

Setup guide

DCD TimeR and LapR



Table of Contents

Introduction..... 3

Included with the package 5

Setup procedure 6

1. Charging the TimeR..... 6

2. Bluetooth connection 6

3. Install the software Windows XP/Vista/7..... 7

4. Connecting the TimeR (Windows XP/Vista/7) 11

Install the software Apple OS..... 14

Connecting the TimeR (Apple OS)..... 18

Tranponder installation..... 20

TimeR tripod installation..... 23

Introduction

Thank you for purchasing a DirtChamp Design product. We are proud to present a state of the art lap counting system for your personal practice analysis as well as racing with your friends.

WARNING! FOR YOUR SAFETY, PLEASE READ THE "IMPORTANT PRODUCT INFORMATION GUIDE" BEFORE YOU BEGIN THE INSTALLATION PROCESS.

This guide will walk you through the setup procedure of your new TimeR and LapR step by step. Please read the important handling information and important product information carefully before proceeding with the actual setup process. The product contains a Lithium Ion cell, which can be dangerous to your health if handled incorrectly.

Warranty and repair procedure

DCD products are manufactured according to the highest quality standards. DCD guarantees this product to be free from defects in materials or workmanship for 12 months from the original date of purchase verified by sales receipt. This limited warranty does not cover damage that are results of normal wear, misuse or improper maintenance of the product.

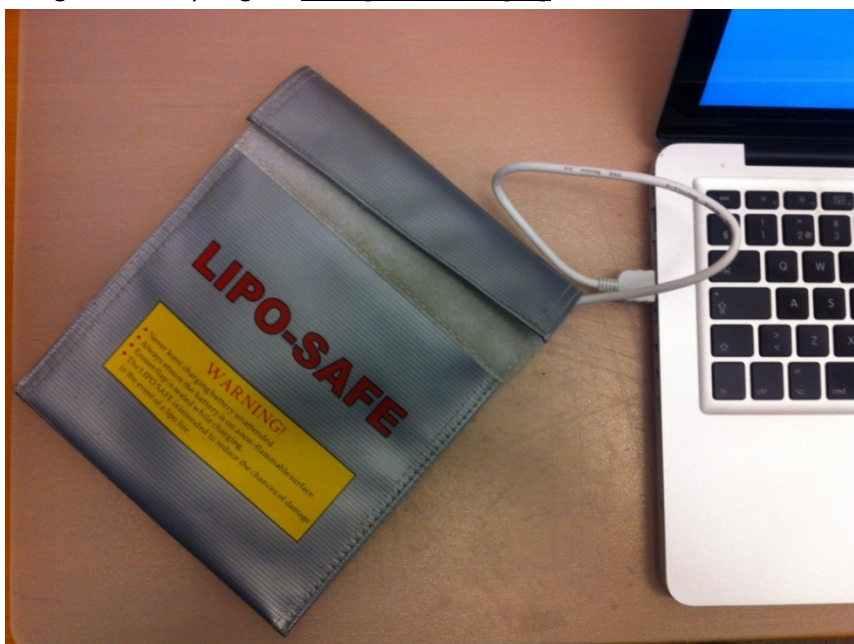
To avoid unnecessary service and mailing charges, always eliminate all other possibilities and check all components for malfunctions before sending in your unit for repair. Products sent in for repair that operate perfectly will be charged a service fee.

When sending in the product, always pack carefully and include the original sales receipt, a description of the problem encountered, your return address and contact information.

Since we do not have control over the connections and use of this product, we cannot accept any liability for any damages resulting from the usage of this product. Therefore, using this product is at your own risk, and the user accepts all resulting liability from using of the product.

Important! For your own safety and to avoid burns or damage to your property, instructions 1-9 must be followed **AT ALL TIME**.

1. ALWAYS use a LiPo safety bag when charging and storing the TimeR. If you don't know what a LiPo safety bag is please contact info@dirchampdesign.com. Such bag can be found in any RC related store.
2. NEVER leave TimeR unattended while charging!
3. NEVER try to charge using higher voltage than 5.0V. This can cause fire and/or explosion.
4. NEVER charge a bulged or swollen TimeR. Contact support@dirchampdesign.com for service.
5. NEVER leave TimeR in a discharged state. Always charge for at least one hour before storage. If TimeR is stored uncharged, contact support@dirchampdesign.com for service.
6. If the charge process is NOT terminated by blinking red light. **DO NOT** attempt to charge again. No light or weak red light indicates erroneous behaviour. Contact support@dirchampdesign.com for service.
7. When inserting TimeR into the USB-port it shall respond with a solid red light after a few seconds. If no red light is visible after 30 seconds DO NOT attempt to charge again. Contact support@dirchampdesign.com for service.
8. If the charge process causes excessive heat of TimeR. **DO NOT** attempt to charge again. Contact support@dirchampdesign.com for service.
9. If the charging is not working in the sense that the TimeR does get charged. **DO NOT** attempt to charge again. Contact support@dirchampdesign.com for service.
10. **TimeR is operated in a harsh environment with a potential threat to be run over by cars or getting hit for several reasons. Due to this reason DCD Racing AB will not accept any legal claims for damage to health and/or property as a consequence of a burning/exploding battery.**
11. Lihium Ion batteries can malfunction with burning and/or exploding characteristics for a long time after abuse. This can occur during charging or storage. This is the reason for always using LiPo safety bag for storage and charging.



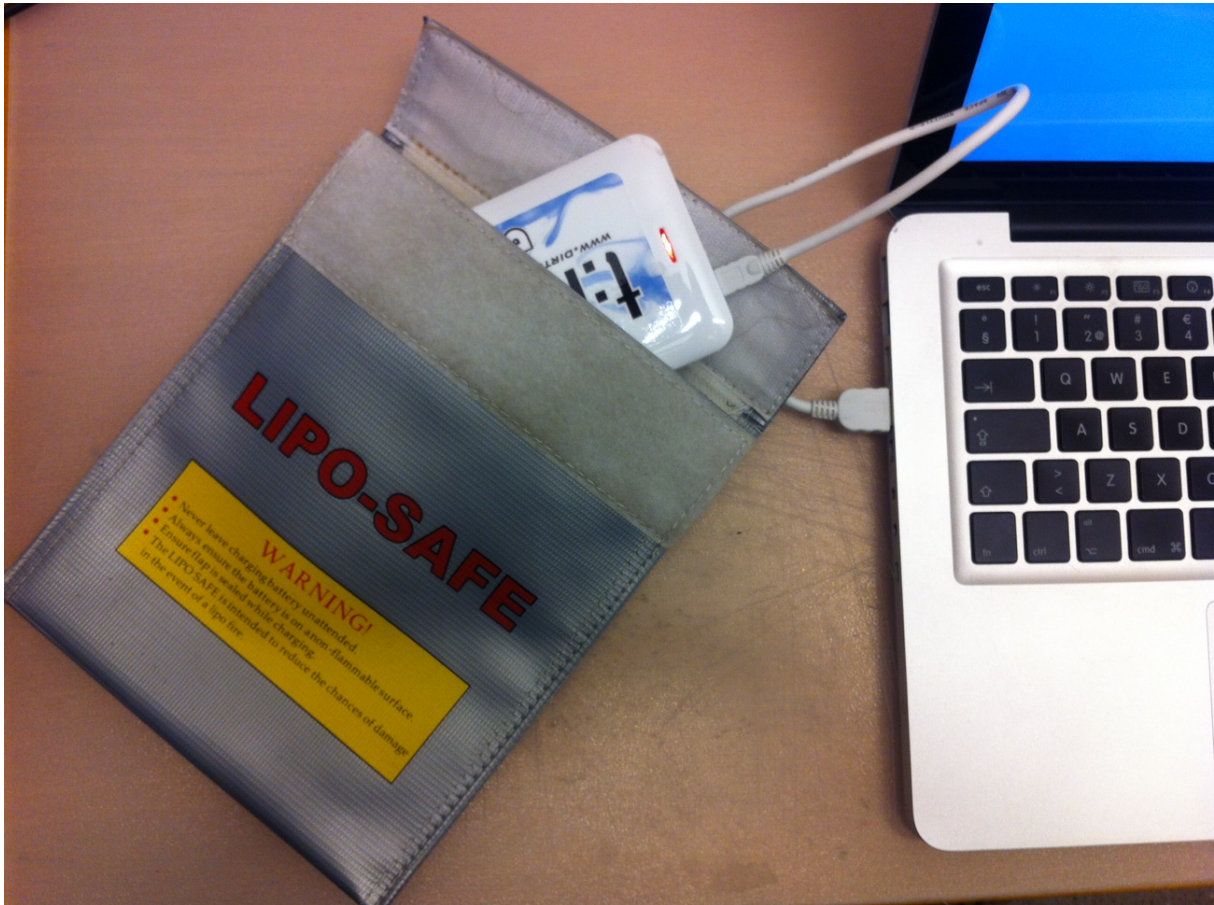
Included with the package



TimeR, Product key card, USB-flash disk with manual and software, (1) DCD Transponder, USB – charging cable and TimeR stand.

Setup procedure

1. Charging the TimerR



The battery inside TimerR needs to be charged before first use. Please insert the USB-cable in to the compatible port of your computer, preferably an USB 1.1 or USB 2.0. When you see a red LED shining the TimerR is charging. Wait until the TimerR is fully charged, the red LED will start flashing when it is fully charged.

If TimerR red LED is turned off without blinking. The charging process has failed. **DO NOT** attempt to charge again. Contact support@dirchampdesign.com for service.

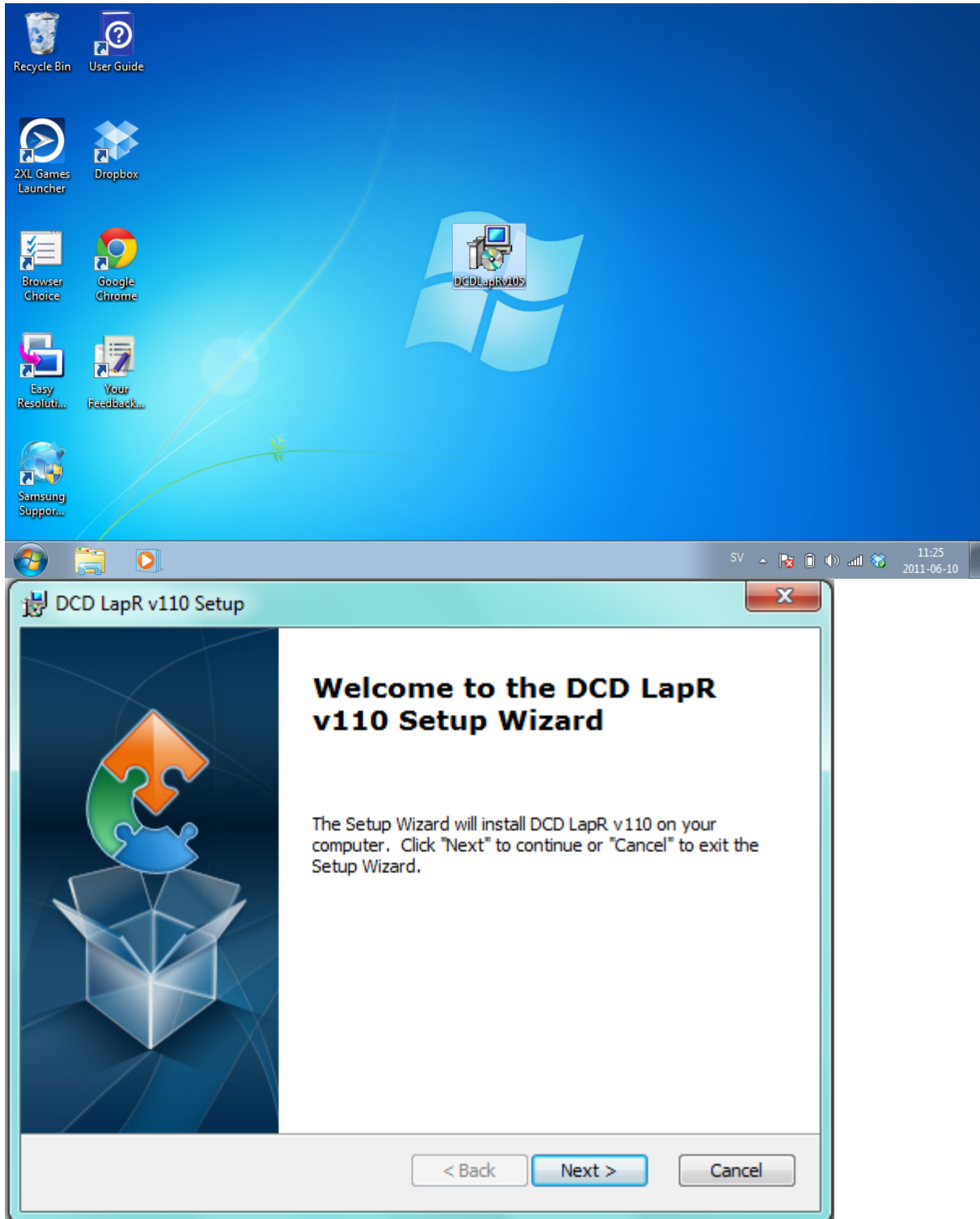
2. Bluetooth connection

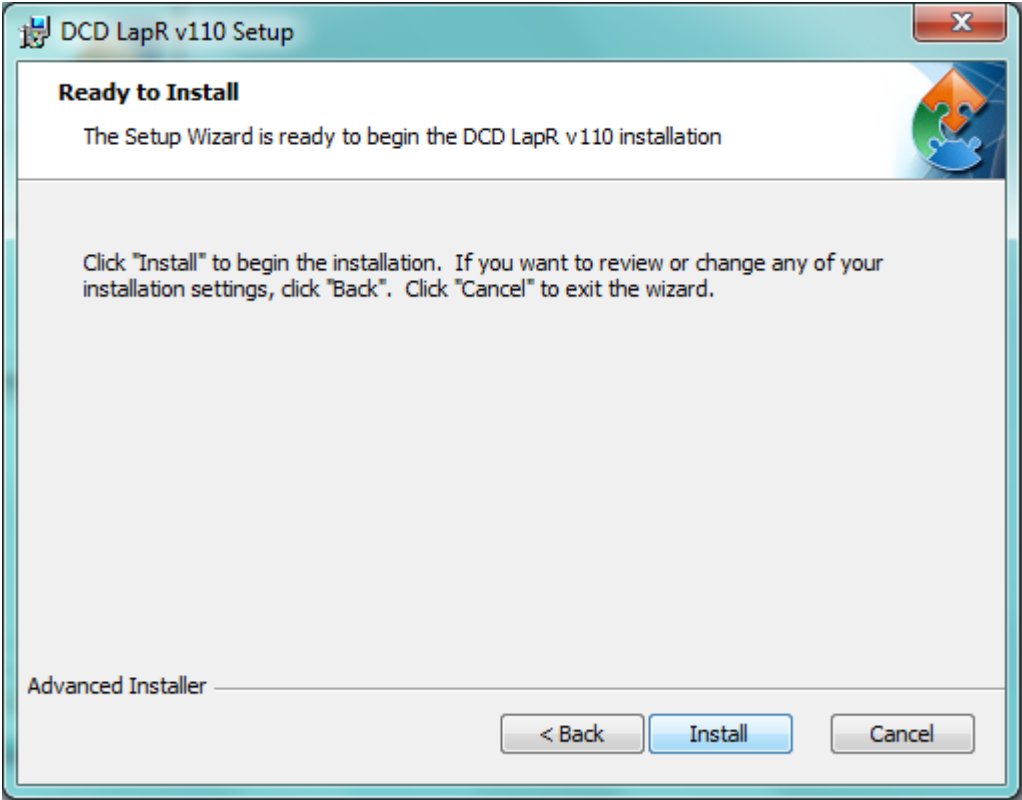
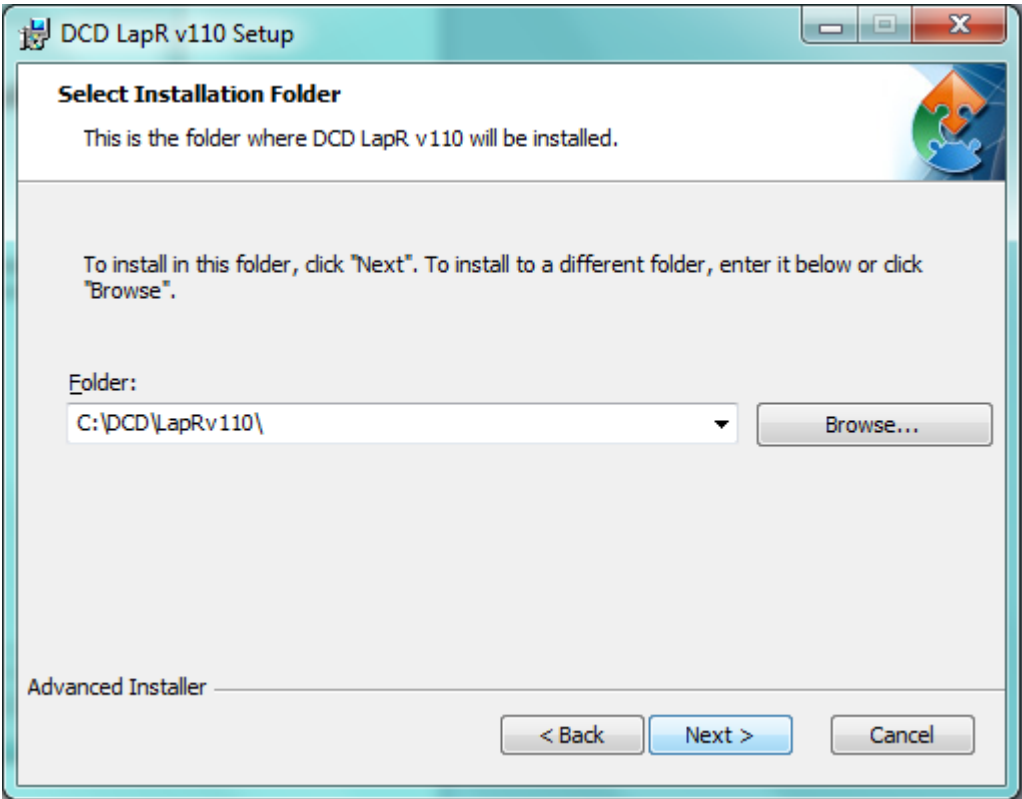
Since the TimerR is communicating with the computer using a Bluetooth connection, you need to have a Bluetooth device attached to, or installed on, your computer. The Bluetooth device inside the TimerR is a class 1 module and can provide a range of at least 100 m (free line of sight). Since most of the devices inside laptops are of class 2 type the device inside your computer may be the limiting. If you need improved range, please see optional USB-Bluetooth devices, which is of class 1 type.

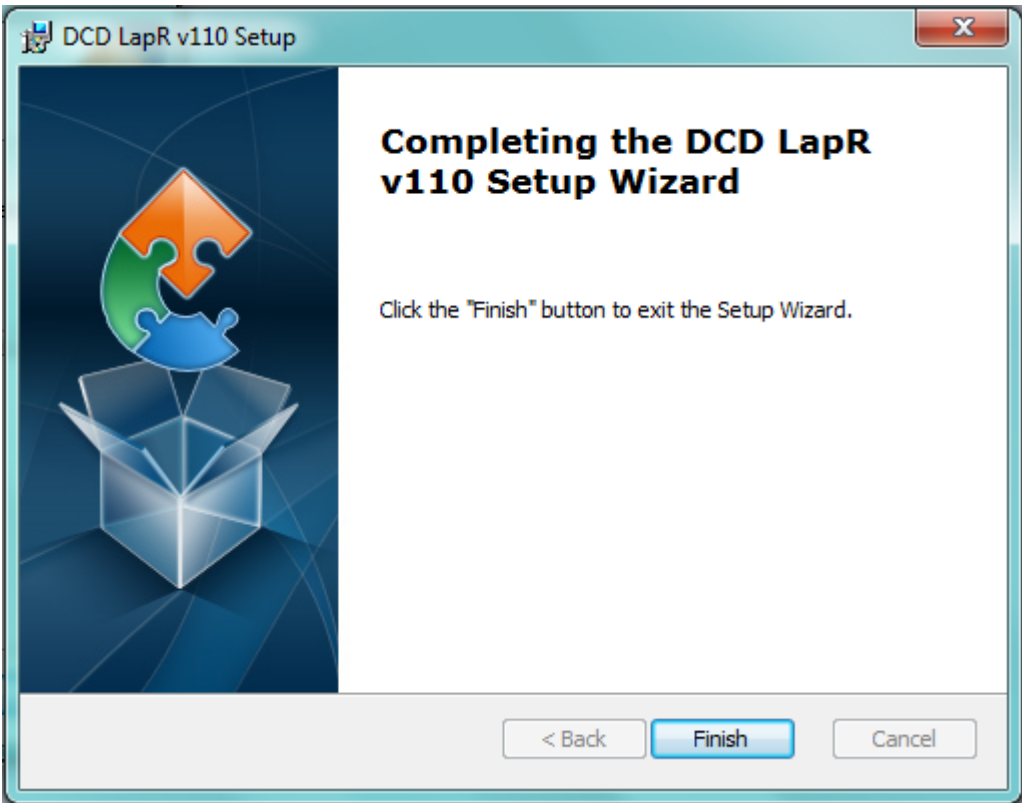
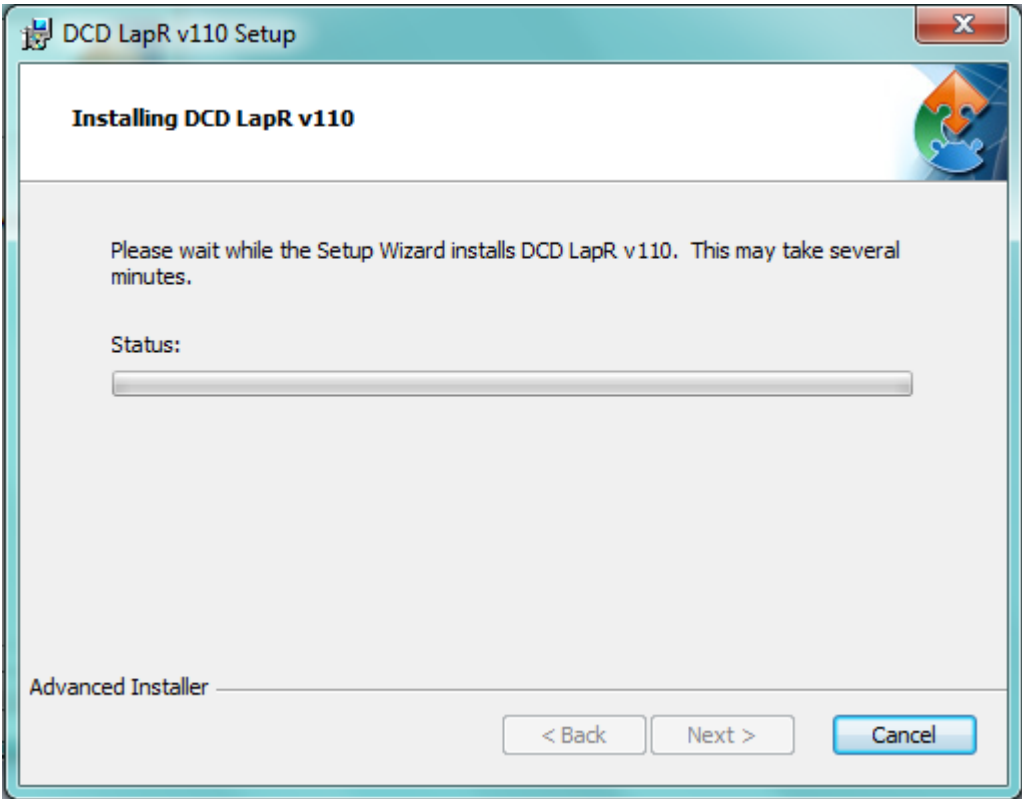
If you are interested in testing the strength of your Bluetooth link, you can see it in Windows.

3. Install the software Windows XP/Vista/7

This software runs under Windows XP/Vista/7 only.







This is the first time you launch LapR.
Please take a moment to register your copy

Name:

Country:

Email:

I agree to DCD
terms and
conditions

In order to make use of the database service and
use the iLapR app for iPhone, you have to fill out the
user name and password found on the user card
that came with your TimeR. Please fill out these in
the boxes below.

User (*):

Pass (*):

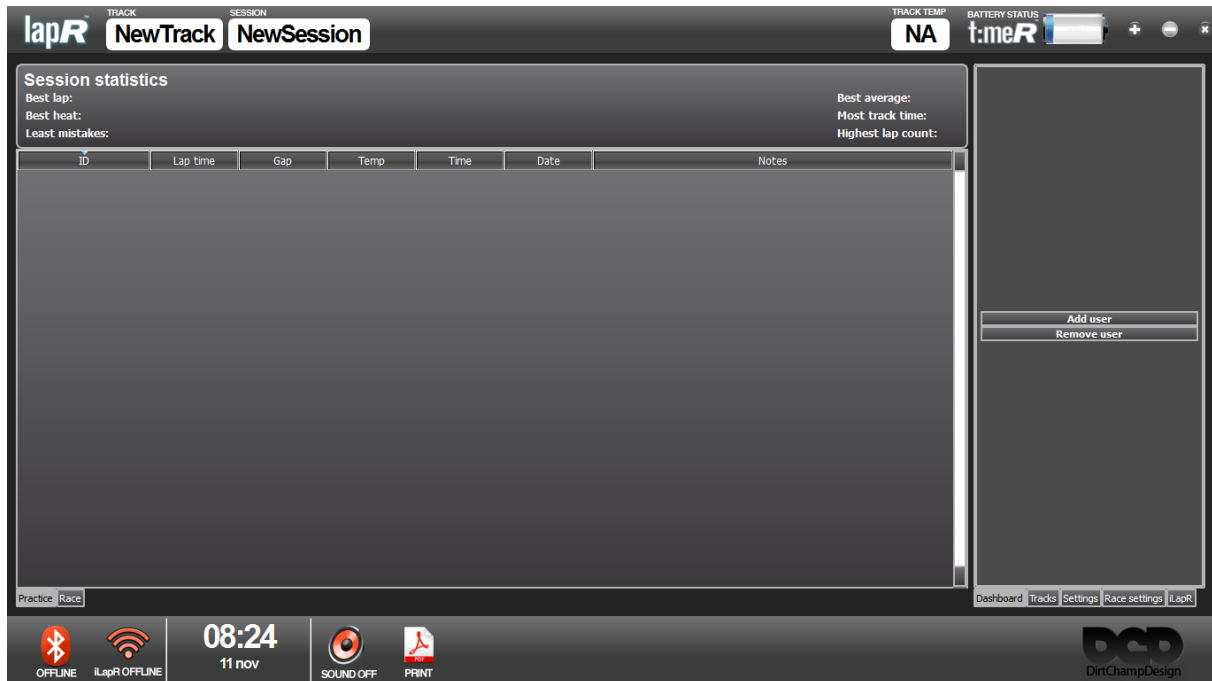
Track name:

Session name:

Minimum lap time:

Nominal lap time:

Heat length:



4. Connecting the TimeR (Windows XP/Vista/7)

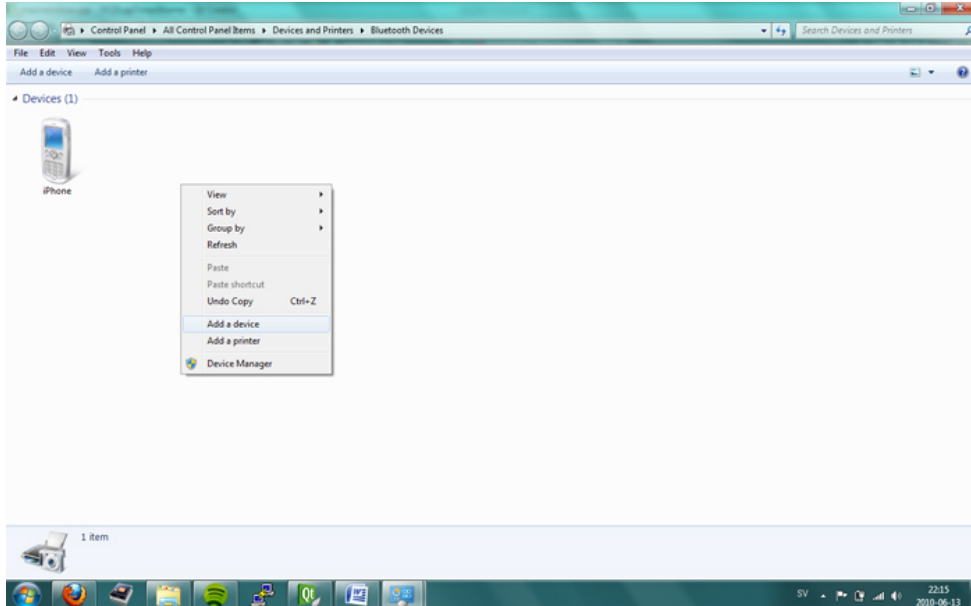
Since the TimeR communicates with your PC using a Bluetooth connection you need to pair TimeR with your computer. This only has to be done once. When the connection is completed the TimeR will connect only to your computer and not to any one else's.

Step by step how to pair TimeR with your computer,

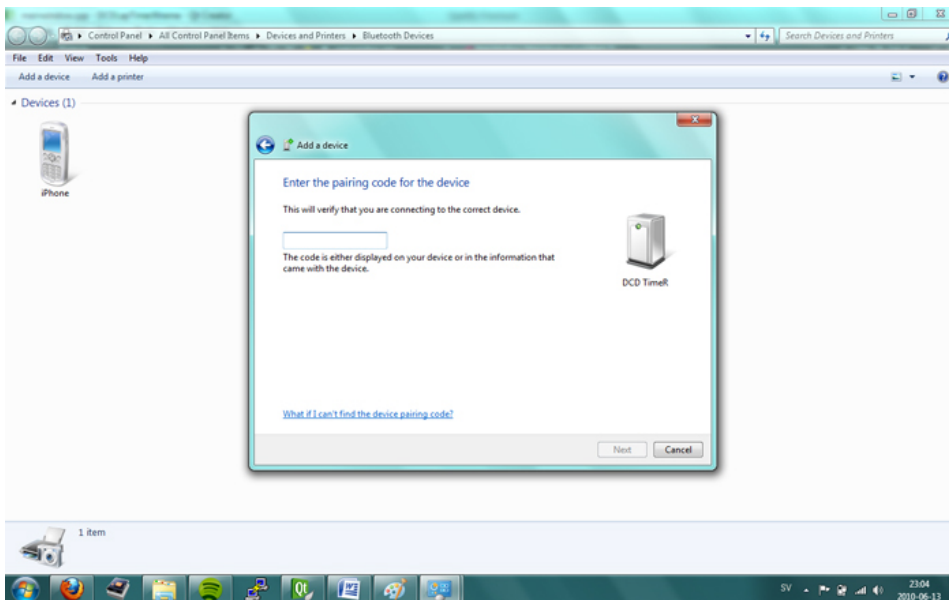
1. Press the on/off button and hold until the LED turns blue. Keep it pressed down until the blue LED starts flashing.



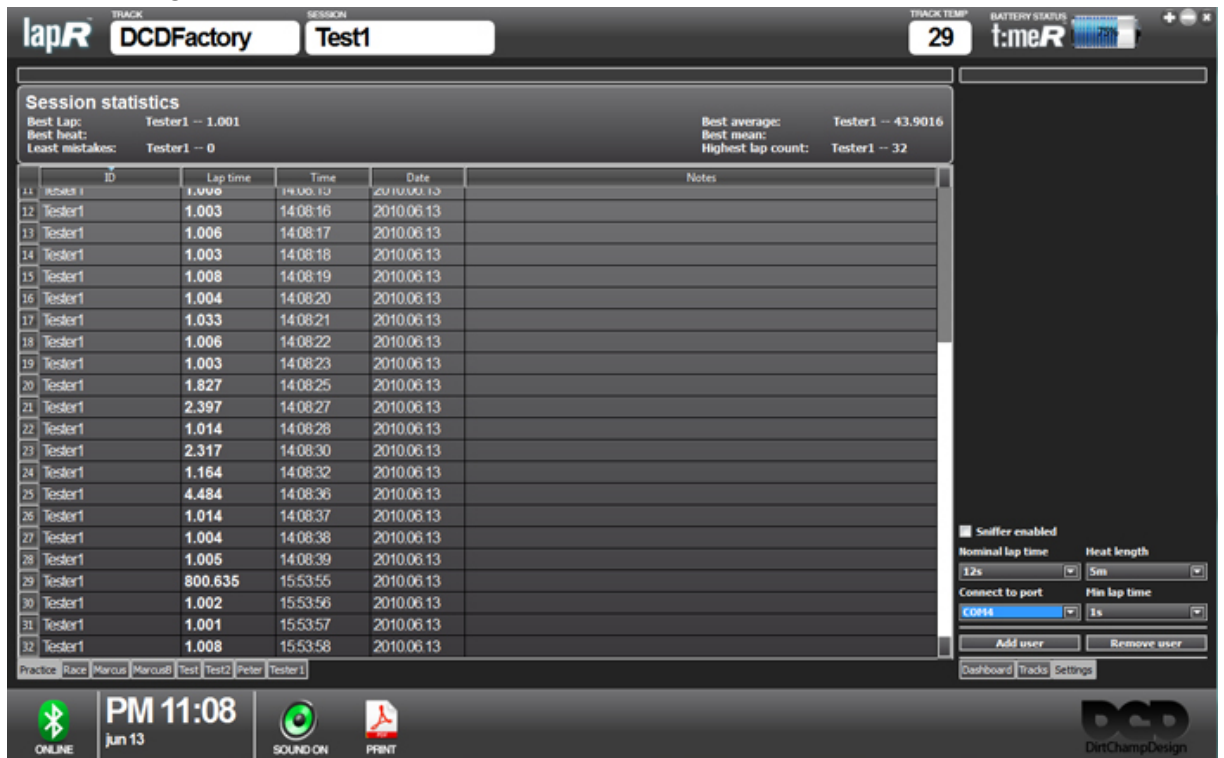
2. When the the blue LED on TimerR is flashing it is possible to pair with the Bluetooth connection in your computer. Search for Bluetooth devices in Windows, which is done by opening the control panel and double-clicking the Bluetooth symbol. It is important that you have the TimerR close to the computer during this procedure.



3. Windows will show the found devices and a blue symbol with a question mark will appear named "DCD TimerR". Right click on this symbol and choose "Pair". Windows will ask for a **passcode** for pairing. Enter **"0000"**, four zeroes.



4. The blue LED will continue to flash, right-click on the "DCD Timer" symbol and choose connect, the blue LED will stop flashing as soon as the computer has connected.
5. Right-click on the "DCD Timer" symbol and choose properties to find which port Windows has assigned to the Timer device. This is usually a port between COM1-COM20.
6. When you have noted the port number start the LapR software and find the Settings button in the lower right corner of the software.

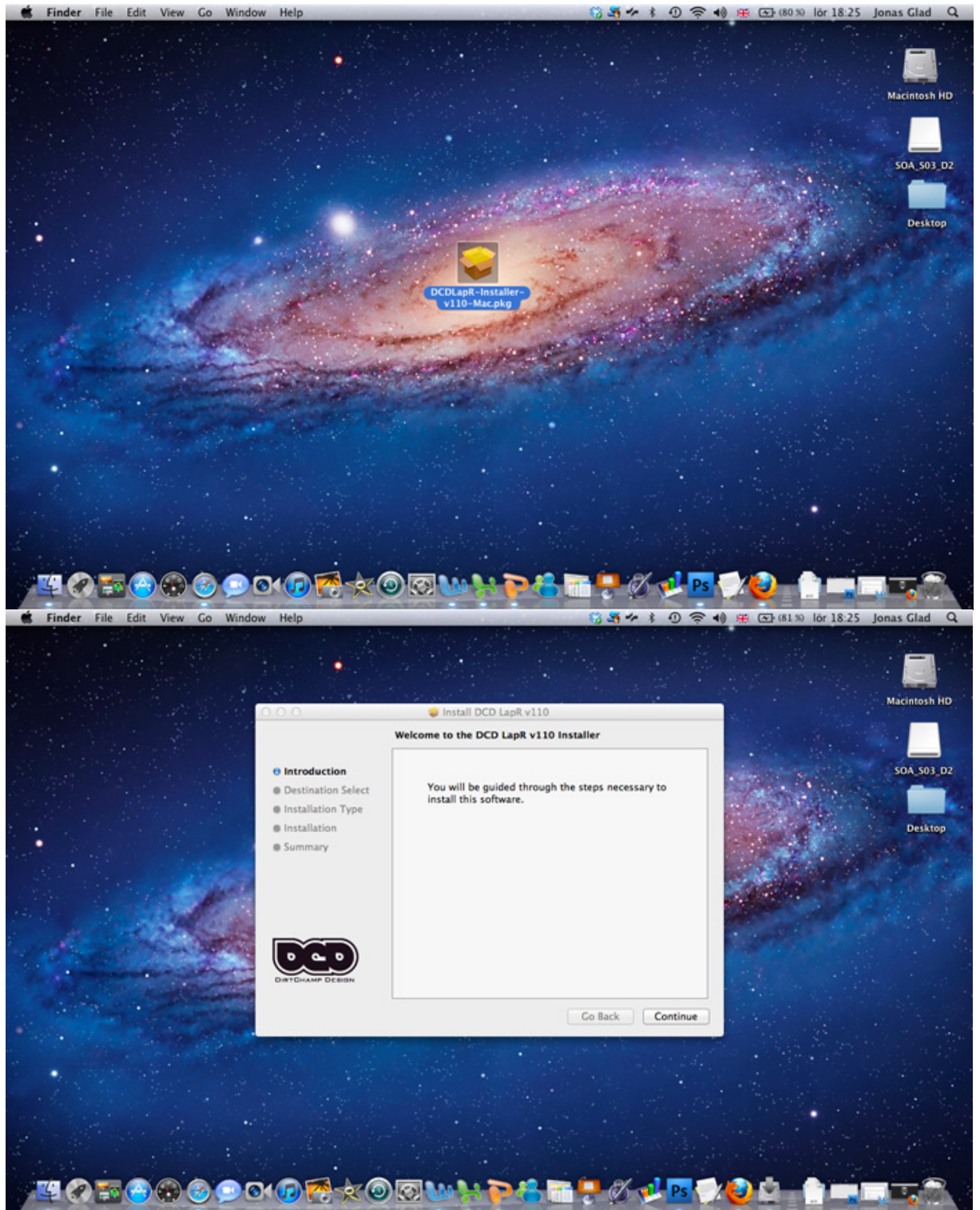


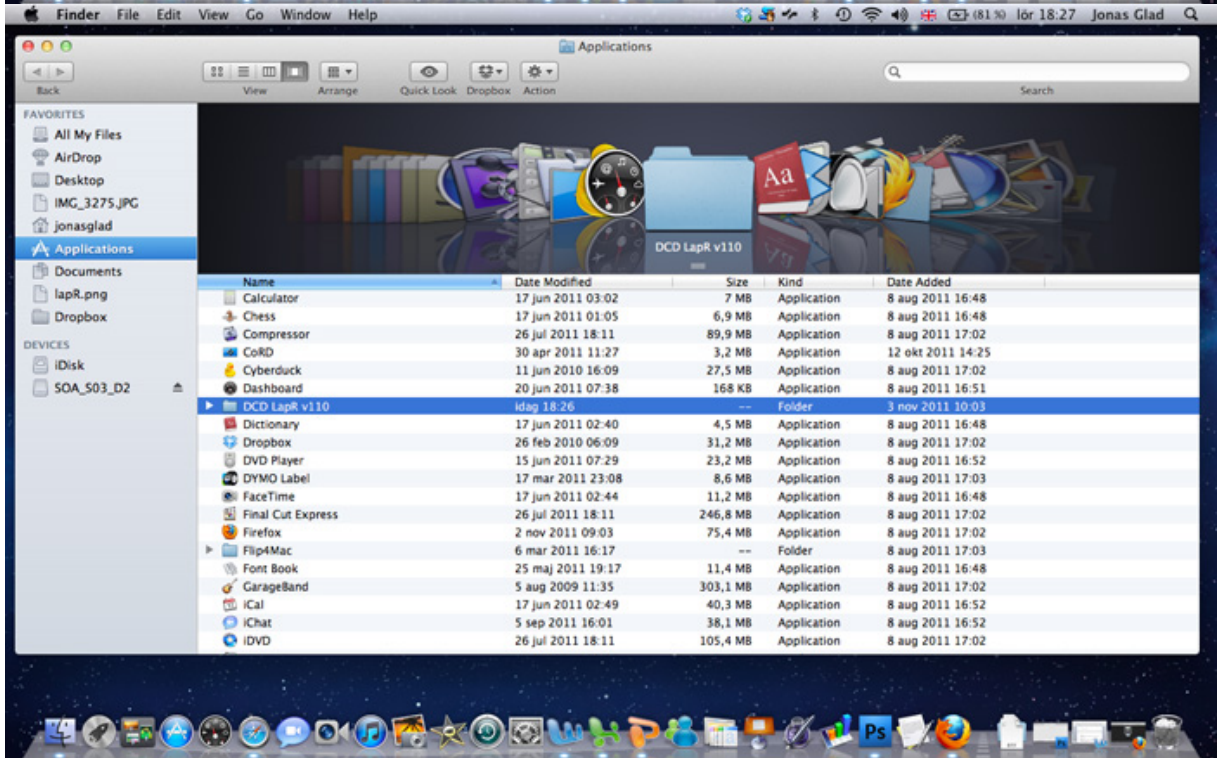
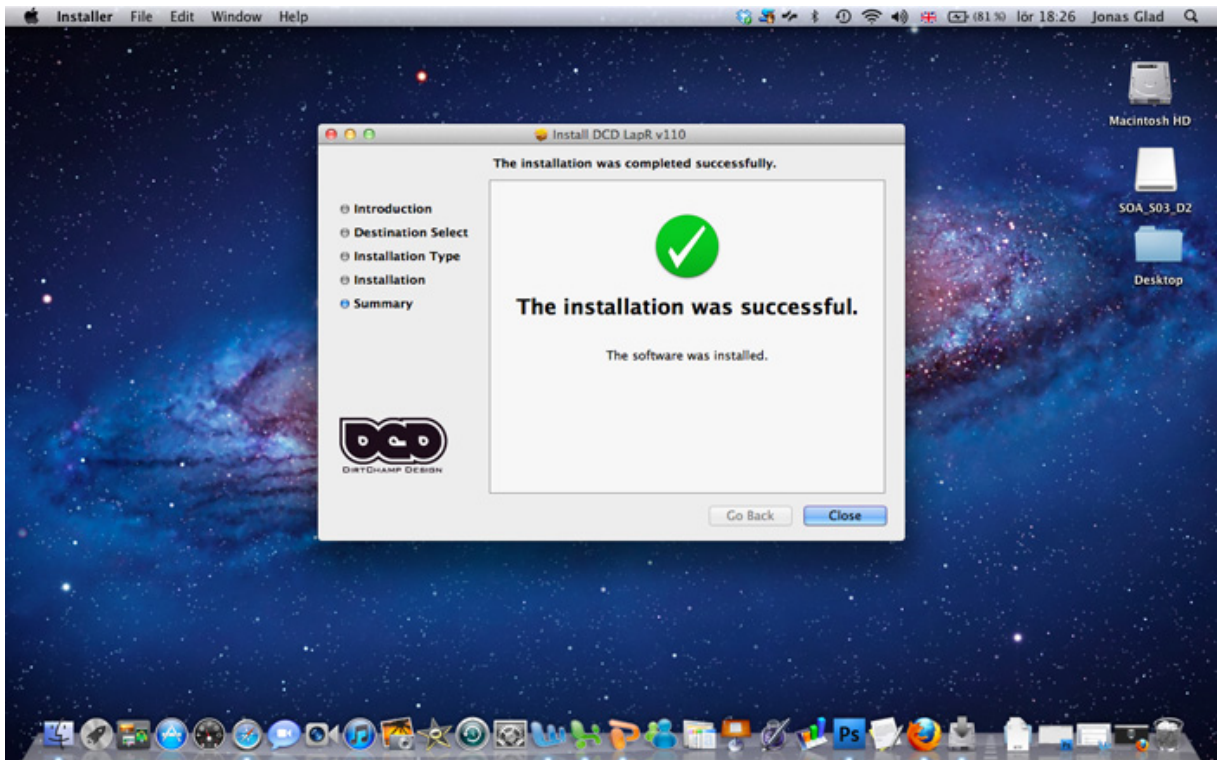
Choose the port Windows assigned to the device as described in step 5. As soon as you have chosen the port, it will be stored and activated by the software itself. Within 20 seconds the software should have connected to the device by itself, this is indicated by the red Bluetooth symbol in the lower left corner of the software turning green.

7. Now register the transponder that came with your package. The transponder number is found on the sticker attached to the cable.
8. This number is unique for you and is not used by any other transponders. Register by clicking on the "add user" button found under settings and fill in your name and transponder number. Now the software automatically saves the user.

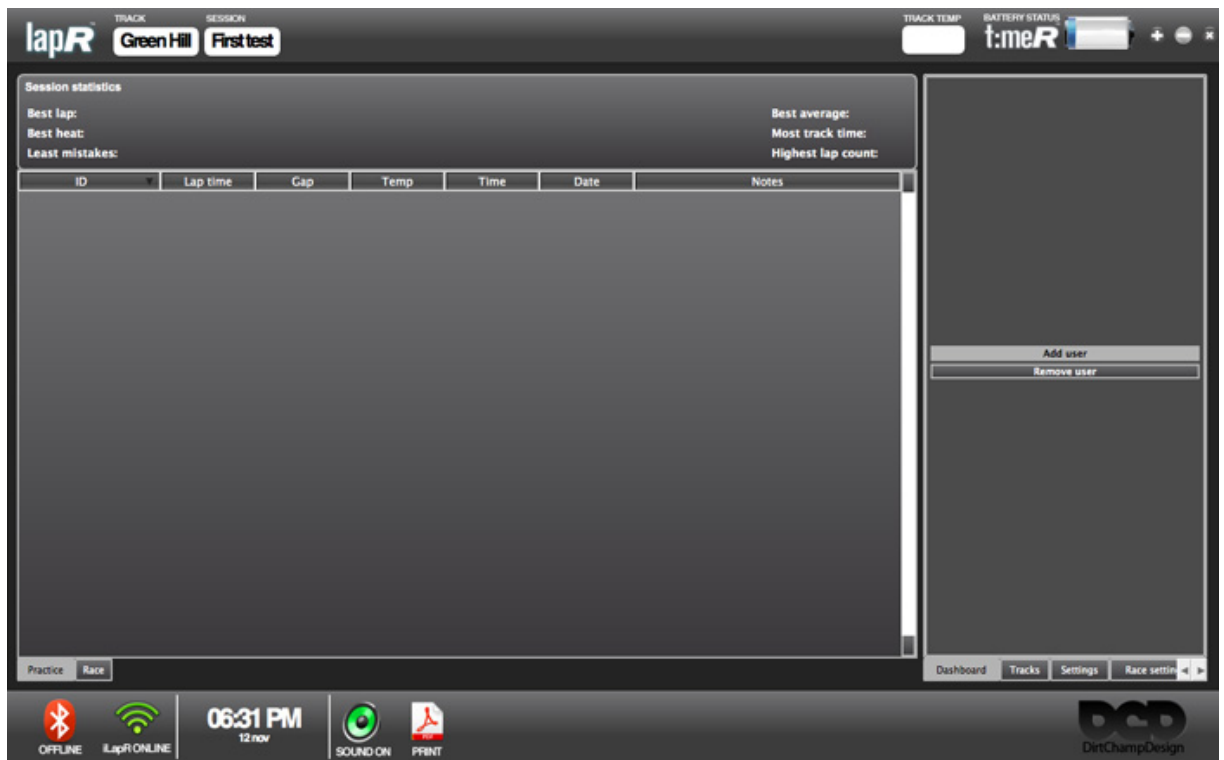
Install the software Apple OS

This software runs under Mac OS X 10.6 and 10.7 only.









Now register the transponder that came with your package. The transponder number is found on the sticker attached to the cable. This number is unique for you and is not used by any other transponders. Register by clicking on the “add user” button found under settings and fill in your name and transponder number. Now the software automatically saves the user.

Connecting the TimeR (Apple OS)

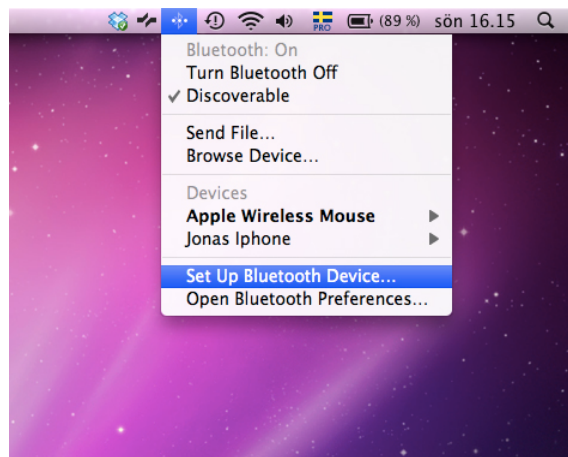
Since the TimeR communicates with your MacBook/iMac using a Bluetooth connection you need to pair TimeR with your computer. This only has to be done once. When the connection is completed the TimeR will connect only to your computer and not to any one else's.

Step by step how to pair TimeR with your computer,

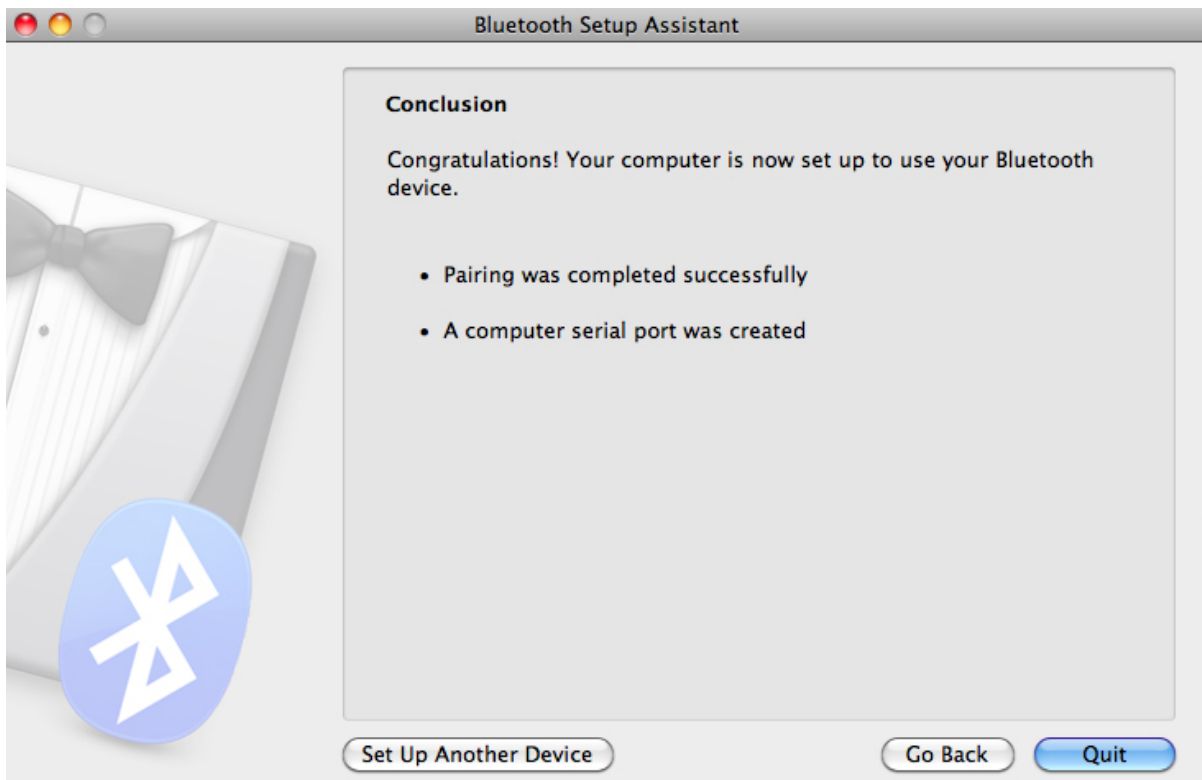
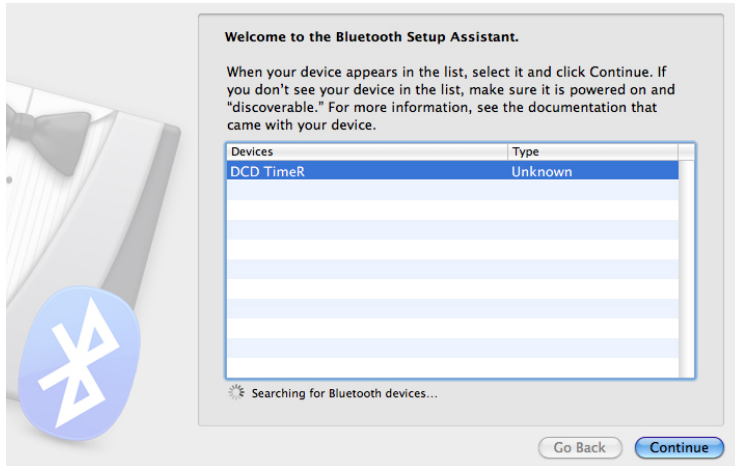
1. Press the on/off button and hold until the LED turns blue. Keep it pressed down until the blue LED starts flashing.



2. When the the blue LED on TimeR is flashing it is possible to pair with the Bluetooth connection in your computer. Search for Bluetooth devices in Mac OS X, It is important that you have the TimeR close to the computer during this procedure.



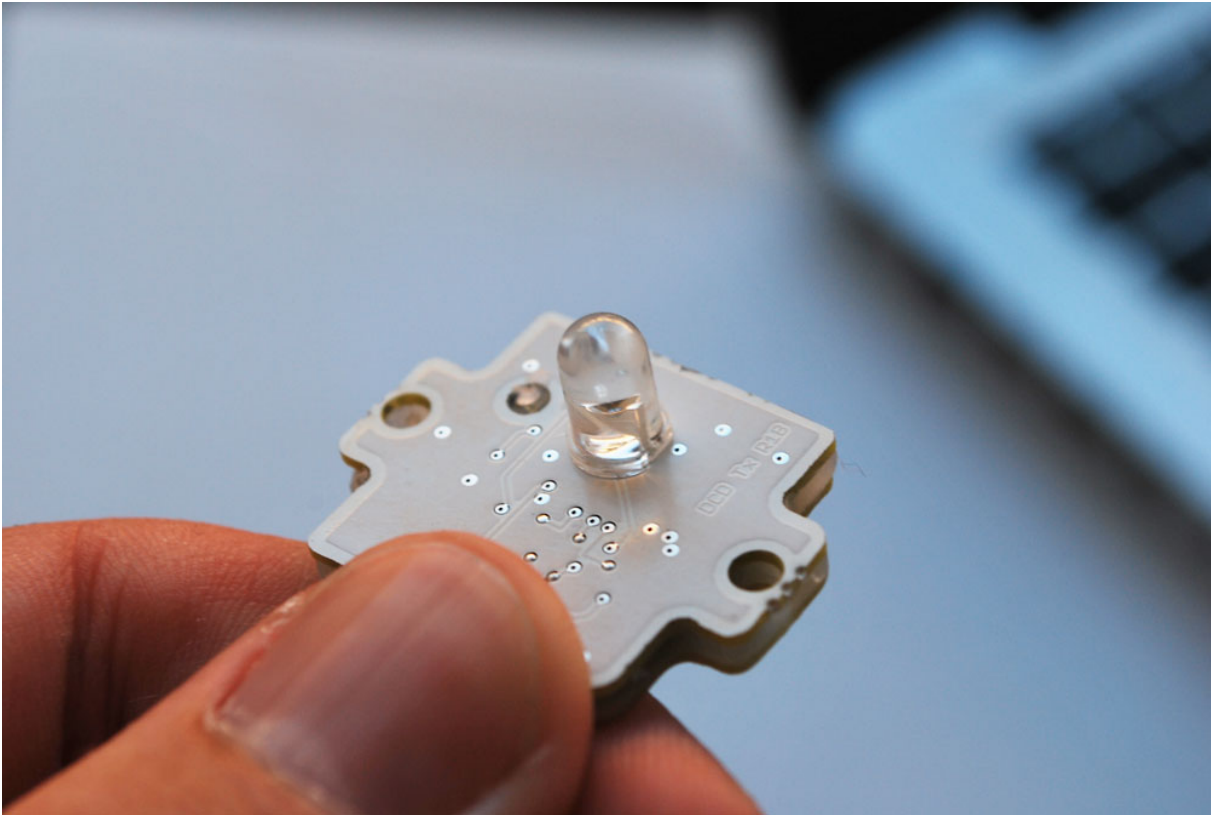
3. Choose "DCD TimeR" when showed



4. When done, start DCD LapR and wait until TimeR stops blinking

Tranponder installation

The transponder that comes with your package is used to communicate with the TimeR-device using IR-light. Hence, its important how to place the transponder in your car. The diode of the transponder must point towards the TimeRs front opening.



In order to get the best performance it is important that the IR-diode is placed in a small angle with respect to the ground. Drill holes in the car body for two mounting screws and one for the IR-diode.

In order to achieve an efficient angle of the IR-diode you can use spacers under the mounting screws. This is dependent on the angle of the side window of your car body. The IR-diode should have similar angle to the one shown in the picture below.





Connect the transponder using the cable to the radio receiver of your car. Make sure the connector is inserted into the receiver with the red wire to the positive pole and the black wire to the negative pole. If you are uncertain of how it is done, please look at the other cables going in to the receiver and insert it the same way with red wire to red wire.

When it is inserted correctly and the car is switched on you will see a flashing red light through your side window.

WARNING: to avoid a short circuit, Observe **plus** and **minus** poles, before you connect the transponder into the receiver.

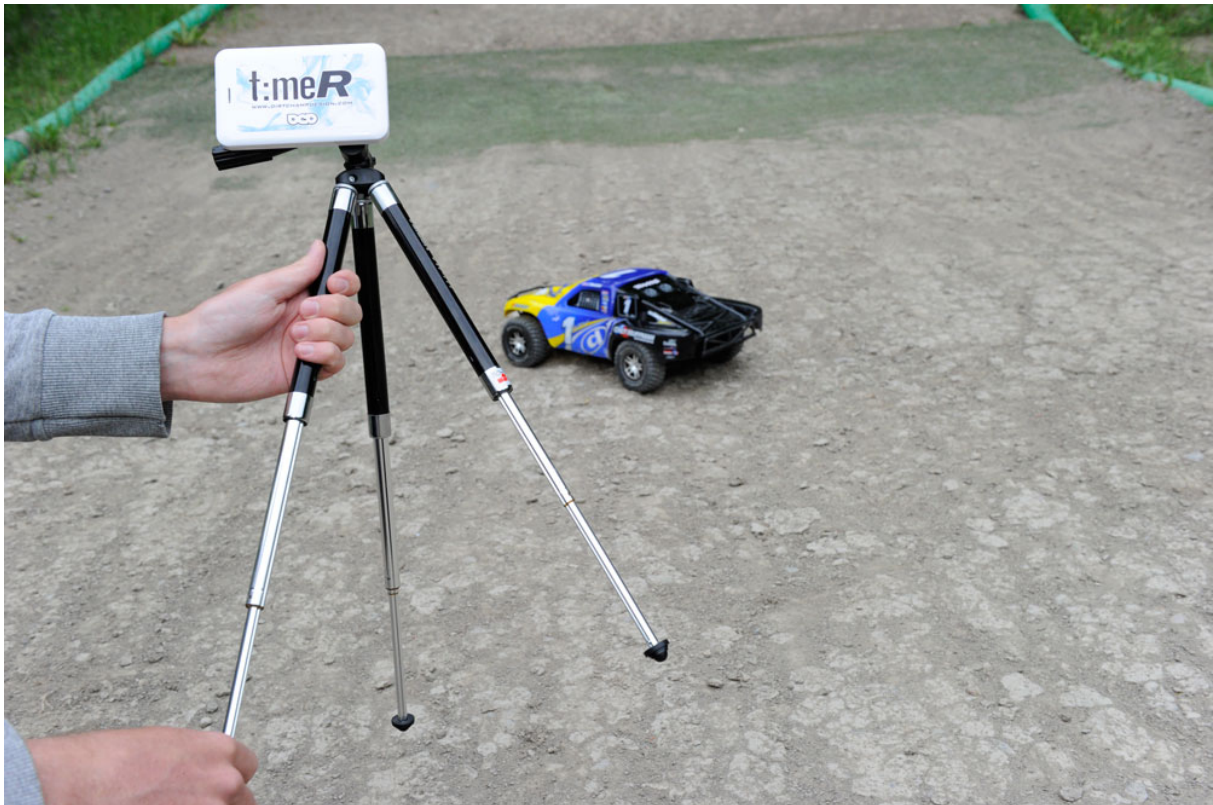
TimeR tripod installation

The stand found in the package is used to attach the TimeR on, in order to achieve the correct height and angle towards the track. Please see the following pictures on how to assemble the stand correctly.









Track side installation

There are a few guidelines for placing the TimeR to achieve optimal performance.

- Choose a cool place, preferably in the shade, away from the sun. If the TimeR reaches 50 degrees Celsius (122 Fahrenheit) it will shut itself down for safety reasons.
- Choose a place where the car is travelling in a straight line and not very fast. For example a short straight.
- Choose a spot as close to the track as possible, remember that the IR-range will vary with conditions for instance temperature and sun shine.
- Try to find a spot where TimeR is unlikely to get hit by a car.
- The height of the stand should be somewhere between 40 and 60 cm (15,7- 23,6 in) above the ground, depending on type of car.
- The angle of the TimeR should be set in order to point at the IR-diode of the transponder in the car. For further tuning, see chapter 8 (range test).



Range test

In order to control that you have a reliable setup of your system you should conduct a range test whenever attending a new track or new placement of TimeR or transponder. This is important when you want to run in race mode as well as to see that the cars are not covering each other. The test is conducted using the following steps,

1. Set the “Min lap time” under settings to “1s”.
2. Place the car as close to the TimeR as possible within the track width.



3. Make sure the LapR is registering laps.

4. Place the car as far away as possible within the track width.



5. Make sure the LapR is registering laps.

6. Place the car in the middle of the track.



If TimeR is not registering laps, when car is placed according to step 2,4 and 6, you should either adjust the angle of TimeR or the angle of your transponder.