

The MCM unit unleashes the full potential of the multi award winning
GSL MPPT Solar Battery Chargers.
Using this simple plug and play option allows a display of the solar
system parameter as well as alarm settings.

Safety

- Read all instructions and cautions in the manual before installing and operating the MCM
- There are no user serviceable parts inside the MCM, do not disassemble or try to repair the unit.
- Install the unit in a dry place out of direct sunlight and away from flammable liquids or gasses.
- Do not use the MCM if the enclosure or wires are damaged.

MCM Connection

First install the MPPT30-2 or MPPT60-2 unit as per their own user manual. Confirm that the MPPT is functional via the built in output status led, it should be green. Plug the MCM via the 9 pin D connector on the MPPT from panel and the system is ready to go. The MCM should be on the default screen displaying battery voltage, battery current, load current and temperature.

The optional MCM PC GUI software, enables detailed system information storage and display on spreadsheet format as well as remote monitoring and control over the internet. This optional software is available with the MCM v200 and higher.



Maximum Power Point Tracker Monitor

Operating Instructions
Please Read Before Use



1. Parameter and Setting List

Main Menu

Vb	Battery Voltage in Volts
lb	Battery Current in Amperes, + For Charging and - for Discharging Current
Il	Load Current In Amperes, Measures Current On Blue Wire
Temp	Internal MPPT Temperature in C
AHb	Battery Charge / Discharge in Ampere-Hours
AH1	Load Consumption In Ampere-Hours
Hours	Ampere - Hours Timer In Hours

System Setup

Load Control	Enable or Disable Load Switch, LVD and DDS options – see Note 1.
Load Switch	Turns On or Off The Load (connect disconnects blue wire from – battery).
LVD	Adjustable Low Voltage Disconnect (10V to 50 range) to disconnect load.
DDS	Dawn to Dusk Switch, connects load for preset period of time when no light over 20 seconds
FBR	Flat Battery Recovery, sets output to 36V for 4 minutes to restore flat 24V or 48V batteries.
Over Temp Enable	Over Temperature Alarm Enabling and Setting.
BUV Alarm	Battery Under Voltage Alarm Enabling and Setting.
Time Elapsed	Time Elapsed in the Ampere Hour Counter.
Amp Hour Alarm	Battery Discharge Ampere Hour Alarm Enabling and Setting.
RESET All ?	Sets all Parameters to Default Values – see default tables.

Note 1: When Load Control is disabled the built in MPPT low voltage disconnect is active.

2. Alarm and Parameter Ranges and Defaults

ALARM	RANGE	DEFAULT VALUE
Over Temp Alarm	30C-75C	70C
BUV Alarm	10V-50V	11V
Ampere Hour Alarm	-50AH - 1000AH	-200AH

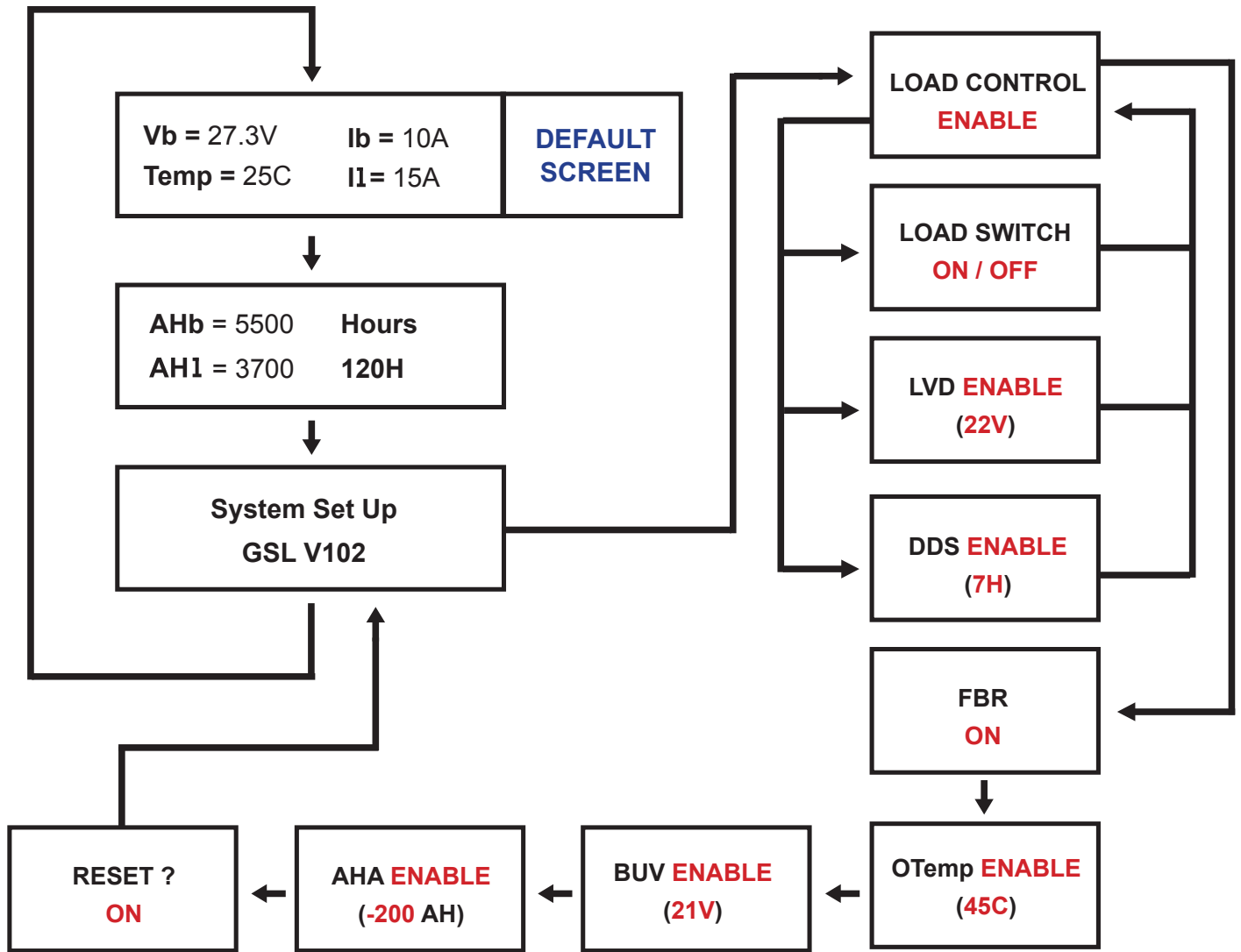
PARAMETER	RANGE	DEFAULT VALUE
LVD	10V-50V	10V
DDS	1 HOUR - 16 HOURS	6 HOURS
Load Control	ON-OFF	OFF

3. MCM Operation

Use left side UP and right side DOWN buttons to navigate between or within screens, and increment or decrement selected **adjustable parameters**. Use center ENTER button used to select **adjustable parameter** or to toggle **options** (on/off, enable/ disable, reset). Any button activity to result in backlight on, after 20 seconds of no button activity the backlight turns off and display goes to **default screen**, unless in parameter set or select mode.

Parameter selection mode is indicated by a blinking cursor. Holding the ENTER button for 2 seconds while within System Setup Menu will bring the Main Menu. When an alarm is tripped the buzzer is activated and backlight starts flashing until ENTER button is held for 2 seconds. Once Load Control is enabled the load control modes (Load Switch, LVD and DDS) become available but only one can be selected at one time.

MCM Menu Diagram



BLACK = DISPLAY ONLY
 BLUE = COMMENT NOT DISPLAYED
 RED = SELECTABLE OR ADJUSTABLE

Product Specifications

Display	LCD 2 X16 CHARACTERS
Dimensions	110mm X 77mmX 35mm
Consumption	0.02A
Voltage Accuracy	+/- 1% FS
Current Accuracy	+/- 5% FS
Connector	D TYPE 9 PIN
Cable Length	1.2M

TROUBLE SHOOTING

- **DIM LCD**
Check battery voltage, low battery can cause a dim display.
Very low temperatures can cause a slow reacting and dim display.
- **THE MCM MENUS DO NOT CORRESPOND TO MANUAL MENUS**
The MCM may have a later than 102 software revision, check software revision.
- **POWERED MCM BUT ERRATIC OR NO DATA DISPLAYED**
The D type connector may not be properly plugged to the MPPT or the ribbon cable may be damaged.
- **MCM IS NOT TURNING ON**
Check that the MPPT is powered up, the MPPT led should be on or flashing.
Disconnect and reconnect the D type connector to the MPPT.
Check ribbon cable for signs of damage.

Warranty Conditions: The product is warranted to be free from defects in materials and workmanship under normal use and service for a period of 24 months from the date of sale. This warranty covers defective parts and workmanship provided that the product is shipped prepaid to the seller within 24 months of purchase of goods. This warranty is limited to the repair or replacement (at the manufacturers' discretion) of parts and shipping prepaid to the original despatch destination. We regret that no liability can be accepted for consequential or special damages of any kind howsoever arising in connection with products supplied by the seller. This warranty is in lieu of all other warranties expressed or implied. No representative is authorised to assume for the seller any other liability in connection with the seller's products.