

# Television on the move

**Bill Wright** considers the options for receiving good TV signals in motorhomes, caravans, boats, and even tents!



It used to be so simple. You arrived on site and put the aerial up. There were four channels at most and after a bit of aerial twiddling you accepted whatever reception you could get, and that was all there was to it, really. But now the options, and thus the decisions, have increased enormously. I'll try to guide you through the different ways of getting decent TV reception whilst you're out and about.

## Use the laptop?

If you are taking your laptop with you, as many people do these days to store and edit the holiday photographs and videos, perhaps you might not need to take a TV set at all, and in a small van or boat the space saved can be a boon. A TV tuner dongle will convert your laptop into a digital TV set, although of course you will still need an aerial.

For occasional short duration viewing, internet access via the mobile phone networks can provide low resolution streaming or high quality downloads from BBC iPlayer and its equivalents. In a 3G, or faster, coverage area this can work, especially if all you want to do is catch up on the news. Of course mobile or WiFi internet access in the van or boat is an absolute boon anyway, allowing you to get loads of info about the area where you're staying, and email pictures and movies home to show what a good time you're having! Incidentally, a crude but effective ploy in a marginal network coverage

area is to put the dongle in a waterproof bag and lift it aloft through a roof vent on the end of a bamboo cane. A 3m USB lead will allow the dongle to stand well above the roof, and the improvement in data speed is enormous.

If you camp in remote spots with no mobile phone coverage, this solution isn't for you, but if you are a frequent city visitor, typically camping in certified locations on the outskirts, it can work well.

Many of the larger sites operated by the 'big two' clubs have on-site WiFi, as do most yacht harbours and inland moorings. Prices vary a lot so ask before you buy. Have a scout round for the WiFi aerials, and park or moor as close to one as possible.

## Finding the solution that suits you

If you're still with us I guess the internet route isn't for you, so you'll want to know about aerials and dishes. There are several 'platforms', or TV reception technologies, so the first thing is to figure out which is best for you. The basic options are Sky, Freesat, Freeview, analogue via an aerial, and non-Freesat free-to-air satellite. If you opt for satellite you'll probably also have a minimal terrestrial set-up as a back-up.

So, consider your usage and circumstances.

● Do you have a mobile van or a static? Obviously, mobile use needs an aerial or dish that can be deployed fairly quickly once on site. A static van or a boat on a near-permanent mooring can have a domestic-style semi-permanent installation.

● Where do you go? For very remote or mountainous areas of the UK, or anywhere abroad, you should plan to have satellite as your primary TV reception method, with a cheap and simple aerial as a back-up in case there isn't a clear view towards the satellite.

● Do you go to the same site or mooring a lot? If so, the quality of terrestrial reception there and whether there's a clear view towards the satellite both need to be considered. Some sites in remote areas have a private 'self-help' TV transmitter or a wired TV distribution system, so don't assume the worst until you've actually investigated.

● How important is TV to you? Do you like to relax in front of the TV for hours each evening, or are you the type that paints the town red every night? Perhaps you spurn the telly in favour of cosy evenings with Gibbon's *Decline and Fall*. If the telly is just for the news and the weather there's probably no point in putting a lot of effort into getting perfect reception.

● How much effort are you prepared to put into getting good reception at each stop? If you like to time your lay-by breaks to coincide with Coronation Street then you need a reception method that is well-nigh instant.

● Lastly you need to think realistically about just what is a physically feasible installation on your van or boat – or tent!

By now you're probably thinking, "So I need either a dish or an aerial, or maybe both. I need Sky or Freesat, or Freeview." Take a look at Which Digital Platform to Choose, page 14, then come back here for a quick look at the pros and cons, for mobile home use, of each platform.

## Digital terrestrial television

DTT (Freeview) needs a signal from an aerial, so it will not work in remote areas where there is no terrestrial reception. In areas where analogue has been switched off though, the DTT signals have been 'turned up' a lot, so reception can be surprisingly easy, even from little local relay stations out in the sticks. Local relays only broadcast three of the six digital multiplexes though, so if you like to have a wide choice of channels in your rural idyll consider Freesat.

A UK-purchased DTT receiver or iDTV (TV set with DTT built in) should work in mainland Europe although the interactive features might not. In order to receive European VHF DTT on a UK-bought receiver you might need to set it to 'Ireland' in the installation menu. In case of difficulty there's always the supermarché, where local set-top boxes will be available. These will be compatible with your UK TV set because the connection will be via a Scart lead.

## Analogue TV through an aerial

Even though the digital age is here, don't forget analogue. The aerial requirements are basically identical. Any TV set bought for touring should include an analogue tuner (at the time of writing all do, but this could change). Many relay transmitters still broadcast analogue signals only, and some countries will retain analogue broadcasts for years to come.

Some parts of Europe (including the Irish Republic) still use VHF for analogue TV broadcasting. The analogue TV standard varies throughout Europe, so if you intend to spend a lot of time abroad and might want to watch the local terrestrial channels (weather forecast – 'Scorchio!') you will need a multi-standard TV set with an analogue VHF/UHF tuner. These are quite common because the market for TV sets is international. The Vision Plus range of caravan aerials includes some VHF/UHF products.

## Sky

If you are a keen Sky viewer you will probably want to take your Sky receiver camping with you. This is in fact literally what you are most likely to do, to avoid the hassle of getting your Sky card mated with a different receiver. It's a nuisance lifting the receiver out of the house and installing it in the van, but if you have Sky+ you will have continuity of recordings across the period when you are away. Remember, though, that Sky+ won't work without a dish installed, even if you only intend to watch recorded programmes!

## Freesat

If you don't like paying Sky, but need satellite reception because terrestrial is poor at your favourite sites, Freesat is the obvious answer.

It should not to be confused with 'Freesatfromsky', by the way. There are a few TV sets on the market that have Freesat built in, although at the time of writing there are no small screen ones suitable for mobile use.

When these appear they will have DTT built in as well and will be ideal for mobile use. Meanwhile, a £50 Freesat receiver will do the job. Freesat recorders will play back recordings without the need to install a dish.

### Non-Freesat free-to-air

Freesat receivers are very much based on the Freesat Electronic Programme Guide (EPG). If you just want to watch the normal mainstream British channels, that's fine. You'll find them all neatly listed along with programme details and times, and it's very user-friendly. But if you intend to travel beyond the reach of UK satellite TV, or if you have an interest in foreign or specialist channels, you might like to sacrifice the convenience of the Freesat EPG and buy a standard free-to-air digital satellite receiver.

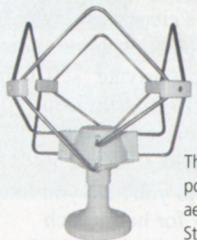
These are not expensive: consider Fortec Star, Manhattan, and EchoStar. These boxes list every available free channel, with the Freesat ones all mixed in with everything else. You can compile a 'favourites list' though, and still have easy access to everything that's available. As a compromise, buy a Freesat receiver with simple access to the non-Freesat channels.

### Very basic aerials

One of life's rules says that the more effort you put in the better will be the result, and this really does apply to aerials on mobile homes. The spectrum runs from set-top aerials (instant installation; low cost; very poor results except in good reception areas) up to large outside aerials (laborious installation, high cost; generally very good results).

If television is very low on your camping priorities, you can improve a great deal on the TV set's loop aerial with a small set-top aerial and enough cable to reach to the van window. Although TV signals will enter a metal-bodied vehicle, reception is usually much better with the aerial near the glass. The best set-top aerials are the log-periodic ones, such as the Antiference Silver Sensor or the Labgear

ANR310. At the time of writing the latter can be found in Asda badged as the Smart Price ANR310 at £5 – a terrific bargain. Aerials with built-in amplifiers can sometimes help a little, but they are not usually worth the extra cost. Very expensive elaborate-looking set top aerials are a waste of money.



The **Maxview Omnimax** is a very popular omnidirectional caravan aerial. Also consider the Status 315.

### Directional or omni?

Moving rapidly on to better reception solutions, let's look at 'proper' outdoor aerials. You might assume that all an aerial has to do is receive signals, but a really effective one will be directional, receiving from one direction only and rejecting everything else. The drawback to this, for mobile use, is that the aerial can't be fixed rigidly on the roof and forgotten because it has to be pointed in the right direction at every stop. So the big decision is whether to go for the convenience of an 'omnidirectional' (non-directional) aerial, or whether to use a directional one.

An 'omni' cannot discriminate between the signal and interference, so a directional aerial can work much better. I recommend you to use a directional aerial if possible; they are far more effective than omnis. But omnis are 'fit and forget' – a massive plus. There's no faffing around with the aerial because there's nothing to faff with. You simply turn the telly on and hope for the best. For those who move camp every day and feel that setting up even a simple directional aerial would be too much trouble, an omni on the roof could be the solution.

Many omnis come with an amplifier, or 'booster' built in, and these amps can provide a limited but possibly worthwhile improvement.



The **Status 530** allows full adjustment of direction and polarisation from inside the van.

### Directional aerials

Omnis will really only work in strong reception areas, and of course this excludes many rural locations. If you want to be able to get decent reception wherever the locals can, then you will have to use a directional aerial. The aerial also needs to be adjustable for polarisation, which is simply whether the rods need to be horizontal or vertical. The simplest installations have telescopic masts of some sort that fit into permanent brackets on the van. The mast and aerial need to have compatible fittings, so might be best bought from the same manufacturer. An example is the Image 420 aerial and any of the Vision Plus masts, both from Grade UK. Also see the Maxview B2005 and B2009 masts, which are compatible with any of Maxview's wide range of caravan aerials.

As you will have gathered, mast-mounted aerials require you to put your cagoule on and brave the rain in order to adjust the aerial while 'er indoors shouts "Better, better, back a bit!" The solution comes in the form of the permanently roof-mounted directional aerials that can be adjusted from inside the van or boat. The undoubted leader here is the Status 530 range, which allows you to raise and rotate the aerial and alter the polarisation from inside the vehicle. Believe me, this is so much better than going out in the wet!

### For the really determined viewer

For those who really like their telly and tend to stay on the same park for the whole holiday there's the option of a serious aerial mast with something impressive at the top. Both Maxview and Status do a good range of telescopic masts that can be bumper or A-frame mounted. Take a look at the Maxview

Unimax B2006 and the Status Uni Mast.

Alternatively there's scope for some good DIY here, using ordinary aerial masts or other tubes. There's nothing as effective as getting the aerial high up.

You can fix a large domestic aerial to your mast if you wish, but a practical and very cost-effective aerial for touring is a domestic log-periodic such as the Antiference LP28, together with a low gain (16dB or less) masthead amplifier (consider Proception, Labgear, and Antiference). If the campsite owner comments that your reception is better than he can get in the house then you're doing it right!

### Statics and normally-moored boats

Semi-permanent installations will owe more to domestic techniques (as discussed elsewhere in this Guide) than mobile ones. Mainstream aerials, masts, and amplifiers are the thing. 12ft masts are often the norm, with decent high gain aerials at the top. If reception is really poor at your static van an aluminium scaffold tube will cost about £35 and will get your aerial 20ft up in the air. You can sleeve a 1.5" aluminium aerial mast into it and gain another 8ft. The fixing needs to be pretty good though! If there's no convenient masonry you might have to use concrete.

### Aligning the aerial

I just love sitting in my motorhome watching the new arrivals trying to set their aerials up. It's better than watching the telly!

So don't provide amusement for that clever-clogs on the next pitch! Approach the problem scientifically. Find out in advance the directions of the likely transmitters, and look for a pitch that doesn't have an obstruction in that direction. Typical obstructions are barns (especially metal ones), the toilet block, American RVs, and dense clumps of trees with low branches. Pitches on high ground are good. If there's a hill in the signal direction get as far back from it as possible.

Don't take too much notice of other people's aerials – they might be pointing the wrong way and the polarisation will almost always be horizontal even when the transmitter demands vertical. (I'm writing this

on a campsite and I've just done a straw poll!!) Aerials on nearby houses are a much better guide. Use a compass in conjunction with transmitter information within this guide book. 'V' means 'vertical polarization' – the aerial rods should be vertical. You can figure 'H' out yourself! Local relay stations usually use vertical polarisation. The short rods on your aerial should be nearest to the transmitter.

Having set the polarization and rough direction, next optimise reception by fine aerial adjustment. You can't do it for digital reception by looking at the picture quality – digital doesn't work like that. A battery-powered in-line meter is the solution. These meters don't tune to an individual channel; they merely look at the whole band and give a general signal level indication, which is all you need. Keep a 10dB or 12dB in-line attenuator (signal reducer) handy to connect in front of the meter in strong signal areas, for more accurate alignment. Choose from these meters: SLX 2786R £13; Grade/Status/Vision Plus Signal Finder £16; Labgear TV Signal Finder £9; Fringe TV Signal Finder £30.



The Vision Plus TV signal finder from Status makes aerial alignment far easier

Having got the aerial sorted out, do a full digital auto-tune, which might involve a 'factory reset'. If there's no digital reception try analogue. If you have an adjustable 'booster' start with it at the minimum setting.

#### Domestic-type aerials

If you have a static caravan you should always buy an aerial of the correct UHF channel group for the transmitter you intend to use. Grouped

aerials work far better than wideband ones. If you are touring though, you have to use a wideband aerial. For mobile use, log-periodic aerials (which are always wideband) are undoubtedly the best choice. Log-periodics are compact and light, and one-piece so there is no assembly on site. They are flat, so they store easily. If you store the aerial in the van smooth the sharp element ends so they don't scratch things. See 'Buying a New Aerial' on page 96 for more about channel groups and log-periodics.



A domestic minidish on a tripod

#### Satellite equipment and alignment

The dish can be mounted in a number of ways. A simple solution is a ground stand such as the tripod pictured above. Ground stands have two major advantages: they can be placed in a position where there isn't a tree in the way of the signal, and they are cheap. They take a few minutes to set up though, and they take up space in the van when travelling.

Roof-top dishes vary from simple manual ones right up to horrendously expensive fully-automatic ones that find the satellite themselves. Maxview and Oyster are at the forefront of the mobile dish market.

Remember that you will need a multi-output LNB for a receiver that needs two dish feeds.



The Maxview Winder: a simple manually-operated roof-mounted dish which can be erected and aligned from inside the van.

Do your homework before you reach the site. Read David Sullivan's article on page 110. As soon as you arrive on site figure out which way is south-east, and choose a pitch with no nearby trees in that direction.

After a bit of practice on site you'll be able to judge quite accurately which trees will obstruct the signal because you'll learn the elevation angle of the satellite. A small satellite meter and a magnetic compass are essential. Find the approximate direction from the compass, then use the meter for exact up-down and left-right alignment. Mark the up-down position on the bracket to make the job easier next time – it doesn't vary much from place to place. If you get a high strength reading but no pictures you have the wrong satellite – move the dish round a tiny bit to the next one and try again. Some receivers will help with satellite identification. Believe it or not it's really easy to set a dish up, once you've learned how.

If you opt for a ground stand keep a 30m CT100 cable extension in the locker so if you do end up under the trees you can put the dish in the clear. From the LNB there should be a short cable, then a connection to the main downlead, so you can fit an in-line meter temporarily for alignment.

Alignment of the manual rooftop dishes is much the same, except you don't get wet. I have one vital piece of advice though. If there isn't an ignition interlock, find an infallible way of reminding the driver to lower the dish before setting off!

**Power** An inverter will produce mains voltage from a 12V battery, so get one and then you can choose from all the competitively-priced domestic mains-powered TV sets, receivers, and recorders. If you buy 12V products the choice is very poor, and the items tend to be over-priced.

If all your TV equipment is mains-voltage powered, you can run it directly from site hook-ups when available. Organise your mains wiring so that the power source can be the inverter or the hook-up, at the turn of a switch. Remember that 240V from even a tiny inverter can render you just as dead as 240V from the mains!

#### Aerial and satellite cables

Use a CAI-benchmarked CT100-type cable (with a copper-coloured foil screen and copper braid) for everything. Use a foam-filled rather than an air-spaced cable because damp gets into the latter. For larger vans or boats with several TV sets an aerial distribution amplifier should be used, with variable attenuation (signal level adjustment) on the input. Connectors should be 'F' types, and should be kept dry.

**Where to buy** 'Leisure' products tend to be overpriced, so check first to see if the product can be got from a normal domestic aerial supplier, DIY outlet, or a mail order outfit like CPC. For installations on statics and normally-moored boats I would treat the caravan accessory market as the last resort. Ship's chandlers often have better quality caravan items than caravan shops!

#### Manufacturers and suppliers

**Status** [www.gradeuk.co.uk/products/antennas/status.asp](http://www.gradeuk.co.uk/products/antennas/status.asp)

**Image** [www.gradeuk.co.uk/products/antennas/vpimage.asp](http://www.gradeuk.co.uk/products/antennas/vpimage.asp)

**Maxview** [www.maxview.co.uk/](http://www.maxview.co.uk/)

**Blake** [www.blake-uk.com/page/home](http://www.blake-uk.com/page/home)

**Antiference** [www.antiference.tv/](http://www.antiference.tv/)

**CPC** <http://cpc.farnell.com/>