

## INSTRUCTION MANUAL

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# BATTERY SAVER HO

## POWER SUPPLY / AUTOMATIC LOAD SWITCH

MODEL #091-35-HO

NOTE :

This Battery Saver is designed  
for negative ground vehicles.

INPUT : 120 Volts, 50/60 Hz, 4amperes

OUTPUT: 12VDC, 20 AMPERES D.C.

### 3 YEAR WARRANTY

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

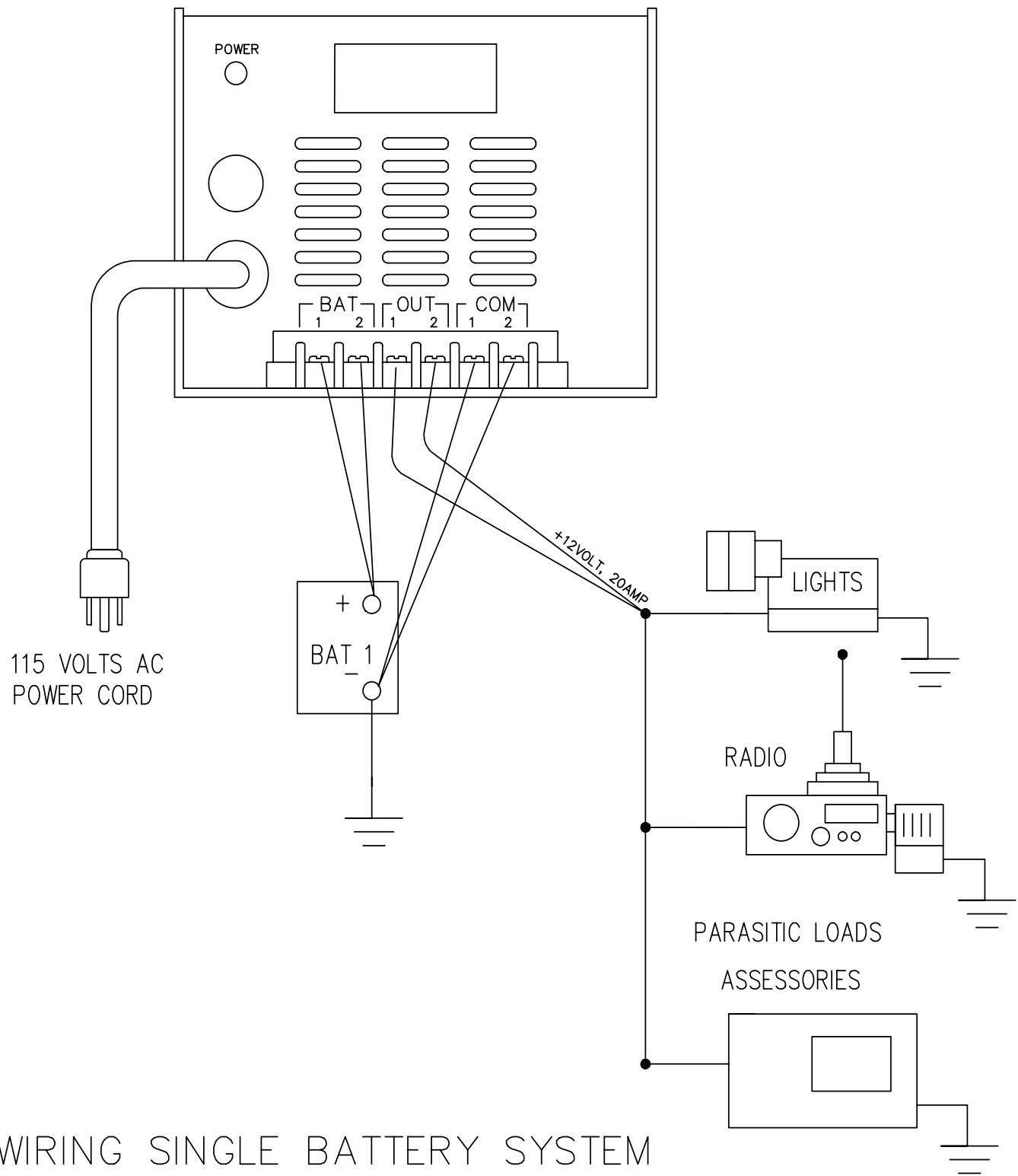
The BATTERY SAVER HO is a power supply with transfer relay. Loads connected to the BATTERY SAVER HO are energized from the vehicle's battery when the A.C. battery is OFF. As soon as A.C. power is applied, the power supply provides 12 volts D.C. and the relay transfers the loads to the power supply. Thus there is no drain on the battery and the entire output of the vehicle's battery charger is available to charge the battery.

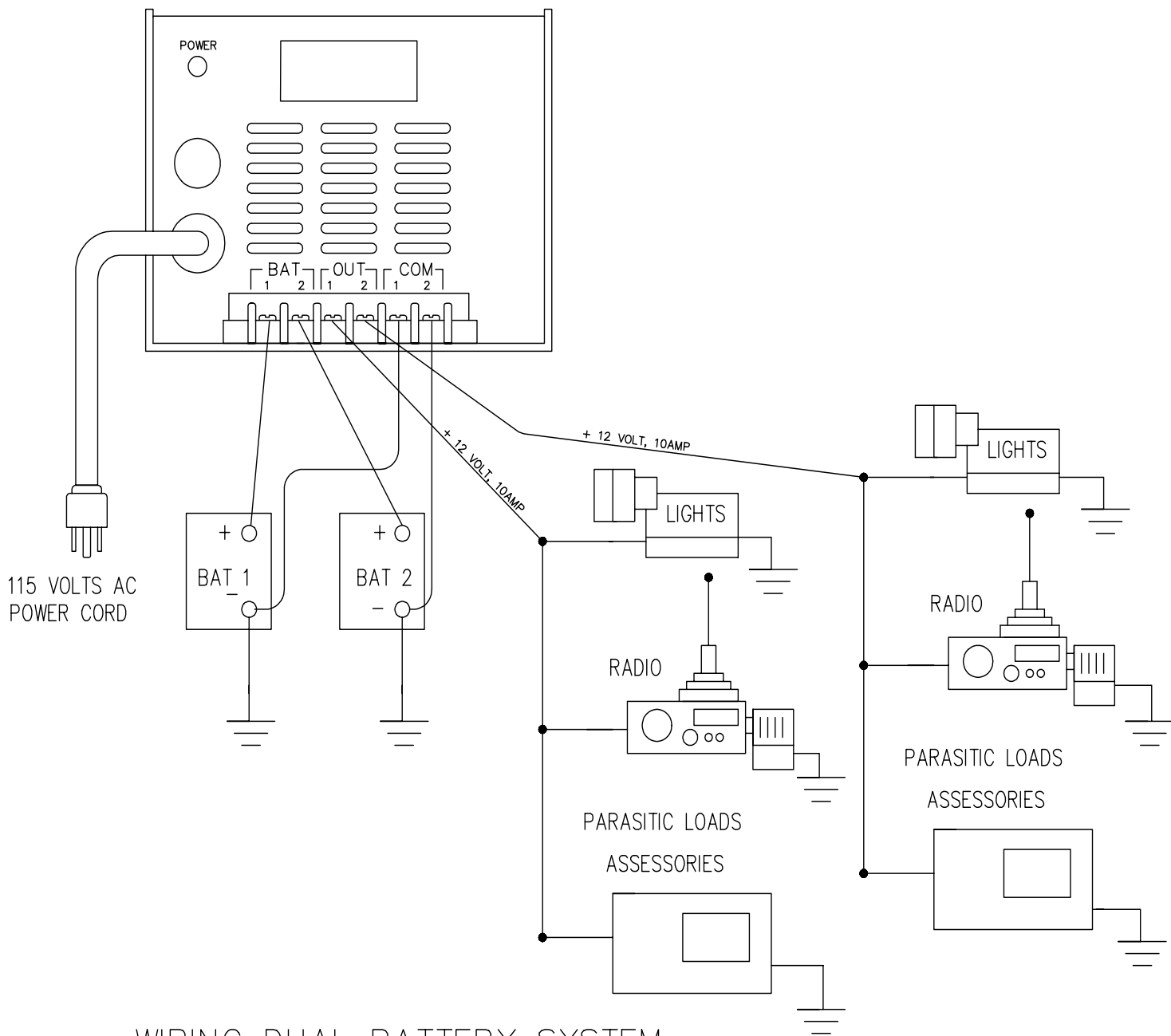
## INSTALLATION

1. Mount the BATTERY SAVER HO in a convenient location with 4 screws in the mounting holes provided. Be certain that adequate ventilation is available and that the unit is not subject to water damage.
2. Connect the 120 volt A.C. input power to the BATTERY SAVER HO through the 3 wire line cord provided.
3. The low voltage connections are made to the terminal strip use 14 gauge wire, see wiring diagrams .
4. The installation is now complete. If done correctly, the loads should be powered from the battery when the A.C. power OFF and from the power supply when A.C. power is ON.

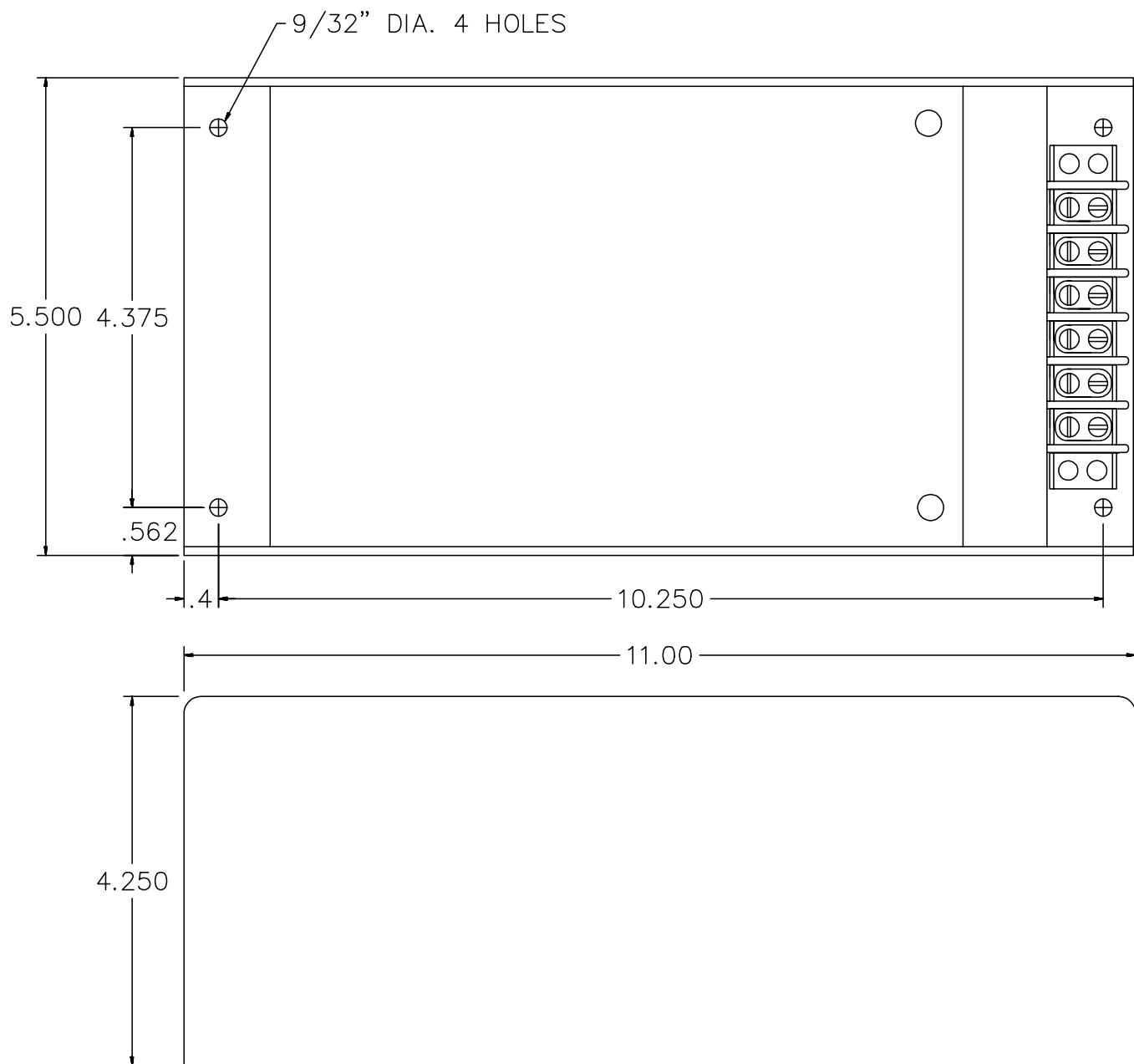
## TEST

To test the installation first remove A.C. power from the vehicle. Now determine that power is being supplied to the loads. This power should be coming through the BATTERY SAVER HO. Disconnect the wires to BAT 1,2 on the terminal strip and note that the loads are deenergized. Leave the wire disconnected and apply 120 volts A.C. power to the vehicle. This should energize the power supply and the loads. If the loads are energized, then the power supply is functioning correctly. THE TEST IS NOW COMPLETE. **Now reconnect the wires to BAT 1,2 on the terminal strip . This is important!**





WIRING DUAL BATTERY SYSTEM



**OUTLINE DRAWING**

## **CAUTION**

This battery saver output is a full wave rectified sine wave. The 12.5 volts D.C. has a peak value of approximately 17.5 volts.

It is recommended that the loads are not highly capacitive. A large capacitor on the load terminal will "peak detect" the output and create a voltage of approximately 17 volts. This voltage may be too high for the component connected.

It is suggested that the installer check the output of the battery saver (when operating with A.C. Input) and determine as each load is connected that the voltage does not rise. Any load that creates an increase in voltage should not be connected to the battery saver but rather be connected directly to the battery.



*SINCE 1967. DESIGNERS OF INNOVATIVE PRODUCTS*

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# INSTALLATION RECORD & WARRANTY

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Date Installed \_\_\_\_\_

Installed By \_\_\_\_\_

Vehicle Identification \_\_\_\_\_

Vehicle Owner \_\_\_\_\_

## WARRANTY

All product 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.

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 others.