C49	(JAPAN)
1 - 12	PAL / SECAM D	13 - 62	NTSC M (JAPAN)	S21 - S41	(HYPER)
1 - 12	NTSC M (JAPAN)	14 - 69	NTSC M (U.S.A.)	Z1 - Z37	(CHINA)
2 - 13	NTSC M (U.S.A.)			5A, 9A	(AUST.)

Tuning System : Frequency synthesizer

Auto search tuning

POS (Position) : 100 position

DIRECT : 125 position

Picture Tube : Overall Picture tube measured diagonally : 73 cm

Viewable Picture tube measured diagonally : 68 cm

CRT Deflection : 104°

Audio Output : 10 W + 10 W = 20 W

Aerial Impedance : 75 Ω Unbalanced coaxial.

Video/audio terminal:	AV1, 2, 3, 4	S-Video In	Y: 1 Vp-p, 75 Ω	
	DVD		C	0.3 Vp-p, 75 Ω
			Y	1.0 Vp-p, 75 Ω
			P _B	0.7 Vp-p, 75 Ω
			P _R	0.7 Vp-p, 75 Ω
			Video In	1 Vp-p, 75 Ω
	Monitor Out		Audio In	Approx. 0.5 V, 47 kΩ
			Video Out	1 Vp-p, 75 Ω
			Audio Out	Approx. 0.5 V, 1 kΩ

Remote Control Transmitter : N2QAJB000108

Battery : R6 (AA) × 2

Dimension (W × D × H) : 786 × 512 × 578 mm

Weight (Net) : 43 kg

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 _____



