PORTABLE SOLAR FENCE ENERGIZER

S20

Instructions - ENG

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Gallagher S20 Portable Solar Fence Energizer User Manual

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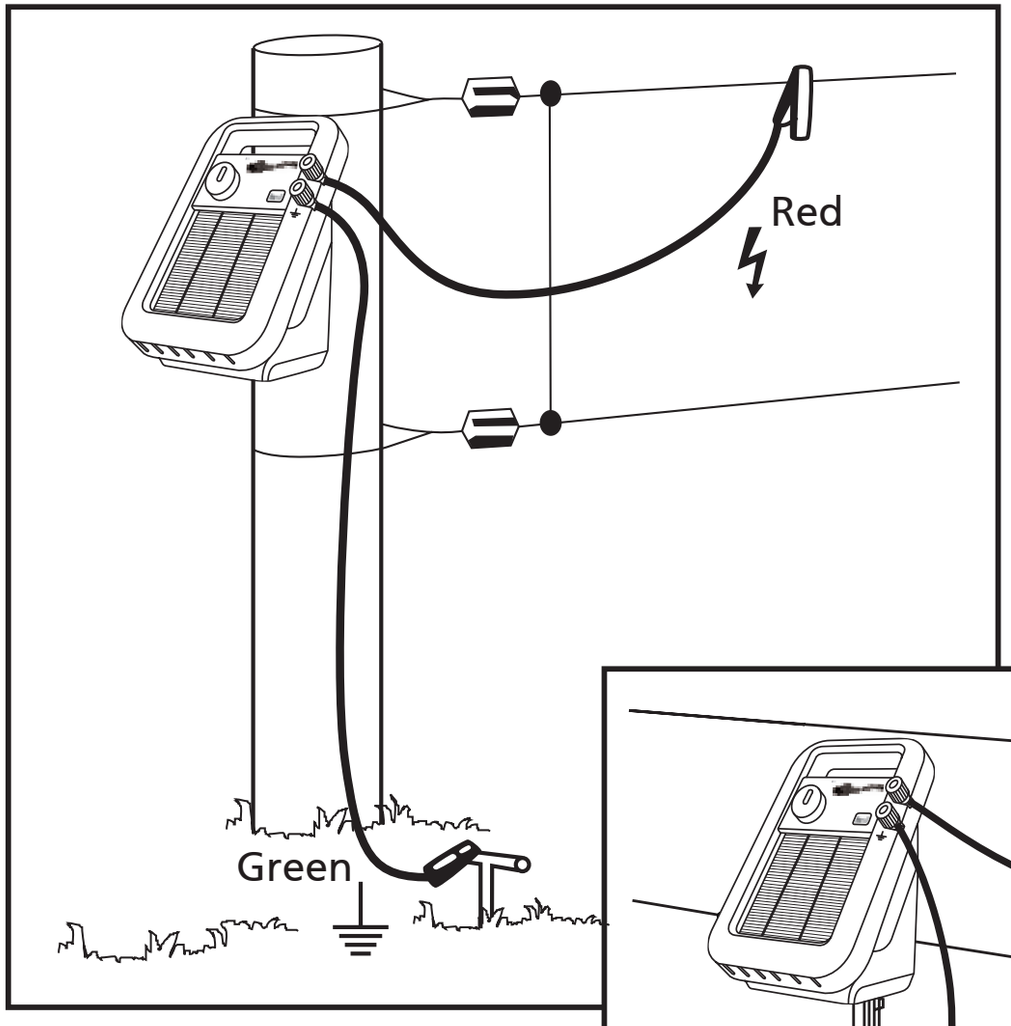
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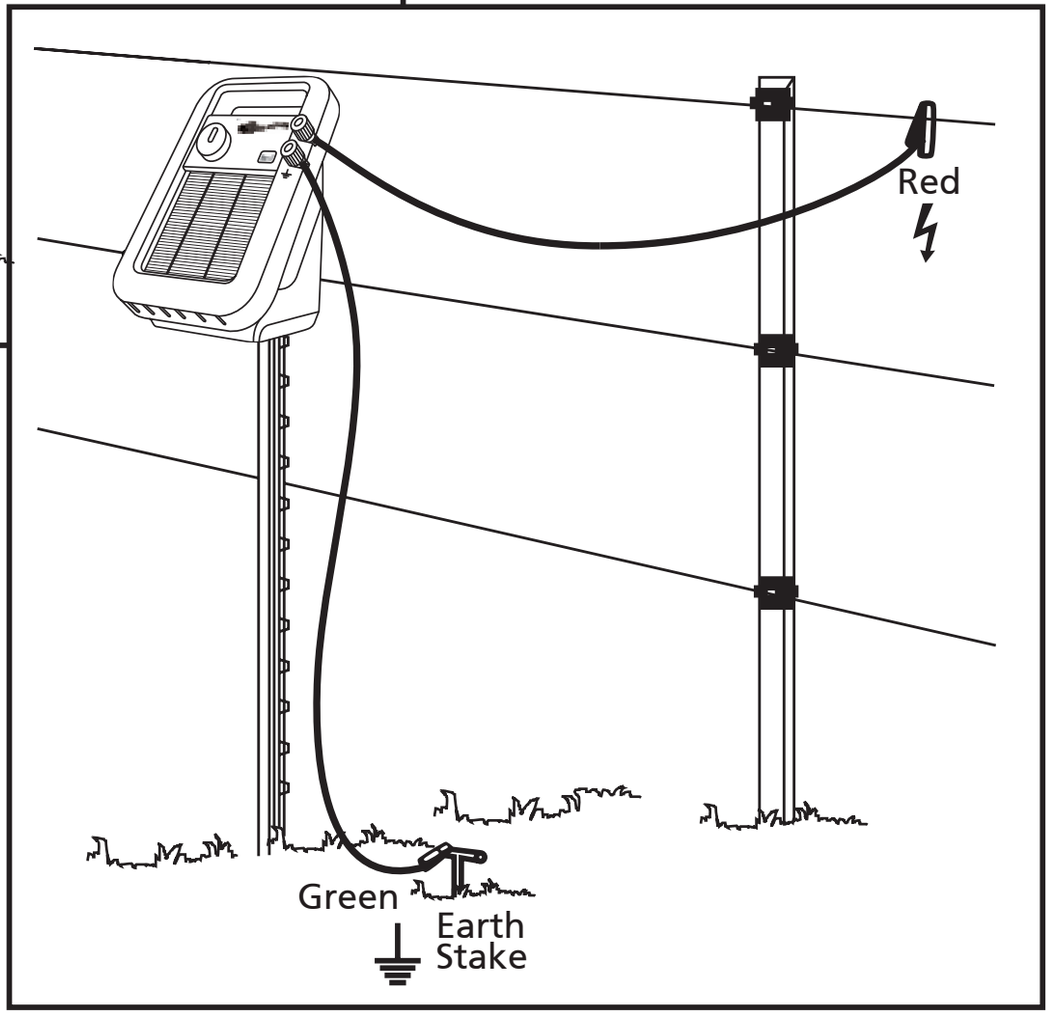
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Red
Green


Red
Green
Earth
Stake

IMPORTANT INFORMATION

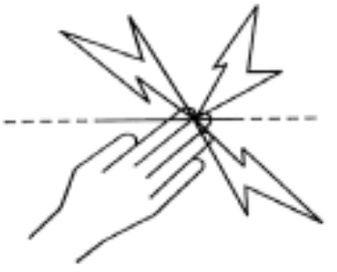
Warning: Read all instructions

- **WARNING** - **Do not connect to mains-operated equipment**.
- Avoid contacting the fence with the head, mouth, neck or torso. Do not climb over, through or under a multi-wire electric fence. Use a gate or a specially designed crossing point.
- Do NOT become entangled in the fence. Avoid electric fence constructions that are likely to lead to the entanglement of animals or persons.
- Electric animal fences shall be installed and operated so that they cause no electrical hazard to persons, animals or their surroundings.
- It is recommended that, in all areas where there is a likely presence of unsupervised children who will be unaware of the dangers of electric fencing, that a suitably rated current limiting device having a resistance of not less than 500 ohms be connected between the energizer and the electric fence in this area.
- The appliance is not intended for use by young children or infirm persons without supervision.
- Young children should be supervised to ensure that they do not play with the appliance.
- Well maintained electric fences kept clear of vegetation with high quality insulation are extremely unlikely to cause fires. In times of extreme fire risk, disconnect energizer.
- Refer servicing to a Gallagher Authorised Service Centre.
- Check your local council for specific regulations.
- An electric animal fence shall not be supplied from two separate energizers or from independent fence circuits of the same energizer.
- For any two separate electric animal fences, each supplied from a separate energizer independently timed, the distance between the wires of the two electric animal fences shall be at least 2.5m. If this gap is to be closed, this shall be effected by means of electrically non-conductive material or an isolated metal barrier.
- Barbed wire or razor wire shall not be electrified by an energizer.
- A non-electrified fence incorporating barbed wire or razor wire may be used to support one or more off-set electrified wires of an electric animal fence. The supporting devices for the electrified wires shall be constructed so as to ensure that these wires are positioned at a minimum distance of 150 mm from the vertical plane of the non-electrified wires. The barbed wire and razor wire shall be earthed at regular intervals.
- Follow the energizer manufacturer's recommendations regarding earthing.
- Do not install an earth (ground) system for your electric fence within 10 m (33 ft) of any power, telecommunications or other system.
- Except for low output battery operated energizers, the energizer earth stake should penetrate the ground to a depth of at least 1 m (3 ft).
- Use high voltage lead-out cable in buildings to effectively insulate from the earthed structural parts of the building and where soil could corrode exposed galvanized wire. Do not use household electrical cable.
- Connecting leads that are run underground shall be run in conduit of insulating material or else insulated high voltage lead-out cable shall be used. Care must be taken to avoid damage to the connecting leads due to the effects of animal hooves or tractor wheels sinking into the ground.
- Connecting leads shall not be installed in the same conduit as the mains supply wiring, communication cables or data cables.
- Connecting leads and electric animal fence wires shall not cross above overhead power or communication lines.
- Crossings with overhead power lines shall be avoided wherever possible. If such a crossing cannot be avoided it shall be made underneath the power line and as nearly as possible at right angles to it.
- If connecting leads and electric animal fence wires are installed near an overhead power line, the clearances shall not be less than those shown in the table below.

Minimum clearances from power lines for electric animal fences

Power line Voltage V	Clearance m
Less than or equal to 1 000	3
Greater than 1 000 and less than or equal to 33 000	4
Greater than 33 000	8

- If connecting leads and electric animal fence wires are installed near an overhead power line, their height above the ground shall not exceed 3 m
  This height applies either side of the orthogonal projection of the outermost conductors of the power line on the ground surface, for a distance of:
  - 2 m for power lines operating at a nominal voltage not exceeding 1 000 V;
  - 15 m for power lines operating at a nominal voltage exceeding 1 000 V.
- Electric animal fences intended for deterring birds, household pet containment or training animals such as cows need only be supplied from low output energizers to obtain satisfactory and safe performance.
- In electric animal fences intended for deterring birds from roosting on buildings, no electric fence wire shall be connected to an earth stake. A warning sign shall be fitted to every point where persons may gain ready access to the conductors.
- Fence wiring should be installed well away from any telephone or telegraph line or radio aerial.
- Where an electric animal fence crosses a public pathway, a non-electrified gate shall be incorporated in the electric animal fence at that point or a crossing by means of stiles shall be provided. At any such crossing, the adjacent electrified wires shall carry warning signs.
- Any part of an electric animal fence that is installed along a public road or pathway shall be identified by electric fence warning signs (G6020) at regular intervals that are securely fastened to the fence posts or firmly clamped to the fence wires.
- The size of the warning sign shall be at least 100mm x 200mm.
- The background colour of both sides of the warning sign shall be yellow. The inscription on the sign shall be black and shall be either:
  - the substance of “CAUTION: Electric Fence” or,
  - the symbol shown:



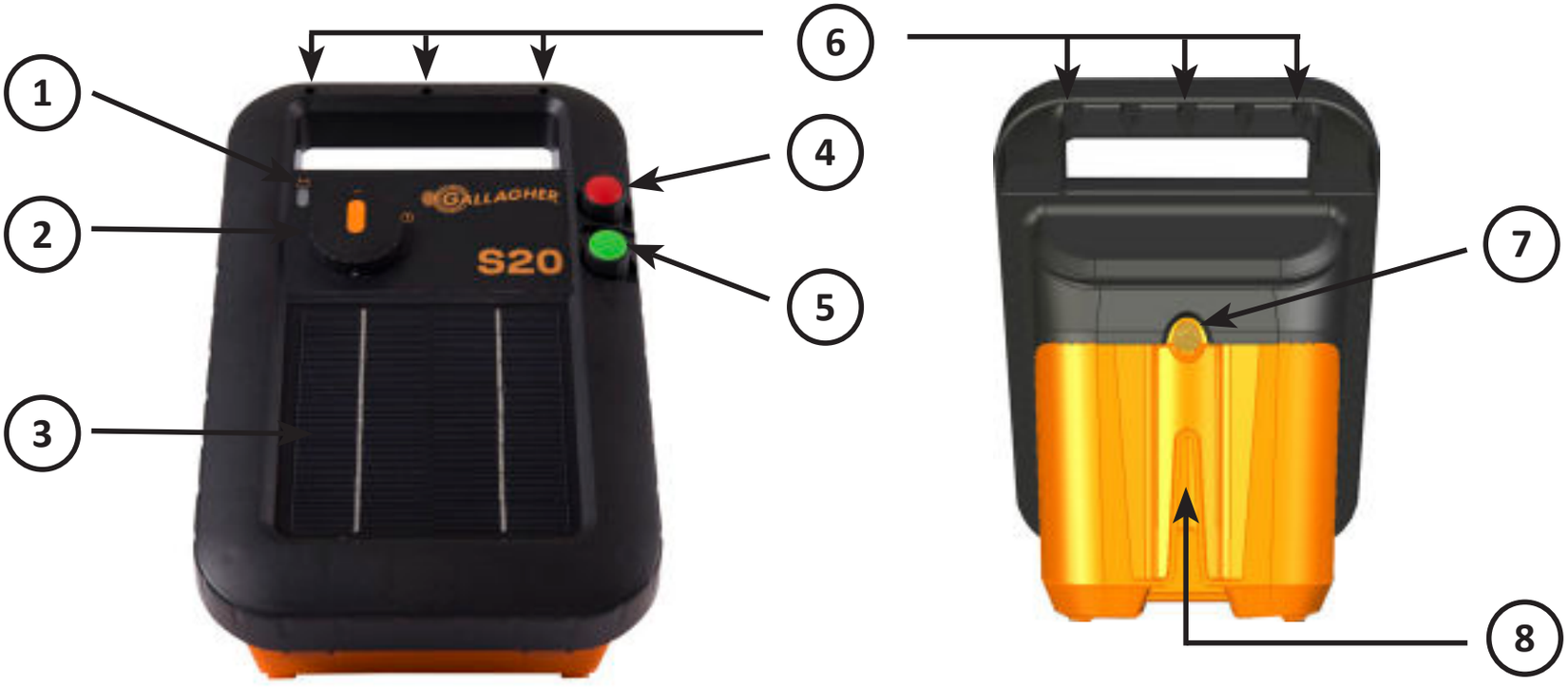
- The inscription shall be indelible, inscribed on both sides of the warning sign and have a height of at least 25mm.
- Ensure that all mains operated, ancillary equipment connected to the electric animal fence circuit provides a degree of isolation between the fence circuit and the supply mains equivalent to that provided by the energizer.
- Protection from the weather shall be provided for the ancillary equipment unless this equipment is certified by the manufacturer as being suitable for use outdoors, and is of a type with a minimum degree of protection IPX4.

This energizer complies with international safety regulations and is manufactured to international standards.
Gallagher reserves the right to make changes without notice to any product specification to improve reliability, function or design. E & OE.

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Save these instructions.

OVERVIEW



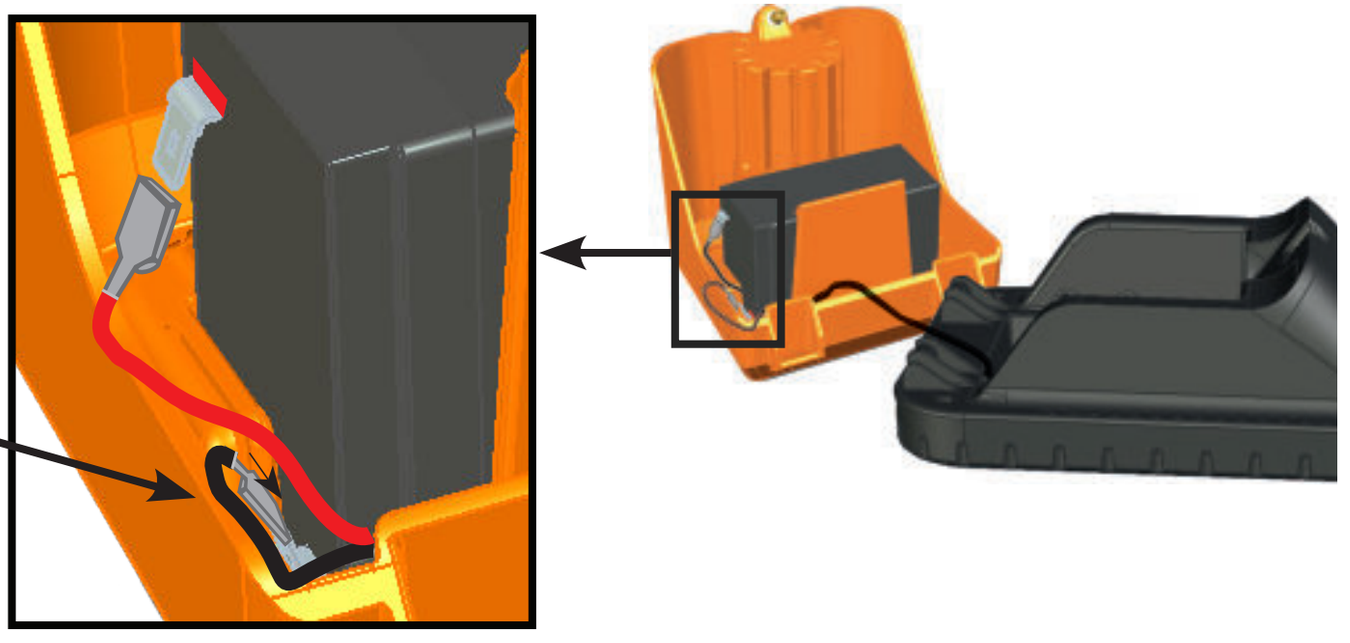
1	Battery indicator	Green	Battery OK
		Red	Battery needs maintenance. See *"Tips & Troubleshooting" p. (10)*
2	On/Off		
3	Solar Panel	Keep clean so battery will charge from the sun	
4	Fence Terminal	Connects to fence	
5	Earth Terminal	Connects to earth/ground stake	
6	Mounting holes		
7	Battery Access	Undo screw to access battery (Battery needs connecting before first use)	
8	Steel Post Mount	Allows for 360° mounting on T-Post, Y-Post or similar	

INSTALLATION INSTRUCTIONS

1. Open the energizer



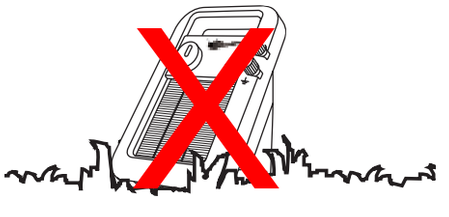
2. Connect the battery



3. Close cover and tighten screw

4. Install energizer

The solar panel should face towards the equator. i.e. in the northern hemisphere, panel faces south, in the southern hemisphere, panel faces north. **Avoid placing in a shady area.**

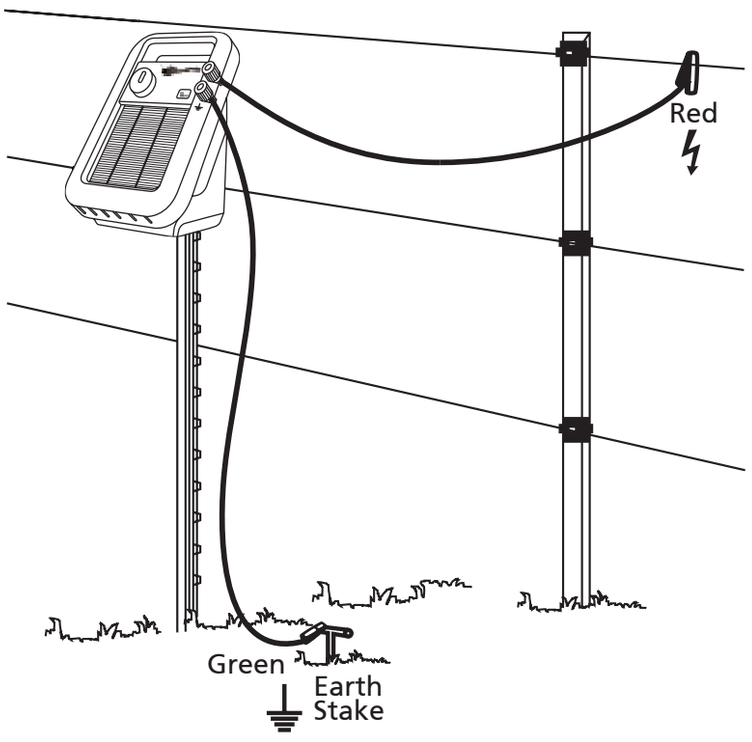


CAUTION:
Do not install energizer on the ground.

5. Connect leads

a) Connect green terminal to earth stake at least 2 ft (60cm) into ground.

b) Connect red terminal to fence line.



6. Switch energizer ON

Note: The energizer will automatically slow the pulse rate at night to conserve the battery while live stock are less active.

Battery indicator	Description
Green flashing	Battery is OK and energizer working normally.
Red flashing	Battery capacity is low due to insufficient sunlight. The energizer will slow down to use less power and allow battery to charge.

CAUTION:
Never leave the energizer face down.



TIPS & TROUBLESHOOTING

- Install energizer where it can get plenty of sunlight.
- Install solar energizers on a post above the ground.
- Keep solar panel surface clean - periodically use a soft cloth with water and a mild detergent.
- Test voltage on the fence using a Gallagher Fence Volt Meter (G50301).

Problem	Solutions
Indicator flashing red	• Ensure energizer is getting enough sun • Turn energizer OFF for 3 days, leave in the sun to charge battery. • Remove battery and use a 6 V 1.2 A charger to charge battery.
Indicator flashes red twice when turned on then stops	• Perform above steps. • Replace battery.
No voltage on fence	• Check energizer isn't faulty; - disconnect from fence and earth - measure across fence and earth terminals with a Gallagher Fence Volt Meter - if less than 5 kV return energizer for service - if more than 5 kV the fault is with the fence or earth system.

IMPORTANT BATTERY INFORMATION

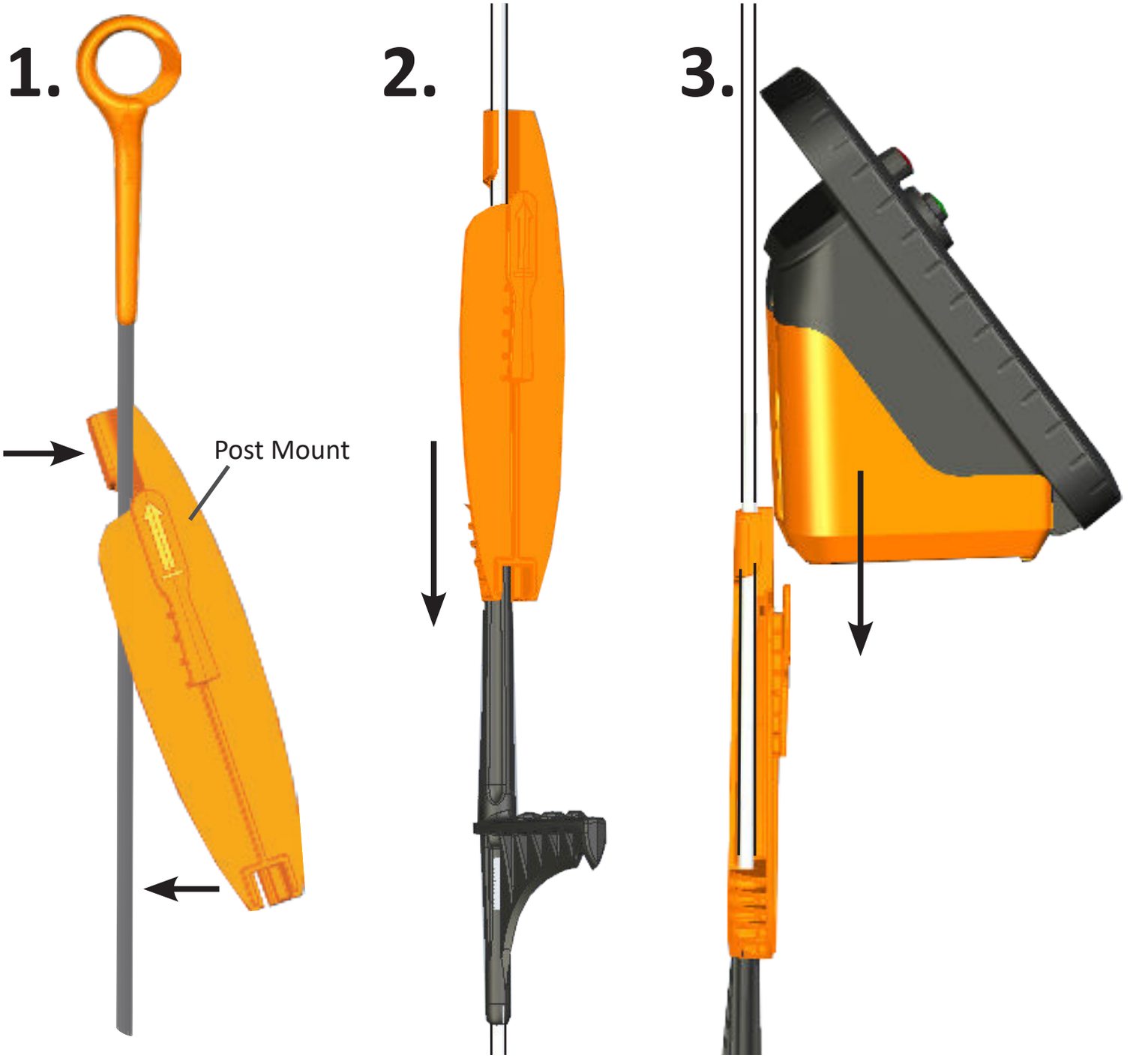
Recharging the battery	Switch the energizer off. Place in sunlight for 3 days with the battery connected OR remove the battery from the energizer and charge the battery for 24 hours with a 6 V 1.2 A battery charger.
Storing the energizer	Switch the energizer off. Store in a well lit area so solar panel keeps battery charged. Recharge battery before and after storage.
Maintenance free battery	The battery must not be opened and does not require maintenance.
Battery replacement	Use only 6 V 4 Ah sealed, valve regulated (VRLA) batteries.
Removing the battery	Switch the energizer off before removing the battery.
Disposing the energizer	The battery must be removed from the energizer before the energizer is disposed.
Disposing the battery	Lead acid batteries must be disposed of safely according to local regulations.

PRODUCT SPECIFICATIONS

Battery	6 V 4 Ah sealed lead acid (2M1847)
Current draw	28 mA
Stored energy	0.2 J
Output energy	0.16 J
Output voltage (no load)	8 kV

OPTIONAL ACCESSORY

Install the energizer on a Gallagher Ring Top Post using the optional Post Mount.



WARRANTY

Register your product online at www.gallagherams.com and receive the following benefits:

- Helpful customer service and technical support.
- A record which can help if your product is lost or stolen.
- Notification of special offers and product updates (optional).

2 YEAR WARRANTY for this product from the date of purchase. A dated sales receipt/invoice is essential for any future warranty claim. In addition please complete the details below and keep this card OR simply register your product online at www.gallagherams.com.

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WARRANTY CONDITIONS

This product is guaranteed free from defects in material or workmanship for a period of two years from date of purchase by the end user. This excludes any consumables provided with, or inside, the product where the warranty period is 90 days (e.g. cleaning materials; batteries - rechargeable and non-rechargeable; etc.). Gallagher will repair or replace at their option any faulty product returned to them or their Dealer within this time period. Exchange modules are guaranteed for 90 days from date-of-fitting.

This warranty does not cover damage due to: incorrect input voltage, contamination by battery acid, physical mishandling, lightning strike, water immersion, damage to external wiring. Gallagher, their Distributors and their Dealers accept no responsibility for the misuse of this product or for any accident caused by tampering with or modification to or misuse of this product. This does not affect your statutory rights.

Model

Purchase Date

Serial No.

Dealer