

## Finding faults with the Electric Fence POWER PROBE

2. At each intersection check readings in each direction.



No current and no arrows means **not** 'this way'

1. At the beginning of the fence, A fault is indicated.



Arrow says 'this way'

Voltage 1.5 KV is **lower** than usual  
Current 9 amps is **higher** than usual

3. Keep following the direction arrow to the fault.



Arrow says 'this way'

As easy as  
1.. 2.. 3



### Types of faults

There are two common types of faults on electric fences:

1. An OPEN CIRCUIT is where the live wire is broken. In the sections of fence after the break there will be NO voltage. These are relatively easy to find by testing the fence for voltage.
2. A SHORT CIRCUIT is where the live wire touches ground or an earth wire, or an insulator breaks down. This leads to a reduced voltage throughout the system and no (or little) voltage at and beyond the fault. When a SHORT circuit occurs a large amount of current flows through the live wires.

### Checking your fence

**VOLTAGE:** Use the POWER PROBE to measure the voltage on the fence by placing the metal tip over the live wire and pressing the **PRESS** button. The reading is shown by the 2 digits on the left side of the display. If it is **lower** than usual then you may have a short circuit. To be an effective barrier the fence should read higher than 2.5 KV. For **Bi-Polar** Energiser users: A "+" sign in the middle of the LCD shows that the voltage polarity of the wire is positive. This is helpful in determining which of the two live wires you are testing in a Bi-Polar system.

**CURRENT:** The POWER PROBE will also be measuring current flow in the fence when the **PRESS** button is pressed. Current flow is shown on the right side of the display. A **higher** than usual reading indicates that you may have a short circuit.

grounded metal) on your fence and "find" them. The experience will be invaluable when you come to find "real" faults. Get to know the "usual" current used by your fence and the "usual" voltages around the system. As a guide, usual current will be approximately 1 amp for every 4 kilometers of live wire. This will also depend on seasonal conditions such as grass and moisture.

### Fault Finding Technique

**Always start close to the energiser** - (But not within 30cm). Where the lead out wire connects to the fence is a good place to start. This way you will always start on the energiser side of a fault.

1. Place the metal tip over the lead out wire and press the **PRESS** button. If the voltage is **lower** than usual and the current is **higher** than usual you may have a short circuit. (see 'Checking your fence') The fault direction arrows will light when the Power Probe calculates that the leakage (current) is worse (**higher**) than an acceptable value.
2. Follow the direction arrows towards the fault. Check the fence at regular intervals and at every side fence or intersection, also each side of joins and underground cables.
3. If the Power Probe shows faults in more than one fence line or wire **ALWAYS** follow the direction with the worst (**highest**) current reading.

Note: for a multiwire fence the current flow will be seen on the "feed" wire but not on the "blind" (dead-end) wires.

Take the time to "play" with the POWER PROBE. Place pretend "faults" (short the live wire to