



Setup & Installation

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1. Introduction

The following file contains information about setting up and running the single gas volume gauge sensor dobona board called DoboX. The DoboX is a small DIN-rail Ethernet-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 DoboX 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 DoboX 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 lose money and clients because of this work interruption, and might have to wait for more than one day to have it replenished because of supplier fleet servicing other customers. The DoboX 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 disruption. The DoboX should be powered by a regulated 5V/500mA power supply (not supplied). The exact terminal connections are drawn on the DoboX enclosure fascia. A three-cable hall-effect sensor must be used to read the magnetic dial gauge and connected to the DoboX. The DoboX should be powered by a regulated 12VDC or 24VDC/500mA supply (not provided). DoboX is an industrial grade electronic board that features SSL encryption for utmost data privacy and customer confidence.

2. Prerequisites

To install DoboX, the user must:

- Have basic information about installing electrical components, otherwise call an electrician to do the necessary wiring
- Own a DoboX board
- Have an 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 DOBOX 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 DOBOX 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 SETING 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 TO THE LIVE_LOG PAGE BUT WITH A BEIGE BACKGROUND (Fig.2).

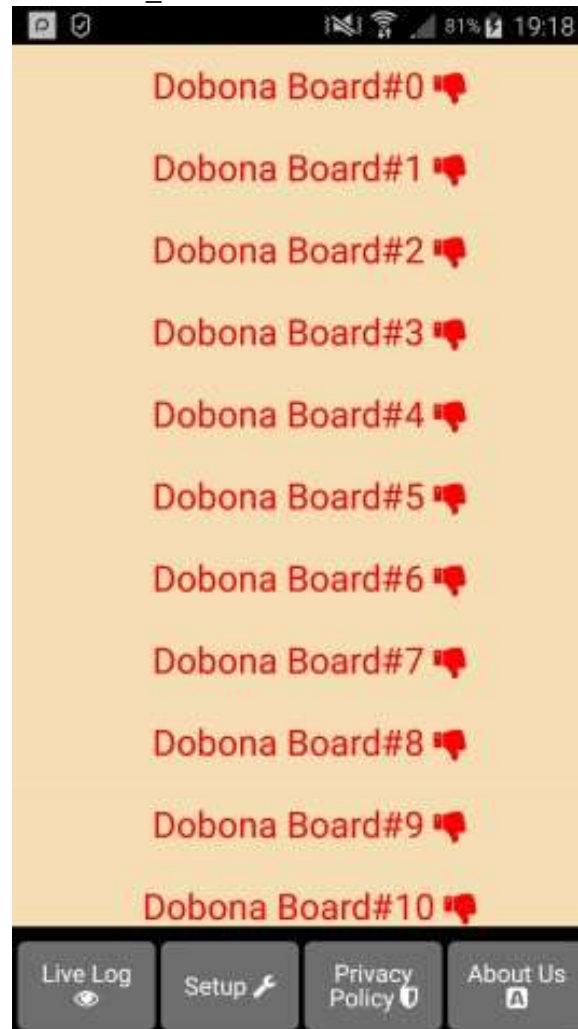


Fig 2.

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 DOBOX BOARD ONLY IN THIS PDF, THE USER SHOULD PRESS THE DoboX (wired gauge).

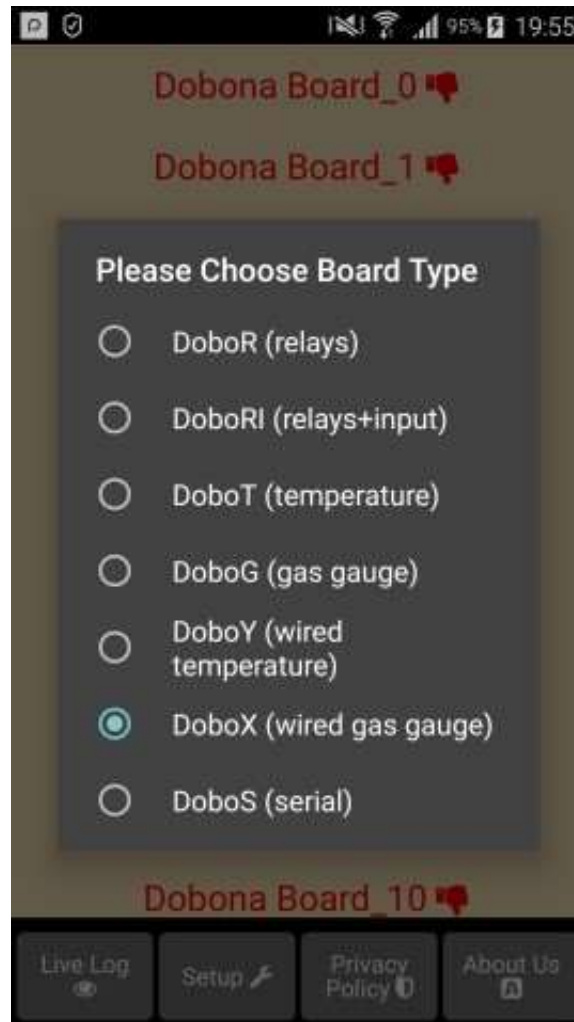


Fig 3.

7. HE 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/SHE IS TAKEN TO A NEW SCREEN TO REGISTER THE BOARD ON THE PHONE/TABLET (Fig.5).

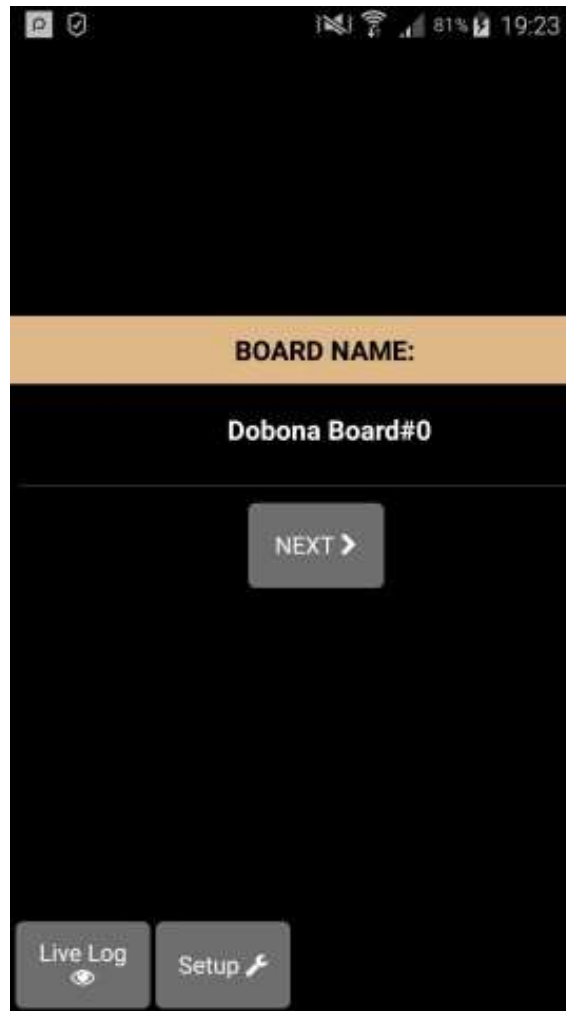


Fig 4.

USER MUST ENTER THE BOARD GENERATED NUMBER AS DESCRIBED IN SECTION 11 OF THIS DOCUMENT IN THE REG.KEY FIELD. 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/SHE 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/HER EMAIL. THERE ARE TWO TYPES OF HALL EFFECT SENSORS USED FOR DOBOX, DISTINGUISHED BY THEIR COLOR. THE USER SHOULD SPECIFY WHICH CABLE THE DOBOX WILL BE CONNECTED TO.

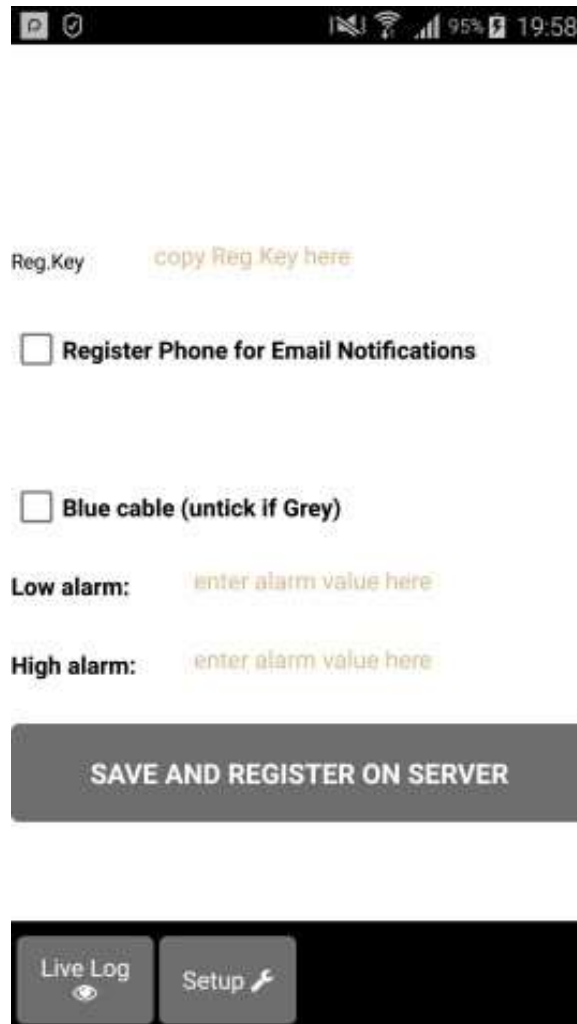


Fig 5.

- ON THE NEXT PAGE (Fig.6), THE USER IS TAKEN TO THE LIVE LOG SCREEN, WHERE HE/SHE WILL NOTICE THAT THE DOBONA BOARD#0 IS NOW REPLACED WITH GAS_TEMP IN GREEN FONT AND THUMBS UP TO INDICATE THAT THE BOARD HAS BEEN PROPERLY REGISTERED ON THE SERVER.



Fig6.

9. NOW PRESSING ON THE GAS_TANK LINE WILL DISPLAY THE LIVE LOG SCREEN RELATED TO THE DOBOX BOARD THAT HAS BEEN SETUP (Fig.8). THE VOLUME IS DISPLAYED ON THE SCREEN TOGETHER WITH THE LAST TIME THE DOBOX BOARD CHECKED WITH THE SERVER. THIS INFORMATION IS IMPORTANT FOR THE USER TO KNOW IF THE DOBOX 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 DOBOX OR ITS INTERNET CONNECTION OR ROUTER ARE FACING ISSUES.



Fig 7.

10. THIS SECTION REFERS TO GENERATING A UNIQUE BOARD NUMBER AS STATED IN SECTION 8 OF THIS DOCUMENT. THE BOARD JUMPER MUST BE PLACED BEFORE THE BOARD IS POWERED. THEN THE ETHERNET CABLE SHOULD BE CONNECTED TO AN INTERNET ENABLED ROUTER BEFORE POWERING UP THE BOARD. THE USER HAS TO WAIT FOR A MINUTE FOR THE BOARD TO CONNECT TO THE SERVER FOR THE FIRST TIME. FROM A BROWSER, THE USER THEN CONNECTS TO (Fig. 8):

https://iotsprint.com/gas_reset/gas_reset.html

THE USER SHOULD ENTER THE FACTORY REGISTRATION NUMBER THAT IS PRINTED ON THE BACK OF THE DOBOY ENCLOSURE AND THEN PRESS THE CHECK NEWLY GENERATED NUMBER BUTTON.

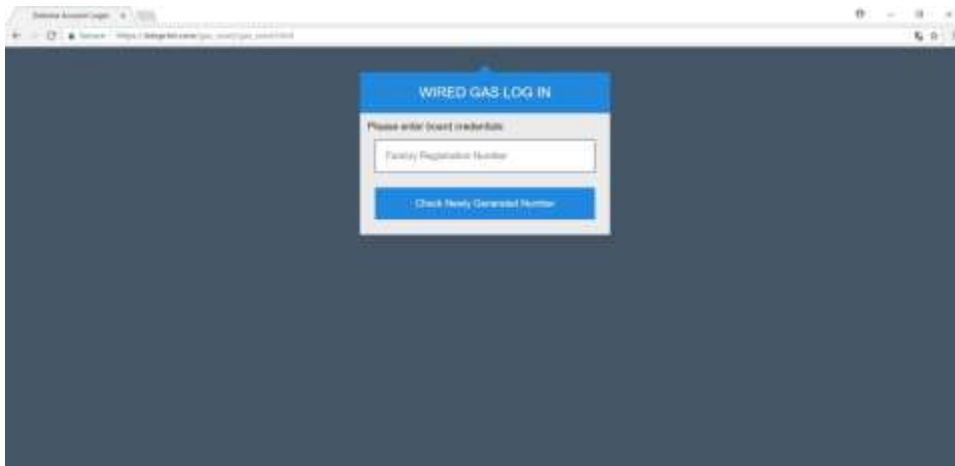


Fig 8.

IF THE ENTERED NUMBER IS CORRECT, THEN A NEW SCREEN WILL SHOW THE BOARD GENERATED NUMBER (Fig 9.)



Fig 9.

AS WRITTEN IN THIS SCREEN, THE USER SHOULD STORE THE BOARD GENERATED NUMBER IN A SAFE LOCATION AND REMOVE THE BOARD JUMPER.



4. How to run the board?

After successful setup, the board is ready to operate. The user should just make sure that the jumper is not connected.

5. How to delete the board setup?

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

- Launch the dobona app
- Press on the Setup button on the bottom of the screen
- The user must make sure his/her 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)

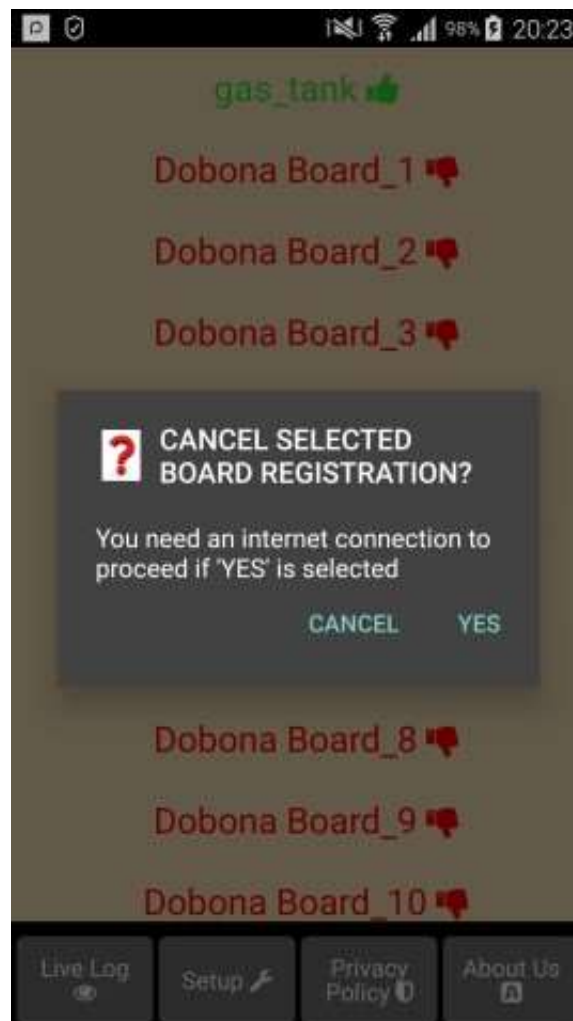




Fig 10.

- Press on the YES button. The app. Will send info to the server to unregister the “gas_tank” board, and will also delete it from the phone.

6. Contact information

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

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