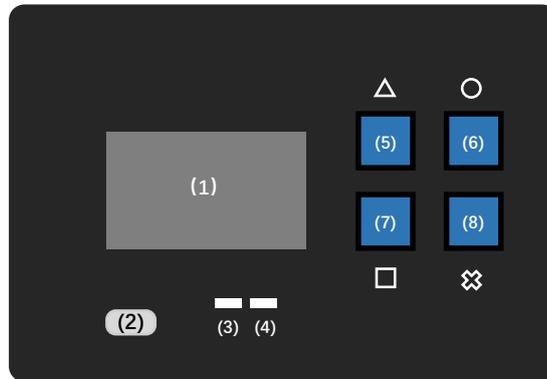# TD-SOLAR ANALYZER MANUAL

1. Introduction

Fig.1 The front of TD-Solar analyzer

(1) LCD screen: Display brief information;

(2) USB port: Connect to PC (Windows only);

(3) Power indicator: When the device is powered, this LED is on;

(4) Working status indicator: When the device is working, this LED is flashing or on;

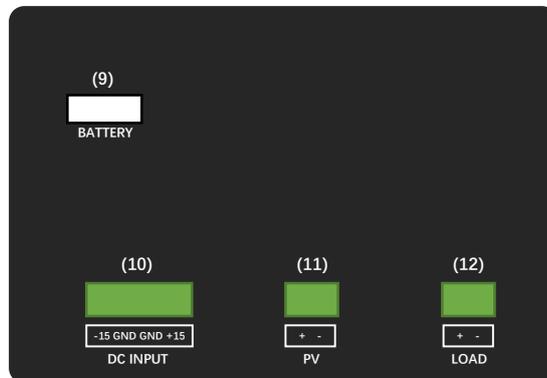(5) ~ (8) Buttons: Switch mode, start/pause, stop, or show more information

Fig.2 The back of TD-Solar analyzer

(9) Battery port: only support 2 x 3.7V batteries;

(10) DC power input: +/- 15VDC (if (9) is connected, do not insert (10));

(11) PV input port: connect to a PV panel;

(12) Load port: connect to a 20 ohm(>=200W) resistor as a load.

Fig.3 PC software interface

The USB driver and software shown in Fig.3 can be downloaded from [TREEE Website](#) (only for Windows). After installing the driver, the software will display the related port name. Then, click [OPEN COM X].

Fig.4 PC software interface after connecting to PC

If the device works well, the interface is shown as Fig.4. The [SCAN MODE] or [MPPT MODE] button should become PINK, which means the software receive proper data from the device. It is worth mentioning that the [EXIT] should be click twice in 1s, which avoids error touch for Windows Tablet. A tablet is very convenient for connecting this device by Bluetooth. Connect a Bluetooth device named HC-05(password is 1234 or 0000). Connect the Bluetooth serial port (COM X).

Next two sections introduce the PV Scan Mode and MPPT Mode.

2. PV Scan Mode

This mode is used to scan the I-V and P-V curve of a PV panel. Before scanning, the PV panel and the load have to be connected well. As the voltage between the load can be very high, do not touch it when the device is powered.

Click [START] or press <O> to scan the connected PV panel. After around 2.18s, the process will be finished. If the curve is reasonable, it will be plotted as Fig. 5. Press <□> to view more information.
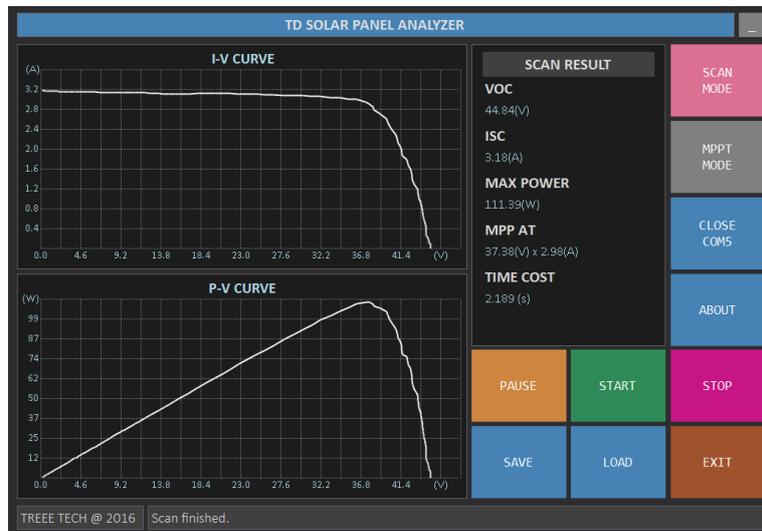

Fig.5 The I-V curve and P-V curve are plotted.

Then, the [SAVE] button can be used to save the data and images of these curves. When you want to review this curve, click [LOAD] button to load the saved data.

3. MPPT Mode

Click [MPPT MODE] or press <△> to enter MPPT mode. The device will track the max power point and count the total energy as shown in Fig.6. Do not touch the load during this mode. Because it is very hot.

Fig.6 MPPT mode: display voltage, current, power and energy.

4. Attention

This device is still a prototype for testing. We are not responsible for the possible hazards. Please send the feedback to io@treee.com.cn .