

SANYO

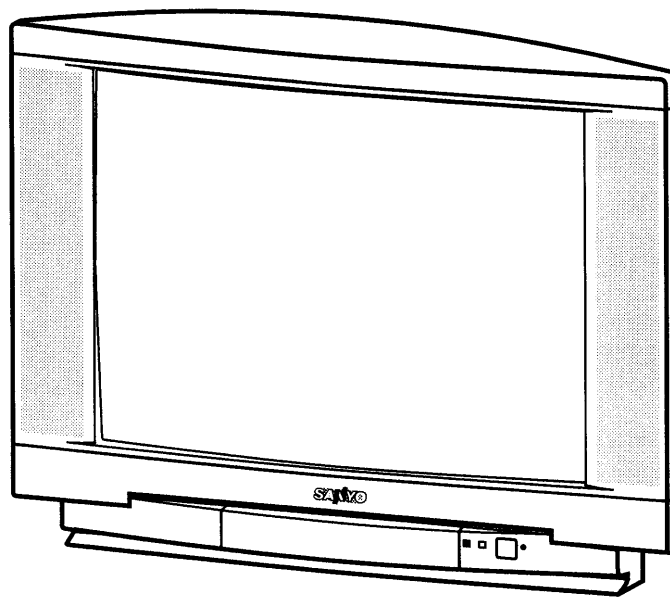
INSTRUCTION MANUAL

CE21DN4-B

CE25DN4-B

CE28DN4-B

COLOUR TELEVISION



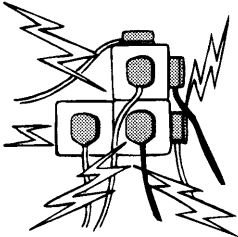
Please read this Instruction book before using your television.

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 electric 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.

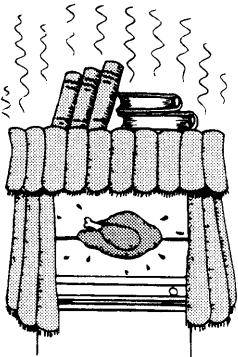
Installation



Do not allow anything to rest on the power cord.

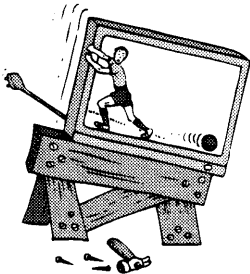
Do not locate this television receiver where the cord will be damaged by people walking on it.

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

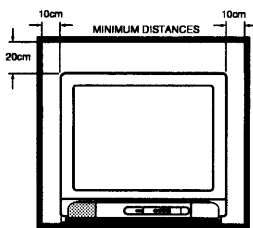


Slots and openings in the cabinet and in the back or bottom are provided for ventilation to ensure reliable operation and to protect it from overheating. These openings **must not** be blocked or covered.

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.

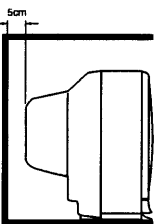


Do not place your television receiver on an unstable stand, shelf or table. Serious injury to an individual, and damage to the television may result if it should fall. Your sales person can recommend approved stands or shelf and wall mounting instructions.

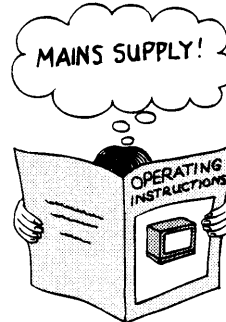


This television receiver should not be placed in a built-in installation such as a bookcase unless proper ventilation is provided.

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.

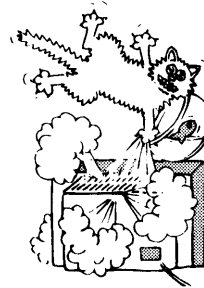


Use

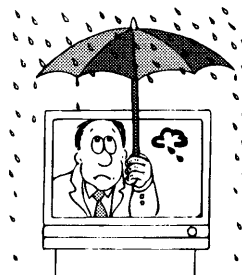


This television receiver should be operated only from the type of power source indicated on the television or as indicated in the Operating Instructions. If you are not sure of the type of power supply in your home, consult your sales person or your local power company.

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

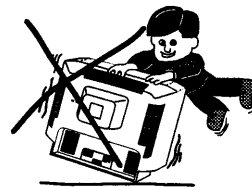


Do not drop or push objects into the television cabinet slots or openings. Some internal parts carry hazardous voltages and contact may result in an electric shock hazard. **Never** spill liquids of any kind on the television receiver.

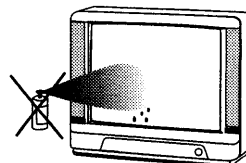


Do not expose the television receiver to rain or use near water. For example, near a bathtub, kitchen sink, in a wet basement, etc. Before cleaning, unplug the television receiver from the wall socket.

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 5 Amp 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 5 Amp. If a plug without a fuse is used, the fuse at the distribution board should not be greater than 5 Amp.

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

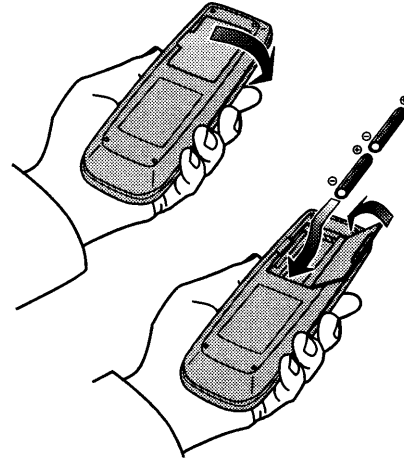
Before replacing the plug cover, make certain that the cord grip is clamped over the sheath of the lead - not simply over the wires.

Aerial Connections

- Insert an aerial plug tightly into the aerial socket on the back of the TV set.
- For all aerial problems please consult your local dealer.
- For the connection to the peripheral AV equipment, refer to section "Connection of AV Equipment" on page 11 & 12.

Battery Installation

1. Remove the battery cover by releasing the clip then open 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.

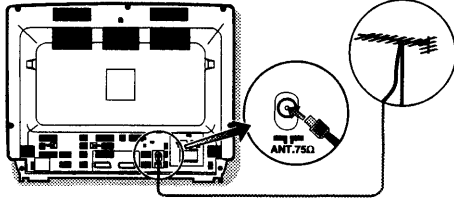


INSTALLATION

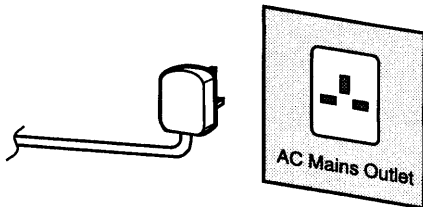
Quick Set Up

This TV set provides an 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.

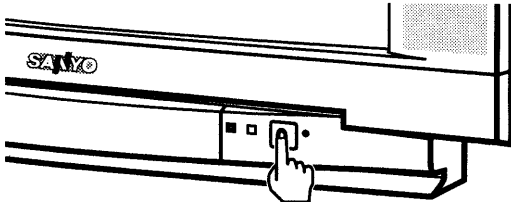
1. Connect your aerial cable to the socket at the rear of the TV. Don't worry about other AV equipment you can add this later referring to the section "Connecting AV equipment" in this instruction manual.



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



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

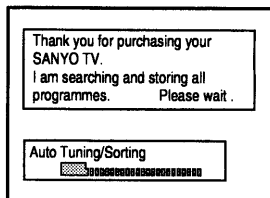


☞ A red power indicator will appear.

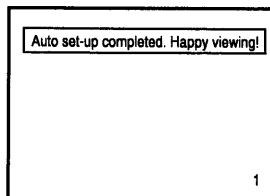
To receive satellite transmission a satellite receiver is required. Before carrying out the automatic setting, select Sky One on the satellite receiver.

The automatic tuning and sorting system will start as follows:

The tuning status and welcome messages will appear on the screen.



After completing this procedure, programme position 1 is selected and the end message will 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.

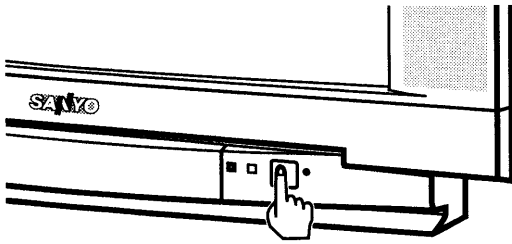
If any stations are not available in your reception area or if they are too weak for the Automatic Tuning function to identify, some programme positions from 1 to 6 will not have a station stored. The remaining stations will be stored from programme position 7 in sequence found.

This procedure only appears the first time you switch your TV set on.

If additional channels become available or you move to another area or add additional equipment, please follow the description "PRESETTING" on page 13.

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.

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

■ To turn the TV set OFF, press the **Mains ON/OFF switch** again.

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: **⏻ button**, **P▲▼**, **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 On mode.

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

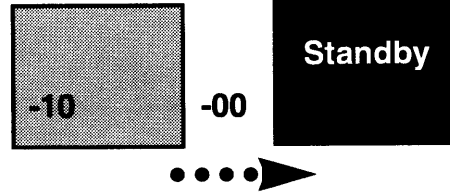
NOTE: It is not possible to turn on from the standby mode with the **Mains ON/OFF switch**.

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

⚠ If you find the 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

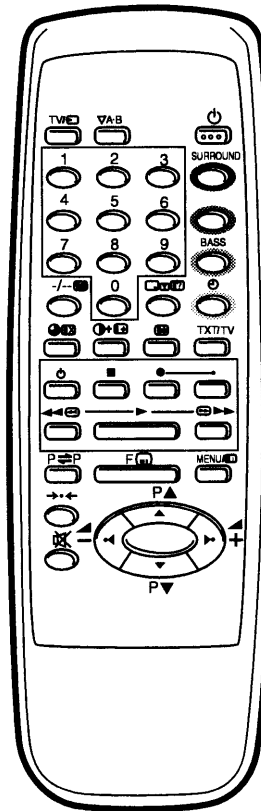
This TV set will automatically switch into the standby mode, 10 minutes after a signal is no longer received. The time until the set will switch off is displayed on the screen.



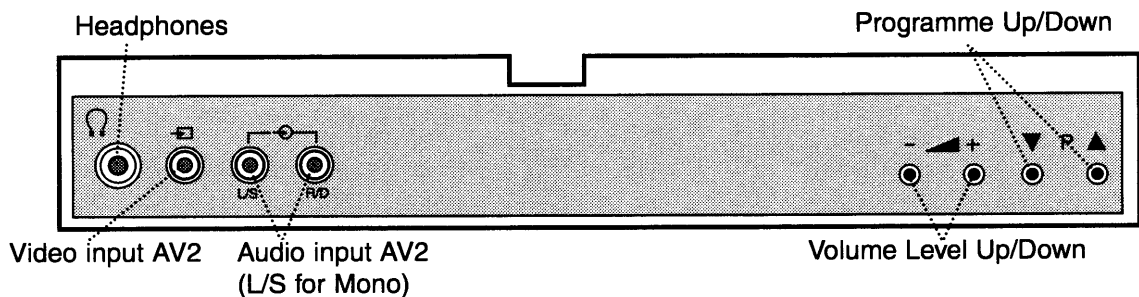
■ If the aerial is removed the TV set will automatically switch into the standby mode after 10 minutes.

■ 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 -Single/double entry
- Volume level Up/Down
- Function
- Sound mute
- Picture setting recall/memory
- TV/AV Selection
- Previous programme selection
- Time setting
- Programme status
- Time Display
- SURROUND 3D Surround Selection
- BASS Bass Expander (Not used)
- MENU (Not used)
- A·B Nicam/Mono/Bilingual switch
- Contrast Plus

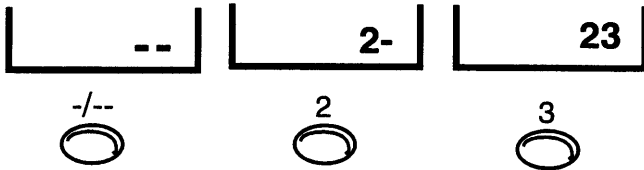


GENERAL OPERATION

Programme Selection

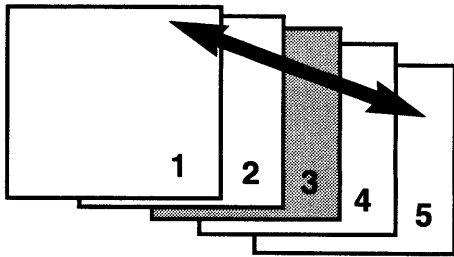
■ Direct Programme Selection

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 then 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.



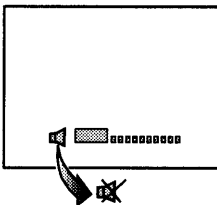
The programme ID (identification) is displayed together with the programme number on the screen automatically when one of the following major stations in the U.K. is selected, BBC1, BBC2, ITV, CH4, S4C, CH5. For further information see the description of Automatic Tuning/Sorting on page 13.

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 mute is cancelled.



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. Each press cycles through the levels as follows:

Picture Control

- ⊗ **Contrast** : To adjust the picture contrast.
- ⚙ **Brightness** : To adjust the picture brightness.
- 🎨 **Colour** : To adjust the picture colour.
- 📏 **Sharpness** : To adjust the picture sharpness.
- TEXT Brightness** : To select the teletext brightness level of the teletext mode (see page 14).

< > To make fine adjustments to tuning.

Sound Control

- 🎵 **Bass** : To adjust low frequency sounds.
- 🔊 **Treble** : To adjust high frequency sounds.
- ⚖ **Balance** : To equalise the output from the left and right speakers.
- Auto Volume**: To equalise the volume level. (See page 8).
- Child Lock** : To lock the control keys on the TV. (see page 9).
- Preset No/Yes** : To enter the presetting mode. (see page 13).

Note: The selection is shown in red for Auto Volume, Child lock and Preset.

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

The following functions do not appear in AV mode: Fine tuning, Preset No/Yes. The function AV1 mode only appears when in AV1 mode.

GENERAL OPERATION

Personal Picture Preference

This TV provides three picture preset levels where you can store different preferred picture/sound settings.

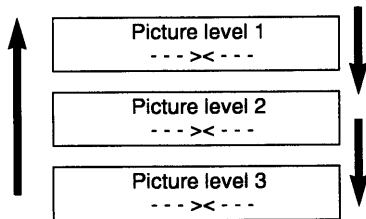
For example you could set up the 3 levels for different viewing conditions as shown below:

Picture Level 1: Normal picture setting

Picture Level 2: High contrast, brightness and colour settings
(For when the room is brightly lit).

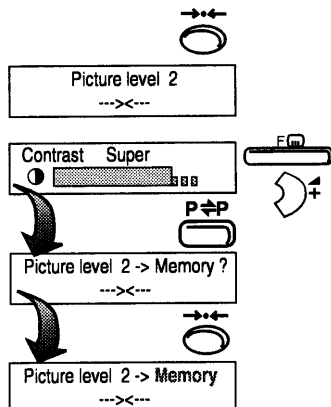
Picture Level 3: Low contrast, brightness and colour setting
(For when the room is dimly lit or the lights are switched off).

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



Storing of preferred picture settings

1. Select the picture preset level which you wish to change by pressing the **→←** button repeatedly. (eg. Picture level 2)
2. Press the **F** button then adjust to your preferred picture levels (see Sound and Picture settings) 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 to store. The colour of the word "Memory" will change to yellow.



Storing is now complete.

Active 3D surround

What is Active 3D Surround?

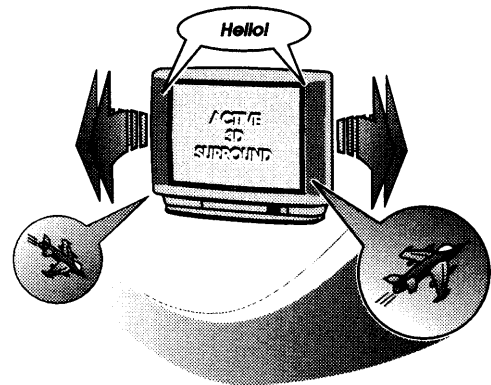
In traditional stereo sound, left and right channels combine to create a stereo image. Better speakers can create a larger perceived sound stage, so sound seems to emanate from a few feet behind the TV. Sound can have a much wider presence with Active 3D surround technologies. Music and sound effects 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.

Active 3D Surround Mode

This TV provides an active 3D surround processor which can produce incredible 3 dimensional sound effects when receiving a standard stereo or monaural signal.

The following 3D surround modes can be selected by pressing the **Surround** 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.
- Off:** To switch off the 3D surround effect.



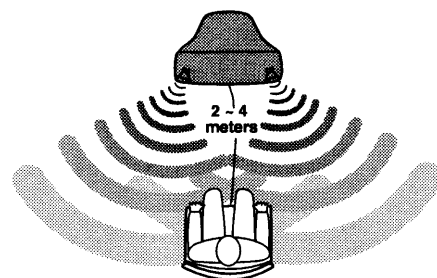
Achieving the optimum 3D surround effect

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.

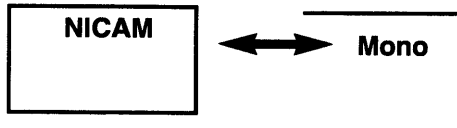


OTHER FUNCTIONS

Nicam & Bilingual Reception

Nicam Sound Reception

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



If nicam sound reception is poor (clicking/crackling), you can switch to "Mono" sound reception by pressing the **∇A•B** button.

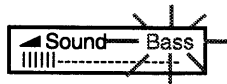
Bilingual reception

In some countries different languages maybe broadcast on the left (A) and right (B) channels. Press the **∇A•B** button repeatedly to select language A or B when the TV channel transmits in 2 languages (dubbed or original language). A or B appears briefly on the screen.



Bass Expander

To emphasise the bass sound, press the **BASS** button. The word "Bass" appears on the sound display. Press it again to return to normal sound.



Auto volume level

Sometimes the volume level is different between programmes. eg. Off-air programs and VCR playback or live programmes and commercials. When this function is set to "Yes" the TV set automatically equalises the volume level differences.

1. Press the **F** button repeatedly until the word "Auto Volume" appears on the screen.
2. Select "Yes" or "No" (highlighted red) 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 for viewing in brightly lit rooms.

Natural: Normal contrast mode, suitable for viewing in dimly lit rooms.

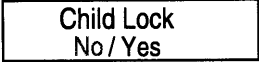
OTHER FUNCTIONS

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 adjusting the volume or changing programme with these buttons. The remote control will still function.

Setting the Child Lock Mode

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



Child Lock
No/Yes

Next select "Yes" (highlighted red) by pressing the **+ / -** buttons.



Child Lock
No/Yes

The TV set is now in the child lock mode.

Cancelling the Child Lock mode

Follow the procedure above but select "No" (highlighted red) by pressing the **+ / -** buttons.

NOTE: The child lock mode is cancelled when the TV is switched off with the mains ON/OFF switch.

Time Display

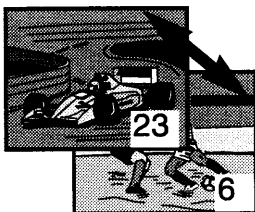
In the TV mode, if the programme being viewed has a teletext service, when the **⊖** button is pressed, the present time will be displayed on the screen for 5 seconds.



16:19/25
6

Previous Programme

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



Recall

To display on-screen information, press the **☐mE?** button. The programme number, channel 10 and sound status will be displayed for 5 seconds.



A

2

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.

OTHER FUNCTIONS

Timer Setting

This TV has 3 timer functions. Select the following modes by pressing the **●** button repeatedly.

- **Sleep timer setting** You can select a period of time until the set switches into the standby mode.
- **On-timer setting** You can set a period of time until the set switches on from the standby mode.
- **Alarm timer setting** You can set a period of time until an "alarm" is activated. eg. as a reminder function.

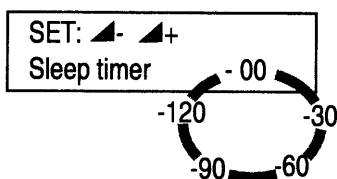
Function	Maximum time periods	Step
Sleep timer	120 minutes	30 minutes
On-timer	24:00 Hours	15 minutes
Alarm timer	3:00 Hours	5 minutes

Sleep Timer Setting

1. Press the **●** button once, the word "Sleep timer" will appear on the screen.
2. Set the period of time 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. Select the programme you wish to view when the set switches on.
2. Press the **●** button twice. The words "On-timer" will appear on the screen.
3. Set the period of time until the set should switch on by pressing the **▲ + / ▼ -** button.

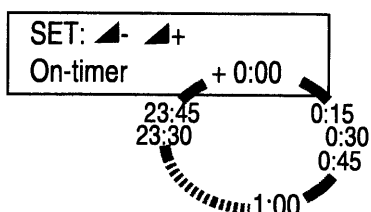
*Press and hold the **▲ + / ▼ -** button, to change the time more rapidly.*

This completes the on-timer setting.

4. Switch into the standby mode by pressing the **⏻** button.

When the period of time has elapsed, the TV set will switch on and select the previously viewed programme automatically.

When the TV set is switched on by using the on-timer function, the TV set will automatically switch into the standby mode after 2 hours if no key control is input.



Alarm Timer Setting

This function can display the time up sign on the screen as illustrated to let you know that the time has come when the set alarm time is reached. This only happens when the TV is on. This may remind you to do something.

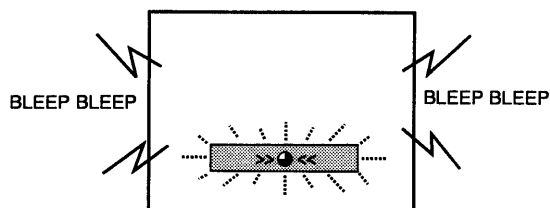
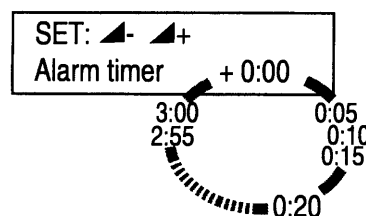
1. Press the **●** button three times. The words "Alarm timer" will appear on the screen.
2. Set the time period by pressing the **▲ + / ▼ -** button.

*Press and hold the **▲ + / ▼ -** buttons, to change the time more rapidly.*

This completes the alarm timer setting.

When the time period has elapsed a flashing timer symbol will appear on the screen until a control key is pressed and a bleep will sound for 10 seconds.

Note: The bleep will only be heard if the sound is not muted or set at minimum.



If the TV set is switched off by the Mains Switch **⓪** 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 repeatedly.

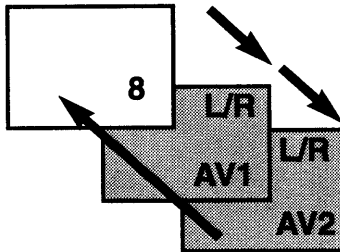
CONNECTION OF AV EQUIPMENT

Using AV Equipment

You can connect a VCR, S-VHS VCR, Satellite Tuner, PAY TV Decoder, Camcorder etc, to the 2 Scart sockets at the rear or the AV terminals at the front of the set.

● Selection of AV mode

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



● Use of front AV2 terminal

This TV provides one set of AV input terminals on the front panel. It is very convenient for using a game or camcorder connection.

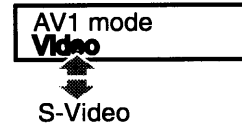
AV equipment can be connected to either the rear AV2 scart socket or to the front AV2 RCA sockets. If equipment is connected to the front AV2 terminals this will override equipment connected to the rear AV2 scart socket. To use the rear AV scart socket please ensure that no equipment is connected to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

● Setting of AV1 input mode

If you want to use a VCR which is equipped with the S-VHS capability to obtain the best performance, you should connect to the AV1 terminal and select S-Video for the AV1 mode.

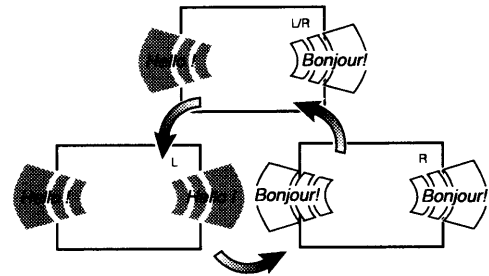
Note: Select Video if you do not have S-VHS compatibility.

1. Select the AV1 mode by pressing the TV/□ button.
2. Press the F□ button repeatedly until the word "AV1 mode" appears on the screen.
3. Select the correct input mode (highlighted red) by pressing the ◀ + / ▶ - buttons.



● Selection of the sound track from the equipment

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



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

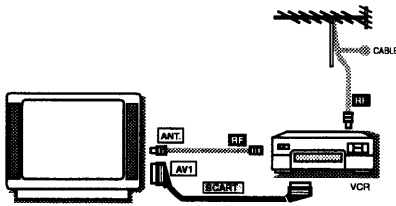
Connection

- ✓ 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 programmes.
- ✓ Watch the playback from the VCR on position 0 or when using a Scart cable, it is on AV1 mode.
- ✓ Record 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 to programme position 0, this is a useful position for VCR use.



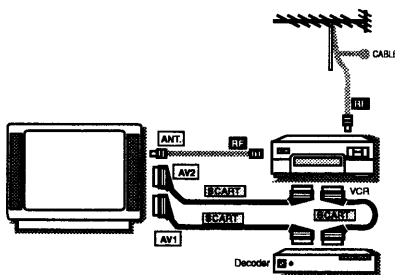
USE OF VCR AND SATELLITE TUNER

Connection

- ✓ Connect RF cables. Roof aerial to VCR & VCR to TV, Dish aerial to Satellite.
- ✓ Connect Scart cables. AV1 to VCR & AV2 to Satellite Tuner & VCR to Satellite.

Ability

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



USE OF CAMCORDER OR GAME EQUIPMENT

Connection

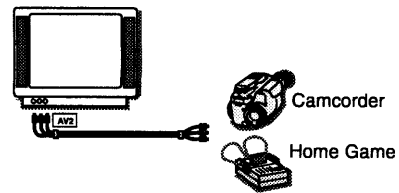
- ✓ Connect an RCA cable from the front AV terminal (AV2) to a camcorder or to game equipment.

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.

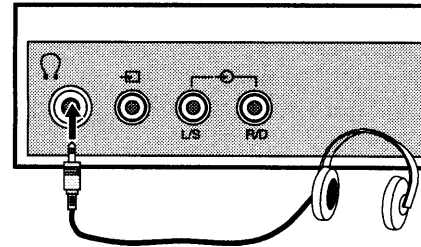
You must select the AV2 mode manually.



Note: You can also connect to the Scart sockets if the appropriate leads are provided.

USE OF HEADPHONES

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



PRESETTING

Up to 100 broadcast stations in your reception area can be stored in the electronic memory. There are three ways of presetting 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

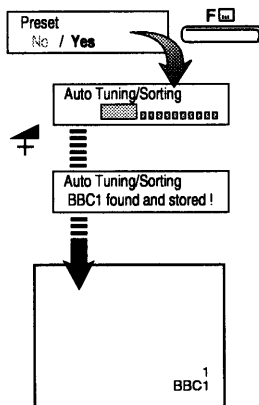
Use to preset a channel in any desired programme position, e.g. BBC1 at position 1.

Manual presetting

Manually tune a channel if it cannot be automatically tuned, such as weak/poor signals.

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.

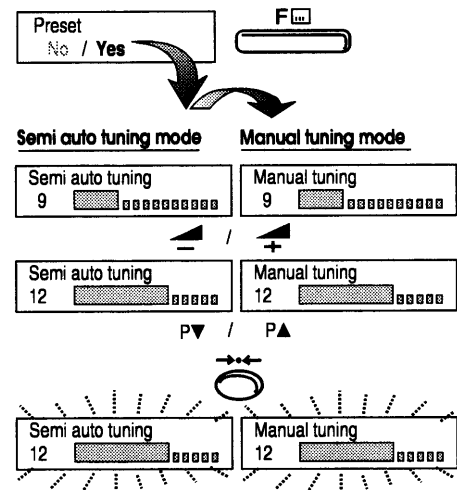
Semi-automatic or Manual tuning

1. Press the **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 repeatedly to select 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 start searching.
4. When you tune your desired channel, select a programme position where you wish the station to be stored using the **P▲▼** buttons.
5. Press the **→←** button to store in the memory.

This completes the presetting.

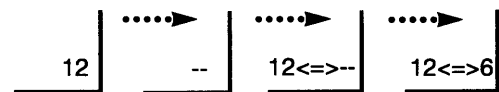
Repeat steps 3 to 5 for other desired channels

To return to normal TV mode, press the **F** button twice to exit Semi-automatic mode and once for Manual mode.



Channel Swapping

Use this channel swapping feature to swap the channels between two stored programme positions. This feature is particularly useful if the automatic tuning/sorting has not been able to store the programmes correctly.



1. Select one of the TV channels you wish to swap by using the **P▲**, **P▼** or using the **(0-9)** numeric buttons.
2. Press the **-/-** button. "--" appears on the screen. Press the **P⇄P** button. Channel swapping mode is displayed.
3. Enter the 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**.

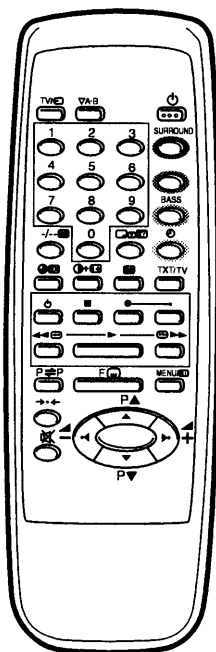
The two TV channels will now have changed places.

Repeat steps 1 to 3 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.

TELETEXT

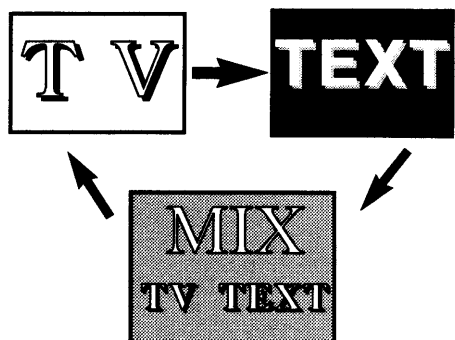
Teletext Controls



TXT/TV	TEXT/MIX/TV SWITCH
0 - 9	0-9 Numeric Buttons
▼ P ▲	Page Up/Down
[1]	Index page selection
[H]	Hold
[S]	Size
[EX]	Cancel
[SUB]	Sub page button
[REVEAL]	Reveal
[RED]	Red
[GREEN]	Green
[YELLOW]	Yellow
[BLUE]	Blue

Switching to the Teletext mode

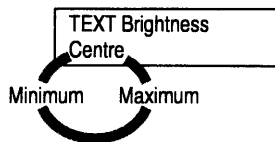
Press the **TXT/TV** button, and the screen changes as illustrated.



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.

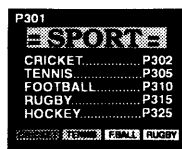
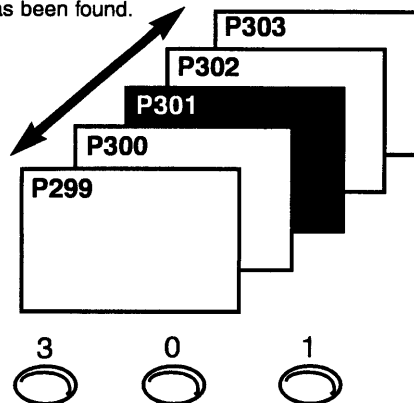
Sound control in the teletext mode.

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 and the page number will appear when it has been found.



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 **down (P▼)** button.

P▲ : P301 → P302 → P303 P399 → P400

P▼ : P301 → P300 → P299 → P298 P201

Hold the button for rapid page change.

TELETEXT

Coloured Page Access

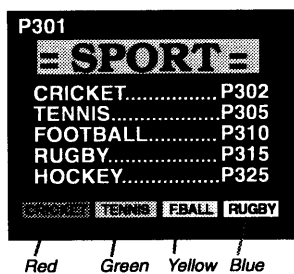
Depending on the TV channel, teletext is transmitted in different systems. The system utilised can be recognised by the coloured line at the bottom of the screen.

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

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 FASTEXT, 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.

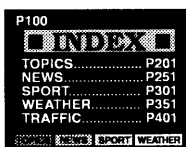


Red Green Yellow Blue



Index Page Selection

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



Hold

The index is determined by the broadcaster.

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

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.



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 page access, you can continue watching the TV picture until the sub-page is reached. Select a teletext page with sub pages.

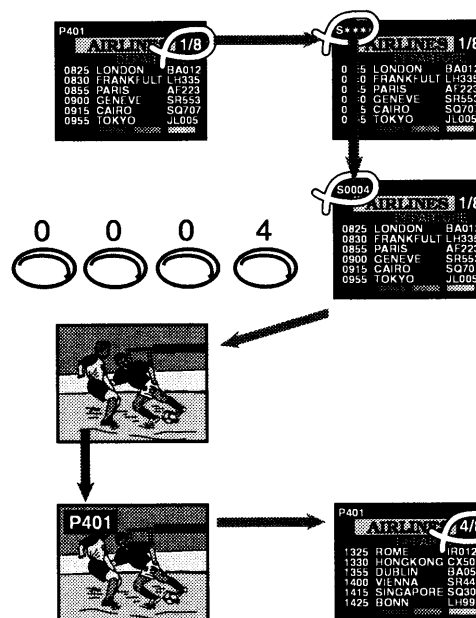
1. Press the **EXIT** button. The characters "S****" will be displayed on the top left corner of the screen.
2. Enter the sub page number by using the (0-9) buttons.

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

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

When the requested sub page is found, the page number will appear over the TV picture.

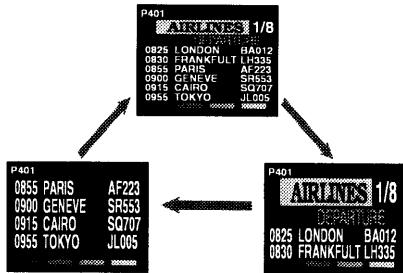
4. Press the **TXT/TV** button to view the sub page.



TELETEXT

Double Letter Height

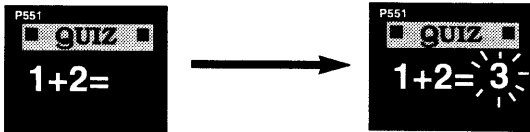
Either the top half or the bottom half of the page can be expanded to fill the whole screen by pressing the **EX** button. Each time the button is pressed, the display changes as illustrated.



Displaying Concealed Information

Press the **EX** 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.



Updated Pages

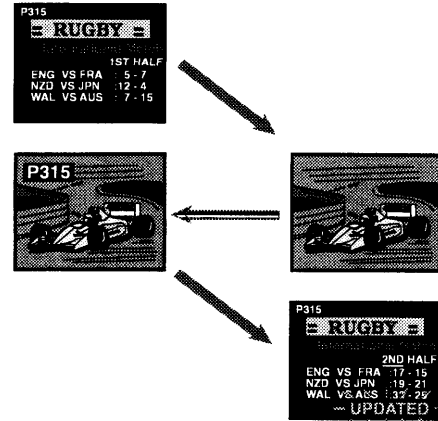
There are teletext pages which are updated as events progress, such as sports results, news reports or traffic information. Select a page which will be updated.

1. Press the **EX** 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 **EX** 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 & SPECIFICATIONS

Special Functions

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

1. Press and hold the **□mE?** button on the Remote control handset and then press the **PA** button on the TV set.
2. To select the "ITEM" number, press the **F□** button on the remote control handset.
3. To select the "SET" number, press the **▲ + / ▲** - button repeatedly.
4. To return to the normal TV mode, press the **□mE?** button.

■ Maximum volume setting and prohibition of presetting

ITEM 1 Sets the current volume as the maximum volume level and prohibition of preset function.

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

	Common Specification
Power source	AC 220~240V, 50Hz
Television system	System I
Colour system	PAL
	Modified NTSC in AV mode (NTSC 4.43)
Receiving channel	UHF: 21~69
Aerial input impedance	75 ohm
AV terminal	
21-Pin SCART Terminal	AV1 : CENELEC Standard(RGB/S-Video inputs) AV2 : Monitor output
Front AV Terminal	AV2 : RCA Terminal, Video and Audio (L/R) Input
Sound output (Music)	6 watts (CE21DN4-B) 12 watts (CE25DN4-B) 12 watts (CE28DN4-B)
Picture tube (Diagonal)	59 cm (CE21DN4-B) 63 cm (CE25DN4-B) 70 cm (CE28DN4-B)
Visible picture (Diagonal)	55 cm (CE21DN4-B) 59 cm (CE25DN4-B) 66 cm (CE28DN4-B)
Dimensions (W x H x D mm)	612 x 476 x 486 (CE21DN4-B) 680 x 543 x 442 (CE25DN4-B) 736 x 597 x 494 (CE28DN4-B)
Weight	21 Kg (CE21DN4-B) 26.6 Kg (CE25DN4-B) 32 Kg (CE28DN4-B)

Specification subject to change without notice.

Scart Specifications

The specification of the 21 pin connector is as follows.

AV1 Terminal (AV2 differences see notes)

Pin

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

*1 AV2 terminal does not provide RGB inputs

*2 AV2 terminal does not provide S-Video inputs

*3 AV1 terminal outputs TV output. AV2 terminal outputs the monitor output.

SERVICING & HELPFUL HINTS

Servicing

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

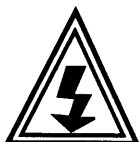
Removal of the cabinet cover may expose you to dangerous voltages. Refer all servicing to qualified service personnel.

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 spilled into the television receiver.
- If the 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



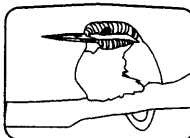
Helpful Hints



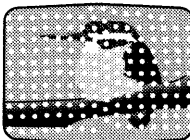
- **NO PICTURE, NO SOUND**
 - Check if TV is plugged in.
 - Try a different channel, if OK, probably station trouble.



- **POOR PICTURE, SOUND OK**
 - Adjust BRIGHTNESS control.
 - Adjust FINE TUNING control.
 - Check aerial connections.

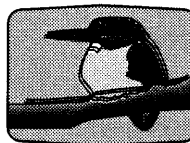


- **NO COLOUR, PICTURE OK**
 - Adjust COLOUR control.
 - Adjust FINE TUNING control.
 - Is the programme in colour ?



- **WEAK PICTURE**
 - Check aerial connections on back of set.
 - Check aerial for broken wires.
 - Re-orient at 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 your 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. SKP10165 F7WA/VA/KA

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