

# FACT SHEET

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## Telecom Noise interference – Electric fences

### BACKGROUND

If you're hearing electric fence clicks on your telephone line, it's virtually certain you'll be getting reduced Internet performance on your dial-up connection. This is because the clicks cause errors in the modem data stream, which means the modem is always re-transmitting data.

This will happen even on a perfectly good telephone line.

This fact sheet explains how electric fences cause the clicks, what you can do about it, and how to get the best performance out of your dial-up connection.

### YOUR FENCE COULD BE THE PROBLEM

#### Finding the problem fence

It can sometimes be hard to find the electric fence that's causing the problem. It could be anywhere along the path of the telephone cable - from where it starts at the telephone exchange or roadside cabinet to the customer who is furthest away.

Often the fence owner doesn't get interference on their own line, but their neighbours do - and those neighbours could live several kilometres away.

#### Fixing the problem

Complete the five-step electric fence check if your fence is causing the interference.

- Find out where there are telecommunications cables or phone lines on or near your electric fence. This includes both buried and overhead wires and cables. They almost always run along or near the roadside reserve or along driveways. A marker post or grey connection pillar should be nearby. Call Telecom on 124 for help if you can't work out where they are.
- Identify the electric fence wires and connecting leads within 100 metres of the phone lines and running either parallel or nearly parallel to them. Long sections running parallel to the phone lines and feeding other fence sections are more likely to be a problem than short sections that go nowhere else.
- Check the current in these wires. To do this, you can use a Gallagher SmartFix or StaFix Fence Compass, or a Speedrite Fault Finder or Pakton Power Probe. The current in a well-maintained fence should be less than two amps per kilometre of energised fence line. If it's higher, there could be a short on the fence, too much overgrowth, live wires contacting the ground or old deteriorating insulators.
- Find a way to feed the main supply through sections of fence further away from the phone line if, after fixing faults, the current is still too high. For example, feed the power out through fences in the middle of the farm, away from the phone line, rather than through the roadside boundary fence next to the phone lines or cables.
- Check the earthing system meets the manufacturer's instructions. Make sure it is at least ten metres from any other earthing system. Also check the energiser, earth electrode connecting lead and output leads are well clear of phone lines.

Please seek expert advice before constructing, extending or altering electric fences to minimise the risk of them interfering with your or your neighbour's phone line.

Don't be tempted to increase the size of the electric fence energiser to overcome poor electric fence performance due to the lack of fence maintenance. Instead, fix the faults on the fence.

How to lay out your fence

The ideal way to set up your electric fence to minimise interference is to feed the power out from the energiser in a 'star' fashion, with no closed loops, and only low currents in those parts of the fence that closely parallel phone lines.

## **NETRIGHT**

Check your modem performance by using a free dial-up test line. NetRight is the free dial-up test line that accurately tests your modem. NetRight also has suggestions on diagnosing and fixing electric fence noise.

Simply type the following web address in to your internet browser  
<ftp://download.xtra.co.nz/telecom/netright.isp>

## **OTHER CONTACTS**

- Tru-Test - phone 0800 878 837
- Gallagher Animal Management Systems - phone 0800 731 500

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