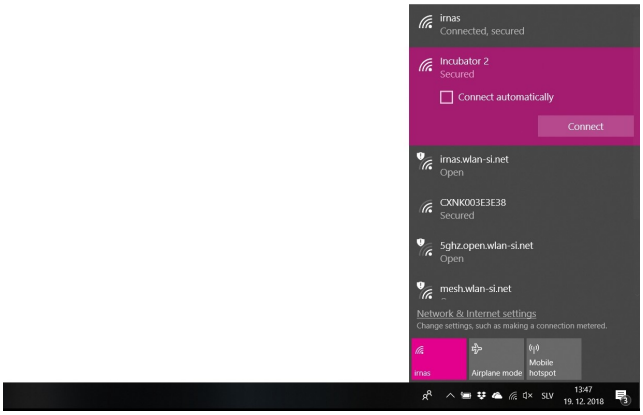
New Harvest Incubator User Manual

User instructions manual for the Incubator, developed for the New Harvest organisation. Describes usage via control panel, web interface and mobile app.

Step 1: Power up the incubator. You should see an welcome screen pop-up.

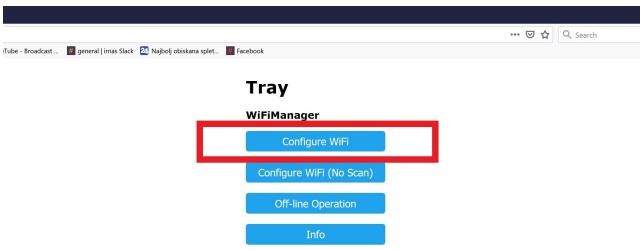
Step 2: On first usage, WiFi connection must be set-up. If there are no pre-set connections, incubator will provide a temporal local WiFi spot.

Step 3: You should be able to observe incubator local WiFi on your computer or mobile phone.



Step 4: Connect to tray network using credentials on the screen.

Step 5: A WiFi manager should automatically open in your browser. This may take a few minutes.

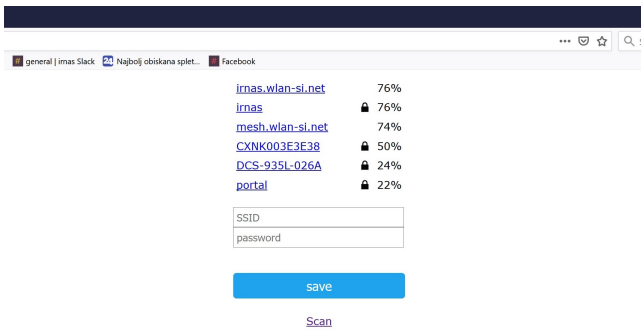


Step 6: Choose on of the following options:

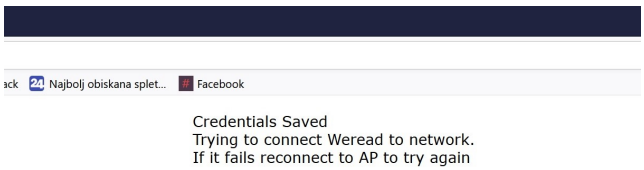
- **Configure WiFi:** standard Wifi configuration. It will scan your network for available connections. **RECOMMENDED!**
- **Configure WiFi (No Scan):** you will need to input your WiFi data - use if desired connection doesn't pop-up at the scan option.
- **Off-Line Operation:** operation without internet access. Keep in mind that the mobile app will not function!

If the window doesn't pop-up after a few minutes, or you have trouble at some other stage of the set-up, rebooting the incubator is recommended.

Step 7: Select "Configure WiFi" option, locate desired WiFi and enter the password. Save.



Step 8: Confirmation window will be displayed. Your incubator will automatically reboot.



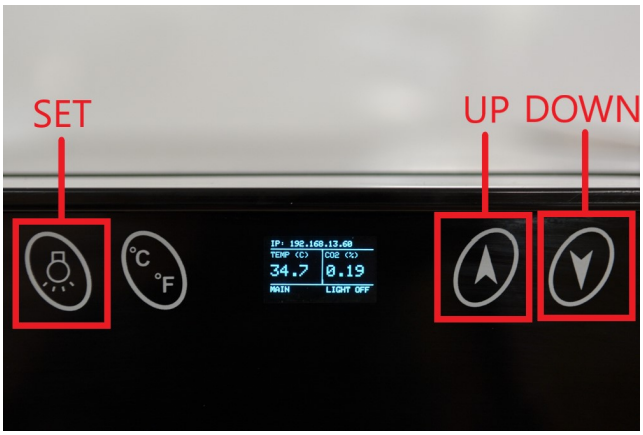
Step 9: Upon reboot, incubator will automatically connect to chosen network.

SET TEMPERATURE: First menu screen is **"SET TEMPERATURE"**. You can adjust set temperature with up and down buttons.

Step 10: Incubator will automatically go to the operational state, where temperature and CO2 levels are regulated.

SET CO2: Second menu screen is **"SET CO2"**. You can adjust set CO2 level with up and down buttons.

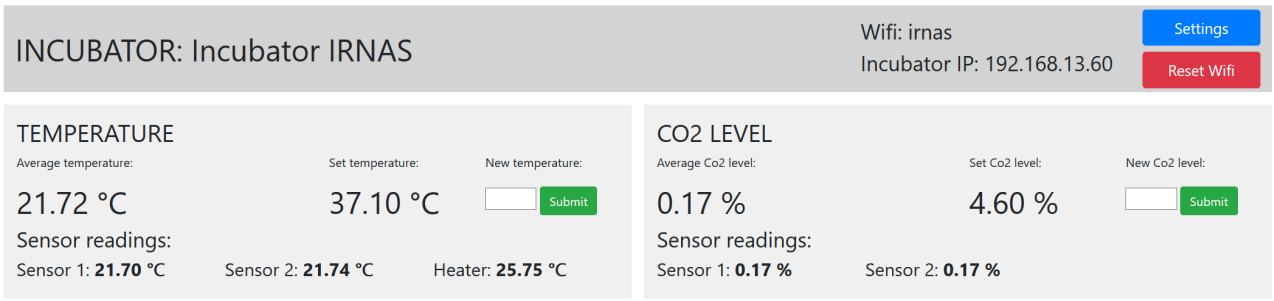
Step 11: To change set temperature, CO2 levels and navigate between the screens, press **"SET"** button.



MAIN: You can return to the main screen by pressing **"SET"** button again.

Web Interface

Incubator can also be controlled via web interface, accessible when connected to the same network as the incubator.



ACCESS: After the incubator set-up, enter the IP address, located at the top of the screen, in the browser. Keep in mined that values are updated only every 10 seconds.

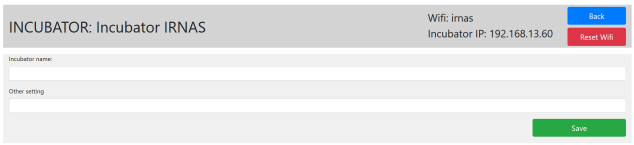
TEMPERATURE: You can observe current average temperature and temperature on all sensors. Keep in mind that he heater temperature is not relevant to the inside temperature.

SET TEMPERATURE: To change set temperature enter the new value in the "New temperature" field and press "SUBMIT" button.

CO2 LEVEL: You can observe current co2 levels inside the incubator. Currently only 1 sensor is installed in the incubator.

SET CO2 LEVEL: To change set CO2 level, enter the new value in the "New CO2 level" field and press "SUBMIT" button.

SETTINGS: To change any settings press "SETTINGS" button. New window will pop-up - UNDER CONSTRUCTION. To change anything, enter new value in the window and press "SAVE" button.

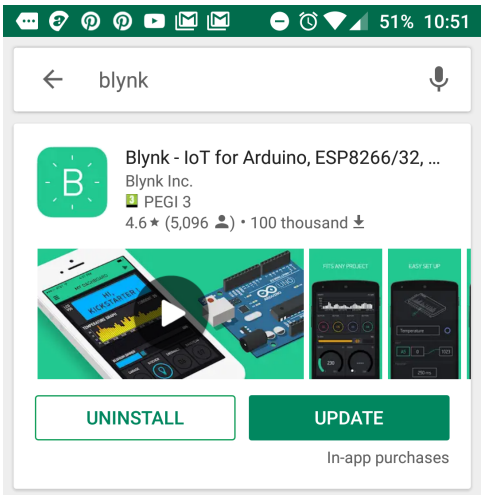


RESET WIFI: To reset WiFi settings press "Reset WiFi" button. You will need to repeat incubator set-up.

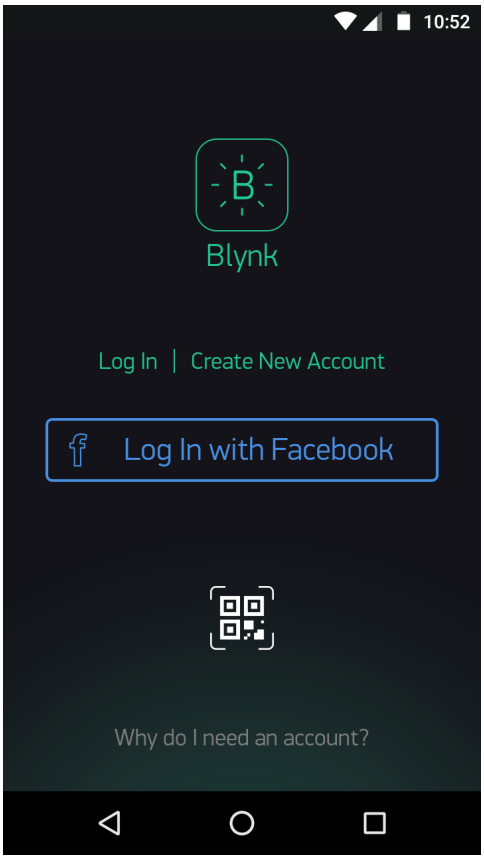
Mobile App

Incubator can be controlled via Blynk mobile app.

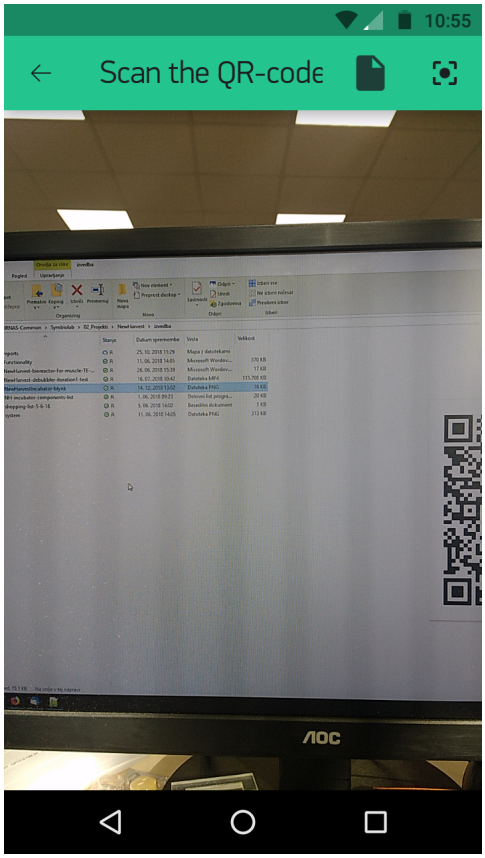
Step 1: Get the Blynk app in your app store, i.e. Google Play Store.



Step 2: Run the app. Click on the QR code sign.

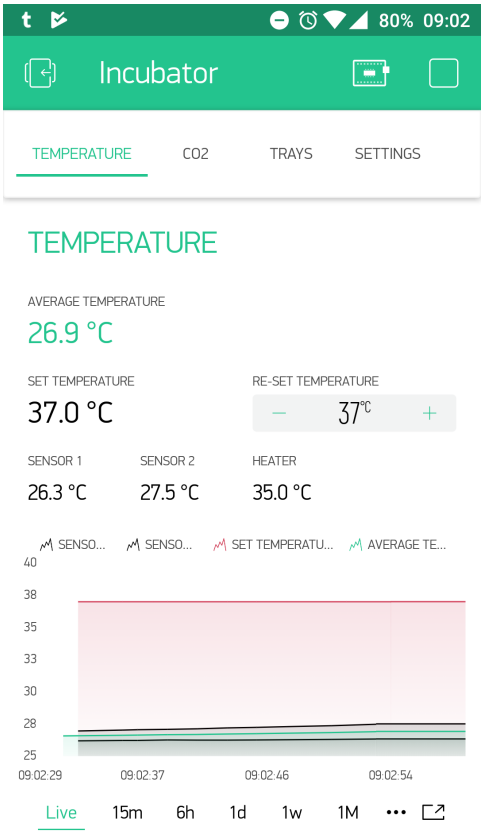


Step 3: Scan the provided QR code.

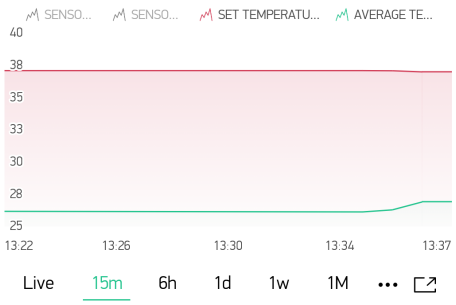


The code:

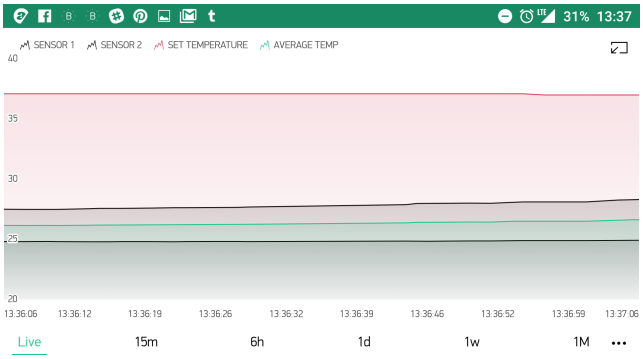
TEMPERATURE: Temperature readings can be monitored under the "TEMPERATURE" tab.



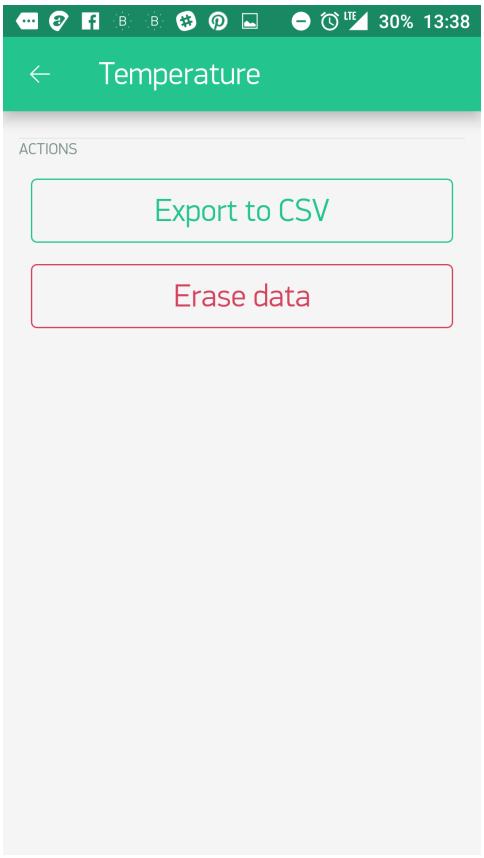
Set temperature can be adjusted by changing the value with + and - signs. All sensor readings are displayed on the graph. You can adjust the plot by pressing on variable name, to make it visible or invisible. For example:



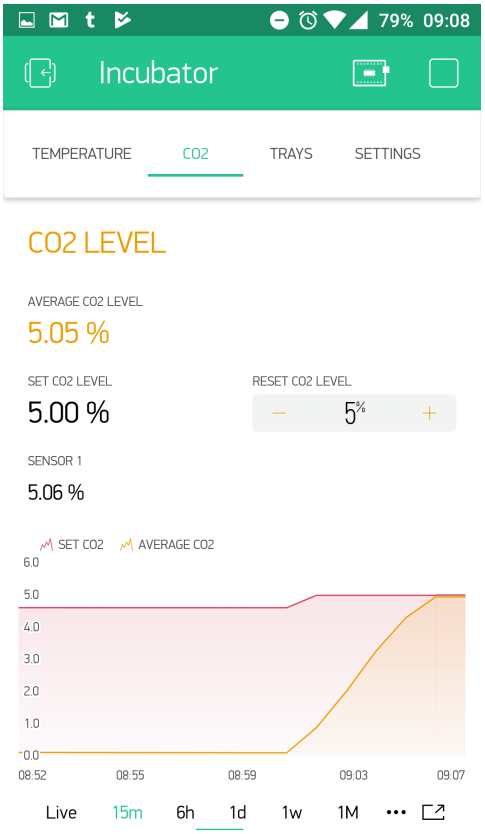
You can access full-screen mode by pressing the icon in the bottom-right corner of the plot.



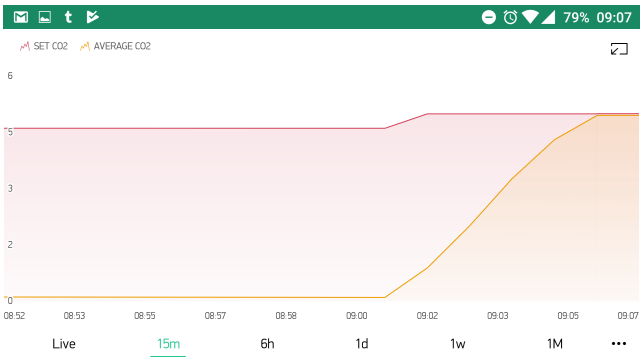
To expor or email csv sensor data press the "three dot" icon in the bottom-right corner of the plot.



CO2: CO2 level readings can be monitored under the **"CO2"** tab.



Set CO2 level can be adjusted by changing the value with + and - signs. All sensor readings are displayed on the graph, that can be manipulated in the same way as the temperature one.



SETTINGS: You can change operational preferences under the **"SETTINGS"** tab. You can enter your mail for notifications and set preferences for type of notifications you want to receive.