



PRODUCT USER MANUAL



EMBE01

TABLE OF CONTENTS

1.	PURPOSE	2
2.	USER INSTRUCTIONS.....	3
2.1.	STATE MACHINE DEFINITION.....	3
3.	BATTERY REPLACEMENT INSTRUCTIONS	4
4.	FCC & IC AUTHORIZATION	6
5.	CE AUTHORIZATION.....	6



1. PURPOSE

This is the product user manual. It contains FCC/CE/IC information, battery replacement instructions and a general user's guide.

2. USER INSTRUCTIONS

EMBE01 is a Bluetooth low-energy proximity beacon. It is controlled by a push button switch, accessible only while the case it open. Two LEDs, one red and one green will flash to indicate the state that the beacon is in according. The standard firmware provided with each beacon is V2.8.0, and implements the state machine described below, other state machines and beacon operations can be defined by reprogramming the EMBE01.

2.1. STATE MACHINE DEFINITION

The state-diagram for the EMBE01 is shown in Figure 1. The firmware implements the following modes:

- Self-test
- Sleep-mode
- Advertise Mode
- Lock Mode

Upon insertion of the battery, a self-test is performed, and EMBE01 then enters a low-power sleep mode. On subsequent short button presses, the green LED flashes once and begins transmitting connectable advertisements. A subsequent button press On the next short button press, the red LED flashes once and then EMBE01 enters the low power sleep mode again. Subsequent short presses iterates between Sleep and Advertisement modes. In any state, if a long button press is performed (longer than 2 seconds), the green LED will flash twice and EMBE01 will stay in that mode until the end of battery life.

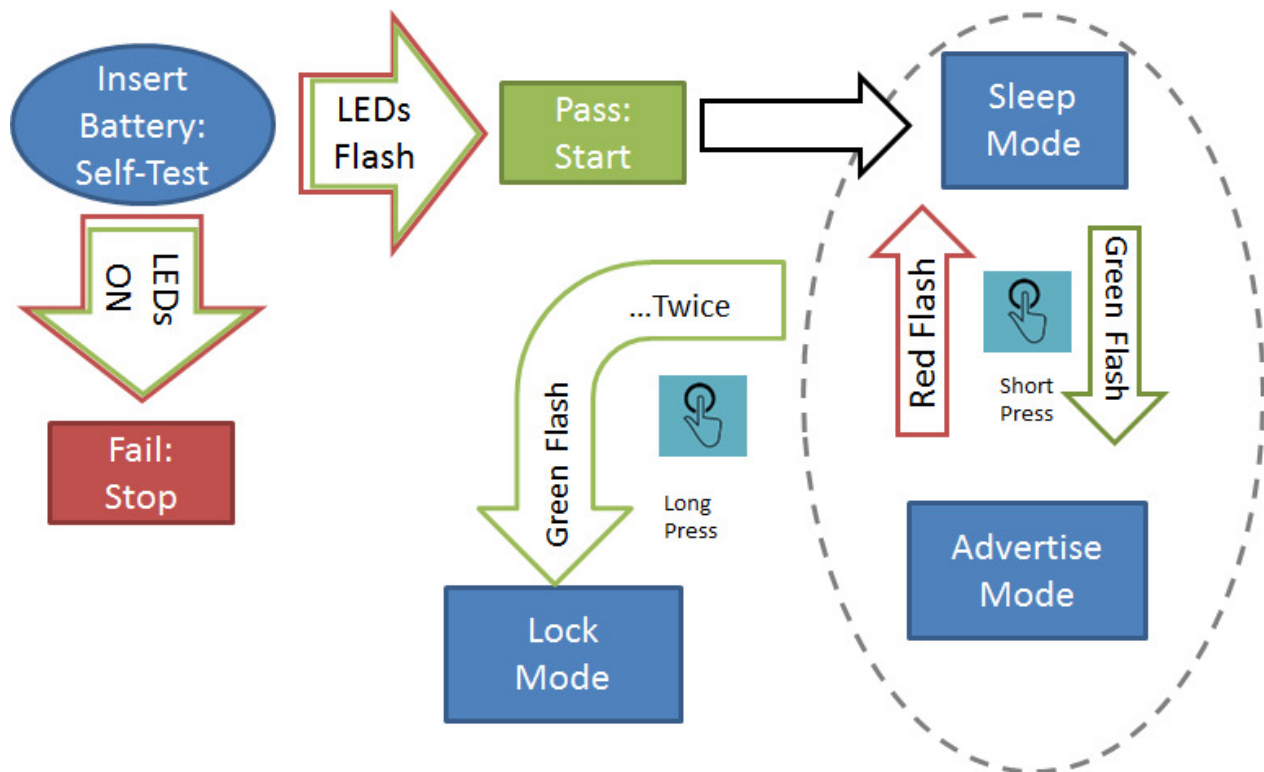


Figure 1: EMBE01 State-Diagram

3. BATTERY REPLACEMENT INSTRUCTIONS

The EMBE01 is powered by four AA batteries. When the beacon stops functioning the battery will need to be replaced. The step-by-step sequence to replace the expired battery with a fresh one is given in the steps below.

Step 1: Remove the EMBE01 from the wall mount as shown in Figure 1. Gently lift the tab using a small pry tool to unclip the unit from the wall mount. If installed, the security screw must be removed prior to lifting the tab. To remove from the mount, tilt the device forward then lift out of the wall mount as shown in Figure 2.



Figure 1: Lift wall mount tab using small pry tool



Figure 2: Tilt device forward then lift to remove from mount

Step 2: Open the beacon housing. Remove the 4 screws in the order indicated in Figure 3.

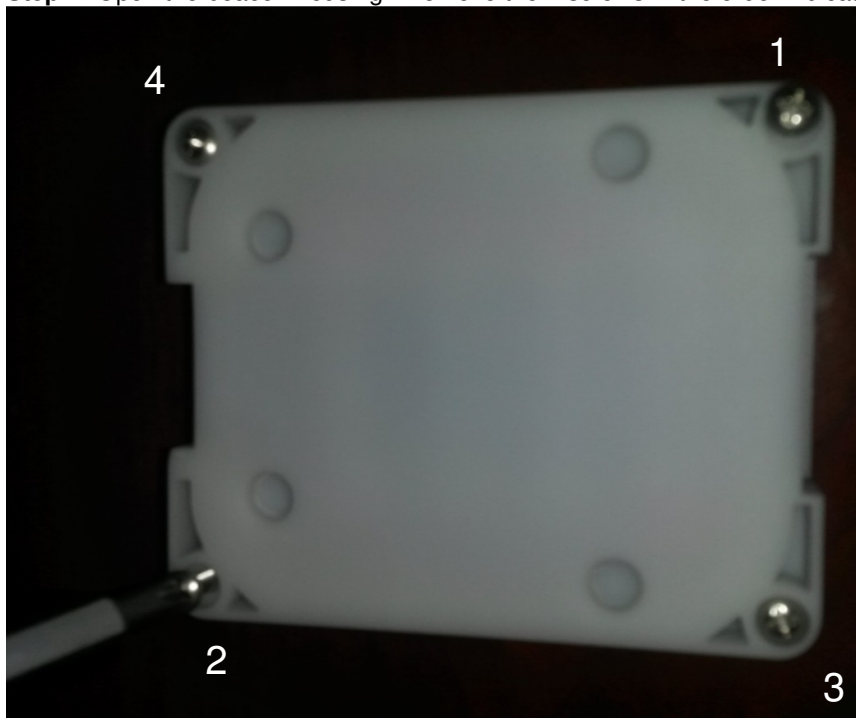


Figure 3: Remove screws in indicated direction and lift off cover

Step 3: Remove the battery. Slide the battery out from the holder.



Step 4: Replace the battery with new 1.5v AA batteries. Reverse the sequence in step 3 above. Care must be taken to confirm the polarity of the batteries prior to insertion.

Step 5: Reinstall the screws following the instructions in Step 2 in reverse order. Hand tighten, but do not over tighten screws.

Step 6: Reinstall in wall mount following reverse instructions from step 1





4. FCC AUTHORIZATION

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.

Caution: Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

5. IC AUTHORIZATION

This device complies with Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device."

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement

6. CE AUTHORIZATION

Hereby, EM Microelectronic – Marin SA, declares that this EMBE01 is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC.

Par la présente EM Microelectronic – Marin SA déclare que l'appareil EMBE01 est conforme aux exigences essentielles et aux autres dispositions pertinentes de la directive 1999/5/CE.

The complete Declaration of Conformity can be found at
<http://www.emmicroelectronic.com/products/wireless-rf>