Discussion with Anthony at Magnum Energy 1425 353 8833

11-15-2017 Revision 01

Default Values with CCCV:

- Default max amps = 200, or, inverter capability max model by model, either 100 (2000 watt model) or 125 amps (2800 watt model)
- It is a 2 Staged Charge, Bulk then Absorb
- Max bulk current applied until 13.8 volts is reached.
- Then, switches to CV mode then battery held at 13.8 volts and at default absorb time of 2 hours
- At the end of 2 hours, goes into silent mode, then, when battery reaches 12 volts, bulk is reinitiated.

CONCLUSION: the default programmed setting pre-set in CC/CV mode is NOT compatible with Lithionics Battery products! Therefore, please modify the CC/CV settings as follow:

New Settings

A. Assuming Shore Power is Present

- CC…do not change default value
- Re-Program Constant Voltage, Set to 14.6
- Set Stop Condition to AMPS of 20 (should be the default setting) if the battery is 400 amps or higher, or, set to a lower value equal to 5% of the battery capacity you purchased.
- Set Re-Charge Volts to 13.4

For Off-Grid Applications:

B. No generator present: Set Re-Charge Volts to 12.4 to permit substantial use of battery capacity.

C. Generator Present: set your AGS (auto generator start) to 12.4 to maximize battery use and minimize generator use. Or, set AGS to 13.4 to keep the battery FULL and use the generator to support the loads

D. Set Low Battery Cut-Out from the default of 10 volts to 12.2 which has a one minute delay. This should set the system to turn OFF the inverter but leave the battery ON and READY. If your loads are high or the battery size is small, and, the BMS on the battery is also tripping OFF when the inverter trips OFF, then increase this setting accordingly, starting at 12.3 and potentially higher to ensure the inverter goes into sleep mode and not the battery

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The settings changes that should be made to the Magnum system to ensure proper battery charging and operation follow:

- Battery type to CC/CV
- CC – leave at 200A
- CV – 14.6VDC
- CV Chg Done – Change to Amps
- Amps = 20A

- Ma CC/CV Time (we did not discuss this, 6h? This is not a condition you normally want to hit, assuming the charging process is working normally, you won't)
- Set Recharge Volts – 13.4V
- Set LBCO 12.2V with possible increases as detailed above
- If using Auto Gen Start – set start voltage to .1-.2V higher than LBCO
- Set time delay to a short time (120s default, 1s-127m)
- Set Stop to the CV voltage and use a reasonable delay time (default is 2m, maximum is 127m)
- If the person has a Magnum PT-100 charge controller they would set the same charging values for it the same as the inverter


PWR
FAULT
CHG
INV
Constant Voltage
03 Charger Setup
SELECT
ON/OFF
CHARGER
MAGNUM
ENERGY
ON/OFF
INVERTER
FAVS
CTRL
METER
SETUP
TECH


PWR
FAULT
CHG
INV
03A AC Input
Amps = 30A
SELECT
ON/OFF
CHARGER
MAGNUM
ENERGY
ON/OFF
INVERTER
FAVS
CTRL
METER
SETUP
TECH


PWR
FAULT
CHG
INV
03B VAC Dropout
100 VAC
SELECT
ON/OFF
CHARGER
MAGNUM
ENERGY
ON/OFF
INVERTER
FAVS
CTRL
METER
SETUP
TECH

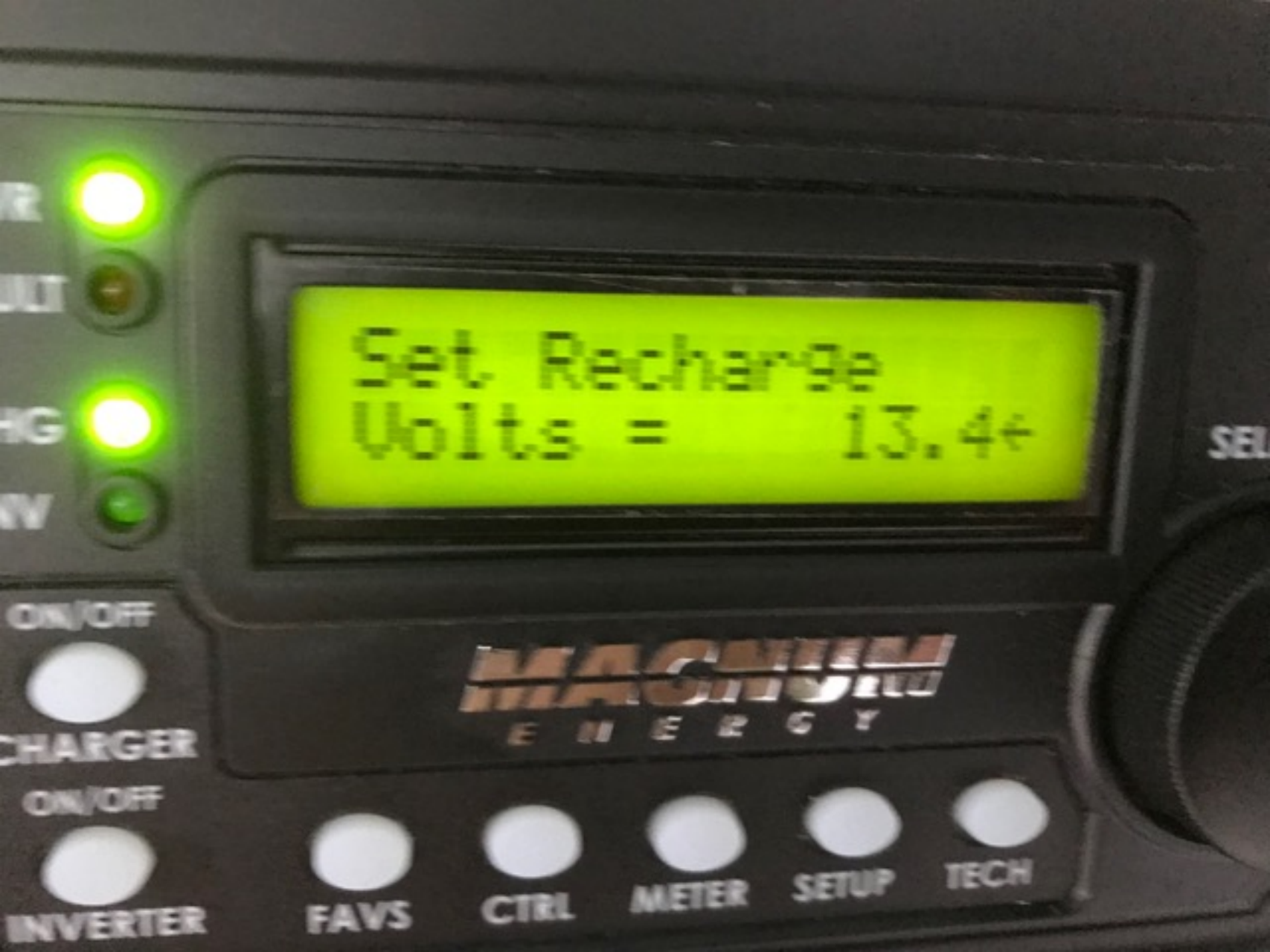

PWR
FAULT
CHG
INV
93C Battery Type
CC/CV
SELECT
ON/OFF
CHARGER
MAGNUM
ENERGY
ON/OFF
INVERTER
FAVS
CTRL
METER
SETUP
TECH


PWR
FAULT
CHG
INV
Set Max Charge
Amps = 200 ADC+
SELECT
ON/OFF
CHARGER
MAGNUM
ENERGY
ON/OFF
INVERTER
FAVS
CTRL
METER
SETUP
TECH


PWR
FAULT
CHG
INV
Set CV Charge
Volts = 14.6
SELECT
ON/OFF
CHARGER
MAGNUM
ENERGY
ON/OFF
INVERTER
FAVS
CTRL
METER
SETUP
TECH


PWR
FAULT
CHG
INV
Set CV Chg Done
Amps = 20 ADC
ON/OFF
CHARGER
MAGNUM
ENERGY
ON/OFF
INVERTER
FAVS
CTRL
METER
SETUP
TECH


Set Max CC/CV
Time = 6.0 Hrs
SELECT
ON/OFF
HARGER
ON/OFF
NVERTER
FAVS
CTRL
METER
SETUP
TECH
MAGNUM
ENERGY


Set Recharge
Volts = 13.4
ON/OFF
CHARGER
ON/OFF
INVERTER
FAVS
CTRL
METER
SETUP
TECH


03C Battery Type
CC/CV
SELECT
ON/OFF
CHARGER
MAGNUM
ENERGY
ON/OFF
INVERTER
FAVS
CTRL
METER
SETUP
TECH

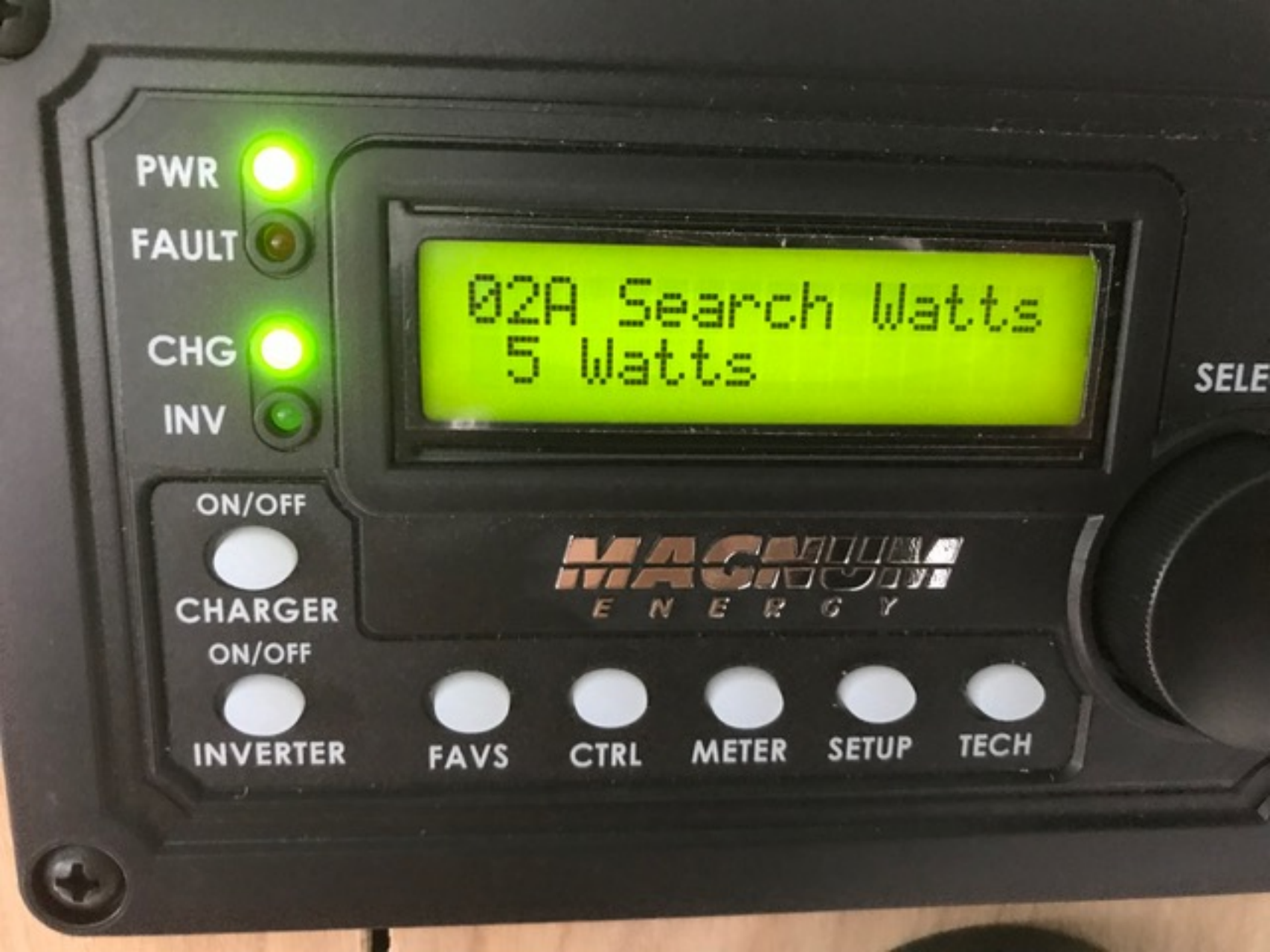

03E Max Charge
Rate = 100%
SELECT
ON/OFF
CHARGER
MAGNUM
ENERGY
ON/OFF
INVERTER
FAVS
CTRL
METER
SETUP
TECH


03F Max Charge
CC/CV Controlled
SELECT
MAGNUM
ENERGY
FAVS
CTRL
METER
SETUP
TECH


PWR
FAULT
CHG
INV
03G Final Charge
CC/CV Controlled
SELECT
ON/OFF
CHARGER
MAGNUM
ENERGY
ON/OFF
INVERTER
FAVS
CTRL
METER
SETUP
TECH


PWR
FAULT
CHG
INV
03H EQ Reminder
CC/CV Controlled
SELECT
ON/OFF
CHARGER
MAGNUM
ENERGY
ON/OFF
INVERTER
FAVS
CTRL
METER
SETUP
TECH


PWR
FAULT
CHG
INV
Silent
02 Invert Setup
SELECT
ON/OFF
CHARGER
MAGNUM
ENERGY
ON/OFF
INVERTER
FAVS
CTRL
METER
SETUP
TECH


PWR
FAULT
CHG
INV
02A Search Watts
5 Watts
SELE
ON/OFF
CHARGER
MAGNUM
ENERGY
ON/OFF
INVERTER
FAVS
CTRL
METER
SETUP
TECH


PWR
FAULT
CHG
INV
02B LBCO Setting
12.2 VDC
SELECT
ON/OFF
CHARGER
MAGNUM
ENERGY
ON/OFF
INVERTER
FAVS
CTRL
METER
SETUP
TECH


PWR
FAULT
CHG
INV
02D AC In - VDC
11.0 to 14.8 VDC
ON/OFF
CHARGER
ON/OFF
INVERTER
FAVS
CTRL
METER
SETUP
TECH
MAGNUM
ENERGY


PWR
FAULT
CHG
INV
02E AC In - SOC
80% to 100% SOC
SELECT
ON/OFF
CHARGER
MAGNUM
ENERGY
ON/OFF
INVERTER
FAVS
CTRL
METER
SETUP
TECH


PWR
FAULT
CHG
INV
SELECT
ON/OFF
CHARGER
ON/OFF
INVERTER
FAVS
CTRL
METER
SETUP
TECH
MAGNUM
ENERGY