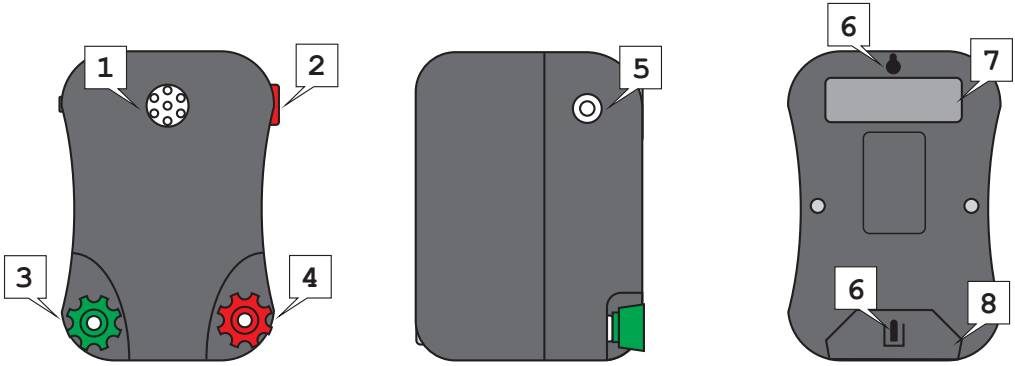
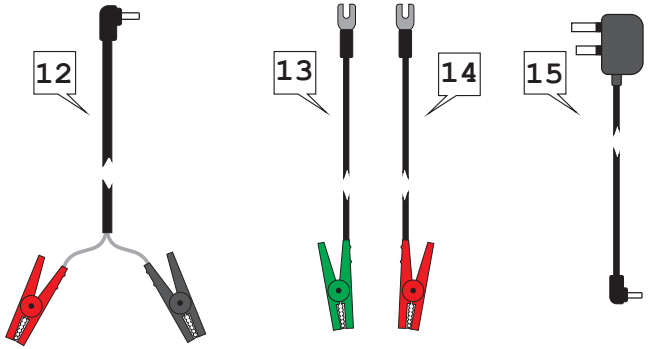
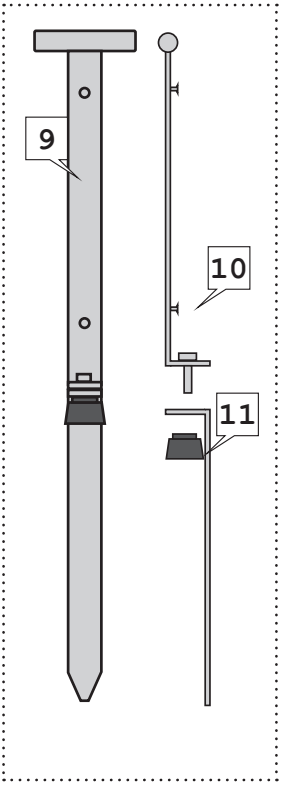
Installation guide - Raptor 47HLB 80, 170

Please read through before installation. Please read safety guidelines leaflet.

What's in the box? Getting to know the Raptor







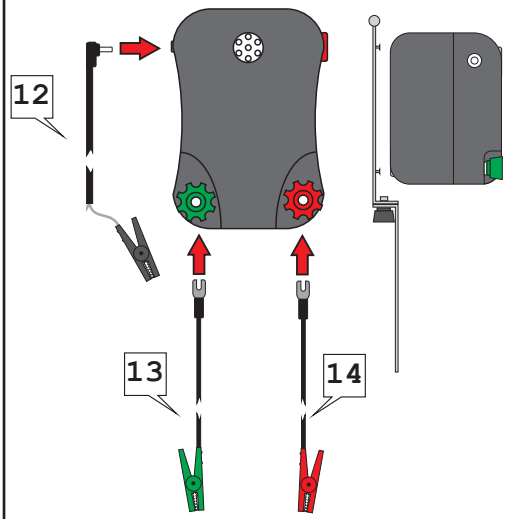
Key

1. LED fence monitor
2. on/off switch
3. Ground connection terminal
4. Fence connection terminal
5. Power input jack
6. Mounting holes
7. Carry handle
8. 6v battery compartment
9. Stand
10. Mounting studs
11. Fixing thumb screw for stand
12. 12v input lead for battery operation
13. Ground connection lead
14. Fence connection lead
15. Power adaptor for mains operation

Connecting it all together

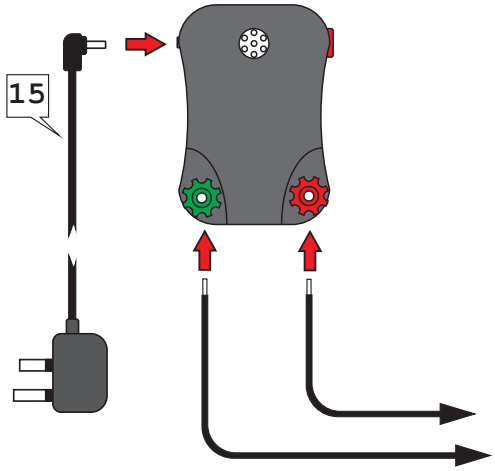
The Raptor can be powered by external 12v battery or mains power via the enclosed adaptor. A 6v spring top battery can also be used alongside both 12v and 230v modes to provide a back up power source or, in the case of the Raptor 20 and Raptor 80, an alternative primary power source.*

12v connection



Insert the male jack from the 12v battery lead into the socket on the side of the energiser. Unscrew the terminals enough to slide in the fork terminals on the earth and fence leads. Securely tighten. Using mounting holes, position the energiser onto the stand.

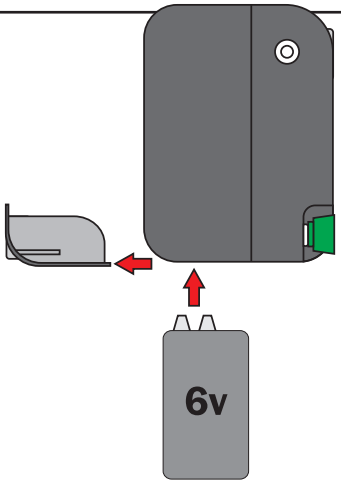
230v connection (adaptor)



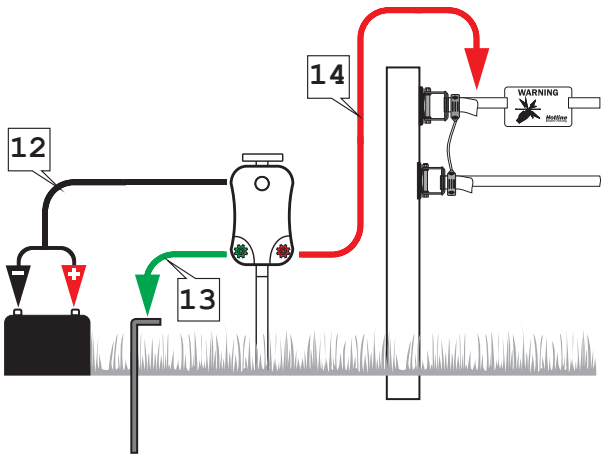
Mount the energiser next to an indoor socket. Insert the male jack of the adaptor into the socket and plug in the adaptor head. Connect the HT lead for your fence and ground connections to the terminals (HT is not included in the pack as power to fence distance varies).

6v battery insertion

To insert the internal 6v battery, slide out the door to the battery compartment and place the battery inside, spring side up. Slide the battery door back into place securely. With the 6v battery inserted, the energiser will operate from the primary 12v or 230v power source and the 6v battery if the primary source is lost or disconnected.

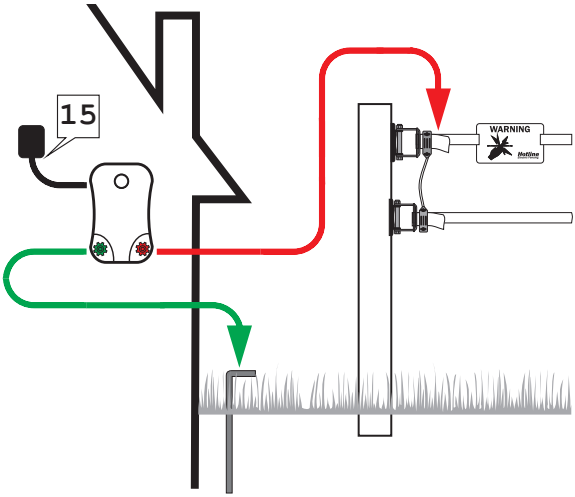


*Using a high amp hour version of the spring top battery will give you a longer operation time. Our Part 47PJ6-50



12v connection

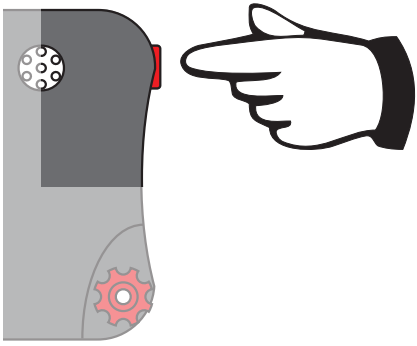
Connect the lead with the red croc clip to the fence (from red terminal) & the green croc clip (from the green terminal) to the ground rod. We recommend a minimum of one ground road driven approx. one metre into the ground. Connect the croc clips on the battery lead to a 12v leisure/marine battery.



230v (adaptor) connection

The energiser should be mounted indoors or in a weatherproof environment and connected via the provided adaptor to a wall socket. Using insulated HT lead-out or undergate cable, take a line from the red terminal to the fence one from the green terminal to the ground rod. The ground rod should be 10m from the building to ensure there is no interference with the buildings mains safety earth.

Switching on and off



Rotating Fence monitor

Indicates voltage conditions on your fence.

Battery indicator

The central LED will flash when your 12v battery is low and when the raptor is operating from the internal 6v battery.

Trouble shooting

You should have a minimum of 3kv on your fence line to be effective. In principle, electric fencing is a simple concept. If your energiser is working then there can only be two other places to look - your fence line or ground system.

Checking the energiser

Sound and sight - Most energisers emit an audible tick caused by the firing of the output transformer. This is a good indication that the energiser working. The indicator light or fence monitor should be pulsing or flashing. As the raptor has an in built fence monitor and this should be operating at all times. If the display is red it is indicating that the energiser is under heavy load from the fence system. If you switch the energiser off, disconnect the wires from the terminals and turn it back on, the load will be removed and the monitor should flash green. This indicates that the problem is somewhere on the fence system. **Flash test -** disconnect the croc clips from the fence and ground stake. Clip the croc clips together making sure the metal jaws contact each other. Slowly draw them apart - you should get a short (1-2mm)spark jumping from one to the other. **Use a Tester -** disconnect completely from the ground stake and fence and take a reading across the terminals. Depending on the model of energiser you should have a reading between 7 and 10kv.

Checking the ground system

Low voltage - If there is high voltage on your ground stake it is missing from your fence line. The greater the depth and surface area under the ground the more efficiently your ground stake will collect the pulse as it returns through the earth. If you get a shock from your ground stake, or your tester shows voltage when touched to the ground stake, you can improve your whole system by adding further ground stakes. Link additional ground stakes with wire, spacing them about a metre apart.

Checking the fence line

Clear lines - An electric fence operates as an open circuit. The fence is positive and the ground itself is negative. By touching both fence and ground the animal completes the circuit and get the shock. If anything touches both ground and fence, other than the animal, it reduces the effective voltage on the fence line. The fence line must not touch anything that is not insulated from the ground. Check the fence line is clear from all vegetation and wooden posts, metal posts and gates are not touching the line. Check all insulators. The fence line can occasionally come unhooked from insulators and touch the posts and broken insulators can cause leaking of power into the post and ground. **Line problems -** If you are joining two sections of tape or wire, try to use correct connectors to ensure the conductors in both sections are connected. Check the condition of the line, if the metal conductors within the line are broken it will effect the efficiency of the fence. Greater metal content means greater efficiency. **Netting -** Netting is closer to the ground than other forms of fence so requires more maintenance to keep clear from vegetation. All horizontal lines, apart from the bottom, must be kept clear from the ground. If your net is sagging and touching the ground, add in extra posts. The net must also be clear of contact from other forms of fencing, arks and chicken wire runs. Check the metal spikes on the posts, occasionally wires can get caught up or slip down to the metal spike and take power to ground. **Remember-** if your energiser and ground system is fine, the problem **will** be somewhere on your fence line!

If in doubt, **Call -** We are always happy to help. **+44(0)1626 33 11 88**