

## Analogue television

Traditional TV received via an aerial

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### More information section at [bbc.co.uk/reception](http://bbc.co.uk/reception)

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# Analogue TV reception – common problems

Analogue TV is the traditional way of receiving television via an aerial. It gives you a limited number of channels, usually BBC One, BBC Two, ITV1, Channel 4 and (if available in your area) Five.

For the best reception, you need the right sort of aerial, correctly positioned. Ideally, the aerial should be on the roof or high up on the outside of the building, though you may also get good results if it is inside, for instance in the loft, or even with a set-top aerial.

The most common reception problems are:

- a fuzzy or 'snowy' picture
- distorted sound
- jumbled teletext (Ceefax)
- no picture or sound
- ghosting
- patterns, dots, flashes, buzzing, clicks, loss of colour
- smooth, evenly placed horizontal bars

The most common causes of these problems are a weak signal being received by your TV, and interference. Occasionally the cause may be too strong a signal reaching your TV.

A weak signal may be the result of:

- a fault or maintenance work at the transmitter
- your aerial being faulty, broken or out of alignment, or the down-lead (the cable coming from it) being damaged or not connected properly
- a fault in your TV set

Interference can be caused by:

- electrical equipment
- radio communications
- the weather and atmospheric conditions

Your TV may be receiving too strong a signal if:

- you live close to a TV transmitter
- there are amplifiers in your aerial system

## Picture and sound problems

Many problems with the picture or sound are a sign that the signal reaching your TV is weak. These include a fuzzy or 'snowy' picture, jumbled teletext, distorted or intermittent sound, the 'Nicam stereo' sign repeatedly appearing on the screen, or no picture or sound at all.

If you are experiencing any of these problems, try to pinpoint the cause.

- Check **This week's transmitter work** at [bbc.co.uk/reception](http://bbc.co.uk/reception) to see if your local transmitter is affected by a fault or planned maintenance. If a transmitter is being worked on, there may be breaks in transmission or the signal may be temporarily reduced.  
Note: Five is not broadcast from the same network of transmitters as the other channels, so (if you can get Five) check to see if the problem is affecting all of your channels.
- Make sure your TV is working properly, especially if all the channels are affected. If possible, play a video or DVD to check the picture and sound quality. Make sure the TV is tuned to the correct channels (see your manual for more information).
- Check that the aerial lead is securely plugged into the TV or, if you have one, the video or DVD recorder. Check the connections between the recorder and the TV.
- If possible, check another TV set connected to a different aerial – for example, at a neighbour's – to see if it is also affected. If it is, there may be an unreported fault at the transmitter.
- If only your set is affected, your aerial may be broken or out of alignment, or the down-lead from it may be damaged. You may need to have the aerial checked, repaired or replaced.

Picture and sound distortion may sometimes be the result of too strong a signal reaching your TV. This can happen if you live close to a transmitter or if there are amplifiers in the aerial system. You can reduce the signal by fitting an attenuator between the aerial down-lead and the TV set.

### Aerials

An outdoor aerial can deteriorate or be knocked or blown out of alignment so that it is not pointing in the correct direction towards the local transmitter. The down-lead and connections can also become waterlogged or corroded. If you live near the sea, corrosion can happen quite quickly.

An aerial in your loft or roof space will not be as effective as an outdoor one. The signal level can also be reduced by roofing material (particularly when wet) and nearby buildings at the same height.

If you need to have your aerial checked, repaired or replaced, we suggest that you have this done by a professional aerial installer, registered with the CAI (Confederation of Aerial Industries). Go to [www.cai.org.uk](http://www.cai.org.uk) to find an installer in your area.

If you use a communal aerial, for example in a block of flats, you should report any faults to whoever is responsible for the block – the council, landlord or property manager.

For more information, see the **Television aerials** factsheet.

The BBC is not responsible for the content of external internet sites

# Ghosting

Ghosting is a double image on the TV screen. It happens when a signal bounces off solid objects (such as hills, tall buildings or even nearby tall trees) or reflect off shiny surfaces such as the sea, creating a second, delayed signal that arrives a fraction of a second later than the direct signal. If you live near an estuary or bay where the tide goes in and out a long way and your aerial points across the water, you may notice that the effect coincides with the tides.

Adjusting or replacing your TV aerial may help.

- Change the angle of the aerial so that it is not pointing directly at the transmitter.
- Alternatively, replace it with a more directional aerial that focuses on the main signal and ignores other signals.

We suggest that work on your aerial is done by a professional installer – see page 3.

# Interference

Interference can be caused by electrical equipment, radio communications or atmospheric conditions. Each type has different symptoms.

## Electrical interference

Effects of electrical interference include:

- ragged, moving horizontal patterns
- random white dots or flashes
- buzzes and clicks on the sound

The interference can be caused by anything powered by electricity, such as domestic appliances, switches, central heating thermostats and computers.

To find the source of the interference, leave the TV on and switch off or disconnect your electrical appliances – including the central heating or boiler – one at a time. If the reception improves when you switch off an appliance, then you have found the source. You may have a faulty appliance or thermostat that needs repairing or replacing.

Other possible sources of interference are:

- a TV aerial system that uses inferior components or is poorly installed
- electrical equipment outside your property – you may want to report this to Ofcom (see page 5)

An unusual colour effect on the TV screen may be caused by the magnets inside a hi-fi speaker, so don't put speakers on or near the TV.

## Ofcom interference investigation service

Ofcom, the independent regulator for broadcasting, can investigate sources of interference outside your property, such as high-voltage electrical equipment. They will ask for an assurance that your aerial system has been checked and there may be a charge for the investigation service. See the Ofcom website, [www.ofcom.org.uk/complain](http://www.ofcom.org.uk/complain), or phone 020 7981 3040 (9am–5pm); textphone (for deaf or hard of hearing) 020 7981 3043.

## Radio interference

Effects of radio interference include:

- moving, wavy or herringbone patterns
- a 'waffle' effect
- S patterns
- loss of colour

This type of interference is usually caused by equipment that emits radio waves, as used by taxis and emergency services, amateur and citizens' band radio, and mobile phone services. Most of this equipment is properly licensed and filtered, though some is not.

Radio interference can also be caused by equipment connected to the TV, such as a video or DVD player/recorder or a signal booster. Try disconnecting these and plugging the aerial lead directly into the TV aerial socket. If the interference disappears, one of the units is causing the problem. You can work out which one by reconnecting them one at a time until the interference reappears.

## Atmospheric conditions

During periods of settled fine weather, you may see smooth, evenly spaced horizontal bars on your TV screen – a 'Venetian blind' effect. You may even see other pictures in the background or the pictures may 'roll'. These effects are signs of co-channel interference, which happens when signals from different transmitters overlap because high air pressure (which produces fine weather) allows signals to travel further than normal. The effect is often more noticeable in the early morning and the evening, and can be particularly strong in coastal areas.

Another effect of high air pressure is that the signal can become weaker in low-lying areas.

There is no technical solution to this type of interference – broadcasters cannot prevent it and adjusting your aerial makes no difference. Reception will only improve when the weather changes.

Tall trees in the path of your aerial may affect your TV reception, and the interference may be worse if the weather is windy or wet. Heavy rain can also cause poor TV reception if water gets into the aerial or down-lead. Before having the aerial looked at, check This week's transmitter work at [bbc.co.uk/reception](http://bbc.co.uk/reception) to see if there is a problem at your local transmitter, and try to find out if it is only your TV that is affected, for example by asking a neighbour who also receives analogue TV via an aerial.

## Other features

### Teletext (Ceefax) and subtitles

Even if you have a good TV picture, you may sometimes have problems with teletext (Ceefax on the BBC, Teletext on other channels), including subtitles on teletext page 888. The usual effect is jumbled text, with words and letters missing. This is usually the result of poor reception because teletext data is more vulnerable to weak signals and interference. For more details, please see the sections on **Picture and sound problems** (page 3) and **Interference** (page 4).

### Widescreen

The shape of a TV screen is given as the ratio of its width to its height (the aspect ratio). A widescreen TV has an aspect ratio of 16:9, giving a 'letterbox' shape; a standard screen has a ratio of 4:3, a squareish shape. On a standard TV, displaying the full width of widescreen pictures means that there are black bands at the top and bottom of the screen.

Most programmes broadcast by the BBC and the other main broadcasters are now made in widescreen. However, on analogue TV most BBC programmes are broadcast in a compromise ratio of 14:9. This fills more of the screen, with narrower black bands at the top and bottom.

If you watch analogue TV channels on a widescreen set, you may need to adjust the picture settings to get the best shape and size. Please see your manual to find out how to do this.

### Recording with PDC and VideoPlus+

These are both ways of setting a video recorder to record automatically. For both, you need to enter a programme's code number, which you can find in listings magazines, newspapers and online. Please see your recorder's manual for full instructions.

PDC (Programme Delivery Control) operates on BBC One, BBC Two, Channel 4, Five and some (but not all) ITV regions. It uses a signal sent from the transmitter just before the beginning and just after the end of the programme. The signal starts the recorder when the programme begins and stops it at the end. Even if the programme starts early, is delayed or overruns, your machine will record it all.

VideoPlus+ does not use the transmitted signals, but sets the recorder to start and end at the time the programme is scheduled to begin and end. It uses the recorder's clock to do this, so you need to make sure the clock is showing the correct time. When you have entered the programme's code number, it is best to adjust the setting to make the machine record past the time the programme is scheduled to end, in case it is delayed or overruns.

If PDC or VideoPlus+ does not work, there are several possible reasons:

- The code number may have been wrong.
- The programme may have been rescheduled.
- A power failure before or during the programme may have disrupted the timing.
- With PDC, the signal may not have been transmitted correctly.
- With an ITV programme, you may be in a region where PDC does not operate.