

# DOMYOS CONSOLE 2.1

## - TECHNICAL SPECS -



CONSOLE NAME	CONSOLE CODE	MODEL NAME	MODEL CODE
CONSOLE 2.1 (EUR)	8520725	BIKE 500	8503088
CONSOLE 2.1 ESSENTIAL PL	8500741	E ESSENTIAL + Elliptical	8396879
CONSOLE 2.1 BLUETOOTH CN	8520729	EB 500 SP NORM CN	8520716
CONSOLE 2.1 (EUR)	8528633	EL 120	8484396

## REVISION HISTORY

2020-04-13	1. Add CMIIT_FCC_IC sticker 2. Add FCC Statement 3. Add IC Statement	7	Leo LV
2020-01-08	1. Firmware version/Equipment ID update for EWAY and Chang Yow 2. Stickers Colour Identification 3. Update after DPP Spec Review	6	Leo LV
2019-08-22	Add CMIIT ID sticker	5	Leo LV
2019-06-24	Update specification for EWAY Duplication	4	Leo LV
2017-05-16	Hand-pulse receiver plug and wire change	3	Guillaume DIVRECHY
2017-04-04	Adding Domyos logo on membrane Remove chest-belt (not supplied with console 2.1) Firmware version is 1.1	2	Guillaume DIVRECHY
2017-02-01	Adding CN artwork (page 7) + Traceability sticker for CN (page 9)	1	Guillaume DIVRECHY
2016-12-07	ORIGINAL DOCUMENT	0	Guillaume

DATE	DESCRIPTION	REVISION	DIVRECHY AUTHOR
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# 1. PRODUCT PROFILE

## 1.1. Introducing

Technical requirements of Domyos middle of range Console: **DOMYOS CONSOLE 2.1**

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 2.1 main features :

- 1 LCD (reversed / Backlight) :
  - 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)
  - TIME
  - Bluetooth icon controlled ON or OFF by bluetooth through APP
  - Workout profile (16x8 dots matrix)
- 5 touch-keys (capacitive membrane). **Keys are in white colors.**
- One heart-rate receiver
- One hand-pulse receiver + jack cable

## 2. Standards of CONSOLE 2.1



CONSOLE PVC  
20190516.xlsx

**Reports are inside PACE**

## 3. USER-keyflow and Machine-Keyflow

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



console21\_6.pdf

### DECATHLON CONTROL

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

**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)**
- 2) **Each touch-key is activate during a finger touch contact < 1second  
Servo-motor is turning when increase or decrease a resistance level (1 to 15)**
- 3)

### ACCEPTANCE CRITERIA

**Main functions are ok**

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 traceabilty paragraph)

Machine-keyflow has also a unit-choice menu where end-user can change from Km to Miles.



CONSOLE 21  
machine menu.pdf

### DECATHLON CONTROL

**Firmware version is X.X (enter inside maintenance ghost menu)**

**X.X=1.3 for Chang Yow Production**

**X.X=1.0 for Eway production**

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

**By default, console unit is Km (use console with bike of bike-simulator jig)**

**Toggle-switch selector on the rear-casing is according to actual FG model**



### ACCEPTANCE CRITERIA

**Firmware and Hardware version are ok**



**Unit is Km**

## 4. Electronic hardware


### 4.1. Electronic schematic

 Console 2.1 Schematic.pdf  
 CY:  CONSOLE2.1 shchimatic.pdf  
 EW:










### 4.2. PCBA

 Console 2.1 PCBA update\_20170512.pdf  
 CY:  Console2.1 PCBA.pdf  
 EW:

### 4.3. Bill of Material

 Console 2.1 BOM.xls  
 CY:  console2.1 BOM.xls  
 EW:

### 4.4. Main EE components

CY:  BM70BLE01FC2.pdf  BS81xA-xv130.pdf  HT1625.pdf  LCD Drawing.pdf  PIC18F66K90.pdf  
 EW:  ET6625.pdf  HR7P201.PDF  NUC029.pdf  LCD.pdf

### 4.5. Hand-pulse cables

 Hand Pulse cable.pdf

#### 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 :

- a) put supplier signal generation JIG on hand-pulse sensors jig
- b) waiting 30 seconds to get a stabilized value
- c) after these first 30 seconds, check if value fluctuation is under +/- 10bpm during 30 more seconds.

(hand-pulse technology is not precise, just for marketing)

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

Testing method as end-user case :

- a) put supplier signal generation JIG on hand-pulse sensors jig
- b) waiting 30 seconds to get a stabilized value
- c) after these first 30 seconds, check if value fluctuation is under +/- 10bpm during 30 more seconds.

(hand-pulse technology is not precise, just for marketing)  
 Test has to be done placing the tablet on its different 4 faces.

### ACCEPTANCE CRITERIA

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

## 5. Mechanical hardware

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



### 5.2. Datasheet of the plastic parts

#### Rubber :



#### Protection film :



#### Casing :



#### Membrane :



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



### 5.4. Membrane artwork and cosmetic



Console 2.1  
Protection film.pdf

**Important : protection film is blank for ASIA version**



Console 2.1  
Membrane.pdf



ArtworkConsole2.1\_  
V03.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 incrustrated 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 length is 420mm (+/-5mm) after stretching with a maximum pulling-force of 3,1Kg



## ACCEPTANCE CRITERIA

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

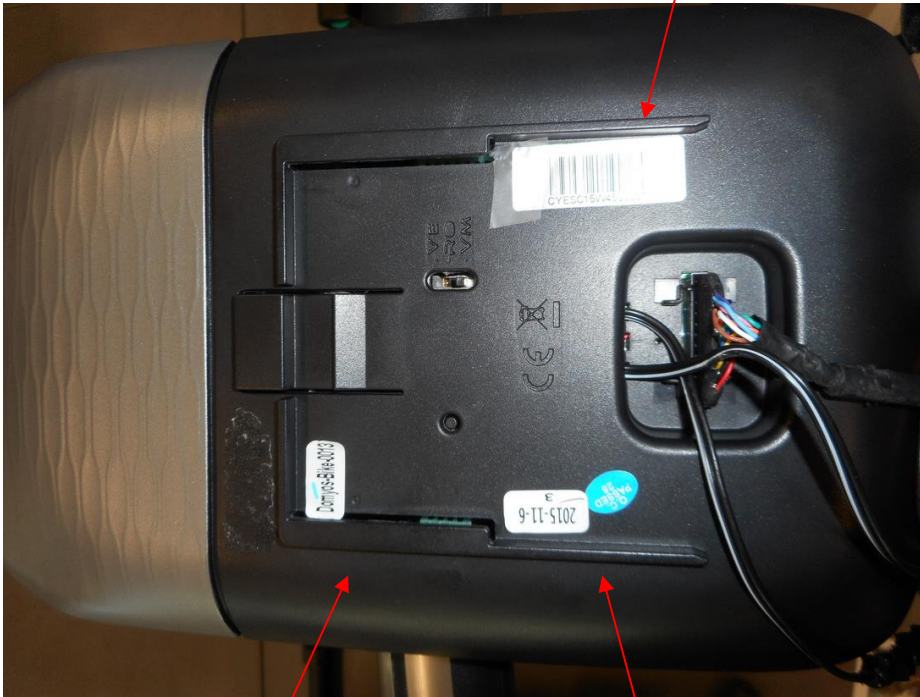


## 6. Traceability

### **Traceability sticker : console serial number**

Format: EWC21ELEYYWWxxxxx or EWC21ELCYYWWxxxxx

example : CYC21ELE17W0300001 (the 1st console produced in week 03/2017) (CY/EW = chang-yow/EWAY, C21= Console 2.1, ELE = Elliptical Europe or ELC = Elliptical China, BKE = Bike Europe or BKC = Bike China)



ID of the console for Bluetooth (if have) internal Supplier production sticker(EW needs to make it different for easy recognition)

### DECATHLON CONTROL

Stickers are all here and stuck in the right position

**Important: For Chinese Version, CMIIT ID sticker has to be pasted near Bluetooth Name Sticker**

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

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

### ACCEPTANCE CRITERIA

Stickers are ok, traceability is ok

**Stickers Colour Identification for Anti Mixing:  
(Logic: Sticker colour same as Phone clip colour)**

Elliptical 椭圆机	Example	<b>FEL 520 / CONSOLE 3(中文/英文) ,颜色 102C</b>
Bike 健身车	Example	<b>EB900 (VM900) / CONSOLE 3.2(中文/英文) 颜色 2200c</b>
Bike 健身车	Example	<b>EB500 (VM6P) / CONSOLE 2.1(中文/英文) 颜色 2200c</b>
Elliptical 椭圆机	Example	<b>EI120 / CONSOLE 2.1(中文/英文) 颜色 347C</b>
Rower 划船器	Example	<b>R120 / CONSOLE 1.1(中文/英文)颜色 185C</b>

Sticker size: 35mm\*20mm, on top cover of console box

## 7. Bluetooth specification

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

#### DECATHLON CONTROL

Connect the Console 2.1 with 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

Console	Bluetooth code
<b>DOMYOS CONSOLE 2.1</b>	Domyos-EL-xxxx / Domyos-BK-xxxx

Finish Goods	Console	Manufactory	EquipmentModel
<b>Elliptical e-essential +</b>	<b>DOMYOS CONSOLE 2.1</b>	Chang Yow	2100001
	<b>DOMYOS CONSOLE 2.1 CN</b>		2100002
<b>Bike 500 SP</b>	<b>DOMYOS CONSOLE 2.1</b>	Chang Yow	2100003
	<b>DOMYOS CONSOLE 2.1 CN</b>		2100004
<b>Bike 500 SP</b>	<b>DOMYOS CONSOLE 2.1</b>	EWAY	2100005
	<b>DOMYOS CONSOLE 2.1 CN</b>		2100006

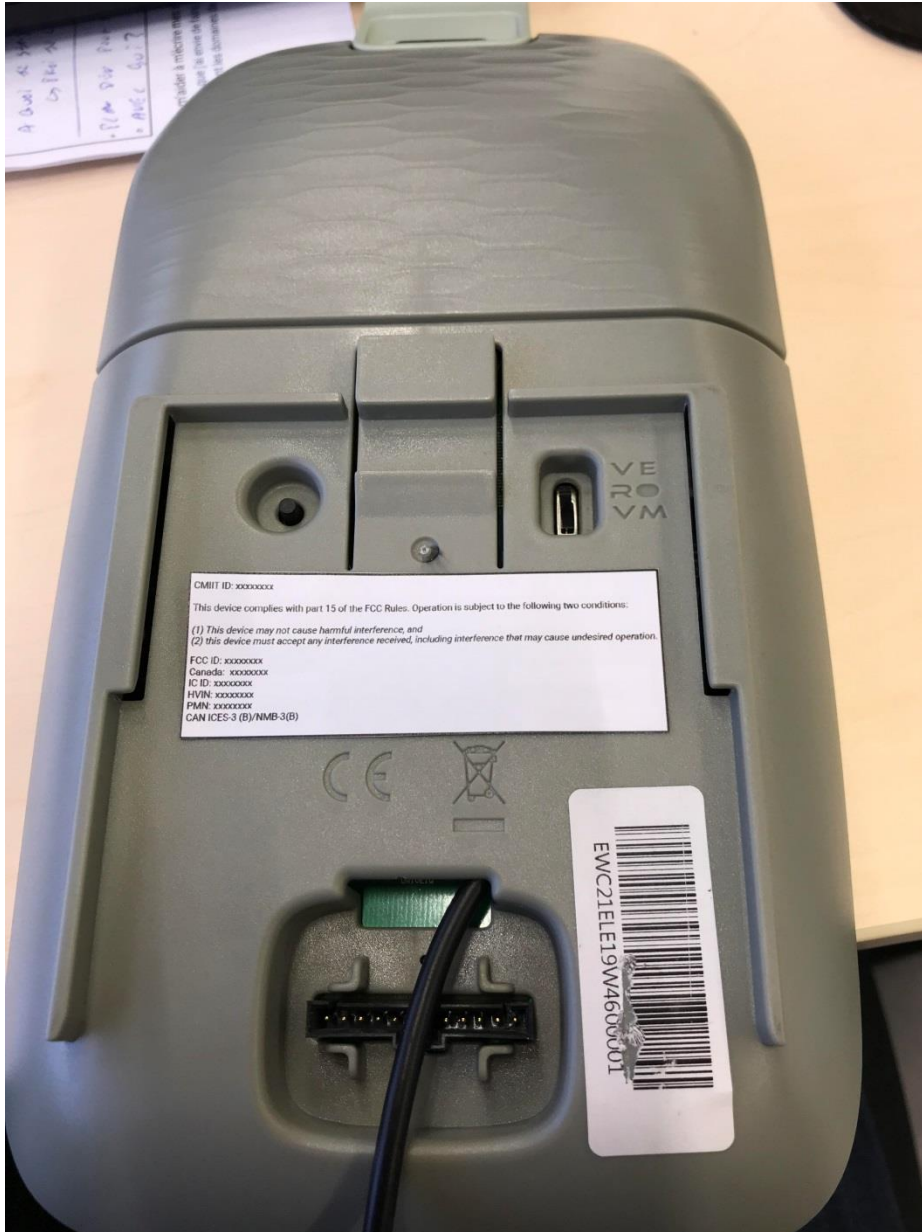
#### DECATHLON CONTROL

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

Check the EquipmentModel bluetooth code is correct (using CY testing App)

[NOTE] EWAY version doesn't have light sensor to detect placement of Phone/Tablet for cost saving, agreed by Product Manager.

## 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.