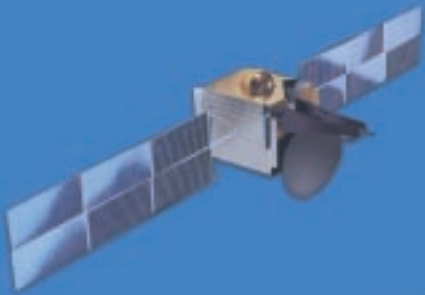


**MAXVIEW**

**SATELLITE  
TELEVISION  
BROADCASTING  
& RECEPTION  
GUIDE**



## INTRODUCTION

**This guide has been written to explain the basics of satellite television broadcasting and to assist you through the reception equipment required to enjoy satellite television away from home. There are still a few satellite providers broadcasting in an analogue format, however the choice is decreasing. Satellite signals for Sky programmes ceased being broadcast in an analogue format at the end of 2001. As the majority of satellite television broadcasting is now in a digital format, this guide will concentrate on digital satellite television.**

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## FREQUENTLY ASKED QUESTIONS

- Q** How do I know where to point my satellite dish?  
**A** The satellite will always be in the same position, this is called geostationary. You will find the Astra 2 (Sky digital) satellites 28.2 degrees East of South. To help you quickly & easily locate the satellite signal, Maxview has a specially designed compass. Please see page **9** for further details.
- Q** Can I use my satellite receiver from home?  
**A** Yes. Please see page **8** for further details.
- Q** Do I have to subscribe to Sky to be able to receive digital satellite television?  
**A** No. You can purchase an unsubsidised satellite receiver and obtain a Free To Air viewing card from the BBC. Please see page **8** for further details.
- Q** What channels will I receive with a Free To Air viewing card?  
**A** You will receive all terrestrial channels i.e BBC1, BBC2, ITV1, Channel 4 & Channel 5 plus a selection of BBC radio and a selection of Sky's Free To Air channels.
- Q** Can I obtain a free & comprehensive list of all available channels covering the UK and Europe?  
**A** Yes. There are a number of websites where you can obtain this information. Please see page **12** for addresses.\*
- Q** Do I have to adjust my satellite dish and satellite receiver to pick up channels being broadcast between the North and South Beam?  
**A** The satellite dish requires no adjustment. The 'satellite footprint' or projected beam is set by your satellite broadcaster and can only be picked up by physically being inside the footprint area. However, a satellite receiver's default is set to the North Beam. If you travel to Southern Europe you may need to change the default setting. Please see page **11** for further details.

## FREQUENTLY ASKED QUESTIONS

- Q** Will I receive the same digital clarity with a portable system as I receive at home?
- A** Yes. As long as you have a clear line of sight above trees and buildings you will be able to receive the same picture quality as at home.
- Q** Can I receive my local news channel whilst I am away from home?
- A** Yes. When you receive your Sky viewing card (Sky subscription or Free To Air) your local news channel will have been determined for you through your postcode. This means as long as you are inside the Astra 2 footprint you will receive your local news.
- Q** Do I have to use a satellite finder to find my signals?
- A** Not always, however a Satellite Finder can greatly aid satellite reception as it is designed to locate the satellite signal and to help align your satellite dish through a series of tones and LED lights. Without a device such as the Satellite Finder, due to the 'satellite delay', which is approximately 2-3 seconds, it could mean missing or 'passing' through the satellite signals. Please see page 10 for further details.
- Q** Are Maxview the UK's leading manufacturer and supplier of touring satellite equipment?
- A** Yes. Maxview have been leading the way in satellite equipment for the touring market since 1990. Over the years we have re-invested our efforts into offering you the best possible system at a realistic price. Our customer service team is on hand to offer technical help and advice before and after your purchase.

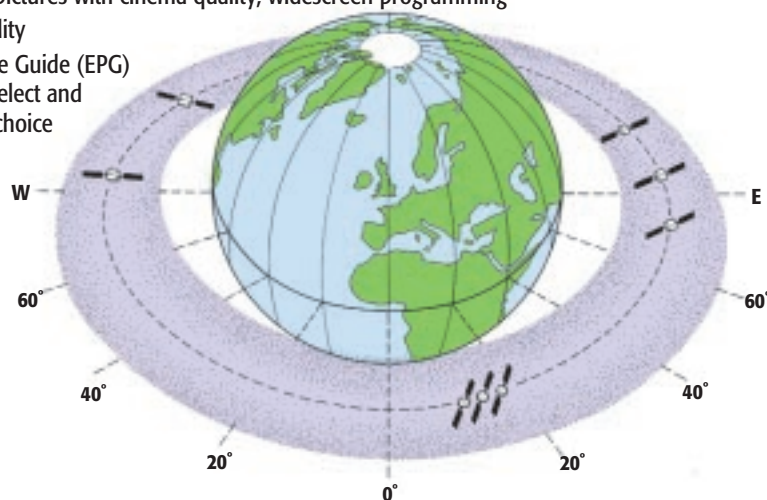
\* Although it is possible to receive Sky digital signals across Europe, Maxview, although give out this information do not sanction the use of equipment for this purpose.

## DIGITAL SATELLITE TELEVISION

The launch of digital television services in 1998 and the availability of terrestrial channels such as BBC, ITV, C4 and C5 on satellite has encouraged the take up of satellite television in the home. There is now a greater desirability to be able to receive the same choice and quality of programming on the move to in the home.

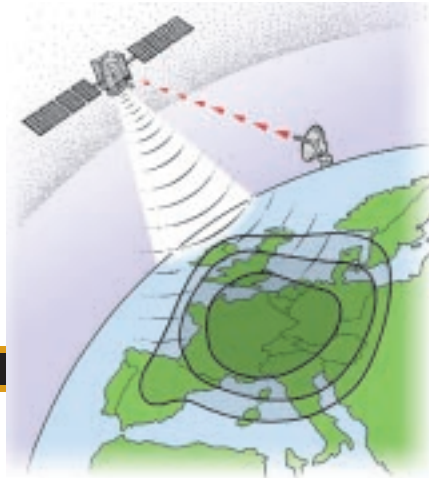
Digital satellite broadcasting is a more complex and efficient way of transmitting signals, allowing much more information than before to be transmitted. Digital satellite offers:

- More channels
- Sharper and clearer pictures with cinema quality, widescreen programming
- Improved sound quality
- Electronic Programme Guide (EPG) to help the viewers select and personalise viewing choice
- Interactive services



## SATELLITE BROADCASTING

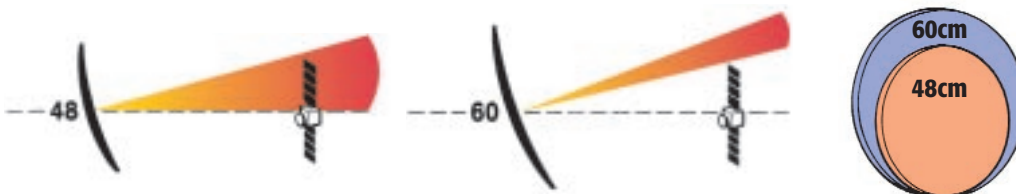
Satellites, which relay TV signals, are positioned in different orbital positions at a distance of 35,615km above the earth's equator. Sky Digital is broadcast from the Astra satellite at the orbital position of 28.2 degrees East of South. A satellite positioned at this distance takes 24 hours to orbit the earth and is said to be in geostationary orbit, as it is always in the same position above the earth. Satellite operators transmit their signals at a very low power from large parabolic aerials on the ground to the satellites. The satellite then amplifies these signals, converts them to a different frequency and transmits them back to earth towards your satellite dish. Each satellite has many transmitting antennae, which transmit different channels or programmes to different European regions. The transmitting ray of a single antenna is called a 'beam'. This beam that reaches the earth is called the 'footprint' and is the predicted coverage area of a satellite signal. Satellite footprints show under optimum weather conditions i.e. clear skies, no rain, cloud etc. the signal strength (dBW) required to receive a picture in a certain location. Satellite signals are stronger in the centre of the footprint getting weaker towards the edge. Clouds, rain or snow decrease the signal strengths. In severe weather conditions, with digital signals the picture and sound block or disappear. It is also important to bear in mind that not every channel received from the chosen satellite will be received with the same signal strength.



## SATELLITE RECEPTION

The basic equipment required to receive a satellite signal is a satellite dish, Low Noise Block (LNB) and satellite receiver. A compass and satellite finder can also be a great aid to help find the signal. To receive a satellite signal you must be within the coverage area or footprint of the satellite. The main criteria which must be considered when choosing a satellite system are the preferred mounting option and the size of the satellite dish, as this determines the surface area, reception angle, rejection of signals from unwanted satellites and ease of alignment.

The choice of dish size is dependent on your location and hence the signal strength in the area in which you wish to receive the signal. The weaker the signal the larger the dish size required to receive a picture. Larger dish sizes will be needed in Scotland, the north of England, Southern Europe, and areas which receive a high rainfall. The size of the dish also determines the surface area and reception angle of the dish. Larger dishes have greater surface areas and therefore can receive more signal. For example, a 60cm dish has 63 per cent more surface area than a 48cm dish and therefore receives 63 per cent more signal. Smaller dishes have larger reception angles than larger dishes. For example, a 48cm offset dish has a reception angle of 4° whereas a 60cm dish is only 3°. With larger reception angles, it is easier to locate the satellite and the dish will only need fine adjustment. However, a smaller reception angle will give greater immunity to interference from adjacent satellites and receive more signal.



## SATELLITE DISH, MOUNT & LOW NOISE BLOCK (LNB)

There are various options as to the choice of satellite dish and mounting option depending on where you wish to receive the signal and whether you are looking for a fixed/permanent or portable/temporary installation. For digital satellite reception you must use a Universal LNB. All Maxview satellite systems are supplied with a good quality, low noise universal LNB. Maxview offer a range of both fixed and portable systems. The fixed systems (Omnisat 48/60 & Omnisat Semitronic) are mounted onto a 'through the roof' fixing mast which enable alignment and adjustment of the satellite dish from inside the vehicle. An alternative 'fixed' system is the Omnisat 66 which mounts directly onto a fixing plate and has a 'crank up' mechanism to manually elevate the dish. As a mast is not required, the unit can be positioned in any convenient position on the vehicle roof. The more advanced permanently fixed satellite systems (Omnisat Seeker) have an electric motor which enables the dish to raise automatically and self seek the satellite. The portable systems (Omnisat Dish Packs) are ideal for mounting on a tripod. This is an ideal solution where it is not possible or desirable to fit a permanent roof mounted dish. The tripod can then be folded together for compact storage with the dish during travel.

### B2570

#### Omnisat Seeker Fully Automatic Self Seeking Satellite System

- Compact, stylish aerodynamic design, manufactured from high quality weatherproof materials
- Permanently roof mounted
- Cable entry junction box allows for system to be positioned in most convenient position on vehicle
- Automatically aligns the dish to the desired satellite and programme within seconds using GPS technology
- Quick and easy satellite acquisition using remote control and On Screen Display (OSD) on TV
- 66cm elliptical satellite dish for digital satellite reception throughout Europe:
  - More choice of channels
  - Improved picture and sound quality
  - Larger coverage area
- LNB feedhorn specifically designed to match dish for optimum reception
- Automatic skew angle adjustment (See page 10)
- Compatible with all digital satellite receivers
- Remote Eye to enable control box to be hidden
- Short cut button on remote control to automatically lower dish before travel (Lowered height: 26cm)
- Automatic safety system to lower antenna before travel
- 12/24V operation
- Installation and technical support helpline



**B2570**

## SATELLITE DISH, MOUNT & LOW NOISE BLOCK (LNB)

### B2550

Omnisat Semitronic 60cm Semi-Automatic 'Through the Roof' Satellite Dish Pack

- Features a 60cm diameter dish, universal LNB\* and control box
- Control box requires a 12/24V d.c. power supply to automatically raise the dish to the desired azimuth (vertical alignment)
- For permanent mounting to 'Through the Roof' Omnimast (B2517/S)
- Receives digital satellite signals when used with compatible receiver
- Last memory elevation feature can store any favoured position for ease of alignment
- Automatically folds down to 21cm and locks for travelling, protecting the dish from dust and dirt
- Motor overload protection & auto power-off
- Watertight motor and motor housing
- Complete with fully illustrated installation and operating instructions



**B2550**

\* Receives all available satellite signals

### B2590

Omnisat 66 Manual 'Crank Up' Satellite System

- 66cm elliptical satellite dish and universal LNB\* for digital satellite reception throughout Europe
  - Permanently roof mounted
- Cable entry junction box allows for system to be positioned in most convenient position on vehicle
- LNB feedhorn specifically designed to match dish for optimum reception
  - Easy to align using ceiling mounted 'crank up' handle and elevation zone map
  - For travelling the dish folds down to a collapsed height of 26cm



**B2590**

\* Receives all available satellite signals

**SATELLITE DISH, MOUNT & LOW NOISE BLOCK (LNB)**

**B2517/S**

Omnisat Semitronic 'Through the Roof' Mast System

- High quality 'Through the Roof' aluminium mast - length 900mm
- For use with Omnisat Semitronic satellite dish packs
- Complete with fixing accessories and fully illustrated instructions

**B2517/B**

Omnisat 'Through the Roof' Mast System

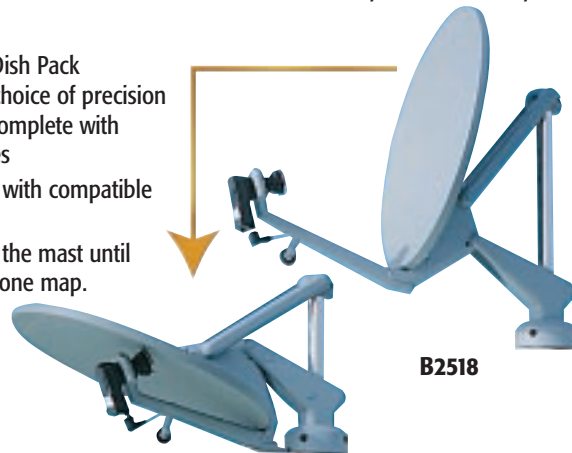
- High quality 'Through the Roof' aluminium mast - length 1400mm
- For use with Omnisat 48/60cm satellite dish packs



**B2518, B2520**

Omnisat 48/60cm 'Through the Roof' Satellite Dish Pack

- Manually operated system which offers a choice of precision moulded 48cm or 60cm diameter dishes complete with universal LNB\*, cable and fixing accessories
- Receives digital satellite signals when used with compatible receiver
- Easy to align vertically by manually raising the mast until pointer corresponds with location on the zone map. Turn the mast for horizontal alignment



**B2518**



**B2520**

- For permanent mounting to 'Through the Roof' Omnimast (B2517/B)
- For travelling, the 48cm dish folds down to a collapsed height of 30cm, with 60cm dish 34cm
- Complete with fully illustrated installation and operating instructions

\* Receives all available satellite signals

**B2548/LNB, B2560/LNB**

Omnisat 48/60cm Portable Satellite Dish Pack

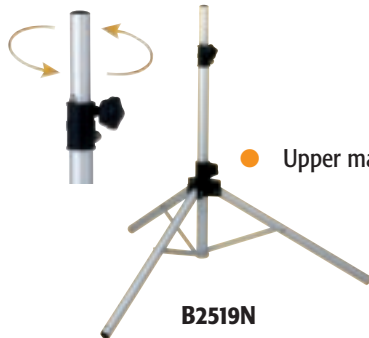
- A choice of 48cm or 60cm diameter steel dish, universal LNB\*, 10m coaxial cable and mast fixing accessories
- Receives digital satellite signals when used with compatible satellite receiver
- Easy to use satellite map for dish alignment
- Suitable for mounting on the tripod stand (B2519N)

\* Receives all available satellite signals



**B2548/LNB**

## SATELLITE DISH, MOUNT & LOW NOISE BLOCK (LNB)



**B2519N**

### **B2519N**

Omnisat Tripod Satellite Stand

- Suitable for dish sizes up to 90cm with universal fixing
- For optimum positioning of satellite system away from vehicle
- Upper mast section rotates freely for ease of use to aid satellite dish alignment
- Long legs and an additional locking device ensuring stability
  - Light weight, stable design at just 1.6kg
  - Complete with tent pegs for secure fixing
  - Folds down for compact storage

## SATELLITE RECEIVER

The satellite receiver is the final part of the chain before the TV and is where all the signals that are collected by the dish are converted into a format that the television can display.

For reception of Sky Digital programmes a Sky Digibox must be used which includes a licensed de-scrambling system called Videoguard. The receiver software is provided exclusively by Sky and is downloaded or updated directly from the satellite into the receiver. There are several manufacturers of Sky Digiboxes although their functionality is similar and all have a common remote control.

If you do not wish to receive Sky Digital transmissions then a Free To Air (FTA) receiver will allow you to receive signals from other satellite providers. Please note though that at present there is no Common Access Module (CAM) available to enable the digital satellite receiver to be adapted for reception of Sky or Free To Air programmes which require a viewing card e.g BBC, ITV.

There are two options with Sky Digiboxes - subsidised or non subsidised. Subsidies vary so it is best to check with either Sky directly or a Sky dealer for the latest information.

Currently to qualify for a subsidised box you must:

- Have the system installed at home by a Sky qualified installer
- Have a permanent connection to a telephone line - subject to contract terms & conditions
- Sign a contract which is valid for one year from signature

Please note there is a requirement to subscribe to Sky if you take the route of a subsidised box. After the contract has expired (12 months) you are then able to remove your Digibox and use it in your touring vehicle.

If you wish to use your Digibox in your touring vehicle immediately you have the option to buy the box outright, independent of subsidies.



### **PRD1UK**

Panasonic Digital Satellite Receiver



### **MINISAT2**

Free To Air Digital Satellite Receiver

## SATELLITE PROGRAMMES

### Free To Air (FTA) Programmes

Without subscribing to Sky or registering for a BBC viewing card you will be able to receive most radio channels and a few Free to Air TV channels such as Sky News, The Travel Channel, CNN & QVC.\* A Free To Air viewing card is required for reception of BBC, ITV, C4 & C5 and is available Free of Charge on application to the BBC (Tel: 0870 243 8000). This is subject to you having a current TV licence. To register for this card you must call from a UK phone and request a card for a UK or Northern Ireland address. The card is then registered against the unique serial number of the Digibox.

\*Correct as at January 2003

### Subscription Programmes

Various subscription packages are available from Sky which include the FTA channels in addition to those programmes offered in the package. Contact Sky directly or a Sky dealer for the latest packages. Please note that your signature on the Sky subscription form contractually obliges you to keep the viewing card in the UK. There is no signature required to obtain the FTA card and hence no contractual agreement to keep the card in the UK.

## GUIDELINES TO ALIGN & ADJUST YOUR SATELLITE SYSTEM FOR THE BEST RECEPTION

To receive a clear satellite picture the dish must have the correct Vertical (or Azimuth) and Horizontal Alignment. Vertical alignment is the dish angle of elevation and refers to the angle at which the satellite signals hit the earth's axis. In the northern hemisphere they are flat - about 15° and the further south you go i.e. nearer to the equator, the steeper they become. On Sicily they have an elevation angle of 45°. Horizontal alignment is the position of a satellite relative to where you wish to receive the signal and requires the dish to be turned until the satellite signal is received.

For digital satellite reception, first make sure that your television is tuned to the output channels of the satellite receiver and that the receiver is tuned to a known satellite channel.

Before you start to align your satellite system, you will first need to make sure that the satellite dish is on level ground and you have a clear line of sight with the Satellite. The Astra digital satellite cluster is located at 28.2 degrees East of South. The dish will need to be aligned to this compass bearing, although the magnetic variation of the continent you are on will need to be taken into account. The variation needed for the UK is about 5 degrees, this will mean you will need to align your dish to the compass bearing of about 23 degrees. Correct dish alignment can be helped with the use of a basic compass.

### B2022

Omnisat Satellite Compass

- Alignment window to help locate the satellite signal zone for Astra and Hotbird satellites quickly and easily
- Suitable for use with all satellite systems
- For use as normal navigation compass

Once the dish is aligned left to right with the compass bearing, the dish can then be adjusted to the correct vertical elevation. The elevation of the dish will be dependent on the region of the world you are in. For the main part of the UK, the elevation is about 21-27 degrees. Supplied with each of the Maxview satellite dish pack's, is a 'Zone Map'. The 'Zone Map' will give you a rough indication of the elevation of the dish.



B2022

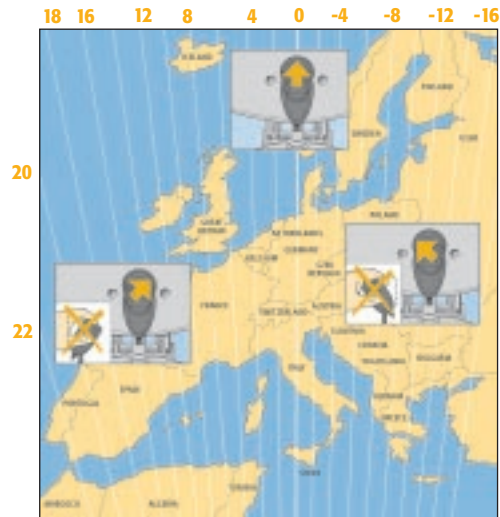
## GUIDELINES TO ALIGN & ADJUST YOUR SATELLITE SYSTEM FOR THE BEST RECEPTION

For digital satellite reception the "Skew" angle of the LNB is also important.

The "Skew" angle represents the Horizontal/Vertical plane of the LNB. When a satellite dish is facing towards a satellite at due south, the plane of the LNB will be vertical (straight down). As the dish is moved around either East or West to receive other Satellites, the "Skew" angle of the LNB will need to be adjusted, clockwise for West and counter clockwise for East.

The more advanced satellite systems such as the Omnisat Seeker have automatic skew angle adjustment. Other satellite systems require the LNB to be manually adjusted.

The use of a 'Sat-Finder' will also greatly help with locating the correct satellite signal.



**ILLUSTRATION TO SHOW AUTOMATIC SKEW ANGLE ADJUSTMENT**

### **B5029**

Omnisat Satellite Finder

- Essential for locating your digital satellite signal
- Designed to aid dish alignment through a series of tones and LED lights
- Features a sensitivity control knob, which can be adjusted to fine tune satellite signal for different reception levels
- Designed for use with all satellite systems



**B5029**

Another help to align the satellite dish to the correct satellite, is to use the 'Signal Test' menu built into the Sky digital decoder. To access this menu you will first have to press the "SERVICES" button on the remote. In the "SERVICES" menu you will then need to access the "SYSTEM SETUP" (number 4) then "SIGNAL TEST" (number 6). The display will then show, from top to bottom:- Signal Strength, Signal Quality, Lock Indicator, Network ID and Transport Stream.

Move the dish in slow discrete steps in order to allow time for the digital meter in the satellite receiver to respond correctly. Consult the manufacturer's instruction manual for more details. Alignment is fairly critical and the dish must be accurately aligned before any picture or sound will be observed. You may need to fine tune the bearing of the dish by slowly moving the dish from left to right and/or vertically until a clear picture is found.

You will need to align the dish until there is at least a quarter of the 'Signal quality' bar displayed, the 'Lock indicator' shows 'OK', and the 'Network ID' is displaying '0002'. If the 'Network ID' is showing any other details, you have locked onto the wrong satellite and will need to re-align the satellite dish. When you have a clear signal, take care when tightening the dish mounting bolts not to move the dish position.

## SATELLITE RECEPTION OUTSIDE OF THE UK & NORTHERN IRELAND

Officially, it is illegal to receive programmes transmitted by Astra/Sky outside of the UK & Northern Ireland as Sky are not licensed to transmit outside of the UK & Northern Ireland. Technically reception is possible, although may be more difficult as the footprints for Sky Digital (especially ITV) are concentrated on the UK. For more information refer to the contact information on page 12 - for footprints and coverage contact Astra; for programme availability and packages contact Sky.

## DISH ALIGNMENT IN SOUTHERN EUROPE

Programmes on the Astra 2 cluster of satellites are 'beamed' down to create three 'Footprints', north, south and UK. All of the Free To Air and Sky programmes are received in these 'footprints': An up to date list of programmes that are available on each footprint, can be obtained from [www.astra.lu](http://www.astra.lu).

Whilst travelling in the UK, you should be within all three of the 'Footprints' and with the right equipment, you should not have any problems with receiving all of the Astra transponders.

Outside of the UK, problems of reception and aligning the dish can start to occur. The default frequency of the Sky 'Digibox' is set to a transponder on the north beam. As you travel south and move out of the north footprint, you may need to change the default transponder of the 'Digibox' to match the south beam.

To change the default transponder setting, you will first need to access the hidden "INSTALLERS SETUP" menu. First press the "SERVICES" button on your Sky remote and then '4' to access "SYSTEM SETUP". Although it is not displayed, you will need to press '0' then '1' then 'SELECT' to access the "INSTALLERS SETUP" menu, then '2' to enter "DEFAULT TRANSPONDER".

The display will then show, from top to bottom:-

Frequency (GHz), Polarization, Symbol Rate (Mbaud), FEC and Save new settings.

Select "Frequency (GHz)" and by typing in the relevant numbers, change the settings from '11.778' to '11.720'. Using the arrow keys, change the "Polarisation" setting from 'V' to 'H'. When the changes have been made you will then need to "Save new settings".

Press "BACK UP" to return to main screen.



48cm 

60cm 

## FURTHER INFORMATION

For further information on satellite broadcasting and reception either contact the Maxview Customer Helpline or refer to one of the following contacts for the information required.

**Maxview Limited**  
Common Lane, Setchey  
King's Lynn  
Norfolk, PE33 0AT, England  
Customer Helpline  
TEL: (01553) 811000  
FAX: (01553) 813301  
e-mail: [cust\\_serv@maxview.ltd.uk](mailto:cust_serv@maxview.ltd.uk)  
website: [www.maxview.ltd.uk](http://www.maxview.ltd.uk)

**BBC Reception Advice**  
PO BOX 1922  
Glasgow G2 3WT  
TEL: (08700) 100 123  
FAX: (020) 8576 7466  
e-mail: [reception@bbc.co.uk](mailto:reception@bbc.co.uk)  
website: [www.bbc.co.uk/reception](http://www.bbc.co.uk/reception)

**Sky Digital**  
Grant Way, Isleworth  
Middlesex TW7 5QD  
TEL: (08702) 40 40 40  
e-mail: [skydigital@sky.com](mailto:skydigital@sky.com)  
website: [www.sky.com](http://www.sky.com)

**Astra Marketing Limited**  
The Progression Centre  
42 Mark Road, Hemel Hempstead  
Hertfordshire HP2 7DW  
TEL: (01442) 235540  
FAX: (01442) 235517  
website: [www.astra.lu](http://www.astra.lu)

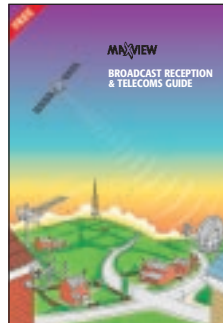
**Eutelsat Helpdesk**  
PO Box 846, Bristol BS99 5HR  
London SE8 4DG  
TEL: (0117) 954 9191  
FAX: (0117) 925 3525  
website: [www.eutelsat.org](http://www.eutelsat.org)

If you require any information on the products featured in this guide, please contact our Customer Helpline on 01553 811000 and we will send you a free copy of our Leisure Catalogue on our full range of leisure products.

For further information on TV & Radio broadcasting please request a copy of our free Broadcast Reception & Telecoms Guide.

Alternatively you can visit our website at <http://www.maxview.ltd.uk>

Please contact our Customer Helpline for a list of dealers from around the UK who can offer a demonstration of the Omnisat 'Through The Roof' satellite system from our Point Of Sale stand.



**MAXVIEW LIMITED**  
**SETCHEY, KING'S LYNN**  
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FAX: (01553) 813300  
e-mail: [cust\\_serv@maxview.ltd.uk](mailto:cust_serv@maxview.ltd.uk)  
website: [www.maxview.ltd.uk](http://www.maxview.ltd.uk)