



INTERNAL & EXTERNAL + RECHARGEABLE POWER SOURCE options for CAMERA TRAPS

Rechargeable power sources are best for camera traps - period. Although initially more expensive, they will end up saving you money in the long-run.

INTERNAL POWER SOURCE options (single-use batteries)

Most camera traps operate on AA or D size INTERNAL batteries and when using internal (single-use) camera batteries, **Lithium (BEST) or Alkaline batteries are your only options** [NOTE: From experience we have noticed that **Energizer** brand batteries work better / longer in camera traps than other brands (e.g. Duracell etc.) - and we have no idea why].



INTERNAL RECHARGEABLE POWER SOURCE options

When using rechargeable INTERNAL camera batteries you have 2 types of rechargeable battery options namely;

(1) Rechargeable 1.5v Li-ion (lithium-ion) batteries [NEW / BEST]

Rechargeable (**1.5v**) Li-ion (lithium-ion) batteries are the best INTERNAL rechargeable battery source option as their voltage is correct at 1.5v so there aren't any compatibility issues with camera trap models (see below) and they are rechargeable. **Currently only available in AA size.**



(1) Rechargeable 1.2v NiMH (nickel metal hydride) batteries

You can use rechargeable NiMH batteries however you will have to check the cameras' User Manual as most camera traps have compatibility issues when using these lower voltage (1.2v) NiMH rechargeable batteries (all NiMH batteries are only 1.2v & all Alkaline, Lithium and rechargeable Li-ion batteries are 1.5v).

So even when using a set of fully charged NiMH rechargeable batteries you are not providing the camera with the correct full voltage for it to operate at its optimum which can cause compatibility issues (like not writing footage to memory cards). Also, when using NiMH rechargeable batteries, their lower (1.2v) voltage also greatly reduce the cameras' operating time in the field.

Some more recent camera models though have been specifically designed to work with the lower voltage (1.2v) NiMH rechargeable batteries (please contact us for information on these newer models).



EXTERNAL PERMANENT POWER SOURCE option (Mains power adapter / for 6v cameras ONLY)

If you have a plug point nearby then this could be an option to use too. Only things to consider are;

- Is there an external power port on the camera?
- Is the camera 6v (12v mains adapters not available)?
- Can an extension cord be used where the camera is?
- Load shedding - or it there a power backup system in place to keep things running?





EXTERNAL RECHARGEABLE POWER SOURCE options

Most camera traps these days come standard with an external DC power port (jack) allowing users to use an additional external power source to power their camera for prolonged operating time in the field. They are for the most part either 6v or 12v camera traps and there are a number of different external power options available to use depending on your setup location and scenario and below is some helpful information to assist you in choosing the one best suited for your specific requirements.



6v SLA (Sealed Lead Acid) rechargeable battery



6v connection cable (2m or 5m lengths available) - to connect 6v SLA rechargeable battery to 6v camera



12v SLA (Sealed Lead Acid) rechargeable battery



12.6v LITHIUM rechargeable battery



12v connection cable (2m or 5m lengths available) - to connect 12v SLA rechargeable battery to 12v camera



12v to 6v reducer cable (2m length) - to connect 12v SLA or LITHIUM rechargeable battery to 6v camera



SLA switch-mode (6v or 12v) battery charger (used with 6v & 12v rechargeable SLA battery)



LITHIUM battery charger (has to be used with 12.6v LITHIUM rechargeable battery)



6v cable pin

12v cable pin

TIP: Ensure you have the correct connection cable that matches your 6v or 12v camera as the camera's jack sizes are different and the cables are made specifically for either a 6v or 12v camera...

- ALWAYS ENSURE THE CORRECT OPERATING VOLTAGE IS USED TO POWER YOUR CAMERA -
- TOO HIGH OR TOO LOW WILL DAMAGE YOUR CAMER OR CAUSE OPERATIONAL ISSUES -
IF WIRING IN PARALLEL or SERIES, ALWAYS USE EQUAL VOLTAGE (v) AND EQUAL CAPACITY (Ah) BATTERIES -



EXTERNAL POWER - BEST RECHARGEABLE OPTION:

12.6v LITHIUM rechargeable battery + applicable 12v or 12v-to-6v step-down converter connection cable

Pro's

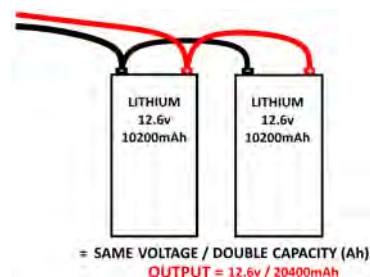
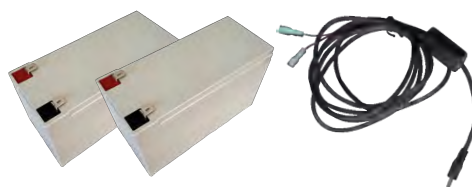
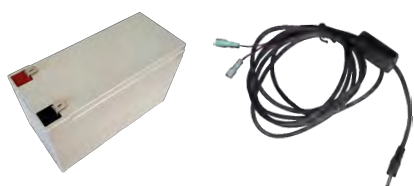
- 4 x longer tested battery life in the field out of all the different available options.
- They are rechargeable.
- Lithium technology allows for up to 90% of discharge before a recharge is required.
- No internal liquid / cells so will last longer.
- A fraction of the weight of SLA rechargeable batteries.
- Can provide the correct voltage to the (6v or 12v) camera.
- 2 or more of them can be wired together in PARALLEL (same voltage output [v] / doubles capacity [Ah]) to power 12v or 6v camera traps
- Will save you money in the long run.

Cons

- More expensive the SLA rechargeable batteries.
- Have to use LITHIUM charger to recharge - SLA chargers will damage this battery.

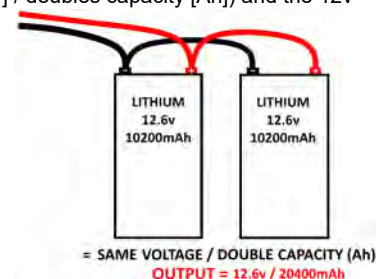
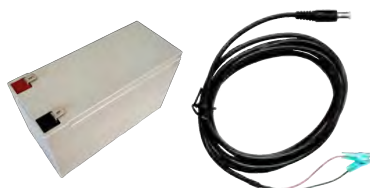
6v camera trap SETUP OPTIONS

1. A single 12.6v LITHIUM rechargeable battery + a 12v-to-6v step-down converter connection cable (2m length) for a 6v camera trap
2. 2 x 12.6v LITHIUM rechargeable batteries (equal capacity Ah) wired in PARALLEL (same voltage output [v] / doubles capacity [Ah]) + a 12v-to-6v step-down converter connection cable (2m length) for a 6v camera trap.



12v camera trap SETUP OPTIONS

1. A single 2.6v LITHIUM rechargeable battery + 12v connection cable (2m or 5m length) for a 12v camera trap.
2. 2 x 12.6v LITHIUM rechargeable batteries (equal capacity Ah) wired in PARALLEL (same voltage output [v] / doubles capacity [Ah]) and the 12v connection cable (2m or 5m length) that connects the 12.6v LITHIUM battery to a 12v camera trap.



EXTERNAL POWER - 2nd BEST RECHARGEABLE OPTION:

6v or 12v SLA rechargeable battery + applicable 6v or 12v or 12v-to-6v step-down converter connection cable

Pro's

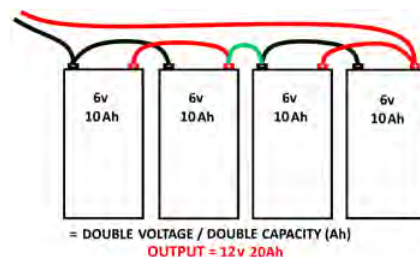
- Cheaper than 12.6v LITHIUM rechargeable battery option.
- They are rechargeable.
- Can provide the correct voltage to the (6v or 12v) camera.
- 2 or more of them can be wired together in PARALLEL (same voltage output [v] / doubles capacity [Ah]) or SERIES (doubles voltage output [v] / doubles capacity [Ah]) to power 12v or 6v camera traps
- Will save you money in the long run.

Cons

- They are heavy (+/- 3.4kg)
- Internal liquid (electrolyte = mixture of sulphuric acid and water)
- Allows for only up to 50% of discharge before a recharge is required. Going more than this damages the battery in the long run.

6v camera SETUP OPTIONS

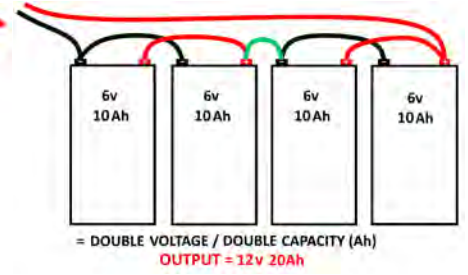
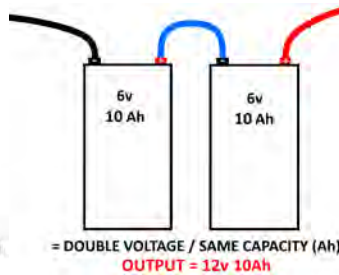
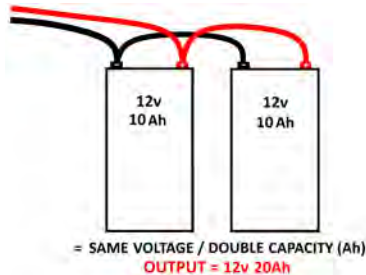
1. A single 6v SLA rechargeable battery and the 6v connection cable (2m or 5m length).
2. 2 x 6v SLA rechargeable batteries (equal capacity Ah) wired in PARALLEL (same voltage output [v] / doubles capacity [Ah]) and the 6v connection cable (2m or 5m length).
3. A single 12v SLA rechargeable battery + 12v-to-6v step-down converter connection cable (2m length) that connects the 12v SLA battery to the 6v camera (*this will last longer than a straight 6v SLA battery as the voltage drops over time*).
4. 2 x 12v SLA rechargeable batteries (equal capacity Ah) wired in PARALLEL (same voltage output [v] / doubles capacity [Ah]) + 12v-to-6v step-down converter connection cable (2m length) that connects the 12v SLA battery to the 6v camera (*this will last longer than a straight 6v SLA PARALLEL battery setup as the voltage drops over time*).
5. 4 x 6v SLA rechargeable batteries (equal capacity Ah) wired in SERIES and PARALLEL (doubles voltage output [v] + doubles capacity [Ah]) + 12v-to-6v step-down converter connection cable (2m length)





12v camera SETUP OPTIONS

1. A single 12v SLA rechargeable battery and the 12v connection cable (2m or 5m length).
2. 2 x 12v SLA rechargeable batteries (equal capacity Ah) per camera **wired in PARALLEL** (same voltage output [v] / doubles capacity [Ah]) and the 12v connection cable (available in 2m or length) that connects the 12v SLA battery to the 12v camera.
3. 2 x 6v SLA rechargeable batteries (equal capacity Ah) **wired in SERIES** (doubles voltage output [v] / maintains capacity [Ah]) and the 12v connection cable (2m or 5m length).
4. 4 x 6v SLA rechargeable batteries (equal capacity Ah) **wired in SERIES and PARALLEL** (doubles voltage output [v] + doubles capacity [Ah]) and the 12v connection cable (2m or 5m length).



TIPS:

- If the SLA batteries are left on the ground, ants tend to be attracted to the '+' terminals. You can coat these in vaseline to minimise this.
- Jackals also tend to like chewing the connection cables so try mount the SLA batteries above ground level. Our SLA battery metal protection cases (below) can also assist with this and also in protecting the SLA batteries and cables from damage / theft.

Metal security cases also available for 1 x SLA or 2 x SLA batteries



SOLAR PANELS

If a camera trap is equipped with a jack or port to hook up an external power source, then a small solar panel may also be an excellent, maintenance-free solution for you.

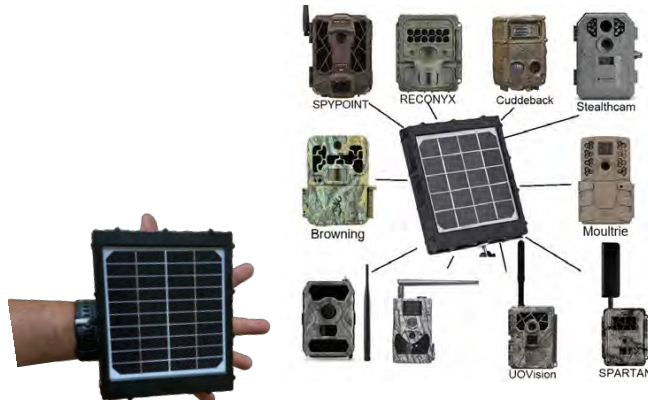
Depending on your setup scenario (like for security applications), this may be something additional to try and conceal which may not make it feasible. Also, there is the connection wire from the panel to the camera which can be tampered with (monkeys / baboons) but this can be minimized with Vaseline etc.

Our solar panels come standard with their own built-in rechargeable lithium-ion 18650 batteries to deliver a full capacity of 8000mAh with multiple recharge cycles and an average working-life span of 3-5 years. These lithium-ion batteries can also be replaced down the line. Basically the panels constantly charge their own built-in batteries and the connected camera runs directly off the panels' batteries - so there's no need to even have batteries inside the camera...

No need to waste time changing or charging batteries and this solar panel comes with a 360° swivel mount and a 1.5 meter long mounting strap to allow you the freedom of best placement to capture maximum sunlight. IP66 waterproof / anti-hail + lightning protection designed for both indoor and outdoor use. The Solar panel comes standard with;

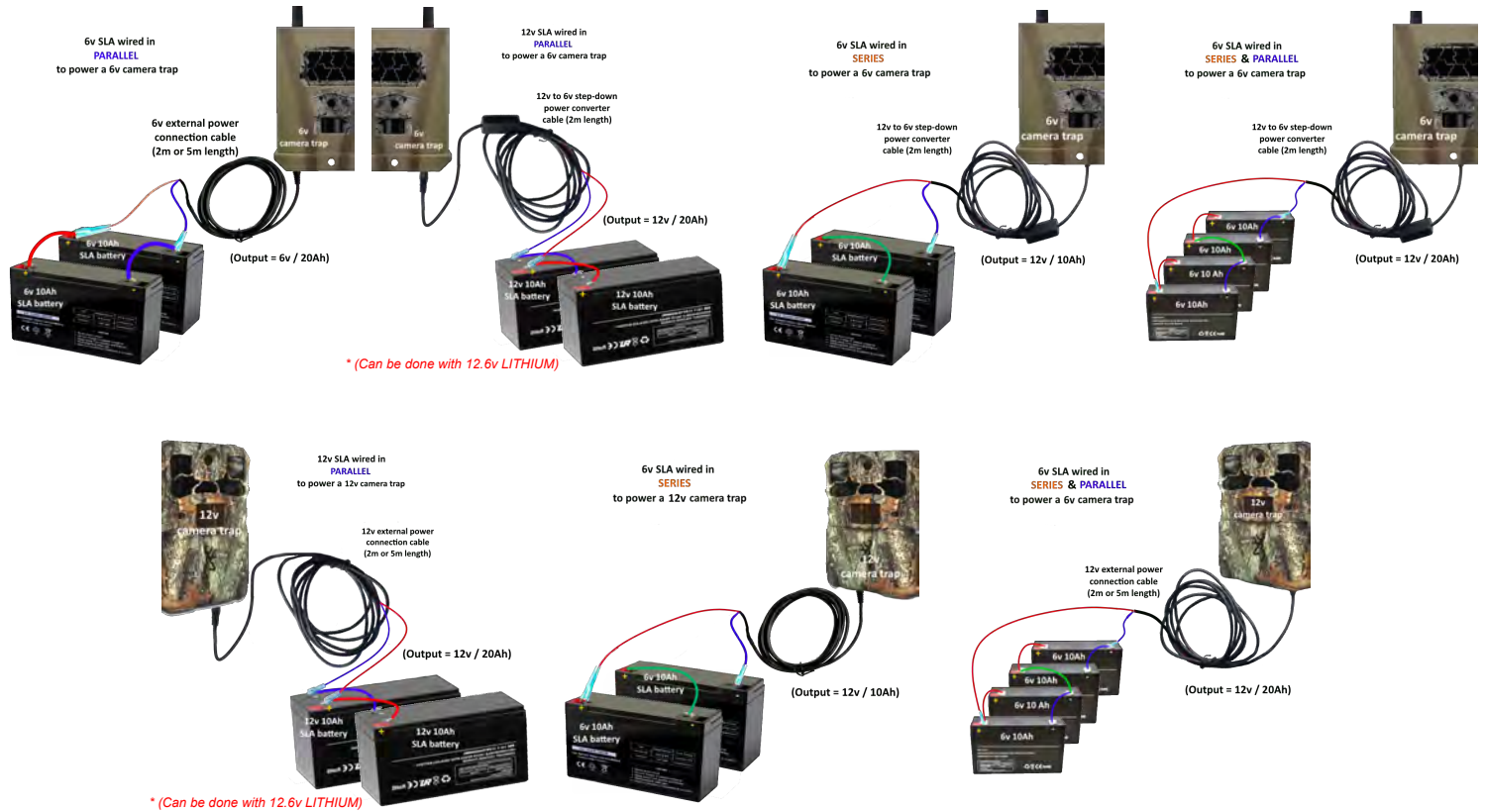
- 6v connection cable (for 6v cameras)
- 12v connection cable (for 12v cameras)
- Mounting swivel bracket

PLEASE NOTE: Certain BUSHNELL camera trap models have the 2-PIN M19 circular connector and require a specialized 2-pin circular socket-type connection cable in order to operate off external power sources. This solar panel does not come supplied with this type of connection cable.





VARIOUS WIRING OPTIONS (can be done with 6v / 12v SLA batteries and *12.6v LITHIUM)



For more information, please feel free to contact us.

Regards,

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