

# Trouble-shooting your electric fence

If you are experiencing problems with your solar powered electric fence energizer, the likelihood is that the cause lies with the fence itself and not the energizer. There is a procedure which will eliminate most of the common failures.

To get to the root of a problem you need to have access to a “multimeter” which will read to 12 volts, and preferably an electric fence tester as well.

The most likely causes of poor performance are either a poor earth, or that your fence is shorting to ground. We have a section on earthing systems, please take a few minutes to read this, then check that you do have a good system.

Shorting to ground is usually weeds, long grass, spiders webs, or even constant rain. We can't do much about the rain, but you need to regularly check the fence line for any of the other problems. With a mains powered system this is not such a problem as you have access to the national grid with almost endless supplies of electricity. Any portable system does not have the reserves to have current draining in this way, so a clean fence is vital.

The next issue is the type of medium used for the fence itself. Top of the line is wire, this conducts far better than anything else. Fence tape is convenient, easy to reel out and in again but according to the electric fence “Bible” produced by Gallaghers, who invented the electric fence, poly-tape can have a resistance of 8500 ohms/km, standard poly-wire 6000 ohms/km whereas wire can be up to 80 times more conductive. If you are using tape or string, you therefore need to be much more vigilant! Joins in tape or string are even more of a potential problem, best solution is to melt off about 50mm of the plastic from each part, then twist the wires remaining together, and then make a knot in the tape. If all of this has not resolved your issue please use a multi-meter to check the voltage in the battery. Our units have an electronic cutout which stops the output shock when the battery drops below about 5.5 volts. If your battery is low, there are a few checks to make. Take the leads off the battery, connect your multi-meter to the appropriate wire and check for voltage. If there is any output, the panel is working. They either work, or they don't! As long as the charger is inputting above the voltage level showing in the battery then it is charging. (Eg if your battery is showing 5.9 volts and the panel 6.2 volts then it will be getting some charge. (6.5volts would be much better!))

Try changing the way the panel is facing, it may not be getting the full potential of the available sunlight. The original instructions tell you to have the unit facing north, and the panel should be at about 45 degrees from horizontal, especially in times when light is low, e.g. winter time. It should also be mounted at least one metre above the ground in order that air is able to freely circulate underneath it to prevent moisture being trapped there and being drawn inside as the energizer cools down at night.

Winter with its weaker sunlight and shorter days, when coupled with any of the issues above, will compound the effect.

If your unit is in a valley, is it getting enough sunlight? It is especially important in the Winter-time to maximize the possible sunlight hours. Topography, cloud cover and bush shadow will all have undesirable effects.

Next, assuming that the battery is at a reasonable level, check the output from the red and black posts. This should be measured with the fence disconnected. If there is a good output, the problem lies in the fence system, not the energiser. If the output is less than 6000 volts there could be a problem with the energizer itself. Please consult with us if this is the case.