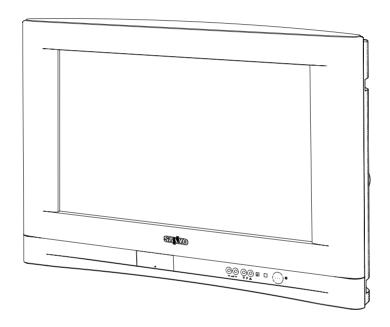




INSTRUCTION MANUAL

CE24FWN5-B

Colour Television



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

	TV	Specifications	Front AV termina	al		
Common specifi Power source Television system Colour system		AC 220~240V 50Hz System I PAL/NTSC4.43 (PAL/NTSC4.43/NTSC3.58 in AV mode)	Headphone soc	ket	AV3: Input: Mini Jack	RCA jacks Composite video and audio-L/R
Channel coverage		UHF: 21-69.		6 F	OAEWNE D	
Aerial input impeda	ance	75 ohm	Sound output	CE	<u>24FWN5-B</u>	
AV terminal			(Continuous)	2 x	3W	
	AV1: Input:	CENELEC Standard Composite video, RGB and audio-L/R	Picture tubes	24		
	Outpu	t: TV-output with composite video and	(inches)	24		
		audio-L/R	Dimensions			
	AV2:	CENELEC Standard	(WxHxD mm)	612	2 x 476 x 482	
	Input:	Composite video, RGB, S-VHS and audio-L/R	Weight (kg)	25		
	Outpu	t: Monitor-output with composite video and audio-L/R				

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

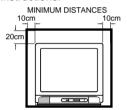
Do not allow anything to rest on the power cord. **Do not** locate this television receiver where the cord will be damaged by people walking on it.

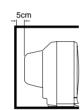
Do not overload wall outlets and extension cords as this can result in fire or electric shock.

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.

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

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.

Servicing

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

You must not remove the rear cover of the TV by yourself. The apparatus is working with high voltages and could damage objects or even endanger people. Leave all required repair and service jobs to an authorised service technician. He will exclusively use such spare parts that are complying with the same safety standards as applicable to the original parts. The use of original spare parts can prevent fire, shock and other hazards.

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.

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** place items such as vases containing liquid on top of the TV set.

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 the television or its stand. **Never** allow children to play with the television or its stand. 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.



Do not place candles or hot objects upon the TV, next to it or behind it. Open flames must never be used near the TV set.

Important:

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

- 1. Remove the fuse cover and fuse.
- Fit a new fuse which should be a BS1362 5Amp A.S.T.A. or BSI approved type.
- 3. Ensure that the fuse cover is correctly refitted.

If the fuse cover is lost or damaged the plug must **NOT** be used but replaced with a serviceable plug.

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, ensure the fuse cover is correctly fitted. 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 13Amp socket elsewhere.

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

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

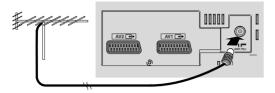
- The Blue wire must be connected to the terminal which is marked with the letter "N" or coloured BLACK.
- 2. The Brown wire must be connected to the terminal with the letter "L" or coloured RED.
- Do not connect either wire to the earth terminal in the symbol or coloured GREEN or GREEN and YELLOW.

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

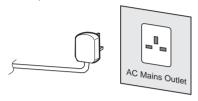
INSTALLATION

Step: 1 Connections (Essential)

Connect your aerial cable socket to the back of the TV set.



Connect the power cord of the TV set to a wall outlet.



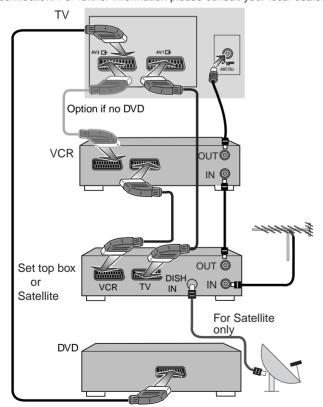
- The TV set is prepared for a mains voltage AC220~240V, 50Hz and is fitted with a single pole mains ON/OFF switch. To completely switch off from the mains, or when the TV set is not to be used for an extended period of time it is advisable to disconnect the power cord from the power outlet.
- // For all aerial problems please consult your local dealer.



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

Connecting DVD / VCR player/ Satellite receiver or Set top box.

We recommend that you connect all other equipment before Plug and Play. The following examples are our recommended standard connection. For further information please consult your local dealer.



Please refer to individual Instruction Manuals for each piece of equipment for their connection suggestions.

Step: 2 Remote control battery installation

Install two "AA" 1.5 volt batteries so that the "+" and "-" marks on the batteries match the "+" and "-" marks inside the unit into the remote control handset.

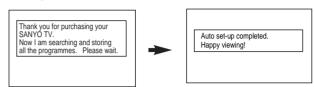
Step: 3 Switching on / Plug & Play

Press the Mains on off switch on the front of the TV set.

This TV set provides a self- automatic tuning function called Plug and Play which automatically searches and stores all of the available TV stations in your reception area.



A welcome message will appear, once this has finished the following screen appears.



To remove the completed message press the **MENU** button.

Now the installation is complete!

After Plug & Play the TV set will automatically sequence the following major stations in the UK starting from programme position 1.

BBC1

BBC2

 ITV

CH4

CH₅

SKY, BBC-World, or BBC-Prime.

- Any other channels found will be stored sequentially as they are found after the major stations.
- If you move to another city or cable is installed, please follow the description "TUNING". (on page 6).

TV front controls / Terminals

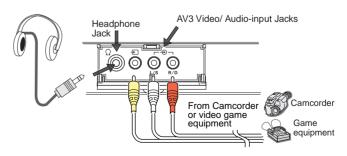


Press the $\mathbf{P} \mathbf{A}$ and $\mathbf{P} \mathbf{V}$ buttons to increase or decrease the programme position.

Press the + or -- buttons to increase or decrease the sound volume.

■ Front terminals

- ✓ To select the AV3 mode press the TV/ button repeatedly.
- When the headphones are inserted the sound from the TV speakers is muted.



GENERAL OPERATION - REMOTE CONTROL

General use



Standby / Power on-off

To switch the TV ON and OFF.



Direct programme selector



For direct access to programmes using (0-9) numeric buttons. For selection of programme position 10-99, eg.23, first press

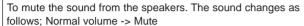
-/-- button and press 2 and 3 numeric buttons.



TV/AV switch - To switch TV, AV1, AV2 or AV3 mode press repeatedly.



Sound mute





Wide - Press to select the following picture modes Auto -Full - Natural - Zoom 14:9 - Title in 14:9 - Zoom 16:9 - Title in 16:9 - Normal.



Nicam/Bilingual selector

To switch the sound mode as follows; NICAM or Mono for nicam stereo programmes. A,B or Mono for nicam bilingual programmes. You can also select the sound track L (left), R (right) or L/R in AV mode.



Picture mode selection -

Press the → **button** repeatedly to select the following picture modes.

Personal - Personal preference mode.

Standard - Normal viewing mode.

Eco - Suitable for dimly lit rooms and gives a cinema - like effect. **Dynamic -** Suitable for brightly lit rooms.



Programme information call

To display the programme information.



You can also select colour systems in AV mode as follows Auto -> PAL -> NTSC4.43 -> NTSC3.58 ->



Surround mode selector

This TV provides an incredible 3 Dimensional sound effect.

Max: Gives the optimum 3D surround effect.

Mid: For Nicam-mono broadcasting. Off: To cut off 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.



Virtual subwoofer On / Off

To get an emphasised bass sound.



Time display

In the TV mode, if the teletext is available the teletext clock will be displayed press repeatedly to switch on and off.



Programme swap

To switch between current and previous programme position watched.



Menu - See pages 5 and 6.



Programme down/up

To select the next programme number or previous programme number. Also operates as up and down cursor.



Level up/down

To adjust the sound volume level. Also operates as left and right cursor.



F/OK button - Use in Menu option.



CS button

Press button once to scan through all current channels already tuned in (except skipped channels). Press any button again to cancel.

Teletext

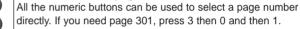
Teletext - This is a free service to give you lots of varied information such as news, sports results, weather and travel features.



To access this feature press the TXT/TV button the picture changes from TV - TXT - MIX and back to TV.



Direct access to a page











Direct access to subject headings

Coloured boxes are displayed at the bottom of the screen. the 4 coloured buttons give access to the corresponding subjects or pages.



Index page selector - This selects one of the teletext index



Up / down page access - Press the button to select the next page or previous page number.



Sub page access

Some text pages are made up of several sub pages which rotate automatically if you wish to view P4 of 8 press the sub page button. "S----" will appear. Enter 0004.



Cancel - To view the TV picture in the teletext mode while waiting for sub page to change or page to update.



Hold - This stops the sub pages from changing. The word "HOLD" will appear instead of the page number.



Size switch - This will make either the top half or the bottom half of the page expand to fill the whole screen.



Reveal switch - This reveals hidden items on the teletext page eg: a hidden answer to a quiz question.

Teletext reception

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

Teletext brightness level

You can change the teletext brightness level. Please return to TV mode.(See Picture menu -Text Brightness on page 5).

Sound volume control

In teletext mode sound volume and muting can be controlled. However they are not displayed on the screen.

MENU OPERATION

Many of your TV's functions are controlled through the menu function.

Main menu
Sound — Volume
Balance
Bass
Treble

Surround — Mid / Max / Off

- Picture — Brightness Contrast Colour Sharpness

Tint (only when NTSC is detected) Dyn. skin tone — On / Off

Picture level — Personal / Standard / Eco / Dynamic

Text brightness - Maximum / Centre / Minimum

Setting — Child lock — On/Off

AV2 ———— S-Video / Video Off Timer ——— Off / 5 / 10 / 15 - 120

- Preset - Program sort

Auto sort OK?
Program pos. 12
Program name Sky
Frequency 799.12 MHz
Skip Off / On

During the menu operation the following buttons are used.

MENU

: To enter the menu function.



To go back and to exit the menu function.To navigate up and down in the menus.

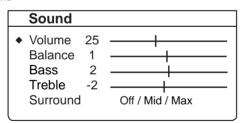


: To navigate forwards to the next screen or to activate settings.

Sound menu

Press the MENU button and select Sound.

Select and adjust to obtain the best sound settings for your environment.



Picture menu

Press the MENU button and select Picture.

Select and adjust to obtain the best picture settings for your environment.

Picture			
◆ Brightness	20		
Contrast	25		
Colour	26		
Sharpness	22		
Dyn. skin tone		On / Off	
Picture level		Personal / Standard / Eco / Dynamic	
Text brightn	ess	Minimum / Centre / Maximum	

Tint: Colour phase if NTSC equipment is detected.

Dyn. Skin tone: Makes the skin tone more realistic.

Picture Level: Rotates between your Personal settings,

Standard, Eco and Dynamic .

Text brightness: Brightness of Teletext screen Minimum /

Centre / Maximum.

Setting menu

■ Child lock

You can prevent small children from operating the TV with the front buttons of the TV set.

Press the MENU button and select Setting and then Child lock.

	Setting
	Child lock
deo	AV2
120	Off timer
	-

The child lock mode will be reset to "Off" when the TV set is switched off with the Mains ON/OFF (I) switch.

■ Setting of AV2 input mode

If you use a VCR which has S-VHS, you should connect it to AV2 and change the AV2 menu to S-Video.

Press the **MENU button** and select **Setting** and then **AV2**. Change to S-Video or Video.

■ Off-timer setting

The Off timer will switch the TV set into the standby mode when the selected time has elapsed.

Press the MENU button select Setting and then Off timer.

◆ Off Timer Off / 5 / 10...../120

The time changes in 5 minute steps. The maximum time is 2:00hrs.

Once set the time will show on the screen with the remaining time.

If the TV set is switched off by the Mains Switch (1), or O button on the remote control, or during Auto sort, the timer settings will be cancelled.

MENU OPERATION

Preset menu

The preset menu can be used to tune new channels, to reorder channels and their programme positions, and to make fine adjustments to the tuning.

The preset menu is used for the following.

Program sort: To rearrange channel positions after Auto sort.

Auto sort: To automatically search, sort and store all channels.

Frequency: To manually search and add channels. To fine tune existing channels.

Preset	
◆ Program sort	•
Auto sort	Busy / OK?
Program pos.	6
Program name	Sky
Frequency	631.25 MHz
Skip	On / Off

■ Program sort

- 1. Press Menu button and select Preset.
- Select Program sort. Using →+, →- buttons and P → or P ▼ buttons. Select which channel you want to move eg. Programme position 4. (highlighted yellow). Press (Green) Move button, the programme position number turns green. Screen shows Move to at the bottom.

Progr	am sort		
1	7	13	
2	8	14	
3	9	15	
4	10	16	
5	11	17	
6	12	18	
▲ ▼	♦ ► ■ N	love ■ [Delete

- Select programme position to move to eg. 2 . Press Green Move button again to move.
- 4. To delete a channel. Select the Programme position. ie.17. Press Red button. (highlights number red). Press Red button again to delete. Programme position 17 is now deleted.

Exit menu by pressing **MENU button** repeatedly.

■ Auto sort

- 1. Press the MENU button and select Preset.
- Select Auto sort by pressing P▲ or P▼ buttons. Press the F/OK button to start automatically tuning, sorting and storing all available channels.

After completion Auto sort changes from Busy to OK?

3. Press the MENU button repeatedly to exit.

Note : Auto sort can be cancelled at any time by pressing any button except for the F/OK button.

: You can change the order of the station selection, by using the Program sort function.

■ Tuning - Frequency (Manual)

- 1. Press the MENU button and select Preset.
- 3. Select Programme name using the P▲ or P▼ buttons. Press the ▲+ button, the first character space turns yellow. Press the P▲ or P▼ buttons until the number or first letter you require appears (0-9, A-Z, a-z, ?, !, -, +). Press the ▲+ button to select the second character.

You can assign 7 characters of information. When finished press the + button repeatedly until no character is highlighted.

4. Select Frequency by using the P▲ or P▼ button.

You can either...

- a) Enter the frequency using the 0-9 buttons referring to the channel table.
- b) Press and hold the —+ or —- buttons until the frequency starts scanning (about 5 seconds), scanning will stop when a channel is found.
- c) Keep pressing to de-tune the frequency.

Repeat above until the correct channel is found.

- 5. Press the F/OK button to store the new frequency (it turns green).
- 6. Repeat for other programme positions if required.

■ Skip

Skip ON : In normal operation when the P▲ or P▼ button is pressed this position will be skipped.

Skip OFF: Position is not skipped when **P**▲ or **P**▼ button is pressed.

- 1. Press the MENU button select Preset Program. pos.
- 2. Select a program position that you wish to Skip.
- Select Skip by pressing the P▼ button. Using →+ or →- buttons select On / Off.

Press Menu button repeatedly to exit.

You can still view a programme position that has been skipped by using the numeric buttons to select the programme position directly.

OPERATION

■ Switching into /from standby mode

The Standby mode is used for switching the TV set off for short periods of time. In standby mode the TV is switched off but is still receiving mains power.

- To turn the TV set into standby mode, press the button.
 The red power indicator illuminates more brightly.
- To turn the TV set ON from standby mode, press any of the following buttons: ①, P▲, P▼ or 0-9 buttons.



If you find the power indicator flashing, please turn the TV set off with the Mains ON/OFF switch, disconnect the power cord from the power outlet 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.

Selecting of picture size

■ Screen options

Today there are various transmission formats with different size ratios, eg. 4:3, 14:9, 16:9 and video formats such as letterbox.

■ Auto

It automatically switches to the optimum screen mode according to the WSS signal provided in the receiving signal source. If the signal does not have it, the TV keeps current screen mode.

This setting may cause the picture to change when a different format is received eg. when an advert is received.

Some broadcasters transmit this signal and some VCR tapes have it included . The signal identifies the picture format ratio (16:9, 14:9, 4:3 etc.).

If WSS is not being received and you are not happy with your picture this TV provides you the option to change it with the following options.

Press the WIDE button repeatedly to select your desired setting.

■ Full

4:3	14:9	16:9	Letterbox Video
The whole screen is filled stretching the width.	The whole screen is filled stretching the height slightly at the edges.	The whole screen is filled with the corrrect picture ratio.	The black bars top and bottom are present and the height is compressed.

■ Natural

4:3	14:9	16:9	Letterbox Video
Stretches the picture horizontally to fill the screen. The picture is more stretched at the edges.	The height is expanded to fill the whole screen.	The picture fills the screen and is proportionally correct.	The black bars top and bottom remain and the height is compressed to fit the picture area.

■ Zoom 14:9

4:3	14:9	16:9	Letterbox Video
The correct picture width is maintained but the top and bottom are cropped.	Zooms in slightly cropping the top and bottom.	Zooms in slightly cropping the top and bottom.	The black bars top and bottom are smaller and the picture height is compressed slightly.

■ Title in 14:9

4:3	14:9	16:9	Letterbox Video
TITLE	TITLE	TITLE	TITLE
As zoom (14:9), but bottom is compressed even more to allow subtitles to be seen.	As zoom (14:9), but bottom is compressed even more to allow subtitles to be seen.	As zoom (14:9), but bottom is compressed even more to allow subtitles to be seen.	As zoom (14:9), but bottom is compressed even more to allow subtitles to be seen.

■ Zoom 16:9

4:3	14:9	16:9	Letterbox Video
The correct picture width is maintained but the top and bottom are cropped.	Zooms in slightly cropping the top and bottom.	Zooms in slightly cropping the top and bottom.	The black bars top and bottom are smaller and the picture height is compressed slightly.

■ Title in 16:9

4:3	14:9	16:9	Letterbox Video
TITLES SEEEN	TITLE	TITLES PEREEN	TITLES OCREEN
As Zoom (16:9), but bottom is compressed even more to allow subtitles to be seen.	As Zoom (16:9), but bottom is compressed even more to allow subtitles to be seen.	As Zoom (16:9), but bottom is compressed even more to allow subtitles to be seen.	As Zoom (16:9), but bottom is compressed even more to allow subtitles to be seen.

■ Normal

4:3	14:9	16:9	Letterbox Video
The correct ratio is maintained with black bars on the left and right.	Black bars left and right, picture height is stretched.	Black bars left and right, picture height is stretched.	Black bars left, right, top and bottom.

HOTEL OPTIONS / HELPFUL HINTS / WARRANTY TO CUSTOMER

Hotel options

This TV set allows you to set up the following:-

■ Maximum volume.

The current volume will become the maximum.

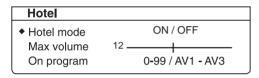
■ Prohibition of presetting.

This prohibits the use of tuning.

■ Programme position at Start up.

SETTING PROCEDURE

- Select Max volume using the P▼ button, use the →+ or →-buttons to set the maximum volume.



Select ON program using the P▼ button, select the start up position using the →+ or →- buttons.

(AV3 - AV2 - AV1 - 0 - 1 - 2 - 3 - 499)

5. Press the MENU button to exit from the menu.

Helpful hints

■ CANNOT TUNE IN

• Check if TV is not in Hotel Mode, this prohibits Preset.

■ 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 a minimum by repositioning the aerial or by installing a 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.
- 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.

Tel: 01923 246363

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 Department, Sanyo UK Sales, (A Division of SANYO Europe Ltd.),Sanyo House, Otterspool Way, Watford, Hertfordshire, WD2 8JX.

