BJ-885 BJOY Ring
User Guide

1_ Introduction

The BJOY Ring mouse emulator is a device which behaves like a conventional mouse and is specially designed to adapt to the controls of a wheelchair, using the inclination of the chair's joystick to move the cursor and using the external switches to perform the normal functions associated to a mouse's clicks. This device is aimed at users who use wheelchairs and who want to access the computer.

The main features of the device are:

- It is non-invasive and easy to install.

- It can be adapted to the assembly position and to the user's mobility by calibration.

- Automatic recognition of the assembly inclination at the time of the connection. It can be installed in an inclined position (up to 45º).

- Compatible with all wheelchair models (the model must be chosen which is adapted to your wheelchair).

- It has two customisable switches to perform the functions associated to the mouse clicks.

- One of the switches allows for the cursor movement to be disconnected.

- It does not require any installation software: the operating system recognises it directly. The configuration software which is supplied with the product allows the device to be calibrated so that its response is optimum.

- Configurable and customisable using the BJOY configuration software which is supplied with the product.

- The configuration is saved on the device and not on the PC which facilitates the use of the same device on different computers without having to reconfigure it.

- The typical configurations can be done offered by the operating systems for the mouse (change of pointer type, click options, etc.).

2_ Description and assembly of the equipment

2.1 Description of the equipment

The BJOY Ring mouse is made up of the following parts:

a) Ring

b) Fixing screw

c) Protection cover

d) Switch input box
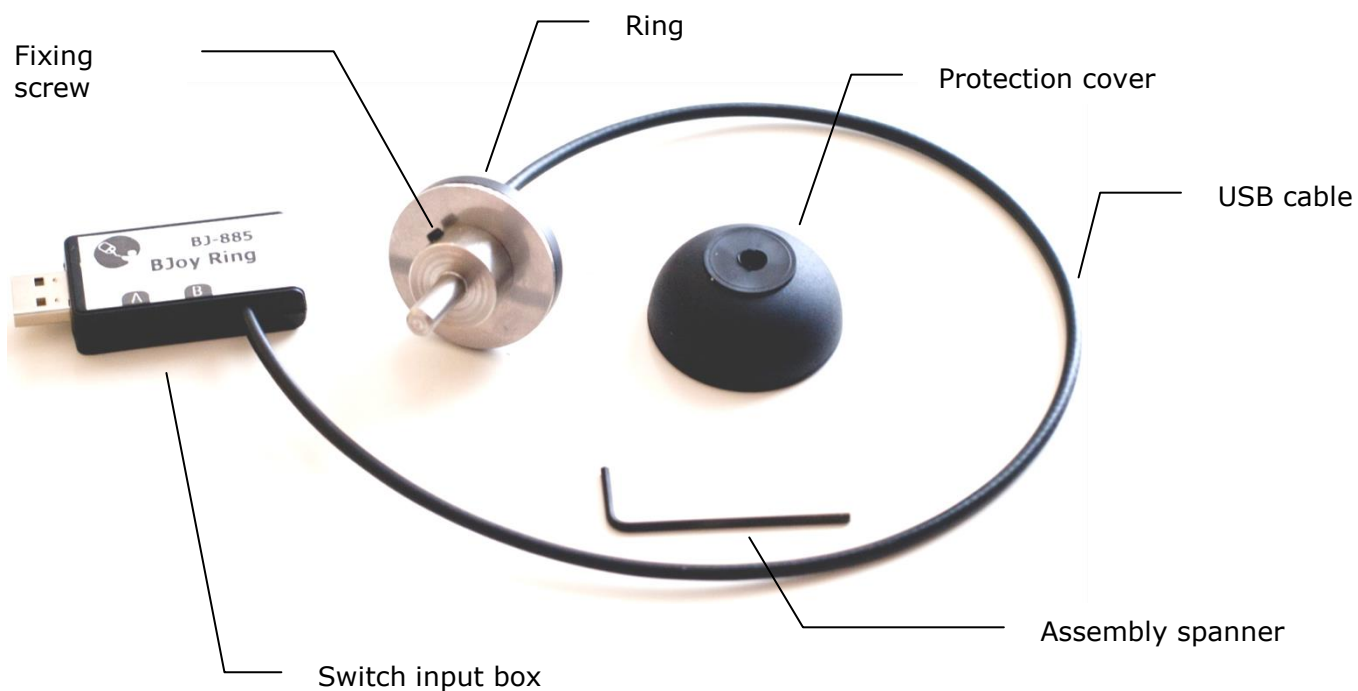
e) USB connection

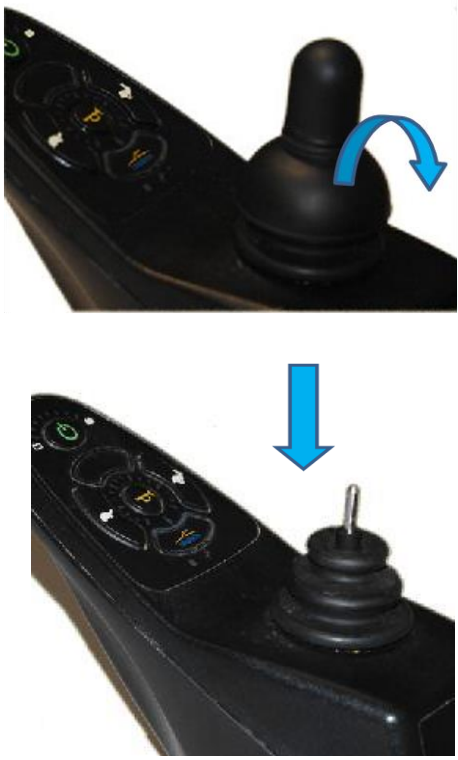f) Assembly spanner

Fig. 1 Parts of the BJOY Ring

The joystick allows the cursor moving in all directions. The two configurable switches allows the click functions of the mouse to be performed: left click, right click, double click and drag-drop. The function of each switch can be assigned via the BJOY configuration software which is supplied with the product, selecting one of these

functions for each switch input. See section 4.2 of the "BJOY configuration programme" in this user's guide to obtain detailed information on the configuration.

By default, the entry A performs the left click function and the entry B the right click function.

2.2 Assembly of the equipment

In order to assemble the equipment the following steps must be followed:

1.	Take the handle off the wheelchair joystick and the protective hood if any.	

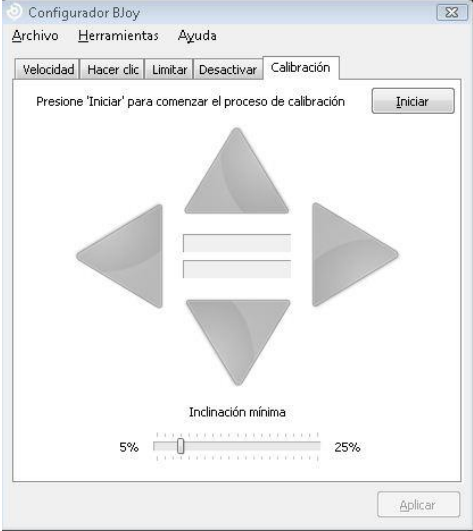| 2. | Insert the ring. | |
	The optimum position for assembling the ring is with the tightening screw in the chair's forward direction.	Optimum position of the mounting screw
	In the case that it can not be set up in the optimum position, it is VERY important that the ring is set up in positions with 90º turns in relation to the chair's forward position.	Other assembly positions of the mounting screw
	If it is set up in different positions the mouse will not respond properly.	Examples of assembly positions to avoid
3.	Tighten the mounting screw using the spanner provided with the device. **It is important not to force the tightening screw**.	

4.	Put on the protective hood. **It is important to always put on the protective hood.**	
5.	Reassemble the joystick handle onto the wheelchair.	
6.	Install the configuration software and do the calibration. See section 4.2.5 of the "BJOY configuration programme" in this manual.	

In order to correctly assemble the equipment it is important to take into account the following indications:

- Protect the switch input box from liquids.
- Avoid water entering via the USB cable.
- Use the USB extension lead if the cable does not reach directly.
- It is recommended to use assemly inclinations of under 45º.

3_How to use the BJOY Ring mouse

In order to start using the BJOY Ring mouse the USB connection cable must be plugged into the computer's USB port.

IMPORTANT: In order to access the computer the wheelchair must be first disconnected.

Although the device adapts to the assembly position, when it is connected to the computer's USB port it must be calibrated in order to obtain the best response from the joystick's movements. The following steps must be followed in order to perform the calibration:

1) Install the provided BJOY configuration software.
2) Do the calibration (See section 4.2.5 of the "BJOY configuration programme" in this manual).

Once the calibration is done the device can be used like the joystick of the wheelchair. To move the cursor on the computer screen you just need to move the joystick in the desired direction.

To avoid the cursor moving on the computer screen when you want to drive the wheelchair, you have to deactivate the mouse by closing the session on the computer, disconnecting the USB cable or configuring the "Deactivate" option using the configuration software (See section 4.2.4 of the "BJOY configuration programme" in this manual).

If due to a slight change in the position of the joystick the mouse moves slightly without moving the lever, the device can be deactivated and then reconnected in order to recognise a new resting position. If this occurs frequently or the position of the wheelchair joystick is not stable, the "minimum inclination" value can be modified using the configuration software (See section 4.2.5 of the "BJOY configuration programme" in this manual).

The two external switches which are connected to the entries indicated as A and B of the box for switch entries must be used to do

the clicks. By default these entries are assigned to the following functions:

Entry A: Left click

Entry B: Right click

B kept down: Deactivate BJOY Ring

If only 1 switch is going to be used it can also be configured so that it does the deactivate function (See section 4.2.4 of the "BJOY configuration programme" section of this manual).

This function can be configured using the BJOY configuration software (See section 4.2.2 of the "BJOY configuration programme" in this manual).

For the correct use of this device, you are recommended to:

- **Do not use it in moving vehicles**

- Do a calibration if there is a substantial change to the wheelchair joystick's resting position.

- Do a calibration if irregular behaviour is noted.

The functioning of the mouse can be customised using the configuration software (See section 4.2 of the "BJOY configuration programme" in this manual).

4_ BJOY configuration software

The BJOY configuration software allows you to configure the mouse behavior according to the user needs.

4.1. Installation

To install the program, you must follow these steps:

1º Insert the CD included with the BJOY mouse in the CD-ROM drive of your computer or download the *BJOYSetup.exe* file from:

http://www.bj-adaptaciones.com/en/products/bjoy-stick-a

NOTE: If using the CD and your computer does not have CD-ROM, you can copy the CD contents on a USB stick or any other removable drive.
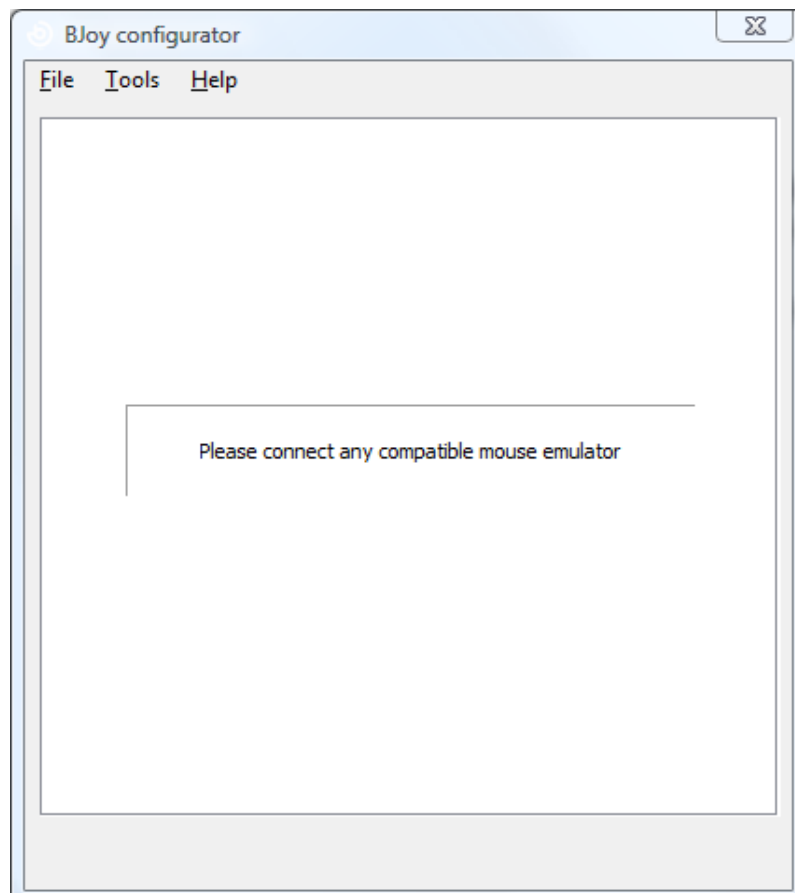
2º **If using the CD** the installation should begin automatically. If it does not, browse to the CD or removable drive and click on *BJOYSetup.exe* file. **If using the web page**, go to section "Downloads" and click on "BJOY Software". Save the *BJOYSetup.exe* file in your computer and double click to start installation.

3º When the installation begins the wizard will guide you through the process. It is recommended to close all other programs during the process. You must click "Next" to continue.

4º You can choose a different path for the installation file and create a shortcut to the program in the Start Menu and Desktop.

5º Once you have selected your installation preferences, click "Install" to install the program on your computer.

6º Once installation is completed, click "Finish" to exit.

4.2. Configuration

IMPORTANT: Once the software is installed in your computer, in order to access to the multiple settings options you must have a BJOY device connected to your computer.
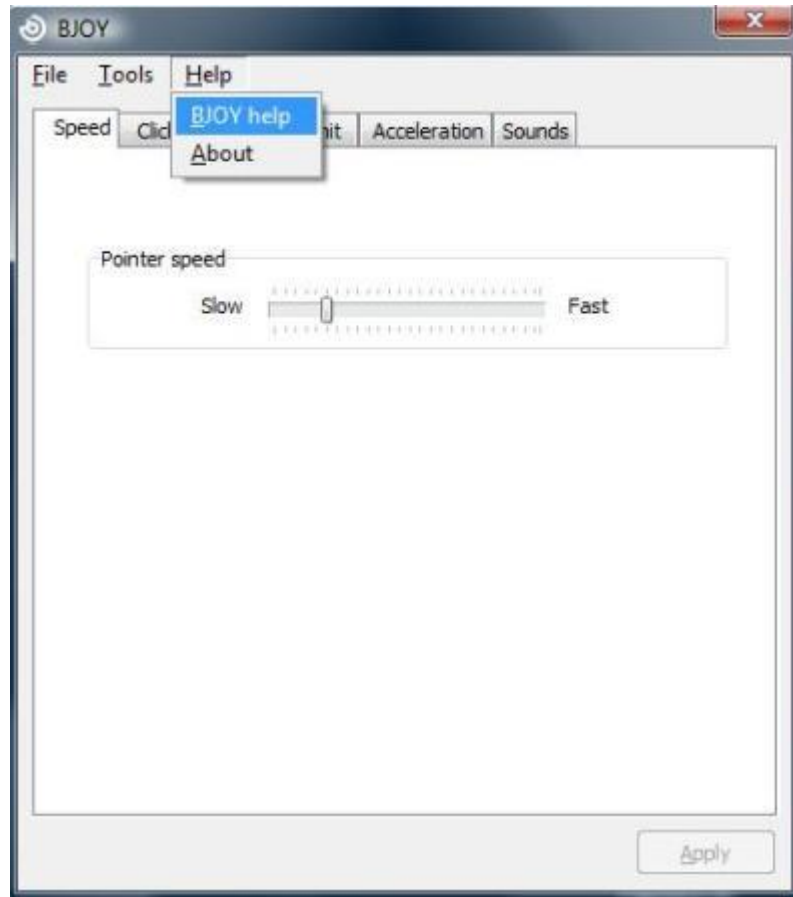
In case you do not have any BJOY device connected, the following screen will appear:

IMPORTANT: if you want that the settings are applied to the BJOY device, click on the "Apply" button that appears at the right bottom of the window.

The instructions for using the BJOY Software are available from the "Help" menu:

4.2.4. Shutdown

In the event that you want to configure the deactivate/activate option of the BJOY Ring mouse, select the "Shutdown" tab. This configuration allows you to deactivate the movement of the cursor while you are moving the wheelchair.
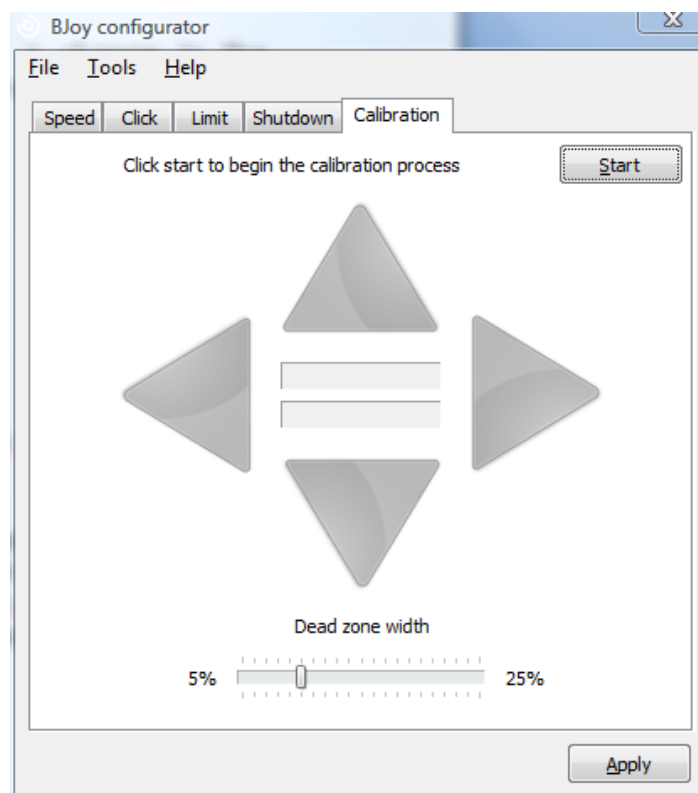
Select from the "Shutdown switch" drop-down list the entry which you want to deactivate the device with.

If you have selected entry A or B, you can adjust the necessary time that the corresponding entry has to be activated so that the device is activated/deactivated. Select the desire time from the bar: "Shutdown accept time".

4.2.5. Calibration

You must do a calibration whenever there is a change in the assembly position of the BJOY Ring or improper behaviour is noted. In this case select the "Calibration" tab.

In order to calibrate the BJOY activate the "Start" button and follow the steps indicated in the screen.

In the event that small movements in the wheelchair's joystick cause undesired cursor movements, you can eliminate them by increasing the "Minimum inclination" value. The higher this value, the more the joystick will have to be inclined in order for the cursor to move.

4.3 Save a customize setting

To save a setting after making any customization, follow these steps:

1. Select the "File" menu

2. Select "Save Settings"

3. In the next screen, assign a name and a location to save the file. Accept making click on the "Save" button.

4.4 Loading a configuration

To reload a saved configuration in order to modify it or save it in the device, follow these steps:

1. Activate the "File" menu

2. Select "Load settings"

3. Find the file corresponding to the stored configuration (files are saved with the extension ". BJOY." Click on the "Open" button in the same screen.

To load the configuration on the device you must click on the "Apply" button.

4.5 Language settings

To change the language of the program, just follow these steps:

1. Activate the "Tools" menu.

2. Select "Change language"

3. Choose your preferred language and validate clicking the "Accept" button.

5_ Maintenance of the equipment

When maintaining and cleaning the equipment take into account the following precautionary measures:

- o Do not connect the equipment to any other type of connections other than USB ports.
- o To connect and disconnect the cable always hold it by its connector. Do not directly pull the cable.
- o Do not bend or force the end of the cable.
- o To clean the device use a moist cloth. Do not use abrasive substances. Always clean the device when it is disconnected.
- o Avoid liquids entering into the switch box as this could seriously damage the equipment.
- o The equipment is not designed to be used outdoors.
- o Do not manipulate the device in the event of a fault.

6_ Technical characteristics

- o USB 2.0 connection
- o Operating voltage: 5 V.
- o Operating current: 70 mA
- o Ring disk diameter: 35 mm
- o Size of the switch box: 50 x 25 x 13 mm
- o Size of the ring's axis: 3/16" (4.75 mm) and ¼"(6.35 mm) depending on the model.
- o Length of the ring cable: 50 cm.
- o Length of the USB cable: 1 m.
- o Switch input: 2 entries for 3.5 mm jack
- o This product complies with the European directives 2004/108/EC. The declaration of conformity can be consulted at the webpage included in this manual.

7_ Disposal of the product

- At the end of the product's useful life neither the product nor its electronic accessories (e.g. the USB cable) can be eliminated together with other domestic waste.

- To avoid possible environmental or human harm which could be caused by uncontrolled waste disposal, separate these products from other types of waste and correctly recycle them. This will promote the sustainable reuse of material resources.

- Consumers can contact the establishment where they purchased the product or the relevant local authorities in order to obtain more information about how and where they can be ecologically and safely recycled.

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