



TECH BULLETIN

TECH BULLETIN NUMBER 0144
PCR 02282008
SUBJECT MS4448AE Software Version 3.6
MODELS AFFECTED MS4448AE
WARRANTY Not Applicable

Change Description	
WAS:	IS:
Inverter Software	Inverter Software
version 3.4	version 3.6
MS4448AE Specific Changes	
SHORE amps meter overrun after 30 Amps AC. i.e. with a 30 Amp setting, if you apply a 40 Amp SHORE setting, the charger would not back off.	Problem fixed, SHORE amps setting works fine.
Maximum SHORE amps setting '60A' allows 60 Amps on each 120 Volt leg.	Maximum SHORE amps setting 30 Amps. For anything above this setting, the charger will limit to 30 Amps.

MS4448AE Specific Changes (cont.)	
With cold inverter (FETs <60°C), AC OVERLOAD limit too high.	Lowered AC OVERLOAD limit for FETs <60°C setting. Note: There's no change to surge power levels.
Charger regulation	
Charger overshoots. i.e. The charge rate is set from 0 to 10%, charge amps increases sharply to 100% and then it begins to normalize.	Lower charger overshoot. i.e. When the charge rate is set from 0 to 10%, charge amps increases to about 50% before it begins to normalize.
Inverter voltage regulation	
Decreased the recovery time and improved the voltage regulation during large load changes.	
Output voltage recovery time from 10% to 80% change in load is over one second.	Output voltage recovery time from 10% to 80% change in load is about 0.4 second.
With 10% to 80% load change, inverter output voltage drops to about 60VAC.	With 10% to 80% load change, inverter output voltage drops to about 90 VAC.
Dead battery boot issues	
In the dead battery boot, AC voltage is not qualified before closing the relay, so the charger can connect to high AC voltage.	AC voltage is qualified before closing the relay to make sure AC voltage is within high (about 145 VAC) and low (VAC Dropout) setting limits.

Search watts sensitivity	
Unit takes a long time to come out of search with a high SEARCH WATTS setting like 30 or 50 Watts. (about 0.5 seconds at 50 Watts)	Search mode will sense the loads faster on each setting. (≤ 0.2 Seconds at 50W)
5W search setting is different with remote and without the remote.	5W search setting same with or without the remote.
Battery size	
Absorption time is not defined for battery sizes larger than 1600 AHrs	Absorption time is defined for battery sizes up to 5000 AHrs.
INTERNAL FAULT - 1 (BRIDGE FAULT)	
Fault counter for "INTERNAL FAULT" never resets. It can accumulate over a long time and present a fault when it accumulates to the 50 th event.	The "INTERNAL FAULT" Error counter decreases the number of events when conditions are normal.
Coming out of charge mode	
If the inverter is "OFF" and AC is applied to the inverter/charger, the inverter will transition to "ON" in the search mode once AC is removed.	Inverter will stay in the "OFF" mode after AC has been removed.

Charger response to ambient temperature	
Charger dials back to 50% of maximum output when ambient temperature is above 45°C.	Charger dials back to 50% of maximum output when ambient temperature is above 45°C and FET's are hotter than 75°C.
Shore amp setting	
With SHORE setting at 30 Amps or higher, the unit will regulate to the 25 Amp setting.	The unit correctly regulates to the SHORE amps setting.
Random inverter shut down	
Communication bytes from remote are not validated before being executed.	Inverter validates the packet length (16 bits) before information is executed.
Custom EQ voltage	
Inverter does not execute the custom EQ voltage request from the remote.	Inverter can accept and execute EQ voltage requests from the remote.
Inverter voltage & current readings	
24 volt inverter battery voltage resolution is 0.3 volt.	24 volt battery resolution voltage resolution is 0.1 volt.