

Micro Charger / Model 9710

Instruction Leaflet

Safety

- 1.1 This leaflet contains important safety and operating instructions. Please read these fully and note all warnings before using the charger. Please follow all instructions and retain this leaflet for future reference.
- 1.2 PAG chargers are not intended for any use other than the charging of batteries as detailed in 'Specification'.
- 1.3 **IMPORTANT: Use only on AC supplies 100-240V, 50/60Hz.** Supply connection to the charger should be made using only the Power Supply Unit and plug supplied with this equipment.
- 1.4 Protect the power cord from being walked on or pinched. Unplug this apparatus during lightning storms or when unused for long periods of time.
- 1.5 **WARNING:** Indoor use only. To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture.
- 1.6 Although the charger is reverse polarity protected, extreme care should always be taken not to short circuit the battery itself. Rechargeable batteries can deliver power at a very high rate, and short circuiting even a partially charged battery could result in a fire or personal injury. PAG supplies a range of connector leads for most charging requirements, and does not accept responsibility for any other form of charging connection.
- 1.7 Do not disassemble the charger. There are no user-serviceable parts inside. Incorrect reassembly may result in a safety hazard.
- 1.8 Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as the supply cord or plug, when the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped. In this event you should seek advice from your PAG dealer or the nearest PAG Authorised Service Centre by visiting paguk.com or direct from PAG in the UK by calling +44 (0)20 8543 3131.

Specification

- 2.1 **Model No. 9710**
- 2.2 **Range of Batteries Charged:**

The PAGlink Micro Charger is designed for charging the following PAGlink batteries, individually or linked:

 - Model 9303 PAGlink PL96e
 - Model 9304 PAGlink PL96T
 - Model 9308 PAGlink PL150e
 - Model 9309 PAGlink PL150T

It can also be used to charge the following batteries:

 - Model 9307V PAG L90 Slim
 - Model 9310V PAG L95e/L96e
 - Model 9305V PAG L96T
 - Model 9360 PAG L95
 - Sony V-Mount Li-Ion
- 2.3 **Battery Connections:**

V-Mount connector.
- 2.4 **Main Charge Program:**

Li-Ion voltage-charge program.
- 2.5 **Recovery Charge:**

This special program will automatically recover a PAG Li-Ion battery where the output has been shut down.
- 2.6 **Self Test Program:**

The internal microprocessor constantly monitors the battery under

charge or process as well as the operation of the charger's own functions which will be shut down to a safe condition should any of the tests fail.

- 2.7 **AC Mains Input:**

100-240V ~ autoselected. Frequency 50-60 Hz. Maximum power consumption 35W.
- 2.8 **Output Protection:**

Charger protected against short circuit and open circuit.
- 2.9 **AC Mains Failure Protection:**

Should mains failure occur during a charging program, or whilst the charger is connected, it will shut down to a safe condition.
- 2.10 **User Interface:**

LED indication of an absent battery, battery charging, charging complete and a faulty battery is provided by the charger. Battery state of charge is indicated by the battery's own capacity indicator. The charger is fully automatic in operation and no user controls are provided.
- 2.11 **Operating Temperature Range:**

0°C to +40°C (+32°F to +104°F).
- 2.12 **Overall Dimensions / Weight:**

110 x 87 x 58mm (boxed) / 200g.
- 2.13 **Typical Battery Charging Times:**

These charge times are for fully-discharged 96Wh batteries to fully-charged. 150Wh batteries will take 50% longer.

No. of Batteries	Charge Time	
1	3 hrs	15 mins
2	7 hrs	15 mins
3	11 hrs	15 mins
4	15 hrs	

Installation

- 3.1 PAGlink Micro Chargers are supplied with an AC to DC power supply unit conforming to: EN60950-1, EN55022 & EN55024.

AC supply connection to the charger should be made using only the Power Supply Unit and connector (plug) included with this equipment. The following connectors are available from PAG:

 - Model 9710U UK
 - Model 9710E Europe
 - Model 9710J Japan/USA
 - Model 9710A Australia
- 3.2 The PAGlink Micro Charger PSU is designed for use on AC supplies worldwide, and automatically accept supplies in the range 100-240V~ autoselected. Mains supply frequency must be in the range 50-60Hz.
- 3.3 PAGlink Micro Charger Model 9710 may be powered from a 12V vehicle battery using PAG Vehicle Battery-Power Converter, Model No. 9775.
- 3.4 **PAG TECHNICAL INFORMATION:**

For further technical information, please contact an authorised PAG Service Centre. Visit the PAG website at paguk.com/agents to discover your nearest point of contact, or contact PAG Ltd. in the UK: +44 (0)20 8543 3131, or support@paguk.com.

Operating Instructions

- 4.1 IMPORTANT:** Note Section 4.13, Supply Failure. PAGlink Micro Chargers may be disconnected from the supply at any time in complete safety and without damage to the charger or any batteries connected.
- 4.2** Fit the AC connector (plug) to the charger. Connect the V-Mount charging shoe to the charger. Clip the V-Mount charging shoe over the contacts of the battery. Connect the charger to a suitable AC supply.
- 4.3** On power-up the charger will automatically run a self test program and then the Recovery Charge program. Any batteries that are connected to the charger but which do not require the Recovery Charge program will be charged as normal.
- 4.4 Key to the PAGlink Micro Charger LED indication:**

RED	Constant	=	ABSENT
ORANGE	Flashing	=	CHARGING
GREEN	Constant	=	DONE
RED	Flashing	=	FAULTY

- 4.5** With no batteries connected, the charger's LED indicator will be lit RED continuously. Charging will automatically commence after 10 seconds and the LED will flash ORANGE while charging is occurring.
- 4.6** Each battery's state of charge will be indicated on its individual capacity display.
- NOTE: When a Li-Ion battery has been charged to approximately 80%, the charge current is reduced. Li-Ion batteries must receive a reduced charge rate during the final phase.
- 4.7** The charger's LED indicator will light GREEN, when batteries are fully-charged and have received as much charge as they can safely accept.
- 4.8** Batteries may be removed, and others connected at any time, without affecting the operation of the charger.
- 4.9** If a new battery is connected, the charging sequence will be initiated automatically. The most discharged battery will be addressed first. The order in which batteries are connected is therefore immaterial; the charger will ensure that all batteries are charged in due course.
- 4.10** If the charger detects a severely faulty battery while the charging program is running, the LED will flash RED. This could be caused by one of several conditions, such as a very old or damaged battery, a short circuit battery, an excessively high or low voltage battery, or an excessively high or low supply voltage. The charger is reset by disconnecting it from the power supply.
- 4.11** The charger will not recognise the connection of a battery which has a voltage substantially outside of its range.
- 4.12** If the internal protection circuit of a PAG Li-Ion battery should turn off for any reason, the battery display will not operate, and there will be no voltage at the battery terminals. The PAGlink Micro Charger incorporates a Recovery Charge program which will automatically turn the protection circuit back on again.
- 4.13** If AC power fails during operation, the charger will shut down safely; no damage will occur to either the charger or the batteries. When the mains power is restored the charger will default to the main charge program.

Servicing & Repairs

- 5.1** Refer all servicing or repairs to an authorised PAG Service Centre. The PAGlink Micro Charger contains advanced electronics that do not require periodic maintenance. Consequently there are no user-serviceable parts inside.
- 5.2** Qualified electronics engineers who wish to gain access to internal assemblies should note that parts of the power circuit retain a high voltage even after the mains supply has been disconnected. Wait for a period of 5 minutes following disconnection before commencing disassembly and be aware of charged capacitors.
- 5.3** The PAGlink Micro Charger features a fail-safe shutdown mode. In this case, the charger should be disconnected from the supply, and the unit allowed to cool before reconnecting to the supply. Should the charger re-enter the fail-safe shutdown mode, more detailed investigation is required. Seek advice from an authorised PAG Service Centre.
- 5.4** If any part of the charger has been damaged, if it has been exposed to moisture, rain or liquid, or if it does not operate normally, seek advice from an authorised PAG Service Centre. Unqualified personnel should not attempt further investigation (see paragraph 5.1). Any such interference will invalidate the guarantee.

Authorised PAG Service Centres:

PAG UK: T: +44 (0)20 8543 3131, E: support@paguk.com

PAG America: T: +1 631 300 8215, E: sales@pagamerica.com

If you are located outside the UK and US, please visit www.paguk.com/agents to discover your nearest point of contact.

Guarantee

- 6.1** Notwithstanding any provision of any agreement the following guarantee is exclusive: PAG Limited guarantees each Micro Charger it manufactures to be free of defects in material and workmanship under use and service for **TWO YEARS** from the date of purchase. This guarantee extends only to the original purchaser. This guarantee shall not apply to fuses or any product or parts which have been subject to misuse, neglect, accident or abnormal conditions of operation.
- 6.2** In the event of failure of a product covered by this guarantee, PAG Limited will repair and calibrate equipment returned to an authorised Service Facility within the period of the guarantee, provided the guarantor's examination discloses to its satisfaction the product was defective. The guarantor may, at its option, replace the product in lieu of repair. With regard to any equipment returned within this period, said repairs or replacements will be made without charge. If the failure has been caused by misuse, neglect, accident or abnormal conditions of operation, repairs will be billed at a nominal cost. In such a case, an estimate will be submitted before work is started, if requested.
- 6.3** The foregoing guarantee is in lieu of all other guarantees, express or implied, including but not limited to any implied guarantee or merchantability, fitness or adequacy for any particular purpose or use. PAG Limited shall not be liable for any special, incidental, or consequential damages, whether in contract, tort, or otherwise.