Solar Power Monitor User Manual

Model:　　PWX-100 / SMX-101
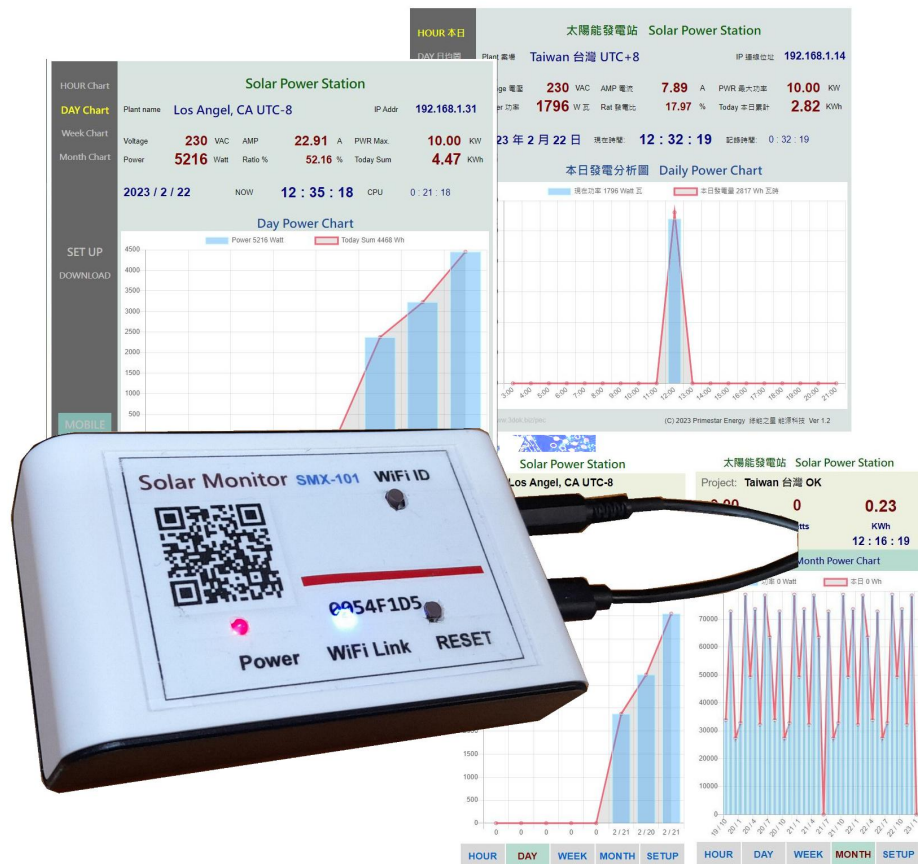
Updated:　　**Nov 5, 2023**

1. Introduction
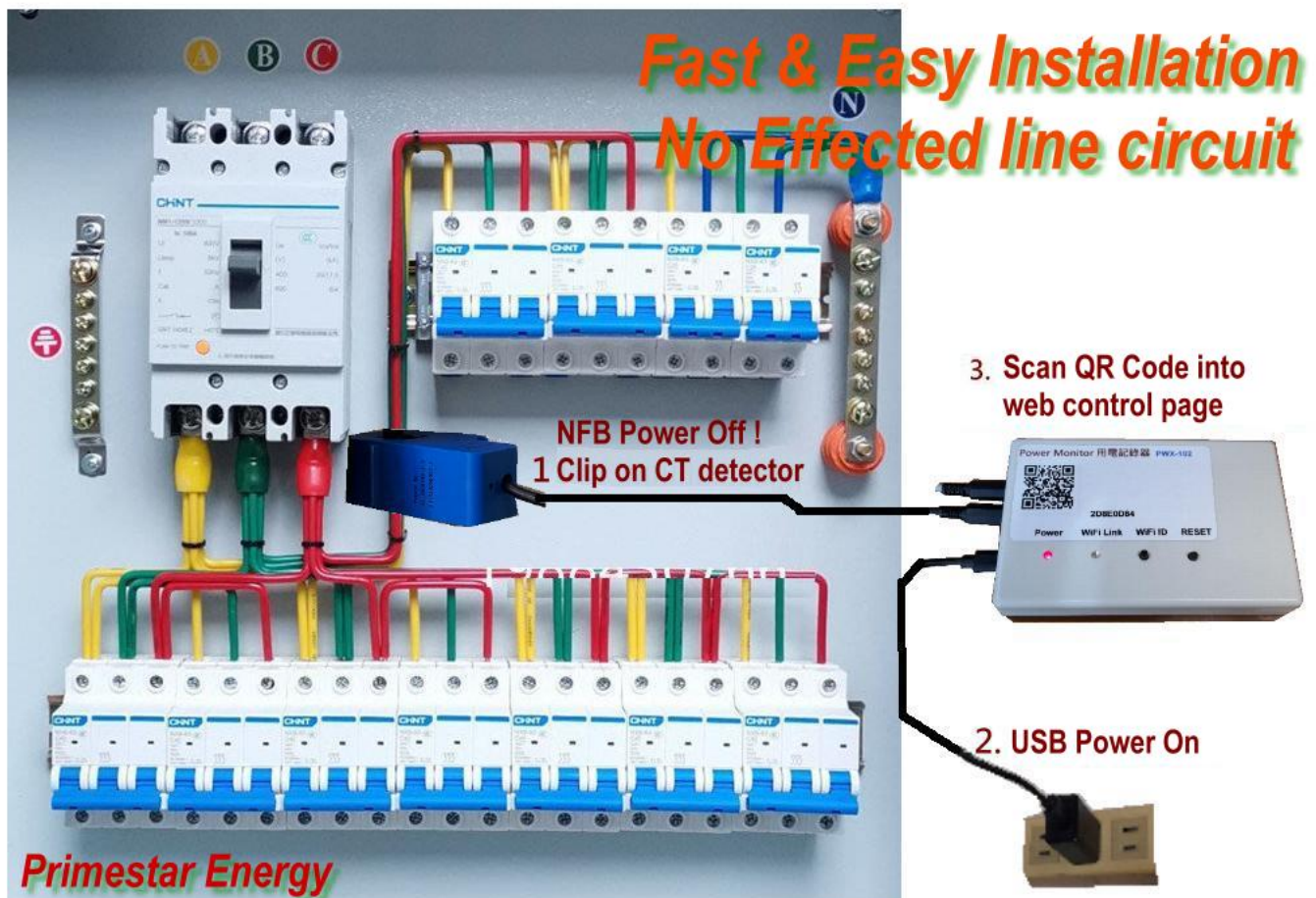

C.T. Socket

USB Power
(Micro USB)
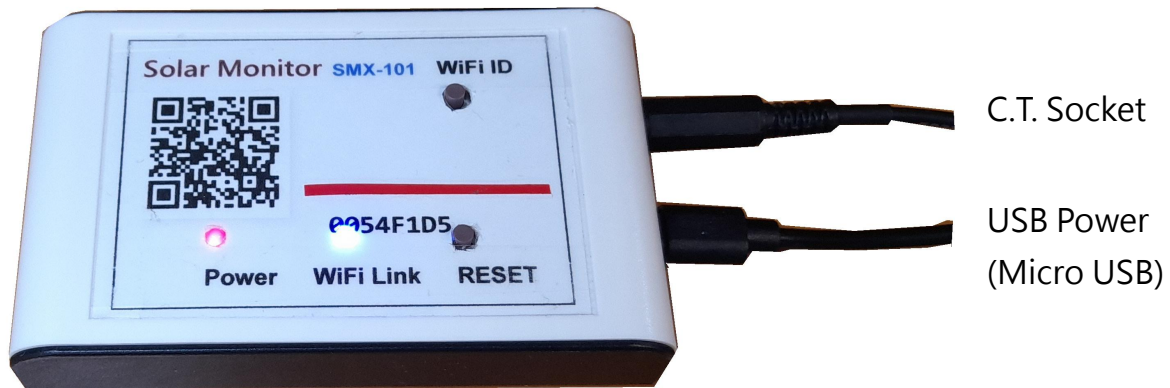
Power LED :   Red LED for power on indicate.

WiFi Link :   Blue WiFi Communication indicate.

RESET :   System reset button.

WiFi ID :   WiFi SSID reset for pressed 10 seond.

> **Turn-Off AC Line Power First :**   Make sure the AC Line Power already turn-off
  for safety issued always.

> **Clips the CT current clamp to AC power line :**   Clip-up the CT sensor into
  main power wire, close up the CT clamp and plug into PMX-100 CT socket.

> **Plug-on USB power :**   When plug USB power On, the Red LED turn on, and blue
  WiFi LED also turn on, WiFi ready and system on work.

> **Scan QR Code on Top :**   First time install need pair up WiFi with home router
  for SSID & Password, requested for WiFi link.

> **Any time scan QR Code into web control pages, after WiFi setup OK :**
  When WiFi setup ready, any time use may scan the Top QR code into the web control
  pages for quickly WiFi link.

  When WiFi setup ready, PMX-100 will get a IP address like_   192.168.x.xx that
  get from your home WiFi router to accepted for web remote operations..

2. Installation

1. **NFB Power Off :**   Turn off the NFB of AC power before operation, and make sure power off for safety.

2. **USB Power Adaptor :**   Put USB adaptor on AC power socket, and USB power On.

3. **Install CT clamp :**   Clips the blue CT current clamp on main AC power wire, close clamp and put into CT socket of PWX-100.

4. **NFB Power On :**   Check again OK then turn-on NFB back AC power, The PWX-100 red power LED-on, and WiFi LED flashed, then system ready for work now !

5. **WiFi setup :**   First time operation at home, it need setup the WiFi SSID and password then work completely.

3. WiFi setup

> **Clear old WiFi data :** First time WiFi setting, press the WiFi ID button for 10 second until WiFi LED flashed, system deleted old WiFi setting and wait for setting..

> **Log-in the PWX-100 WiFi hot spot :** Turn on the WiFi hot spot search function, search the PWX-100 hot spot entrance like this …

> "ESP32_XXXXX" The head ESP32 WiFi hot spot is the PWX-100 chip ID please select it for enter WiFi configuration.

> System will show there is no internet service but it is ok, we just only use it to input your home WiFi SSID & Password only needed.

> Scan the top QR-Code machine ID or link 192.168.4.1 for WiFi configuration_

> Scan the top QR Code of machine ID, use browser to open web page for WiFi Manager proceed WiFi configuration.
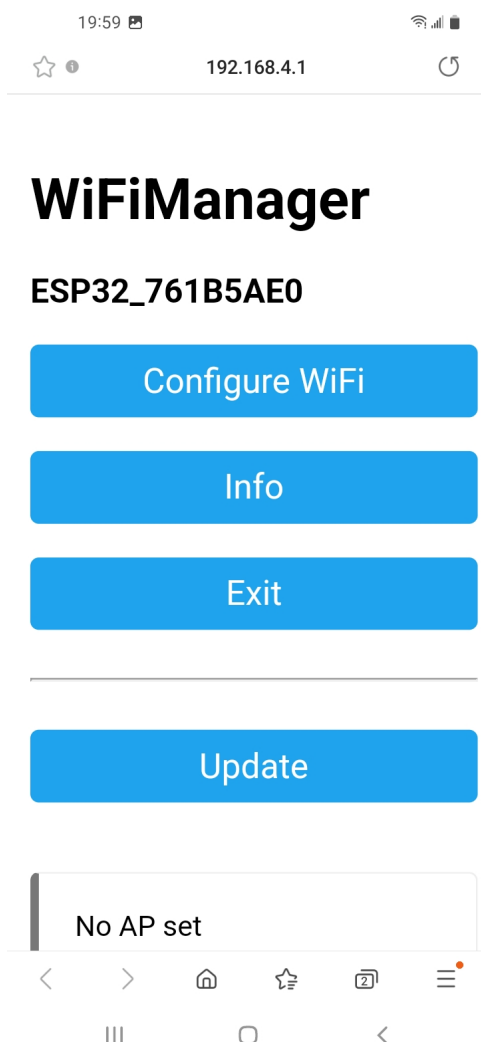
> Or directlly type IP address_ 192.168.4.1 into WiFi Manager page.

> **NOTICES:**
  Now procedures only available when user already find the ESP32 wifi services.

  If it 's not showed, please back previously step to choice the ESP32_xxx for WiFi service again to complete web setting.

> Enter the ESP32 WiFi Manager and select <Configure WiFi > for PWX-100 for home WiFi router connect setting.

19:59

Mi_FH-2F 🔒 .ıl

goforwildnetis2.4G 🔒 .ıl
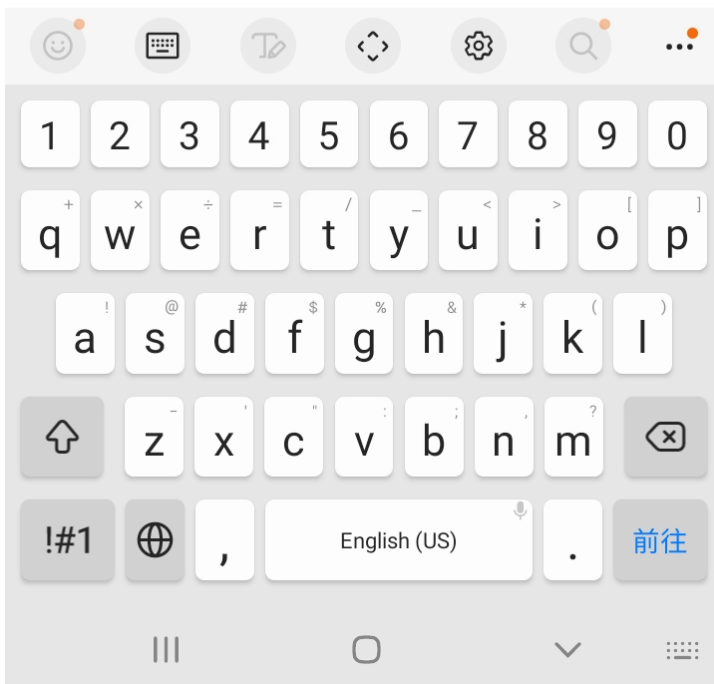
ASUS 🔒 .ıl

CHT 20 🔒 .ıl

SSID

TP-LINK_60EE50
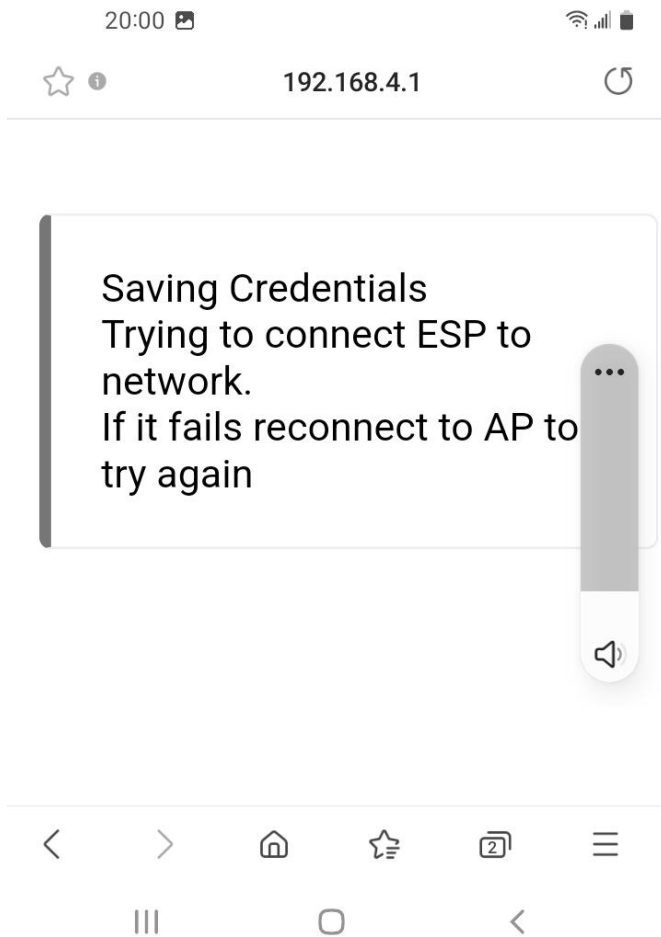
Password

•••••••••

☐ Show Password

> Select your home WiFi SSID
  for PWX-100 to connect and
  enter the password then SAVED.

> **NOTICES:**
  Now you selected WiFi hot spot
  that must be the same as later
  which user want to enter the
  PWX-100 web control functions.

  If not in the same WiFi SSID router
  that may cause fire wall blocked
  and unable to link.

> The WiFi setup complete OK !

> Shown as this means WiFi Configure completed, when next time scan QR code it will goto the control page directly.

> When the WiFi configuration not success, or user and PWX-100 not in the same WiFi hot spot, it may cause blocked by fire wall and unable to reach PWX-100 web services.

> When too many WiFi hot-spot at home, be sure that user operates with PWX-100 in the same WiFi SSID router to make sure the web link allowed all the time.

> Please repeat the upper procedure to complete the WiFi SSID & Password setting.

> Again scan top QR Code for into PWX-100's web function pages.

> When WiFi setting complete, after scan QR code it will show the connected IP address which get from home WiFi router, and into web page automatically in user's web browser.

> OK！ Next to web function pages！

> WiFi Setup completed !

Congratulations, when you success
enter the web control page of
PWX-100, that means system had
already work normally now.

> Any time user just scan the QR code
then into the web page directly
like this.

Or user may save the web IP address
which shows on the page_
192.168.x.x as short-cut, then next
time can into web page quickly.

> The IP address like_ 192.168.1.30
is the web address which get from
users home WiFi router, so you
may save the address as short-cut
for directly open this address
into the PWX-100.

> WiFi Configuration completed
OK !

4. Functions
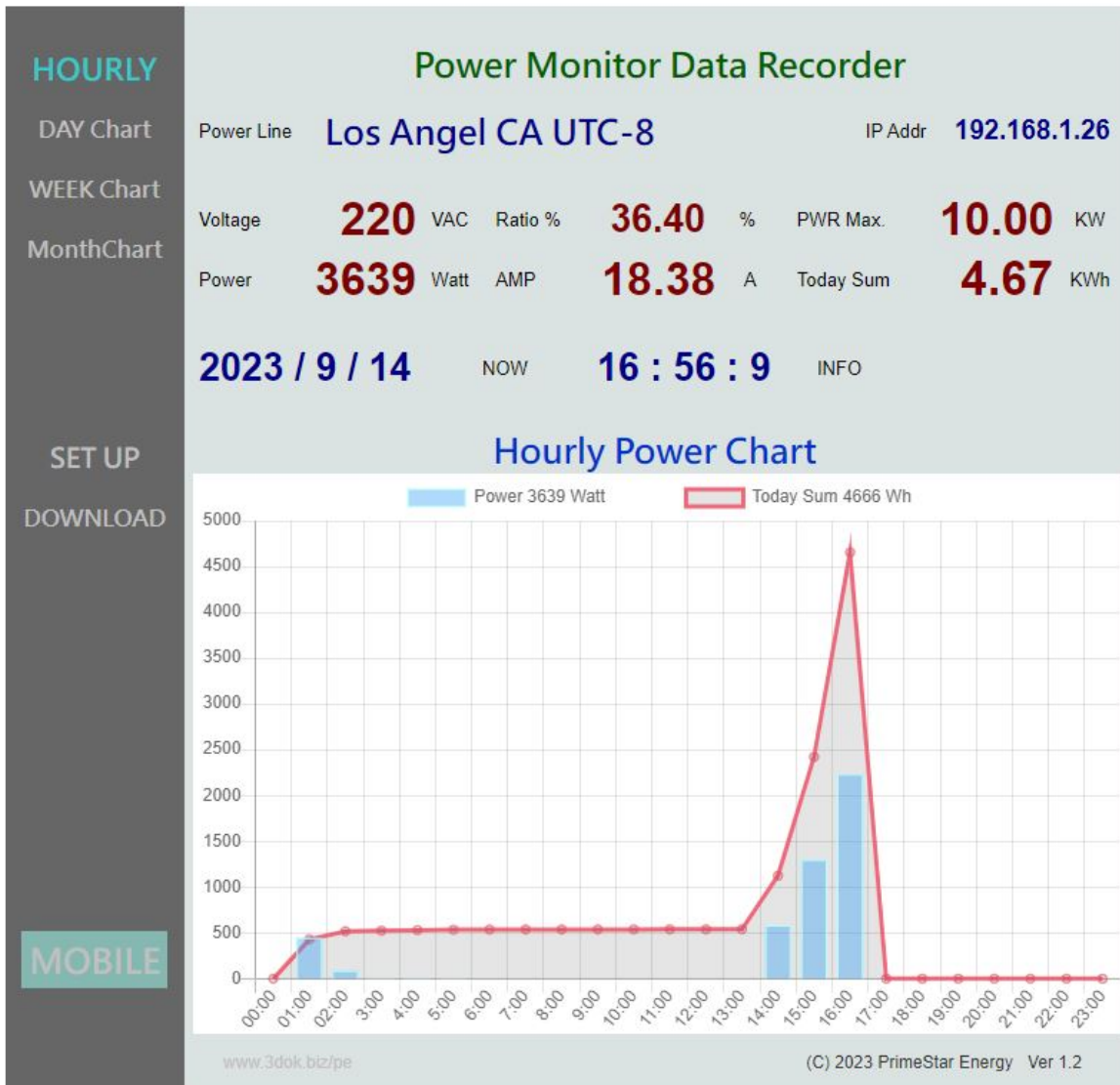
> **HOME** : Hour Power Chart Display today's 00:00 – 23:00 hourly power chart,

Left side for function pages:

  HOUR Today's / Hourly chart

  DAY Goto Daily power chart

  WEEK Goto Weekly chart

  Month Goto Monthly chart

SETUP	User's information setting.
DOWNLOAD	Data upload, download manager.
MOBILE	For cell phone, Mobile pages.

Upper side for Real-time data :

|	
Power Line	User's solar project name.
IP Address	**192.168.x.x** Is now WiFi link IP address.
Voltage	Is the solar system's VAC value, from user's setup input.
AMP	Is the now current AC ampere value.
PWR Max.	Is the maximum solar power capacity, from user's setup input.
Power	Is now measuring AC power Watts value.
Ratio%	Is now power / maximum ration% value.
Today's Sum	Today's power summary in KWh.
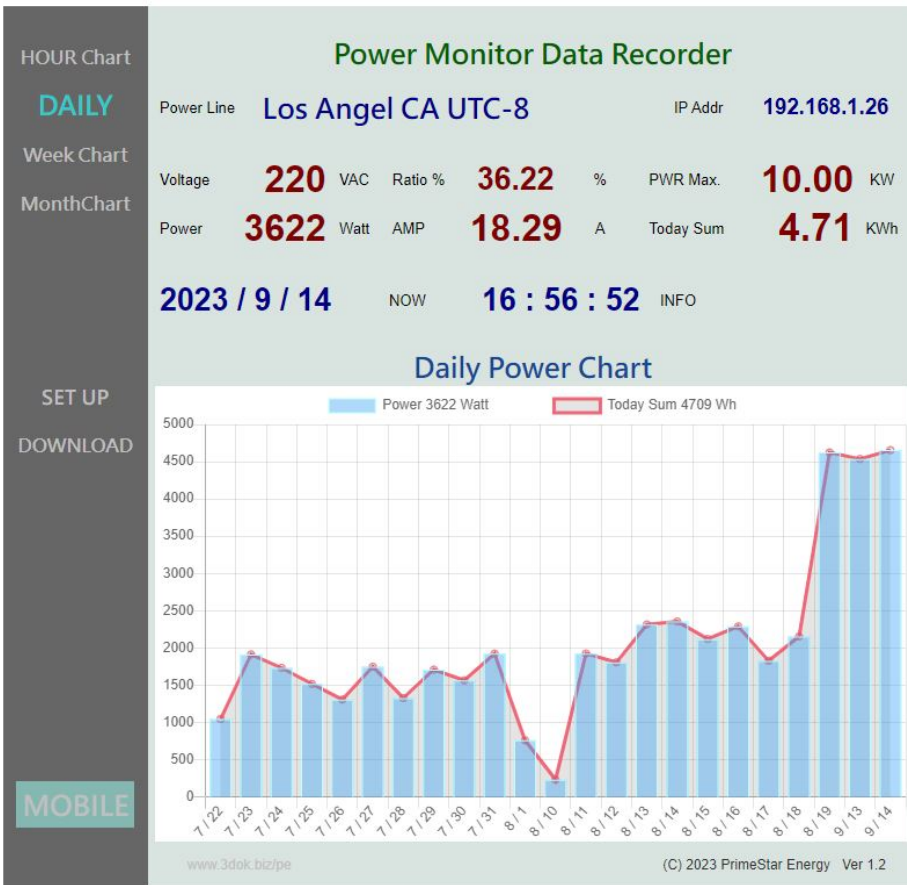
> Daily / Weekly / Monthly Solar Power Charts.
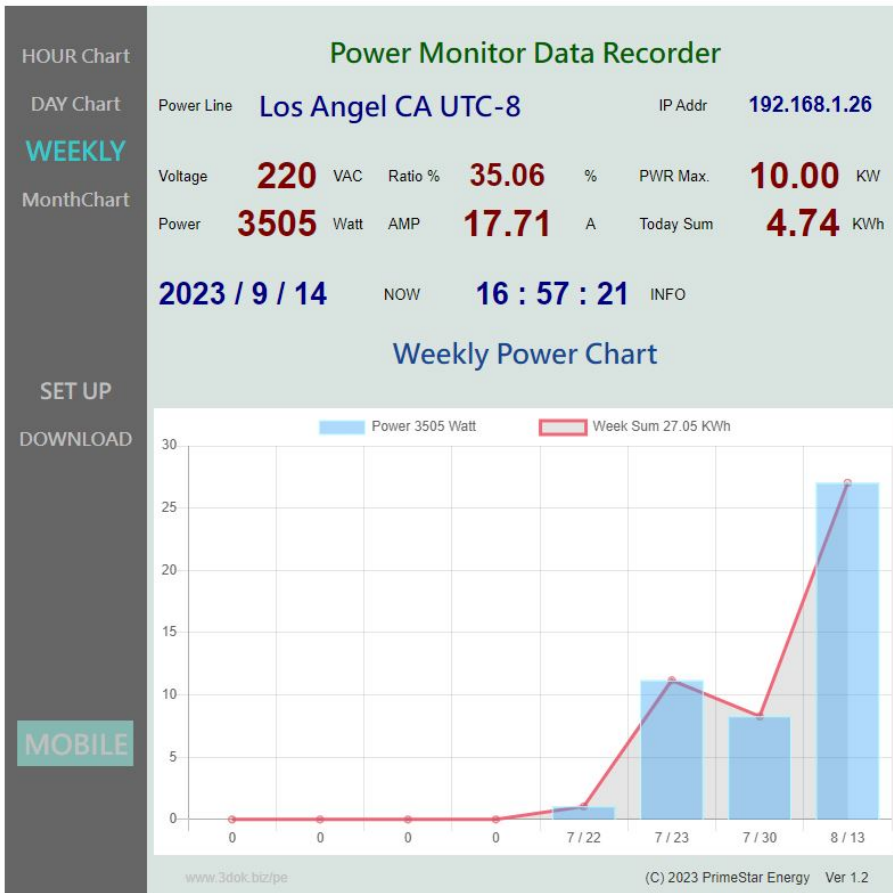
> **Energy Calculator** :　　Calculate　　Displays power's statistics of duration days.

Set the duration date:

From　　Enter Start date Ex: 2023.1.1 Enter "230101" in 6-Digits,

To　　Enter End date Ex: 2023.10.15 Enter "231015".

For always last end day, Enter "999999"　of 6-Digits.

@ Unit　For unit price of per KWh price, then press -SET OK-

And start calculate result of Duration Energy kWh,

Average kWh / day, and total accounts.
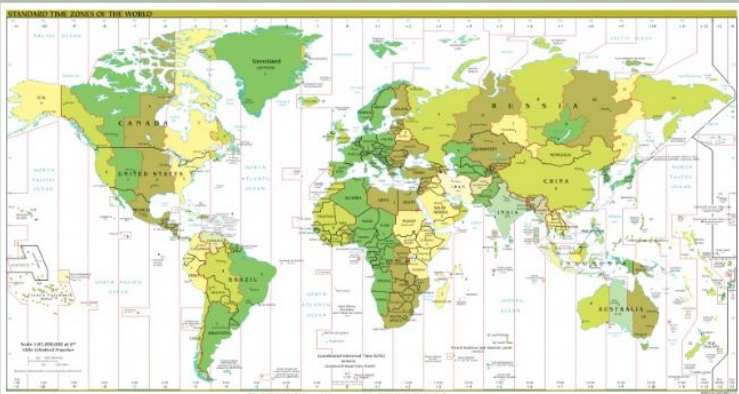
> **User Setup Page :**   To Modify, Update user's information.

    <mark>Power Line</mark>   Input the User's project name.

    <mark>Voltage</mark>   Input the AC Power line Voltage, Default is "220".

    <mark>Capacity</mark>   Input the solar maximum capacity in watts. Default is "10000".

    <mark>Time Zone</mark>   Input user's Time Zone for auto time correction.

> SET :   Setup OK and Save it.

> **Charts Upload / Downloads :**   Hourly / Daily / Week / Month charts file manager.

   Select file for Upload   :   From user computer files upload to PWX-100 / SMX-101.

   Solar Data Records Update   :   Update all files to newest before download.

   Hourly Chart   < PowerHour.dat >   Hourly / Today's chart   Click to Download

   Daily Chart   < PowerDay.dat >   Daily chart   Click to Download

   Weekly Chart   < PowerWeek.dat >   Weekly chart   Click to Download

   Monthly Chart   < PowerMonth.dat >   Monthly chart   Click to Download

 Delete All Records, Reset !   :   Deleted all data & files, return to original clean states.
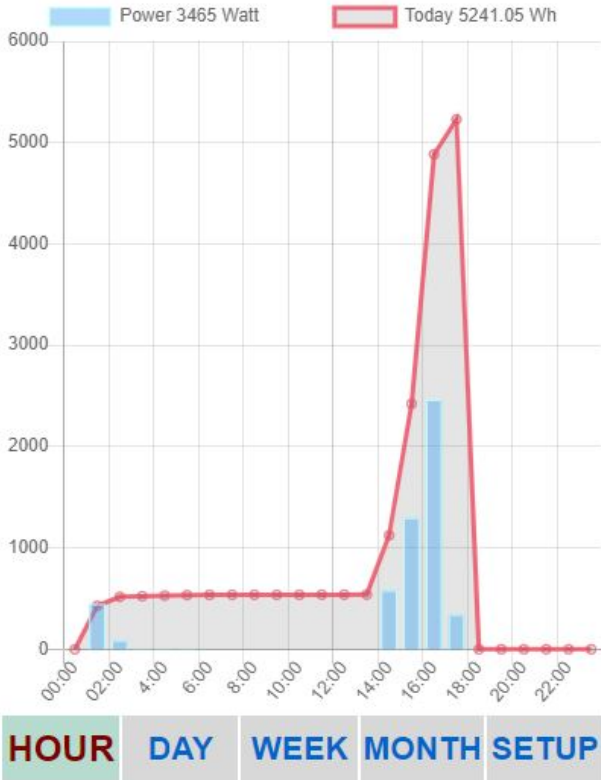
Power Monitor Recorder

Project: **Los Angel CA UTC-8**

17.50 **3465** **5.24**
Amp Watts KWh

2023 / 9 / 14 **17 : 6 : 11**
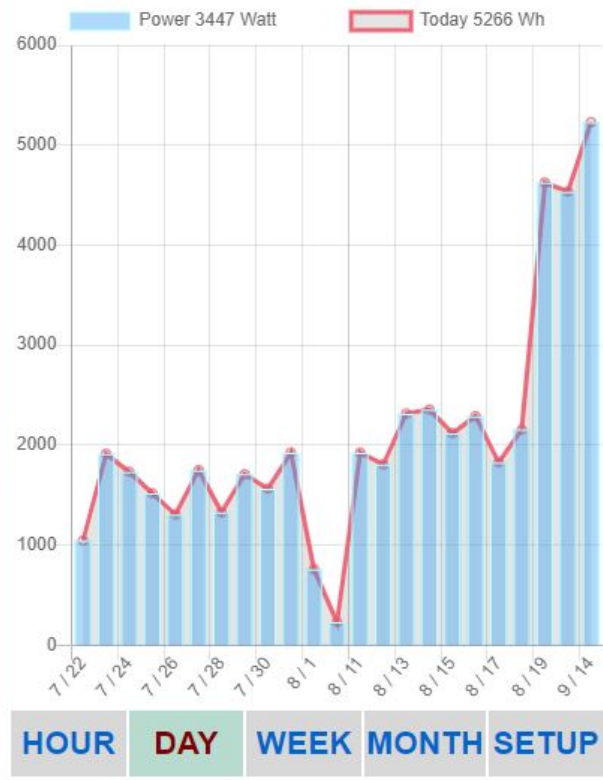
Hourly Power Chart

Power 3465 Watt | Today 5241.05 Wh

HOUR DAY WEEK MONTH SETUP

Power Monitor Recorder

Project: **Los Angel CA UTC-8**

17.41 **3447** **5.27**
Amp Watts KWh

2023 / 9 / 14 **17 : 6 : 37**

Daily Power Chart

Power 3447 Watt | Today 5266 Wh

HOUR DAY WEEK MONTH SETUP

> **Mobile / Cell phone pages :**   Mobile style Hourly / Daily / Weekly /Monthly Charts

for real-time data monitors.

Solar Power Station

Project: **Los Angel, CA UTC-8**

0.00	0	2.83
Amp	Watts	KWh

2023 / 2 / 22   **21 : 58 : 21**

Function Setup

Project	Los Angel, CA UTC-8	
Time Zone	UTC+8 Taipei Beijing Singapore ∨	SET

Upload	Upload record charts to Solar.	Hint
Download	Download record charts.	Hint
	< SolarDay.dat >	
	< SolarWeek.dat >	
	< SolarMonth.dat >	
RESET	Reset clear all datas !	Hint
Download	**Goto DOWNLOAD Page**	GO

HOUR	DAY	WEEK	MONTH	HOME

> **MOBILE user setup page :**   To update, modify the user's information and saved.

5. Specifications

Model :	Solar Power Monitor PWX-100 / SMX-100
Measurement :	Single channel, Open loop C.T. Current Clamp x 1
Range :	AC 100 – 500V / 1 -50 Amp / 100 – 10,000 Watt
Working Voltage :	USB 5V / 2.5W
Dimension :	L=110 x W=70 x H=30 cm
Weight :	350 gm

Solar Power Monitor SMX-101
Easy Install / WiFi Web Control

Primestar Energy   **https://3dok.biz/pe/**

Power Control PWX-103 PWX-104 Monitor Recorder

Web Page Control, No need install APP

WiFi Power Remote Control

Primestar Energy

PWX-104 PNP
Plug & Play

PWX-103 Wire Connect
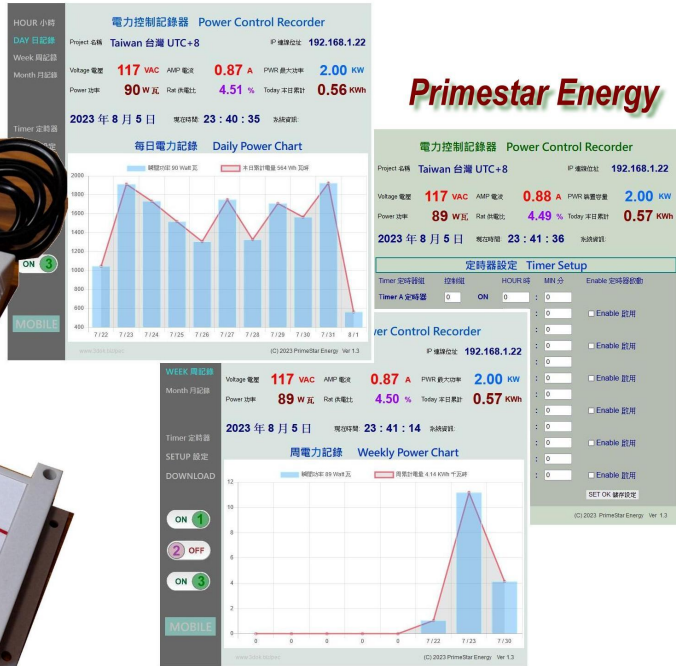
Hour / Day / Week / Month Power Graphic Charts

PWX Power Monitor Control Recorder

PWX-105 AC220V 50KW
Three-Phase AC Power Monitor
Data Recorder

PWX-103 AC100-250V
Home Monitor Control Recorder

PWX-102 AC110V / 220V
Power Monitor Data Recorder

Primestar Energy

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