Part No:
L600

Laurel | 600

3A Charger Supplied

AMPS
ADVANCED MOBILE POWER SYSTEMS

L600

UK CA
CE
RoHS compliant

www.ampsystems.co.uk

Portable Power Supply

- Small, lightweight and robust
- 12.8V 40Ah $LiFePO_4$ - 512Wh battery
- 600W | 230VAC Pure Sine Wave inverter
- 15A DC DC charger built in w/ Solar input (up to 60VDC)
- USB-C 65W PD IN + OUT (can be charged up with USB-C)
- 15W Wireless charging
- Onboard LED lamp
- 25A DC output capable - with over current protection
- 2x Universal Sockets
- Vivid LCD screen

INTRODUCTION WELCOME

Welcome

Welcome to the AMPS Owners Handbook for the product Laurel | 600, the Portable Power Supply.

Please take your time to read and fully understand the contents of this Handbook. These guidelines are developed with your safety and the products performance in mind and failure to follow or understand these guidelines may lead to voiding the product warranty or even leading to damage or injury for you or your setup.

If you are unsure of any step or guideline then please consider reaching out to AMPS via our web contact form or our phone service and we shall offer our support.

Thank you for joining AMPS and we hope to serve your travels well.

Laurel | 600

This portable power supply is lightweight, relatively small and suited for powering lots of relatively small AC and DC appliances. There are numerous ways to take power from the supply and numerous ways to add power. The Laurel | 600 is ideal for camping as it provides sufficient power for all your electronic devices, comes with a torch and you could even run an induction cooker from it.

Product Code Understanding

Throughout this manual we will make reference to this product as the 'L600'. The terms '12V' or '24V' are nominal voltage ranges, rather than specific voltages.

Using this Handbook

This manual must be read throughout before installing this electronic device. Do not lose these instructions - keep them safe. The most up to date instructions can be found on sterling-power.com. Please refer to the latest instruction manual before contacting AMPS. At AMPS, we endeavour to include all of the product information that we can think of into the manual.

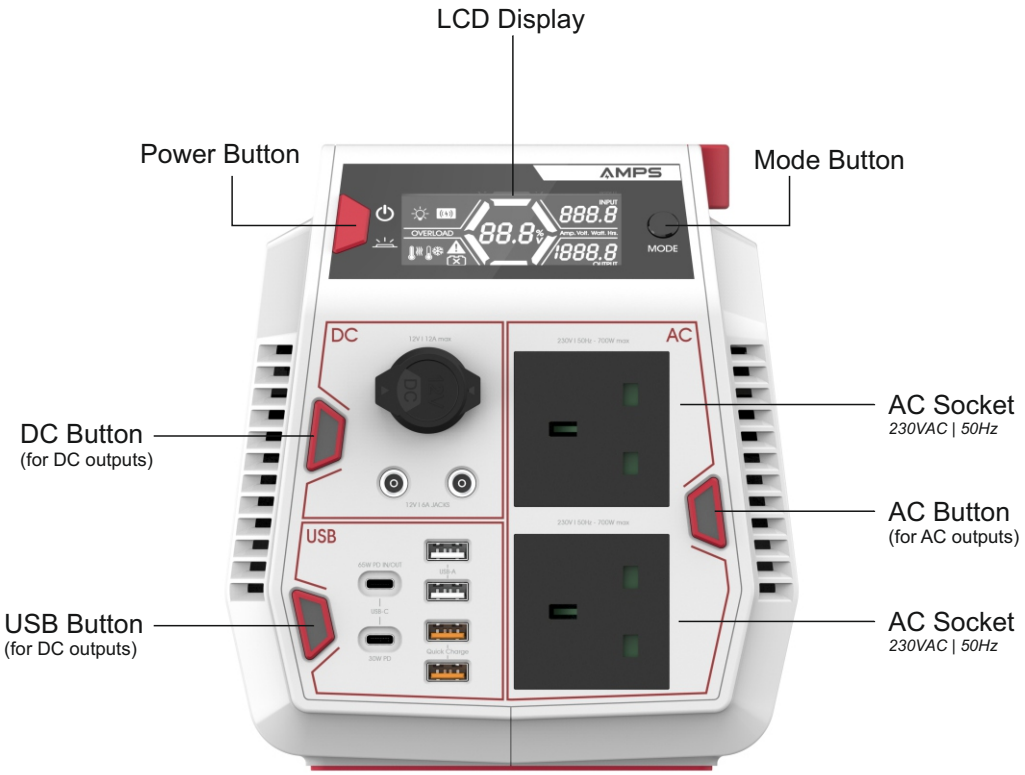
Safety

Installation of the electronic device must be carried out by qualified and trained personnel only. The personnel must be familiar with the locally accepted guidelines and safety measures.

Your safety is AMPS top priority. Please follow all precautions to keep yourself safe. If you believe your unit requires repair then please contact AMPS or your distributor. Do not attempt to service the unit yourself.

Specifications

Description	Specification
Solar Panel input range to Mini Anderson	Anderson socket :10V~60V,230W Max/8mm
Solar Panel input range to DC Jack	DC socket: 15~24V 100W PWM, Max
8mm DC socket PWM Solar panel range	OCV 15~24VDC, 100W Max / 8A max
Anderson socket MPPT Solar panel range	OCV 10.5~60VDC, 230W Max / 15A max
3A Adaptor	15.3V / 3A
Battery Capacity (LiFePO4)	512Wh - 40Ah 12.8V
Standby current	5mA
Under-voltage protection	10.5V
Max. charging voltage	15V
Low charging voltage	5V
White USB port x 2 output	5V/2.4A max.
Orange QC3.0 USB port x 2 output	5/9/12V/3A max/ 18W max
Car cigarette port	12V | 12A max
65W Type-C PD port x1 input	Input: 5~20V, 3.25A/65W max.
65W Type-C PD port x1 output	Output: 5/ 9/12/15/20V,3.25A/65W max.
30W Type-C PD port x1 output	Output: 5/9/12V, 3A/30W max.
6mm DC output	6A max
Anderson Output	12V/25A 25A max
AC output x1 (pure Sine Wave)	230V~50Hz (EU).600W , 700W max.
AC overload protection	620W± 30W
Qi Wireless Charging	15W
LED light	1200/2400mcd min., 300mA max.
Dimension of Main unit(L x W x H)	185W x 305L x 202H mm
Net weight of Unit (W/0 Packing)	7.3kg



Power Button Press to turn on all the DC output ports. Long press to power off the unit and lighting.

LCD Display This shows battery state of charge, input and output power. If any features are on or any faults, they shall be displayed here.

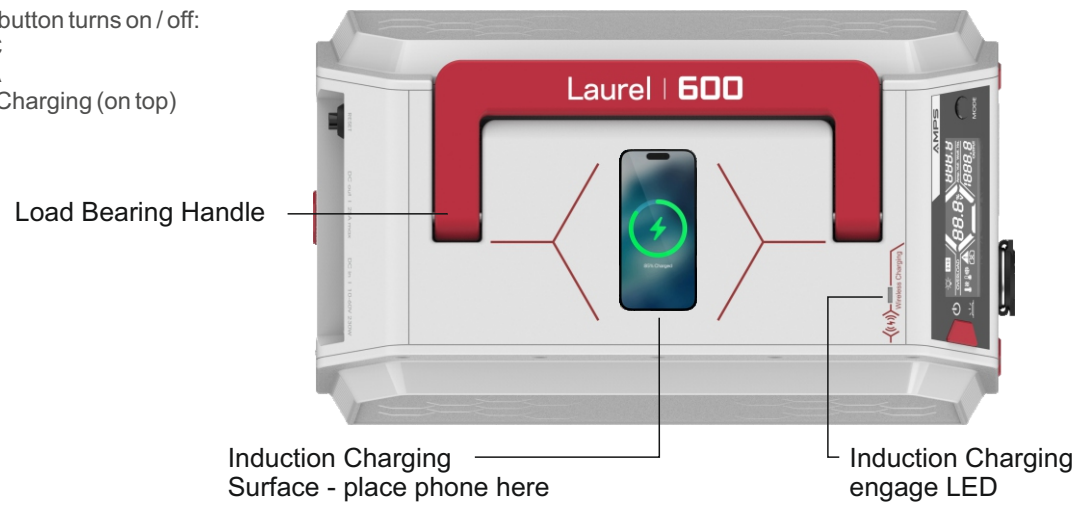
Mode Button Pressing this toggles between what the LCD displays. Voltage, current, power, battery time remaining display.

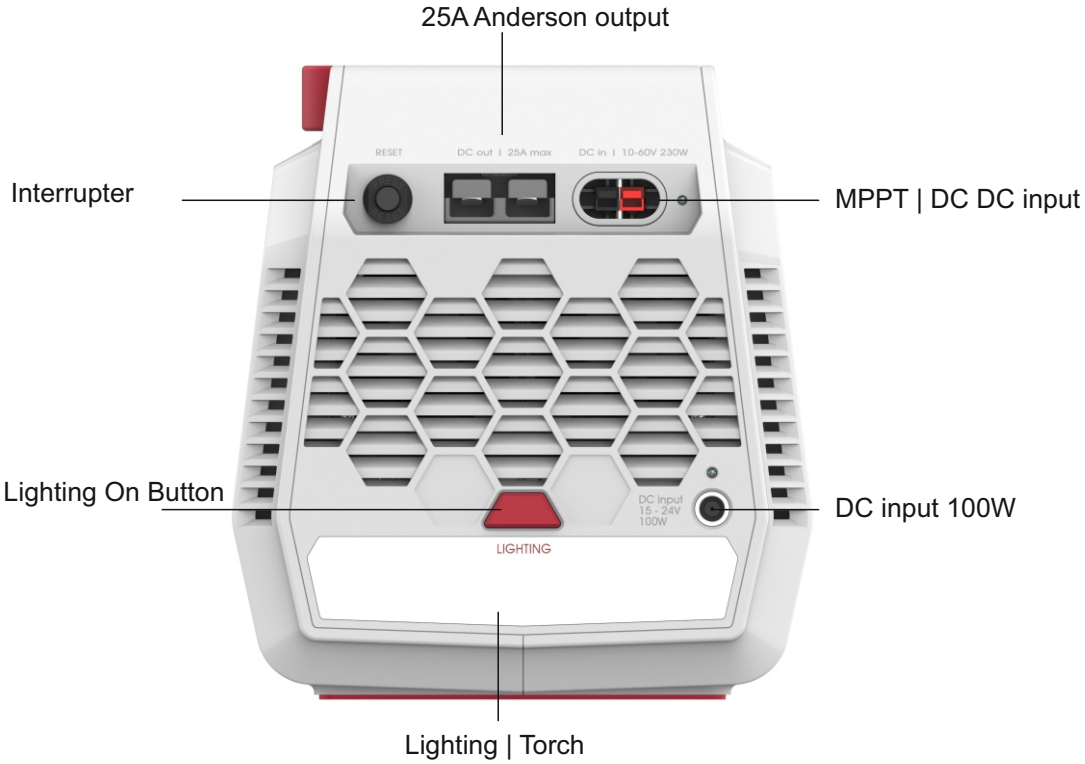
AC Button *on when lit*
The AC button turns on / off:
2x UK sockets - 600W AC Pure Sine Wave. 600W total.

AC Sockets Connect your AC loads to the AC sockets - 600W continuous. **Shared** across both sockets (total 600W).

DC Button *on when lit*
The DC button turns on / off:
1x Cig socket - 12V | 12A
2x 12V | 6A jacks

USB Button *on when lit*
The USB button turns on / off:
2x USB-C
4x USB-A
Wireless Charging (on top)





Interrupter This button shall jut out when the current being pulled through the 25A Anderson exceeds 25A. Investigate why, then press the button in to reset.

25A Anderson output This connector (50A standard Anderson style) - allows a 25A direct connection to the battery. If 25A is exceeded the interrupter shall trip the circuit.

MPPT | DC DC input This mini Anderson socket connector - allows 10V - 60DC input 230W current limiting. Therefore, you can install a solar panel directly into this connector. Or, you can install a DC DC charger into this terminal - or direct wire it into a donor battery.

DC input 100W Purpose built for the supplied mains charger to be connected here. This allows 15-24V DC PWM regulated 100W of power. A USB-C to Jack output would also work here - to allow charge whilst driving.

Lighting On Button This button operates the Lighting | Torch directly beneath.

INTRODUCTION

Several ways to charge Laurel

There is a total of 4 different ways to charge the Laurel

DC DC charger

If you have a DC DC charger, this can be used to charge up the Laurel, when driving. Simply plug it into where the solar is connected. The current rating of the DC DC charger does not have to be a certain current. The output voltage of the DC DC charger must be somewhere between 10V-60V. at 25A, charge time could be as little 100 minutes.

Solar input

The PV + and -ve terminals. Connect to the complementary Mini Anderson socket and install directly into the Mini Anderson. The MPPT controller is internal to the Laurel.

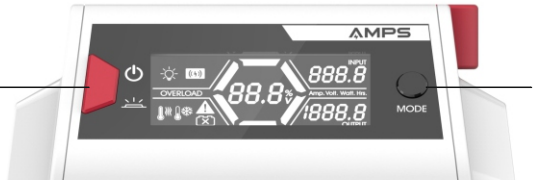
Mains Battery Charger

Connect the provided charger into this port. From flat, the battery could take 13hours to charge.

USB-C 65W PD charging

If your USB-C is capable of providing the power, a USB-C 65W supply can also charge the Laurel. Simply connect a USB-C to USB-C cable to this **65W PD IN** socket. From flat, the battery could take 8hours to charge.

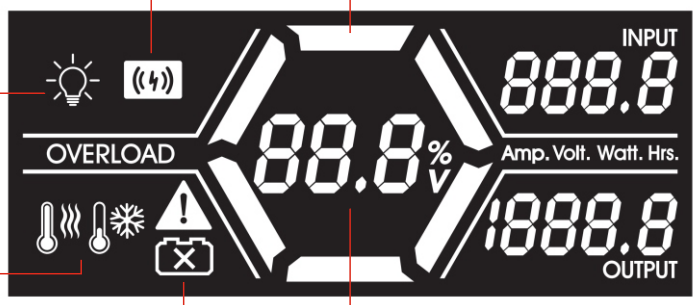
The Screen



Laurel on | off button

MODE button, toggles through display. Repeat pushing to toggle through different displays

Display Screen



Examples:

There are numerous sequences within the screen menu.

Simply mash the MODE button to toggle through numerous displays.

- The internal battery voltage is 13.2V.
- The 5 out of 6 illuminated segments around the centre suggest the state of charge is approximately 83-99% full.
- 300 Output suggests there is a 300W load being taken from the battery.

- The internal battery state of charge is 92%.
- The 5 out of 6 illuminated segments around the centre suggest the state of charge is approximately 83-99% full.
- 20 Input suggests there is a 30A charge entering the battery. The battery is being charged up

- The internal battery voltage is 12.0V
- The 3 out of 6 illuminated segments around the centre suggest the state of charge is approximately 50% full.
- 30A Output suggests there is a 30A load being taken from the battery. To run a load (inverter or DC load)

- The internal battery state of charge is 53.2%
- The 3 out of 6 illuminated segments around the centre suggest the state of charge is approximately 50% full.
- 12 Input and Output suggests there is 12.0V on the internal battery.

OVERLOAD

OVERLOAD shall be displayed if the AC output power of the inverter exceeds the maximum power rating. If above 600-700W+ is being drawn from the AC sockets. Or, if there is a short circuit. Reduce power consumption. The load that is running from the inverter may be too high. Overload shall reset.

High temperature icon. If the inverter is too hot this icon shall turn on. This could be because the inverter has been running at full power for a long period of time. Or, the Laurel has been in the direct sunlight. Wait for inverter to cool down. Reduce consumption and leave Laurel somewhere cooler.

Low temperature icon. Below 0DegC, the battery can not accept charge. The icon shall begin flashing if below -10DegC. Please ensure Laurel is left in a mild ambient temperature. This fault shall reset when temperature goes above 5DegC.

This icon shall display when there is a load over current (DC Anderson socket). Or a short circuit DC. Or, when there is too high a voltage on the 12V battery terminal. Reduce DC load on Anderson socket output. 25A limit. Ensure positive and negatives of the 12V load is the correct polarity.

This icon shall appear if the RS485 communication from battery has failed.