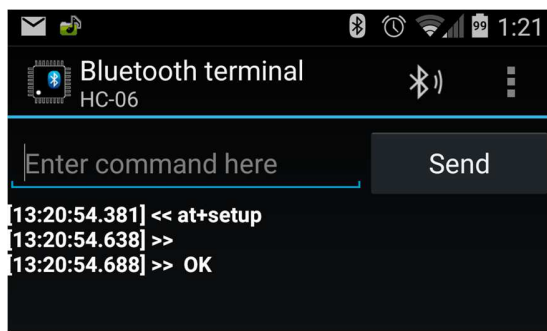


AT Commands for EV Display V4 configuration

EV Display has a number of parameters stored in EEPROM, which can be changed using 2 buttons on the LCD display unit. In case your system does not have LCD unit, you can modify those parameters using set of AT commands over serial interface available on EV Display board. Setup your serial connection and use any suitable terminal program, such as Putty or Hyperterminal to send AT commands to the EV Display.

Setup via BT Dongle for Torque Pro users: If your EV Display has BT dongle for Torque Pro, then you can use Android apps for BT Terminal to connect and enter commands. There are many free BT terminal apps, but we recommend the one called “Bluetooth Terminal” for its ease of use and simplicity. Make sure to pair your BT Dongle to your Android device using passcode 1234, then open Bluetooth Terminal app and touch BT symbol to connect. Your BT Dongle should appear in the list with name HC-06. Once connected you can type commands and send. The screen will look similar to this:



Entering Setup Mode: Once serial connection is established, EV Display will be sending data to the serial port, which will show up in your terminal window. You can ignore this data and type in following command and then press Enter to send it – **AT+SETUP**. If command is accepted the unit will respond with OK and will stop sending data, expecting next set of AT commands. Below is the listing of all commands. You don't have to send all commands, only those which require changes to corresponding parameters. Once all changes have been sent, complete setup by sending command – **AT+END**

List of all AT commands: Commands listed below can take new values after “=” sign or can report existing values if command is not followed by “=” sign. If new value is outside of expected range, error will occur. If new value is accepted, OK message will be sent as confirmation. For example, sending command AT+AH=100 will set Pack AmpHours to 100AH, while sending command AT+AH will report existing value from EEPROM. Commands are not case sensitive and can be entered with either lower or upper case letters.

NOTE: Detailed explanation of each value is outside of scope of this document. Please refer to User Guide document for detailed explanation of each value.

- **AT+VR** – Voltage Range. Set to 0 for 64V range or 1 for 350V range.
- **AT+AH** – Pack AmpHours. Valid range 1 to 3000.
- **AT+FV** – Full Voltage. Valid ranges 0 – 640 (64V unit in 0.1V increments) or 0 – 350 (350V unit)
- **AT+MSOC** – Min SOC. Valid range 0 – 80.
- **AT+DIR** – Current sensor direction. Set to 0 for Reversed or 1 for Normal.
- **AT+TC** – Temperature Correction. Valid range 0 – 20.
- **AT+LF** – Low Fuel trigger level. Valid range 0 – 80.

AT Commands for EV Display V4 configuration

- **AT+TU** – Temperature Units. Set to 0 for Celsius or 1 for Fahrenheit.
- **AT+CE** – Charge Efficiency. Valid range 50 – 100.
- **AT+DZ** – Dead Zone. Valid range 0 – 9.
- **AT+TM** – Test Mode. Set to 0 for OFF or 1 for ON.
- **AT+ST** – Sensor Type. Set to 1 for 1000A or 2 for 2000A
- **AT+CS** – Current Scale. Valid range -50 – 50.
- **AT+IL** – Idle Load. Valid range 0 – 20.

NOTE: Below 3 commands don't have any values. These commands execute actions as described below.

- **AT+CALIB** – Zero point calibration.
- **AT+END** – End Setup routine and resume to normal operation mode.
- **AT+SETUP** – Halt normal operation and enter Setup routine.