Astronomical Streetlight Timer (WiFi Configurable) User Manual

Astronomical Street Light Timer - (WiFi Configurable)

Orange LED for Basement Mode indication

Bicolour LED for Load status indication

Key to select Bypass or Basement Mode

Features:

1. Works on Real-Time-Clock + GPS Coordinates
2. The user can set Current Date, Time, GMT Offset, GPS Coordinates, Manual Bypass, Manual offsets in automatically calculated astronomical ON TIME & OFF TIME.
3. Power Saving Mode, which saves electricity by switching off the load when its not needed.
4. Optional features like Over & Under Voltage Trip Levels – Hysteresis Voltage- Startup & recovery delay.
5. WiFi model makes it possible to easily configure the timer using your Smartphone or Tablet or Laptop. It supports IOS, Android, Windows, Linux Operating System.

Description:

- **ASTRO Mode:**
  In this Mode, the Timer automatically operates the Load connected to it as per sunrise/sunset timings applicable as per the place of installation. Seasonal variations in sunrise and sunset timings are automatically taken care of. The load gets powered accordingly. The user needs to enter the latitude and the longitude coordinates of the place where the installation is being done. Along with that, the user also needs to enter the GMT time zone of the place of installation, in it. One can easily find out the latitude and longitude, of the place of installation, from the internet. Please note that, it is highly recommended to search and note down exact latitude, longitude coordinates and the GMT time zone, of the place of installation, before configuring the Timer to operate into the ASTRO Mode.

- **PRO Mode:**
  In this Mode, the Timer operates the load connected to it as per the specified ON time and OFF time. The user needs to enter the ON time and OFF time, into the Timer, while configuring the Timer to enter into the PRO Mode. The user also needs to enter the current date and time while configuring the Timer to operate into the PRO Mode.

- **Basement Mode:**
  This Mode can be enabled only and only, when the Timer is configured for ASTRO Mode. This mode can't be enabled when the Timer is configured for the PRO Mode. In this BASEMENT Mode, users can set positive or negative time offsets in minutes. Those would get applied to the "ASTRONOMICAL (Dawn-Dusk)" ON & OFF timings. For Example : If you set - 05 min for ON Time & +10 min for OFF Time. The Timer would operate 5 min before the ASTRONOMICAL ON Time and 10 min after the ASTRONOMICAL OFF Time.

- **Power Saving Mode:**
  This Mode can be enabled only and only, when the Timer is configured for ASTRO Mode. This mode can't be enabled when the Timer is configured for the PRO Mode. In Night Out Mode it is possible to set the blackout window for certain duration. This can be decided by user, by selecting " Night-out Mode ON at " time to "Night-out Mode OFF at" time. This way for a pre-set duration, the user can keep the load powered off. To switch OFF the load at night select the ON time i.e. HH:MM. To switch ON the load again before sunrise select the OFF time i.e. HH:MM. For selected ON time to OFF time the load will be OFF.

- **Upper & Lower Trip Levels:**
  In this setting, the Timer would trip itself, thereby protecting itself from voltage fluctuations, when the input voltage crosses any of the trip limits. You need to specify the upper voltage trip limit as well as lower voltage trip limit. However, we recommend you to keep lower voltage trip limit at 90V and the upper voltage trip limit to 270V

LED Indications:

BLUE LED	ON	Your device is connected to the Timer
BLUE LED	OFF	Your device is not connected to the Timer
ORANGE LED + RED LED	ALTERNATE BLINKING	Power Saving Mode is applied. Load is off.
ORANGE LED + GREEN LED	ALTERNATE BLINKING	Power Saving Mode is applied. Load is on.
ORANGE LED	ON	Basement Mode is on.
ORANGE LED	BLINKING	High-low voltage cutout enabled.
RED LED	ON	Output load is off.
GREEN LED	ON	Output load is on.
ANY LED	SLOW BLINKING	Bypass Mode is on.
RED + GREEN LED	FAST ALTERNATE BLINKING	Indicates that the internal RTC battery (CR2032) coin cell is low.

Applications:

For astronomical & programmable load switching at:

- Streets, Gardens, Parking,
- Lobbies/ Corridors, Construction Sites, Hoardings,
- Schools, Colleges, Housing Complexes,
- Commercial Buildings, Hospitals, Factories,
- Offices, Shops, Malls, etc

Operating Instructions:

IMPORTANT NOTE:

BEFORE ATTEMPTING TO CONNECT YOUR DEVICE TO THE TIMER'S WIFI NETWORK, PLEASE CAREFULLY READ ALL THE DESCRIPTION PROVIDED UNDER THE MODES OF OPERATION OF THE TIMER, ESPECIALLY IF YOU WISH TO OPERATE THE TIMER IN ASTRO MODE. ALSO PLEASE NOTE THAT ALL THE OPERATIONS RELATED IMAGES WHICH ARE ATTACHED IN THIS MANUAL ARE TAKEN ON A SMARTPHONE.

CONNECTING TO THE TIMER'S WIFI NETWORK :

1. Power ON your Timer. At the same time also switch off your mobile data connection (in case you're using a Smartphone or a Tablet PC).
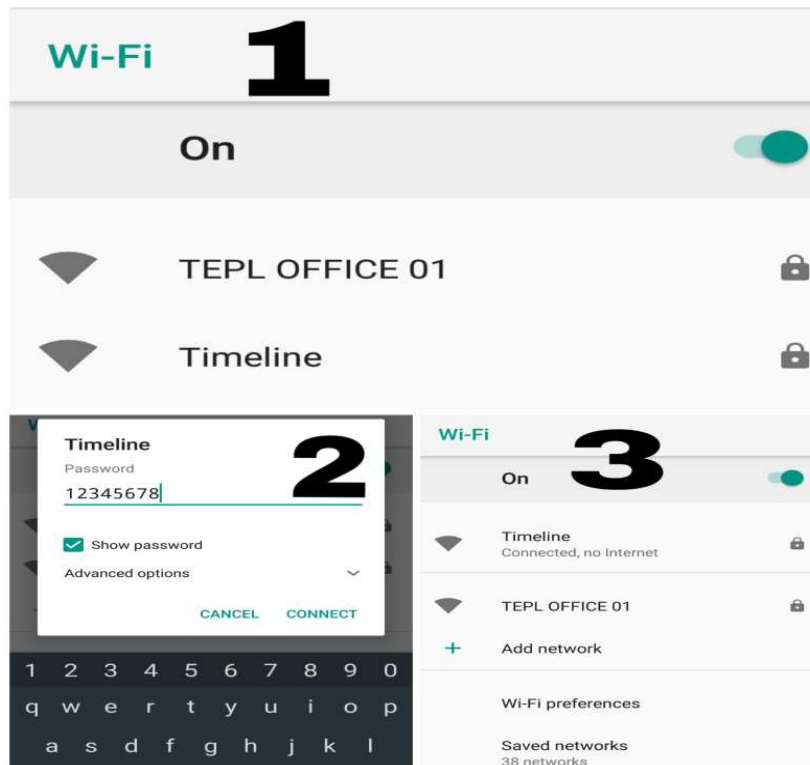
Figure 1

2. As shown in section 1 of the figure 1, in your Smartphone/laptop/tablet PC, search for the available WiFi networks. Further, as shown in section 2 of the figure 1, connect to the WiFi network named "**Timeline**" and enter the password as shown in figure. The default password is: **12345678**. Please note that the default name of the Timer's WiFi Network may change, from Timer to Timer.
3. As shown in section 3 of the figure 1, your device will establish a connection with the Timer, and thus your Timer is now ready for use.
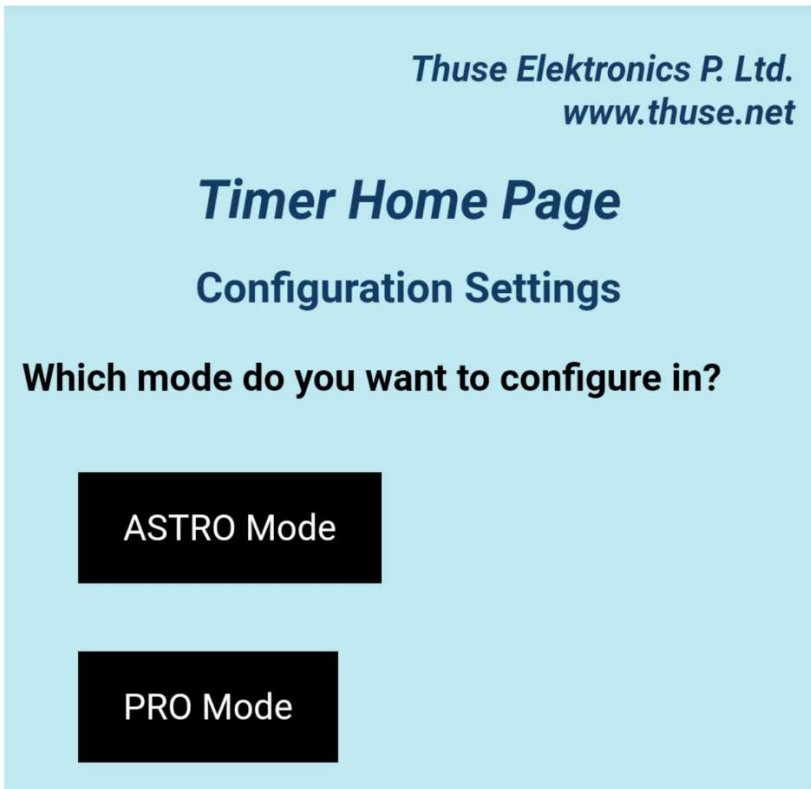
CONFIGURING THE TIMER:

Figure 2

4. Once your device has established a connection with the Timer, open your preferred internet browser and type **192.168.4.1** in the URL search bar, as shown in the figure 2.

5. You will be directed towards the Timer's Home Page. On this page you can configure the timer to either operate in **ASTRO Mode** or **PRO Mode**.

Configuring for the ASTRO Mode:

- On the Home Page of the Timer, please click/tap on the **ASTRO Mode** option, to enter into the configuration settings of the ASTRO Mode.
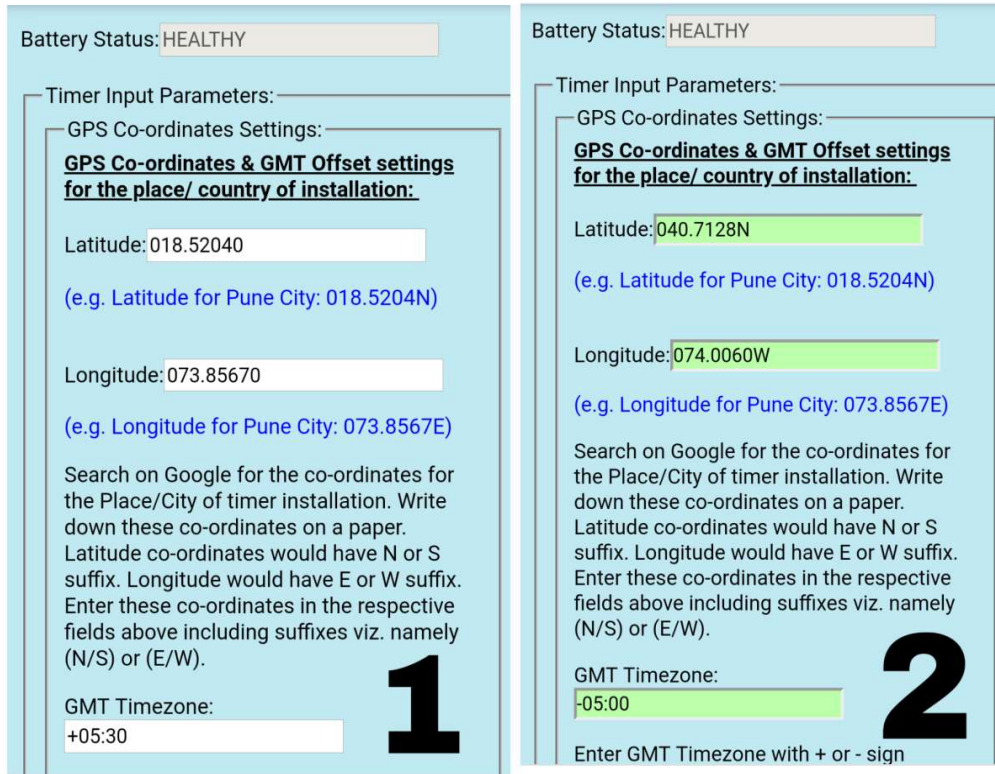
Figure 3

- As shown in figure 3, under the **GPS Co-ordinate Settings**, enter the **Latitude**, **Longitude** and the **GMT Timezone** of the place of installation. As shown in the section 1 of the figure 3, you'll find some default coordinates already entered into the fields. Section 2 of the figure 3 shows, the values entered in the fields, for New York City. Similarly, you can enter information about your place of installation suitably into the given fields
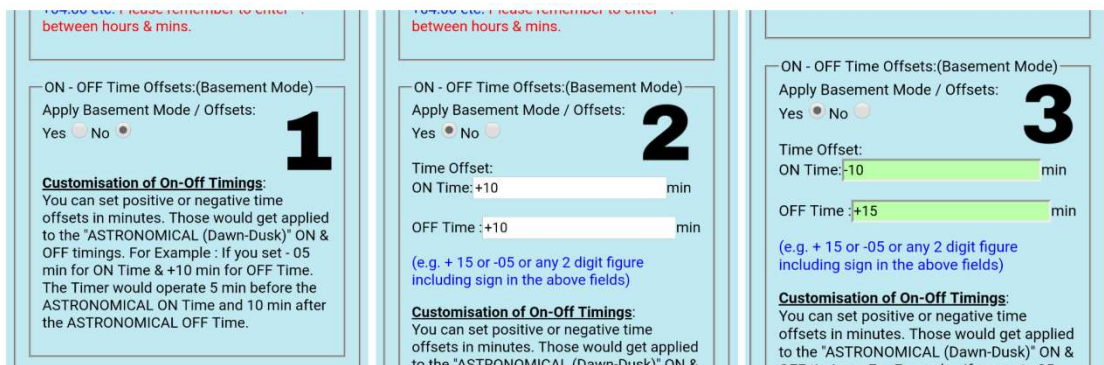
Figure 4

- To enable the **BASEMENT Mode**, please click/tap on the **YES** option, under the **ON - OFF Time Offsets:(Basement Mode)** section, as shown in section 1 of the figure 4. Section 2 of the figure 4 shows some already entered default values. As shown in section 3 of the figure 4, please enter your desired time offsets for **ON Time** and **OFF Time** in minutes
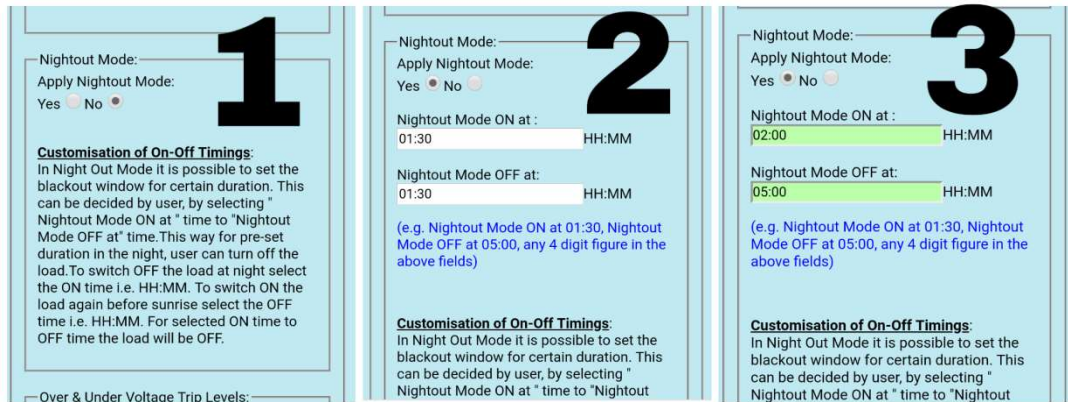

Figure 5

- To enable **NIGHTOUT Mode**, please click/tap on the **YES** option, under the **Nightout Mode** section, as shown in the section 1 of the figure 5. Section 2 of the figure 5 shows some already entered default values. As shown in section 3 of the figure 5, please enter your desired time, as specified in the fields.
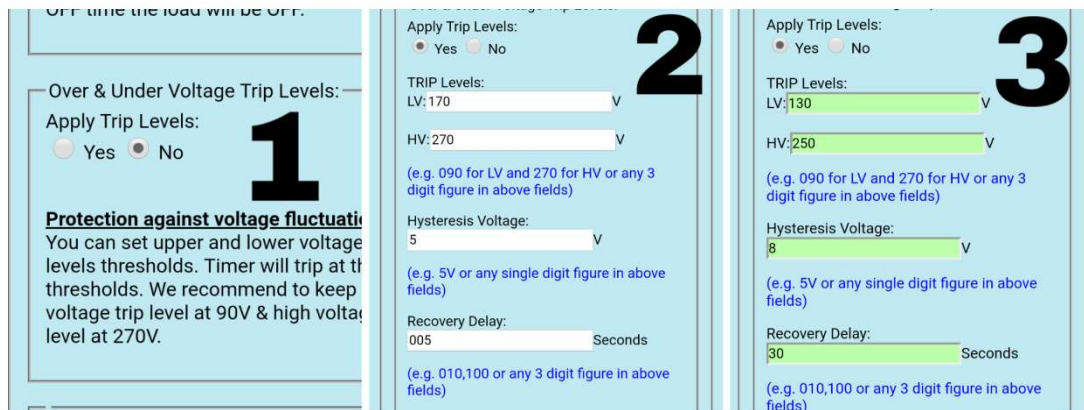

Figure 6

- To enable the **Over & Under Voltage Trip Levels**, please click/tap on the **YES** option, under the Over & Under Voltage Trip Levels, section, as shown in the section 1 of the figure 6. Section 2 of the figure 6 shows some already entered default values. As shown in section 3 of the figure 6, please enter your preferred Over voltage and Under voltage trip levels, in the fields. However, we recommend you to keep the under voltage trip level to 90V and the over voltage trip level at 270V. In the same section, also enter your preferred Recovery Delay and Hysteresis Voltage.
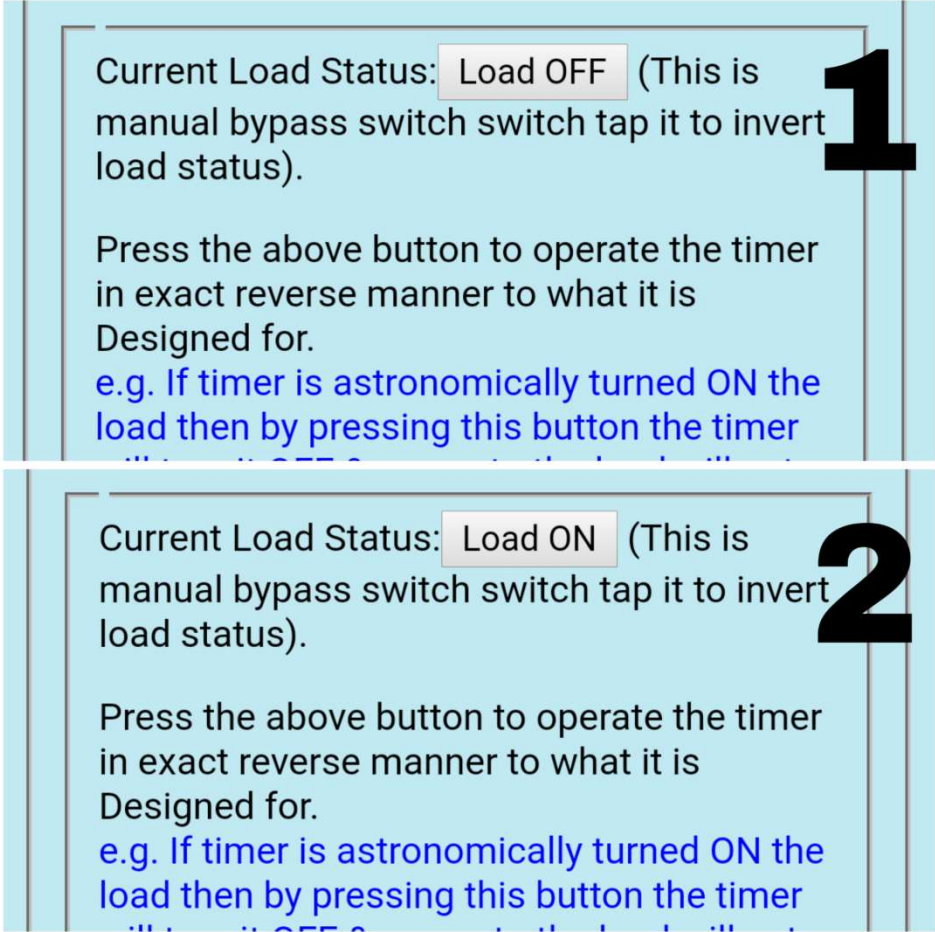
Figure 7

- To invert the current status of the connected load, click/tap on the button specified under the **Current Load Status setting**, as shown in sections 1 & 2 of the figure 7. By doing this, the timer operates in exactly reverse manner of what its designed for. For eg: If Timer is astronomically turned ON the load then by pressing this button the timer will turn it OFF & power to the load will get removed. If the timer has astronomically turned OFF the load then by pressing above button the timer will turn it ON and power to the load get applied.
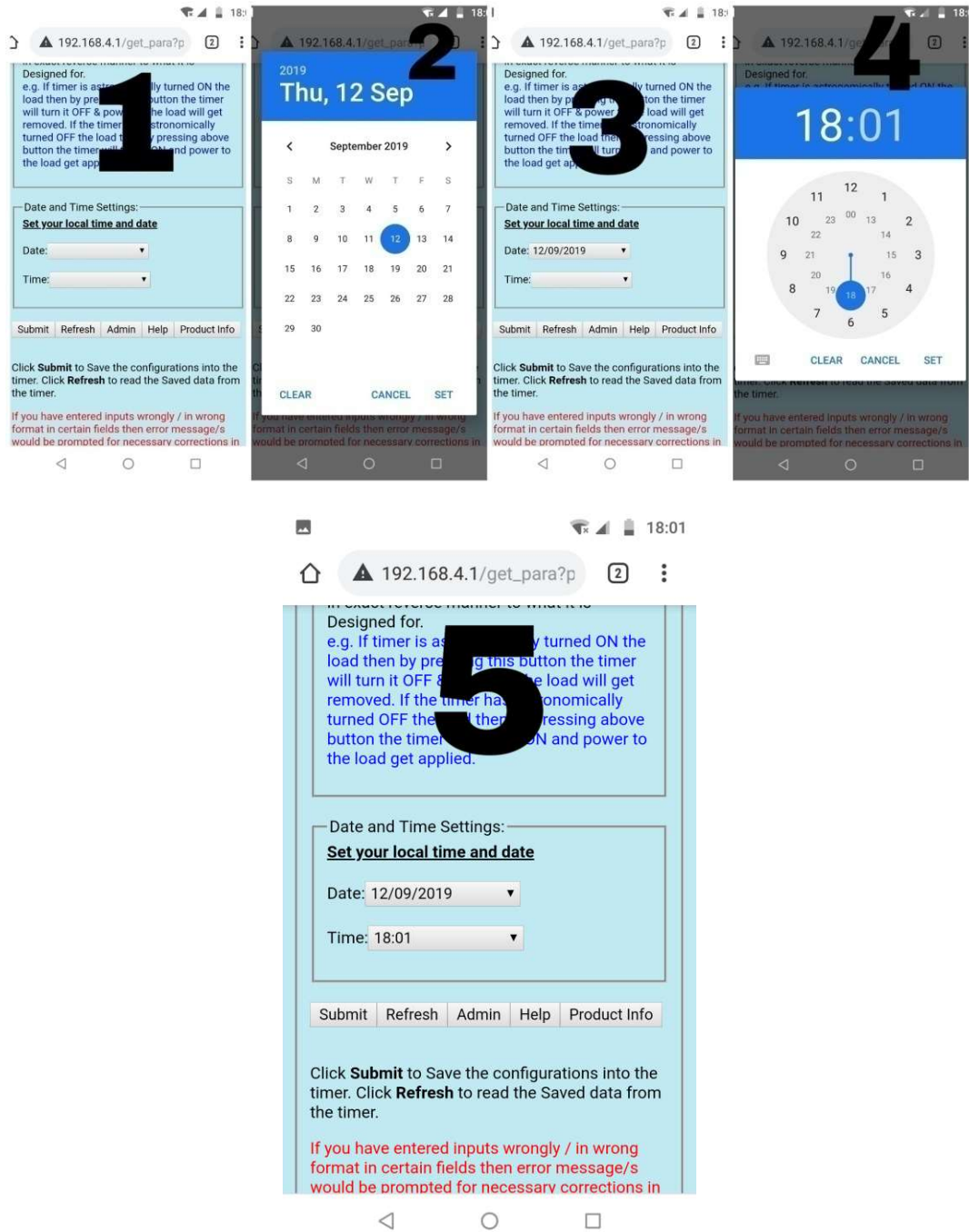
Figure 8

- In the **Date and Time Settings section**, please enter your local date and time, in the specified formats in the respective fields, as shown in all the sections of the figure 8.
- Click/tap on the **Refresh** button to refresh and reset all the settings on this page to default.
- Click/tap on the **Submit** button to configure your Timer, according to the settings entered so far.

Configuring for the PRO Mode:

- On the Home Page of the Timer, please click/tap on the **PRO Mode** option, to enter into the configuration settings of the **PRO Mode**.
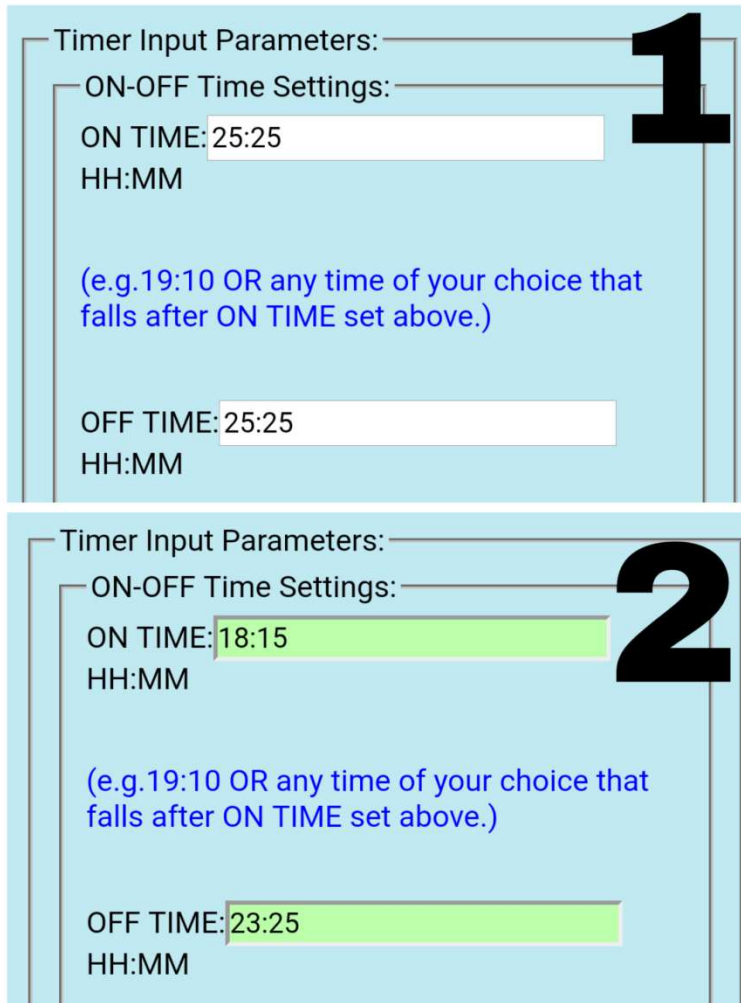

Figure 9

- Under the **ON-OFF Time Settings** section, as shown in the image above, section 1 of the figure 9 shows some already entered default values. As shown in section 2 of the figure 9, please enter your desired **ON TIME** and **OFF TIME**.
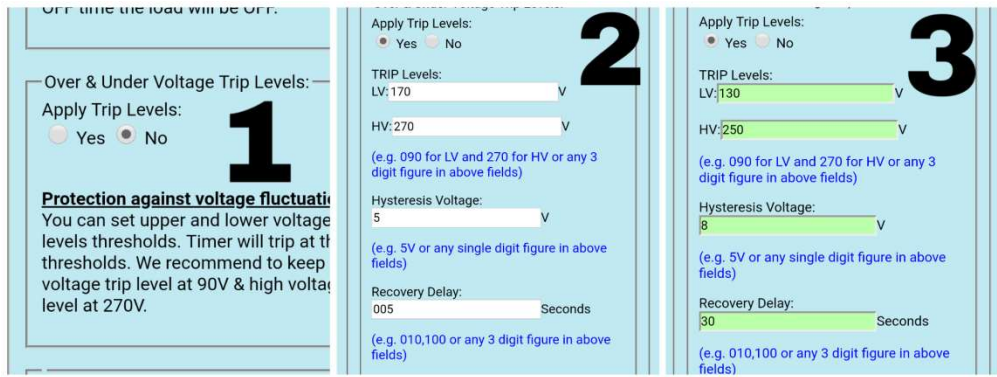
Figure 10

- To enable the **Over & Under Voltage Trip Levels**, please click/tap on the **YES** option, under the Over & Under Voltage Trip Levels, section, as shown in the section 1 of the figure 10. Section 2 of the figure 10 shows some already entered default values. As shown in section 3 of the figure 10, please enter your preferred Over voltage and Under voltage trip levels, in the fields. However, we recommend you to keep the under voltage trip level to 90V and the over voltage trip level at 270V. In the same section, also enter your preferred Recovery Delay and Hysteresis Voltage.
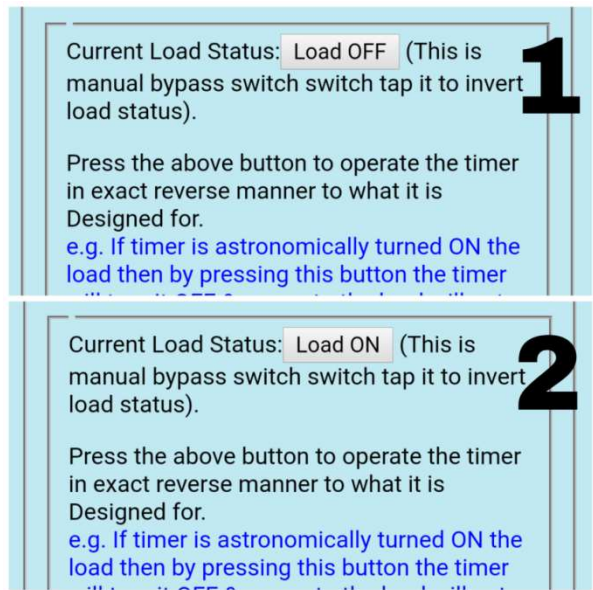

Figure 11

- To invert the current status of the connected load, click/tap on the button specified under the **Current Load Status setting**, as shown in sections 1 & 2 of the figure 7. By doing this, the timer operates in exactly reverse manner of what its designed for. For eg: If Timer is astronomically turned ON the load then by pressing this button the timer will turn it OFF & power to the load will get removed. If the timer has astronomically turned OFF the load then by pressing above button the timer will turn it ON and power to the load get applied.
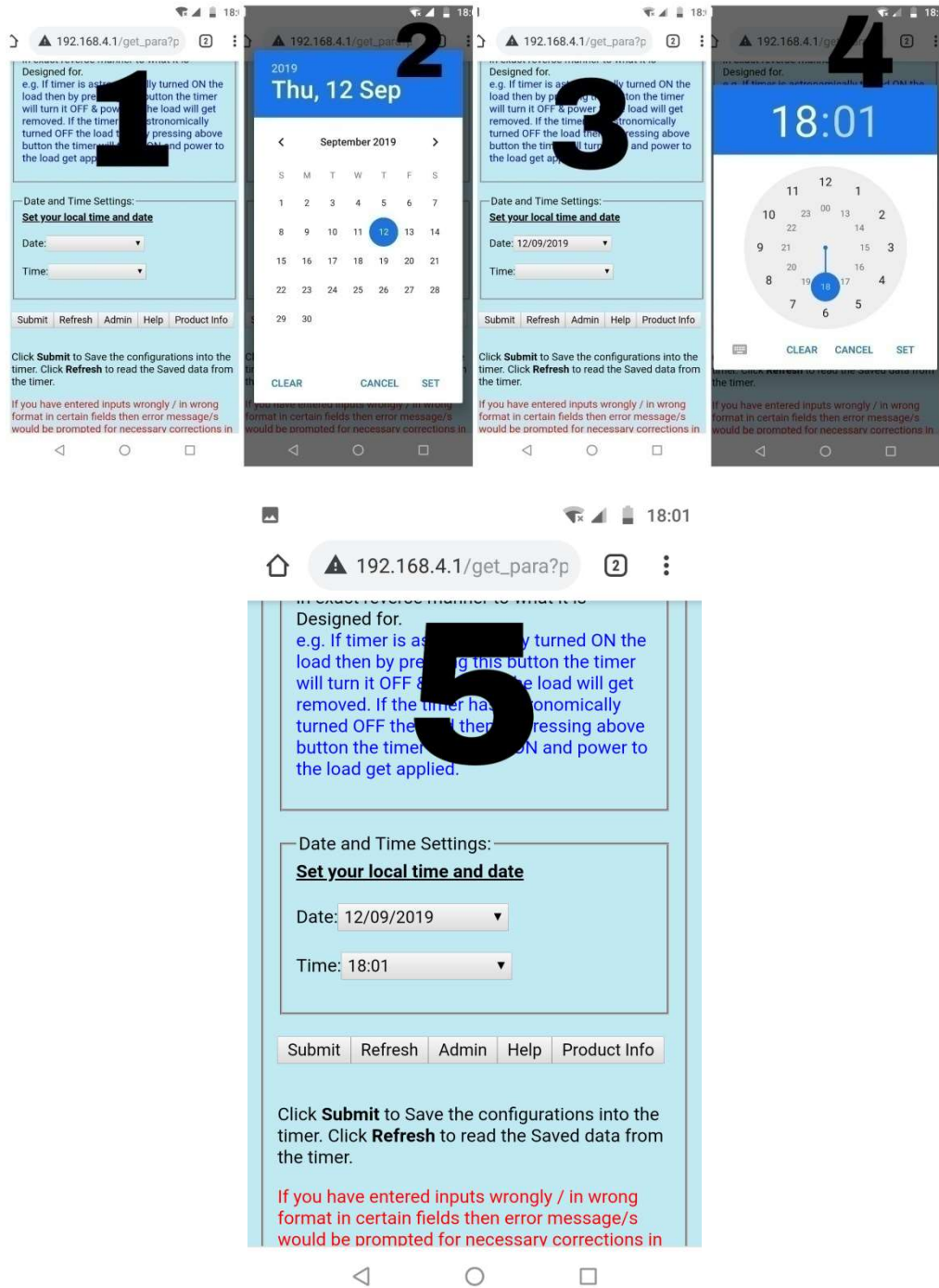
Figure 12

- In the **Date and Time Settings** section, please enter the current date and time, in the specified formats in the respective fields.
- Click/tap on the **Refresh** button to refresh and reset all the settings on this page to default.
- Click/tap on the **Submit** button to configure your Timer, according to the settings entered so far.

CHANGING THE LOGIN CREDENTIALS OF TIMER'S WIFI NETWORK:

- Connect your device to the WiFi Timer's Network, by following the instructions described earlier in this manual.
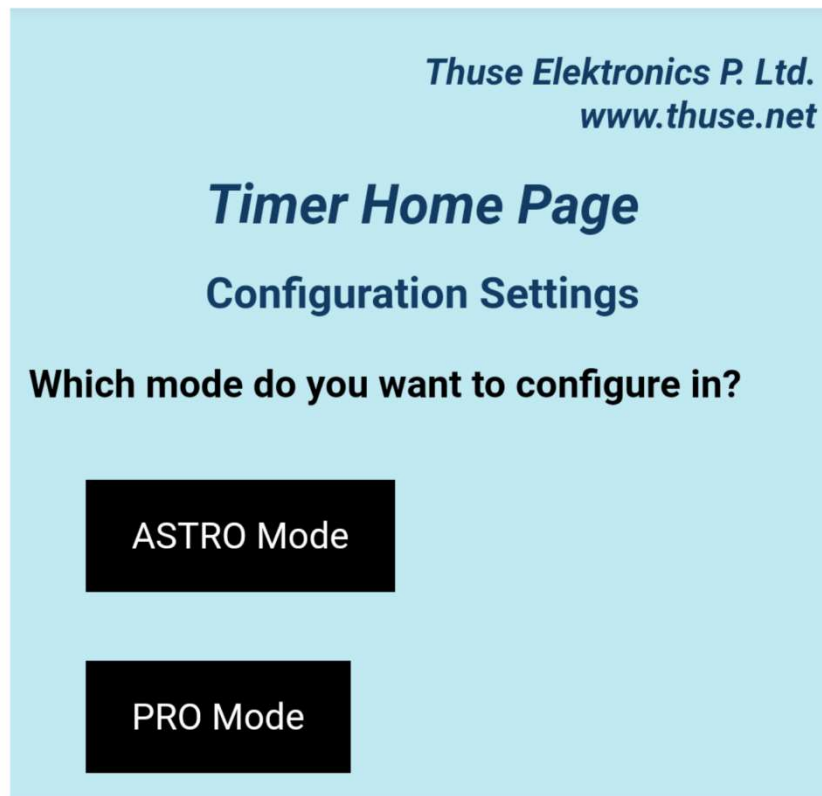

Figure 13

- Once your device has established a connection with the Timer, open your preferred internet browser and search for **192.168.4.1** in the URL search bar, as shown in the image above.
- You will be directed towards the Timer's Home Page. On this page you can configure the timer to either operate in **ASTRO Mode** or **PRO Mode**.
- Enter into any one Mode, by clicking/tapping the option available on the Home Page.
- Click/Tap on the "**Admin**" button on the top. Please note that there is also an "**Admin**" button available at the bottom of the Configuration Settings Page.
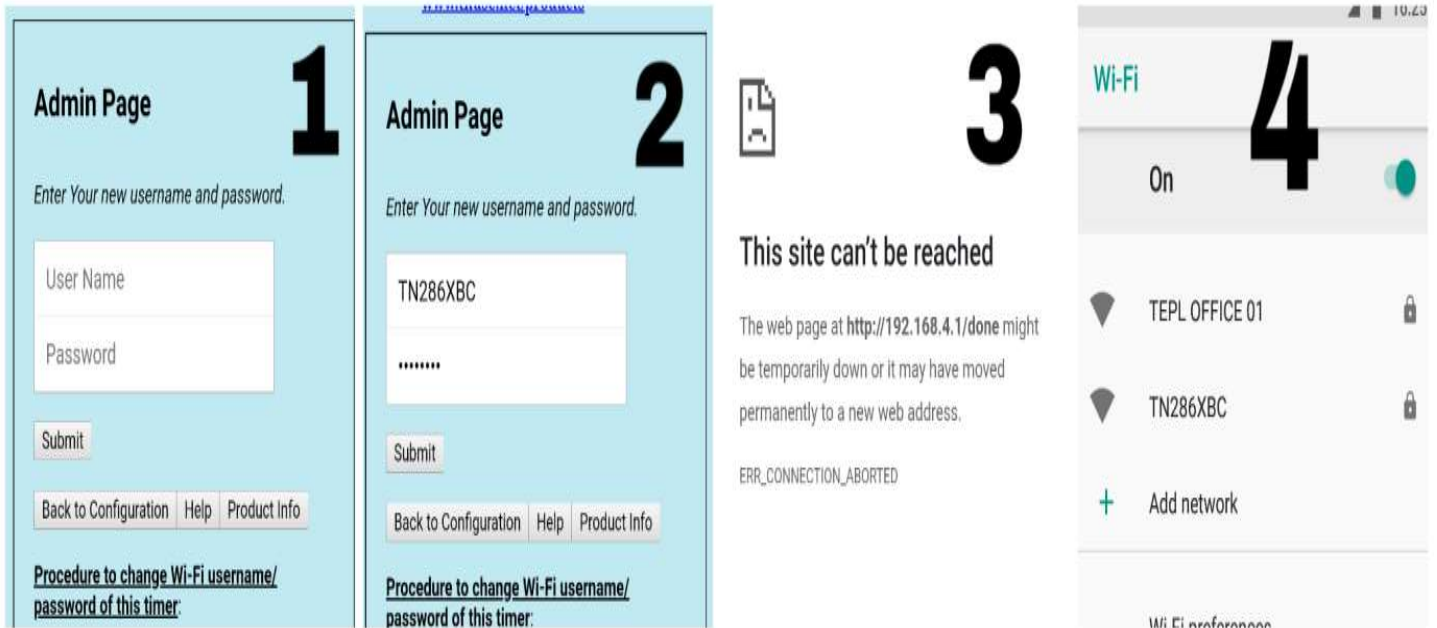
Figure 14

- As shown in the various section 2 of the figure 14, enter your new **User Name** and **Password**. The procedure to change the Username and Password is displayed on the **Admin Page** itself. Also, there are various sections of the image above which show, the complete process. You can refer to that and get the changes done.
- In case, you've forgotten the password to login to the Timer's WiFi network, press the bypass key of the Timer for one second and release the key, repeat this process for three times, while the Timer is in Power ON condition, and then, the name and password of the WiFi network will get changed to default.

Default Network Name: Timeline
Default Network Password: 12345678

- Help Page is meant to show you all the help which you want.