

User's Guide CDot Tracker



tobii

Celebrating Communication

Tobii CDot Tracker User's Guide

Content subject to change without notice.

Please check Tobii web site www.tobii.com for updated versions of this manual.

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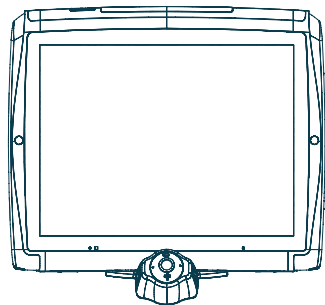
Introduction

The Tobii CDot Tracker is a head mouse tracker that is made to replace a regular mouse. It is made for as an exclusive accessory to the Tobii Technology C-Series Devices. It works by tracking, in detail, the exact movements of a small Dot that is placed on the forehead, glasses, shoulder or any other visible area of the body.

Once the Dot is placed, its movements are tracked by a high-resolution, intelligent camera and are instantly translated into accurate mouse cursor movements.

In the communications software Tobii Communicator clicking can be done through dwell (the pausing of the cursor over an object on the screen for a preprogrammed amount of time) or the use of a switch. Within the Windows environment clicking can be achieved by configuring an external switch to act as a mouse click or by installing the software Magic Cursor 2000 (by Madentec) which enables (among other features) the dwell function to be used for clicking.

Any action within the capacity of a regular mouse can also be accomplished with the Tobii CDot Tracker.



Package Contents

The items below are included in your Tobii CDot Tracker package:

- 1 CDot Tacker
- 1 sheet of reflexive Dots
- 1 Torx size 10 screwdriver
- 2 Torx Mounting screws
- This Tobii CDot Tracker User's Guide

Warranty and Use

Please read this User's Guide carefully before using the device.

The warranty is only valid if the device is used according to the User's Manual. Disassembling the CDot Tracker device will void the warranty. Should the CDot Tracker be used in any way other than those described in this User's Guide and said use results in an injury of any kind, Tobii Technology will not be held liable.

Customer Support

For further product information than that specified in this manual, and for support resources, please contact your local

reseller or Tobii Support (see the back of the manual for telephone numbers, support hours and mailing addresses). Otherwise, please visit the Tobii community www.mytobiicommunity.com and the Tobii Assistive Technology website www.tobii.com/assistive_technology.aspx.

Safety and Compliances

The CDot Tracker device 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. The CDot Tracker generates, uses and can radiate radio frequency energy which can cause harmful interference to radio communications, especially if the device is not installed and used in accordance with this User's Guide. If you experience interference in your radio or television communications, shut the CDot Tracker device down by detaching it from the C-Series Device. If the interference persists after reattaching (and thus activating) the device, try 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 a qualified radio/TV technician for help.

⚠ Modifications not expressly approved by Tobii Technology could void the user's authority to operate the equipment under the FCC rules.

⚠ Personal training for the use of this device by caregivers (or other suitable persons) may be required for users with mental disabilities.

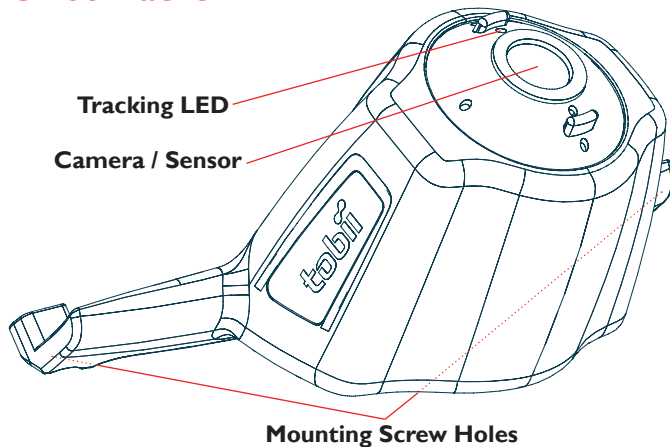
⚠ **Warning:** Choking Hazard. Small Parts. Not for Children under 3 Years.

Do not allow children access to the screwdriver and the screws that are used to mount the CDot Tracker to the C-Series device. In the hands of a child, these items may constitute a Choking Hazard.

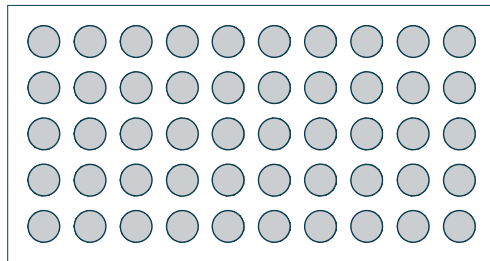
⚠ **Warning:** Due to the low, but possible, risk of failure, the Tobii CDot Tracker should not be relied upon exclusively as the control mechanism for audio communication or environmental control in emergencies, as well as in dangerous, or otherwise important, situations.

The Device

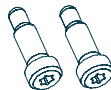
CDot Tracker



Reflexive Dots



Mounting Screws




Getting Started

All that is required to get started using your CDot Tracker is to mount it onto your C-Series device, place one of the included reflexive Dot's appropriately, position yourself within the Track Box (tracking range) and the device will immediately start tracking.

Mounting

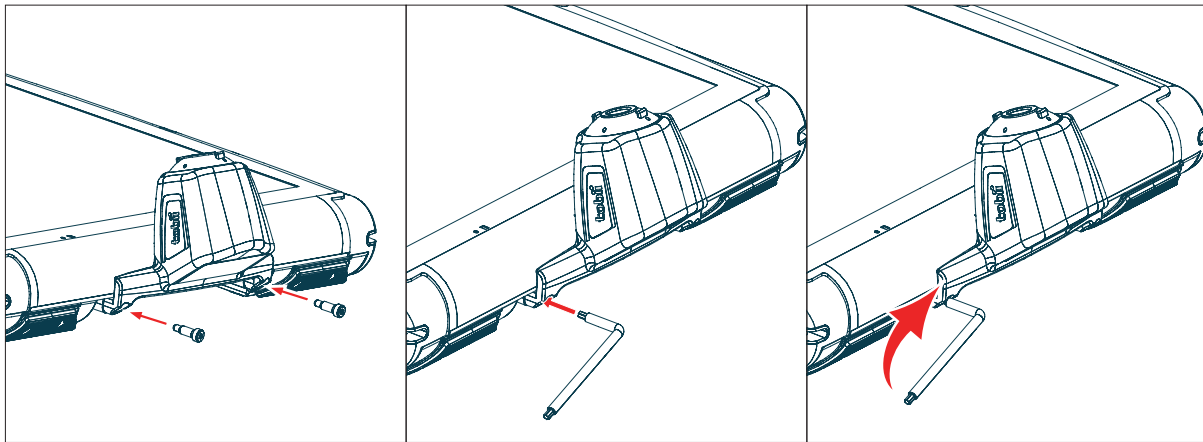
To use the Tobii CDot Tracker it must first be mounted to a Tobii C-Series device using the included screws.

 When mounting the CDot Tracker to the C-Series Device it is important that the contact areas between the two are clean.

Mount the CDot Tracker to the Tobii C-Series device in the following way:

1. Make sure that the Tobii C-Series device is shut down.
2. Remove the power adapter.
3. Place the Tobii C-Series device face up on a flat surface.
4. Use the accompanying Torx screwdriver and screws to mount the CDot Tracker to the Tobii C-Series Device.


- ⚠ Do not overtighten the screws, tighten until you encounter resistance. Overtightening may increase risk for breakage and will not improve functionality.



Installation

As the Tobii CDot Tracker uses standard Windows mouse controls, all of the software and drivers necessary for the functioning of the CDot Tracker when using Tobii Communicator are already installed on the Tobii C-Series devices.

The Windows Environment

-  The CDot Tracker is configured to be used together with the software program Tobii Communicator. If you start your C-Series device in the Windows environment, with the CDot Tracker attached, you will see that the mouse cursor moves in accordance with the placement of the Dot within the Track Box but you will be unable to click using the cursor.

If you wish to make the equivalent of mouse clicks within the Windows environment using the CDot Tracker, you must first configure a Switch to act as a mouse clicker with your C-Series device (see **Getting Started > Clicking > Switch (Within the Windows environment and Tobii Communicator)** for instructions).

To enable Dwell Clicking and Zooming options, etc, within the Windows environment you must install a separate software package called MagicCursor 2000 (by Madentec) available as a software accessory from Tobii Technology or from Ablenet, at www.ablenet.com.

Tobii Communicator

Tobii Communicator is the communications software pre-installed on your C-Series device. The Tobii CDot Tracker is fully configured to function properly when using Tobii Communicator.

Within Tobii Communicator clicking is achieved through the use of Dwell (see **Getting Started > Clicking > Dwell (Only when using Tobii Communicator)**) or by configuring a Switch to act as a mouse clicker (see **Getting Started > Clicking > Switch (Within the Windows environment and Tobii Communicator)** for instructions).

The Dot

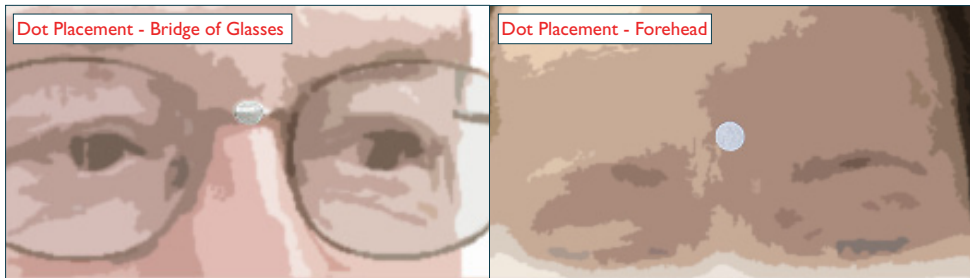
The reusable, reflexive Dot in combination with the CDot Tracker intelligent camera device is what makes head mouse/head movement tracking possible. The CDot Tracker emits a small amount of infrared light that is reflected on the surface of the reflexive Dot. The sensor on the CDot Tracker device detects the infrared reflection on the Dot and translates the motion of the reflection into minutely accurate cursor movements on the screen of the C-Series device.

The most common placement of the Dot is on the user's forehead or on the bridge of the user's glasses. Yet, as some users may lack sufficient head control while still retaining sufficient control of other parts of their body, and as it is the Dot itself that is being tracked by the CDot Tracker, it is unimportant upon which movable part of the body the Dot is placed, as long

as it is within the Tracking Range of the CDot Tracker.

Try different placement locations. Placement on the cheek, lip, shoulder or hand of an individual who might not sit completely upright might be more functional, for example, or help for different reasons. Generally, because of the minute muscle control of the head and neck, the most accurate control is achieved by placing the Dot somewhere on the user's face.

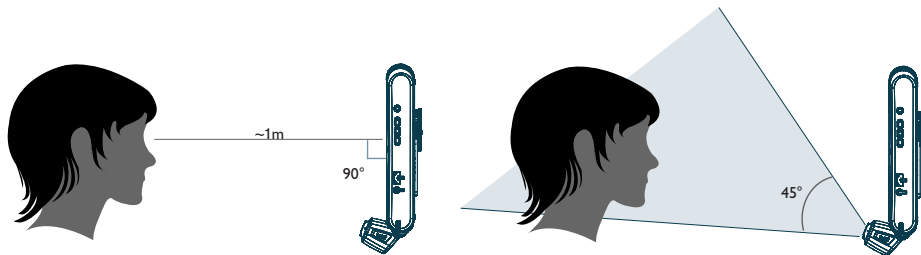
There is no wrong way to place the Dot, use whatever works for your purposes.



Tracking

Tracking occurs when the Dot is positioned within the Tracking Range produced by the CDot Tracker camera. The Tracking Range describes the distance that the Dot (on the head or body) can be from the CDot Tracker camera, and within how many angular degrees, to continue to be tracked accurately.

The Tobii CDot Tracker can be operated accurately from a distance of about 1 meter (~ 3 feet) and at angles from the camera of up to 45 degrees (a 45 degree field of view). This gives the user a wide range of motion and nearly complete freedom of movement.

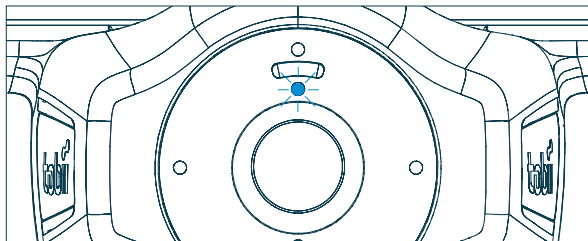


Whenever a user is located within the Tracking Range the Tobii CDot Tracker will automatically start tracking. If the user leaves the Track Range and then returns, the CDot Tracker will automatically begin tracking again.

There is no need to reset or restart your CDot Tracker or your C-Series device.

It is also easy to see when the Tobii CDot Tracker is functioning properly.

A Blue LED (Light Emitting Diode) on the front of the CDot Tracker indicates when the tracker has “locked on” to the reflexive Dot.



- The Tobii CDot Tracker functions equally well outside as it does inside, including when tracking in direct sunlight.

Bumping to Center

A process called “bumping” accomplishes the centering of the mouse cursor while the CDot Tracker is tracking. If the cursor is not centered in the screen in relation to the user, simply move the cursor to the edge of the screen until it “bumps” against the edge. Continue moving your head (or the part of your body with the Dot attached) beyond that point, effectively catching up on the cursor. Continue in this fashion with simple and slight up-and-down or side-to-side movements. As you practice, it will become apparent what you must do to center the tracked mouse cursor.

Clicking

Clicking with the CDot Tracker can be achieved in two different ways: through Dwell or the use of a Switch.

Dwell (Only when using Tobii Communicator)

“Dwell” is a term that means pausing, or holding, the cursor over a point on the screen (over the “Close” icon in a window for example) for a preprogrammed amount of time.

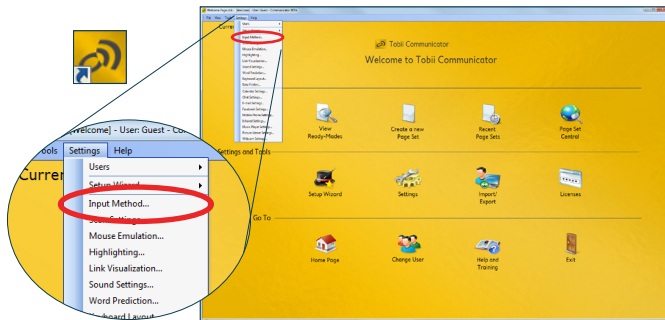
When the time is up the cursor clicks automatically.

Dwell Options in Tobii Communicator

Within Tobii Communicator you can configure the Dwell clicking feature so that it best suits your needs. The dwelling feature in Tobii Communicator is an input method called Mouse Dwell, and as the CDot tracker functions as a selector in the same way as a mouse it is this input method that needs to be selected.

How to activate Mouse Dwell in Tobii Communicator:

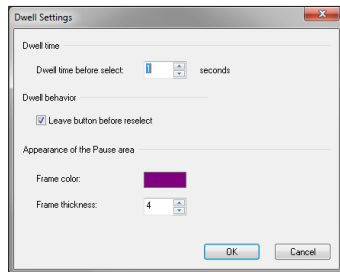
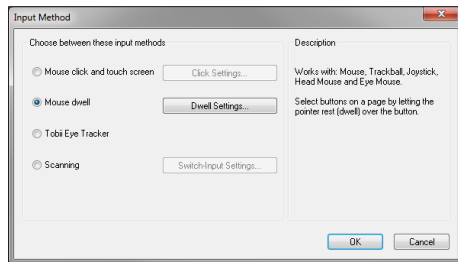
1. Open Tobii Communicator on your C-Series Device. Either select the Tobii Communicator shortcut icon on your Desktop or follow **Start > All Programs > Tobii > Communicator 4 > Tobii Communicator 4**.
2. From the **Welcome Page** select the **Settings** tab, then **Input Method...**. An **Input Method** dialog will open.



3. In the **Input Method** dialog select **Mouse dwell** and select **OK**.

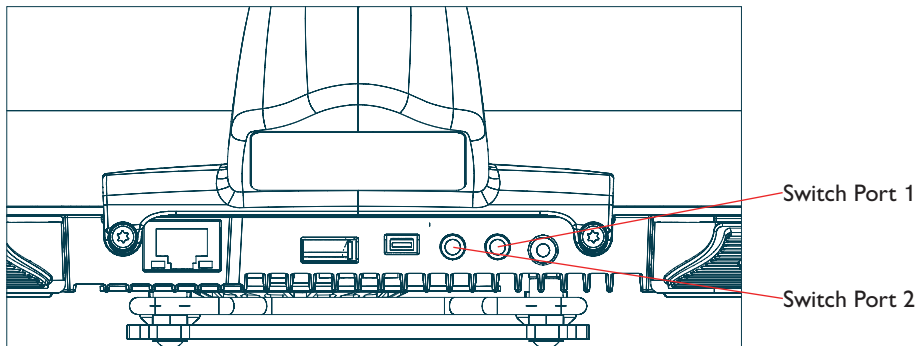
Tobii Communicator will now be configured to function using Dwell clicking with your CDot Tracker.

If you would like to change the settings of the Mouse Dwell input method you may do so by selecting the **Dwell Settings** button from the **Input Method** dialog. A **Dwell Settings** dialog will open, here you can change the Dwell time before clicking, the Dwell behavior or Pause area appearance. Select **OK** to save changes.




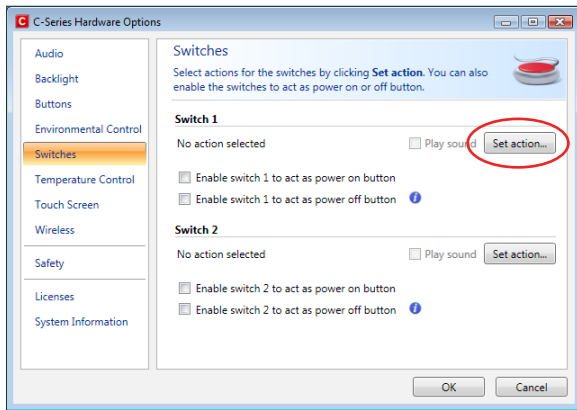
Switch (Within the Windows environment and Tobii Communicator)

In order to click with a Switch you must plug in any one of the many kinds of Switches into one of the Switch ports on your C-Series Device (see **Tobii C-Series User's Manual > Overview of the Tobii C8 and Tobii C12 > Product Layout > Connectors and Device Buttons**) and configure it to act as a mouse clicker.




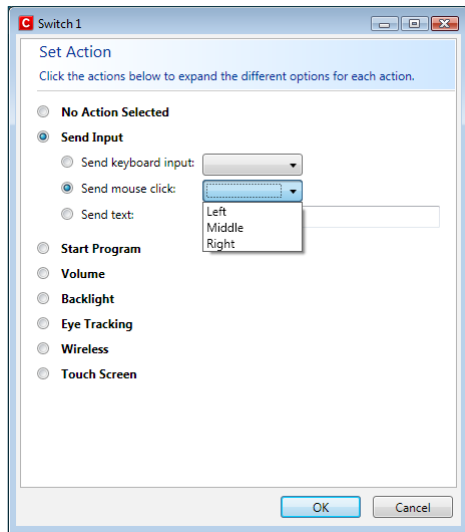
To configure the switch to act as a mouse click on your C-Series device:

1. Open **C-Series Hardware Options** by selecting the Desktop shortcut icon, , or the same icon in the Start menu of your C-Series Device.
2. Select **Switches** in the left column.
3. Click on the **Set Action** button (under Switch 1 or Switch 2 depending on the switch port into which you chose to plug your switch)
4. In the **Set Action** dialog that opens select **Send Input** (click to fill in the bubble)
5. Choose **Send mouse click** (click to fill in the bubble)
6. In the **Send mouse click** list, select the desired mouse button: left, middle or right mouse click



7. Click on the **Ok** button to close **Set Action** dialog and save changes.
8. Click on the **Ok** button to close **C-Series Hardware Options** and save changes.

 If you wish to have two mouse clicks (a right and left click, for example) you can follow the same procedure to configure another switch, configuring one for each port. Set one as a left click and the other as a right click.



Specifications

Size: (HxWxD)	50mm x 120mm x 74mm (1.97" x 4.72" x 2.91")
Weight (with screws):	164g (5.8 ounces / 0.36 lbs)
Input Voltage	5 V DC
Power	1.15 watts
Field of View	45°, symmetric
Lens	Focus Free
Operating Temperature:	0-40°C, 32-105°F
Infrared Transmission	850 nanometers

Tobii Support:

SWEDEN/GLOBAL

Phone: +46 8 522 950 10
support@tobii.com
www.tobii.com
Support hours: 8 am - 6 pm
Between July-August: 9am - 5 pm
(Central European Time, GMT+1)

GERMANY

+49 69 24 75 03 4-28
support@tobii.com
www.tobii.com
Support hours: 8 am - 6 pm
Between July-August: 9 am - 5 pm
(Central European Time, GMT+1)

NORTH AMERICA

Toll-Free: +1-800-793-9227
Phone: +1-781-461-8200
techsupport@tobiiATI.com
www.tobiiati.com
Support hours: 9 am - 9 pm
(US Eastern Standard Time)

JAPAN

+81-3-5793-3316
support.jp@tobii.com
www.tobii.co.jp
Support hours: 9 am - 5.30 pm
(Japan Standard Time, GMT+9)

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EUROPE, MIDDLE EAST, AFRICA

Tobii Technology AB
Karlsrovägen 2D
S-182 53 Danderyd
Sweden
Phone: +46 8 663 69 90
Fax: +46 8 30 14 00
sales@tobii.com

CENTRAL EUROPE

Tobii Technology GmbH
Niedenau 45
D-60325 Frankfurt am Main
Germany
Phone: +49 69 24 75 03 40
Fax: +49 69 24 75 03 429
sales.de@tobii.com

NORWAY

Tobii Norge
Thormøhlens gate 55
5008 Bergen
Norway
Phone: +47 55 55 10 60
Fax: +47 55 55 10 61
sales.no@tobii.com

ASIA

Tobii Technology, Ltd.
3-4-13 Takanawa, Minato-ku
Tokyo 108-0074
Japan
Phone: +81-3-5793-3316
Fax: +81-3-5793-3317
sales.jp@tobii.com

NORTH AMERICA

Tobii ATI
333 Elm Street
Dedham, MA 02026
Toll-Free: 800-793-9227
Phone: 781-461-8200
Fax: 781-461-8213
Web: www.tobiiati.com
sales.us@tobii.com