

# MC3881 Military Battery Management System



The MC3881 (NATO stock number 6130-99-442-5234) is a 10-way battery management and charger system for military battery packs. Functions include:

- Pre charge test – to check battery fit to charge
- Fast charge – to recharge packs quickly and have them available for operations
- Normal charge – essential to activate cells after long term storage
- Capacity test – charge/discharge/charge cycle to test packs
- Discharge – to test packs after storage or after charging with another charger
- Condition – 3 cycles of charge/discharge to bring packs to capacity after storage
- Life test – continuous sequence of charge/discharge cycles for testing sample packs

The MC3881 intelligent battery management and charger system is designed for testing and charging most types of military battery.

With fast, normal, and balance charging and programmable discharge the MC3881 can fully condition, discharge and measure the capacity of the battery under test.

With each of the 10 outputs being independent, each channel can perform a different operation. For example one channel may be conditioning a 24V battery while another is fast charging a 14V battery.

The built in 12-line digital display of the MC3881 gives all the operational information for each channel. With 20 programmes and 9 functions the MC3881 covers most military requirements for charging and battery management.

**Power sharing.** Under normal conditions the charger is capable of fast charging ten 12V 4Ah or five 24V 4Ah battery packs at the same time. It is possible for a combination of battery packs to be connected that requires more output power than is available, for example ten 24V 4Ah packs. In this example the first five batteries connected will be fast charged with the remainder being trickle charged. As soon as a battery completes fast charge one of the remaining batteries will commence its fast charge. This process continues until all batteries are ready for service.

The MC3881 undertakes a self-test function at power up and indicates pass or fail on the LCD display.

A single coded battery lead is used for each battery type. All functions are selected from the alphanumeric LCD display using push button switches. For new battery types individual battery information can be entered using push buttons and clear display prompts. Up to 20 battery types can be programmed by the user and stored in the MC3881.

While charging and discharging the LCD display shows battery voltage, and capacity if measured, and fault reports such as low capacity, short circuit, and high resistance.

The MC3881 is designed and manufactured in the UK giving the user unbeatable product support. The MC3881 meets the relevant European electrical safety and EMC standards.

Function	Value
Nominal battery voltage	6V to 24V
Fast charge current	100mA to 2000mA
Normal charge current	100mA to 2000mA
Charge termination	Voltage profile or timed
Discharge current	100mA to 2000mA
Number of channels	10
Output connectors	6 pin MIL-C-26482 series
Output power	300 Watts
AC supply voltage	110V/230V ac internally switched 50/60Hz
Max power consumption	480 Watts
DC supply voltage	20 to 30 Volts dc
Max DC current drain	30 Amps at 20Volts dc
Size L * W * H	340mm * 210mm * 180mm
Weight	25kg
Charging temperature	0°C to +55°C
Storage temperature	-20°C to +70°C



LXO Enterprises  
 1520 E. Covell B5 #233  
 Davis, California 95616 USA  
 Tel: + (530) 792 1075  
 Fax: + (530) 792 1145  
[www.lxoenterprises.com](http://www.lxoenterprises.com)

