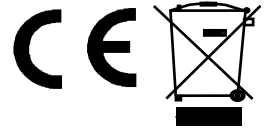


# S.M. Services (UK) Ltd

18 Orchard Way, Cranfield, Beds. MK43 0HU. Tel 01234 751095

## MULTI CHARGER MK 3



### Specifications

Size.	280mm x 180mm x 75mm.
Construction.	Boxed.
Connections	2.5mm Jack connector tip positive (centre contact).
Supply Voltage.	230v AC 50Hz 80VA Inlet connector fuse 1 Amp anti surge.
Outputs.	6 Independent timed outputs reverse polarity protected.
Output Voltage.	Automatic voltage selection 1 to 10 cells.
Output Current.	5 to 400 mA user adjustable.
Indicators.	One led per output on when charging, pulsed in maintenance charge at end of 14 hours. Channel selectable milliamp charge display.

### Description.

The Multi Charger Mark 3 has been designed to charge nickel metal hydride and Nicad batteries in the workshop. The multiple outputs are capable of charging six batteries with capacities in the range 100 mAhr to 4000 mAhr and cell counts in the range 1 to 10 cells.

When batteries are connected the microprocessor starts a timed 14 hour charge (indicated by the led being on) at the completion of the timed charge maintenance mode is started (indicated by the led pulsing at a 1 second interval) this is designed to hold the battery in a fully charged state without over charging. If at any time the battery is disconnected the microprocessor will start a new 14 hour charge. This unit contains a thermal switch to control the cooling fan this will switch on at 40 C and switch off at 25 C.

### Operation.

1. Make up charging leads using the 2.5 mm plugs (see leads section).
2. Plug in charging and mains supply leads.
3. Switch on unit.
4. Set all charge knobs to minimum.
5. Select channel 1 on the front panel display switch.
6. Connect battery to channel 1 and set the charge rate to 10% of the battery capacity.
7. Repeat steps 5 and 6 for each battery to be charged.

### Standard receiver wiring connections.

Lead function	Futaba	JR/New Sanwa	Hitec	Sanwa (old)
Positive = +	Red	Red	Red	3
Negative = -	Black	Brown	Brown	2
Signal	White	Orange	Yellow	1

Please refer to your equipment instructions for wiring codes if they are not listed.

Note 1. Most JR TX charging jacks are wired tip negative (check before charging).

Note 2. The normal trickle charge rate is 10% of the battery capacity ie. 1000 mAhr battery should be charged at 100mA for 14 hours.

Note 3. Do not allow outputs to be shorted together as this can lead to overcharge or undercharge to the two batteries.

Note 4. This unit should not be used with the SM2 Multicycler as all its inputs are ground referenced and connected together (see note 3 above).

## Leads.

Make up leads to suit the battery connectors that you currently use, using the 2.5 mm plugs supplied as follows.

1. Remove cover from the 2.5mm plug, (note. The centre or small contact is positive, outer contact with strain relief tabs is negative).
2. Mount the plug barrel in the vice very gently taking care not to distort the barrel.
3. Pre tin both contacts on the plug and allow to cool, (note the plug contacts are insulated with plastic, when tinning the contacts 3 seconds is the longest that the iron should be applied, allow the contact to cool before tinning the second contact).
4. Take a fly lead and strip 2 mm of insulation from both wires and pre tin.
5. Slide the plug cover over the fly lead, cut 6 mm of 2.4mm diameter heat shrink tubing and slide over the positive lead.
6. Solder both positive and negative leads to the plug and allow to cool.
7. Slide heat shrink over the positive contact and shrink down.
8. Using small pliers fold the strain relief tabs over the negative lead only and refit cover.

## Your Guarantee

S.M. Services (UK) Ltd guarantee all products for 1 year from date of purchase. During this time S.M. Services (UK) Ltd will repair or replace all defective products free of charge, except for Units subject to fair wear and tear, or units that are subject to crash damage. To qualify for benefits under the guarantee you must have installed and used the product in accordance with S.M. Services (UK) Ltd instructions. Consequential losses and accidental damage to the product are not covered by the guarantee. S.M. Services (UK) Ltd cannot be held responsible for results of using our products for any purpose other than those described in the relevant instructions.

## Returns

Any returned products ordered in error or are not required will if returned unopened in original product packaging within 28 days from date of purchase be subject to a full refund less shipping charges and a 5% handling charge. All other returns will be subject to a full refund less shipping charges and a 20% handling charge.