



# Q-LOGIC 3 PROGRAMMING GUIDE



**QUANTUM**<sup>®</sup>

PROVIDING GREATER INDEPENDENCE

### WARNING!

**A Quantum Rehab Provider or a qualified technician must perform the initial setup of this product and must perform all of the instructions in this manual.**

The symbols below are used throughout this owner's manual and on the power chair to identify warnings and important. It is very important for you to read them and understand them completely.

### WARNING!

Indicates a potentially hazardous condition/situation. Failure to follow designated procedures can cause either personal injury, component damage, or malfunction. On the product, this icon is represented as a black symbol on a yellow triangle with a black border.

### MANDATORY!

These actions should be performed as specified. Failure to perform mandatory actions can cause personal injury and/or equipment damage. On the product, this icon is represented as a white symbol on a blue dot with a white border.

### PROHIBITED!

These actions are prohibited. These actions should not be performed at any time or in any circumstances. Performing a prohibited action can cause personal injury and/or equipment damage. On the product, this icon is represented as a black symbol with a red circle and a red slash.

## Intended Use

A wheelchair component is a device intended for medical purposes that is generally sold as an integral part of a wheelchair, but may also be sold separately as a replacement part.

## Regarding Devices for Prescription Use

### WARNING!

**CAUTION!** Federal law restricts this device to sale by or on the order of a physician or other certified personnel licensed by the law of the State (US only) or region in which this personal practices to use or order the use of the device.

*NOTE: These instructions are compiled from the latest specifications and product information available at the time of publication. We reserve the right to make changes as they become necessary. Any changes to our products may cause slight variations between the illustrations and explanations in this manual and the product you have purchased. The latest/current version of this manual is available on our website.*

*NOTE: This product is compliant with WEEE, RoHS, and REACH directives and requirements.*

*NOTE: This product meets IPX4 classification (IEC 60529).*

*NOTE: The Q-Logic 3 Controller and its components are not made with natural rubber latex. Consult with the manufacturer regarding any after-market accessories.*



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**NOTE:** *There are more warnings identified and explained in the Consumer Safety that is included with your power chair. Please become familiar with all the warnings and safety information found in the Consumer Safety Guide and refer to this resource often.*

*Please refer to the Q-Logic 3 Basic Operation Instructions and the Consumer Safety Guide included with the power chair prior to making any changes to the pre-programmed parameters of the controller.*

### **WARNING!**

A Quantum Rehab Provider or a qualified technician must perform the initial setup of this power chair and must perform all of the procedures in this manual.

Always fasten the positioning belt when operating the power chair.

**NOTE:** The end user must follow the proper sequences to activate their desired input device.

### Programming Hand Control Driving Parameters

Adjusting drive parameters in the Econ-W, similar to Q-Logic 3, are performed in real time. Real time programming allows you to adjust while the client is driving without the need to reboot to save these changes to the system. Q-Logic 3 offers a wireless programming option through Bluetooth. This allows you to make the changes while the client is driving and not be tethered to them by a cable.

1. Parameter Settings/Program Adjustments
2. User Drive Profiles
3. Hand Control Profiles
  - Click on the parameter that needs changing. By double clicking on the parameter box, the parameter can be typed in or the slide bar can be used to change the parameter.

### Programming Parameters Labels

Similar to Q-Logic 2, Q-Logic 3 has the ability to customize how the drive profiles will show up on the Hand Control or Enhanced Display.

1. Parameter Settings/Program Adjustments
2. User Drive Profiles
3. Hand Control Profiles
4. Click on **Profile Label Type** to change the following:
  - Text
  - Icon
  - Symbol

### Programming Parameters Labels (Text or Icon & Symbol)

Similar to Q-Logic 2, Q-Logic 3 has the ability to customize how the drive profiles will show up on the Hand Control or Enhanced Display

1. Parameter Settings/Program Adjustments
2. User Drive Profiles
3. Hand Control Profiles
  - If **Text** or **Icon** is chosen in **Profile Label Type**, select from the drop-down in **Text & Icon**.
  - If **Symbol** is chosen from **Profile Label Type**, select from the drop-down menu from **Symbol**.



### WARNING!

The controller program can affect speed, acceleration, deceleration, dynamic stability, and braking. If the controller is programmed incorrectly or outside of the safe limits as determined by the healthcare professional, it can create a dangerous situation. Only the power chair manufacturer or a Quantum Rehab Provider should program the controller.

### Programming Startup Configuration — Input Device Selection Screen

Programming the Input Device Selection will tell the system how the power chair will power up. There are 3 options.

1. Parameter Settings/Program Adjustments
2. Startup Configuration
3. **Input Device Selection:** There are 3 options:
  - **Default Input Device:** The same input device powers up the chair regardless of which power button is used.
  - **Last Device Used:** The device that powered off the chair.
  - **Input Device Selection Screen:** If multiple inputs are on the power chair, this gives the end user a way to choose which input device they wish to use.
  - **Power on Device:** Similar to with Q-Logic 2, the device that powers on the power chair is the device that is in charge.

### Startup Configuration — Input Device Selection Screen

If the Input Device Selection is set to Input Device Selection Screen, then the input direction would need to be set.

1. Parameter Settings/Program Adjustments
2. Startup Configuration
3. **Input Device Selection:** Choose from one of the following directions:
  - Left
  - Right
  - Left - Right - Left
  - Right - Left - Right

### Startup Configuration — Default Input Device

If the **Default Input Device** is chosen for the startup configuration, the input device needs to be selected from the **Default Input Device** menu.

1. Parameter Settings/Program Adjustments
2. Startup Configuration
3. **Default Input Device:** Choose which input device will be the default:
  - Enhanced Display
  - Hand Control
  - SCIM
  - Stand-alone Joystick
  - SPM (Sip & Puff Module)
  - 1-Switch Scanner



## Startup Configuration — User Entry Point

User Entry Point is what screen the electronics will start on when powering up the power chair.

1. Parameter Settings/Program Adjustments
2. Startup Configuration
3. **User Entry Point:** From the drop-down, choose one of the following options:
  - Home
  - Drive 1, 2, 3, 4
  - Input Device Selection
  - Auxiliary
  - Seat
  - Last used

## Programming Clinic Mode

**Clinic Mode** allows a clinician or an ATP to quickly perform an initial setup of a demo chair without a programmer. **Clinic Mode** needs to be **Enabled** in the programming first.

1. Parameter Settings/Program Adjustments
2. Startup Configuration
  - **Enable Clinic Mode**
  - Once **Clinic Mode** is enabled, power off the power chair
  - Power up the power chair by pressing then holding the On switch for 5+ seconds.

The first screen will allow you to choose the mode you want to use. 1-Switch Scanner is a programmable feature, not a module. Choose which type of device the specialty control is.

1. Choose how the device will be programmed (i.e. if you have a 3-Switch Head Array plugged into the Enhanced Display of the power chair).
2. On the first screen, choose **Enhanced Display**.
3. On the second screen, choose **Head**.
4. On the third screen, choose **3-Switch Head**.

## Adding Provider Information

A Provider can add their contact information in a Q-Logic 3 Enhanced Display or Hand Control. The serial number of the power chair is automatically entered as the unit is being built.

1. Parameter Settings/Program Adjustments
2. System
  - **Miscellaneous** (Click on Provider Info Line 1, enter the first line of information, making sure to press the enter key once complete).
  - Repeat steps for remaining Provider Info lines, making sure to press the Enter key after each.

## Accessing Provider Information

To see the changes made to the Provider information, follow these steps with your Enhanced display or Hand Control.

1. Parameter Settings/Program Adjustments
2. System
  - From the **Home** screen make a left input device command.
  - From the **Settings** screen, make another left input device command.
  - Highlight **System Information** and give a right input device command.
  - Highlight **Provider Information** and make a right input device command.



## Programming Hand Control Options — Input Configuration

Configuring the Hand Control

1. Parameter Settings/Program Adjustments
2. Hand Control
3. Input Configuration
4. HC Input Configuration (Hand Control can be configured in 4 ways)
  - **Proportional:** Default Programming
  - **Switch Operation:** Joystick will operate with a 4-switch system.
  - **3-Direction prop:** Forward is disabled on the hand control; reverse toggles between forward and reverse.
  - **3-Direction Switch op:** Forward is disabled on the hand control; reverse toggles between forward and reverse.

## Programming Hand Control Options — Joystick Setup

1. Parameter Settings/Program Adjustments
2. Hand Control
3. Joystick Setup
  - **Center Deadband:** Defines how far from center the joystick must be moved for the system to take as a drive command.
  - **Tremor Suppression:** Suppresses a tremor on the joystick
  - **Assign Direction:** Allows you to assign directions. Keep in mind that forward must be opposite of reverse and left must be opposite of right.
  - **Throw:** Defines how far the joystick must be deflected forward/reverse/left/right to be at full speed.

## Programming Hand Control Options — Button Operation

1. Parameter Settings/Program Adjustments
2. Hand Control
3. Button Operation
  - **Toggle Mode:** Allows the toggle function of the on/off toggle to be disabled.
  - **Horn Button:** Allows the horn button to be enabled/disabled.
  - **Key I & II:** Can be set to Disabled, Drive 1, Seat, Aux Menu and Custom MIO.
  - **Home Button:** Allows the Home Button to be enabled/disabled.

## Programming Hand Control Options — Button Operation




1. Parameter Settings/Program Adjustments
2. Hand Control
3. Button Operation
  - **Toggle Mode:** Allows the toggle function of the on/off toggle to be disabled.
  - **Horn Button:** Allows the horn button to be enabled/disabled.
  - **Key I & II:** Can be set to Disabled, Drive 1, Seat, Aux Menu and Custom MIO.
  - **Home Button:** Allows the Home Button to be enabled/disabled.

## Programming Hand Control Options — Custom MIO

1. Parameter Settings/Program Adjustments
2. Hand Control
3. Button Operation
4. **Key I and Key II**
  - Disabled
  - Drive I
  - Seat
  - Aux Menu
  - Custom MIO

## Programming Hand Control Options — Custom MIO

Programming the **Mapped IO** in the Econ-W requires going to **MIO Support** which is located on the top tool bar of the programming station. This is where custom electronics can be done to better fit the end user's needs.

1. MIO Support
2. MIO 
  - Click on the  sign to start a new mapping.
  - Select Device.
  - Select Input (which will be Key I or Key II).
  - Select Output (which will be the custom function).
  - Click on the Save Icon .

## Programming Device Double Command

Device Double Command allows the end user to use a double left or double right command on their hand control and it will change the mode.

1. Parameter Settings/Program Adjustments
2. Hand Control
3. Button Operation
  - **Device Double Command:** There will be a drop down menu. From there, either **Enable Left** or **Enable Right** can be selected.

## Programming Device Double Timing

**Double Command Time** is the time the end user has to provide a double command. There are two ways to accomplish this.

1. Parameter Settings/Program Adjustments
2. Hand Control
3. Device Options/Timing
  - **Double Command Time** can be programmed by using the slide bar.
  - **Teach Double Command** allows the end user to give the command they can comfortably do when the Start icon is pressed. That time can be captured and set as the **Double Command Time**.

## Programming Hand Control — Switch Options/Timing

1. Parameter Settings/Program Adjustments
2. Hand Control
3. Switch Options/Timing
  - **Mode Jack Configuration Type:** Can be set to either Jack configuration or Mapped I/O.
  - **Double and Long Commands:** Can be set via the slide bar or taught using the **Teach Double Command** or **Teach Long Command**.
  - **Mode and On/Off Jack Switch Type:** Can be set for 1 or 2 Switches. 2 switches require a splitter harness (Stereo to mono).
  - **Mode and On/Off E-Stop:** Has two options to stop.
  - **Decel Stop:** Is a gradual stop.
  - **Quick Stop:** Is a more abrupt stops.

## Programming Hand Control — Switch Options/Timing

1. Parameter Settings/Program Adjustments
2. Hand Control
3. Jack Commands
  - Click on the command to be programmed.
  - Choose from the drop down menu which option you want that command to do.
  - The power chair will go into **Programming mode**. Click to all shown below to reset the power chair to **System Ready**.



See page 33.

## Programming Proportional Alternative Drive Controls

Proportional Alternative Drive controls consist of joysticks such as the mo-Vis All-Round, Stealth Mushroom Joystick, and Switch-It Joystick A Can. These proportional controls plug into the 9-pin connection on either the SCIM Enhanced Display in the Q-Logic 3 Drive Control System.

### To program the input device:

1. Parameter Settings/Program Adjustments
2. Enhanced Display/SCIM
3. Input Configuration
  - Set the Input Configuration to **Proportional**.
  - Click on the little arrow at the bottom of the screen to reset the system for driving. The system is now ready to drive.



See page 33.

## Programming Joystick Calibration

Proportional Alternative Drive controls at times do require a calibration through the Q-Logic 3 system. This is to ensure the system knows where the center position is. At power up, the error message that will show on the joystick is **#35: Joystick Not Centered**.

### To calibrate the joystick:

1. Parameter Settings/Program Adjustments
2. Enhanced Display/SCIM
3. Proportional Input
  - Select **Proportional Calibration**.
  - Move the joystick around in two circles. Press **OK** when completed.
  - If calibration is successful, then it will ask if you want to save the values. Click on **Yes** to save then changes.
  - If calibration is not successful. Click on **Retry** to perform the calibration again.

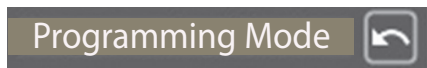
**NOTE: The power chair will be in Output Inhibited which will allow the joystick to be moved but the power chair will not drive during the calibration process.**

## Programming Mini Proportional Alternative Drive Controls

Programming Mini Proportional Alternative Drive controls consist of joysticks such as mo-Vis Micro, Multi, and All-Round Lite Joysticks. These joysticks have a shorter throw than the Proportional drive controls in the previous section. The programming of these input devices are slightly different to ensure the best performance.

### To provide the input device:

1. Parameter Settings/Program Adjustments
2. Enhanced Display/SCIM
3. Proportional Input
  - Set the input Configuration to Mini Proportional.
  - Click on the little arrow at the bottom of the screen to reset the system for driving. The system is now ready to drive.



See page 33.

## Programming Mini Joystick Calibration

Proportional Alternative Drive controls at times do require a calibration through the Q-Logic 3 system. This is to ensure the system knows where the center position is. At power up, the error message that will show on the joystick is **#35: Joystick Not Centered**.

### To calibrate the joystick:

1. Parameter Settings/Program Adjustments
2. Enhanced Display/SCIM
3. Proportional Input
  - Select **Proportional Calibration**.
  - Move the joystick around in two circles. Press **OK** when completed.
  - If calibration is successful, then it will ask if you want to save the values. Click on **Yes** to save then changes.
  - If calibration is not successful. Click on **Retry** to perform the calibration again.

**NOTE: The power chair will be in Output Inhibited which will allow the joystick to be moved, but the power chair will not drive during the calibration process.**



## Programming 3-Switch Head Array

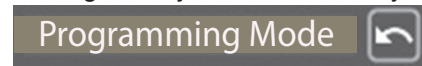
1. Parameter Settings/Program Adjustments
2. Enhanced Display or SCIM
3. Input Configuration
  - Set Ed Input Configuration to **3-Switch Head**.
  - Click on the little arrow at the bottom of the screen next to "Programming Mode" to reset the system for driving. The system is now ready to drive.



See page 33.

## Programming i-Drive 4 Head Array

1. Parameter Settings/Program Adjustments
2. Enhanced Display or SCIM
3. Input Configuration
  - Set Ed Input Configuration to **3-Direction Prop. Head Switch Operation**.
  - Click on the little arrow at the bottom of the screen next to Programming Mode to reset the system for driving. The system is now ready to drive.



See page 33.

## Programming Toggle Command

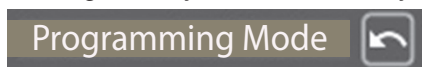
**Toggle command** allows the end user to reverse the arrow's direction. The Toggle Command is enabled at a default setting during initial programming; however, the timing for some end users may require adjustment. The Toggle Command Time, which works on a slide bar, is the amount of time that the end user needs to flip the directional arrow from front to back. A command longer than the default Toggle Command Time is considered by the system as a drive command, causing the power chair to move.

1. Parameter Settings/Program Adjustments
2. Enhanced Display or SCIM
3. 3-Direction Arrow Toggle Settings
4. Toggle Command Time

## Programming Device Double Command

**Device Double Command** allows the end user to give either a double left or double right command on their head array and it will change the mode.

1. Parameter Settings/Program Adjustments
2. Enhanced Display or SCIM
3. Device Options/Timing
  - **Device Double Command**, there will be a drop down menu. From there either **Enable Left** or **Enable Right** can be selected.
  - Click on the little arrow at the bottom of the screen next to Programming Mode to reset the system for driving. The system is now ready to drive.



See page 33.

## Programming Double Command Timing

**Double Command Time** is the time the end user has to provide a double command. There are two ways this can be accomplished.

1. Parameter Settings/Program Adjustments
2. Enhanced Display or SCIM
3. Device Options/Timing
  - **Double Command Time**: Can be programmed by using the slide bar.
  - **Teach Double Command**: Allows the end user to give the command they can comfortably do when the **Start** icon is pressed. That time can be captured and be set as the **Double Command Time**.




## Programming Mode Jack Configuration

There are two configurations that the mode jack can be programmed for in Q-Logic 3. The first is **Jack Configuration** which allows the mode jack to use a short, double, and long command. **Mapped IO** allows other features to be programmed, such as power seat functions, mouse clicks, and shortcuts such as **HOME** and **Auxiliary Functions**.

1. Parameter Settings/Program Adjustments
2. Enhanced Display or SCIM
3. Switch Options/Timing
  - Mode Jack Configuration Type (Can be set to **Jack Configuration** or **Mapped IO**).

## Programming Mapped IO

Programming the **Mapped IO** in the Econ-W requires going to **MIO Support** located on the top tool bar of the programming station. This is where custom programming can be done to the electronics to better fit the end user's needs.

1. MIO Support
2. Mapped I/O 
3. Click on the  sign to start a new mapping.
  - Select Device.
  - Select Input (which will be Mode Jack on the Display for instance).
  - Select Output (which will be the custom function).
  - (Repeat for other mappings if needed).
  - Click on the Save Icon .

### Programming Mode Jack Switch Type

If the Mode Jack Switch Type is set to 1 Switch, then the mode jack can only accept one single switch.

If the Mode Jack Switch Type is set to 2 Switch, then a splitter must be installed. Quantum Rehab has available for purchase a stereo to mono splitter. The two switches, both 1 and 2, can be plugged into the Mode Jack where even more features can be programmed.

1. Parameter Settings/Program Adjustments
2. Enhanced Display or SCIM
3. Switch Options/Timing
  - Mode Jack Switch Type (On/Off Jack Switch Type can be programmed the same way)

### Programming Jack Commands

**Jack Commands** are where functions can be programmed for either a short, double or long command for both the On/Off Jack and Mode Jack.

1. Parameter Settings/Program Adjustments
2. Enhanced Display or SCIM
3. Jack Commands
  - Click on the item under the jack to which you would like to assign a function.
  - Select from the drop down menu which function is to be assigned.

### Programming Jack Double Commands

**Jack Double Command Time** adjusts the time required to provide a double command on the switch that is plugged into the Enhanced Display.

1. Parameter Settings/Program Adjustments
2. Enhanced Display or SCIM
3. Switch Options/Timing
  - **Jack 1 Double Command Time:** Can be adjusted by moving the slide bar.
  - **Teach Double Command Time:** Can be done by clicking on the **Start** button and following the directions provided for the end user to set their own double command time.

### Programming Jack Long Commands

**Jack Long Command Time** adjusts the time required to provide a long command on the switch that is plugged into the Enhanced Display

1. Parameter Settings/Program Adjustments
2. Enhanced Display or SCIM
3. Switch Options/Timing
  - **Jack 1 Long Command Time:** Can be adjusted by moving the slide bar.
  - **Teach Long Command Time:** Can be done by clicking on the **Start** button and following the directions provided for the end user to set their own double command time.

### Programming Mode Jack E-Stop

**Mode Jack E-Stop** enables the switch plugged into the mode jack to perform an emergency stop command.

1. Parameter Settings/Program Adjustments
2. Enhanced Display or SCIM
3. Switch Options/Timing
4. On/Off Jack E-Stop
  - **Off:** E-Stop will not function.
  - **Decal Stop:** Power chair will come to a gradual stop using the programmed deceleration.
  - **Quick Stop:** Power chair will come to an abrupt stop.

### Programming On/Off Jack E-Stop

**On/Off Jack E-Stop** enabled the switch plugged into the On/Off jack to perform an emergency stop command.

1. Parameter Settings/Program Adjustments
2. Enhanced Display or SCIM
3. Switch Options/Timing
4. On/Off Jack E-Stop
  - **Off:** E-Stop will not function.
  - **Decel Stop:** Power chair will come to a gradual stop using the programmed deceleration.
  - **Quick Stop:** Power chair will come to an abrupt stop.

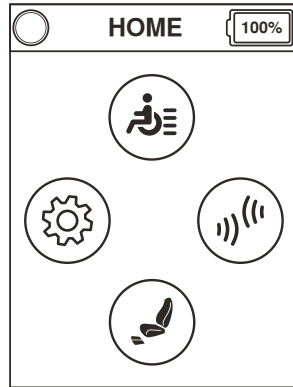


### Programming Change Input Device

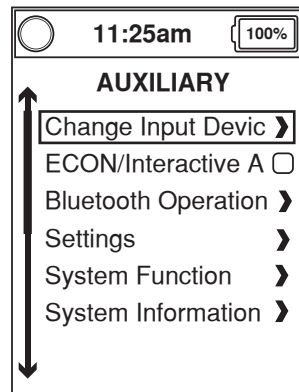
**Change Input Device** allows the end user to change to a different input device (if installed) on their power chair. In an evaluation setting, it allows the end user to have the ability to change from one input device to another to find the right fit.

1. Parameter Settings/Program Adjustments
2. Enhanced Display or SCIM
3. Menu Entries
4. **Show Change Input Device** should be **Enabled**.

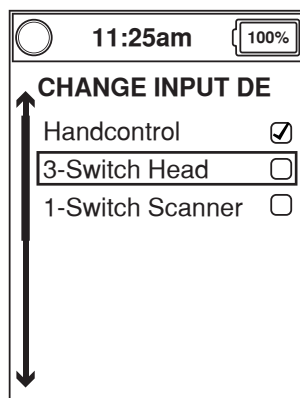
Provide a left command on the home screen or provide a mode command until you reach the Auxiliary screen.



Highlight the change input device function and provide a right input on the input device.



Highlight which device you desire to use and provide a right command on the input device.



### Programming Sleep Mode:

**Sleep Mode** can be programmed in a few ways on Q-Logic 3. Sleep Mode allows the system to go into a hibernate mode once the set amount of time is achieved without an input command. Once the system is asleep, the end user can then use a programmed sequence to wake up the system.

1. Parameter Settings/Program Adjustments
2. Enhanced Display or SCIM
3. Sleep
  - **Enable** Sleep Command.
  - Set the Sleep Timeout (1 - 240 Minutes).
  - Set the Wake Up method from the drop down menu.

Sleep Mode can be programmed into a short, double, or long command under Jack Commands. The end user can give a double command to put their power chair to "sleep" and then give another double command to "wake up" the system.

1. Parameter Settings/Program Adjustments
2. Enhanced Display or SCIM with Hand Control
3. Jack Commands
  - **Set Jack:** Command to the end user's choice for Sleep Mode.

### Programming Switched Turning Adjustments

Switched Turn allows the speed and tightness of the turn to be adjusted.

1. Parameter Settings/Program Adjustments
2. System
  - Shape settings.
  - From here you can adjust each parameter individually per profile setup.

Figure 1. Programming Change Input Device

## Programming Sip N Puff Driving Parameters

Adjusting drive parameters in the Econ-W, are done in real time; however, you need to be connected to the chair via PC Programming Cable. In Q-Logic 3, once paired via Bluetooth, those changes can be done more easily.

1. Parameter Settings/Program Adjustments
2. User Drive Profiles
3. Sip N Puff Profiles
4. Click on the parameter that needs changing. By double clicking on the parameter box, the parameter can be typed in or the slide bar can be used to change the parameter.

The Sip N Puff can be programmed to operate as a 2-pressure or 4-pressure system.

1. Parameter Settings/Program Adjustments
2. Sip N Puff
3. Input Configuration
  - SNP Input Configuration
  - **2-Pressure:** Double Puff and hold is forward, Puff is right, Double Sip and hold is reverse, and Sip is left.
  - **4-Pressure:** Hard Puff is forward, Hard Sip is Reverse, Soft Puff is Right and Soft Sip is left.

## Programming Sip N Puff — Setting Up Pressures Manually

There are two options to set the pressures for the end user:

**Four Pressure Quick Setup** or manually setting the pressures.

1. Parameter Settings/Program Adjustments
2. Sip N Puff
3. Pressure Fine Adjustment
  - **Four Pressure Quick Setup:** Allows the end user to give the pressure they can comfortably do without fatigue.
  - Manual Setup is completed by selecting each slide bar of the 4-pressure or 2-pressure adjustment boxes and manually adjusting.

## Programming Sip N Puff — Sampling Delay

Sampling Delay Sip and Puff parameters are how long the command must be provided before the system will recognize the command.

1. Parameter Settings/Program Adjustments
2. Sip N Puff
3. Pressure Fine Adjustment
4. **Sampling Delay Puff:** Click on the sliding bar and move it until the desired time is reached.
5. **Sampling Delay Sip:** Click on the sliding bar and move it until the desired time is reached.

## Programming Sip N Puff — Assign Direction

**Pressure Direction Assignment** can be changed if a end user has an easier time performing a hard sip instead of a hard puff for a forward command.

1. Parameter Settings/Program Adjustments
2. Sip N Puff
3. Pressure Direction Assignment
4. Depending on whether the system is programmed for a 2 pressure or a 4 pressure will determine which settings are used.

## Programming Sip N Puff — Latch Driving

Latch driving is very common with sip n puff users. Latch allows the user to provide a forward command and then release the pressure and the chair continues to drive.

1. Parameter Settings/Program Adjustments
2. User Drive Profiles
3. Sip N Puff Profiles
4. Forward Latch and set to one of the following options:
  - Cruise
  - 3 Step
  - 1 Step

## Programming Sip N Puff — Latch Braking Options

**Decel/Braking Option:** This option allows you to set the way that a latched power chair stops.

**Decel Stop:** When a reverse command over 50% is given, the chair will come to a soft stop using the deceleration that is set in the driving.

**Quick Stop:** When a reverse command over 50% is given, the chair will come an quick stop.

**Speed/Step Reduce:** When a reverse command over 50% is given when Cruise is in use, the speed of the power chair will reduce. A long reverse command will stop the power chair.

When 3 Step is in use, and a reverse command over 50% is given the speed will step down. A full stop can be done with a long reverse command.

## Programming Sip N Puff — Latch Driving/Braking

1. Parameter Settings/Program Adjustments
2. User Drive Profiles
3. Sip N Puff Profiles
4. Latch Decel/Braking
  - Decel Stop
  - Quick Stop
  - Speed/Step Reduce

## Programming Sip N Puff — Changing Profile with Double Command

To assign a profile change with either a double sip or double puff follow these steps:

1. Parameter Settings/Program Adjustments
2. Sip N Puff
3. Device Options/Timing
4. Mode Command set to either:
  - Double Sip
  - Double Puff

From the **Device Options/Timing** section, you can also set the Double Command Time and Long Command time via slide bars. **Using Double Sip or Double Puff will delay a driving response from a stopped position.**

## Programming Sip N Puff — Changing Profiles with Standby Select

Standby Select can be set for a certain length of time. When that time expires, the power chair goes into a standby mode. Standby mode then reverts to the home screen, where the end user can choose which part of the chair they want to go into, such as Settings, Drive or Seat.

1. Parameter Settings/Program Adjustments
2. Sip N Puff
3. Standby Select
  - Enabled
4. Standby Select Timeout
  - Use the Slide Bar in the time out box to set the time

The **Standby Seat** and **Aux Timeouts** if disabled an alternate mode method must be available.

## Programming Switched Turning Adjustments

Switched Turn allows the speed and tightness of the turn to be adjusted to the individual you are working with.

1. Parameter Settings/Program Adjustments
2. System
3. Shaping Settings
  - From here you can adjust each parameter individually per profile setup.



## Programming 5 Switch

1. Parameter Settings/Program Adjustments
2. Enhanced Display or SCIM
3. Input Configuration
  - From the drop down, scroll and select 5-Switch.
    - The unit will go into Programming Mode
4. Click on the arrow next to Programming Mode to reset the power chair to System Ready.



See page 33.

## Programming 5 Switch — Types of Latch Driving

There are 3 choices when latching forward in Q-Logic 3.

**Cruise:** Cruise control works just like cruise control in an automobile. The end user provides a forward command until they reach their desired speed.

**3-Step:** The first forward input sets the chair driving at 33% of the set maximum forward speed. With each forward command, the speed increases 33%.

**1-Step:** The chair will drive whatever maximum forward speed it is set to.

## Programming 5 Switch — Latch Driving

Latch driving is very common with 5 switch users. Latch allows the user to provide a forward command and when the switch is released, the chair continues to drive.

1. Parameter Settings/Program Adjustments
2. User Drive Profiles
3. Switched Profiles
4. Forward Latch and set to one of the following options:
  - Cruise
  - 3 Step
  - 1 Step

## Programming 5 Switch — Latch Braking Options

**Decel/Braking Option:** This option allows you to set the way that a latched power chair stops.

**Decel Stop:** When a reverse command over 50% is given, the chair will come to a soft stop using the deceleration that is set in the driving.

**Quick Stop:** When a reverse command over 50% is given, the chair will come an quick stop.

**Speed/Step Reduce:** When a short reverse command is given when Cruise is in use, the speed of the power chair will reduce to the speed they wish to drive in. A long reverse command will stop the power chair. When using 3 Step, a short reverse command is given the speed will step down. A full stop can be done with a long reverse command.

## Programming 5 Switch— Profile Change Stop

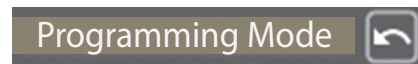
If **Profile Change Stop** is enabled, when a mode command is given when the end user is driving, the power chair will come to a stop then the drive profile will change.

If disabled, drive modes can be changed while the power chair is driving. If the next profile is either **Auxiliary** or **Seat**, the unit will come to a stop then change to Auxiliary or Seat.

1. Parameter Settings/Program Adjustments
2. Enhanced Display or SCIM
  - Profile Change Stop Drive

## Programming 4 Switch

1. Parameter Settings/Program Adjustments
2. Enhanced Display or SCIM
3. Input Configuration
4. From the drop down, scroll and select **4-Switch**.
  - The unit will go into **Programming Mode**.
  - Click on the arrow next to **Programming Mode** to
  - Reset the power chair to **System Ready**.



See page 33.

## Programming 4-Switch — Device Double Command Programming

Device Double Command allows the end user to give either a double left or double right command on their specialty controls and it will change the mode.

1. Parameter Settings/Program Adjustments
2. Enhanced Display or SCIM
3. Device Options/Timing
  - **Device Double Command**, there will be a drop down menu. From there either **Enable Left** or **Enable Right** can be selected.

### Programming 4 Switch — Changing Profiles with Standby Select

Standby Select can be set to a certain length of time. When it expires, the power chair goes into a standby mode. Standby mode then reverts back to the home screen, where the end user can choose what part of the chair they want to go into, such as Settings, Drive or Seat.

1. Parameter Settings/Program Adjustments
2. Enhanced Display or SCIM
3. Standby Select
  - Enabled
4. Standby Select Timeout
  - Use the Slide Bar in the time out box to set the time.

The **Standby Seat** and Aux Timeouts should always be set to **Enabled**; otherwise, the person will not have any way to return to their drive profile from a seat or aux profile.

### Programming 4-Switch — Menu Settings

For each direction a specific menu navigation is assigned. These can be changed for an end user who has an easier time accessing one switch over another.

1. Parameter Settings/Program Adjustments
2. Enhanced Display
3. Menu Settings
4. **Menu Navigation Mode** can be set to:
  - **Manual:** Requires a command to move to the next item.
  - **Auto Repeat:** Will change from one time to the next as long as the button is pressed.
  - **Auto Change:** Will change from one item to the next automatically. The speed of the scrolling is controlled by Menu Navigation Timing.
5. **Menu Navigation Timing:** Will change the time.

### Programming 4-Switch — List Navigation

The List Navigation Inputs will allow programming for each direction. The system is designed to allow customization based off the movements of the end user if set to manual. Below are the options:

1. **Scroll Up** (moves upwards through the list)
2. **Scroll Down** (moves downward through the list)
3. **Select** (selects the highlighted menu entry)
4. **Back Up** (returns to the previous menu)
5. **Inactive** (Disables the Command)

### Programming 3-Switch

1. Parameter Settings/Program Adjustments
2. Enhanced Display or SCIM
3. Input Configuration
  - From the drop down, scroll and select **3-Switch**.
    - The unit will go into **Programming Mode**
    - Click on the arrow next to **Programming Mode** to reset the power chair to **System Ready**.



See page 33.

### Programming 3-Switch — Toggle Command

1. Parameter Settings/Program Adjustments
2. Enhanced Display
3. 3-Direction Arrow Toggle Settings
  - **Toggle Command:** When enabled, uses the forward command to toggle between forward and reverse.
  - **Toggle Command Time:** Can be programmed via slide bar or by teaching the toggle command (end user gives the command themselves).
  - **Latch Toggle Auto Flip:** If **Latch Forward** is set to **Enabled**, this will flip the arrow from forward to reverse automatically when the unit starts to drive.. The next touch of the switch will stop the chair.
  - **Toggle While Driving:** When **Enabled**, the end user can change from forward to reverse while driving. If disabled, the power chair will need to come to a complete stop before adjusting from forward to reverse.

### Programming 3-Switch — Device Double Command Programming

Device Double Command allows the end user to give either a double left or double right command on their specialty controls. This will change the mode.

1. Parameter Settings/Program Adjustments
2. Enhanced Display or SCIM
3. Device Options/Timing
  - **Device Double Command:** From the drop down menu. **Enable Left** or **Enable Right** can be selected.

### Programming 3-Switch — Double Command Timing Programming

**Double Command Time** is the time the end user has to provide a double command.

There are two ways this can be accomplished.

1. Parameter Settings/Program Adjustments
2. Enhanced Display or SCIM
3. Device Options/Timing
  - **Double Command Time** can be programmed by using the slide bar.
  - **Teach Double Command** allows the end user to give the command they can comfortably do when the **Start** icon is pressed. That time can be captured and set as the **Double Command Time**.



## 2-Switch Options

Driving in **2-Switch** requires significant motor planning and memory in order to drive with the system.

- **Forward Drive Command:** Double hit and hold the right switch.
- **Reverse Drive Command:** Double hit and hold the left switch.
- **Left Drive Command:** Hit and hold the left switch
- **Right Drive Command:** Hit and hold the right switch

Linked Driving, available through Stealth, is another way to drive with 2 Switches.

## 2-Switch Linked Driving

Linked Driving is programmed as a **3-Switch Prop Head Switch Operation** in the Q-Logic 3 system but only uses 2 physical switches.

- **Left Drive Command:** Hit and hold the left switch.
- **Right Drive Command:** Hit and hold the right switch.
- **Forward Drive Command:** Pressing both left and right switches at the same time.
- **Reverse Drive Command:** Tap the switches to flip the directional arrow. Hit and hold both the left and right switches at the same time.

## Programming 2-Switch

1. Parameter Settings/Program Adjustments
2. Enhanced Display or SCIM
3. Input Configuration
4. From the drop down, scroll and select 2-Switch.
  - The unit will go into Programming Mode.
5. Click on the arrow next to Programming Mode to reset the power chair to System Ready.



See page 33.

## Programming 1 – Switch

1. Parameter Settings/Program Adjustments
2. 1-Switch Scanner
3. 1-Switch Scanner Settings
  - 1-Switch Scanner Enable: set to **Enabled**.
  - The power chair will go into **Programming Mode**. To reset, click on the arrow next to **Programming Mode** to change the power chair back to **System Ready**.



See page 33

## Programming 1-Switch — 1-Switch Scan Settings

1. Parameter Settings/Program Adjustments
2. 1-Switch Scanner
3. 1-Switch Scanner Settings
  - **Scan Rate:** Will set the scanner speed rotation.
  - **E-Stop for Latch:** If Latch Forward is Enabled, the chair will come to a stop when the switch is pressed for the time set in.
  - **E-Stop Switch Hold Time:** Defines the amount of time that the switch must be pressed in order to stop while in latched.
  - **1- Switch Timeout:** Defines how long the switch can be pressed before driving stops.
  - **Mode Scan Option:** If turned Off, the scanner will skip over the Mode icon in the scanner.
  - **Profile Assign Scan Order (Profile 1-4):** Allows to set one of eight preset scanner layouts for each of the 4 drive profiles.

## Programming 1-Switch — Scan Order

The Q-Logic 3 system allows the ability to customize the scan orders to better assist the end user. Scan Order allows the directions to be rearranged to optimize the driving experience for the end user.

1. Parameter Settings/Program Adjustments
2. 1- Switch Scanner
3. Scan Order
  - Click on the item number in the profile you wish to change
  - From the drop down, select the direction, and the power chair will go into **Programming Mode**.
  - Once all the needed changes are made, press the arrow next to the **Programming Mode** to make it **System Ready**.

## Programming Switched Turning Adjustments

Switched Turn allows the speed and tightness of the turn to be adjusted to the individual you are working with.

1. Parameter Settings/Program Adjustments
2. System
3. Shaping Settings
  - From here you can adjust each parameter individually per profile setup.



### Setting Up for an Evaluation Where Multiple Devices will be Used

Up to 4 Specialty Controls can be plugged into the Q-Logic 3 system.

1. One 9-pin device can be plugged into the Enhanced Display.
2. One 9-pin device can be plugged into the SCIM Module.
3. Sip n Puff Module.
4. 1-Switch Scanning.

These devices can quickly be switched during the evaluation in multiple ways.

### Programming Clinic Mode

**Clinic Mode** allows a clinician or an ATP to quickly perform an initial programming for Alternative Drive Devices without life of a programmer. **Clinic Mode** needs to be **enabled** in the programming first.

1. Parameter Settings/Program Adjustments
2. Startup Configuration
  - **Enable Clinic Mode.**
  - Once **Clinic Mode** is enabled, power off the power chair.
  - Power up the power chair by pressing and holding the On Switch for 5+ seconds.

The first screen will allow you to choose the mode you want to use. 1-Switch Scanner is a programmable feature, not a module.

3. Choose which type of device the specialty control is.
4. Choose how the device will be programmed.

**Example:** With a 3-Switch Head Array plugged into the enhanced display of the power chair, highlight **Enhanced Display** on the first screen and give a right input device command. On the second screen, highlight **Head** and give a right input device command. On the third screen, highlight **3-Switch Head** and give a right input device command.

### Changing Input Devices Quickly

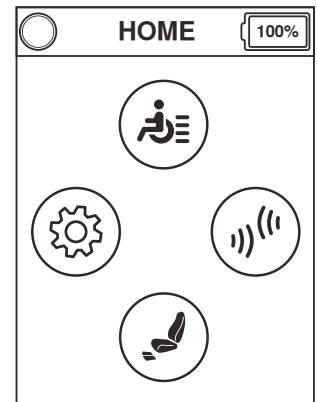
Another option for changing input devices is to have all the specialty controls already hooked up to the power chair and use the **Change Input Device** screen to swap between input options.

### Programming Change Input Device

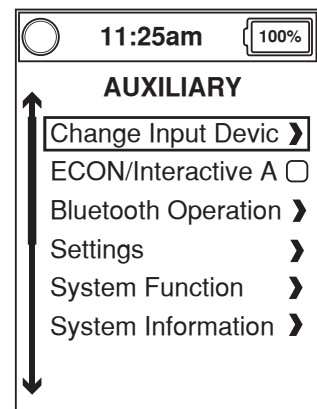
**Change Input Device** allows the end user to change to a different input device (if installed) on their power chair. It also provides the ability to change from one input device to another to find the right fit for an end user in an evaluation setting.

1. Parameter Settings/Program Adjustments
2. Enhanced Display
3. Menu Entries
4. **Show Change Input Device** should be **Enabled**.

Give 2 Left Input Device Commands to reach the **Auxiliary** Profile.



Highlight the Change Input Device function and provide a right input command on the input device.



Highlight which device you desire to use and provide a right turn command on the input device.

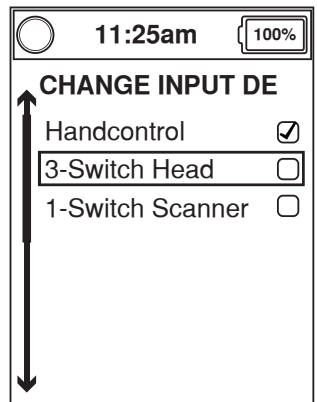


Figure 2. Programming Change Input Device

### Seat Programming — Drive Inclination (Econ-W)

Drive Inclination—Allows the individual to drive while in a preset amount of tilt or tilt/recline. The standard setting from Quantum Rehab is 25 degrees.

1. Click on the **Seat** icon.



2. Click on **Inclination Threshold**.
3. Scroll down and find **Drive**, using the slide bar. The inclination can be adjusted from there.



Figure 3. Seat Programming - Drive Inclination Econ-W

4. After the changes are made, click on the **Save** icon.



### Seat Programming — Drive Inclination (HHP)

Drive Inclination—Allows the individual to drive while in a preset amount of tilt or tilt/recline. The standard settings from Quantum Rehab is 25 degrees.

1. Program Adjustments



2. Seat Configuration



3. Inclination Thresholds



4. Drive Restriction



5. Angle



Using the up and down arrows on the hand-held programmer, change the angle to the desired angle adjustment.



## WARNING!

Q-Logic 3 Controller and Quantum Seating system can be programmed to ensure a safe and comfortable level of tilt and recline in the position of the seating system. The tilt and recline position can be adjusted as needed to accommodate the end user's specific circumstances and needs.

Although this manual outlines the adjustments, at no time should the drivable seat angle exceed 25 degrees. Exceeding this setting may create instability or unexpected loads on the seating system. Programming or exceeding the inhibits may cause a compromise of the integrity of the seating system which may result in a fall leading to personal injury and/or death.


If your power chair is equipped with a reclining seatback, do not attempt to negotiate inclines with the seat in a reclined position. Do not attempt to negotiate obstacles with the seat in a reclined position unless an attendant is present to help stabilize the chair. Failure to heed this warning may result in inadequate/inaccurate programming and may result in instability, product damage, and dangerous situations that may lead to serious personal injury and/or death.

## Seat Programming — Latched (Econ-W)

If the end user wants to latch an actuator, meaning that they give the command and then the actuator will activate for the set amount of time in the **Timeout** section.

1. Click on the **Seat** icon.



2. Click on **Functions**.
3. Find the actuator you wish to latch and check the box next to it.
4. Set the **Timeout** above to the time you wish for the actuator to operate.
5. After the changes are made, click on the **Save** icon. 

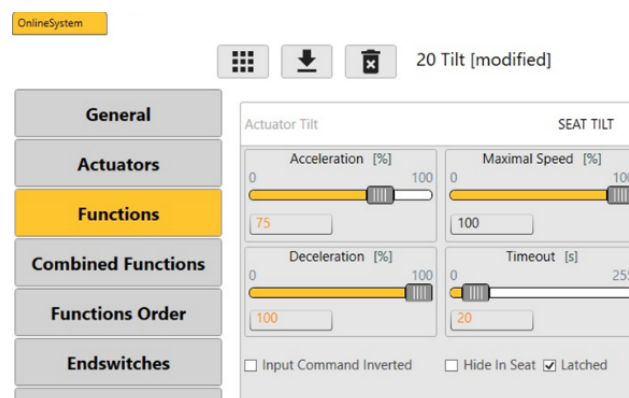


Figure 6. Seat Programming—Latched (Econ-W)

## Seat Programming — Latched (HHP)




If the end user wants to latch an actuator, meaning that they give the command and then the actuator will activate for the set amount of time in the Timeout section.



Figure 7. Seat Programming - Latched (HHP)

## Seat Programming — Input Command Inverted (Econ-W)

If the end user is having issues pushing forward to come out of tilt or recline, the polarity of the joystick can be reversed for actuator use only.

1. Click on the **Seat** icon. 
2. Click on **Functions**.
3. Find the actuator to invert the command on and click on the **Input Command Inverted** check box. 
4. After the changes are made, click on the **Save icon**. 

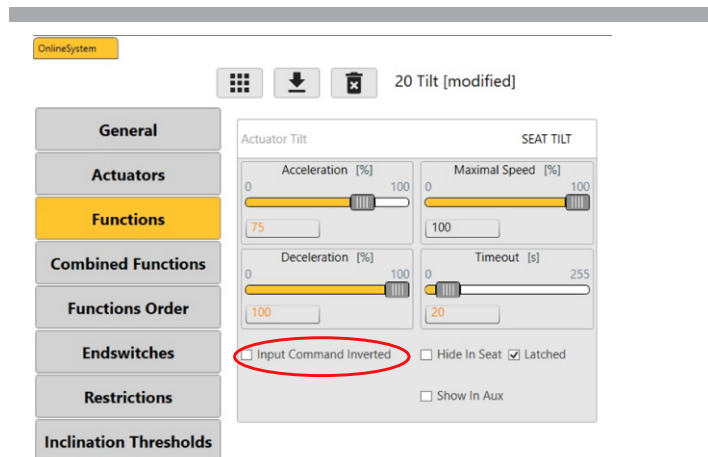


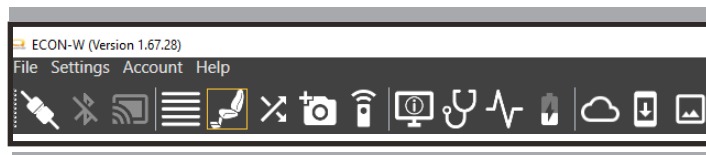
Figure 8. Seat Programming - Input Command Inverted Econ-W

## Combined Latched Seating

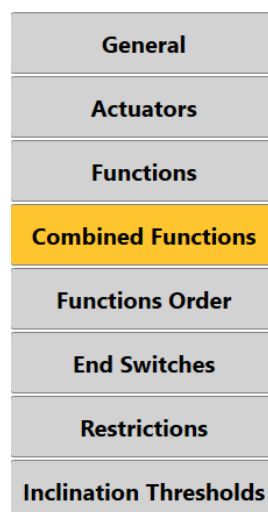
This document will help you set a demo chair with combined latched seating to mimic "Memory Seating." Keep in mind, do not call this memory seating. This is just a way to mimic what memory seating does in the Q-Logic 3 Drive Control System by using the Combined Function Feature along with the actuator speeds and accelerations.

Here are the programming steps:

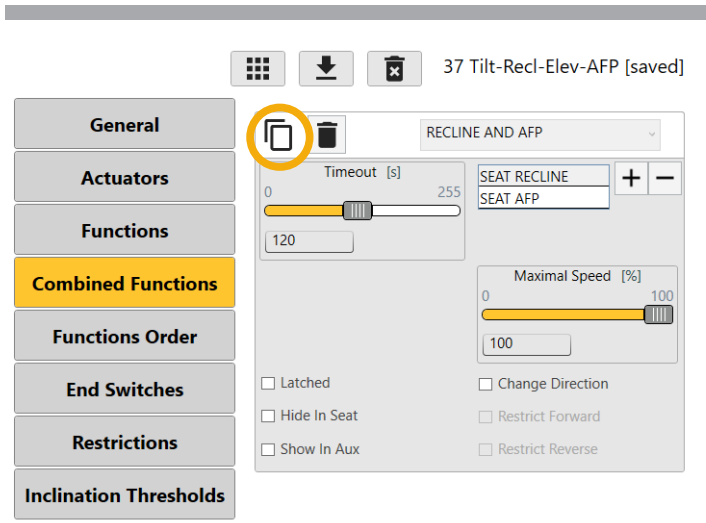
1. Once connected to Econ-W, go the Seat Configuration on the top tool bar.



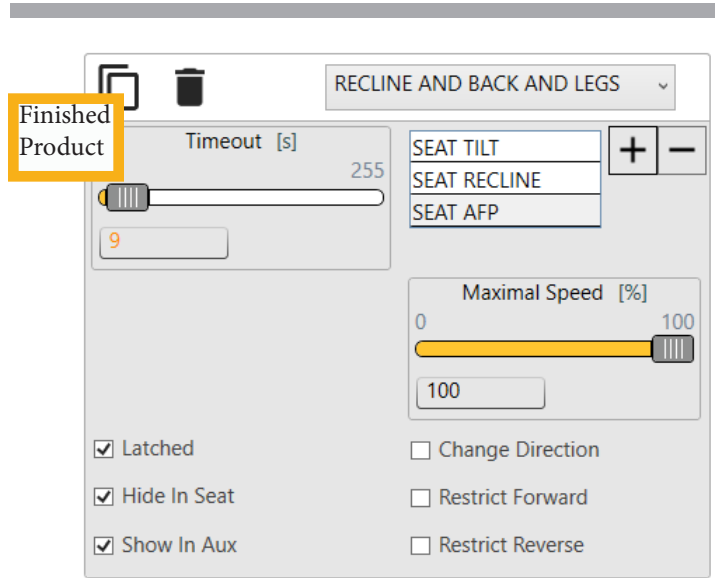
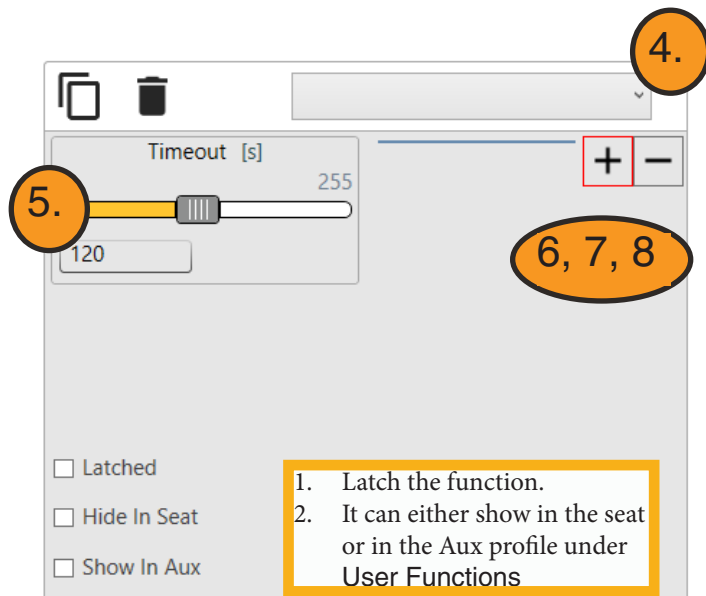
2. Click on Combined Functions on the left side.



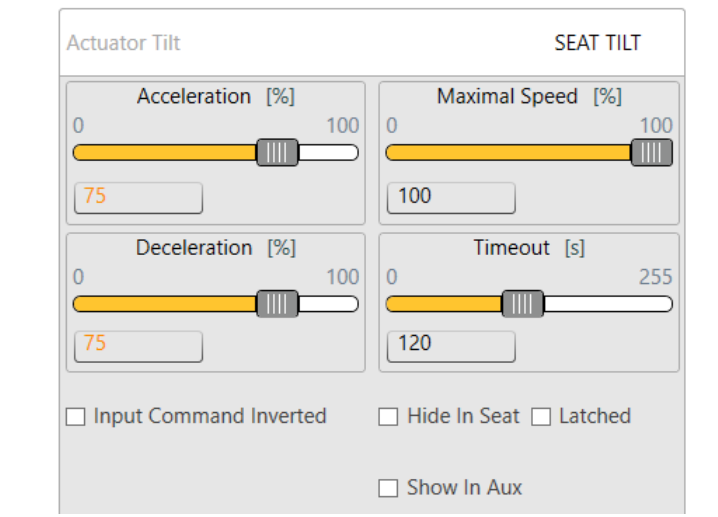
- Once in Combined Functions, click on the **Add New Combined Function** icon.



- Select **Recline and Back and Legs** from the drop down.
- Set **timeout** to the approximate time needed (keep in mind this time can change depending on the end user.)
- Click on the + sign, click on **Seat Tilt**, and click OK.
- Click on the + sign, click on **Seat Recline**, and click OK.
- Click on the + sign, click on **Seat AFP**, and click OK.



- Next Click on Functions on the Left side of the screen. Below is an example of where to set the actuators to; however, depending on the situation and the position the end user needs to be in, it can be changed to read the goal. It's all about manipulating the speeds of the actuators in combination with the time out set in Combined Functions.





Actuator Recline		SEAT RECLINE	
Acceleration [%] 0 <input type="range"/> 100 <input type="text" value="75"/>	Maximal Speed [%] 0 <input type="range"/> 100 <input type="text" value="100"/>	Deceleration [%] 0 <input type="range"/> 100 <input type="text" value="75"/>	Timeout [s] 0 <input type="range"/> 255 <input type="text" value="120"/>
<input type="checkbox"/> Input Command Inverted	<input type="checkbox"/> Hide In Seat	<input type="checkbox"/> Latched	<input type="checkbox"/> Show In Aux

Actuator AFP		SEAT AFP	
Acceleration [%] 0 <input type="range"/> 100 <input type="text" value="75"/>	Maximal Speed [%] 0 <input type="range"/> 100 <input type="text" value="100"/>	Deceleration [%] 0 <input type="range"/> 100 <input type="text" value="75"/>	Timeout [s] 0 <input type="range"/> 255 <input type="text" value="120"/>
<input type="checkbox"/> Input Command Inverted	<input type="checkbox"/> Hide In Seat	<input type="checkbox"/> Latched	<input type="checkbox"/> Show In Aux

## Mapping that Combined Latched Actuator Function to a Switch

Now that the Combined Latched Actuator is programmed, you can now program a Mapped I/O to that combined function so it works through a press of a switch.

- Once connected to the power chair, click on the Mapped I/O icon on the top tool bar.



- Next click on the Mapped I/O

OnlineSystem

Mapped I/O

- Program the Mapped I/O like normal.

Device	Input	Inactive: NO / Active: NC	Output
Advanced Actuator Module	AM Remote Switch 1	<input type="checkbox"/>	Seat Tilt Toggle
Advanced Actuator Module	AM Remote Switch 2	<input type="checkbox"/>	Seat Recline Toggle
Advanced Actuator Module	AM Remote Switch 3	<input type="checkbox"/>	Seat Elevate Toggle
Advanced Actuator Module	AM Remote Switch 4	<input type="checkbox"/>	Seat AFP Toggle
Handcontrol	Key I	<input checked="" type="checkbox"/>	Seat Recline and Back and Legs Toggle

Program the output to the Combined Latched Actuator function programmed earlier in this document.

- Make sure to Save and change the configuration of either the Key or Mode Jack to Custom MIO.

10. Click on the Save icon at the top of the Seat Configuration Screen.

11. Take out of Programming Mode.

## Seat Programming — Input Command Inverted (HHP)

If the end user is having issues pushing forward to come out of tilt or recline, the command of the joystick can be inverted for actuator use only.

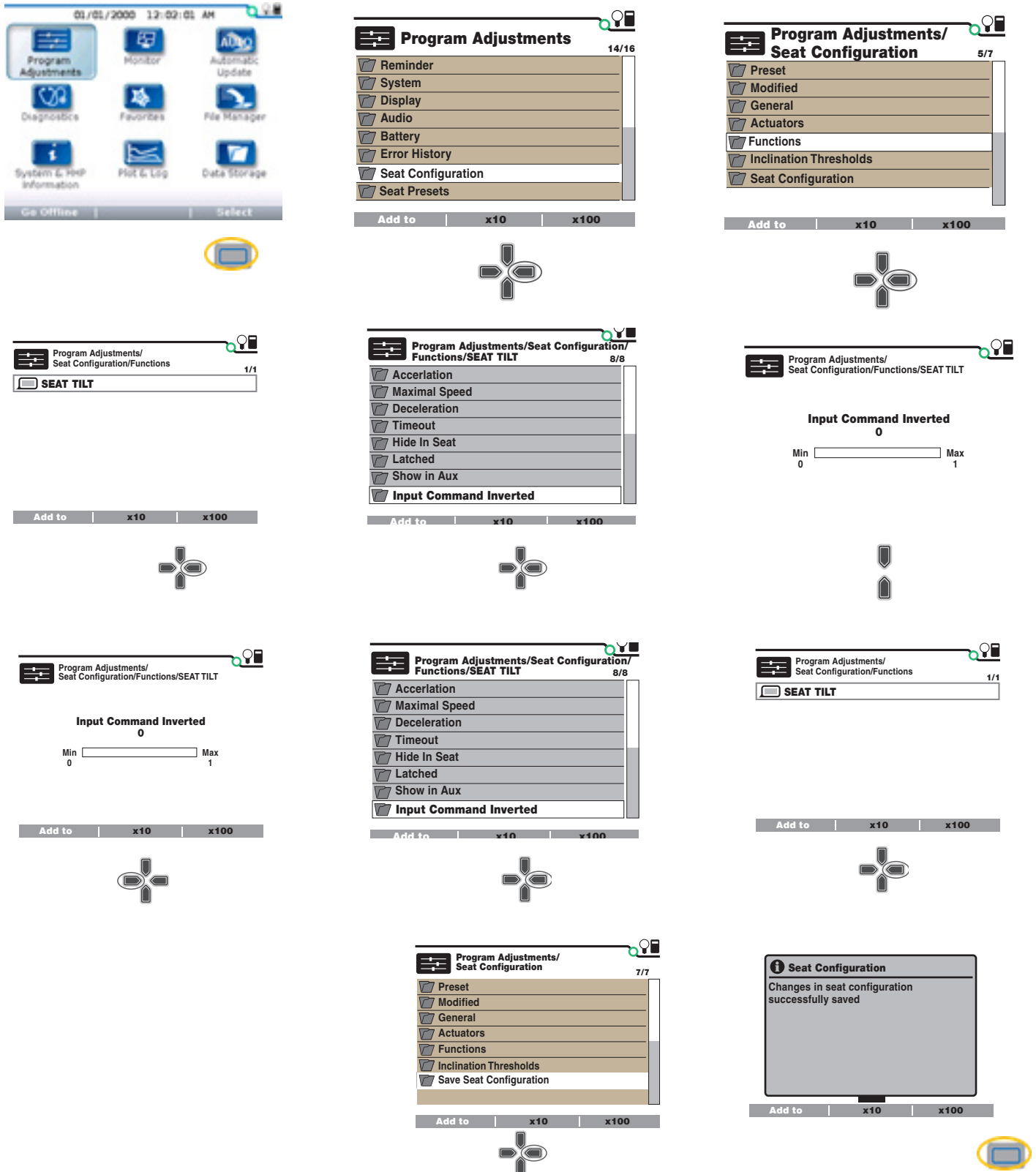


Figure 10. Seat Programming -Input Command Inverted (HHP)

## Seat Programming — Setting Pretilt


If a end user requires a certain degree of tilt or recline for postural support (gravity assisted positioning), setting a pretilt to the angle desired will help.

Also note to ensure the pretilt angle does not interfere with transfers.

Depending on which Econ you are programming with, follow the screen shot for numbers. Instructions are on the following pages and match up with the numbers on the screen shot.

Setting a Seat Pretilt can only be completed using the Econ-W Programming Stations.

### Seat Programming—Setting Pretilt

1. Click/tap on **Add New Restriction**. 
2. Click/tap on the drop down at the top of the blank restriction at the bottom of the page. Select **Actuator Restriction**.
3. Set the Restriction to **Forward Restricted**.
4. Set the Actuator Type to **Actuator Tilt** for a pretilt or **Actuator Recline** for a pre-recline.
5. Click on the + sign and choose **Condition 1**.
6. Set drop down to **Inclination Condition**.
7. Use the slide bar to select your pretilt or pre-recline angle
8. Click on the drop down and select **Inclination Seat Recline**.
9. Set Threshold to **Threshold Less Than**.

### WARNING!

If your power chair is equipped with a reclining seatback, do not attempt to negotiate inclines with the seat in a reclined position. Do not attempt to negotiate obstacles with the seat in a reclined position unless an attendant is present to help stabilize the chair. Failure to heed these precautions may result in the power chair tipping over.

## Seat Programming — Setting Pretilt (Screenshot Econ-W)

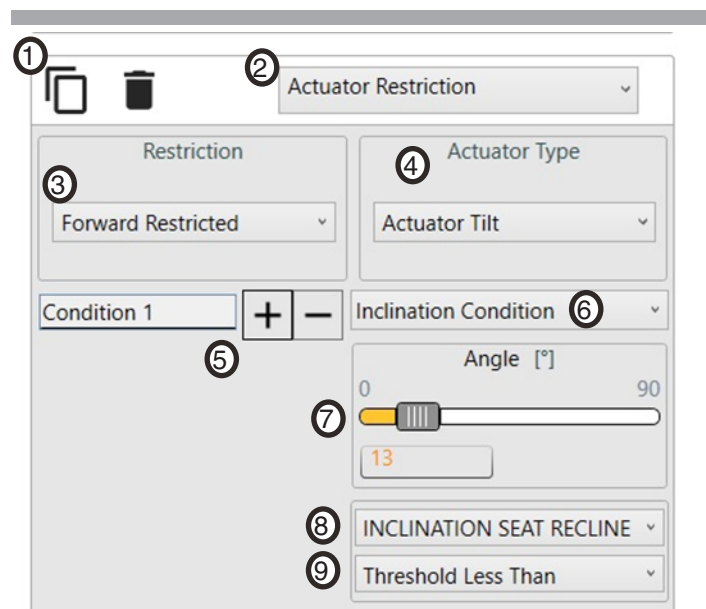


Figure 12. Seat Programming — Setting Pretilt (Screen shot Econ-W)

### iAccess

iAccess is a programmable module that can operate a wide range of functions, (seating, Bluetooth mouse click, etc). iAccess can be programmed up to 19 functions and have up to 5 pages programmed.

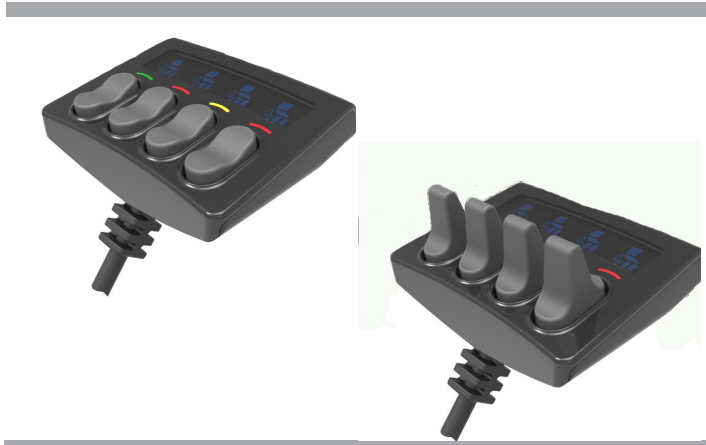


Figure 13. iAccess Programming Module

### iAccess Programming — Single Page Mode

1. Click/Tap on the Mapped I/O icon.
2. Click/Tap on the iAccess button.

The screen will change, showing a picture of the iAccess module. From here, click and drag or tap the function (Econ-W) then tap on the iAccess button(s) you wish to program that function to (Econ-I).

On Single Page Mode you can use all 4 buttons to program the iAccess.

3. Make sure you click/tap on the Save icon

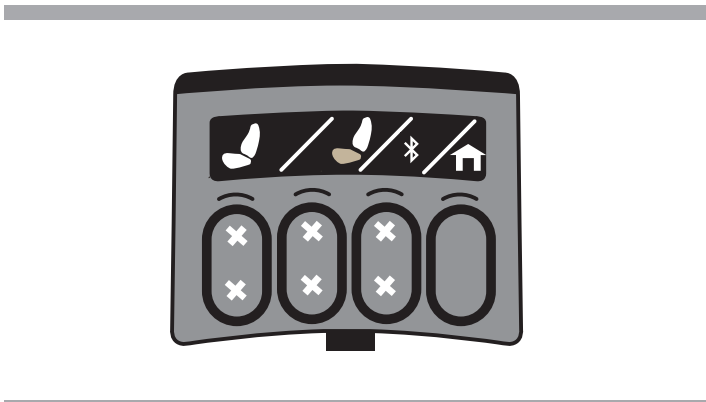


Figure 14. iAccess Single Page Mode

### iAccess Programming — Single Page Mode (HHP)

Press the left soft key to change from **1 Button and 2 Button**.

Use the + and - keys to select the function you wish those buttons to have.

Press the right arrow to change to the next button set.


When completed, press the right soft key twice. Press the soft key under Save and the configuration will save.

Figure 15. iAccess Single Page Mode

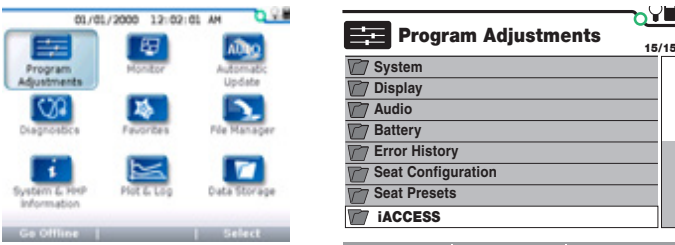
## iAccess Programming — Multiple Page Mode

1. Click/Tap on the Mapped I/O icon.
2. Click/Tap on the iAccess button.
3. Select either Multi Page right mode or Multi Page left mode.

The screen will change, showing a picture of the iAccess module. From here, click and drag the function (Econ-W) or tap on the function then tap on the iAccess button(s) you wish to program that function to (Econ-I).

4. To change pages, select the Page number (Econ-W) or tap on the up or down arrow on the picture of the iAccess module (Econ-I).
5. Make sure you click/tap on the Save icon .

## iAccess Programming — Multiple Page Mode (HHP)





01/01/2000 12:02:01 AM

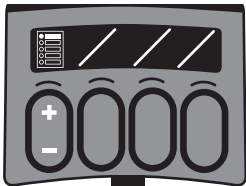
Program Adjustments

- System
- Display
- Audio
- Battery
- Error History
- Seat Configuration
- Seat Presets
- iACCESS**

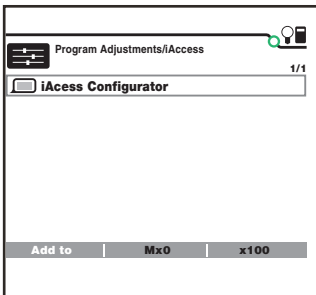
Go Offline | Select

Seat Tilt Up  
Seat Tilt Down




Multi Page Left Mo | Delete All | >>



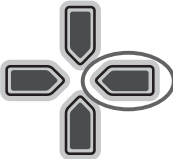
Program Adjustments/iAccess 1/1

iAccess Configurator

Add to | Mx0 | x100



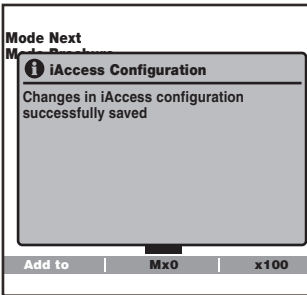
Add to | x10 | x100



Press the left soft key to change from **1 Button and 2 Button**.

Use the + and - keys to select the function you wish those buttons to have.

Press the right arrow to change to the next button set.



Mode Next

iAccess Configuration

Changes in iAccess configuration successfully saved

Add to | Mx0 | x100




Figure 16. Multiple Page mode (HHP)

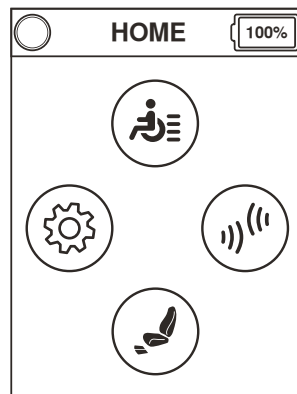
## Programming Mouse/Apple Products

The Bluetooth® mouse feature can be used with the mouse emulator in an Android device. This is a built-in feature that will help a end user to easily pair their phone or tablet with their power chair.

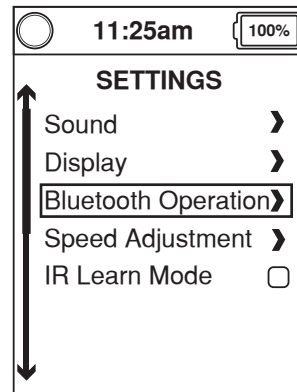
Computers can be programmed the same way using Bluetooth mouse.

Apple Products use **Assistive Switch Controls** for programming.

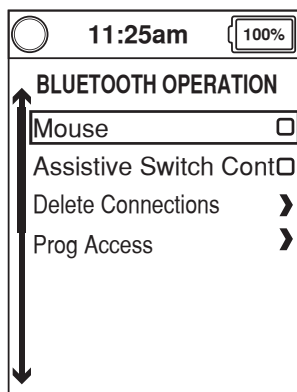
Give a left input device command to go into the Settings Screen.



Give two reverse input device commands to go into the Bluetooth Operation screen and then give a right input device command.



Make sure Mouse is highlighted and give a right input device command. This will check the box.



## ⚠ WARNING!

**Be aware that cell phones, two-way radios, laptops, electricity generators or high power sources and other types of radio transmitters may cause unintended movement of your electrically powered mobility vehicle due to EMI. Do not turn on hand-held personal communication devices, such as citizen band (CB) radios and cellular phones, while the wheel power chair is turned on. Be aware of nearby transmitters, such as radio or TV stations, and avoid coming into close proximity to them.**

## Programming Bluetooth® Mouse

First, the mouse clicks need to be programmed within the system. To program mouse clicks and enable mouse in the system follow these steps:


1. Parameter Settings/Program Adjustments
2. Bluetooth
3. Mouse
  - **Mouse** set to Enabled
  - **Mouse Clicks** - there is an array of different ways to click within the system. One added method is **Dwell**, which is if the cursor hovers over an icon for a set period of time. The screen on the Q-Logic 3 will change from mouse movements to mouse clicks. System goes into Programming Mode upon enabling. Click on the Arrow next to **Programming mode**.
4. From the **Home Screen**, give a right input device command to go into **Environmental Settings** Screen.
5. Highlight **Mouse** and give a right input device command.
6. Highlight **New** and give another right input device command.
7. The screen will change and a picture of a mouse will appear. Take notice that the clock will change to an ID number. That ID number will be the number of the system when pairing with a computer.
8. Find and click on the Bluetooth icon  on your computer screen. Normally it's located on the bottom right of the screen on the tool bar.

Figure 17. Programming Mouse



9. A new window will pop up about the icon. Find **Show Bluetooth Devices** and click on it. This will show all the available Bluetooth signals in this area. When you find the ID number which for mouse will be MouseXXXX (the XXXX will represent a 4-digit number). Click on it.
10. A new drop-down will appear on the screen, click on **Pair**.
11. Confirm the pairing number on the power chair first by giving a forward command and click **Yes** in the pop-up window on your computer.
12. The power chair will then pair up with the computer.

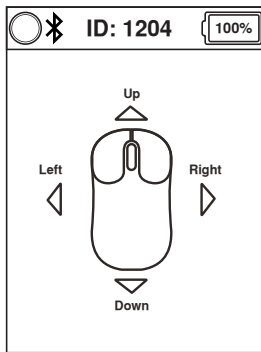
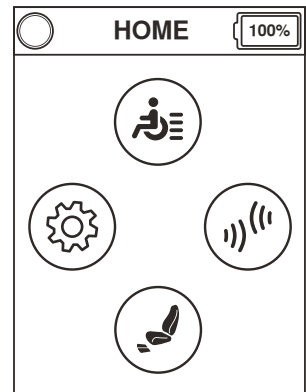


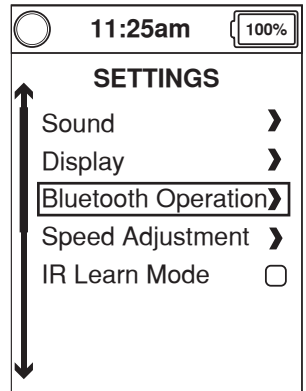
Figure 18. Mouse Clicks

### Activating Assistive Switch Control Function Without Programmer

Give a left input device command to go into the **Settings** Screen.



Give two reverse input device commands to go into the **Bluetooth Operation** screen and then give a right input device command.



Make sure **Assistive Switch Control** is highlighted and give a right input device command. This will check the box.

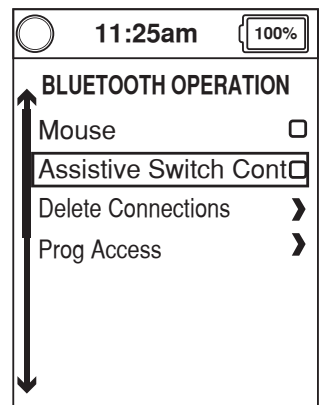


Figure 19. Activating Assistive Switch

## Pairing Assistive Switch Control

On the **Hand Control**, from the Home Screen follow these steps:

1. From the **Home** Screen, give a right input device command to go into **Environmental Settings** screen.
2. Highlight **Assistive Switch Control** and give a right device command.
3. Highlight **New** and give another right input device command.
4. The screen will change and a picture of an iPhone and iPad will appear. Take notice that the clock will change to an ID number. That ID number will be the number of the system when pairing with an Apple device.

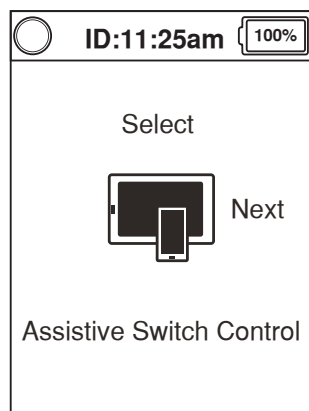



Figure 20. Assistive Switch Control



## Pairing Apple Device with Power Chair

1. Tap on Settings 
2. On the left hand side of the screen, find **Bluetooth** and tap on it.
3. Make sure that the slide switch for the **Bluetooth** is turned on. If **Bluetooth** is on the icon will be set to the right.



4. Next find the power chair ID number. It will be **SwitchControlXXXX** and tap on it.
5. Verify the pairing code by giving a forward command on the input device of the power chair and by tapping **Pair** on the Apple Device.

## Setting Up Switches

1. Tap on **Settings** 
2. On the left hand side of the screen tap on **General**.
3. Find **Accessibility** and tap on it.
4. Find **Switch Control** and tap on it.
5. Make sure the **Switch Control** is switched to green or to the right side.
6. Next tap on **Switches** on the right half of the screen.
7. Find **Add New Switch** and tap on it.
8. Tap on **External**. 
9. The right half of the screen will only say **Activate your external switch**.
10. Give a input device command and then name the external switch.
11. Once the switch is named, program the system function for which you wish to use that command.
12. Repeat for the remaining 3 directions.

The **Scanning Style** is default set to **Auto Scanning**. It may be easier to set to either **Manual Scanning** or **Single Switch Step Scanning**.

### WARNING!

Be aware that cell phones, two-way radios, laptops, electricity generators or high power sources and other types of radio transmitters may cause unintended movement of your electrically powered mobility vehicle due to EMI. Do not turn on hand-held personal communication devices, such as citizen band (CB) radios and cellular phones, while the powered power chair is turned on. Be aware of nearby transmitters, such as radio or TV stations, and avoid coming into close proximity to them.

## New iOS 13.4.1 Update Feature - Mouse Cursor

With the launch of the new iOS 13.1.2, there is a new feature in the operating system which can help an end user. Apple has a mouse emulator. It works slightly different than normal mouse clicks and movements, but is a quicker setup than Assistive Switch Control (which is still available). It gives the end user a choice of which is easier for them to use. Since then iOS 13.4.1 has been launched with some different navigation to change the pointer itself.

### Enabling AssistiveTouch

1. Tap on **Settings**.
2. Tap on **Accessibility** (now easier to find).
3. Tap on **Touch**.
4. Tap on **AssistiveTouch** (this will enable **AssistiveTouch**).
5. A new symbol will show up on the screen.

### How to setup the Quantum Power Chair

1. From the **Home** Screen, give a left turn command to go into **Settings**.
2. Highlight **Bluetooth Operation** and give a right turn command.
3. Highlight **Mouse** and give a right turn command (check box will check)
4. Go to the **Home** Screen again and now give a right turn command.
5. Highlight **Mouse Connections** and give a right turn command.
6. Highlight **New** and give a right turn command
7. Picture of the mouse will appear with the ID number.

Pair the power chair to the iPhone or iPad as you would a computer mouse. Once the pairing is complete, the power chair will work the iPhone much like a computer mouse. If you have **Dwell** enabled on the power chair, left mouse click will select whatever you are hovering over.

### Changing cursor color and size:

1. Tap on **Settings**.
2. Tap on **Accessibility**.
3. Tap on **Pointer Control** (right hand side of the screen).
4. Here color and pointer size can be changed. This mimics a computer's mouse cursor style.

### Enable Dwell feature/set up timing:



1. Tap on **Settings**.
2. Tap on **Accessibility**.
3. Tap on **Touch** (right hand side of screen).
4. Tap on **AssistiveTouch**.
5. Swipe down to the bottom of the page and look for **Dwell Control** and tap to the right to enable.
6. To adjust the dwell time, below **Movement Tolerance**, look for a time and a - and + keys which will adjust the timing that the cursor must be over the icon before it will click.



### Programming IR (Infrared)

Programming IR can only be done through the Enhanced Display and the Econ-W programming station. There are three different IR menus to choose from. The Q-Logic 3 system will accept a Q-Logic 2 IR project. You have the ability to import the IR Project to the Q-Logic 3 system.

#### iAccess Programming — Single Page Mode

1. Connect the Econ-W using either Bluetooth or the Curtis Programming Cable.
2. Once connected, click on the icon  located on the top of the tool bar.
3. Locate the  icon. Select this icon. Once selected, this will create a new "menu". After the menu is created, it can then be renamed.
4. Next, a preconfigured menu can be added from the right side of the screen. As mentioned earlier, there are three (3) to choose from.

#### IR Menu: 6 Button Configuration

The 6 Button Configuration can be used for a vast array of configurations such as but not limited to:

- Favorite Channels
- Toys
- DVD Players
- DVD Recorders

Up to 4 pages can be added along with custom text for each "button".



Figure 21. Button Configuration

#### IR Menu: Function Remote Menu

The Function Remote Menu is a very simple menu where Power On/Off, Volume Up/Volume Down, Channel Up, and Channel Down can be programmed. Custom Text can be added to "name" the remote as well.

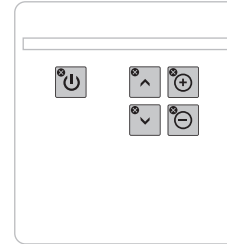




Figure 22. Function Remote Menu

#### IR Menu: Remote Menu

The **Remote menu** is an easy way to set up a remote control that will resemble the remote control of a television, cable box, or satellite.

Custom text can be added to "name" this remote.

A new feature is the  icon, which allows an end user to enter in the channel they wish to use and then use the enter key. 

They can send the signal for the channel entered all at the same time.

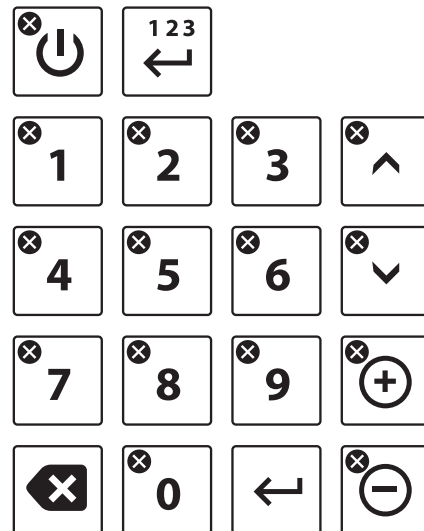


Figure 23. IR Menu: Remote Menu

### Saving an IR Project

If a project will be used for multiple end users as a template or baseline, the project can be saved to the computer.

1. Create the template for the menu combination that you wish to add based on past end user needs.
2. Once the IR menus are set up, save the project by clicking on **Save**.
3. Name the file and location and click on the **Save** button in the pop-up window.

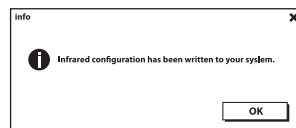
The project is now saved to your computer.

### Loading IR Project to the Power Chair

After the project is saved or the project is opened, to load it to a end user's power chair, click on the **Load IR Project to Device icon**.

Once the project is successfully loaded into the connected power chair, the following window will pop up:

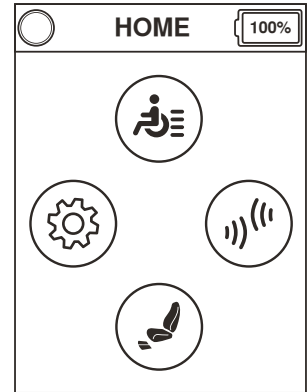
Click OK and now you are ready to program the IR signals.



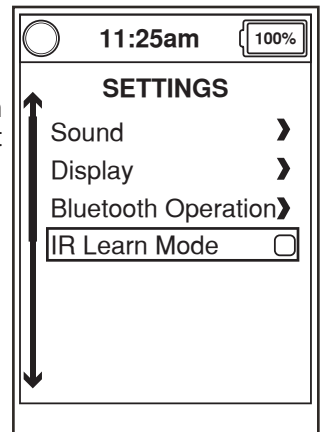
### IR Learn Mode

After the menus are built and loaded into the power chair, you can program and test the signals going into the system.

Provide a left command with the input device.



Scroll down to "IR Learn Mode" and give a right input command.



Notice the Blue "L" at the top for the screen next to the drive status indicator. This means that the unit is in IR Learn mode.

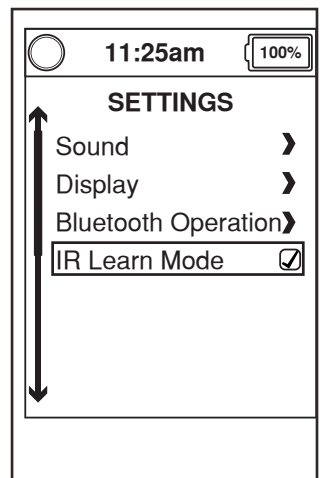
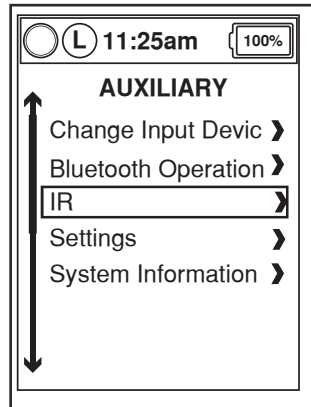


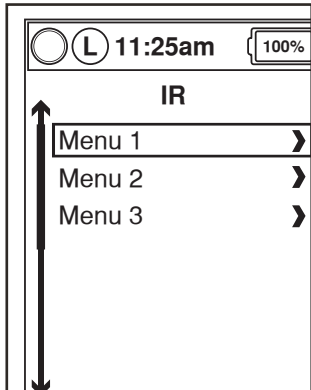
Figure 24. IR Learn Mode

### Programming the Menus

In the Auxiliary Menu, highlight "IR" and give a right input command.



Select the Menu you wish to program and give a right input command.



Select the Function you wish to program and give a forward input/command.



Point the remote about 6-8" from the Enhanced Display and give the command you wish to program from the remote control. You do not need to press the button down on the remote control until it leaves the learning screen.

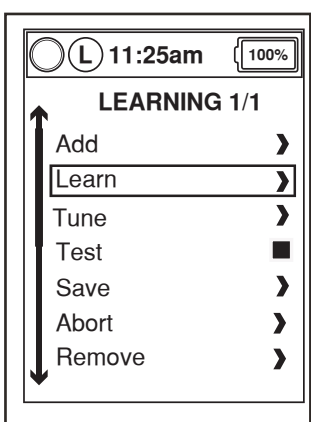
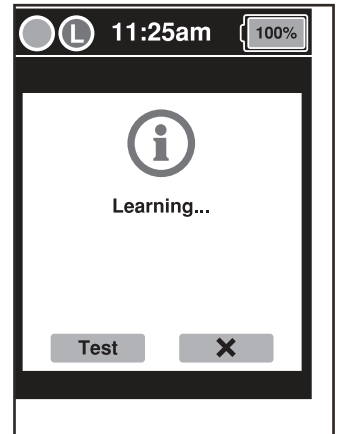


Figure 25. Programming Menus

Once the signal is received and recognized, it will go to this screen. Scroll down to "Test" and give a right input command to test the signal. The command you pressed should be outputted by the Enhanced Display.



If the output is good, go down to "Save" and give a right input command.

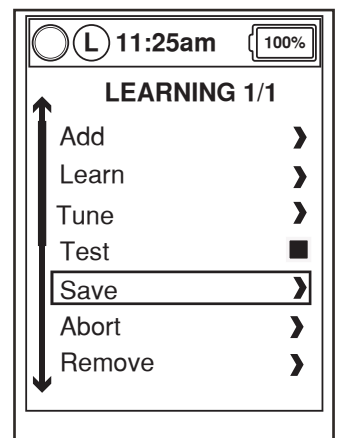


Figure 26. Programming Menus



## Adding Functions

Unlike Q-Logic 2, there are no Single, Double, or Triple options for Q-Logic 3. You may add a function (another button command) and stack it on the existing programmed command.

Multiple button presses are programmed for one function under Learn Mode. Example, select 1, 2, and 3 and all three codes will be learned at the same time.

## Helpful Hints to Remember

Make sure the Enhanced Display has a clear line of sight to the device being programmed.

Depending on the lighting, the signal can deteriorate quickly cutting down the effective range of the IR.

If you are having issues getting an IR signal to actually be accepted by the Q-Logic system, use a plain white piece of paper that will block the light and allow the signal to be learned by the system.

## Importing a Q-Logic 2 IR Project to Q-Logic 3

If you have an end user using Q-Logic 2 with an IR setup, the project can be saved with IR signals and loaded into the Q-Logic 3 system with the saved signals.

The Q-Logic 2 PC Programming Station and programming cable are needed and can be downloaded and installed from [prideprovider.com](http://prideprovider.com) under the **Q-Logic Resource Center**.

## Saving the IR Menu from Q-Logic 2


1. Open the Q-Logic 2 PC Programming Station.
2. Click on **Communication**.
3. Click on **Connect**.
4. Once connected, click on **Parameters**.
5. Under the **Parameter Editor**, click on **Enhanced Display**.
6. A new section will open up. Click on **Remote Control**.
7. Another new section will open up. Click on **Menu Tree Editor**.
8. Under the **Remote Control Menu Tree Editor**, all the menus programmed into the system are visible, regardless if they have signals sent to them or not.
9. Click on the Save button on top off the toolbar under **Remote Control Menu Tree Editor**.
10. When the **Save** button is clicked, a new windows will appear.
11. Make sure that the **Include learned IR Codes** is checked in that new window.
12. Click on **Save as**.



Figure 27. Saving the IR Menu from Q-Logic 2

13. Name the file whatever you wish, but keep in mind to put the file in a location where you will easily find it.
14. Once the file is named, click on **Save**.

## Importing Saved Q-Logic 2 IR Project to Q-Logic 3

1. Connect to the Q-Logic 3 system using **Econ-W**.
2. Click on the Infrared **Remote Control Menu** on the top toolbar. 
3. Click on the folder icon on the left most of the new toolbar **Open IR Project**.

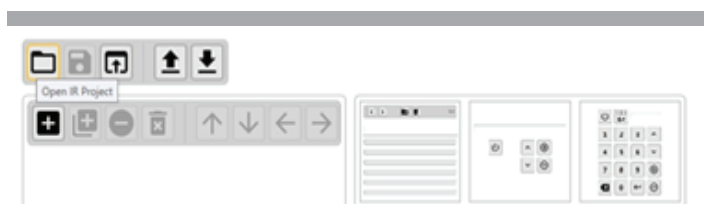


Figure 28. Importing Saved Q-Logic 2 IR Project to Q-Logic 3

4. A new window will appear. Find the IR project that was recently saved from the Q-Logic 2 system and click **Open**.
5. When the project opens, you will see all the menus that were on the Q-Logic 2 PC Programming Station.
6. The Check Mark on the left side of the menus mean that those menus have been programmed and have IR Codes associated with them.
7. Click on the **Save IR Project to Device** on the tool bar.

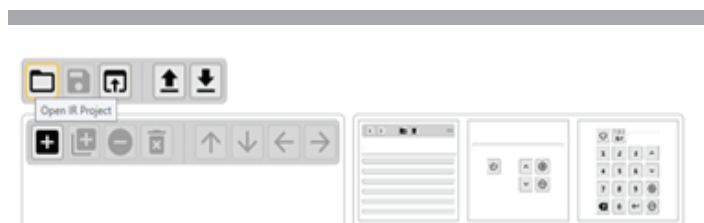


Figure 29. Importing Saved Q-Logic 2 IR Project to Q-Logic 3

8. The system will go into **Power Cycle Required** mode.
9. Once the configuration is saved to the Q-Logic 3 system, a pop up window will come up.
10. Click on **OK** then reboot on the Q-Logic 3 system.

## Setting Up Reminders

Setting up reminders can be useful for medical reminders or even service checkups.

1. Parameter Settings/Program Adjustments
2. Reminder
3. General Settings
  - **Display Time:** Is how long the reminder will display the screen.
  - **Repetition Rate:** Is how often the reminder should appear.
  - **Text 1-7:** Up to 7 different text reminders can be entered. Make sure when you type in each text box to press enter when done.

Another feature in the Q-Logic 3 system is the **Driven Distance Reminder**. This can be programmed to inform an end user when it's time to contact their provider for maintenance on their power chair.

1. Parameter Settings/Program Adjustments
2. Reminder
3. Driven Distance Reminder.
  - Set **Driven Distance Reminder** to **Enabled**.
  - **Distance Reminder Text:** Choose which text from the **General Settings** page that will show on the joystick.
  - **Driven Distance Trigger:** Sets the distance that should trigger the reminder to show up.

**Day Reminders** are used for reminders that are triggered after so many days pass.

1. Parameter Settings/Program Adjustments
2. Reminder
3. System Day Reminder
  - **System Days Reminder:** Set to Enabled.
  - **System Days Reminder Text:** Choose the text that will show up when the reminder is triggered. (Text is from the **General Settings** page).
  - **System Days Trigger:** Is to choose the number of days until the reminder will trigger.

**User Reminder Settings** allows the user to turn off reminders or postpone the reminder to later.

1. Parameter Settings/Program Adjustments
2. Reminder
3. User Reminder Settings
  - **User Has Access to User Reminder:** Set to **Enabled**. Allows the user to shut off the reminders.
  - **Remind Me Later** set to **Enabled:** Allows the user to postpone the reminder and it will pop up again later.

**User Reminder 1 — 5** are used to set up specific reminders in either **Interval** (every so many minutes the reminder will pop up) or **Time** (that at that specific time the reminder will pop up).

1. Parameter Settings/Program Adjustments
2. Reminder
3. User Reminder 1
4. Select the **Type** (Interval or Time)
5. Select the **Text** (Entered in under General Settings)
6. If **Interval** is selected, set the **Interval** time under **Interval**.
7. If **Time** is selected, set the **Start Time Hours, Start Time Minutes**, then **Stop Time Hours and Start Time Minutes**.



### HHP Programming Mode

Programming mode will take the place of Idle Mode in some instances. Programming mode does not require a reboot cycle of the system to populate the changes you make. On the handheld programmer, press the left arrow on your key pad until you get to the main screen. This will take the system out of Programming Mode.

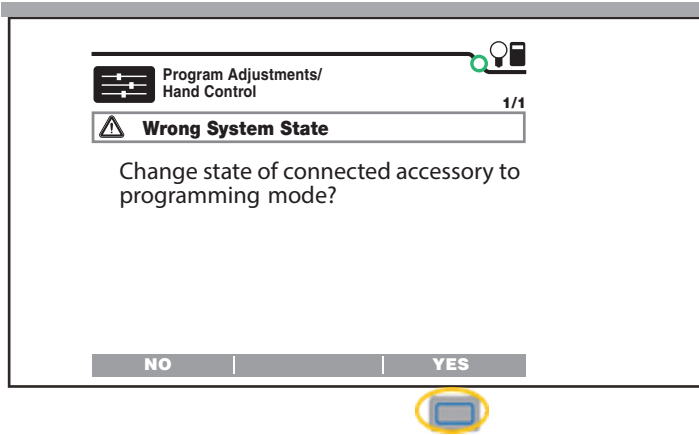


Figure 30. HHP Programming Mode

Change into Programming Mode

Press the left arrow to come out of the programming mode to the Main Screen

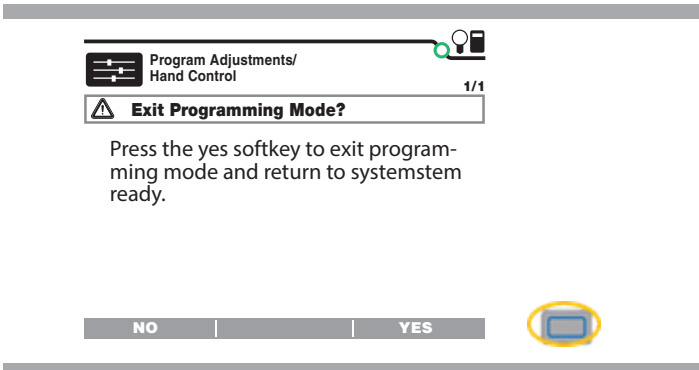


Figure 31. HHP Programming Mode

When you press Yes, system will go back to System Ready.



















# Q-LOGIC 3 PROGRAMMING GUIDE

## **USA**

401 York Avenue  
Duryea, PA 18642  
[www.quantumrehab.com](http://www.quantumrehab.com)

## **Canada**

5096 South Service Road  
Beamsville, Ontario L0R 1B3  
[www.quantumrehab.com](http://www.quantumrehab.com)

## **Australia**

20-24 Apollo Drive  
Hallam, Victoria 3803  
[www.quantumrehab.com.au](http://www.quantumrehab.com.au)

## **New Zealand**

38 Lansford Crescent  
Avondale, Auckland 0600  
[www.pridemobility.co.nz](http://www.pridemobility.co.nz)

## **UK**

32 Wedgwood Road  
Bicester, Oxfordshire OX26 4UL  
[www.quantumrehab.co.uk](http://www.quantumrehab.co.uk)

## **Netherlands**

(Authorised EU Representative)  
De Zwaan 3  
1601 MS Enkhuizen  
[www.quantumrehab.eu](http://www.quantumrehab.eu)

## **Italy**

Via del Progresso, ang. Via del Lavoro  
Loc. Prato della Corte  
00065 Fiano Romano (RM)  
[www.quantumrehab-italia.it](http://www.quantumrehab-italia.it)

## **France**

26 Rue Monseigneur Ancel  
69800 Saint-Priest  
[www.quantumrehab.fr](http://www.quantumrehab.fr)

## **Spain**

Calle Las Minas Número 67  
Polígono Industrial Urtinsa II, de Alcorcón  
28923 Madrid  
[www.quantumrehab.es](http://www.quantumrehab.es)

## **Germany**

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