

User Manuel



Lugdosphere BibraxOne H2



Summary



lugdosphère

- 1 Overview
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- 4 Drope base screens
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Visual indication





Overview

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Icones ...



Bluetooth



The drop base WiFi Network



WiFi/HotSpot Network



Cloud



Important Point



Risk of electric shock



Remote device with a WiFi antenna (computer, smartphone or tablet running Apple, Android or Windows)



Drop Base / Dropper : Smart acquisition center to control falls, record impact data and stream Lugsoft WebApp



Head Form HIC - gmax. Embarks a triaxial accelerometric system

infos

Information details

You can also inspect...

Parkours

Free Runner develops the art of urban displacement. Specific equipment is now being built. Their floors must have cushioning features, inferior to playgrounds because the public is not the same, but must be checked in accordance with the principles of EN 16899

<https://www.lugdosphere.fr/domaines-dactivites/>





Overview





Preamble

Hello,

You have received or will soon receive your new HIC and gmax test device : The BibraxOne H2 Lugdosphere,

We are very happy to present it to you and we would like to thank you for your trust.

When you read this booklet, you'll find out all the features of our H2 and how to take full advantage of it.

With its new on-board technology and numerous accessories, we are sure that the innovation that drives us will follow you in your daily life on site.

Friendly

A stylized signature of Silvain Marvié, consisting of a horizontal line with two vertical strokes extending downwards from it.

Silvain Marvié

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Safety and health first!

Safety and risk prevention, especially for children, is one of the reasons for our commitment. It is important to preserve future generations.





Getting started





At the opening

You can start by loading your devices :



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Don't reverse - Risk of breakage



A simple system ...



1. Impact data goes back from the head to the dropper via Bluetooth.
2. The dropper records impact data in physical memory.
3. The Lugsoft WebApp in the dropper process raw data and displays live results.

Any device with a WiFi card can connect to Lugsoft via the dropper's wifi network. Ex: LU2050XX.



The WiFi network of the dropper does not give access to the internet but to Lugsoft.

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Your device will be able to have access to internet with data.

1. The Lugsoft WebApp will accompany you in connecting the dropper to a wifi network that can be the hotspot of your mobile phone or your internet box.
2. Once your dropper has internet with data, the device connected to the dropper have access to internet through it.
3. An automatic backup of your impact data and inputs in Lugsoft is performed as soon as your dropper is connected to the internet via a hotspot or your internet network.

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You can also check...

Toys

The "toy" standard EN71-8 describes testing of domestic swing elements to determine the maximum acceleration value of the child's head. The Lugdosphere equipped with its swing kit responds perfectly.

<https://www.lugdosphere.fr/domaines-dactivites/>



Iugdosphère



First use



lugdosphère



Start your Dropper

Bip, bip ...

1 - Turn on your dropper by pressing the button and wait for the beeps! (38 sec)



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2 - Connect with your computer, phone or tablet to the dropper via its Wi-Fi network (SSID - LU2050XX)

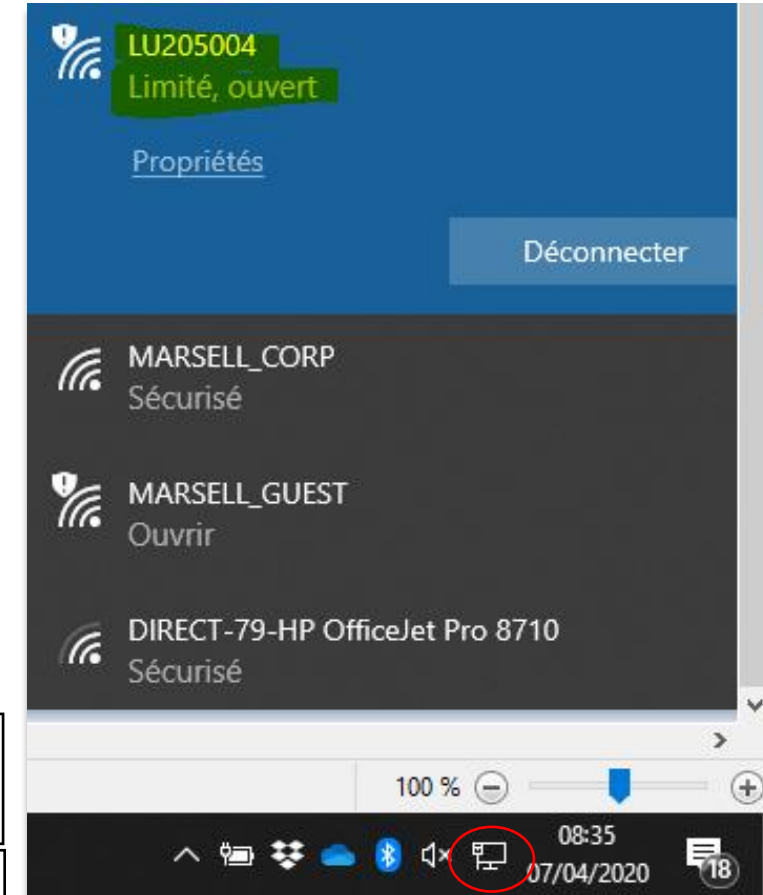


Nota :
No password requested? That's normal!

 From now on your PC must always be connected in Wi-Fi to your dropper.

 The network is limited: it does not give access to the internet ... But you will benefit from the internet of your box via our H2 dropper who will act as a repeater in the following stages!

 If you use a smartphone: do not agree to switch to the mobile network to have access to the internet if it asks you.



Example of connecting with Windows10

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Start your HIC head...

3 - Turn on your HIC head by placing it on its base and wait for auto calibration and automatic drop pairing via Bluetooth.

4 - To browse the menu of head, refer to the screen chapte of the head. You need to get the following screen:



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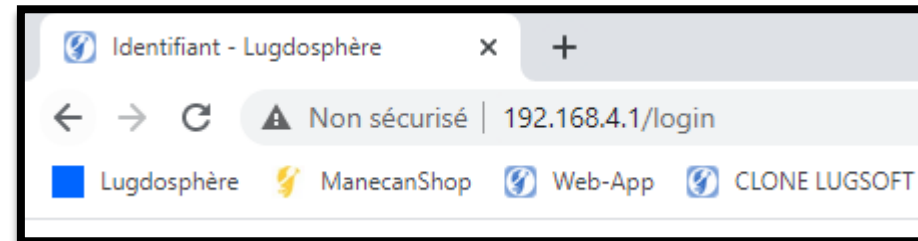
Connect to Lugsoft ...

5 – In your browser copy and paste the following address in the address bar:

192.168.4.1

You will arrive directly on the login page

Nota : We recommend the use of [Google Chrome](#) to work with our WebApp Lugsoft



Nota : You can find this address on the dropper's screen

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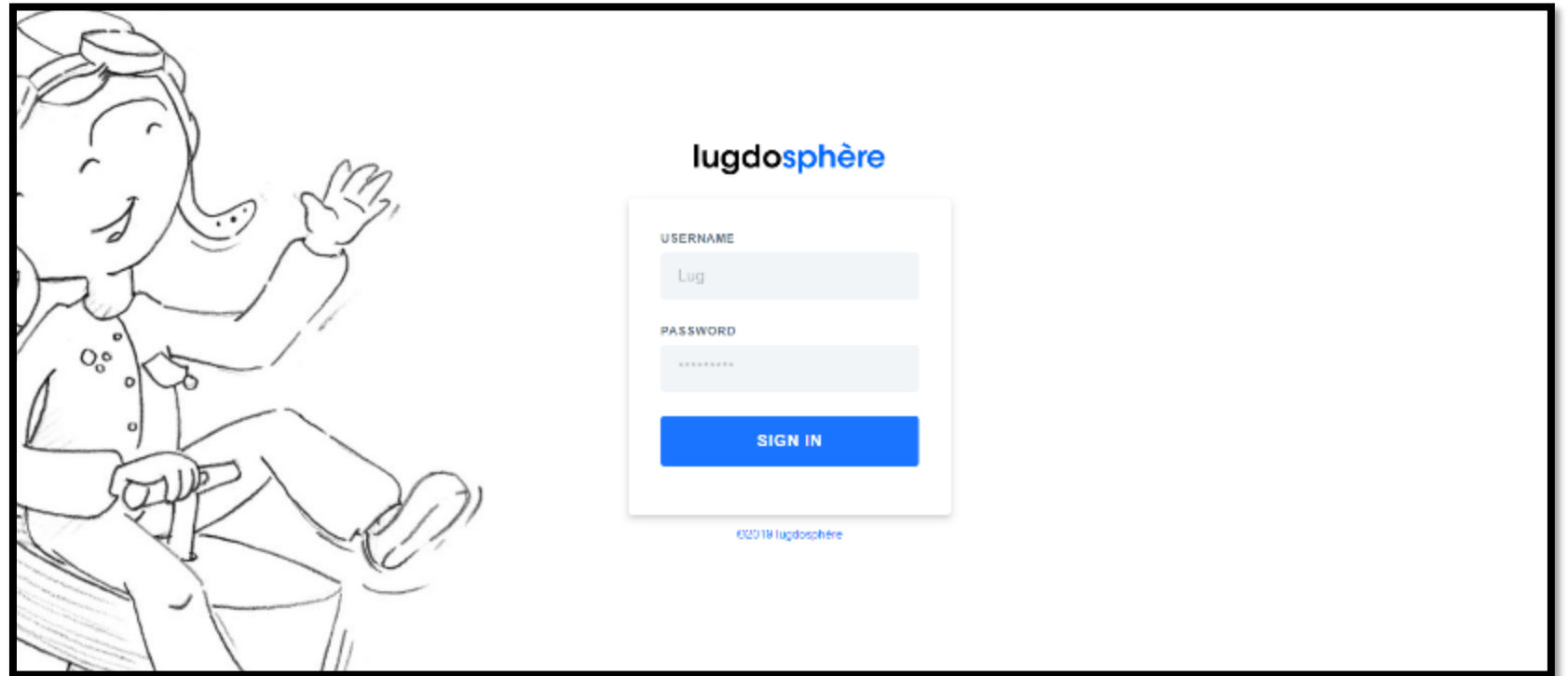
General



We advise you to add to your favorites the website that will open: it's our WebApp Lugsoft



Connect to Lugsoft ... Connection page



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Connect to Lugsoft ...

Scan wifi

6 – Now that you're on the login page: Click "Connect to Wifi"

7 – Click "Scan"

A screenshot of the lugdosphère login page. The page has the lugdosphère logo at the top. Below it are two input fields: "USERNAME" with the text "test" and "PASSWORD" with four dots. A blue "SIGN IN" button is below the password field. At the bottom, there is a link "Connect to Wifi" circled in red. The footer says "@2019 lugdosphère."A screenshot of the Wifi connection screen. The title is "CONNECT LARGUEUR TO NETWORK Wifi". There are two input fields: "SSID" with the text "MyBox-8327" and "PASSWORD" with the text "1AE4DA87303DE12FE". A blue "CONNECT" button is below the password field. At the bottom, there is a blue "Scan" button circled in red.



Connect to Lugsoft ...

Scan wifi

8- Select your network from the drop-down list and enter your login code

The screenshot shows a web interface for connecting to a network. It features a dropdown menu for SSID with 'MARSELL_CORP' selected and circled in red. To the right is a password field labeled 'MOT DE PASSE'. Below these are 'CONNECT' and 'Scan Your Network' buttons. At the bottom is a table of detected networks.

| SSID | Signal level |
|------------------|--------------|
| MARSELL_GUEST | 42 |
| MARSELL_CORP | 43 |
| Flavien B Iphone | 43 |

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Connect to Lugsoft ...

Scan wifi

9 - Click "Connect."

Connection request starts when the button switches from CONNECT to CONNECTING

It is effective when the CONNECTING button to CONNECTED in green

CONNECTING

CONNECTED

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Connect to Lugsoft ... Connexion Licence

- 10 – Click on the Lugdosphere logo to return to the login page
- 11 – Enter your login and password

username:

HicTest@normenjeu.hic

password:

France69Lug

A screenshot of the Lugdosphère login page. The page has a white background with a black border. At the top, the logo "lugdosphère" is displayed in blue. Below the logo is a white login form with a blue border. The form contains two input fields: "USERNAME" with the text "test" and "PASSWORD" with four dots. Below the fields is a blue "SIGN IN" button. Underneath the button is a link "Connect to Wifi" in blue. At the bottom of the page, there is a copyright notice "©2019 lugdosphère." in blue.

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You can also inspect ...

Trampoline protection

At the same time entertainment, individual sport and collective trampoline is expanding. For these trampolines you will be able to test according to the EN913 standard.

<https://www.lugdosphere.fr/domaines-dactivites/>



Using lugsoft





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Sign in

On the home page: <http://192.168.4.1/login> enter your password and ID.

A screenshot of the lugdosphère login page. The page features the lugdosphère logo at the top. Below the logo, there are two input fields: one for the username labeled 'NOM DE L'UTILISATEUR' with the text 'Lug' entered, and another for the password labeled 'MOT DE PASSE' with asterisks. A blue button labeled 'SE CONNECTER' is positioned below the password field. Underneath the button, there is a link that says 'Se connecter au Wifi'. At the bottom of the page, there is a copyright notice: '©2019 lugdosphère'.

Nota : the first time you use a username/identifier with a dropper you must first connect it to the internet. Refer to the first login step.

lugdosphère



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Home

[Menu « Home »](#)

The screenshot shows the home interface of the lugdosphère V 1.36 application. At the top left is the logo and version number. A green power icon is next to it. A callout bubble points to the 'Menu principal' text. To the right are navigation links for 'Home', 'Settings', and 'Logs', with a globe icon for 'Language choice'. Below the navigation bar, there's a 'New Update' button and a callout bubble that says 'An update is available!'. On the left, there are buttons for 'production_default' and 'Normenjeu'. On the right, there's a phone number '+33 (0) 4 28 87 00 33' with a callout bubble that says 'ASS phone number'. The main content area features a blue-bordered box containing images of a cylindrical sensor and a handheld device labeled 'CGV'. To the right of this box is a table with mission statistics. Below the table is a large blue 'NEW MISSION' button. At the bottom, there's a 'PAST MISSIONS' section with a table listing previous missions.

| MISSIONS | 1 | SITES TESTED | 1 |
|----------|---|------------------|---|
| IMPACTS | 0 | MAX. GMAX | - |
| MAX. HIC | - | TIMES ABOVE 250G | 0 |

| GPS | Date | Mission | Site | Client | Method | Rep... | Dup... |
|-----|-------------------|------------|------------|----------|--------|--------|--------|
| | | | | | | | |
| | Il y a une minute | MISSION ID | PLAYGROUND | CUSTOMER | 1 | | |



Set up automatic reports "Settings/Report" menu

lugdosphère
V 1.37.1 beta

Accueil Réglages Journal

New Update 4.21 m 25 °C 56 % 54 %

Account Report Wifi

PERSONALISE YOUR REPORTS
Report

LOGO OF YOUR COMPANY

Drag & Drop your picture or [Browse](#)

FOOTNOTE

PERSONNALIZED SECOND PAGE

Hz

Here you can add personalized content for a second page of the reports

SAVE MODIFICATIONS

Add your logo

Set up your footnote

Opportunity to create a "page two" presenting your: company, methodology, expression of results...

Overview

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Set up automatic reports "Settings/Count" menu

The screenshot shows the 'lugdosphère' app interface. At the top, the app name and version 'V 1.37.1 beta' are displayed. The navigation bar includes 'Accueil', 'Réglages', and 'Journal'. A secondary menu is visible with three options: 'Compte' (highlighted in blue), 'Rapport', and 'Wifi'. The 'Compte' screen is titled 'Compte' and contains a section for 'INFORMATIONS UTILISATEUR'. This section includes two columns of input fields: 'NOM DE L'UTILISATEUR' with the value 'fberut@normenjeu.fr' and 'TITRE PROFESSIONNEL' with the value 'Alexis SANCHEZ'. Below these are two more columns: 'MOT DE PASSE' and 'CONFIRMER LE MOT DE PASSE', both containing masked text. A 'Déconnexion' button is located at the bottom left, and a large blue 'ENREGISTRER LES MODIFICATIONS' button is at the bottom right. Three callout boxes provide additional context: one points to the 'Secondary menu' at the top, another points to the 'TITRE PROFESSIONNEL' field with the text 'Who's doing the test? Appears on the report's first page', and a third points to the 'MOT DE PASSE' field with the text 'User change. Log out/log in'.

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Connect or reconnect

On the home page: <http://192.168.4.1/login> enter your password and ID.

A screenshot of the lugdosphère login page. The page has a white background with a black border. At the top, the logo "lugdosphère" is displayed in blue. Below the logo, there are two input fields: "NOM DE L'UTILISATEUR" with the text "Lug" and "MOT DE PASSE" with asterisks. A blue button labeled "SE CONNECTER" is positioned below the fields. Underneath the button, there is a link "Se connecter au Wifi" and a copyright notice "©2019 lugdosphère" at the bottom.

Note: the first time you use a username with a dropper you must first connect it to the internet. Refer to the first connection step.

lugdosphère



Home Focus on indicators

The screenshot shows the 'Indicators' screen of the lugdosphère V 1.36 application. At the top, there is a power icon, a 'New Update' button, and a status bar with various indicators: altitude (-0.01 m), temperature (-255 °C), humidity (-1%), a green plant icon, Wi-Fi, and battery (47%). Below the status bar, there are three buttons: 'production_default', 'Normenjeu', and a phone number '+33 (0) 4 28 87 00 33'. The main content area features a blue-bordered box containing images of a cylindrical sensor and a handheld device labeled 'CGV'. To the right of this box is a table with mission statistics:

| | | | |
|----------|---|------------------|---|
| MISSIONS | 1 | SITES TESTED | 1 |
| IMPACTS | 0 | MAX. GMAX | - |
| MAX. HIC | - | TIMES ABOVE 250G | 0 |

Below the table is a prominent blue 'NEW MISSION' button. At the bottom of the screen, there is a 'PAST MISSIONS' section with a table:

| GPS | Date | Mission | Site | Client | Method | Rep... | Dup... |
|-----|-------------------|------------|------------|----------|--------|--------|--------|
| | Il y a une minute | MISSION ID | PLAYGROUND | CUSTOMER | 1 | | |

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Operating indicators Height ...

Drop height for
position indication

2.94 m



24 °C



58 %



55 %



Overview

First use

Using lugsoft

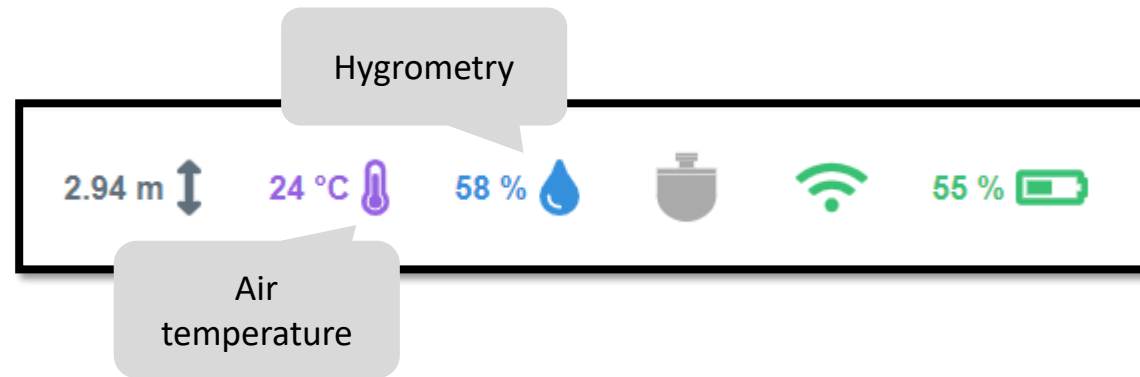
Drop base screens

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Operating indicators Environment conditions ...



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First use

Using lugsoft

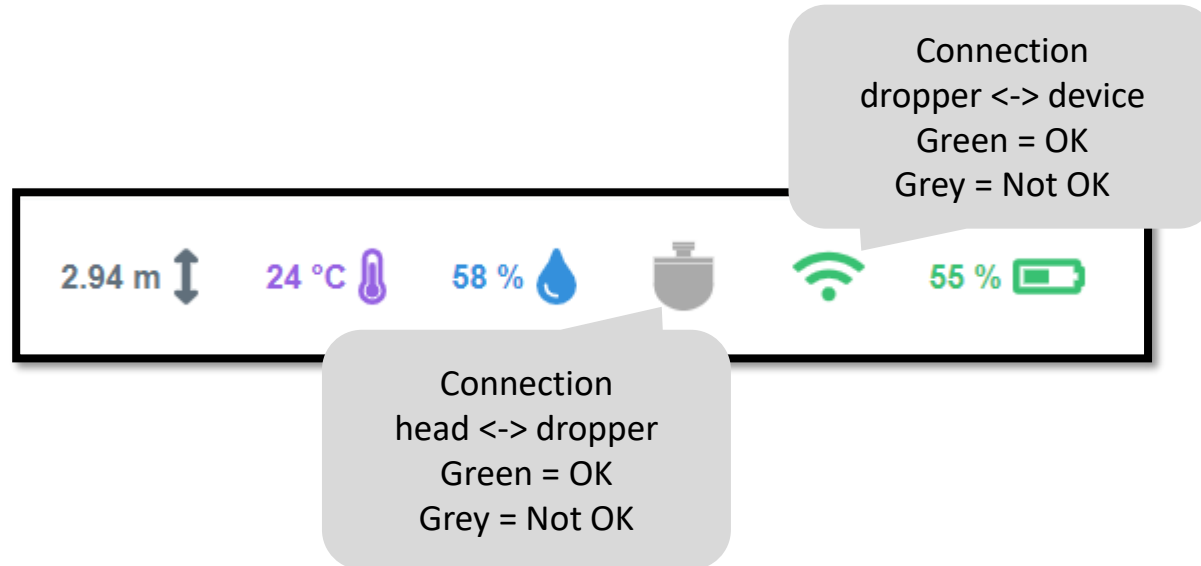
Drope base screens

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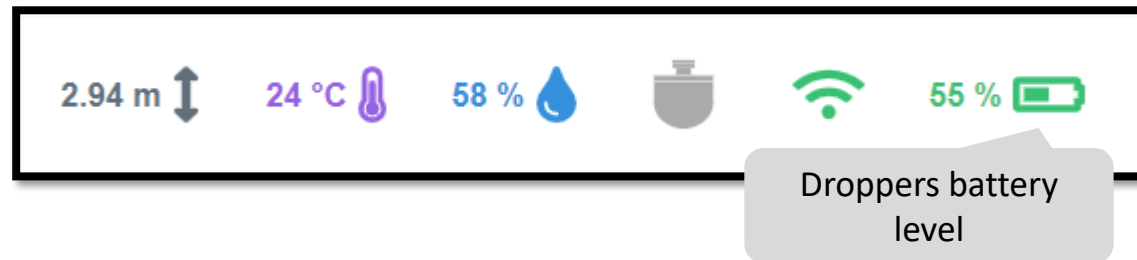
Operating indicators Pairings ...



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Operating indicators Battery management ...



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lugdosphère



Home Page Create a new mission

The screenshot shows the home page of the lugdosphère V 1.36 application. At the top, there is a navigation bar with 'Home', 'Settings', and 'Logs' links. Below this, a status bar displays 'New Update', altitude (-0.01 m), temperature (-255 °C), humidity (-1%), and battery (47%) levels. The main content area features a 'production_default' button, a 'Normenjeu' button, and a phone number '+33 (0) 4 28 87 00 33'. A central image shows a cylindrical sensor unit and a handheld device labeled 'CGV'. To the right, a statistics table is displayed:

| | | | |
|----------|---|------------------|---|
| MISSIONS | 1 | SITES TESTED | 1 |
| IMPACTS | 0 | MAX. GMAX | - |
| MAX. HIC | - | TIMES ABOVE 250G | 0 |

Below the statistics is a prominent blue 'NEW MISSION' button. A callout bubble points to this button with the text 'Create a new mission'. At the bottom, a 'PAST MISSIONS' table is visible:

| GPS | Date | Mission | Site | Client | Method | Rep... | Dup... |
|-----|-------------------|------------|------------|----------|--------|--------|--------|
| | Il y a une minute | MISSION ID | PLAYGROUND | CUSTOMER | 1 | | |

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Choosing the method The type of method and reporting format

Method 1 of the
EN1177:2019
Standard

Method 2 of the
EN1177:2019
Standard

The screenshot shows a software interface with the following elements:

- METHOD**: Two radio button options: Method 1: CFH and Method 2: Adequacy.
- MISSION ID**: A text input field.
- LAB TEST**: A toggle switch currently in the 'off' position.
- CLIENT**: A text input field.
- SITE**: A text input field.
- Buttons**: A 'Cancel' button and a blue 'VALIDATE' button.

Callouts from the text blocks above point to the radio buttons for Method 1 and Method 2. A callout from the 'LAB TEST' toggle switch indicates 'Lab mode: Method 1 only'.



Site page / Playground

Creating a new play equipment

List of the site's play equipment

From the site page, it is possible:

- Either create a play equipment right away by entering a text and then clicking "STRAT" and therefore going directly to the equipment page.
- Either enter data describing the site. This data can be entered before, during or after the test.

Back Home » PLAYGROUND

SITE TO TEST METHOD 1: CFH

PLAYGROUND

TEST NEW EQUIPMENT

START

EQUIPMENTS TESTED

| Equipment | Result |
|---------------|--------|
| no data found | |

PICTURE OF THE SITE

Drag & Drop your picture or Browse

ADDRESS

ANNEXES

This data will appear on the last page of the report

Annex #1

Granulometry

ADD PICTURE

Delete Site UPDATE SITE

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Site page / Playground

From the site page, it is possible:

- Either create a play equipment right away by entering a text and then clicking "STRAT" and therefore going directly to the equipment page.
- Either enter data describing the site. This data can be entered before, during or after the test.

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Back Home » PLAYGROUND

METHOD 1: CFH

SITE TO TEST

PLAYGROUND

TEST NEW EQUIPMENT

START

EQUIPMENTS TESTED

| Equipment | Result |
|-----------|--------|
| | |
| | |
| | |

PICTURE OF THE SITE

Drag & Drop your picture or Browse

ADDRESS

ANNEXES

This data will appear on the first use

Annex #1

Granulometry

ADD PICTURE

Delete Site UPDATE SITE

Site image -
Overview

The address of
the site can be
entered

Additions up to 4
annexes with photos



Site page / Playground

Example of a completed and saved playground page.

After entering or changing information, the blue "site update" button should be clicked to turn "updated" green

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PLAYGROUND


TEST NEW EQUIPMENT

START

EQUIPMENTS TESTED:

| Equipment | Result |
|------------------|--------|
| Double Cow swing | |
| Yellow swing | |
| Slide structure | |

PICTURE OF THE SITE



ADDRESS

-4, Place Chazette - 69004 LYON

ANNEXES

This data will appear on the last page of the report

Annex #1

Granulometry

ADD PICTURE

Delete Site

UPDATED

Play Equipment Page



Play equipment concerned

From the equipment page it is possible:

- Either create an area to test right away by entering a text and then clicking "START" and therefore going directly to the area page.
- Either enter data describing the game. This data can be entered before, during or after the trial.

A screenshot of a mobile application interface for testing playground equipment. The page title is 'Double Cow swing'. It features a 'METHOD 1: CFH' label, a 'START' button, and a table for 'TESTED ZONES'. A callout bubble points to the 'TEST NEW ZONE' input field with the text 'Creating a new test zone'.

Back Home » PLAYGROUND » Double Cow Swing

EQUIPMENT TO TEST METHOD 1: CFH

Double Cow swing

EQUIPMENT

Double Cow swing

TEST NEW ZONE

START

TESTED ZONES

| Zon | CFH | Groun... | Result |
|---------------|-----|----------|--------|
| no data found | | | |

PICTURE OF THE EQUIPMENT

Drag & Drop your picture or [Browse](#)

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Play Equipment Page



From the equipment page it is possible:

- Either create an area to test right away by entering a text and then clicking "START" and therefore going directly to the area page.
- Either enter data describing the game. This data can be entered before, during or after the trial.

The screenshot shows the 'Double Cow swing' page. At the top, there are navigation links: 'Back', 'Home > PLAYGROUND > Double Cow Swing'. Below this, the page title is 'Double Cow swing' with a 'METHOD 1: CFH' tag. Under 'EQUIPMENT', the text 'Double Cow swing' is displayed. The 'TEST NEW ZONE' section features an input field with a vertical bar, a 'START' button, and a callout bubble pointing to the input field that says 'List of tested zones of the play equipment'. Below this is a 'TESTED ZONES' table with columns for 'Zone', 'FHF', 'CFH', 'Grou...', and 'Result'. The table currently shows 'no data found'. At the bottom, the 'PICTURE OF THE EQUIPMENT' section has a callout bubble pointing to a 'Drag & Drop your picture or Browse' area.

| Zone | FHF | CFH | Grou... | Result |
|---------------|-----|-----|---------|--------|
| no data found | | | | |

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Picture of the
play
equipment

Play Equipment Page



Back Home » PLAYGROUND » Double Cow Swing

EQUIPMENT TO TEST METHOD 1: CFH

Double Cow swing

EQUIPMENT

Double Cow swing

TEST NEW ZONE

START

TESTED ZONES

| Zone | FHF | CFH | Groun... | Result |
|------------------------------------|-----|-----|----------|--------|
| Left side Zone (Next to slide) | | | | |
| Right side Zone (Next to Entrance) | | | | |

PICTURE OF THE EQUIPMENT

A photograph of a double cow swing set on a playground with red rubber safety matting. The swing has two cow-shaped seats hanging from a horizontal bar.

Example of play equipment page completed and saved.

After entering or changing information, the blue "equipment update" button should be clicked to turn "updated" green

Information about play equipment

Information about the surface tested

EQUIPMENT

| | |
|------------|--------------|
| REF | MANUFACTURER |
| Double Cow | GoodGame |

INSTALLATION DATE

20/06/2016

| | |
|-----|---|
| FHF | |
| 60 | m |

SURFACE

| | |
|-------------|--------------|
| REF | MANUFACTURER |
| RED WETPOUR | GoodIAS |

KIND

WETPOUR

| | |
|----------|--|
| SUBSTRAT | |
| CONCRET | |

INSTALLATION DATE

20/06/2016

| | |
|---------------------|--|
| SURFACING CONDITION | |
| Like new | |

Delete **UPDATED**

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Test Zone Page

From the zone page it is possible:

- Either make an impact right away by swiping the "Slide to release" button or using the button on the dropper handle.
- Either enter data describing the test area. This data can be entered before, during or after the trial.

Zone concerned

The screenshot shows a mobile application interface for a playground safety test. At the top, there is a navigation bar with a back arrow and the text "Retour", and a breadcrumb trail: "Accueil > PLAYGROUND > DOUBLE COW SWING > Left Side Zone (NExt To The Slide)". Below this, the page title is "Left side Zone (NExt to the slide)" with a "MÉTHODE 1: HCC" label. The form includes fields for "ZONE" (Left side Zone (NExt to the slide)), "HCL" (m), and "ÉPAISSEUR" (mm). A graph titled "COURBE / MÉTHODE 1" displays HIC (0-1200) and Gmax (0-200) values. Below the graph, there are fields for "HCC CALCULÉE" (m), "T°C" (20 °C), and "HYGRO.%" (73 %). At the bottom, a large blue button with a right arrow and the text "GLISSER POUR LIBÉRER" is visible. A callout box points to this button with the text "Makes the headform fall off".

Makes the headform fall off

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Test Zone Page

From the zone page it is possible:

- Either make an impact right away by swiping the "Slide to release" button or using the button on the dropper handle.
- Either enter data describing the test area. This data can be entered before, during or after the trial.

Free Height of Fall (FHF) of the zone

surface thickness at the test position

Temperature and Hygrometrics recorded automatically

The screenshot shows the 'Left side Zone (NExt to the slide)' test page. At the top, there is a navigation bar with a 'Retour' button and a breadcrumb trail: 'Accueil > PLAYGROUND > DOUBLE COW SWING > Left Side Zone (NExt To The Slide)'. Below this, the page title is 'Left side Zone (NExt to the slide)' with a 'MÉTHODE 1: HCC' label. The 'ZONE' field is set to 'Left side Zone (NExt to the slide)'. A horizontal bar labeled 'EPAISSEUR' (thickness) is shown with a scale in 'mm'. Below this is a graph with two y-axes: 'HIC' on the left (0 to 1200) and 'Gmax' on the right (0 to 200). The graph area is labeled 'TEMPERATURE AND HYGROMETRICS RECORDED AUTOMATICALLY'. At the bottom, there are three data fields: 'HCC CALCULEE' (value: -), 'T°C' (value: 20 °C), and 'HYGRO.%' (value: 73 %). A large blue button at the bottom right says 'GLISSER POUR LIBÉRER' with a right-pointing arrow.

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Test Zone Page



Retour Accueil » PLAYGROUND » DOUBLE COW SWING » Left Side Zone (Next To The Slide)

ZONE À TESTER METHODE 1: HCC

Left side Zone (Next to the slide)

ZONE

Left side Zone (Next to the slide)

HCL EPAISSEUR

60 m 30 mm

The software can only give a result on a test with a FHF

Example of play equipment page completed and saved.

After entering or changing information, the blue "equipment update" button should be clicked to turn "updated" green

→ GLISSER POUR LIBÉRER

TABLEAU DES IMPACTS

| Hauteur | HIC | Gmax | Résultats | |
|---------|-----|------|-----------|----|
| 0.74 m | 214 | 37 | Adequate | 🗑️ |

PHOTO DE LA ZONE DE TEST

Point.JPG 20 KB Upload complete tap to undo

COMMENTAIRES

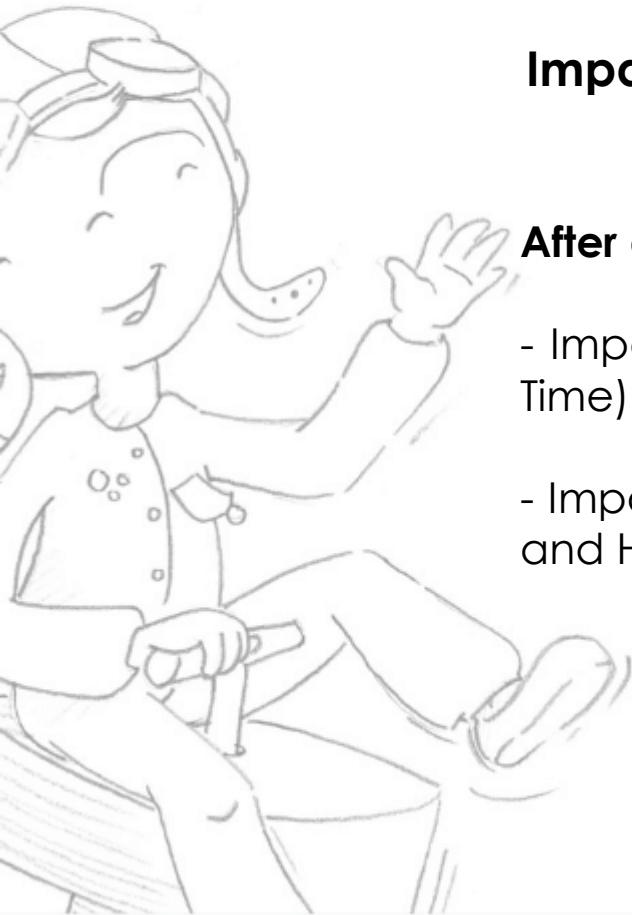
35cm from middle of swing A
47cm from middle of swing B

Supprimer

MISE À JOUR DE LA ZONE DE TEST

Commentaires, par exemple pour trianguler la position d'essais

- Overview
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Impact Page

After an impact Lugsoft displays:

- Impact curves. (deceleration Vs. Time)
- Impact results (height, gmax, HIC and HIC calculation time)

Overview

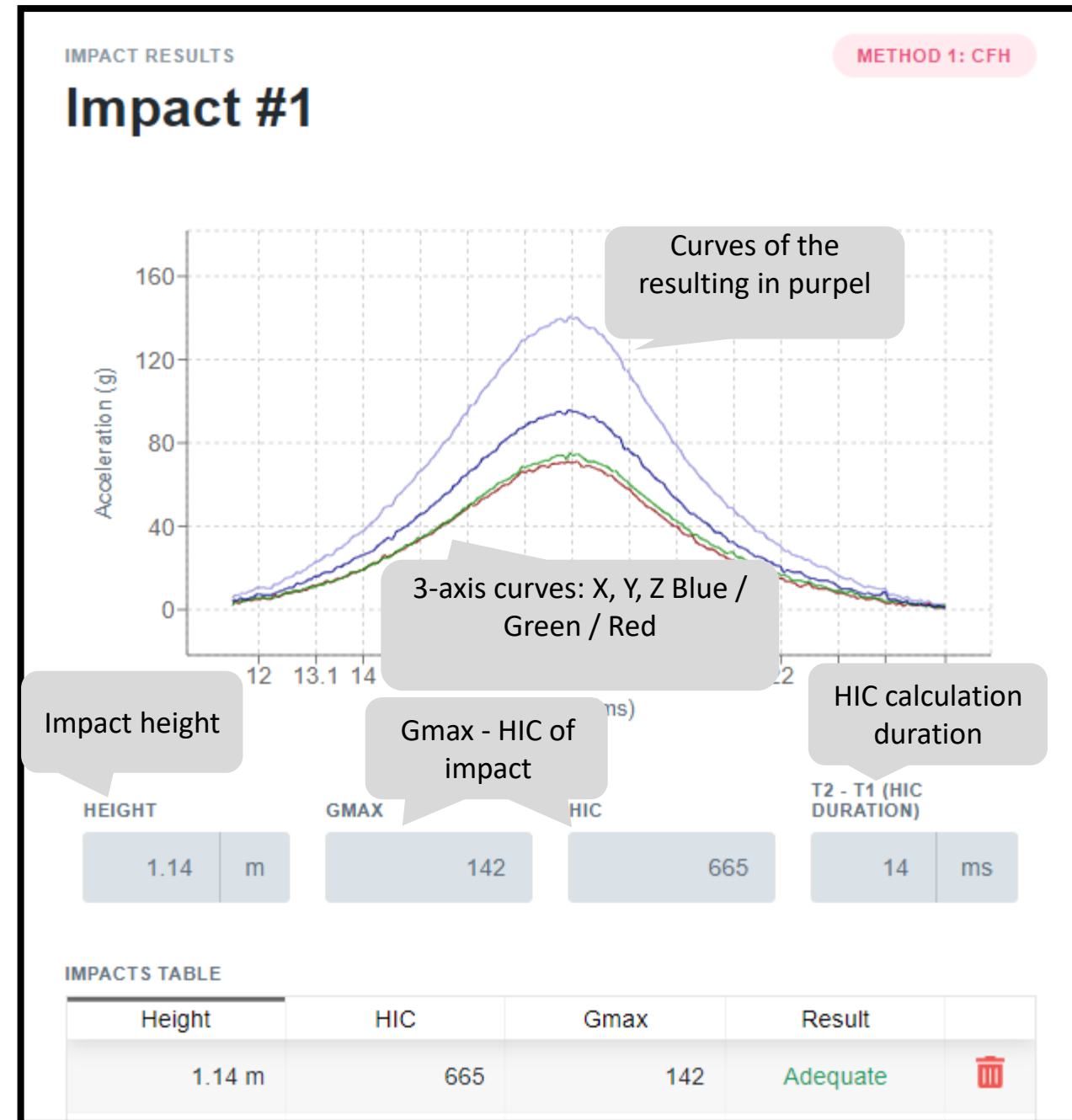
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Impact Page

After an impact Lugsoft displays the curves and data of the last impact.

Depending on the case, other impacts will be made on the same test position. The data will then be incremented in a table. Each impact can be examined by clicking on it.

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Summary table of impacts in the zone

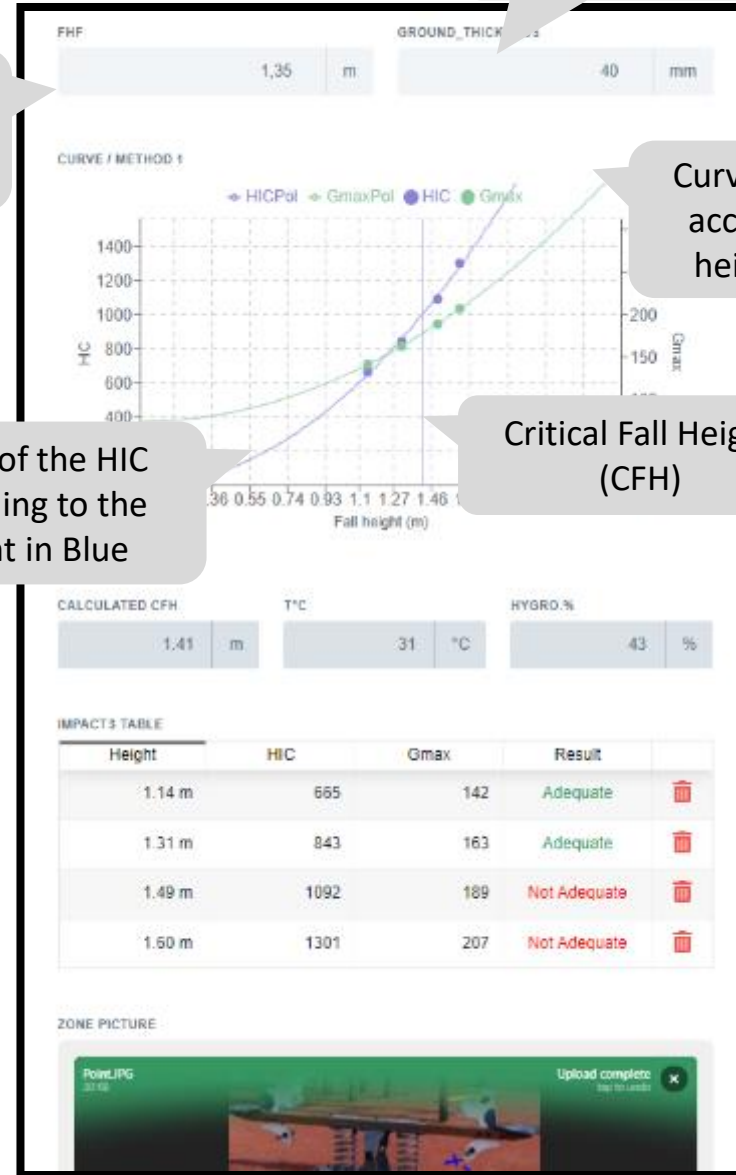




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Result Example for a method 1

Free Height of Fall (FHF) of the equipment area. To be entered by the user



Surface thickness of the tested zone

Curve of the gmax according to the height in Green

Curve of the HIC according to the height in Blue

Critical Fall Height (CFH)



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Result Example for a method 1



Critical Fall Height (CFH)

Summary table of impacts on the area. Each line is represented by a dot on the graph

Temperature and Humidity during testing

After his first mission



The screenshot shows the main dashboard of the 'lugdosphère' application. At the top, there's a header with the logo 'lugdosphère V 1.36', a power icon, and navigation links for 'Home', 'Settings', and 'Logs'. Below the header, there's a status bar with a 'New Update' button and various system indicators: altitude (-0.01 m), temperature (-255 °C), battery level (-1%), signal strength, Wi-Fi, and a 47% battery icon. The main content area features a 'production_default' button, a 'Normenjeu' button, and a phone number '+33 (0) 4 28 87 00 33'. A central image shows two pieces of equipment: a black cylindrical sensor and a black handheld device with a screen and a metal rod. To the right of the equipment is a table with mission statistics:

| | | | |
|----------|---|------------------|---|
| MISSIONS | 1 | SITES TESTED | 1 |
| IMPACTS | 0 | MAX. GMAX | - |
| MAX. HIC | - | TIMES ABOVE 250G | 0 |

Below the table is a prominent blue 'NEW MISSION' button. At the bottom, there's a 'PAST MISSIONS' section with a table:

| GPS | Date | Mission | Site | Client | Method | Rep... | Dup... |
|-----|-------------------|------------|------------|----------|--------|--------|--------|
| | Il y a une minute | MISSION ID | PLAYGROUND | CUSTOMER | 1 | | |

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Mission history

Print the report



Connect to a new internet network to get data "Settings/Wifi" menu

1) Go into Settings and then WiFi

2) Search for your network

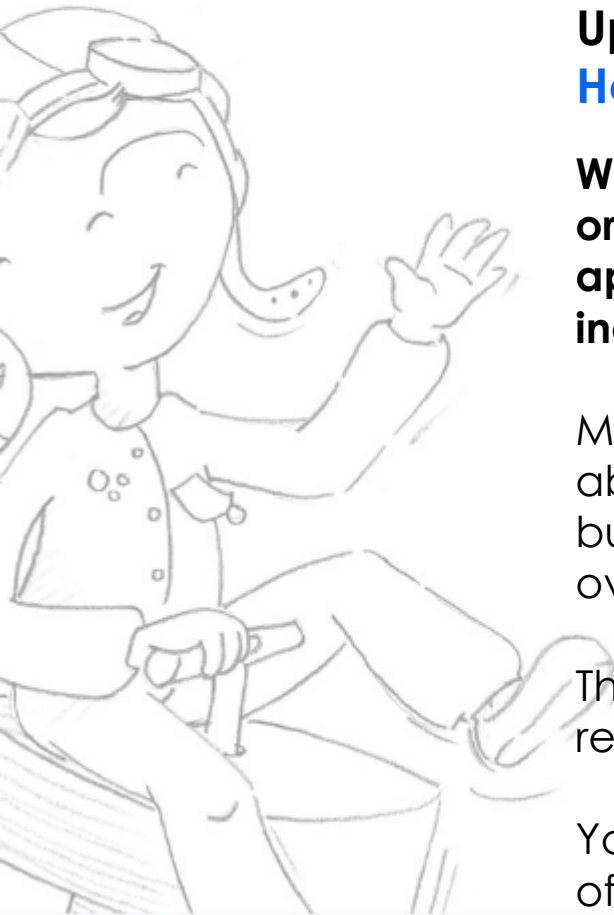
3) Select your network

4) Make sure the selected SSID is the right one

5) Type in the password

6) Click connect

| SSID | Signal level |
|------------------------------|--------------|
| MARSELL_CORP | 31 |
| MARSELL_GUEST | 31 |
| \x00\x00\x00\x00\x00\x00\x00 | 41 |



Update Lugsoft Homepage

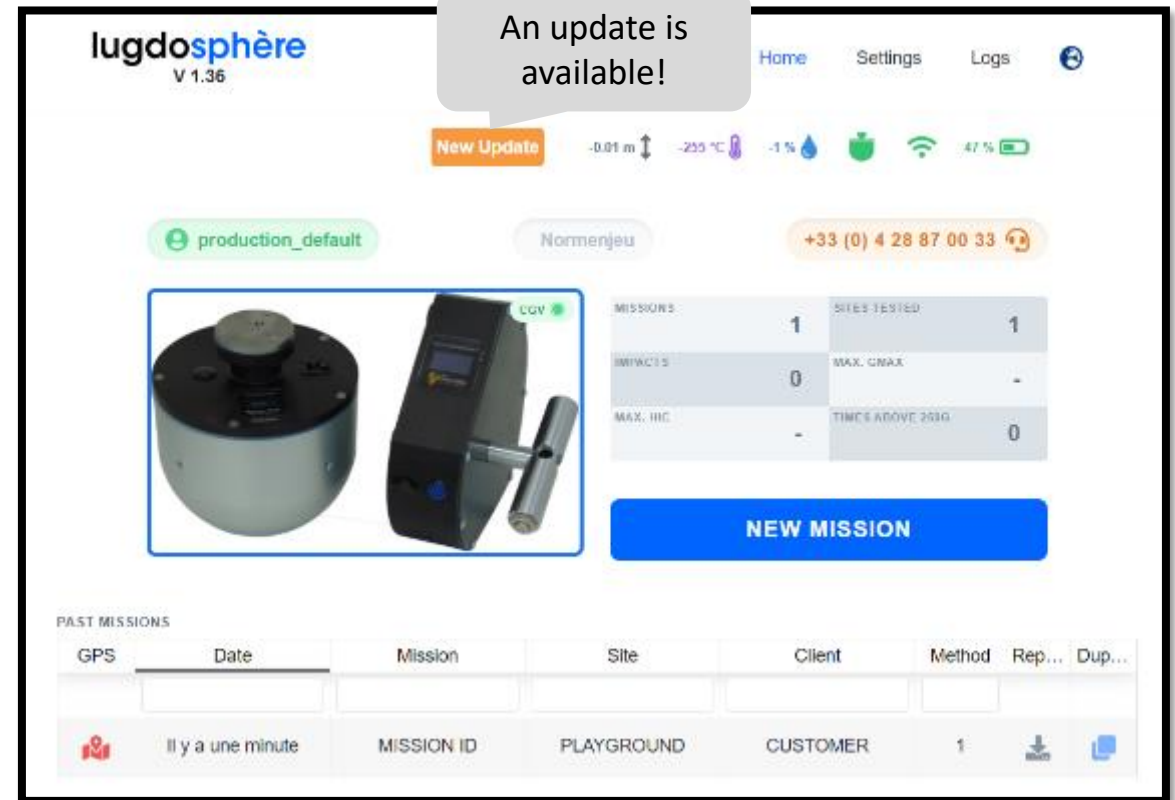
When an update is available, an orange "New Update" button appears to the left of the operating indicators.

Make sure you have a battery level above 60% before you click the button. Wait until the button passes over Updating and then Updated.

Then the dropper automatically restarts.

You'll be able to check the success of the update on the dropper screen during the restart and on Lugsoft after a "refresh" of the page.

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Laboratory mode tests

To perform laboratory tests select Method 1 and click "Laboratory Test" to activate the button.

A screenshot of a software interface for configuring laboratory tests. The interface is divided into several sections: 'MÉTHODE' with two radio button options, 'MISSION LD' with a text input field, 'CLIENT' with a text input field, and 'TEST EN LABORATOIRE' with a toggle switch. The 'Méthode 1: HCC' radio button is selected. The 'TEST EN LABORATOIRE' toggle switch is turned on. A grey callout box with the text 'Lab mode selected' points to the toggle switch. At the bottom right, there are two buttons: 'Annuler' and 'VALIDÉ'.

Overview

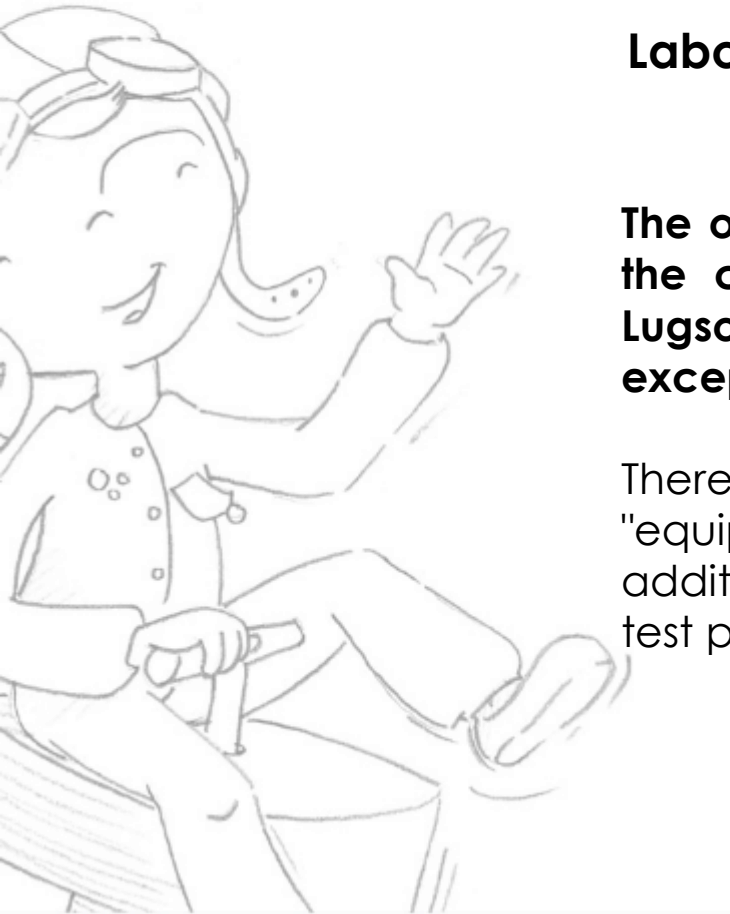
First use

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Laboratory mode tests

The organization of the pages and the conduct of the tests through Lugsoft are the same with a few exceptions.

There is the possibility on the "equipment" page to put an additional image to represent the test positions.

Overview

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← Back Home » Laboratoire Normenjeu » Echantillon X

EQUIPMENT TO TEST

Echantillon X METHOD 1: CFH

EQUIPMENT

Echantillon X

TEST NEW ZONE

START

TESTED ZONES

| Zone | Theoretical ... | Theoretical ... | Final CFH |
|---------------|-----------------|-----------------|-----------|
| no data found | | | |
| | | | |
| | | | |

PICTURE OF THE EQUIPMENT

Drag & Drop your picture or [Browse](#)

PICTURE SHOWING ALL TEST POSITIONS

Drag & Drop your picture or [Browse](#)

Lab Method 1 logo

Picture of the sample tested - General view

Picture or image of test positions performed



Laboratory mode tests

The organization of the pages and the conduct of the tests through Lugsoft are the same with a few exceptions.

Also in the "Equipment" page it is possible to complete the detailed descriptive information of the sample tested.

Overview

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| SPECIMEN DATA | |
|-----------------------------------------------------------------|----------------------|
| <i>This data will appear on the specimen page of the report</i> | |
| TITLE | VALUE |
| specimen name | <input type="text"/> |
| specimen ref | <input type="text"/> |
| specimen manufacturer | <input type="text"/> |
| specimen dimension | <input type="text"/> |
| specimen weight | <input type="text"/> |
| specimen kind | <input type="text"/> |
| specimen density | <input type="text"/> |
| specimen surface mass | <input type="text"/> |
| specimen properties | <input type="text"/> |
| specimen loose thickness | <input type="text"/> |
| specimen particule distribution | <input type="text"/> |
| specimen 9331 results | <input type="text"/> |
| fixing method | <input type="text"/> |
| fixing dimension | <input type="text"/> |
| specimen condition | <input type="text"/> |
| specimen temperature | <input type="text"/> |
| specimen hygro | <input type="text"/> |

+ NEW ROW



Laboratory mode tests

Sample description

It is possible to change the title of the descriptive line

DESCRIPTION DE L'ÉCHANTILLON

Ces informations apparaîtront à la page "échantillon" du rapport

| TITLE | VALUE | |
|-------------------------|-------|--|
| dénomination du produit | | |
| référence du produit | | |
| fabricant des granulats | | |

It is possible to add a descriptive line by clicking on the "New Row" button

| | | |
|------------------|--|--|
| specimen hygro | | |
| Specimen ... | | |
| + NEW ROW | | |

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Report editing

Reports can be edited from two different locations:

From the home page in the "missions" table by clicking the button



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From the bottom of the mission website by clicking on the "Generate Report" button

lugdosphère V 1.37.2 beta

Home Settings Logs

1.37 m 25 °C 52% 43%

tberut@normenjeu.fr Normenjeu +33 (0) 4 28 87 00 33

HEAD HIC : LU284020

| | | | |
|----------|------|----------------------|-----|
| MISURES | 45 | SEIN'S TOUTES | 45 |
| IMPACTES | 923 | MAX. TOUTES | 280 |
| MAX. HIC | 3427 | TEMP'S ARRIVEE TOUTE | 14 |

NEW MISSION

PAST MISSIONS

| GPS | Date | Mission | Site | Client | Method | Report | Duplicate |
|-----|------------|-------------------------|---------|-----------|--------|--------|-----------|
| | | aire | | | | | |
| | 14/09/2020 | aire de jeux amneville | city | amneville | 2 | | |
| | 14/09/2020 | aire de jeux ecole metz | queuleu | metz | 1 | | |

previous page 1 ofText 1 20 rows next

Delete Site UPDATE SITE

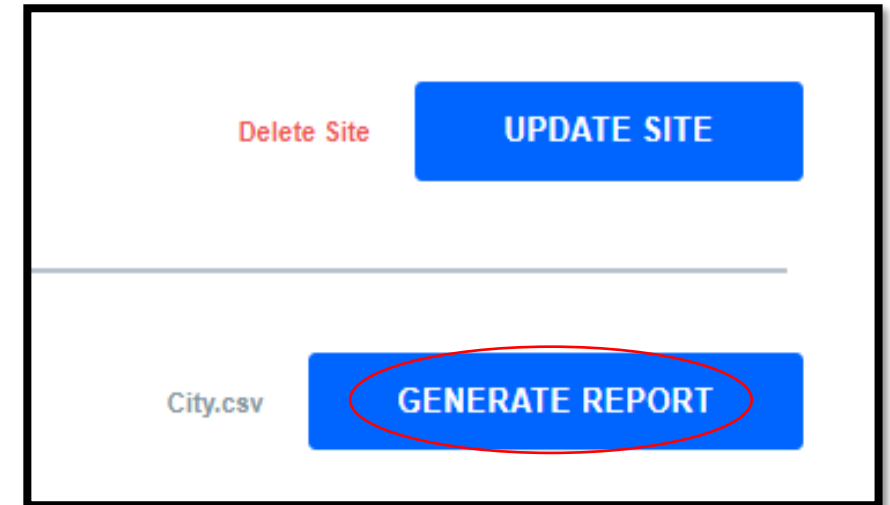
City.csv GENERATE REPORT



Report editing

From the mission's website page by clicking on the "Generate Report" button

Framing "missing information" only appears through this and tells you if information or images have not been captured or taken. This information remains optional, and the report can still be generated.



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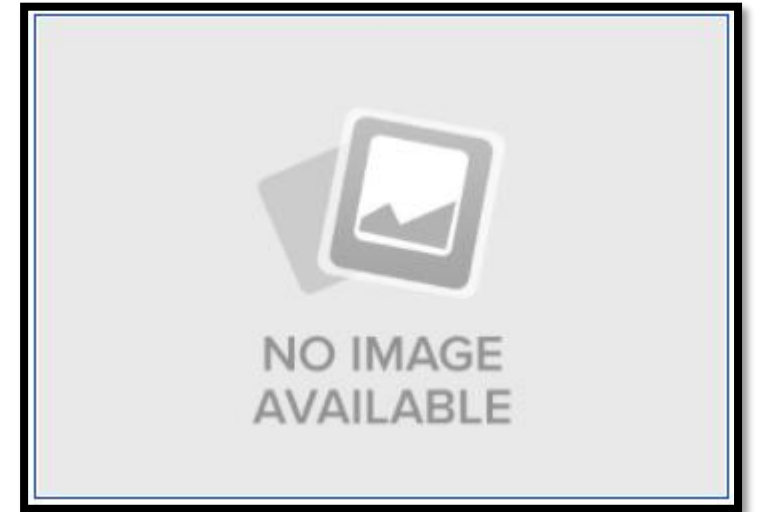
Head screens

General



Report editing

A missing photo materializes in the report by an image like this.



Overview

First use

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Report editing

An information not filled in, results in the non-generation of the title of the information. Example:

| Equipment n°1: PIRATE BOAT | |
|----------------------------|----------------------------|
| <u>PLAY EQUIPMENT</u> | <u>SURFACING</u> |
| Ref : GSP4003 | Kind : IN SITUE |
| Manufacturer : KOMPAN | Manufacturer : KOMPAN |
| Installed the : 24/09/2017 | Installed the : 24/09/2017 |
| Max FFH : 1.00 m | Condition : GOOD |
| | Substrat : CONCRETE |

The Ref. line doesn't appear.

| Equipment n°1: PIRATE BOAT | |
|----------------------------|----------------------------|
| <u>PLAY EQUIPMENT</u> | <u>SURFACING</u> |
| Ref : GSP4003 | Kind : IN SITUE |
| Manufacturer : KOMPAN | Ref : Not mentioned |
| Installed the : 24/09/2017 | Manufacturer : KOMPAN |
| Max FFH : 1.00 m | Installed the : 24/09/2017 |
| | Condition : GOOD |
| | Substrat : CONCRETE |

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Report editing

Lugsoft manages the versioning of reports.

The number of the version appears at the top right of the first page of the report

Overview

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REPORT VERSION

| LAST VERSION | NEW VERSION |
|--------------|----------------------------------|
| 1.1 | 1.2 |
| | <small>Edit if necessary</small> |

VALIDATE

Report Réf. Test-Test

publishing : 29/10/2020
v1.2

This version cancels and replaces the previous one



Report editing Example Method 1

On the right : Main page of a test zone in method 1.

- Impact summary table,
- Acceleration Curves Vs Time
- CFH extrapolation curves (HIC and gmax)

Below: Synthetic summary for a play equipment.

Report Réf. Accès_m1-Accès_m1

normenjeu
ingénierie et développement

publishing - 03/11/2020
v1.0
This version cancels and replaces the previous one.

Equipment results summary n°1

| Zone | FHF | CFH | Ground_thickness | Result |
|-------------|--------|--------|------------------|----------|
| Rope Ladder | 1.48 m | 2.08 m | 85 mm | Adequate |

Report Réf. Accès_m1-Accès_m1

normenjeu
ingénierie et développement

publishing - 03/11/2020
v1.0
This version cancels and replaces the previous one.

PIRATE BOAT - Rope Ladder

FHF : 1.48 m
CFH : 2.08 m
Result : Adequate

| Height | HIC | Gmax |
|--------|------|------|
| 1.22 m | 473 | 103 |
| 1.49 m | 613 | 116 |
| 1.81 m | 846 | 135 |
| 2.22 m | 1130 | 154 |
| 2.42 m | 1239 | 161 |

Temperature : 26 °C / Hygrometry : 62 %

Comment : 35cm to A 69cm to B

Time/acceleration curve of the highest value measured

Curves of HIC and gmax vs. drop height

Overview

First use

Using lugsoft

Drope base screens

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Report editing Example Method 2

On the right: Main page of a test zone in method 2.

- Summary table of impact(s),
- Acceleration Curves Vs Time

Below: Synthetic summary for a play equipment.

Report Réf. Accès_m2-Accès_m2

normenjeu
ingénierie et développement

publishing : 03/11/2020
v1.0
This version cancels and replaces the previous one

Equipment results summary n°1

| Zone | Ground_thickness | FHF | Release height | Gmax | HIC | Result |
|-------------|------------------|--------|----------------|------|-----|----------|
| Rope Ladder | 85 mm | 1.48 m | 1.50 m | 109 | 586 | Adequate |

Report Réf. Accès_m2-Accès_m2

normenjeu
ingénierie et développement

publishing : 03/11/2020
v1.0
This version cancels and replaces the previous one

PIRATE BOAT - Rope Ladder

Zone: Rope Ladder
FHF : 1.48 m
Release height : 1.50 m
Result : Adequate

| Height | HIC | Gmax |
|--------|-----|------|
| 1.5 m | 586 | 109 |

Temperature : 26 °C / Hygrometry : 60 %
Comment : 36cm from A 47cm from B

Time/acceleration curve of the highest value measured


Acceleration (g)

time (ms)

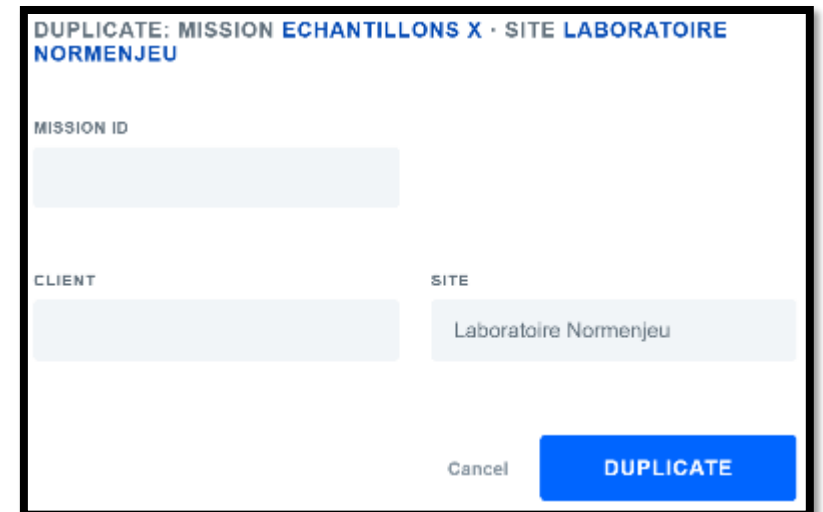
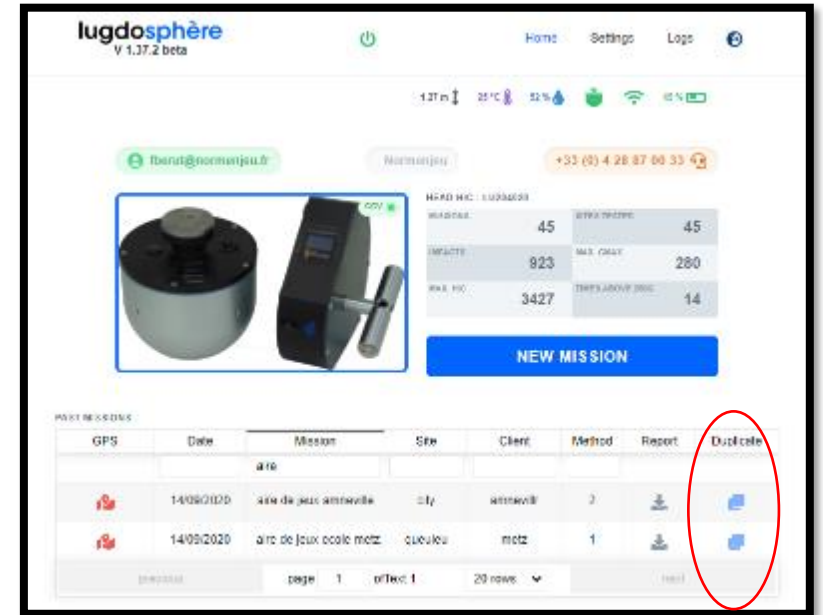
- Overview
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Duplicating a mission

Lugsoft allows you to duplicate a mission. From the home page click the button  on the mission line that you want to duplicate.

A window appears, you can rename the mission and the name of the client. All other information (Site, games, zones and results) will be duplicated identically.



You can also inspect...

Climbing and bouldering mats

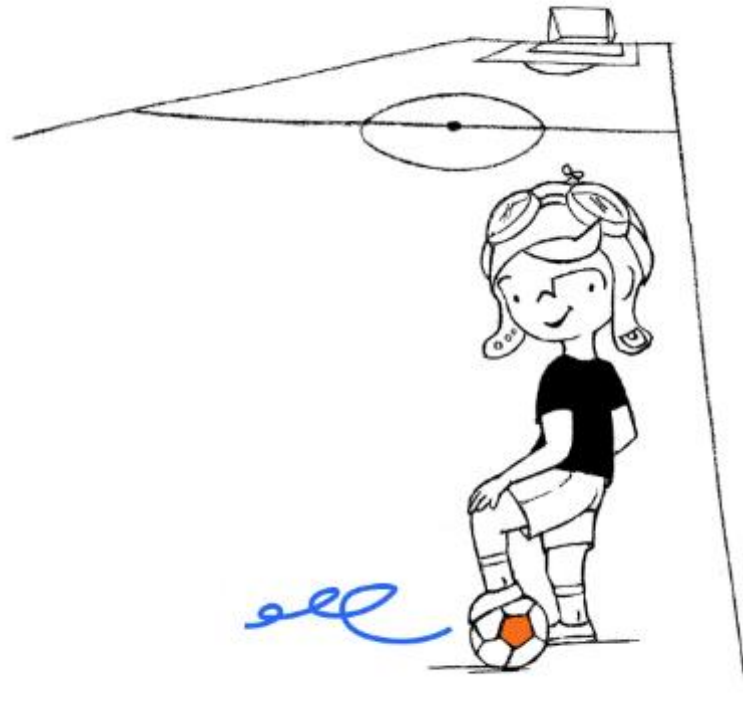
Check the maximum deceleration of your climbing or bouldering receiving mats equipment (NF P90-311 - NF P90-312).

<https://www.lugdosphere.fr/domaines-dactivites/>



Iugdosphère

Drope base screens





The dropper Start

The logo appears 20 seconds after starting,
The Wi-Fi environment can be detected



The model's name appears after 40 seconds with
a beep. The dropper is operational.



Immediately after the dropper indicates the
version of the Lugsoft WebApp



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The dropper Logos



Barred Bluetooth Logo: Head is not connected



Barred WiFi logo : The dropper does not have access to the internet (hotspot or box...)



Overview

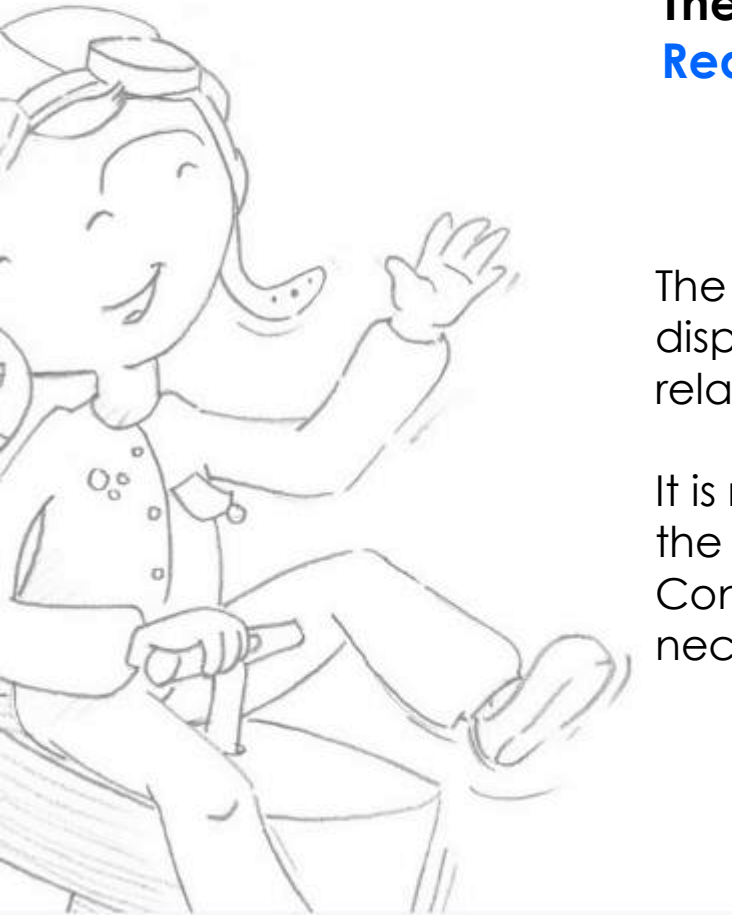
First use

Using lugsoft

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The dropper Ready for testing

The dropper screen is ready for testing when it displays the approximate height of the head relatively to the surface.

It is ready when the Bluetooth connection with the head is functional.
Connecting to a hotspot with data is not necessary.



Overview

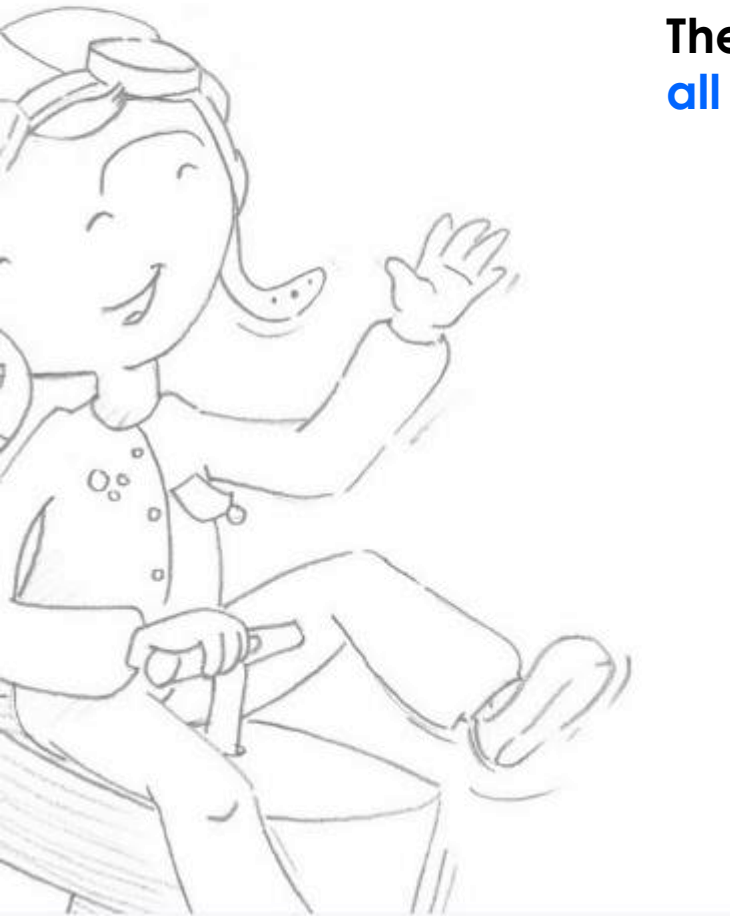
First use

Using lugsoft

Drope base screens

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The dropper all and impact

The dropper displays the indicative height: it is ready to work



After the drop: The "fall-computing" screen appears



After receiving head data: the screen returns to the height. Ready for a new impact.



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You can also inspect...

Protective device like nets on ski slopes

The management of ski areas requires the management of flows and risks...
Test the protective devices in the form of nets that are installed to protect against falls

<https://www.lugdosphere.fr/domaines-dactivites/>



Head screens



The head Start-up



The Lugdosphère Logo appears



Firmware and head settings



Bluetooth information



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The head

The calibration of accelerometers

Calibration of accelerometer starts: Don't move your head and position it as straight as possible



Calibration of accelerometers is underway



Calibration of accelerometers is finished



Overview

First use

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Head screens

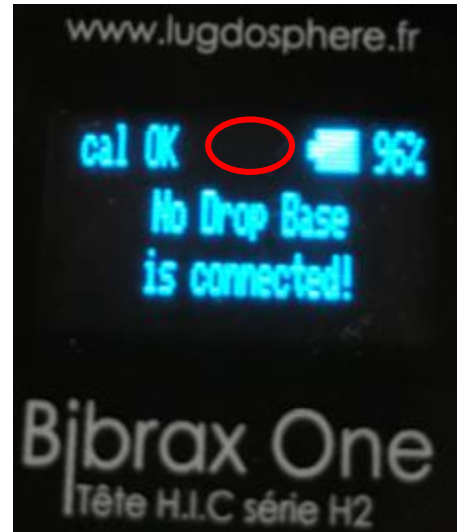
General



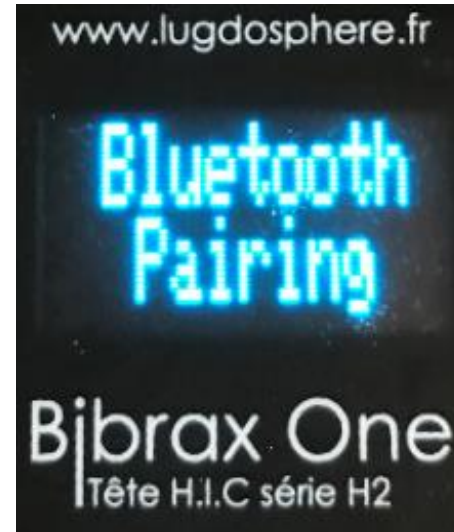
The head

The Bluetooth connection to the dropper

Head screen ready to be connected to the dropper (Drop Base) but with no connection yet to the head via Bluetooth



The head automatically connects to the dropper via Bluetooth



Bluetooth communication is established



The head is ready to be glued to the dropper - The Bluetooth connection is established



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The head

Fall, impact and data transmission

Ready ! Screen : When the head is well positioned on the dropper magnet and is ready to fall



From the beginning of the fall the "Fall" screen is displayed



The data transfer is underway to the dropper (and therefore the WebApp screen), there is a scroll bar



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The head Calculated data

The results scroll: Calculated fall height, gmax, HIC, HIC calculation time, duration of impact. A press on the on/off button allows you to return to the "no drop base" screen



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Note: the third number in [hook] ensures and guarantees the hundredth displayed



The head Error code



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lugdosphère



The head

Battery Menu - Battery Stallion

If during the "Lugdosphere" screen the sensor is short-circuited then the battery will be calibrated, a push of the button on off at the end allows you to get out of the menu,

The sensor is short-circuited when a conductive metal part connects the magnet plate and the feeler (e.g. the magnet)

A push of the button allows you to go out and continue the classic start of the machine



Overview

First use

Using lugsoft

Drope base screens

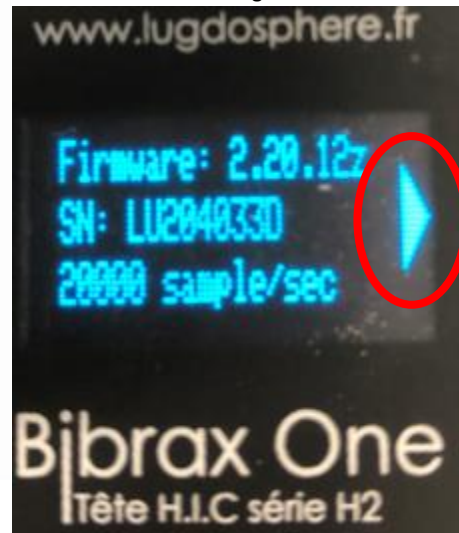
Head screens

General



The head Menu

To access the menu you have to press the button when the screen reads "No Drop Base... »
The Firmware screen then appears with an arrow on the right side



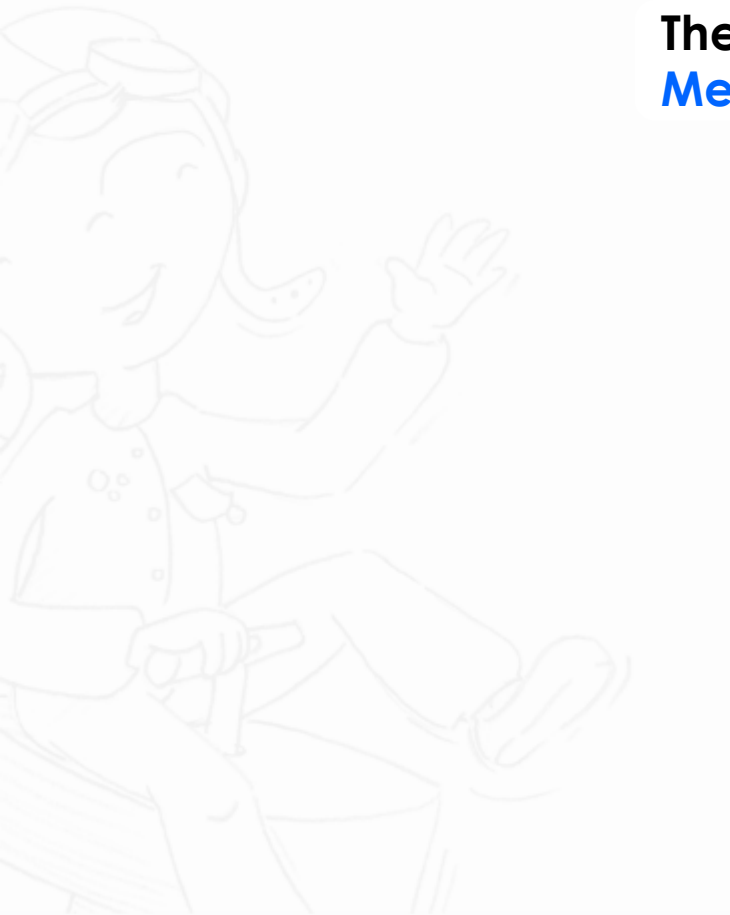
New support brings to Bluetooth screen



New support brings Batteries to the Batteries screen



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The head Menu (continuation)

New support brings Radio Frequency signal (Wi-Fi strength) to the screen



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The head

Menu - accelerometers

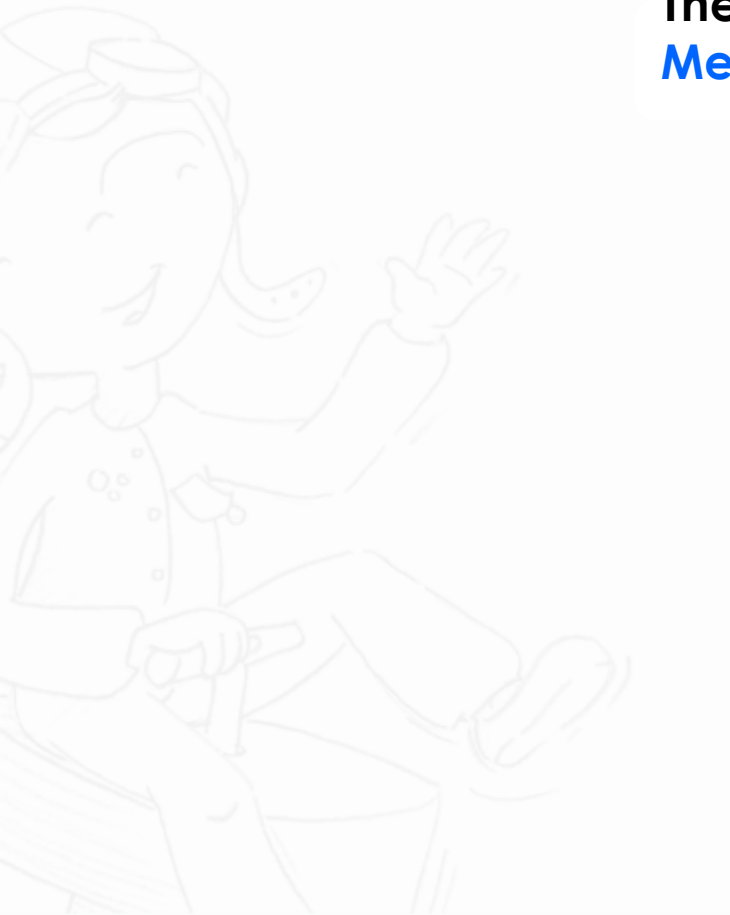
New support brings to the accelerometers screen



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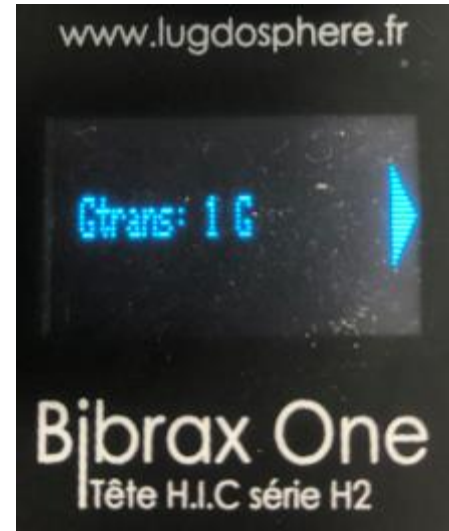


Note: the three axes must be between 0 and 2g



The head Menu - Gtrans

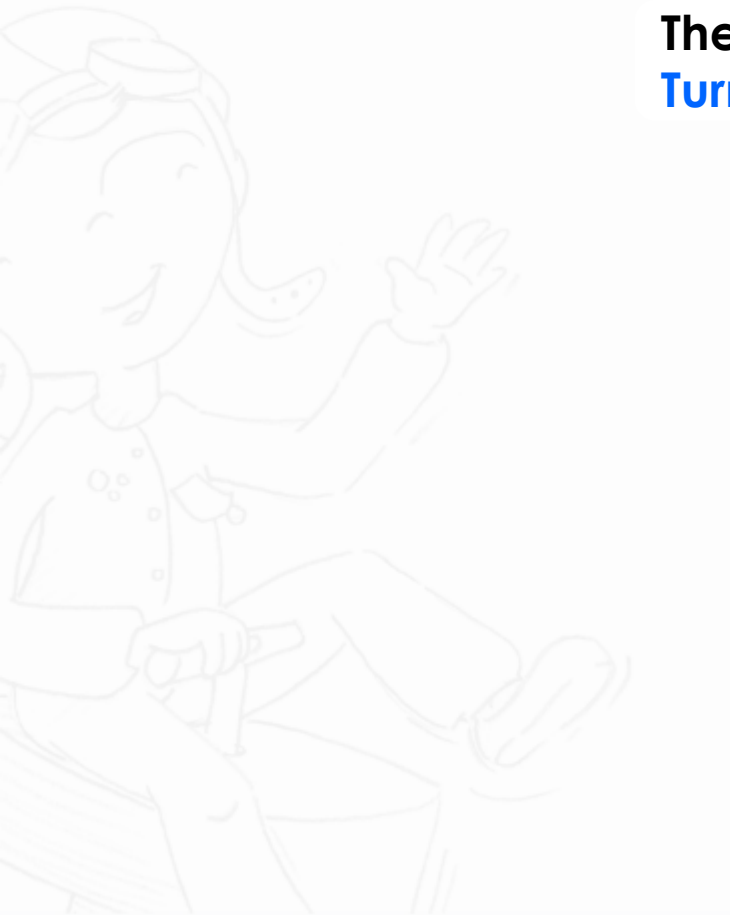
New support brings to the Gtrans screen before a return to the "No drop Base ..." screen



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Note: Gtrans must be between 0 and 2



The head Turning off

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To turn off the head you need a 5-sec press on the head button. The countdown has started, 3...



2....



1 ...



... Goodbye. The logo appears, flashes and the head goes off

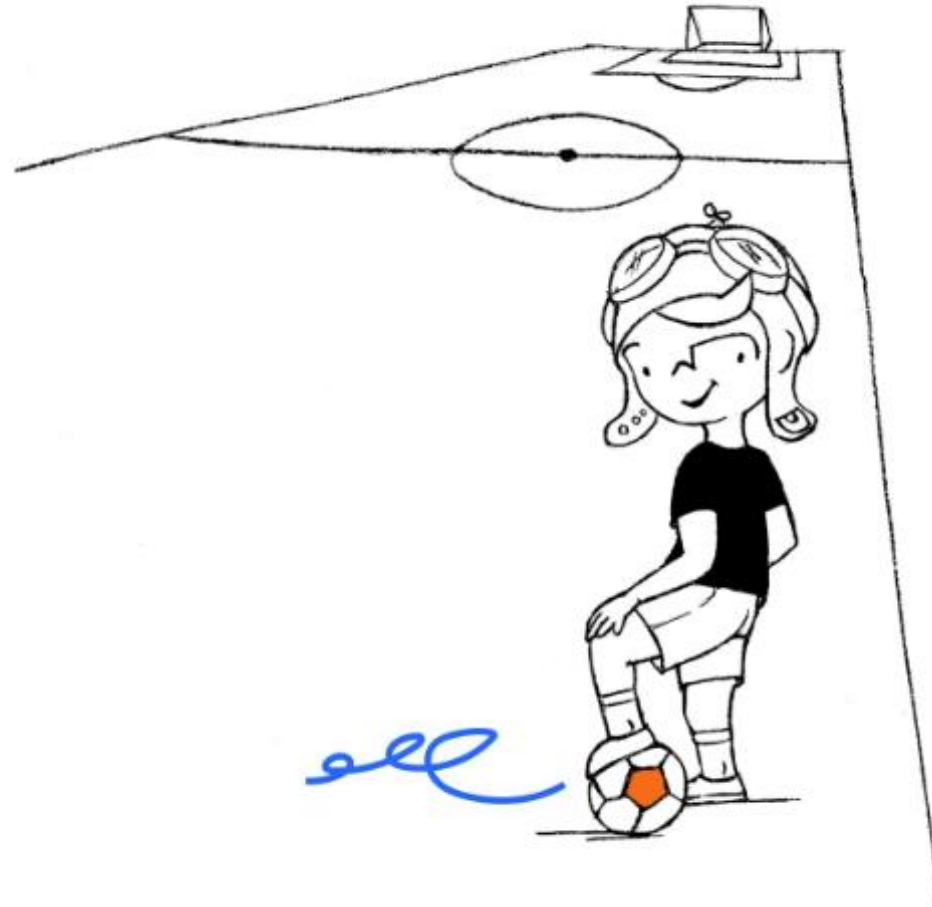


You can also inspect...

Football

Synthetic turf used, for example, in football or rugby stadiums must meet many requirements, including the residual level of impact between a player's head and the playing surface.

<https://www.lugdosphere.fr/domaines-dact>

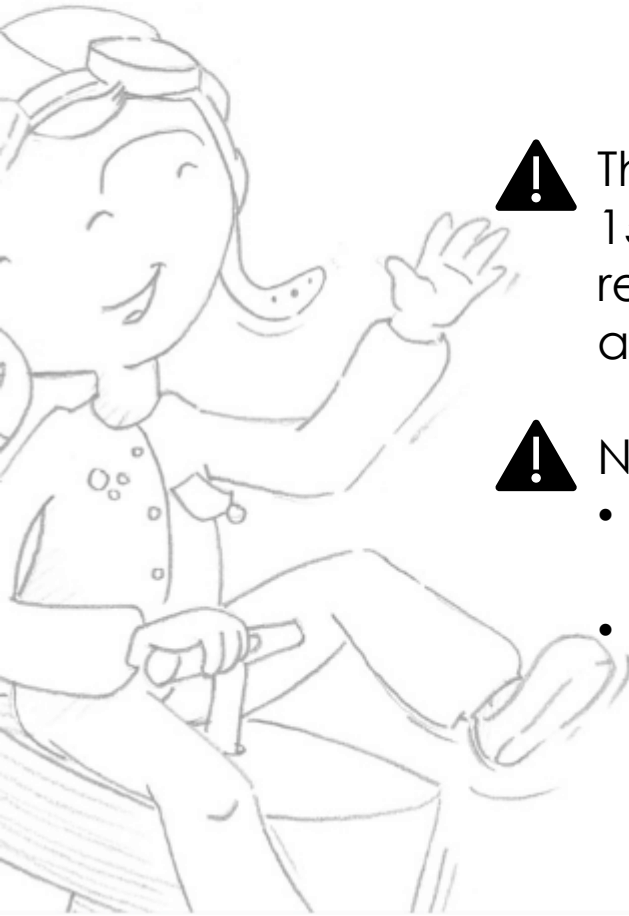


Iugdosphère



General





⚠ The Lugdosphere is intended for maximum use of up to 300g (which is indeed 150% of the Gmax criterion of the EN1177:2018 standard). However, too repetitive use close to the acceptable limit is a source of accelerated aging for all on-board components.

⚠ Normenjeu attracts the user's attention:

- On the one hand, testing a surface with low thickness (lower than 30mm) presents a significant risk of reaching too strong decelerations (gmax).
- On the other hand, on the risk inherent to Method 2 of Standard 1177:2018 "Determination of impact attenuation on site." Indeed, the release is made directly at the free height of fall of the play equipment, in case of surface not at all adequate, the impact can present too strong decelerations. Thus, it is appropriate for the user to probe the surface to measure its thickness. Thus, depending on his experience and these investigations the user may decide to make a first impact at a height below the free height of fall.

⚠ **Using our headform for impacts at more than 300g will cause the lose of the warranty benefit.**

Overview

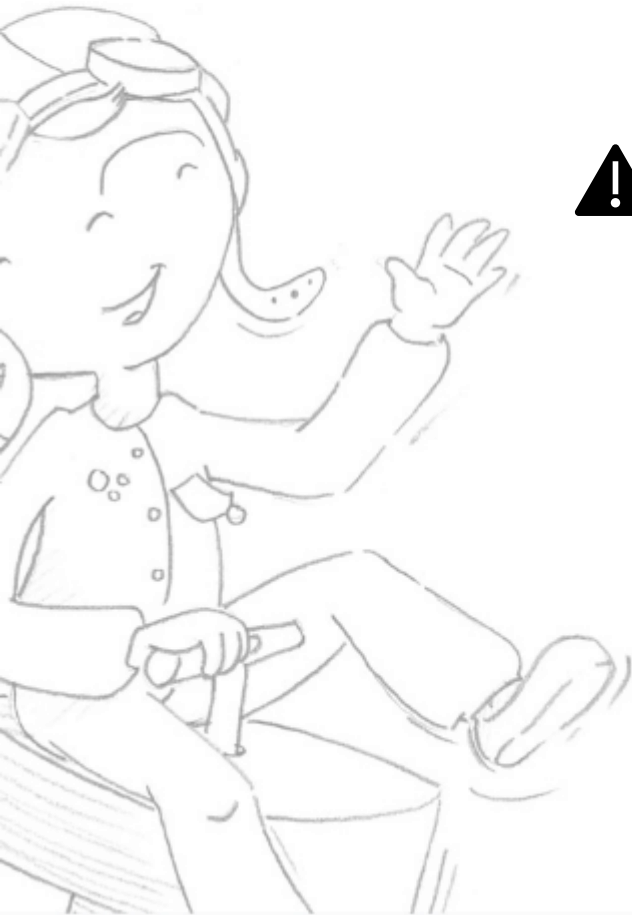
First use

Using lugsoft

Drope base screens

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General



Using our headform for impacts at more than 300g will cause the lose of the warranty benefit.

It is preferable to properly clean the half-sphere and pay particular attention to its surface condition.

The false head is waterproof and is conditioned in a controlled environment.

It is strongly recommended that :

- you use your distributor to carry out the after sales services.
- You do not open the device on your own. Indeed, it will be on your own risk of damaging the on-board electronics and the warranty will be cancelled.
- Normenjeu recommends the use of PPE when using the Lugdosphere. The user must take all the necessary recommendations to carry out the tests safely and adapt these practices to the test conditions (wind, rain, surface stability...). In particular, he must be careful not to go under the head form and prohibit passage to any other person.

-

Overview

First use

Using lugsoft

Drope base screens

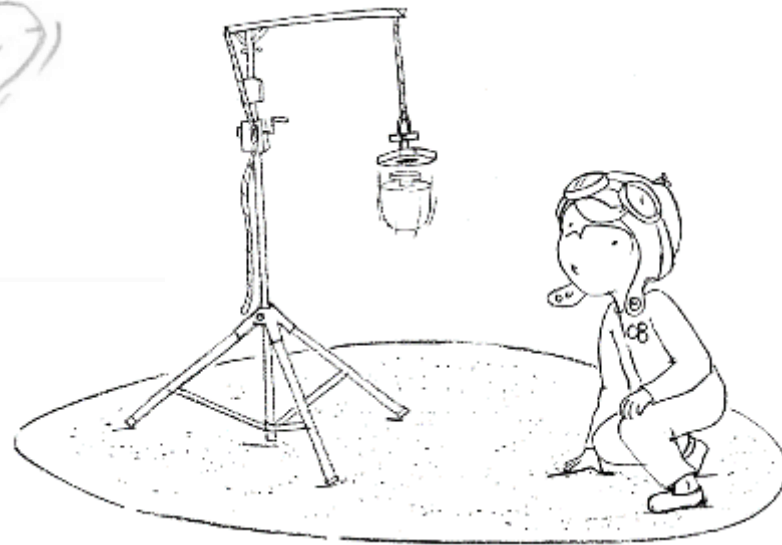
Head screens

General

lugdosphère

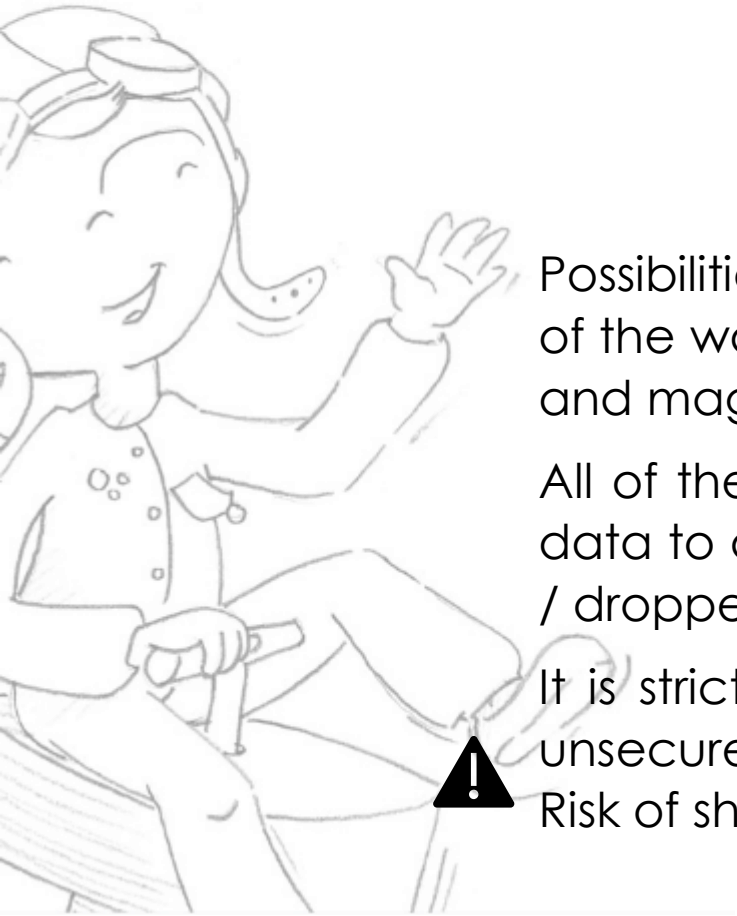


The ludosphere allows you to release by hand as well as with a fixed drop device like a tripod. Users are informed that the uncertainties of measures described in EN1177:2018 have been determined with tests with fixed-drop devices. Also, handmade impacts increase the uncertainty and decrease repeatability of the measurement. This uncertainty is not quantifiable by normenjeu because it is the result of unskilled and variable factors: user, height, arm position, muscular tone...



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lugdosphère



Possibilities of connection disturbance due to civil or military interference of the waves, a high voltage line, by particular networks in large quantities and magnetic fields.

All of these disorders do not disrupt the measurement, but the transfer of data to display the curves. It is advisable to bring the triptych closer: head / dropper / equipment in this case to reduce these disorders.

It is strictly forbidden to recharge the equipment (head or drop) on an unsecured and stabilized current socket, such as those found in vehicles. Risk of short surge but that may damage some electronic components.



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Device Settings / Technical Features

Material : Aluminium

Characteristic : 160 mm in diameter - 165 mm in height

Weight : 4600 g

Acquisition : -500G to 500G tri axes

Converter : Digital analog 12 bit

Height measurement : accuracy greater than centimetre

Display on the head : height, HIC, gmax, duration of shock and calculation

Battery : Lithium

Connection : Bluetooth

According to : Norme EN1177-2018

Acquisition frequency : 20kHz

Power : 8.4V – 1A

Sealing : Water and dust waterproofing (IP65)

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To ensure the maintenance of the technical and metrological characteristics as well as the guarantee of your Lugdosphere, it is necessary to respect the periodicities of your maintenance book..

Maintenance must be carried out by standard at a controlled environment. No part of the equipment should be opened by a third (zero warranty, risk of damage).

The lugdosphere is designed to work in any type of atmosphere including wet. The equipment is waterproof. Before storing your device after a use in wet conditions, wipe well the equipment before packing it in an open suitcase in a dry and temperate environment.

During testing, it is important to check the g_{max} of the impacts.

⚠ The range of use covered by the device is up to 300 g. Overspending cancels the warranty.

As part of the inspections, it is advisable to check the fall height and CFH on a reference surfaces :

- After a maintenance
- After calibration
- After a period of no use of more than 1 month
- If in doubt

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! Important !

| | |
|-------------------------------------------------------------|---------------------------------------------------------------------------------------|
| The head must not fall upside down |  |
| The head should not hit a hard part when falling |  |
| The head should not hit a hard part after the bounce |  |
| Do not use tripods in strong winds |  |
| Don't charge devices on an unsecured socket |  |



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