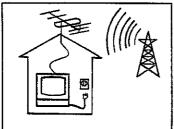
Panasonic

Colour Television TX-21V50X TX-21V50Z

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.

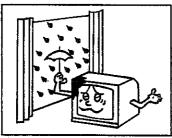
Safety Instructions



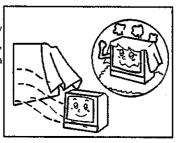
The TV set can be operated on AC Auto (110~240) V, 50/60 Hz



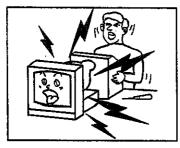
The cabinet and picture tube can be kept in good condition by simply wiping with a clean, soft cloth moistened with mild detergent and water. Do not use solutions containing benzol, petroleum or a chemical cloth. For safety, remove the plug from the wall outlet.



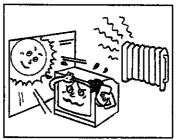
To prevent damage which may result in fire or electrical shock, do not expose the TV set to rain or excessive moisture.



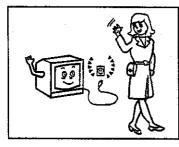
Adequate ventilation is essential to prevent failure of electrical components.



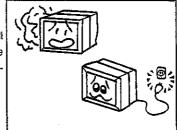
Do not remove the rear cover, as live parts are accessible when it is removed.



Avoid exposing the TV set to direct sunlight and other source of heat.



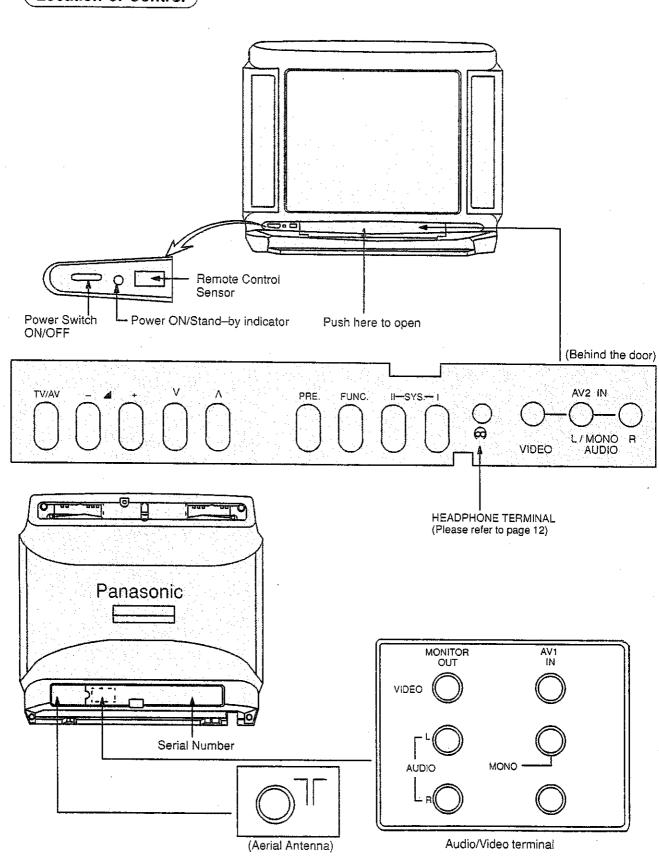
Remove the plug from the walk outlet (Power point) when the TV set is not used for a prolonged period of time.



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.

Location of Control



General Operation on the TV set

1. TV/AV Selection Button.

Press the button to select the TV mode, AV1 mode or AV2 mode.

2. Volume Up or Down Buttons

Press these buttons to adjust the higher or lower sound level.

3. Programme Number Up or Down Buttons

Press these buttons to select next higher or next lower Programme Number.

4. PRE. (PRESET) Button

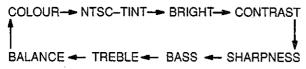
Please refer to the right column (Tuning Procedure) and page 4 (Fine Tuning Operation and Skip Operation).

5. FUNC. (FUNCTION) Button

Press to select the COLOUR, NTSC-TINT, BRIGHT, CONTRAST, SHARPNESS, BASS, TREBLE and BALANCE.

The selected function can be adjusted by pressing the Volume Up or Down buttons.

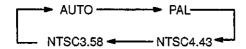
The sequence is as follows:



6. System Button

System 1 Select Operation

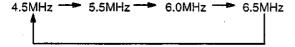
The System button is automatically set to the AUTO mode. If a clear picture cannot be obtained when receiving broadcast or AV signal, press this button repeatedly until the optimum picture is received. Press this button to change the System as follow:



System 11 Select Operation (TV mode only)

When the sound is not clear or no sound is produced on programme number selected, press this button repeatedly until the optimum sound is obtained. The selected sound mode on each programme number position is automatically memorized.

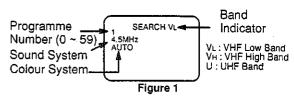
The on-screen display changes as follows:



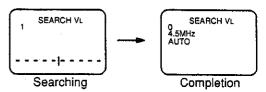
Tuning Procedure

How to Tune in Your TV Set (Automatic Search)

- The TV set must be turned on.
- 2. Press the "PRE.(PRESET)" button until the on-screen display appears as follows:



3. Press the "FUNC. (FUNCTION)" button. The on-screen display is as follows:

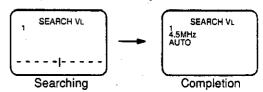


The best tuning position is automatically memorized.

4. Press the "PRE. (PRESET)" button twice to return the TV set to the normal operating mode.

How to Tune in Your TV Set (Manual Search)

- Press the "PRE.(PRESET)" button until the on-screen display appears as shown in Figure 1 (above).
- Press either the Programme Number Up or Down button to select the desired Programme Number on which you want to tune the TV station of your choice.
- Press either the Volume Up "+" or Down "-- " buttons, the TV station broadcasting on the next higher or lower frequency will be automatically tuned and memorized.



If an undesired TV station is received, press the same button again until the desired TV station is tuned.

 Use the Programme Number Up or Down buttons to select the next Programme Number that you wish to tune a TV programme on.

Repeat step 2 and 3 to tune all the available TV stations on the remaining Programme Number.

Ensure that a new programme number is set (step 2) before tuning the next station.

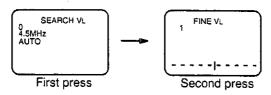
Press the "PRE. (PRESET)" button twice to return theTV set to the normal operating mode.

Fine Tuning Operation

Under normal reception condition, this function is not used. However, in areas of poor reception or constant interference, a slight adjustment on the fine tuning can improve the picture and sound quality.

How to set the Fine Tuning Operation

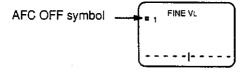
Press the "PRE.(PRESET)" button twice.
 The on-screen will appear as shown:



2. Press either the Volume Up "+" or Down " – " buttons continuously.

When the above fine tuning operation has been performed, the " *" symbol appear on the left of Programme Number.

The AFC function is deactivated.

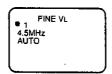


Press the "PRE.(PRESET)" button once to return the TV set to the normal operating mode.

How to Cancel the Fine Tuning Operation

If you want to reset this Programme Number to the automatically tuned condition with the AFC activated, perform the following steps:

Press the "PRE.(PRESET)" button once.
 The on-screen will appear as shown:



- 2. Press either the Volume Up "+" or Down "-" buttons.
- 3. Press the "PRE. (PRESET)" button twice after the cancel operation is completed.

Skip Operation

You can skip the unused or undesired Programme Number using the TV/AV button.

How to set the Skip operation

1. Press the "PRE.(PRESET)" button once.
The on-screen display appears as shown:



- 2. Select the Programme Number you want to skip.
- Press the "TV/AV" button.
 If more Programme Number are to be skipped, repeat step 2 and 3.

The on-screen display appears as below:



Press the "PRE.(PRESET)" button twice after the skip operation is completed.

How to cancel the Skip operation

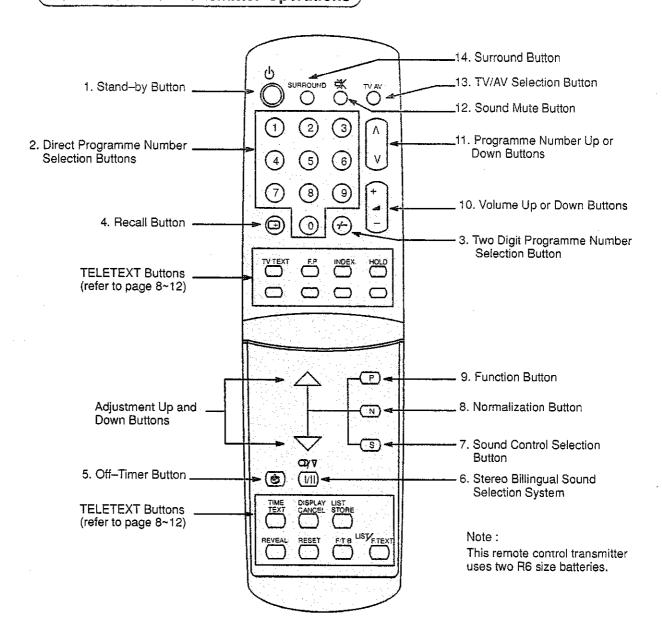
- 1. Press the "PRE.(PRESET)" button once.
- 2. Select the skipped programme number using Programme Number Up or Down button.
- 3. Press the "TV/AV" button once.



If more Programme Number are to be cancelled, repeat step 2 and 3.

 Press the "PRE.(PRESET)" button twice after the cancel operation is completed.

Remote Control Transmitter Operations



1. Stand-by Button



Press the button to switch the TV set off (in stand-by condition).

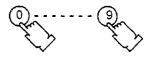
To switch ON again:

- a. Press Stand-by button again or,
- b. Press one of the Direct Programme Number Selection buttons (0~9) or,
- c. Press Programme Number Up or Down buttons on the remote control transmitter or TV set.

Note

Do not leave your TV set on stand-by mode for a long period of time. It is better to switch it off when you are away

2. Direct Programme Number Selection Buttons



Press once to select Programme Number between $0 \sim 9$.

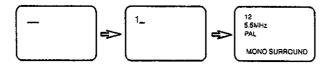
Remote Control Transmitter Operations

3. Two Digit Programme Number Selection Button



Press the button and follow by the required numbers to select Programme Number from 10 to 59.

- e.g. To select Programme Number 12.
- 1. Press this button once.
- 2. Press button number "1".
- 3. Press button number "2".



4. Recall Button



Press this button to display the current Programme Number, Colour System, Sound System, Surround mode and Off-Timer.

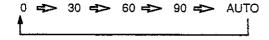
In AV mode, a blue colour screen appears if there is no AV signal (when the recall function is off).

5. Off-Timer Button



The TV set can be preset to switch off after a fixed period of time by pressing this button.

The Off-time can be selected are as follows:



In Auto mode, if the TV set is not switched off, it will automatically go to stand-by condition 5 minutes after the TV station ends broadcasting.

How to cancel the off-timer setting:

- Set the pre-set time condition to "0" mode by pressing the "off-timer" button or,
- 2. switch off the TV set.

6. Stereo/Billingual Sound Selection Button

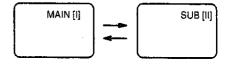


By using this button, the "STEREO" or "MONO" mode can be selected.

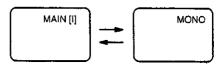
When this button is pressed, on-screen indication will change depending on type of broadcasting transmission,

The on-screen display is as follows:

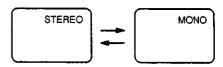
a) Nicam Main [I] / Sub [II] (TX-21V50X only)



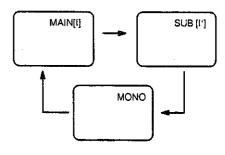
b) Nicam Mono I (Main[I])



c) Nicam Stereo



d) Nicam Dual Mono (Main [I] / Sub [II])



Note:

- If the stereo signal is weak or the receiving signal are poor, it is recommended to switch to the "MONO" mode.
- 2. When the power is switched ON, the mode is preset at either "MAIN[i] or STEREO".
- Even when the contents of the receiving signal change, selection mode is kept intact.
- When the receiving conditions deteriorate, listening will be easier if the mode is set to the "MONO" position.

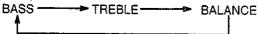
Remote Control Transmitter Operations

7. Sound Control Function (S) Button



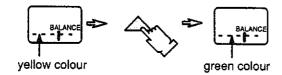
By pressing this button, one of the Sound Control function will be displayed on the factory preset level (in yellow colour).

The sequence is as below:



The level can be adjusted by:

i) pressing the Adjustment Up or Down buttonsii) pressing the Volume Up or Down buttons.



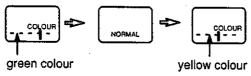
8. Normalization (N) Button



This button can be used for setting the Colour, Tint (Auto, NTSC only), Brightness, Contrast, Sharpness, Bass, Treble and Balance.

When this button is pressed, all functions setting are reset to the factory preset level (in yellow colour).

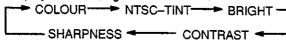
e.g. When this button is pressed after adjusting colour function.



9. Function (P) Button



By pressing this button repeatedly, the on-screen display will be changed as shown below :



During display, the level selected function can be adjusted by:

i) pressing the Adjustment Up or Down buttonsii) pressing the Volume Up or Down buttons.

Mote

NTSC-TINT will appear on the screen if NTSC 4.43 or NTSC 3.58 is selected.

10. Volume Up or Down Button

Press these buttons to adjust the volume level.

11. Programme Number Up and Down Button

Press these buttons to select the higher or lower Programme Number.

12. Sound Mute Button



Press the button to mute the sound. To cancel the mute mode:

- a) Press this button again.
- b) Press the Volume Up or Down buttons.

13. TV/AV Button

Press to select either TV mode, AV1 mode or AV2 mode.

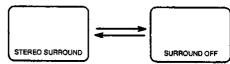
14. Surround Button



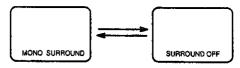
By pressing this button, the surround effect can be changed. On-screen display is as below:

1. TV mode

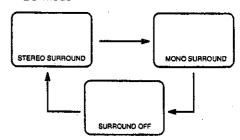
a) If STEREO mode is activated.



b) If MONO mode is activated.



2. VIDEO mode



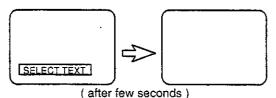
Remote Control Transmitter Operation

(Teletext mode)

How to select TELETEXT mode.

Press 'TV/TEXT' button, **SELECT TEXT** will appear in a black bar to indicate TELETEXT availability.

On-screen display appears as follows:



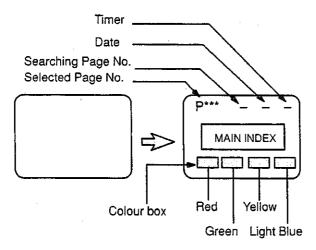
Note: A black bar briefly appears to indicate Teletext availability, when a channel is selected. If the station broadcasting Teletext has its own title transmitted in the Teletext signal for inclusion in this position, then this title will appear inside the black bar.

1. TV/TEXT Button

Press this button to select the TELETEXT mode. Press again to select the TV mode.

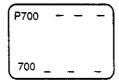
2. INDEX Button

Press this button to return to main index page.

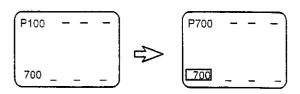


Each colour box has its own page number which can be stored by users. You can select the required page number by pressing one of these colour buttons on the remote control.

Note: The selected page number or current page number will be displayed on the top left of the screen.



e.g. when a red colour button on the remote control is pressed, on-screen will change as follows:



3. Direct Programme Number Selection Buttons (0~9).

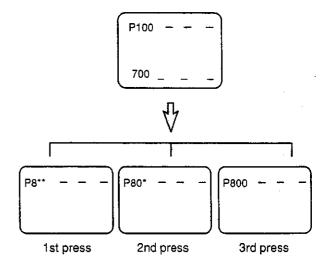
The required page number can be displayed instantly by pressing these buttons continuously.

e.g. to select page number 800.



By pressing these buttons, the current page number will be changed to the selected page number.

The sequence is as follows:



Note:

All page numbers consist of 3 digits, the lowest being 100 and the highest being 899.

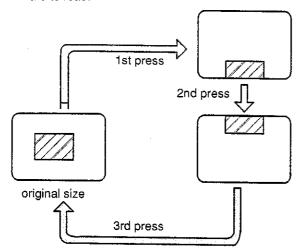
If the selected page is not available, the number will be blinking.

4. Programme Number Up or Down Buttons

Press the button to select the next higher or lower teletext page.

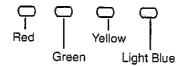
5. FULL/TOP/BOTTOM (F/T/B) Button

This button is used when characters on the screen are hard to read.



1st press — expands the upper half of the screen. 2nd press — expands the lower half of the screen. 3rd press — return it to the original size.

6. COLOUR Buttons



These buttons has own page number which will be displayed on the bottom of the screen. So that, the required page number can be displayed instantly by pressing one of these buttons.

7. RESET Button

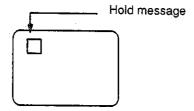
Pressing this button in the "F.TEXT" mode reset the present page to page 100 and the associated colour subject.

Pressing this button in the "LIST" mode will reset the present page to the "RED" colour coded page number.

8. HOLD Button

The selected teletext page may consist of a number of sub-pages. These sub-pages are rotated automatically, unless the 'hold 'has been activated.

Press this button to "hold "the sub-page.



Press again to cancel the "Hold" command.

9. FAVOURITE PAGE (F.P.) Button

This function is used to store a favourite page in the TV memory and can be instantly recalled by pressing the button.

To store such a page the TV must be in LIST mode and the programme position must be from 0~16.

The processes can be done as follows:

- 1. Press the Light Blue button and choose your favourite page number.
- 2. Press LIST STORE button. The page number is now stored.

To recall this page (can be done on TV mode as well), press the F.P. button.

10. REVEAL Button

Some pages contain concealed information.

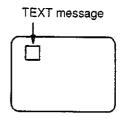
e.g. the solution to a riddle or a puzzle.

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

11. DISPLAY CANCEL Button (Teletext must be selected)

While a selected page is being searched for, the normal TV picture can be viewed by pressing this button.

When the page is found, the TEXT message appear on the top left corner of the screen. Press the "TV/TEXT" button to display the selected page.



How to watch a newsflash page.

- 1. Select a newsflash page in Text mode.
 - e.g. Page 300



Press the "DISPLAY CANCEL" button. The TV is switched from the Teletext page to TV broadcast.

Every time an update newsflash information is available, the newsflash information will be displayed at the bottom of the screen.

3. Press the "TV/TEXT" button twice.

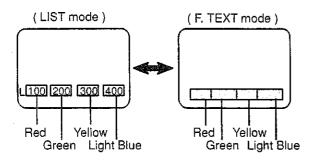
Fast Text (F. TEXT) Mode Access

In "F. TEXT" mode, select the desired teletext information by pressing one of the colour buttons on the remote control which correspond with the coloured subject title on the screen.

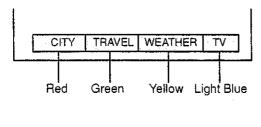
(Teletext must be selected)



1. Press this button to select the "F. TEXT". The on –screen display is as follows:



e.g. The screen displays the subject titles.





- When one of these buttons is pressed, the subject titles page will be displayed.
 - e.g. By pressing the Light Blue colour button on the remote control the TV page will be viewed.
- Follow the same procedure to access other colourcoded information pages.

Note:

- Subject titles and their sequence for access are set—up by TV broadcast stations, they are not user definable with the Remote Control.
- 2. It is a convenient way of accessing someTeletext pages without to entering page number.

TEXT ALARM Page Access

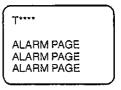
This function is used for selected pages only. e.g. The Teletext ALARM page (refer to the subject index page for page location).

(Teletext must be selected)

Select the text ALARM page. Press the "TIME TEXT" button.



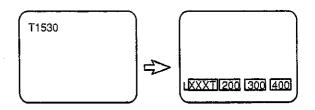
By pressing the button, this indicator (T^{***}) appears. It means you can enter the time at which this alarm page should be displayed using direct programme number selection buttons ($\tilde{0} \sim 9$) on the remote control.





This feature uses a 24 hour clock.

To set the alarm for 3:30 p.m., press numerical buttons 1,5,3,0 consecutively on the remote control (as shown above). The indicator which displayed on the top corner of the screen will change to "T1530" momentarily, then return to the current page number.



In "LIST" mode the letter "T" will appear in the current coloured box at the bottom of the screen indicating that the alarm page has been set.



Press the "DISPLAY CANCEL" button to view TV broadcast.

At 15:30 the alarm page will be displayed.

How to cancel this feature.

1. Press the "TV/TEXT" button to return to normal viewing.



2. Press the "RESET" button to select other teletext page.



- Enter the desired text page number by pressing numerica buttons (0 ~ 9) or Page Number Up or Down buttons on the remote control.
- Repeat step 2 and 3 for the remaining positions if, required. Up to 4 page numbers can be preset for each programme position from 0 to 16.
- 5. To store these page numbers into memories, press this button and hold it until the background of the 4 numbers change to white.



List Mode Page Memory Allocation

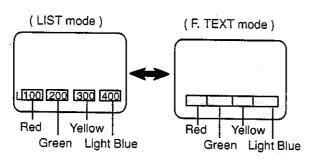
List mode is a convenient way of accessing some teletext pages without the need to enter page numbers. In this mode, 4 page numbers can be preset for each Programme Number from 0 to 16. A maximum of 68 pages can be programmed. Any one of these 4 pages can be displayed instantly by pressing the corresponding "colour" Button on the remote control.

(Teletext must be selected)

Press this button to select the "LIST" mode.
 Press again to get F. TEXT mode.



The on-screen display is as follows:



To select the memory position, press one of these colour buttons.



 Every time a "LIST" mode is selected, these 4 page numbers will flash until all 4 pages have been found and stored into memories.

Any one of these 4 pages can be displayed instantly by pressing the colour buttons on the remote control.

Note:

- 1. If a new page number is entered for viewing, it will not replace the previous number in the memory at that position unless the "LIST STORE" button is pressed and held down for a few seconds. The 4 page numbers will be reset to the preset numbers when either the "RESET" button is pressed or programme position is changed, or mode changes between "FTEXT" and LIST MODE, or TV set is turned off.
- 2. The 4 preset page numbers can be changed when required, by following procedure 2 to 5 above.
- 3. Page numbers preset can only be performed on programme number from 0 to 16.

Text Sub Page Access

When a Teletext Information Page exceeds more than one screen of information, it may take some time for automatic changing of the sub-pages to reach the sub-pages as required. It is possible to enter the required sub-page and continue watching the normal programme until the correct sub-page is found.

(Teletext must be selected)

The Required Teletext page must be selected.

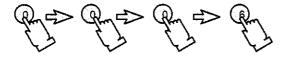
When the "TIME TEXT" button is pressed, this indicator "T**** " will be displayed on the top left of the screen.

Enter the desired sub-page number while the "T****" prompt is on the screen.

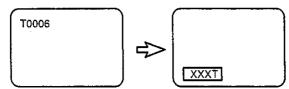
Note:

As shown above sub-page selection must be inserted as a 4 Digit Number.

i.e. for sub-page 6, press the buttons "0-0-0-6".



The screen will change as shown:



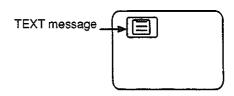
In "LIST" mode the letter "T" will appear in the current coloured box at the bottom left side of the screen. This is an indication that the sub-code has been set.

Note:

If no sub-page exists for the page for which this function has been set, the system will wait indefinitely until it has been cancelled.

Press the "DISPLAY CANCEL" button to view the normal TV mode.

When the desired sub-page is received, the "TEXT" message appears on the top left of the screen.



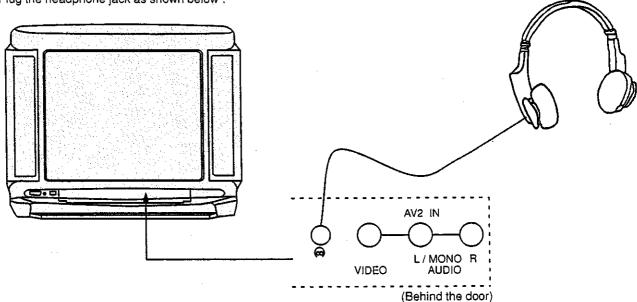
Press the "TV/TEXT" twice to display the received sub-page. To clear the sub-coded page, enter a new page number or press the "RESET" button.

Note:

It is not possible to select another Programme Number during sub-page operation, without cancelling the sub-page search operation.

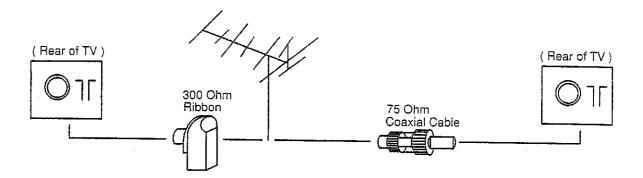
Headphone Connection

Plug the headphone jack as shown below:

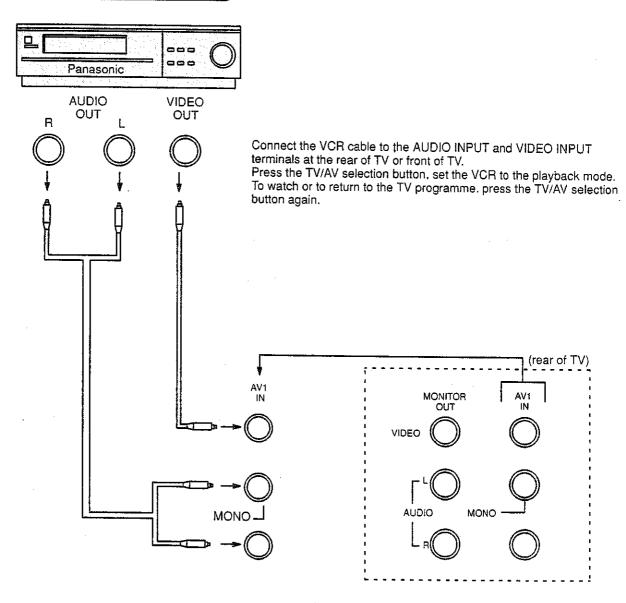


Antenna Connections

To obtain the best quality picture and sound, plug the connectors (300 Ohm Ribbon or 75 Ohm Coaxial Cable) to the antenna terminal on the rear of TV set.



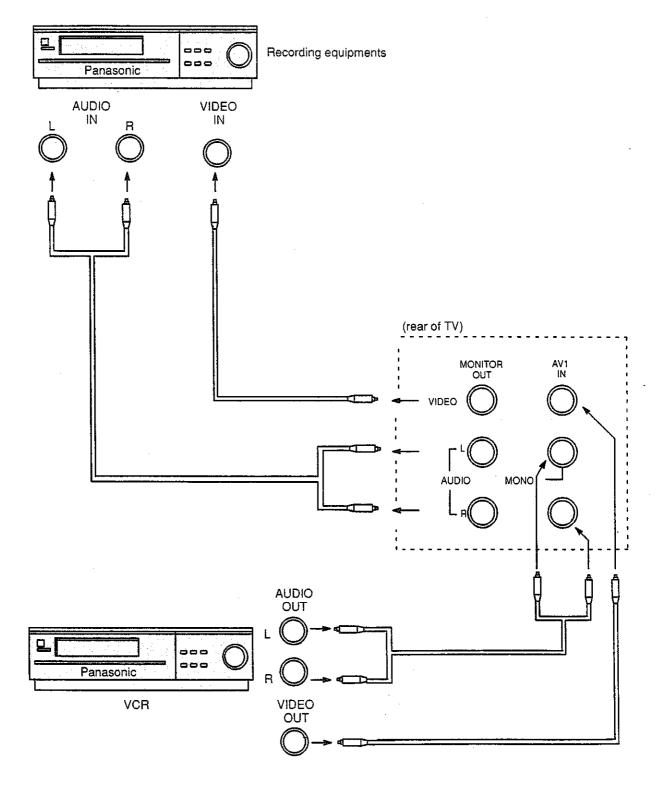
Connect Your TV to a VCR



Recording

"MONITOR OUT" terminals contain either a TV programme signal or a AV signal from AV1 input or AV2 input.

Follow the connection shown when you want to record a TV programme or copy a programme from another tape. When you record TV programme, the connection to AV1 input or AV2 input is not necessary.



Troubleshooting

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

Picture	Sound	Countermeasure	9		Not plugged into AC
Snowy Picture	Noisy Sound	Aerial location, direction connection	No Picture	No Sound	outlet. Not switched on. Contrast and Bright- ness/Volume Setting (check by pushing
Multiple Image	Normal Sound	Aerial location, direction connection			the Power Switch or Stand-by button on remote control).
Inteference	Noisy Sound	Electrical Appliances Cars / Motorcyles Flourescent Lamps	Scrambled	Weak Sound	Re-tune Channels
Normal Picture	No Sound	Check whether the mute function has been activated on the remote control.	Colour Patches	Normal Sound	Magnetic inteference from unshielded equipment. Receiver moved while "ON".
No Colour	Normal Sound	Colour Control	No Colour Rolling Picture H-Line	Noisy Sound	. System Button

Specifications

Power Source : AC AUTO (110~ 240) V, 50/60 Hz Power Consumption : 115 W

Picture Tube: 54 cm (TX-21V50X) Audio Output: 5 W X 2

51 cm (TX-21V50Z) measured diagonally, 90° deflection

Dimension (W x D x H) : 600 x 480 x 467 mm Weight : 23. 0 Kg (Net)

Receiving System : Receiving Channels :

PAL B.G
PAL I
PAL D
PAL D
1 - 12
PAL D
1 - 11
PAL D
1 - 11
PAL B
NTSC 4 43 45 5MHz
NTSC 4 43 45 5MHz
NTSC 4 43 45 5MHz

NTSC 4.43 / 6.5MHz NTSC 3.58 / 5.5MHz UHF BAND

NTSC 3.58 / 6.0MHz

NTSC 3.58 / 6.5MHz

21 - 69

PAL B, G I

28 - 69

PAL G (Australia)

13 - 56

PAL D

13 - 52

NTSC M Japan

PAL 60Hz / 5.5MHz 14 – 69 NTSC M Japan NTSC M U.S.A. PAL 60Hz / 6.5MHz PAL 60Hz / 6.5MHz

Note:

Design and Specifications are subject to change without notice.