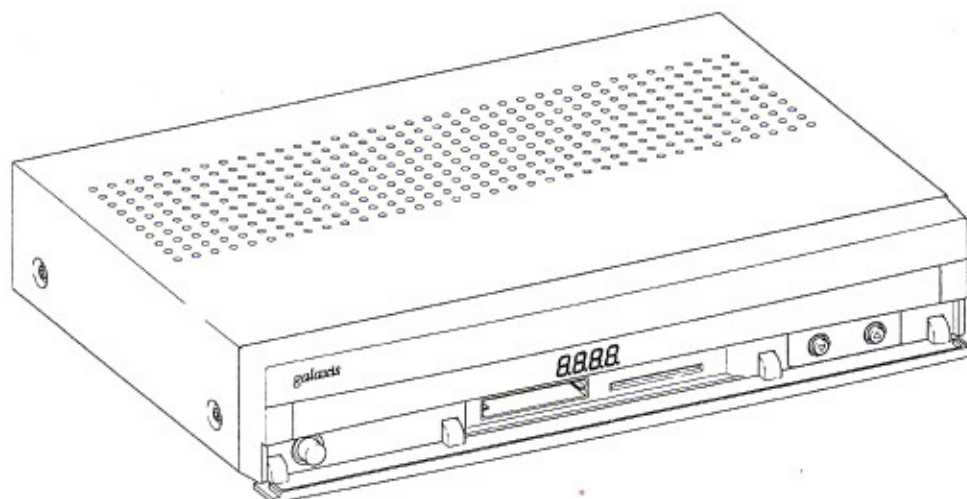




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Data Sheet

Important:

Following a download of new software from the satellite, it may be necessary to perform a factory reset operation in order to properly activate new features or functionality.

In addition, your settings would also be needed in the unlikely event that your receiver fails and has to be replaced.



You should press the **Setup** button and then navigate through the various menus.

In most cases the default settings will be applicable.

Tick the box and/or write-in the option that applies in your case for each item.

For example, if the UHF Channel on your system is not the default value of 38, then you should tick the right-hand box and write in the correct channel number. The example below shows 59, but your system may be set to any channel between 21 and 69.

UHF Channel ☐ 38 ☒ 59

Please Note:

When entering the **Antenna Settings** menu, the **Single LNB** field will automatically be highlighted, even if your system is already configured in **DiSEqC Switch** mode. If in doubt about your system configuration, always opt for **DiSEqC Switch** mode.

If you alter something accidentally then, before doing anything else, you should immediately switch off the main power switch.

This will have the effect of cancelling any unstored changes.

1. Data Sheet

The purpose of this sheet is so that you or your installer can record the exact settings in use for your system. Completing it will enable you to restore your custom receiver settings in the event that this becomes necessary.

Please take a little time now to ensure that you are protected ...

System Setup	
TV/SCART Settings	TV Format ☐ 4:3 ☐ 16:9 ☐ Auto
Language Options	Remodulator Type ☐ PAL B/G ☐ PAL I
LNB Settings	UHF Channel ☐ 38 ☐
Antenna Settings	TV SCART Mode ☐ CVBS ☐ S-VHS ☐ RGB
	VCR SCART Mode ☐ CVBS ☐ S-VHS
	Control Audio Cinch ☐ No ☐ Yes
Local Time Zone	
	Menu Language ☐ English ☐ German ☐
	1st Soundtrack ☐ Japanese ☐ Natural ☐
	2nd Soundtrack ☐ English ☐ German ☐
	LNB Name ☐ 1 ☐ 2 ☐ 3
	Oscillator 1 ☐ ☐ ☐
	Oscillator 2 ☐ ☐ ☐
	22kHz Tone ☐ ☐ ☐
Signal Setup Settings	Single LNB
Signal Strength %	Satellite ☐ Hot Bird 13°E ☐ Astra 19,2°E ☐
Signal Quality %	LNB Type ☐ Universal ☐ 1 ☐ 2 ☐ 3
back	back
Signal Setup Settings	DiSEqC Switch
Signal Strength %	Number of Satellites ☐ 1 ☐ 2 ☐ 3 ☐ 4
Signal Quality %	Port A Satellite ☐ HotBird 13°E ☐ Astra 19,2°E ☐
back	back LNB Type ☐ Universal ☐ 1 ☐ 2 ☐ 3
Signal Strength %	Port B Satellite ☐ Astra 19,2°E ☐ HotBird 13°E ☐
Signal Quality %	back LNB Type ☐ Universal ☐ 1 ☐ 2 ☐ 3
Signal Strength %	Port C Satellite ☐ Sirius 5°E ☐ Thor 1°W ☐
Signal Quality %	back LNB Type ☐ Universal ☐ 1 ☐ 2 ☐ 3
Signal Strength %	Port D Satellite ☐ Thor 1°W ☐ Sirius 5°E ☐
Signal Quality %	back LNB Type ☐ Universal ☐ 1 ☐ 2 ☐ 3
back	back
Local Time Zone	Local Time Zone ☐ GMT+1 ☐ GMT ☐

2. Safety

Please closely follow the instructions in this guide to avoid damage to the unit and possible danger to life.

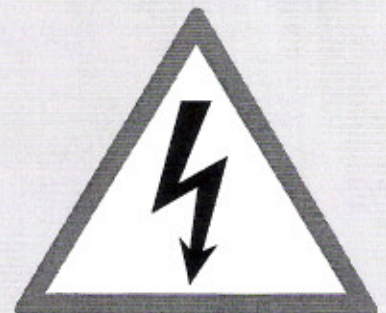
The manufacturer cannot accept responsibility for the consequences of ignoring this advice.

Do ...

- Thoroughly read these operating instructions before operating the unit. Keep them safe for future reference and pass them on if you sell the unit.
- Check that the mains outlet you intend to use is in perfect order. If, for example, the connection is wobbly, or if there is any smell, heat, smoke, burn marks or sounds of arcing, you should not use the socket and are advised to consult an electrician.
- Check the mains lead and plug are not damaged in any way. If they are, please discard the lead and obtain a replacement from your local electrical store, before you use the equipment again.
- Grip the body of the plug, *not* the lead, when removing the power cord plug from the mains outlet.
- Disconnect the power cord plug from the mains outlet before you attempt to remove or replace any connectors or modules. This reduces the risk of electric shock or equipment damage that may otherwise result from accidental short-circuits or mis-placed connectors.
- Consider the safety of others when you work on electrical systems!

Do not ...

- Open the device as there are no user-serviceable parts inside. In addition, there exists a risk of ***fatal electric shock*** due to exposed live parts. Refer servicing to qualified personnel.
- Overload mains outlets, extension cords or adaptors as this can cause overheating or fire.
- Remove the moulded plugs from the mains cable otherwise you risk danger from electric shock. If the lead supplied does not have the correct plug attached, you should obtain a suitable replacement lead from your local electrical store. If the cable is too short, use an approved type of extension lead. In the UK and Eire, always ensure that the correct fuse is fitted (3A or 5A).
- Use liquid cleaning agents as these may cause exterior or interior damage. If you need to clean the receiver, please use a dry cloth.
- Obstruct the ventilation holes nor allow objects to pass through them, otherwise serious damage may occur. The device may overheat, short-circuit or even catch fire!
- Allow children to use electrical equipment unsupervised as children cannot always recognise the potential danger associated with electricity.
- Attempt any work on your satellite system when there is the slightest risk of a thunderstorm because any lightning strike could cause lethal voltages to be present on the antenna cables and any metal parts of the receiver to which they are attached.



Remote Control

3. Remote Control



Standby	Switch between standby and on	Page 13
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TV	Choose TV programmes	Page 14
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Audio	Choose radio programmes	Page 14
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Text	Display DVB text	Page 15
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TV/VCR	Switch TV to video and aux input sockets	Page 16
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Soft keys	Select colour-coded items	Page 14
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OK	Select from menu, accept option	Page 14
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Exit	Quit Setup mode	Page 14
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▲▼◀▶	Browse menus and lists, change options	Page 14
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Keypad	Direct programme number and option entry	Page 17
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Recall	Revert to previous programme	Page 14
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Navigator	Activate Navigator system	Page 14
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Volume	Adjust sound level on TV SCART output	Page 15
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Mute	Mute sound on UHF and TV SCART outputs	Page 15
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CH + -	Browse TV and radio programmes	Page 14
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EPG	Activate Electronic Program Guide	Page 36
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Tick	Used in EPGs	Page 36
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Info	Activate information or help boxes	Page 16
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Subtitle	Activate subtitles	Page 15
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Setup	Enter Setup mode	Page 17
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Sound	Select alternative languages	Page 16
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4. Technical Specifications

Receiver data

Satellite IF Input	: 1 x type F, IEC 169-24, Female, 75Ω unbalanced
Satellite IF Loophrough Output	: 1 x type F, IEC 169-24, Female, 75Ω unbalanced
Frequency Range	: 950 – 2150 MHz
FM Threshold	: <7dB
LNB Control	: Eutelsat's <u>DiSEqC</u> version 1.1 for multi-LNB control 22 kHz tone for lower and upper band switching 13.5 / 18V for vertical / horizontal polarisation control 500mA current supply, short-circuit protected
Terrestrial Input	: 1 x type IEC 169-2, Female, 75Ω unbalanced
Frequency Range	: 47-860 MHz
UHF Remodulator Output	: 1 x type IEC 169-2, Male, 75Ω unbalanced
Output Channel	: Software selectable PAL I or B/G, channels 21-69 (470-860 MHz)
Output Level	: 67-75 dBμV
Display	: 4 Digits
EPG	: OpenTV EN2
Cinch Connectors	: Stereo analogue audio outputs (2V rms max) <u>SPDIF</u> Stereo digital audio output
SCART Connectors	: TV: CVBS, S-VHS and RGB output modes, adjustable volume, SCART control VCR: CVBS input, CVBS, S-VHS output modes, fixed volume AUX: CVBS input
RS232 Data Connector	: 9pin D-sub type 19,200 bit/s serial computer interface
Front Panel Controls	: Power switch, CH+, CH-
Remote Control	: Complete control of the receiver, including EPG
<u>OSD</u>	: Open TV EN 2, installation and setup menus, EPG, user information, multi-programme timer Languages: English, German, French, Spanish
Demultiplex	: min 3 PES data streams, teletext
<u>Video Data Rate</u>	: 1.5-15 Mbits/s
Audio Data Rate	: 384 Kbits/s
Video Bandwidth	: 36 MHz
Tuning System	: Phase-Locked Loop Synthesizer
Microprocessor	: ARM7 running at 60 MHz
Demodulation	: QPSK (Quadrature Phase-Shift Keying)
Symbol Rate	: 5-31 MS/s
Service	: Updates via satellite and computer serial port
Encryption Decoding	: 1 CryptoWorks smart card slot (embedded) 2 Common Interface <u>PCMCIA</u> slots, compatible with EN 50221 standard
Audio Decoding	: <u>MPEG</u> 1 Layer I & II, mono, dual, stereo and joint stereo decoding. Sample frequencies 32.0, 44.1, 48.0 kHz. Volume control, mute
Video Decoding	: <u>MPEG</u> 2 MP@ML (Main Profile at Main Level) 720 pixels/line, 576 lines/picture Picture frequency 25 Hz, field frequency 50 Hz.
Power Supply	: Switched-mode type on separate board
Input Voltage	: 180 – 264 VAC, 50 Hz
Power Consumption	: 15W typical, 8W max. in standby
Approvals	: <u>DVB</u> Compliant. Meets all applicable safety regulations, EU standards and is fully CE approved

DiSEqC is an acronym for Eutelsat's Digital System for Equipment Control.

Version 1.1 communicates with special antenna changeover switches. When a programme is selected, a toneburst sequence is automatically transmitted over the antenna cable to the switch, which then changes reception between up to four different satellites.

DiSEqC is a protected registered trade mark of Eutelsat.

SPDIF is an acronym for the Sony Philips Digital Interconnect Format – a recognised standard for digital audio.

OSD is an acronym for On Screen Display – the system that can display menus and other information on the TV screen.

The Video Data Rate has a considerable effect on the image quality of digital television programmes. Data rates of 4 – 6 Mbits/s correspond to the image quality of typical analogue television programs.

PCMCIA is an acronym for the Personal Computer Memory Card International Association. They have defined standards for this type of interface.

MPEG is an acronym for the Moving Pictures Experts Group. They have defined a set of compression methods which have been adopted as part of the DVB standard. MPEG 1 is used for audio and MPEG 2 for video. These methods are also used in other products e.g. DVD players and PC cards.

DVB is an acronym for Digital Video Broadcasting, a recognised standard for the broadcasting of digital television, radio and data. DVB has been adopted in many countries. It contains a number of definitions and protocols for satellite, cable and terrestrial broadcasting.

Features

OpenTV is the world's leading interactive middleware system and EN2 is the latest version.

Please Note:

Software upgrades via satellite may change the menu structure and functionality of your receiver.

This manual refers to the set of menus and functions available in *software version 3.1*.

Many programmes are broadcast free of charge, without encryption, and these are referred to as Clear services.

Others are encrypted and require the payment of a fee. These are known as Pay-TV services.

Please Note:

For more information about the Common Interface, and the range of modules available, please refer to **Page 23**.

PCMCIA modules are also made for use with computers and laptops. These are *NOT* compatible with the Matrix S-CW and should *NEVER* be inserted into it.

Before inserting or removing a module, always switch off the Matrix S-CW using the main power switch, or unplug it from the mains.

Keep the front flap closed to avoid the ingress of dirt into the receiver.

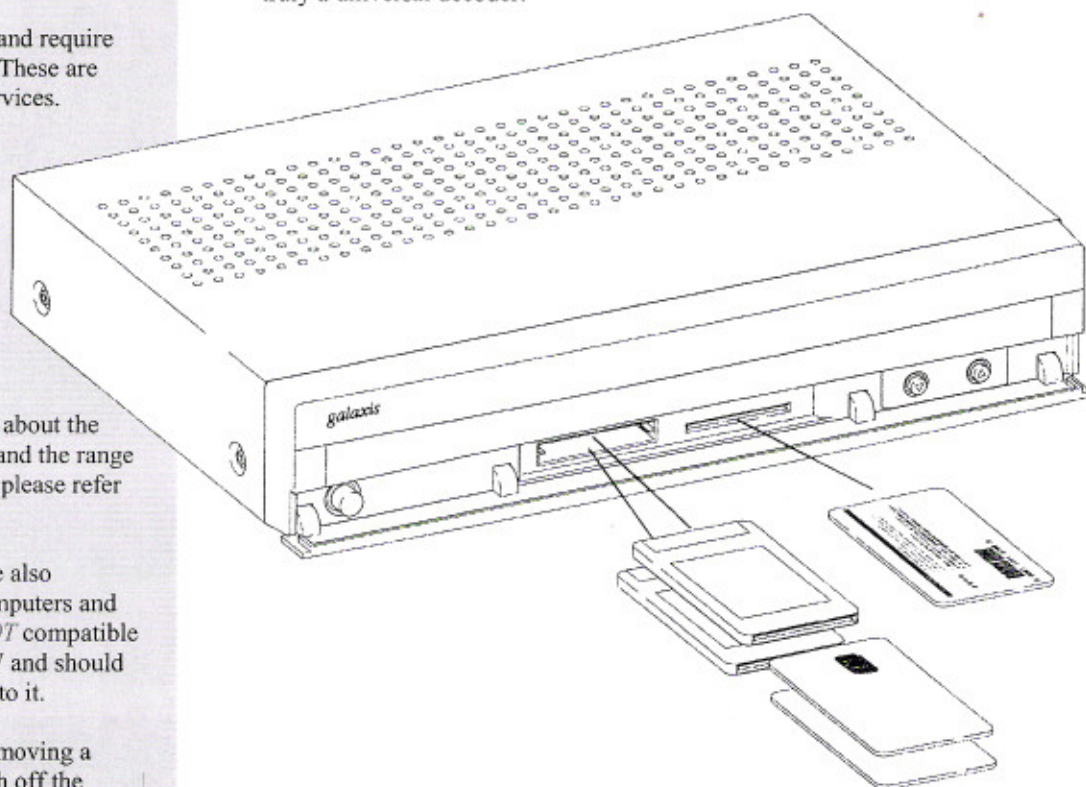
A satellite has several transmitters on board, known as Transponders. Over each transponder, 6-9 digital channels may be broadcast.

This packaging of digital channels is known by the acronym MCPC – Multi Channel Per Carrier.

5. What can my digital receiver do ?

With the Matrix S-CW you have a powerful system at your disposal, enabling you to make the most of current and future digital services ...

- The flexible OpenTV EN2 operating system enables new functions or software improvements to be installed easily – either automatically using a data stream transmitted via satellite, or from a computer via a data cable.
- Many Clear services are available from a wide range of satellites.
- The embedded Philips CryptoWorks decoder offers easy access to a growing number of Pay-TV services using this system, simply by inserting a viewing card in the slot.
- In addition, two completely DVB-compliant Common Interface sockets allow the Matrix S-CW to accept a wide range of plug-in PCMCIA modules for most other encryption systems – truly a universal decoder.



6. What are the benefits of digital television ?

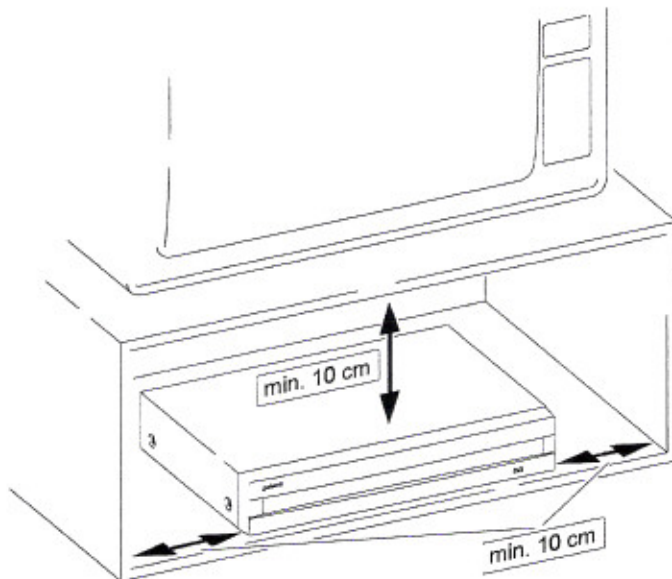
Above all, digital television lets you easily find what you want, when you want it, with a degree of quality and convenience never before possible ...

- The range of programmes available is much larger than with older analogue broadcast systems. This is because many digital channels can share a single MCPC satellite Transponder. How? Through clever compression techniques that discard redundant information – see MPEG on **Page 5**.
- Picture and sound quality can be substantially higher than with analogue television. Why? Because programmes are encoded into self-correcting digital packets – like internet data – which are resistant to the disturbances and noise present in the transmission system. Therefore the signal arriving at your TV can be just as good as when it left the studio.
- Multi-lingual broadcasts are possible. Just program the Matrix S-CW with your preferred languages and – if available – it will automatically find the right soundtrack and/or subtitles for you using special codes transmitted within the DVB broadcast. You can also browse the options available on any channel at any time at the touch of a button.

7. Choosing a location

For your safety and to ensure continued good service, you are advised to adhere to the following guidelines when choosing a location for your receiver ...

- Place the receiver away from sources of heat. i.e. not near any heaters, not immediately on top of or underneath any other electrical devices, and not exposed to direct sunlight.
- Your receiver is designed to be operated only in a completely dry environment. Damp or excessively humid conditions may cause malfunctions or pose a threat to safety. Avoid scenarios where there may be any risk of water ingress into the receiver. For example, the receiver does not make a good pot plant stand!
- Be careful with the placement of cables so that there is no risk that they may be dragged against sharp or hot objects, or tripped-over.
- The receiver must not be operated when placed directly on a carpet or any soft furnishings. Ensure that sufficient space exists around the receiver, so that heat does not build up. In particular, ensure that the ventilation holes are free from obstructions.



8. Installing the receiver

8.a Antenna system installation

The Matrix S-CW is a high quality device, manufactured to exacting standards, but it can only perform well if it is provided with a good signal from the antenna system ...

- The installation and alignment of an antenna system and **LNB(s)** for digital reception is a precise operation that is best left to a professional engineer with the correct test equipment.
- Unlike analogue, it is not possible to receive pictures *at all* until all the components have been aligned very accurately onto the correct satellite(s). Achieving this without test equipment is almost impossible.
- Digital television receivers are designed to be able to automatically correct for a certain amount of errors. Unlike analogue, where it is possible to see a progressive decline in performance as the signal worsens, with digital the performance remains consistently good until suddenly the signal quality reduces to a point where the receiver cannot fully correct it any more. At this point, reception deteriorates rapidly and then stops altogether.
- Even if an apparently perfect picture is being received at the time of installation, the signal quality may not be optimised. Later, when the signal becomes weaker, for example when it starts raining, unreliable reception may result.

Please Note:

This digital receiver is designed for domestic use only. Any other usage may be dangerous and could invalidate your warranty.

Television sets and HiFi equipment produce a lot of heat when in operation.

Others, such as video recorders and other satellite receivers, may do so even in standby.

Systems for digital reception require more accurate components than analogue.

LNB is an acronym for **Low Noise Block** downconverter. This is a device fitted at the focal point of the antenna.

Its job is to downconvert a block of microwave frequencies focussed by the antenna into an **IF** (Intermediate Frequency) range suitable for passing down a cable to the tuner. At the same time it amplifies the signal a great deal whilst introducing the minimum amount of noise.

The LNB must have a very stable local oscillator. Types previously used for analogue reception are generally not suitable for digital.

Some models of LNB work better with the Matrix S-CW than others. For further information you should contact your broadcaster.

Correctly aligning the LNB's vertical and horizontal planes is also critically important to maximise performance in digital systems.

Although the Matrix S-CW incorporates signal quality and strength meters, these are offered only as a guide.

They are not a substitute for professional test equipment.

See **Page 30** for more details.

Installation

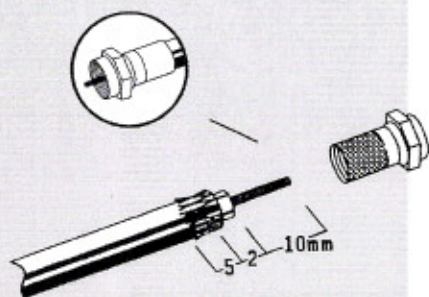
SMATV is an acronym for Satellite Master Antenna TeleVision.

SMATV systems are a sophisticated arrangement whereby a number of users may share a communal dish (or dishes).

Special multi-port LNBs feed a multi-switched distribution network with each receiver controlling reception as if it had its own *virtual* LNB(s).

The F-Connector (IEC 169-24) is a relatively problem-free and common type. It is used with most digital and analogue satellite receivers on the market today.

These connectors are available from any reputable satellite dealer.



A Single-feed System consists of an antenna that is aligned to receive a single satellite only.

The reception of several satellites at different orbital positions is possible using a number of differently aligned antennae, or with a larger antenna and a number of offset LNBs – this is known as a Multi-feed System.

It is also possible to use a device that comprises two feedhorns and two LNBs in a common housing complete with an integral 2-port DiSEqC switch and a single outlet – this is known as a Monoblock.

The dual-reception of Eutelsat HotBird 13° East and ASTRA 19,2° East is a common configuration in many European countries.

8.b Antenna system cabling

There are substantial variations in the quality and suitability of different types of antenna cable ...

- Many types of cable are *not* suitable for digital satellite reception. Even cables that worked well with analogue may give poor results with digital.
- A solid copper or aluminium shield underneath the braid is absolutely essential to minimise interference.
- CT100 or better is recommended for domestic satellite installations.
- CT125 or better is recommended for SMATV systems.

8.c Fitting an F-connector

The antenna cable is connected to the receiver with an F-Connector. If this has not already been attached to your antenna cable then please proceed as follows ...

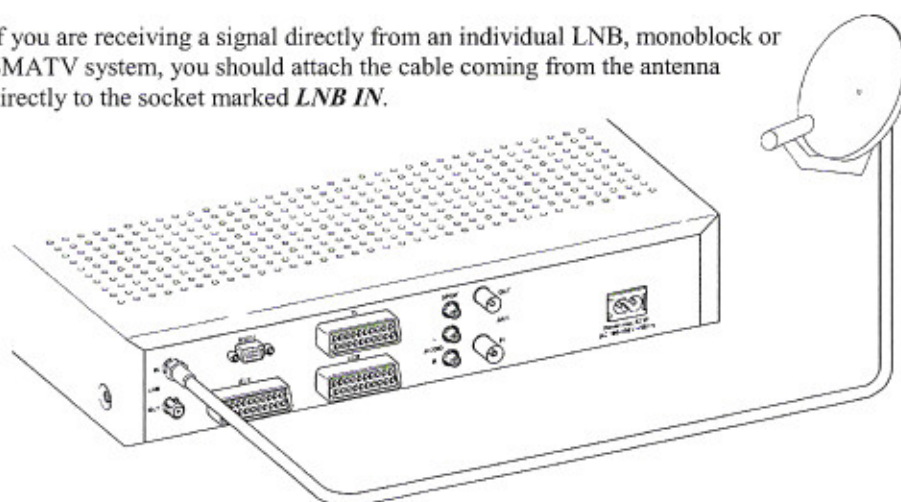
- First remove the **outside plastic coating** on the antenna cable over a length of approximately **12mm**.
- Peel back the **metallic braid**, likewise the **metal foil** that is under it.
- Trim the braid and foil to a length of approximately **5mm**.
- Trim the plastic insulation to leave about **10mm** of the large centre wire exposed, and about **2mm** of the plastic insulation remaining.
- Take special care to ensure that no stray conductors from the braid are inadvertently left touching the centre wire. A short-circuit will prevent reception and could cause damage to the receiver.
- Screw the F-connector onto the cable end by turning clockwise until the plastic insulation touches the exit hole in the plug for the centre wire.

8.d Attaching the satellite antenna

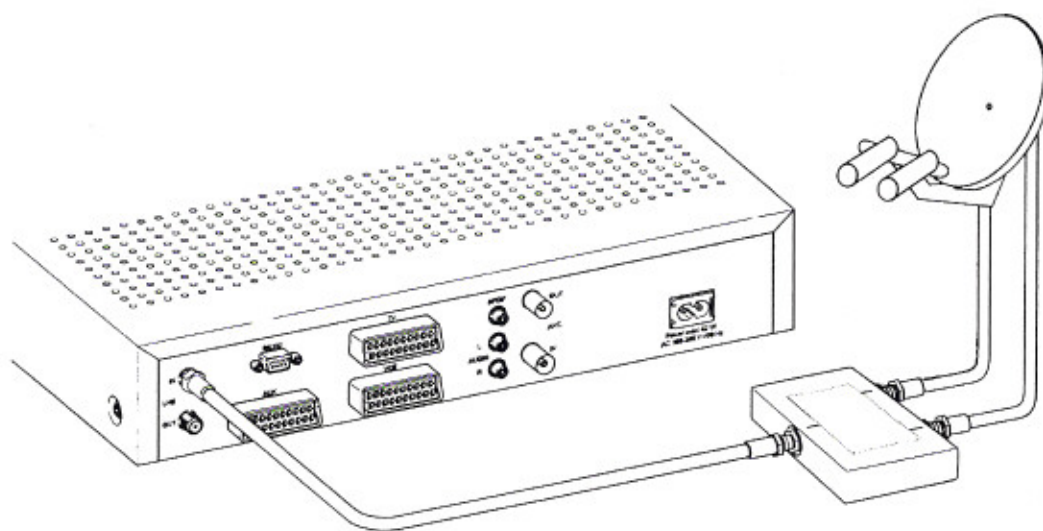
To the Matrix S-CW you can directly attach either an individual satellite antenna, known as a Single-feed System, or using DiSEqC switching, up to 4 antennae or LNBs in a Multi-feed or Monoblock System ...

Attaching an antenna cable directly

- If you are receiving a signal directly from an individual LNB, monoblock or SMATV system, you should attach the cable coming from the antenna directly to the socket marked **LNB IN**.



Installation

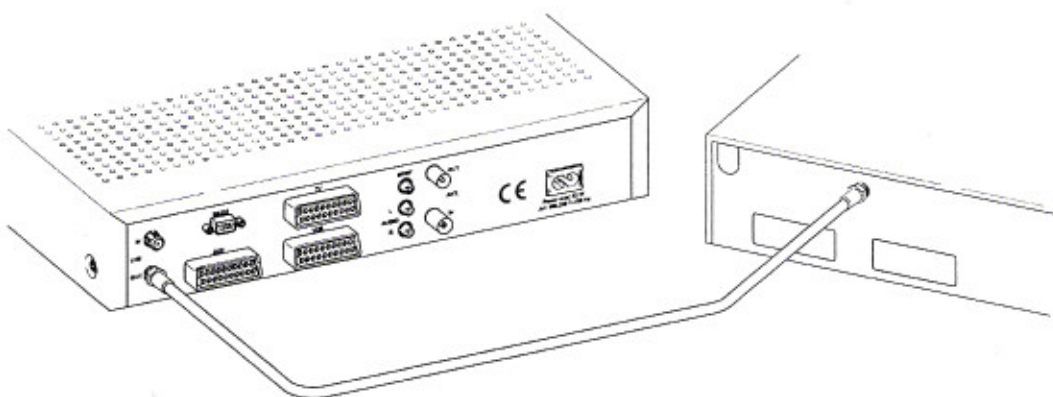


An example of a DiSEqC switching box with two antenna inputs is shown. This could be used for the reception of services from Eutelsat 13° East and ASTRA 19,2° East.

DiSEqC switches with two or four inputs are available from reputable satellite dealers.

Attaching antenna cables via a DiSEqC switch box ...

- If you have installed several antennae or a multi-feed system with several LNBs, you should attach each cable to a suitable DiSEqC switch input.
- To minimise cabling, the switch is usually located within a metre of the antenna(e), but this is not essential.
- The single cable coming from the switching box should be connected to the socket marked **LNB IN**.
- The method for setting up DiSEqC switching on your receiver is described on **Page 30**.



Attaching an additional receiver ...

- You may be able to attach a further satellite receiver (e.g. your existing analogue receiver, or another digital one), which then automatically takes control of and is supplied with satellite signals from your antenna system when the Matrix S-CW is placed into Standby.
- You should attach this to the socket marked **LNB OUT**.

Please Note:

Not all satellite receivers are suitable for this type of connection.

Some makes and models that maintain a voltage on their LNB input whilst in standby cannot readily be used in this way.

This is because a removal of power is necessary in order to reset the LNB to low band operation, which is where analogue channels are generally located.

Installation

AV (Audio/Video) sockets allow a direct connection to be made from the receiver to your television set.

The Matrix S-CW uses the **SCART** type of AV socket.

SCART is an acronym for the **Syndicat des Constructeurs d'Appareils Radiorécepteurs et Téléviseurs**, the French consortium who designed it.

This allows separate stereo sound signals to be received (by a stereo TV) and offers better picture quality as less processing is involved.

TVs with SCART inputs can all accept basic **CVBS** (Composite Video, Blanking and Syncs) signals.

Some can accept superior **S-VHS** signals that separate colour and detail.

If your TV supports it, the primary **R B** (Red / reen / Blue) signals which the Matrix S-CW can also output from the **TV SCART** socket, will give the purest possible picture quality.

You should only use good quality SCART cables which have *all pins connected* and an *individual screen* for each video wire.

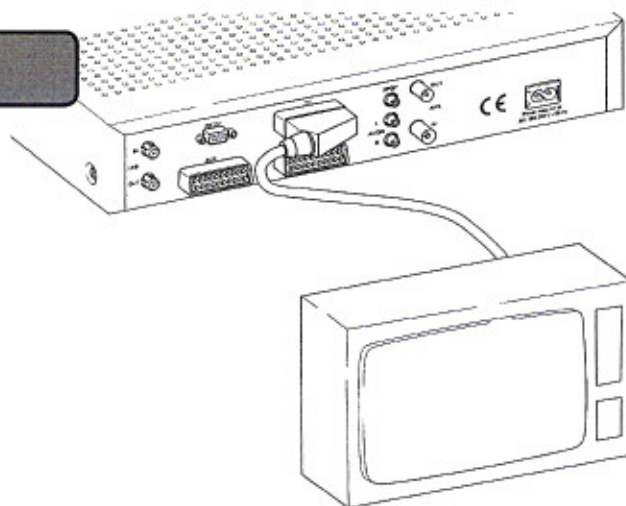
Please Note:

SCART sockets on some TVs are marked simply as **AV**. Some devices refer to **Cinch** sockets as RCA or phono.

Reception of regular UHF and/or VHF TV broadcasts is usually via a so-called **terrestrial** antenna. (Latin: terra = land)

The **UHF Remodulator** in the Matrix S-CW is like a small television station.

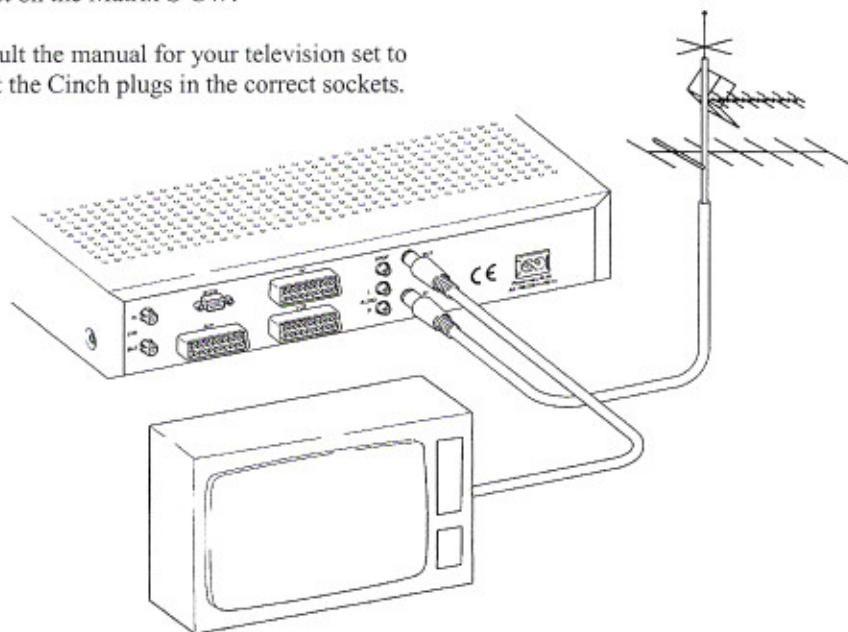
It converts the baseband audio and video signals from the digital receiver into a regular television broadcast signal.



8.e Connecting your television set

Using direct **AV** connections to connect the Matrix S-CW to your television set offers better picture quality and stereo sound. You should choose this method whenever possible ...

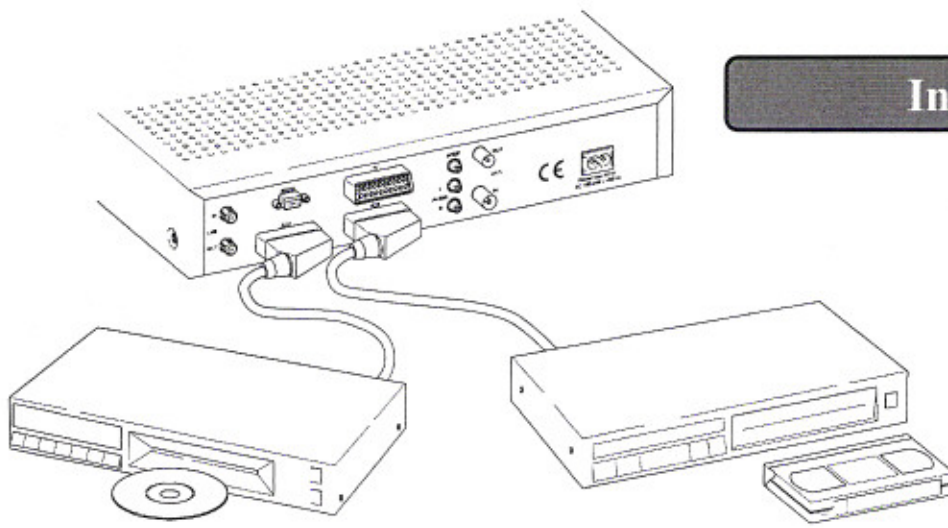
- If your television set has a **SCART** input, then use the SCART cable provided to attach to the **TV SCART** socket on the Matrix S-CW.
- High quality SCART cables can carry normal **CVBS**, **S-VHS** or **R B** signals.
- Connect the plug on the other end of the SCART cable to your TV.
- If your television set does not have a SCART input, but has **Cinch** inputs instead, then use a commercially available quality SCART to multi-Cinch plug lead to attach to the **TV SCART** socket on the Matrix S-CW.
- Consult the manual for your television set to insert the Cinch plugs in the correct sockets.



If your TV does not have direct AV connections, or for some reason you do not want to use them, you can also connect your receiver to your television set via your TV's **terrestrial** antenna cable ...

- Remove the TV antenna cable from your TV's **RF IN** socket. This may instead be labelled as **AERIAL IN** or some other name.
- Take the aerial hookup lead provided and plug the male end into the vacant socket.
- Plug the TV antenna cable into the **RF IN** socket on the Matrix S-CW.
- Plug the female end of the aerial hookup lead into the **RF OUT** socket on the Matrix S-CW.
- Please refer to **Page 26** for details of how to set up the receiver's **UHF Remodulator**.

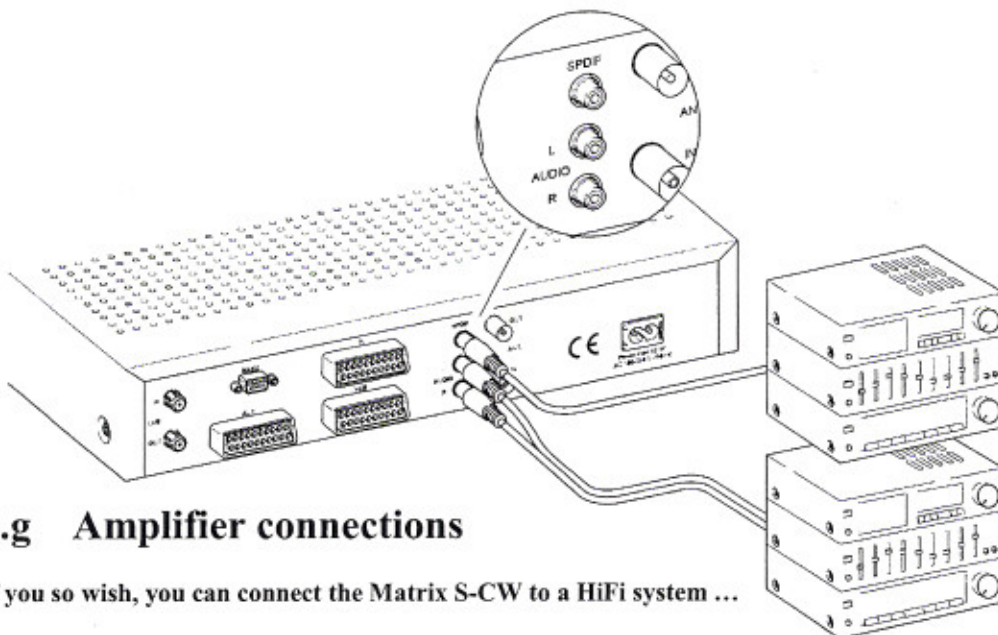
Installation



8.f Attaching a video recorder

Using direct AV connections to connect the Matrix S-CW to your VCR offers better picture quality and stereo sound. It also allows you to make recordings that are unaffected by the volume control and mute button. You should choose this method whenever possible ...

- If your VCR has a SCART input, then use a commercially available SCART cable to attach to the **VCR SCART** socket on the Matrix S-CW.
- Connect the plug on the other end of the SCART cable to your VCR.
- If your VCR does not have a SCART input, but has Cinch or other inputs instead, then use a commercially available quality SCART to compatible multi-plug lead to attach to the **VCR SCART** socket on the Matrix S-CW.
- Consult the manual for your VCR to insert the plugs in the correct sockets.
- Please refer to **Page 26** for details on how to change the signals present on the **VCR SCART** socket.



8.g Amplifier connections

If you so wish, you can connect the Matrix S-CW to a HiFi system ...

For digital ...

- You should connect a cable from the **SPDIF** socket on the receiver to the appropriate connector on your digital amplifier (usually marked SPDIF).

For analogue ...

- You should connect cables from the **AUDIO L** and **R** sockets on the receiver to the appropriate connectors on your analogue amplifier (usually AUX L and R).

Most VCRs only support the CVBS standard.

However S-VHS and Hi8 machines usually support the S-VHS standard, either via a SCART or separate Mini Din and Cinch connectors.

In order to take advantage of the better quality offered by the superior S-VHS signal, you are advised to obtain an appropriate lead.

SCART to Mini Din and Cinch audio leads are generally available from specialist dealers.

You can connect other equipment such as a DVD player or games console to the AUX socket. This can then easily be selected for viewing by pressing the **TV/VCR** button twice. See **Page 16** for more details.

If you have a digital amplifier with a SPDIF input, then you can use the topmost Cinch socket to send digital audio signals to it.

These are the digital equivalent of the analogue signals emanating from the lower two Cinch sockets.

You can then enjoy near-CD quality sound through your HiFi system.

You can also connect to an analogue amplifier via two Cinch analogue cables, although the audio quality will not be as good as via digital connections.

Consult your HiFi system's guide for connection information.

Installation

The RS-232 data connection provides further future-proofing for your Matrix S-CW.

Please Note:

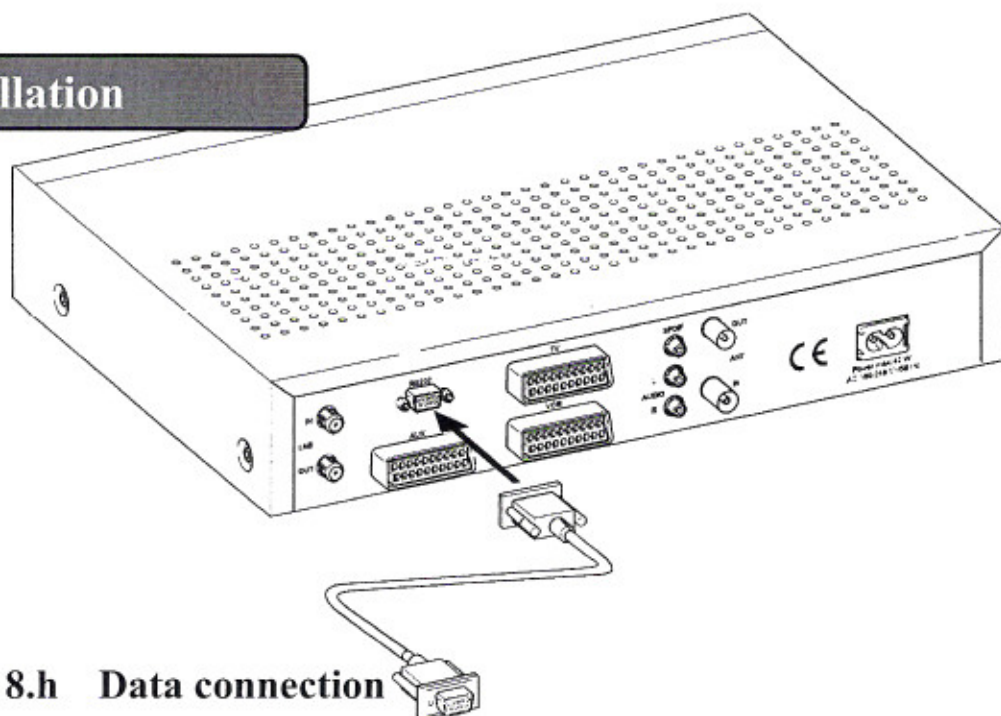
The data cable depicted is not included with the receiver.

You are strongly advised not to experiment with this data connection.

The software in your Matrix S-CW may accidentally become corrupted, rendering the receiver inoperable.

In addition, you should *not* download software from the internet unless you are certain that it is compatible with your exact receiver model.

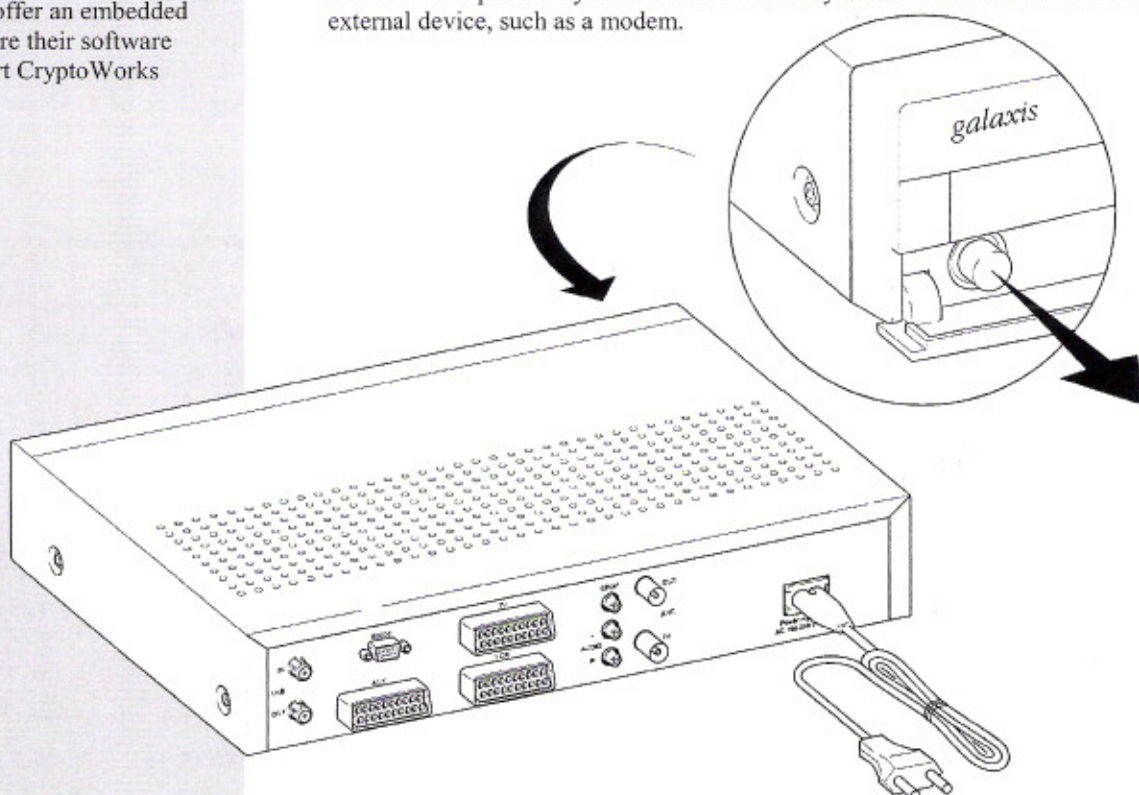
For example, other similar Galaxis models *do not* offer an embedded slot and therefore their software *does not* support CryptoWorks decoding.



8.h Data connection

The data connection is designed for the transmission of special software or for service purposes ...

- Follow instructions given to you with the applicable software or hardware.
- Whilst it is intended that any regular software updates will be made via satellite, the data port allows for the possibility of data transfer directly from a PC and/or the connection of an external device, such as a modem.



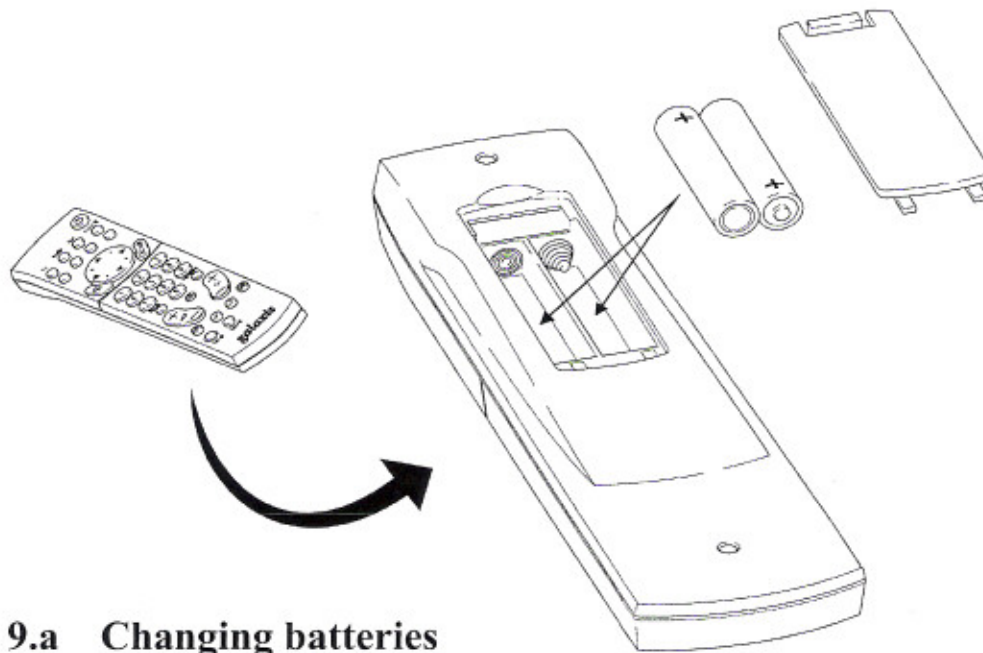
8.i Mains connection

- Make sure that the receiver is **switched off** – i.e. the power switch on the left hand side under the lower left fascia panel is out – before you make the mains connection.
- Then connect the receivers **Mains connection socket** with the plug socket using the mains cable provided.
- In order to turn the equipment OFF, the **Main Power Switch** should be OUT.
- In order to turn the equipment ON, the **Main Power Switch** should be IN.

9. Basic Operations

This chapter assumes that you have correctly and safely installed the receiver in accordance with the previous instructions ...

• Changing batteries.....	13
• Standby button	13
• Selecting programmes	14
• Navigator.....	14
• Pop-up browser	15
• Television, radio, text and subtitle buttons	15
• Volume control and mute buttons	15
• Switch TV between Satellite,VCR and AUX	16
• Multilingual broadcasts	16
• Information	16



9.a Changing batteries

Use only high-quality leak-proof batteries, and change them as soon as the remote control seems to be failing. Your remote control can be irreparably damaged by leakage from exhausted batteries ...

- Insert batteries as per the diagram above. Be careful to observe the correct polarity.
- Use 1.5v batteries of type: **Micron R03 / AAA** or local equivalent.

9.b Standby button



The **Standby** button takes the Matrix S-CW in and out of Standby mode ...

- Please note, this is not an immediate operation, it may take a second or two before the Matrix S-CW reacts to depressing the button.
- Avoid pressing the **Standby** button more than once as the equipment may switch off and then on again (or vice versa).

In Germany, since 27.03.1998, *Battery regulation (§7 BattV)*, issued by the Federal Ministry of the Environment, places a legal obligation on the final consumer to take old batteries to a dealer or a special public refuse site. They must not be disposed of with normal domestic refuse.

When you press the **Standby** button, like a computer, the Matrix S-CW contains a sophisticated microprocessor that automatically saves important settings, before closing down.

You should wait until the time appears with a flashing colon before attempting to turn the receiver back on or operating the **Main Power Switch** to shut down the receiver completely.

If you press the **Standby** button again, after a few seconds you are taken back to the channel you were viewing before.

If instead you press one of the number keys **1 – 9** you are taken straight to that channel. Pressing **0** takes you to channel 10.

When in Standby mode, several parts of the receiver continue working. For example, the power supply must run and infrared receptors are waiting for the next command from the remote control.

All this wastes power if you have no intention of using the receiver for a few days.

Users are sometimes reluctant to switch equipment off completely in case they may be forced to reprogram the channel settings or clock time, but with the Matrix S-CW they needn't worry.

This receiver will permanently store your channel settings even with the power off, and will automatically re-synchronise the clock to the time in your locality as soon as a broadcast is next received.

Basic Operations

At the time of manufacture, and subsequently by satellite downloads, your Matrix S-CW has been pre-programmed with a selection of channels from various satellites that your supplier believed might be interesting.

However, a channel will only be available if your system is receiving a suitable signal from the appropriate satellite.

In addition, channels frequently change and therefore some of them may not function anymore.

Nevertheless, it is likely that there will be many other channels available that have not been pre-programmed.

Please refer to **Page 20** for information on how to quickly and easily search for current services on various satellites.

If you wish to enjoy the maximum amount of choice then you should repeat the search process periodically.

The **Recall** button is useful if you wish to switch quickly and easily between two arbitrary programmes.

For example, you may wish to watch a programme on one channel whilst you are waiting for another to start on a different channel.

9.c Selecting programmes

The Matrix S-CW is able to store up to 2000 TV and radio programmes in its memory ...

- The currently selected programme number is indicated on the front panel display of the receiver.
- When you select a new programme number, a variety of useful information such as the channel name, satellite name etc. is superimposed over the lower part of the picture.
- Once programmed, you may select programmes by several methods:

Front panel ...

- Use **▲▼** buttons located on the right hand side of the receiver, under the lower front fascia.

Browse ...

- Use the **CH+/CH-** buttons on your remote control.



Enter a number ...

- Key in the programme number directly using the numeric buttons on your remote control.

Recall ...

- Toggle between the last programme selected and the current one by pressing the **Recall** button on your remote control.



Navigator and pop-up browser ...

- Please see the next two sub-sections.

9.d Navigator

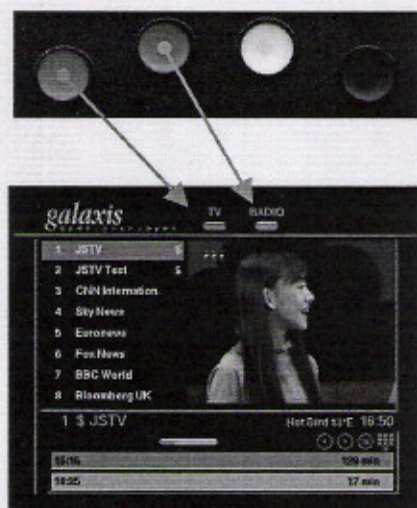
Using the navigator, you can quickly move around programme lists, whilst enjoying a quarter-size picture and sound from the currently selected programme ...

- Press the **Navigator** button to activate the function.



Using the **Soft keys** on your remote control, it is possible to call up two different programme lists: These are **TV** and **RADIO**.

- Press the **RED** (TV) button to select the TV channel list.
- Press the **GREEN** (RADIO) button to select the radio channel list.
- Use **▲** button to go up a single channel and **▼** button to go down.
- Use **◀** button to go back a page and **▶** button to go forward.
- Press the **OK** button to select the chosen channel.
- Press the **CH+** or **CH-** buttons to browse and immediately select the channel.
- Press the **Exit** button to quit the Navigator and view the currently selected channel full-screen.

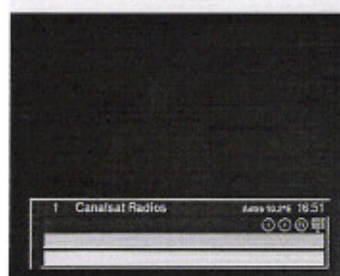
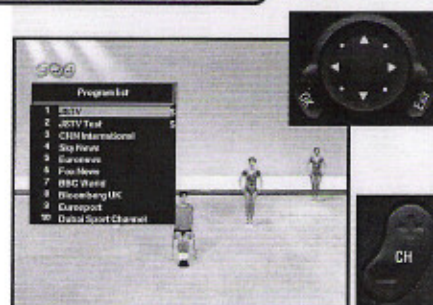


Basic Operations

9.e Pop-up browser

The pop-up browser is a quick and easy way of browsing channels on the Matrix S-CW ...

- Press the **OK** button to activate. The browser will be superimposed over the normal screen.
- Use **▲** button to go up a single item and **▼** button to go down.
- Use **◀** button to go back a page and **▶** button to go forward.
- Press the **OK** button to select the chosen channel.
- Press the **CH+** or **CH-** buttons to browse and immediately select the channel.
- Press the **Exit** button to quit the browser.



9.f Television, radio, text and subtitle buttons

These are used to select different modes on the Matrix S-CW ...

- Pressing the **Audio** button allows you to browse radio programme selections. When in radio mode, the Matrix S-CW displays a plain background.
- Pressing the **TV** button returns you to TV programme selections.
- Pressing the **Text** button allows you to display DVB text, when provided by the broadcaster. If there is no text service then the message **Please use the TV remote control** will appear. This is because there may be a conventional text service available that your TV could receive directly.
- Pressing the **Subtitle** button allows you to display DVB subtitles, when provided by the broadcaster. If there is no subtitle service then the message **No subtitle** will appear.



9.g Volume control and mute buttons

These are used to control sound level on the Matrix S-CW ...

- Pressing the volume control up and down buttons allows you to adjust the sound level of your satellite receiver to meet your preference. A level bar is temporarily displayed as you adjust the volume.
- To store your preferred volume level, you should operate the **Standby** button.
- Pressing the **Mute** button on the remote control will cut the sound completely on the **TV SCART** and **RF OUT** connectors and brings up the word **Mute** on-screen. Pressing it again restores normal sound.
- The **VCR SCART** is designed to always output sound at a fixed level, so that recordings are not affected by volume control or mute functions.



Please Note:

By default, the volume control is designed to operate on the **TV SCART** only. It does not adjust the audio level of the **RF OUT** and **AUX SCART** connectors, although mute will cut the sound completely on the **RF OUT** connector. If you wish to control the analogue Cinch sockets as well, please see **Page 27**.

Basic Operations

9.h Switch TV between Satellite, VCR and AUX



This function allows you to use your Matrix S-CW as a switching centre ...

- When the **TV/VCR** button is pressed once, the Matrix S-CW switches the signal present on the **VCR SCART** input (if any) to the **TV SCART** and **RF OUT** connectors and **Vcr** is displayed on the front panel.
- When the **TV/VCR** button is pressed a second time, the Matrix S-CW switches the signal present on the **AUX SCART** input (if any) to the **TV SCART** and **RF OUT** connectors and **Aux** is displayed on the front panel.
- When the **TV/VCR** button is pressed a third time, the Matrix S-CW switches back to normal satellite viewing and the channel number is displayed on the front panel.
- Whatever mode is selected, the normal satellite programme is still sent to the **VCR SCART** output. Therefore, for example, if you want to view a DVD connected via the **AUX SCART** input, at the same time you could still record a satellite programme on a VCR connected to the **VCR SCART** output.
- The **TV/VCR** button may be operated during normal viewing, Navigator viewing and during active timer recordings, but NOT whilst in setup mode.



Please Note:

This function is only applicable if you have attached equipment to the **VCR SCART** and/or **AUX SCART** sockets on the Matrix S-CW, as described on **Page 11**.



Please Note:

With the **Sound** button you only temporarily swap to another language. If you change channels, the language reverts back to the default.

To change the language settings so that the Matrix S-CW searches broadcasts to find your preferred language(s) automatically, use the **Language Options** menu as described in detail on **Page 28**.

9.i Multilingual broadcasts



With multilingual broadcasts, this function allows you to quickly switch to one of the other offered languages temporarily ...

- Press the **Sound** button in order to receive a list of available languages. The current language will be highlighted.
- Use **▲** button to go up a language and **▼** button to go down. The language will change immediately.
- If no other languages are available, there will only be one entry in the list.
- To resume normal viewing, press either the **Sound** or **Exit** buttons on your remote control.

9.j Information

Many broadcasters provide brief programme details together with their transmission. These can easily be superimposed over the current picture at any time ...

- Press the **i** button to display the information box.
- Channel number and name, satellite and current time are displayed. A \$ symbol indicates that the broadcaster has designated the service as encrypted.
- When provided by the broadcaster, current and next programme schedule details are displayed.
- Use **◀▶** buttons to permanently adjust the transparency of the graphics. This is an alternative to the method described on **Page 25**.
- Press the **i** button again to reveal supplementary information (if any) and to remove the information box.
- Use **◀▶** buttons to browse supplementary pages.



10. Menu Operations

This chapter shows the controls used for navigating the Matrix S-CW menu system ...

- Setup mode 17
- Navigating the menu tree 17
- Selecting options and entering values 17

10.a Setup mode



It is necessary to enter Setup mode to adjust the settings of the Matrix S-CW ...

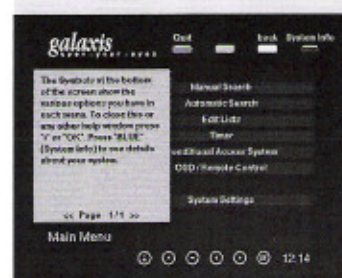
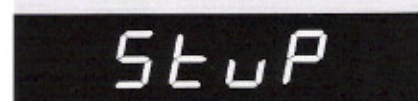
- Press the **Setup** button on your remote control to enter Setup mode.
- **StuP** will appear on the front panel of the receiver.
- Press the **Exit** button on your remote control to leave Setup mode.

10.b Navigating the menu tree

- Use ▲▼ buttons to highlight a menu option.
- Press the **OK** button to move to the highlighted menu item.
- Context-sensitive help appears on-screen if you press the *i* button.
- Press the **YELLOW** (back) button to drop back to the previous menu level.
- Press the **Exit** button to quit Setup mode altogether.

10.c Selecting options and entering values

- Use ▲▼ buttons to highlight a menu option.
- Use ◀▶ buttons to change settings.
- Use number buttons to enter data.
- Press the **OK** button to confirm any changes or press the **YELLOW** (back) button to drop back to the previous level, cancelling any unconfirmed setting changes made within the menu.
- Press the **Exit** button to quit Setup mode altogether. This will cancel any unconfirmed setting changes.
- Whenever the *Data stored* box appears, you will need to press **OK** again.



Basic Settings

A satellite has several transmitters on board, known as **Transponders**.

Most transponders are dedicated either to analogue or digital use.

The Galaxis Matrix S-CW is a digital satellite receiver. It is not suitable for receiving analogue services.

A single transponder can carry 6-9 digital programmes as an MCPC multiplex.

However some transponders used primarily to carry an analogue television programme also carry a single digital service as an additional **SCPC** signal.

SCPC is an acronym for **Single Channel Per Carrier**.

SCPC services are typically low in power and usually require a much larger antenna than MCPC services.

In addition, some SCPC services cannot be received if their symbol rate is too low.

The information needed to perform manual searches may be found in various consumer magazines such as **Tele-Satellite International** and **What Satellite TV** or web sites such as www.SatcoDX.com and www.lyngsat.com.

Manual Search may be required if an **Automatic Search** fails to find certain channels. Occasionally this can happen when the **NIT** (**Network Information Table**) – a kind of *master transponder list* – normally broadcast by the satellite operator is not present or has not been fully updated.

11. Basic Settings

This chapter details the basic settings that may be adjusted on your Matrix S-CW ...

• Manual Search	18
• Automatic Search	20
• Edit Lists	21
• Timer	22
• Conditional Access System	23
• OSD / Remote Control	25
• System Information	25

11.a Manual Search

With this function you can make the Matrix S-CW search for new television and radio programmes on a single satellite **Transponder** or network group. In most circumstances, you are advised to use the **Automatic Search** function instead as this is easier to use and generally finds all the available channels from all the transponders on the whole satellite ...

To perform a manual search, certain information must be known ...

- Satellite Name
- Transponder Frequency
- Polarisation
- Symbol Rate
- Forward Error Correction (FEC)



SatcoDX				
1 2 3 4 5 6 7 8 9				
Position Code and Satellite	Type	Ch No	Frequency	Pol
0130 Hotbird 1, 2, 3, 4, 5 (013.0)	PACKAGE	110	10.719	V
0130 Hotbird 1, 2, 3, 4, 5 (013.0)	TV-DIG	110	10.719	V
0130 Hotbird 1, 2, 3, 4, 5 (013.0)	PACKAGE	111	10.723	H
0130 Hotbird 1, 2, 3, 4, 5 (013.0)	TV-DIG	111	10.723	H
0130 Hotbird 1, 2, 3, 4, 5 (013.0)	TV-DIG	111	10.723	H
0130 Hotbird 1, 2, 3, 4, 5 (013.0)	TV-DIG	111	10.723	H
0130 Hotbird 1, 2, 3, 4, 5 (013.0)	PACKAGE	112	10.758	V
0130 Hotbird 1, 2, 3, 4, 5 (013.0)	R-DIG	112	10.758	V
0130 Hotbird 1, 2, 3, 4, 5 (013.0)	PACKAGE	113	10.775	H
0130 Hotbird 1, 2, 3, 4, 5 (013.0)	R-DIG	113	10.775	H
0130 Hotbird 1, 2, 3, 4, 5 (013.0)	PACKAGE	114	10.796	V
0130 Hotbird 1, 2, 3, 4, 5 (013.0)	R-DIG	114	10.796	V
0130 Hotbird 1, 2, 3, 4, 5 (013.0)	R-DIG	114	10.796	V
0130 Hotbird 1, 2, 3, 4, 5 (013.0)	R-DIG	114	10.796	V

When you have this information ...

- Press the **Setup** button on your remote control to enter Setup mode.
- The **Manual Search** menu option should already be highlighted.
- Press the **OK** button to select it.

Basic Settings

To perform a manual search ...



- Use ◀▶ buttons to select a satellite to search.
- Use ▼ button to highlight the **Frequency** field. Use number buttons to enter the transponder frequency.
- Use ▼ button to highlight the **Polarisation** field. If required, use ◀▶ buttons to change the polarity.
- Use ▼ button to highlight the **Symbol Rate** field. If required, use ◀▶ or number buttons to change the Symbol Rate.
- Use ▼ button to highlight the **FEC** field. If required, use ◀▶ buttons to change the FEC rate.
- Use ▼ button to highlight the **Skip pay channels** field. The default setting is **No**, which will store all available channels. If required, use ◀▶ buttons to select the **Yes** option that will attempt to store only clear programmes.
- Use ▼ button to highlight the **Keep channels** field. The default setting is **Yes**, which will keep and update all existing stored channels and add new ones at the end of the list. *You are recommended not to alter this setting.* However, if required, use ◀▶ buttons to select the **No** option that will erase **all** programmes from **all** satellites – including the pre-programmed list – before storing the scanned channels.
- Use ▼ button to highlight the **Network Search** field. The default setting is **No**, which will search only the entered transponder frequency. If required, use ◀▶ buttons to select the **Yes** option that will also attempt to search other transponders belonging to the same network group, if the network supports this.
- Press the **OK** button to start the search or press the **YELLOW** (cancel) button to drop back to the previous menu without scanning.
- When the search finishes, the software automatically drops back to the previous menu.
- Press the **Exit** button to quit Setup mode altogether.

Clear and encrypted programmes can only be properly recognised during the search process if the broadcaster correctly denotes them.

Unfortunately this is sometimes not the case.

In general therefore, you should not choose the skip option.

Names of encrypted programmes are prefixed with the \$ symbol.

If you wish to delete unwanted channels, use the **Edit Lists** procedure detailed on **Page 21**.

Please Note:

If you want to recover the pre-programmed list after accidentally erasing it, you will need to follow the **Factory Reset** procedure on **Page 32**.

Before doing so however, please ensure that you have completed the data sheet on **Page 2**.

Basic Settings

The Matrix S-CW is a digital satellite receiver. It is not suitable for receiving analogue services.

Manual Search may be required if an **Automatic Search** fails to find certain channels. Occasionally this can happen when the **NIT** (Network Information Table) – a kind of *master transponder list* – normally broadcast by the satellite operator is not present or has not been fully updated.

Clear and encrypted programmes can only be properly recognised during the search process if the broadcaster correctly denotes them.

Unfortunately this is sometimes not the case.

In general therefore, you should not choose the skip option.

Names of encrypted programmes are prefixed with the \$ symbol.

If you wish to delete unwanted channels, use the **Edit Lists** procedure detailed on **Page 21**.

Please Note:

If you want to recover the pre-programmed list after accidentally erasing it, you will need to follow the **Factory Reset** procedure on **Page 32**.

Before doing so however, please ensure that you have completed the data sheet on **Page 2**.

11.b Automatic Search

With this function you can make the Matrix S-CW search for new television and radio programmes on a single satellite. This will generally find all the available channels from all the transponders on the whole satellite ...

- Press the **Setup** button on your remote control to enter Setup mode.
- Use **▲▼** buttons to highlight the **Automatic Search** menu option.
- Press the **OK** button to select it.

To perform an automatic search ...



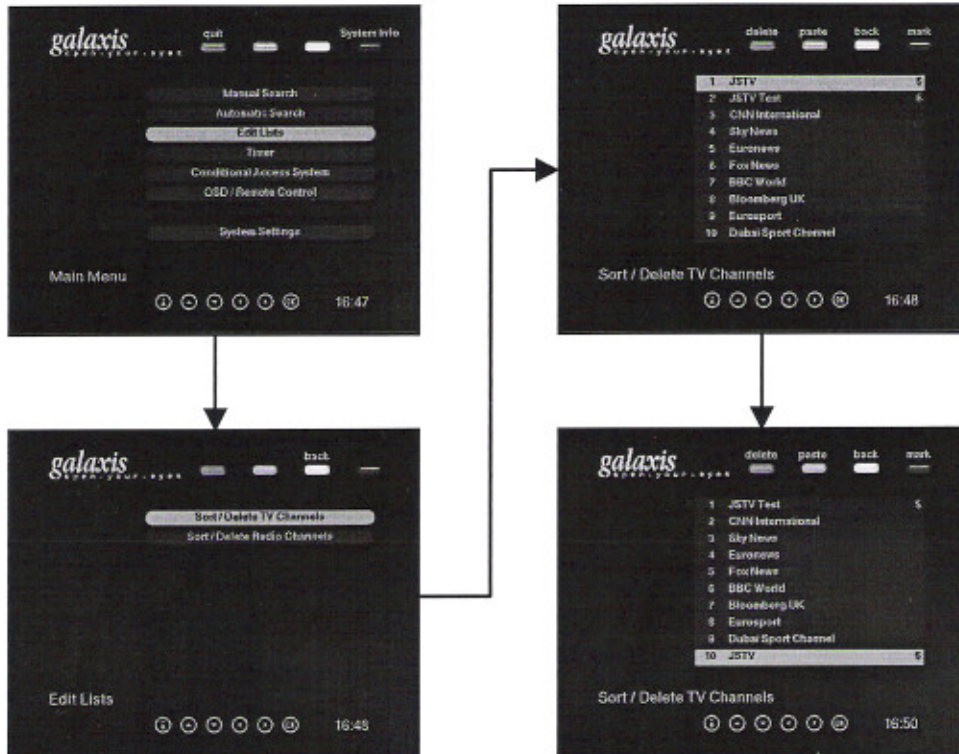
- Use **◀▶** buttons to select a satellite to search.
- Use **▼** button to highlight the **Skip pay channels** field. The default setting is **No**, which will store all available channels. If required, use **◀▶** buttons to select the **Yes** option that will attempt to store only clear programmes.
- Use **▼** button to highlight the **Keep channels** field. The default setting is **Yes**, which will keep and update all existing stored channels and add new ones at the end of the list. *You are recommended not to alter this setting.* However, if required, use **◀▶** buttons to select the **No** option that will erase **all** programmes from **all** satellites – including the pre-programmed list – before storing the scanned channels.
- Use **▼** button to highlight the **Factory TR-List** field. The default setting is **No**, which will use the Network Information Table for reference. However, if required, use **◀▶** buttons to select the **Yes** option that will use the factory-programmed transponder list, if one exists.
- Press the **OK** button to start the search or press the **YELLOW** (cancel) button to drop back to the previous menu without scanning.
- When the search finishes, the software automatically drops back to the previous menu.
- Press the **Exit** button to quit Setup mode altogether.

11.c Edit Lists

With this function you can move and delete programmes that are stored in your receiver ...

- Press the **Setup** button on your remote control to enter Setup mode.
- Use **▲▼** buttons to highlight the *Edit Lists* menu option.

Press the **OK** button to select it.



- Use **▲▼** buttons to highlight *Sort/Delete TV Channels* or *Sort/Delete Radio Channels*. Press the **OK** button to select the list.

To delete channels ...

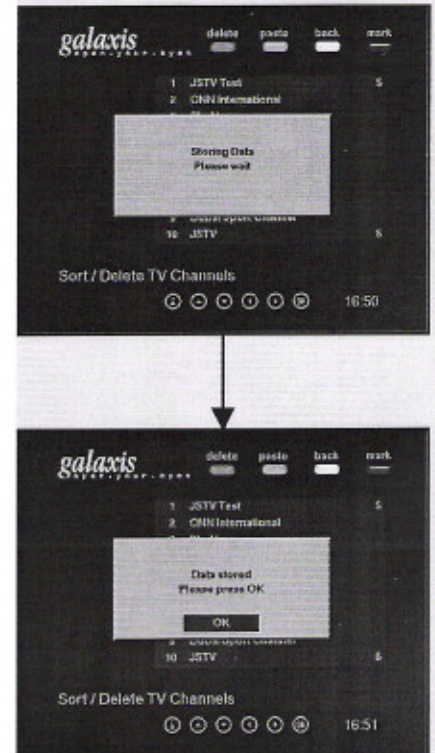
- Use **▲▼◀▶** buttons to highlight a channel. Press the **RED** (delete) button to delete the channel. Repeat to delete further channels.
- Press the **OK** button to confirm deletion of all channels or press the **YELLOW** (cancel) button to drop back to the previous menu and restore unconfirmed deletions.
- Press the **Exit** button to quit Setup mode altogether.

To move channels ...

- Use **▲▼◀▶** buttons to highlight a channel. Press the **BLUE** (mark) button to mark the channel.
- Use **▲▼◀▶** buttons to highlight the channel number position to which you wish to move the channel. Press the **GREEN** (paste) button to move the channel.
- Repeat the above to move further channels.
- Press the **OK** button to confirm movement of all channels or press the **YELLOW** (cancel) button to drop back to the previous menu and restore unconfirmed editing.
- Press the **Exit** button to quit Setup mode altogether.

The **◀▶** buttons move through the list a page at a time. This can be quicker than using the **▲▼** buttons which only move one channel at a time.

It is also useful to note that the list 'wraps-around'.



When you confirm deletion or editing operations by pressing the **OK** button, a message will appear – *Storing Data Please wait*.

The storing process takes about 20 seconds and then another message will appear – *Data stored Please press OK*. You should briefly press the **OK** button again to clear the message.

When your broadcaster sends a software update via satellite, it is likely that the factory-programmed lists will be changed in order to better reflect the current channel line-up.

If you have scanned additional channels and/or edited the programme lists, unfortunately this work will be lost and you will have to repeat it again.

Basic Settings

11.d Timer

With this function you can set the Matrix S-CW to automatically select your preferred channels at pre-set times. Usually this is used in conjunction with your video recorder to make unattended recordings ...

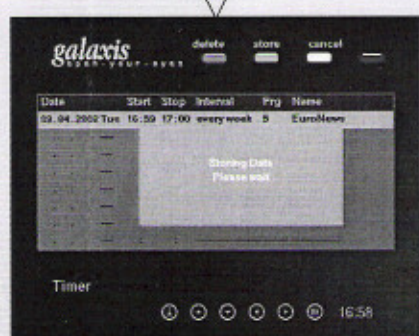
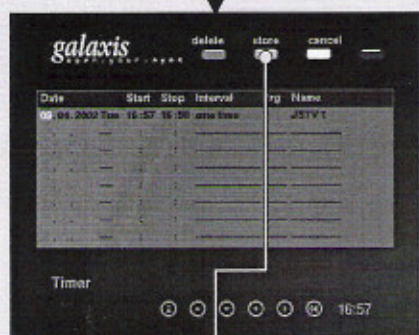
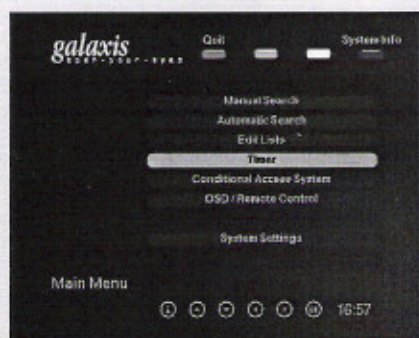
- Press the **Setup** button on your remote control to enter Setup mode.
- Use **▲▼** buttons to highlight the **Timer** menu option. Press the **OK** button to select it.

To setup or amend a timer event ...

- Use **▲▼** buttons to highlight the event you want to amend or the first available blank event.
- Press the **OK** button to select it. For a new event, the current date and time are automatically entered.
- The cursor is automatically placed in the **Day** field. Use **▲▼** or number buttons if you need to change the day.
- Use **◀▶** buttons to select the **Month** field. Use **▲▼** or number buttons if you need to change the month. The year and day of the week are automatically displayed.
- Use **◀▶** buttons to select the **Start** hours field. Use **▲▼** or number buttons if you need to change the start time hours.
- Use **◀▶** buttons to select the **Start** minutes field. Use **▲▼** or number buttons if you need to change the start time minutes.
- Use **◀▶** buttons to select the **Stop** hours field. Use **▲▼** or number buttons if you need to change the stop time hours.
- Use **◀▶** buttons to select the **Stop** minutes field. Use **▲▼** or number buttons if you need to change the stop time minutes.
- Use **◀▶** buttons to select the **Interval** field. Use **▲▼** buttons to select *one time*, *Mon to Fri*, *every day* or *every week*.
- Use **◀▶** buttons to select the **Prg** field. Use **▲▼** buttons to change the channel number.
- The channel name is automatically displayed. Press the **OK** button.
- Press the **GREEN** (store) button to store the event, or press the **YELLOW** (cancel) button to drop back to the previous menu without storing or amending the event.
- Repeat the above to program further events.
- Press the **Exit** button to quit Setup mode altogether.

Please Note:

- Events will only activate when the receiver is left in **Standby** mode.
- Events are automatically sorted into chronological order.
- When the timer is running, all buttons on the remote control except **Standby** and **TV/VCR** are disabled.
- If you try to set *Mon to Fri* for a Saturday or Sunday event, or if you do not leave a gap of at least 1 minute before and after existing event(s), then the new event will be rejected when you try to store it as it is invalid.
- Some channels do not maintain their clocks accurately and this could cause one or more events not to record in full, or even at all. You are advised to check the clock on each channel you wish to record before setting the timer and to make allowances in the times that you set.



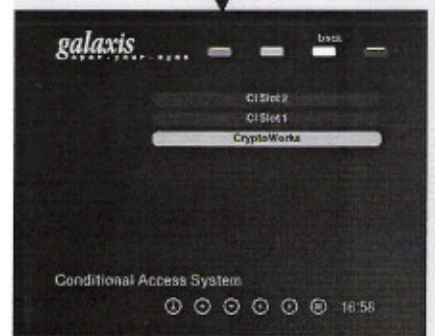
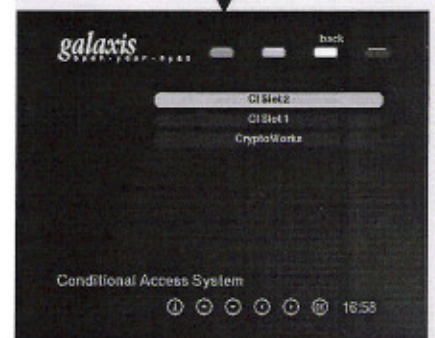
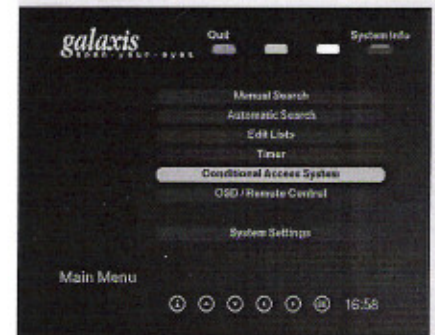
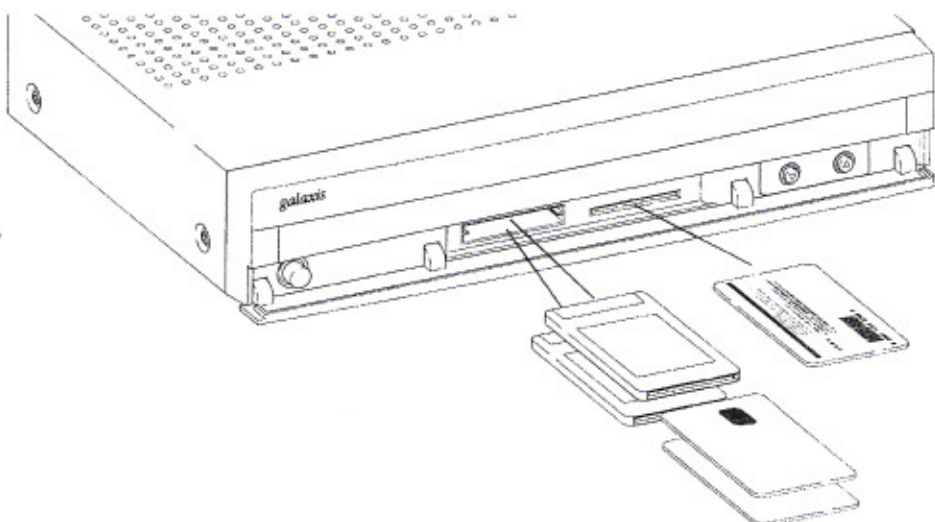
11.e Conditional Access System

With this function you can monitor the operation of any Smart Cards and/or modules that have been inserted into your Matrix S-CW ...

- Many programmes are broadcast free of charge, without encryption, and these are referred to as Clear services.
- Others are encrypted and require the payment of a fee. These are known as Pay-TV services.
- Services encrypted using Philips' **CryptoWorks** system, for example JSTV, only require a Smart Card as the decoder is embedded.
- For services encrypted using other systems, two **Common Interface** slots are provided. These accept EM 50221 standard **PCMCIA** modules which are designed for use in digital receivers. These are usually referred to as CI modules or **CAMs** (Conditional Access Module).
- Officially approved modules are available for most European encryption systems such as France Telecom's **Viaccess**, Mindport's **Irdeto Access**, Kudelski's **NagraVision** and Telenor's **Conax**.
- Unofficial modules are also available for Seca's **MediaGuard**.
- At the time of writing, modules are not available for NDS' **VideoGuard** encryption system (used in the UK/Eire by BSkyB and in Greece by OTE) or Scientific Atlanta's **PowerVu**. In order to receive services using either of these encryption systems, you must obtain a special receiver from the broadcaster.

To monitor the operation of a CI module ...

- Press the **Setup** button on your remote control to enter Setup mode.
- Use **▲▼** buttons to highlight the **Conditional Access System** menu option. Press the **OK** button to select it.
- Use **▲▼** buttons to highlight the CI slot you wish to monitor. **CI Slot 2** is uppermost, and **CI Slot 1** is below it.
- Press the **OK** button to select it. If there is no module fitted, then the option cannot be selected. You will also need to have a valid Smart Card inserted into the CAM, with the gold chip facing upwards, as per the diagram below.
- Menus beyond this point are generated by the module and Smart Card and therefore you will need to refer to instructions from the relevant supplier.



Please Note:

PCMCIA modules are also made for use with computers and laptops. These are **NOT** compatible with the Matrix S-CW and should **NEVER** be inserted into it.

Before inserting or removing a module, always switch off the Matrix S-CW using the main power switch, or unplug it from the mains.

To insert a module, carefully locate it on the guide rails and gently, but firmly push it home.

Keep the front flap closed to avoid the ingress of dirt into the receiver.

Basic Settings

The embedded Philips CryptoWorks decoder offers easy access to a growing number of Pay-TV services using this system, simply by inserting a viewing card in the slot ...

To monitor the operation of a CryptoWorks smart card ...

- Press the **Setup** button on your remote control to enter Setup mode.
- Use **▲▼** buttons to highlight the *Conditional Access System* menu option.
- Press the **OK** button to select it.
- Use **▲▼** buttons to highlight the *CryptoWorks* menu option.
- Press the **OK** button to select it. If there is no CryptoWorks card inserted, or if it is inserted incorrectly, then you will get an error message. The card should be inserted with the gold chip underneath, and the barcode on the right-hand side.
- Menus beyond this point are generated by the CryptoWorks Smart Card.

To check the card number of a JSTV CryptoWorks Smart Card ...

- Use **▲▼** buttons to highlight the *Smartcard Info* menu option. Press the **OK** button to select it.
- A box will appear which displays the card number. The *Valid until* feature is not used by JSTV.
- Press the **YELLOW** (back) button to drop back to the previous menu or press the **Exit** button to quit Setup mode altogether.

To check entitlements on a JSTV CryptoWorks Smart Card ...

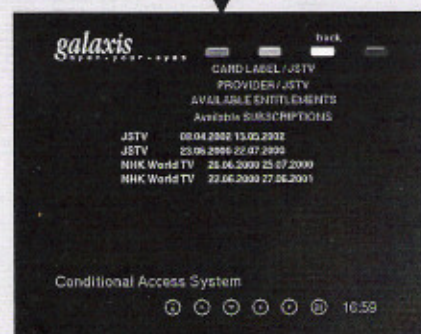
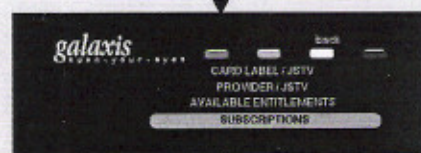
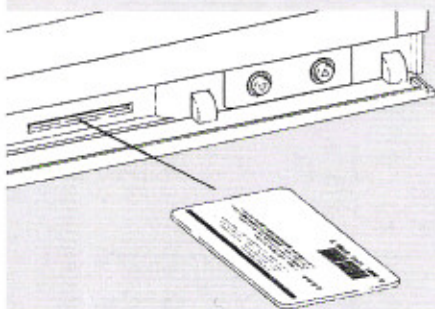
- Use **▲▼** buttons to highlight the *Service Provider* menu option. Press the **OK** button to select it.
- Use **▲▼** buttons to highlight the *JSTV* menu option. Press the **OK** button to select it.
- The *SUBSCRIPTIONS* menu option will be highlighted. Press the **OK** button to select it.
- JSTV entitlements are displayed with the start and end date in the form:

JSTV 08.04.2002 13.05.2002

- JSTV entitlements are renewed via satellite prior to the end date shown for current subscriptions.
- If there is more than one entry for JSTV then only the newest entitlement is applicable.
- NHK World TV entitlements are not used at present and may be ignored.
- Press the **YELLOW** (back) button to drop back through the previous menus or press the **Exit** button to quit Setup mode altogether.

Please Note:

- At the time of writing, JSTV does not use CryptoWorks *Maturity Rating*, *Pincode* or *Mailbox* functions. You should not select or alter these settings.



11.f OSD / Remote Control

With this function you can adjust graphics display parameters on your Matrix S-CW ...

- Press the **Setup** button on your remote control to enter Setup mode.
- Use **▲▼** buttons to highlight the *OSD / Remote Control* menu option.
- Press the **OK** button to select it.

To alter the information banner display duration ...

- Use **▲▼** buttons to highlight the *Banner Duration (1-15)* menu option.
- Use **◀▶** buttons to select the number of seconds to display the banner between **01** and **15**. Press the **OK** button to store.
- Press the **YELLOW** (back) button to drop back to the previous menu or press the **Exit** button to quit Setup mode altogether.

To alter the system graphics transparency level ...

- Use **▲▼** buttons to highlight the *Transparency-Level* menu option.
- Use **◀▶** buttons to select a transparency value between **01** and **15**. Press the **OK** button to store.
- Press the **YELLOW** (back) button to drop back to the previous menu.
- Press the **Exit** button to quit Setup mode altogether.

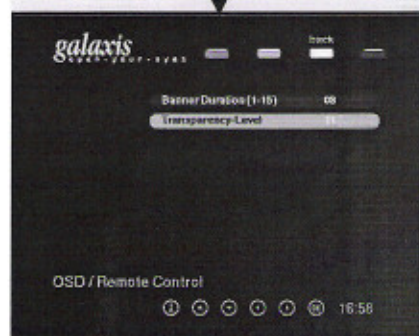
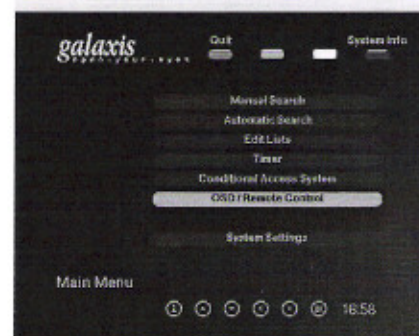
Please Note:

- There is a simpler method to alter the system graphics transparency level described on **Page 16**.
- If the system graphics transparency level is set too high, you may be unable to see on-screen menus properly.

11.g System Information

With this function you can check some hardware and software system parameters on your Matrix S-CW ...

- Press the **Setup** button on your remote control to enter Setup mode.
- Press the **BLUE** (System Info) button to show the System Information.
- Press the **BLUE** (System Info) button or the **YELLOW** (back) button or the **OK** button to return to the main menu.
- Press the **Exit** button to quit Setup mode altogether.



System Settings

12. System Settings

This section details the settings that may be adjusted on your Matrix S-CW ...

Warning: System settings are normally configured during the installation process by your installer. Great care should be exercised when making changes here as you may lose your television picture, sound, or ability to receive programmes altogether.

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• Language Options.....	28
• LNB Settings.....	28
• Antenna Settings.....	29
• Signal Meters.....	30

12.a TV/SCART Settings

With this function you can change the channel and PAL type settings for the UHF remodulator. You can also choose the type of video signals presented at the SCART sockets ...

- Press the **Setup** button on your remote control to enter Setup mode.
- Use **▲▼** buttons to highlight the *System Settings* menu option.
- Press the **OK** button to select it.

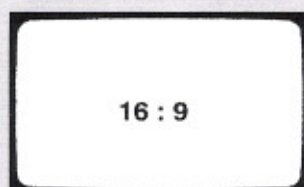
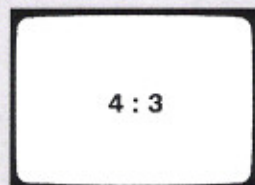
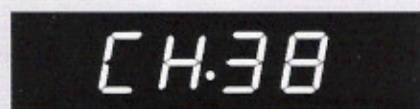
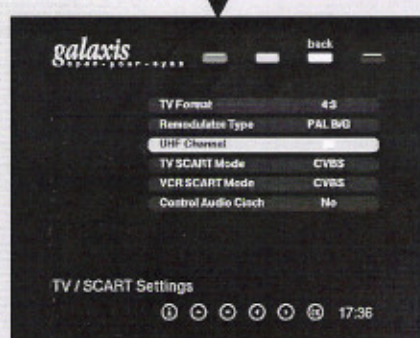
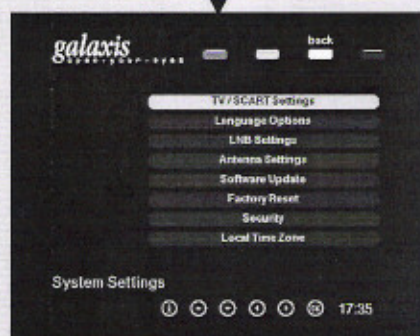
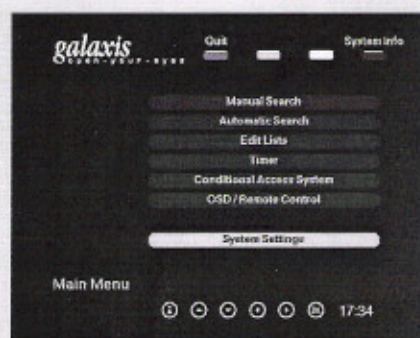
To alter the TV/SCART settings ...

- Use **▲▼** buttons to highlight the *TV/SCART Settings* menu option.
- Press the **OK** button to select it. The *UHF Channel* field will be highlighted.

Please Note:

The settings, *UHF Channel* and *Remodulator Type* are only applicable if you have attached the Matrix S-CW to your TV and/or VCR using a terrestrial antenna cable.

- You will see the front panel display change to show the current UHF channel number. The default setting is **38**, which displays as **CH.38** on the front panel.
- Use **◀▶** buttons to select a channel number between **21** and **69**.
- Use **▲** button to highlight the *Remodulator Type* field. The default setting is **PAL B/G**. If required, use **◀▶** buttons to select the **PAL I** option.
- The correct remodulator setting depends on your locality. For most European countries, **PAL B/G** is required. However, in the UK and Eire, **PAL I** is required.
- Use **▲** button to highlight the *TV Format* field.
- **4:3** is the correct setting for regular format TVs. Widescreen broadcasts will automatically be 'letterboxed' (black bars at the top and bottom of the screen) to maintain a proper perspective.
- If you have a widescreen TV, use **◀▶** buttons to select **Auto** or **16:9**.
- **Auto** enables format auto-switching and is generally the best option for widescreen TVs. **16:9** broadcasts are shown widescreen and **4:3** broadcasts are shown in regular format.
- **16:9** is for fixed widescreen format. Widescreen mode will always be selected, so regular **4:3** broadcasts will appear incorrectly 'stretched' on a widescreen TV.

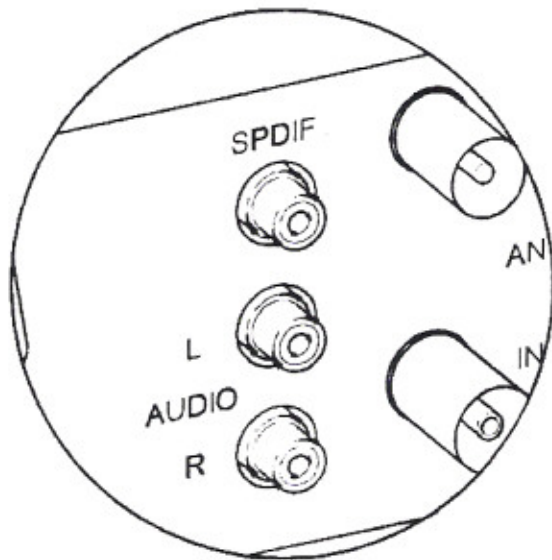


System Settings

Please Note:

The next two settings, **TV SCART Mode** and **VCR SCART Mode** are only applicable if you have attached the Matrix S-CW to your TV and/or VCR using a SCART cable.

- Use ▼ button to highlight the **TV SCART Mode** field. The default setting is **CVBS**. If required, use ◀▶ buttons to select **RGB** or **S-VHS** options.
- Some television sets can accept **RGB** (Red / Green / Blue) signals, which potentially can offer the purest possible picture quality.
- Use ▼ button to highlight the **VCR SCART Mode** field. The default setting is **CVBS**. If required, use ◀▶ buttons to select the **S-VHS** option.
- Most VCRs only support the **CVBS** standard. S-VHS and Hi8 machines usually support the **S-VHS** standard, either via SCART or separate Mini Din and Cinch connectors. In order to take advantage of the better quality offered by the superior **S-VHS** signal, you are advised to obtain an appropriate lead.
- Use ▼ button to highlight the **Control Audio Cinch** field. The default setting is **No**. If required, use ◀▶ buttons to select the **Yes** option.
- If you change this setting to **Yes**, then the analogue audio Cinch connectors may be adjusted by the volume control.



- Press the **OK** button to store the changed settings or press the **YELLOW** (back) button to drop back to the previous menu without saving.
- Press the **Exit** button to quit Setup mode altogether.

TV SCART Mode:

Some TVs displace the picture to the left when in RGB mode.

If RGB cannot be used, S-VHS is still superior to CVBS, but it will appear black & white on incompatible TVs.

Consult the manual for your TV.



System Settings

12.b Language Options

With this function you specify which language you prefer for menus to appear on the screen, and which language soundtrack is selected during multilingual transmissions ...

- Press the **Setup** button on your remote control to enter Setup mode.
- Use **▲▼** to highlight the *System Settings* menu option.
- Press the **OK** button to select it.

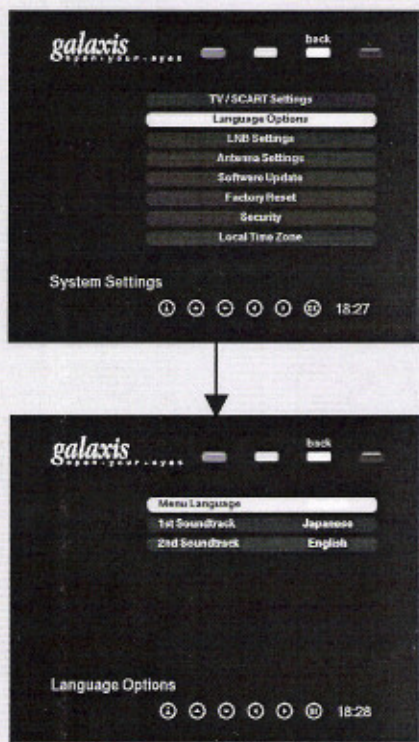
To alter the language options ...

- Use **▲▼** buttons to highlight the *Language Options* menu option.
- Press the **OK** button to select it. The *Menu Language* field will be highlighted. The default setting is **English**. If required, use **◀▶** buttons to select other available languages.
- Please think carefully before touching this setting. As soon as you alter it, the menu language will change. However, it will not be permanently stored until you press the **OK** button.
- Use **▼** button to highlight the *1st Soundtrack* field. The default setting is **Japanese**. If required, use **◀▶** buttons to select other available languages.
- Select **Natural** instead of **Japanese** if you prefer to hear the natural language of JSTV programmes whether this is Japanese or English.
- Select **English** instead of **Japanese** if you prefer to hear the English soundtrack of JSTV programmes whenever this is available. Japanese will automatically be provided at other times.
- The *1st Soundtrack* setting selects your most preferred language. If the programme you are watching carries this soundtrack then the Matrix S-CW will automatically select it.
- Use **▼** button to highlight the *2nd Soundtrack* field. The default setting is **English**. If required, use **◀▶** buttons to select other available languages.
- If the programme you are watching does not carry the language in the *1st Soundtrack* field then the Matrix S-CW will look to see if the language you have chosen for the *2nd Soundtrack* exists, and will select that if available.
- Press the **OK** button to store the changed settings or press the **YELLOW** (back) button to drop back to the previous menu without saving.
- Press the **Exit** button to quit Setup mode altogether.

12.c LNB Settings

With this function you can define custom **LNB** settings which may sometimes be required in non-standard installations, e.g. SMATV. Generally users will not need to use this function, it will be set-up by the installation engineer ...

- Press the **Setup** button on your remote control to enter Setup mode.
- Use **▲▼** buttons to highlight the *System Settings* menu option.
- Press the **OK** button to select it.



Please Note:

If you alter the menu language accidentally and you cannot understand the language on-screen, before doing anything else, you should immediately switch off the main power switch.

This will cancel any unstored changes.

If neither preferred soundtrack is available then the system will select the primary language of the service.

To temporarily change soundtracks, you should use the **Sound** button. See **Page 16**.

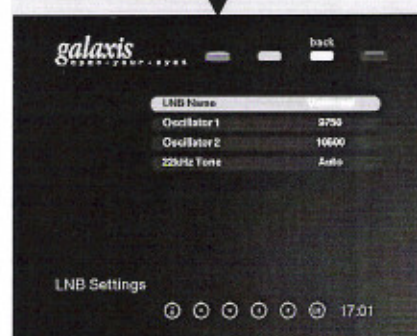
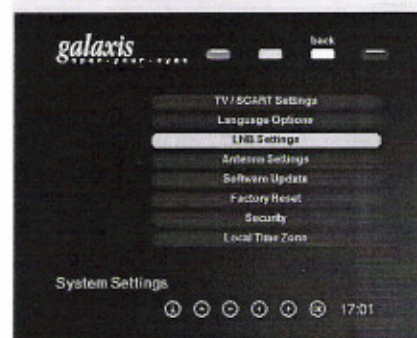
LNB is an acronym for **Low Noise Block** downconverter. This is a device fitted at the focal point of the antenna.

Its job is to downconvert a block of microwave frequencies focussed by the antenna into an **IF** (Intermediate Frequency) range suitable for passing down a cable to the tuner. At the same time it amplifies the signal a great deal whilst introducing the minimum amount of noise.

System Settings

To define an LNB ...

- Use ▲▼ buttons to highlight the **LNB Settings** menu option.
- Press the **OK** button to select it. The first LNB type to be highlighted will be **Universal**. This is the default LNB. The settings for this cannot be changed.
- Use ◀▶ buttons to select other LNBs. Only LNB types 1, 2 and 3 are user-definable.
- Use ▼ button to highlight the **Oscillator 1** field. Use the number buttons to enter the local oscillator frequency for low band reception.
- The local oscillator in the LNB is mixed with (i.e. subtracted from) the incoming satellite signal frequencies in order to downconvert them to a range suitable for the tuner.
- Use ▼ button to highlight the **Oscillator 2** field. Use the number buttons to enter the local oscillator frequency for high band reception.
- Use ▼ button to highlight the **22kHz Tone** field. The default setting is **Auto**. If required, use ◀▶ buttons to select **Yes** or **No** instead.
- The 22kHz tone is a signal that the Matrix S-CW sends to an LNB. This is normally used to switch to high band.
- Press the **OK** button to store the changed settings or press the **YELLOW** (back) button to drop back to the previous menu without saving.
- Press the **Exit** button to quit Setup mode altogether.



22kHz Tone:

If you select **No** then tone is not sent. In this case, it is important to enter zero in the **Oscillator 2** field.

If you select **Yes** then tone is always sent. In this case, it is important to enter zero in the **Oscillator 1** field.

Antenna Settings:

Warning: These settings are intended for use *only by a satellite specialist*. Making changes here without a proper understanding could result in you being unable to receive some or all programmes.

If you alter something accidentally, you should immediately switch off the main power switch. This will cancel any unstored changes.

When entering the **Antenna Settings** menu, the **Single LNB** field will automatically be highlighted, *even if* your system is already configured in **DiSEqC Switch** mode.

If in doubt about your system configuration, always opt for **DiSEqC Switch** mode.

12.d Antenna Settings

With this function you can check and specify which satellite(s) you have connected to your system and the types of LNBs used to receive them ...

- Press the **Setup** button on your remote control to enter Setup mode.
- Use ▲▼ buttons to highlight the **System Settings** menu option.
- Press the **OK** button to select it.

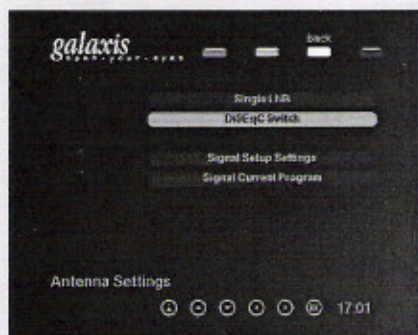
To alter the Antenna Settings ...

- Use ▲▼ buttons to highlight the **Antenna Settings** menu option.
- Press the **OK** button to select it. The **Single LNB** field will be highlighted.

If you have only one LNB connected – i.e. you intend to receive programmes from only one satellite then you can use this mode, but you are generally advised to select **DiSEqC Switch** mode instead as this is suitable for all types of installation ...

- Press the **OK** button to select **Single LNB** mode. The **Satellite** field will be highlighted.
- Use ◀▶ buttons to select the satellite you wish to receive.
- Use ▼ button to highlight the **LNB Type** field. The default setting is **Universal**. If required, use ◀▶ buttons to select other available LNB types.
- Press the **OK** button to store the changed settings or press the **YELLOW** (back) button to drop back to the previous menu without saving.
- Press the **Exit** button to quit Setup mode altogether.

System Settings



Please Note:

If you use **DiSEqC Switch** mode with a single LNB and no switch, then you will automatically receive signals from the satellite assigned to Port A.

Port settings B – D will only function if there is an appropriate DiSEqC switch fitted which is connected to LNBs receiving signals from the designated satellite locations.

It is possible to use a monoblock for the dual-reception of Eutelsat HotBird 13° East and ASTRA 19,2° East.

This is a device that comprises two feedhorns and two LNBs in a common housing complete with an integral 2-port DiSEqC switch and a single outlet.

The **JSTV** transponder frequency of 12597MHz is in the high band and is downconverted to 1997MHz using a **Universal** LNB, i.e. 12597-10600=1997.

If you have more than one LNB connected or you wish to use DiSEqC switch mode ...

- Use ▼ button to highlight the **DiSEqC Switch** mode. Then press the **OK** button.
- The **Number of Satellites** field will be highlighted. The default setting is 2. If required, use ◀▶ buttons to select the number of satellites you wish to receive 1-4.
- The number of satellites chosen defines the number of active DiSEqC ports.
- With a selection of 1, only port A is available. 2 enables ports A and B. 3 enables ports A, B and C. 4 enables ports A, B, C and D.
- Use ▼ button to highlight the **Port** field. The initial port shown is A. Use ◀▶ buttons to select other ports.

The following menu items need to be set for each DiSEqC port ...

- Use ▼ button to highlight the **Satellite** field.
- Use ◀▶ buttons to select the satellite you wish to receive.
- Use ▼ button to highlight the **LNB Type** field. The default setting is **Universal**. If required, use ◀▶ buttons to select other available LNB types.
- Use ▲ button to go back to the **Port** field again and change to another port.
- When you have finished making changes, press the **OK** button to store the changed settings or press the **YELL** (back) button to drop back to the previous menu without saving.
- Press the **Exit** button to quit Setup mode altogether.

12.e Signal Meters

With this function you can check the signal quality and strength being received by your Matrix S-CW ...

Please Note:

The signal quality and strength meters are offered only as a guide. They are not a substitute for professional test instruments. Nor are they intended to enable you to install a satellite system without expert help.

- Press the **Setup** button on your remote control to enter Setup mode.
- Use ▲▼ buttons to highlight the **System Settings** menu option. Press the **OK** button to select it.

To check signal quality and strength ...

- Use ▲▼ buttons to highlight the **Antenna Settings** menu option. Press the **OK** button to select it.

To check the default transponder ...

- Use ▲▼ buttons to highlight the **Signal Setup Settings** menu option.
- Press the **OK** button to select it. **Signal Strength** and **Signal Quality** figures will be shown.

System Settings

- Signal quality and strength shown are for the default transponder on the satellite port last selected in the antenna settings menu. For HotBird 13° East, this is 12597 MHz, which is the JSTV transponder.
- Press the **YELLOW** (back) button to drop back to the previous menu.
- Press the **Exit** button to quit Setup mode altogether.

To check the current programme ...

- Use **▲▼** buttons to highlight the *Signal Current Program* menu option.
- Press the **OK** button to select it.
- Signal Strength* and *Signal Quality* are displayed for the programme number selected prior to entering setup. Channel name, Satellite name, Frequency, Symbol rate and FEC are also shown.
- Press the **YELLOW** (back) button to drop back to the previous menu.
- Press the **Exit** button to quit Setup mode altogether.

Please Note:

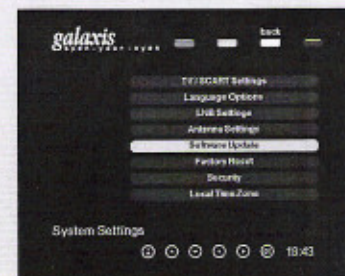
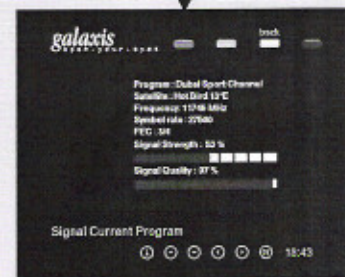
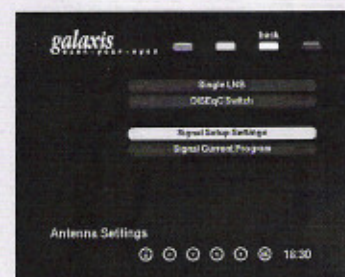
- Signal Strength* should typically be between **30%** and **100%**. In fine weather, *Signal Quality* should typically be between **90%** and **100%**.
- However, actual values will depend on many factors, and systems may not be optimally aligned, *even if* they are showing figures within this range.
- Signal Quality* is the most important parameter. An installation engineer will endeavour to align your antenna and LNB(s) to give the highest possible *Signal Quality* using a professional test instrument. In general, the higher the *Signal Quality*, the more reliable reception should be.
- Signal Quality* will always decline in bad weather. However, if the *Signal Quality* falls below **80%**, you may suffer interference or could lose reception altogether.
- On a fine day you should check the *Signal Strength* and *Signal Quality* figure(s) for each satellite connected to your system and make a note of them on the data sheet on **Page 2**.
- If you later experience reception problems, then you should re-check the figures in similar weather conditions to see if they have declined. If so, this may be an indication that adverse weather has caused your system to deteriorate or that the antenna has become mis-aligned.

13. Software Update

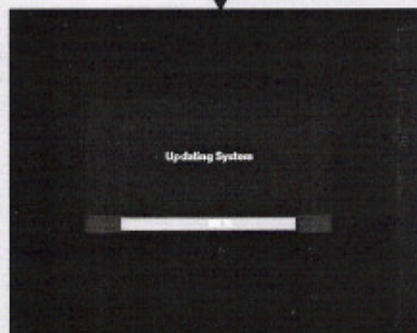
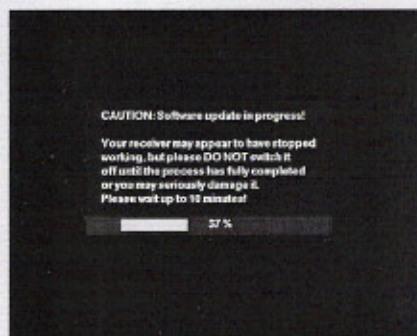
With this function you can download updated software versions via satellite as soon as they become available ...

To check and download a new software version manually if one is available ...

- Press the **Setup** button on your remote control to enter Setup mode.
- Use **▲▼** buttons to highlight the *System Settings* menu option. Press the **OK** button to select it.
- Use **▲▼** buttons to highlight the *Software Update* menu option.
- You are prompted to enter your current pincode and press the **OK** button. The default is **0000**.
- If there is no new software available then you will get a message saying so. Press the **OK** button to clear the message.



System Settings



Please Note:

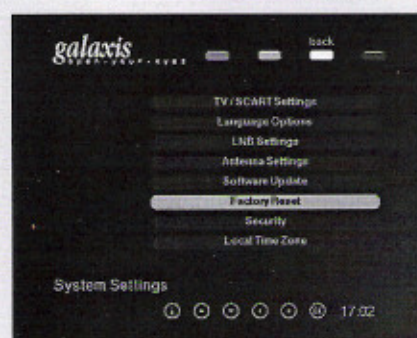
Occasionally, if the download process detects a problem with your existing software settings, it will perform an automatic **Factory Reset** to replace them.

In such a case, the receiver will reboot with a display on the front panel of **CH.38**.

If this happens then please follow the instructions to perform a **First-time Installation**.

Please Note:

Before performing a software download or factory reset, it is a good idea to check that your custom system settings have been entered in the data sheet on **Page 2** of this manual in case you may need them.



- Sometimes, a broadcaster will initialise software updating automatically as soon as you switch on. This is the usual method with **JSTV**. In this case, you will not need to do anything other than wait for the update to complete. However, *once the update has started* you **MUST NOT** switch off your receiver until it has completely finished.
- If there is new software, or if software downloading has started automatically, then you will get a software update progress screen. Downloading can last for a very long time. During the procedure you *must not* switch off the Matrix S-CW, otherwise your receiver's operating software may become seriously damaged, resulting in a **noSF** display on the front panel. If this happens, please consult your retailer.
- Following the download phase, the new software has to be checked and programmed into the receiver. This process takes some time. On the screen you will see the message **Updating System** and on the front panel you will see the word **chs** followed by the word **prog**.
- You may get some strange displays on the screen as the video memory is used for temporary storage. This is normal. Eventually, the receiver will reboot. The word **prog** will appear again on the front panel as the receiver tries to restore your custom settings.
- Again, you may get some strange displays on the screen as the video memory is used for temporary storage. This is normal. Finally, pictures and sound should return. If you still do not get a picture after waiting about 10 minutes, it may be necessary to re-select the channel you were viewing or, in some cases, to switch the receiver off and on again.

14. Factory Reset

With this function you can reset your Matrix S-CW to the default configuration, in order to perform a new **First-time Installation** ...

- Press the **Setup** button on your remote control to enter Setup mode.
- Use **▲▼** buttons to highlight the **System Settings** menu option.
- Press the **OK** button to select it.

To perform a factory reset ...

- Use **▲▼** buttons to highlight the **Factory Reset** menu option.
- You are prompted to enter your current pincode. The default is **0000**.
- Press the **OK** button to perform the factory reset or press the **YELLOW** (back) button to drop back to the previous menu or press the **Exit** button to quit Setup mode altogether.
- Eventually, the receiver will reboot with a display on the front panel of **CH.38**.
- Now please follow the instructions on **Page 33** to perform a **First-time Installation**.

15. First-time Installation

These instructions assume that the receiver has been **Factory Reset**. The receiver should be powered up with **CH.38** on the front panel display ...

- If you can see a setup screen on your TV then skip to the **Remodulator Type** section below.

If you are setting up after doing a factory reset or with a replacement receiver ...

- If the UHF channel number written on the data sheet on **Page 2** is not the default value of **38**, then use **◀▶** buttons to change to the previously used channel number. The setup screen should now appear on the TV. Now skip to the **Remodulator Type** section.

System Settings

If you are setting up the system for the very first time ...

- Depending on your circumstances, trying to set up the receiver yourself may not be easy. If you experience any difficulty, you are advised to consult a professional engineer.
- The installation will be easier and the picture quality better, if you use the enclosed SCART lead between the **TV SCART** socket on your receiver and the TV. If you do this, then you will be able to skip to the **Remodulator Type** section.
- Please be aware that if there is currently a SCART lead from your VCR occupying the only SCART socket on your TV, then you can move this from the TV to the **VCR SCART** socket on the receiver and insert the new lead as above.
- If you decide that you still prefer to use a UHF antenna cable connection, then you need to choose a vacant channel number on your TV. Follow your TV's instruction manual to scan for the signal from the receiver. Eventually you should see the setup screen.
- If the picture is suffering from interference then you will need to change the UHF Channel coming from the receiver. Use ► button to change to **CH.39** on the front panel and re-tune the TV. If still no good then use ► button to change to **CH.40** on the front panel and re-tune the TV again. If necessary, repeat this process for every channel from 21 to 69 until you get a clear picture.
- Then you must check that no other UHF channel is affected. Check all your local terrestrial channels, your VCR etc. If any are suffering from interference then you will need to continue the above process. Eventually you should find a channel that is satisfactory.

Setting the Remodulator Type ...

- The default setting is **PAL B/G**. This is used in most European countries. However, for installations in the UK or Eire, use ▲ and then ► buttons to change the **Remodulator Type** setting to **PAL I**.

For all installations ...

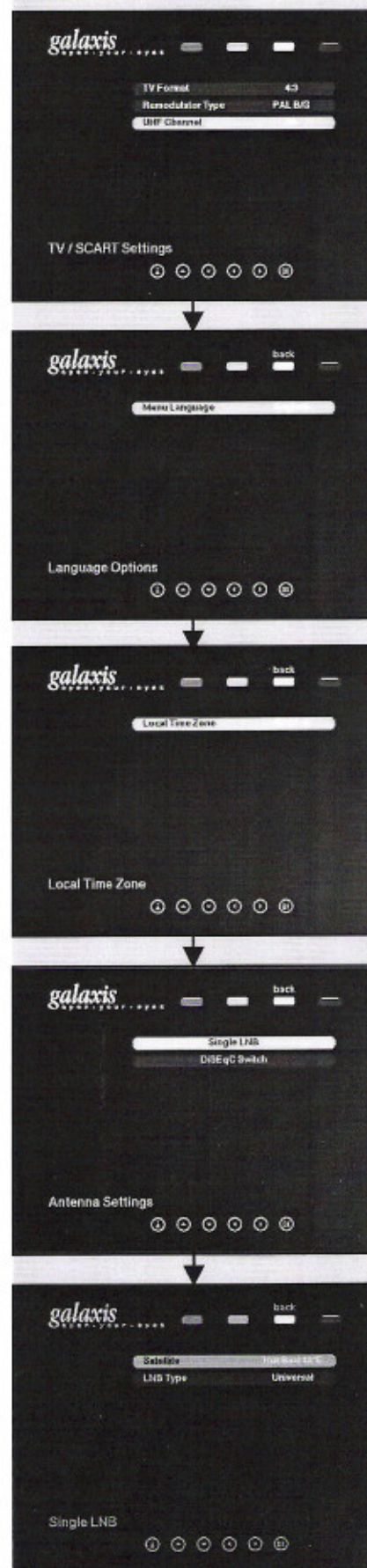
- Use ▲ button to highlight the **TV Format** field.
- 4:3** is the correct setting for regular format TVs. Widescreen broadcasts will automatically be 'letterboxed' (black bars at the top and bottom of the screen) to maintain a proper perspective.
- If you have a widescreen TV, use ◀▶ buttons to select **Auto** or **16:9**.
- Auto** enables format auto-switching and is generally the best option for widescreen TVs. **16:9** broadcasts are shown widescreen and **4:3** broadcasts are shown in regular format.
- 16:9** is for fixed widescreen format. Widescreen mode will always be selected, so regular **4:3** broadcasts will appear incorrectly 'stretched' on a widescreen TV.
- Press the **OK** button to move onto the next menu item.

Choose a Menu Language ...

- The default is **English**. If required, use ◀▶ buttons to select a different language.
- Press the **OK** button to move onto the next menu item or press the **YELLOW** (back) button to drop back to the previous menu.

Set your Local Time Zone ...

- The default time zone is **GMT+1**. If required, use ◀▶ buttons to select a different time zone.
- Press the **OK** button to move onto the next menu item or press the **YELLOW** (back) button to drop back to the previous menu.



System Settings

If you have only one LNB connected – i.e. you intend to receive programmes from only one satellite then you can use this mode, but you are generally advised to select DiSEqC Switch mode instead as this is suitable for all types of installation ...

- Press the **OK** button to select *Single LNB* mode. The *Satellite* field will be highlighted.
- Use ◀▶ buttons to select the satellite you wish to receive. If applicable, make sure that the *Satellite* name matches the one on the data sheet on **Page 2**.
- Use ▼ button to highlight the *LNB Type* field. The default setting is **Universal**. If required, use ◀▶ buttons to select other available LNB types.
- At this point you can press the **OK** button to perform a *Signal Check*. See below for details.
- To finish the **First-time Installation**, Press the **BLUE** (finish) button. See below for details.

If you have more than one LNB connected or you wish to use DiSEqC switch mode ...

- Use ▼ button to highlight the *DiSEqC Switch* mode. Then press the **OK** button.
- The *Number of Satellites* field will be highlighted. The default setting is **2**. If required, use ◀▶ buttons to select the number of satellites you wish to receive **1-4**. If applicable, select the number that matches the entry on the data sheet on **Page 2** for *Number of Satellites*.
- Use ▼ button to highlight the *Port* field. The initial port shown is **A**. Use ◀▶ buttons to select other ports.

The following menu items need to be set for each DiSEqC port ...

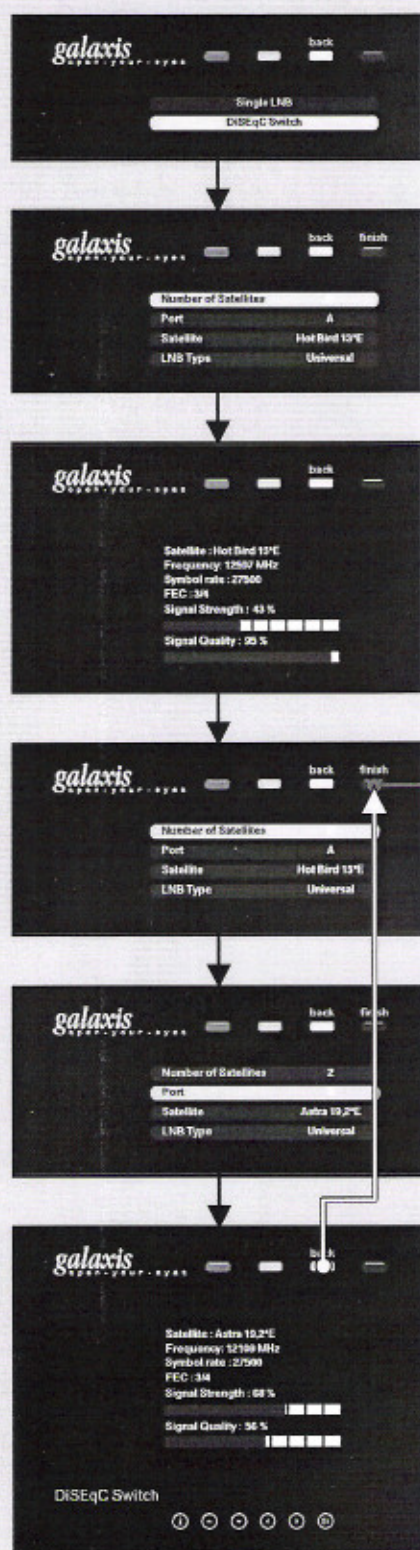
- Use ▼ button to highlight the *Satellite* field.
- Use ◀▶ buttons to select the satellite you wish to receive. If applicable, make sure that the *Satellite* assigned to *Port A* matches the entry on the data sheet on **Page 2** for *Port A*.
- Use ▼ button to highlight the *LNB Type* field. The default setting is **Universal**. If required, use ◀▶ buttons to select other available LNB types.

To perform a Signal Check ...

- At this point you can press the **OK** button to perform a *Signal Check*.
- *Signal Strength* and *Signal Quality* will be shown for the default transponder on the currently selected satellite. Please refer to **Page 31** for details of typical values. You should note the readings on the data sheet on **Page 2**.
- Press the **YELLOW** (back) button to drop back to the previous menu.
- If applicable, using the ▲ and ► buttons, make sure that the *Satellite* assigned to *Port B* matches the entry on the data sheet on **Page 2** for *Port B*. If not, then change it using the ▼ and ◀▶ buttons.
- If applicable, repeat for *Ports C & D*.

To finish the First-time Installation ...

- Press the **BLUE** (finish) button. The receiver will show that it is storing settings. When prompted, press the **OK** button. The receiver will then reboot. Following the reboot, if **JSTV** does not appear, press the **1** button to select **JSTV**.
- Press the **Standby** button to switch the receiver into standby. Then switch off the Matrix S-CW completely by using the main power switch. Wait for about 10 seconds and switch on again. Your receiver should then work reliably.



16. Security

With this function you can configure parental locking and change your PIN codes ...

The Master PIN code is used to protect certain system settings from accidental changes. Parental PIN codes are used to restrict under-age viewing.

- Press the **Setup** button on your remote control to enter Setup mode.
- Use **▲▼** buttons to highlight the *System Settings* menu option. Press the **OK** button to select it. Use **▲▼** buttons to highlight the *Security* menu option.
- You are prompted to enter your current Master PIN code. The default is **0000**. Press the **OK** button.

To configure Parental Lock ...

- The *Parental Lock* field will be highlighted.
- The default setting is **no**, indicating that parental locking is disabled. If required, use **◀▶** buttons to select from the available options.
- **at 16 to 17** restricts viewing of programmes intended for viewers aged 16 and over. Entry of the Parental PIN Age 16 to 17 or Master PIN number is required in order to view restricted programmes.
- **at 18** restricts viewing of programmes intended for viewers aged 18 and over. Entry of the Parental PIN Age at 18 or Master PIN number is required in order to view restricted programmes.

Please Note:

The Parental PIN system only restricts programmes if the broadcaster transmits rating information. At the time of writing, **JSTV** and many other broadcasters do not do this. However, the Child Protection Lockout system will always function.

To configure Child Protection Lockout ...

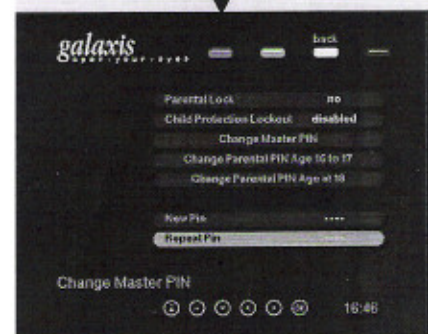
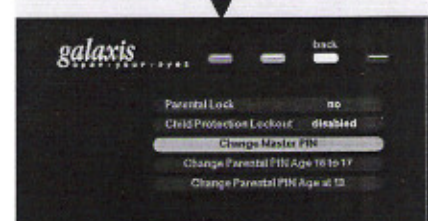
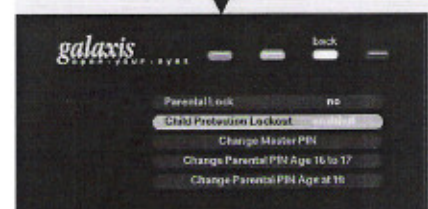
- Use **▼** button to highlight the *Child Protection Lockout* field.
- The default setting is **disabled**, indicating that Child Protection Lockout is disabled. If required, use **◀▶** buttons to select **enabled**.
- When Child Protection Lockout is enabled, entry of one of the Parental PIN Age 16 to 17, Parental PIN Age at 18 or Master PIN numbers is required in order to view programmes.

Please Note:

- Take great care to remember your PIN codes! A forgotten Master PIN code will require you to consult your dealer for information on how to reset your Matrix S-CW. It may even be necessary to return your equipment to the manufacturer!

To change PIN codes ...

- Use **▼** button to highlight *Change Master PIN* or *Change Parental PIN Age 16 to 17* or *Change Parental PIN Age at 18* fields, whichever is required. Press the **OK** button.
- Use number buttons to enter the new four-digit PIN code in the *New Pin* field.
- Use **▼** button to highlight the *Repeat Pin* field. Use number buttons to enter the same four-digit PIN code again as confirmation.
- Press the **OK** button to store the new PIN code, or press the **YELLOW** (back) button to revert to the old PIN code.
- Press the **Exit** button to quit Setup mode altogether.



System Settings / EPG

17. Local Time Zone

With this function you can set the clock in the Matrix S-CW to correspond with your local time zone ...

- Press the **Setup** button on your remote control to enter Setup mode.
- Use **▲▼** buttons to highlight the *System Settings* menu option.
- Press the **OK** button to select it.
- Use **▲▼** buttons to highlight the *Local Time Zone* menu option.
- The default setting is GMT+1. If required, use **◀▶** buttons to adjust to your local time zone.
- Press the **OK** button to store the new time zone setting, or press the **YELLOW** (back) button to revert to the old time zone setting and return to the previous menu.
- Press the **Exit** button to quit Setup mode altogether.

18. Electronic Program Guide

The Electronic Programme Guide or EPG is an OpenTV interactive middleware service provided by some broadcasters ...

To activate an EPG ...

EPG

- Press the **EPG** button on your remote control in order to activate an EPG service provided by a broadcaster. The letters EPG will appear on the front panel.
- If no EPG service exists, then you will be returned to normal viewing after a slight pause and a *No EPG* message will appear.
- To exit an EPG, usually you will need to press the **Exit** button, although sometimes a different button will be required according to the broadcaster's choice.

EPG functions ...

- EPGs are provided by broadcasters and are therefore not an inherent function of the Matrix S-CW itself. For this reason it is impossible to describe exactly what functions may be available.
- **ARD, ZDF** and **RTL** offer free EPGs on the Astra 19,2° East satellite.
- **TPS** and **STREAM** offer Pay-TV EPGs on the Eutelsat HotBird 13° East satellite.
- **JSTV** hopes to launch a Japanese-language EPG on the Eutelsat HotBird 13° East satellite at some time in the future.

Tick button ...

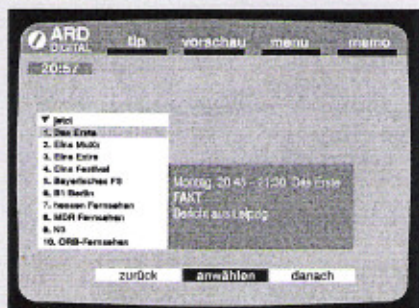


- The tick button is used for a variety of purposes within an EPG. Typically, it may be used to tag programmes in a list or to respond to a query. Sometimes it is used to exit an EPG.



The time received from the satellite signal corresponds to GMT = Greenwich Mean Time, which is used as a world reference.

You should set a value to match the time in your locality relative to GMT.



19. Troubleshooting

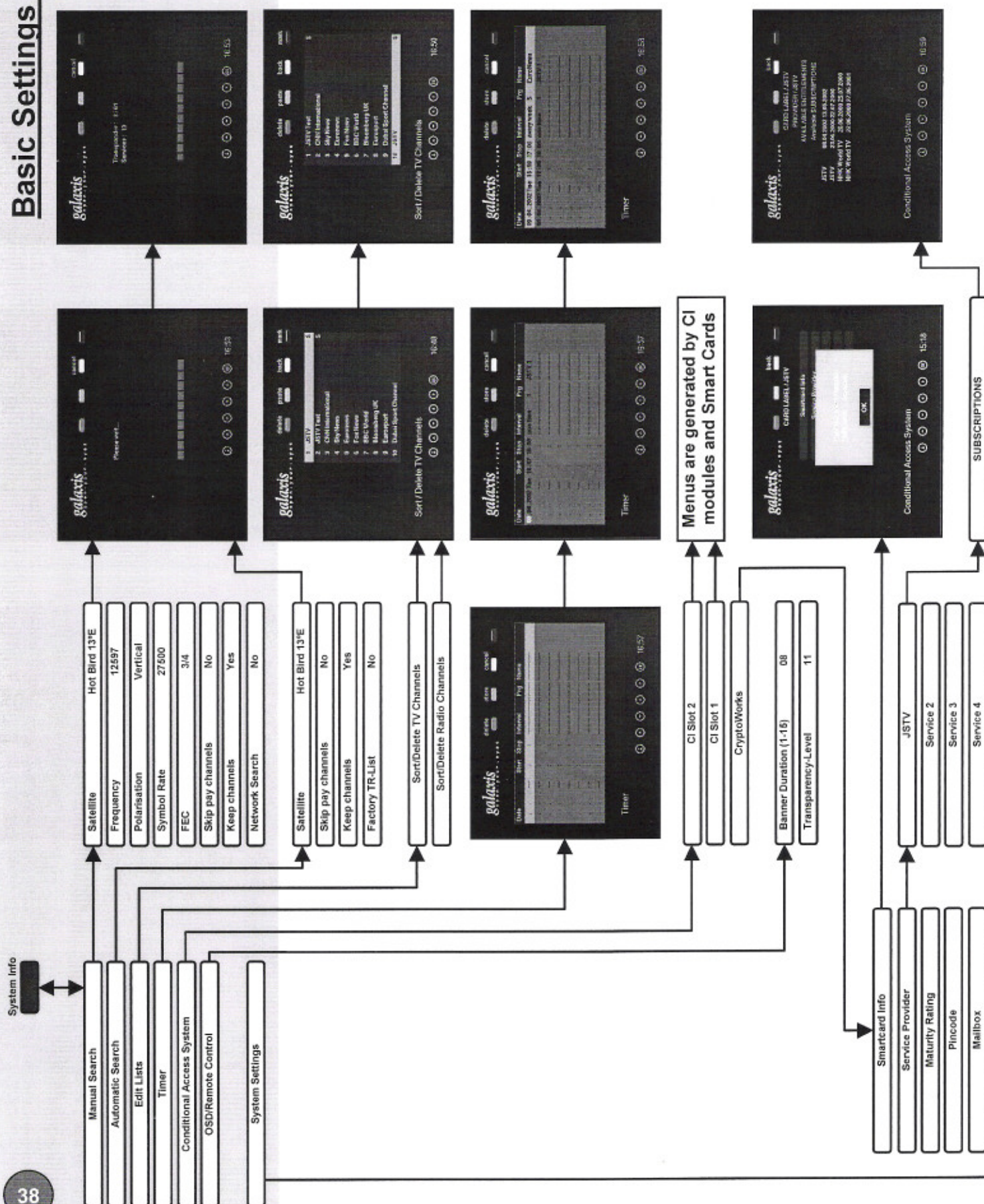
This chapter is intended to help you to solve common problems and to answer frequently asked questions ...

- *When I switch on my receiver the front panel is always blank and nothing works.*
- Try another appliance in the mains outlet to make sure that it is working.
- Check the receiver in a different mains outlet.
- Check that your receiver is correctly plugged in and that the fuse in the plug (if any) is intact.
- *Sometimes when I switch on my receiver the front panel is blank and nothing works, but other times it's fine.*
- The power supply protection circuits may trigger sometimes when you switch on. Switch off using the main power switch and wait for 10 minutes. If the problem occurs frequently – i.e. more than one time in ten – then you should consult your retailer.
- *When I switch on my receiver the front panel is ok, but I get no picture and/or sound on the TV, not even the information banner.*
- Check that the correct channel is selected on the TV.
- Check that the TV is tuned correctly.
- Check that all cables are firmly connected at both ends. In particular, SCART cables may easily work loose. Try to avoid moving them when cleaning etc.
- *Sometimes when I switch on my receiver the front panel displays strange characters e.g. tttt or ----.*
- The display microprocessor may sometimes fail to initialise properly when you switch on. Although this should not affect normal reception, if it is annoying then you should switch off using the main power switch and wait for 10 seconds. If the problem occurs frequently – i.e. more than one time in ten – then you should consult your retailer.
- *The front panel of my receiver displays noSF.*
- A noSF display on the front panel means that your receiver's operating software has somehow been damaged. If this happens, please consult your retailer. You will require a software download from a PC via the serial port, or to return your receiver for repair.
- *The time displayed by my receiver is inaccurate.*
- This is not a receiver fault. The DVB specification includes the transmission of time and date information within the signal from each satellite transponder. The receiver accurately displays this. However, if the transmitted information is incorrect, then so will be the display on the receiver. The accuracy may vary from channel to channel. This fluctuation may also cause trouble when setting the timer.
- *The time displayed by my receiver is wrong by one or more hours.*
- The time zone is set incorrectly. See **Page 36**.
- If the time zone is set correctly but some channels show the wrong time, then the broadcaster's clock is in error.

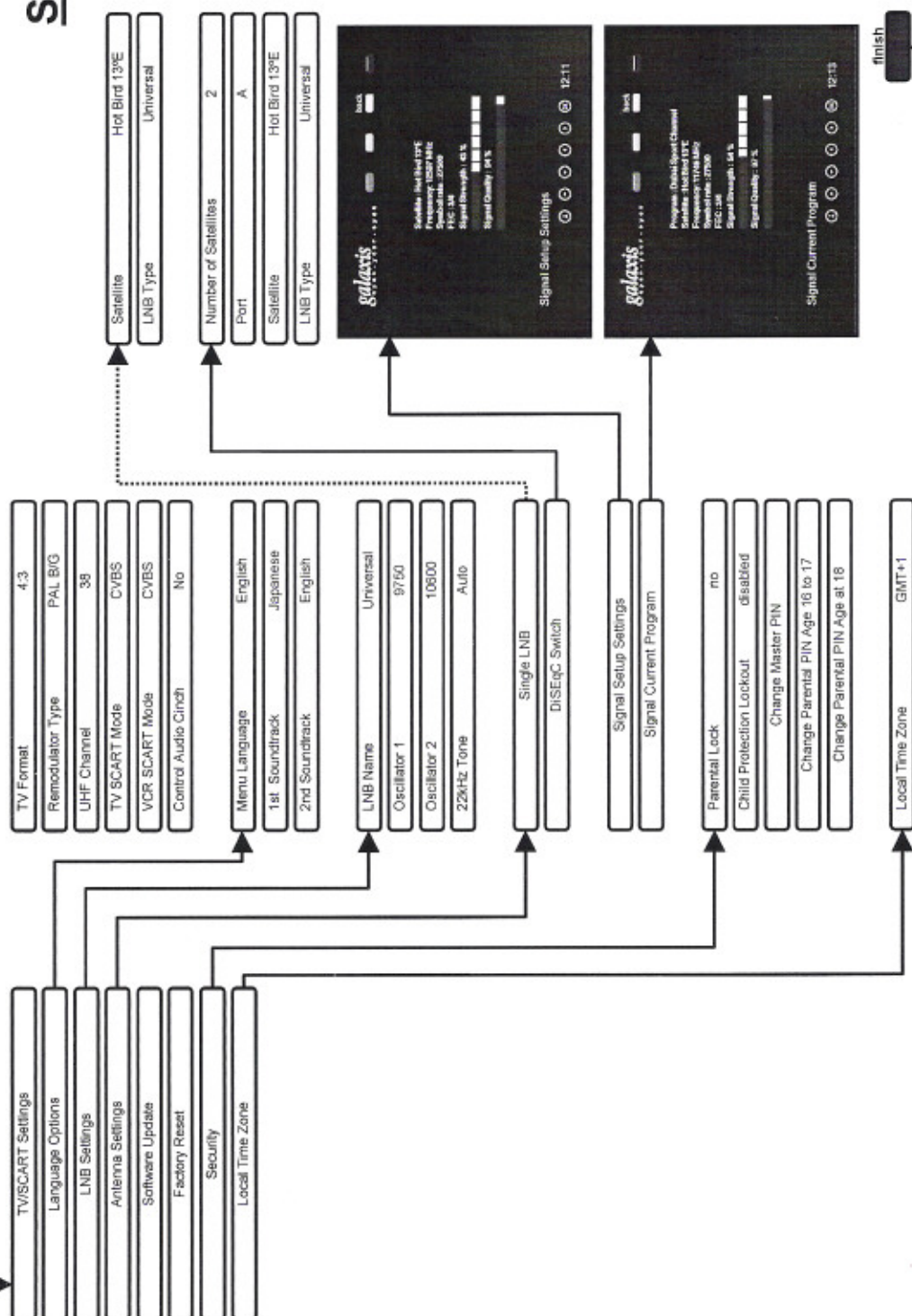
- *When I switch on my receiver the front panel is ok, but I get no picture and/or sound on the TV, although the information banner displays and/or flashes on and off.*
- Try switching off using the main power switch and wait for 10 seconds before switching back on.
- Check that the lead from the satellite antenna is correctly attached to your receiver.
- Check that the weather conditions are not bad. Heavy rain or other precipitation may reduce the signal strength to the point where reception breaks up or is not possible at all. Wait until the weather improves.
- Check the signal strength and quality meters as described on **Page 31** and compare the readings with those written in your data chart on **Page 2** to see if there may be a fault with your antenna system.
- *When I am watching programmes, sometimes the picture breaks up into blocks and/or the sound becomes distorted.*
- As above.
- *I can receive some channels in the pre-programmed list, but not others.*
- At the time of manufacture, and subsequently by satellite downloads, your Matrix S-CW has been pre-programmed with a selection of channels from various satellites that your supplier believed might be interesting. However, channels frequently change and therefore some of them may not function any more. Conversely, it is likely that there will be many other channels available that have not been pre-programmed. Please refer to **Page 20** for information on how to quickly and easily search for current services on various satellites. If you wish to enjoy the maximum amount of choice then you should repeat the search process periodically.
- Channels on satellites other than HotBird 13° East are only available if you have a DiSEqC-switched system with a signal available from the named satellite. They are provided for the convenience of users with these systems. Please refer to **Page 21** for information on how to delete unwanted channels.
- The HotBird series of satellites at 13° East are not all the same and nor are the transponders on them. Reception of a transponder requires that you are receiving an adequate signal quality from it in your locality. This can depend on a number of factors. Depending on your locality, some transponders will be stronger than others. SCPC channels are weaker than MCPC ones. MCPC Channels with a low FEC (e.g. 2/3) can be received better than those with a higher one (e.g. 7/8) because there is more corrective margin available.
- There may be local interference e.g. a DECT portable telephone or in-car speed-trap radar detector. If the problem only occurs at certain times of day then it may be due to a neighbour or nearby business.
- When entering the *Antenna Settings* menu, the *Single LNB* field will automatically be highlighted, even if your system is configured in *DiSEqC Switch* mode. If you accidentally choose *Single LNB* mode then you will lose the ability to switch to other satellites. As a general rule you should always select *DiSEqC Switch* mode to avoid this problem.

Menu Trees

20. Menu Trees



System Settings Menu Tree



Installation Menu Tree

