

# Basic setup of satellite antennas

**The digitalisation of satellite channels** is progressing rapidly and soon there will be no more analog satellite channels in Europe. Once the conversion is completed old analog receivers are rendered useless and have to be replaced by digital set-top boxes.

In most cases it is sufficient to simply unplug the analog receiver and connect the antenna cable to the new digital box. As a general rule the antenna alignment should remain unchanged, unless the dish has not been aligned properly in the first place and needs fine tuning. All this should not pose a big problem.

If a new antenna has to be set up for the first time, however, the absence of any analog signal will create some difficulties. Since digital signals are much harder to find than analog signals, the search for the correct antenna angle

and alignment will invariably take longer than before. In the analog days it was quite easy to simply move the antenna until a blurry image appeared on the TV screen. A little fine-tuning was all that was needed until the TV screen showed a clear picture. This is not possible any longer with digital satellite reception. Weak digital signals do not translate at all into a picture on the screen which remains black until the signal strength has passed a certain threshold (approximately 30%) and a crystal clear picture appears on your TV set.

If you don't know where exactly to search for your desired satel-

lite your search will be in vain. As long as there are still some analog signals left, an old analog receiver for the antenna alignment will do a perfect job. But what to do after the switch-off of all analog signals? In this case a systematic approach is required.

If only a single satellite is to be received the antenna alignment can be fixed at the particular position. In order to align the dish correctly the elevation has to be adjusted properly using the scale on the antenna pole. However, the correct elevation depends on the local degree latitude. Below are the values for a satellite that is in a precise southern position (in a precise northern position when seen from the southern hemisphere):

<b>Latitude</b>	15	20	25	30	35	40	45	50	55	60	65
<b>Elevation</b>	72	67	61	55	49	44	38	33	27	22	17

For a satellite that is some degrees to the East or the West the elevation decreases. For a 10-degree deviation the elevation

decreases by a maximum of one degree.

Next, the hunt for a signal can begin by moving the antenna towards the desired satellite's position. In order to check the success of the search on the TV screen the digital set-top box has to be tuned into a channel on that satellite. Of course new receivers have a pre-programmed channel list, so selecting a valid channel should not be a problem. However, since transponder data do change in the course of time it is advisable to check the pre-stored data against the current SatcoDX frequency chart.

Unfortunately there is no scale on the pole for turning the antenna to the East or the West. This makes finding the correct

alignment as difficult as with a motorised antenna which allows receiving a great deal more channels without additional costs.