# DF1 Manual

## Description:

DF1 is a remote sensor device measuring 3-axis accelerations and communicating data via a wireless connection to a base station.

It is intended as a development platform for a technical user, or someone who wants to learn more about this technology. The user can read, record, and process data produced by the device via a wireless connection. This connection can be made though any computer which supports the Bluetooth 4.0 protocol.

Demo applications are available and can be installed on a iOS device supporting Bluetooth 4.0. For more information please go to: http://devicefactory.com

Warning: This device is intended for adult use only, keep out of reach of children and pets.

#### Contents:

- DF1 device
- CR2032 Battery

# Operation:

#### Install Battery:

- Place device face down on a flat surface, FCC ID should be visible
- Unscrew the Philips head fastener securing the battery door with a #1 driver
- Do not remove any of the other Torx fasteners
- Swing battery door open
- Place CR2032 battery into the battery tray with positive (+) side facing up
- Swing battery door closed
- Secure battery door with Philips head fastener, do not over tighten fastener

Note: If the device is not going to be used for an extended period of time, please remove the battery.

Connecting via iOS or Android device:

- Demo application will be made available App stores
- Search for Device Factory for available Apps
- App source code is also available at http://github.com/devicefactory

Connecting via Linux or Mac OSX:

- Standard programming techniques can be used to access the device
- Your computer must support the Bluetooth 4.0 protocol
- A Bluetooth 4.0 USB adapter can also be used
- To list available devices use the following software tool: hcitool
- To connect to the device you can use the following software tool: gattool

For more information please go to the following sites:

- http://devicefactory.com
- http://github.com/devicefactory
- http://developer.apple.com
- http://developer.android.com

### Specifications:

Range: 160 feet (50 meters), line of sight

Battery: CR2032 3.0 volts

Battery Life: Up to 1 year, application dependent
Communication Protocol: Bluetooth Low Energy (Bluetooth Smart)
Operating Frequency: 2.400 GHz - 2.4835 GHz ISM band

Operating Temperature: 5F (-15C) to 150F (65C)

### Safety:

<u>Important safety instructions</u>: Read and follow all instructions in this manual.

- Do not attempt to open or tamper with the device.
- Do not expose the device to any liquids.
- Do not expose the device to extreme temperatures, high or low.
- Do not allow children or pets to handle the device.
- Components may present a choking hazard.
- Device may contain substances that can damage the environment if handled and/or disposed of improperly.
- Device may contain substances that can damage human health if handled and/or disposed of improperly.

# Disposal:

Be kind to our environment. It is your responsibility to dispose of the device properly at its end of life. Please contact your local government's waste management authority to locate a recycling drop off point for electronic equipment and batteries.

- Do not dispose of the device with household waste.
- Device may contain a Lithium-Ion battery which may not be disposed of with household

waste.

• Follow all local laws pertaining to waste disposal

### Regulatory:

Federal Communications Commission (FCC) Statement

This device complies with FCC part 15 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, including interference that may cause undesired operation of the device.

FCC Warning: Changes or modifications to the device could void the user's authority to operate the equipment.

Note: 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 or more of the following measures:

- Reorient or relocate the receiving antenna
- Increase the separation between the equipment and receiver.
- Consult the an experienced radio technician for help.

This device meets the FCC and IC requirements for RF exposure in public or uncontrolled environments.

Cet appareil est conforme aux conditions de la FCC et IC en matière de RF dans des environnements publics ou incontrôlée.

Canada: Industry Canada (IC) Statement

IC Notice to Users English/French in accordance with RSS GEN Issue 3:

This device complies with Industry Canada license 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.

Cet appareil est conforme avec Industrie Canada RSS standard exempts de licence(s). Son utilisation est soumise à Les deux conditions suivantes:

- 1. cet appareil ne peut pas provoquer d'interférences et
- 2. cet appareil doit accepter Toute interférence, y compris les interférences qui peuvent causer un mauvais fonctionnement du dispositive

CAN ICES - 3 (B)/NMB - 3(B)

IC: 11777A-DF1

FCC ID: 2ABTJ-DF1

