



Anglian Lepidopterist Supplies

**Specialising in
moth traps and
related equipment**

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THE ALS WHAT BATTERY GUIDE

With a continued interest in moth tapping away from a 240V power supply via 12 volt batteries ALS have produced this 'what battery guide' for guidance for the enthusiast. It has been produced in accordance with Yuasa Batteries UK.

When moth trapping with 12 volt batteries it is usual to use an actinic light source and the 15w actinic portable unit with built in photo cell seems about the most popular set up with fairly good catch results. It also has the added option of having all parts of the electrical system of the control box and end caps to the bulb waterproof (IP56), unlike other actinic systems in the market.

ALS only use what is called a sealed lead acid or gel 'cyclic' battery. This is a type of battery which is fully sealed so if toppled over acid cannot spill, it will also allow the operator to charge/discharge the unit more cycles than a standard battery. If used correctly and instructions followed this could be as many as 150 charge/discharge cycles or twice as much as conventional batteries depending on depth of discharge (i.e. discharging 100% will give a shorter battery life than if only discharged 50% with each usage).

The 15w actinic will draw 1.25 amps. ALS offers the choice of two types of 12 volt batteries.

The 7amp hour battery: This is a none cyclic battery (no longer available) A very small light weight battery measuring 151x65x98 mm (LxWxD) and only weighing 2.75 kg. This will only power the 15w actinic portable unit for a maximum of 5 hours on a fully charged, good condition battery. If run above this time span damage to the battery can occur with cells starting to crystallize and the bulb blackening very quickly at the ends. This battery is recommended for high summer usage and must **NOT** be left all night un-attended. It can be charged from what is called a trickle charger (such as our GM06) Do not use appliances such as car battery chargers, this will force the power into the battery at such a rate that the battery will burn its self out and appear bulged.

A none cyclic battery will obviously deliver fewer cycles (chargers) than a cyclic battery (see above for terminology of cyclic batteries). For instance, if discharging more than 75% then the life of the battery will be greatly reduced. Please consider if this battery is what will meet your requirements.

The 12amp hour battery (lead acid): This battery is intended for the operator who wishes to trap between the months of (approximately) May to early August and intends leaving the trap all night. It measures 151x98x98mm and weighs 4.0kg. It will power the 15w actinic unit for a maximum of 9 hours on a fully charged, good condition battery meaning the operator can trap during the early and late summer months. Again a special charger will be required such as our GM10 quick charger and will take approximately 10 hours to charge (when the green light is on the battery is charged and ready to go).

The 20amp hour battery (gel): This battery can be used almost all year round with a maximum running time for the 15w actinic of 15 hours. It measures 181x76x167mm and weighs 6.0kg. Again the GM10 charger is used and will take approximately 12 hours to re-charge from flat.

When operating 12 volt batteries with moth traps the above quoted running times can vary significantly depending on weather conditions. **WE DO NOT** recommend using batteries below 20Ah during the cold winter months, remember **COLD KILLS BATTERIES**.

For example wet and cold weather will draw more from the battery than dry warm conditions. We always recommend placing the battery on a piece of dry material such as wood for optimum results.

ALS also recommend the use of car batteries for powering portable actinic set ups. These units come fairly cheap from high street traders often around the £25.00 mark. They have a high voltage output and most will power the 15w actinic for around 20 hours (not quite enough for two nights) As most people have a car charger the extra cost of this is then cancelled out. A number of considerations must be borne in mind with this type of battery, fundamentally the weight will usually be around 8/10kg plus, in addition they are not a sealed unit like the ALS range of batteries, if toppled over acid leakage will occur. If you are not intending walking the trap far from the car this is a very good alternative option.

Additional tips:

- Do not store batteries in cold outhouses over winter, bring them indoors. **Cold kills batteries.**
- When batteries are not in use, always re-charge every three/four months to keep in good condition.
- Never try and run batteries for two nights, even if it has only been used for several hours, always re-charge.
- Do not use batteries if you know the temperature will be below 5c, it could result in serious damage occurring. **DO NOT USE BATTERIES DURING COLD WINTER MONTHS.**
- If the bulb blackens at one end this is a classic sign of a voltage problem, check your battery.

All prices of the above batteries and chargers are listed in our price list under the 'going mobile' section.

Customer Tip: One customer in Lancashire places his batteries in a simple insulated bag on a piece of 4 by 1 inch timber and then places a charcoal hand warmer inside the bag whilst the hand warmer is still burning (about 5 hours) its brings the temperature inside the bag to approximately 20c during the winter months. This has greatly prolonged the life of his batteries giving his 12Ah battery over 150 re-charges to date.

*Note: The battery must **NOT** be left in the bag when charging takes place. Refer to your charging manual.*

Jon Clifton
ALS