

**RF-5059-CH002****NIMH/NICD BATTERY  
CHARGER/DISCHARGER**

The RF-5059-CH002 is a quick charger system for BB-390A/U Nickel Metal Hydride (NiMH) and BB-590/U Nickel Cadmium (NiCd) batteries. It has the ability to optionally discharge batteries prior to charging as a means of avoiding the NiCd memory effect. It is capable of simultaneously charging or discharging up to two batteries of either type or of mixed types in four to six hours. The internal discharger is activated via a momentary switch and facilitates a structured battery maintenance program. The RF-5059-CH002 meets MIL-STD-410E specifications for high/low temperature, humidity, altitude, vibration, shock, and immersion. The RF-5059-CH002 is powered by AC (95 to 135 or 190 to 270 VAC automatically selected at turn on) or DC (11.8 to 33 VDC) power. The use of a Velcro® strap to secure the batteries to the RF-5059-CH002 plus the DC input capability allows the system to be used in mobile applications. The RF-5059-CH002 consists of a Charger/Discharger Unit, an AC to DC power supply unit, an instruction manual, and a rainproof transport case to contain all items. AC and DC power cables are not included and must be ordered separately.

Based on Smart Charging technology, the unit automatically detects the correct battery type and configures the charge cycle accordingly. Problems such as open cells or other battery problems, which prevent a safe and efficient charge, are also detected. Temperature, voltage, and time are monitored throughout the fast charge cycle. The unit is designed to independently charge each 12-volt section of the BB-390 or BB-590 battery for optimum charge balance. If the battery voltage is too low, the battery will go on trickle charge until the minimum battery voltage is obtained, then automatically switch to fast charge. If a battery is discharged or aged beyond a recovery point, the unit will stay in the trickle charge mode. Upon a fast charge termination, the unit will switch to a charge complete mode or a trickle charge mode depending upon battery type.



## Specifications for the RF-5059-CH002

### Electrical

#### Charging rates

BB-590/U	3 hours nominal
BB-590A/U	6 hours nominal
BB-390A/U	4.5 hours nominal

#### Charging Current

Fast Charge	765 to 935 mA, 850 mA nominal
Trickle Charge	55 to 70 mA, 63.5 mA nominal

#### Output DC Charging

Voltage	17 to 22 VDC. Voltage varies to stay within charging current specifications
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Discharging Rate	Nominal 300 mA
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Charge Indicators	Four groups of two each, one group for each 12-volt battery section
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#### Input DC Voltage

Range	11.8 to 33 VDC, start up 10.8 to 33 VDC, operation
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Input DC Power	Less than 80 Watts
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#### Reverse Voltage Protection

Reverse polarity will cause no damage, but operation will be interrupted. Operation will be automatically restored upon correct application of the DC input voltage.

#### AC to DC Power Supply

#### AC Input Voltage

Range	95 to 135 or 190 to 270 VAC. The AC voltage will be automatically sensed and voltage range selection will be made upon initial connection to an AC power source
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#### AC Input Frequency

Range	47 to 440 Hz
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### Mechanical

#### Battery Charger/

Discharger	12 x 4.8 x 4.8 inches
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#### Power Supply

	12 x 4.8 x 4.8 inches
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#### Carrying Case

	19.13 L x 15.44 W x 7.57 H inches
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### Weight

#### Battery Charger/

Discharger	7 lbs.
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#### Power Supply

	9 lbs.
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#### Entire System

	25 lbs including carrying case.
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### Environmental

#### Temperature

-20 to +55 degrees C	Operating
-40 to +71 degrees C	Non-operating

#### Altitude

15,000 ft	Operating
40,000 ft	Non-operating

#### Humidity/Moisture

	Rain watertight
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### Accessories

(purchase separately)

#### 10488-1386-01

AC Power Cable, US NEMA 5-15P,	8 ft.
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#### 10488-1387-01

AC Power Cable, Continental Europe,	2.5 m
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#### 10488-1388-A008

AC Power Cable, UK, 8 ft	
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#### 10488-1385-A005

DC Power Cable, alligator clip to	charger, 5 ft.
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Specifications are subject to change without notice.



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