SPS-9-5 SOLAR POWER SUPPLY **INSTRUCTION SHEET** FTC-1 BOARD 5VDC LOAD **CHARGE**₀ Converter 5V AUX CNTLR (customer **160W SOLAR PANEL** ro Output supplied) NC NC Output NC Batterv 10A Ø ANEL 1 Ø Solar In Ю + RFD - BLK (Pos) (Neg) 12VDC 150Ah BATTERY 0

MOUNTING POSITION - The SPS-9-5 Enclosure must be mounted in an upright position so that the battery is placed on the <u>bottom</u> of the enclosure. Mount the solar panel using the metal mounting system provided to get the correct mounting angle pursuant to the instructions included in the mounting bracket kit. The solar panel mounting bracket is designed to attach to a pole or building. The Solar Panel may not be shaded by trees or a building at any time to get the maximum solar day.

POWER INPUT - Connect the Solar Panel's positive lead to the "+" input for Panel 1 on the FTC-1 termination board. Connect the solar panels' negative lead to the "-" input for Panel 1 on the FTC-1 termination board. Connect the electrical system ground to the grounding bracket on the mounting panel. GROUND MUST BE CONNECTED, either to the electrical system ground or a ground rod.

LOAD CONNECTIONS - The **LOAD** terminals supply +12VDC to a Load. Connect the 12V "+" Load terminal to the load's positive "+" lead. Connect the 12V "-" Load Terminal to the load's negative "-" lead. The **AUX OUT** terminals provide a +5VDC output. Connect the Auxiliary Load output terminals to the Load requiring 5VDC, + to the positive input and - to the negative input. This voltage may be adjusted or down as long it is below +12VDC.

POWER UP - Connect the marked RED lead with the RING terminal to the Battery's positive BATT(+) terminal.

FUSES - 10 Amp AGC or 3AG fuses are provided on the termination board for the battery's positive (+) terminal and the load terminal. 5 Amp fuses are provided for the solar panels. Fuse sizes may be reduced to a lower amperage if desired.

NORMAL OPERATION - Under normal circumstances the solar panel will output between 10 and 22 volts to the charge controller. The length of time that the battery will hold up the load is directly related to the discharge rate. The lower the discharge rate the longer the battery's charge will last. The hold-up time without any recharge from the solar panel for a 500mA load is approximately 12 days. Limit the load current to the lowest possible level for the best results.



SOLID STATE INSTRUMENTS

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