

# SANYO

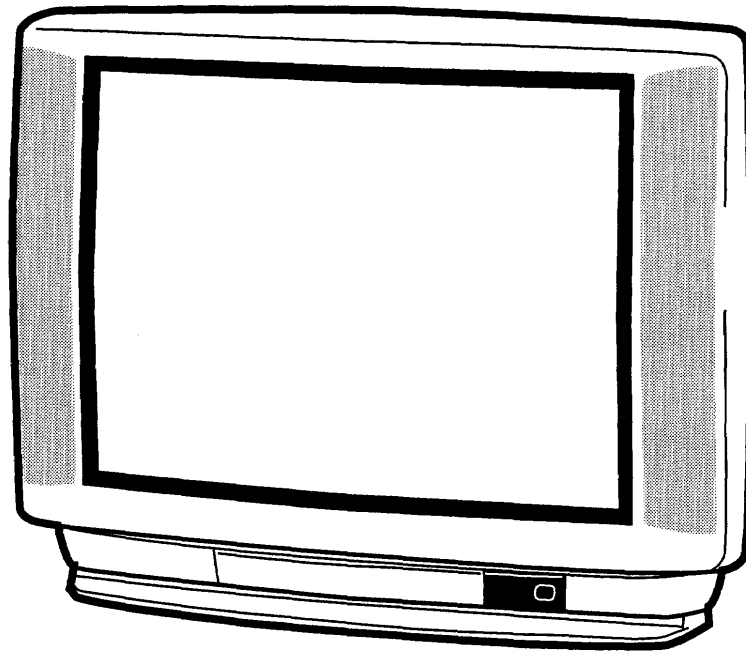
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**INSTRUCTION MANUAL**

**CE25XP2-B**

**CE28XP2-B**

**COLOUR TELEVISION**



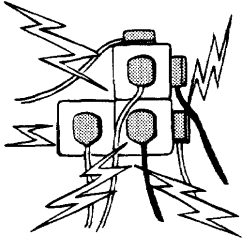
Manufactured under license from Dolby Laboratories Licensing Corporation. Dolby, the double-D symbol and "PRO LOGIC" are trademarks of Dolby Laboratories Licensing Corporation.

**Please read this Instruction book before using your television.  
We wish you many hours of pleasure from your new television.**

# SAFETY PRECAUTIONS

**CAUTION: Please read and retain for your safety.** This unit has been engineered and manufactured to assure your personal safety. But improper use can result in potential electrical shock or fire hazards. In order not to defeat the safeguards incorporated in this receiver observe the following basic rules for its installation, use and servicing.

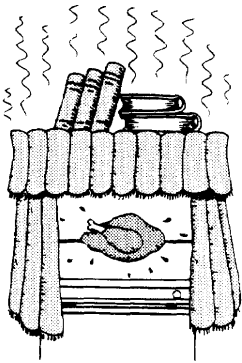
## Installation



**Do not** allow anything to rest on the power cord.

**Do not** locate this television receiver where the cord will be damaged by people walking on it.

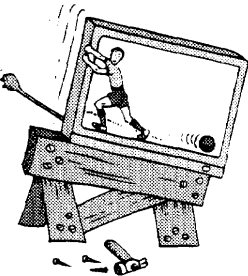
**Do not** overload wall outlets and extension cords as this can result in fire or electric shock.



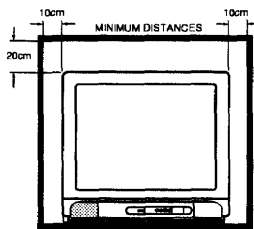
Slots and openings in the cabinet and in the back or bottom are provided for ventilation to ensure reliable operation and to protect it from overheating. These openings **must not** be blocked or covered.

The opening **should never** be covered with a cloth or other material, and the bottom openings **should not** be blocked by placing the television receiver on a bed, sofa, rug, or other similar surface.

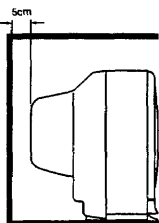
This television receiver **should never** be placed near or over a radiator or heater.



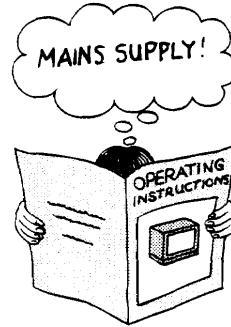
**Do not** place your television receiver on an unstable stand, shelf or table. Serious injury to an individual, and damage to the television may result if it should fall. Your sales person can recommend approved stands or shelf and wall mounting instructions.



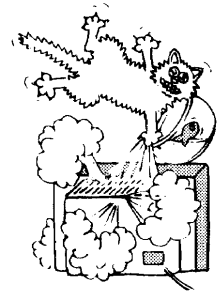
If the television is built into a unit, or enclosed, the minimum distances for ventilation must be maintained. Heat build up can reduce the life of your television, and can be dangerous.



## Use

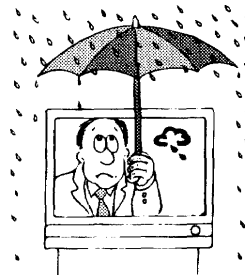


This television receiver should be operated only from the type of power source indicated on the television or as indicated in the Operating Instructions. If you are not sure of the type of power supply in your home, consult your sales person or your local power company.

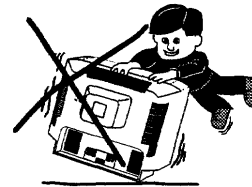


**Never** add accessories that have not been specifically designed for this television.

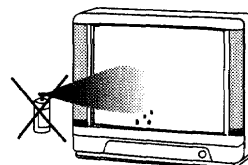
**Do not** drop or push objects into the television cabinet slots or openings. Some internal parts carry hazardous voltages and contact may result in an electrical shock hazard. **Never** spill liquids of any kind on the television receiver.



**Do not** expose the television receiver to rain or use near water. For example, near a bathtub, kitchen sink, in a wet basement, etc. Before cleaning, unplug the television receiver from the wall socket.



**Never** stand on, lean on or push suddenly the television or its stand. You should pay special attention to children. Serious injury may result if it should fall.



**Do not** apply liquid cleaners or aerosol cleaners directly onto the television receiver. Use a damp cloth for cleaning.

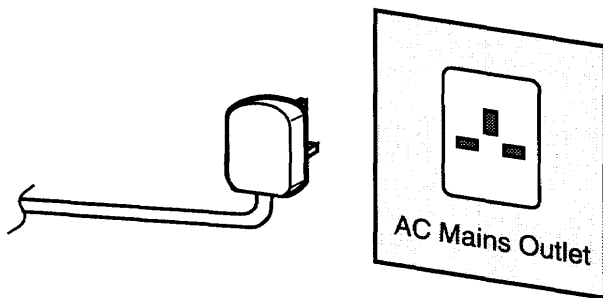
# INSTALLATION

## Mains Supply

The TV set is prepared for a mains voltage AC220~240V, 50Hz. Connect the power cord of the TV set to a wall outlet. When the TV set is not to be used for an extended period of time, it is advisable to disconnect the power cord from the power outlet.

### WARNING!

High voltages are used in the operation of this set. Refer service to qualified service personnel.



### Important:

This equipment is fitted with an approved non rewirable UK mains plug. To change a fuse in this type of plug proceed as follows:

1. Remove the fuse cover and fuse.
2. Fix a new fuse which should be a BS1362 5Amp A.S.T.A. or BSI approved type.
3. Refit the fuse cover.

If the fitted plug is not suitable for your socket outlets, it should be cut off and an appropriate plug fitted in its place. If the mains plug contains a fuse, this should have a rating of 5Amp. If a plug without a fuse is used, the fuse at the distribution board should not be greater than 5Amp.

**Note:** The severed plug must be destroyed to avoid a possible shock hazard should it be inserted into a 13Amp socket elsewhere.

The wires in this mains lead are coloured in accordance with the following code:

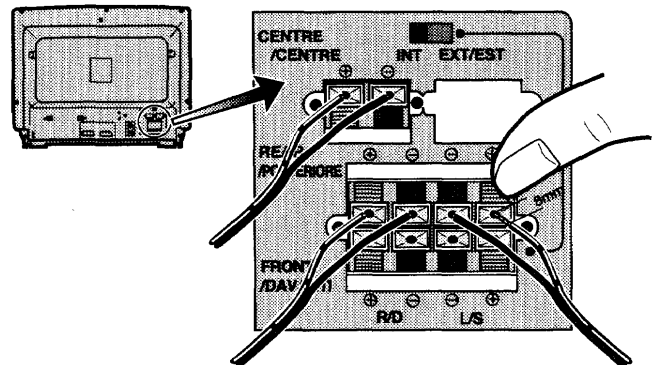
Blue -----> Neutral  
Brown ----> Live

1. The Blue wire must be connected to the terminal which is marked with the letter "N" or coloured BLACK.
2. The Brown wire must be connected to the terminal with the letter "L" or coloured RED.
3. **Do not** connect either wire to the earth terminal in the plug which is marked with the letter "E" or by the earth symbol or coloured GREEN or GREEN and YELLOW.

Before replacing the plug cover, make certain that the cord grip is clamped over the sheath of the lead - not simply over the wires.

## Surround Speakers

- Check if the Internal/External speaker selector on the back of the TV set is in the INT. position.
- Connect the centre speaker and the two rear surround speakers to the connector clips on the back of the TV set.
- Connect the centre speaker at **CENTRE**, the left rear surround speaker at **REAR L** and the right rear surround speaker at the **REAR R** on the back of the TV set.
- Push the connector clip down and insert the end of the wire into the opening: the positive wire to the red surround speaker connection; the negative wire to the black surround connection. Do not insert the wires too far.
- The centre speaker should always be located in the TV stand and rear surround speakers should always be located behind or to either side of the listener. If preferred you can also hang the rear surround speakers on the wall.
- If you want to use the external speakers instead of the internal front speakers, connect the external left front speaker at **FRONT L** and the right front speaker at **FRONT R** on the back of the TV set, and then switch the Internal/External speaker selector to **EXT.** position.



# INSTALLATION

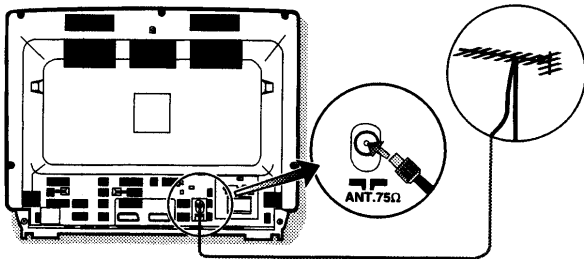
## Aerial Connections

- The aerial socket is located on the back of the TV set.
- For all aerial problems please consult your local dealer.
- The connection to the peripheral AV equipment, refer to section "Connection of AV equipment" on page 14.

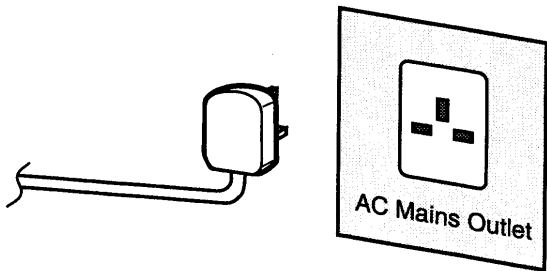
## Quick Set Up

This TV set provides a self-automatic tuning function called "Plug & Play". The first time you switch on this TV set, it will automatically begin to search and store all available channels. To ensure that this feature works properly please follow the steps below before you switch on the TV set.

1. Connect your aerial cable socket to the rear of the TV. Don't worry about other AV equipment you should add this later referring to the section "Connecting AV equipment" in the instruction manual.

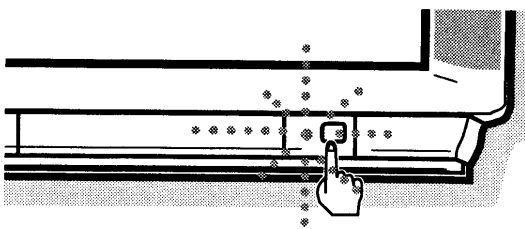


2. Plug the Mains cable plug into a wall socket.



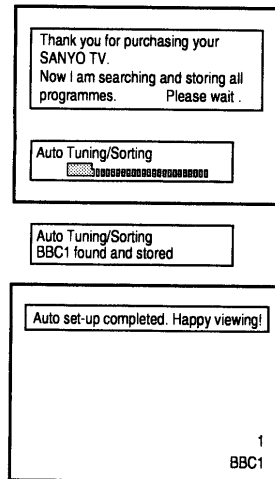
☞ This TV set is prepared for a mains voltage of AC220~ 240V 50Hz.

3. You are now ready to switch on. Simply press the **Mains ON/OFF** switch on the front of the TV set.



☞ A red power indicator will appear.

A self-automatic tuning system will start as follows;



After completing this procedure, the programme position 1 is selected and the ending messages appear on the screen. To make this message disappear, press any of the control buttons.

**Now the installation is completed !**

### Station allocations

The programme positions 1 to 6 are especially prepared for the following major stations in the UK.

- Programme position 1 : BBC1
- Programme position 2 : BBC2
- Programme position 3 : ITV
- Programme position 4 : CH4 or S4C
- Programme position 5 : CH5
- Programme position 6 : SATELLITE/CABLE

Programme position 4 is preserved for CH4 or S4C station, and 6 is for Satellite/Cable. If several transmissions are available in your reception area, the first station found is stored for each specified programme position.

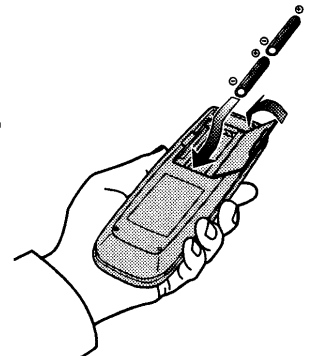
If any stations are not available in your reception area or if they are too weak for the Automatic Tuning function to identify, some programme positions from 1 to 6 will not have a station stored. The remaining stations will be stored from programme position 7 in sequence found.

☞ This procedure only appears at the first switch-on time.

☞ If additional channels become available (you move to another city or cable is installed), please follow the description "PRE-SETTING" on page 13.

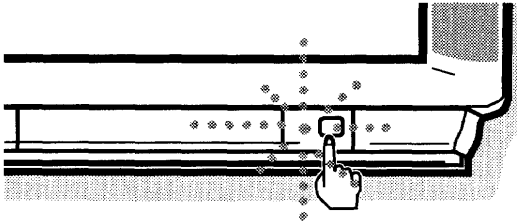
## Battery Installation

1. Remove the battery cover by sliding it in direction of the arrow.
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.



# GENERAL OPERATION

## Mains ON/OFF



■ To turn the TV set ON, press the **Mains ON/OFF switch**. The power indicator illuminates to show the power is on.

■ To turn the TV set OFF, press it again.

If no picture appears but the power indicator is on, press the **⏻ button, P ▲ P▼ or 0-9 button** as the TV set is in the Standby mode.

## Standby


■ To turn the TV set into standby mode, press the **⏻ button**. The power indicator illuminates more brightly.


■ To turn the TV set ON from standby mode, Press any of the following buttons: **Standby button, Programme Selector, 0 to 9 Numeric buttons**.

In the Standby mode the TV set is still partially powered, this is denoted by the red Standby/Power indicator illuminating more brightly than in Power mode.

The **Mains ON/OFF switch** must be in the ON position before the using remote control transmitter.

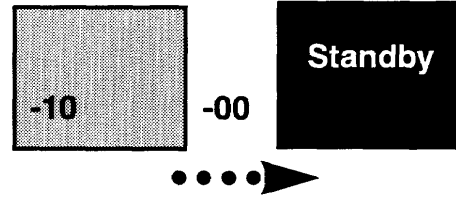
**NOTE:** It is not possible to turn on with the **Mains ON/OFF switch** from the standby mode.

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

 If you found a power indicator flashing, please turn the TV set off completely with the **Mains ON/OFF switch** and contact our Service desk. This warning is a sign to let you know that the power protection function of this TV set is now operating.

## Auto Shut Off

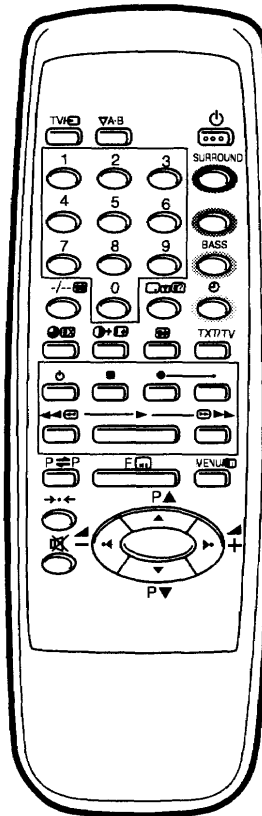
This TV set will automatically switch into the standby mode, 10 minutes after a signal is no longer received. The time until the set will switch off is displayed on the screen.





















■ If the aerial is removed the TV set will automatically switch into the standby mode after 10 minutes.

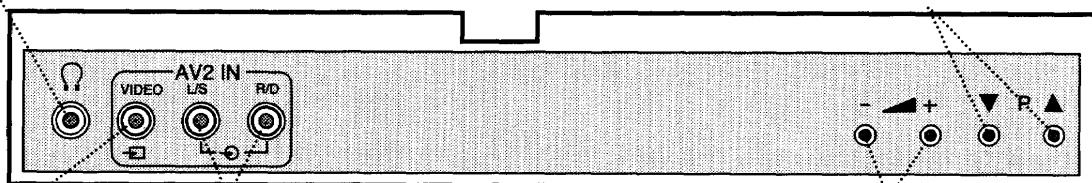
■ When the TV set is switched on by using the On-timer function with no signal being received, the auto-shut off function will be ignored.

## Controls



-  Standby/Power On
-  Programme Up/Down
-  0 to 9 Numeric buttons
-  Digit
-  Level Up/Down
-  Function
-  Sound mute
-  Picture setting recall
-  TV/AV Selection
-  Previous programme selection
-  Timer setting
-  Programme status
-  Time Call
-  SURROUND Active 3D Surround
-  BASS Bass
-  MENU Menu
-  A·B Stereo/Nicam/Bilingual
-  Contrast Plus

Headphones



Video input AV2    Audio input AV2

Programme Up/Down

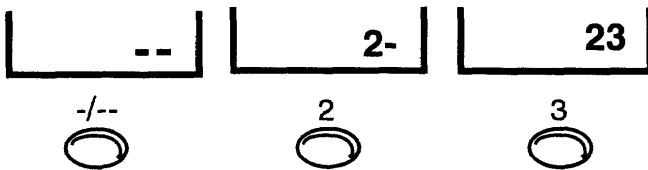
Level Up/Down

# GENERAL OPERATION

## Programme Selection

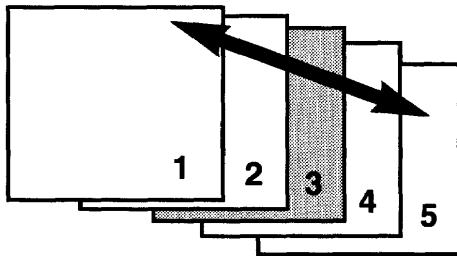
### Direct Programme Selection

For selection of programme position 0 to 9, press the corresponding **numeric button**. If the required programme is equal or more than 10, for example 23, first press the **-/- button** and enter 2 then 3.



### Up/Down Programme Selection

Press the **P▲ button** to increase the programme position. Press the **P▼ button** to decrease the programme position.



## Sound & Picture settings

1. To adjust the sound volume, press the **▲ + / ▼ - button**.



2. To adjust other levels, first press the **F button** to select the level to be adjusted, then press repeatedly to cycle through the levels as follows:

### Picture Controls

- 🎨 **Colour** : To adjust the picture colour.
- ☀️ **Brightness** : To adjust the picture brightness.
- 🔊 **Contrast** : To adjust the picture contrast.
- 📏 **Sharpness** : To adjust the picture sharpness.
- Text Brightness** : To select the teletext brightness level of the teletext mode (see page 15).

< > To make fine adjustments to tuning.

### Sound Controls

- 🎵 **Bass** : To adjust low frequency sounds.
- 🎵 **Treble** : To adjust high frequency sounds.

### Operation Control

- Child Lock** : To prevent small children unexpectedly pressing buttons.
- Auto Volume** : When this function is set to "On" the TV set automatically equalises the volume level difference to make a standard volume level.

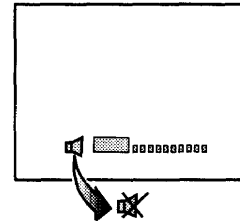
3. To adjust the level of the selected function, press the **▲ + / ▼ - button**.

## Sound Mute

This function has two sound mute stages. Press the **🔇 button** once, the sound from the speakers will be reduced, press it again and it will be muted completely.

Press the **🔇 button** again to switch the sound back on.

When the **▲ + / ▼ - button** is pressed, the sound attenuation is cancelled.



## Personal Picture Preference

This TV provides three picture settings at which you can store different preferred picture set ups.

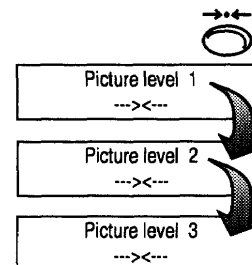
For example you could set up 3 levels for different viewing conditions.

**Picture Level 1:** Normal picture setting

**Picture Level 2:** High contrast, brightness and colour picture setting (Suitable for brightly lit rooms).

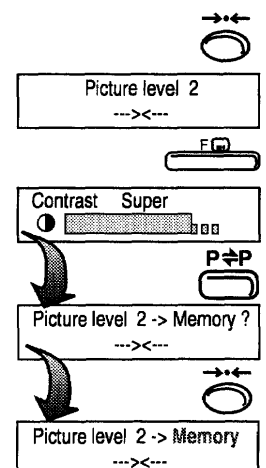
**Picture Level 3:** Low contrast, brightness and colour picture setting (Suitable for dimly lit rooms and gives a cinema-like effect when the lights are switched off).

Press the **→•← button** repeatedly to choose your desired picture level.



### Storing of picture setting

1. Select the picture level which you wish to change by pressing the **→•← button** repeatedly. (eg. Picture level 2)
2. Press the **F button** and then press the **P↔P button** while the control display is still on the screen. The word "Memory?" appears on the screen.
3. Press the **→•← button** for memorisation. The colour of the word "Memory" will change to yellow.




Now the setting is complete.

# DOLBY / SURROUND MODES

## What is Dolby Pro Logic Surround?

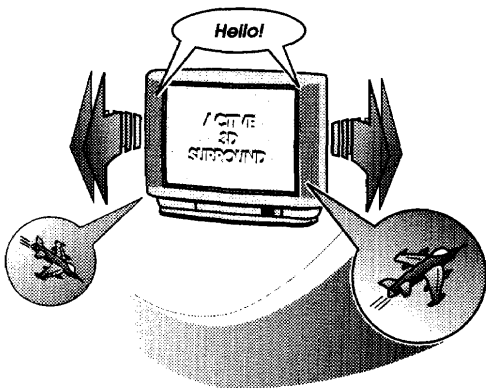


Manufactured under license from Dolby Laboratories Licensing Corporation. Dolby, the double-D symbol  and "PRO LOGIC" are trademarks of Dolby Laboratories Licensing Corporation.

This TV set is equipped with a Dolby Pro Logic Surround decoder which gives you an enhanced audio experience when watching programmes encoded with Dolby Surround. In Dolby Pro Logic Surround system, in addition to the left and right sound channels there are two special sound channels available giving to sound a three dimensional quality. A centre channel is added to balance the stereo image because the traditional stereo sound is effective only for viewers sitting near the centre axis of the screen. A rear surround channel is added to give depth and presence to the surround image.

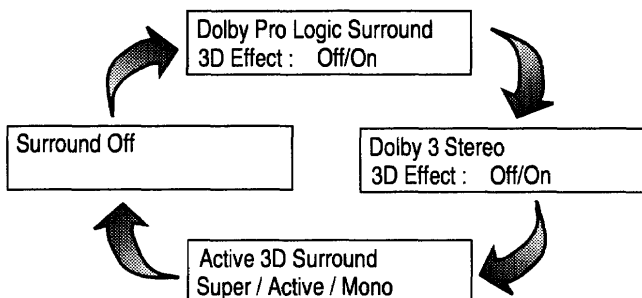
## What is Active 3D surround?

In traditional stereo sound, left and right channels combine to create a stereo image. Better speakers can create a larger perceived sound stage, so sound seems to emanate from a few feet behind the monitor. Sound can have a much wider presence with Active 3D surround technologies. Music and sound effects appear to come from points in the room far from the speakers. Objects (such as jets) seem to move towards and then past the listener, whilst the important channel sound still appears to come from the centre of the screen.



## ● Selection of Surround Mode

This TV provides the following surround modes. Please select the optimum surround mode according to your speaker placement and receiving signal source. Press the **SURROUND** button once, the present surround mode will be displayed on the screen, and press it again repeatedly, it changes as follows:

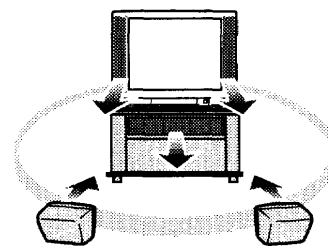


## ● Dolby Pro Logic Surround

This mode is recommended when you watch a movie or programme which is encoded with Dolby Surround. It is marked with **Dolby Surround**. The left, right front speakers, the centre and the rear surround speakers reproduce the Dolby Pro Logic Surround sound.

**3D Effect : On** To add an enhanced 3 dimensional sound effect to the receiving sound source, select 'On' by pressing the + or - button.

Dolby Pro Logic Surround  
 - + 3D Effect : Off / On



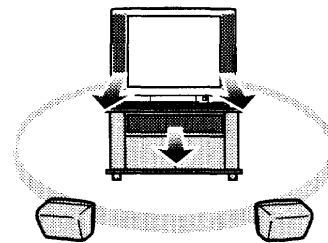
Dolby Pro Logic Surround

## ● Dolby 3 Stereo

This mode is recommended when the rear surround speakers are not connected. You can obtain the Dolby Pro Logic Surround effect through the left and right front speakers.

**3D Effect : On** To add an enhanced 3 dimensional sound effect to the receiving sound source, select 'On' by pressing the + or - button.

Dolby 3 Stereo  
 - + 3D Effect : Off / On



Dolby 3 Stereo

## DOLBY / SURROUND MODES

### ● Active 3D Surround

This mode is recommended when you wish to add surround sound to a programme not encoded with Dolby Surround or movie. This TV provides an active 3D surround processor which can create an incredible 3 dimensional sound effect when receiving a standard stereo signal, bilingual signal or monaural signal.



You can choose following 3D surround modes by pressing the  + or  - button.

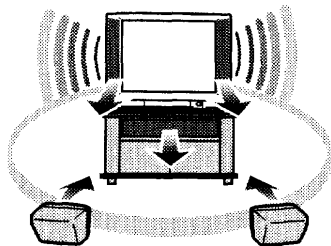
**Super:** This emphasises the 3D surround sound to produce a wider sound effect, similar to listening at a cinema or theatre.

**Active:** Normal 3D surround sound, set to give the optimum 3D surround effect.

**Mono:** This mode is specially prepared for Nicam-mono broadcasting. Select this mode, when you can not get the 3D surround effect because the sound is Nicam stereo.

Active 3D Surround

 -  + Super / Active / Mono



Active 3D Surround

If the receiving signal source is a monaural programme or movie and the surround mode selected is **Dolby Pro Logic Surround** or **Dolby 3 Stereo**, the sound only reproduces from the centre speaker. In this case, you should select the **Active 3D Surround** or **Surround Off** mode by pressing the **SURROUND** button.

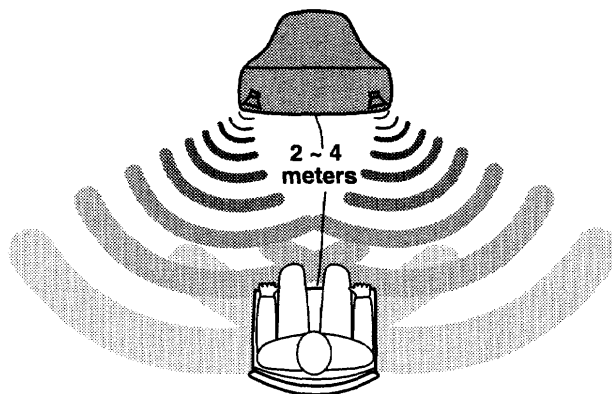
### ■ Guidance for the best enjoyment of active 3D surround and Dolby Pro Logic Surround

#### Optimum positioning

Sit at a distance of approximately 2 to 4 meters from the TV set.

Listen facing the centre of the TV set.

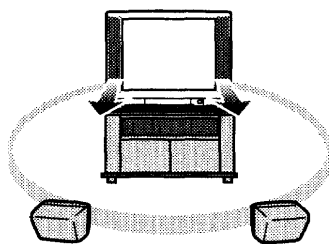
Remove any obstructions between you and the TV set.



### ● Selection Surround Off

This mode reproduces only the left and right front sound signals. The rear and centre speakers are not active.

Surround Off



Surround Off



# GENERAL OPERATION / OTHER FUNCTIONS

## Adjusting of the Sound Balance

If you wish to adjust each sound level for each speaker individually, proceed as follows:

1. Press the **MENU/** button.
2. Select **Centre Mode/Balance** by pressing the **P▲** or **P▼** button. Press the **F** button, the screen display changes as follows.  
**Balance** : To equalise sound level from the left and right front speakers.  
**Centre** : To adjust sound level from the centre speaker.  
**Front** : To adjust sound level from the front speakers.  
**Rear** : To adjust sound level from the rear surround speakers.  
**Sound** : To adjust the whole of sound level.
3. Light up the control by pressing the **P▼** or **P▲** button, and adjust sound level by pressing the **◀** - or **▶** + button.
4. To return to the TV mode, press the **MENU/** button.

Blank out controls may appear depending on the selected surround mode or centre sound, as these controls are not available.

**Note** : To obtain the best sound performance, please set the front sound level to the Centre or greater. When it is set around the minimum level an adequate sound output may not be obtained.

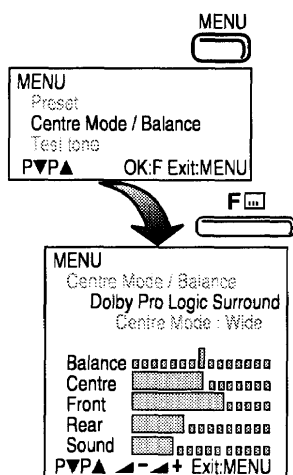
The following table shows the adjustable sound controls under the each surround mode.

Surround Mode	Controls	Balance	Centre	Front	Rear	Sound
Dolby Pro Logic Surround	Wide	✓	✓	✓	✓	✓
	Normal	✓	✓	✓	✓	✓
	Phantom	✓	--	✓	✓	✓
Dolby 3 Stereo		✓	✓	✓	--	✓
Active 3D Surround		✓	✓	✓	✓	✓
Surround Off		✓	--	--	--	✓

## Setting of the Centre mode

When selecting the Dolby Pro Logic Surround or Dolby 3 Stereo mode, this TV has the following 3 centre modes according to your centre speaker system.

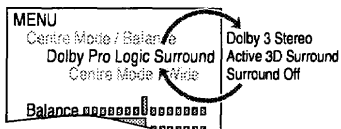
1. Press the **MENU/** button.
2. Light up the words **Centre Mode/Balance** by pressing the **P▲** or **P▼** button. Press the **F** button on the remote control.
3. Light up the surround mode by pressing the **P▲** or **P▼** button. Set the surround mode to **Dolby Pro Logic Surround** or **Dolby 3 Stereo** by pressing the **◀** - or **▶** + button.
4. Light up the words **Centre Mode** by pressing the **P▲** or **P▼** button. Set the centre mode to **Wide**, **Normal** or **Phantom** by pressing the **◀** - or **▶** + button.



Refer to the following note.

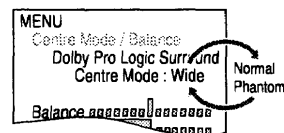
### Wide

When using a full-range centre speaker similar in size and sound quality to the front speakers.



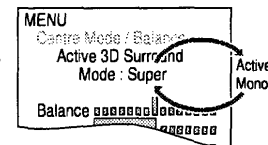
### Normal

When using a centre speaker having limited low-frequency response. The low-frequency sounds are distributed over the left and right front speakers.



### Phantom

When a centre speaker is not used. The centre sound components are distributed over the left and right front speakers.



5. To return to the TV mode, press the **MENU/** button.

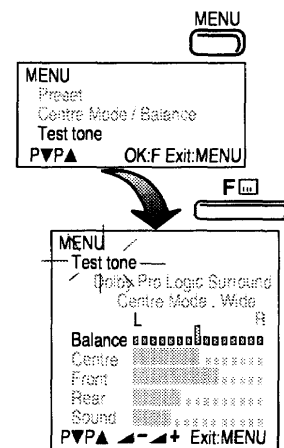
You can select **Active 3D Surround mode** (Super, Active, Mono) or **Surround Off** mode through the above steps.

- It is advisable to set the centre mode to **Wide** when using the provided external centre speaker.
- Centre mode can not be selected to **Phantom** when the surround mode is selected to **Dolby 3 Stereo**.

## Setting of the sound balance with test tone

For optimum surround sound performance, adjust the sound volume as follows. The adjustment can be made at the listening point using the remote control handset.

1. Press the **MENU/** button.
2. Light up the words **Test tone** by pressing the **P▲** or **P▼** button.  
*Blanked out controls may appear depending on the selected surround mode or centre mode.*



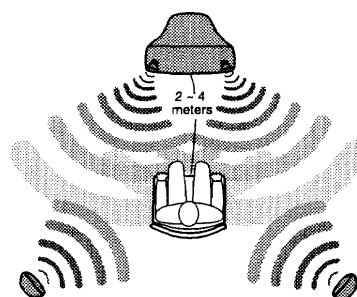
Press the **F** button on the remote control. The steady noise tone is switched sequentially through the left, right, centre speakers and rear surround speakers for about 2 seconds each. The active speaker is represented with the yellow screen text, and allows you to adjust the sound level.

- **Dolby Pro Logic Surround-Wide/Normal**  
Front Left → Front Right → Centre → Rear →
- **Dolby Pro Logic Surround-Phantom**  
Front left → Front Right → Rear →
- **Dolby 3 Stereo**  
Front Left → Front Right → Centre

3. Adjust each sound level by pressing the **◀** - / **▶** + button until the sound level from each speaker sounds the same.

- To obtain the best sound performance, please set the front sound level to the centre or greater. When it is set around the minimum level an adequate sound output may not be obtained.
- When you wish to adjust the whole of sound volume, press the **◀** - or **▶** + button on the TV set.

4. To return to the TV mode, press the **MENU/** button.

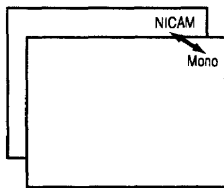


## OTHER FUNCTIONS

### Stereo Bilingual Reception

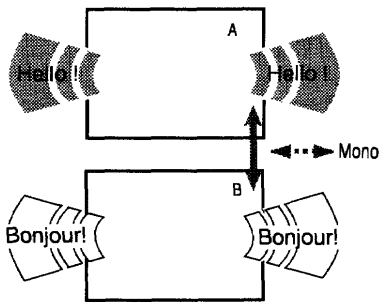
#### ■ Stereo and Nicam sound reception

If the TV receives nicam programs, it automatically switches to nicam sound reception. The word "NICAM" or "Mono" appears on the screen briefly.



#### ■ Bilingual reception

If the TV receives bilingual programs, the TV initially selects language A and displays "A" on the screen briefly. If you want to switch to language B or Mono (Only available in Nicam reception), press the **∇A•B** button.



If the stereo or nicam sound reception is poor in quality, you can switch to "Mono" sound reception by pressing the **∇A•B** button.

### Bass Expander

To get a emphasis bass sound, press the **BASS** button. The word "Bass" appears on the sound display.

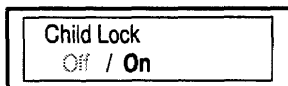


### Child Lock

This TV has a child lock function which inhibits the use of the buttons on the front of the TV set. With this you can prevent small children unexpectedly pressing buttons.

#### Setting the Child Lock Mode

1. Press the **F** button repeatedly until the word "Child Lock" appears on the screen.

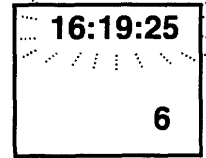


2. Select "On" or "Off" by pressing the **▲ + / ▼ -** buttons.

To cancel the child lock mode, follow the above procedure and you should select "Off" in step 2 or switching off the TV set with the **main ON/OFF** switch.

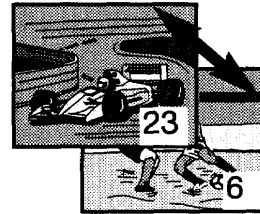
### Time Call

In the TV mode, if the receiving programme has a teletext service when the **⊖** button is pressed, the present time will be displayed on the screen for 5 seconds.



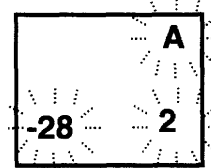
### Alternative Programme

Press the **P⇌P** button and the TV set will alternately select the current programme position and the previous programme position viewed.



### Recall

To display the on-screen indications, press the **□TR(E?)** button. The display disappears after five seconds.



### Auto volume level

Sometimes we notice a volume level difference between the receiving sources, such as on-air programs and VCR playback, channels, and programmes and commercials. When this function is set to "On" the TV set automatically equalises the volume level difference to make a standard volume level.

1. Press the **F** button repeatedly until the word "Auto Volume" appears on the screen.
2. Select "On" or "Off" by pressing the **▲ + / ▼ -** button.

### Contrast plus

This TV provides two kinds of contrast modes. You can choose "Super" or "Natural" by pressing the **⊕+** button.

- Super:** High contrast mode, suitable viewing in brightly lit rooms.
- Natural:** Normal contrast mode, suitable for viewing in dimly lit rooms.

## OTHER FUNCTIONS

### Timer Setting

This TV has three timer functions and you can select the following modes by pressing the **●** button repeatedly.

- **Sleep timer setting** You can select a time period from which the set will switch into the standby mode.
- **On-timer setting** You can set a time period from which the set will switch on from the standby mode.
- **Alarm timer setting** You can set a time which you want to display the time up sign on the screen.

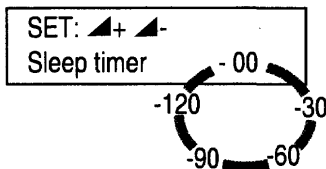
Function	Maximum time periods	Step
Sleep Timer	120 minutes	30 minutes
On-Timer	24:00 Hours	15 minutes
Alarm Timer	3:00 Hours	5 minutes

### Sleep Timer Setting

1. Press the **●** button once, the word "Sleep timer" will appear on the screen.
2. Set the time period by pressing the **▲ + / ▼ -** button. The display changes in 30 minute steps.

If you have set a time, then one minute before the TV switches off the remaining minute (-1) automatically appears on the screen.

To cancel the sleep timer, select "-00" by using the above procedure.



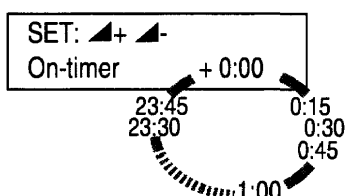
### On-Timer Setting

1. Press the **●** button twice. The word "On-timer" will appear on the screen.
2. Set the time period by pressing the **▲ + / ▼ -** button.
3. Press the **⏻** button to switch into the standby mode.

The TV set automatically switches on after the time period has elapsed.

To cancel the on timer, set to "+0:00" by using the above procedure.

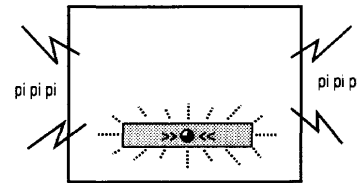
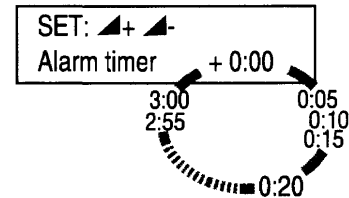
- The programme position at which the TV set will switch on by using on-timer function is the last watched position.
- When the TV set is switched on by using the on-timer function, the TV set will automatically switch into the standby mode in 2 hours if no key control is input.



### Alarm Timer Setting

1. Press the **●** button twice. The word "Alarm timer" will appear on the screen.
2. Set the time period by pressing the **▲ + / ▼ -** button.

When it reaches the set alarm time the time up signal will appear on the screen and the alarm will sound for 15 seconds.



- If the set alarm time is reached whilst in teletext mode, the TV set automatically returns to the TV mode.
- If the TV set is switched off by the **Mains Switch**  $\text{Ⓢ}$  or a power failure occurs, the timer settings will be cancelled.
- You can confirm the remaining time for each timer mode by pressing the **●** button.

### VCR Use

This remote control transmitter has been designed to be used in conjunction with selected **SANYO VCR's**. Some SANYO VCR's may have their own functions, so please refer to the individual instruction booklet when using this remote control to ensure compatibility.

#### ⏻ POWER On/Off :

Use to turn VCR power on and off.

#### ▶ PLAY :

Use to playback the tape.

#### ■ STOP :

Use to stop the movement of the tape.

#### ▶▶ FAST/CUE :

Use to advance the tape at fast speed, or in order to playback the tape at fast speed.

#### ◀◀ REWIND/REVIEW :

Use to rewind the tape or in order to playback the tape in reverse at fast speed.

#### ● . RECORD :

Use to record on the tape. Press both of the buttons at the same time.

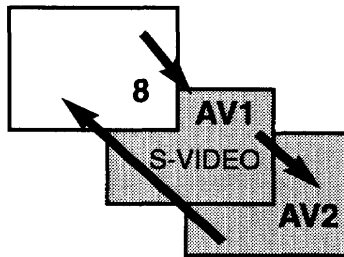
# CONNECTION OF AV EQUIPMENT

## Using AV Equipment

You can connect a VCR, S-VHS VCR, Satellite Tuner, PAY TV Decoder or Camcorder, as this TV has two Scart terminal on the rear panel and one pair of AV input terminal on the front panel.

### ● Selection of AV mode

Most AV equipment will automatically switch to the AV mode (because of the pin 8 function signal) by pressing the PLAY button on your AV equipment. If not, press the TV/AV button to select the desired AV mode manually.



### ● Selection of front AV2 mode

Connect your AV equipment to the front AV2 sockets and then press the TV button repeatedly to select the AV2 mode.

AV equipment can be connected to either the rear AV2 scart socket or to the front AV2 RCA sockets. If equipment is connected to the front AV2 terminals this will override equipment connected to the rear AV2 scart socket. To use the rear AV scart socket please ensure that no equipment is connected to the front AV2 terminals.

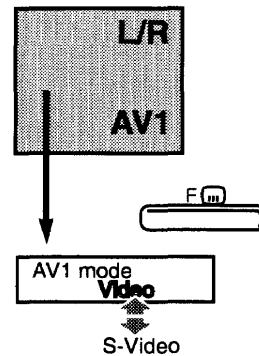
### ● Setting of AV1 input mode

To obtain the best performances of the equipment connected to the AV1 terminal, you are required to set the correct input mode.

1. Select the AV1 mode by pressing the TV/AV button.
2. Press the F button repeatedly until the word "AV1 mode" appears on the screen.
3. Select the correct input mode by pressing the  $\blacktriangle + / \blacktriangle$  - button.

AV1 MODE VIDEO : Video input mode

AV1 MODE S-VIDEO : S-Video input mode



### ● Selection of the sound track from the equipment

By pressing the  $\nabla A \cdot B$  button repeatedly, you can select the sound track L (left), R (right) or L/R from the equipment connected to the scart terminals or the front AV terminal.

# PRESETTING

Up to 100 broadcast stations in your reception area can be stored in the electronic memory.

There are three ways of pre-setting modes:

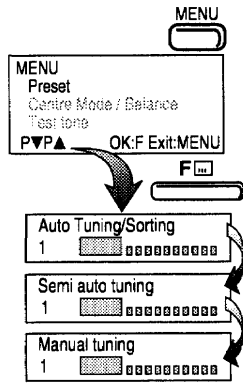
## Automatic tuning/sorting

All receivable channels are automatically found and stored and the programme positions 1 to 6 are especially prepared for the following major stations in the UK.

- Programme position 1 : BBC1
- Programme position 2 : BBC2
- Programme position 3 : ITV
- Programme position 4 : CH4 or S4C
- Programme position 5 : CH5

Programme position 6 : Satellite

Programme position 4 is preserved for CH4 or S4C station, and 6 is for Satellite. If more than one transmission is available in your area, the programme stored is the first found.



## Semi-automatic presetting

Use to preset a receivable channel in any desired programme position, e.g. BBC1 at position 1.

## Manual presetting

Manually tune a channel if it cannot be automatically tuned, such (when signal is poor).

## Automatic Tuning / Sorting

1. Press the **F** button repeatedly until the word "PRESET NO/YES" appears on the screen.

2. Select "YES" (highlighted red) by pressing the **+ / -** button. Press the **F** button once to select the automatic presetting mode. The words "Auto tuning/sorting" appears on the screen.

3. Press the **+ / -** button to begin automatic tuning and sorting.

The automatic tuning/sorting operation can be cancelled at any time by pressing the **F** button.

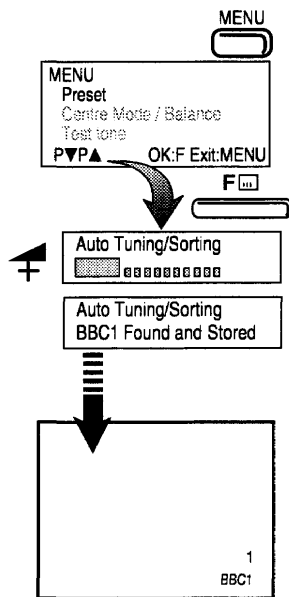
After all receivable channels have been found and stored, the TV set automatically returns to programme position 1.

If any of them are not available in your reception area, some programme positions from 1 to 6 will not have a stored station. The remaining stations will be stored from programme position 7 in the sequence found.

If you select "Yes" but do not press the **F** button within 5 seconds in step 2, the mode automatically returns to the normal TV mode. The automatic tuning/sorting function may not operate properly under the following conditions.

- The reception of a weak/poor signal condition.
- The reception of a station which does not have a teletext service.

You can change the order of a stored station, by using the Channel swapping function.



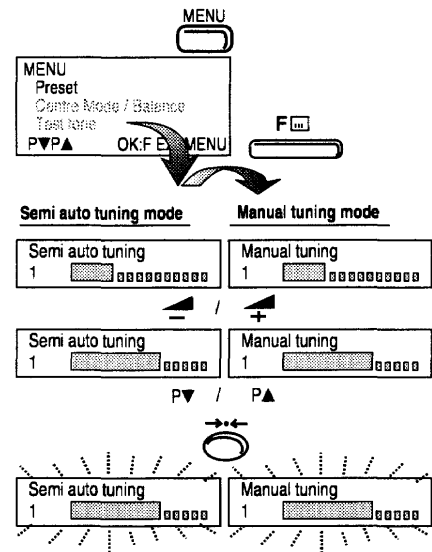
## Semi-automatic or Manual tuning

1. Press the **MENU** button.
2. Light up the word "Preset" by pressing the **P** or **A** button. Then press the **F** button to select the Semi-automatic or manual presetting mode. The word "Semi auto tuning" or "manual tuning" appears on the screen.
3. Press or hold the **+ / -** button, to begin searching.
4. When you tune your desired channel, select a programme position where you wish the station to be stored using the **P** or **A** buttons.
5. Press the **↔** button to store in the memory.

This completes the presetting.

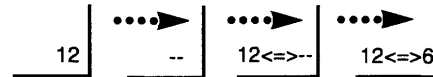
Repeat steps 2 to 5 for other desired channels

To exit the presetting mode, press the **F** button once or twice.



## Channel Swapping

Use this channel swapping feature to swap the channels between two stored programme positions. This feature is particularly useful after automatic presetting.



1. Select one of the TV channels you wish to swap by using the **P**, **A** or using the (0-9) numeric buttons.
2. Press the **-/-** button. "--" appears on the screen.
3. Press the **P=P** button. Channel swapping mode is displayed.
4. Enter other programme number by using the (0-9) numeric buttons with two digit numbers.

**For example:** Selection of programme position 6, first enter 0 and then enter 6.  
Selection of programme position 25, first enter 2 and the enter 5.

The two TV channels will now have changed places.

Repeat steps 1 to 4 for all other TV channels you want to swap.

The above procedure must be done while the on-screen display is still on the screen.

# CONNECTION OF AV EQUIPMENT

The following are our recommended standard connections for AV equipment. There are various types of connections depending on the equipment which you have or its use. For further information please consult your local dealer. If you have a S-VHS type VCR, to obtain the best performance it should be connected to the AV1 terminal which has been specially designed for S-VHS.

## USE OF A VCR

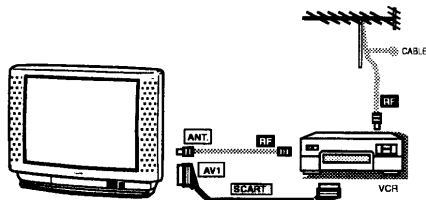
### Connection

- ✓ Connect RF cables. Roof aerial to VCR & VCR to TV.
- ✓ Better picture quality can be obtained if you also connect a Scart cable.

### Ability

- ✓ Watch TV and cable TV programmes.
- ✓ Watch the playback from the VCR on position 0 or when using a Scart cable, it is on AV1 mode.
- ✓ Record TV and cable TV programmes.

When you connect the VCR to the aerial terminal on the TV using an RF cable, it is advisable to tune the VCR channel to the programme position 0, this is useful position for VCR use.



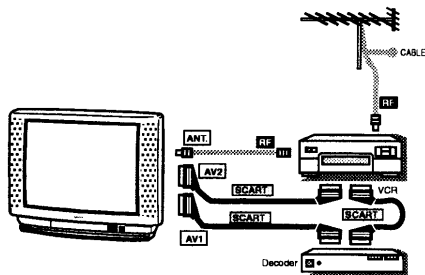
## USE OF VCR AND DECODER

### Connection

- ✓ Connect RF cables. Roof aerial to VCR & VCR to TV.
- ✓ Connect Scart cables. AV1 to decoder & AV2 to VCR & VCR to decoder.

### Ability

- ✓ Watch TV and cable TV programmes.
- ✓ Watch scrambled cable TV programmes on AV1 mode.
- ✓ Watch the playback from the VCR on AV2 mode.
- ✓ Record TV, cable TV and scrambled cable TV programmes.



## USE OF CAMCORDER OR GAME EQUIPMENT

### Connection

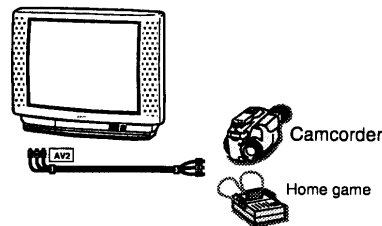
- ✓ Connect an RCA cable from the front AV terminal(AV2) to a camcorder or to game equipment.

For monaural units, connect the sound cable to the L-socket.

### Ability

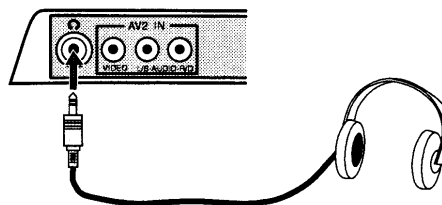
- ✓ Watch the playback from the camcorder or enjoy playing games on AV2 mode.

You must select the AV2 mode manually.



## USE OF HEADPHONES

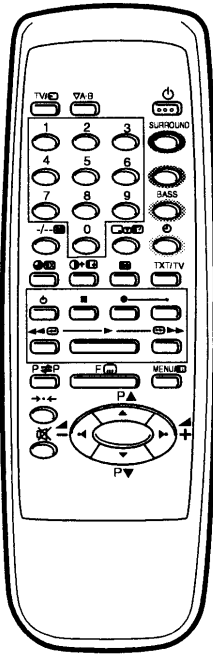
The 3.5mm mini-stereo jack socket located behind the door of the TV can be used for headphone. When the headphones are inserted the sound from the TV speakers are muted.



- ✦ If you are selecting the surround mode as **Dolby Pro Logic Surround, Dolby 3 Stereo**, you should switch to **Active 3D Surround** or **Surround Off** mode by pressing the **SURROUND** button, refer to pages 7 & 8.

# TELETEXT

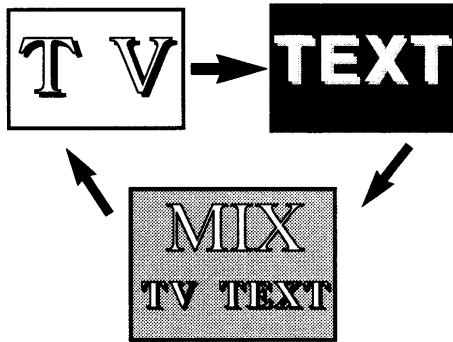
## Teletext Controls



- TXT/TV** TEXT/MIX/TV SWITCH
- 0 - 9** 0-9 Numeric Buttons
- ▼ P ▲** Page Up/Down  
Index page selection
- [Hold]** Hold
- [Size]** Size
- [EX]** Cancel
- [Sub page]** Sub page button
- [Reveal]** Reveal
- [Red]** Red
- [Green]** Green
- [Yellow]** Yellow
- [Blue]** Blue

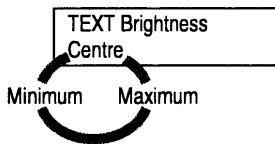
## Switching to the Teletext mode

Press the **TXT/TV** button, and the screen changes as illustrated.



## Picture & Sound in teletext mode

**Picture and Text brightness controls in the teletext mode.**  
You can not adjust the picture or teletext brightness in the teletext mode. You must first switch back to the TV mode and then adjust the picture control or set the teletext brightness level.



### How to set the teletext brightness level

1. Press the **F** button repeatedly in the TV mode until the word "TEXT Brightness" appears on the screen.
2. Press the **+ / -** button to select one of the 3 teletext brightness levels either Maximum, Centre or Minimum.
3. Confirm the selected teletext brightness level by switching to the teletext mode by pressing the **TXT/TV** button.

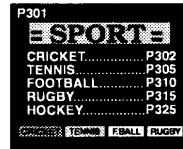
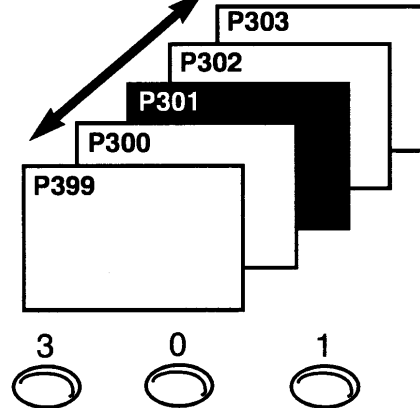
### Sound control in the teletext mode.

Only sound volume and muting can be controlled in the teletext mode but the on-screen display will not appear.

## Page Selection

### Direct page access

A page can be selected with the **0-9 Numeric buttons**. eg. To display page 301, press buttons 3, 0 and then 1. The selected page number will appear on the screen.



### Up/down page access

When a page is displayed on the screen and you want to read the following page number, press the up (**P▲**) button instead of selecting the new page number. To read the previous page, press the (**P▼**) button.

**P▲** : P301 → P302 → P303 ... P399 → P300 ...

**P▼** : P301 → P300 → P399 → P398 ... P301 ...

Hold the button for rapid page change.

## Coloured Page Access

Depending on the TV channel, teletext is transmitted in different systems. The system utilised can be recognised by the coloured line at the bottom of the screen.

Press one of the **4 coloured buttons** to select the topics shown at the bottom of the text screen.

For example the Red topic can be selected using the **Red button**, the Blue topic by the **Blue button**, and so on forth with the other colours.

When the teletext service is not transmitting with the TOP or FLOF, 4 coloured page numbers will appear at the bottom of the screen instead of the topics.

You can select the previous viewed pages up to 4 pages, by pressing the **P=P** button repeatedly.



# TELETEXT

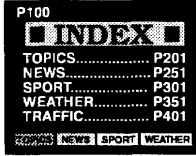
## Index Page Selection

### Receiving TOP teletext system

When you press the **INDEX** button, the classified table will appear on the screen. To highlight your desired category page by using **Red** or **Blue** button and press **Green** button to go to it's page directly.

### Receiving FLOF or another teletext systems

Press the **INDEX** button to select one of the teletext index pages.



## Hold

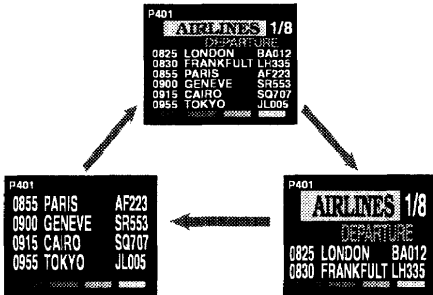
Press the **Hold** button to stop sub pages changing. The word "HOLD" will appear instead of the page number.

Some teletext pages are made up of several sub pages. These sub pages are automatically changed. Sub page is shown as P4/8 (sub page 4 of 8 pages) the location on the text page depends on the text service.



## Double Letter Height

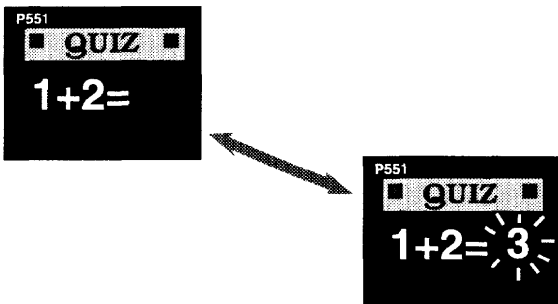
Either the top half or the bottom half of the page can be expanded to fill the whole screen by pressing the **Double Letter Height** button. Each time the button is pressed, the display changes as illustrated.



## Displaying Concealed Information

Press the **Conceal** button to reveal hidden items on the text page.

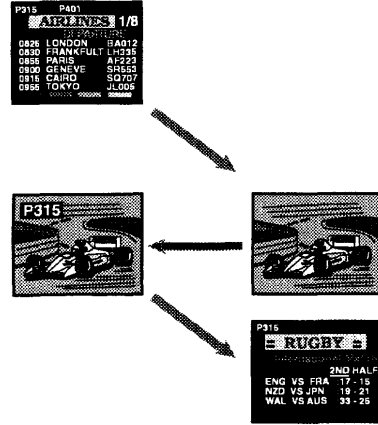
Some pages such as quiz pages have the answers hidden. The button may have to be held to keep the answer on the screen, or pressed again to remove the answers.



## Viewing TV while searching for a page

Sometimes the page access can take some time. While waiting you can view the TV picture by pressing the **TV** button.

1. Enter the new page number. Press the **TV** button.
2. When the page is found, the page number will appear over the TV picture.
3. Press the **TXT/TV** button to view the teletext page.



## Sub Page Access

When the teletext information is longer than one page, it may take some time to reach the required page which is automatically changed. By using the sub-coded page access, you can continue watching the TV picture until the sub-page is reached. Select a teletext page with sub pages.

1. Press the **Sub Page Access** button. The characters "S\*\*\*\*" will be displayed on the top left corner of the screen.

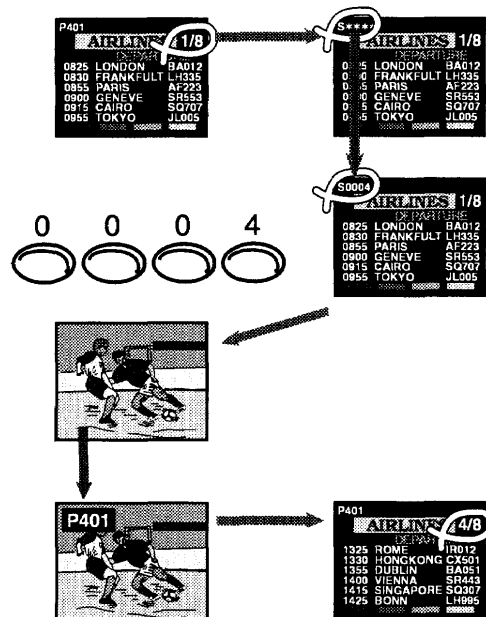
2. Enter the sub page number by using the (0-9) buttons.

For example, to enter the sub page 4, press buttons **0, 0, 0** and **4**.

3. Press the **TV** button to return the normal TV picture.

Immediately the requested sub-coded page is found, the page number will appear over the TV picture.

4. Press the **TXT/TV** button to view the sub-coded page.





# TELETEXT / SPECIAL FUNCTIONS / SPECIFICATIONS

## Updated Pages

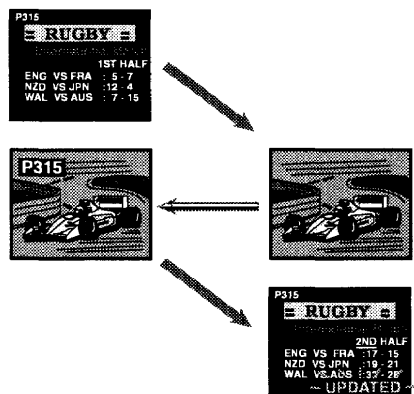
There are teletext pages which are updated as events progress, such as sports results, news reports or traffic information. Select a page which will be updated.

1. Press the **EXIT** button to return to the normal TV picture.

Immediately the selected page is updated, the page number will appear over the normal TV picture.

2. Press the **TXT/TV** button to view the updated page.

**Note:** If the page has sub pages the number will appear when the sub page is changed.



### ● Cancel

When you press the **EXIT** button, the TV picture appears on the screen. Whilst in this mode you can not select another TV programme. You should first switch back to TV reception by pressing the **TXT/TV** button if required.

### ● Teletext reception

If your aerial signal is poor, the teletext reception may be poor.

## Special Functions

This TV set allows you to set up the following special functions.

- Press and hold the **EXIT** button on the Remote control handset and then press the **P▲** button on the TV set.
- To select the "ITEM" number, press the **F** button on the remote control handset.
- To select the "SET" number, press the **+ / -** button repeatedly.
- To return to the normal TV mode, press the **EXIT** button.

### ■ Prohibition of presetting

**ITEM 1** Sets prohibition of presetting.

SET→ 0 NO      SET→ 1 YES

### ■ Start up programme position

**ITEM 2** Presets the programme position when the set is switched on.

SET→ 0 Last programme position start  
 SET→ 1 Programme position "1" start  
 SET→ 2 Programme position "2" start  
 SET→ 3 Programme position "3" start  
 SET→ 4 Programme position "4" start  
 SET→ 5 Programme position "5" start  
 SET→ 6 Programme position "6" start  
 SET→ 7 Programme position "7" start  
 SET→ 8 Programme position "8" start  
 SET→ 9 "AV1" start

The setting conditions of all items can be confirmed.  
 Special functions are not cancelled if the TV set is switched off or the mains disconnected.

## TV Specifications

Power source	AC 220~240V, 50Hz
Television system	System I
Colour system	PAL
Receiving channel	UHF: 21~69 Aerial input impedance 75 ohm
AV terminal	
21-Pin Terminal	AV1 : CENELEC Standard (with RGB/S-inputs) AV2 : CENELEC Standard
Front AV Terminal	AV2 : RCA Terminal, Video and Audio (L/R) Input
Sound output Main L/R (Continuous) Centre Rear	10 watts x 2 12 watts 6 watts x 2
Picture tube (Diagonal) (Visible picture diagonal)	63 cm (CE25XP2-B) 70 cm (CE28XP2-B) 59 cm (CE25XP2-B) 66 cm (CE28XP2-B)
Dimensions (W x H x D mm)	680 x 543 x 446.5 (CE25XP2-B) 736 x 595.5 x 500 (CE28XP2-B)
Weight	26 Kg (CE25XP2-B) 32 Kg (CE28XP2-B)

Speaker system	Centre speaker	Surround speakers
Unit used	Full range: 10cm cone type	Full range: 10cm cone type
Rated Input Power	20 watts	20 watts
Maximum Input Power	40 watts	40 watts
Normal impedance	4 ohms	8 ohms
Dimensions (W x H x D)	270x130x145 mm	180 x 130 x 130 mm
Weight	1030 g	630 g (per speaker)

Specification subject to change without notice.

## Scart Specifications

The specification of the 21 pin connector is as follows.

### AV Terminal

Pin	
1	Audio output (R-channel) *1      0.5V/ 1 K ohm
2	Audio Input (R-channel)      0.5V/10 K ohm
3	Audio output (L-channel) *1      0.5V/ 1 K ohm
4	Audio earth
5	Earth (blue)
6	Audio Input (L-channel)      0.5V/10 K ohm
7	Blue (B) input *2      0.7Vpp/75 ohm
8	Remote switch input      L:0-2V H:10-12V
9	Earth (green)
10	
11	Green (G) input *2      0.7Vpp/75 ohm
12	
13	Earth (red)
14	Earth
15	Red (R) *2 or chrominance input *3      0.7Vpp/75 ohm
16	Fast blanking *2      L:0-0.4V H:1-3V
17	Earth(video)
18	Earth
19	Video output *1      1 Vpp/75 ohm
20	Video/sync.*2 or luminance input *3      1 Vpp/75 ohm
21	Connector shield

\*1: AV1 terminal outputs the TV Audio/Video signals and AV2 terminal outputs the Audio/Video signal from AV1 or AV2 or TV.

\*2: AV1 terminal only provides RGB inputs

\*3: AV1 terminal only provides S-video inputs

# SERVICING & HELPFUL HINTS

## Servicing

Your television is fully transistorised and does not contain any user serviceable components.

Removal of the cabinet cover may expose you to dangerous voltages. Refer all servicing to qualified service personnel.

Unplug the television receiver from the wall outlet and refer servicing to qualified service personnel under the following conditions:

- If the power cord or plug is damaged.
- If liquid has been spilt into the television receiver.
- If television receiver has been exposed to rain or water.
- If the television receiver has been dropped or the cabinet has been damaged.
- If the television receiver exhibits a distinct change in performance.
- If the television receiver does not operate normally by following the operating instructions.

Adjust only those controls that are covered in the operating instructions as improper adjustment of other controls may result in damage. This will often require extensive work by a qualified technician to restore the television receiver to normal operation.

When replacement parts are required, have the service technician verify that the replacements he uses have the same safety characteristics as the original parts. Use of manufacturers specified replacements can prevent fire, shock or other hazards.



## Helpful Hints



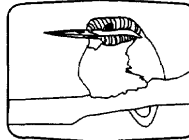
### ■ NO PICTURE, NO SOUND

- Check if TV is plugged in.
- Try a different channel, if OK, probably station trouble.



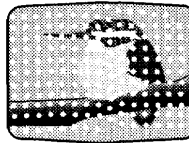
### ■ POOR PICTURE, SOUND OK

- Adjust BRIGHTNESS control.
- Adjust FINE TUNING control.
- Check aerial connections.



### ■ NO COLOUR, PICTURE OK

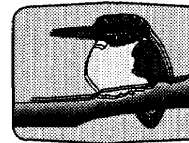
- Adjust COLOUR control.
- Adjust FINE TUNING control.
- Is the programme in colour?



### ■ WEAK PICTURE

- Check aerial connections on back of set.
- Check aerial for broken wires.
- Re-orient aerial.

The following faults are not caused by the receiver:



### "GHOSTS"

Reflections of signals from mountains or high buildings will cause multiple images, called "Ghosts". These abnormal conditions can be reduced to minimum by repositioning aerial or by installing new one suited for your area.



### "INTERFERENCE"

Interference may be caused by electrical appliances, car ignition systems, etc. This should normally be a temporary condition, but should this interference persist, contact your dealer.

## WARRANTY TO CUSTOMER

Sanyo U.K. Sales Ltd. (the company) warrants to the initial retail purchaser that if this equipment is or becomes defective and that, in the opinion of the Company, the defect is due to faulty material or workmanship the Company will, for a period of 12 calendar months from the date of sale to the original purchaser repair or replace, at its sole option, free of charge, any such defective component part of the equipment, always provided that:-

- 1: The equipment has at all times been used in accordance with the operating instructions issued by the Company, and has not been connected to an electrical mains supply for which it has not been adjusted.
- 2: Accidental damage or damage caused by negligence of misuse by the user, is specifically excluded.
- 3: Unauthorised repairs, or any modification to the equipment which has not been expressly approved by the Company, shall render this warranty null and void.
- 4: Failure due to fair wear and tear of any item is specifically excluded.

This warranty is not transferable and is only applicable within the United Kingdom (and the Republic of Ireland).

Nothing in this express warranty affects the statutory rights available to the purchaser of this equipment.

Note: This warranty supersedes any other form of guarantee that may inadvertently have been enclosed with or attached to the product.

### **Dear Customer.**

Thank you for buying **SANYO**. This equipment should give you many years of pleasure and faithful service but in the event that a fault occurs, the following notes for you guidance may be helpful:-

- 1: PLEASE RETAIN YOUR PURCHASE RECEIPT WHICH WILL BE REQUIRED FOR SERVICE DURING WARRANTY.
- 2: If your Sanyo equipment proves faulty during the period of guarantee, take it or send it back to the dealer who originally supplied it together with this guarantee and the proof of purchase. We have made arrangements with our approved dealers under which they will carry out in guarantee service repairs on our behalf. In this way, we hope to reduce to a minimum the amount of time you will be without your equipment.
- 3: If for some reason it is impossible to return the equipment to the original supplier, please contact our Service Department at the address below for further advice.
- 4: Should the equipment require servicing after the expiry of the guarantee period, take or send it to the original supplier or any other Sanyo dealer. He will be pleased to give you a quotation for the repair.

Service Departments,  
Sanyo U.K. Sales Ltd.,  
Sanyo House,  
Otterspool Way,  
Watford, Hertfordshire WD2 8JX  
Tel: 01923 246363

Part No. 1AA6P1P1460-- F3PB/SB

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