



Please dispose of packaging for the product in a responsible manner. It is suitable for recycling. Help to protect the environment, take the packaging to the local amenity tip and place into the appropriate recycling bin.



Never dispose of electrical equipment or batteries in with your domestic waste. If your supplier offers a disposal facility please use it or alternatively use a recognised re-cycling agent. This will allow the recycling of raw materials and help protect the environment.



machinery specialists since 1968

Pro Booster 802Li



03973

**FOR HELP OR ADVICE ON THIS PRODUCT PLEASE CONTACT YOUR DISTRIBUTOR, OR
SIP DIRECTLY ON:
TEL: 01509500400
EMAIL: sales@sip-group.com or technical@sip-group.com
www.sip-group.com**

Please read and fully understand the instructions in this manual before operation. Keep this manual safe for future reference.

DECLARATION OF CONFORMITY

Declaration of Conformity

We

SIP (Industrial Products) Ltd
Gelders Hall Road
Shepshed
Loughborough
Leicestershire
LE12 9NH
England

As the manufacturer's authorised representative within the EC
declare that the

Pro Booster 802Li - SIP Part. No. 03973

Conforms to the requirements of the following directive(s), as indicated.

2006/95/EC	Low Voltage Directive
2004/108/EC	EMC Directive
2011/65/EC	RoHS Directive

And the relevant harmonised standard(s), including

EN 61558-2-6:1998
EN 61558-1:1998+A1 1998+A112003
EN 55022-24

Signed: 

Mr P. Ippaso - Director - SIP (Industrial Products) Ltd
Date: 13/06/2014.



Page No.	Description
4.	Safety Symbols Used Throughout This Manual
4.	Safety Instructions
6.	Guarantee
6.	Electrical Connection
7.	Technical Specifications
8.	Contents & Accessories
9.	Getting to Know Your Pro Booster
9.	Operating Instructions
15.	Maintenance
16.	Spare Parts & Accessories
19.	Declaration of Conformity

SAFETY SYMBOLS USED THROUGHOUT THIS MANUAL



Danger / Caution: Indicates risk of personal injury and/or the possibility of damage.



Warning: Risk of electrical injury or damage!



Note: Supplementary information.

SAFETY INSTRUCTIONS



IMPORTANT: Please read the following instructions carefully, *failure to do so could lead to serious personal injury and / or damage to the Pro Booster or personal property.*

When using your Pro Booster, basic safety precautions should always be followed to reduce the risk of fire, electric shock, personal injury and / or damage to the Pro Booster 802Li. Read all of these instructions before operation and save this user manual for future reference.

SIP recommends that this Pro Booster should **not** be modified or used for any application other than that for which it was designed. If you are unsure of its relative applications do not hesitate to contact us and we will be more than happy to advise you.

KNOW YOUR PRO BOOSTER: Read and understand the owner's manual and labels affixed to the Pro Booster 802Li. Learn its applications and limitations, as well as the potential hazards specific to it.

KEEP CHILDREN AND UNTRAINED PERSONNEL AWAY FROM THE WORK AREA: All visitors should be kept at a safe distance from the work area.

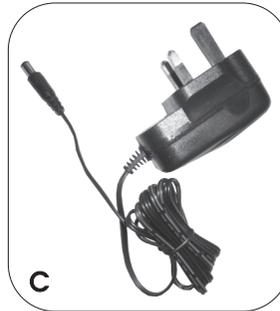
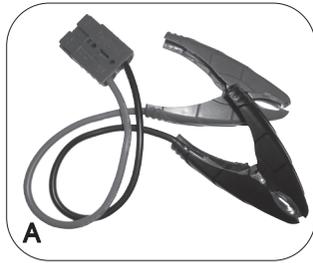
STAY ALERT: Always watch what you are doing and use common sense.

DO NOT ABUSE THE CHARGER LEAD: Never pull the DC output lead of the charger to remove the charger from the mains socket. Keep the leads away from heat, oil and sharp edges. If the charger is damaged, it must be replaced, or repaired by the manufacturer or its service agent or a similarly qualified person in order to avoid unwanted hazards.

HAVE YOUR PRO BOOSTER REPAIRED BY A QUALIFIED PERSON: The Pro Booster is in accordance with the relevant safety requirements. Repairs should only be carried out by qualified persons using original spare parts, otherwise this may result in considerable

NOTES

SPARE PARTS / ACCESSORIES



Ref.	Description	SIP Part No.
A.	Jump Cable	PW02-00150
B.	Laptop Lead / Adaptors	PW02-00151
C.	Mains AC Charger	PW02-00152
D.	Test Lead	PW02-00153
E.	DC Charger	PW02-00154

SAFETY INSTRUCTIONS....cont

danger to the user and void the warranty.

DANGER! Check that the mains charger and Pro Booster are in sound condition and good working order. Take immediate action to repair or replace damaged parts.

USE RECOMMENDED PARTS ONLY - Unapproved parts may be dangerous and will invalidate the warranty.

WARNING! Take care where the Pro Booster is placed during operation; ensure that it cannot fall, and that the wires are routed so as to not come into contact with moving parts such as fans and belts etc.

WARNING! Do not allow untrained persons to operate the Pro Booster and do not operate the Pro Booster 802Li without all covers etc. correctly fitted.

- Keep all combustible materials away from the Pro Booster.
- **ALWAYS** operate the Pro Booster in an area of good ventilation.
- Never stand on the Pro Booster, or use it as a step.
- Only ever use the supplied charger to charge the internal battery of the Pro Booster.
- **DO NOT** dismantle or tamper with the Pro Booster, or mains charger, as this may be dangerous and will invalidate the warranty.
- When using the mains charger, pull on the plug and never on the wire when disconnecting from the Pro Booster and the mains supply.
- Do not operate in an explosive environment and / or with flammables such as petrol, gas etc.
- Wear safety goggles during use.
- Use of an accessory or attachment not recommended or sold by SIP, may result in a risk of damage to the Pro Booster 802Li, or injury to personnel.
- Do not recharge the Pro Booster with a damaged plug or cord. Replace the broken part immediately.
- Do not submerge the Pro Booster or mains charger in water.
- Never allow the red and the black clamp to come into contact with each other or allow them to contact a common conductor; Lead-acid batteries store a large amount of energy - Short-circuiting the battery or charger terminals will cause the battery to try and release this energy immediately.
- Do not attempt to repair the Pro Booster yourself if found to be defective, have it repaired by a suitably qualified person; contact your distributor or SIP for advice.
- Always recharge the Pro Booster after each use.
- Never use the mains charger in damp or wet locations.
- Do not store or operate the Pro Booster outside the temperature range of -20° to 40°c.

If a problem with the Pro Booster is experienced, or suspected, or if the mains charger or plug become damaged, contact your distributor for repair.

If the Pro Booster is used in a place of work all rules and laws etc. relating to the use of portable electrical appliances should be followed.

SAFETY INSTRUCTIONS....cont



Danger: During operation, batteries can give off some hydrogen and oxygen creating a highly explosive mix. Ensure adequate ventilation exists and avoid sparks, smoking, etc.



Caution: During battery maintenance ensure adequate clean water is available in the event of an acid spill. The liquid inside batteries is highly corrosive therefore ensure that it is not allowed to make contact with the skin (especially eyes).



Important: When the Pro Booster is not in use, recharge it at least every 3 months with the supplied charger. Failure to follow these instructions may void your warranty.



Caution: The warnings and cautions mentioned in this user manual can not cover all possible conditions and situations that may occur. It must be understood by the operator that common sense and caution are factors which cannot be built into this product, but must be applied.

GUARANTEE

This SIP Pro Booster 802Li is covered by a 12 month parts and labour warranty covering failure due to manufacturers defects. This does not cover failure due to misuse or operating the Pro Booster outside the scope of this manual - any claims deemed to be outside the scope of the warranty may be subject to charges including, but not limited to parts, labour and carriage costs. Consumable items such as clips, leads and fuses are not covered by the warranty.

In the unlikely event of warranty claims, contact your distributor as soon as possible.



Note: Proof of purchase will be required before any warranty can be honoured.

ELECTRICAL CONNECTION

WARNING! It is the responsibility of the owner and the operator to read, understand and comply with the following:

You must check all electrical products, before use, to ensure that they are safe.

You must inspect power cables, plugs, sockets and any other connectors for wear or damage.

You must ensure that the risk of electric shock is minimised by the installation of appropriate safety devices; A residual current circuit breaker (RCCB) should be incorporated

MAINTENANCE



Note: There are no user serviceable parts inside the Pro Booster 802Li. Any internal checks / repairs should only be carried out by a suitably qualified person.

RECHARGING THE INTERNAL BATTERY



Note: The ambient temperature range should be between 0°C & 40°C during the charging operation.

The charge status of the internal battery can be checked anytime by turning the Pro Booster 802Li on (see page 10).

The internal battery should ideally be recharged when the display shows 5%.

To recharge with the AC charger:

Connect the AC charging adaptor lead to the charge input on the Pro Booster 802Li. Plug the AC charger to a suitable power supply. Turn on the power to the AC adaptor and charge until the battery status is 100% (approx. 6 hours).

To recharge with the DC adaptor:

Connect the DC charging adaptor lead to the charge input on the Pro Booster 802Li. Plug the DC charging adaptor to a suitable vehicles 12v socket. Charge until the battery status is 100% (approx. 6 hours).

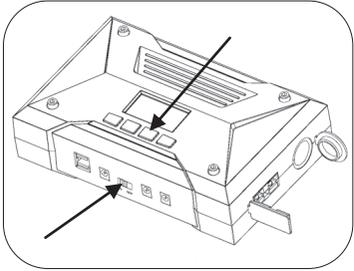
Once fully charged, the Pro Booster 802Li will automatically cut off the charger; the charger can be left connected for long periods of time.

The battery should be charged as often as possible (at least every 3 months), and should not be left for long periods without being charged.

OPERATING INSTRUCTIONS...cont

- Once the vehicle has started, disconnect the jump leads from the Pro Booster, then disconnect the clamp which is not connected to the battery first, followed by the clamp which is connected to the battery.

Start An Engine With No Battery:



- Connect the Positive (red) clamp to the positive of the engine, and connect the negative (black) lead to the negative of the engine.
- Connect the jump leads to the jump cable connector on the Pro Booster.
- Turn the unit on.
- Press and hold the override button for 2 seconds; "Ready Override" and a 20 second countdown

will be displayed on the LCD screen.

- Switch the ignition of the vehicle on as you would normally start the vehicle; The Pro Booster will only allow the operator to attempt to start the vehicle for 5 seconds, if the vehicle has started or not, after that the power will be cut for 60 seconds and the display will show this. After 60 seconds the output will be restored and the operator can make a second attempt to start the vehicle. This is to allow the unit to cool and to protect it from overheating.
- Once the vehicle has started, disconnect the jump leads from the Pro Booster, then disconnect the clamp which is not connected to the battery first, followed by the clamp which is connected to the battery.

FAULT CODES

During use, a fault code may appear on the LCD screen of the Pro Booster; Below is a list of these codes, and their meaning.

F01: The Pro Booster needs to be recharged.

F02: The ambient / Internal temperature is too low for the unit to operate.

F03: The ambient / Internal temperature is too high for the unit to operate.

F04: Overload; The operator has attempted to draw a load that is too high for the unit to deliver.

F05: The unit has been connected to the battery in reverse polarity.

F06: The unit is not connected to a battery, or the battery is below 2 volts.

ELECTRICAL CONNECTION...cont

in the main distribution board. We also recommend that a residual current device (RCD) is used. It is particularly important to use an RCD with portable products that are plugged into a supply which is not protected by an RCCB. If in any doubt consult a qualified electrician.

Connecting to the power supply:

The mains charger for the Pro Booster is designed to work with a standard 230v ~ 13 amp supply. Before using the mains charger, inspect it to ensure that it is not damaged. If any damage is visible have the charger inspected / repaired by a suitably qualified person.



Note: Always make sure the mains supply is of the correct voltage and frequency. If an extension lead is required in order to reach the mains supply; ensure that this too is rated for the correct voltage and fuse rating.

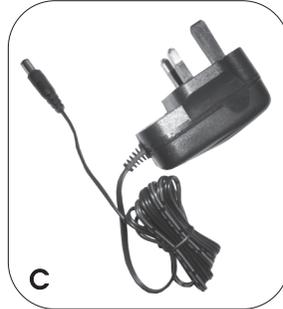
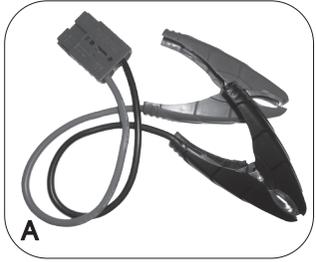


Note: The cross section of the extension lead should be checked so that it is of sufficient size so as to reduce the chances of voltage drops.

TECHNICAL SPECIFICATIONS

Model No.	03973
Description	Pro Booster 802Li
Internal Battery	20,000mAh LiFePO4
Boost Voltage	12v
Start Current	500A
Peak Current	800A
Battery Life	2000 Cycles
Auxiliary Outputs	2 x USB: 5v 1 x Laptop: 19v 1 x 12v
Working Temperature	-20°C to 40°C
Net Weight	1.12Kg
AC Charger	
Input	230v ~ 50Hz
Output	15v DC, 1.0A

CONTENTS & ACCESSORIES



Ref.	Description
A.	Jump Cable
B.	Laptop Lead / Adaptors
C.	Mains AC Charger
D.	Test Lead
E.	DC Charger
N/A	Pro Booster 802Li
N/A	Carry Case
N/A	Instruction Manual



Note: If any of the above are missing or damaged, contact your distributor immediately.

OPERATING INSTRUCTIONS...cont

- Switch the ignition of the vehicle on as you would normally start the vehicle; The Pro Booster will only allow the operator to attempt to start the vehicle for 5 seconds, if the vehicle has started or not, after that the power will be cut for 60 seconds and the display will show this. After 60 seconds the output will be restored and the operator can make a second attempt to start the vehicle. This is to allow the unit to cool and to protect it from overheating.
- Once the vehicle has started, disconnect the jump leads from the Pro Booster, then disconnect the clamp which is not connected to the battery first, followed by the clamp which is connected to the battery.

OPERATING THE OVERRIDE FUNCTION

If the vehicle has no battery connected, or the battery voltage is below 2 volts the engine start mode will not function; The unit will need to be set to override mode in these circumstances.

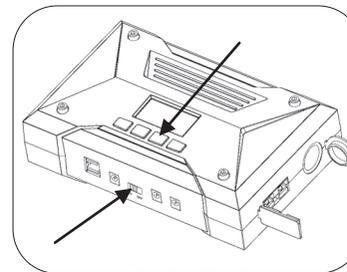


Caution: It may damage the vehicle's electrical system to crank the engine without a battery connected; Always check with the manufacturer that the vehicle can be started with the Pro Booster in place of a battery.



Caution: When set to override mode; The reverse polarity protection will not function. **Always** ensure that the leads are connected in the correct polarity when operating in override mode.

Start An Engine With Battery (below 2v):



- Connect the Pro Booster to the vehicle as described in jump starting a vehicle (page 11).
 - Connect the jump leads to the jump cable connector on the Pro Booster.
 - Turn the unit on.
 - Press and hold the override button for 2 seconds; "Ready Override" and a 20 second countdown will be displayed on the LCD screen.
- Switch the ignition of the vehicle on as you would normally start the vehicle; The Pro Booster will only allow the operator to attempt to start the vehicle for 5 seconds, if the vehicle has started or not, after that the power will be cut for 60 seconds and the display will show this. After 60 seconds the output will be restored and the operator can make a second attempt to start the vehicle. This is to allow the unit to cool and to protect it from overheating.

OPERATING INSTRUCTIONS...cont



Danger: a spark can be generated when connecting or removing the second clip which can ignite battery or fuel gases; the following instructions will reduce this risk.

For Negative Earth Vehicles (negative terminal of the battery is connected to the chassis / body of the vehicle):

- Connect the positive (red) clamp from the jump lead to the positive terminal (+) on the battery first.
- Then connect the negative (black) clamp to the negative terminal on the engine (ground) or the car chassis as far as practical from the battery and fuel line.

For Positive Earth Vehicles (positive terminal of the battery is connected to the chassis / body of the vehicle):

- Connect the negative (black) clamp from the jump lead to the negative terminal (-) on the battery first.
- Then connect the positive (red) clamp to the positive terminal on the engine (ground) or the car chassis as far as practical from the battery and fuel line.
- Connect the jump leads to the jump cable connector on the Pro Booster.
- Ensure that the cables are routed so that they cannot come into contact with moving parts such as fans or belts etc.



Note: Before attempting to start the vehicle; Turn the Pro Booster on and check that the internal battery status is at least 80%



WARNING! Take care where the Pro Booster is placed during operation; ensure that it cannot fall, and that the wires are routed so as to not come into contact with moving parts such as fans and belts etc.

- Turn the Pro Booster on and set it to engine start by pressing the ENGINE START button.

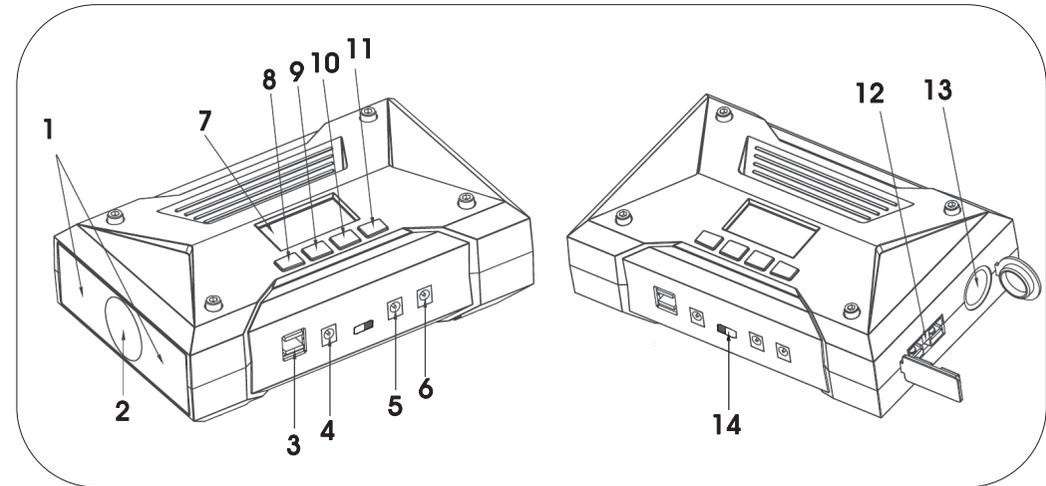


Note: If the vehicles battery voltage is below 2v the display will show F06; The battery voltage is too low for the Pro Booster to operate in this mode; See "Using the override mode".



Note: The operator will have 120 seconds to attempt to start the vehicle before the unit cuts the output. A countdown will appear on the display showing this. If the unit cuts the power the operator will have to press the engine start button to restart the countdown.

GETTING TO KNOW YOUR PRO BOOSTER



Ref. No.	Description	Ref. No.	Description
1.	LED Warning Light	8.	Warning / Work Light Control
2.	LED Work Light	9.	Engine Start
3.	USB Output	10.	Override Switch
4.	19v Output	11.	Battery / Alternator Test Switch
5.	Test Input	12.	Jump Cable Connector
6.	Charge Input	13.	12v Outlet
7.	LCD Screen	14.	Main On/Off Switch

OPERATING INSTRUCTIONS

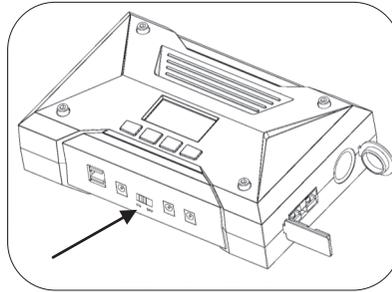


Note: Before initial operation; Ensure that the battery is fully charged (see page 15).

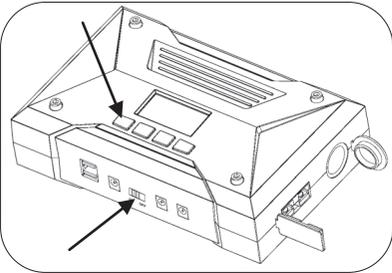
OPERATING INSTRUCTIONS...cont

TURNING THE PRO BOOSTER ON

- Slide the main On/Off switch to the On position (see right).
- The LCD screen should light up and display the % of charge remaining in the internal battery.



OPERATING THE LIGHTS



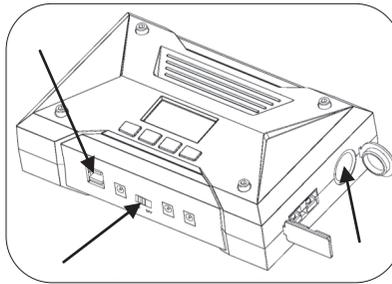
- Turn the Pro Booster 802Li on.
- Press the Warning / Work Light Control once (see left) and the flashing warning light will operate. Press again and the work light will operate on setting 1, press once again and the work light will operate setting 2 (bright).
- Press again to turn the light off.

OPERATING THE USB / 12V OUTLET

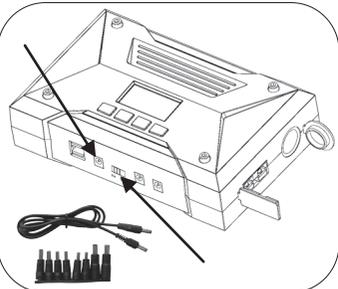
- Turn the Pro Booster 802Li on.
- Your USB or 12v device can now be connected (lead not supplied).

The USB outlet can charge most appliances which have internal batteries and can be charged via the USB port of a desktop / laptop computer.

The 12v outlet can power 12v DC devices up to 12v 10 amps.



OPERATING THE LAPTOP POWER SUPPLY

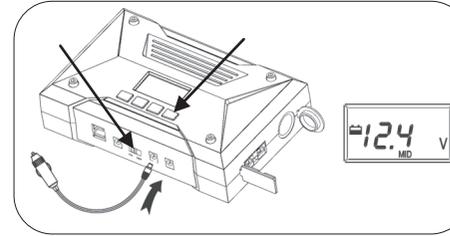


The laptop setting allows the user to charge a laptop running at 19v (with the correct adaptor).

- Turn the Pro Booster 802Li on.
- Choose the correct adaptor and fit it to one end of the laptop lead.
- Connect the opposite end to the laptop charging port (see left).

OPERATING INSTRUCTIONS...cont

OPERATING THE BATTERY TEST FUNCTION



The battery test function will give you an idea as to the condition of the battery.

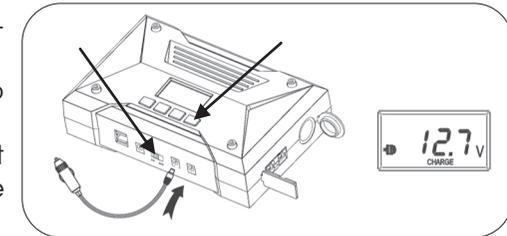
- **LOW** - The battery voltage is too low and should be checked by a professional.
- **MID** - The battery voltage is ok.
- **FULL** - The battery is fully charged.

- Connect one end of the test lead to the 12v socket of the vehicle.
- Connect the opposite end to the test input of the Pro Booster 802Li (see left).
- Ensure that the engine is turned off.
- Turn the Pro Booster 802Li on.
- Press the test switch until the battery test mode is displayed (see left).
- The battery voltage and status will be displayed.

OPERATING THE ALTERNATOR TEST FUNCTION

The alternator test function will test if the voltage being delivered is correct.

- Connect one end of the test lead to the 12v socket of the vehicle.
- Connect the opposite end to the test input of the Pro Booster 802Li (see right).
- Turn the engine on followed by the Pro Booster 802Li.
- Press the test switch until the alternator test mode is displayed (see right).
- The alternator voltage and status will be displayed.



- **LOW** - The alternator output is too low and should be checked by a professional.
- **CHARGE** - The alternator output is ok.
- **OVER** - The alternator output is too high and should be checked by a professional.

JUMP STARTING A VEHICLE

- Check the vehicles battery fluid level and top up if required.
- Ensure that the ignition is in the off position on the vehicle.

Connecting the Pro Booster To The Vehicle:



Important: Check with the manufacturer of the vehicle to be started that it is safe to use the Pro Booster without causing damage to the electrical system.