



**Alternative
Drive Controls**



Precision Mini Proportional Joystick

Owner's Manual - Maintenance Guide
iDrive Precision Mini Proportional Joystick

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Stealth Products is committed to 100% customer satisfaction. Your complete satisfaction is important to us. Please contact us with feedback or suggestions to help us improve the quality and usability of our products.

You may reach us at:

Stealth Products, LLC
 104 John Kelly Drive, Burnet, TX 78611



Phone: (512) 715-9995
 Fax: (512) 715-9954

Toll Free: (800) 965-9229
 Toll Free: (800) 806-1225

info@stealthproducts.com
 www.stealthproducts.com

EU REP  EMERGO EUROPE BV Westervoortsedijk 60 6827 AT Arnhem The Netherlands	CH REP GELBART AG Tribschenstrasse 64 CH-6005 Luzern Switzerland	UK CA UK Authorized Representative EMERGO CONSULTING (UK) LTD. c/o Cr360 - UL International Compass House, Vision Park Histon Cambridge CB24 9BZ United Kingdom
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General

Read and understand all instructions prior to the use of the product. Failure to adhere to instructions and warnings in this document may result in property damage, injury, or death. Product misuse or failure to follow instructions will void the warranty.

Immediately discontinue use if any function is compromised, if parts are missing or loose, or if any component shows signs of excessive wear. Consult with your supplier for repair, adjustment, or replacement.

All persons responsible for fitting, adjustment, and daily use of the devices discussed in the these instructions must be familiar with and understand all safety aspects of the devices mentioned. In order for our products to be used successfully, you must read and understand all instructions and warnings, and maintain our products according to our instructions on care and maintenance.

The installation instructions will guide you through this product’s options and possibilities.

Instructions are written with the expressed intent of use with standard configurations. They also contain important safety and maintenance information, as well as describe possible problems that can arise during use. For further assistance, or more advanced applications, please contact your supplier or **Stealth Products** at (512) 715-9995 or toll free at (800) 965-9229.

Always keep the operating instructions in a safe place so they may be referenced as necessary.

All information, pictures, illustrations, and specifications are based on the product information that was available at the time of printing. Pictures and illustrations shown in these instructions are representative examples and are not intended to be exact depictions of the various parts of the product.

CAUTION

These products are designed to be fitted, applied, and installed exclusively by a healthcare professional trained for these purposes. The fitting, application, and installation by a non-qualified individual could result in serious injury.

Warranty

Our products are designed, manufactured, and produced to the highest of standards. If any defect in material or workmanship is found, Stealth Products will repair or replace the product at our discretion. Any implied warranty, including the implied warranties of merchantability and fitness for a particular purpose, shall not extend beyond the duration of this warranty. **Stealth Products** does not warrant damage due to, but not limited to: misuse, abuse, or misapplication of product, and/or modification of product without written approval from **Stealth Products, LLC**. Any alteration or lack of serial number, where applicable, will automatically void all warranty.

Stealth Products, LLC is liable for replacement parts only. **Stealth Products, LLC** is not liable for any incurred labor costs.

Stealth Products warrants against failure due to defective materials or workmanship:

Covers: 2 years
Hardware: 5 years
Electronics: 3 years

In the event of a product failure covered by our warranty, please follow the procedures outlined below:

Call **Stealth Products** at (512) 715-9995 or toll free at (800) 965-9229.

Request a Return Authorization (RA) form from the Returns Department and follow the documentation instructions.

You can download additional copies of this manual by accessing the Stealth website (<https://stlpro.site/stealth-docs>) and searching "PMPJ" in the search bar at the top of the page.

Supplier Reference

Supplier:	
Telephone:	
Address:	
Purchase Date:	
Model:	

Warning Labels

Warnings are included for the safety of the user, client, operator, and property. Please read and understand what the signal words **DANGER**, **WARNING**, **CAUTION**, **NOTICE**, and **SAFETY** mean, and how they could affect the user, those around the user, and property.



DANGER

Identifies an **imminent** situation which, if not avoided, may result in **severe injury, death, and property damage**.



WARNING

Identifies a **potential** situation which, if not avoided, may result in **severe injury, death, and property damage**.



CAUTION

Identifies a **potential** situation which, if not avoided, may result in **minor to moderate injury and property damage**.

NOTICE

Identifies important information not related to injury, but possible **property damage**.

SAFETY

Indicates steps or instructions for safe practices, reminders of safe procedures, or important safety equipment that may be necessary.

Limited Liability

Stealth Products, LLC accepts no liability for personal injury or damage to property that may arise from the failure of the user or other persons to follow the recommendations, warnings, and instructions in this manual.

Stealth Products does not hold responsibility for final integration of final assembly of product to end user. **Stealth Products** is not liable for user death or injury.

Testing

Initial setup and driving should be done in an open area free of obstacles until the user is fully capable of driving safely.

Parts & Accessories

The i-Drive Precision Mini Proportional Joystick (PMPJ) Package includes:

- PMPJ
- i-Drive Control Interface
- Egg Switch
- 1/8" Mono Dongle
- ARMS260 Swing Away Mount
- Two #10-32 x 3/8" Button Head Screws supplied

PMPJ



i-Drive Control Interface



1/8" Mono Dongle



Egg Switch



ARMS260 Swing Away Mount



Mounting Options

Mounting options for the i-Drive PMPJ includes:

- Gatlin Mount
- Bib Mount
- Swing Away Arm

Gatlin Mount

GAT486

GAT497



Bib Mount

SBM851



Swing Away Arm SM670



Factory Settings

The i-Drive interface contains 6 mini USB input ports. Ports 1, 2, 5, and 6 are for proximity sensors or mini-joystick. Ports 3 and 4 are for mechanical switches.



Port 1	Prop Fwd/Rev	Joystick
Port 2	Prop Left/Right	Joystick
Port 3a	Unassigned	(1/8" Mono)
Port 3b	Unassigned	(1/8" Mono)
Port 4a	Reset/Mode	Egg Switch
Port 4b	Unassigned	(1/8" Mono)
Port 5	Unassigned	(micro USB)
Port 6	Unassigned	(micro USB)

One dongle is included, and additional dongles are available for purchase. The associated *i-Drive Programmer Software* allows for quick port assignability and higher level of sensor adjustability.

NOTICE

The dongle is required for mechanical input, and provides for a double input for mechanical ports.

Mounting

Stealth's i-Drive PMPJ joystick housing comes with two threaded holes for mounting system fastening.

The following pictures feature the part numbers and mounts that are necessary for mounting the joystick.



SM671



SM670 Swing Away Arm



ARM260-PMPJ



SBM851

Connecting the Joystick

The i-Drive Control Interface plugs directly into the power chair's control interface using supplied DB-9 connector. Depending on the type of interface, the location port varies.

**9-pin
Connector**



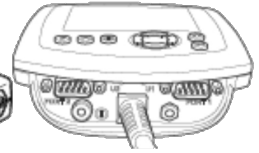
**Q-Logic Drive
Control System**



Q-Logic SCIM



**R-Net Omni Specialty
Control Interface**



Joystick Operation

The i-Drive PMPJ gives the user ability to operate their wheelchair drive parameters with smooth and precise control in 360°.

NOTICE

Ensure the wheelchair and i-Drive PMPJ are correctly set up and adjusted to the user's needs.



CAUTION

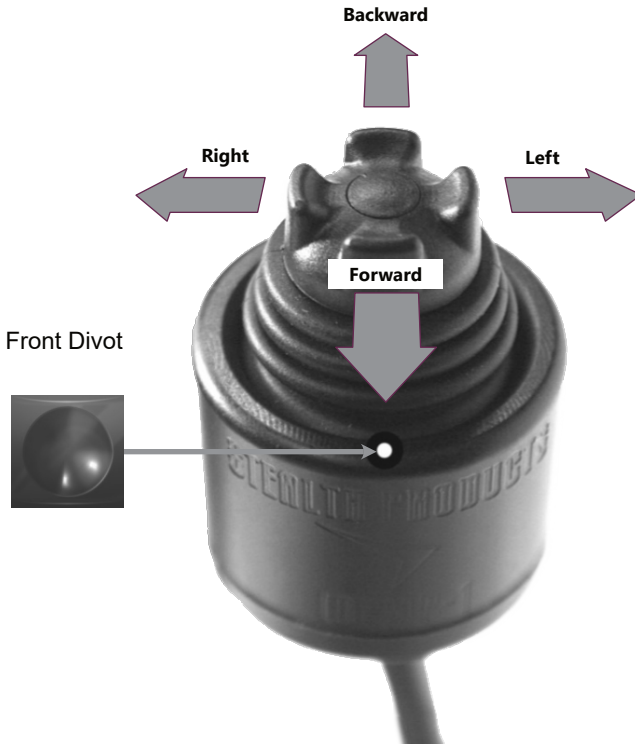
If the i-Drive PMPJ does not perform as specified, turn off the wheelchair and repeat setup or contact your supplier.

Joystick Setup

It is important to properly install the i-Drive PMPJ for the user. Take care during the assessment to identify the joystick placement and allow maximum user access and control. Do not position the joystick where the hand may be obstructed from moving in any direction.

Joystick Directions

The front divot represents the front of the joystick, or *Forward* as the factory setting.



CAUTION

Manually disengage the drive motors prior to setting up the chair's electronics. Refer to the power chair's manual for important instructions.

CAUTION

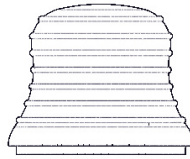
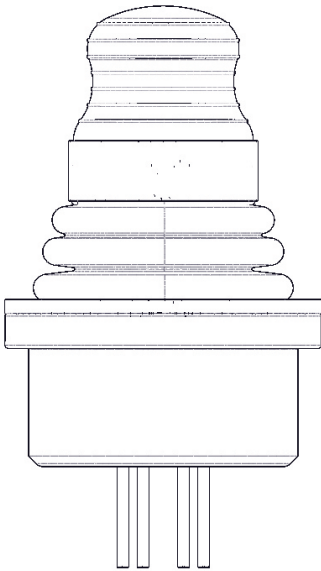
Always use a slow speed when first operating the i-Drive PMPJ.

WARNING

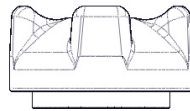
All setups should be performed by a trained technician.

Joystick Topper

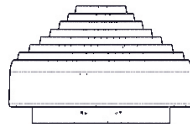
There are a variety of toppers which can be utilized on the PMPJ. The joystick will ship with the Fingertip topper but can be changed to the Castle or Cone style. An extra Fingertip topper comes with the joystick so that it can be replaced when needed.



Spare Fingertip



Castle Style



Cone Style



4-40 x 3/16"
Flat Head
Screws



Plastic Plug



After installing the new topper, test the joystick in each direction and ensure that it is securely fastened.

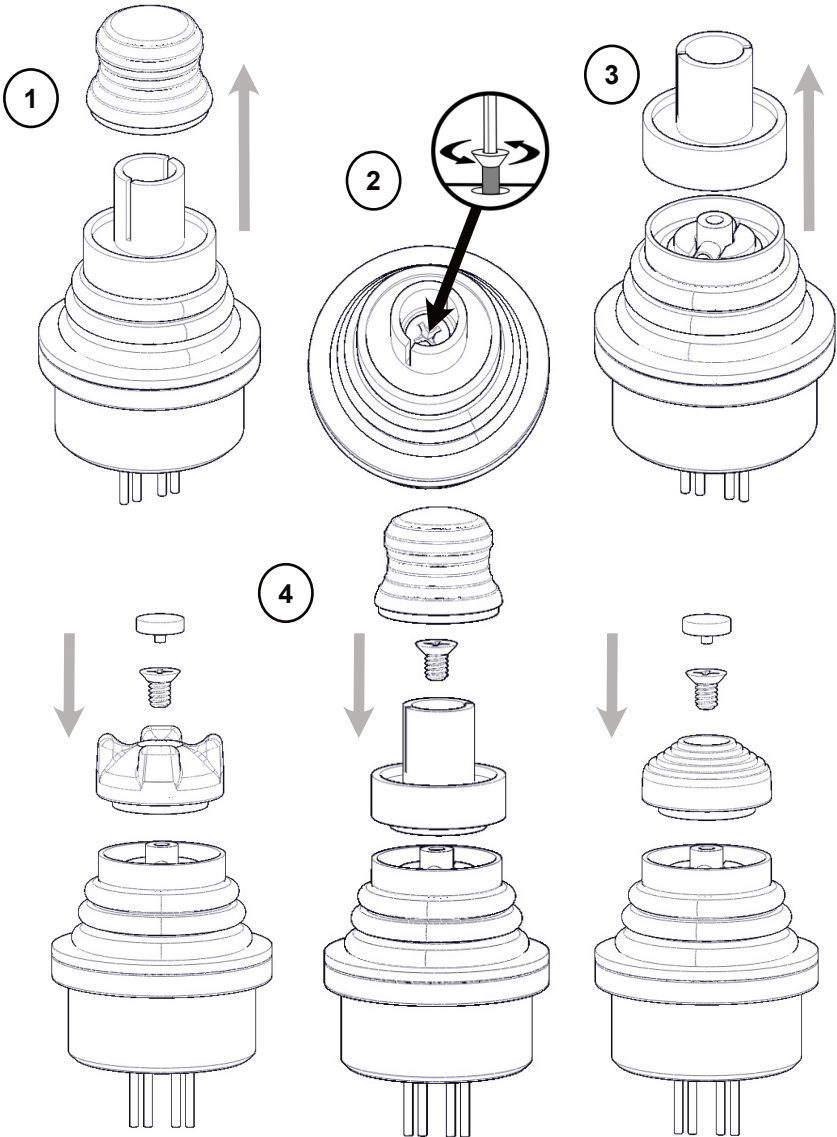
Joystick Topper Installation

Step One: Remove the top of the fingertip topper.

Step Two: Loosen the 4-40 x 3/16" Flat Head Screw with a Phillips screwdriver.

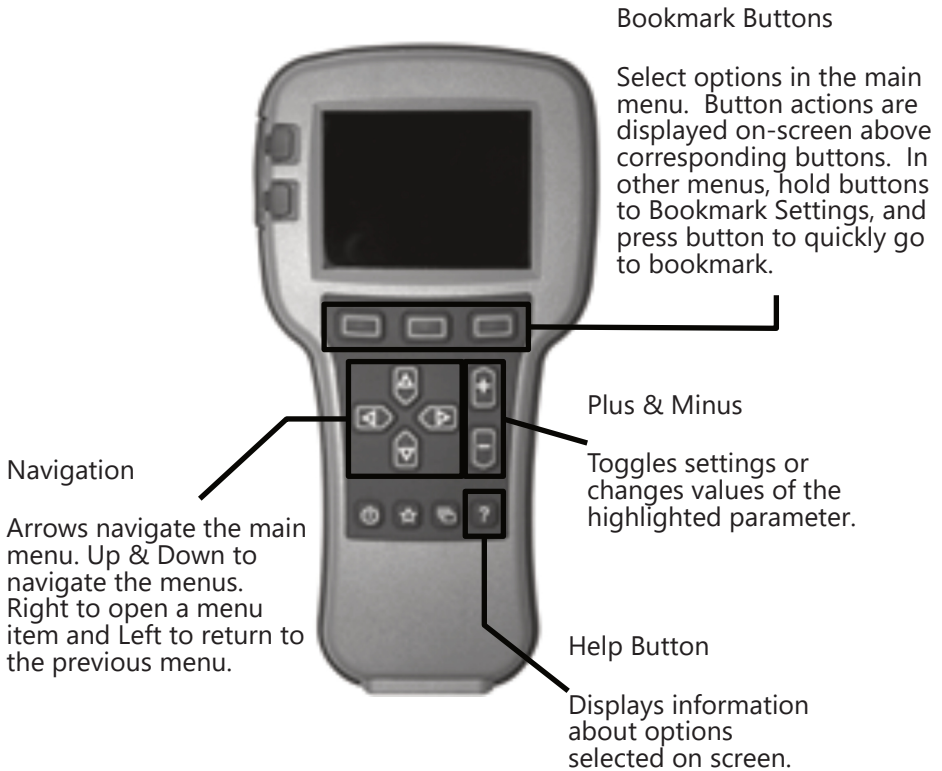
Step Three: Take off the plastic post.

Step Four: Install the replacement fingertip style or another style of topper.



Q-Logic™ Setup

Q-Logic Programmer



Note: Q-Logic Enhanced Display and Q-Logic Handheld Programmer required

Q-Logic™ Setup

1. Plug in the Q-Logic™ Handheld Programmer to the Q-Logic™ Enhanced Display or to the standalone joystick if the SCIM (Specialty Control Input Module) is in use.
2. On the Q-Logic™ Programmer, navigate with the Left & Right buttons < > to Program Adjustments x Specialty Control x Active Device.
3. Toggle with the Plus & Minus buttons +/- from Active Devices to Proportional.
4. Unplug the Q-Logic™ Handheld Programmer and Turn Off the system.

NOTICE

For new chairs that have never been programmed, a power cycle will need to be done after the joystick has been calibrated and before the joystick throw can be adjusted.

NOTICE

If using Q-Logic™ Specialty Control Input Module (SCIM), you will need any type of mechanical switch to plug into the power port of the standalone joystick to power *On/Off* the chair and ensure the SCIM as master control.

R-Net™ Omni Setup

Profile

Switch between preset drive profiles and activate device as control.

Plus & Minus

Toggle settings or changes value of the highlighted parameter.

Mode

Switch mode to drive, power seating, or OBP (onboard programming)

Power

Turns chair ON/OFF.

Navigation

Up & Down buttons to navigate the menus, Right button to open a menu item and Left button to return to previous menu.



R-Net Programming Dongle

R-Net Setup

1. Plug in the R-Net™ Programming Dongle in line with the Omni Display and chair's electronics, and then power ON the chair.
 2. Press the Mode button until you reach the OBP (Onboard Programming) menu. The OBP menu will appear as an hourglass while loading.
 3. With the navigation buttons, navigate to Omni > Global > Sleep 12V and toggle Sleep 12V to On with the Plus & Minus buttons. +/-
 4. Navigate back < to the Omni menu, then navigate to Omni Port 1 (or Port 2 if the i-Drive is in Port 2)
 5. In the Port menu, toggle SID to Prp with the Plus & Minus buttons. +/-
 6. In the Port menu, navigate to Switches
 7. In the Switch menu, toggle Switch Detect to Off with the Plus & Minus buttons. +/-
 8. In the Switch menu, toggle 9 way Detect to Off with the Plus & Minus buttons.
 9. Navigate with the Left button < back to the Omni menu, and then navigate to Profiled.
 10. In the Profiled menu, configure a profile to use the port for the i-Drive
 11. Power off the chair, remove the R-Net™ Programming Dongle, reconnect the Omni Display, and power on the chair.
- The chair should now be programmed to recognize the i-Drive. Be sure to reengage the motors before operation.

i-Drive Programmer Software

The i-Drive's Programming Software is not required for operation. Using the software will ensure fine tuning to the user's needs. The software is available to ensure a customized fit and driving experience. Programming the i-Drive is simple. By connecting a PC or tablet via USB and using the i-Drive Programming Software, you can:

- Dynamically assign ports to control any of the 9 output types.
- Adjust the range of proximity activation, or activation sensitivity of the i-Drive PMPJ.
- Provide an easy to set up custom double-tap that extends the chair's double-tap limits.



Software Installation

Included with your i-Drive package is a card with the download link for the i-Drive Programmer Software. Included with the download should be instruction on installing the i-Drive Programmer Software. If there are any difficulties getting or installing the software, or if the card is lost or misplaced, contact Stealth Products, LLC for further assistance.

Getting Started

- Using the Male USB to Male Mini USB Cable included with the i-Drive, connect your i-Drive to your PC or tablet.
- Launch the i-Drive Programmer Software.
- Click on the drop-down menu and select the corresponding COM port for the i-Drive.
- Click the Connect button to digitally connect the i-Drive to the Programmer Software.

NOTICE

The i-Drive comes pre-configured, and does not require i-Drive programming for use. When the inputs from the switches are moved into different ports on the i-Drive, running the setup wizard in the programmer software will reassign to the correct switches.

NOTICE

The i-Drive needs a minimum system voltage of 12V to operate.

NOTICE

Features of the programmer will be unavailable if the i-Drive is incorrectly installed on the power chair.

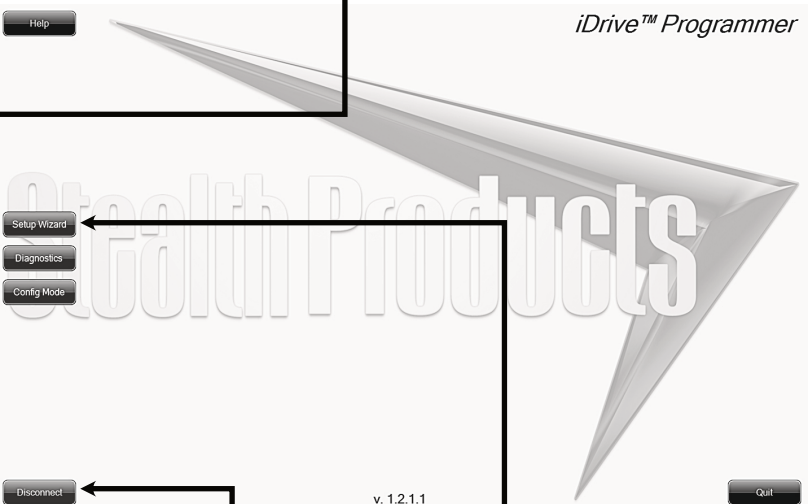
Help

Clicking on button and menu items will explain how it is used. Click to toggle on and off.

Diagnostics

Displays real-time control activation, calibrates joystick sensitivity and double-tap timing.

iDrive™ Programmer



Config Mode

Individual fine-tuning of each switch, sensor, and joystick input.

Disconnect

Disconnects the i-Drive from the programmer.

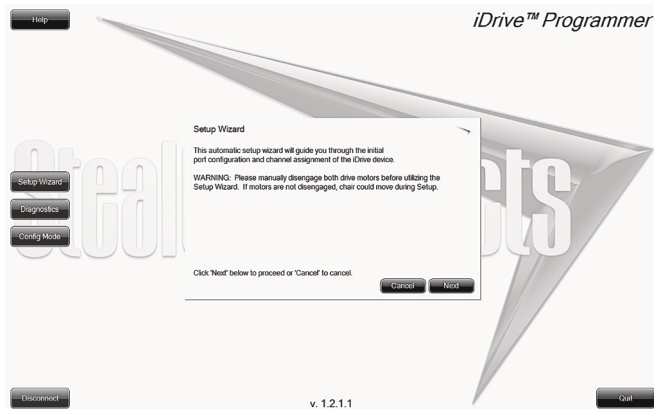
Quit

Closes the software

Setup Wizard

Quickly configures the input automatically through a series of simple steps.

Setup Wizard



Setup Wizard Button

Click this to begin the *Setup Wizard*.

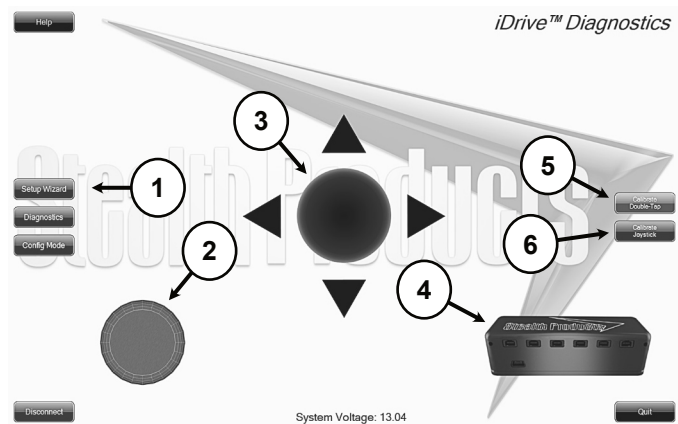
Next

Goes to the next step of the *Setup Wizard*.

Cancel

Closes the *Setup Wizard*.

The *Setup Wizard* will guide you through the initial port configuration and channel assignment. It is recommended to perform a Factory Reset from the *Config Mode* menu before running the *Setup Wizard* to ensure that no previous setting may interfere with the new setup.

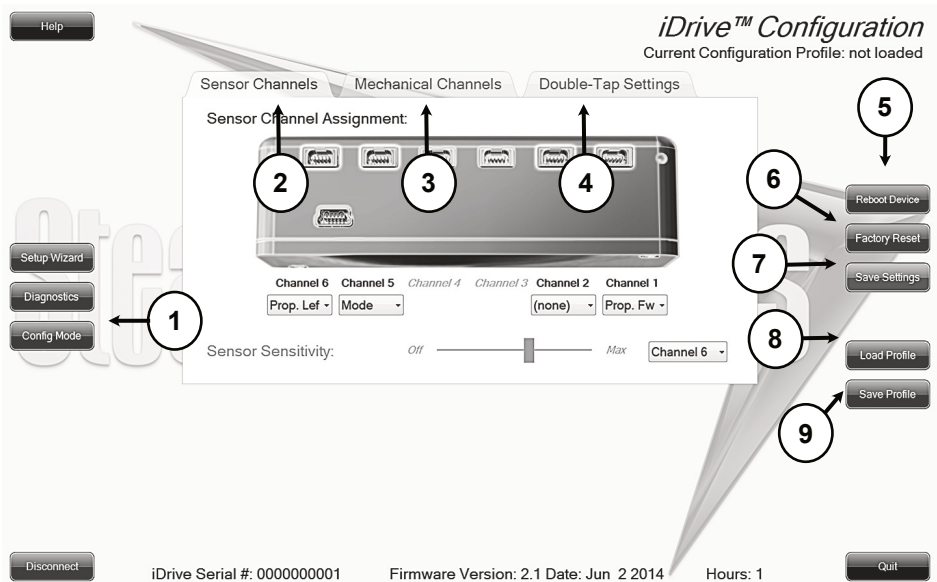


Diagnostics

Real-time *Diagnostics* allow you to observe input behavior as the i-Drive sensors and switches are activated by the user. This is useful to fine-tune the i-Drive.

1. Diagnostics Button - click this to begin *Diagnostics*.
2. Mode Switch - This will display when the mode switch is activated. Mode switches are used to change drive profiles, or activate power seating functions.
3. Directional Activation - this displays one of the four directions that can be configured into the i-Drive. Forward, Reverse, left and right are displayed, and are the bases for drive controls.
4. i-Drive Ports - highlights which port the activated sensor or switch is plugged into.
5. Calibrate Double-Tap - sets the timing of double-tap used for mode reset/profile change.

6. Calibrate Joystick - sets the sensitivity for activation and proportional joystick movement.



Config Mode

The *Config Mode* allows you to adjust the way the i-Drive activates, and allows you to fine tune the function and sensitivity of each sensor and switch individually.

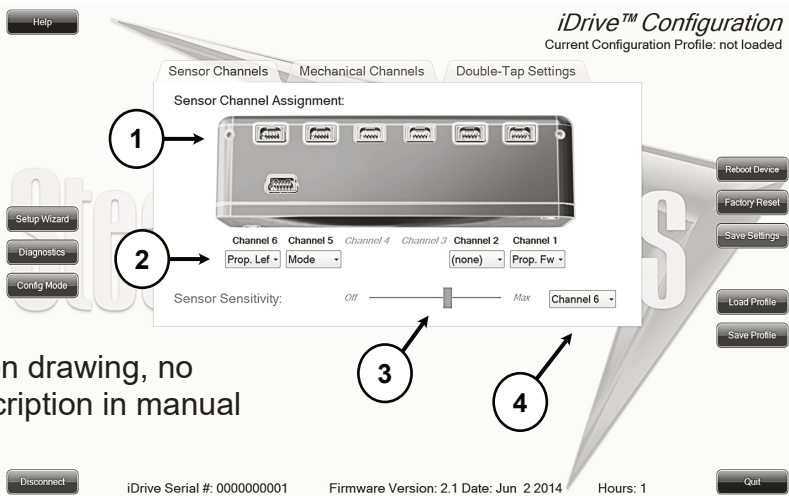
1. Config Mode Button - click this to enter *Configuration Mode*
2. Sensor Channels Tab - opens the menu for fine-tuning sensors and proportional joysticks.
3. Mechanical Channels Tab - Opens the menu for mechanical switch input assignment.
4. Double-Tap Settings Tab - opens the menu to enable and fine-tune *Double Tap*.
5. Reboot Device Button - restarts and power cycles the device.
6. Factory Reset Button - resets joystick calibration, switch sensitivity and double-tap to default values. Does not affect individual channel assignment settings.
7. Save Settings Button - saves all configurations and required changes to take effect.
8. Load Profile Button - loads a configuration profile that has been saved on your computer.
9. Save Profile Button - allows you to save a profile to your computer with all the current configuration settings which can be loaded later at any time.

NOTICE

Be sure to save your settings with the *Save Settings* button after all desired changes are made. If settings are not saved, all your configuration settings will not take effect and will be lost.

Sensor Channel Assignment

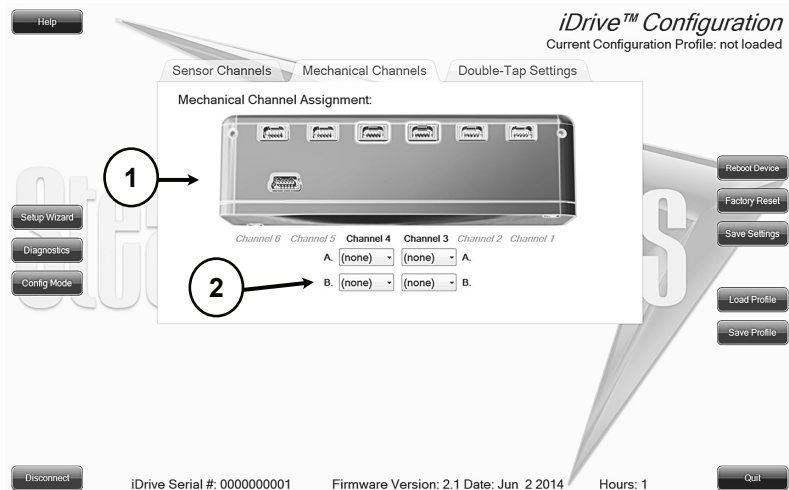
1. Diagram that shows which sensor channels are available to assign and modify.
2. Drop down menu that allows you to assign the function per sensor channel.
3. *Sensor Sensitivity Slider* sets the activation range of proximity sensors.

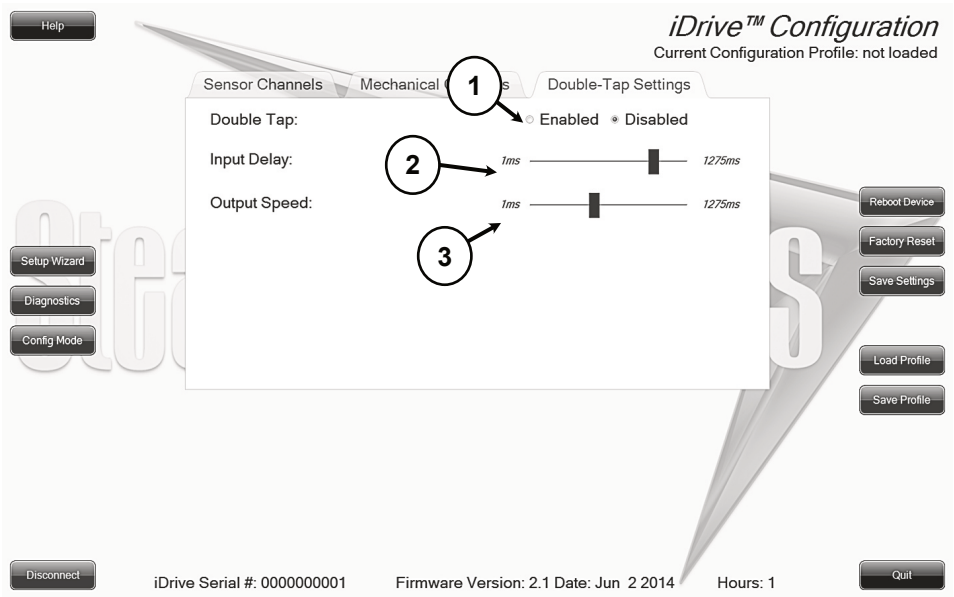


#4 on drawing, no description in manual

Mechanical Channel Assignment

1. Diagram that shows which mechanical channels are available to assign and modify.
2. Drop-down menu that allows you to assign the function per mechanical channel. Mechanical channels allow for two 1/8" mono inputs via dongle per channel.





Double Tap Settings

1. Enable *Double Tap* to allow double-tap for mode/switch function, and allow input delay and output speed adjustment.
2. Input Delay is the amount of time allowed for double-tap command capture.
3. Output Speed is the time period between mode output pulses. This value should match the double-tap timing of the chair.

NOTICE

It's recommended to use the *Calibrate Double Tap* option in the *Diagnostics* to get a properly timed double-tap setting for the user.

Testing

After installation of the i-Drive PMPJ joystick, execute the following tests before the wheelchair is delivered or put into service, in this order:

- Check the i-Drive PMPJ for intactness
- Operational Test
- Test Drive
- Stop Test

Check that the i-Drive PMPJ:

- Is not bent or damaged.
- Housing, cabling, and all connectors are not damaged.
- Returns to its default position when moving and releasing the joystick forward, backward, left and right.

Operational Test



WARNING

Execute this test on a level surface, in an open area free of obstacles.

1. Activate the wheelchair operating system.
2. Check for any error messages.
3. Move the joystick slowly forward until you hear the parking brakes switch off.



CAUTION

The wheelchair may start moving.

4. Immediately release the joystick. You should hear the parking brake react within a few seconds.
5. Repeat steps 3 and 4 three times, while slowly moving the joystick towards you, to the left and to the right.

Test Drive

- Perform a test drive with the wheelchair
- Check whether the wheelchair and all of its operations are fully functioning in all positions the user may have it configured.
- Check that no cabling or parts may become damaged or hindered in any possible position of the wheelchair.

Stop Test

Drive full speed ahead and shut down the wheelchair with the joystick.

The wheelchair may not suddenly stop, but must slow down to a gradual stop.

Dealer Assistance

During first time use by the client, it is advised that the dealer or service technician assists and explains the different drive configurations to the customer (the user and/or the attendant). If needed, the dealer can make final adjustments.

User Testing

It is important that the customer is fully aware of the installation, how to use it, and what can be adjusted in order to gain as much mobility as possible. As a dealer, proceed as follows:

- Explain and show the customer how you have executed the installation, and explain the function of the joystick.

Have the user test all positions of the i-Drive PMPJ:

-
- Is the i-Drive PMPJ within easy reach?
- Can the user safely operate the wheelchair with minimal effort?
- Is the placement of the joystick in an optimal position for the user?

Conditions of Use

- The i-Drive PMPJ is intended for use as installed by the dealer, in accordance to the installation instructions in this manual.
- The foreseen conditions of use change significantly, please contact your dealer or a qualified service technician to avoid excessive wear and tear or unintended damage.

Cleaning

- Positioning accessories can be wiped clean with a damp cloth and mild, non-abrasive cleaner.
- Ensure all cleaners are approved for finished steel, aluminum, plastic, and upholstered surfaces.



WARNING

Do not immerse in water or rinse with a water hose.

Disinfecting

- When needed, surfaces can be wiped with an approved disinfecting product.
- Ensure the disinfectant is approved for finished steel, aluminum, plastic and upholstered surfaces.

Water Contact

- Turn off the chair and disconnect the i-Drive PMPJ from the power chair.
- Thoroughly dry i-Drive PMPJ with a towel.
- Allow the joystick to dry for 12 hours in a warm, dry area to allow for unseen moisture to evaporate.
- Check that the i-Drive PMPJ operates to specifications before use.

Electromagnetic Interference (EMI)

The i-Drive PMPJ has been tested to a radiation immunity level of 20 volts per meter.

Electronics may be susceptible to EMI. EMI is the interfering energy emitted from sources such as radio stations, TV stations, radio transmitters, and cellular phones. The interference from radio waves may cause malfunctions and equipment damage.

Daily Maintenance Check

- Ensure all cords are properly connected and secured and show no signs of damage or wear.
- Ensure that the joystick rubber boot is free of cracks and tears.
- Move the joystick through the four quadrants, checking for smooth movement and its return to the centered position.
- Ensure all switched are functioning as programmed.



WARNING

Do not overtighten screws.

Weekly Maintenance Check

- Check all fasteners and tighten as necessary.
- Clean all surfaces and disinfect when necessary.
- Check that the mechanical condition, as well as the functions, are operating properly. If it is not, contact your supplier for immediate repairs.

Environment Safety

- Always operate or store the i-Drive PMPJ in safe temperature of -40° to +149°F (-40° to +65°C)
- Do not operate or leave the i-Drive PMPJ in rain, snow, sleet, hail, or damp environment.
- Do not expose the i-Drive PMPJ to water, condensation, icing, or dampness.
- Do not operate in the shower.
- Do not operate or store near open flame, flammable, or combustible products.



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Warranty Information



Home Page



Online User Manual



Stealth Products, LLC · info@stealthproducts.com · www.stealthproducts.com
(800) 965-9229 | (512) 715-9995 | 104 John Kelly Drive, Burnet, TX 78611