OLDHAM

CAP LAMP SYSTEM
10-TYPE CHARGER
for “T” & “L” Batteries

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INSTRUCTION MANUAL

WARNING

This manual, including the warnings and cautions inside, must be read and followed carefully by all persons who use or maintain this product, including those who have any responsibility involving its selection, application, service, or repair. This cap lamp system will perform as designed only if used and maintained according to the instructions, otherwise it could fail to perform as designed and persons who rely on this product could sustain serious personal injury or death.

PART NO. M656204, 115 / 230 V AC, SINGLE PHASE, 50~60 HZ, 10-LAMP CHARGER

CAUTIONS AND WARNINGS

IMPORTANT

Pay close attention to Warnings and Cautions in this manual. A Warning describes a condition that may cause serious personal injury or death if allowed to happen. A Caution describes a condition that may cause the cap lamp or other property to be damaged if allowed to happen.

DESCRIPTION / INSTALLATION

DESCRIPTION

The ten-lamp charger is designed to recharge all Oldham caplamps; both lead-acid and lithium-ion. The charger is equipped with a variable rate, factory-set program controlled by a microprocessor that maximises recharge capacity in the shortest amount of time. The charge indicator is an easy-to-read LED display; with red and green lights showing the charge status.

The ten lamp battery charger is also a “float” charger, which means that the battery will not be overcharged if left in charge mode over long periods of time.

Technical Data	
Charging Method	Automatic constant current / constant potential
Initial Charging Current	2.5 A max.
Charging Voltage	5.3 VDC switching to 5.1 VDC (float mode 4.6 VDC)
Charging Time	Approximately 8 hrs. (after 8 hour discharge)
Supply Voltage	115 / 230 VAC +/- 10%, single phase, 50/60 Hz
Power Consumption	70 WATTS, 500mA fuse. 1A for 115 V AC operation

INSTALLATION

The charger assembly may be installed in the following ways

1. • table or bench top
2. • configured with multiple assemblies into a freestanding rack
3. • mounted to a wall using the 3 holes in the rear of the assembly using 3/8 inch diameter minimum bolts securely anchored into the wall (the anchoring system must be able to support the charger plus 10 cap lamps weighing approximately 43 kg in total with lead-acid batteries). Each charger has a standard 1 meter / 3 core cable for connection to the main power supply.

The charger is set for 230-volt AC operation. For operation from 115 volt AC, the following steps must be taken before charging:

- the voltage selection switch - located inside the charger panel on the right side - must be set for 115 VAC
- The 5A fuse located adjacent 10 the voltage selector switch must be changed to the 10A fuse supplied for operation at 115 VAC
- The plug (not supplied) must be changed (or adapted for International usage) to match the mating outlet.
- For clarification of plug type and AC circuit requirements, please consult with qualified electrical power personnel or standards.

CAUTION

Operating the charger from 230 VAC while switched for 115 VAC will permanently damage the charger transformer and the charger will need to be replaced.

OPERATION / MAINTENANCE

OPERATION

1. Any battery must be recharged - regardless of how long it has been used - before next use, in order to maintain the battery's rated capacity and cycle life. Typically, the approximate recharge time is 8 hours after an 8-10 hour discharge. Longer recharge times can be expected if longer discharge times are used.

2. Plug the charger into an appropriate power supply. The mains supply switch (located on the right hand end of the front panel) is illuminated when in the "power on" position

3. To charge the cap lamp, the headpiece should be fitted over the projecting key on the front of the charger and rotated clockwise until it is in the full stop position. To remove the lamp from charge – reverse the procedure.

After connection of the cap lamp, the red LED will illuminate after a short time, the circuitry will wait 5 seconds then start the constant current charge (stage 1) while monitoring the charger voltage. When the charging voltage reaches 5.3 VDC the charger switches to a constant potential of 5.1 volts (stages 2 & 3) for a set period of time (full charge is reached when the green LED is on only), the charger then switches to a ''float'' mode voltage of 4.6 volts (stage 4) until the battery is removed. The battery state of charge is indicated by the Charge Indicator Guide.

Note:
The charging requirements for individual batteries are unaffected by the state of charge of other batteries on charge.
If the battery is removed or input power is interrupted, the charger will reset to stage 1 when mains power is reconnected. The charger will quickly read the level of charge in the battery then go on to the appropriate stage where it left off before the interruption.
It is not advisable to leave a battery partially discharged for any extended length of time. Doing so will reduce the cycle life and capacity of the battery.

MAINTENANCE AND ORDERING INFORMATION

1. Each charger is supplied with an extra fuse for 115 V AC operation. Replace any blown fuses with the following types which are readily available through most electrical supply sources:

- 115 V AC: Fuse type: 10 A
- 230 V AC: Fuse type: 5 A

The fuse holder is located on the front right hand side of the charger below the mains switch. To replace a blown fuse, unscrew the fuse holder cover counter-clockwise. Remove the blown fuse, place the new fuse in the end of the cover and screw back into the holder.

2. Refer to the troubleshooting guide if the charger is not working properly, or see the cap lamp user manual for lamp and battery operating instructions.
3. Module Replacement: isolate the charger from mains supply, remove screws in front of and on top of charger and carefully expose interior of charger showing modules. Disconnect: a) red lead on module from positive contact terminal, b) black lead on module from negative key terminal, c) disconnect both white and grey leads (with push-on terminals) from module and remove faulty module from plastic supports. Replace with new module in reverse order of procedures.

ALWAYS ISOLATE THE POWER ELSEWHERE AND REMOVE THE LAMPS BEFORE WORKING ON THE CHARGER

SPECIFICATION	Supply voltage 230V or 115V AC single phase 50/60 Hz Load current 3.0A at 230V, 6.0A at 115V	
Approximate Overall Dimensions	**Length**	**1180mm**
	Height	260mm
	Width	190mm
Weight	15Kg empty (with 10 lamps 43Kg max)	

Charge Indicator Guide		
Stage	**LED Display**	**Charge Status**
1. Constant Current Mode	RED light on	charging
2. Constant Potential Mode	RED and GREEN light on	75% charged
3. Fully Charged	GREEN light on	fully charged, ready for use
4. Float Mode	GREEN light on, RED light flashing	float charge mode; ready for use

TROUBLESHOOTING GUIDE

FAULT FINDING