

**INSTRUCTION MANUAL**

---

# **LOAD MANAGER 2**



**MODEL # 091-79-12**

**A BATTERY VOLTAGE MONITOR WHICH  
DETECTS AN UNDER-VOLTAGE CONDITION  
AND HAS TWO OUTPUTS.**

**3 YEAR WARRANTY**



**KUSSMAUL ELECTRONICS CO., INC.**

170 CHERRY AVE., WEST SAYVILLE, N.Y. 11796

TEL: 631-567-0314 FAX: 631-567-5826 WORLDWIDE WEB: <http://www.kussmaul.com> E-MAIL: [sales@kussmaul.com](mailto:sales@kussmaul.com)

## **INTRODUCTION:**

The 091-79-12 LOAD MANAGER 2 is a device which continuously monitors the voltage of the battery. The unit is factory set to actuate at 12.0 volts, but may be field adjusted to other voltages. Two output relays are provided. One relay is actuated at the 12.0 volt threshold while the other relay operates when the voltage decreases to 11.50 volts. The output relays are capable of switching 30 amperes and both “normally open” and “normally closed” contacts are provided.

## **INSTALLATION:**

Connect the Load Manager 2 to the battery and the loads as illustrated in figure 1. This is a typical circuit; many other variations are possible. It is important to connect the Bat+ and Bat- terminals to that point at which the voltage is to be sensed.

## **ADJUSTMENT:**

The factory adjustment for the Load Manager 2 is 12.0 volts for the first relay to be energized. The 2nd relay is energized at a voltage .5 volts lower than relay 1. No separate adjustment is provided for relay 2.

To readjust the setpoint, remove the 4 screws and lift off the cover. Connect a variable voltage source to the battery input terminals and an ohmmeter across the normally open contacts of relay 1. Vary the input voltage to the point at which relay 1 just becomes energized. Turn the trimmer resistor R100 slightly CCW to lower the setpoint or slightly CW to raise the setpoint. Check the new setting to determine what voltage will cause the relay to be energized.

### **CAUTION**

**The circuit responds very slowly so allow ample time, 15 to 30 seconds for the circuit to respond to voltage changes. This time delay is required to prevent the relay from chattering for small changes in voltage around the setpoint.**

## **SPECIFICATIONS:**

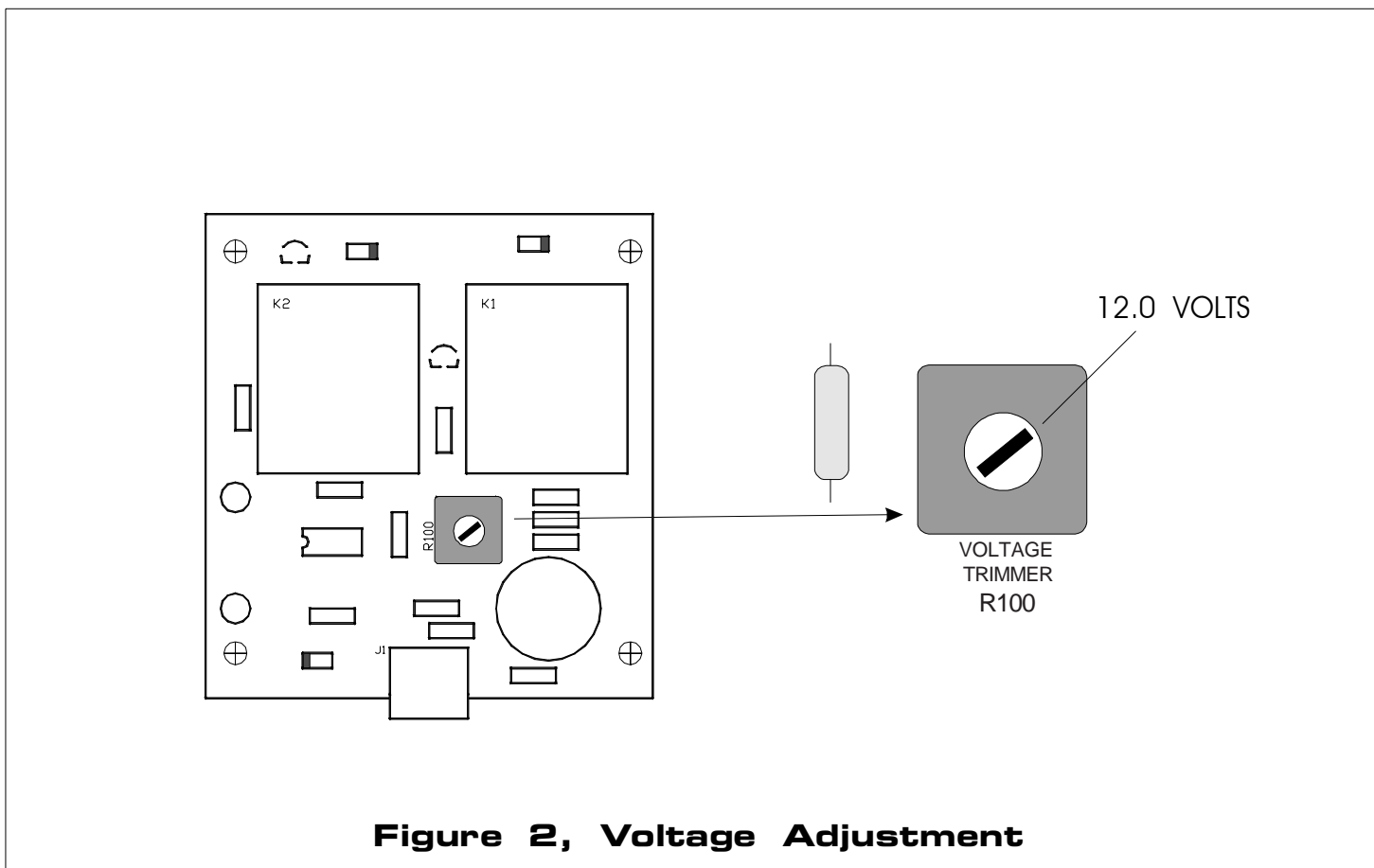
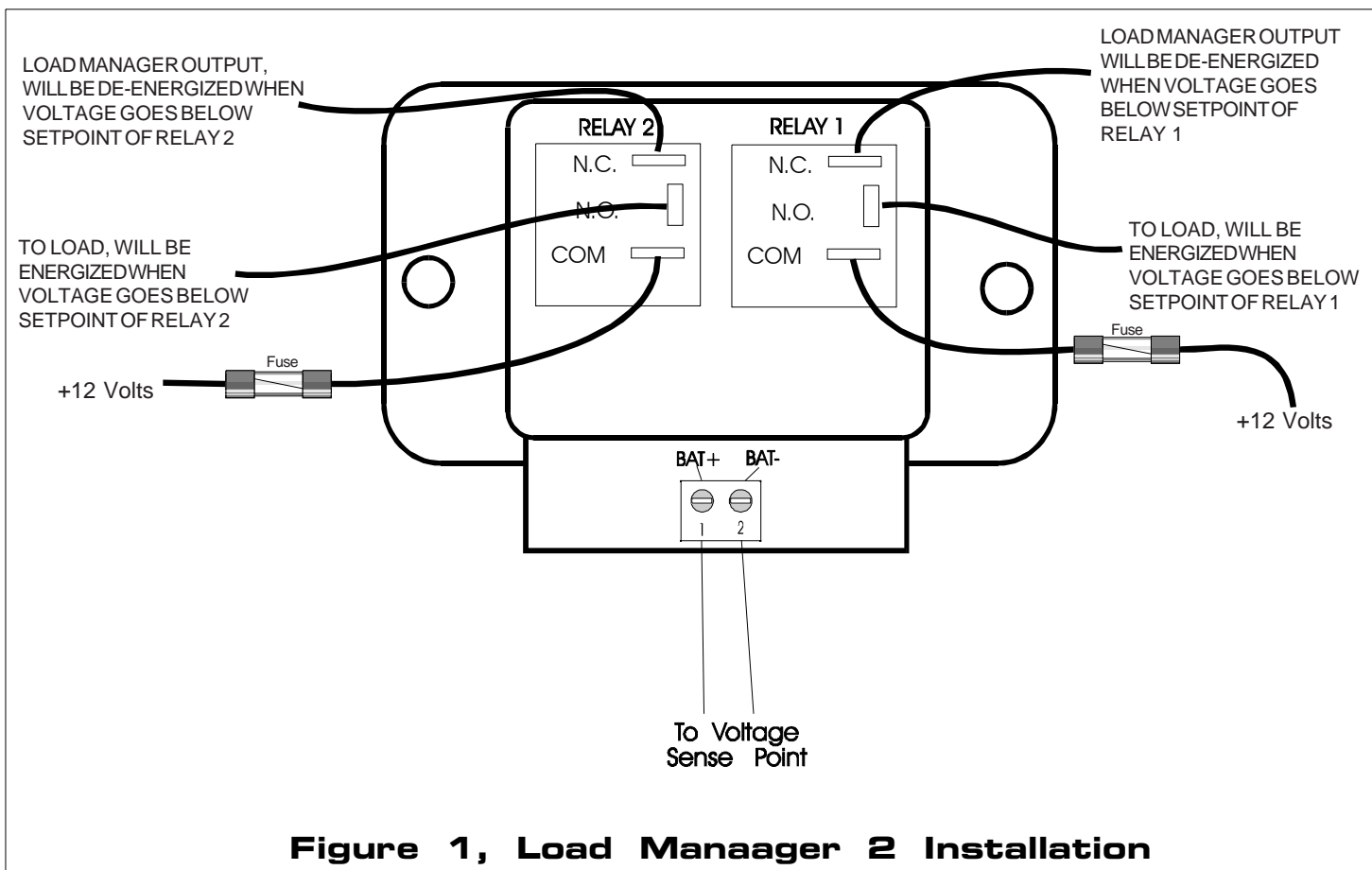
**Input Voltage:** 10 to 15 volts, D.C.

**Input Amps:** .020 amps, relay deenergized  
.20 amps, relay energized

**Relay Contacts:** 30 amperes, max.

**Case:** non weatherproof, polypropylene

**Weight:** 8 ounces



# **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.