

# DOMYOS CONSOLE 3.2 - TECHNICAL SPECS -



| PROJECT NAME          | CONCEPTION CODE | MODEL CODE |
|-----------------------|-----------------|------------|
| DOMYOS CONSOLE 3.2 EN | 325366          | 8586821    |
| DOMYOS CONSOLE 3.2 CN | 325366          | 8586822    |

## REVISION HISTORY

|            |                                                                                                                                                                               |    |        |
|------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|--------|
| 2020-04-10 | 1. Keyflow update for BIKE 900/FEL 700/R500 SP<br>2. Remove Bluetooth light sensor<br>3. Initial heart value starts from 80                                                   | 12 | LEO LV |
| 2020-02-28 | 1. Add CMIIT_FCC_IC sticker<br>2. Add FCC Statement<br>3. Add IC Statement                                                                                                    | 11 | LEO LV |
| 2019-12-15 | 1. Update Firmware(V 1.1) to connect new E CONNECTED APP,<br>2. New traceability sticker to better identify,<br>3. New Bluetooth Mapping<br>4. Stickers Colour Identification | 10 | LEO LV |
| 2019-08-22 | Add CMIIT ID sticker                                                                                                                                                          | 9  | LEO LV |
| 2019-07-30 | Specification Update for Mass Production V4(Table Page/Keyflow Error Code)                                                                                                    | 8  | LEO LV |
| 2019-07-29 | Specification Update for Mass Production V3(Front Casing/PMMA)                                                                                                                | 7  | LEO LV |
| 2019-07-22 | Specification Update for Mass Production V2                                                                                                                                   | 6  | LEO LV |
| 2019-05-29 | Specification Update for Mass Production                                                                                                                                      | 5  | LEO LV |
| 2019-02-25 | Resistance level keep as 15, adjust Key flow to adapt LCD design                                                                                                              | 4  | LEO LV |
| 2019-01-16 | Update for first prototype                                                                                                                                                    | 3  | LEO LV |

| 2018-12-18 | Remove WATT display/USB charging, update name as console 3.2 | 2        | LEO LV |
|------------|--------------------------------------------------------------|----------|--------|
| 2018-12-13 | ORIGINAL DOCUMENT based on Console 2.1                       | 1        | LEO LV |
| DATE       | DESCRIPTION                                                  | REVISION | AUTHOR |

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# 1. PRODUCT PROFILE

## 1.1. Introducing

**DOMYOS CONSOLE 3.2** is designed for FEB 900/FEL 700/R500 SP, finally assembly in ARCANA. This console is connected thanks to Bluetooth Low energy protocol. This console can connect an APP with Android and IOS devices as to provide a new user experience.



Console 3.2 main features:

- LCD (reversed / Backlight, 127 \* 59 mm) :
  - RPM information (pedalling cadence)
  - KCAL information (calories burnt)
  - SPEED information (Km/h or Mi/h)
  - DISTANCE information (Km or Mi)
  - HR information (Bpm)
  - RESISTANCE LEVEL (1 to 15) separated display in small LCD(40 \* 23 mm)
  - TIME
  - Workout profile (12x8 dots matrix)
- Bluetooth icon controlled ON or OFF by bluetooth through APP
- 5 touch-keys (capacitive membrane). Keys are in white colors.
- 24 programs(6 Calories, 6 Health/Fitness, 6 Tonification / 6 Performance)
- One heart-rate receiver
- One hand-pulse receiver + jack cable
- One chest-belt **NOT** provided with the Console 3.2
- Power by self power system(Control Board from Eway)
- PCBA LED Color: POWER LED **RED**, BLUETOOTH LED **BLUE**
- Tablet click color is BLUE for Fitness Bike
- LCD cover is shiny(PMMA)

## 2. Standards of CONSOLE 3.2

DOMYOS CONSOLE CONCEPTION VALIDATION PLAN



CONSOLE PVC.xlsx

Reports are inside PACE

## 3. USER-keyflow and Machine-Keyflow

User-keyflow is the main keyflow used by end-customer.



20200410\_keyflow\_  
bike900.pdf



20200410\_keyflow\_  
FEL700.pdf



20200410\_keyflow\_  
R500 SP.pdf

### DECATHLON CONTROL

Test can be done using a bike or jig simulator proposed by Supplier.

Functional test of the user-interface of the console :

- 1) Displays are working and information values are changing during a training session. (Kcal, distance, time, rpm, BPM (*when active*), resistance level, WATT)
- 2) Each touch-key is activate during a finger touch contact < 1 second
- 3) Servo-motor is turning when increase or decrease a resistance level (0 to 15)

### ACCEPTANCE CRITERIA

Main functions are ok according to key flow specification

Machine-keyflow is a ghost menu for maintenance. This menu can check :

1. The firmware version of the console
2. The hardware version of the console
3. Console total time of use
4. Console total km of use
5. Console serial number (see traceability paragraph)

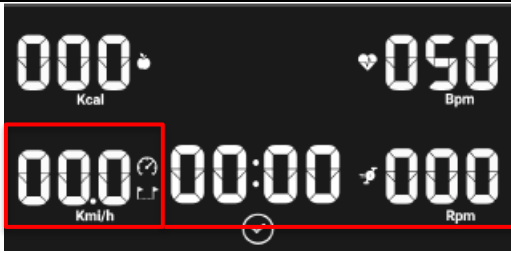
Machine-keyflow has also choice menu where end-user can change distance unit (from Km to Miles) and Button Sound ON/OFF.

### DECATHLON CONTROL

Firmware version is **1.1** (enter inside maintenance ghost menu)

Hardware version is **1.0** (enter inside maintenance ghost menu)

By default, console distance unit is Km, Button Sound is ON.



Display distance then speed every 5s(default)

Toggle-switch selector on the rear-casing is on VM

### ACCEPTANCE CRITERIA

Firmware and Hardware version are ok

Default setting is ok

Traceability code from firmware is coherence with traceability sticker on casing, the information is right

## 4. Electronic hardware

### 4.1. Electronic schematic



CONSOLE3.2  
Schematic Design.pdf

### 4.2. PCBA



CONSOLE 3.2 PCB  
Layout.zip

### 4.3. Bill of Material



CONSOLE 3.2 BOM.xls

### 4.4. Main EE components



HR7P201.PDF



NUC029.pdf



Small Back Light  
Board.pdf

### 4.5. Hand-pulse cables

## DECATHLON CONTROL

**Using Supplier hand-pulse sensor kit. For information hand-pulse monitoring is less accurate than chest-belt monitoring.**

### **Without tablet and smartphone put on the console tablet holder :**

Testing method as end-user case :

- put your hands on hand-pulse sensors jig
- waiting 30 seconds to get a stabilized value
- after these first 30 seconds, check if value fluctuation is under +/- 10bpm during 30 more seconds.

### **With tablet and smartphone put on the console tablet holder :**

Testing method as end-user case :

- put your hands on hand-pulse sensors jig
- waiting 30 seconds to get a stabilized value
- after these first 30 seconds, check if value fluctuation is under +/- 10bpm during 30 more seconds.

## ACCEPTANCE CRITERIA

**Heart-rate is ok with hand-pulse sensors**

## **5. Mechanical hardware**

### **5.1. 2D drawings of consoles parts and assembly**

  
Console\_3\_2  
Mechanical BOM.xlsx

  
Console 3.2 explosion  
view.pdf

  
Console 3.2 Front  
Casing 2D.pdf

  
Console 3.2 PMMA  
2D.pdf

  
Console Inner Box  
Drawing.pdf

  
Console Carton Box  
Drawing.pdf

### **5.2. Datasheet of the plastic parts**

#### **TPR :**

  
TPR Data sheet.doc

  
TPR MSDS.doc

#### **Protection film:**

  
PET Data Sheet.doc

  
PET MSDS.xlsx

#### **Casing:**

  
ABS  
AG15E1-E4B23AP.pdf

  
ABS MSDS.pdf

#### **Membrane (PMMA):**



PMMA Data Sheet.doc



PMMA MSDS.doc

### 5.3. Elastic strap (for the tablet holder hook system) 2D drawing



Console 3.2 Strap  
2D.pdf

### 5.4. Membrane artwork and cosmetic



20190715\_Membran  
e Artwork and Protec

#### Important:

1. Words are in Chinese for China Version
2. Protection film is blank for China Version

#### Phone / Tablet Sticker



Console 3.2 Phone  
Sticker 2D.pdf

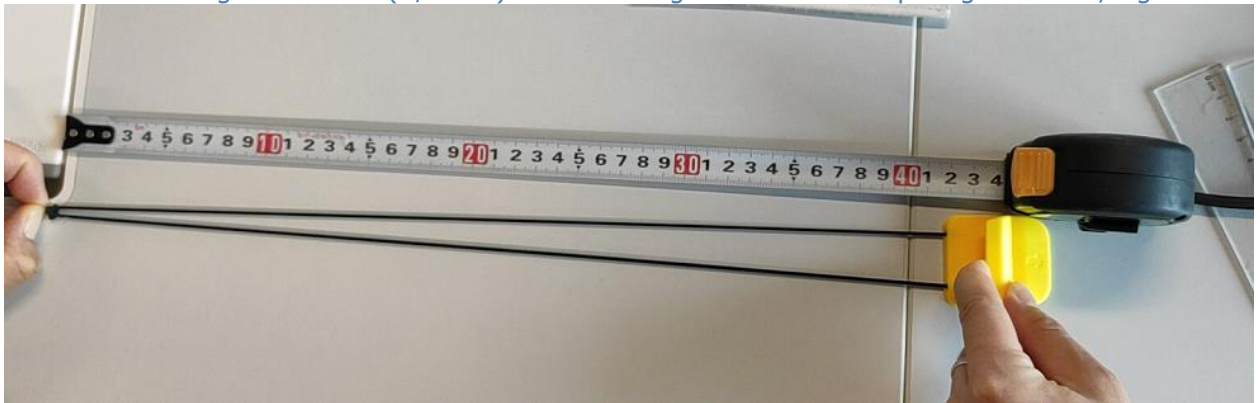
## DECATHLON CONTROL

### Cosmetic :

- 1) Few scratches on protection film surface
- 2) Protection film has no fold, no tear
- 3) No scratches on PMMA surface
- 4) No trace of glue on the edges of rubber and PMMA
- 5) No trace of incrusted dust on plastic casing
- 6) PMMA print is correct and clean (no drip, print is uniform, compliant with artwork)

### Assembly :

- 1) Casing is correctly clipped all around (<1mm of air gap between front and rear plastic casing)
  - 2) PMMA stickness is correct (example of 4 hours temperature 70°C test)
  - 3) Rubber stickness is adjusted on all edges (<1mm of air gap between rubber edge and plastic casing)
  - 4) Rubber stickness is correct (example of 4 hours temperature 70°C test)
  - 5) Elastic strap is correctly fixed, the plastic hook can cover a IPAD 10" when in landscape
- The maximum lenght is 420mm (+/-5mm) after streching with a maximum pulling-force of 3,1Kg



## ACCEPTANCE CRITERIA

This control is very subjective, trust on QPL high requirement to validate or not.

Rubber Pad is made by Double Injection, Decathlon has paid Double Injection Mold, QPL should make sure production is using double injection.

## 6. Traceability

### Traceability sticker : console serial number

Format: EWC32ELEYYWxxxxxx or EWC32ELCYWxxxxxx

Example: EWC32ELE17W0300001 (the 1st console produced in week 03/2017) (EW = Eway, C32= Console 3.2, BKE = Bike Europe or BKC = Bike China)

LEO LV 20191215 **Update:**

Format: EWC321ELEYYWxxxxxx or EWC321ELCYWxxxxxx

Example: EWC321ELE17W0300001 (the 1st console produced in week 03/2017) (EW = Eway, C321= Console 3.2.1, BKE = Bike Europe or BKC = Bike China)



ID of the console for Bluetooth connection

internal Supplier production sticker

### DECATHLON CONTROL / ACCEPTANCE CRITERIA

**Stickers are ok, traceability is ok**

**Console serial number inside firmware must be compliant with serial number on traceability sticker (checking with Machine Keyflow menu)**

#### **Stickers Colour Identification for Anti Mixing:**

**Elliptical** 椭圆机

**Example**

**FEL 520 / CONSOLE 3**

**Bike** 健身车

**Example**

**EB900 / CONSOLE 3.2**

**Rower** 划船器

**Example**

**R120 / CONSOLE 1.1**

## 7. Bluetooth specification

### 7.1. Technical specification under this [\[LINK\]](#)

#### DECATHLON CONTROL

Connect the Console 3.2 with Supplier testing APP with Android tablet AND Ios tablet. Activating one or two functions to check if bluetooth is working. Not necessary to check all the functions.

#### ACCEPTANCE CRITERIA

Bluetooth connection with IOS and Android are ok

Bluetooth Mapping as below(Leo LV **update** on 20191215)



20191215\_LCD  
Design File & BTH MAI

| Console                   | Bluetooth code   |
|---------------------------|------------------|
| <b>DOMYOS CONSOLE 3.2</b> | Domyos-BIKE-xxxx |

| Console                      | EquipmentModel |
|------------------------------|----------------|
| <b>DOMYOS CONSOLE 3.2</b>    | 3200001        |
| <b>DOMYOS CONSOLE 3.2 CN</b> | 3200002        |

#### DECATHLON CONTROL / ACCEPTANCE CRITERIA

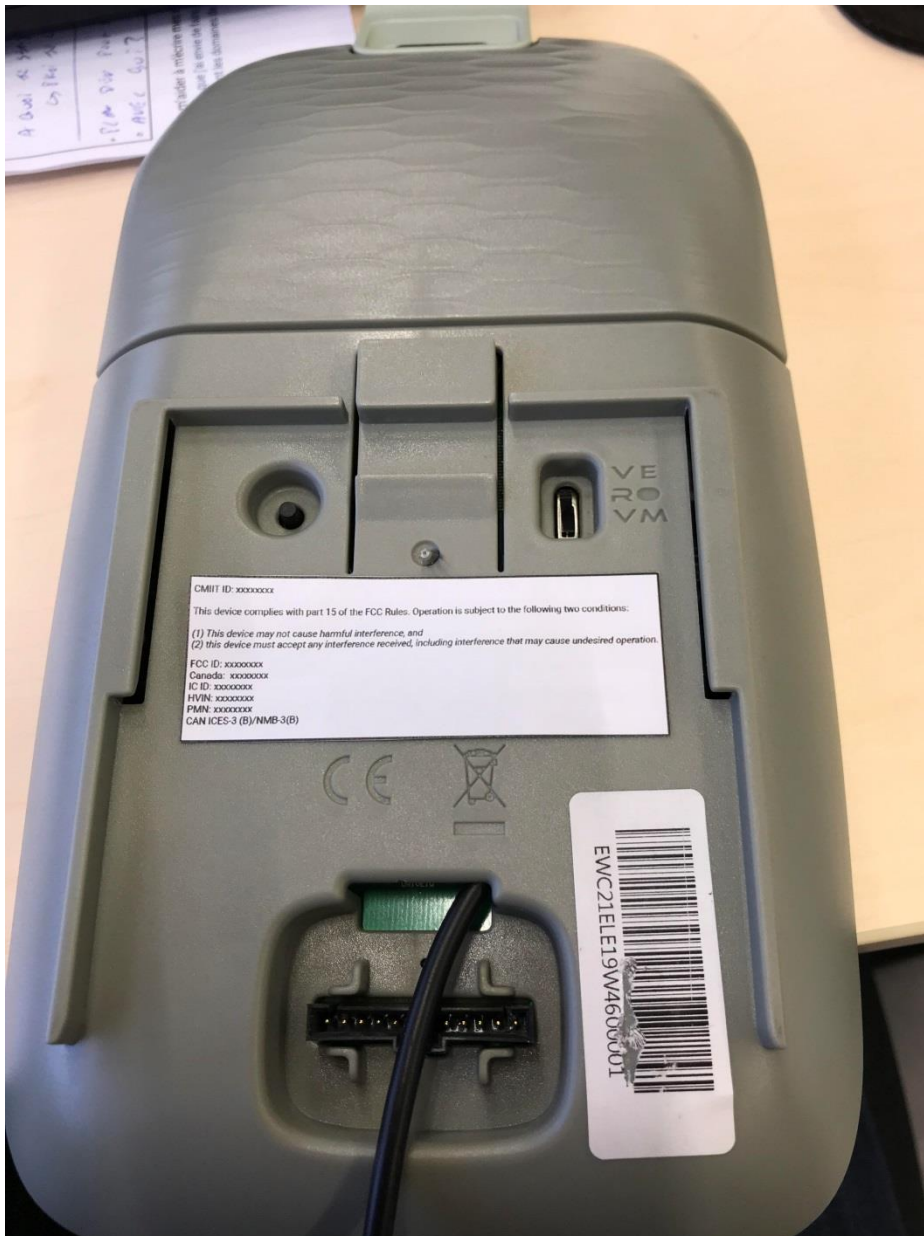
Check the Bluetooth code written on sticker corresponds to the console Bluetooth code pairing.

Check the EquipentModel Bluetooth code is correct (using Supplier testing App)

#### Important:

1. Supplier APP is using the same Bluetooth SDK as inside the end-user APP. The SDK is the Bluetooth link between APP and Console. Supplier APP is reliable to control on production.
2. Supplier should ensure Bluetooth OAT function for any future firmware upgrade.

## 7.2. CMIIT\_FCC\_IC Label



**CMIIT ID check in this [LINK](#)**

## CMIIT\_FCC\_IC Label Documents



SRRC\_ID-FCC\_ID-IC  
\_ID Label - CONSOLE

**CMIIT ID: 2020DP1276**

## 7.3. FCC Statement

FCC 15.21 Information to user

Please note that changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

FCC 15.105 Information to the user (Class B)

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.
- 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 equipment complies with radio frequency exposure limits set forth by the FCC for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 15 mm between the device and the user or bystanders.

This device must not be co-located or operating in conjunction with any other antenna or transmitter.

#### **7.4. IC Statement**

IC RSS-Gen 8.4 User Manual Notice for Licence-Exempt Radio Apparatus

This device contains licence-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's licence-exempt RSS(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.

L'émetteur/récepteur exempt de licence contenu dans le présent appareil est conforme aux CNR d'Innovation, Sciences et Développement économique 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;
- (2) L'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

This equipment complies with radio frequency exposure limits set forth by the Innovation, Science and Economic Development Canada for an uncontrolled environment.

This equipment should be installed and operated with a minimum distance of 15 mm between the device and the user or bystanders.

This device must not be co-located or operating in conjunction with any other antenna or transmitter.

Cet équipement est conforme aux limites d'exposition aux radiofréquences définies par la Innovation, Sciences et Développement économique Canada pour un environnement non contrôlé.

Cet équipement doit être installé et utilisé avec un minimum de 15 mm de distance entre le dispositif et l'utilisateur ou des tiers.

Ce dispositif ne doit pas être utilisé à proximité d'une autre antenne ou d'un autre émetteur.