

Operating instructions
MyEcc Prop

Specialist retailers

CE

HomeBrace
Your home at your hands

HomeBraceGermany GmbH
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Contents

Page

01 Version information Instructions . . . 3
02 Foreword . . . 4
03 Intended use . . . 5
04 Application area/environment . . . 5
05 Environmental hazard analysis . . . 6
06 Incidents/malfunctions . . . 6
07 Reuse . . . 6
08 Warnings/Precautions + Delivery Checklist . . . 7
09 Warranty . . . 13
10 Product liability . . . 13
11 Package contents/scope of delivery . . . 14
12 Hardware . . . 15
13 Note . . . 17
14 Installation on the wheelchair . . . 18
15 Requirements for the power wheelchair . . . 19
16 Programme installation . . . 19
17 Programme start . . . 20
18 Programme version . . . 23
19 Settings . . . 23
    19-01 Driving mode . . . 23
    19-02 Settings menu . . . 26
    19-03 Driving geometry setting for proportional mode . . . 27
    19-04 Driving geometry setting for switch mode . . . 28
20 Camera settings . . . 29
21 General settings . . . 31
22 Safety instructions . . . 34
23 Safety functions . . . 35
24 Combination with third-party products . . . 35
25 Artificial intelligence (AI) . . . 36
26 Care and maintenance . . . 37
27 Software update . . . 38
28 Disposal . . . 38
29 Expected service life . . . 38
30 Nameplate . . . 39
31 Technical data . . . 40
32 Network security . . . 40
33 State of the art . . . 40
34 Residual risks . . . 41
35 FAQ / frequently asked questions . . . 42
36 Error messages . . . 43
37 Contact . . . 44

01 Version information Instructions

These operating instructions were created on 01.03.2024.

Revision history:

V1.0 → 01.03.2024 → Creation of these operating instructions
V1.1 → 05.03.2024 → Technical data updated
V1.2 → 19.03.2024 → Disclaimer inserted
V1.3 → 04.04.2024 → Open points have been resolved / FAQ added
V1.4 → 17.09.2025 → Hardware modifications through MyEcc V5 / Notes on software updates
V1.5 → 01.01.2026 → Extension of the user manual to include a delivery checklist

02 Foreword

Welcome to the operating instructions for the MyEcc Prop.

These operating instructions are intended for specialist retailers/technicians who install and maintain this system. These and other instructions from HomeBraceGermany GmbH (hereinafter referred to as “HomeBraceGermany”) have been written without a “GENDER”, which makes them easy to read (they can also be read aloud by the computer). This form of expression in no way constitutes discrimination against other gender groups.

Please read these instructions carefully. It provides important information on installing the hardware and software. It also contains safety/warning instructions that must be followed at all times. If you have any questions, please contact HomeBraceGermany immediately. The contact details are at the end of the instructions. Information on reuse and storage can also be found at the end of these instructions.

A space for notes and notes on settings has been created on the last pages of these instructions. This can be a great help to you and subsequent technicians.

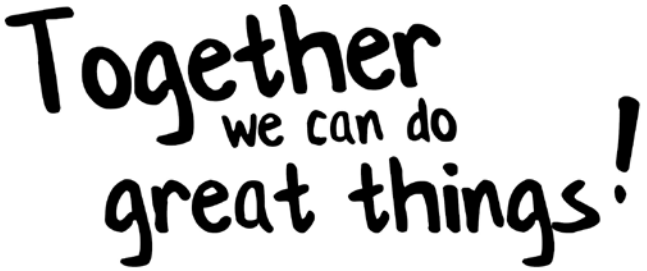
These operating instructions must always be kept close to the system. If the system is stored or used for the first time, these instructions must always be supplied with it. You can request a replacement from HomeBraceGermany or download it from the homepage.

Install the system with care and do not allow it to become a routine operation. Every user has different needs, which can be adapted to the MyEcc Prop using these instructions.



It is not the user who adapts to the system, the system will adapt to the user.

Additionally, this manual includes a delivery checklist for traceable documentation of installation and commissioning. There is also a separate chapter with a small overview of possible errors and how to rectify them.



03 Intended use

The MyEcc Prop special wheelchair control is a manufacturer-independent power wheelchair control that enables people with a disability or complete inability to walk to control their power wheelchair safely and independently indoors and outdoors.

Existing eye control systems (e.g. ALEA, Tobii) can be used for eye control. If attachments such as robot arms are available, these can also be controlled.

Any other use is **NOT** in accordance with the intended use and leads to exclusion of liability and loss of warranty. A change in the intended use or unauthorised conversions/modifications also lead to an exclusion of liability and loss of warranty.

04 Application area/environment

The MyEcc Prop special control unit, in combination with a power wheelchair and an eye-controlled communication aid, can be used indoors and outdoors. When used in public areas, the applicable national laws and regulations of the respective country must be observed.

Weather conditions (rain, snow, sunlight, darkness) do not affect the operation of the MyEcc Prop. Restrictions on the user environment may be specified by the wheelchair manufacturer or the manufacturer of the eye control system. The respective user manual must be read and observed.

Operation is intended for indoor and outdoor use only. Failure to do so will invalidate all liability and warranty claims.

05 Environmental hazard analysis

Before use, a hazard analysis of the surroundings must be carried out and the user must be made aware of any recognised hazards (e.g. unsecured stairways, ramps, slopes without railings, etc.).

HomeBraceGermany recommends an EMERGENCY STOP switch (mechanical or wireless) provided by the wheelchair manufacturer. This helps to minimise any hazardous situations that may occur but cannot be seen.

06 Incidents/malfunctions

If the system malfunctions, please contact HomeBraceGermany directly. The address can be found at the end of these instructions. Should an incident occur, please report it directly to HomeBraceGermany.

Please provide as much detail as possible so that we can gain a full understanding of the incident in question.

A notification to the competent authority (BfArM) www.bfarm.de can and may also be made by any person.

We have a very high standard of quality and we hope that there will be no incidents. If, despite all this, there are any defects or suggestions regarding our product, please let us know directly. This helps HomeBraceGermany to maintain the high standard of its products and can also contribute to product improvements.

07 Reuse

The products in the HomeBrace range are generally suitable for reuse. All hardware must be returned to HomeBraceGermany for the following measures before being used again:

- Cleaning and disinfection of equipment received (to prevent infection)
- Photo documentation of the components
- Functional test of the components (hardware)
- Checking the software
- De-personalisation (always carried out in accordance with the GDPR)

08 Warnings/Precautions + Delivery Checklist

Explanation of the symbols:



Information



Warning

Please read the following warnings/precautions carefully and draw the user's attention to them. Failure to follow these instructions could have consequences. This could result in danger to life and limb. If these instructions are disregarded or even deliberately circumvented, the manufacturer's warranty is void and product liability no longer applies.

For optimum use of the system, HomeBraceGermany recommends an appropriate driving stabilisation programme from the wheelchair manufacturer (ESP, gyro). Such a system ensures automatic correction of the direction of travel (e.g. on slopes or gradients). It reduces the possibility of "drifting".

Danger to persons:

Non-compliance will result in death or serious injury.

- **First drive**

The first time you drive your wheelchair must be in the presence of a certified Assistive Technology Professional or therapist who is qualified to ensure that the wheelchair is properly configured for you, and you are in a safe environment.

- **Qualified service technician**

Only carry out maintenance and minor adjustments that are specified in the user manual. All other maintenance, service, configuration, and repairs must be carried out by a qualified service technician authorized by HomeBraceGermany.

- **Do not drive near edges or on elevated surfaces**

MyEcc Prop is not designed to be used near edges or on elevated surfaces, such as ramps, stairs, and multi-level floors.



- **Sunlight interferes with eye control**

Eye control cameras rely upon being able to see your eyes' pupils clearly to determine where you are looking on the display device. Sunlight interferes with these cameras and can cause loss of control. You may lose precision of control or be stranded.



- **Changing seating position can affect eye control**

Eye control cameras rely upon a proper position relative to your head in order to have a clear view of your eyes. Changing seating position can cause this relative position and the camera view to be compromised resulting in loss of precision control.



- **Do not drive while reclined, tilted, or elevated**

Do not drive the wheelchair using MyEcc Prop while the wheelchair is reclined, tilted, or elevated. These positions can affect the camera view in MyEcc Prop.



- **Drive on public roads**

Your wheelchair is not an automobile. Obey all local pedestrian rules and always drive your wheelchair defensively. MyEcc Prop is a wheelchair control interface only, it does not change how your wheelchair behaves.



- **Use only approved eye gaze devices**

Using MyEcc Prop on untested devices is known to be unsafe and can cause injury.



- **Calibration of the eye control system before program start**

Before starting the program, it must be ensured that the user's eye control system is correctly calibrated. If this is not the case, calibration must be performed.



- **Do not modify the wheelchair or MyEcc Prop components**

Do not modify your wheelchair, MyEcc Prop, or any of its components. MyEcc Prop and your wheelchair have been configured specifically for your needs as prescribed by your healthcare provider. Special skills, training, and knowledge are needed to set up, modify, and repair MyEcc Prop and the wheelchair.



- **Do not use a damaged wheelchair**

If the wheelchair or its accessories have suffered transportation damage during driving, or damage from other causes, you must inform your assistive technology professional as soon as possible and immediately stop using your wheelchair. There is a risk that the wheelchair or its accessories can no longer be used safely. Contact your service provider for further information.



- **Discontinue use after extraordinary events**

Do not use your device if it has been dropped, crushed, exposed to fire, submerged in water, or involved in a vehicular accident, or other extraordinary events. Events like these can lead to significant damage that is impossible to detect upon inspection. Contact your service provider. Damage caused by these types of incidents exceeds the limits covered by the manufacturer's warranty.



- **Supervise children and those with cognitive disabilities**

Do not let children or people with cognitive disabilities drive the wheelchair without supervision. A buddy button must be available for the caregiver.



- **Discontinue use if the wheelchair does not behave as it should**

If the wheelchair is not behaving as it should, or if you suspect that something is wrong, stop MyEcc Prop immediately to stop the wheelchair. Turn off the power and contact your service provider or HomeBraceGermany for further information.



- **Turn off the power before you transfer or before you lift the armrest**

Turn off the power before you transfer in or out of the wheelchair or lift the armrest. If you do not, it can lead to bodily injury.



- **Eye gaze devices must be securely mounted**

Eye gaze devices must be securely mounted in the appropriate position for eye gaze control. The mounting system must be able to maintain the positioning of the eye gazed device while the power wheelchair is being driven.



- **Installing software or changing settings can lead to lack of control**

Installing 3rd party software, or changing the default settings such as power management, or notifications on approved devices can lead to MyEcc Prop being less responsive to eye gaze commands leading to lack of powerchair control and potential injury.



- **Stacked equipment**

Use of this equipment adjacent to or stacked with other equipment should be avoided because it could result in improper operation. If such use is necessary, this equipment and the other equipment should be observed to verify that they are operating normally.



- **Use approved cables**

Use of accessories, transducers and cables other than those specified or provided by the manufacturer of this equipment could result in increased electromagnetic emissions or decreased electromagnetic immunity of this equipment and result in improper operation.

- **Replace damaged components**

If either the plug or cable becomes damaged, both must be replaced by qualified personnel.

- **Do not drive near fast-moving objects**

Do not drive the wheelchair near fast-moving objects such as trains, planes, cars, and buses.

- **Portable RF communications equipment**

Portable RF communications equipment (including peripherals such as antenna cables and external antennas) should be used no closer than 30 cm (12 inches) to any part of the ADT, including cables specified by the manufacturer. Otherwise, degradation of the performance of this equipment could result.

- **MyEcc Prop is not to be used for life sustaining or life saving**

Use of this equipment is not meant to provide life sustaining or life saving functionality.

- **Cleaning and Maintenance**

If cleaning is required, spot clean the affected areas with a slightly damp cloth. Do not use aggressive cleaning agents, solvents, or abrasive materials, as these may damage the surface or impair functionality. Ensure that no moisture enters any electronic components.

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Delivery Checklist

MyEcc Prop (Windows/iOS) / MyEcc Pupil Prop

Customer Information

Commission: _____
Delivery no.: _____
Medical supply store: _____

Product

MyEcc V5
Serial number: _____

☐ MyEcc Prop (Windows)

Software

Software-Version:	

Button Timing	
Hold focus until activation:	(300)
Focus-Timeout:	(600)

Note: Values in brackets indicate default values.
If modified, please enter the updated values.

☐ Function checked after change + activated

☐ MyEcc Prop (iOS)

Hardware (MyEcc Bluetooth Connection)

Serial number:	

Software

Software-Version:	

Button Timing	
Hold focus until activation:	(300)
Focus-Timeout:	(600)

Note: Values in brackets indicate default values.
If modified, please enter the updated values.

☐ Function checked after change + activated

☐ MyEcc Pupil Prop

Hardware (MyEcc Frame)

Sensor version / angle:	☐ V1	☐ V2
Sensor option:	☐ Left	☐ Right
Frame size:	☐ M	☐ L
Serial number:		

Software

Software-Version:	

Local USB Source	
Resolution:	(192,192)
Frame rate:	(60)
Exposure Mode:	(auto mode)

Pupil Detector	
Intensity Range:	(23)
Pupil Min:	(10)
Pupil Max:	(100)
Focus-Timeout:	(600)

Note: Values in brackets indicate default values.
If modified, please enter the updated values.

☐ Function checked after change + activated

Installation technician / Specialist dealer

Place, Date

User / Legal representative

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Delivery Checklist

MyEcc Prop (Windows/iOS) / MyEcc Pupil Prop

	MyEcc Prop (Windows/iOS)			MyEcc Pupil Prop		
	Yes	No	N/A	Yes	No	N/A
User can control the software after approval						
User can activate indoor driving mode						
User can deactivate indoor driving mode						
User can activate driving mode in sunlight						
User can deactivate driving mode in sunlight						
User can drive straight ahead						
User can drive backwards						
User can drive curves (left/right)						
User can stop the software by closing their eyes						
User can stop the software by looking outside the display *						
User can stop the wheelchair using the focus/neutral zone						
User has been instructed in the functionality and operation of all available modes						
User has been instructed in the use of the mode button and the procedure for changing modes						
User has been instructed on safe tilt and recline adjustments to ensure proper eye control.						
The environmental conditions are safe for driving the power wheelchair						
The system can be removed or detached for user transfer						

* Applies only to MyEcc Prop (Windows/iOS)

Signature – Confirmation of installation and instruction

By signing, all parties confirm the proper installation, instruction, and complete handover of the device from HomeBraceGermany GmbH.

Installation technician / Specialist dealer

Place, Date

User / Legal representative

All tests and instructions required by HomeBraceGermany GmbH were carried out in accordance with the relevant specifications.

Note: This installation and instruction protocol is part of the technical documentation and must be kept by the specialist dealer. A copy will be given to the user.

09 Warranty

The systems supplied by HomeBraceGermany are supplied with a two-year warranty (in accordance with the German Civil Code). Damage reports must be submitted within the statutory deadlines.

10 Product liability

Pursuant to the liability of manufacturers for their products as defined in the German Product Liability Act, the instructions provided in this brochure must be observed (product information and intended use, improper use, product performance, product maintenance, information and instruction obligations). Non-observance releases the manufacturer from any liability.

Failure to follow the instructions and requirements in this manual will void any liability or warranty provided by HomeBraceGermany.

11 Package contents/scope of delivery



1. MyEcc V5 Box (Hardware)
2. USB stick (contains the software for the communication device)
3. USB-A to USB-C cable
4. Connection cable with red plugs
5. Storage bag for attachment to the wheelchair

12 Hardware

MyEcc V5 Box
Front view:



MyEcc V5 Box
Connection strip (left):



1: "PC" → Connection to tablet PC (USB C).
2: "Chair" → Wheelchair control connection (9-pin DSUB) incl. switch 1 function.
3: "5V USB" → Control LED (red, 5V power supply via USB C).

MyEcc V5 Box

Connection strip (right):



A: “12V CHAIR” → LED voltage wheelchair (blue, 12 V from wheelchair).
B: “PROP” → PROP mode active (blue, 12 V is switched through in proportional operation, voltages / reference / speed / direction are ready).

CHECK 1 - 4 → LED driving relay (only in switch mode):
1: Forwards
2: Right
3: Backwards
4: Left

CHECK 5 - 8 → LED additional switching functions (1 - 4):
5: Switch 1
6: Switch 2
7: Switch 3
8: Switch 4

CHANNELS 6-8 → (output, potential-free, cable with 3.5 mm jack plug):
B2: Switch function 2
B3: Switch function 3
B4: Switch function 4

Important:
Version 5.0 MyEcc boxes must be connected to the cable (item 10438) with red plugs.



Only the original cable from HomeBraceGermany may be used. Using other cables will lead to a malfunction.

13 Note

The eye control must be fitted to the back of the wheelchair if the seat/back adjustment is to be controlled from assistant or caregiver. When adjusting the seat position, eye focus with the cameras may be lost.

When adjusting the backrest, attention must be paid to dynamic length compensation (biomechanics of the backrest). This is the only way to ensure that the scanning area of the eye control is **NOT** left.

The user must always have the wheelchair display in focus Installing a second display (e.g. the OMNI2 display) at eye control level is a useful addition. This enables safe switching between the different modes.

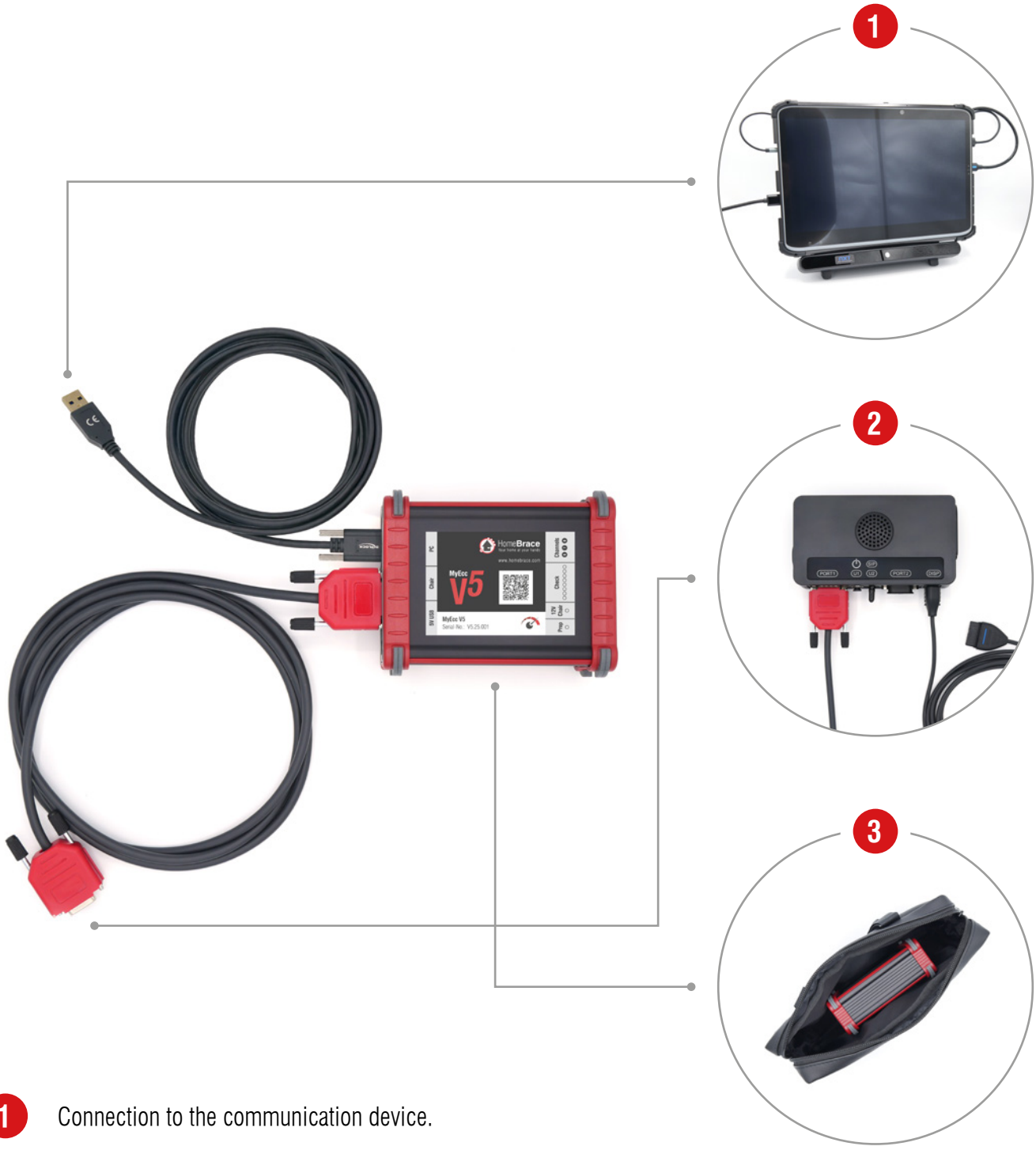
When wiring and installing, pay attention to the wheelchair's travel paths to avoid damage caused by incorrectly laid cables.

The MyEcc Prop must be attached to the wheelchair with the supplied bag (waterproof); we recommend installing on the back of the wheelchair or the armrest. The cables for the eye control are detachable and should remain detachable during assembly so that the carer can easily remove the eye control from the wheelchair during transfers.

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14 Installation on the wheelchair



1. Connection to the communication device.
2. Connection to the wheelchair input (here OMNI2).
3. Store the MyEcc V5 Box and all cables in the storage bag and attach it to the wheelchair.

15 Requirements for the power wheelchair

The power wheelchair is equipped with one of the following power electronics. A switch control may also be required (not included in the scope of delivery):

- **R-Net (Curtiss-Wright Corporation) plus OMNI1 or OMNI2**

→ (possible power wheelchairs from the following manufacturers: Sunrise, Permobil, Meyra, SKS, Life&Mobility)

- **LiNX / DX2 (manufacturer Dynamic Control)**

→ (possible power wheelchairs from the manufacturer: INVACARE)

- **Q-Logic 3**

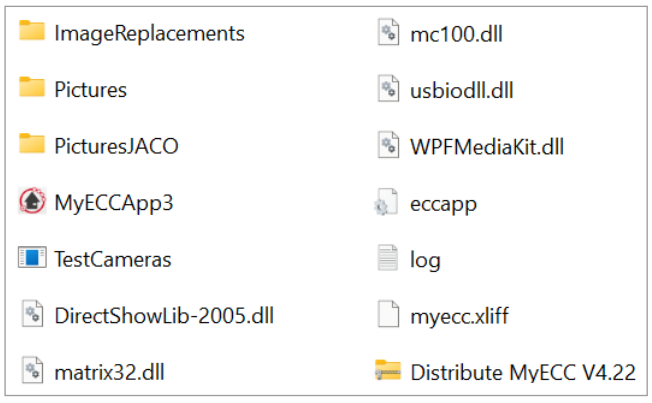
→ (possible wheelchairs from the manufacturer: Quantum Pride)

16 Programme installation

Copy the folder MyEcc Prop with program and additional files to PC/tablet hard drive (source: USB stick HomeBrace). The location on the hard drive is freely selectable (we recommend C:/Program Files). Create a shortcut for “MyECCApp3.exe” on the desktop.

Attention:
For speed reasons, do not run the programme directly from the USB stick.

The following files/folders must be present in the execution folder:



A temporary “log.txt” file is created at programme runtime. This contains any error messages and internal information on the programme sequence.

17 Programme start

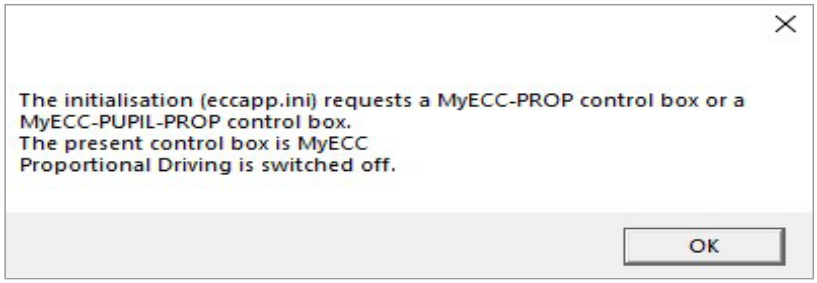
Operation before Version 4.31:
The app can only be run when the control box is connected. Always start the app first and then switch on the wheelchair using the OMNI.

- If not, the following message appears on the OMNI:

→ OMNI input module error 09D0.

Execute the “MyECCApp3.exe” programme.

Possible error messages at programme start:



- Current software set to proportional control, but hardware set to switch control:

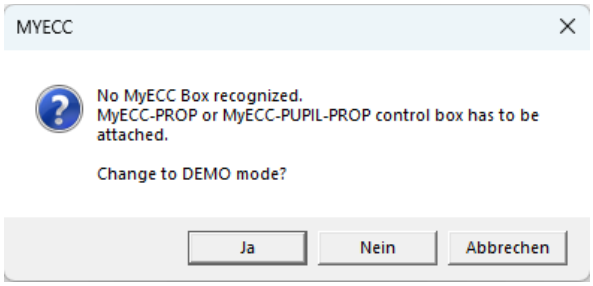
→ Software closes and restarts.



- If no control box has been recognised (as in these 2 cases), proceed as follows:

1. Check all cable connections.
2. Close note.
3. Restart the software.

Starting from software version 4.31, MyEcc Prop can be launched in DEMO mode even if no control unit is connected.





- In this state, the software name is displayed in red to indicate that no control unit is connected:

→ Interaction with the software in DEMO mode is possible.

Possible error messages during programme operation:



- The red indicator light signals that there is no connection to the control box:

→ Check all cable connections.

A green light on the indicator confirms the successful connection to the control box.

Header:



- Single click (or 1x click):

→ Programme closes.

- Double-click (or 2x click):

→ The settings menu opens.

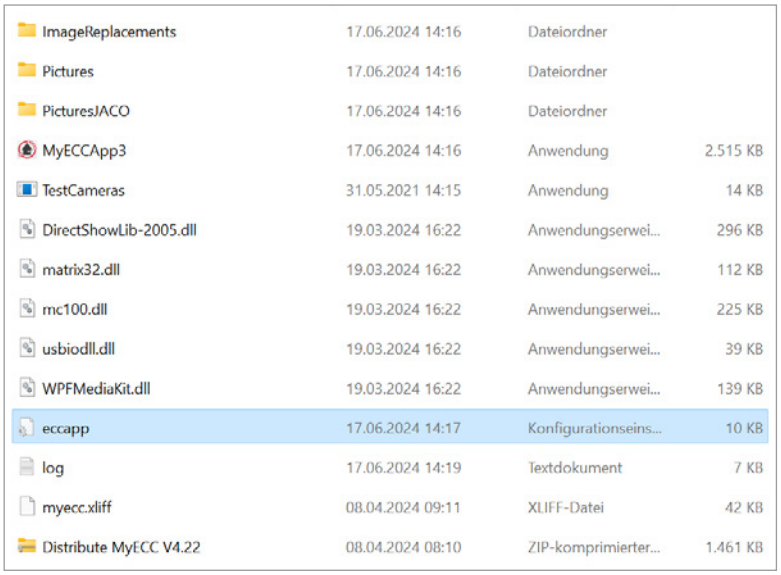
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Normally, the software settings can be opened simply by double-clicking. However, these should be made as inaccessible as possible to the user, as access to the settings is only permitted to HomeBraceGermany or authorised retailers.

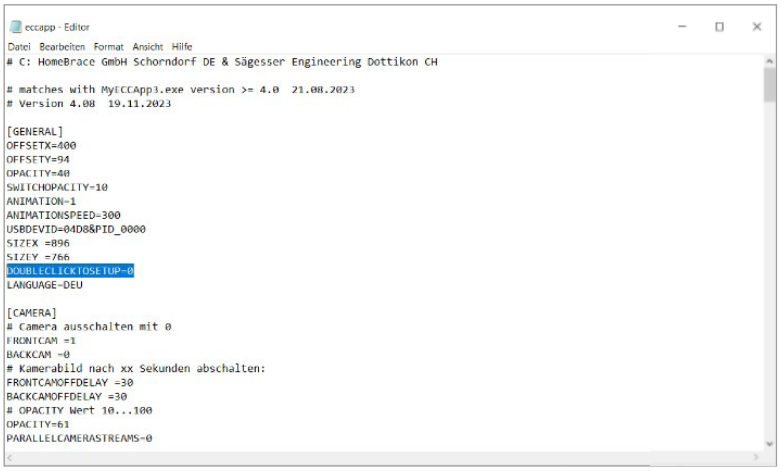
To deny or restrict this access, proceed as follows:

1. Open the file “eccapp” in the folder MyEcc Prop.



2. Set the value of “DOUBLECLICKTO-SETUP” to 0 (normal value=1).

3. Save the “eccapp” file and Restart the software.



Setup

Alternative: Holding down the Ctrl key, changes the “Settings” button to “Open settings menu”.

To be able to make changes, an external keyboard must be connected.

18 Programme version

SOFTWARE

MyEcc:
Programme name with switch control

MyEcc Prop:
Programme name with proportional control



Indicator:
Hardware information

Version XYZ:
Programme and box version

HARDWARE

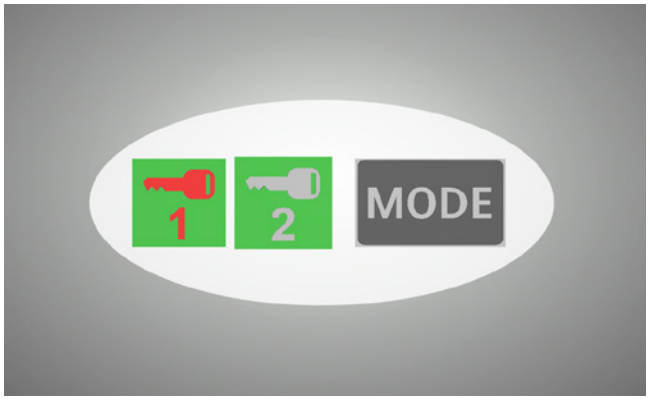
Version of the connected MyEcc box and version of the copy protection key:

- **"S"** = MyEcc Standard
- **"P"** = MyEcc Pupil
- **"SP"** = MyEcc Standard Proportional
- **"PP"** = MyEcc Pupil Proportional



19 Settings

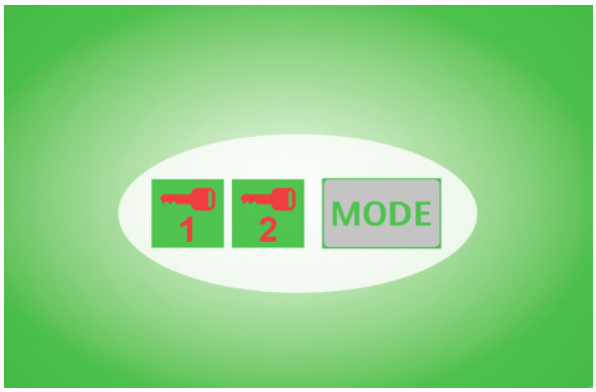
19-01 Driving mode



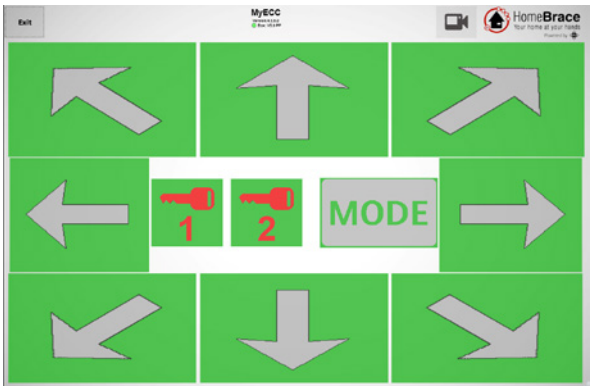
Sequence for unlocking:
Focus on Key 1 - Focus on Key 2

→ Active areas are coloured green.

Before unlocking, ensure that the eye control system is correctly calibrated.

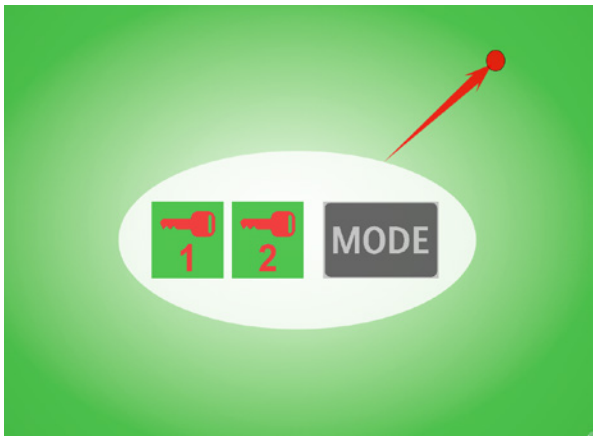


MyEcc Prop:
MyEcc with proportional control



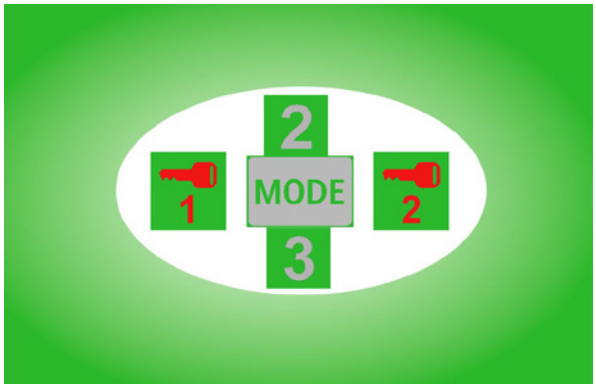
MyEcc:
MyEcc with switch control

Driving: Active area outside white ellipse.
→ The switching functions (mode, etc.) are set to inactive to prevent unintentional triggering.



Eye focus within white ellipse:
Wheelchair is stopped.

Eyes closed /
eye focus outside the application window:
Programme switches to inactive mode after the programmed time.



“Mode” (= switch 1):
Depending on the programming, switch 1 changes to the wheelchair menu.

Further switching functions (2, 3...):
Additional functions are performed depending on how the wheelchair is programmed.

The switching times can be programmed in the “General settings”.

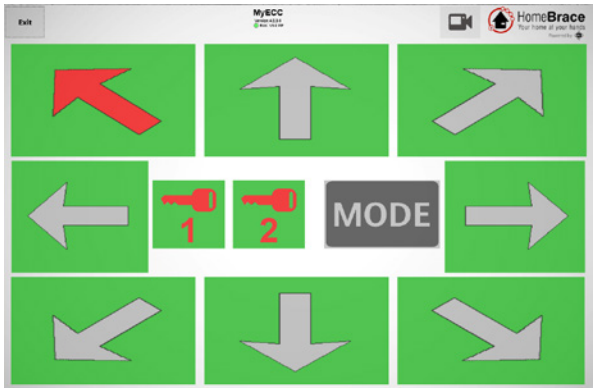
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Two different driving modes are available, which can only be used with proportional control.

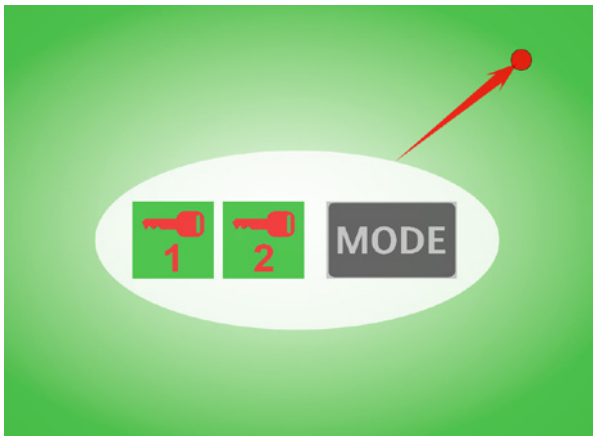
- Simple driving mode:
→ Interface with direction fields.

- Advanced driving mode:
→ Interface with dynamic driving direction interaction.



MyEcc Prop – Simple mode:

The simple mode supports easy and safe learning of the drive controls. The interface is divided into directional fields. By targeting a corresponding arrow, the electric wheelchair moves in the indicated direction.



MyEcc Prop – Advanced mode:

The advanced mode offers dynamic driving control without fixed direction fields. Instead, the movement is visualized by an interactive arrow that aligns itself according to the selected direction of travel and scales in size.

The further the gaze deviates from the center, the faster the electric wheelchair moves in the selected direction. This allows for smooth changes of direction.

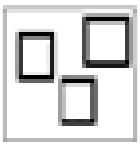
19-02 Settings menu



Return to driving mode



Driving geometry setting proportional mode



Driving geometry setting switch mode



Camera settings



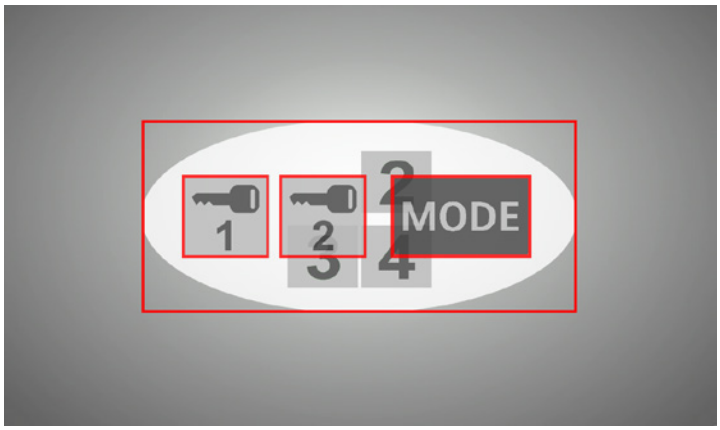
General settings



Reset to factory settings (only for driving geometry)

19-03 Driving geometry setting for proportional mode





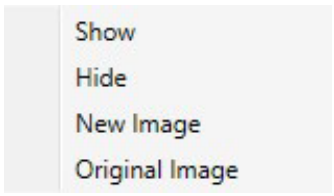
The fields can be moved by dragging the red borders with the mouse.
Fields without red borders are invisible in driving mode.

Changing/moving the white ellipse changes the inactive area in driving mode (standstill area).



Reset the fields to factory settings.

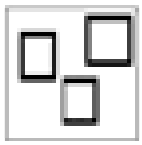
Options menu opened by right-clicking:

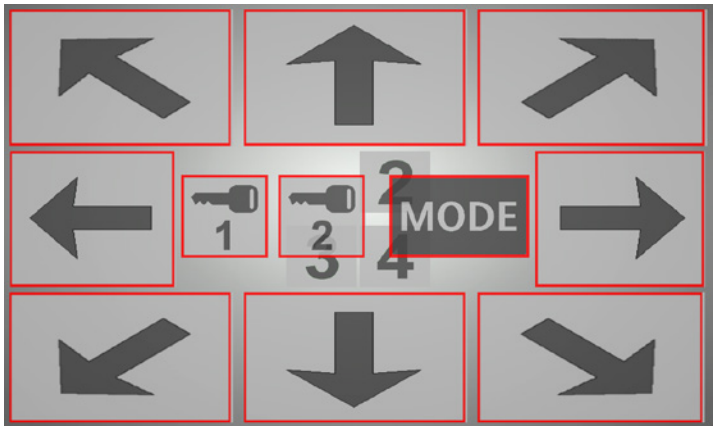




- **“Show”** = field is displayed (red border appears)**.**
- **“Hide”** = field is hidden (red border disappears)**.**
- **“New Image”** = Another image (any JPG or PNG file) can be selected**.**
- **“Original Image”** = The factory setting is displayed**.**

19-04 Driving geometry setting for switch mode



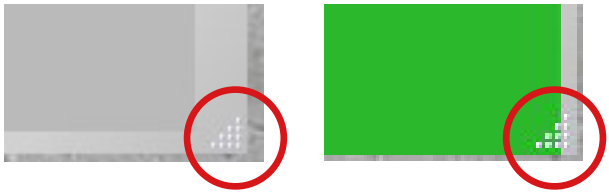


The size and position of the arrows can be changed by dragging the red borders with the mouse.
The visibility and display of the switches can be changed (right mouse button options menu as in proportional driving).



Reset the fields to factory settings.

The size of the entire application window can be changed by dragging the marked area at the bottom right (also in driving mode):



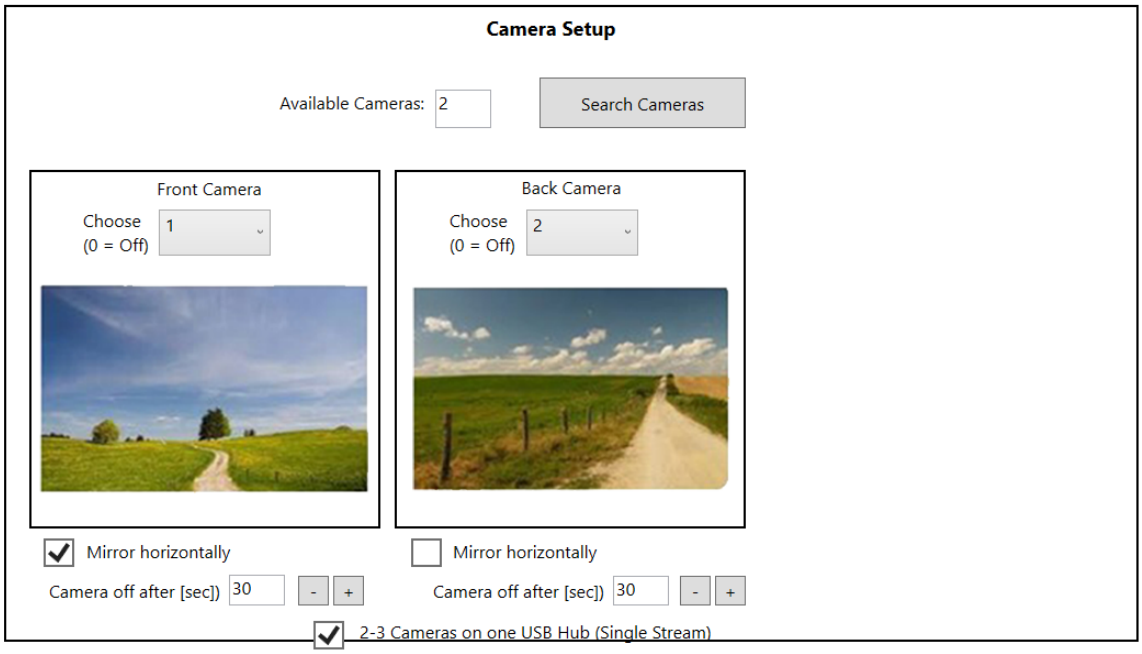
Full-screen mode can be activated by double-clicking in the upper section of the interface. Double-clicking again reverts to the original view.

20 Camera settings



Camera images are displayed as the background image of the application in driving mode:

- The front camera when driving forwards
- The reversing camera when reversing



Available cameras:
The number of usable cameras connected to the tablet/PC (incl. internal camera).

Search Cameras → The available cameras are searched for and the number is updated.

Front camera: Selection: Camera 1 - n:
The image of the corresponding camera is displayed.
The camera is switched off with “0”.

Reversing camera: Selection: Camera 1 - n:
The image of the corresponding camera is displayed.
The camera is switched off with “0”.

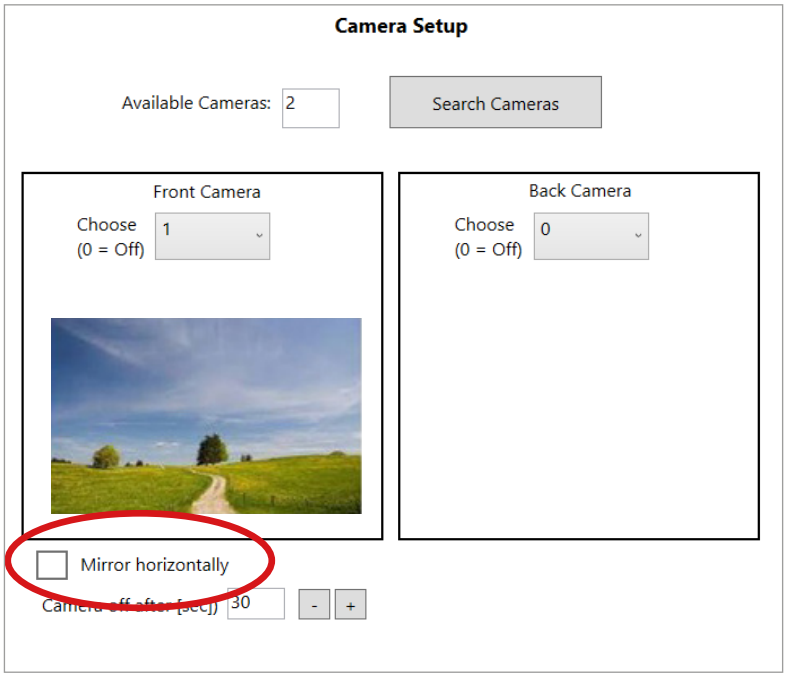
2 cameras on one USB hub (single stream):
If two cameras are connected to the same external USB hub, this check box must be selected as two camera streams cannot be routed simultaneously through one USB hub.

This means that the cameras are displayed alternately. The following prompt appears in the camera field in the settings dialogue box:

Click here to switch on the Front Camera respective Click here to switch on the Back Camera

camera off after [sec] : Delay time of the cameras after the wheelchair has stopped.
With a delay ime of “[0 sec]”, the camera remains permanently active.

From software version 4.34 onwards, the camera settings have been extended with an additional feature.



Mirror horizontally:
Normally, the full camera image is displayed while driving.
By activating the checkbox, the camera image can be flipped if the image is displayed upside down.

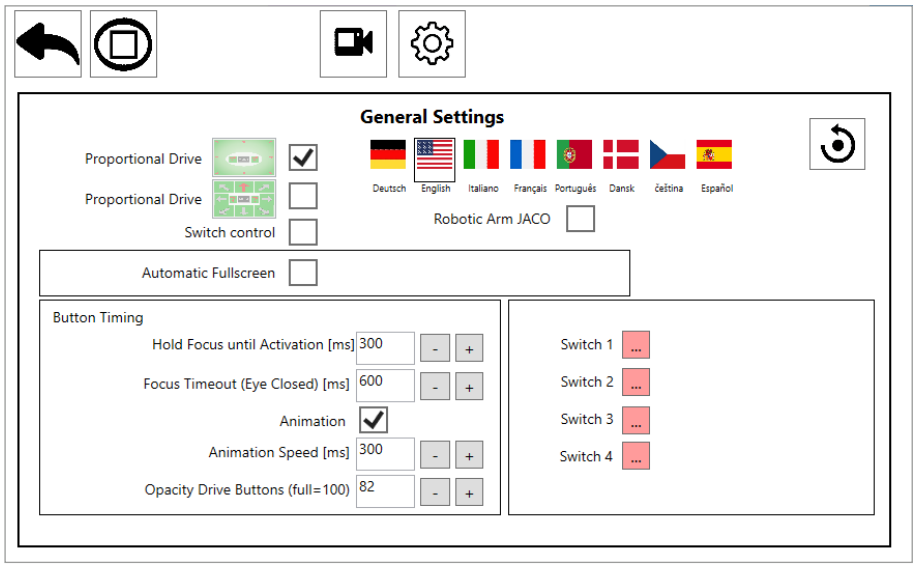
An extended option for the camera settings is available from software version 4.37 onwards.



Camera button:
A new camera button is located to the left of the HomeBrace logo.
This allows quick access to the camera settings if a camera needs to be reassigned.

21 General settings





Proportional driving:
Switching between proportional mode and driving in switch mode (relay mode).

In proportional mode, the travelling speed is changed depending on the location of the eye focus. The speed increases the further the eye focus moves towards the outer edge of the application window.

When driving in switch mode, the direction of travel is determined by the arrows and the speed is permanently programmed into the wheelchair.

Language:



Selection of the language for the user interface.
Shaded languages are not (yet) available.

Automatic full screen:
This function is intended for use with communication devices and various displays. It ensures that the screen is displayed correctly and that no elements overlap or are cut off.



Reset the input fields to factory settings.

Timing buttons:
These settings apply to all switching areas (colour change green - red) in driving mode.

Hold focus until activation [ms]:
Delay time from focussing on a field with the eye to its activation. This time is used to avoid triggering fields that have been unintentionally "stripped". Unit milliseconds.

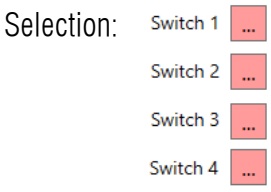
Focus timeout (eye closed) [ms]:
Waiting time from loss of eye focus (no more eye movements and/or pupil position detectable) until the application is deactivated (→ Stopping the wheelchair).

Animation:
Checked: The next fields to be activated are indicated by movement (rhythmic change in size), e.g. Key 2 after activating Key 1. This only works in driving mode.

Animation speed [ms]:
Repetition speed of the animation movement of fields.

Opacity of arrows (full=100):
When using camera images in the background, it makes sense to display the move command fields transparently, so that the camera image is visible behind it. The smaller this number, the more transparent the move command fields become.

Switch programming:
Four possible additional functions can be triggered with switches 1 to 4. The first switch ("Mode") is intended for switching the driving mode in the wheelchair menu by default. The visibility and position as well as the image of the buttons of switches 1 to 4 can be determined in the driving geometry settings.

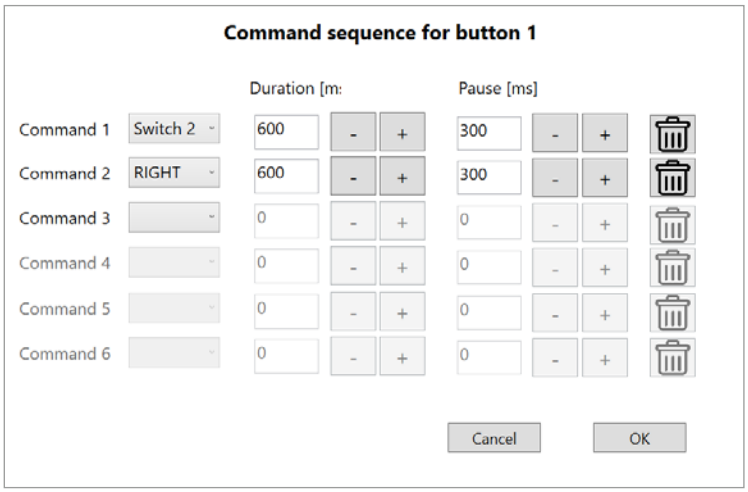


This is where the switch for changing from driving mode to the wheelchair menu is defined. If you do not want to use this option, remove the functions in fields 1 - 6.

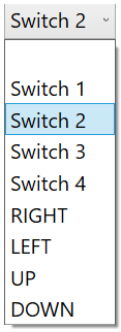
Important note:
When the button is red, a command is stored.

Open command sequence:
To activate an additional function, switches 1–4 can each be assigned an individual sequence.

Click on the value field to open the input dialogue:



Selection:



Up to 6 commands in succession can be defined:

1. Selection of the switching function (Switch 1 - 4 or functions left - right - top - bottom)
2. Duration [ms]: Switch-on time of the selected function
3. Pause [ms]: Subsequent pause time

Example: S2 600 300 RIGHT 600 300

S2 600 300:
- Switch 2 is triggered for 600 milliseconds.
- Pause of 300 milliseconds.

RIGHT 600 300:
- “Right” command is triggered for 600 milliseconds.
- Then pause for 300 milliseconds.

Confirm entry with “OK”.

22 Safety instructions

If the MyEcc Prop control unit fails, the wheelchair can still be moved using the original wheelchair control unit. To do this, switch the entire wheelchair off and on again using the wheelchair's own controls. HomeBraceGermany must be informed of the failure immediately and the MyEcc Prop control unit may only be operated again after the repair has been completed.

Any action being performed can be stopped **IMMEDIATELY** by closing the eyes (driving functions, accessory controls). Switching off the wheelchair also leads to an immediate **STOP** of the action being performed.



It is essential to check the safety functions of the MyEcc Prop carefully before use.

The following monitoring mechanisms are active and are continuously monitored. Malfunctions with the following will result in an immediate **STOP** of the wheelchair:

- Camera contact with the eye
- Operability of the eye control unit
- Monitoring the Windows operating system
- Connection from the eye control unit to the MyEcc Prop
- Cable/plug connection from the eye control unit to the MyEcc Prop

Appropriate measures must be taken to prevent or avoid crushing, impact, shearing and trapping. The following points in particular must be checked and monitored:

- STOP function of the software when closing the eyes (the software must deactivate itself)
- Speeds

23 Safety functions

If the eye-camera software stops sending new eye-mouse coordinates for a certain period of time (FOCUSTIMEOUT) (eye focus lost or other eye-camera problems, tablet PC overload), all driving commands or adjustment functions are stopped **IMMEDIATELY**.

If, for any reason (Windows problems, programme crash, etc.), the application fails to send activation impulses to the relays in the control box, all the relays are **IMMEDIATELY** switched off, stopping the movement or active adjustment.

24 Combination with third-party products

The MyEcc Prop may only be connected and operated with systems that are recognised as compatible.

Compatible systems (eye control cameras):

▪ IntelliGaze Alea	▪ IntelliGaze NXT
▪ Smartbox Lumin-i	▪ Tobii Dynavox PCEye
▪ Tobii Dynavox PCEye mini	▪ Eyegaze Inc. Eyegaze Edge
▪ IrisBond Hiru for Windows	▪ eyeV Skyle for Windows

Compatible complete systems (eye control PCs):

▪ Tobii i-Series 13/16	▪ Tobii i-Series 12+/15+
▪ SmartBox Grid Pad 12/15 with Lumin-i camera	▪ SmartBox Grid Pad 12/15 with Alea IntelliGaze
▪ SmartBox Grid Pad 12/15 with Tobii camera	▪ eyetech EyeOn Elite
▪ Jabbla Tellus i6	▪ PRC Accent 1400 series with Look2 camera
▪ Humanelektronik Seetech	▪ MyBraceDisplay for MyEcc

HomeBraceGermany accepts no liability or warranty for combinations with third-party products.

25 Artificial intelligence (AI)

Our artificial intelligence module is fully functional from software version 4.19 and hardware version 4.1.
If one of the modules is not available, the AI is automatically switched off.

The integration of AI-based technology provides precise control of the electric wheelchair, creating a new dimension of mobility and independence.

AI-supported detection of the pupil:
It is not necessary to move to a “zero position” in order to start reliable detection. The software searches for its destination independently, recognises it and uses it.

Safety shutdown:
The software learns to capture and analyse the correctly calibrated field of view based on the user’s movements. This rules out any possible misinterpretations. Cramps, spasms, coughing or other potential disturbances are safely masked by the normal movement pattern.

Machine learning:
Through continuous learning and regular updates, the MyEcc Prop can constantly improve and adapt to new needs and challenges.

Accessibility:
Technology opens up new opportunities for people with different types of impairments and contributes to inclusion.

Wide range of applications:
In addition to controlling the wheelchair, AI-based eye control can be used to control other devices such as computers, communication systems, robotic arms and even household appliances.

Integration with other technologies:
The AI-based MyEcc Prop can be easily integrated into smart home systems and other assistive technologies. This enables more comprehensive support and control to be offered.

Faster response time:
The AI-based MyEcc Prop can respond very quickly to commands, which can be particularly useful in emergency situations.

Increased independence:
Users who are dependent on assistance due to their limitations can use the AI-based eye control to achieve greater independence and autonomy.

Adaptability and personalisation:
The AI-based MyEcc Prop can learn and adapt to an individual user's eye movement behaviour. Over time, this learning process allows the control system to become more and more attuned to the user's needs.

User friendliness:
Intuitive eye movement controls allow even people with severe physical disabilities to operate the wheelchair easily and safely, without the need to physically operate buttons or switches.

26 Care and maintenance

Before each use, check the cable routing and the condition of the cables (tight fit, no kinks, no defects). If defects or similar are detected, the system must not be put into operation. HomeBraceGermany must be informed of the defect immediately.

The components have no serviceable parts.
The hardware must not be opened.

All components should be checked annually to ensure that they are intact:
- Check screw connections for tightness.
- Check concealed cables for possible damage or protect them from damage.

We recommend regular cleaning and disinfection with a disinfectant and cleaning agent intended for household use (www.rki.de). Cleaning should only be carried out with a wipe. Wipe down all exterior surfaces and allow them to dry by themselves.

Only genuine HomeBraceGermany parts should be used for repairs and upgrades.

27 Software update

The software does not require any updates, as the latest final version is always available on the system at the time of delivery, so no additional updates are required.

If there are any complications within the software, the user and the specialised retailer will be informed automatically by HomeBraceGermany. An update will then only be carried out by HomeBraceGermany.

Any unauthorised intervention, such as tampering with the hardware or software, will invalidate the warranty.

28 Disposal

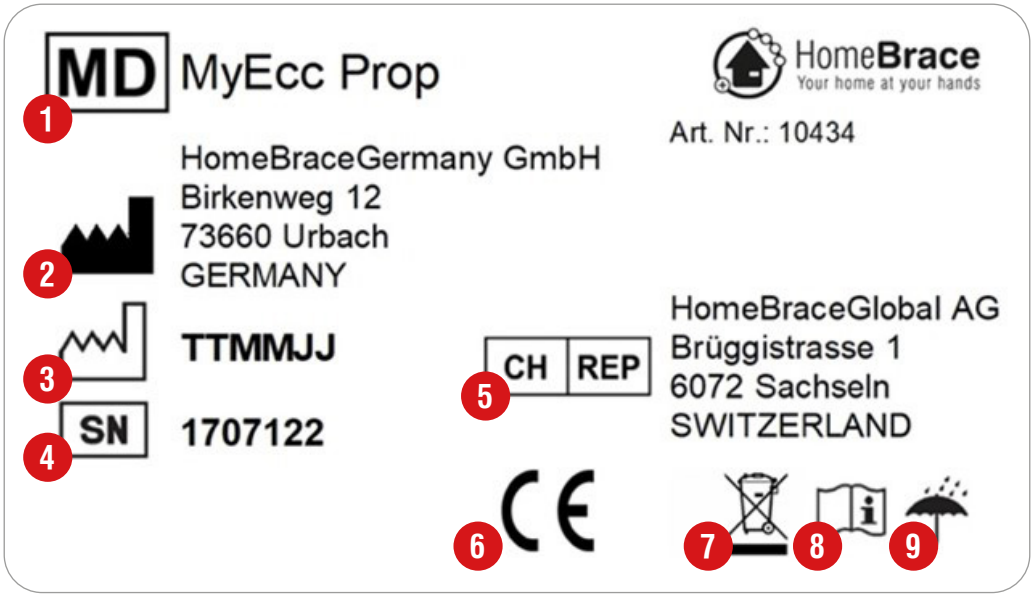
Disposal of the MyEcc Prop:
The MyEcc Prop consists of recyclable materials that do not belong in household waste and should be recycled. For this reason, the German Electrical and Electronic Equipment Act (Gesetz über das Inverkehrbringen, die Rücknahme und die umweltverträgliche Entsorgung von Elektro- und Elektronikgeräten) requires consumers to ensure that electrical and electronic equipment is disposed of properly and separately from household waste. Please return the MyEcc Prop to a recycling centre or similar collection point and help protect the climate and the environment.



29 Expected service life

The components and construction of the MyEcc Prop are designed to provide a service life of 5 to 8 years when used as intended.

30 Nameplate



1. Medical device
2. Manufacturer
3. Production date (DDMMYY)
4. Serial number
5. Swiss authorised representative
6. CE labelling
7. Disposal of the MyEcc Prop
8. Follow the instructions for use
9. Protect from moisture

31 Technical data

Operating/storage environment:
- Maximum ambient temperature during operation: 0°C (32°F) to 55°C (131°F)
- Maximum humidity during operation: 0% - 85% relative humidity
- Maximum ambient temperature during storage: -20°C (-4°F) to 75°C (167°F)
- Maximum humidity during storage: 5% - 85% relative humidity
- MyEcc Prop is splash-proof (IP 22)

Power requirement:
USB 3.0 plug connection 5VDC (100mA)

Weight/dimensions:
MyEcc V5
0.325 kg
120 × 95 × 50 mm (length × width × depth)

Operating system:
(without processor) ATMEL ARM software version V2.0
Operating system:
(without processor) ATMEL ARM software version V4.04

Required operating system on the display:
Min. Windows 10 or newer, from software version V3.13 (MyECCApp3.exe) or higher

32 Network security

The MyEcc Prop has no external access to change the system. Information on the system safety of the other components can be found in the manufacturer's manuals (camera system, display, wheelchair).

No external data carriers may be connected to the system.

33 State of the art

HomeBraceGermany products are designed and realised according to the latest state of the art. Safety and compliance with standards are confirmed by the affixing of the CE mark.

The declaration of conformity can be requested free of charge from HomeBraceGermany.

34 Residual risks

The following residual risks must be taken into account when operating the MyEcc Prop. These are recognised as part of the risk analysis and are accepted by HomeBraceGermany. It is not possible for HomeBraceGermany to completely prevent these risks.

Risk: Driving forwards/backwards over critical points (steps, ramps, slopes, edges).
Cause: User may not be able to see the route.
Consequence: Accident with the wheelchair (serious injuries, death).
Control measure: User or accompanying person aware of the route/environment.
Recommended action: Emergency stop on the wheelchair (can be remote-controlled if necessary).

Risk: Collision with other persons.
Cause: User cannot recognise the obstacle.
Consequence: Personal injury.
Control measure: User or accompanying person aware of the route/environment.
Recommended action: Emergency stop on the wheelchair (can be remote-controlled if necessary).

Risk: A plug comes loose when driving/adjusting the seat.
Cause: The cabling was not checked before driving off.
Consequence: Wheelchair remains stationary.
Control measure: check all cable connections according to the instructions before use.
Recommended action: Move the wheelchair with the control unit out of the danger zone and improve the seating position using the wheelchair controls.

Risk: The power supply for the MyEcc Prop drops below 5V.
Cause: Cable fault, batteries not charged.
Consequence: Wheelchair remains stationary.
Control measure: Before travelling, check the current charge status of the wheelchair and charge it first if necessary.
Recommended action: Wheelchair can still be driven with the original controls and moved out of the danger zone. The seating position can be improved with the original controls.

35 FAQ / frequently asked questions

The display does not respond or is black. What should be done?

- Ensure that all cable connections between the display and the control unit are firmly and correctly plugged in.
- Restart the display by switching it off for a few seconds and then switching it on again.
- Check whether the battery is charged.
- If the problem persists, contact the manufacturer of your communication device.

Eye control does not work or is imprecise. What is the problem?

- Changing the seating position. Recalibrate the eye control.
- Ensure that the eye control is correctly calibrated and that the position of the user's eyes is correctly recognised.
- Check the surroundings for possible light sources or reflections.
- If the problem persists, please contact the manufacturer of your eye control unit.

The MyEcc Prop software responds, but the wheelchair does not drive. Why?

- Check the cabling.
- Use the original cables.
- Check whether the control box is connected correctly and the LED (A) is lit.
  (In prop mode: A and B light up).
- When connecting the MyEcc Prop, select the appropriate port on the control box.
- The appropriate driving profile has been selected on the wheelchair.
- Software set to Prop, but hardware (V1/V2/V3) only switch control.
- Software restarts automatically and adapts to the hardware.
- **Error message: OMNI input module error 09D0.**
  First start the MyEcc Prop software and then switch on the wheelchair via the OMNI display.

If the problem persists, please contact our technical support.

36 Error messages

- **File “eccapp.ini” faulty or not found.**

→ The ini file cannot be read when the programme is started.

- **No MyEcc box was recognised. MyEcc or MyEcc Pupil control box must be present.**

→ No box detected when starting the programme. Software configured in switch mode. Check with USBDeview.

- **No MyEcc box was recognised. MyEcc Prop or MyEcc Pupil Prop control box must be present.**

→ No box detected when starting the programme. Software configured in proportional mode. Check with USBDeview.

- **The initialisation (eccapp.ini) requires a MyEcc Prop control box or MyEcc Pupil Prop control box. The existing control box is MyEcc. Proportional driving has been switched off.**

→ When starting the programme in proportional mode with box without “Prop” (e.g. box version 2).

- **MyEcc control box must be present.**

→ Message appears if the box is no longer recognised during the periodic check while the programme is running.

- **MyEcc: USB GPIO device not found.**

→ Message appears if the interface to the switch control box version 2.0 is not found.
Presumably defective box.

- **MyEcc: Serial interface of the control box not found.**

→ Message appears if a box is present but the interface for control is not found .
Box version 4.x. Presumably defective box.

- **Error reading the “Textdata.xml” file.**

→ The file with the test specifications for the text output mode is incorrect or does not exist.

- **Languages file “myecc.xliff” not found.**
  Error loading languages file “myecc.xliff” not found.

→ The file with the language translations is incorrect or does not exist.

37 Contact

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