

Introduction

This application note is a guide for users to operate iBS01 beacons. The quick verification is using Nordic's Master Control Panel Android APP. Please download this APP with the link below:

<https://play.google.com/store/apps/details?id=no.nordicsemi.android.mcp>.



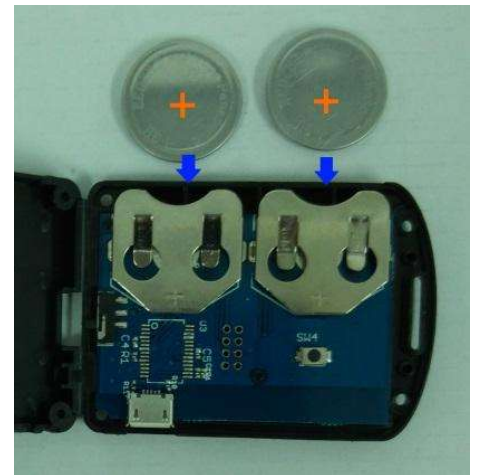
Operation

There is no battery shipped with the tag. User has to put 2x CR2032 coin batteries inside the tag. The figure on the right is an instruction for inserting the battery.

Users can also power the tag by a micro-USB cable from a standard USB host port(like the USB port in a PC) or normal smartphone charger.

There is a power switch like in the figure below. Switching on/off depends on the power source. After power on, it starts and continuously advertises the beacon message through BLE.

| Switch Position | USB Power | CR2032 Battery |
|-----------------|-----------|----------------|
| Right | On | Off |
| Left | Off | On |



 Use Battery Power On
  Use USB Power On

Caution: risk of explosion if the battery is replaced by an incorrect type. Dispose of used batteries according to the instructions


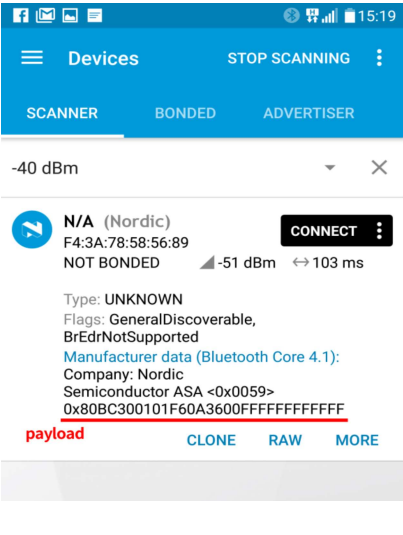
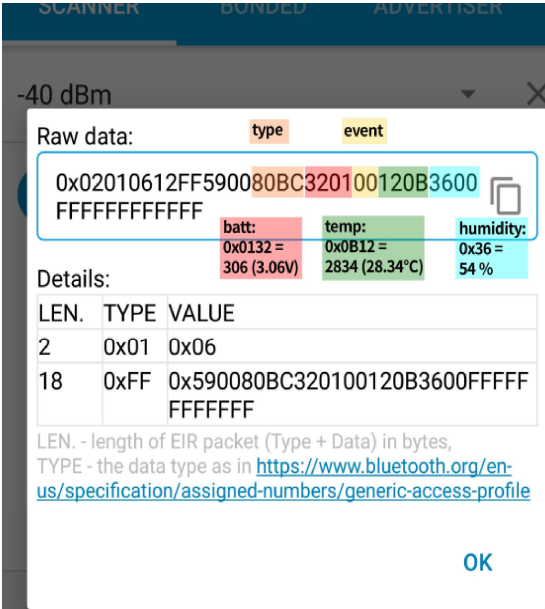
iBS01H sensor position

The iBS01H is using a hall sensor to detect if a magnet is in range or not. Depending on the strength of the magnet, the range is around 0.5cm~1.5cm. The sensor position is marked on the enclosure.



Quick Start

When powered on iBS01 Tag starts to advertise immediately. User can use BLE scan app to scan iBS01 Tag to get payload to see its working. Detail procedure as following:

| | | |
|--|--|---|
| <p>1. Power on iBS01 with Battery or USB without pressing the button.</p> | <p>2. Scan to find iBS01 Tag</p> | <p>3. Tag Info is in payload, detail information please check format document</p> |
|  |  |  |

Notes when using Master Control Panel APP

- When scanning the BLE device when using the Master Control Panel, you can see current nearby BLE devices and the cached BLE device that do not currently exist. To tell the difference, check the RSSI value. If the RSSI is not in solid color then the device does not currently exist. Or you can use "refresh" in the settings menu(at the top right corner) to clear the cached information.

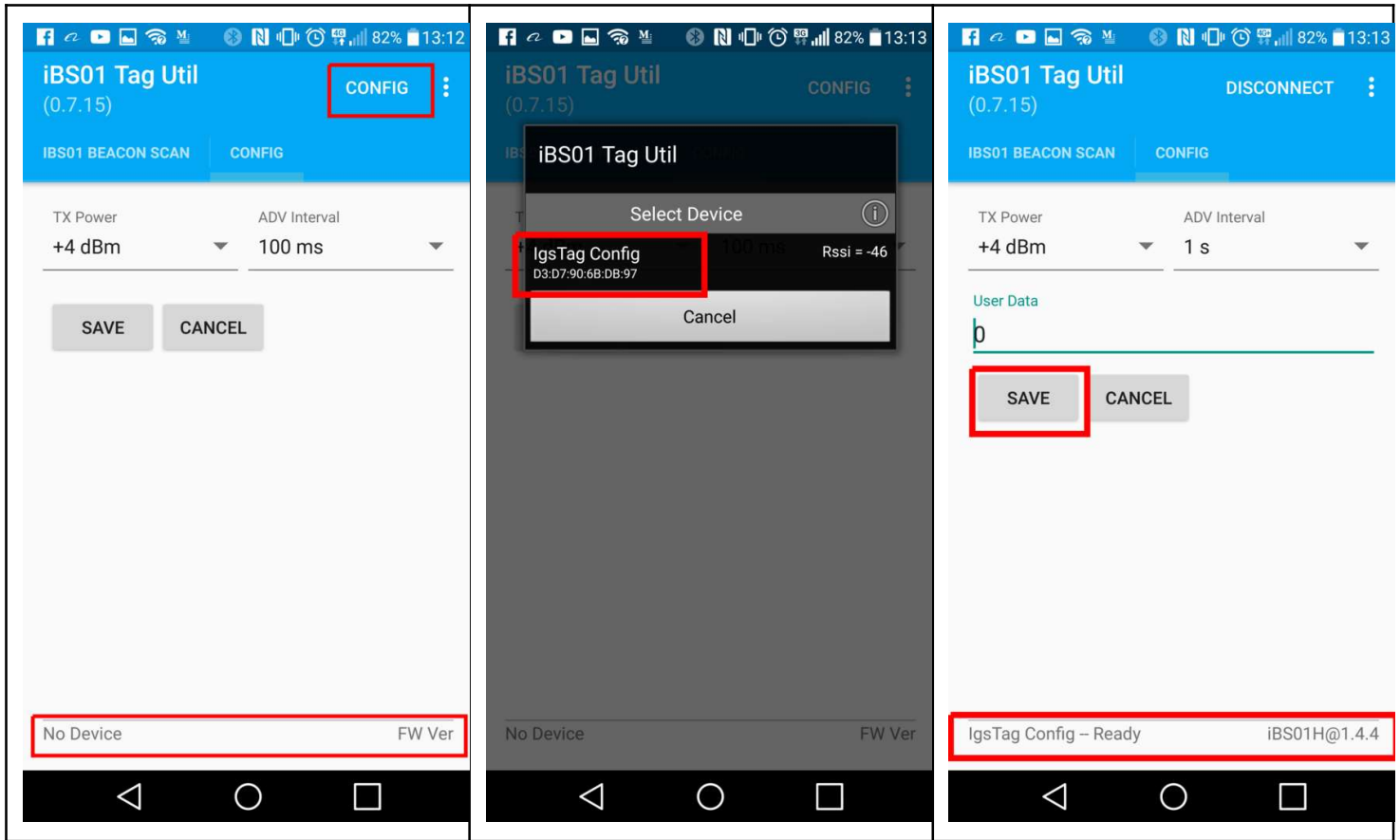
Configuration

There are several parameters you may want to configure. Basic procedure is as below.

- Press and hold the config button on top of the iBS01(right figure) and power on the iBS01. After power on, release the button. iBS01 will enter the configure mode.
- Open iBS01 Utility and push scan device
- Connect and change the parameters.



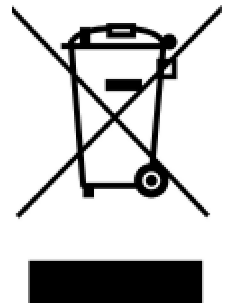
4. Disconnect and the iBS01 will go into normal mode.



Waste Electrical and Electronic Equipment Recycling

Our product is compliant with the WEEE directive for re-use/recovery/recycling. This cross-out wheeled-bin symbol is a reminder that this product should not be treated as household waste. Instead hand it over to the appropriate collection point for the recycling of electrical and electronic equipment in accordance with local environmental regulations for waste disposal.

Since our product is not sold directly to the end user and generally it is a part of our customer's solution, our customer is recognized as a professional seller. Our customer has the responsibility to comply with the requirement of the directive too. To help our customers, when necessary, we will provide a WEEE compliant assessment report for registering and communicating with the local authorities and recycling agency.



Certification

Japan MIC Regulatory
201-160404

FCC Regulatory
2AH2IIBS01

NCC Regulatory
CCAJ16LP4280T1

Statement

Federal Communication Commission Interference Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, 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 to correct the interference by one of the following measures: . Reorient or relocate the receiving antenna. . Increase the separation between the equipment and 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.

FCC Caution: To assure continued compliance, any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment. (Example - use only shielded interface cables when connecting to computer or peripheral devices).

FCC Radiation Exposure Statement This equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20 centimeters between the radiator and your body.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter. The antennas used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter.

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.

NCC 警語

第十二條

經型式認證合格之低功率射頻電機，非經許可，公司、商號或使用者均不得擅自變更頻率、加大功率或變更原設計之特性及功能。

第十四條

低功率射頻電機之使用不得影響飛航安全及干擾合法通信；經發現有干擾現象時，應立即停用，並改善至無干擾時方得繼續使用。

前項合法通信，指依電信法規定作業之無線電通信。

低功率射頻電機須忍受合法通信或工業、科學及醫療用電波輻射性電機設備之干擾

CE Regulatory

iBS01 series has been tested and complies with the essential requirements of the DIRECTIVE 2014/53/EU. Below is the copy of the CE Conformity of Declaration.

DECLARATION OF CONFORMITY

EU EU RED - DIRECTIVE 2014/53/EU -

This Declaration that the following designated product

Sensor Beacon
Model No.: iBS01
Multi-listing Model No.: iBS01H, iBS01T, iBS01G
Brand Name: INGICS

.....
(Product identification)

complies with the essential requirements of the **EU RED - DIRECTIVE 2014/53/EU** on the approximation of the laws of the Member States relating to **Radio Spectrum Matters/Health Matters**. Assessment of compliance of the product with the requirements relating to radio spectrum matters was based on Annex IV of the Directive **2014/53/EU** and the following standard:

| | | |
|--|--------------------------------------|----------------------------------|
| EMC | Radio Spectrum | Safety |
| EN 301 489 -1: V 2.2.0 (2017) | EN 300 328 (V 2.2.2, 2019-07) | EN 60950-1:2006+A11:2009 |
| EN 301 489 - 17: V 3.2.0 (2017) | | +A1:2010+A12:2011+A2:2013 |
| | | Health |
| | | EN 62479(2010) |

.....
(Identification of regulations / standards)


This declaration is issued for
INGICS TECHNOLOGY.
2F., No.15-2, Changshou St.,
Shulin Dist., New Taipei City 238,, Taiwan, R.O.C.

.....
(Name / Address)

Furthermore we declare that our product will be produce in correspondence with all requirements according to the Directive **2014/53/EU** .

Name: J.K.Fan

Title: President

Signature 

Date: June/02/2021

Revision History

| DATE | REVISION | CHANGES |
|--------------|----------|---|
| May 25, 2016 | 1 | Initial release |
| Feb 1, 2017 | 2 | Add configuration section |
| Jul 7, 2017 | 2a | To meet EU RED - DIRECTIVE 2014/53/EU 1. Add battery warning on page 1 2. Add DOC on last page |
| June 2, 2021 | 2b | 1. Add Waste Electrical and Electronic Equipment Recycling section for appropriate recycling the equipment 2. Rearrange page 3. Add Certification section |