DW-RADIO

broadcast on shortwave – Tips and Information

Shortwave broadcasting still plays an important role on the worldwide information market. The improvements made in radio reception technology (smaller receivers, digital frequency displays, the possibility to store multiple frequencies) have in fact made this medium even more attractive. In many countries, where the use of a satellite receiver and the internet are forbidden or economically not realisable, shortwave radio is the only objective source of information. It goes without saying that shortwave signal quality cannot compete with that of regional FM-channels, but it has qualities that no other communication medium has to offer. Shortwave signals can be received all over the world using a small portable receiver.

Basic requirements for shortwave reception are: a radio set capable of receiving shortwave signals, batteries or a mains adapter, a list of frequencies for the required broadcasting station, a world time chart and an antenna. A mains adapter set is advisable when travelling.

Tip 1: – Obtain current programme and frequency information

Unlike FM, medium and long wave frequencies, shortwave frequencies have to be changed regularly. The main reason for this is the rather special propagation properties of electromagnetic waves in the shortwave range which are influenced amongst other things, by the time of day, the time of year and the number of sunspots.

As a result shortwave frequency lists are only valid for a period of 6 months, at the most. Representatives of the international broadcasting companies meet regularly to coordinate the distribution of shortwave frequencies in order to minimise overlapping and cross-interference. The various broadcasting companies usually want to broadcast at approximately the same time (e.g. in the morning and the evening) and because of this, despite careful planning, disturbance can still occur on the channel itself or because of interference from a neighbouring channel. For this reason it is wise to obtain a list showing the different frequencies available for a particular broadcast, in order to be able to tune into the frequency with the least amount of disturbance or interference at that time.

Tip 2 – The use of the entire frequency range of the required broadcaster.

Statistics show that poor reception is nearly always caused by the same factors: The whole spectrum of available frequencies were not tried, the user has only tuned into the known usual frequency or the listener tuned in at the wrong time (differing world time zones) or tuned in to an outdated frequency.
Almost everywhere in Europe **DW-RADIO**/German is available on at least one of the following frequencies:
6075 kHz, 9545 kHz or 13780 kHz.

In addition to this **DW-RADIO**/German can be picked up in Europe and other regions, on frequencies that are intended for other target areas. Those taking the time to tune

in to all the available frequencies will be rewarded with the best possible reception at their present location.

The unreliable character of the ionosphere (the layer of the atmosphere which reflects shortwave radio signals) is responsible for changes in reception quality which can change from day to day; in fact, even during a broadcast. In order to overcome this situation, it may be necessary to try another frequency, e.g. a frequency which is intended for a target area much further afield, using a different radio-path route and a different Deutsche Welle transmitter. A receiver which allows you to store multiple frequencies facilitates this process. It allows pre-programming of the available frequencies (using current frequency lists) for the target area before travel. Switching between available frequencies on arrival is very quick and easy and takes the harassment out of searching for the best frequency when abroad. A list of standard shortwave radio receivers obtainable lon the market is available free of charge from our Customer Service Department.

Tip 3 – Test your receiver before you go!

Another cause of a poor reception can be the receiver itself or its settings. It is not always sufficient just to tune in to the required frequency. Please read the instruction manual carefully, since most receivers require additional settings to be made. Below is a check list of further settings which may be required on your receiver.
Be sure to unlock the lock switch: This switch is to make sure that the receiver is not switched on inadvertently during travel, which would cause unnecessary battery use. In addition to this, it ensures that all settings, e.g. pre-programming, cannot be accidentally deleted.
Check the antenna switch: Make sure that the antenna switch is in the right position – e.g. telescopic or external antenna.
Mains Usage: What voltage is used in the country you are in? The mains adapter has to have the same voltage. Some adapters can be switched between 110v/220v. Don't forget to take a mains adapter set – the sockets are often different in foreign countries. Some mains electricity supplies are very erratic; should disturbances occur it may be wise to use batteries instead and perhaps change the location of the receiver (see tip 4).
Is the sensitivity selector set on high? For the majority of sets the highest setting is either, *DX* or *max*., the lowest setting usually *local* or *min.*

Tip 4: Receiver location – choosing the best position

If the receiver is used in a location which is unfavourable for the propagation of radio signals the reception will be of poor quality and in the worst case, there will be no reception at all. In buildings, especially those made of reinforced concrete, the radio waves are screened causing a reduction of the incoming signal strength. This may be to such an extent, that an external antenna is required. Finding the best position for your set is a case of trial and error, but experience shows that the reception is improved near windows or in the vicinity of metal piping (water or heating pipes). If possible try the reception in different rooms, especially when the rooms have windows facing different directions.

Fluorescent lamps, computers, televisions and other electrical appliances can cause interference when the receiver is used in their vicinity. As mentioned before, the

mains electricity can also cause a reduction in reception quality. If this is the case, only the use of batteries will solve the problem.

Tip 5: A simple external antenna

A wire antenna is the simplest external antenna but it can be very effective in increasing the reception quality. This type of antenna, which weighs next to nothing, can be packed easily and fits in everywhere. They are usually 3-7m in length and made of insulated copper wire. On one end, after the insulating casing has been removed, a jack plug is fitted (most radios use a 3.5 mm jack connector plug - check the user's manual to find out which is the correct plug for your set). This is then plugged into the antenna jack (Ψ) on the receiver. In case your receiver does not have an external antenna jack it is possible to attach the wire to the receiver's telescopic antenna with an alligator clip. The other end of the wire is bent into a small loop. The antenna can then be run along a wall, or be attached to a window frame. If possible, the antenna should be attached to an outside wall (horizontally or vertically) or hung out of the window as this will greatly improve the signal quality. Numerous shortwave receivers have a wire antenna as a standard accessory delivered with the set.