# SANYO

## INSTRUCTION MANUAL

### Colour Television
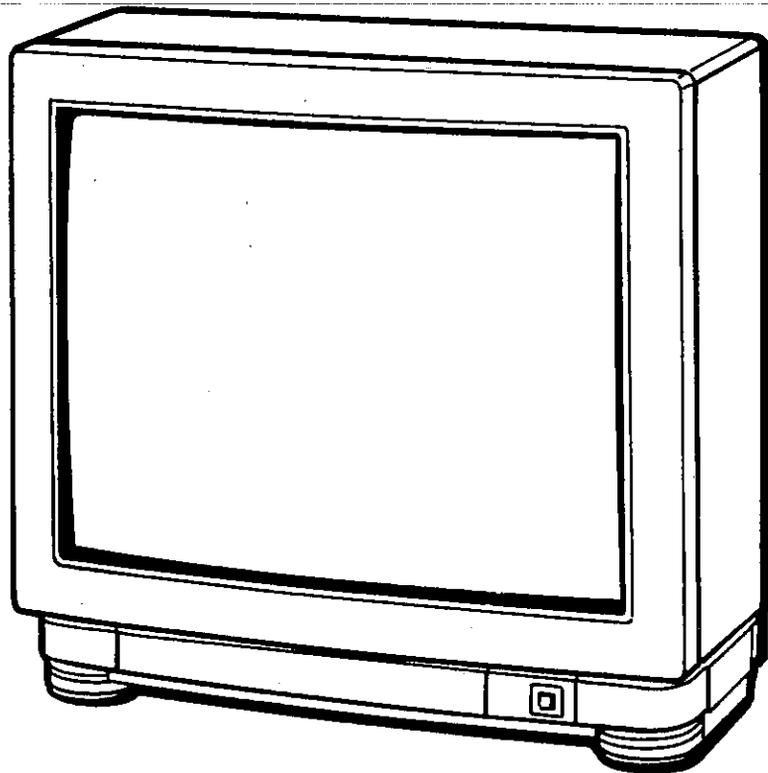
# C21PM10
# C21PM15

*Remote Control*
*Special Function*
*AV Input and Output Terminals*

Model C21PM15 — Equipped with the Teletext Decoder.

# Contents

# Electric Mains

The receiver is designed to operate on an A.C. mains supply of 220–240Volts 50Hz.
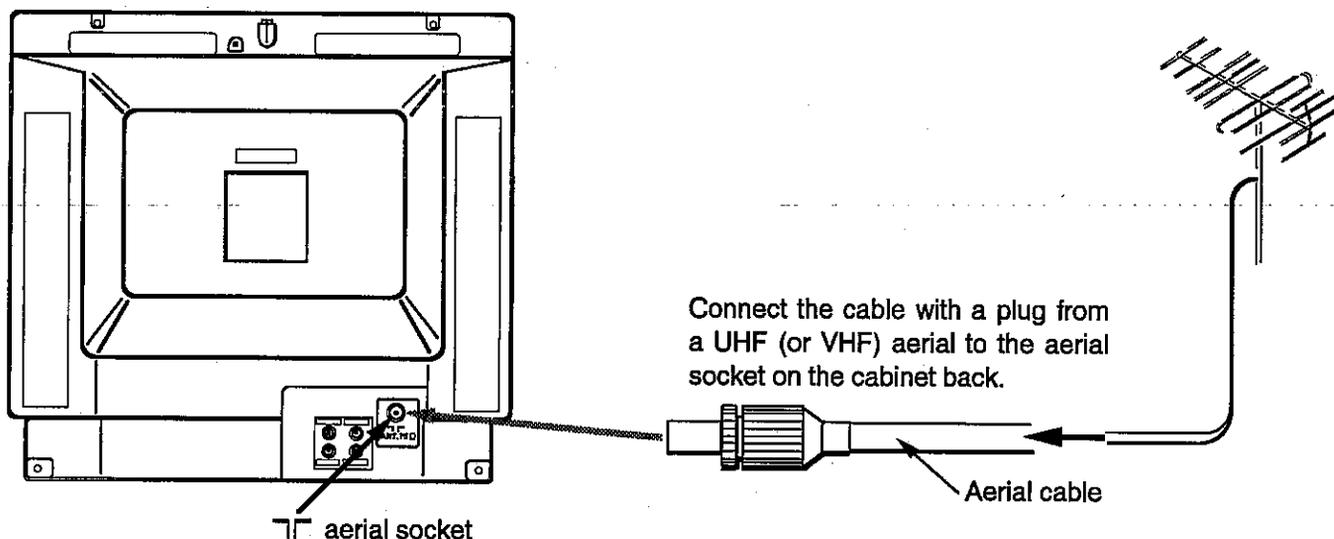
# Warning

To prevent fire or shock hazard, do not expose the unit to rain or moisture.
High voltages are used in the operation of this TV set. Do not remove the cabinet back from your set. Refer servicing to qualified service personnel.

# Precautions

When the TV receiver is not to be used for an extended period of time, it is advisable to disconnect the AC power cord from the AC outlet.

## Aerial Connection

Connect the cable with a plug from a UHF (or VHF) aerial to the aerial socket on the cabinet back.

Aerial cable

⊓⌐ aerial socket

For all aerial circuit problems please consult your local dealer.

## Battery installation of the Remote Control Transmitter

[1] Remove the battery cover by sliding.
[2] Install two "AA" 1.5 volt batteries so that the "+" and "−" marks on the batteries match the "+" and "−" marks inside the unit.
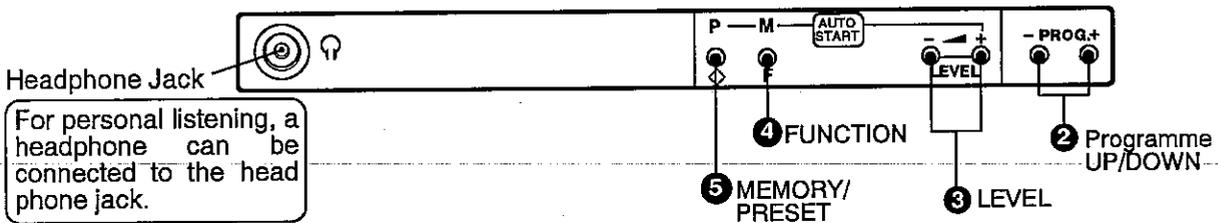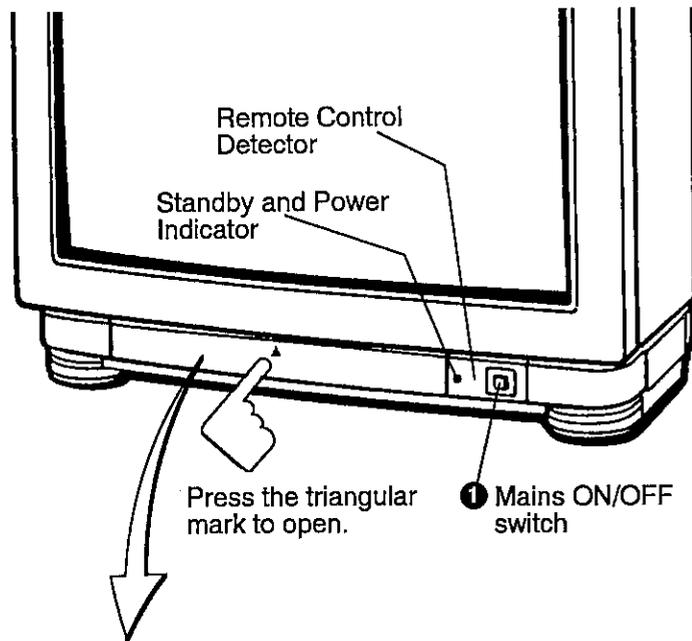[3] Close the battery cover.

Note: Replace the batteries when the TV set is showing the following symptoms:
  Operation is unsteady or erratic, sometimes the TV set does not work with transmitter.
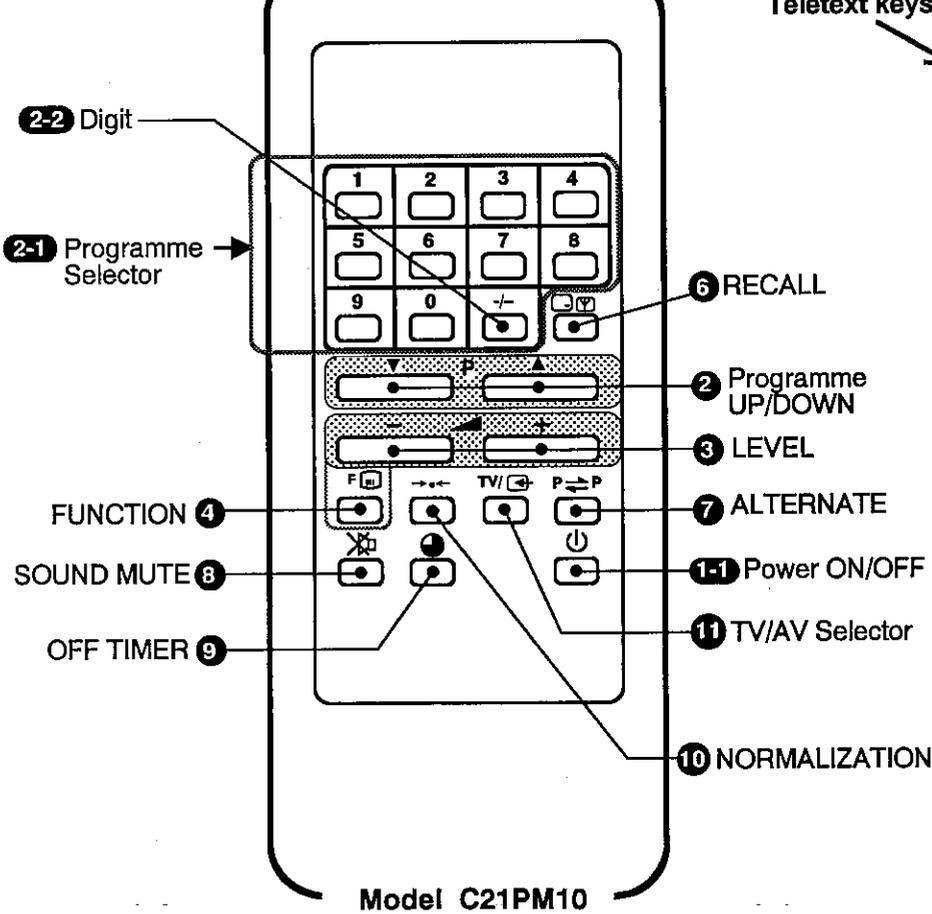  Discharged batteries may leak and damage the unit.
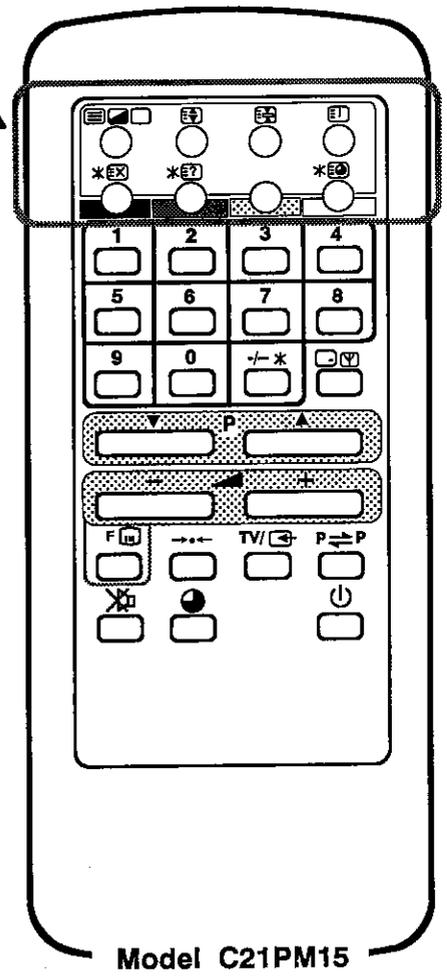  The normal life of batteries should be from nine to ten months.
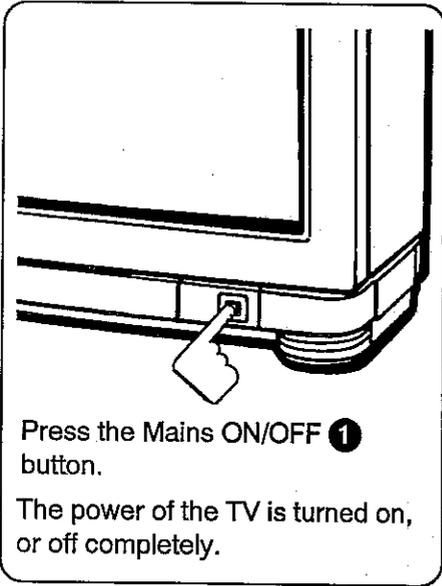
# Controls

Remote Control
Detector

Standby and Power
Indicator

Press the triangular
mark to open.

**1** Mains ON/OFF
switch

Headphone Jack

For personal listening, a
headphone can be
connected to the head
phone jack.

P — M — AUTO START

LEVEL

— PROG.+

**4** FUNCTION

**5** MEMORY/
PRESET

**2** Programme
UP/DOWN

**3** LEVEL

# Remote Control
Transmitter

Teletext keys

**2-2** Digit

**2-1** Programme
Selector

**6** RECALL

**2** Programme
UP/DOWN

**3** LEVEL

FUNCTION **4**

**7** ALTERNATE

SOUND MUTE **8**

**1-1** Power ON/OFF

OFF TIMER **9**

**11** TV/AV Selector

**10** NORMALIZATION

**Model C21PM10**

**Model C21PM15**

# General Operation

**To switch on or off the TV;**



Press the Mains ON/OFF ❶ button.

The power of the TV is turned on, or off completely.

**To set the TV to standby mode;**



Press the Power ON/OFF button ❶-❶
To turn on the TV, press again.
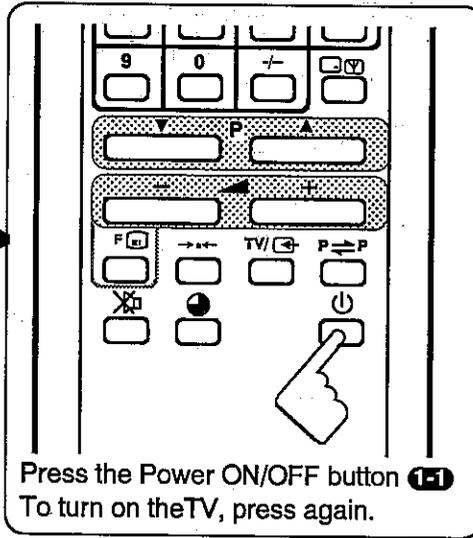
**To turn on the TV from standby mode;**

Press



Power ON/OFF ❶-❶
(remote control transmitter)

**or**



Programme UP/DOWN ❷
(remote control transmitter)

**or** 1 to 9, 0 Key



(remote control transmitter)

**or** − PROG. +
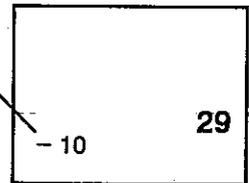


Programme UP/DOWN ❷
(TV set)
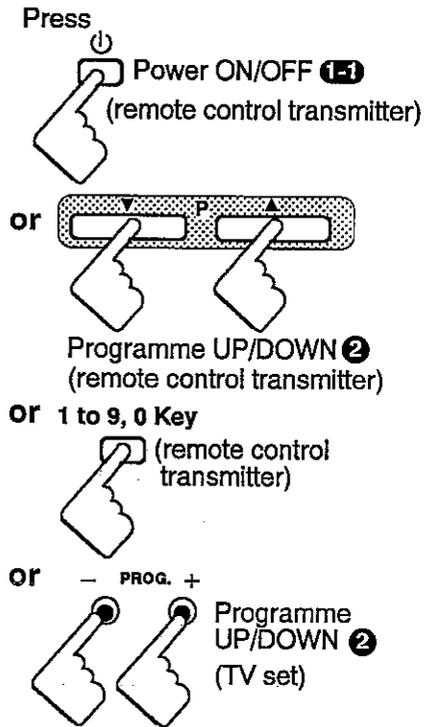
**Important !**

Be sure to set the Mains ON/OFF switch ❶ to the off position, if the power failure occurs while viewing.
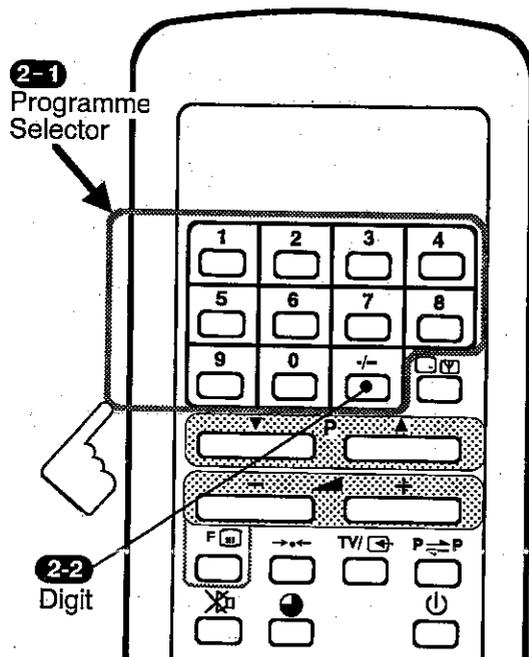
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**AUTO SHUT OFF**

This TV set incorporates the AUTO SHUT OFF function.
Even if the TV is left on after you have gone to sleep, the TV set changes to the standby mode within 10 minutes after all broadcasts have ended.
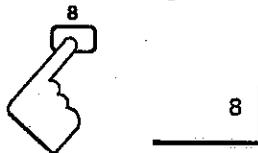
Remaining time



− 10    **29**

---

**To select a programme directly**



❷-❶
Programme Selector

❷-❷
Digit

**For example;**

To select a programme 8



8

To select a programme 10



Press the Digit ❷-❷ key.

− −   →   1 −   →   10
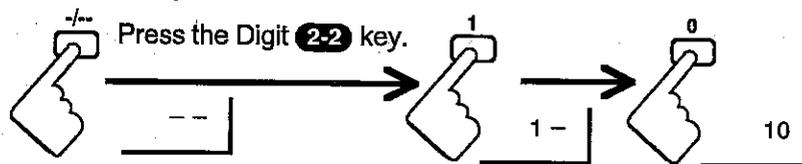
To select a programme 27



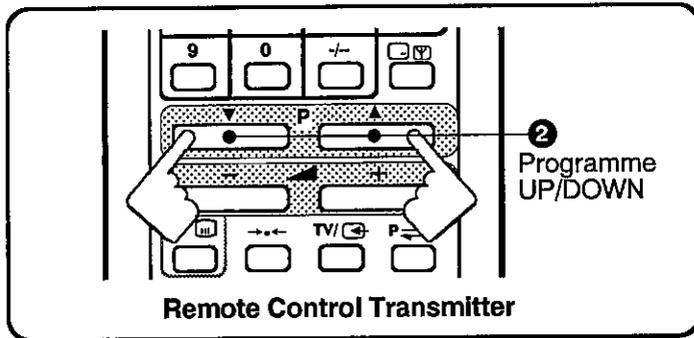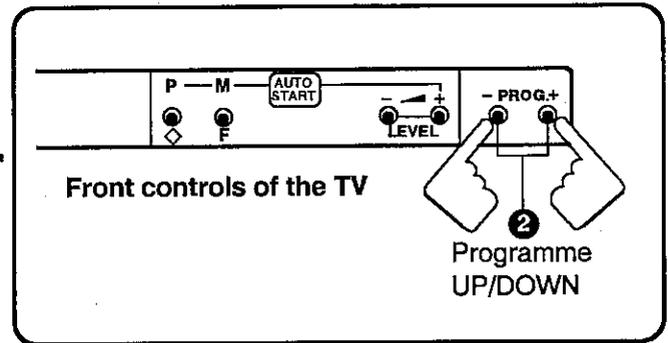− −   →   2 −   →   27
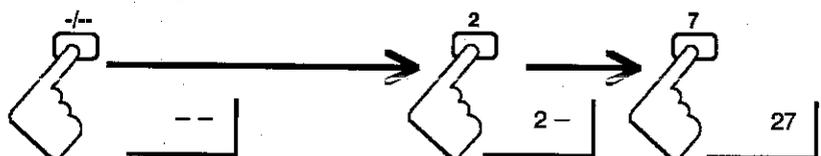
# General Operation

## Programme Selection (Programme UP and Down)

**To select a channel**



**Remote Control Transmitter**

**②** Programme UP/DOWN
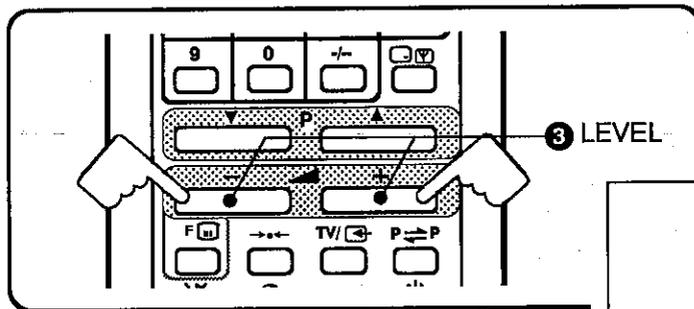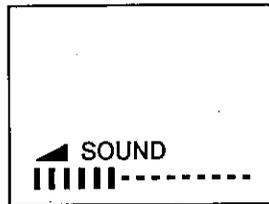
**or**

**Front controls of the TV**

**②** Programme UP/DOWN

## Volume Control

**To adjust the sound volume**



**③** LEVEL

**or**

**③** LEVEL

**SOUND**
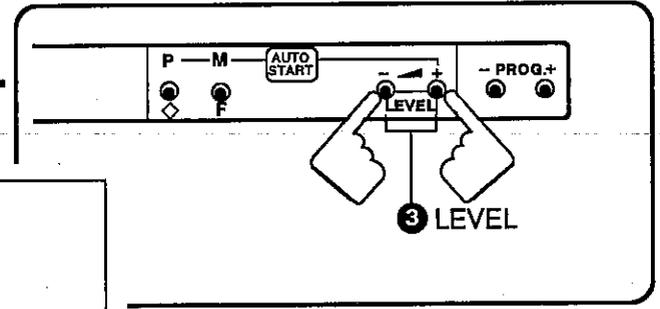
## RECALL

To display the on screen indications, press the RECALL key.



**⑥** RECALL

off timer

– 30

29

Programme position
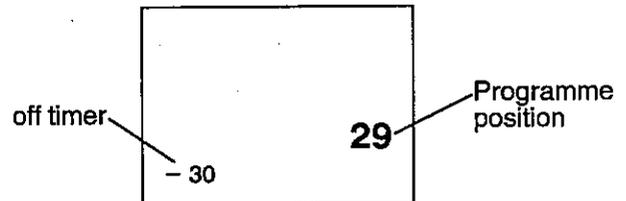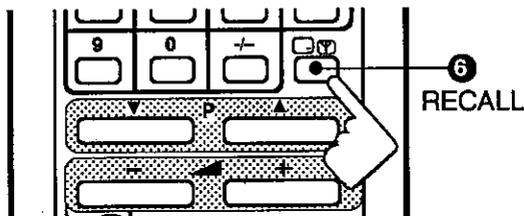
Screen display disappears after about 5 seconds.

## ALTERNATE

Press the ALTERNATE **⑦** key, and the programme position will alternately select the previous position and the present position.



**⑦** ALTERNATE

4          2
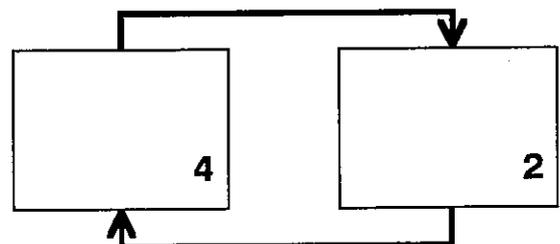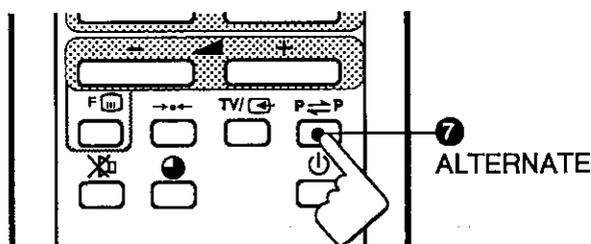
For example, now you are watching programme position "4" but you watched programme position "2" previously. If you press the ALTERNATE key, programme position "2" immediately appears.

# General Operation

## SOUND MUTE

Should you wish to mute the sound (e.g. While talking on the telephone), press the SOUND MUTE ❽ key.

❽ SOUND MUTE

◢ SOUND MUTE
I I I I I I - - - - - - - - -

To switch the sound back on, press SOUND MUTE key again.

## OFF TIMER

The TV set will be turned off after about 30, 60, 90 or 120 minutes.
Press the OFF TIMER ❾ key.

❾ OFF TIMER

**To cancel the OFF TIMER**

Press the OFF TIMER key until " − − " appears.

| − − | No off timer |
| − 30 | After 30 minutes |
| − 60 | After 60 minutes |
| − 90 | After 90 minutes |
| − 120 | After 120 minutes |

Just one minute before switching off the TV, " − 01 " and channel number will be displayed on the screen.
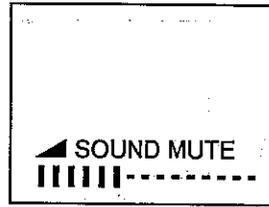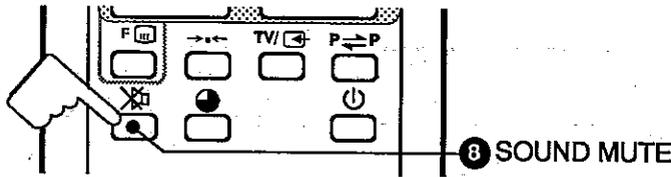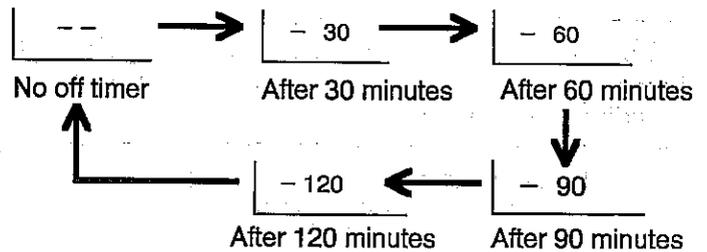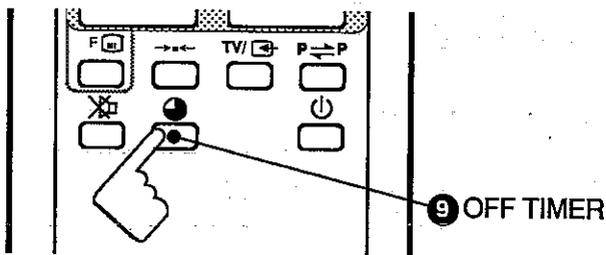
− 01     25

## MEMORY

This function lets you store the settings (for colour, brightness, contrast, sharpness, sound volume)in memory for both picture and the sound, and these setting levels can be recalled by pressing the NORMALIZATION ❿ key of the remote control transmitter.

**To store the picture and sound settings**

(1) Set the picture and sound to the desired levels. ⟶ 

◢ SOUND
I I I I I I - - - - - - - -
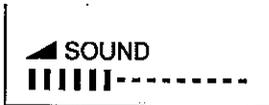
etc.

(2) Press the MEMORY/PRESET ◇ ❺ button while the control function display is still visible on the screen.

❺ MEMORY/PRESET ⟶ 
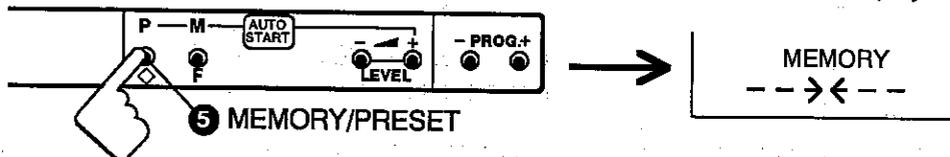
MEMORY
− − ❯❮ − −

NOTE: The control settings will not be saved if the MEMORY button is pressed after the control function display has left the screen.

## NORMALIZATION
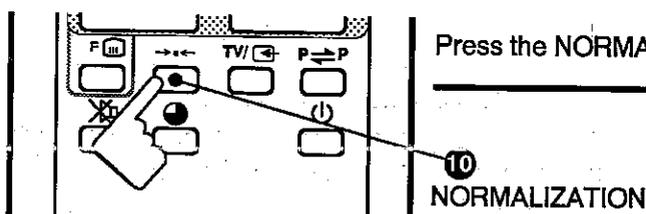
Press the NORMALIZATION ❿ key.

⟶ 

NORMAL
− − ❯❮ − −

❿ NORMALIZATION
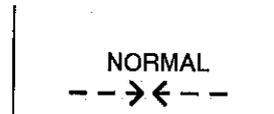
The colour, brightness, contrast, sharpness and sound volume settings which you stored using the MEMORY button are recalled.

− 6 −

# General Operation

## PICTURE ADJUSTMENTS

**(1) Select the adjustment item using the FUNCTION ❹ key.**



FUNCTION ❹

**or**

(Front controls of the TV)

❹ FUNCTION

**(2) Adjust using the LEVEL ❸ + and − key.**



LEVEL ❸

**or**

❸ LEVEL
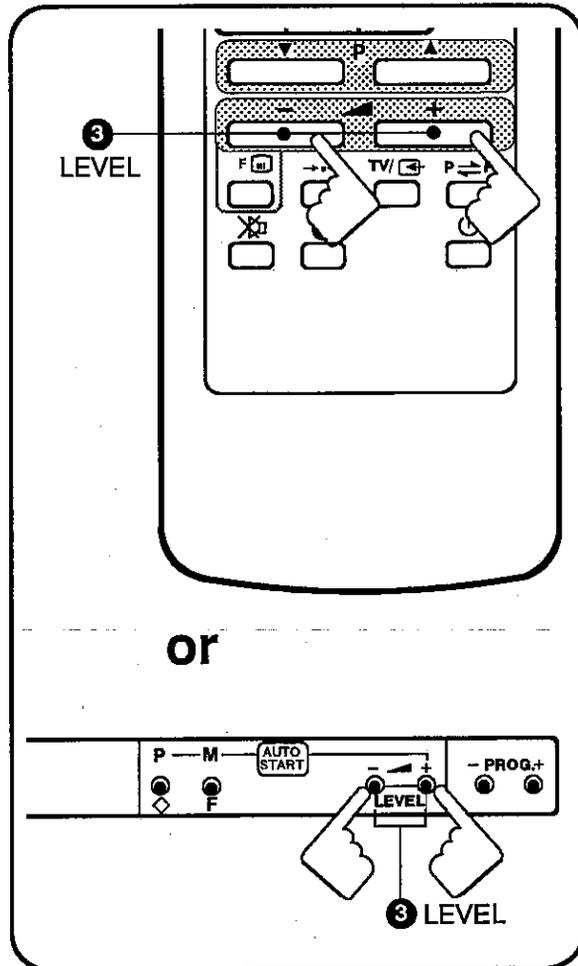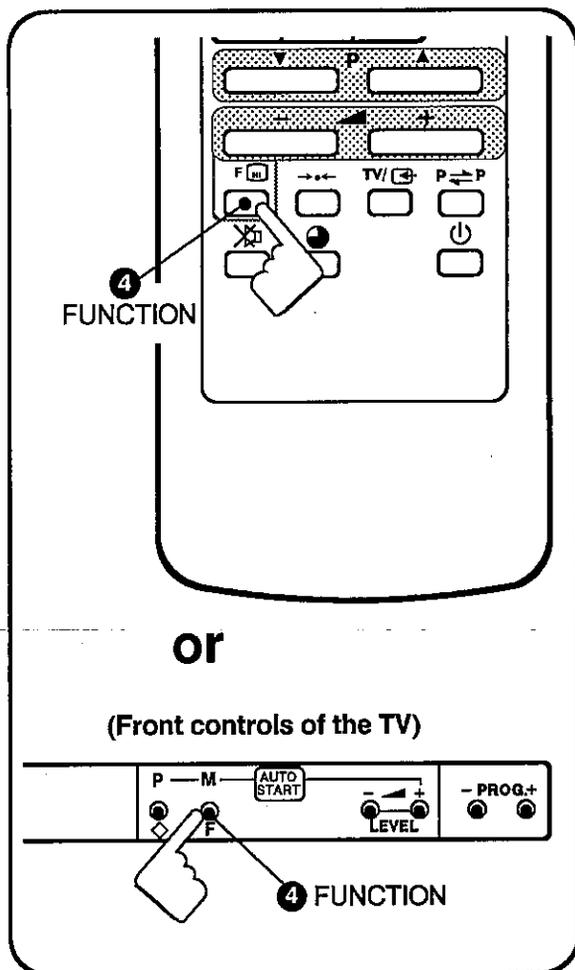
Each time the FUNCTION ❹ key is pressed, function choice will change as follows;



| | | |
|---|---|---|
| ⊕ COLOUR | ☼ BRIGHT | ◑ CONTRAST |
| **Colour intensity** | **Brightness** | **Contrast** |

| | | |
|---|---|---|
| | ⟨ ⟩ | ▭ SHARPNESS |
| **Display off** | **Fine tuning**<br>(Operative for TV mode only) | **Sharpness** |

−7−
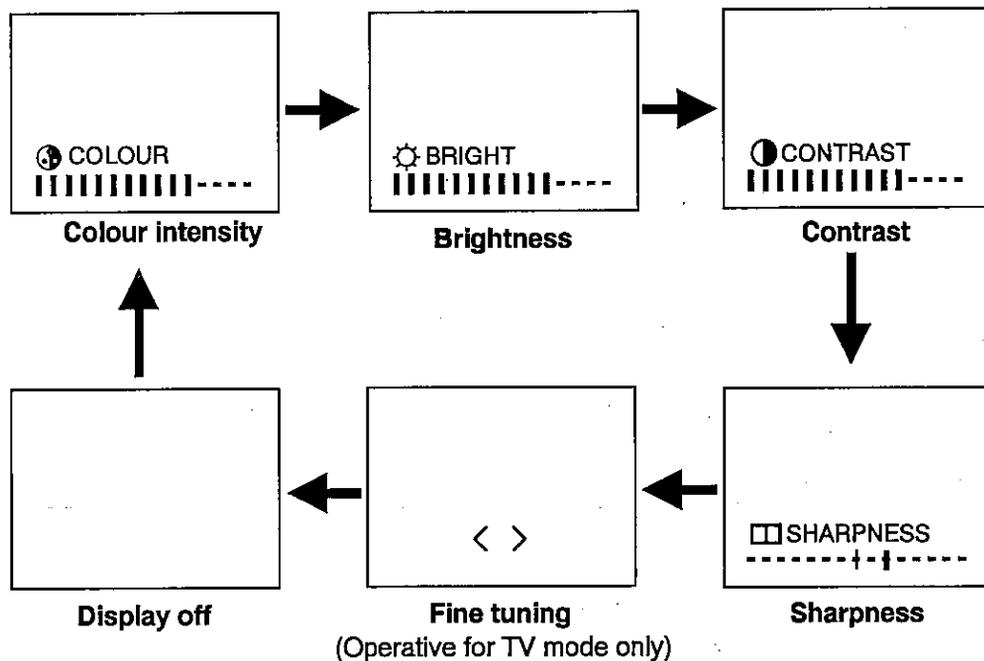
# Special Functions

You can set the special functions by inputting the special codes using the RECALL ❻ key and the Programme Selector ❷❶ of the remote control transmitter.

Special codes and special functions are as follows

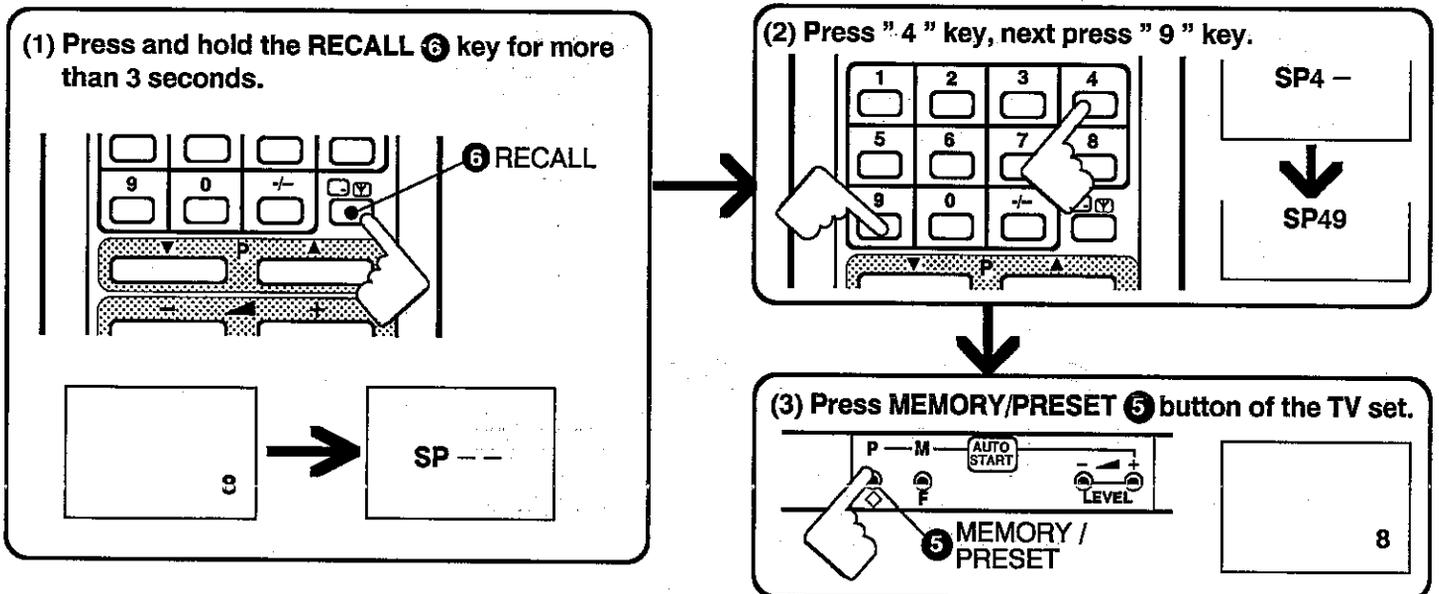| Special code | Special functons |
|---|---|
| SP 00 | Reset all special functions  (The start condition for the TV power is changed to the standby start). |
| SP 01 | Reset all special functions. |
| SP 30 | Cancellation special code "31". |
| SP 31 | Maximum volume level setting and prohibition of channel tuning function. |
| SP 40 | Setting of the start up condition for the TV programme.(Always switched on in previous programme position) |
| SP 41 | Setting of the start up condition for the TV programme. (Always switched on in programme position "1" ) |
| SP 42 | Setting of the start up condition for the TV programme. (Always switched on in programme position "2" ) |
| SP 43 | Setting of the start up condition for the TV programme. (Always switched on in programme position "3" ) |
| SP 44 | Setting of the start up condition for the TV programme. (Always switched on in programme position "4" ) |
| SP 45 | Setting of the start up condition for the TV programme. (Always switched on in programme position "5" ) |
| SP 46 | Setting of the start up condition for the TV programme. (Always switched on in programme position "6" ) |
| SP 47 | Setting of the start up condition for the TV programme. (Always switched on in programme position "7" ) |
| SP 48 | Setting of the start up condition for the TV programme. (Always switched on in programme position "8" ) |
| SP 49 | Setting of the start up condition for the TV programme. (Always switched on in AV mode) |
| SP 50 | Change of the start condition for the TV power (Setting to the standby start). |
| SP 51 | Change of the start condition for the TV power (Setting to the normal start). |
| SP 60 | Cancellation special function 61. |
| SP 61 | Suppression of the auto shut off function. |

Note: Special functions are not cancelled when the power is turned off or when the AC power plug is disconnected from the mains.

**Example: To input special code "49"**   (The input method is the same for all the special codes.)

**(1) Press and hold the RECALL ❻ key for more than 3 seconds.**



**(2) Press " 4 " key, next press " 9 " key.**



**(3) Press MEMORY/PRESET ❺ button of the TV set.**

# Special Functions

## SP00 and SP01 (Reset all special functions)

■ When "SP01" is input, all special functions are reset.

■ When "SP00" is input, all special functions are cancelled, and the start condition for TV power is changed to the standby start condition, meaning that the picture will not appear even when the mains ON/OFF switch ❶ is set at the on position. To turn on the TV set from the standby mode, press the Power ON/OFF⟨1-1⟩,Programme UP/DOWN ❷ or Programme Selector ⟨2-1⟩ key.

## SP 31 (Maximum volume level setting and suppression of channel tuning function)

"SP31" is used to set a limit for the maximum volume level while keeping the current preset programme position in memory.
When "SP31" is entered, the volume output at the time of entering the code is placed in the memory as the maximum volume level. In other words, with this code it is possible to set the maximum volume at your preference. Entering this code automatically suppresses the preset function, so that even if the preset button is pressed, the preset mode will remain inactive.

(1)Set the disirable volume level using the LEVEL ❸ key.



❸ LEVEL

◢ SOUND
||||||||------
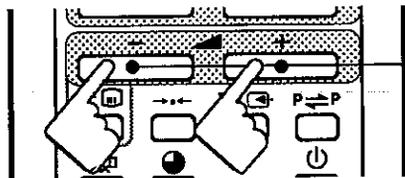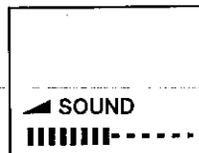
The volume level set in this procedure will be memorized as the maximum volume level.

(2) Input "SP31".

**To cancell "SP 31", Input "SP 30".**

## SP50 and 51 (Change of the start condition for the TV power)

When "SP 50" is entered, the start condition of the TV power is set to the standby start condition, meaning that the picture will not appear even when the Mains ON/OFF switch ❶ is set at the on position(The TV set remains in standby mode).

**To return the TV's power start condition to its original condition(normal start condition), Input "SP51".**

## SP60 and SP61 (Suppression of the auto shut off function)

When "SP 61" is entered, the auto shut off function is suppressed.

AUTO SHUT OFF
(Refer to page 4)



29

– 10
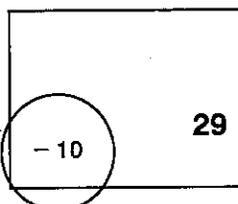
**To cancell "SP61", input "SP60".**

# Special Functions

These functions can be used to change the start up condition of the TV set as follows;

### When "SP40" is input

Power on
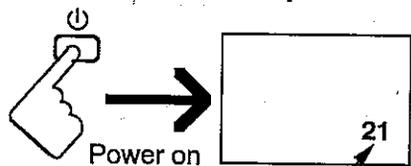
Previous
programme
position

The previously viewed programme
position is always selected.

### When "SP41" is input

1

The TV will always switch on in
programme position 1.

### When "SP42" is input

2

The TV will always switch on in
programme position 2.

### "SP43"

3

### "SP44"

4

### "SP45"

5

### "SP46"

6

### "SP47"

7

### "SP48"

8

### "SP49"

AV
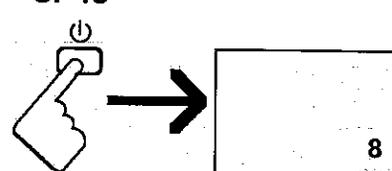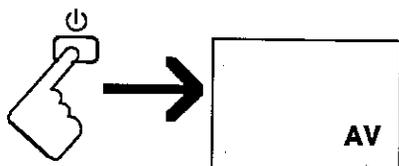
The TV will always switch on in
AV mode.

# Tuning of the Channels
Up to 30 broadcast stations in your reception area can be stored in the electronic memory.

*There are three ways of tuning as follows;*

**Automatic Tuning (the basic way)**
All receivable channels are automatically tuned in and memorized in consecutive programme position.
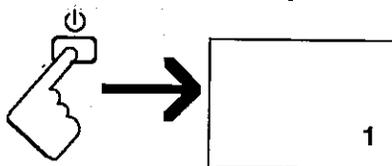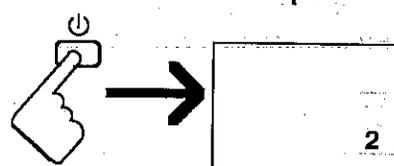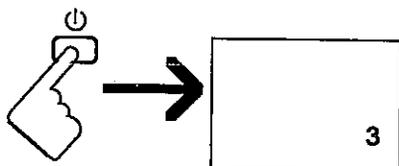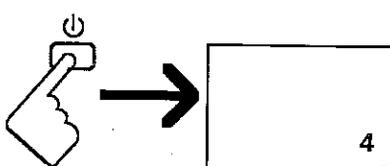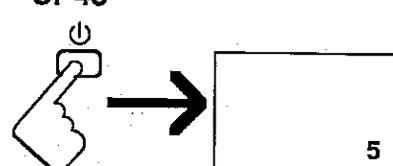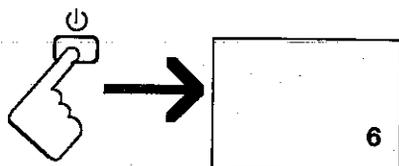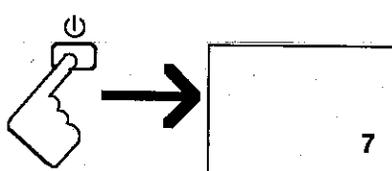
**Search Tuning**
Use to preset a receivable channel in any desired programme position, e.g. the position with the same number as the channel.

**Manual Tuning**
Manually tune a channel if it cannot be automatically tuned, such as when the signal is poor.

## Automatic Tuning

(1) Press the MEMORY/PRESET button **5**.

**(Front controls of the TV)**



**5** MEMORY / PRESET

AUTO TUNING

Programme position

Channel band
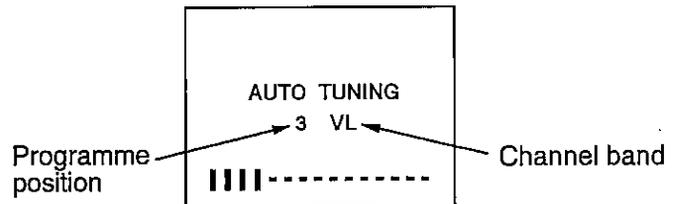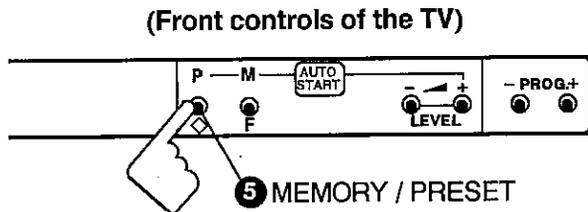
(2) Press the LEVEL( + ) **3** button.



LEVEL( + )
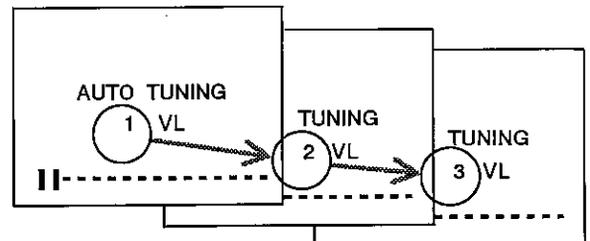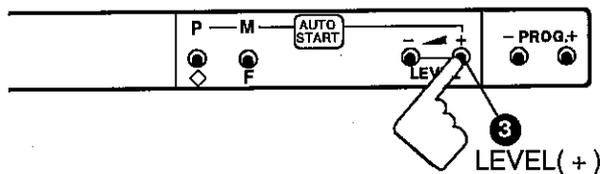
The channels are preset in consecutive positions begining from the programme position "1".
After all available channels have been preset, the unit returns to the position "1".

Note: To cancel automatic tuning midway, press the MEMORY/PRESET **5** or Power ON/OFF **1-1** button.
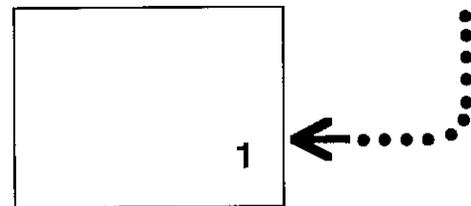
## Channel Copy

**Example: To copy the TV channel in the programme position 2 into the programme position 6**

(1) Select programme position 2 using Programme selector **2-1** ⟶ | 2 |
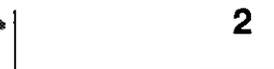
(2) Press the MEMORY/PRESET button **5** 3 times. ⟶
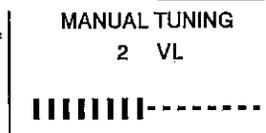
MANUAL TUNING
2  VL

(3) Select the programme position 6 using Programme UP/DOWN **2** button of the TV set. ⟶

MANUAL TUNING
6  VL
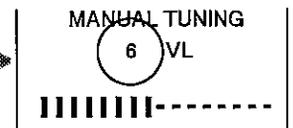
MANUAL TUNING
6  VL

(4) Press FUNCTION button **4** . ⟶
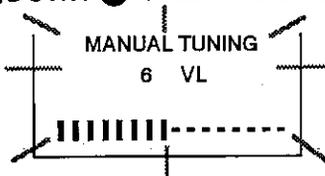
MANUAL TUNING
6  VL

(5) Press the MEMORY/PRESET button **5** .

| 6 |

# Tuning of the Channels

**Example: To preset a channel in programme position 6**

| Search Tuning | Manual Tuning |
|---|---|

(1) Select programme position 6 using Programme selector **2-1** .

6

---

**Search Tuning**

(2) Press the MEMORY/PRESET button **5** twice.

SEARCH TUNING
6   VL

|||| - - - - - - - - - - -

**5** MEMORY / PRESET

(3) Press the LEVEL( + ) or ( − ) **3** button.

SEARCH TUNING
6   VL

|||||||||||| - - - -

When a station is found, searching stops automatically.

LEVEL **3**

(4) Press the FUNCTION button **4** of the TV set.

SEARCH TUNING
6   VL

||||||||||| - - - -

**4** FUNCTION

(5) Press the MEMORY/PRESET button **5** twice.

6

**5** MEMORY / PRESET

This completes the presetting.

---

**Manual Tuning**

(2) Press the MEMORY/PRESET button **5** 3 times.

MANUAL TUNING
6   VL

||||||||| - - - - - - -

(3) Press and hold the LEVEL( + ) or ( − ) **3** button until the desired station appears.

MANUAL TUNING
6   VL

|||||||||||| - - - -

(5) Press the MEMORY/PRESET button **5** .

6

This completes the presetting.

---

Repeat steps 1 to 5 for other desired channels.

# Teletext Use (Note: Model C21PM10 is not equipped with the Teletext Decoder)

SIZE

TV/TEXT/MIX

CANCEL(RED)

REVEAL(GREEN)

Page Selection

Page UP(▲)/DOWN(▼)

HOLD

INDEX

TIME/SUB(CYAN)

YELLOW

Digit

(1) To use CANCEL, REVEAL or TIME/SUB in Text mode, press the Digit button first.

To return to the normal text display, press the Digit button again.

**TEXT PAGE**

⟨X⟩ ⟨?⟩ S✱✱✱✱

**TEXT PAGE**

500 502 510 600

You can use CANCEL, REVEAL or TIME/SUB when this display is shown.

(2) Next, press the CANCEL, REVEAL or TIME/SUB key.

## ■ Switching to the Teletext mode

Press the TV/TEXT/MIX button, and the screen changes as follows:

TV → [TV/TEXT/MIX ▤▨▢] → TEXT → [TV/TEXT/MIX ▤▨▢] → TV/TEXT MIX

TV/TEXT/MIX ▤▨▢
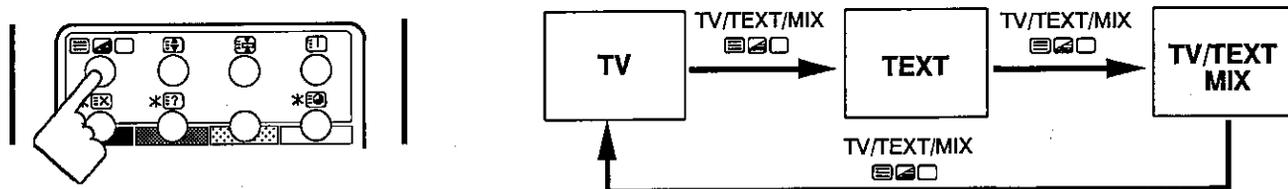
## ■ Page Selection

### Direct Page Access

A Teletext page can be selected with the "0" to "9" buttons.

For example:
To select page 120, press 1 → 2 → 0

P120

**TEXT PAGE**

119 121 130 200
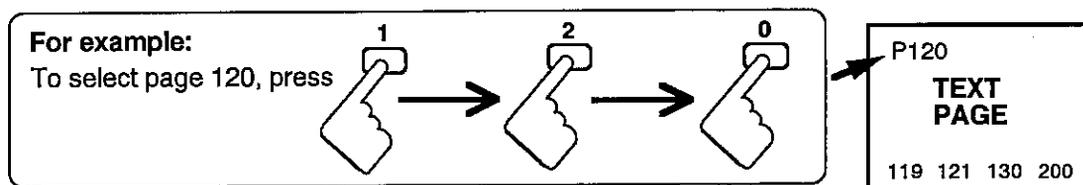
### UP–DOWN Page Access

DOWN  UP
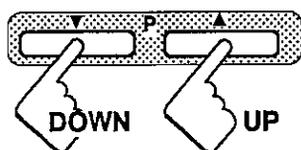
Press the Page UP(▲) button to step up to the next higher Teletext page.

Press the Page DOWN(▼) button to step down to the next lower Teletext page.

## ■ To display the Index Page
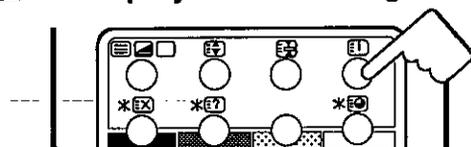
To return to the index page, press the INDEX button

# Teletext Use

## ■ Sub-Coded Page Access

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

(1) Select a text page which has sub pages.

(2) Press the Digit button.



```
TEXT PAGE

<X>  <?>          S****
```

(3) Press the TIME/SUB button.



```
S****

TEXT PAGE
```
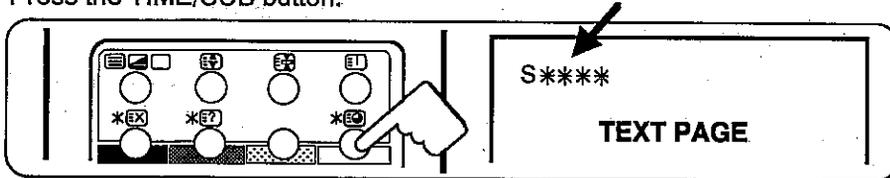
To go back to normal Teletext page entry mode, press the Digit button again.

(4) Enter the desired sub-page.

**Example:**
To enter the sub page "10", you must press the 0, 0, 1, and 0 button.

0 → 0 → 1 → 0

```
S0010

TEXT PAGE
```

(5) Press the CANCEL button.
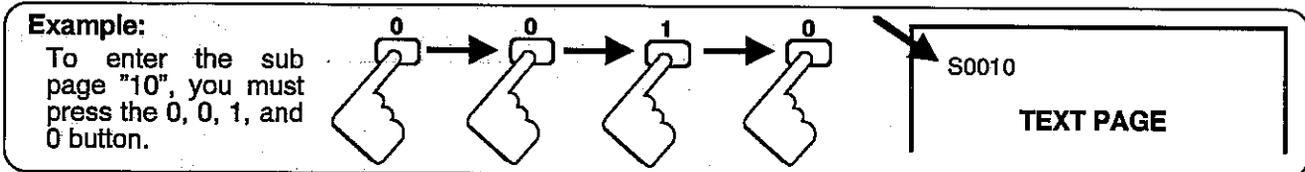
CANCEL    Normal TV Picture    >    Normal TV Picture
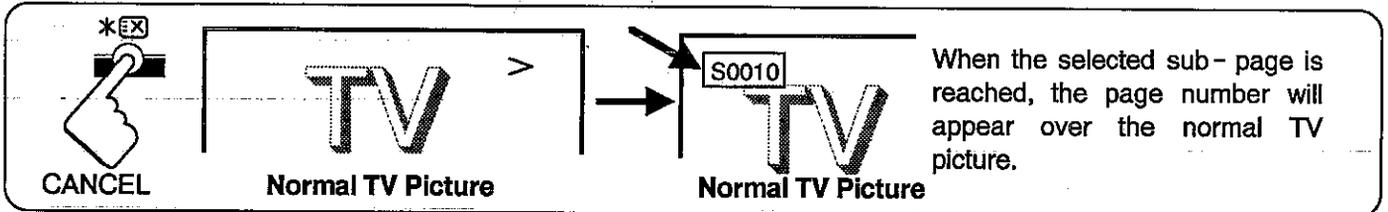
When the selected sub-page is reached, the page number will appear over the normal TV picture.

(6) Press the TV/TEXT/MIX button to display the received sub-page.
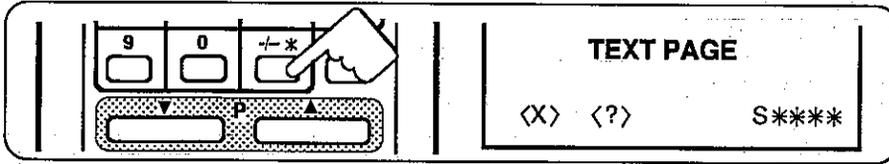
```
S0010

TEXT SUB-PAGE
```
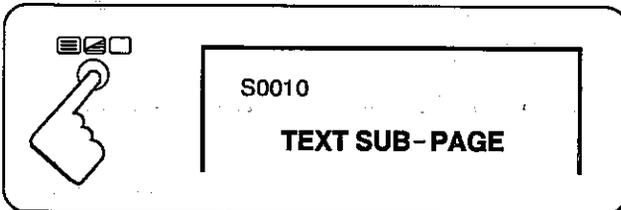
**Note:**
To clear the sub-coded page, enter a new page number.

It is not possible to select another television station during a sub-page access operation.

## ■ Viewing TV while searching for a page

In some cases it can take some time to look for a page. In the interval you can view the TV by pressing the Digit and CANCEL button.

```
P351  P301

TEXT
PAGE

199  101  110  220
```

→ Digit → CANCEL → Normal TV Picture → Normal TV Picture → TV/TEXT/MIX

```
P351  P308

TEXT
PAGE

<X> <?> S****
```

When the page arrives, the page number will appear on the normal TV picture.

```
P351

TEXT
PAGE

350  352  360  400
```
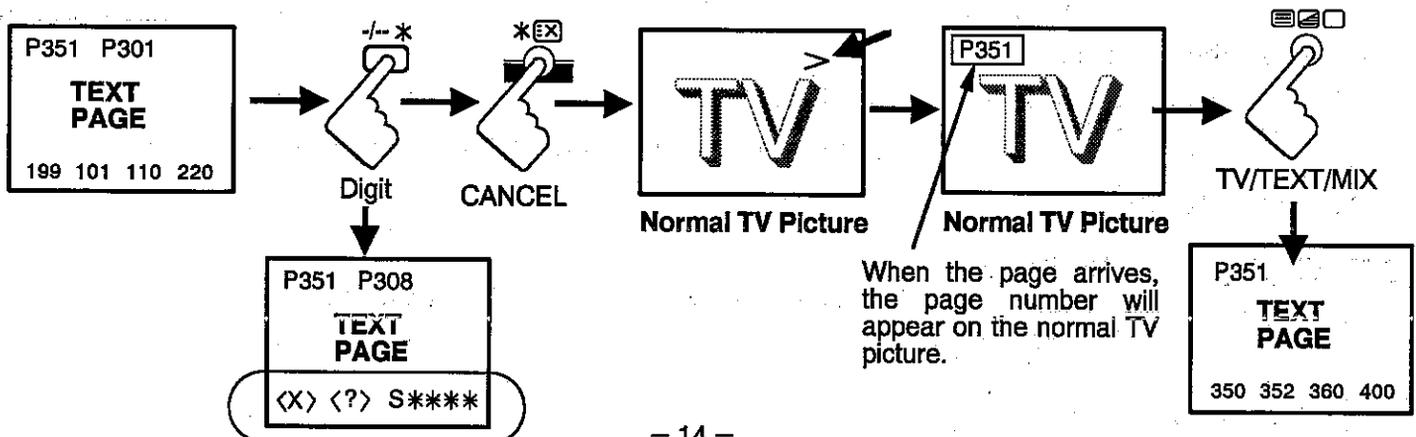
# Teletext Use

## ■ HOLD 🖼

When a text page has sub-pages, you can prevent the sub page being automatically changed by pressing the HOLD button. Press the HOLD button again to resume page change or enter a new page number.

HOLD

**TEXT PAGE**

HOLD
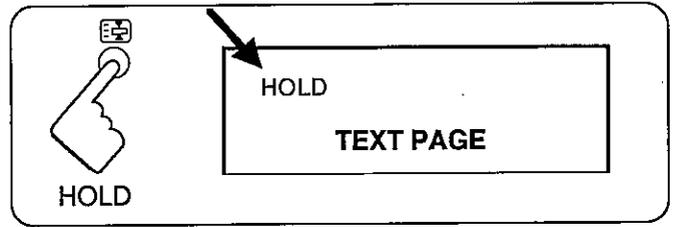
## ■ Double letter height

Either the top or bottom half of the display can be expanded by pressing the SIZE button.

SIZE

**TELETEXT DISPLAY** → **TELETEXT** → **DISPLAY**

Upper half of the screen

Lower half of the screen
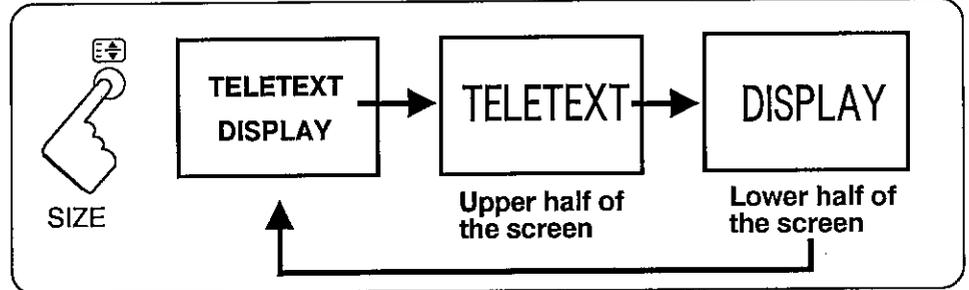
## ■ Displaying concealed information

Some of the text pages are in the form of a quiz or puzzle.
The answer to these can be revealed by pressing the Digit and REVEAL button.

Digit

P471
**QUIZ**
**?**
⟨X⟩ ⟨?⟩ S****

REVEAL

P471
**QUIZ**
**ANSWER**
⟨X⟩ ⟨?⟩ S****

REVEAL

P471
**QUIZ**
**?**
⟨X⟩ ⟨?⟩ S****

## ■ News flash

(1) In the text mode, select a newsflash page.

P500
**NEWS FLASH**
599 501 510 600

(TEXT mode)

(2) Press the Digit button.

P500
**NEWS FLASH**
⟨X⟩ ⟨?⟩ S****

(TEXT mode)

(3) Press the CANCEL button.

TV

(Normal TV picture)

(4) As soon as news comes in, the word "NEWS FLASH" and the news appears over the normal TV picture.

NEWS FLASH
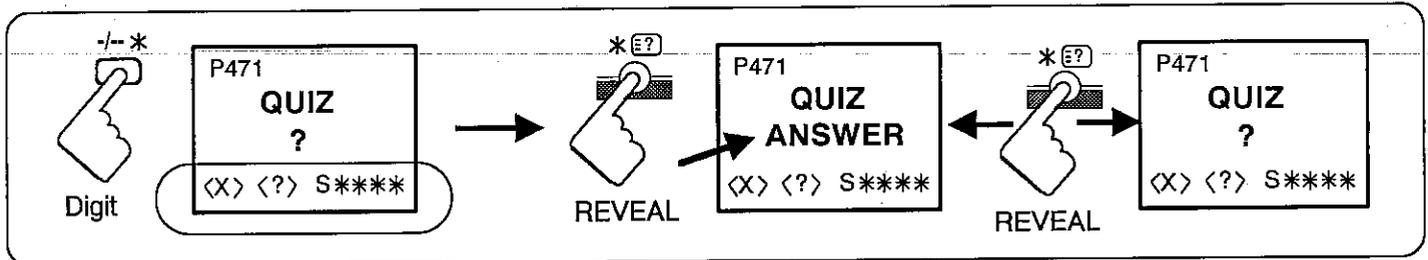
(5) Press the TV/TEXT/MIX button.
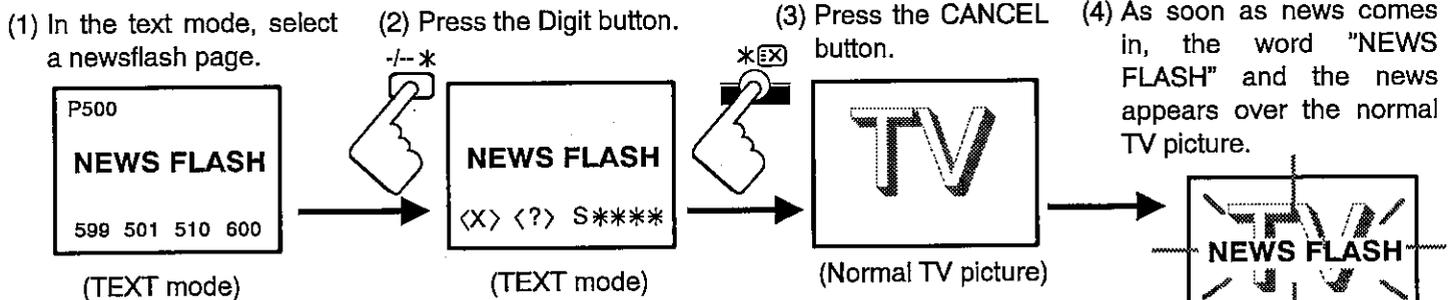
Note : It is not possible to select another TV station during a NEWS FLASH. You should first switch back to TV reception by pressing the TV/TEXT/MIX button.

P500
**SPORT NEWS**
599 501 510 600

(TEXT mode)

P500
SPORT NEWS
599 501 510 600
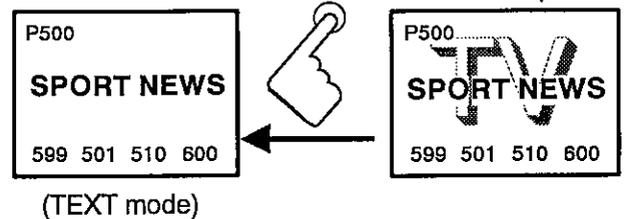
# Teletext Use

## ■ Updated Page

There are pages which are updated as events progress, such as sports results, news reports and traffic information.

If you have selected one of the above pages from the list of contents and you want to view television but still be kept informed about the other events;

(1) Press the Digit button.

(2) Press the CANCEL button.

(3) As soon as this page is updated, the page number will appear on the normal TV picture.

```
P300

Updated Page

399 301 310 400
```
(TEXT mode)

```
P300

Updated Page

<X> <?> S****
```
(TEXT mode)

(Normal TV picture)

(Normal TV picture)

(4) Press the TV/TEXT/MIX button.

Note : It is not possible to select another TV station during an UP - DATE. You should first switch back to TV reception by pressing the TV/TEXT/MIX button.

```
P300

Updated Page

399 101 310 400
```
(TEXT mode)

## ■ TIME *

If the time is required while a programme is being viewed, press the TIME/SUB * button.
Providing that the channel being viewed is also transmitting teletext, the time will appear at the top righthand of the screen for five seconds. The digits displayed represent hours/minutes/seconds.

TIME/SUB

18:05/47

(Normal TV picture)
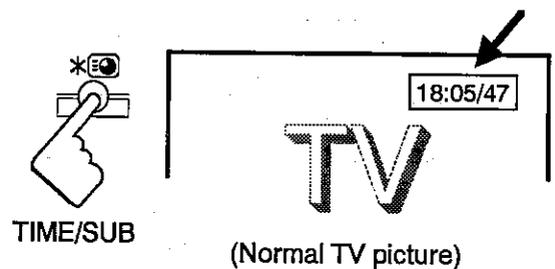
# Teletext Use

## ■ FLOF (FLOF: Full -level -one feature)

When a broadcasting station provides FLOF service, you can access the text pages you desire quickly and easily.

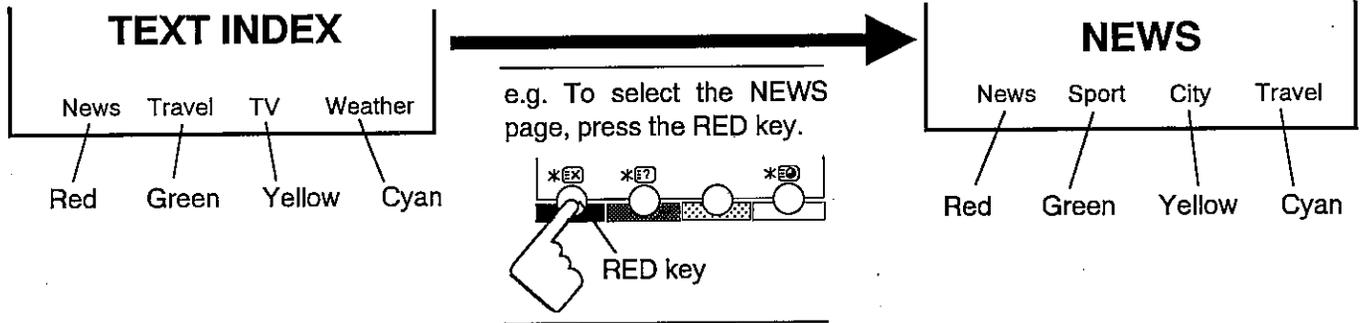In the FLOF mode , four Fastext topics are displayed at the bottom of the screen. These can be selected by pressing the corresponding coloured button(Red, Green, Yellow, Cyan) on the remote control transmitter.
For example, when the Red button is pressed, the topic written in red is selected.

To get back to the initial index page, press the INDEX button.

**(FLOF mode)**



TEXT INDEX

News    Travel    TV    Weather

Red    Green    Yellow    Cyan

e.g. To select the NEWS page, press the RED key.

RED key

NEWS

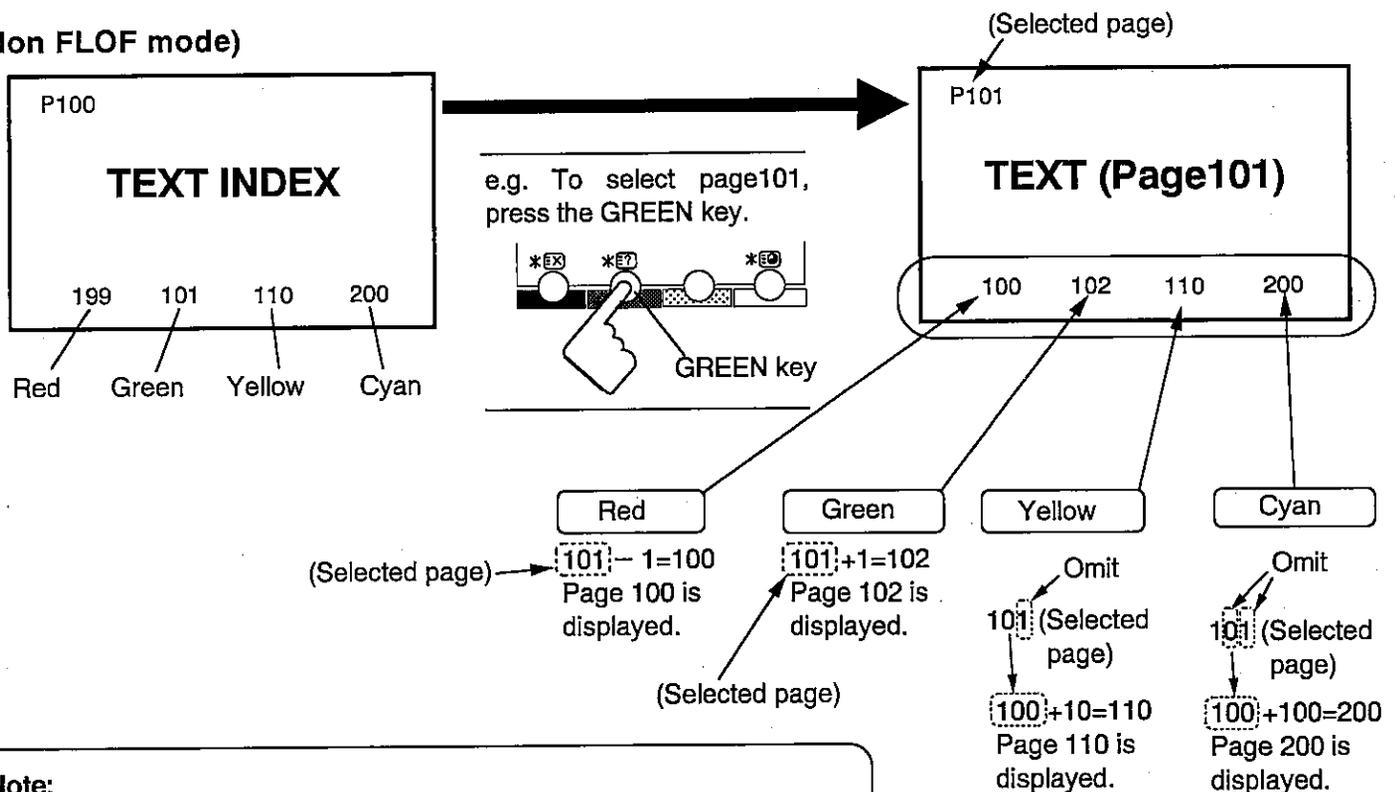News    Sport    City    Travel

Red    Green    Yellow    Cyan

## ■ Non FLOF Service

When the station does not have FLOF service, the INDEX page(P100) is automatically displayed.
At the bottom of the screen, the four page numbers 199,101,110,200 are also displayed. Then, when you select a random page number out of the displayed four pages by pressing a colour button, the text of that page is displayed.

Of course at any time you can select new pages by inputting new numbers.

**(Non FLOF mode)**



P100

TEXT INDEX

199    101    110    200

Red    Green    Yellow    Cyan

e.g. To select page101, press the GREEN key.

GREEN key

(Selected page)

P101

TEXT (Page101)

100    102    110    200

| Red | Green | Yellow | Cyan |
|---|---|---|---|

(Selected page)→ 101 −1=100
Page 100 is displayed.

101 +1=102
Page 102 is displayed.

(Selected page)

Omit
101 (Selected page)
100 +10=110
Page 110 is displayed.

Omit
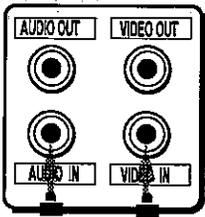101 (Selected page)
100 +100=200
Page 200 is displayed.

> **Note:**
> If your aerial signal is poor, the teletext reception may be poor.

# Connecting other Equipment

## Connecting to the AV input jacks

**(A/V Terminal)**

| AUDIO OUT | VIDEO OUT |

Rear of the Set

| AUDIO IN | VIDEO IN |

PLAYBACK

Connect the video and audio outputs of a VCR, video disc player, etc. to the input jacks of this TV set. Tapes and discs can be played back.

VIDEO/AUDIO Input level

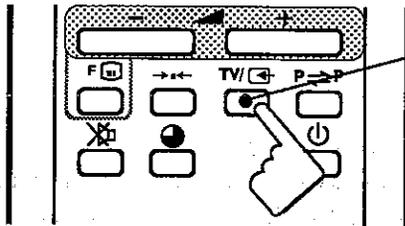|  | Level | Impedance |
|---|---|---|
| VIDEO INPUT | 1.0Vp-p | 75 Ω |
| AUDIO INPUT | 436mVrms | More than 40K Ω |

to Video Output ⇒

**VCR**

to Audio Output ⇒

### To watch the video input picture

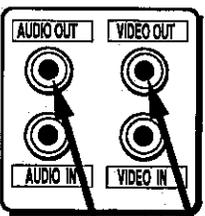(1) Press the TV/AV Selector ⑪ .

TV/AV Selector ⑪

28 ➡ AV

(2) Set the VCR to playback mode.

### To return to the TV mode;

Press the TV/AV Selector again.

## Connecting to the AV output jacks

**(A/V Terminal)**

| AUDIO OUT | VIDEO OUT |

Rear of the Set

| AUDIO IN | VIDEO IN |

The AV output terminal provides audio and video output for TV broadcasts being received. They are used to record TV broadcasts.

**To record TV broadcasts, Select the TV mode using TV/AV Selector ⑪**
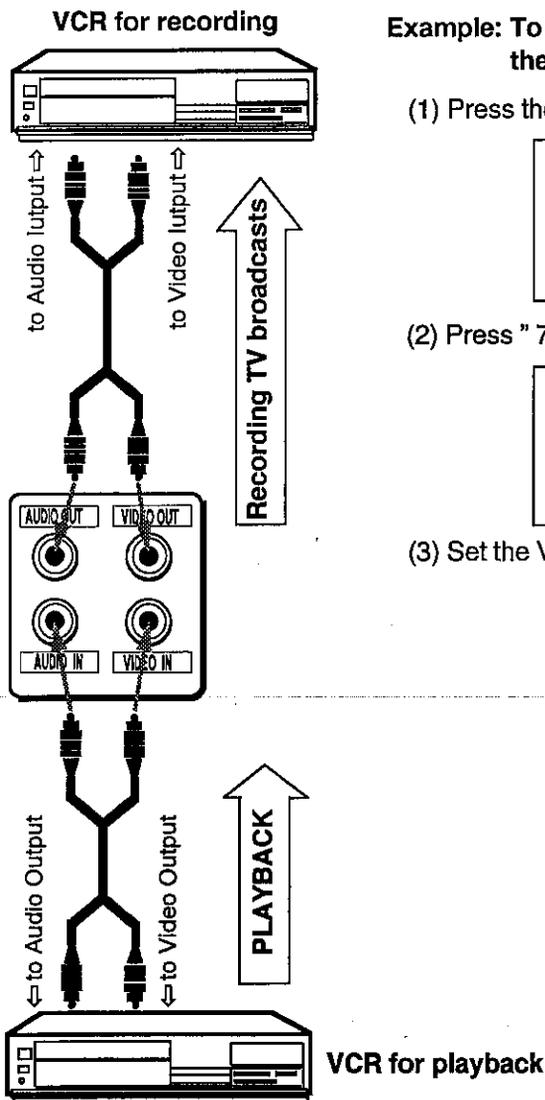
to video input ⇒

**VCR for recording**

Recording TV broadcasts

to audio input ⇒

VIDEO/AUDIO output level

|  | Level | Impedance |
|---|---|---|
| VIDEO OUTPUT | 1.0Vp-p | 75 Ω |
| AUDIO OUTPUT | 436mVrms | Less than 600 Ω |

# Connecting other Equipment

## To record a TV broadcast while watching the playback from a VCR

**VCR for recording**

to Audio Iutput ⇧

to Video Iutput ⇧

Recording TV broadcasts

AUDIO OUT   VIDEO OUT

AUDIO IN   VIDEO IN

to Audio Output ⇩
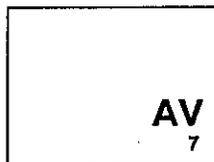
to Video Output ⇩

PLAYBACK

**VCR for playback**

**Example: To record a TV broadcast of programme position " 7 " while watching the playback from a VCR,**

(1) Press the TV/AV Selector ⑪ , and set the VCR to playback mode.

> **AV**
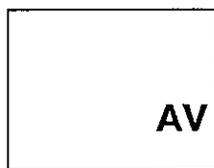
(2) Press " 7 " key of the Programme Selector ②-①.

> **AV**
> 7

(3) Set the VCR for recording to the recording mode.
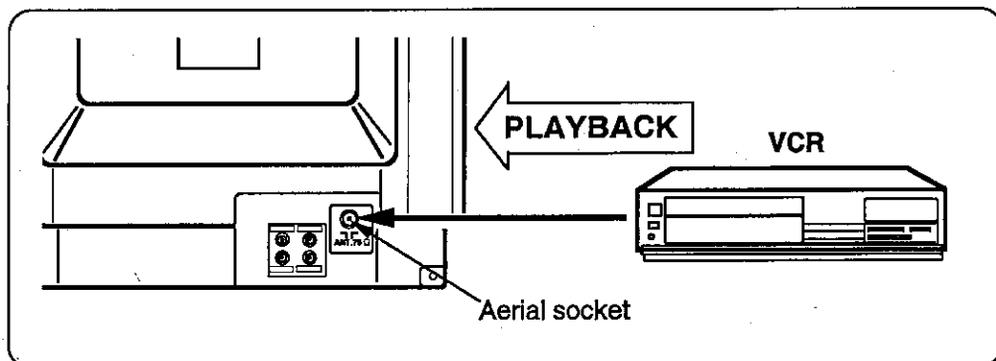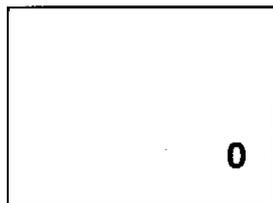
## AV connection to the aerial socket

The AV apparatus can also be connected to the aerial socket of your TV receiver.

**Presetting to watch the video input**

(1) Play back the VCR.
(2) Tune a channel in programme position 0 (See Search tuning & Manual tuning on page 13).

**Watching the video input**

Select programme position 0.

> **0**

PLAYBACK   VCR

Aerial socket

For further details concerning this connection and adjustment, refer to the operating instructions for the AV equipment.

# Specifications

Power source          AC 220-240 Volts, 50Hz.

Receiving system   PAL-B/G

Channel coverage   VHF: 0-11, 5A
                   UHF: 28-69

Aerial input impedance   75 $\Omega$

Audio output         3.5W

Ext. terminals       AV Inputs:
                         Video input(Phono jack) x 1
                         Audio input(Phono jack) x 1
                     AV Outputs:
                         Video output(Phono jack) x 1
                         Audio output(Phono jack) x 1
                     Headphone jack(Mini jack) x 1

Dimensions           506(W) x 469(H) x 483(D)mm

Weight               approx. 20 Kg

*Specifications subject to change without notice.*

**SANYO**