

# **Dansprint computer**

# **User manual**

Rev. 1.00

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## Introduction

The dansprint ergometer comes with a powerful on-board computer with a large graphical display. The computer gives the paddler feedback about the performance. A training session can be setup and you can paddle against a pacer. Two dansprint ergometers can be connected with a link cable. This makes it possible to make a race between two paddlers.

## Paddling values



*Dansprint computer*

### **Stop watch (1)**

The stopwatch shows the time in [HH:MM:SS].

### **Distance (2)**

The distance is displayed in meters.

### **Power and Speed (3)**

The speed can be displayed in:

Kilometers per hour	[KM/HOUR]
Meters per second	[M/S]
Time per 500m	[TIME/500M]
Time per 1000m	[TIME/1000M]

The power is displayed in watts

The speed and power displayed is an average of the last four strokes.

Toggle this field with the up and down arrow key.

## ***Stroke rate (4)***

The stroke rate is displayed in strokes per minute. The stroke rate is an average of the last four strokes.

## ***Heart rate (5)***

The heart rate is displayed in heartbeats per minute. The heart rate is an average of the last 10 heartbeats.

A heart rate interface and a heart rate chest ribbon are needed to see the heart rate.

The heart rate interface is a small box that receives the heart beats from the chest ribbon. The heart rate interface is plugged in a socket on the back of the computer.

To make sure you have equipment that is compatible with the dansprint computer, we advise you to purchase both the heart rate interface and the chest ribbon from a dansprint dealer.

## ***Water %, Average and maximum power/speed (6)***

During the paddle session the average and maximum values for the speed and power are recorded.

All the maximum values are recorded from a single stroke.

The water percentage shows, how long time you are in the water phase compared to the total stroke time.

For example, when the water % is 47, it means that the paddle is in the water phase 47 % of the time of the total stroke time. If you take long paddle strokes with short air break in between, the water % will be high. If you take short paddle strokes with long air breaks in between, the water % will be low.

Toggle this field with the left and right arrow key.

## ***Pacer and stroke balance (7)***

### **Pacer**

The pacer can show a virtual race between two paddlers or a race against a pacer.

The paddler on the ergometer is shown as the top triangle and the pacer or the other paddler is shown as the bottom triangle. The display shows a distance of 100 meter with 25 meters between each buoy.

## Balance

The computer compares the power from the right and left stroke to each other. The difference is displayed in percent by a horizontal balance bar. The maximum deflection is 30 percent to each side.

The balance is an average of the last four strokes.

**Important** - Tighten the elastic cords equally, to get the best result. This is done in the back of the seat



*Elastic cords.*

## Key definitions

The following key definitions are divided into three main modes:

- Menu Mode
- Value Mode
- Paddling Mode

In Menu mode the user scrolls through menu points.

In Value mode the user sets up a user parameter such as Paddlers Weight or countdown. In case of the first, the key definitions are of value mode A, which is related to values that can be chosen arbitrarily within a predefined range; in this case 1 to 999 Kg.

In paddling mode, it is possible to toggle the read-out for two of the displayed values: Instant speed/power and Session average and max speed/power and water%.

The specific key definitions for the various modes are as follows:

### **Menu mode:**

- Up, Down: Scroll through menu points.
- Left, Right: Inactive.
- Enter: Select menu point.
- Reset: Reset session and go.

### **Value mode:**

- Up, Down: Increase and decrease value.
- Left, Right: Change position.
- Enter: Accept new value.
- Reset: Reject new value and reset to old.

## **Paddling mode:**

- Up, Down: Toggle readout for instant speed/power
- Left, Right: Toggle readout for overall session speed/power/water%
- Enter: Go to menu mode.
- Reset: Reset/clear session and go.

## **Menu Tree**

The menu is divided into two main parts - New Session and Data Presentation. It is not possible to enter the Data Presentation menu without having created data by paddling.

### ***New Session***

**USER SETUP** (Setting of user specified parameters)

- **PADDLERS WEIGHT** (IMPORTANT! Specify your personal weight.)
- **STOP WATCH** (Set the stop watch to continue or stop when inactive)
- **TRAINING SESSION**
  - **TIME** (Set the work time, rest time and pacer)
  - **DISTANCE** (Set the work distance, rest time and pacer)
  - **DISABLE** (Stops the training session)
- **CALIBRATION** (Drag resistance test)

**RESET TO DEFAULTS** (Reset to factory defaults)

**SAVE CONFIG** (Save session parameters for power-on values)

**SESSION STATUS** (List session parameters, Box ID and latest countdown)

**LINK** (Connect to other dansprint computer)

**GO** (Go to paddling mode)

### ***Data Presentation***

**CONTINUE** (Return to paddling mode and append data)

**GRAPHICS** (Setting up and showing graph)

- **GRAPH TIME SPAN** (Number of seconds to show from end of session)
- **SHOW GRAPH** (Show graph)

**NEW SESSION** (Clear data and go to New Session menu)

Note: At any time, pressing the Reset key will clear all data and start a new session using current parameters.

## Menu functions

### ***Paddlers weight***

It is very important to set the weight, because the calculated speed is affected by this setting.

### ***Training session***

Here the interval training and pacer are setup. You can choose work time or work distance and the rest time between each interval. You can also setup how fast the pacer should go.

#### **Time interval:**

Set the work time [HH:MM:SS]

Set the rest time between each interval. Press RST, to make only one countdown.

Set the distance that the pacer travels, during the work time. Press RST, to see the balance field instead.

#### **Distance interval**

Set the work distance

Set the rest time between each interval. Press RST, to make only one countdown.

Set the time for the pacer to complete the distance. Press RST, to see the balance field instead.

### ***Calibration / fan resistance***

The fan resistance / air intake can be set between 1 and 10 in the front of the ergometer. The more air that flows through the fan, the harder it gets.

Weight [Kg]	< 50	50 – 60	60 – 70	70 - 80	80 - 90	90 - 100
Fan resistance	1	1-4	3-6	5-8	6-9	7-10

*Recommended fan resistance setting*

The drag resistance can vary, because of change in humidity, temperature, dust in the air intake and bearing resistance. Calibrate the ergometer, to use the same drag resistance every time.

## **Session Status**

The session status shows the status parameters of the paddle session, Box ID, version and latest countdown.

The Box ID is used to generate a key file for the dansprint PC software.

The latest countdown shows the distance, time and the paddlers weight of the latest countdown. Furthermore a control code is added, to verify the result.

## **Link**

Two dansprint computers can be connected with a link cable.

Follow this procedure to connect the computers.

- Connect cable, if not already connected
- Apply power to both computers
- Choose link in the menu on one of the computers.
- Press the RST button on the other computer and the computers are connected.

Setup the race in the menu under training session.

The dansprint software version must be 1.30 or higher.

## **Contrast adjustment**

Depending of the computer, the contrast is set in the back of the display or with the keys. The contrast on the newest computer is adjusted with the keys.

If the contrast is adjusted in the back of the computer, simply turn the rod until you have the best picture.

Otherwise the contrast is adjusted with the keys. For more contrast press the up arrow key for more than a second. For less contrast press the down arrow key for more than a second.

Release the key when the right contrast is found. If you wish to keep the adjusted contrast the next time the computer is powered on, choose "save config" in the menu.

# Connectors

## Heart rate interface (1)

The heart rate interface is plugged into socket number one. The interface box must be fastened a close to the heart rate chest ribbon.

## Power input (2)

The power plug goes into socket number two. Secure the power cord, to avoid that someone stumbles over it.

## Serial (3)

The serial connector is used for communication with other devices, like

- Another dansprint computer, with a link cable
- PC software – dansprint analyser, with serial cable
- Dansprint virtual race, with serial cable

## Front sensor (4)

Connect the sensors in the front to connector number four, using the ninepin d-sub socket-to-socket cable.



*Dansprint computer connectors*

## PC software

All the paddling values can be transferred to a PC application and shown graphically. The stroke data and heart rate are displayed while paddling and saved for later analysing. Use the stroke data to improve your training session and the comparison of the right and left stroke side to improve you paddle technique.



*PC software – dansprint analyser*

### The application graphically presents the paddlers

- Speed
- Power
- Stroke rate
- Heart rate
- Total stroke distance
- Distance in water phase
- Time in air phase
- Water / Stroke distance

### You can compare the paddlers left and right stroke regarding

- Power
- Work
- Total stroke distance
- Distance in water phase
- Time in air phase

**All the values can be presented versus effective paddle time or distance.**

### With the application you can also

- Print graph
- Copy graph to another application
- Export data for use with other applications, like excel
- Save personal data

For more information see the dansprint homepage – [www.dansprint.com](http://www.dansprint.com)