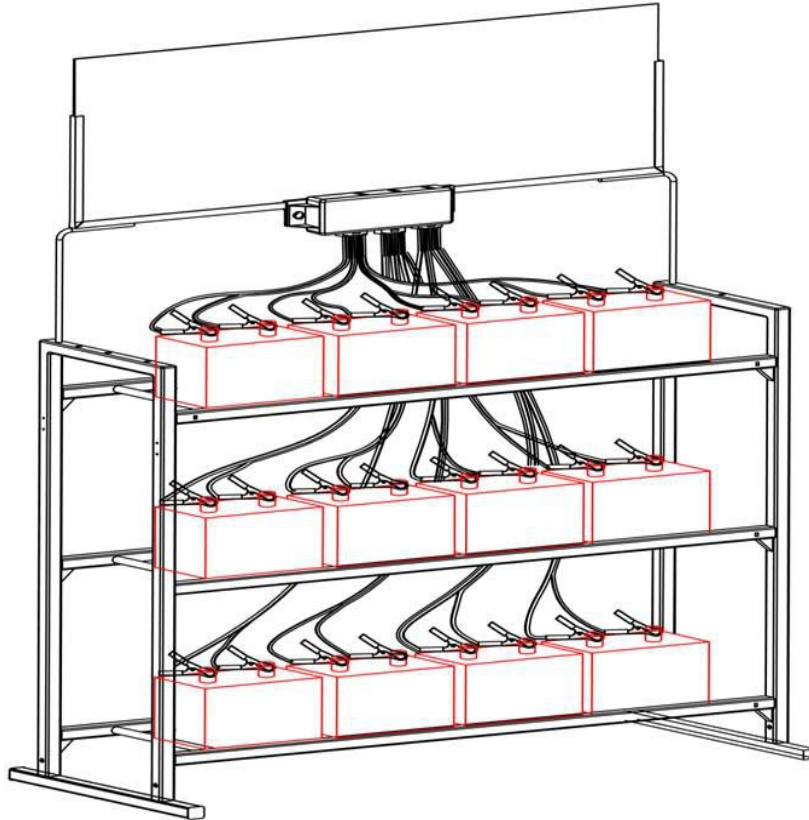


MOTOBATT



MOTOBATT 12 Station Charger Maintenance System

SAFETY INSTRUCTIONS

**FOR MOTOBATT MODELS: MBC12B
(For 12 Volt Batteries only)**

THIS MANUAL CONTAINS IMPORTANT SAFETY AND OPERATING INSTRUCTIONS. PLEASE SAVE THESE INSTRUCTIONS. KEEP WITH OR NEAR CHARGER AT ALL TIMES.

a. **WARNING – RISK OF EXPLOSIVE GASES.**

- a) Working in a vicinity of a lead-acid battery is dangerous. Batteries generate explosive gases during normal battery operation.
- b) For this reason it is of the utmost importance that each time before using your charger, you read and follow the instructions provided exactly.
- c) The appliance is not intended for use by young children or infirm persons without supervision. Young Children should be supervised to ensure that they do not play with the appliance.

b. To reduce risk of a battery explosion, follow these instructions and those marked on the battery.

c. **NEVER** smoke or allow an open spark or flame in the vicinity of the battery or engine.

d. **CAUTION –** To reduce the risk of injury, use the charger for charging a rechargeable lead-acid battery only. It is not intended to supply power to a low-voltage electrical system or to charge dry-cell batteries. Charging dry-cell batteries may cause them to burst and cause injury to persons and damage to property.

e. Do not expose the charger to moisture, rain or snow. For indoor use only.

f. Use of an attachment not recommended or sold by the battery charger manufacturer may result in a risk of fire, electric shock, or injury to persons.

g. To reduce risk of damage to electric plug and cord, pull by plug rather than cord when disconnecting the charger.

h. Make sure cord is located so that it cannot be stepped on, tripped over, or otherwise subjected to damage or stress.

i. Study all the battery manufacturers' specific precautions such as removing or not removing cell caps while charging and recommended rates of charge.

j. Do not use the battery charger unless the battery voltage matches the output voltage rating of the charger.

k. Do not operate the charger in a closed-in area or restrict ventilation in any way.

l. An extension cord should not be used unless absolutely necessary. Use of improper extension cord could result in a risk of fire and electric shock. If extension cord must be used, make sure:

- a) That pins on the plug of extension cord are the same number, size and shape as those of plug on charger;
- b) That extension cord is properly wired and is in good electrical condition;
- c) That wire size is as specified below.

Length of Cord (Feet)	25'	50'	100'	150'
AWG Size of Cord	18	18	18	16

m. Do not operate the charger with damaged cord or plug. If the supply cord cannot be replaced and the cord is damaged, the appliance should be scrapped.

n. Do not operate the charger if it has received a sharp blow, been dropped, or otherwise damaged in any way. Take it to a qualified repair station or your supplier dealer.

o. Do not disassemble the charger. Take it to a qualified repair station or your supplier when service or repair is required. Incorrect reassembly may result in a risk of electric shock or fire.

p. To reduce risk of electric shock, unplug the charger from an outlet before attempting any maintenance or cleaning.

PERSONAL PRECAUTIONS:

- a. Someone should be within range of your voice or close enough to come to your aid when you work near a lead-acid battery.
- b. Have plenty of fresh water and soap nearby in case battery acid contacts skin, clothing, or eyes.
- c. Wear complete eye protection and clothing protection. Avoid touching eyes while working near battery.
- d. If battery acid contacts skin or clothing, wash immediately with soap and water. If acid enters an eye, immediately flood eye with running cold water for at least 10 minutes and get medical attention immediately.
- e. NEVER smoke or allow a spark or flame in vicinity of battery or engine.
- f. Be extra cautious to reduce risk of dropping a metal tool onto battery. It might spark or short-circuit battery or other electrical part that may cause an explosion.
- g. Remove personal metal items such as rings, bracelets, necklaces, and watches when working with a lead-acid battery. A lead-battery can produce a short-circuited current high enough to weld a ring or like to metal, causing a severe burn.
- h. Use the charger for charging lead-acid batteries ONLY (standard flooded, sealed AGM and Gel). It is not intended to supply power to a low-voltage electrical system or to charge dry-cell batteries. Charging dry-cell batteries may cause them to burst and cause injury to persons and/or damage to property.\
- i. NEVER charge a frozen battery.

PREPARING TO CHARGE

- a. Be sure area around battery is well ventilated while battery is being charged. Explosive gas can be forcefully blown away by using a piece of cardboard or other nonmetallic material as a fan.
- b. Clean battery terminals. Be careful to keep corrosion from coming in contact with eyes.
- c. If battery is not sealed, add distilled water in each cell until battery acid reaches level specified by battery manufacturer. This helps purge excessive gas from cells. Do not overfill. For a sealed battery or a battery without cell caps, carefully follow manufacturers' recharging instructions.
- d. Study all battery manufacturers' specific precautions such as removing or not removing cell caps while charging and recommended rates of charge.
- e. Determine voltage of battery by referring to vehicle owner's manual and make sure it matches output rating of the battery charger.

LOCATE CHARGER

- a. Locate the charger as far away from battery as the DC cables permit.
- b. Never place the charger directly above or below the battery being charged. Gases or fluids from the battery will corrode and damage the charger.
- c. Never allow battery acid to drip on the charger when reading gravity or filling battery.
- d. Do not operate charger in a closed-in area or restrict ventilation in any way.
- e. Do not set a battery on top of charger.

Accessories List Included

Part No.	Item	Accessories Name	Quantity	Drawings
MBC12B	1. ROUTERMBC12B	12 Station Charger Router	1 PC.	
	2. PWRSPLYMBC12B	12 Station Power Supply	1PC.	
	3. CBLCLPMBC12B	12 Station Charger Cable Routing Clips	15 PCS.	
	4. SCBLMBC12B	36" Cable set	2 set	
	5. LCBLMBC12B	48" Cable set	1 set	

Header Card Channel Mounting Bracket – Optionally available

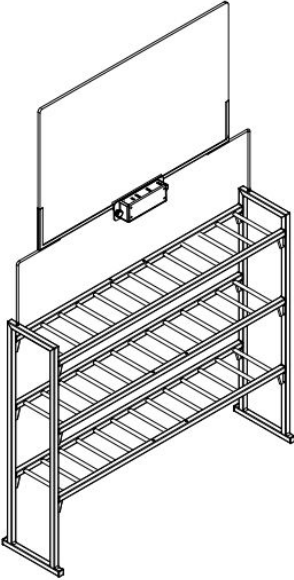
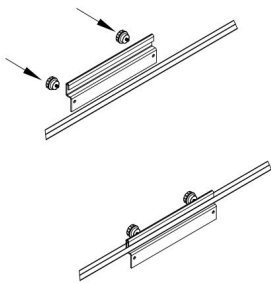
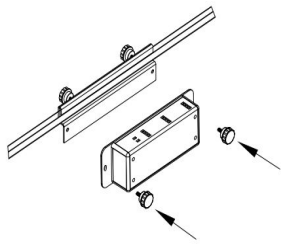
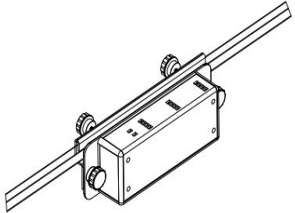
BRKTMBC12B	1.BRKTMB12B	12 Station Charger Router Mounting Bracket	1PC.	
	2.LSCREWMBC12B	Long Mounting Screws	2 PCS.	
	3.SSCREWMBC12B	Short Mounting Screws	2 PCS	

Retro-Fit Mounting Bracket – Optionally available (for use without Header Card Bracket)

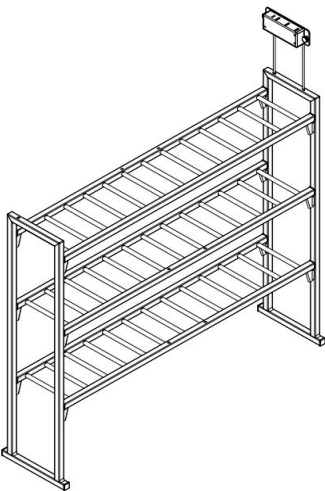
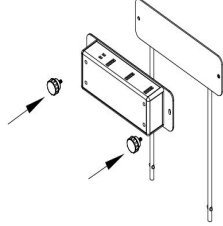
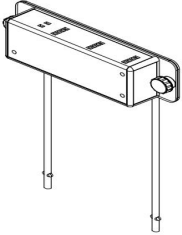
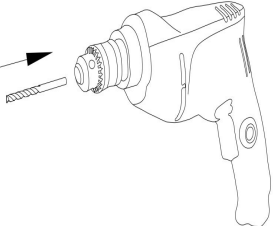
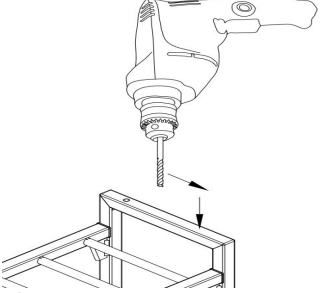
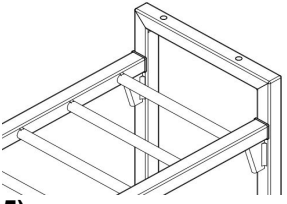
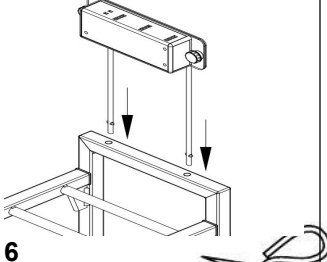
RBRKTMBC12BKIT	1.RBRKTMBC12B	Retro-Fit Bracket	1PC.	
	2. LSCREWMBC12B	Long Mounting Screws	2PCS	
	3.7DRILLMBC12B	7MM Drill Bit	1PC.	

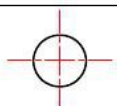
Installation

Channel Mounting Bracket: ROUTERMBC12B + BRKTMBC12B

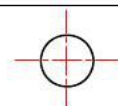
	<p>Step 1.- Attach the "Mounting bracket" with thumb screws and make sure the bracket is firmly attached to the sign holder channel as shown in images 1,2 and 3 below</p> <p>Step 2. - Affix 12 Station Charger Router onto the "Mounting bracket" with thumb screws. See images 2 and 3 below</p>		
	 <p>1)</p>	 <p>2)</p>	 <p>3)</p>

Retro Fit Mounting Bracket Option: ROUTERMBC12B+ RBRKTMBC12BKIT

	<p>Step1. – Affix 12 channel Charger Router onto retro-fit bracket. . See images 1 and 2 below</p> <p>Step 2. Use existing header card bracket hole and drill one new hole in the top side shelf support leg with 7mm drill , the distance between the two holes should be 140mm (please cut off this template for marking hole placement, see template below) Once drilled affix the retro-fit bracket support rode into the holes. See images 3,4,5 and 6 below</p>		
	 <p>1)</p>	 <p>2)</p>	 <p>3)</p>
	 <p>4)</p>	 <p>5)</p>	 <p>6)</p>



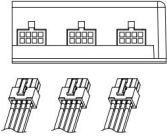
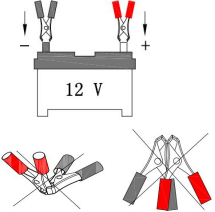

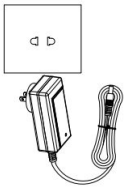
Mark / drill here for drill hole replacement



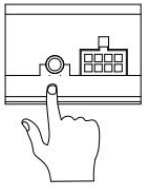
Warning: Please firmly install the 12 Station Charger Router on the bracket before connecting to the Power supply

OPERATING INSTRUCTIONS:

1. Connect the Clip Leads to the 12 station charger router

	<p>Step 1</p> <p>Connect the DC output cable leads sets to the router's output ports they will clip lock into place</p>
	<p>Step 2</p> <p>Connect the Red clamp of DC cable to the battery's positive (“+” pos.) terminal and the Black clamp to the battery negative (“-“Neg.”) terminal.</p> <p>Note : If the clip touch a red light will flash on the charger – this is normal</p>
	<p>Step 3</p> <p>Connect the AC Power Supply to 12 station charger router's input port</p>
	<p>Step 4</p> <p>Connect the power supply to available wall socket</p>

2. Turn on the 12 Station Power Supply

	<p>To turn unit on</p> <ul style="list-style-type: none"> - Hold the “power – on/off” button for 3 seconds or until you hear a “Beep” sound. The unit will then provide a “battery check” function that will light , all LED's simultaneously for 1 second.
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3. Charging Status and LED Indication

Light Indication	Description
Red light flashes	No battery is connected or the clips have touched together
Yellow light flashes	The battery is being charged.
Green light flashes	The battery is fully charged and being maintained

TROUBLE SHOOTING CHECK LIST:

Symptoms	Solution
No signal on Charger Router when power has turned on	<ul style="list-style-type: none"> - Ensure the AC input power is being supplied to AC outlet - Make DC Power Supply / Charging unit is properly connected to AC power outlet. - Ensure the DC power jack from power supply is firmly inserted into the input port of the 12 station charger router
Audible Beeping and all Red lights are flashing	<ul style="list-style-type: none"> - Battery is connected in reverse polarity, please check the battery connection(s) and correct reverse polarity condition.
Red light flashing	<ul style="list-style-type: none"> - Short circuit <p>Please check all connections and make sure the cable clip are not clamped to battery rack or touching each other</p> <ul style="list-style-type: none"> - Battery voltage is <8.5V, the maintainer will not come on, please check the battery with a battery tester and have the empty/bad battery recharged with battery charger or replaced.

Technical Specifications:

12 Station Power Supply

Model No.	: PWRSPLYMBC12B
Input Voltage	: World Capable Auto switching 100-240VAC 50Hz /60Hz
Output Voltage	: 16VDC 1.0 Amp (regulated by 12 station router)
Output Cable	: Length 10.5'22AWG, black
Max Charge Current	: 1.0 A
Max Voltage	: 16V
Overcharge Protection	: Yes
Limited Warranty	: 3 Years
Certificate	: UL certified

12 Channel Charger Router

Model No.	: ROUTERMBC12B
Input Voltage	: 15.5V -16VDC 1A
Output Range	: 8.5V-13.9VDC 1A per channel
Output Cables Sets	: 2 X 36" / 18AWG SPT-1 1 X 48" / 18AWG SPT-1
Max Charge Current	: 1 A
Max Voltage	: 13.9V
Reverse Polarity Protection	: Yes
Short Circuit Protection	: Yes
*Battery Capacity	: Maintenance –up to 150 AH
Limited Warranty	: 3 Years