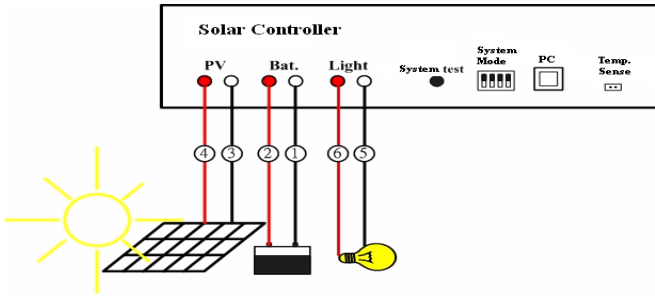# ARM-L-1512 / ARM-L-1524 Quick Installation Guide

Important Safety Instruction

General Safety Instructions

- All electrical work must be done in accordance with local, and/or international electrical codes.
- Before installing or using this device, read all instructions and cautionary marking located in (or on) this guide, the controller, the batteries, PV(Photovoltaic) array and any other equipment used.
- To reduce the risk of short-circuits, use insulated tools when installing or working with the inverter, the controller, the batteries, or any DC source (e.g., PV, hydro or wind).
- Remove all jewelry. This will greatly reduce the chance of accidental exposure to live circuits.
- The controller contains more than one live circuit (batteries and PV array, wind or hydro). Power may be present at more than one source.
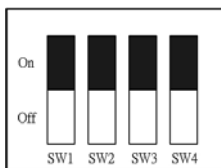- This product contains no user serviceable parts. Do not attempt to repair this unit unless fully qualified.

1. Installation

Connect the system according to following instructions in sequence:

(1) Connect the Battery's (-) terminal to the Battery's (-) terminal of the Controller

(2) Connect the Battery's (+) terminal to the Battery's (+) terminal of the Controller

(3) Connect the PV (-) terminal to the PV (-) terminal of the Controller

(4) Connect the PV (+) terminal to the PV (+) terminal of the Controller

(5) Connect the Load (-) terminal to the load (-) terminal of the Controller

(6) Connect the Load (+) terminal to the load (+) terminal of the Controller

(7) Set the Dip Switches SW3 and SW4 to off so that the controller can operate in Auto Mode.

(8) You can set lighting time to 6 /8 /10 /12 hours by adjusting the Dip Switches SW1 and SW2 according to following Timer Settings Table.

(9) To check whether the installation is completed, please press the light test button. The bulb will light about 10 sec then turns off automatically. Don't press the button over 10 sec. It has 5 times limitation when the battery is below LVD(Low Voltage Disconnect).
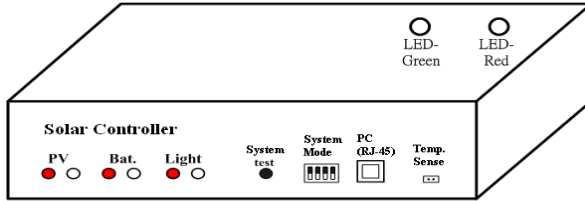

Lighting Mode		
	SW4 Off	SW4 On
SW3 Off	Auto Mode	Manual Mode
SW3 On	Schedule Mode	

Table 1: DIP Switches and Operation Modes

Timer Settings		
	SW2 Off	SW2 On
SW1 Off	6 hrs	10 hrs
SW1 On	8 hrs	12 hrs

Table 2: Timer Settings

2. Descriptions for the controller

- ➤ Light test button
  Pressing the light test button will activate the light (don't press the button for more then 10 sec). This button can only be used 5 times when the battery is below the LVD.
- ➤ Reset button
  Pressing the reset button for more then 10 sec will reset the system.
- ➤ Dip switch
  Please refer to Table1 DIP Switches and Operation Modes and Table 2 Timer Settings.

The Solar Controller can operate under one of the following modes (Please refer to Table1 DIP Switches and Operation Modes):

- ● **Auto mode**
  Lighting control depends on the PV voltage and the threshold voltages for turning ON or OFF the light which can be adjusted by Solar Controller Utility.
- ● **Manual mode**
  Lighting control is in accordance with by timer settings (6 hrs/ 8 hrs/ 10 hrs or 12 hrs). Please refer to the following timer settings table.
  * At dawn, the controller deactivates the output regardless which lighting duration has been selected.
- ● **Schedule mode**
  Turn ON or OFF the light according to the Real Time Clock. The solar controller supports 8 programmable sections in a schedule.

  *Remark:
  Auto mode: To turn ON or OFF the light depends on the detected PV voltage.
  Manual mode: To turn ON the light depends on detecting the PV voltage and to turn OFF the light depends on detecting the PV voltage or on manual timer settings (6hrs/ 8hrs/ 10hrs/ 12hrs).
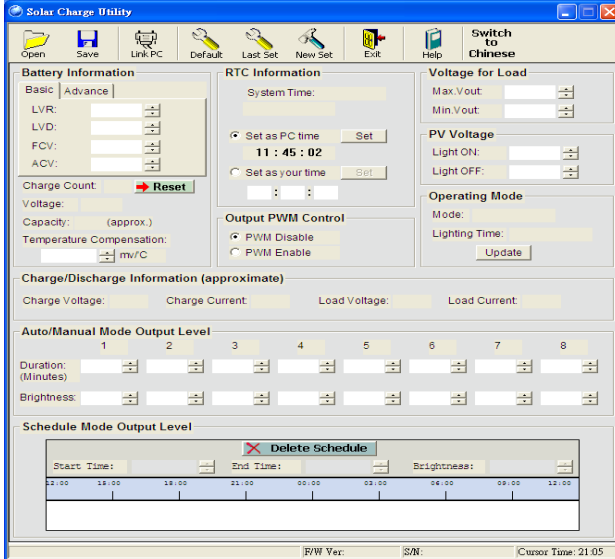 Schedule mode: To turn ON or OFF the light depends on the Real Time Clock.
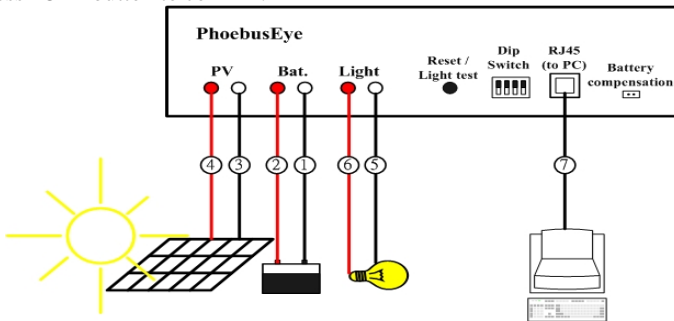
LED Indicators:

	System On	Charging	LVD	Bad Bat.	PV Disconnect
LED Color	Green	Green	Red	Red	Red
Remark	On : 2.0 s Off : 2.0 s	On : 0.5 s Off : 0.5 s	On : 0.5 s Off : 0.5 s	On	On : 2.0 s Off : 2.0 s

3. Use Solar Controller Utility:

Run "Solar Controller Utility.exe" on a PC and you will see below user interface.

Link PC: Connect a PC onto the PC terminal of the controller using a RJ45/RS232 cable. Click **Link PC** button on the user interface, then select your PC COM port or use 'Auto Detect' function to search the controller. Once you finish Link PC process then press "OK" button to confirm.

    * If link PC fails, then you can not save any setting to controller.
For further instructions, click the **Help** icon located on the top right hand corner of the user interface for detailed description.

Congratulations! Solar Controller is now installed and basically configured. For further information and instructions on the usage and setup of this device and its applications, refer to the full user manual provided on the CD.