Chargery BMS update instructions

Warning:

1. BMS main unit and LCD display module have different firmware file, and must be updated separately.
2. There are USB port on main unit and LCD unit separately.
3. Don't turn off BMS during updating
4. If load wrong firmware, BMS will be damaged and don't be resumed.
5. Generally BMS need not install USB driver on BMS8T, 16T and 24T. If need, please install USB driver on PC.
6. Main unit V4.0 cannot communicate with lower version LCD, such as V3.03, it means, when press START button on LCD unit, the BMS DON'T start.

Update operations

Before update, please down load update tool software, new firmware for BMS main unit and LCD unit. Generally windows PC can identify BMS and communicate with BMS successfully as right image (COM3)

If the below image or others with yellow mark is showed up in device manager, please install USB driver on pc.

1. Please down load BMS8T, 16T and 24T USB driver for window PC
2. Please down load update tool on http://www.chargery.com/uploadFiles/Update_Tool_V1.03.zip, it is for BMS8T v3.0, BMS16T v3.0 and BMS24T v3.0 (new hardware with COM3 communication port),
3. Please down load the latest firmware according to your BMS model, including main unit firmware and LCD unit firmware, take as BMS16T-300 as sample, the correct link is BMS16T-300 main unit v4.0 and BMS16T LCD module V4.0
   All files are here http://chargery.com/update.asp,
4. Install USB driver if need,
   a) Turn on BMS, connect BMS to PC,
   b) If above image with yellow mark is showed in device manager, please run the USB driver. If don't show it, please check the USB data cable and BMS turned on or not.
   c) After running USB driver, when right image showed, please press INSTALL button, continue to install the driver.
   d) When Installation finished, installation finished menu will be pop up.

e)   Check the device manager, USB-SERIAL CH340 (COMx) will be listed in Ports(COM&LPT) list.

Update BMS main unit

1. Connect PC to BMS by USB data cable and turn on BMS, the LCD display module need not connect to main unit. If connect LCD to main unit, the update information will not be showed on LCD.
2. On PC "device manager" find the correct COM port, as above image, it is COM3.
3. Unzip the update tool software, and run the software, choose correct COM port, See right image, choose COM3
4. Click OPEN button lock the port please.
5. Click Open File button load the firmware file. The file should be .hex file. Such as BMS16C3_V4.00_APP.hex. "C3" means 300A model. See right image.
6. Click Update button start to update, the update progress bar will be showed on PC,
7. Finish installation, the complete information will be displayed on PC.

Continue to update LCD unit

1. Connect LCD unit to main unit and connect LCD unit to PC by usb data cable.
2. Click Close button unlock the port, then click Open button lock the port on update tool software
3. Click Open File button load the firmware file. The file should be .hex file. Such as BMS16T_V4.00_APP.hex, it is for BMS16T LCD model.
4. Click Update button start to update, the update progress bar will be on PC and LCD, update complete information will be displayed on PC.

Finish update, the BMS will start automatically. You can find the main unit version on the bottom line of program setup interface, when power on BMS, you can find the LCD module version on the first interface.

NOTES:
a) If display "update time over", or don't display any COM port, please run update tool software again, the software version must be V1.03.
b) After BMS main unit and LCD unit updated to V4.0, please enter into program setup interface and press UP or DOWN choose Default Settings, then choose Enable press START button, resume all parameters settings as default.   As below.

```
Program setup
LCD Back-Light Time          10Min
Cut-Off Delay Time              2S
Current Calibration           -20A
Temperature Alarm              ON
Cell Empty Voltage          2.50V
Cell Full Voltage           4.20V
Default Setting            Enable  ──→  Resume default settings in factory
Balance Parameter             SET
Battery Capacity AH          10AH
Battery Power WH            257WH
Low temp. Cutoff In Charge    2°C
Low temp. Cutoff In Disch   -10°C
Version:BMS16C3_V1.26  ──→  BMS16T-300 Main unit firmware version
```

Firmware v4.0 is the latest version, add some new features as below,

1. Improve the SOC---based on battery power charged in and discharged out
2. Add WH setup,
3. Add each cell internal resistance measurement
4. Add WH, AH and cell internal resistance send out.
5. Add balancing indicator

After calibration when discharge or charge, the SOC reading will be accurate.

Thanks for your enjoy the BMS.
Chargery R&D team.
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