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May 23, 2024

LF Connect Main Unit
Technical documentation
Version 4.0

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1 General description

Below is a general description of the Connected Gym system which the main unit belongs to.

Introduction

- Connected gym: digitize a gym without replacing the equipment – the sensors can be retrofitted on all major gym machine brands.
- The LF Connect app provides motivation and inspiration for the users. The user can forget about pen and paper and just get going. The users simply touch their phone to a sensor on a connected machine to record their reps and sets.
- PT:s can create exercises with video instructions and share their programs with its client

The connected gym system includes:

- An application (LF Connect app) to be used during workouts for Android and iPhone
- Sensors (main units) which are mounted on the top weight packs
- ID touch points (pucks) which is mounted easily accessible for the user on the machines
- Web application to run in a web browser for the gym and the PT to administrate the system
- Observers to be installed centrally in the gym connected to internet via WiFi
- Holders that can be mounted on machines for the purpose to place the phone during an exercise
- An application to be used during installation on the gym (Android)
- Zone pucks used in the free weight areas to give fast access to free weight exercises
- A reception puck, for customization of the connected gym application for the gyms
- Marketing material/Announcements

The Main Unit

The main unit is the core of the Connected gym system, and is easily mounted on top of the weight stack. It measures the number of repetitions and sets, as well as speed and range of motion.

The Main Unit size is 90x37x41mm, and it has a battery life of up to 2 years during normal operation. Batteries can easily be replaced by the gym. The main unit communicates with the observer to transfer workout data.

2 Pictures

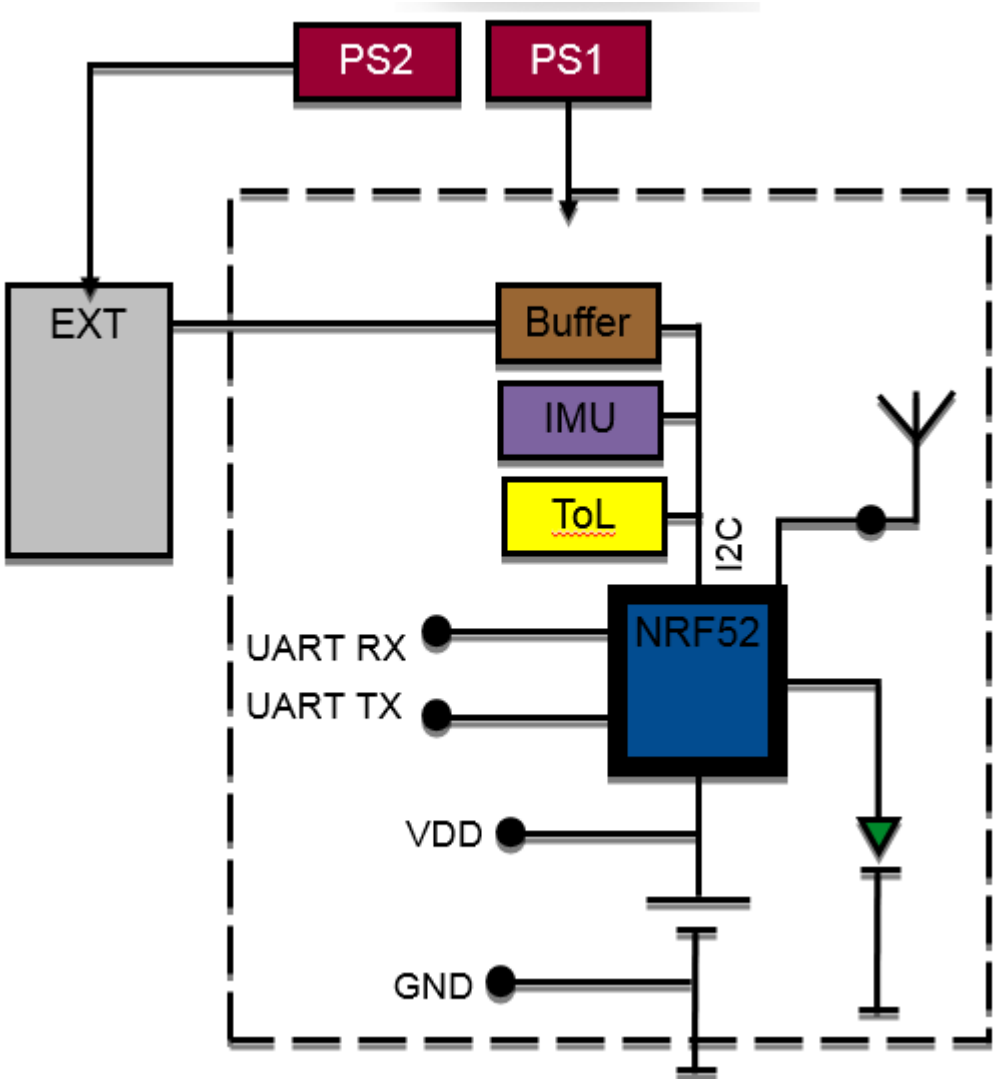
2.1 Main unit

Figur 1 Main unit top view

Figur 2 Main Unit bottom view

Figur 3 Main Unit inside view

3 Block diagram



Figur 4 Main Unit block diagram

4 Main markets

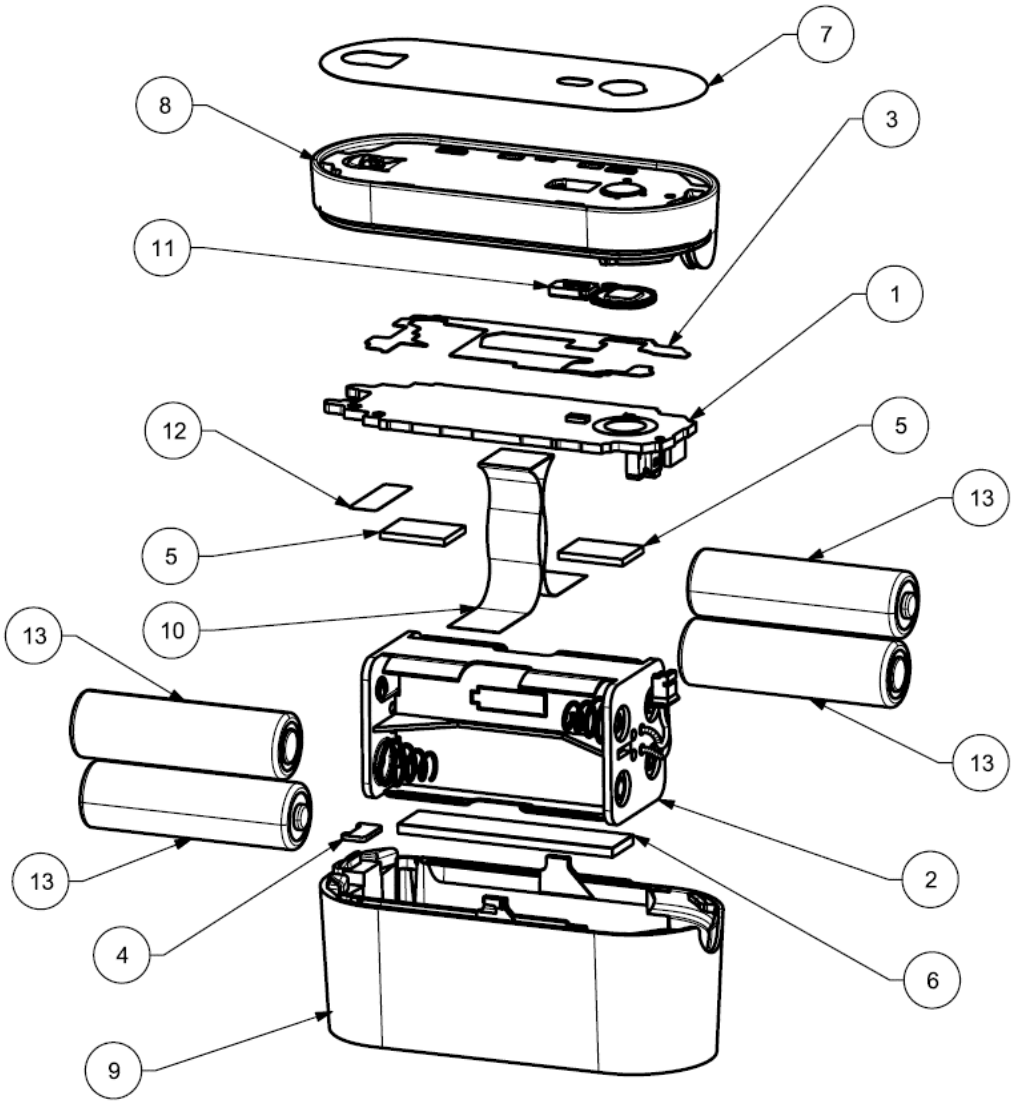
The Main unit is certified for FCC, IC, CE and Japanese market. Other markets can be supported by performing additional local type approval.

5 Environmental data

The normal temperature and humidity operating range of the main unit is conditioned by typical gym environments.
Temperature 10 to 45 degrees Celsius
Humidity 20 % to 80%

6 Mechanics

See chapter **Error! Reference source not found.** for parts descriptions

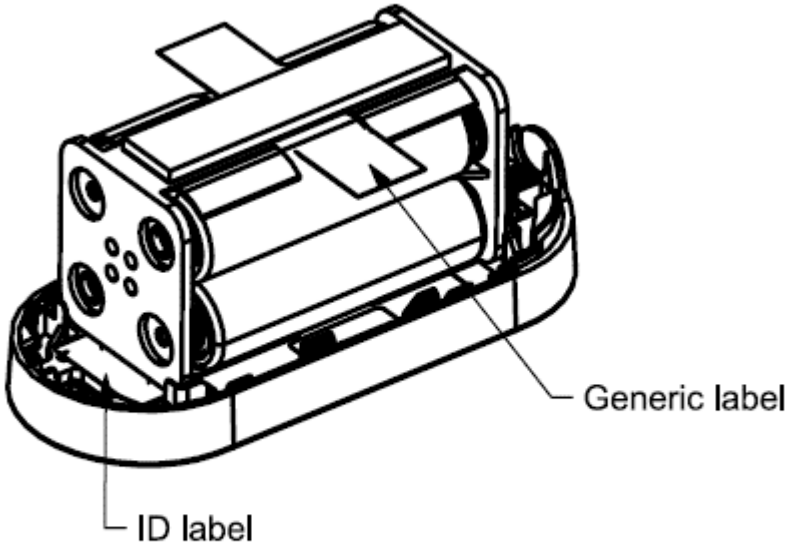


Figur 5 Main Unit mechanical stack up

7 Label sample and location

A generic label with regulatory information is taped inside the main unit.

There is also a smaller ID label with the product serial number



The main unit has two labels (1) a generic label and (2) a label with serial number only

Figure 6 Main Unit generic label

8 FCC 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 no installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will 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 use 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 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.

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.

Changes or modifications not expressly approved by the part responsible for compliance could void the user's authority to operate the equipment. The device can be used in portable exposure condition without restriction.

English:

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 interference, including interference that may cause undesired operation of the device.

French:

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 radio électrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

9 Other

Model number of the main unit
MU

Model name of the main unit
Main Unit

Applicant details Life Fitness

Manufacturer details Life Fitness

END OF THE DOCUMENT