

Clarke®



12/24V JUMPSTARTER

MODEL NO: JS1224LIN

PART NO: 6238905

OPERATING & MAINTENANCE INSTRUCTIONS

UK
PA | CE



ORIGINAL INSTRUCTIONS

DL0723

INTRODUCTION

Thank you for purchasing this CLARKE Jumpstarter.

The JS1224LiN is a rechargeable power pack which can be used to start a car in the event of a flat battery. The unit can also be used to power electrical appliances via a cigarette lighter type socket using the adaptor supplied. The unit also incorporates a built-in lamp and may be used as a stand alone light source. A visual warning will appear in the event that the clamps are incorrectly fitted for jump starting (wrong polarity).

Before attempting to use this product, please read this manual thoroughly and follow the instructions carefully. In doing so you will ensure the safety of yourself and that of others around you, and you can look forward to your purchase giving you long and satisfactory service.

Please keep these instructions in a safe place for future reference.

SPECIFICATIONS

Item	Specification
Product Size (D x W x H)	120mm x 248mm x 230mm
Weight	2.2kg
Insulation/Protection Class	Class II (Charger)
Max Output Current (12V)	Starting 600A, Peak 1200A
Max Output Current (24V)	Starting 400A, Peak 900A
Input Voltage	230V-50Hz
Battery Type	Sealed Re-chargeable Lithium-ion
Electric Charge Value	4,000mAh
Charge/Discharge Current	Nominal: 500mA, Maximum: 4000mA
Estimated Engine Starting Capacity	Up to 4 Litres (Diesel) or 6 Litres (Petrol)
Charge Lifetime (Based on 3L Engine)	Approx. 20 Vehicle Starts
Charging Time	6-8 Hours
Auxiliary (USB) Socket Output	5V DC / 2.1A
COB LED Worklight	3.2V / 1W

Please note that the details and specifications contained herein, are correct at the time of going to print. However, CLARKE International reserve the right to change specifications at any time without prior notice.

GENERAL SAFETY RULES



WARNING: HYDROGEN GAS AND BATTERY ACID (SULPHURIC ACID) CAN BE: EXPLOSIVE, CORROSIVE TO SKIN, EYES AND HAIR, DAMAGING TO CLOTHING AND METALS, FLAMMABLE, POISONOUS TO BREATHE

1. **ALWAYS** ensure when jump-starting that air can circulate freely around the jumpstart.
2. **NEVER** allow the negative and positive leads on this unit to touch each other or to touch the same metal object. **NEVER** allow the cables to become wrapped around the operator or any other person.
3. Although the jumpstarter may be used outdoors, **DO NOT** leave it exposed to the elements. **AVOID** direct sunlight, direct heat, rain/moisture etc.
4. **DO NOT** operate the jumpstarter if any of the cables are damaged. Consult your CLARKE dealer for repair or replacement.
5. **DO NOT** operate the jumpstarter if the case is damaged, **NEVER** attempt any repairs yourself. Consult your CLARKE dealer or a qualified person for inspection and repair.
6. Ensure the vehicle battery posts and battery clamps are perfectly clean before use.
7. **ALWAYS** wear suitable protective clothing and eye protection when working with lead-acid batteries.
8. The jumpstarter is **NOT** designed to be used as a replacement for the vehicle battery.
9. **DO NOT** attempt to BOOST CHARGE the jumpstarter's sealed battery.
10. **ALWAYS** keep your body and clothing dry. **NEVER** work in damp area without adequate insulation against electric shock.
11. **NEVER** jump-start the engine whilst the jumpstarter is being charged.
12. **ALWAYS** store the jumpstarter out of reach of children.
13. If acid comes into contact with the eyes, flush the eyes with clean water continuously and seek medical help immediately.
14. If splashed by battery acid, immediately flush the area of the splash with clean water. If a burning sensation is felt or any blistering occurs, seek medical help immediately

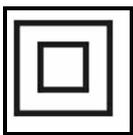
ENVIRONMENTAL RECYCLING POLICY



Through purchase of this product, the customer is taking on the obligation to deal with the WEEE in accordance with the WEEE regulations in relation to the treatment, recycling & recovery and environmentally sound disposal of the WEEE.

In effect, this means that this product must not be disposed of with general household waste but in accordance with the laws governing Waste Electrical and Electronic Equipment (WEEE) at a recognised disposal facility.

SYMBOLS DISPLAYED ON THE PRODUCT

	Read instruction manual before use		Class 2 Appliance (Charger)
	Always use eye protection		Always use protective gloves
	Always use a face mask		Always keep out of reach of children

GUARANTEE

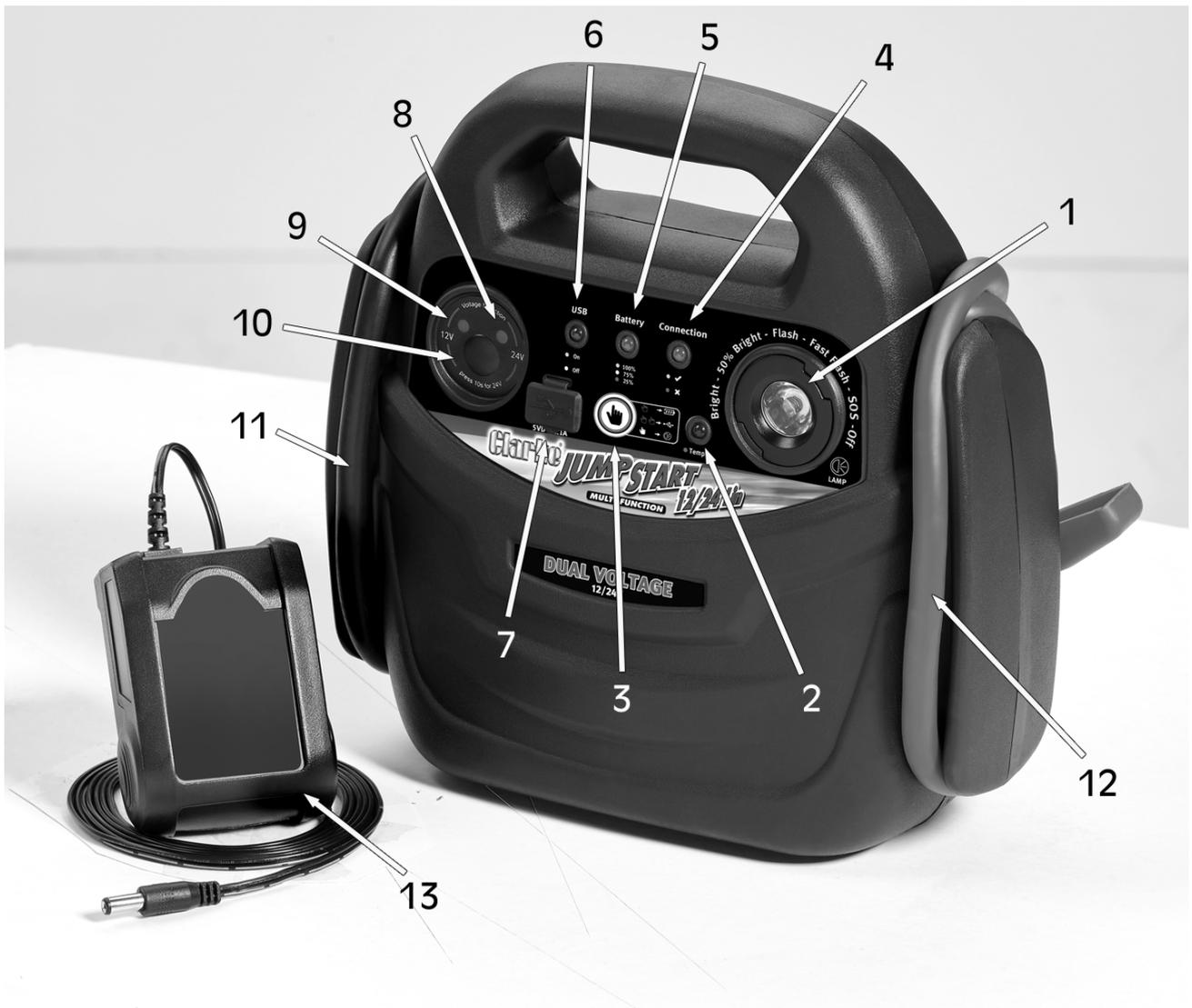
This product is guaranteed against faulty manufacture for a period of 12 months from the date of purchase. Please keep your receipt which will be required as proof of purchase.

This guarantee is invalid if the product is found to have been abused or tampered with in any way, or not used for the purpose for which it was intended.

Faulty goods should be returned to their place of purchase, no product can be returned to us without prior permission.

This guarantee does not effect your statutory rights.

COMPONENT IDENTIFICATION



1	LED Work Light	8	24V Stage Indicator
2	Temperature Indicator	9	12V Stage Indicator
3	On/Off Button	10	12V to 24V Manual Shift Button
4	Starting/Connection Indicator	11	Black Negative (-) Cable & Clamp
5	Battery Status Indicator	12	Red Positive (+) Cable & Clamp
6	USB Indicator	13	Input Charging Adaptor
7	USB Charging Port	14	Input Charging Port (Not Shown, on Reverse of Jumpstarter)

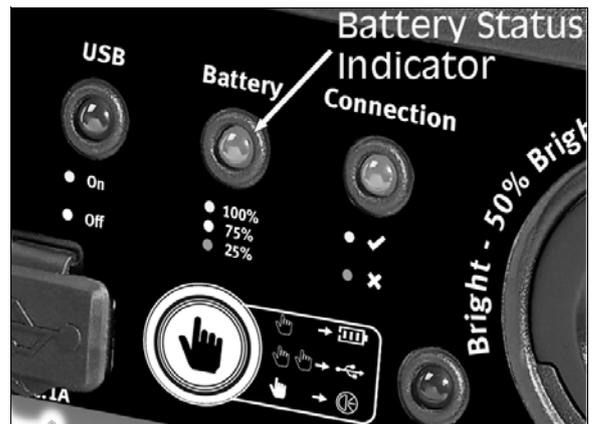
CHARGING JUMPSTARTER

CAUTIONS

1. **ALWAYS** use the original charger for charging. Unqualified chargers will shorten the life of the product and may even be dangerous.
2. **ALWAYS** charge the unit before using for the first time (see below).
3. **DO NOT** charge for long periods of time unattended.
4. **ALWAYS** charge in a well ventilated area and on a non-flammable surface.
5. **NEVER** try and jump start while the device is being charged.
6. After each use, press the On/Off button. When the battery level is showing a yellow light, the device should be charged as soon as possible. If the red light is showing then charge immediately.

CHECKING THE JUMPSTARTER CHARGE LEVEL

1. Press the On/Off button.
 - The battery status indicator light will show either Red (25%), Yellow (75%) or Green (100%).



CHARGING THE JUMPSTARTER

1. Charge your jumpstarter battery fully before using it for the first time.
2. Insert the input charging adaptor into the input charging port on the rear of the Jumpstarter.
3. Insert the charger into a mains power outlet and switch on.
 - During charging, the battery indicator light will flash relative to the charging stage, Red (25%), Yellow (75%), Green (100%).
 - Charging will take a maximum of 6-8 hours, depending on how much charge is still left in the jumpstarter.



- When fully charged the battery status indicator light will show a constant stable green light and charging will automatically shut off.

NOTE: After charging is completed and the charger is not disconnected from the power source, the charging mode will automatically restart if the battery voltage drops to 12 volts.

NOTE: It is recommended to recharge the Jumpstarter every 3-4 months to maintain the efficiency and prolong the service life of the internal battery even if the unit has not been used.

VEHICLE STARTING FUNCTION



WARNING: When connecting the jumpstarter leads to a battery, ensure the ON/OFF switch is **OFF**, and **ALWAYS** connect the **RED**, (positive '+') output conductor to the **UNEARTHED** (+) battery terminal **FIRST**, then connect the **BLACK**, (negative '-') conductor to a suitable earthing point on the chassis, well away from any fuel lines.

Always carry out the following preliminary checks before connecting the jumpstarter to the car battery:

- Make sure that the vehicle ignition and all ancillary equipment - lighting, radio etc, is switched off.
 - Make sure that the vehicle battery is rated at 12V or 24V and is not damaged in any way.
 - Make sure that the battery terminals are clean and the clamps are firm and secure.
 - If fitted, remove any vehicle battery filler plugs and check the electrolyte level. If necessary, top up with distilled water.
 - Make sure that the area is well ventilated.
 - Take great care not to touch the red positive (+) clamp against the black negative (-) clamp.
1. Push the On/Off button to check the jumpstarter battery capacity, making sure the battery capacity is above 50% (Yellow or Green Light).
 2. Connect the red (Positive '+') clamp to the positive (Red '+') terminal of the vehicle battery.
 3. Connect the black (negative '-') clamp to the metal part of the engine or negative ground (consult the vehicle handbook for exact location) or the negative (Black '-') terminal of the vehicle battery.
 4. After the connections are complete, if the vehicle battery voltage is between 3.0V and 15.5V, the jumpstarter will automatically set to the 12V

starting stage and the 12V LED indicator will be stable green and the starting/connection indicator will flash green. When the vehicle battery voltage is detected between 15.5V and 30V, the jumpstarter will automatically set to the 24V starting stage and the 24V LED indicator will be a stable green and the starting/connection indicator will flash green.

- When the connection indicator starts flashing, press the On/Off button, this will turn the indicator to a stable solid green and the system will be ready for use.

NOTE: If you do not achieve the above, consult the chart below.

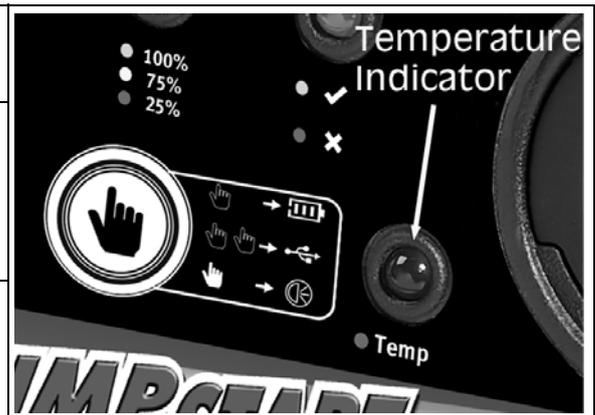
STARTING/CONNECTION INDICATOR CHART

	Green LED	Red LED	Sound	Description
1	On	Off	Off	Correct connections, jumpstarting enabled
2	Flashing	Off	Off	Correct connections, ready for jumpstart by pressing the On/Off button
3	Off	Fast Flashing	On	Wrong connection (Reverse Polarity), reconnect clamps correctly
4	Off	Slow Flashing	On	Vehicle battery over voltage, not suitable for jumpstarting
5	Slow Flashing	Off	On	Override is activated for jumpstarting
6	Off	On	On	Short circuit connection, warning under override

- Attempt the vehicle ignition sequence. Duration of ignition should not exceed 5 seconds to avoid overheating.
- If the vehicle does not start successfully, wait 3 minutes before trying again.
- If the vehicle starts, push the On/Off button to turn the jumpstarter off and disconnect the clamps, with the black clamp removed first.
- Recharge the jumpstarter after each use.
- If ignition waiting time exceeds 3 minutes, the jumpstarter will automatically turn itself off. Push the On/Off button or reconnect the clamps for the next jumpstart.

TEMPERATURE INDICATOR CHART

	Red LED	Sound	Description
1	Off	Off	Normal Temperature, enabled for jumpstarting
2	On	On	Over Temperature, DO NOT USE for jumpstarting



OVERRIDE JUMPSTARTING

A battery with some charge must be connected to the vehicle circuit in order for the jumpstarter to select a start voltage. If the terminals are bad/loose fit on the battery, or the battery is so low as not to register a voltage then the jumpstarter will not select or provide a voltage. To override this issue carry out the following:

1. Tighten all connections and terminations on the vehicle battery.
2. Ensure the clamps are correctly connected to the battery terminals.
3. Press the On/Off button for 10 seconds, the start/connection indicator will flash and there will be a warning sound. This will put the jumpstarter into the override start mode.

NOTE: Override for 24V Battery. When a 24V battery is lower than 15.5V, the jumpstarter will only activate on 12V mode. To turn the jumpstarter to 24V mode, press the 24V Manual Shift Button for 10 seconds.



4. Attempt the vehicle ignition sequence. Duration of ignition should not exceed 5 seconds to avoid overheating.
5. If the vehicle does not start successfully, wait 3 minutes before trying again.
6. If the vehicle starts, push the On/Off button to turn the jumpstarter off and disconnect the clamps, with the black clamp removed first.
7. Recharge the jumpstarter after each use.

8. If ignition waiting time exceeds 3 minutes, the jumpstarter will automatically turn itself off. Push the On/Off button or reconnect the clamps for the next jumpstart.

RUNNING/CHARGING USB DEVICES

1. Connect a USB cable to the jumpstarters USB charging port
2. Double click the On/Off button, which will provide 5V/2.1A charging power.
3. Plug the appropriate connector on the USB cable into the device that requires charging.

NOTE: When a loading current of over 2.4A is detected, the jumpstarter will shut down the USB charging port.

4. Double click the On/Off button to turn off the USB charging port. If the port is unused for 10 seconds the jumpstarter will automatically turn the port off.



USING THE LED WORK LIGHT

1. Press and hold the On/Off button for about 3 seconds to turn the light on.
2. To rotate through the light working modes, press the On/Off button as follows:

- Turning On: 100% Brightness
- 1st Short Press: 50% Dim Light
- 2nd Short Press: Slow Flash
- 3rd Short Press: Fast Flash
- 4th Short Press: SOS
- 5th Short Press: Turn Light Off

3. After continuing to work for more than 5 seconds in any working mode, short press the On/Off button to turn the light off.



DAILY CARE

Always ensure the cables & clamps are in good condition and the clamps are clean and corrosion free. If damaged they should be replaced. Keep the unit clean by wiping with a dry cloth. **DO NOT** use solvents as a cleaning agent.

Keep the unit fully charged at all times.

Always turn the jumpstarter OFF during storage and store in an upright position, away from direct sunlight, moisture or sources of extreme heat or cold.

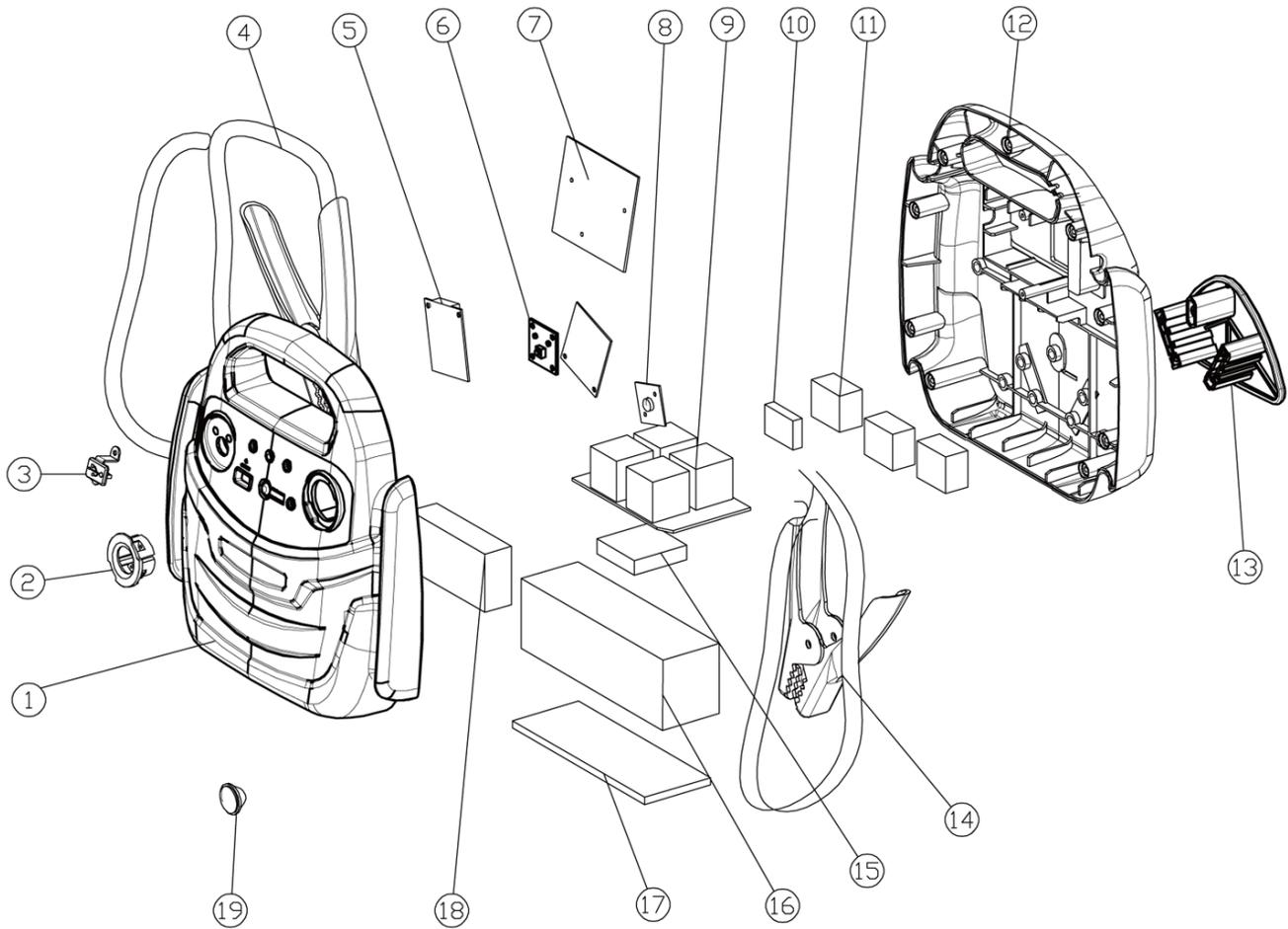
NEVER attempt any repair unless you are a qualified technician. Your CLARKE jumpstarter has been designed to give long and trouble free service. If, however, having followed the instructions in this booklet carefully, you encounter problems, take the unit to your local CLARKE dealer.

Q&A / TROUBLESHOOTING

Question	Answer
Why didn't my Jumpstarter start my vehicle?	There could be a number of reasons why the Jumpstarter didn't start your vehicle. a) Ensure the Jumpstarter battery is fully charged b) Ensure you have followed the correct operating procedures and the clamps are well connected. c) Ensure the vehicle operates on 12V DC or 24V DC. d) When the car battery voltage is less than 2.5V, ensure that the clamps are well connected, then press the On/Off button for 5 seconds, the device will detect the connection with a warning sound, when pressed for 10 seconds the device will be activated for starting. e) Ensure the vehicle is not over 10 litres in size.
How do I turn off the jumpstarter?	The jumpstarter has intelligent detection function. If there is no load, or the starter is charged for a long time, it will automatically fall into 'sleep mode' and save the energy.
How long do I have to charge the jumpstarter for?	Usually 6 - 8 hours. It will automatically stop charging after the starter is fully charged.

How many times can I charge my mobile device?	Between 2 - 6 times, depending on the capacity and size of the device.
How long can I leave the jumpstarter once charged?	There should be no problem storing for 6 - 12 months, but in order to prolong the service life, it is recommended to fully charge the starter once every 3 - 4 months.
How many starts can I get from a fully charged starter?	Depends on the displacement, the number of starts can vary. For example, if it is a 3 litre vehicle, it could have 20+ starts.
What are the protection features of this product?	<p>There are 10 protections, as follows:</p> <ul style="list-style-type: none"> a) Reverse Polarity Protection: Prevents harm if clamps are reversed. b) 12/24V Wrong Connection Protection: In case of wrong selection of voltage between 12V and 24V c) Overcurrent Protection: Prevents damage to the product caused by excessive input charging current d) Short Circuit Protection: Prevents the clamps from shorting between the positive and negative poles e) Overcharge Protection: When fully charged or external input voltage is too high, the device will not accept charge f) Reverse Charge Protection: Stops any reverse charging from the vehicle after jump starting g) Over Discharge Protection: Keeps the device from discharging when the battery is too low h) Over Temperature Protection: Automatically stops working when the temperature gets too high during charging, lighting and USB interface use i) Over Time Protection: Device will automatically turn off when not being used j) Spark Proof Protection: Prevents sparks when clamps are connecting to vehicle battery

SPARE PARTS



Spare Parts List

1	Front Housing	11	Battery Pad - 2B
2	Light Cover Bracket	12	Back Housing
3	USB Protective Cover	13	Clamps Board (Black)
4	Booster Cable with Clamp (Red)	14	Booster Cable with Clamp (Black)
5	PCBA for BMS (Serial Connected)	15	Battery Pad - 3C
6	PCBA for Voltage Selection & Indicator	16	Battery Pack
7	PCBA Main Board	17	Battery Pad - 4D
8	PCBA for Working Light	18	Battery Pad - 5E
9	PCBA with Relays	19	Transparent Light Bowl
10	Battery Pad - 1A		

DECLARATION OF CONFORMITY - UKCA



Hemnall Street, Epping, Essex, CM16 4LG

DECLARATION OF CONFORMITY

This is an important document and should be retained.

We hereby declare that this product(s) complies with the following legislation:

The Batteries and Accumulators (Placing on the Market) Regulations 2008

The Electromagnetic Compatibility Regulations 2016

The Electrical Equipment (Safety) Regulations 2016

The Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations 2012

The following standards have been applied to the product(s):

IEC 62321-3-1:2013, IEC 62321-4:2013+AMD1:2017 CSV, IEC 62321-6:2015, IEC 62321-7-1:2015, IEC 62321-7-2:2017, IEC 62321-8:2017, EN 55014-1:2017, EN 55014-2:2015, EN 61000-3-2:2014, EN 61000-3-3:2013, EN 55014-1:2021, EN 55014-2:2021, EN 61000-3-2:2019+A1:2021, EN 61000-3-3:2013, EN 60335-2-29:2004+A2:2010+A11:2018, EN 60335-1:2012+A11:2014+A13:2017+A1:2019+A14:2019+A2:2019+A15:2021, EN 62233:2008

The technical documentation required to demonstrate that the product(s) meet(s) the requirement(s) of the aforementioned legislation has been compiled and is available for inspection by the relevant enforcement authorities.

The UKCA mark was first applied in: 2023

Product Description: Jump Starter
Model Number(s): JS1224LIN
Serial/Batch Number: Refer to product/packaging label
Date of Issue: 10/07/2023

Signed:

J.A Clarke

Director

DECLARATION OF CONFORMITY - CE



Clarke[®]
INTERNATIONAL

Fitzwilliam Hall, Fitzwilliam Place, Dublin 2

DECLARATION OF CONFORMITY

This is an important document and should be retained.

We hereby declare that this product(s) complies with the following legislation:

2006/66/EC	Battery Directive
2014/30/EU	Electromagnetic Compatibility Directive
2014/35/EU	Low Voltage Directive
2011/65/EU	Restriction of Hazardous Substances (RoHS) Directive

The following standards have been applied to the product(s):

IEC 62321-3-1:2013, IEC 62321-4:2013+AMD1:2017 CSV, IEC 62321-6:2015, IEC 62321-7-1:2015, IEC 62321-7-2:2017,
IEC 62321-8:2017, EN 55014-1:2017, EN 55014-2:2015, EN 61000-3-2:2014, EN 61000-3-3:2013, EN 55014-1:2021,
EN 55014-2:2021, EN 61000-3-2:2019+A1:2021, EN 61000-3-3:2013, EN 60335-2-29:2004+A2:2010+A11:2018,
EN 60335-1:2012+A11:2014+A13:2017+A1:2019+A14:2019+A2:2019+A15:2021, EN 62233:2008

The technical documentation required to demonstrate that the product(s) meet(s) the requirement(s) of the aforementioned legislation has been compiled and is available for inspection by the relevant enforcement authorities.

The CE mark was first applied in: 2023

Product Description: Jump Starter
Model Number(s): JS1224LIN
Serial/Batch Number: Refer to product/packaging label
Date of Issue: 10/07/2023

Signed:

J.A Clarke
Director

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