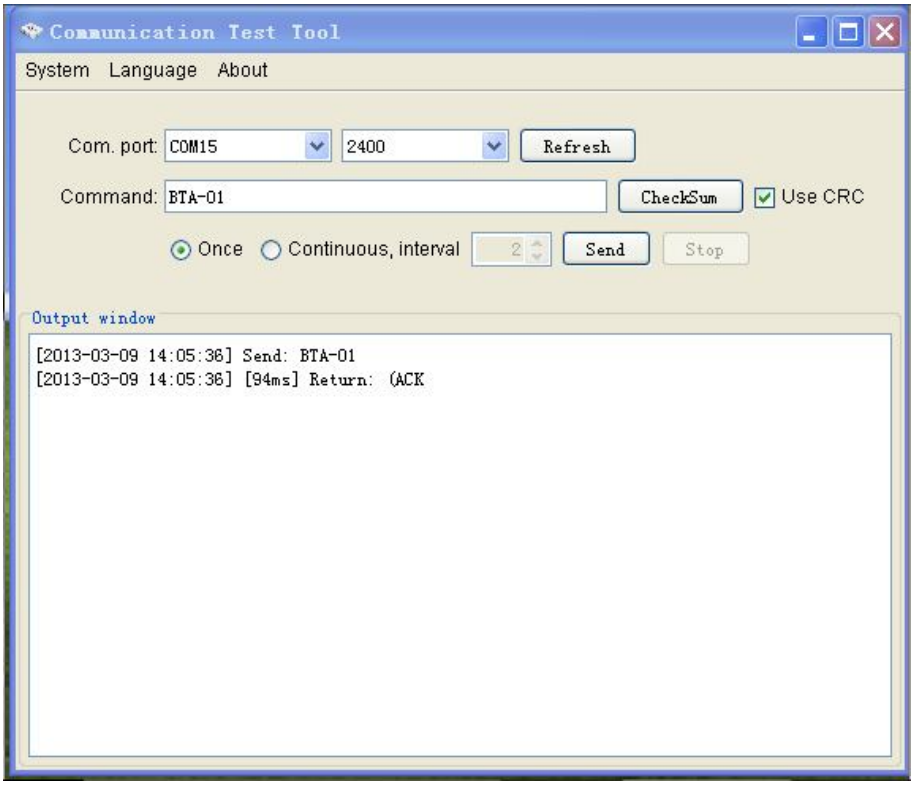
1. **Unpack communication tool software.**

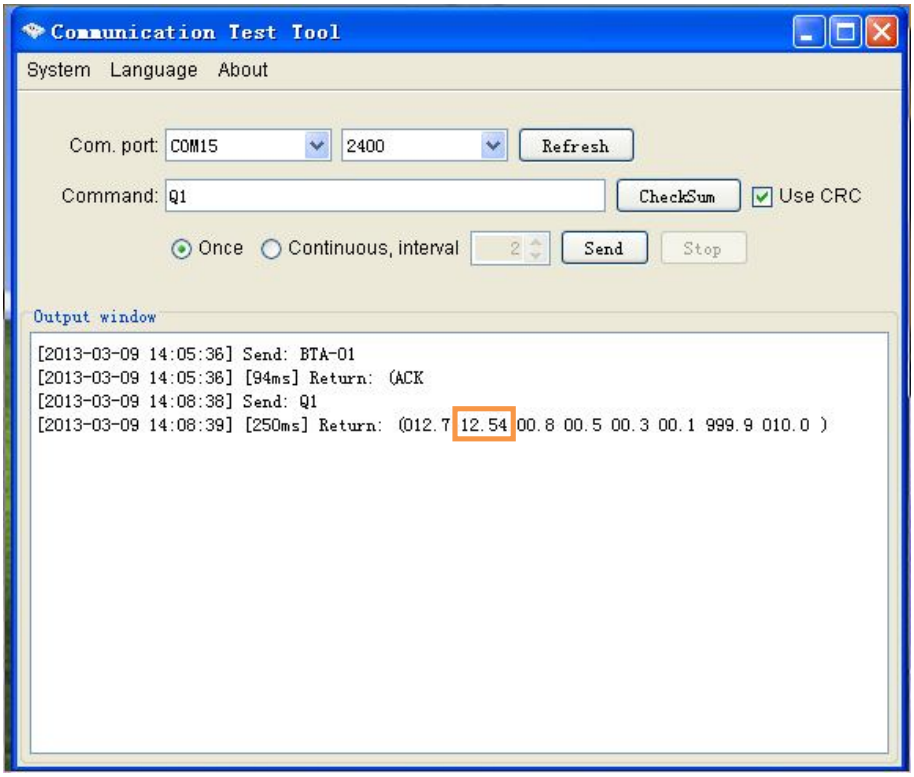
2. **Battery Voltage Calibration**

STEP 2.1: Connect a 12V battery to PCM3012. And connect a light load (about 30W) to the PCM3012. MPPT will turn on automatically. Connect the F/W upgrade cable between MPPT and your PC. You need a multi-meter or a power meter to measure the battery voltage.

STEP 2.2: Read the actual battery voltage in the multi-meter. Double click the communication tool icon, and run this software.

You should select the corresponding serial port number of your PC. The baud rate sets 2400. Then you type the battery voltage ***calibration command*** "**BTA+(-)XX**". XX is integer number from 0 to 20. The bigger XX is, the more detection battery voltage changes. "+" means you want increase the detection value, while "-" means to decrease the detection value. Then you should type ***inquiry command "Q1"***. The 2rd return value is the detection battery voltage. Repeat this step, until detection battery voltage is the same with the actual battery value in multi-meter.



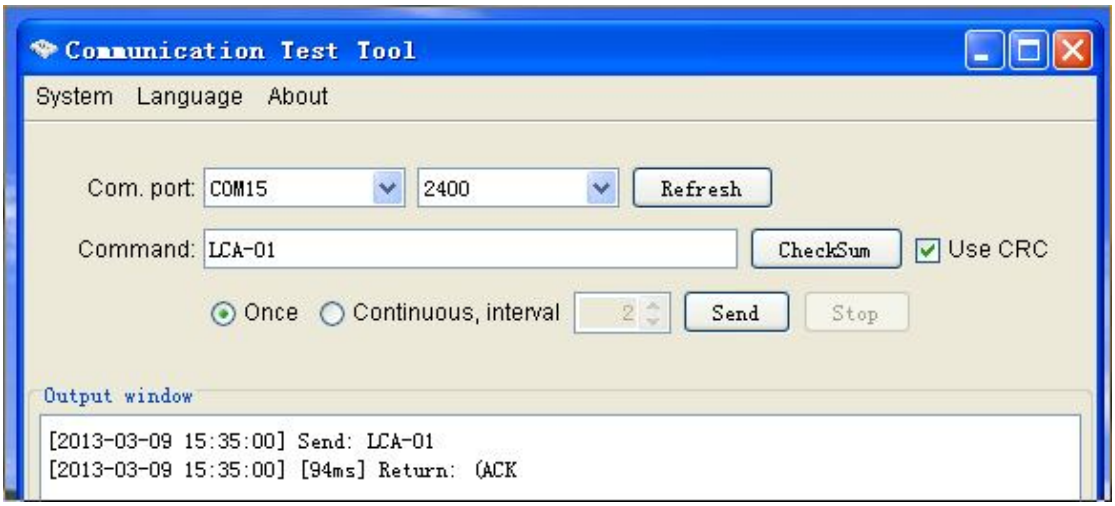


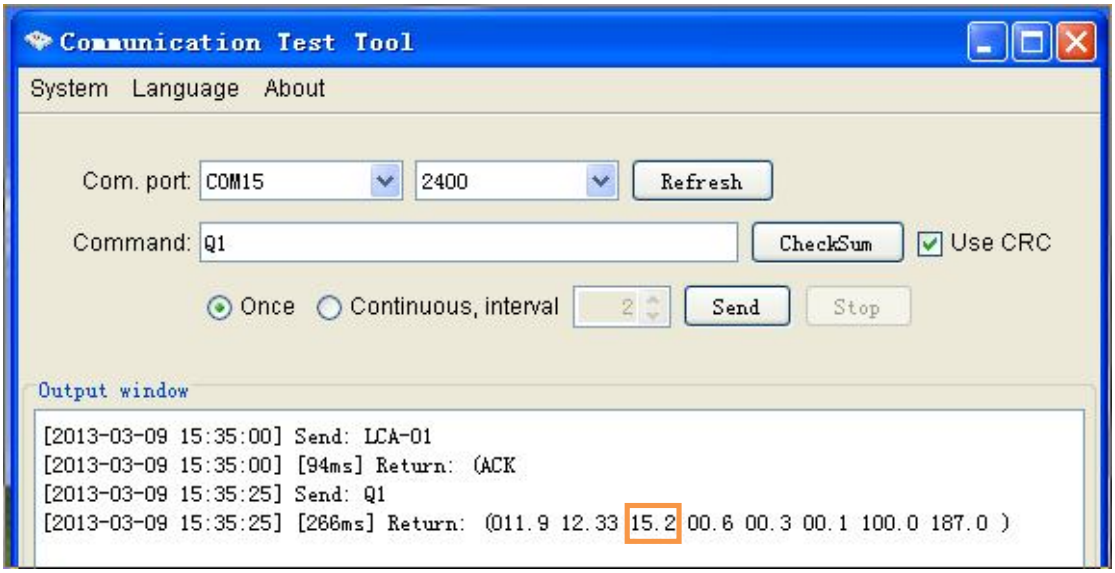
3. Load Current Calibration

Connect 12V battery and load with PCM3012. Set load to 150W, and read the actual load current in power meter.

Then you type the load current ***calibration command*** "**LCA+/-XX**". XX is integer number from 0 to 20. The bigger XX is, the more reading load current changes. "+" means you want increase the detection value, while "-" means to decrease the detection value.

Then you should type ***inquiry command "Q1"***. The 3rd return value is the detection load current. Repeat this step, until detection load current is same with the actual load current in power meter.



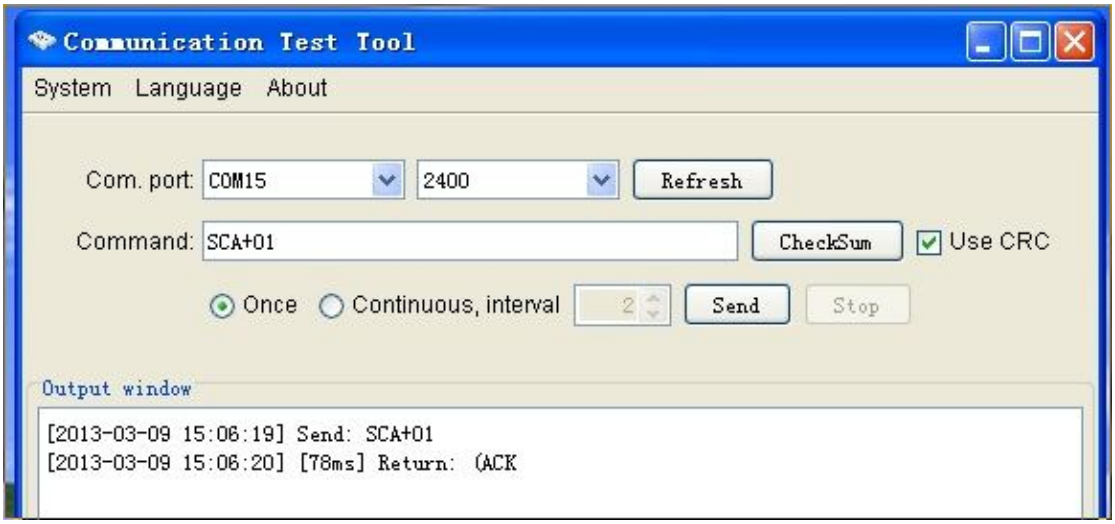


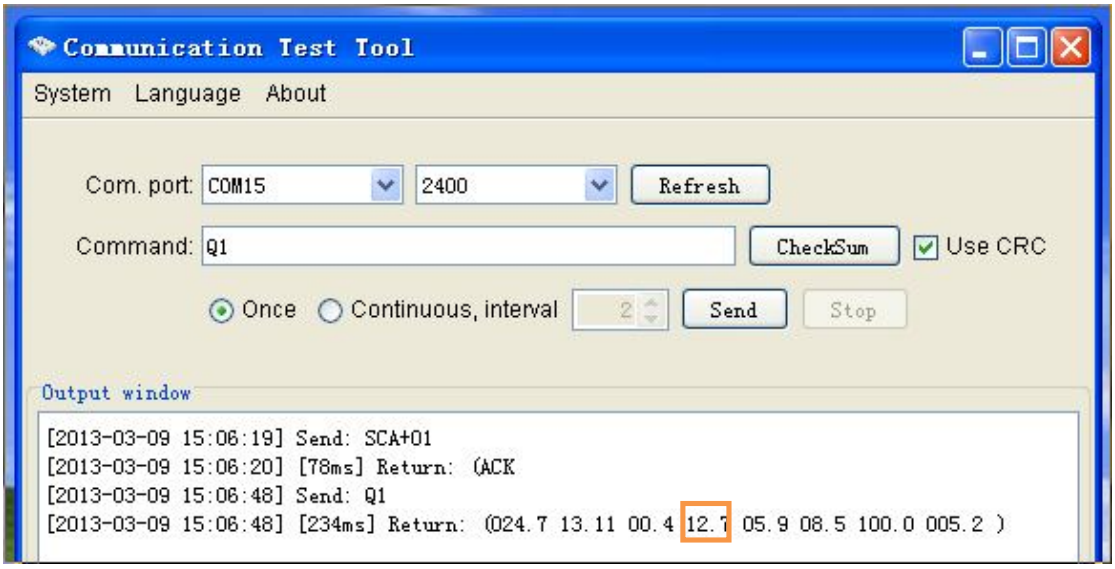
4. **Charging Current Calibration**

Connect 12V battery and DC source with PCM3012. Set DC source to 20V/8.5A, and read the actual charging current in power meter.

Then you type the charging current ***calibration command*** "**SCA+/-XX**". XX is integer number from 0 to 20. The bigger XX is, the more detection charging current changes. "+" means you want increase the detection value, while "-" means to decrease the detection value.

Then you should type ***inquiry command "Q1"***. The 4th return value is the detection charging current value. Repeat this step, until detection charging current is the same with the actual charging current in power meter.




Communication Test Tool
System Language About
Com. port: COM15 2400 Refresh
Command: Q1 CheckSum Use CRC
Once Continuous, interval 2 Send Stop
Output window
[2013-03-09 15:06:19] Send: SCA+01
[2013-03-09 15:06:20] [78ms] Return: (ACK
[2013-03-09 15:06:48] Send: Q1
[2013-03-09 15:06:48] [234ms] Return: (024.7 13.11 00.4 12.7 05.9 08.5 100.0 005.2)

5. **Finished**