Panasonic

Operating Instructions

Colour Television

TX-32WG15X
TX-32WG15G

This is a combined Operating Instruction manual for above models.

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

TQB600017

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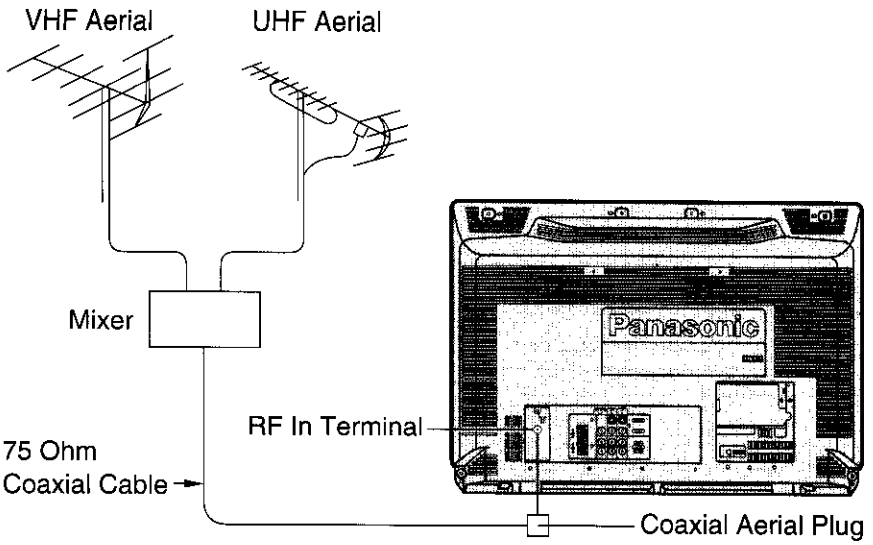
Connect the Aerial Cable to the RF In Terminal

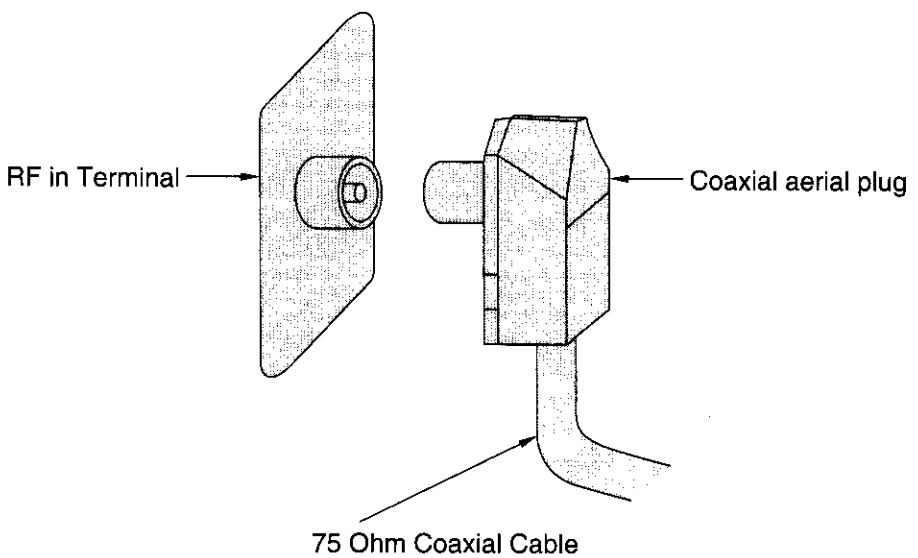


To obtain optimum quality picture and sound, an Aerial, the correct cable (75 Ohm coaxial) and the correct terminating plug are required.

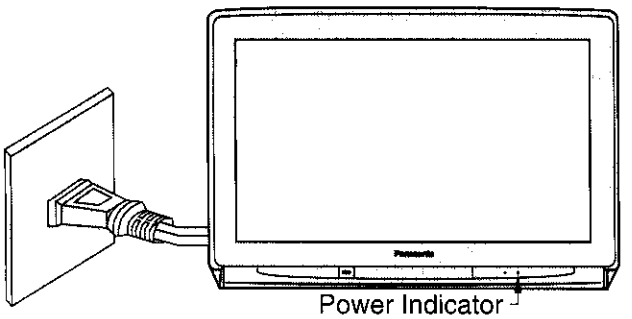
If a communal Aerial system is used, you may require the correct connection cable and plug between the wall Aerial socket and your television receiver.

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

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

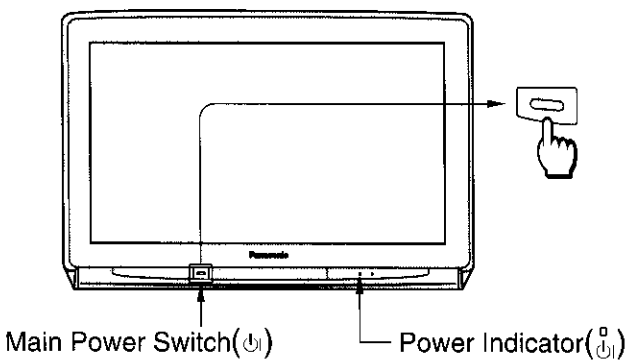


Connect the Plug to the Wall Outlet



Note:
Mains plug types vary between countries. The mains plug shown at left may therefore not be the type fitted to your set.
When connecting the mains plug to the wall outlet, the indicator on the right side of the power indicator will light (Red).

How to Turn the Power On



Push the Main Power switch on the Television to turn the set on.

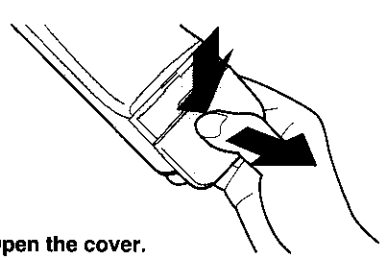
The Power Indicator will light.

Power-OFF ..... Indicator not illuminated.
Stand-by ..... Red
Power-ON ..... Green

Note:
When in the Stand-by condition (Refer to page 26), it is possible to turn the TV set on by pushing the "Power (Stand-by)" Button or the Programme Number Up and Down Buttons on the TV set or Remote Control.

Battery Installation

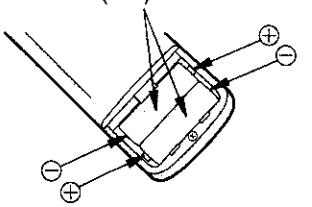
1



Open the cover.

Apply slight downward pressure while pulling towards the bottom.

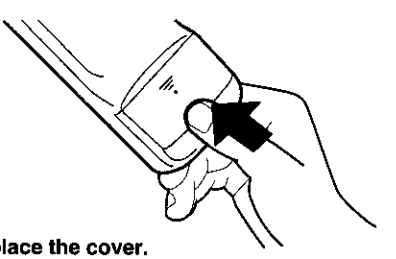
2 Two "R6 (AA)" size



Batteries:Use two "R6 (AA)" size batteries.

Insert the batteries ensuring correct polarity.
This is identifiable by the "+" and "–" symbols on both the batteries and inside the battery compartment.

3



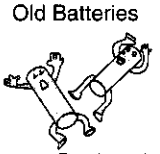
Replace the cover.

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

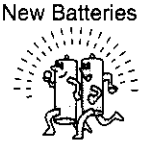
Battery precautions

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

Old Batteries

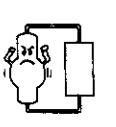


New Batteries



Replace both batteries at the same time.

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

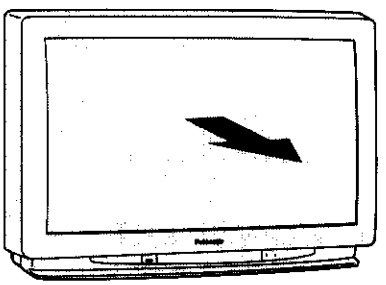


Don't Recharge.

Geomagnetism Correction

Since a large picture tube has been used, blurring of colours and patches strange colouration may occur depending on the direction the television faces. This is caused by a geomagnetic effect.
For optimum viewing, it is necessary to adjust the TV placement.

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).

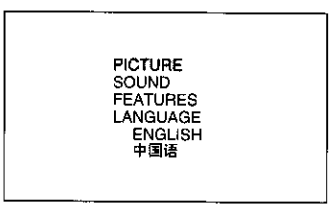


2

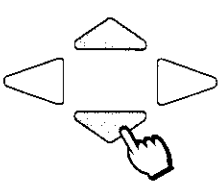
Push the "Main Power Switch".

3

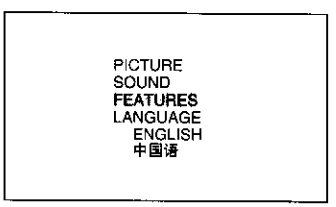
Push the "Main Menu" Button.

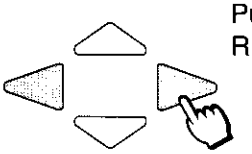


"Main Menu" Condition.

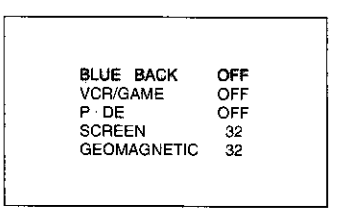
4 

Select the Feature Menu by using the Position Up "∧" or Down "∨" Button.



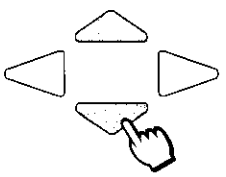
5 

Push the "Position Left or Right" Button.

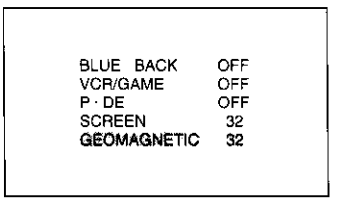


"Features Menu" Condition.

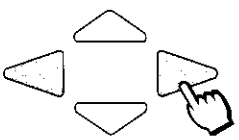
6



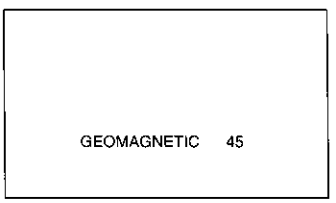
Select the Geomagnetic Mode by using the Position Up "∧" or Down "∨" Button.



7



Adjust the placement so that no viewing appears the colour patches in the four corners of the screen.

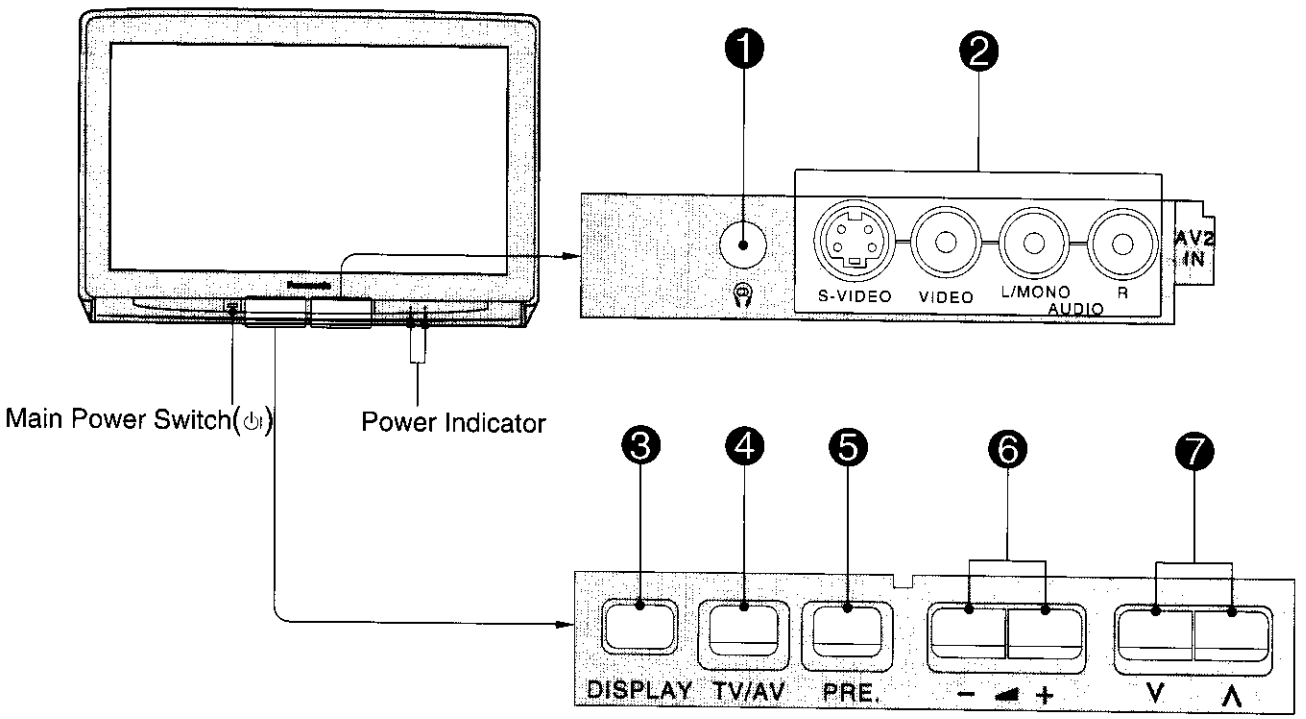


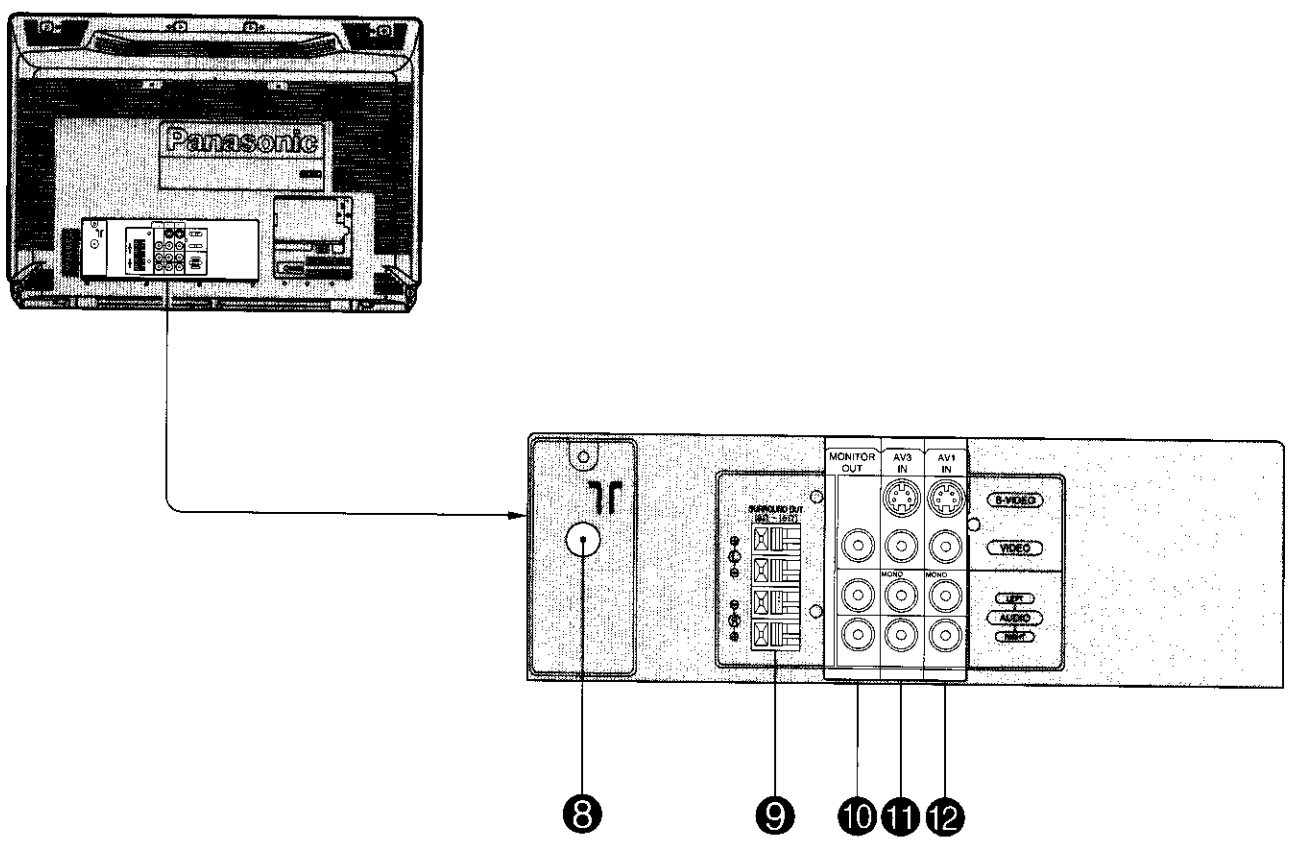
Helpful Hint

(1) If geomagnetic changes still cause colour patches on the screen even after the TV is installed, turn the power off and turn back 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.

Location of Controls

Controls and Terminals on the TV

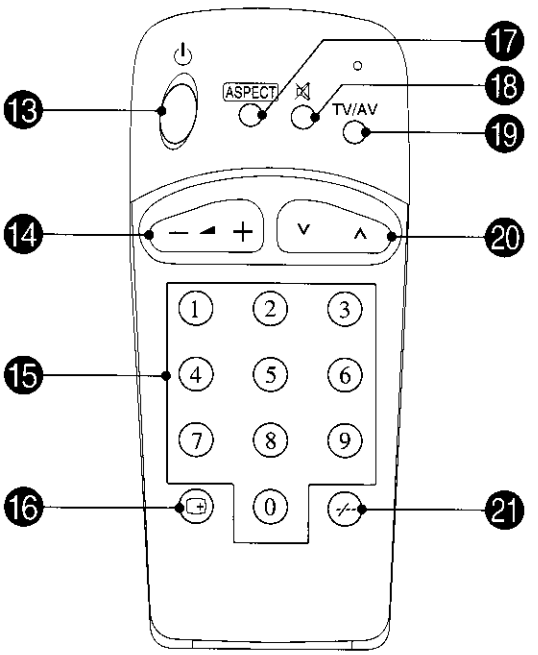


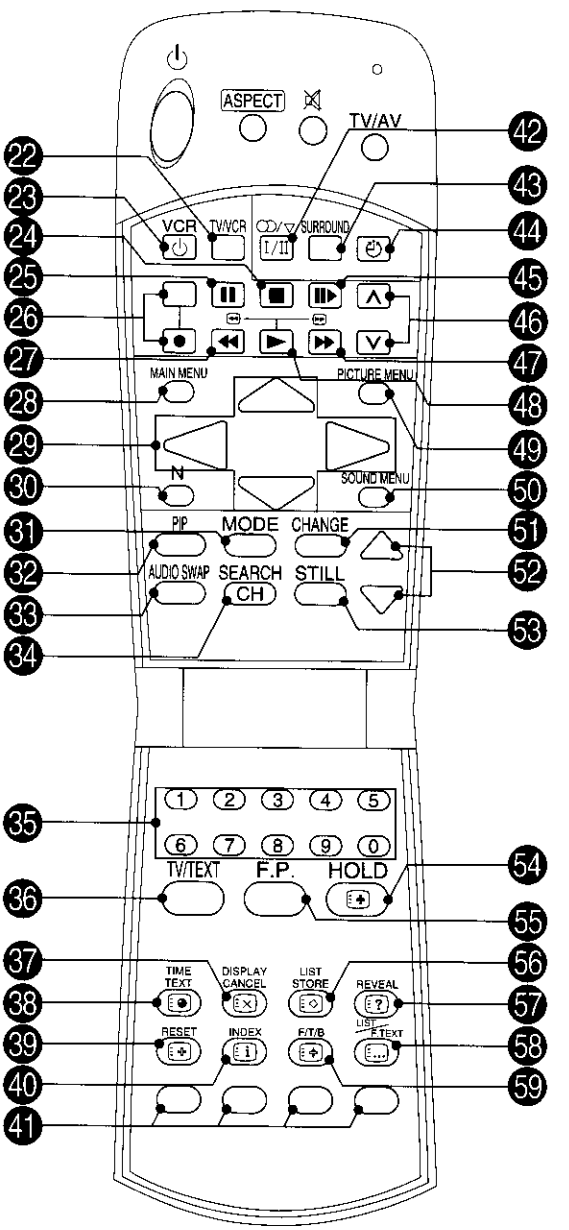


Location of Controls

Item No.	Description/Function	Refer to Page
❶	Headphones Jack	14
❷	AV2 Input Terminals	12
❸	Display	27
❹	TV/AV Selection	27
❺	Preset	17, 18, 20
❻	Volume Up (+) and Down (–)	27
❼	Programme Number Up (∧) and Down (∨)	26
❽	Aerial Terminal (Also called the "RF In Terminal")	4
❾	Surround Speaker Terminals	14
❿	Monitor Output Terminals	13
⓫	AV3 Input Terminals	12
⓬	AV1 Input Terminals	12

Remote Control

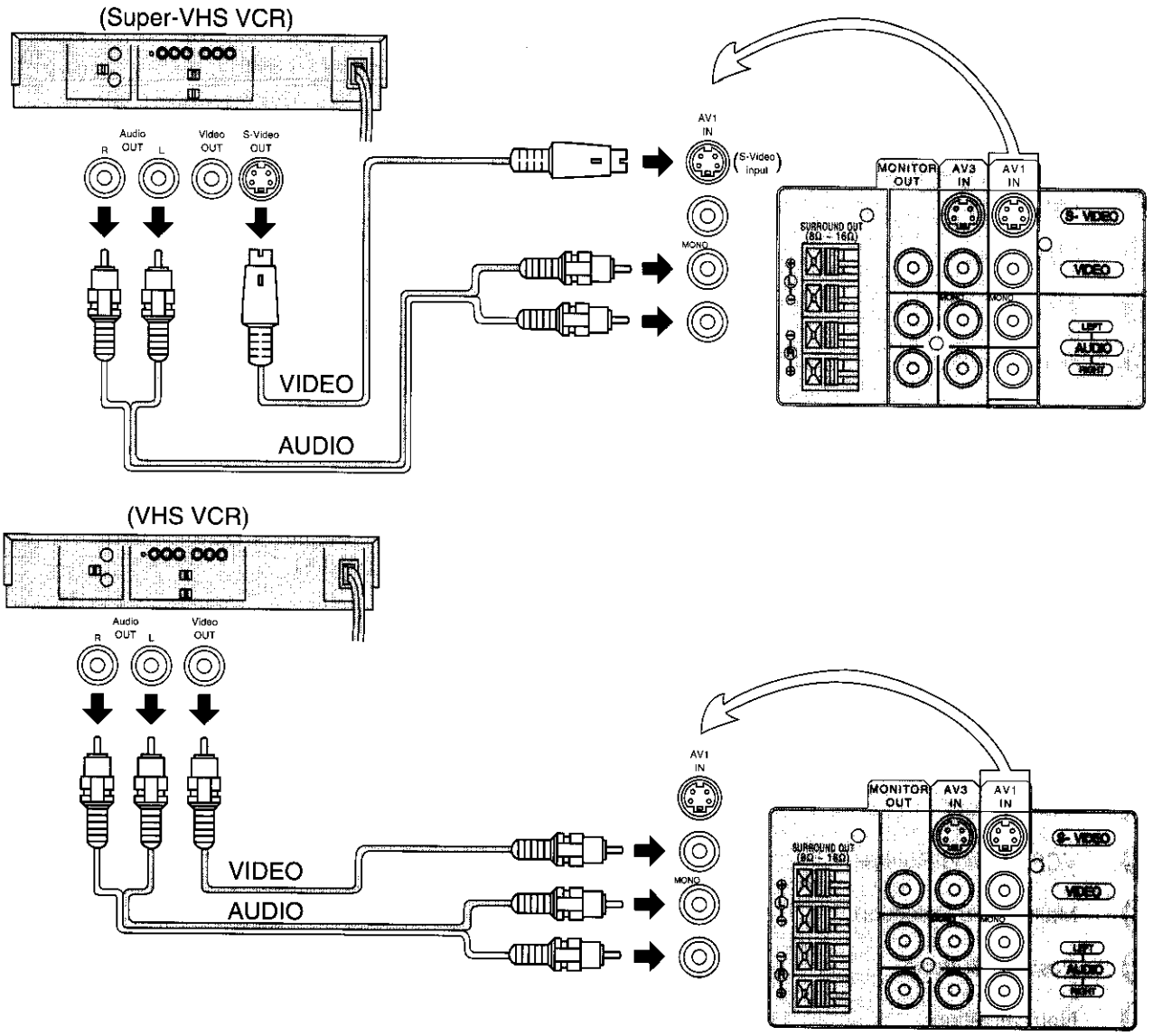




Item No.	Function	Refer to Page
13	Power (Stand-by)	26
14	Volume Up and Down	27
15	Direct Programme Number Selection	26
16	Status Recall	27
17	ASPECT	28
18	Sound Mute	27
19	TV/AV Mode Selection	27
20	Programme Number Up and Down	26
21	Two Digit Programme Number Selection	26
22	TV/VCR Mode Selection	52
23	VCR Power	52
24	VCR Stop	52
25	VCR Pause Still	52
26	VCR Record	52
27	VCR Rewind/Review	52
28	Main Menu Selection	36
29	Position Buttons	36
30	Normalisation	37
31	Picture in Picture Mode Selection	40
32	Picture in Picture Selection	40
33	Picture in Picture Audio Swap	41
34	Picture in Picture Channel Search	41
35	Numerical Buttons for Teletext Page Number Selection	42
36	TV/TEXT Selection	42

Item No.	Function	Refer to Page
37	TEXT Display Cancel	51
38	Time Text	44
39	TEXT Reset	43
40	TEXT Index	42
41	TEXT Colour-coded Buttons	48
42	Stereo/Bilingual Sound Selection	32
43	Surround Selection	31
44	OFF Timer Selection	27
45	VCR Still/Advance	52
46	Programme Number Up and Down Buttons for VCR	52
47	VCR Fast Forward/Cue	52
48	VCR Play	52
49	Picture Menu Selection	34
50	Sound Menu Selection	35
51	Picture in Picture Change	40
52	Programme Number Up and Down Buttons for Sub Picture	41
53	Picture in Picture Still	41
54	TEXT Hold	43
55	TEXT Favourite Page Selection	43
56	TEXT List Store	48
57	TEXT Reveal	43
58	TEXT LIST/F. TEXT	48
59	TEXT Full/Top/Bottom Selection	42

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



Note:

(1) When AV1, AV2 or AV3 is selected, and that AV mode has no input picture signal, the Background Colour of the TV screen will change. (This only occurs if the Blue-Back function is set to the ON condition; refer to pages 38 and 39 for details.)

(2) When an S-Video cable is connected to the S-Video terminal, the Phono Video input will be automatically switched off for that AV mode.

(3) When a Monaural VCR is used, connect the Monaural Audio cable to the Audio "L" (Left) terminal.

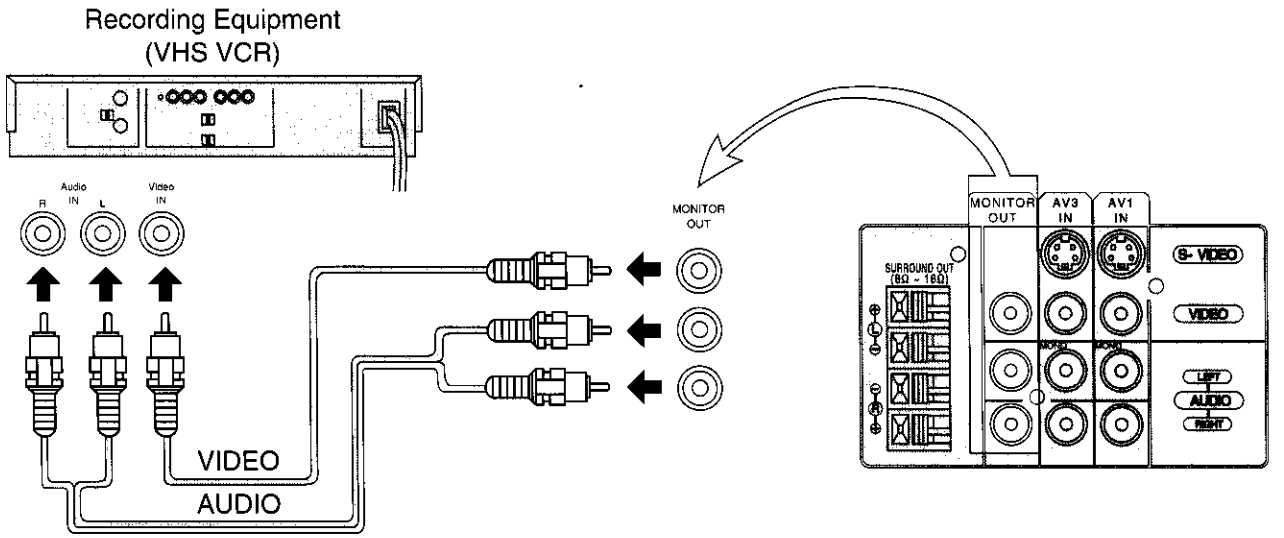
(4) Similar connections are available at the AV1, AV2 and AV3 input terminals.
Select the desired AV input position by pushing the TV/AV button. (Refer to page 27)

S(Separator) Video Terminal

The S-Video terminal on this unit is a separator luminance (Y) and chrominance (C) signal terminal which supports videos compatible with wide TV. When a full image from the video is detected by the unit, the screen size automatically sets to full. Connection is established with priority given to the S video when the S video input terminal and the video input terminal are connected at the same time. Thus connection is not required for video input. Also, when connecting, connect the audio mode at the same time.

How to connect the AV Monitor Output Terminals to other equipment.

The "Monitor Out" Terminals output the same signals as are on the TV screen at that time, e.g. TV programmes or signals from AV2 or AV3 input, (but NOT AV1)



Note:

(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) When the input signal comes from a VCR with built in S-Video terminal, the S-Video signal will NOT be output at the Monitor output terminals.

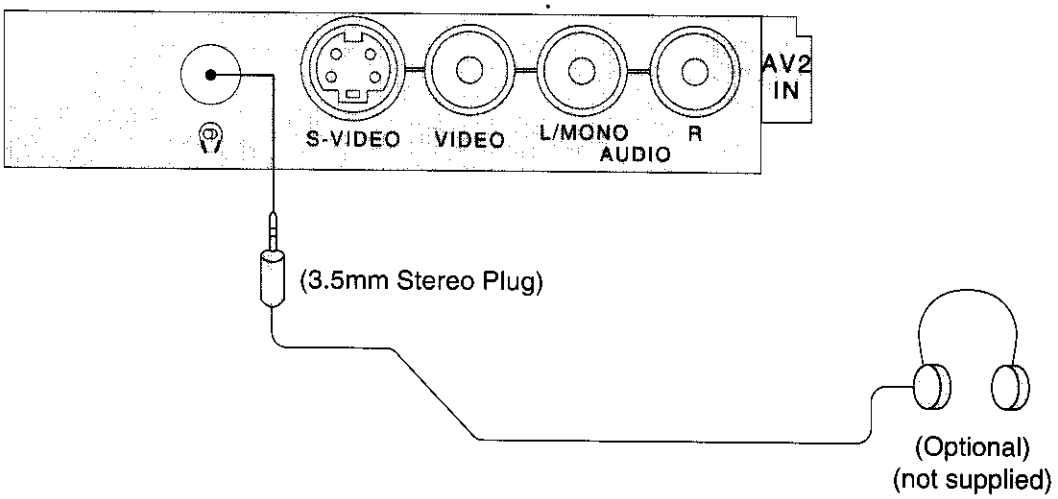
(3) AV1 Input signals will not be output at the Monitor output terminals.

(4) Teletext displays on screen will not be output at the Monitor output terminals.

Connecting Headphones

Connect headphones as follows.

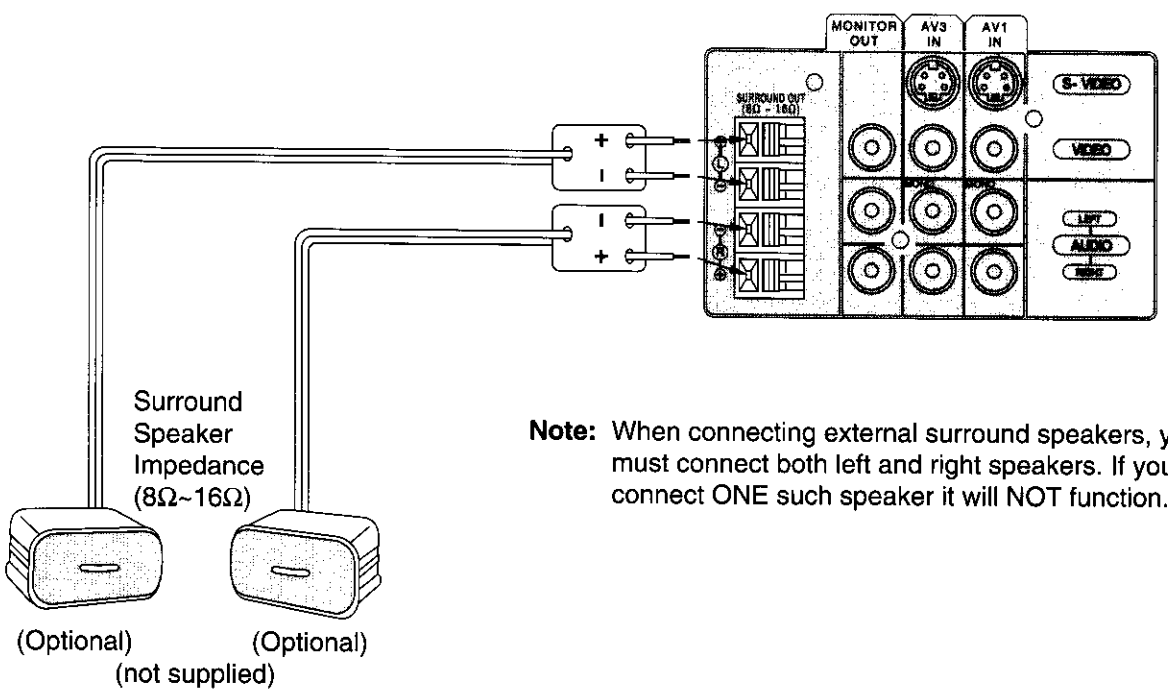
When a Headphones plug is inserted into the Headphones socket all speakers will be automatically disconnected; only the Headphones will function.



Connecting Surround Speakers

Connect the surround speakers as follows.

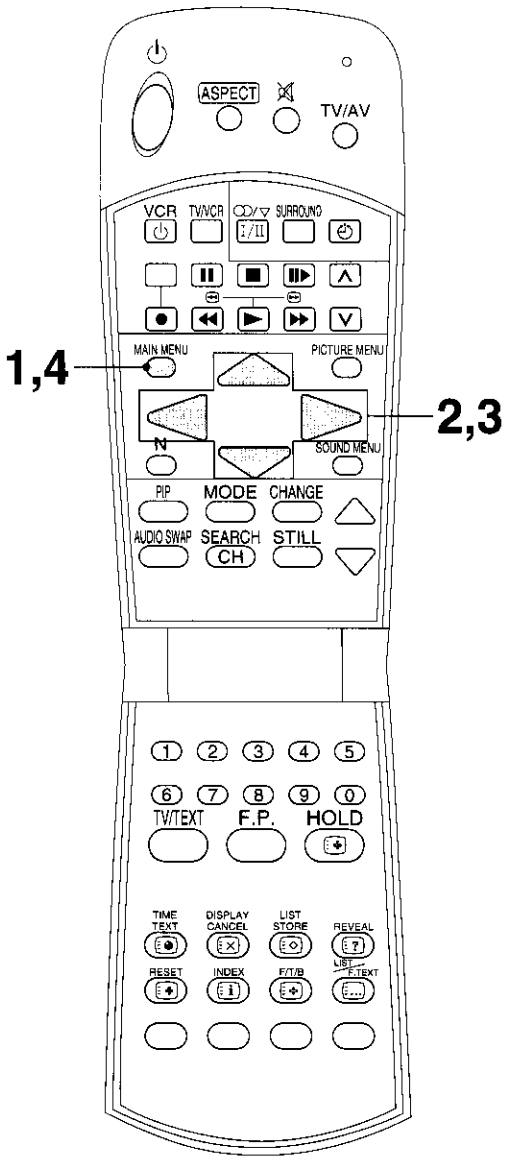
The Surround effect is enhanced by connecting external surround speakers. (optional)
Although it is possible to enjoy the "Surround effect" with this TV set as it is, upon connecting separate "Surround Speakers" the presence of the enveloping sound becomes more vivid.



Note: When connecting external surround speakers, you must connect both left and right speakers. If you only connect ONE such speaker it will NOT function.

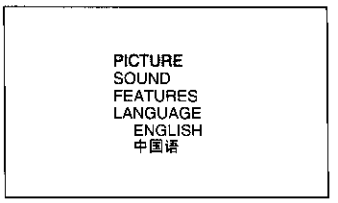
How to Select the LANGUAGE Function

Language of on-screen display can be selected as following method.



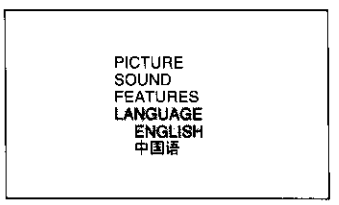
1 MAIN MENU

Push the "Main Menu" Button.



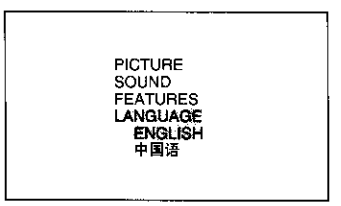
2

Push the "Position Up or Down" Button until your desired language position is reached. (English, Chinese)



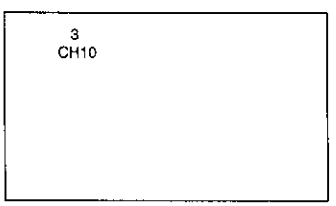
3

Push the "Position Left or Right" Button. The on-screen language display will change.



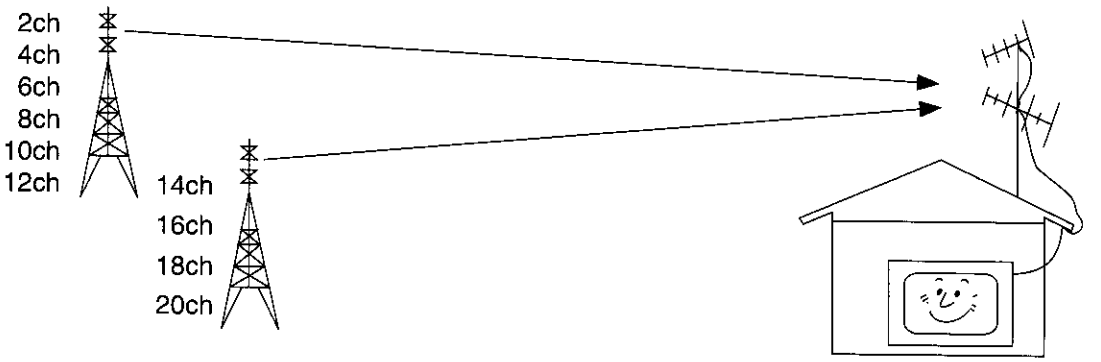
4 MAIN MENU

Push the "Main Menu" Button again to return to the normal viewing condition.



Channel Selection

Select the most easily viewed channel selection method.



EX.

Programme Number	Channel Display	Receive 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 POS. (Position), and Auto Search is performed, the unit memories the channels searched in order from Programme No.1.

Push the button ① to view channel 2.
Push the button ② to view channel 4.
Push the button ③ to view channel 6.

During Position mode various reception channels can be viewed.

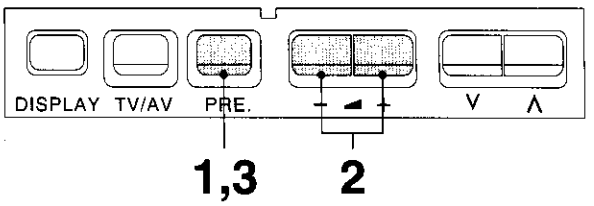
EX.

Programme Number	Channel Display	Receive 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 Search is performed, the unit memories the programme number which is the same as the channel searched.

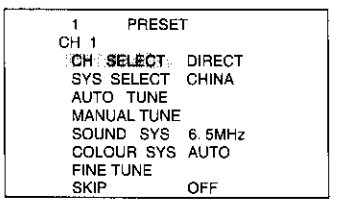
This method allows you to select the desired channel by pushing the channel display number directly on the remote control to select the station. The channel display numbers for the broadcast stations in each country are listed on Page 19.



Before Country System Selection and AUTO SEARCH tuning, set the "CHANNEL SELECT" mode, as detailed below.

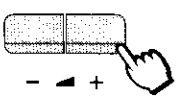
1

Push the "PRE." (PRESET) Button, setting the Preset Menu to "CH SELECT".



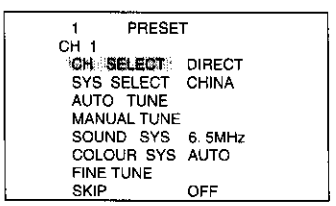
"CH SELECT" Condition.

2



Select the "CH SELECT (Channel Select)" Mode by pushing the Volume Up "+" or Down "–" Button.

- Setting range when the "POS" (Position) has been selected: Position 0–99
- Setting range when the "DIRECT" has been selected: Channel 0–125



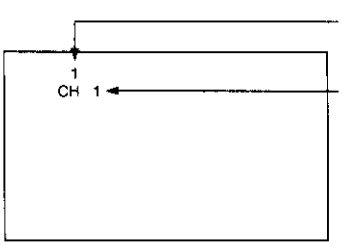
The channel select indicator will change as follows.

DIRECT ⟷ POS.

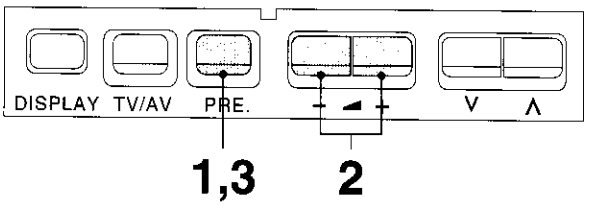
3

Push the "PRE." (PRESET) Button 8 times.

This returns the set to the normal viewing condition.



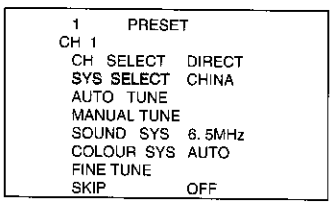
Country System Selection



Before AUTO SEARCH tuning and MANUAL SEARCH tuning, set the "SYSTEM SELECT" mode, as detailed below.

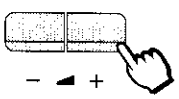
1

Push the "PRE." (PRESET) Button twice, setting the Preset Menu to "SYS SELECT".

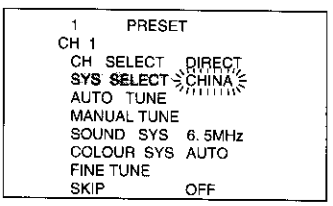


"SYS SELECT" Condition.

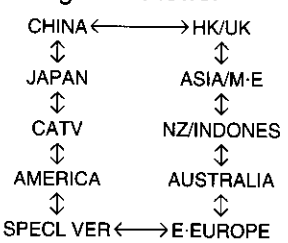
2



Select the appropriate System by pushing the Volume Up "+" or Down "–" Button, referring to "System Select by Country" as shown below.



The system select indicator will change as follows.



3

Push the "PRE." (PRESET) Button 7 times.

This returns the set to the normal viewing condition.

System Select by Country

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

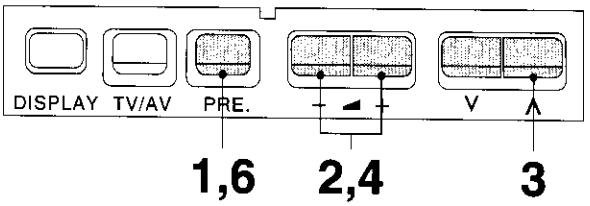
Channel Allocation

- 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•E	NZ/INDONES	AUSTRALIA	E•EUROPE	SPECL VER	AMERICA	CATV	JAPAN
CH DISPLAY	RECEIVE CHANNEL									
0	–	–	–	–	0	–	–	–	–	–
1	1	–	–	1	1	1	1	–	1	1
2	2	–	2	2	2	2	2	2	2	2
⌇	⌇	–	⌇	⌇	⌇	⌇	⌇	⌇	⌇	⌇
11	⌇	–	11	11	11	11	11	⌇	⌇	⌇
12	12	–	12	–	12	12	12	⌇	⌇	12
13	13	–	–	–	–	–	13	13	⌇	13
14	⌇	–	–	–	–	–	–	14	⌇	⌇
⌇	⌇	–	–	–	–	–	–	⌇	⌇	⌇
20	⌇	–	–	–	–	–	–	⌇	⌇	⌇
21	⌇	21	21	21	–	21	21	⌇	⌇	⌇
⌇	⌇	⌇	⌇	⌇	–	⌇	⌇	⌇	⌇	⌇
28	⌇	⌇	⌇	⌇	28	⌇	⌇	⌇	⌇	⌇
⌇	⌇	⌇	⌇	⌇	⌇	⌇	⌇	⌇	⌇	⌇
57	57	⌇	⌇	⌇	⌇	⌇	⌇	⌇	⌇	⌇
58	–	⌇	⌇	⌇	⌇	⌇	⌇	⌇	⌇	⌇
⌇	–	⌇	⌇	⌇	⌇	⌇	⌇	⌇	⌇	⌇
62	–	62	62	62	62	62	62	62	62	62
63	–	63	63	63	63	63	63	63	63	C13
⌇	–	⌇	⌇	⌇	⌇	⌇	⌇	⌇	⌇	⌇
69	–	69	69	69	69	69	69	69	⌇	⌇
70	–	–	–	–	–	–	–	–	⌇	⌇
⌇	–	–	–	–	–	–	–	–	⌇	⌇
73	–	–	–	–	–	–	–	–	⌇	⌇
74	–	S'1	S'1	S'1	–	S'1	S'1	–	⌇	⌇
75	–	S'2	S'2	S'2	–	–	S'2	–	⌇	⌇
76	–	S'3	S'3	S'3	–	–	S'3	–	⌇	⌇
77	–	–	–	–	–	–	–	–	⌇	⌇
78	–	–	–	–	–	–	–	–	⌇	⌇
79	–	–	–	–	–	–	–	–	⌇	⌇
80	–	S1	S1	S1	–	S1	S1	–	⌇	⌇
81	Z1	S2	S2	S2	–	S2	S2	–	⌇	⌇
⌇	⌇	⌇	⌇	⌇	–	⌇	⌇	–	⌇	⌇
89	Z9	S10	S10	S10	–	S10	S10	–	⌇	⌇
90	Z10	S11	S11	S11	5A	S11	–	–	⌇	⌇
91	Z11	S12	S12	S12	9A	S12	–	–	⌇	⌇
92	Z12	S13	S13	S13	–	S13	–	–	⌇	⌇
93	Z13	S14	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	–
⌇	⌇	⌇	⌇	⌇	–	⌇	⌇	–	⌇	–
117	Z37	⌇	⌇	⌇	–	⌇	⌇	–	⌇	–
⌇	–	⌇	⌇	⌇	–	⌇	⌇	–	⌇	–
120	–	S41	S41	S41	–	S41	S41	–	⌇	–
⌇	–	–	–	–	–	–	–	–	⌇	–
125	–	–	–	–	–	–	–	–	125	–

Tuning Procedure

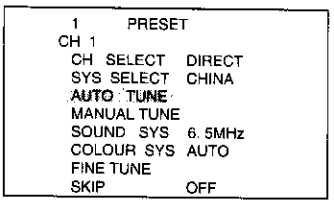
Automatic Tune (Channel Select and Country System must already be set; Refer to pages 16 to 19)



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

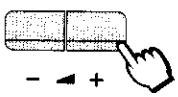
1

Push the "PRE." (PRESET) Button 3 times.

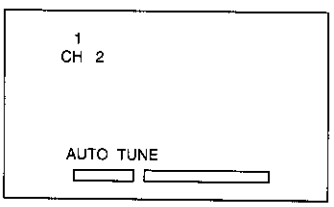


Automatic Search "AUTO TUNE" Condition.

2



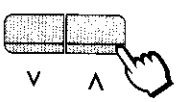
Push the Volume Up "+" or Down "–" Button.



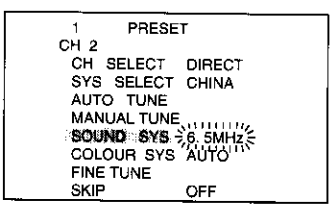
Search Start.

The best tuning position is automatically memorized.

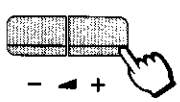
3



After all stations are tuned, the on-screen display will automatically change from "AUTO TUNE" to "SOUND SYS" Position. Confirm the sound condition of each Programme Number by using the Programme Number Up "Λ" Button.
If the Sound is not clear or no sound is produced on a Programme Number, then follow the next Step 4.

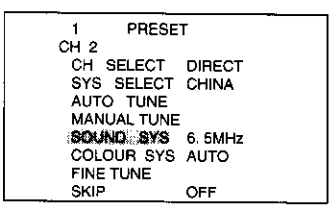


4



If necessary, push the Volume Up "+" or Down "–" Button, to improve the Sound quality.

Note:
When sound volume is too small to confirm, turn it up by using the sound volume button of the remote control.



The sound indicator will change as follows.

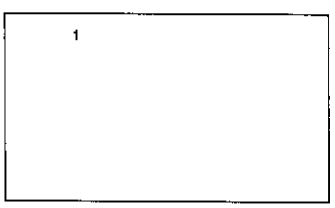
→ 4.5MHz ↔ 5.5MHz ←
→ 6.5MHz ↔ 6.0MHz ←

5

Use the Programme Number Up "∧" button to sequentially check each station.
If necessary, repeat step 4 for each Programme Number.

6

After all stations are tuned, push the "PRE." (PRESET) Button 4 times.



This returns the set to the normal viewing condition. Programme Number memory locations.

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 30.

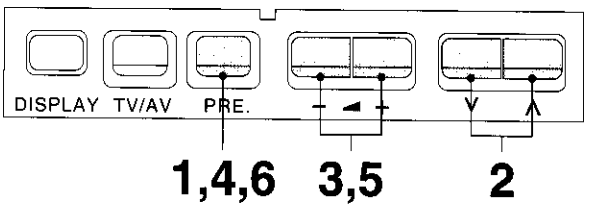
(2) After the Automatic Search is finished, push the Programme Number "Up" Button to confirm the tuning condition for each Programme Number. If some Programme Numbers are unused, it is possible to skip such Programme Numbers. Please refer to the Programme Number Skip operation on page 25.

(3) Repeated pushing of the "PRE." (PRESET) button changes the Preset Menu as follows;

→ CH SELECT (Page 16) → SYS SELECT (Page 18) → AUTO TUNE (Page 20) → MANUAL TUNE (Page 22) → SOUND SYS (Page 30)

TV Mode (Normal viewing condition) ← SKIP (Page 25) ← FINE TUNE (Page 24) ← COLOUR SYS (Page 30) ←

Manual Tune (Channel Select and Country System must already be set; Refer to pages 16 to 19)



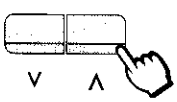
1

Push the "PRE." (PRESET) Button 4 times.

```
1      PRESET
CH 1
 CH  SELECT   DIRECT
 SYS SELECT   CHINA
 AUTO TUNE
 MANUAL TUNE
 SOUND SYS    5.5MHz
 COLOUR SYS   AUTO
 FINE TUNE
 SKIP         OFF
```

Manual Search "MANUAL TUNE" Condition.

2

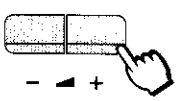


Push either the Programme Number Up "Λ" or Down "V" Button.

```
2      PRESET
CH 2
 CH  SELECT   DIRECT
 SYS SELECT   CHINA
 AUTO TUNE
 MANUAL TUNE
 SOUND SYS    5.5MHz
 COLOUR SYS   AUTO
 FINE TUNE
 SKIP         OFF
```

Select the desired Programme Number.

3



Push the Volume Up "+" or Down "–" Button.

Volume "+": Next higher Channel

Volume "–": Next lower Channel

```
2
CH 2


MANUAL TUNE
```

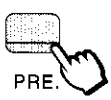
Search Start.

↓

```
2      PRESET
CH 4
 CH  SELECT   DIRECT
 SYS SELECT   CHINA
 AUTO TUNE
 MANUAL TUNE
 SOUND SYS    5.5MHz
 COLOUR SYS   AUTO
 FINE TUNE
 SKIP         OFF
```

The best tuning position is automatically memorized.

4

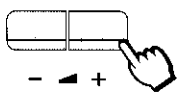


Push the "PRE." (PRESET) Button.

```
2      PRESET
CH 4
 CH  SELECT   DIRECT
 SYS SELECT   CHINA
 AUTO TUNE
 MANUAL TUNE
 SOUND SYS    5.5MHz
 COLOUR SYS   AUTO
 FINE TUNE
 SKIP         OFF
```

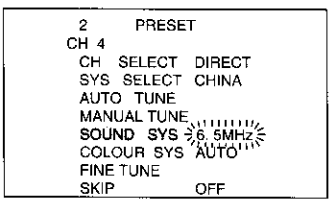
"SOUND SYS" Condition.

5



If the sound is not clear or no sound is produced on a Programme Number Position, push the Volume Up "+" or Down "–" Button.

Note:
When sound volume is too small to confirm, turn it up by using the sound volume button of the remote control.



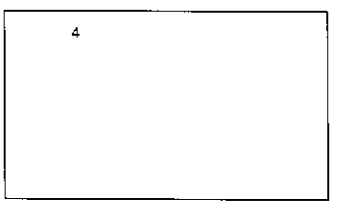
You may improve the Sound quality.

The sound indicator will change as follows.

→4.5MHz↔5.5MHz←
→6.5MHz↔6.0MHz←

6

Push the "PRE." (PRESET) Button 4 times.



This returns the set to the normal viewing condition.

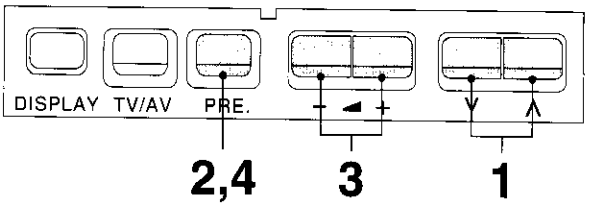
Helpful Hint

(1) If a clear picture cannot be obtained even when a Broadcast or AV signal is received, refer to the "Colour System Selection" operation on page 30.

(2) After the Manual Search is finished, push the Programme Number "Up" Button to confirm the tuning condition for each Programme Number. If Programme Numbers are unused, it is possible to skip such Programme Numbers. Please refer to the Programme Number skip operation on page 25.

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

Fine Tuning



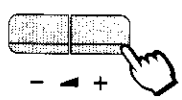
Under normal reception conditions this function is not required or necessary.
However, in areas of poor reception or constant interference, a slight adjustment of the tuning may improve the picture and sound quality.

1

Select the channel which you want to try to improve, using the Programme Number Up "Λ" or Down "V" Buttons.

2

Push the "PRE." (PRESET) Button 7 times, setting the Preset menu to "FINE TUNE".

3 

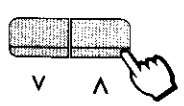
Push and hold the Volume Up "+" or Down "–" Button until a clearer picture is received.
The "■" symbol appears to the left of the Programme Number. After fine tuning has been adjusted. This symbol tells you that the set's Automatic Fine Tuning has been disabled for that Programme Numbers.

4

Push the "PRE." (PRESET) Button twice, to return the set to the normal viewing condition.

How to Cancel the Fine Tuning Function

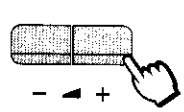
Cancelling previously adjusted (manually) fine tuning, means re-activating the AFC (Automatic Frequency Control) Function, also known as AFT (Automatic Fine Tuning). Re-activating the Automatic Fine Tuning means albaming the set to automatically tune to the optimum tuning position, for that Programme Number.

1 

Select the "AFC OFF" Programme Number which you want to return to Automatic Frequency Control (cancel the manual fine tuning).
"AFC OFF" Programme Numbers are indicated to you by the "■" symbol to the left of the Programme Numbers in the On-Screen-Display.

2

Push the "PRE." (PRESET) Button 4 times, setting the Preset menu to "MANUAL TUNE".

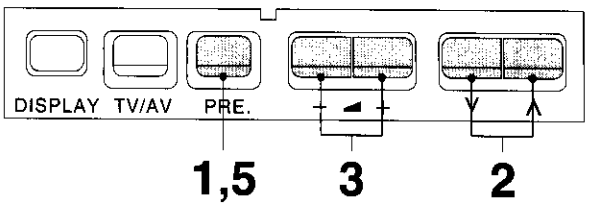
3 

Push the Volume Up "+" and then the Down "–" Button, briefly.
The best tuning position is automatically memorised.
(In other words, manually tune away from the transmission, and then back to it.)

4

Push the "PRE." (PRESET) Button 5 times, to return the set to the normal viewing condition.

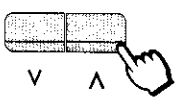
Programme Number Skip



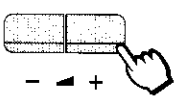
It is possible to step Programme Numbers on which no TV stations are tuned appearing on the screen. The function is only effective when selecting Programme Numbers by pushing the Programme Number Up or Down Buttons either on the TV set or the Remote control.

1

Push the "PRE." (PRESET) Button 8 times, setting the Preset menu to "SKIP".

2 

Select a Programme Number you want to skip, by pushing the Programme Number Up "Λ" or Down "V" Buttons.

3 

Push the Volume Up "+" or Down "–" Button.
The displayed "OFF" condition changes to "ON"

4

Repeat Steps 2 and 3 for the remaining Programme Numbers for which the Skip function is desired.

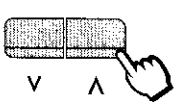
5

After Skip operation is completed, push the "PRE." (PRESET) Button (once) to return the set to the normal viewing condition.

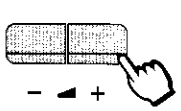
How to Cancel the Skip Function

1

Push the "PRE." (PRESET) Button 8 times, setting the Preset menu to "SKIP".

2 

Select the skipped Programme Number, by pushing the Programme Number Up "Λ" or Down "V" Buttons.

3 

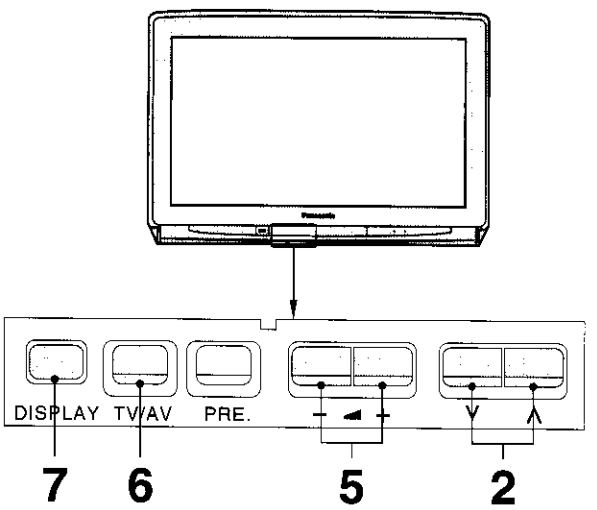
Push the Volume Up "+" or Down "–" Button.
The displayed "ON" condition changes to "OFF".

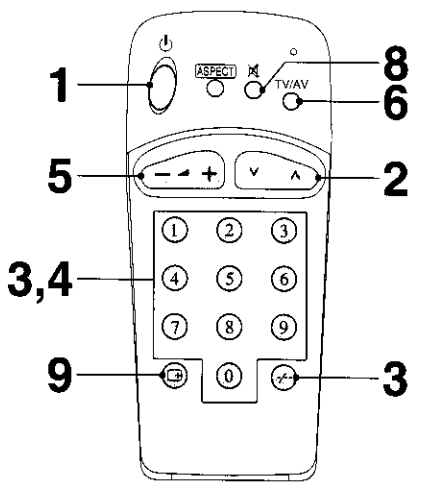
4

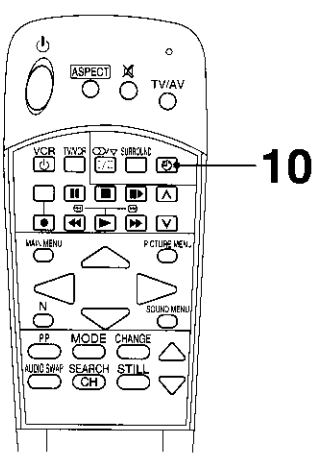
Repeat Steps 2 and 3, if you wish to cancel the Skip function on any other Programme Number.

5

After the Skip Cancel operation is completed, push the "PRE." (PRESET) Button (once) to return the set to the normal viewing condition.







1

How to switch the power ON or OFF

The TV set must first be switched on at the wall outlet and at the Main Power Switch. (Refer to page 5)

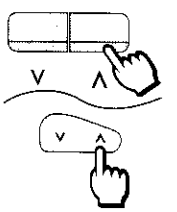
Push this button to turn the TV set ON, from STANDBY mode.

Push it again to turn the TV set OFF. (to STANDBY)

Note:

It is also possible to turn the TV set on STANDBY by pushing 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.

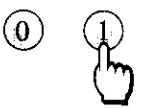
2



Programme Number Selection

Push the Programme Number Up "∧" or Down "∨" Button to select the next higher or lower Programme number.

3



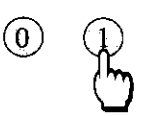
Programme Number Selection (CH SELECT = POS.)

You can select the numbers 0 to 9 directly by pushing "Number 0 – 9" button and the two digit Numbers by pushing "Two Digit" and "Number 0-9" buttons.

Programme Number 8..... (8)

Programme Number 12..... (-/--), (1), (2)

4



Programme Number Selection (CH SELECT = DIRECT)

You can select the number directly by pushing the corresponding number button on the Remote Control.

Programme Number 8..... (8) or (0), (8)

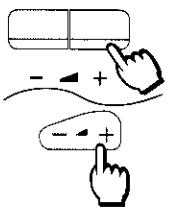
Programme Number 36..... (3), (6)

Programme Number 124.... (1), (2), (4)

Note:

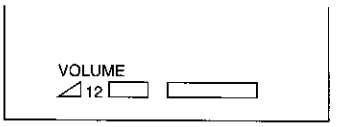
The unit waits another entry for approximately 3 seconds after a button is pushed, and does not immediately select the channel.

5



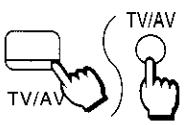
Volume Adjustment

Push the Volume Up "+" or Down "–" Button to increase or decrease the sound volume level.



Note:
The on-screen display will indicate both numerically and graphically the volume level. Numeric levels start at "0" for zero or no sound, and will increase up to 63 which is the maximum sound level.

6



TV/AV Selection

Push the "TV/AV" Button to select TV, AV1, AV2, AV3 input signal modes sequentially.

7

Display Button

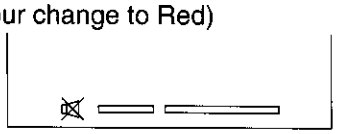
By pushing the Display button various demonstrations and on-screen displays will appear.
Push the Display button a second time to half the display/demonstration mode, and return the set to the nomal viewing condition.

Note:
When this button is pushed, the Picture and Sound Menus change to Picture (AUTO) and Sound (XBS).

8

Mute Button

Push this button to mute the sound completely.
The "Mute" symbol will appear. (colour change to Red)

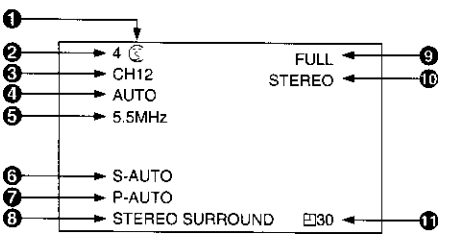


Push the button once again to restore the previous sound level, and cancel the mute.

9

Recall Button

Push the "Recall" Button to display the current system status.
Push again to cancel.

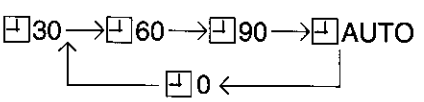


❶ VCR/GAME Indicator (Refer to page 38)
❷ Programme Number (Refer to page 26)
❸ Channel Display Number (Refer to page 19)
❹ Colour System (Refer to page 30)
❺ Sound System (Refer to page 30)
❻ Sound Menu (Refer to page 35)
❼ Picture Menu (Refer to page 34)
❽ Surround Mode (Refer to page 31)
❾ Wide Mode (Refer to page 28)
❿ Audio Mode (Refer to page 32)
⓫ OFF Timer (Refer to page 27)

10

Off Timer Button

The TV set may be preset to switch to stand-by after a fixed period.
By pushing "OFF-Timer" Button, you can select the preset time; either "30", "60", "90" minutes or AUTO Mode.



After setting the Off-Timer, push the Recall button (refer section 9 above), to confirm the remaining time before the set will switch itself to Stand-By.

Setting Off-Timer to AUTO mode.
If the set is not switched off when the TV station stops broadcasting, it will automatically go to Stand-by Mode after 5 minutes.

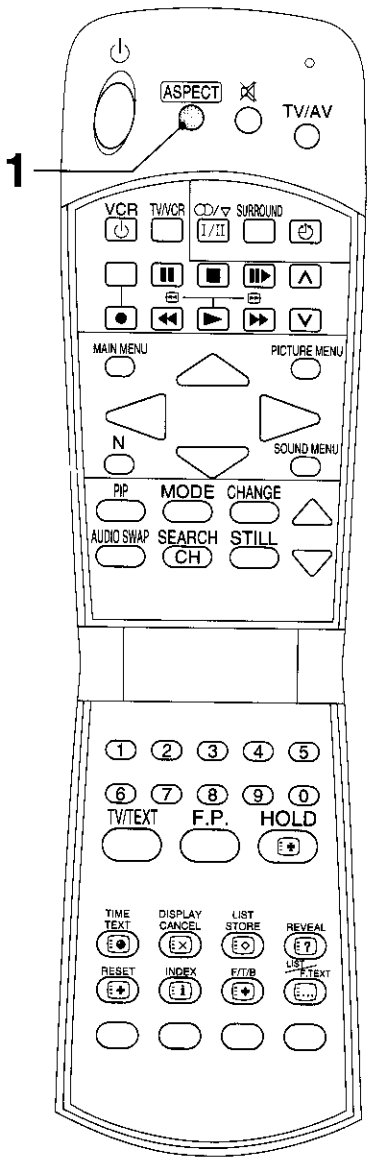
Note:
Setting Off-Timer to AUTO mode will not operate when the Television set is in AV Mode.

Adjusting the Wide Picture

1 ASPECT

Even when this TV is in 4 : 3 screen mode, you can widen the picture tube width to the full screen and enjoy a close-up image.

By pushing the "ASPECT" Button, you can sequentially select the Wide Mode as below.



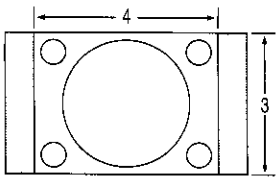
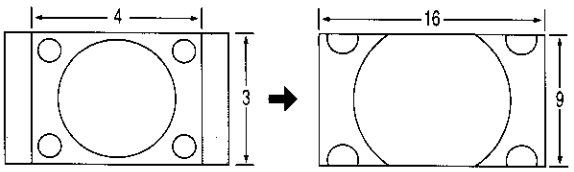
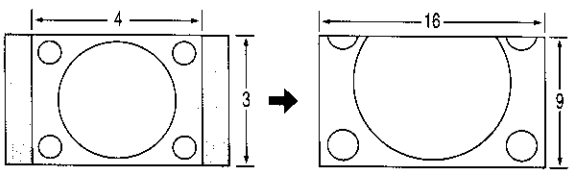
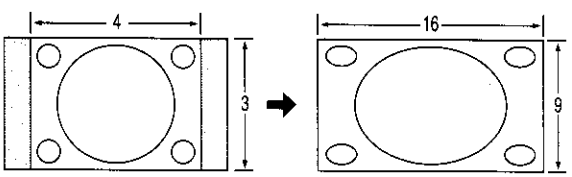
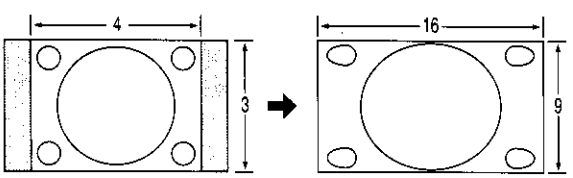
Wide Screen condition is as shown below.

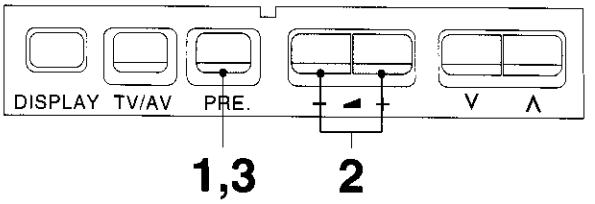
TV Mode	TEXT Mode	AV Mode
4 : 3	4 : 3	4 : 3
ZOOM1	FULL	ZOOM1
ZOOM2	FULL	ZOOM2
FULL	FULL	FULL
JUST	FULL	JUST

Note:

(1) The screen size will be stored in memory for each mode (TV, AV1, AV2 and AV3).

(2) The screen position can be changed in the Zoom 1, Zoom 2 and Just modes. (Refer to pages 38 and 39 for details)

Mode	Screen	Explanation
4 : 3		Normal TV broadcast screen (4 : 3)
ZOOM1		Since the both the vertical and horizontal display are expand at the same rate, widening the picture will not result in an elongated image, so that the viewer can enjoy a wide screen image without distortion. **Note:** The top and bottom of the picture may disappear, however.
ZOOM2		The vertical and horizontal directions will be expanded at the same rate, and the vertical direction at the bottom of the screen will be compressed. Thus the subtitles which disappered in the ZOOM 1 mode will be visible without adjusting the top and bottom of the screen. **Note:** The bottom portion of the screen will be visible as a compressed image.
FULL		Since the horizontal borders will be expanded to the width of the tube without changing the horizontal section, you can enjoy a wide screen without cutting the image. When the full picture is software the compressed image will return to the normal image, and will be expanded to the full area of the picture tube. **Note:** A Normal picture will become elongated.
JUST		The left and right borders will be slightly widened. However the centre image will not be as elongated as in a full image, so no feeling of distance from the screen will occur. **Note:** This will result in a slightly elongated image. The top and bottom of the picture may disappear slightly.

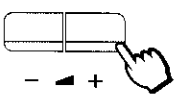


Sound System Selection (Different countries use differing systems)

1

(This function is used only in the TV mode, and is not applicable in AV Mode)
When the sound is not clear or no sound is produced on a Programme Number, push the "PRE." (PRESET) Button 5 times, setting the Preset Menu to "SOUND SYS".

2



Push the Volume Up "+" or Down "–" Button repeatedly until the optimum sound is obtained.
The sound system will change as shown.

4.5MHz↔5.5MHz↔6.0MHz↔6.5MHz

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

3

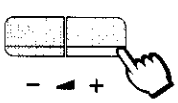
Push the "PRE." (PRESET) Button 4 times to return the set to the normal viewing condition.
The selected Sound System is automatically memorised.

Colour System Selection (Different countries use differing systems)

1

If a clear picture with current colours cannot be obtained when a Broadcast or AV signal is received, push the "PRE." (PRESET) Button 6 times, setting the Preset Menu to "COLOUR SYS". In AV mode it is only nesessary to push the "PRE." (PRESET) button once.

2



Push the Volume Up "+" or Down "–" Button repeatedly until the optimum image is produced.
The colour system will change as shown.

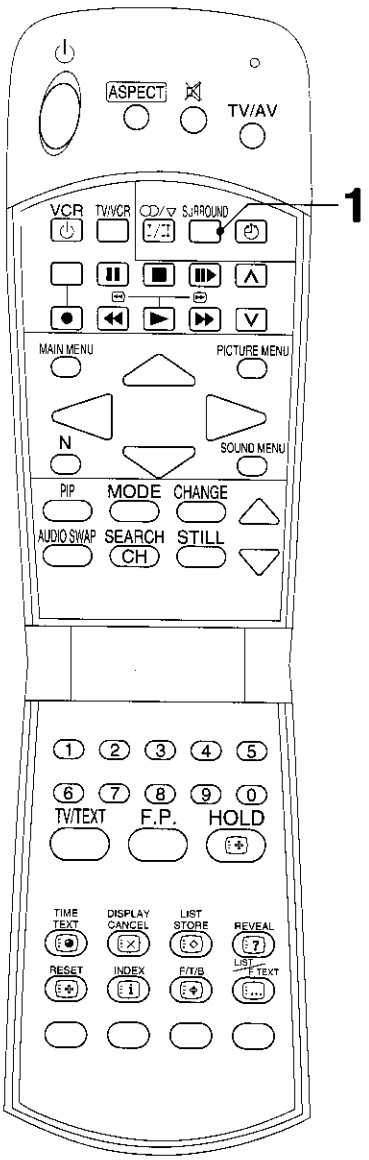
AUTO ⟷ PAL ⟷ SECAM
⇕ ⇕
NTSC 3.58 ⟷ NTSC 4.43

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

3

Push the "PRE." (PRESET) Button 3 times, (In AV Mode it is only necessary to push the "PRE." (PRESET) button once.) to return the set to the normal viewing condition.
The selected Colour System is automatically memorised.

Surround Operation



1

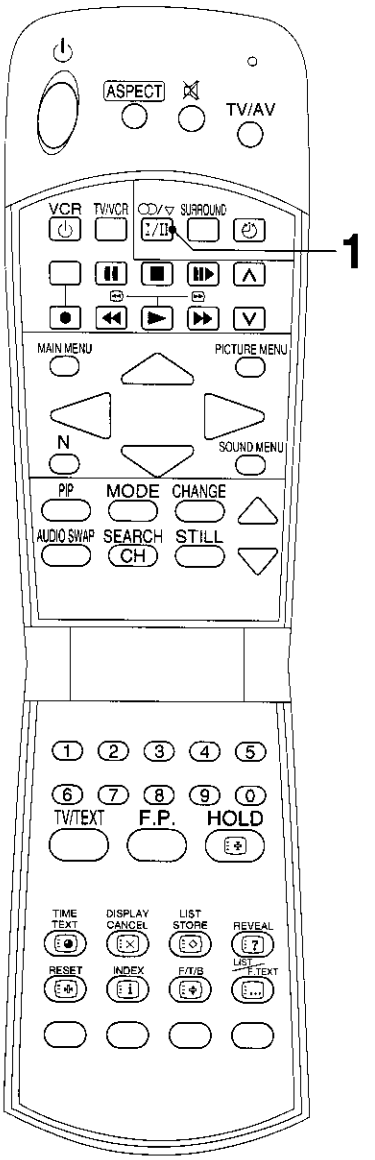
Surround Button
The benefits of surround sound are enormous. With additional speakers you can be completely enveloped in sound; just as if you were at a concert hall or cinema.
The surround effect does operate without external surround speakers, but is enhanced when they are connected. Such near surround speakers should not be sited in direct proximity to the listeners.

On-Screen display during surround mode.

	Type of broadcast	On-screen display	Remark
TV Mode	• MONO (Including STEREO switched to MONO by you) and BILINGUAL	MONO SURROUND ↕ SURROUND OFF	You can select either "MONO SURROUND" or "SURROUND OFF".
TV Mode	• STEREO	STEREO SURROUND ↕ SURROUND OFF	You can select either "STEREO SURROUND" or "SURROUND OFF".
AV Mode	• Select the AV mode (AV1, AV2 and AV3)	STEREO SURROUND → MONO SURROUND → SURROUND OFF →	You can select either of the three surround modes "STEREO SURROUND/ MONO SURROUND/ SURROUND OFF".

Note: If the stereo signal is poor or the receiving conditions are not optimum or if STEREO: MONO automatic switching occurs, it is recommended that "STEREO" switch to MONO (Refer to page 32) be used. If problems or unusual sudden effects are encountered in any of the surround modes, it is recommended that "SURROUND OFF" be selected.

Stereo Reception



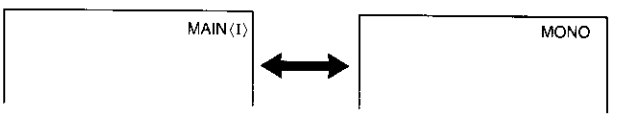
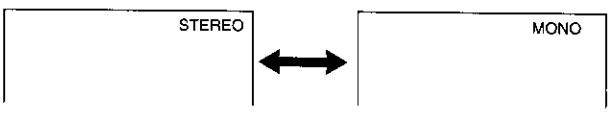
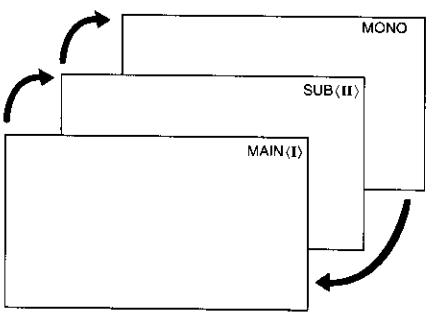
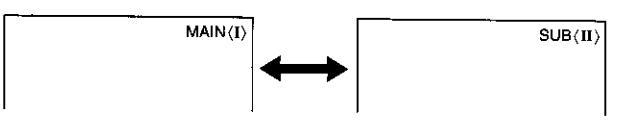
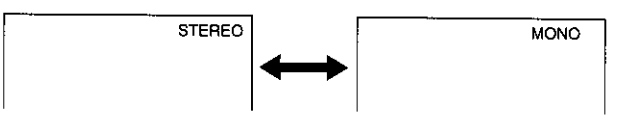
Stereo/Bilingual Sound Selection Button
Sound output modes can be selected by pushing the "Sound Selection" Button.

"STEREO" (if transmitted), "BILINGUAL" (if transmitted) and "MONO" modes can be selected using this button.

Note:

(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 and Hong Kong.

(2) If the stereo signal is weak or the receiving conditions are poor or if STEREO: MONO automatic switching occurs, it is recommended that you to switch to the "Mono" Mode.
When the broadcasting mode changes to "STEREO", "DUAL", or "MONO" after you have selected "MONO" mode, change over to either "STEREO" or "MAIN" Modes will be made automatically.
"DUAL" also known as "BILINGUAL" mode is not currently transmitted in some countries.

Type of Stereo	Type of broadcast	On-screen indication	Remark
NICAM Digital Stereo	Regular broadcast (Standard Audio)		Normal use
	Regular + NICAM MONOI (MAIN〈I〉)		You can select either the "MAIN〈I〉" or "MONO" audio signal.
	NICAM STEREO		You can select either the "STEREO" or "MONO" mode.
	NICAM DUAL MONO (MAIN〈I〉/SUB〈II〉)		You can select either the "MAIN〈I〉, SUB〈II〉 or MONO".
A2 (German) Stereo	Regular broadcast (Standard Audio)		Normal use
	BILINGUAL or DUAL MONO: MAIN〈I〉/SUB〈II〉		You can select either the "MAIN〈I〉" or "SUB〈II〉" audio signal.
	STEREO		You can select either the "STEREO" or "MONO" mode.

Note:

(1) When the power is switched ON, the mode is automatically preset at either "MAIN <I> or STEREO", depending on the current transmission.

(2) Even when the contents of the receiving signal undergo changes, selection mode is kept intact.

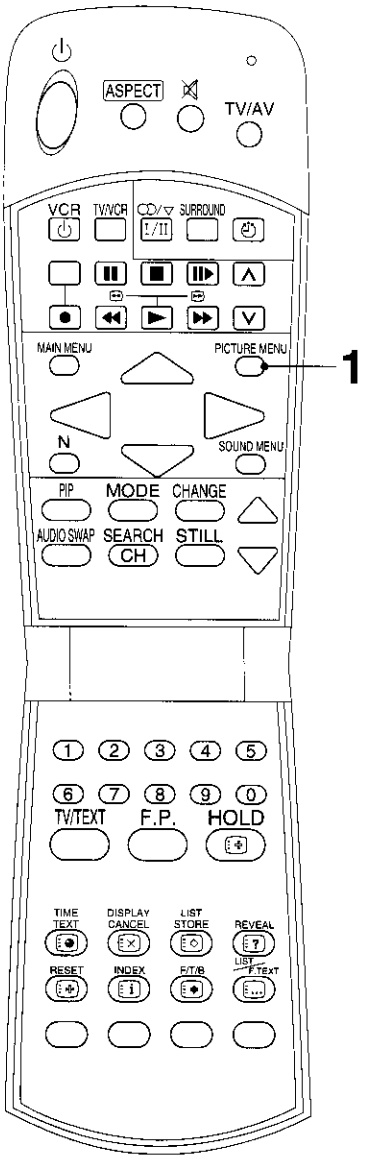
(3) When the receiving conditions deteriorate, listening will be easier if the mode is set to the "MONO" position, using the Stereo/Bilingual Sound selection button as shown on page 32.

(4) "DUAL", also known as "DUAL MONO" or as "BILINGUAL" is not currently transmitted in some countries.

Picture Menu Operation

1 PICTURE MENU

By pushing the "PICTURE MENU" Button, you can sequentially select the Picture Menus as shown below.



On-Screen indication
P-AUTO ↕ P-STANDARD

On-Screen	Function
P-AUTO	As the TV video signal is processed for immediate reception, "Brightness", "Contrast", "Shade of colour", etc. are automatically adjusted to the optimum conditions.
P-STANDARD	For watching in normal (evening lighting) environments. This menu selects the normal level of Brightness and Contrast.

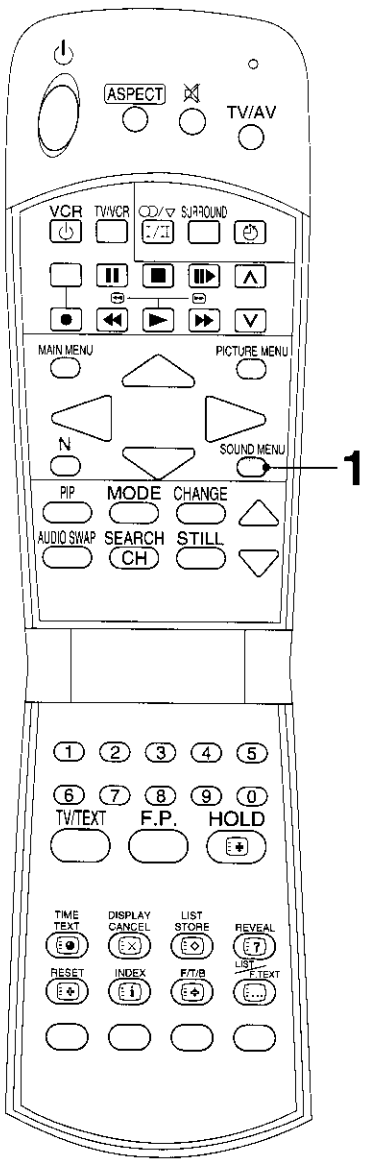
Helpful Hint

You can change the level of each Function for each picture menu.
Please refer to pages 36 and 37.

Sound Menu Operation

1 SOUND MENU

By pushing the "SOUND MENU" Button, you can sequentially select the Sound Menus as shown below.



On-Screen indication
S-AUTO → S-STANDARD → S-XBS → S-AUTO

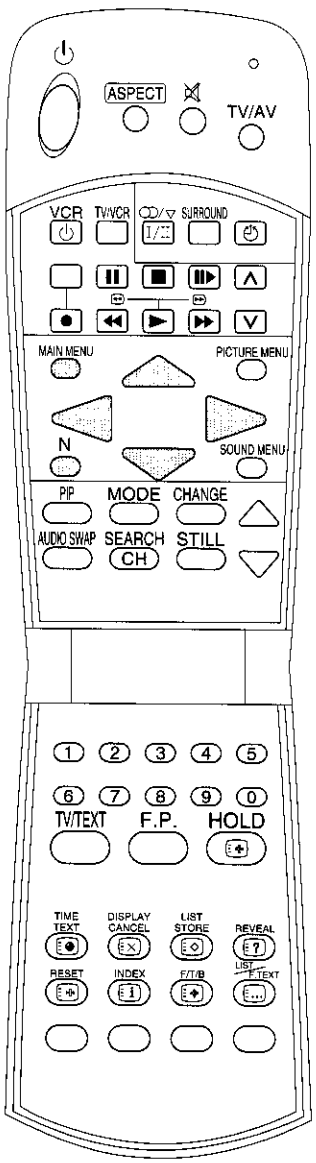
On-Screen	Function
S-AUTO	Sound and Music signals are altered and the best sound is automatically adjusted; sound (e.g. News and Human voice, etc.) is adjusted so as to be is easy to hear and music is adjusted to give background impression.
S-STANDARD	For Normal use.
S-XBS	The dynamic low frequency ranges are boosted.

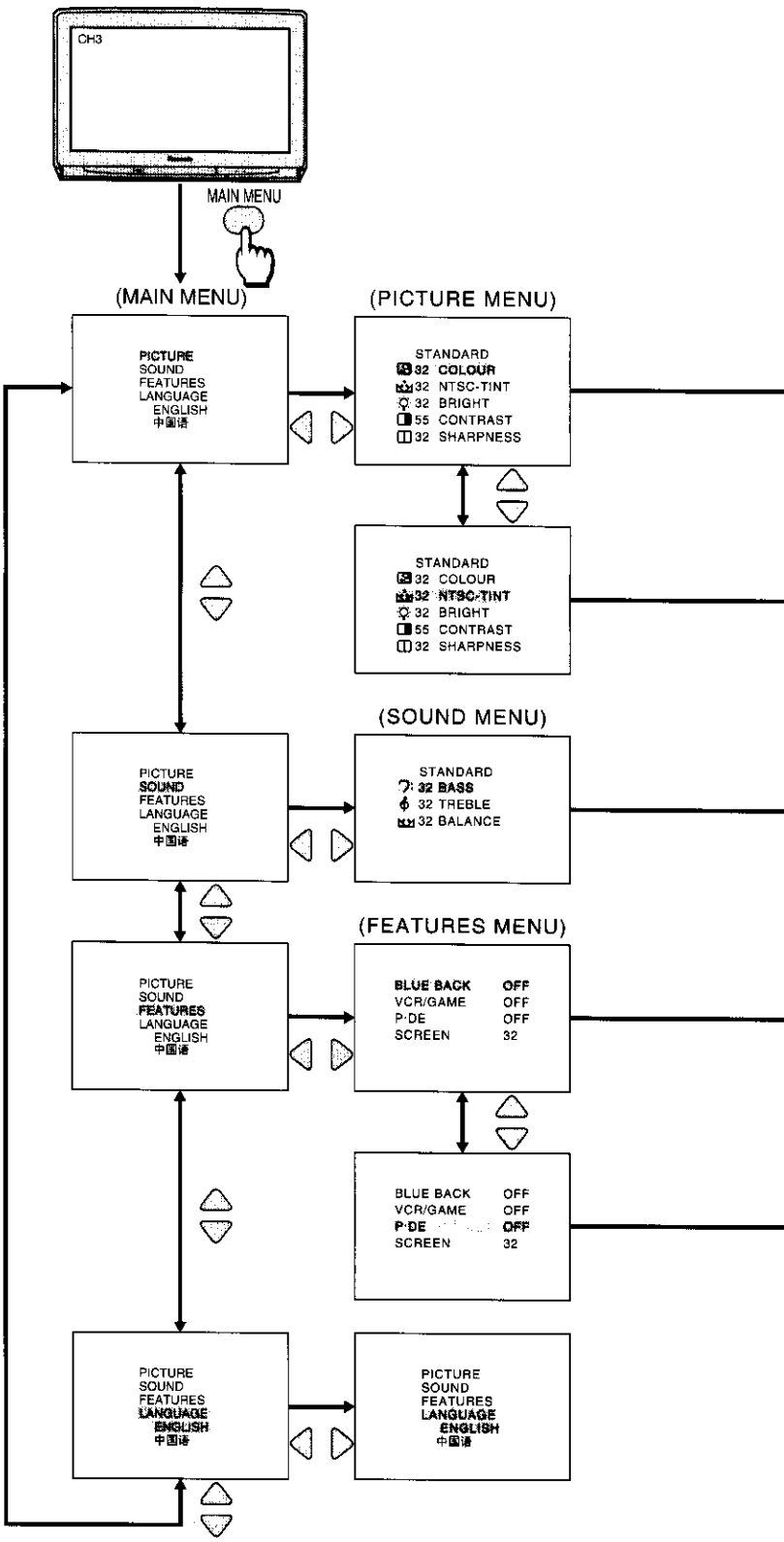
Helpful Hint

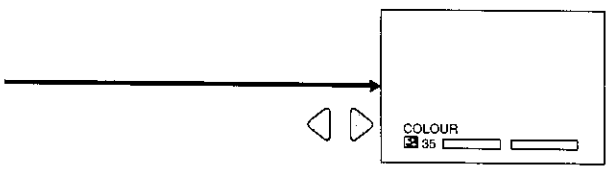
You can change the level of each Function for each Sound Menu. Please refer to pages 36 and 37.

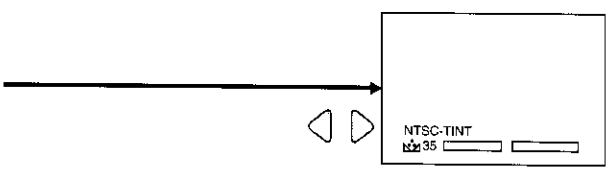
Main Menu Operation

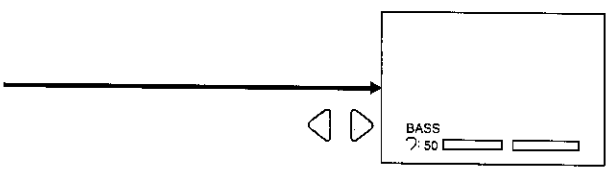
The "MAIN MENU" screen will change as follows.
You can change/select the condition of each item on the menu.

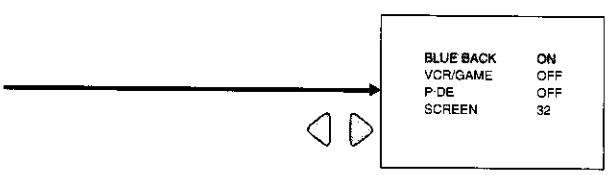




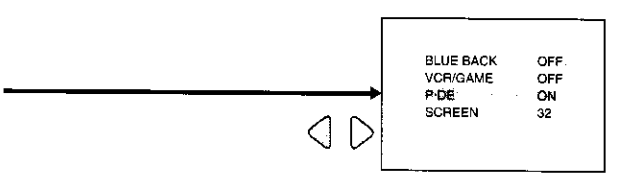








(Refer to page 38)



Picture

Item	Push	Effect	Indicator
COLOUR	MAIN MENU →	Less / More	COLOUR 32
NTSC-TINT	MAIN MENU →	Greenish / Reddish	NTSC-TINT 32
BRIGHT	MAIN MENU →	Darker / Brighter	BRIGHT 32
CONTRAST	MAIN MENU →	Less / More	CONTRAST 32
SHARPNESS	MAIN MENU →	Less / More	SHARPNESS 32

Note:
Even if the TV is not set to "NTSC" mode, "NTSC-TINT" will be displayed and level adjustment would be possible.
But it would not function.

Sound

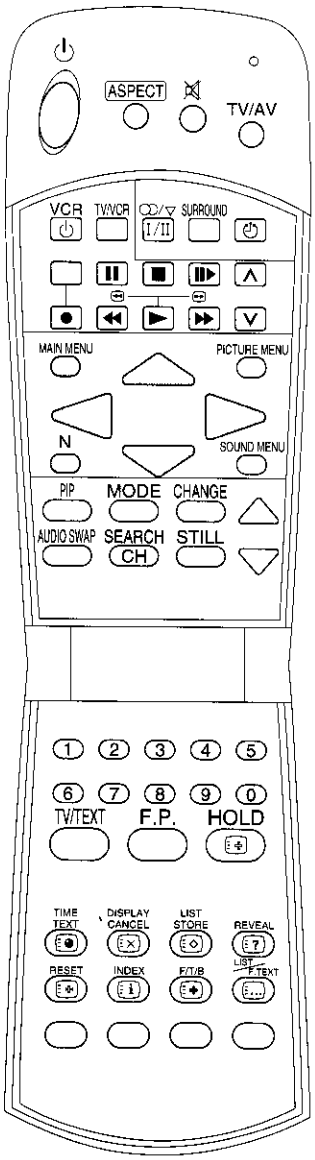
Item	Push	Effect	Indicator
BASS	MAIN MENU →	Less / More	BASS 32
TREBLE	MAIN MENU →	Less / More	TREBLE 32
BALANCE	MAIN MENU →	Left SP. / Right SP.	BALANCE 32

Note:
When SOUND AUTO mode is selected in Sound Menu Operation, BASS and TREBLE can not be adjusted and they are not displayed.

Helpful Hint (N Normalisation)

By pushing the Normal "N" Button on the Remote Control while the Picture or Sound menu is displayed, the selected menu will be changed to the Normal Mode.
Normalisation will not occur if the menu is not displayed when the "N" Button is pushed.
The Normal mode is the factory preset condition. Returning to this original condition is called "Normalisation".

Main Menu Operation



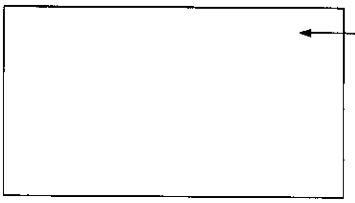
BLUE BACK Mode
When no picture signal is input, or the signal is weak, the screen reverts to a blue background colour and Mute the Sound.
Disable this Feature to continue watching very weak signals.

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

P•DE Mode (Picture Detail Enhancer)
The Picture Detail Enhancer System is designed to reduce picture noise during poor quality reception conditions.

Screen Mode
Use to see the upper and lower portions of the screen which disappear in Wide Screen (can be used only in ZOOM 1, ZOOM 2 and JUST Mode).

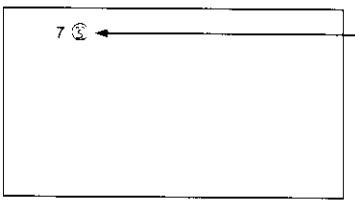
Note:
By pushing the Normal "N" Button while the features menu is displayed, the screen position will be changed to Normal Mode.



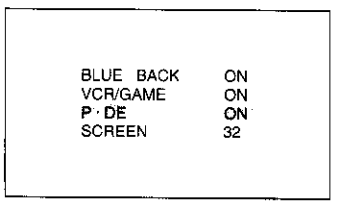
Blue if no input picture signal or input signal is weak.

Note:

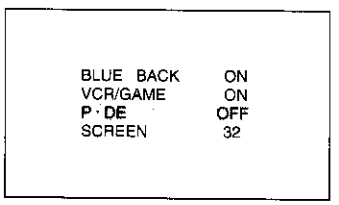
(1) In the Blue Back Mode the screen size is forced to FULL mode.
(2) If BLUE BACK Mode is set on while a VCR signal is being viewed, selecting CUE or REVIEW may cause the screen to revert to the blue background colour.Disable this Feature to view correctly.



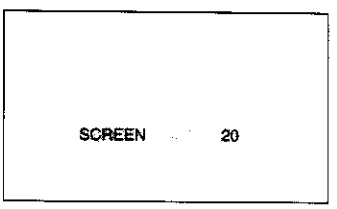
VCR/GAME Indicator



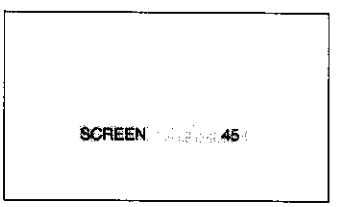
When the Picture Detail Enhancer System is ON, the picture will be sharper.



When the Picture Detail Enhancer System is OFF, picture noise will be softened and less sharp.

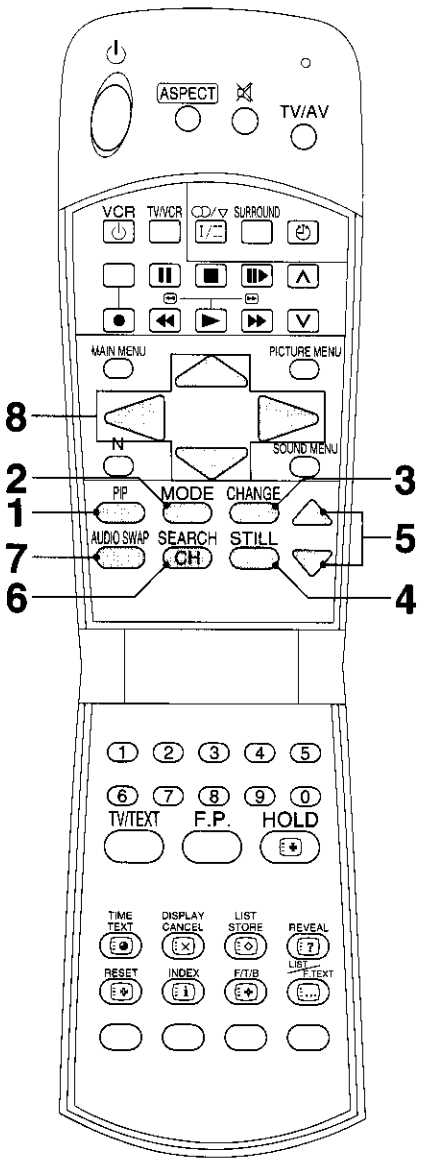


To see the upper portion, push the "Position Left" Button, the picture go down.



To see the lower portion, push the "Position Right" Button, the picture go up.

Picture in Picture Operation

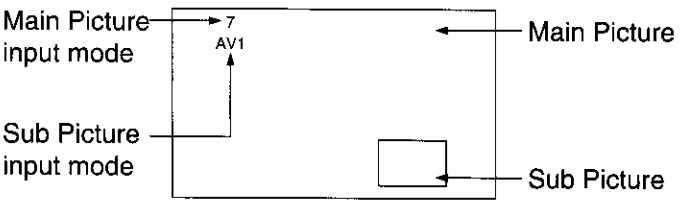


1

Picture in Picture

Push the "PIP" Button to superimpose a small picture within the main picture.
Push again to cancel the sub picture.

On-Screen indications



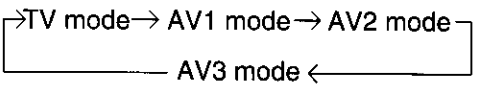
Note:

(1) The Sub picture position is recorded into memory for each wide picture aspect.
(2) The size of the Sub picture will differ depending on the aspects of the Main picture.

2

MODE

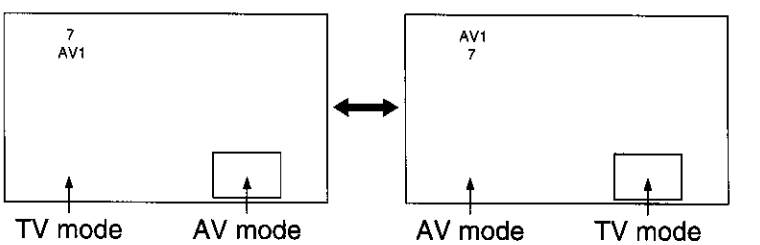
To change the Mode of the sub picture, push the "MODE" Button.
At every push the mode of the sub picture changes as follows.



3

CHANGE

Push the "CHANGE" Button to SWAP from Main picture to sub picture and vice versa.



4

STILL
The Still function can be used to freeze the action on the screen and display a still picture.
Push the "STILL" Button to freeze the moving picture into a still picture.

Push again to cancel.

When pushed in normal mode (Picture in Picture mode OFF), a freeze frame of the main Picture will be displayed as a sub-picture while the action in the Main picture continues.

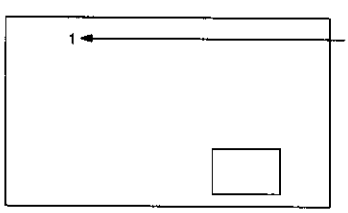
When the still button is pushed in the Picture in Picture Mode, the sub-picture changes to a still picture.

5

Sub picture Programme Number Selection
Push the Sub picture Programme Number Up "∧" or Down "∨" Button to select the next higher or lower tuned channel.

6

CH (Channel) SEARCH
By pushing this button, it is possible to search through all programmed positions and display a picture on the sub picture screen.

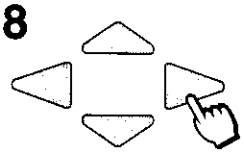


7

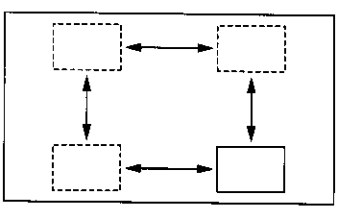
AUDIO SWAP
The AUDIO SWAP button is the changeover button for the sounds (audio programme content) of the MAIN and SUB Picture.
Push it to hear the sound of the SUB Picture. However, note that the sound of MAIN Picture can not be heard when the SUB Picture sound is selected.

Note:
1. This function can not be used when the Main Picture is set to Stereo/Bilingual Sound or TEXT mode.
2. When the SUB Picture is selected, can be only heard MONO sound.

8



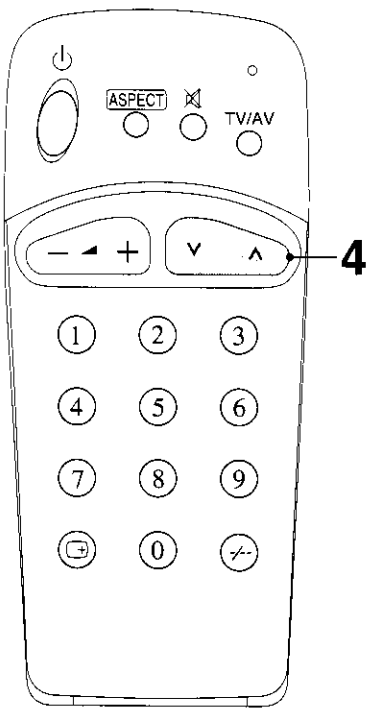
Position Buttons
By pushing each "Position" Button, you can easily select the desired position of the Sub Picture on the screen.

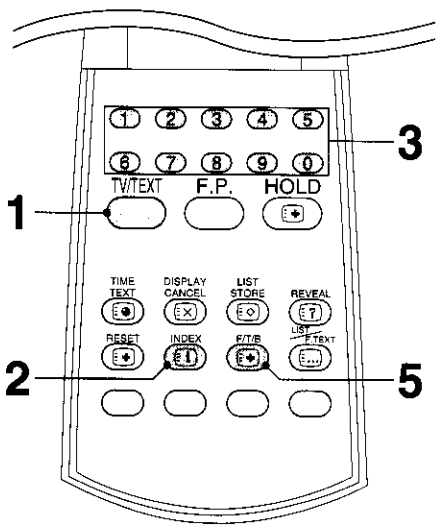


Note:
By pushing the Normal "N" Button while the picture in picture mode is activated, the Sub Picture position will be changed to the bottom Right corner.

Basic Operation

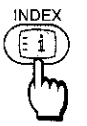
A black may bar briefly appear to indicate Teletext availability, when a channel with Teletext is selected. If the station broadcasting Teletext has its own title transmitted in the Teletext signal for inclusion in this position, then this title will appear inside the black bar.



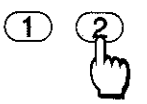


1

TV/TEXT Selection
Push to select "TEXT" Mode.
To return to the TV Mode, push the button again.

2 

INDEX
Push this button, in "F.TEXT" Mode, to return to the Index Page.
Depending on the way information is transmitted by each TV channel, this "INDEX" Button may need to be pushed more than once to return to the Main Index Page.

3 

Numerical Buttons
To select the required Page of TELETEXT, use these buttons "0" to "9".

Note:
All Page Numbers consist of 3 digits, the lowest being 100 and the highest being 899, and the first being between 1 and 8 inclusive.

4

Page Number Up/Down
Push the Page Number Up "∧" Button to step up to the next higher TELETEXT Page. Push the Page Number Down "∨" Button to step down to the next lower TELETEXT Page.

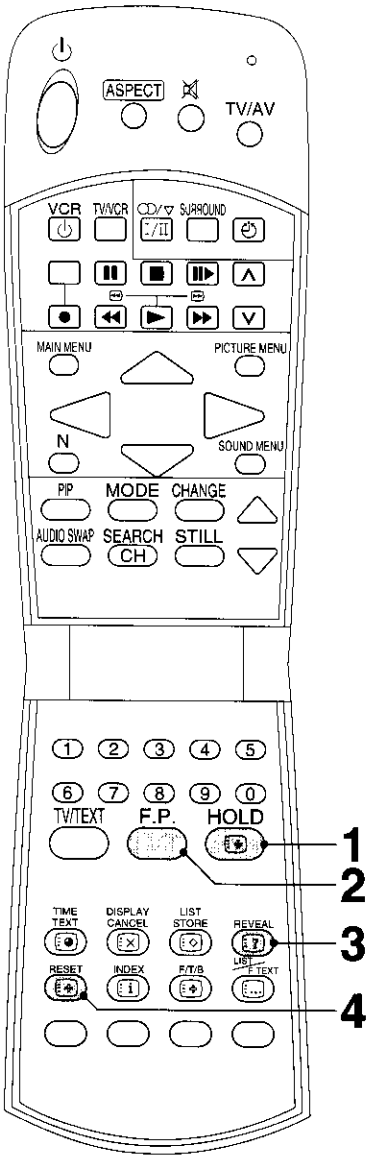
5

Full/Top/Bottom Button
This function is used when characters on the TV screen are hard to read.
Pushing the 1st time expands the upper half of the screen only.
Pushing the 2nd time expands the lower half of the screen only.
Pushing the 3rd time returns the display to its original size.

✳ "F.TEXT" mode is not transmitted in some countries.

Useful Functions for Teletext

These functions can be used in either LIST mode or F.TEXTmode.



1 HOLD

Hold

The selected Teletext Page may consist of a number of "Sub-Pages".
These sub-pages are rotated automatically, unless the "Hold" function has been activated. (Refer also to page 44)
Push the "Hold" button, and the Sub-Page will stay on the screen.
The "Hold" message symbol will be displayed at the top left corner of the screen.
To cancel the "Hold", push this button again.

2 F.P.

Favourite Page Selection (F. P.)

This feature will store a favourite Page in the TV memory which can then be instantly recalled. To store such a Page the TV must be in LIST Mode and the Programme Number must be from 1 to10.
Push the Light Blue button, choose your Page Number and then push the LIST STORE button.
The Page Number is now stored. Push the F.P. button to recall this Page even in TV Mode.

3 REVEAL

Reveal

Some Pages contain concealed information. e.g. the solution to a riddle or a puzzle.
To reveal this information, push the "REVEAL" Button.
To conceal this information again, push the "REVEAL" Button again.

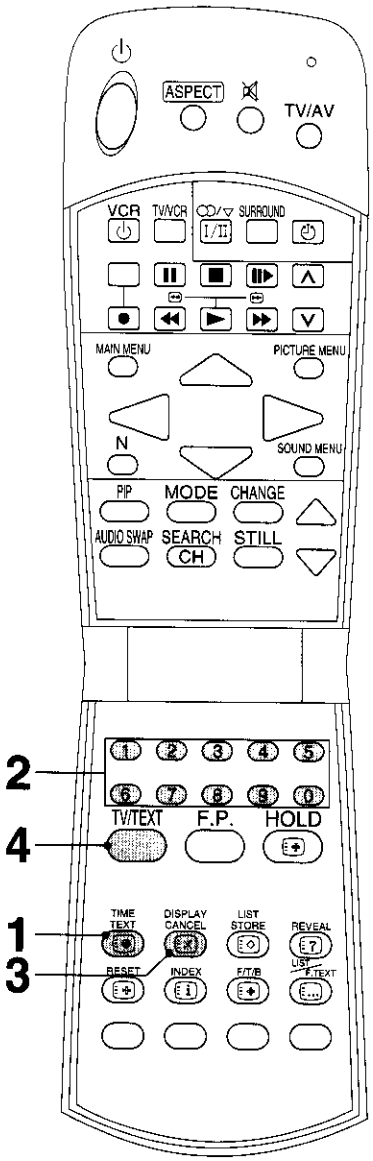
4 RESET

Reset

Pushing "Reset" in "F.TEXT" Mode will reset the present Page to Page 100 and the associated colour subject.
Pushing "Reset" in "LIST" Mode will reset the present Page to the "RED" colour coded Page number.

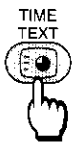
"F.TEXT" (Fast Text) and "LIST" mode are not transmitted in some countries.

Text Sub Page Access



When a Teletext Page exceeds more than one screen of information, it may take some time for the automatic changing of the Sub-Pages to reach the one you wish to view.
It is possible to enter your required Sub-Page and then continue watching the normal programme until your selected Sub-Page is received.

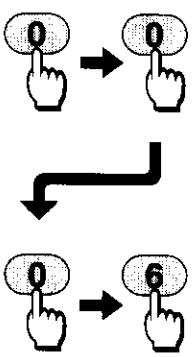
1



(Teletext must be selected first.)
The required Teletext Page must be selected, i. e. the Page in which Sub-Pages exist.

Push the "TIME TEXT" Button.

2



Enter the desired Sub-Page number which the "T****" prompt is on screen.

Note:
Sub-Page selection must be inserted as a 4 Digit Number.

e.g. for Sub-Page 6 the numbers "0-0-0-6" must be entered.

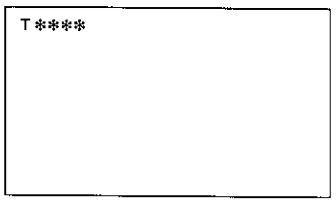
3

Push the "DISPLAY CANCEL" Button to return to the normal TV programme.

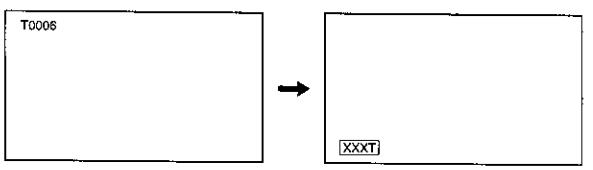
4

Push the "TV/TEXT" Button to display the received Sub-Page.
To clear the Sub-Page, enter a new Page number or push the "RESET" Button.

Note:
It is not possible to select another Programme Number during Sub-Page operation, without cancelling the Sub-Page search operation.



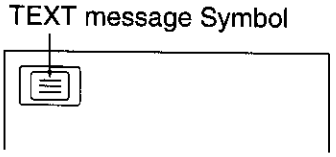
At that time, "T****" will be displayed at the top left of the screen. This is the TIME TEXT prompt.



In "LIST" mode the letter "T" will appear in the current coloured box at the bottom of the screen.
This is an indication that the Sub-Page number has been set.

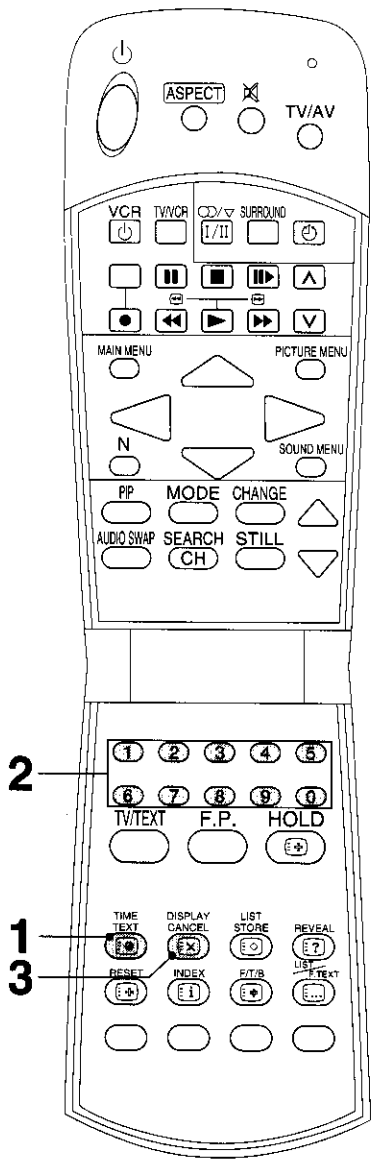
Note:
If no Sub-Page exists for the Page for which this function has been set, the system will wait indefinitely or until;

(a) the Sub-Page function is cancelled.
(b) the Programme Number is changed.
(c) the TV is switched to STANDBY or OFF.
(d) the RESET button is pushed.
(e) a new Page number is selected.



When the desired Sub-Page is received, the "TEXT" message symbol appears at the top left of the screen.

Text ALARM Page Access

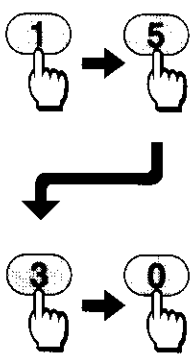


This function is used for selected Pages only.
e.g. The Teletext ALARM Page.
Refer to the Subject Index Page for the ALARM Page location.

1

Teletext must be selected first and then the Text ALARM Page must be selected.
Push the "TIME TEXT" Button.

2



This feature uses the 24 hour clock,
e.g. 3:30 pm = 1530.

To set the time at which the ALARM Page is to be displayd, e.g. 1530, push buttons 1,5,3,0 consecutively.
The "T****"display will change to "T1530" momentarily then return to the current Page number.

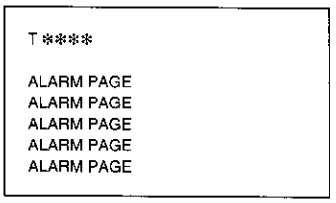
3

Push the "DISPLAY CANCEL" Button to return to the normal TV broadcast.

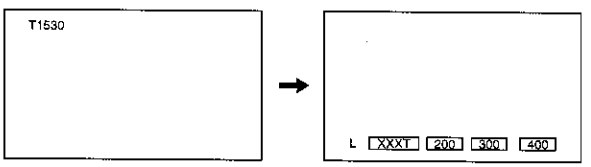
Helpful Hint

To cancel this feature
Push the "TV/TEXT" Button to return to normal viewing.
If you wish to select other Teletext Pages, push the "RESET" Button.

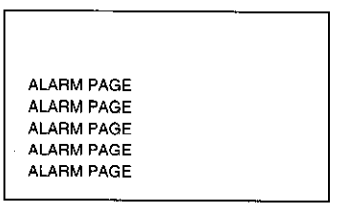
Note:
This function is not currently transmitted in some countries.



"T****" will be displayed at the top left of the screen; now enter the time at which this ALARM Page should be displayed using buttons 0 to 9 on the Remote Control.

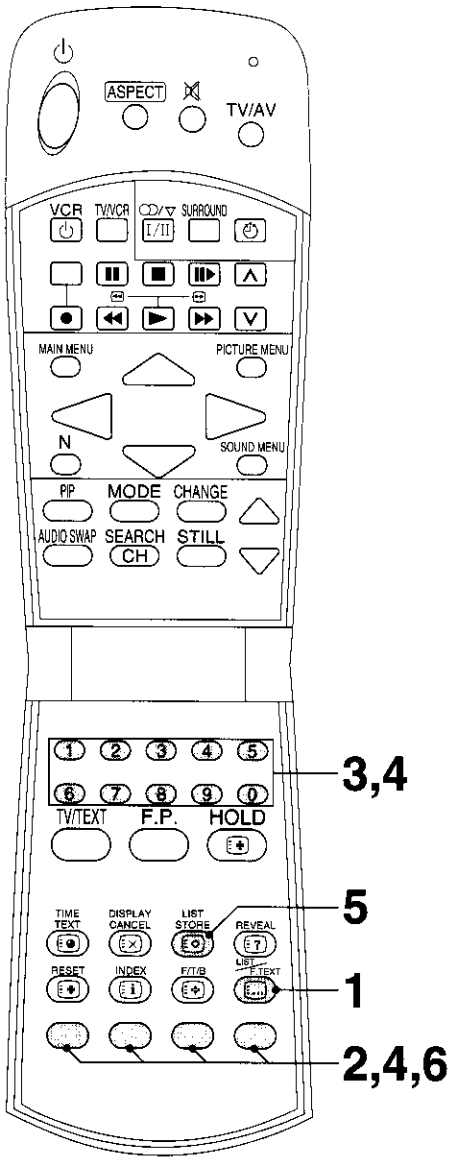


In the "LIST" Mode the letter "T" will appear in the current coloured box at the bottom of the screen indicating that the ALARM Page has been set.



At 15:30 the ALARM Page will be displayed.

List Mode Access



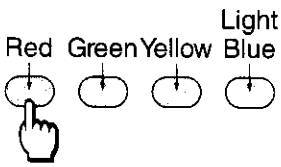
LIST Mode is a convenient way of accessing some Teletext Pages without the need to enter Page numbers.
In this Mode, 4 Page numbers can be preset for each Programme Number 1 to 10.
A maximum of 40 Pages can thus be programmed. (i.e. 4 Pages 10 Programme Numbers) Any one of these 4 Pages can be displayed instantly by pushing the corresponding "colour coded" Button on the Remote Control.

List Mode Page Memory Allocation

1

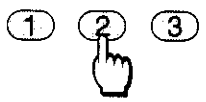
(Teletext must be selected first.)
Select the "LIST" Mode by pushing the "LIST/F.TEXT" Button.
Pushing this Button will switch between the "LIST and F.TEXT" Modes.

2



To select a memory position, push one of the "colour-coded" Buttons.

3



Enter the Page number of the desired Teletext Page by using buttons "0" to "9".

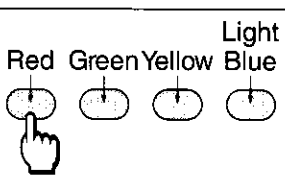
4

Repeat steps 2 and 3 for the remaining colour coded positions if required.

5

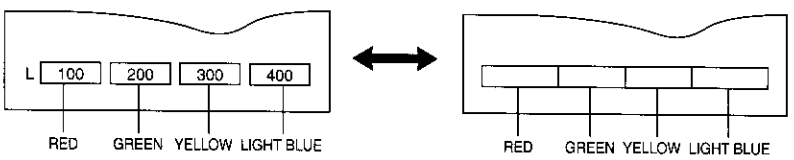
Push and hold the "LIST STORE" Button until the background of the 4 numbers changes from Black to White.

6



Any one of these 4 Pages can then be displayed instantly by pushing the corresponding "colour-coded" Button on the Remote Control.

List mode **F. TEXT mode**



Note:
F.TEXT Mode is currently not transmitted within Australia.

You can also use the "Programme Up or Down" Buttons to enter the page number.

Up to 4 page numbers can be preset for each Programme Number 1 to 10.

This stores these Page numbers into memory.

Every time "List" Mode is selected, these 4 Page numbers will flash until all 4 Pages have been received and stored in memory.

Note:

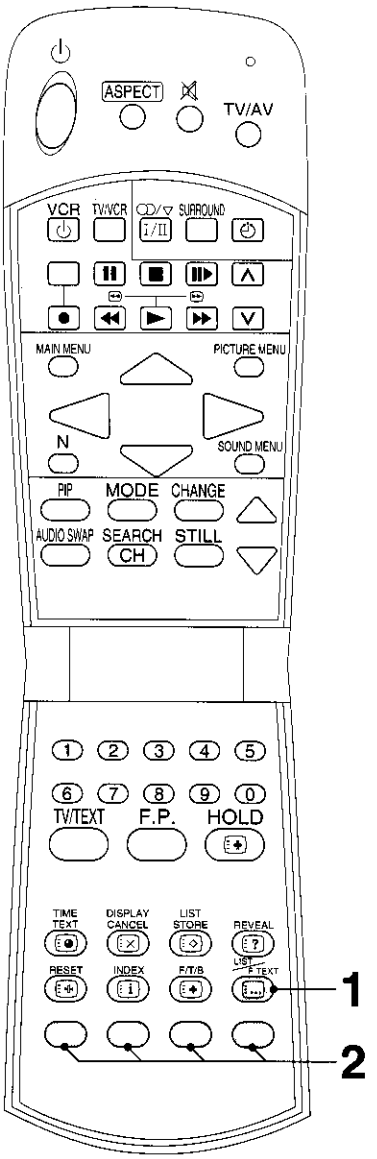
(1) If new Page number is entered for viewing, it will not replace the previous number in the memory at the position unless the "LIST STORE" Button is pushed and held down for a few seconds.
The 4 Page numbers will be reset to the preset numbers when either the "Reset" Button is pushed or the Programme Number is changed, or the Mode is changed to F.TEXT and then returned to LIST mode again, or the TV set is turned off.

(2) The 4 preset Page numbers can be changed when required by following steps 2 to 5 above.

(3) Page number presetting can only be performed on Programme Numbers 1 to 10.

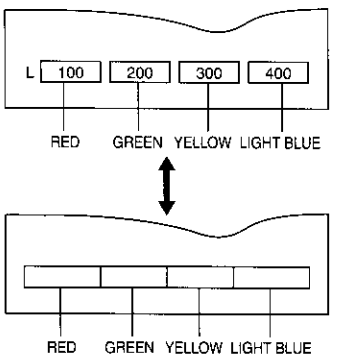
Fast Text (F.TEXT) Mode Access

In "F.TEXT" Mode, select the desired Teletext information by pushing one of the "colour-coded" Buttons on the Remote Control which corresponds with the coloured subject title on the screen.



1

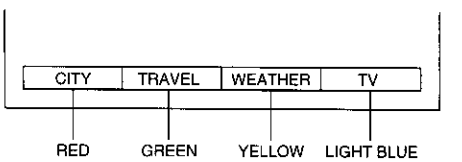
(Teletext must be selected first.)
Push the "LIST/F.TEXT" Button to select "F.TEXT".



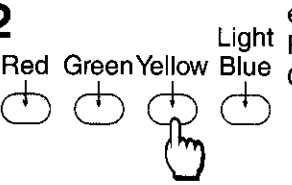
List mode

F. TEXT mode

e.g. The on-screen display with these subject titles.



2



e.g. Viewing the "Weather" page.
Push the "Yellow" Button on the Remote Control.

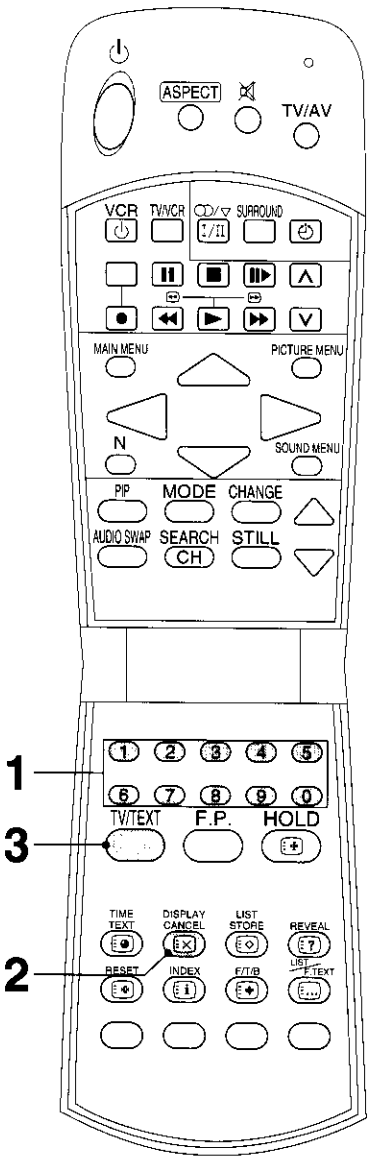
3

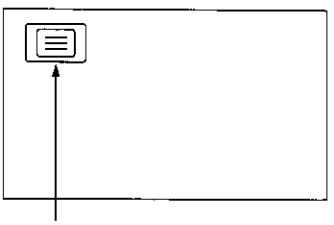
Follow the same procedure to access other colour coded information Pages.

Note:

(1) Subject's titles and their sequence for access are setup by TV broadcast stations; they are not user definable with the Remote Control.
(2) It is a convenient way of accessing some Teletext Pages without the need to enter Page numbers.
(3) This function is not currently transmitted in some countries.

Display Cancel Operation





TEXT message symbol

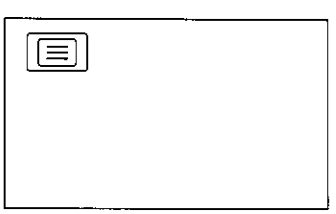
(Teletext must be selected first.)
While a selected Page is being searched for, the normal TV picture can be viewed by pushing this button.
When the Page is found, the "TEXT" message symbol will be displayed at the top left corner of the screen.
Pushing the "TV/TEXT" Button will display the selected Page.

Method (To watch a newsflash Page)

1

In the Text Mode, select a newsflash Page.
e.g. Page No. 155

2



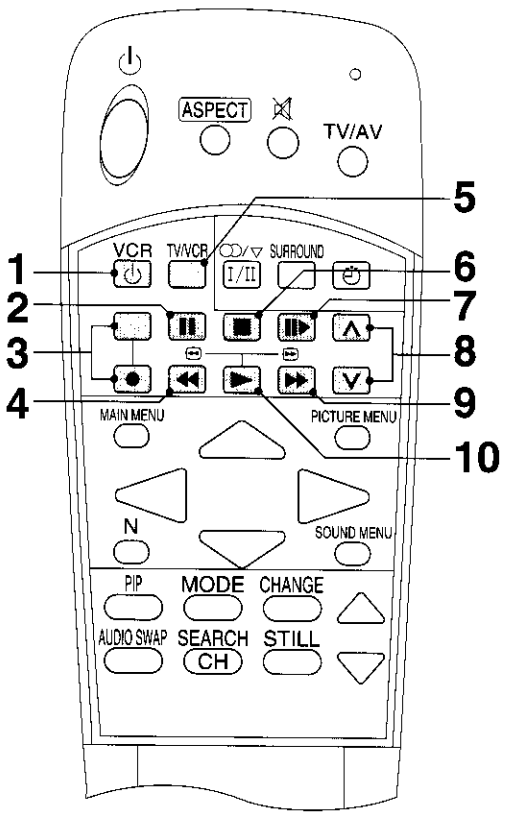
Push the "Display Cancel" Button.
The TV screen is switched from the Text Page to the normal TV programme.
Every time a newsflash information update is available, the newsflash information will be displayed at the botton of the screen.
When that Page is found, a message will be displayed at the top left corner of the screen.

3

Push the "TV/TEXT" Button.

Operation of the VCR

Your Remote Control is designed to be used with selected Panasonic/National VCRs.
Some model VCRs have different functions, so please refer to the individual VCR Instruction Booklet to ensure compatibility.



1 VCR

VCR Power Button

2

Pause/Still Button

3

Rec (Record) Button

4

Rew (Rewind)/Review Button

5 TV/VCR

TV/VCR Selection Button

6

Stop Button

7

Still Advance Button

8

Programme Number Up and Down Buttons for VCR

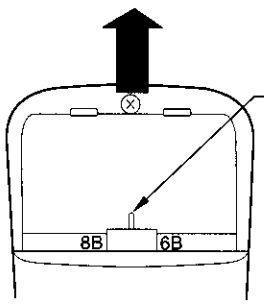
9

FF (Fast Forward)/Cue Button

10

Play Button

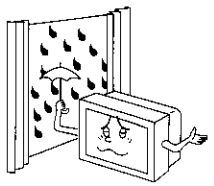
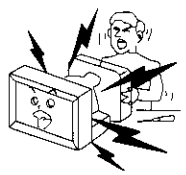
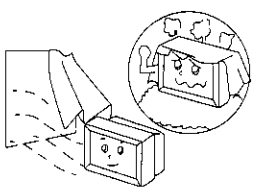
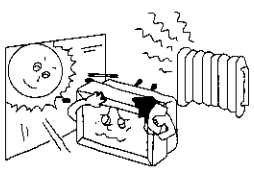
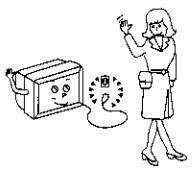
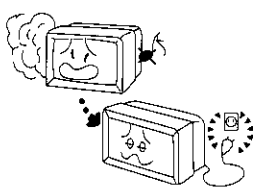
Open the cover
(Push down and Slide the cover out.)

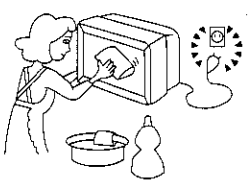


(Rear Side)

VCR Mode Select Switch
When used with normal Panasonic/National VCR's, set this switch to "6B".
If operation cannot be carried out, set the switch to "8B".

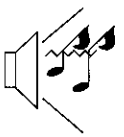
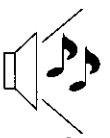
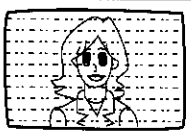
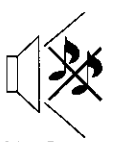
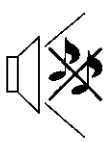
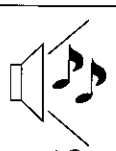
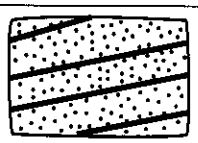
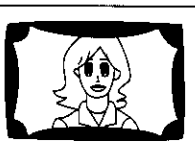
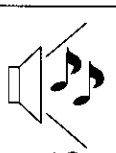
Warnings and Cautions

	To prevent damage to the television which may result in fire or electrical shock, do not expose the TV set to rain or excessive moisture. For safety, do NOT place vases or any container which contain fluids including water, on or near the TV.
	**High Voltage:** Do not remove the rear cover as live parts and High Voltage components are accessible when the rear cover is removed.
	Adequate ventilation is essential to prevent premature failure of electrical components.
	Avoid exposing the TV set to direct sunlight and other sources of direct heat.
	Remove the AC plug from the wall outlet 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 plug, if you notice any unusual operation.

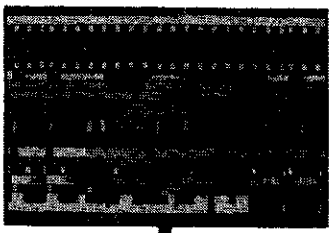
	**Cabinet and Picture Tube Care** The cabinet and picture tube can be kept in good condition by simply wiping with a clean, dust-free cloth moistened with mild detergent and water. Do not use solutions containing benzol, petroleum or a chemical cloth. For safety, remove the AC plug from the wall outlet when cleaning. **Speaker grill Care** Remove dust with a vacuum cleaner after attaching a brush adaptor. Do not let the vacuum cleaner pipe come into direct contact with the speaker (without the adaptor). **CAUTION:** When the cabinet, the speaker grill and picture tube are scratched (with a nail or hard object) or struck by similar materials, it may become deformed. Also, the speaker grill may be easily pierced by a sharp object.

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 pushing 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	• Geomagnetism Correction (Refer to page 6) • Magnetic interference from unshielded equipment TV set moved while "ON" Turn the TV set off for 30 mins, using the "Main Power" Button on the TV set.
No Colour	Noisy Sound	Sound System (Refer to page 30) Colour System (Refer to page 30)

Troubleshooting Guide for Teletext Reception



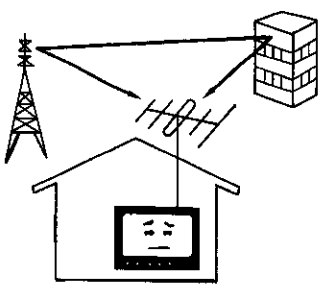
- MISSING CHARACTERS
- MALFUNCTIONS

- GHOSTS

- SNOWY

- SPURIOUS
- CROSS MODULATION
- INTERFERENCES

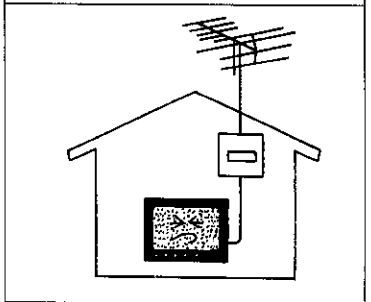
CAUSE



CHECK STEPS

1. Aerial connection.
2. Missmatching of aerial cable.
3. Aerial direction.

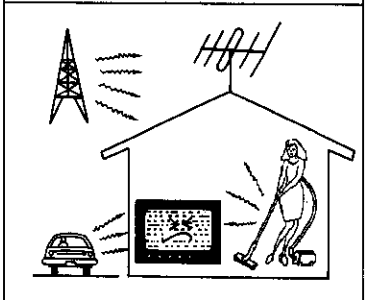
CAUSE



CHECK STEPS

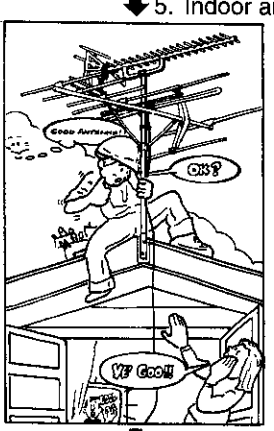
1. Aerial connection.
2. Missmatching of aerial cable.
3. Booster or distribution amplifier unit.
4. Input signal strength should be more than 55dB.
5. Indoor antenna

CAUSE



CHECK STEPS

1. Booster.
2. Too much input signal to Booster.
3. Interference from other equipment.



Still no good

CONTACT PANASONIC AUTHORIZED SERVICE CENTRE.

Specifications

Power Source

AC 110-240 V, 50/60 Hz

Power Consumption

200 W
Stand-by condition 3 W

Receiving System

21 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 3.58/4.5 MHz)	
8	NTSC 4.43/5.5 MHz	Playback from Special VCR's
9	NTSC 4.43/6.0 MHz	
10	NTSC 4.43/6.5 MHz	
11	NTSC 3.58/5.5 MHz	
12	NTSC 3.58/6.0 MHz	
13	NTSC 3.58/6.5 MHz	
14	SECAM I	
15	PAL 60 Hz/5.5 MHz	Playback from Special Disc Players and Special VCR's
16	PAL 60 Hz/6.0 MHz	
17	PAL 60 Hz/6.5 MHz	
18	SECAM 60 Hz/5.5 MHz	
19	SECAM 60 Hz/6.0 MHz	
20	SECAM 60 Hz/6.5 MHz	
21	NTSC 50 Hz/4.5 MHz	

Receiving Channels

Regular TV

VHF BAND

2-12	(PAL/SECAM B, K1)
0-12	(PAL B AUST.)
1-9	(PAL B N.Z)
1-12	(PAL/SECAM D)
1-12	(NTSC M Japan)
2-13	(NTSC M U.S.A)

UHF BAND

21-69	(PAL G, H, I/SECAM G, K, K1)
28-69	(PAL B AUST.)
13-57	(PAL D, K)
13-62	(NTSC M Japan)
14-69	(NTSC M U.S.A)

CATV

S1-S20	(OSCAR)	S21-S41	(HYPER)
1-125	(U.S.A. CATV)	Z1-Z37	(CHINA)
C13-C49	(JAPAN)	5A, 9A	(AUST.)

Specifications

Tuning System

Frequency synthesizer
Auto Search Tuning
POS (Position) : 100 Position
DIRECT : 125 Position

Picture Tube

Overall Picture tube measured diagonally	81 cm
Viewable Picture tube measured diagonally	76 cm
CRT Deflection	106°

Audio Output

12 W (Max.) × 2

Headphones

Impedance 8 Ω

Aerial Impedance

75 Ω Unbalanced coaxial

Video/Audio Terminals

AV 1, 2, 3	S-Video In	Y: 1.0 Vp-p, 75 Ω
		C: 0.3 Vp-p, 75 Ω
	Video In	1 Vp-p, 75 Ω
	Audio In	Approx. 400 mV 47 KΩ
Monitor Out	Video Out	1 Vp-p, 75 Ω
	Audio Out	Approx. 400 mV 1 KΩ
Surround Terminals Impedance	8~16 Ω	

Accessories Supplied

Remote control Transmitter (EUR 501105)
R6 (AA) Battery × 2

Optional Accessories

Set Stand TY-S32WG15G

Dimensions (W × D × H)

800 mm × 543 mm × 549 mm

Weight (Mass)

55.0 kg (Net)

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

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

Model Number TX-32WG15X, TX-32WG15G Serial Number

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