ENTR Tiny Bridge

Wi-Fi Kit Integration Guide

Revision 2.0

Date 24-04-17

Proprietary Notice

The information contained in this document is proprietary to Mul-T-Lock.
Use or transfer of this document or the information contained herein
without the express written consent of Mul-T-Lock is prohibited.

Table of Contents

1. Package contents

1 x Tiny Bridge unit.
1 x Wi Fi kit integration guide.

2. HMI and Led Indicators

LED/Push Button	Description	Remarks
Power	**Off**-Power is not supplied to the Tiny Bridge **Solid Green**-The Tiny Bridge is on and BIT was successful. **Solid Red**-BIT failed. **Blinking Green**-Tiny Bridge is in power up mode. **Blinking Red**-Firmware upgrading is in progress.	
BLE	**Off**-The BLE radio is off. **Solid Green**- The BLE radio is operating. **Blinking Green**- Data is send or receives. **Solid Amber**: Joined a piconet network successfully. **Blinking Amber**: Scan activity **Solid Red**: Failed to pair.	Amber Color = Red + Green
Wi-Fi	**Off**-The 2.4GHz radio is off. **Solid Green**- The 2.4GHz radio is	White Color = Red + Green +

	operating. **Blinking Green**- Data is send or receives. **Solid Amber**: Joined Wi-Fi network successfully. **Blinking Amber**: Wi-Fi Tx/Rx activity. **Solid Red**: Failed to join Wi-Fi network. **Blinking White**: WPS in process. **Solid White**: WPS end process.	Blue
WPS push Button	This button lets you use WPS to join the Wi-Fi network without typing the Wi-Fi password. The Wi-Fi LED blinks white during this process and then lights solid white.	
Factory Reset push Button	Press the reset button for 3 seconds in order to return to default settings.	

3. Getting Started

The Tiny Bridge is connecting to various ecosystem domains, the first one is BLE connectivity to the ENTR lock, the second is to the Wi-Fi home network and the last one is to the server (integrator cloud).

In order to configure/pair all three of the above we are using dedicated configuration application.

Assuming the ENTR DU is already paired to the smartphone the Tiny Bridge is considered as an ENTR user and for that the ENTR App. owner has to add this user to the ENTR system in the following procedure:
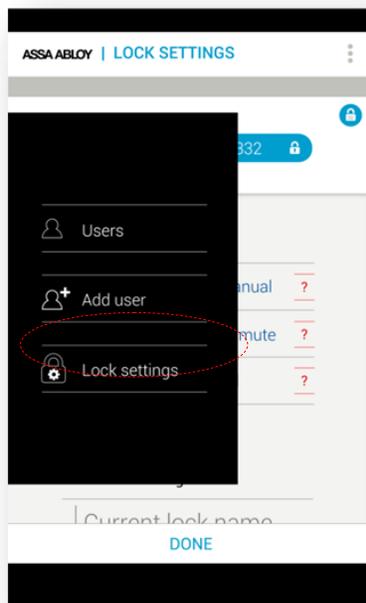
After configuring the ENTR per "ENTR user manual" and use the "ENTR™ lock App User Manual" go through the "set owner" and "find lock", now you can add a new user (Tiny Bridge) per paragraph 3.1.
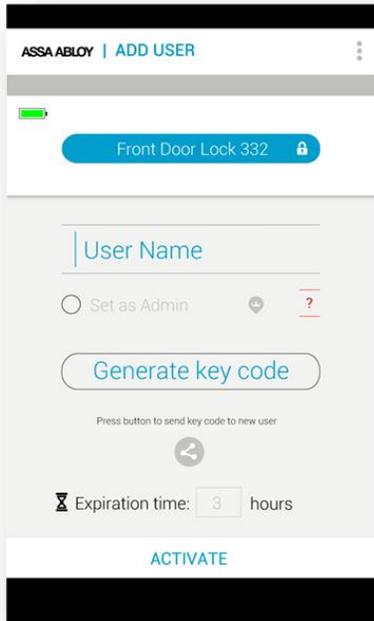
3.1 Generating BLE key with the owner Smartphone

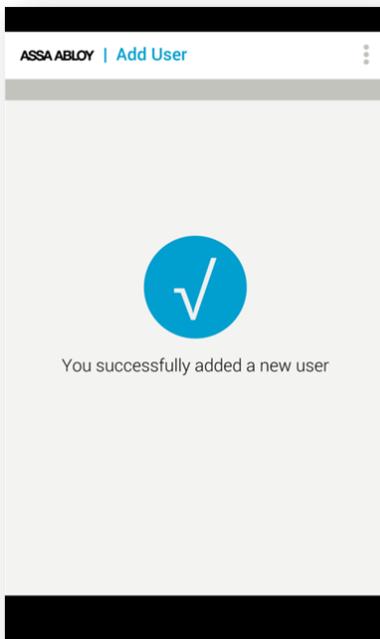Get into "Lock Settings" by tapping the lock icon:
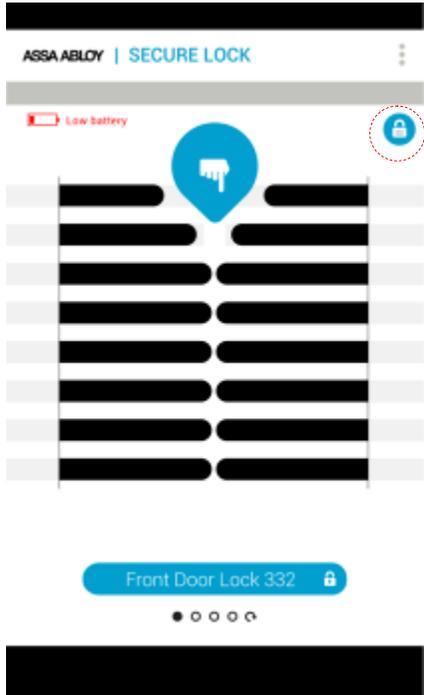
Tap on "Add User"

Enter the user name, generate the key code, and share or remember the code for the process of getting the key through the Tiny Bridge unit. Press "Activate".

On Success you will see the following screen:

From this moment, for the predefined expiration time, the key will be waiting in the lock (pending) until it will be pulled from the lock using this code. The key pulling can be done by the Tiny Bridge.

3.2 Powering up the Tiny Bridge

It is recommended that you first set up this Tiny Bridge somewhere close to the wireless router, and then move this Tiny Bridge to another location for optimal Wi-Fi reception.

Insert the Tiny Bridge adaptor into the AC socket.

The Tiny Bridge will start powering up and the green power led will become steady if the BIT procedure passes successfully (picture 1).

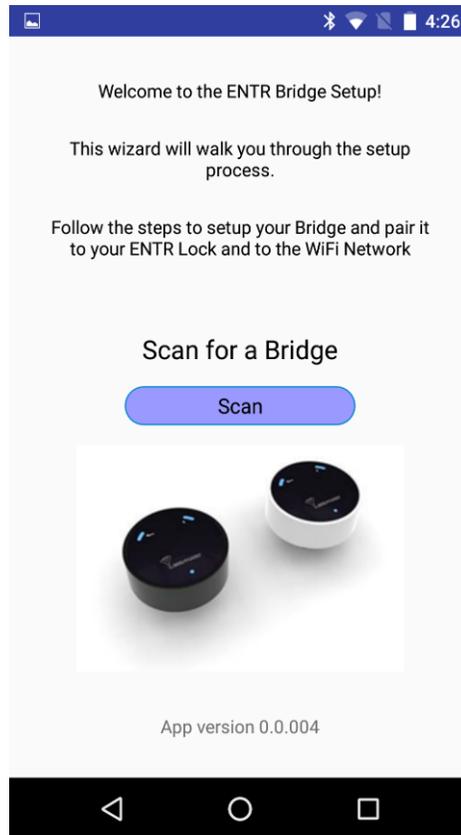The BLE pairing, server, IP or URL address procedures are done via the Configuration App. as well.

Picture 1.

3.3 Configuration the Tiny Bridge step by step

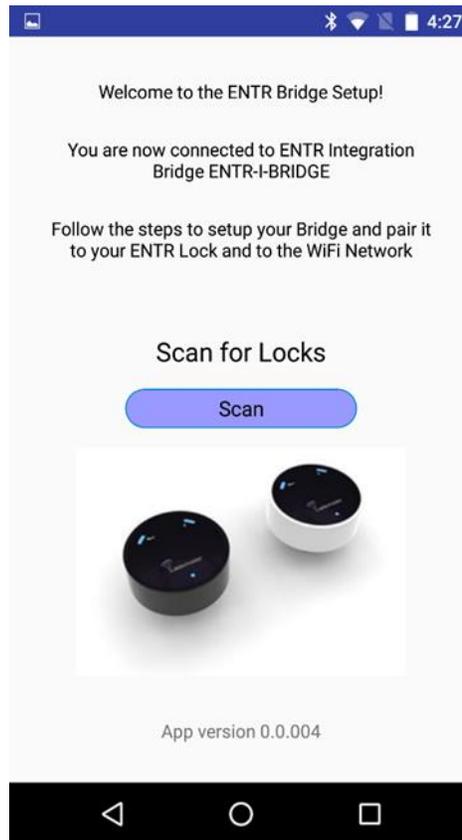### 3.3.1 Configuration App. connecting to the Tiny Bridge

Open the configuration application on your mobile phone.

Picture 2.

A welcome ENTR Tiny Bridge set up appears.

Now press the "Scan" button and wait for the app to connecting to the Tiny Bridge.
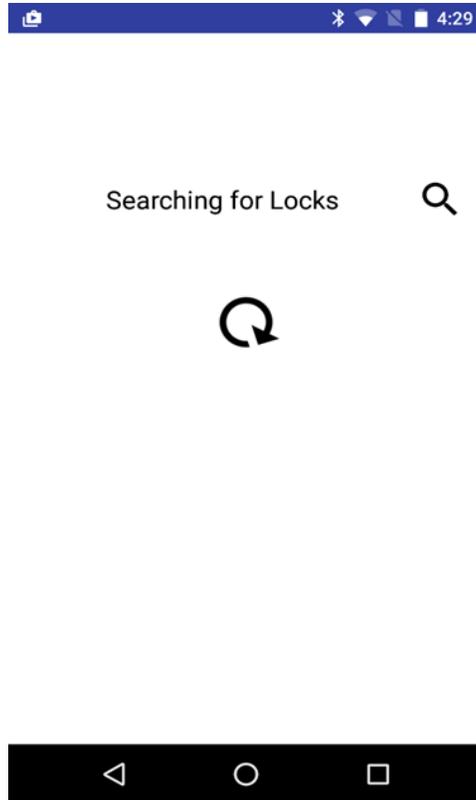
Picture 3.

After the App. is connecting to the Tiny Bridge successfully the App. updates its status to "You are now connected to ENTR Integration Tiny Bridge ENTR-I-TINY BRIDGE".

Remark: The same configuration application supports both integration and Tiny Bridges.

3.3.2 Pairing the Tiny Bridge to the ENTR BLE domain

After adding the Tiny Bridge and generating a key per paragraph 3.1 we can start paring the Tiny Bridge to the ENTR BLE domain.

Press the scan icon (picture 3) for ENTR door locks that pending a key.
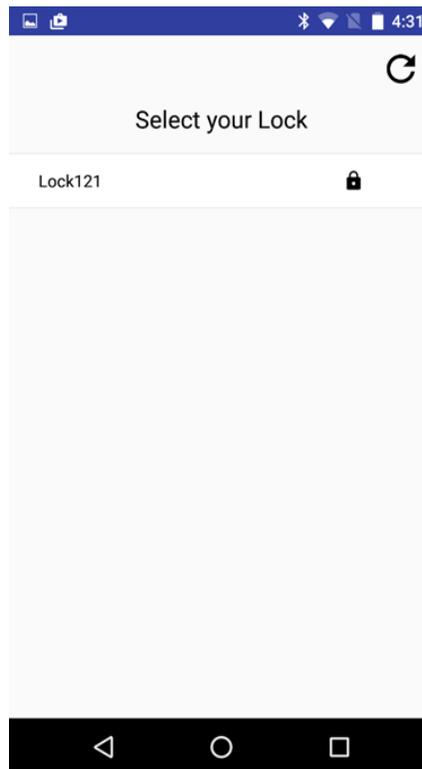

Picture 4.

The App. is searching for locks that are in BLE range and have a pending key.

Picture 5.

The BLE LED blinks in Amber color that indicates that the Tiny Bridge is searching for locks that are within BLE range and have a pending key.

Picture 6.
Select "Lock 121" from the list appears on the screen on picture 6.
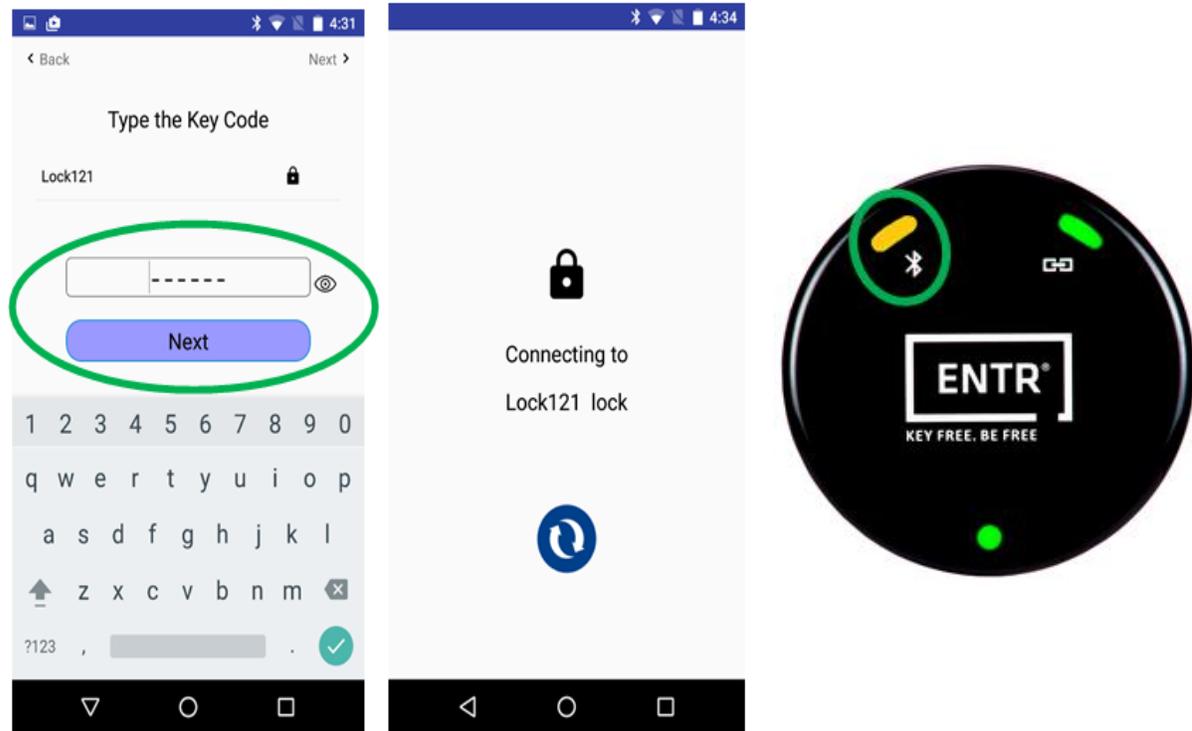
Picture 7.

Type your pin code that you received per paragraph 3.1.a connecting attempt will appears on your screen.

Wait for successful connection and ensure that the BLE LED is steady state amber colored.

3.3.3 Pairing the Tiny Bridge to the Wi-Fi network domain
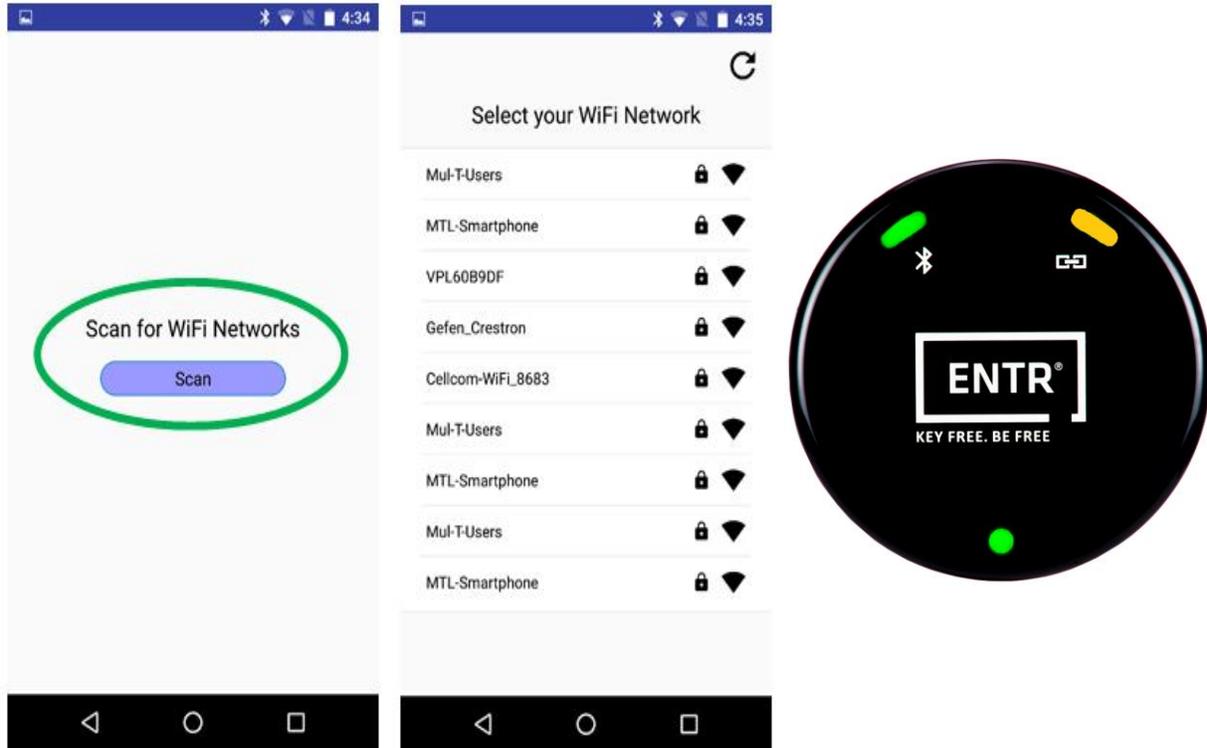
Picture 8.

Now we are ready to configure the Wi-Fi section of the Tiny Bridge.

Remark: There are two methods to connect to a Wi-Fi network, one is via WPS (QSS) procedure (see appendix A) and the other is via the configuration application.

Press the Wi-Fi scan icon in order to scan for Wi-Fi networks within Wi-Fi range (see picture 8).
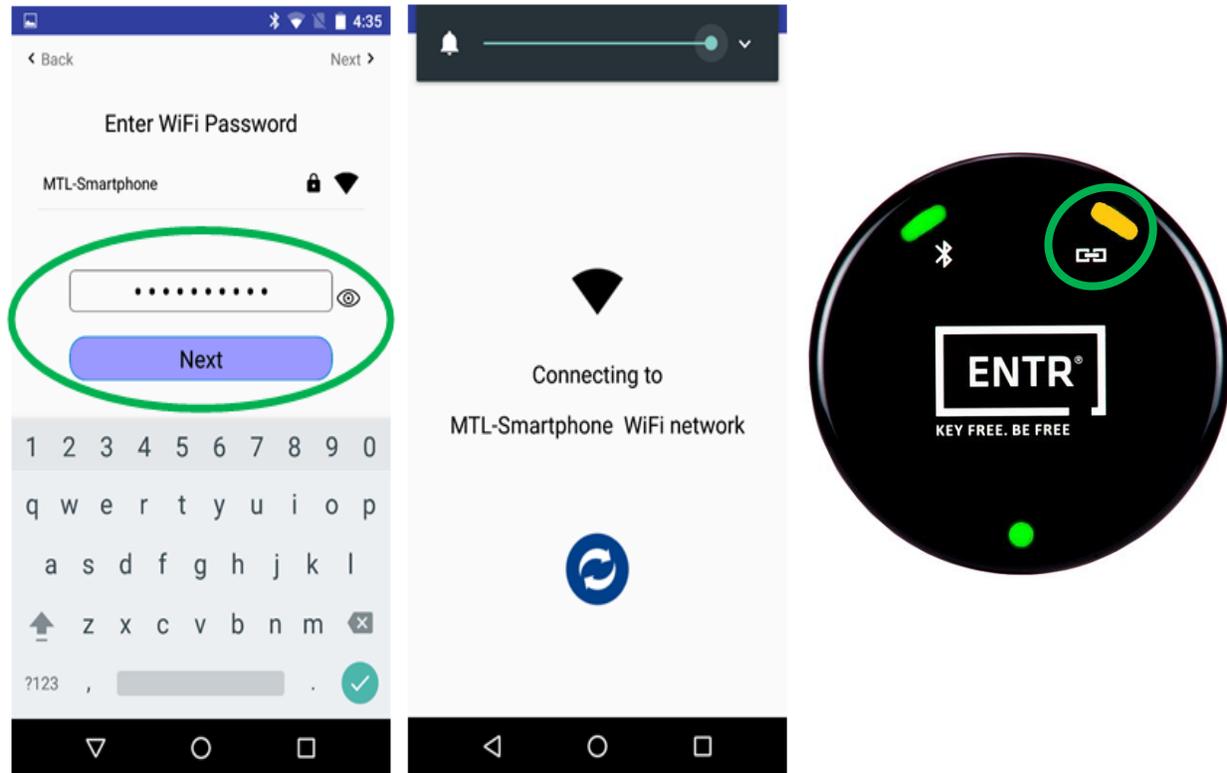
Picture 9.

Enter the Wi-Fi network password (SSID), a connecting attempt will appears on your screen. The Wi-Fi LED   blinks in Amber color and wait for successful connection – Wi-Fi LED become steady state amber colored.

3.3.4 Tiny Bridge to server configuration procedure
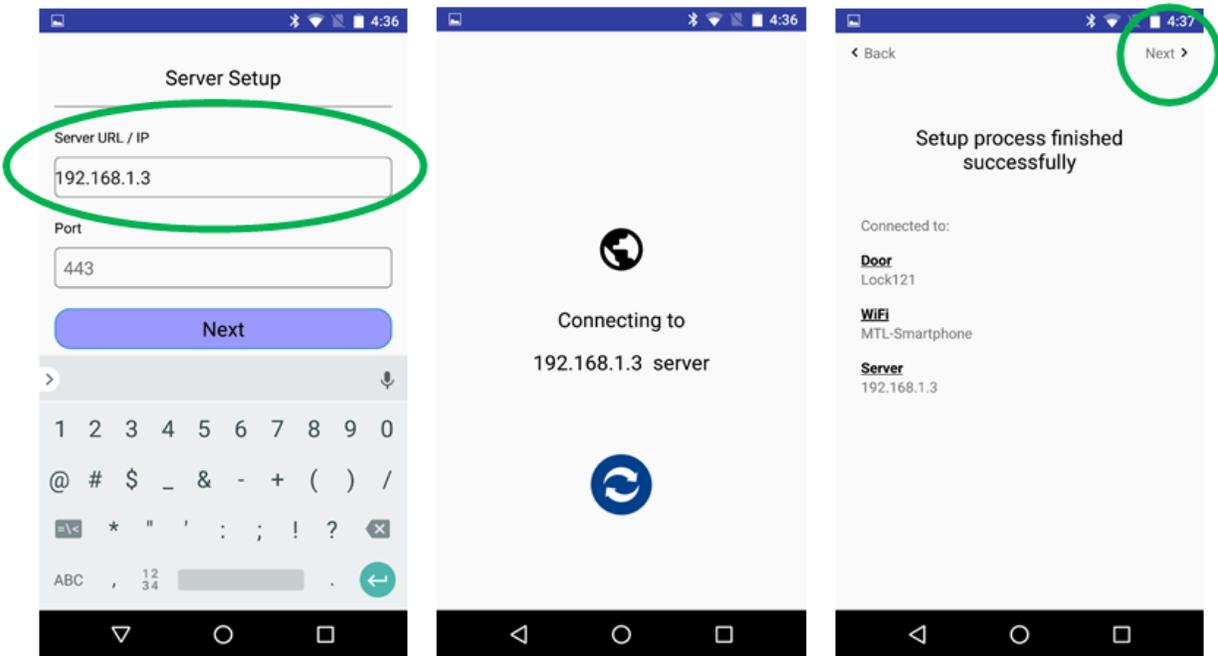
The integrator has to enter the DNS server IP or URL address and port number (optional).

Default port number is 40003.

Press "Next" after filling both fields.

When setup is done, the Tiny Bridge will try to connect to the server. Make sure the server is running.

3.3.5 WPS Configuration

You can connect to the Tiny Bridge's Wi-Fi network with Wi-Fi Protected Setup (WPS), to use WPS procedure do the following:

- Make sure that the Tiny Bridge has power (its green Power LED is lit steady).

- Press the WPS button on the Tiny Bridge for 3 seconds (WPS button is located on the bottom right of the Tiny Bridge) until the Wi-Fi white color led start blinking.

- Within two minutes, on your router, press its WPS button or follow its instructions for WPS connections, now wait for the WPS setup to end till the Wi-Fi white color led will lit steady.

- Now wait that the Wi-Fi amber led will lit steady (white color led will turn off) to indicate the Tiny Bridge join the network successfully ,If the WPS configuration fails the white led will turn off and a solid red led will lit to indicate that the Tiny Bridge fails to join the network.

- If the WPS procedure fails or the wireless router does not support WPS procedure go to paragraph 3.3.3.

4   For radio enclosure

Federal   Communications   Commission   (FCC)   Statement labelling

requirement for small device statement (FCC15.19 (3))

This device complies with part 15 of the FCC Rules. Operation is subject to the following

two conditions: (1) This device may not cause harmful interference, and (2) this device must

accept any interference received, including interference that may cause undesired operation.

4.3   *Radio Frequency Interference (RFI) (FCC 15.105)*

This equipment has been tested and found to comply with the limits for Class B digital devices

pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable

protection against harmful interference in a residential environment. This equipment

generates, uses, and can radiate radio frequency energy, and if not installed and used in

accordance with the instruction manual, may cause harmful interference to radio

communications. However, there is no guarantee that interference will not occur in a particular

installation. If this equipment does cause harmful interference to radio or television reception,

which can be determined by turning the equipment off and on, the user is encouraged to try

and correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.

- Increase the separation between the equipment and the receiver.

- Connect the equipment into an outlet on a circuit different from that to which the receiver is
  connected.

- Consult the dealer or an experienced radio/TV technician for help.

4.4   *Labeling Requirements (FCC 15.19)*

This device complies with Part 15 of FCC rules. Operation is subject to the following two

conditions: (1) this device may not cause harmful interference, and (2) this device must accept

any interference received, including interference that may cause undesired operation.

Product FCC ID: 2AHH881135

4.5 *Modifications (FCC 15.21)*

Changes or modifications to this equipment not expressly approved by Mul-T-Lock® may void the user's authority to operate this equipment.

4.6 *RF Exposure info (FCC 2.1093)-for module radio*

This equipment has been approved for mobile applications where the equipment should be

used at distances greater than 20cm from the human body (with the exception of hands, wrists,

feet and ankles). Operation at distances less than 20cm is strictly prohibited.

FOR MOBILE DEVICE USAGE (>20cm/low power) Radiation Exposure Statement:

This equipment complies with ISED radiation exposure limits set forth for an uncontrolled

environment. This equipment should be installed and operated with minimum distance 20cm

between the radiator & your body.