## INSTRUCTION MANUAL

# AUTO CHARGE 11 PIM
## AUTOMATIC BATTERY CHARGER

**MODEL #091-11PIM**

**NOTE :**
**This charger is designed for**
**vehicles with dual batteries**
**and negative ground.**

**INPUT : 120 volts, 50/60 Hz, 2.5 amp max**

## 3 YEAR WARRANTY

**KUSSMAUL ELECTRONICS CO., INC.**
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# INTRODUCTION

The Auto Charge 11PIM Battery Charger is a compact completely automatic charger designed for installation on vehicles with two batteries. An internal charge divider charges both batteries simultaneously while maintaining battery isolation. Remote sensing permits long lines between the charger and the batteries by compensating for the voltage drop in the charging wires. An ammeter provides continuous indication of the charger output.

Construction of the Auto Charge 11PIM is extremely rugged to withstand the shock and vibration normally encountered by vehicle mounted equipment. The unit operates completely automatically and stops charging the batteries when they are fully charged. There is no trickle charge and therefore no danger of overcharging and water boil-off. Any parasitic loads on the battery such as radio, lights, etc., are automatically supplied with current by the charger.
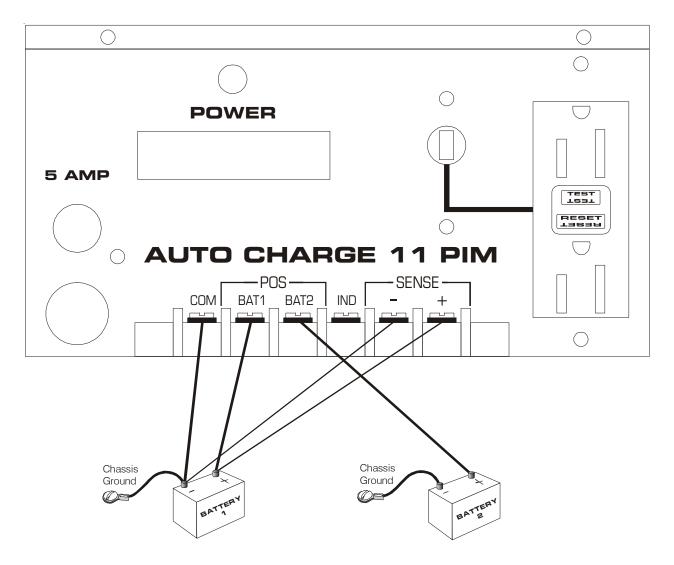
Any 120 volt loads when plugged into the GFI on the Auto-Charge 11PIM will be protected from ground faults. A separate lever operated circuit breaker protects the GFI connected loads. This circuit breaker may also be use to disconnect these loads from the line. The fuse on the Auto-Charge 11PIM protects the charger only.

# INSTALLATION

The Auto Charge 11PIM Automatic Battery Charger should be installed in an area with adequate ventilation. A power cord is supplied for connection to 120 volts 50/60 Hz.

1. Mount the charger using the four holes provided for this.

2. Connect the wiring from the batteries to the Output Terminal Strip. Spade lugs that have been securely crimped, or soldered, should be used.

3. Double check all wiring before proceeding.

4. Wire the A.C. power line cord to 120 volts.

5. Pilot light will light to show that the charger has power.

# INSTALLATION WIRING DIAGRAM

**POWER**

**5 AMP**

**AUTO CHARGE 11 PIM**

POS — COM | BAT1 | BAT2 | IND | SENSE — | + |

TEST

RESET

Chassis Ground

Chassis Ground

BATTERY 1

BATTERY 2

## WIRE SIZE CHART

| CONNECTION | ITEM | DEFINITION | WIRE SIZE |
|---|---|---|---|
| **COM** | BATTERY COMMON | NEGATIVE CHARGING LEAD FOR BATTERIES | 12 AWG |
| **BAT 1** | BATTERY #1 | POSITIVE CHARGING LEAD FOR BATTERY # 1 | 12 AWG |
| **BAT 2** | BATTERY #2 | POSITIVE CHARGING LEAD FOR BATTERY # 2 | 12 AWG |
| **SENSE –** | NEGATIVE SENSE | NEGATIVE VOLTAGE SENSE LEAD. DETECTS VOLTAGE | 16 AWG |
| **SENSE +** | POSITIVE SENSE | POSITIVE VOLTAGE SENSE LEAD. DETECTS VOLTAGE | 16 AWG |

**IMPORTANT**: Wire size is for a maximum length of 20 feet. If wiring is to be longer, larger wiring is required. Additional information is available on request.

**NOTE**: Sense leads are shown connected to battery #1 but may be connected to either battery at the installers option. The sense leads however **must** be connected for the charger to operate. The charger does not require a 2 battery vehicle to function properly. For single battery vehicles connect to battery #1.
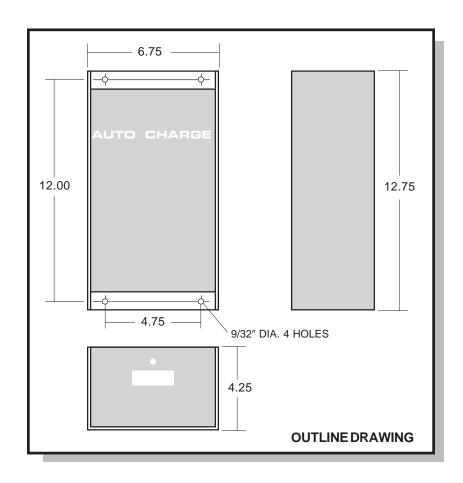
# SPECIFICATION & OUTLINE

**SPECIFICATIONS:**
**Input:** 120volts 50/60Hz, 2.5 amps
**Fuse**: 3 amp
**Output:** for 12 volt batteries
**Output Current:** 0-11 amps
**Charge Indicator:** 0-15 amps
**Weight:** 12 lbs

6.75

AUTO CHARGE

12.00

12.75

4.75

9/32" DIA. 4 HOLES

4.25

**OUTLINE DRAWING**

# INSTALLATION RECORD & WARRANTY

**Date Installed** _____

**Installed By** _____

**Vehicle Identification** _____

**Vehicle Owner** _____

# WARRANTY

All products of Kussmaul Electronics Company Inc. are warranted to be free of defects of material or workmanship. Liability is limited to repairing or replacing at our factory, without charge, any material or defects which become apparent in normal use within 3 years from the date the equipment was shipped. Equipment is to be returned, shipping charges prepaid and will be returned, after repair, shipping charges paid.

Kussmaul Electronics Company, Inc. shall have no liability for damages of any kind to associated equipment arising from the installation and /or use of the Kussmaul Electronics Company, Inc. products. The purchaser, by the acceptance of the equipment, assumes all liability for any damages which may result from its installation, use or misuse, by the purchaser, his or its employees or others.