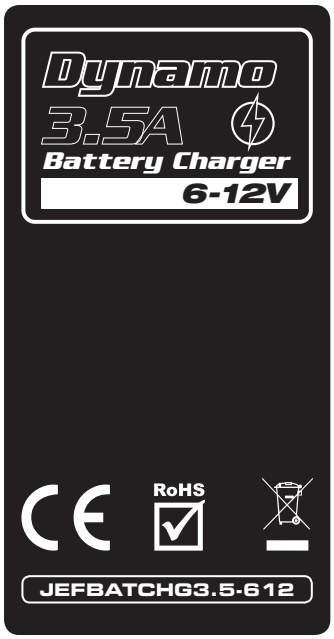
Jefferson®
PROFESSIONAL TOOLS & EQUIPMENT

JEFBATCHG3.5-612
User Manual
v.1.1



IP54 WATER RESISTANT

Please note this is not a jump start device!

FEATURES

- ★ Suitable for charging all 6V and 12V lead-acid batteries including; Wet (Flooded), Gel, MF (Maintenance-Free), CA (Calcium), EFB (Enhanced Flooded Battery), and AGM (Absorption Glass Mat) batteries
- ★ Suitable for charging battery capacities from 2 to 120 Ah and maintaining all battery sizes
- ★ Stabilises internal battery chemistry for increased performance and longevity
- ★ Four external holes for easy mounting
- ★ Supplied with 1.7 meter DC, 0.5 meter battery clamp and eyelet terminal connector quick charge leads

1. SAFETY

WARNING:
The user must read and understand all of the product safety information prior to using the JEFBATCHG3.5-612 Dynamo 3.5A Battery Charger.

- The JEFBATCHG3.5-612 has been designed for charging all 6V and 12V lead-acid batteries including; Wet (Flooded), Gel, MF (Maintenance-Free), CA (Calcium), EFB (Enhanced Flooded Battery), and AGM (Absorption Glass Mat) batteries.
- Do not use this product to charge any products outside of it's intended use.
- Before using the charger carefully read the battery manufacturers specification, precautions and recommended rates of charge. Jefferson do not assume any liability for misuse of this charger.
- Batteries contain explosive gases. Charging should be carried out in a well ventilated area and cool area away from sources of heat flames and sparks.
- Indoor use only. This charger must not be used outside in rain or snow conditions.
- Disconnect the mains cable. Before making or breaking the connection to the battery terminals, remove the plug from the power supply.
- Connect the charger carefully. Make sure the red clamp is attached to the battery positive terminal. The black clamp attaches to the negative. Do not reverse the clamps or allow them to touch each other.
- Refer to the vehicle manufacturers information. Follow these instructions fully to make sure no damage occurs to the vehicle or it's equipment.
- Do not cover the charger. Allow air to circulate around the charger to prevent over heating.
- The charger is equipped with a time-lag fuse inside. Over-heating will trip the fuse to prevent damage and will not reset until sufficiently cooled.
- Do not use the charger within the vehicle. Stand it on a level firm surface to prevent damage to the charger or vehicle.
- Do not tamper with this product. Repairs and maintenance must be carried out by an authorised service agent. Do not modify this product in any way.
- Wear approved safety goggles (not safety glasses) and latex/nitrile gloves. Before charging a maintenance type battery the electrolyte (battery acid) must be filled to the maximum marked levels. Never use tap water. Distilled water or electrolyte must be used.
- Never attempt to charge non-rechargeable batteries. Only charge lead acid batteries within the voltage and amp hour capacities of the charger.
- Never attempt to charge a frozen battery.
- Never attempt to charge a damaged or distorted battery.
- Keep out of the reach of children.

2. CHARGING MODES

Mode	Explanation
Standby	In Standby mode, the charger is not charging or providing any power to the battery from the mains power supply. When selected a GREEN LED will illuminate indicating NO POWER.
12V 3.5A NORM	For charging 12V Wet Cell, Gel Cell, Enhanced Flooded, Maintenance-free and Calcium batteries. When selected, a GREEN LED will illuminate.
12V 3.5A COLD/ AGM	For charging 12V batteries in cold temperatures below 10°C (50°F) or AGM batteries. When selected a GREEN LED will illuminate.
12V 1A NORM	For charging 12V Wet Cell, Gel Cell, Enhanced Flooded, Maintenance-free and Calcium batteries. When selected a BLUE LED will illuminate.
12V 1A COLD/ AGM	For charging 12V batteries in cold temperatures below 10°C (50°F) or AGM batteries. When selected a BLUE LED will illuminate. 6V, 3.5A, for charging 6V wet cell, gel cell.
12V REPAIR	An advanced battery recovery mode for repairing and storing, old, idle, damaged, stratified or sultated batteries.

2. CHARGING MODES (CONTINUED)

The JEFBATCHG3.5-612 Dynamo 3.5A Battery Charger has six modes: Standby, 12V/3.5A NORM, 12V/3.5A COLD/AGM, 12V/1A NORM, 12V/1A COLD/AGM, 12V REPAIR and 6V, 3.5A NORM.

These "Press and Hold" modes are advanced charging modes that require your full attention before selecting. "Press and Hold" are indicated on the charger by "MODE".

It is important to understand the differences and purposes of each charge mode. Do not operate the charger until you confirm the appropriate charge mode for your battery.

See the various charge modes on page 1 of this manual.

3. SPECIFICATION

Input Voltage:	220-240V, 50-60Hz, 0.8A
Efficiency:	About 85%
Power:	Max 60W
Charging Voltage:	Various
Charging Current:	3.5A (6V), 1A/3.5A (12V)
Low Voltage Detect:	>6V
Back Current Drain:	<5mA
Ambient Temperature:	0°C~+40°C
Charging Steps:	8Steps, Smart Charger
Battery Chemical Reaction:	Wet, Gel, MF, CA , EFB, AGM
Battery Capacity:	2-120Ah (6V/12V) Maintains 6V/12V lead-acid batteries
Insulation Class:	IP54
Refrigeration:	Natural Convection
Size (L×W×H):	190 x 79 x 42mm
Weight:	0.7Kg

4. CONNECTING THE BATTERY

Do not connect the AC power plug until all other connections are made. Identify the correct polarity of the battery terminals on the battery. The positive battery terminal is typically marked by these letters or symbols (POS,P,+). The negative battery terminal is typically marked by these letters or symbols (NEG,N,-). Do not make any connections to the carburettor, fuel lines, or thin sheet metal parts. The below instructions are for a negative ground systems (most common). If you vehicle is a positive ground system (very uncommon), follow the below instructions in order.

1. Connect the positive (red) battery clamp or eyelet terminal connector to the positive (POS,P,+) battery terminal.
2. Connect the negative (black) battery clamp or eyelet terminal connector to the negative (NEG,N,-) battery terminal or vehicle chassis.
3. Connect the battery chargers' AC power plug into the mains power supply. Do not face the battery direction when making this connection.
4. When disconnecting the battery charger, disconnect in the reverse sequence, removing the negative first.

Note: LED will indicate a solid Red if the battery clamp or eyelet terminal connector are connected to the wrong terminal, reverse the battery connectors.

5. CHARGING THE BATTERY

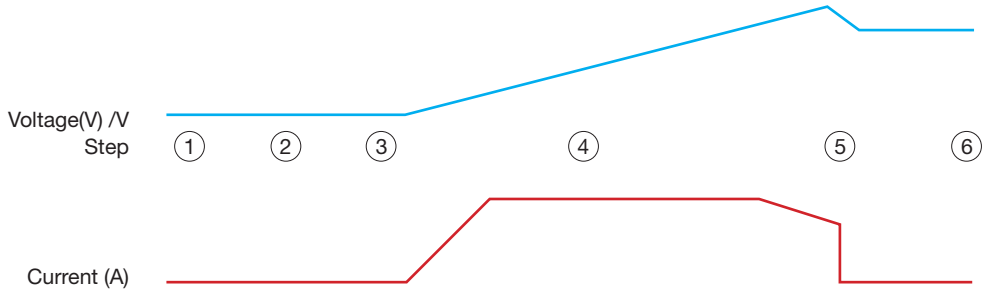
1. Verify the voltage and chemistry of the battery.
2. Confirm that you have connected the battery clamps or eyelet terminal connectors properly and the AC plug is plugged into the mains supply.
3. The charger will begin in Standby mode, indicated by an orange LED. In Standby, the charger is not providing any power.
4. Press the mode button to toggle to the appropriate charge mode (press and hold for three seconds to enter an advanced charge mode) to select the voltage and chemistry of your battery.
5. The mode LED will illuminate the selected charge mode and the Charge LEDs will illuminate (depending on the health of the battery) indicating the charging process has started.

LED				EXPLANATION
25% ●	50% ○	75% ○	100% ○	The 25% charge LED will slowly pulse 'on' and 'off', when the battery is less than 25% fully charged. When the battery is 25% charged, the charge LED solid.
25% ●	50% ●	75% ○	100% ○	The 50% Charge LED will slowly pulse 'on' and 'off', when the battery is less than 50% fully charged. When the battery is 50% charged, the Charge LED will be solid.
25% ●	50% ●	75% ●	100% ○	The 75% Charge LED will slowly pulse 'on' and 'off', when the battery is less than 75% fully charged. When the battery is 75% charged, the Charge LED will be solid.
25% ●	50% ●	75% ●	100% ●	The 100% Charge LED will slowly pulse 'on' and 'off' when the battery is less than 100% fully charged. When the battery is 100% charged, the charge LED will be solid, and the 25%, 50% and 75% Charge LEDs will turn 'off'.

6. INCORRECT POLARITY WARNING ⚠

When the error LED warning is flashing, it denotes a potential error in the battery conditioner. Several potential errors include;
1. Battery is not connected
2. Battery voltage is too low
3. Battery is connected incorrectly

7. CHARGING PROCESS



Step	Explanation
1&2. Analyse and Diagnose	Check the initial condition of battery, especially voltage.
3. Reverse Connection Detection	Detect battery if connects right.
4. Heavy Current	Charge at heavy current to approximately 80% of battery capacity.
5. Gentle Current	Charge with gentle current until the maximum capacity of battery.
6. Stop	Detect the full battery capacity, stop charge. When the voltage of battery falls down to a certain value, charge cycle starts again.

8. CHARGING TIME

Different battery capacity and residual voltage would affect the charging time.
Following data is only for reference (when discharge 12V lead-acid battery to 9V, with 5A discharge current).

Battery Size/Ah	Approx. Time to charge in hours (12V)	
20	5H @ 14.4V	7H @ 14.7V
40	8H @ 14.6V	11H @ 14.9V
60	9H @ 14.4V	12H @ 14.7V
75	14H @ 14.5V	17H @ 14.7V
120	16H @ 14.4V	20H @ 14.7V

9. MOUNTING

The JEFBATCHG3.5-612 Dynamo 3.5A Battery Charger has four external holes for mounting. Mount the charger in the desired location using the M3 self drill screws (supplied).
- Ensure there are no obstructions behind the mounting surface.
- IMPORTANT: keep in mind the distance to the battery to ensure the supplied leads will reach. The DC cable length from the charger is approximately 1.7 meters.

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LIMITED WARRANTY STATEMENT

Jefferson Professional Tools & Equipment, or hereafter "Jefferson" warrants its customers that its products will be free of defects in workmanship or material. Jefferson shall, upon suitable notification, correct any defects, by repair or replacement, of any parts or components of this product that are determined by Jefferson to be faulty or defective.

This warranty is void if the equipment has been subjected to improper installation, storage, alteration, abnormal operations, improper care, service or repair.

Warranty Period

Jefferson will assume both the parts and labour expense of correcting defects during the stated warranty periods below.

All warranty periods start from the date of purchase from an authorised Jefferson dealer. If proof of purchase is unavailable from the end user, then the date of purchase will be deemed to be 3 months after the initial sale to the distributor.

1 Year
• *Jefferson Dynamo 3.5A Battery Charger (JEFBATCHG3.5-612).*

90 Days
• All replacement parts purchased outside of the warranty period

Important: *All parts used in the repair or replacement of warranty covered equipment will be subject to a minimum of 90 days cover or the remaining duration of the warranty period from the original date of purchase*.

Warranty Registration / Activation

You can register and activate your warranty by visiting the Jefferson Tools website using the following address:
www.jeffersontools.com/warranty and completing the online form.

Online warranty registration is recommended as it eliminates the need to provide proof of purchase should a warranty claim be necessary.

Warranty Repair

Should Jefferson confirm the existence of any defect covered by this warranty the defect will be corrected by repair or replacement at an authorized Jefferson dealer or repair centre.

Packaging & Freight Costs

The customer is responsible for the packaging of the equipment and making it ready for collection. Jefferson will arrange collection and transportation of any equipment returned under warranty. Upon inspection of the equipment, if no defect can be found or the equipment is not covered under the terms of the Jefferson warranty, the customer will be liable for any labour and return transportation costs incurred. These costs will be agreed with the customer before the machine is returned.

NOTE: ** Jefferson reserve the right to void any warranty for damages identified as being caused through misuse **

Warranty Limitations

Jefferson will not accept responsibility or liability for repairs made by unauthorised technicians or engineers. Jefferson's liability under this warranty will not exceed the cost of correcting the defect of the Jefferson products.

Jefferson will not be liable for incidental or consequential damages (such as loss of business or hire of substitute equipment etc.) caused by the defect or the time involved to correct the defect. This written warranty is the only express warranty provided by Jefferson with respect to its products.

Any warranties of merchantability are limited to the duration of this limited warranty for the equipment involved.

Claiming Warranty Coverage

The end user must contact Jefferson Professional Tools & Equipment:
(Tel: +44 (0) 1244 646 048) or their nearest authorised Jefferson dealer where final determination of the warranty coverage can be ascertained.
Step 1 - Reporting the Defect

Online Method:

Visit our website www.jeffersontools.com/warranty and complete the Warranty Returns form. You can complete the form online and submit it to us directly or download the form to print out and return by post.

Telephone Method:

Contact your Jefferson dealer or sales representative with the following information:

- Model number
- Serial number (usually located on the specification plate)
- Date of purchase

A Warranty Returns form will be sent to you for completion and return by post or fax, together with details of your nearest authorised Jefferson repair centre. On receipt of this form Jefferson will arrange to collect the equipment from you at the earliest convenience.

Step 2 - Returning the Equipment

It is the customer's responsibility to ensure that the equipment is appropriately and securely packaged for collection, together with a copy of the original proof of purchase. Please note that Jefferson cannot assume any responsibility for any damage incurred to equipment during transit. Any claims against a third party courier will be dealt with under the terms & conditions of their road haulage association directives.

NOTE: *Jefferson will be unable to collect or process any warranty requests without a copy of the original proof of purchase.*

Step 3 - Assessment and Repair

On receipt, the equipment will be assessed by an authorised Jefferson engineer and it will be determined if the equipment is defective and in need of repair and any repairs needed are covered by the warranty policy. In order to qualify for warranty cover all equipment presented must have been used, serviced and maintained as instructed in the user manual.

Where repair is not covered by the warranty a quotation for repair, labour costs and return delivery will be sent to the customer (normally within 7 working days). Note: If the repair quotation is not accepted Jefferson Professional Tools & Equipment will invoice 1 hour labour time at £30 per hour plus return carriage costs (plus VAT).

In cases where no fault can be found with the equipment, or, if incorrect operation of the equipment is identified as the cause of the problem, a minimum of 1 hour labour at £30 per hour plus carriage costs will be required before the equipment will be despatched back to the customer.

Any equipment repaired or replaced under warranty will normally be ready for shipment back to the customer within 7 working days upon receipt of the equipment at an authorised Jefferson Repair centre (subject to part availability). Where parts are not immediately available Jefferson will contact you with a revised date for completion of the repair.

General Warranty Enquiries

For any further information relating to Jefferson warranty cover please call:
+44 (0) 1244 646 048 or send your enquiry via email to **warranty@jeffersontools.com**

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EC DECLARATION OF CONFORMITY

We, Jefferson Professional Tools & Equipment, as the authorised European Community representative of the manufacturer, declare that this equipment conforms to the requirements of the following Directives:

`2014/30/EU - Electromagnetic compatibility`

Signed By: Stephen McIntyre **Date:** 4th July 2018

Name and address of manufacturer or authorised representative:

Jefferson Tools, Herons Way, Chester Business Park, Chester, United Kingdom, CH4 9QR

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