



# Setup & Installation

## Table of Contents

1.	2
2.	2
3.	2
	11
	12
	13



## 1. Introduction

The following file contains information about setting up and running the single gas gauge sensor dobona board called DoboG. The DoboG is a small Wi-Fi enabled board that could be placed near an LPG gas tank to read its content volume through a magnetic dial gauge placed on the tank and send it over the internet to a server. A user downloaded application from either app store or google play can remotely read this volume online. Furthermore, the DoboG can have a limit setup that when exceeded will send an alarm email to the registered user(s) to alert him/them of an abnormal volume level, either when dropping below a threshold and/or exceeding another threshold, both user-set through the app. Typical usage for the DoboG board could be for gas volume monitoring of restaurants and residential buildings tanks where an out of limit volume could either have potentially dangerous effects (like pressurized tank overfill) or cause an interruption of gas supply (empty tank). For example a restaurant tank suddenly running empty (human error, forgetting to regularly check its level) can cause the restaurant to loose money and clients because of such work disruption, and might have to wait for more than one day to have it replenished because of supplier fleet servicing other customers. The DoboG board can alert both tank owners and suppliers ahead of time when the tank reaches for instance 20% to plan a scheduled refill without causing work interruption. The DoboG should be powered by a regulated 5V/500mA supply (not provided). The exact terminal connections are drawn on the DoboG enclosure fascia. A three-cable hall-effect sensor must be used to read the magnetic dial gauge and connected to the DoboG.

## 2. Prerequisites

To install DoboG, the user must:

- Have basic information about installing electrical components, otherwise call an electrician to do the required wiring
- Own a DoboG board
- Have a Wi-Fi internet connection
- Download the “dobona” application from the Play Store (Android) or the Apple Store (iOS)

## 3. How to setup the board?

1. User installs DoboG at a location close to the gas tank and makes sure that it is covered by his wifi internet router. A certified electrician must be called in to do the electrical branching.
2. User downloads dobona app to his android or apple phone/tablet.



3. User makes sure that the jumper on his board is plugged in before powering up the DoboG for the first time. User should make sure he has a constant internet connection during all of the setup session.
4. User launches dobona app. The first screen that appears is the live\_log screen with scrollable fifty lines, each for setting up a separate board. the red font with the downward thumb shows that no board has been setup so far (Fig.1).

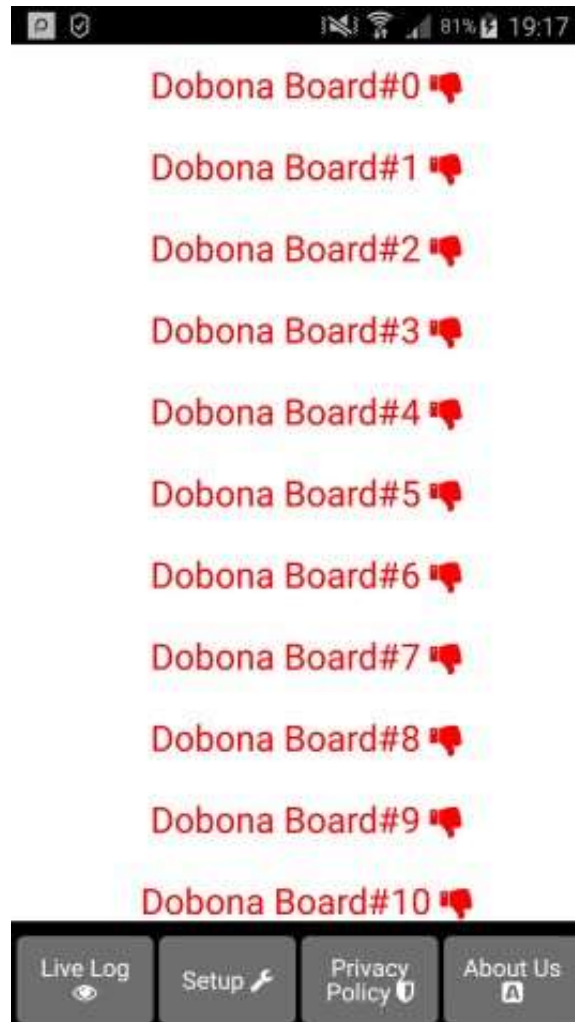


Fig 1.

5. Since no board has been setup yet, the user should press on the setup button on the bottom of the screen to move to the setup page, which looks similar the live log page but with beige background (Fig.2).

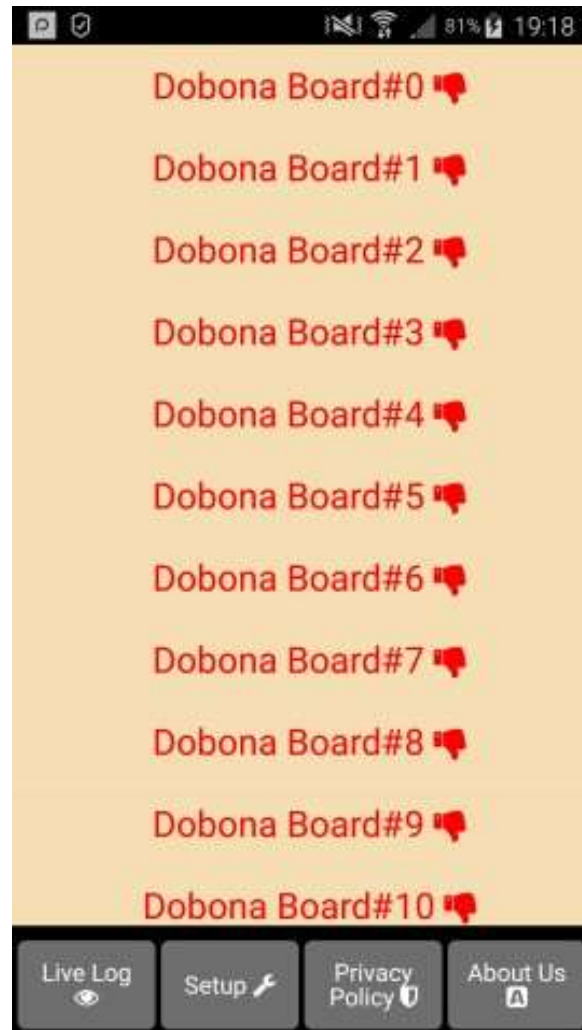


Fig 2.

6. In order to setup a board, the should press any of the red lines. Supposing he presses on the first line (dobona board#0), after which he is presented with a popup screen to choose the board type (Fig.3). Since we are interested in DoboG board only, the user should press the DoboG (gas gauge).

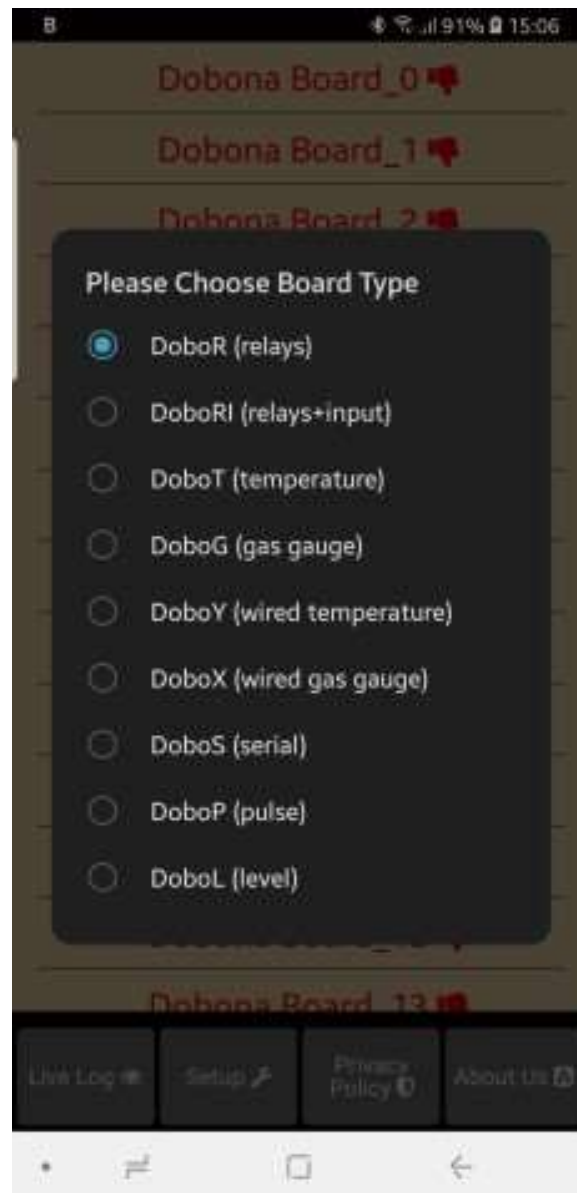


Fig 3.

7. User is then presented with the next screen where he is prompted to enter a name for the dobona board he chose (Fig.4). Supposing he writes “gas\_tank” as name and makes sure the phone/tablet has an internet connection, and presses on the next button, he is taken to a new screen to register the board on the server (Fig.5).

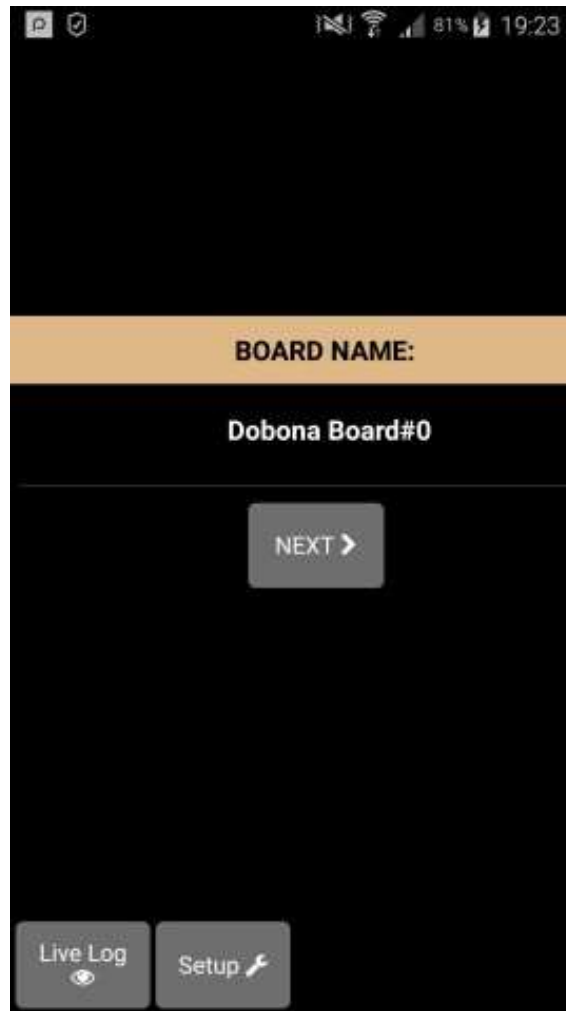


Fig 4.

8. User must enter the ssid and password of the internet enabled wifi network where the DoboG will be installed. The reg.key is automatically generated by the server. The user should fill both low alarm and high alarm fields (between 0 and 99). If the user wishes to receive email notifications whenever a volume level is exceeded (above and below), he should tick the “register phone for email notification”. A field to enter the email will appear on the screen where the user can enter his email. After completion, the user presses on the save and register on server button to send the entered data to the server and move to the next screen. If the DoboG board has already been setup from a previous phone/tablet and the user wants to enable his phone to control it, he should press on the pen thumbnail to enter the previously setup DoboG reg.key before pressing on the save and register on server button. If



the reg.key, ssid and password are correct, then he will be directed to the live\_log screen to read the temperature (in this case go directly to step 10).

The screenshot shows a mobile application interface for setting up a DoboG board. At the top, there is a status bar with icons for signal strength, Wi-Fi, battery (74%), and time (15:27). Below the status bar, the following fields are visible:

- SSID:** Blink123456
- Password:** abcdefgh
- Reg.Key:** ittv2sdporfd
- Register Phone for Email Notifications**
- john.doe@example.com
- Blue cable (untick if Grey)**
- Low alarm:** 20
- High alarm:** 80

A large grey button labeled "SAVE AND REGISTER ON SERVER" is positioned below the form fields. At the bottom of the screen, there are two buttons: "Live Log" with an eye icon and "Setup" with a wrench icon.

Fig 5.

9. On the next page (Fig.6) the user has to switch the phone/tablet wifi connection to the "dobona\_xxxx" network that should appear on the list of available wifi networks. That network requires no password. The user can tick the high speed communication for the fastest communication between DoboG and the server, the enable power up notification for receiving an email after each DoboG powering up. Pressing the send info to dobona will send the entered data to the DoboG. If the connection was successful then the "dobona" network should disappear from the list of available networks on the phone/tablet and the DoboG board will try to connect to the server via the ssid and password that have been entered. If successful connection between



DoboG and server is established then pressing on the live log button on the button will take the user to the live log screen (Fig.7). The user will notice that the dobona board#1 is now replaced with gas\_tank with green font and thumbs up to indicate that the board has been setup.

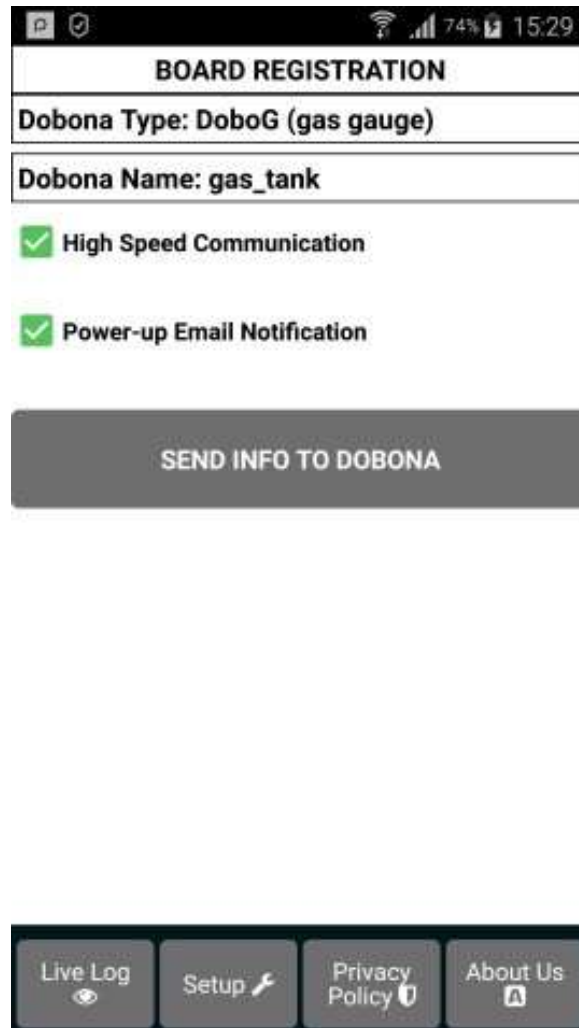


Fig 6.



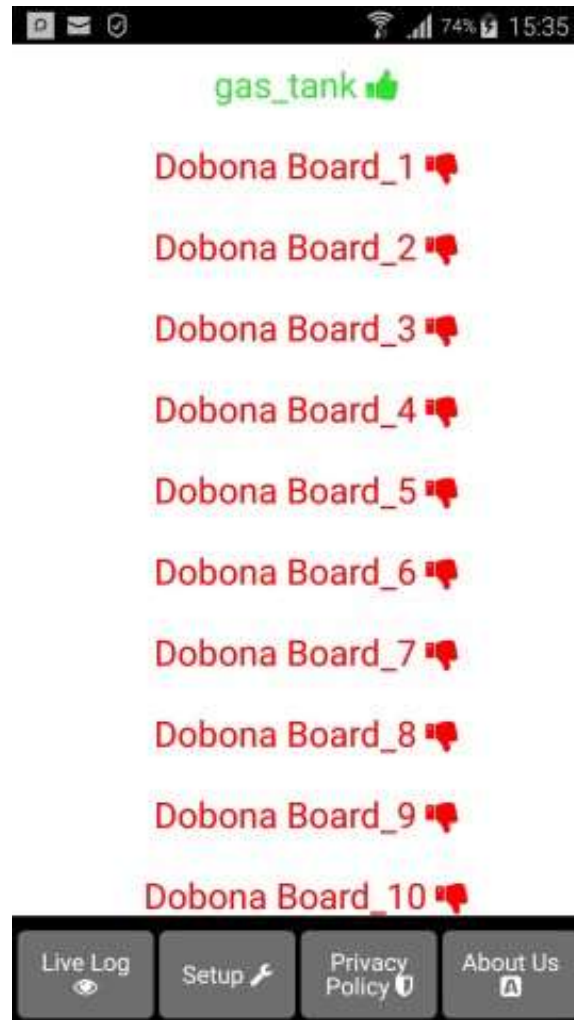


Fig 7.

10. Please check section “4. How to run the board” in order to run the DoboG. Pressing on the gas\_tank line will display the live log screen related to the DoboG board that has been setup (Fig.8). The volume is displayed on the screen together with the last time the DoboG board checked with the server. This information is important for the user to know if the DoboG and its internet connection are working properly within a certain time period. If for instance the screen displays an unusually long time, it could be an indication that the DoboG or its internet connection or router are facing issues.

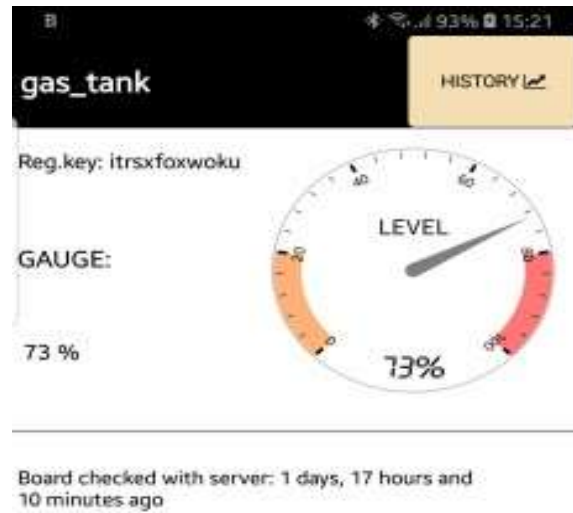


Fig 8.

11. Notice the “HISTORY” button on the screen upper left corner. Pressing it will launch the default browser and display the board history chart for the past 31 days on an hourly basis (Fig 9.). Please note that if the browser does not launch on some devices, then the user should enable JavaScript from the browser settings before loading the page again. The user can also download the chart data points as a .CSV file to his device by pressing the “Download” button. Note that if the chart contains red stars with numbers above them, they denote the number of hours the board did not communicate with the server. This could have been caused by internet going down or power cut to the board... They are also saved in the third column of the CSV file. The user is urged to select the geographical location of the board and to save it to the server by pressing the “Save Timezone” button. This is important for the server to save the Date/Time chart data according to the board local Timezone.

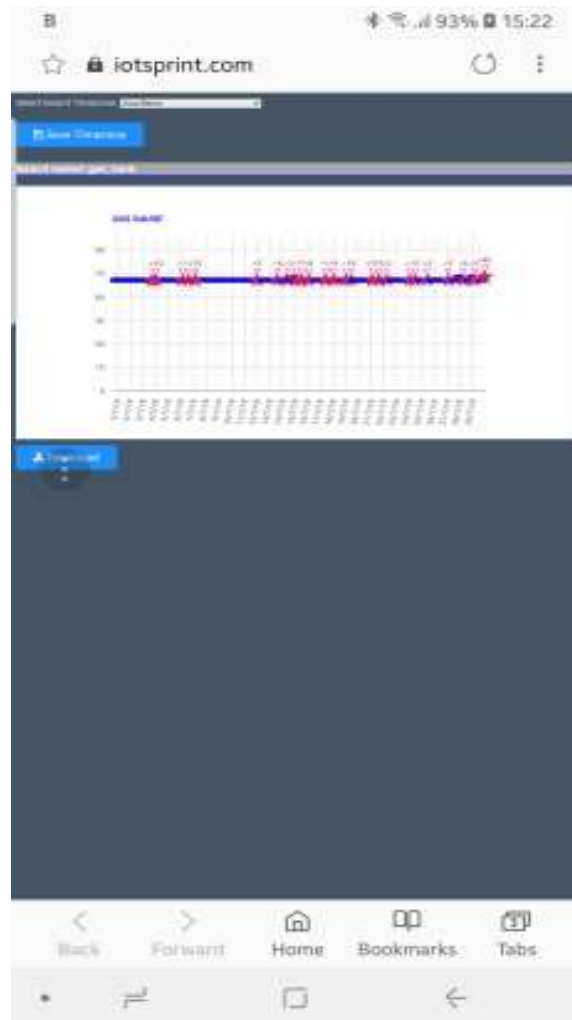


Fig 9.

#### 4. How to run the board?

After successful setup, the user must:

- Power down the DoboG by removing the 5V supply
- Remove the jumper on the DoboG board
- House the DoboG back in its enclosure
- Place the enclosure in its final panel destination
- Power up the DoboG. The DoboG will now seek the user-entered router SSID and password to connect to the internet and send updates to the remote server. It should be noted that poor internet service or weak local router Wi-Fi coverage will impact DoboG performance.



## 5. How to delete the board setup?

In order to delete an already setup DoboG from the user phone/tablet, he must:

- Launch the dobona app
- Press on the Setup button on the bottom of the screen
- The user must make sure his phone/tablet is connected to the internet
- Press on the green line of the board name (gas\_tank in our case) □ The below screen is displayed (Fig.10)



Fig 10.



- Enter the board SSID in the input field and then press on the OK button. The app. will send info to the server to delete the “gas\_tank” board information and will also delete it from the phone if the server acknowledges that the entered SSID was correct.

## **6. Contact information**

For more information or comments, please do not hesitate to contact the Dobona technical team by email at: [info@iotsprint.com](mailto:info@iotsprint.com)

We are available from 8:00AM (GMT+3) to 6:00PM (GMT+3).