



EO Smart Home User Manual V2.1

Table of Contents

1	Introduction	3
2	Charging a vehicle	4
2.1	Starting the Charge	4
2.2	Stopping the Charge.....	4
3	Main Screen	5
3.1	No Vehicle Conencted.....	5
3.2	Vehicle Connected	5
3.3	Disable Charger	5
3.4	State of Charge.....	6
3.5	Pause / Play.....	6
3.6	Fast Forward	7
4	Charging Options.....	8
4.1	Off Peak.....	8
4.2	Solar Charging	9
4.3	Scheduled Charging.....	9
5	Session Details	10
6	Menu Options	11
6.1	Charging Session History.....	11
7	TroubleShooting.....	13
8	Further Technical Support	14
8.1	Revision History	14

1 Introduction

This document details the user instructions for the EO Smart Home solution. It details how to use both the charging station as well as the key features of the associated EO Smart Home App Version 2.

Note - It is assumed that:

- The User has the EO Smart Home app installed on a smart phone or has access to the EO Cloud- <https://portal.eocharging.com/>
- The EO Smart home has been joined to the user's WiFi network as per the EO Smart Home Installation Manual

There are Four main screens associated with the EO Smart Home App V2

- 1) Main Screen
- 2) Charging Options
- 3) Session Details
- 4) Menu options

2 Charging a vehicle

2.1 Starting the Charge

- 1) Ensure that the EO Mini is powered and that the Status LED is pulsing blue.
- 2) Insert the cable into the vehicle first.
- 3) Insert the other end of the cable into the EO Mini.
- 4) The vehicle should start to charge immediately or will charge at the scheduled time.

The main screen is shown with and without a vehicle charging below

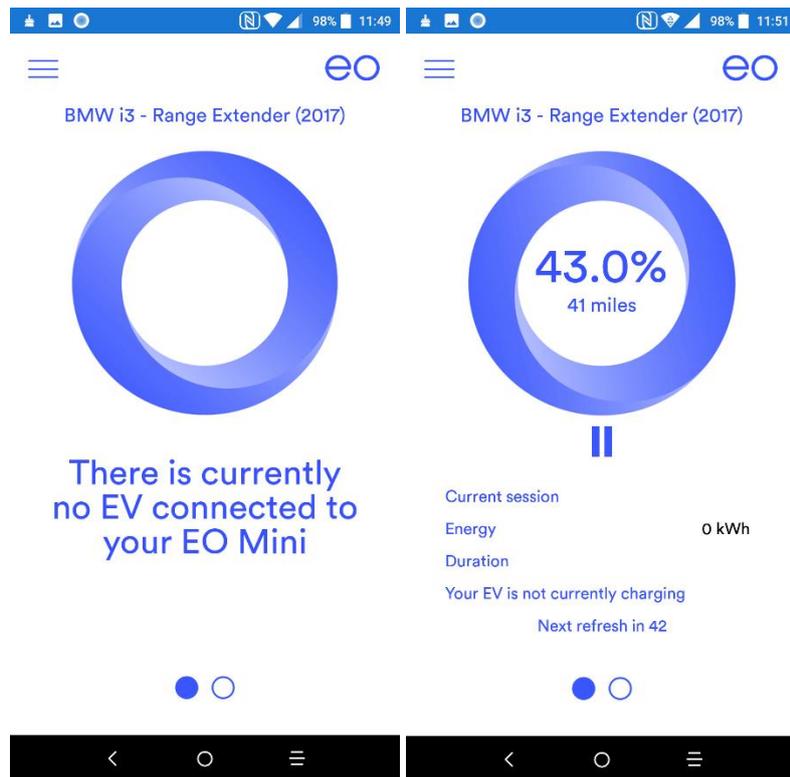


Figure 1 – Main Charging screen on the App

2.2 Stopping the Charge

- 1) Stop the charging session from the vehicle e.g. unlock the vehicle
- 2) Remove the cable from the vehicle first
- 3) Remove the cable from the EO Mini

3 Main Screen

This is the default screen of the EO Smart Home App. It presents a variety of information which changes when the vehicle is connected or not

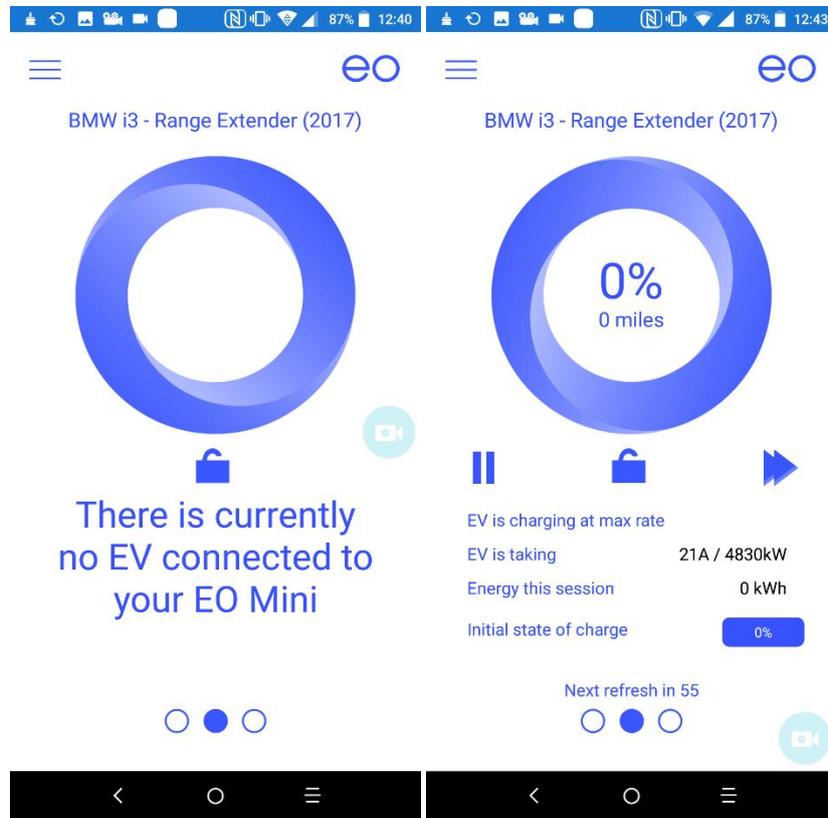


Figure 2 - Main screen with vehicles connected and not connected

3.1 No Vehicle Connected

The only option available is to disable the charging station – please refer to section 3.3

3.2 Vehicle Connected

When a vehicle is connected then more information is presented to the end user:

<insert picture of the plugged in vehicle>

The information shown is:

- Vehicle state – is the vehicle charging or not
- Charging rate – how much power is the vehicle consuming
- Duration
- State of Charge – please refer to section 3.4

3.3 Disable Charger

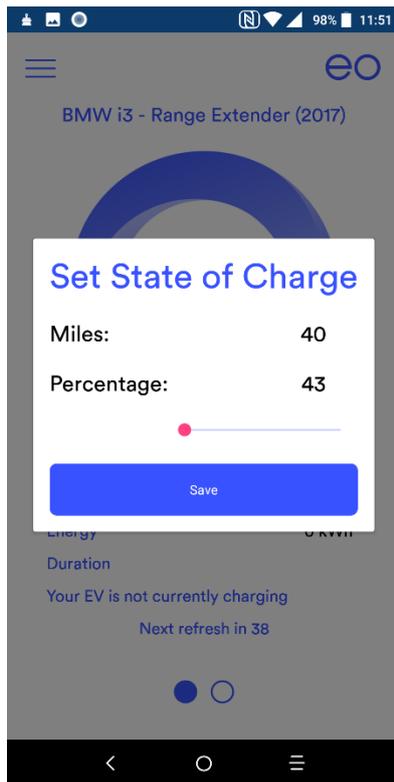
It is possible to disable the charger so that if a vehicle is connected, then it won't charge. This option is useful if the owner is going away on holiday and doesn't want a neighbour to charge whilst they are away!

In order to disable the charger, simply press the padlock on the main screen. When a vehicle is plugged in the it won't charge

3.4 State of Charge

When a vehicle is charging or plugged in, then it is possible to set the state of charge of the vehicle at plugin. If no state of charge is entered, then the system assumes 0%. The state of charge can be entered by two mechanisms:

- 1) Tapping the % in the centre of the circle
- 2) Tapping on the "set" button



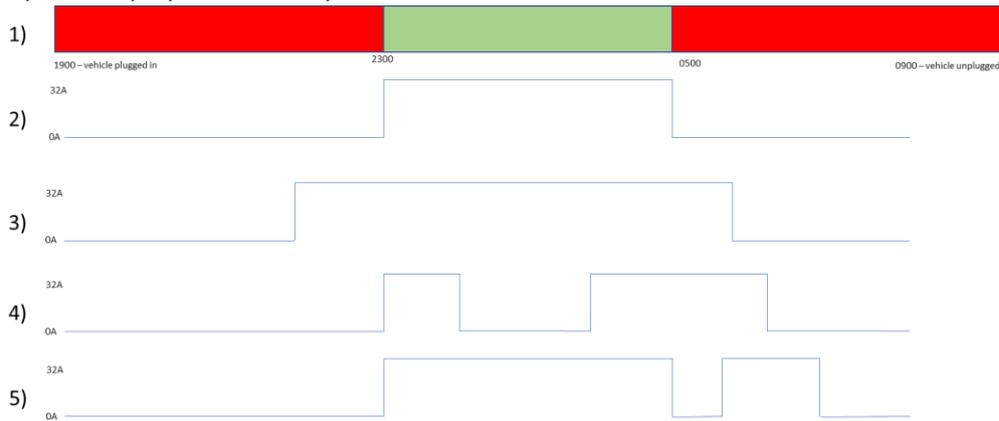
Note – the charging system cannot automatically detect the state of charge for the vehicle.

Therefore this piece of information must be manually entered into the app by the end user. If not, then 0% is used.

3.5 Pause / Play

When a vehicle is connected to the charging station then it is possible to pause and resume the charging session by pressing the pause and play buttons

The pause & play functionality is detailed below



- 1) Scheduled Charging Window set to 2300 - 0500
- 2) Vehicle charges during Scheduled Charging Window (2300 – 0500)
- 3) “Play” pressed before Scheduled Charging Window – vehicle charges until it is full
- 4) “Pause” & then “Play” pressed inside the Scheduled Charging Window –vehicle charges until it is full
- 5) Scheduled Charging Window set to 2300 – 0500. Resume pressed after TOU and vehicle charges until it is full

Figure 3 - pausing and resuming around the Scheduled Charging window

If the play button is ever pressed, then the system will allow the vehicle to charge until it is full. It assumes that if the owner presses the resume button then they want to over-ride the Scheduled Charging Window.

3.6 Fast Forward

The fast forward button acts as an over-ride button. If the vehicle is charging in a solar mode where the charge rate is limited e.g. at 10A, then pressing the fast forward button will force the charger to charge at the maximum possible rate e.g. 32A.

4 Charging Options

By swiping left from the main screen, the charging options are shown. This screen allows the user to define the charging windows when they want the vehicle to charge. There are three options:

- 1) Off Peak
- 2) Solar
- 3) Scheduled

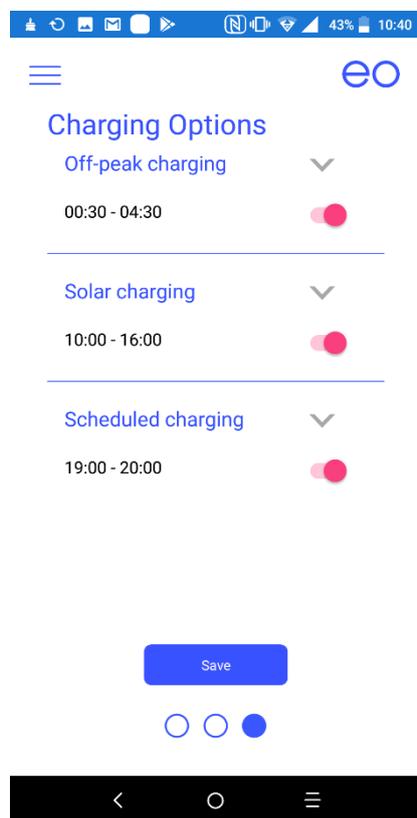


Figure 4 - Charging Options

These options would allow a user to configure a wide variety of charging options but one such scenario might be as follows:

- Solar charging between 1000 and 1600 – charge using solar
- Off peak charging from 0000 to 0430 – charge when electricity is cheap
- Scheduled session from 1900 to 2000 – put a small amount of charge in when the EV Driver comes back from work – this would ensure that the vehicle has some charge in case they need to pop to the shops to get some milk.

4.1 Off Peak

It is possible to define a charging window where the electricity is cheap e.g. 0000 to 0400. During this window, the vehicle will charge at full rate.

EO Charging have integrated with two UK Energy suppliers to offer two EV biased electricity deals:

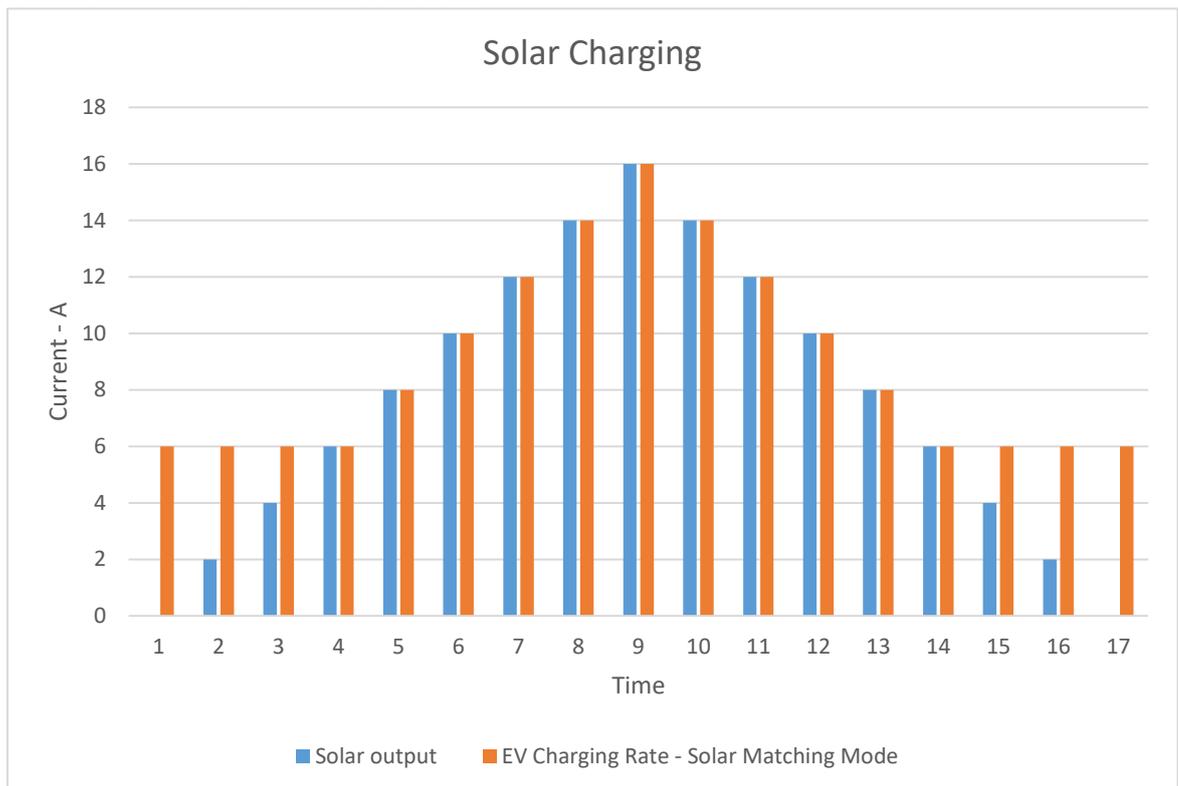
- Octopus Go
- GoElectric by EDF

Additionally it is possible to select a user defined option where the end user can set an off peak window according to the details of their own energy supplier.

4.2 Solar Charging

It is possible to define a time window during which the vehicle will charge according to the output of the solar array:

- 1) This will charge your vehicle at the same rate as the output of the solar array.
- 2) If the solar output drops below the specified minimum rate (e.g. sun goes behind a cloud) then the vehicle will charge at the minimum rate. It is not safe for a vehicle to repeatedly stop and start charging and so the minimum rate will always guarantee the charging rate
- 3) The Recommended minimum rate is 6A



4.3 Scheduled Charging

It is possible to define a time window when the vehicle can charge at full rate. This could be used in a variety of scenarios:

- Define a small window when the EV driver returns from work at 1700 to put a small amount of energy into the vehicle to cover potential emergency
- Extend the off peak charging window because the off peak window won't charge the vehicle fully. Therefore the off peak might be from 0000 to 0430 and then the scheduled window could be from 0430 to 1800.

5 Session Details

This screen is designed to present detailed information about the charging sessions to the end user. It is designed to help the end user make informed decisions about when to charge. For example, the end user could look at this screen, see that the solar is generating 10A of current and then decides to plug in the vehicle to charge on solar mode. The screen shows:

- At all times
 - the reported values from the CT Clamps for the house, vehicle and solar output
- When a vehicle is plugged in
 - The Initial state of charge entered by the owner
 - Amount of energy already added to the vehicle - % & Mileage
 - Remaining – amount of battery left to charge - % & Mileage

6 Menu Options

From the menu (three horizontal bars on the left of the app) it is possible to select other options including the charging session history and also diagnostic information to help with support issues.

6.1 Charging Session History

It is possible to review the charging session history from the app.

- 1) Click on the settings options on the top right of the app and the options are displayed as shown in Figure 5

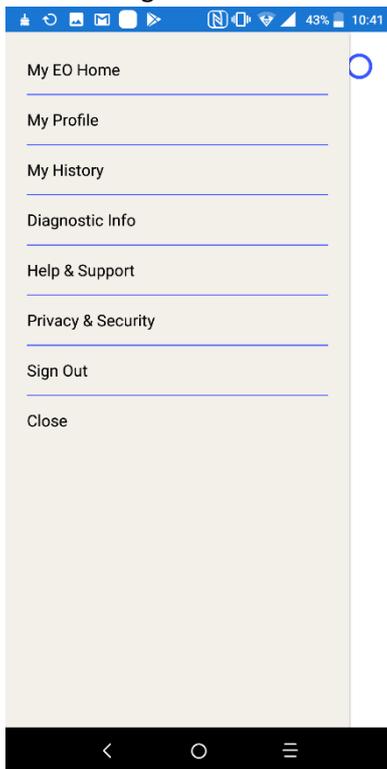


Figure 5 - Settings and Options

2) Click on My History

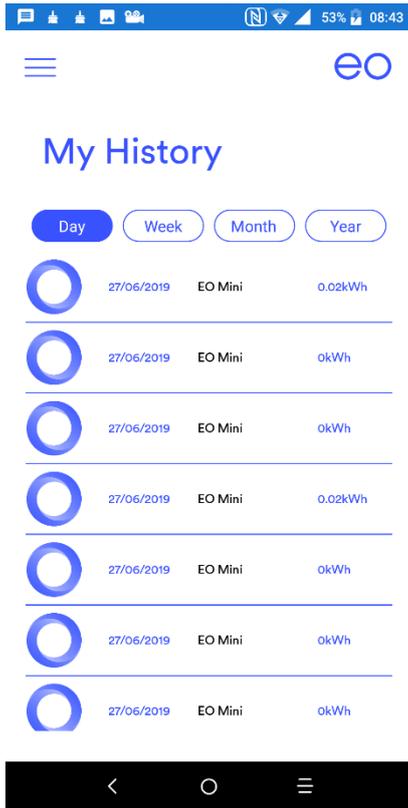


Figure 6 - My History

3) In order to display more details then select one of the charging sessions

7 Troubleshooting

- What do the colours of the LED on the EO Mini mean?
 - The LED is an indicator of the state of the EO Mini. For more details please refer to the [EO Mini & EO Basic LED Guide.pdf](#) which is on the EO Resource Centre
- I get an error code on the app
 - If you receive an error code then please note it down and contact EO Support who would be happy to help
- My car didn't charge
 - Please check the scheduling options and confirm that the vehicle was supposed to charge in the appropriate time window
 - If the problem persists then please note down the time of the charging session and contact EO Support for further help

8 Further Technical Support

All EO Charging technical documentation is published in the EO Resource Centre, this is found at:
<https://www.eocharging.com/service-support/>

The EO Support team can be reached at:

- Email: support@eocharging.com
- Phone: +44 (0) 333 77 20383

8.1 Revision History

Version	Date	Change history
1.0	20 th Aug 2019	First draft
2.0	12 th Dec 2019	Updated with latest app updates – off peak charging, disable etc
2.1	24 th Mar 2020	Clarified the pause and resume functionality