

Sureguard


Electronic Cat Fence

15m* Fence Barrier Kit


(extendable to about 250m)

 Solar Powered



 Solar Pingg-String Energizer & Battery



 40 Wire Supports + 1 Cable Tie

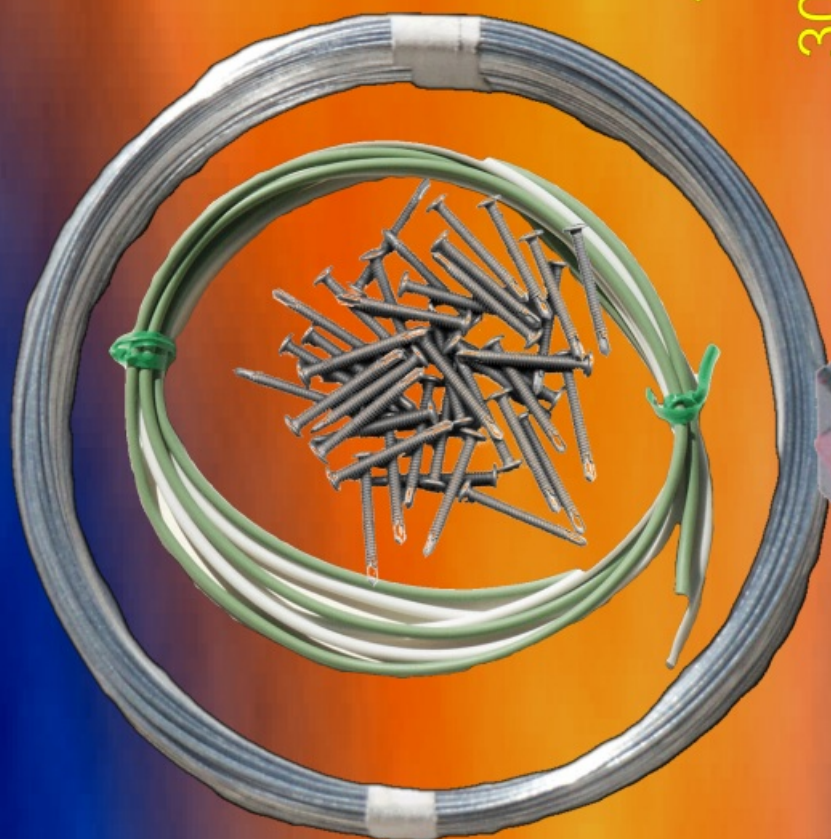


 30m Barrier Wire, 40 Screws,
Pair Insulated Cable



Australian Patent
No.2005100420

Item Code
707



How Does the Pingg-String Fence Work?

The PinggString is designed to keep animals within an area, or prevent undesired animals from entering. High voltage electrical impulses from the "Live" terminal of the energizer are applied to the fence wire to make it "live". This impulse lasts only thousandths of a second but is repeated at about 150 pulses per minute. An animal that strays into contact with the fence wire completes an electrical circuit with its body. The electrical pulse produces a muscle contraction which is sufficiently unpleasant to cause the animal to avoid the wires.

How Do I Operate the Energizer?

Mounting Post:

To operate the device it is essential that you secure the Mounting Post to the case of the energizer exactly as shown. Notice that the batteries are uppermost. Remove the red backing tape off the post. Do not touch the adhesive. Align the post on the back of the case and push firmly into place. Allow 24 hours for the adhesive to set. Do NOT skip this step!



Solar Power:

The solar panel is located inside the energizer under the clear hinged lid. It produces electricity from visible light, not heat. The day can be cold or hot but electricity is still generated. During cloudy conditions, the panel will generate power but in lesser amounts. During these times the reserve energy from the battery starts to be used. However, once bright sunshine reappears, this battery is boosted back to full charge again.

To properly operate the solar energizer take care that you set it up as follows:

1/ Install the mounting post **vertically**. It may be pushed into the soil or attached to another structure.

2/ The solar panel **MUST FACE NORTH** in Australia. To check the North direction, stand behind the post & energizer at 12-noon with the shadow at your feet. You are now facing North. Note 1: During daylight-saving-time use 1pm instead of 12-noon. Note 2: For locations in the Northern Hemisphere, face the solar panel south.

3/ The angle of the solar panel to the horizontal **MUST** be 30~45 degrees. If you attach the energizer to a vertical post, as described above, the angle will be correct.

4/ It is vital that **NO SHADOWS** fall on the solar panel between 9am and 3pm. Any shadowing, however small it is, will cause the whole panel to cease operating and your battery will go flat. Prolonged operation under such conditions will greatly reduce the life of the battery.



Symbols Used Below: ○ No Light ● Constant Light ● Light Flashes ON & OFF

NORMAL OPERATING CONDITIONS	INDICATOR LIGHTS		
	POWER	FENCE	FAULT
The device has power. Fence is OFF.	●	○	○
The device has power. Fence is ON.	●	●	○



Control Panel:

The Control Panel has a push button switch and three indicator lights. The push button switch is used to stop & start the device. The indicator lights show whether the device is operating correctly or what fault has occurred. To start the device operating, press & release the push button switch. To stop the device operating, press & release the push button switch again.

FAULT CONDITIONS	INDICATOR LIGHTS			PROBLEM SOLVING
	POWER	FENCE	FAULT	
The device has no power to operate.	○	○	○	#1
Battery is low. Fence is OFF.	●	○	●	#2
Battery is low. Fence is ON.	●	●	●	#2
Fence has a Fault.	●	●	●	#3
Battery is low. Fence has Fault.	●	●	●	#3
Possible device malfunction.	○	○	●	#4

How do I Problem Solve Faults?

#1 - Device has no power

- Make sure the positive terminal of the battery connects to the positive terminal of the battery holder.
- Make sure the battery terminals are clean.
- Charge the battery by having full sunlight shining on the solar panel.
- Replace the battery.



* Only operate with recommended battery (order type Sureguard Model #201)
* Do not use non-rechargeable batteries
* Do not operate without batteries
* Do not connect to mains operated equipment

#2 - Power source low

- Has the device worked without fault for more than 18 months? Then replace the battery.
- Has the weather been continuously cloudy for a long period? Then your batteries are low but the device should operate during daylight hours. After a full day of sunlight, full 24 hour operation should be resumed. NOTE: Device will pulsate more slowly while battery is low.
- Has the problem occurred during the first 4 weeks from installation, or a re-location? Your solar setup is wrong. Re-read installation instructions.
- Has the problem occurred in the first winter from installation? Your solar setup may be slightly wrong or marginal.

#3 - Fence fault

- Perform the following self-test: Disconnect the energizer's output leads from the fence wires and make sure they touch nothing or each other. Switch the energizer ON. Wait 30 seconds for it to measure the output voltage. If the fault light comes on again then the fault is internal to the energizer. Call Sureguard & ask for Technical Assistance.
- If the self test is okay then reconnect the output leads to the fence wires. Break up your fence into several sections. Energize the first section. If this section is okay then the fault light will remain off. Next, energize the first and second sections. If section 2 is okay then the fault light will remain off. Continue this procedure until the fault light indicates which section causes the fault. Also, keep within the maximum distance rating of the energizer. **Note:** The in-built functions (Advanced User's Section) may help you to further problem solve the fault. Refer to functions #1,3,4 & 5.

#4 - Possible device malfunction

- Try resetting the fault indicator (see below). If the same fault comes back then call Sureguard & ask for Technical Assistance.

How to reset the fault indicator:

Press the push button switch to switch OFF the fence. The fault light will continue to flash. Wait 5 seconds. Press the push button switch again to switch ON the fence. This will clear the fault light. If the source of the fault continues then the fault light will come on again. You must rectify the fault to maintain a reliable fence.

Maintenance

1/ Keep the solar panel clean. Dust & bird droppings will cause the battery to go flat. 2/ Replace the battery after every 2 years of use. Use only the battery supplied by Sureguard. This will maintain proper performance & not invalidate your warranty. 3/ Do not spray chemicals into the device. 4/ If water accumulates inside the case then clean the two drainage holes at the lower two corners of the case.

Advanced User's Section

These additional functions are not required for basic operation of the energizer. They provide customized options & additional information for problem solving. The method to select a function is as follows: 1/ If the fence light is ON then switch OFF the fence. 2/ Press AND Hold the push button switch down until the three indicator lights glow. 3/ Immediately release the button. 4/ Immediately press the button the number of times for the function you want to select. For example, press three times to report the average fence voltage (see below).

Functions #1 to #8:

#1 Reports more information about a fault. Count the number of beeps reported. The number meanings the following:

- 1-Beep: No fault recorded.
- 3-Beeps: The output voltage has been low for a prolonged period. Probably indicating shorted wires.
- 4-Beeps: The internal battery is nearly exhausted. Check solar setup. Recharge in external charger. Or replace battery.
- 5-Beeps: Solar panel orientation is incorrect or panel is experiencing shading. Rechargeable battery could also be too old. **Note:** the mechanism takes 2 weeks to detect this kind of fault.
- 6-Beeps: The output voltage is going low intermittently. Probably sparking somewhere on your fence.
- 7-Beeps: Device malfunction. Contact the manufacturer.

#2 Reports the State of Charge of the battery at the start of solar charging today. Count the number of beeps. The number will be 1-10 meaning 10% to 100% charge.

#3 Reports the average fence voltage measured over the last 60 Seconds. Count the beeps. For example: counting 4 beeps followed by 2 beeps means 4.2kV. (kV meaning kiloVolts. i.e. 4.2kV is 4200Volts). Values between 0.1kV & 0.9kV are reported as a single digit. Values with zero as the second digit are rounded up one, so 4.0kV will read as 4.1kV. Typical values will depend on your fence design but could be from 2.5kV to 7.5kV. The fault indicator is triggered below 2.1kV.

#4 Reports the minimum fence voltage today or from the last time a reading was taken. Small fluctuations will naturally occur over a 24-hour period. Large fluctuations may indicate intermittent faults or aged fence components. **NOTE:** To measure the un-loaded terminal voltage of the energizer disconnect the live fence wire. However, it is important to connect the energizer's earth terminal to the fence earth, otherwise the reported minimum voltage will be incorrect.

#5 Reports the maximum fence voltage in a similar way to the minimum. This reading gives you a reference point for interpreting the minimum reading.

#6 During a fault, the device will sound an alarm every 50 seconds to draw your attention to the device. This function switches the fault alarm sound OFF. Re-applying power will activate the alarm sound again. **NOTE:** The device mechanism makes a slight sound during operation. This is normal. It is not the alarm.

#7 When power is generated at the device output terminals, the device will simultaneously sound a CLICK. This function makes the click sound quieter. Re-inserting the battery will activate the click sound again.

#8 If you press the switch the wrong number of times and want to cancel then just press 8 or more.

Disclaimer Notice: Do not use an electronic barrier if failure of the system could result in personal injury or property damage.

Sureguard Electronic Cat Fence

15m Fence Barrier Kit

Cat Freedom! No Risk!



Would you like to give your cats the freedom to roam your garden in safety?

The Sureguard Pingg-String Cat Fence will protect your cats.

This electronic fence will stop your cats escaping from your garden.

How Does it Work?

Simply install the Barrier Wire at the top of your existing fence. An electronic device called a *Pingg-String* Energizer puts a special electrical impulse on the Barrier Wire. This impulse feels like strong static electricity. Your cats will quickly learn that touching the wire is unpleasant. Suitable for all cats including long haired breeds..

NOTE: The Ping-String Energizer is not the same as a farm electric fence. The electrical impulse will not harm your cat. It is illegal to use a farm electric fence on cats.

Stop Fence & Gate Climbing:

This kit is intended to stop your cat **climbing** over fencing & gates. It is suitable for all types of fences, provided you can install the Wire Supports every 75cm along the top edge of your fence, no more than 2cm below the top. The containment area must already be fully fenced.

This kit is generally not suitable for pool, weld mesh, or brush wood fencing.

Barrier Design:

This Pingg-String Starter Kit comes complete for fences up to 15m long. Accessories are available to extend this length up to 250m. Insulated cable is also available to protect single & double gates and to connect sections of fencing separated by distance. You can easily customize the barrier design to your own particular situation.

It is important that you install the barrier around the full containment area. Do not leave any points unprotected. If you only block one area your cat will learn to escape from the unprotected area.

Example #1

The red circles at the top of the fence represent the Barrier Wire energized by the electrical impulse. This is called the "Live" Wire & is connected to the "Live" Terminal of the Energizer.

The green circle lower down the fence represent the "Earth" Barrier Wire. It is connected to the "Earth" Terminal of the Energizer.

It is important to understand that your cat will only feel the electrical impulse when it touches the Live Wire and the Earth **simultaneously**. Very little is felt when touching only the Live Wire.

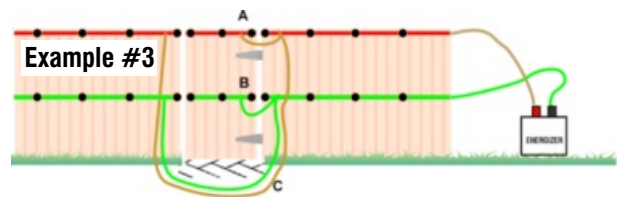
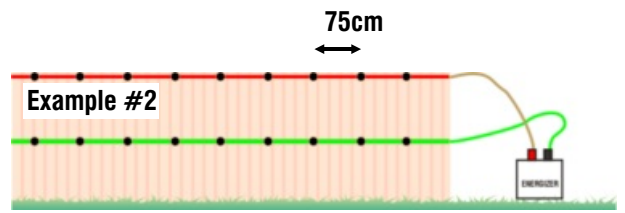
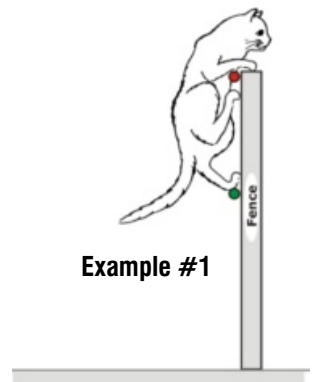
Example #2

The red line represents the "Live" Wire. The green line represents the "Earth" Wire. The black circles are the Wire Supports.

Special insulated cable connects the Energizer to the barrier. This cable is illustrated in green for the Earth Wire & beige for the Live Wire.

Example #3

This example shows wiring a fence with a gate. On either side of the gate, terminate the Barrier Wires as close to the fence edge as possible. Install Barrier Wires on the gate using at least three Wire-Supports per wire. Points "A" & "B" show the insulated cable used to make a flexible connection from the Barrier Wires on the fence to the Barrier Wires on the gate. Point "C" shows a pair of insulated cables used to connect together the Barrier Wires on either side of the gate. Connect Live Wire to Live Wire, and Earth Wire to Earth Wire. This design protects the gate & allows it to be opened freely. Double gates can be protected in a similar manner. (Special insulated cable is available in 5m, 15m & 30m lengths.)



[...Continue reading on the inside of this card.](#)

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707



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Made in Australia
by Power Innovations

Australian Patent
No.2005100420

For New South Wales (ONLY) residents we are obliged to highlight the following regulation:
This device may be "...used inside a fence through which animals cannot pass and that is not less than 1.5m high."

Installation Guide

For reliable containment, you must:

- Install the barrier around the full perimeter of the cat's containment area.
- Never alter Sureguard's recommended design or materials.
- Never install insulated cable other than the special insulated cable supplied by Sureguard.
- Never force your cat to touch the Barrier Wire.
- Maintain the Barrier Wire by ensuring no plant, tree, vine, or foliage touches the Live Barrier Wire.
- Maintain the tension in the Live Barrier Wire. The Live Barrier Wire must not touch the metal fence. Re-tension the Live Barrier Wire as required.



FIGURE 1

Figure 1 & 2

Screw the Wire Support as close to the top of the fence as practical, no more than 2cm from the top. Space the Wire Supports no more than 75cm apart. Some fences may require a 60cm spacing in order to have regular spacing between posts. Follow this same procedure for all other fence materials except picket fences as explained in Figure 5. Substitute masonry fixings on brick fences.



FIGURE 3

Figure 3

The hole which the Barrier Wire is threaded through must be uppermost.

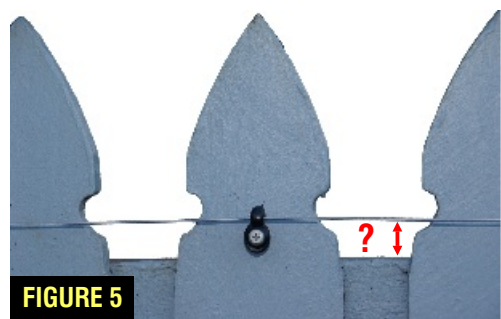


FIGURE 5

Figure 5

On a picket fence, attach the Barrier Wire above the horizontal rail. Choose the height so when your cat climbs and places its front legs between the pickets, your cat will touch the Barrier Wire.



FIGURE 7

Figure 7

At each change of direction, tie off the Barrier Wire at a Wire Support. Apply just a little tension to ensure the Barrier Wire is straight.



FIGURE 9

Figure 9

To connect insulated cable to the Barrier Wire, simply wrap the exposed cable around the Barrier Wire.

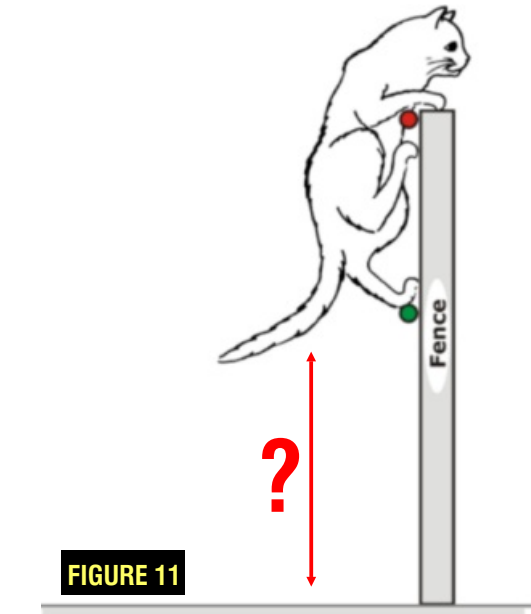


FIGURE 11

Figure 11

Install an Earth Wire lower down on the fence. The height of this wire is **critical** for proper operation of the barrier. Examine your fence for signs showing where your cat's back legs are scraping the fence. Install the lower wire at this height so your cat will naturally touch the lower wire while climbing. Remember, your cat will only feel the correction from the Live Wire while simultaneously touching the lower Earth Wire.



FIGURE 2



FIGURE 4

Figure 4

The Live Barrier Wire must follow the contour of the fence. Use extra Wire Supports where a change of height is required.

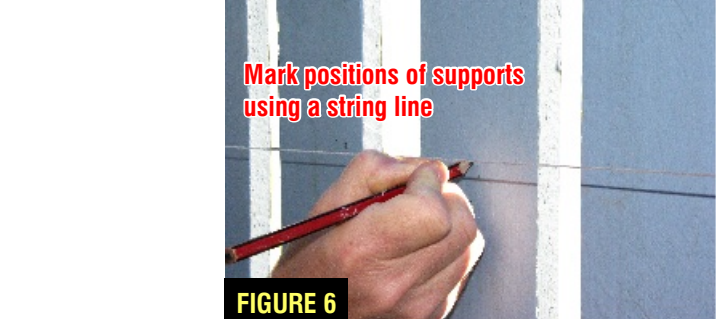


FIGURE 6

Figure 6

Use a string line to mark the position of the lower Wire Supports so the Barrier Wire will look straight.

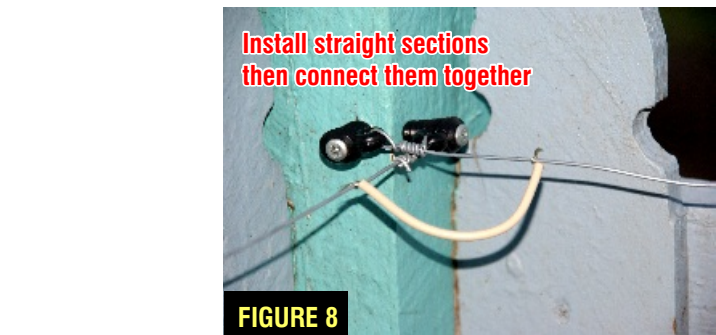


FIGURE 8

Figure 8

At corners, connect the Barrier Wires in each direction using insulated cable.

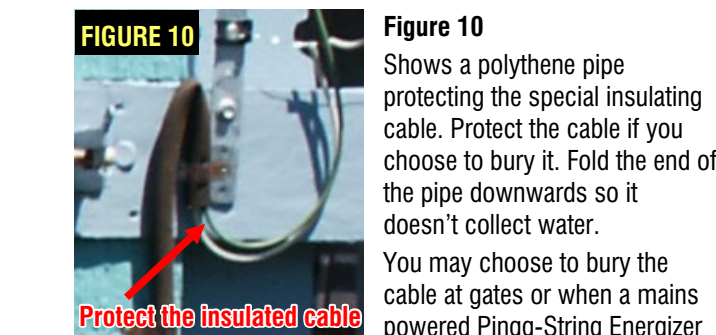


FIGURE 10

Figure 10

Shows a polythene pipe protecting the special insulating cable. Protect the cable if you choose to bury it. Fold the end of the pipe downwards so it doesn't collect water. You may choose to bury the cable at gates or when a mains powered Ping-String Energizer is located some distance from the fence.



FIGURE 12

Figure 12

Shows the Solar Energizer attached to the fence. The Live Wire of the Energizer is attached to the top Live Wire. The Earth Wire of the energizer (green) is attached to the bottom Earth Wire.

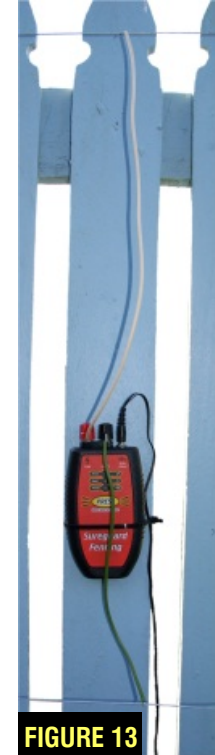


FIGURE 13

Figure 13

Shows the Mains Powered Energizer attached to the fence by a cable-tie. You may choose to locate the energizer up to 30m away from the fence by using the special insulated cable.