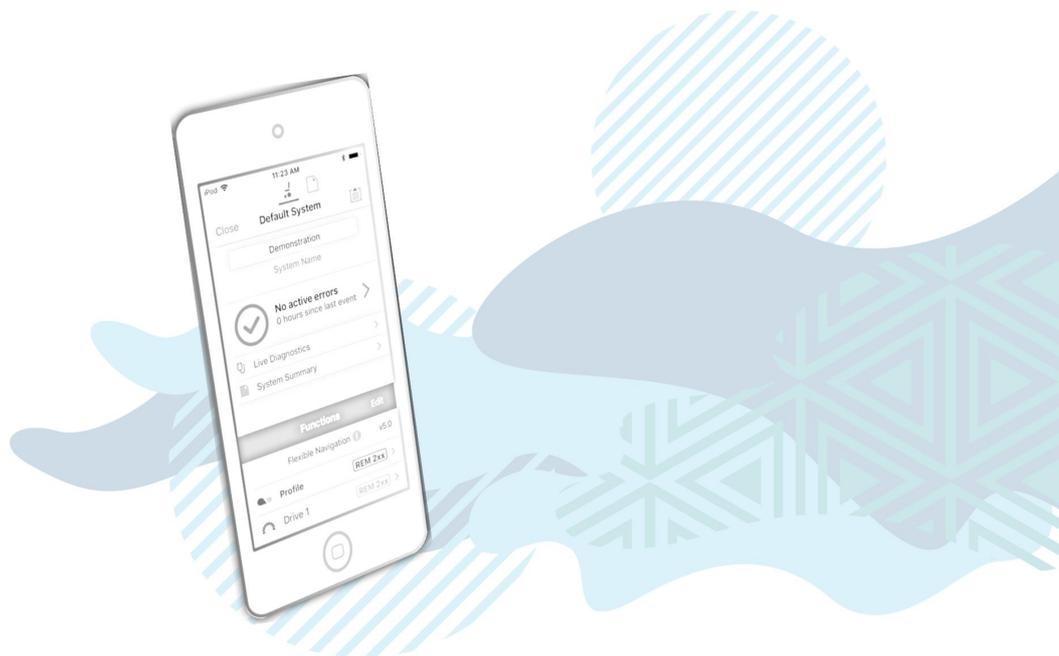




## LiNX Access iOS

Programming and diagnostic tool



dynamic™

LiNX Access iOS  
GBK54034 Issue 9  
Jul 2021



Welcome

# 1 Welcome

---

1.1 About the LiNX Access iOS tool .....	2
1.2 Using this manual .....	2
1.3 Important information .....	2
1.4 Copyright, trademarks and acknowledgements .....	2
1.5 Personal data you collect and process .....	3
1.6 Contents .....	4
1.6.1 Contents Overview .....	4
1.6.2 Contents Detailed .....	5
1.7 Glossary .....	7

---

## 1.1 About the LiNX Access iOS tool

Welcome to the user manual for the LiNX Access iOS tool.

The LiNX Access iOS tool is an application for Apple's iPhone, iPad and iPod touch.

It is used to:

- configure Dynamic Controls' range of LiNX wheelchair controllers
- view real-time and historical diagnostic information.

## 1.2 Using this manual

This manual will help you to understand, install, and use the LiNX Access iOS tool.

This manual uses the following information boxes to convey important and useful information:

### **Warning**

*Warnings provide important information that must be followed in order to install, configure and use the product safely and efficiently. Not following the instructions given in a warning can potentially lead to equipment failure, damage to surrounding property, injury or death.*

### **Note**

*Notes provide supporting information in order to install, configure, and use the product. Not following the instructions given in notes or precautions can lead to equipment failure.*

### **See also**

*The "See also" box provides cross-references to help you navigate the installation manual more easily.*

## 1.3 Important information

Due to a policy of continuous product improvement, Dynamic Controls reserves the right to update this product and manual without notice. This issue of the manual supersedes all previous issues. Previous issues must no longer be used.

The latest version of this manual can be downloaded from Dynamic Controls' website at [www.dynamiccontrols.com](http://www.dynamiccontrols.com)

## 1.4 Copyright, trademarks and acknowledgements

Dynamic Controls, the Dynamic logo and the LiNX logo are trademarks of Dynamic Controls. All other brand and product names, fonts, and company names and logos are trademarks or registered trademarks of their respective companies.

Dynamic Controls owns and will retain all trademark rights, and Dynamic Controls or its licensors own and will retain all copyright, trade secret and other proprietary rights, in and to the documentation.

All materials contained within this manual, in printed or electronic format, are protected by copyright laws and other intellectual property laws.

iPhone, iPod touch, iPad and iTunes are trademarks of Apple Inc., registered in the U.S. and other countries.

The Bluetooth® word, mark, and logos are registered trademarks owned by Bluetooth® SIG, Inc., and any use of such marks by Dynamic Controls is under license.

## 1.5 Personal data you collect and process

The App permits you to download information to your mobile device, such as the serial number and technical product data (battery levels, usage patterns, error codes, seat angle patterns, motor characteristics, and run time for example) of a product connected to the App, and to save that data on your mobile device as a file (“Configuration File”). Although the App does not collect any information about the product end user’s health, the end users use of the product together with the Configuration File may reveal the fact, or be an indication, that the end user has a particular health condition, which may be considered sensitive information (“Sensitive Information”). The Configuration File and the Sensitive Information (individually and collectively the “End User Data”) may be the Personal data of the product end user. You are the controller (as defined under the General Data Protection Regulation (“GDPR”)) of the End User Data and it is your responsibility to provide required privacy notices and obtain any required consent of the end user prior to Processing the End User Data.

1. “Process” or “Processing” is any operation or set of operations which is performed upon personal data, whether or not by automatic means, such as collection, recording, organization, storage, adaptation or alteration, retrieval, consultation, use, disclosure by transmission, dissemination or otherwise making available, alignment or combination, blocking, erasure or destruction.
2. “Personal data” means any information relating to an identified or identifiable natural person (‘data subject’), directly or indirectly, in particular by reference to an identification number or some other factor specific to the person’s identity. Examples of personal data are your name or contact details or information about your usage of your product.
3. See Article 6(1)(b) (necessity for the performance of a contract) and Article 6(1)(c) (necessity for compliance with a legal obligation) of the GDPR. See also fn. 4.
4. See Article 6(1)(f) of the GDPR (necessity for purposes of legitimate interests).

## 1.6 Contents

### 1.6.1 Contents Overview

<i>1 Welcome</i>	.....	<i>1</i>
<i>2 Overview</i>	.....	<i>9</i>
<i>3 Set-up</i>	.....	<i>13</i>
<i>4 Concepts and interface</i>	.....	<i>17</i>
<i>5 Navigation</i>	.....	<i>29</i>
<i>6 How to ...</i>	.....	<i>35</i>
<i>7 Index</i>	.....	<i>73</i>

**1.6.2 Contents Detailed**

---

<b>1 Welcome</b> .....	<b>1</b>
1.1 About the LiNX Access iOS tool .....	2
1.2 Using this manual .....	2
1.3 Important information .....	2
1.4 Copyright, trademarks and acknowledgements .....	2
1.5 Personal data you collect and process .....	3
1.6 Contents .....	4
1.6.1 Contents Overview .....	4
1.6.2 Contents Detailed .....	5
1.7 Glossary .....	7
<b>2 Overview</b> .....	<b>9</b>
2.1 What it does .....	10
2.2 Features .....	10
2.3 Version information .....	10
2.3.1 The LiNX Access iOS tool .....	10
2.3.2 The LiNX System .....	10
<b>3 Set-up</b> .....	<b>13</b>
3.1 System requirements .....	14
3.2 Install the application .....	14
3.3 Connect the application to a wheelchair .....	14
3.4 Application update notifications .....	14
3.5 The LiNX Access Key (LAK) .....	14
3.5.1 LAK versions .....	14
3.5.2 LAK firmware .....	15
3.5.3 How to insert the LAK .....	15
<b>4 Concepts and interface</b> .....	<b>17</b>
4.1 Programming contexts .....	18
4.1.1 Viewing the contexts .....	18
4.2 Editing modes .....	18
4.2.1 Live edit .....	18
4.2.2 Bulk edit .....	19
4.3 The interface .....	20
4.3.1 Home screen .....	20
4.3.2 Parameter editing screens .....	20
4.3.3 Utility screens .....	21
4.3.4 Diagnostic screens .....	22
4.3.5 Navigation bar .....	26
4.3.6 Application menu .....	26
<b>5 Navigation</b> .....	<b>29</b>
5.1 Overview map .....	30
5.2 Detail map .....	31
5.3 Detail map – profiles .....	32
5.3.1 Profile .....	32
5.3.2 Attendant profile .....	33

---

5.4 Detail map – modules .....	33
5.5 Detail map – actuator motions .....	34
<b>6 How to ... .....</b>	<b>35</b>
6.1 Open the LiNX Access iOS tool .....	36
6.2 Select the context .....	36
6.2.1 Wheelchair .....	36
6.2.2 File .....	37
6.2.3 Toggle between contexts .....	37
6.3 Connection context actions .....	37
6.3.1 Connect and disconnect to the LiNX Access tool .....	38
6.3.2 Manage chair configurations .....	39
6.3.3 Change the program name and system name .....	40
6.3.4 Modify a program .....	41
6.3.5 Save a program .....	41
6.3.6 Upgrade the firmware .....	42
6.3.7 Tune the gyro .....	43
6.3.8 Tune Adaptive Load Compensation (ALC) .....	43
6.3.9 Calibrate sip and puff .....	44
6.3.10 Joystick shaping .....	45
6.3.11 Store the Access Level Certificate .....	46
6.4 File context actions .....	47
6.4.1 Open and close a file .....	48
6.4.2 Modify a file .....	48
6.4.3 Convert configuration .....	49
6.4.4 Save a file .....	49
6.4.5 Write to the wheelchair .....	50
6.4.6 Delete a file .....	51
6.4.7 Share a file .....	51
6.4.8 Program a system from a bundle file .....	52
6.5 Modify parameters .....	55
6.5.1 Modify parameters textually .....	55
6.5.2 Modify parameters numerically .....	55
6.5.3 Modify parameters graphically .....	56
6.6 Modify profiles and functions .....	60
6.6.1 Add and delete profiles .....	61
6.6.2 Add, delete and move functions .....	62
6.6.3 Edit function icons .....	65
6.7 Configure control inputs and outputs (control IO) .....	66
6.7.1 Select and configure an input .....	66
6.7.2 Configure an always rule .....	68
6.7.3 Configure a conditional rule .....	69
6.7.4 Configure advanced settings .....	71
<b>7 Index .....</b>	<b>73</b>

## 1.7 Glossary

### A

---

**Access Key**

A Bluetooth adaptor that plugs into the XLR connector of the Remote module and connects the Remote module to the LiNX Access Tool on your iOS device.

### B

---

**Bluetooth**

A commonly used, short-range, wireless technology. Bluetooth is used between the LiNX Access Key and an iOS device to transmit programs and diagnostic information with the LiNX Access Tool.

**Bulk edit**

A feature that writes all parameters to the LiNX system when the user selects Write to Chair. (Compare with Live edit.)

### C

---

**Connection - Bluetooth**

The process of linking two Bluetooth devices together each time they are within range of each other and data is about to be exchanged between them. This process occurs after the devices have paired. (See Pairing - Bluetooth.)

### I

---

**iOS**

Operating system used by portable Apple devices such as iPhone, iPad, and iPod touch.

### L

---

**Live edit**

A feature that writes parameter changes to the LiNX system immediately as they are entered. (Compare with Bulk edit.)

### O

---

**OEM**

Original Equipment Manufacturer.

**P**

---

**Pairing - Bluetooth**

Pairing is the process of establishing a connection between two Bluetooth devices (e.g. a LiNX Access Key and an iPhone or a PC) for the FIRST time. (Compare with Connection - Bluetooth).

**R**

---

**Remote module**

The physical device that controls the operation of the wheelchair.

**X**

---

**XLR connector**

A connector (industry standard) used with the LiNX system primarily for connecting to the battery charger. It is also used for attaching the LiNX Access Key, a Bluetooth device used to communicate with the LiNX Access tools.

Overview

## 2 Overview

---

2.1 What it does .....	10
2.2 Features .....	10
2.3 Version information .....	10
2.3.1 The LiNX Access iOS tool .....	10
2.3.2 The LiNX System .....	10

---

## 2.1 What it does

The LiNX Access iOS tool connects wirelessly to a LiNX wheelchair controller to read and write control configurations, and view diagnostic information.



Figure 1: The LiNX Access iOS tool

### **i** See also

Visit the Dynamic Controls website for more information on the LiNX product range and the LiNX Access Key: [www.dynamiccontrols.com](http://www.dynamiccontrols.com)

## 2.2 Features

- Move easily between wheelchair and files
- Instant wireless configuration (live edit) and diagnostics
- Numeric, graphic and text parameter input
- Intuitive, user-friendly interface
- 10 m working range

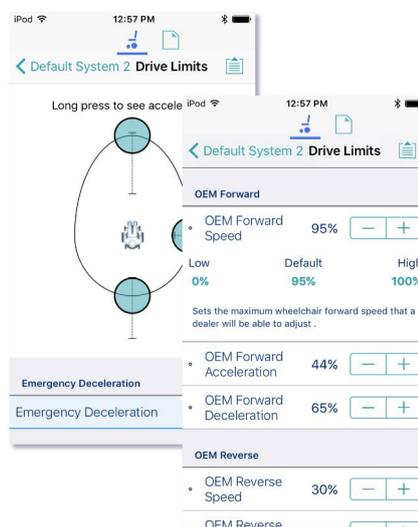


Figure 2: Numerical and graphical programming

## 2.3 Version information

### 2.3.1 The LiNX Access iOS tool

This manual has been written for the LiNX Access iOS tool, version 6.0 and later. For information regarding previously released versions, please see the downloads section on the Dynamic Controls website: [www.dynamiccontrols.com](http://www.dynamiccontrols.com)

### 2.3.2 The LiNX System

The LiNX Access iOS tool supports all versions of the LiNX family of wheelchair controllers.

**⚠ Warning**

*Performance adjustments must only be made by healthcare professionals or by persons who completely understand the adjustment process and the capabilities of the wheelchair user.*

*Before upgrading the firmware of the system, or a module in the system, always ensure that the battery charge level is sufficient and the park brakes are not manually or electronically released.*

*Incorrect settings, or programming in a location that is not safe, can cause injury to the user and bystanders, or damage to the wheelchair and surrounding property.*

*After you have configured the wheelchair, check to make sure that it performs to the specifications entered in the programming procedure. If the wheelchair does not perform to specifications, reprogram it. Repeat this procedure until the wheelchair performs to specifications. If the wanted operation cannot be reached, contact your service agent.*

*Ensure that the deceleration parameters are always higher than the acceleration parameters for a safe response. It is the responsibility of the health care professional to make sure that the user is capable of both cognitively understanding and physically operating the programmed features and functions.*

*With inappropriate programming settings, certain features and options may not be accessible or perform as expected.*

*Where any inconsistencies about chair status occur between the LiNX System and that reported by a programming tool, the user should take the status as reported by the LiNX System as correct.*



### 3 Set-up

---

3.1 System requirements .....	14
3.2 Install the application .....	14
3.3 Connect the application to a wheelchair .....	14
3.4 Application update notifications .....	14
3.5 The LiNX Access Key (LAK) .....	14
3.5.1 LAK versions .....	14
3.5.2 LAK firmware .....	15
3.5.3 How to insert the LAK .....	15

---

### 3.1 System requirements

To use the LiNX Access iOS tool, you need:

- a LiNX wheelchair control system
- a LiNX Access Key
- an Apple iPhone, iPad or iPod touch (using iOS 11.0 or higher)
- the LiNX Access iOS application

### 3.2 Install the application

The LiNX Access iOS tool is a free application available from the Apple App Store. Search for 'LiNX Access'.

If your iOS device does not have the application installed, you will be prompted to install it when you attempt to pair with a LiNX Access Key for the first time.

### 3.3 Connect the application to a wheelchair

To connect the LiNX Access iOS tool to a wheelchair, see *Connect and disconnect to the LiNX Access tool*.

### 3.4 Application update notifications

All updates to the application are automatically notified on your iOS device (if this feature has not been disabled). This feature requires an Internet connection.

### 3.5 The LiNX Access Key (LAK)

A LiNX Access Key (LAK) is required for the LiNX Access iOS tool to communicate via Bluetooth with a LiNX system.

The LAK is inserted into a remote module's XLR socket. (See *Figure 4*.)



Figure 3: LiNX Access Keys

#### 3.5.1 LAK versions

Two versions of the LiNX Access Key are supplied. The version determines the access you have to programming functions.

The two versions are:

- **Distributors:** Providers, dealers, therapists and wheelchair service agents (DLX-HKEY01-A)
- **Manufacturers:** OEMs and certain service agents (DLX-HKEY02-A)

### 3.5.2 LAK firmware

The LiNX Access Key's firmware must be version 4.0 or higher to support the features of the LiNX Access iOS tool.

Information on how to upgrade the firmware is at [6.3.6 Upgrade the firmware](#).

### 3.5.3 How to insert the LAK

Insert the LAK into a remote module's XLR socket — see [Figure 4](#). The XLR socket's location depends on the remote module.



Figure 4: Inserting the LiNX Access Key



## 4 Concepts and interface

---

4.1 Programming contexts .....	18
4.1.1 Viewing the contexts .....	18
4.2 Editing modes .....	18
4.2.1 Live edit .....	18
4.2.2 Bulk edit .....	19
4.3 The interface .....	20
4.3.1 Home screen .....	20
4.3.2 Parameter editing screens .....	20
4.3.3 Utility screens .....	21
4.3.4 Diagnostic screens .....	22
4.3.5 Navigation bar .....	26
4.3.6 Application menu .....	26

---

The LiNX Access iOS tool allows you to program, diagnose and analyse LiNX systems.

This chapter gives an overview of the tool and how to use it.

- For information on how to find your way around the tool, see section 5 *Navigation*.
- For information on how to perform particular tasks, see section 6 *How to ...*

## 4.1 Programming contexts

The LiNX Access iOS tool has two programming contexts:

- **Connection context:** access and program a system directly while connected to the LiNX system on a wheelchair
- **File context:** access and edit a program stored as a file on your device

### 4.1.1 Viewing the contexts

You can view the contexts by toggling between them on the context switch on the navigation bar. (See 6.2 *Select the context*.)

## 4.2 Editing modes

Programs can be modified in one of two modes, which define when parameters are written to the wheelchair:

- live edit
- bulk edit

### 4.2.1 Live edit

Live edit mode is available in the connection context only – that is, when connected to a wheelchair.

Live edit writes parameter changes immediately to the wheelchair as you enter them.

This is useful for quickly setting up or testing.

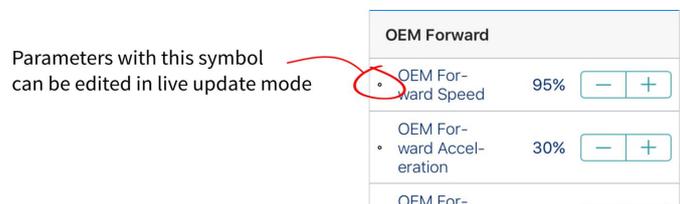


Figure 5: Live edit mode indicator

Not all parameters can be updated in live edit mode. Parameters that can be updated in live edit are identified by a circular icon to the left of the parameter name (see *Figure 5*).

#### ⚠ Warning

When in live edit mode, changes to parameters take immediate effect, changing the performance of the wheelchair immediately.

#### ⚠ Warning

There is no function to undo a change in live edit mode. Before editing, save a copy of the program to use to restore settings, if required.

### 4.2.2 Bulk edit

Bulk edit parameters are available in connection context and file context.

In bulk edit, all parameters are editable but none are written to the wheelchair immediately. They are written to the wheelchair when the Write function is selected.

In connection context, bulk edit parameters are identified by a blue background and must be unlocked to be editable. In file context, all parameters are bulk edit parameters.

#### 4.2.2.1 Connection context

You can unlock bulk edit by opening any bulk edit parameter and tapping **Unlock** — *Figure 6*. Alternatively, you can tap on the Application Menu button (top-right hand corner ) and select **Unlock And Enter Bulk Edit** — *Figure 7*. When unlocked, the editing mode switches from live edit to bulk edit, and all parameters are editable.

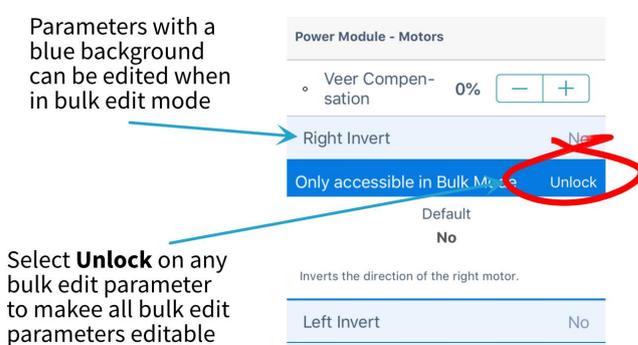


Figure 6: Bulk edit unlock from parameter

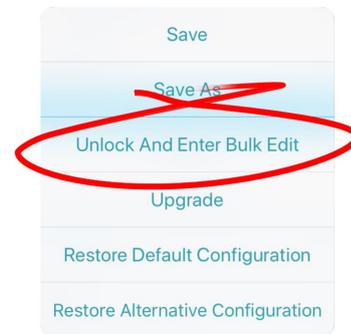


Figure 7: Bulk edit unlock from application menu

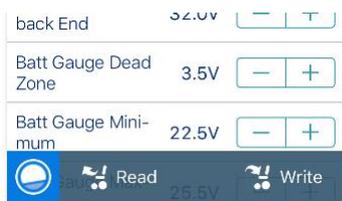


Figure 8: Bulk edit icon, and read and write options

After unlocking bulk edit, the bulk edit icon and read and write options appear at the bottom of the screen.

- **Read** power-cycles the system and returns you to live edit, if your program is in sync with the wheelchair. Any edits you have made will be lost.
- **Write** writes your edits to the wheelchair, power-cycles the system and returns you to live edit.

#### 4.2.2.2 File context

In file context, the read and write functions are available only if a wheelchair is connected to the system. To connect a wheelchair, open a connection in connection context and return to file context to edit the file.

#### Note

By default, live edit mode is enabled every time the system is powered up, including after a power cycle. The application remains in live edit mode until bulk edit mode is unlocked. At that point, the application changes to bulk edit mode and live edit mode is disabled. The application then remains in bulk edit until the system is written to and power-cycled.

### 4.3 The interface

Find out here about the:

- Home screen
- Parameter editing screens
- Diagnostic screens
- Utility screens
- Navigation bar
- Application menu

#### 4.3.1 Home screen

The Home screen is the default screen after connecting to a wheelchair or opening a configuration file. It provides general information about the system as well as access to the tool's programming and diagnostic screens.

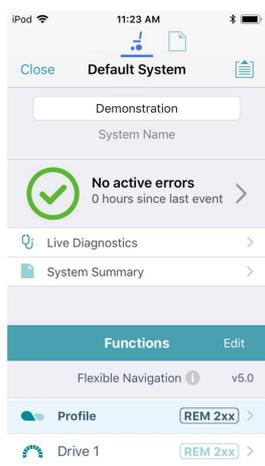


Figure 9: Home screen

#### Note

The **Program Name** and **System Name** are located at the top of the **Home** screen. If they are not visible, you can reveal them by swiping down on the Home screen.

#### Note

Further information about the home screen, and the screens accessed from it, is in the **Navigation** section.

#### 4.3.2 Parameter editing screens

Edit a wheelchair's operational parameters from the parameter groups on the **Home** screen. Parameter groups include:

- Profiles / Functions
- Modules
- Actuator motions
- Trigger angles
- User preferences
- Core features \*
- Drive limits \*
- Gyro limits \*
- Lighting

\* Manufacturer only

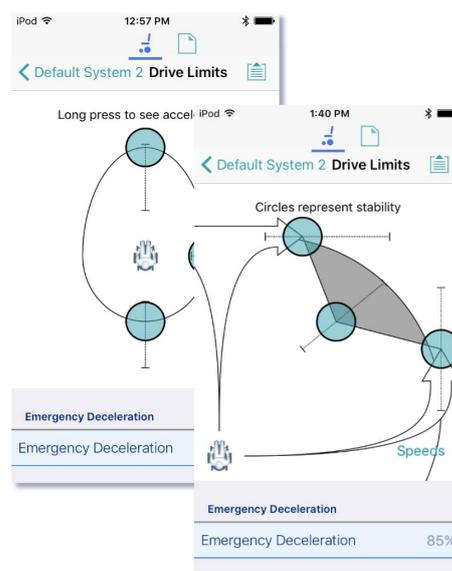


Figure 10: Drive limit speed and stability parameter editing screens

#### 4.3.2.1 Editing a parameter

There are several ways to edit a parameter:

- Change numerical parameters with the +/- buttons, or the low, high or default buttons
- Change non-numerical parameters (yes/no, on/off, etc) with a slide control
- Change the text in the name of a parameter
- Edit some parameters with graphical input tools

For details on how to edit parameters, see [6.5 Modify parameters](#).

For details on how to modify profiles and functions, see [6.6 Modify profiles and functions](#).



#### Note: Function states

The colour of a function icon indicates the state of the function.



*Function available*



*Function not available*



*Function inoperable*

#### 4.3.3 Utility screens

Utility screens display only when particular hardware or features are available.

There are four utility screens in LiNX:

- Adaptive load compensation calibration
- Gyro calibration
- Sip and puff calibration
- Joystick shaping calibration

##### 4.3.3.1 Adaptive load compensation calibration

The Adaptive Load Compensation (ALC) calibration utility calculates the motor resistance values to help provide more consistent motor speed.

ALC must be enabled before this utility can be used.

See information about using the ALC calibration at [Tune Adaptive Load Compensation \(ALC\)](#).

##### 4.3.3.2 Gyro calibration

The Gyro calibration utility helps you set up a gyro module.

A gyro module must be fitted and connected to the system before this utility becomes available.

See information about setting up the gyro utility at [Tune the gyro](#).

#### 4.3.3.3 Sip and Puff calibration

Sip and puff calibration lets you set up sip and puff thresholds on your input module.

See information about calibrating sip and puff at [Sip and puff calibration](#).

#### 4.3.3.4 Joystick shaping calibration

Joystick shaping lets you reduce the extent the joystick has to be deflected to reach full demand in one or more quadrants.

See information about joystick shaping calibration at [Joystick shaping](#).

#### 4.3.4 Diagnostic screens

Diagnostic screens let you view information about system activity.

View:

- [live diagnostics](#)
- [the system summary](#)
- [the chair log – active and previous errors](#)
- [chair statistics](#)

##### 4.3.4.1 Live diagnostics – Drive

When connected to a wheelchair, tap **Live Diagnostics | Drive** to view real-time graphs and data:

- Speed Demand (%)
- Turn Demand (%)
- Left Motor
  - Voltage (V)
  - Current (A)
  - Resistance (mΩ)
- Right Motor
  - Voltage (V)
  - Current (A)
  - Resistance (mΩ)
- Battery Voltage (V)
- Speed Dial (%)

Tap **Back** to exit the diagnostics.



Figure 11: Real-time diagnostics – drive

#### 4.3.4.2 Live diagnostics – Angle Sensor

When connected to a wheelchair, and if one or more angle sensors are configured and enabled, tap **Live Diagnostics** and then select an angle sensor to view a real-time graph of the selected angle sensor's angle.

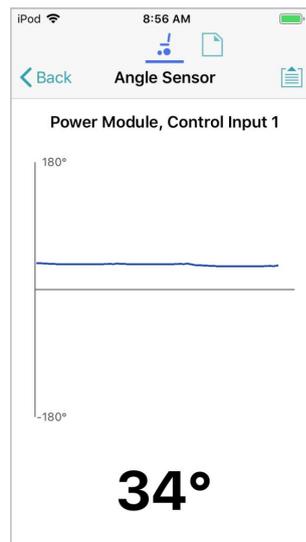


Figure 12: Real-time diagnostics – angle sensor

#### 4.3.4.3 The system summary

Tap **System Summary** to view the System Summary screen.

The System Summary screen displays details of the system's connected modules and tools, such as:

- a connected module's identifier
- a module's software version
- a module's serial number
- the access level of the LiNX Access Key

A link to the Dynamic Controls website is at the bottom of the screen.

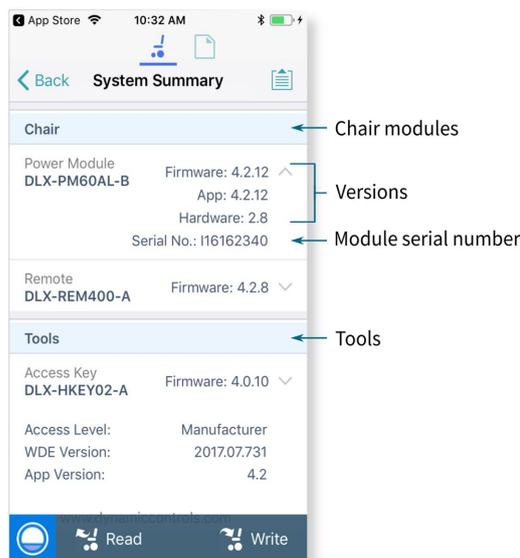


Figure 13: The system summary

#### 4.3.4.4 Active errors

Tap **Active Errors** to access and view:

- *the chair log*
- *chair statistics*

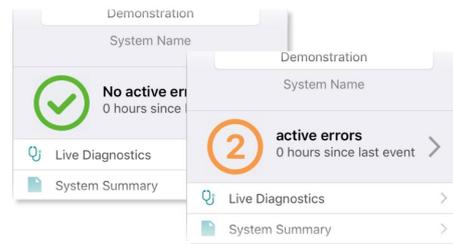


Figure 14: Active error button

#### View the chair log

Tap **Active Errors**, then tap **Chair Log** to display:

- a list of active errors
- a list of previous errors in the event log

Each entry in the log displays the error, its flash code (e.g. FC 3:7), and the component where the error occurred.

Tap an error entry to view further information on the error.

#### Clear the event log

Scroll to the bottom of the list and tap **Clear Event Log**.

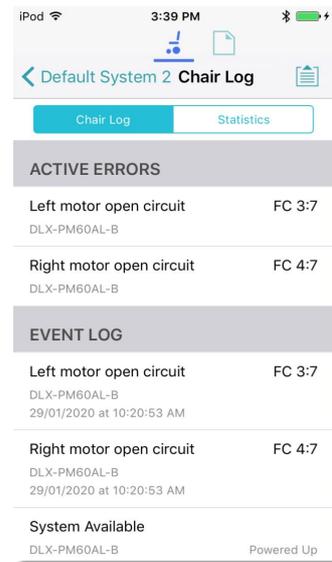


Figure 15: Viewing the event log

#### View chair statistics

Tap **Statistics** to view current system statistics.



Figure 16: View chair statistics

The statistics screen is divided into the following sections:

- *Battery usage*
- *Drive statistics*

### Battery usage

The battery usage statistics are in the top section of the statistics screen.

- To view more information about a battery usage statistic, tap the statistic, and a description displays under it.
- To reset the statistics, click **Reset Battery Usage** at the bottom of the battery usage section.

Available battery usage statistics are detailed in the table below:

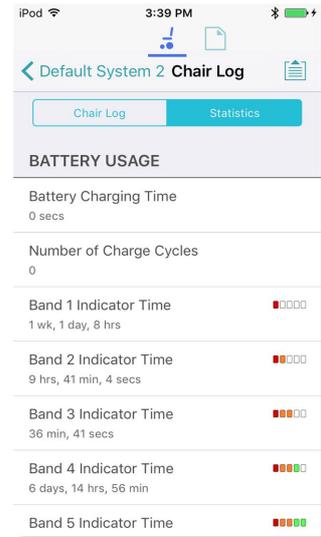


Figure 17: Reading battery usage

Battery usage statistics	Details
Battery Charging Time	The time that the batteries have been charged for
Number of Charge Cycles	The number of times the batteries have been charged
Band 1 Indicator Time	The total time the LINX system is operated with the state of charge between 0 and 20%
Band 2 Indicator Time	The total time the LINX system is operated with the state of charge between 20% and 40%
Band 3 Indicator Time	The total time the LINX system is operated with the state of charge between 40% and 60%
Band 4 Indicator Time	The total time the LINX system is operated with the state of charge between 60% and 80%
Band 5 Indicator Time	The total time the LINX system is operated with the state of charge between 80% and 100%
Average Battery Voltage	The average battery voltage over the last 31 days
Last Charge Timestamp	The date and time when the batteries were last put on charge
Number of High Battery Events	The number of high battery warnings
Number of Low Battery Events	The number of low battery warnings
Number of Deep Discharge Warnings	The number of deep discharge warnings
Battery Usage Last Reset	Date when these statistics were last reset

### Drive statistics

The drive statistics are in the bottom section of the statistics screen, below the battery statistics.

- To view more information about a drive statistic, tap a statistic, and a description displays below it.
- To reset the statistics, click **Reset Drive Statistics** at the bottom of the drive statistics section.

Drive statistic	Details
Average Motor Current	The average current drawn across all motors while driving
Maximum Left Motor Current	The peak measured motor current
Maximum Left Motor Current Time	Time spent drawing the "Maximum Drive Current Draw"
Maximum Right Motor Current	The peak measured motor current
Maximum Right Motor Current Time	Time spent drawing the "Maximum Drive Current Draw"
Powered Up Time	The total time the wheelchair controller is powered up
Drive Time	The total time the wheelchair has been driven
Average Drive Time	Average drive time
Time Near Maximum Current	The duration the current was within 20% of maximum threshold
Trip Distance	The total distance travelled by this wheelchair in meters since being reset by the user.
Total Distance Travelled	The total distance travelled by this wheelchair since being reset by a service agent.
Drive Statistics Last Reset	Date when these statistics were last reset

### 4.3.5 Navigation bar

The navigation bar is at the top of each screen. Its contents change depending on the screen. (See a typical layout in *Figure 18.*)

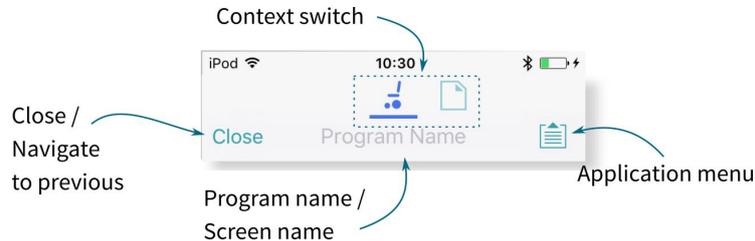


Figure 18: Navigation bar

### 4.3.6 Application menu

The Application menu contents depend on the selected context:

- Connection context: live and bulk edit
- File context

In the **connection context**, and when connected to a system, the following options are available:

- **Save** — save the configuration as a file (.lci)
- **Save As** — save the configuration as a file (.lci) with a different name
- **Unlock And Enter Bulk Edit** — unlock all parameters for editing (only shown in live edit)

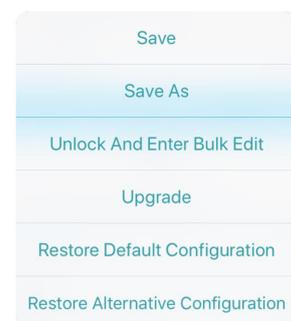


Figure 19: Application menu – connection context – live edit

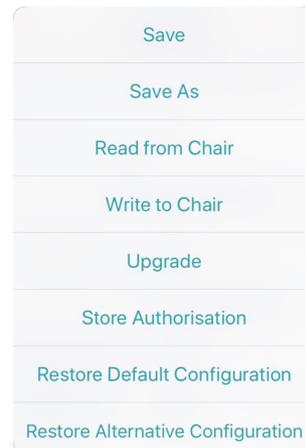
- **Read from Chair** – read the configuration from the connected LiNX system (only shown in bulk edit)
- **Write to Chair** – write the configuration to the connected LiNX system (only in shown bulk edit)
- **Convert Configuration** – convert to a valid configuration (only shown when conversion is possible)
- **Upgrade** – go to firmware upgrade mode
- **Store Authorisation** – store an Access Level Certificate (only shown if access level has not been stored)
- **Restore Default Configuration** – swap current configuration for the stored default configuration
- **Restore Alternative Configuration** – manage configurations (select, add, delete)

In **file context**, the options are:

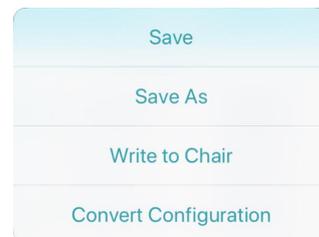
- **Save**
- **Save As**
- **Write to Chair** (if connected to a LiNX system).
- **Convert Configuration** – convert the file to a valid configuration

**Warning**

*The Write to Chair option and the Write button (in Bulk Edit ) overwrite the data on the connected LiNX system*



**Figure 20: Application menu – connection context – bulk edit**



**Figure 21: Application menu – file context**



## 5 Navigation

---

5.1 Overview map .....	30
5.2 Detail map .....	31
5.3 Detail map – profiles .....	32
5.3.1 Profile .....	32
5.3.2 Attendant profile .....	33
5.4 Detail map – modules .....	33
5.5 Detail map – actuator motions .....	34

---

In this chapter, find out where to access specific parameters and diagnostic information in the LiNX Access iOS tool.

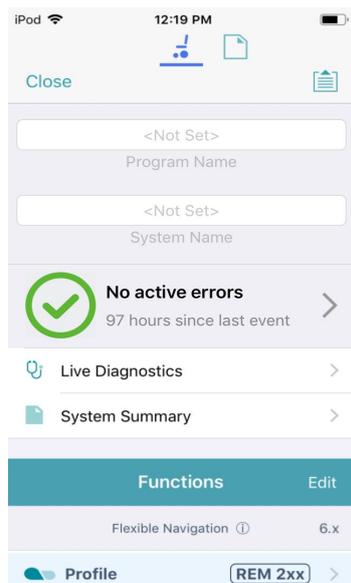
## 5.1 Overview map

Here are the parameters and diagnostic information accessible from the home screen:



### Note

The parameter groups accessed and displayed by the LiNX Access iOS tool vary depending on your LAK's access level (manufacturer or distributor), the system's configuration and the connected modules.



Program Name
System Name
Active Errors
Live Diagnostics
System Summary
Profiles (including Attendant profile, where relevant)
Modules
Actuator Motions
Trigger Angles
User Preferences
Core Features *
Drive Limits *
Gyro Limits *
Lighting
* Manufacturer only

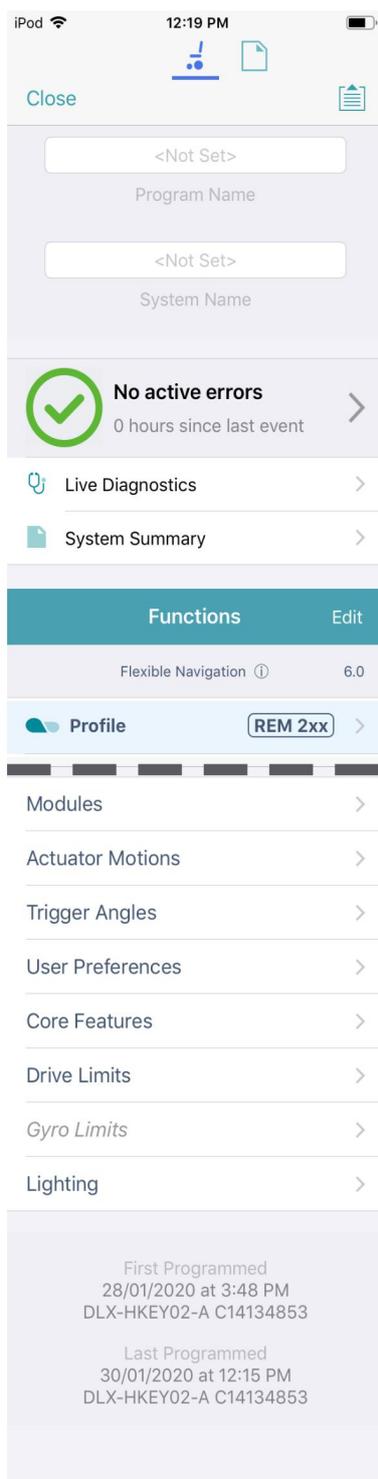
**Figure 22: Home screen overview map**

Drill down from these parameters to access further parameters (described below):

- *Detail map*
- *Detail map – profiles*
- *Detail map – modules*
- *Detail map – actuator motions*

## 5.2 Detail map

The parameters accessible from the home screen are:



**Figure 23: Home screen detail (image stitched between Functions and User Preferences)**

\* Manufacturer only

Active errors	Chair Log	Active errors
		Event Log
	Statistics	Battery Usage
		Drive Statistics
Live Diagnostics	Drive	Speed Demand
		Turn Demand
		Left Motor
		Right Motor
		Motor Resistance
		Battery Voltage
		Speed Dial
	Angle Sensor	
System Summary	Chair	System Modules
	Tools	Access Key
		Access Level
		WDE Version
		Application Version
		Link to Dynamic's website
		Privacy Policy
Profiles/functions	<a href="#">See 5.3 Detail map – profiles</a>	
Modules	<a href="#">See 5.4 Detail map – modules</a>	
Actuator Motions	<a href="#">See 5.5 Detail map – actuator motions</a>	
Trigger Angles	Configurations (Trigger Angle 1–7)	
User Preferences	Drive Settings	
	Switched Driving	
	Sleep and Rest Settings	
	Quadrant Actions in Rest	
	Lock Settings	
	User Function Navigation	
	User Function Change	
	Control Input/Output Settings	
	Display Settings	
	Energy Use Settings	
	Speedometer and Odometer	
	Audible Cues	
Core Features *	Battery Management	
	Anti-rollaway	
	Actuators	
	Firmware	
	System Configuration	
Drive Limits *	Emergency Deceleration	
	Forward	
	Reverse	

	Turn
	Stability
	Configuration
Gyro Limits *	OEM Forward Gyro
	OEM Reverse Gyro
	OEM Turn Gyro
	OEM Stability Gyro
Lighting	Turn Indicators
	Position

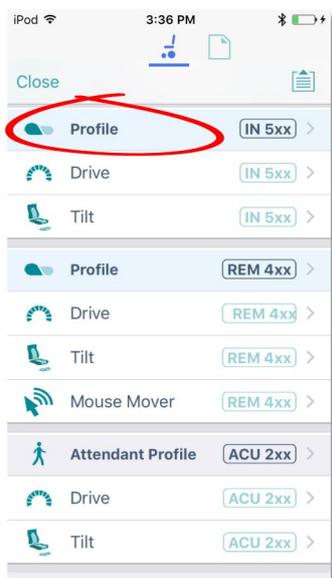
### 5.3 Detail map – profiles

A profile is a container for user functions: drive, seating, mouse mover, utility and switch control. A profile can contain one or more functions. For profiles with multiple functions, the functions can be of the same type, or mixed. LiNX has two types of profile:

- Profile (many can be created)
- Attendant profile (one available, and only on an ACU module)

Wheelchair occupants can see all profiles except the attendant profile, while wheelchair attendants can only see the attendant profile.

#### 5.3.1 Profile



**Figure 24: Profile detail**

Drive	General
	Forward
	Reverse
	Turn
	Stability
	Latched Driving
	Performance
	Operation
Seating	General
	Axis
Mouse Mover	General
	Cursor Speeds
	Operation
Switch Control	General
Utility	General
	Forward Momentary/Short Press
	Forward Long Press
	Reverse Momentary/Short Press
	Reverse Long Press
	Left Momentary/Short Press
	Left Long Press
	Right Momentary/Short Press
	Right Long Press

### 5.3.2 Attendant profile

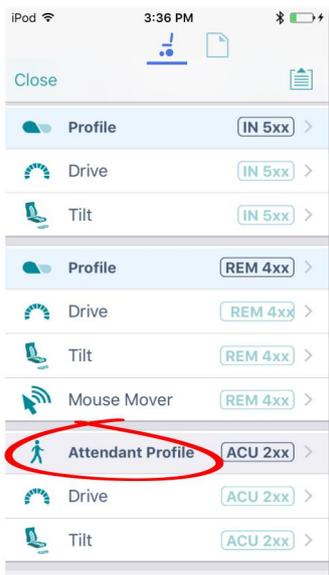


Figure 25: Attendant profile

Drive	General	
	Forward	
	Reverse	
	Turn	
	Stability	
	Latched Driving	
	Performance	
	Operation	
	Seating	General
		Axis

### 5.4 Detail map – modules

The parameters accessible from the **Modules** screen are:

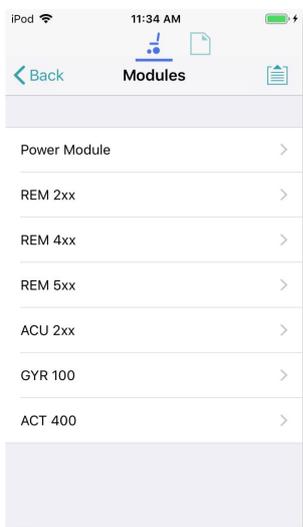


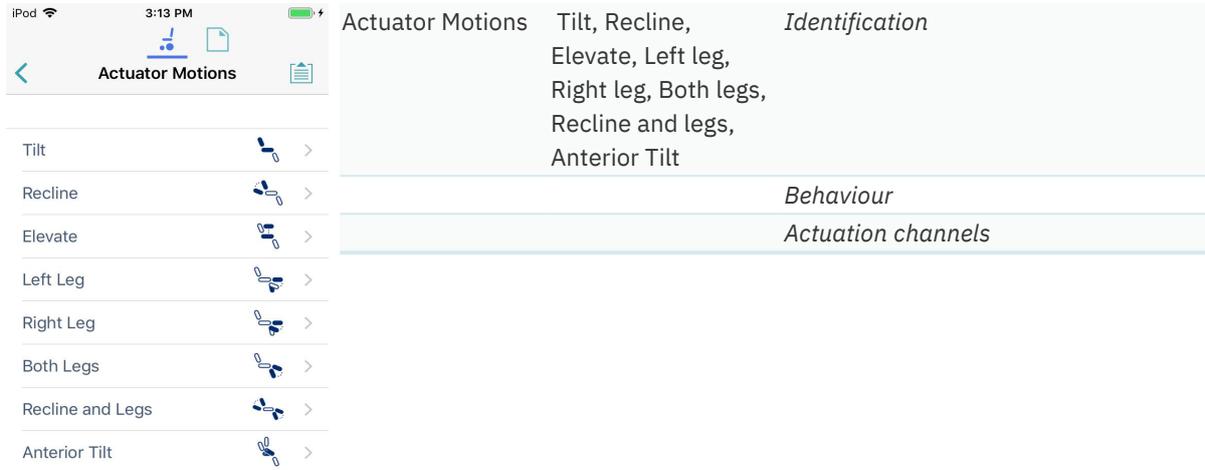
Figure 26: Modules

Modules	Power module	Motors
		Load compensation
		Custom load compensation
		Park brake
		Actuators - Electrical and Timing
		Control inputs - Port settings
		Control input/output port settings
	ACU / Compact Remote / Input Module / REM modules / TPI	User input - configuration
		Port settings (as relevant)
	GYR 100	Gyro performance
	ACT200-1 *	Actuators - Electrical and Timing
		Angle Sensor - Triggers
		Angle Sensor - Orientation
		Control inputs - Port settings
	ACT400-1 *	Actuators - Electrical and Timing
		Angle Sensor - Triggers
		Angle Sensor - Orientation
		Control inputs/outputs

\* Manufacturer only

## 5.5 Detail map – actuator motions

The parameters accessible from the **Actuator Motions** screen are:



**Figure 27: Actuator Motions**

## 6 How to ...

---

6.1 Open the LiNX Access iOS tool .....	36
6.2 Select the context .....	36
6.2.1 Wheelchair .....	36
6.2.2 File .....	37
6.2.3 Toggle between contexts .....	37
6.3 Connection context actions .....	37
6.3.1 Connect and disconnect to the LiNX Access tool .....	38
6.3.2 Manage chair configurations .....	39
6.3.3 Change the program name and system name .....	40
6.3.4 Modify a program .....	41
6.3.5 Save a program .....	41
6.3.6 Upgrade the firmware .....	42
6.3.7 Tune the gyro .....	43
6.3.8 Tune Adaptive Load Compensation (ALC) .....	43
6.3.9 Calibrate sip and puff .....	44
6.3.10 Joystick shaping .....	45
6.3.11 Store the Access Level Certificate .....	46
6.4 File context actions .....	47
6.4.1 Open and close a file .....	48
6.4.2 Modify a file .....	48
6.4.3 Convert configuration .....	49
6.4.4 Save a file .....	49
6.4.5 Write to the wheelchair .....	50
6.4.6 Delete a file .....	51
6.4.7 Share a file .....	51
6.4.8 Program a system from a bundle file .....	52
6.5 Modify parameters .....	55
6.5.1 Modify parameters textually .....	55
6.5.2 Modify parameters numerically .....	55
6.5.3 Modify parameters graphically .....	56
6.6 Modify profiles and functions .....	60
6.6.1 Add and delete profiles .....	61
6.6.2 Add, delete and move functions .....	62
6.6.3 Edit function icons .....	65
6.7 Configure control inputs and outputs (control IO) ...	66
6.7.1 Select and configure an input .....	66
6.7.2 Configure an always rule .....	68
6.7.3 Configure a conditional rule .....	69
6.7.4 Configure advanced settings .....	71

---

## 6.1 Open the LiNX Access iOS tool

1. Open the LiNX Access iOS tool using the LiNX icon on your device.  
The **Connect to Device** screen opens.
2. From the Navigation bar, select a context to work on either a connected wheelchair or a file stored on your device.  
See [6.2 Select the context](#) for details on how to select a context.

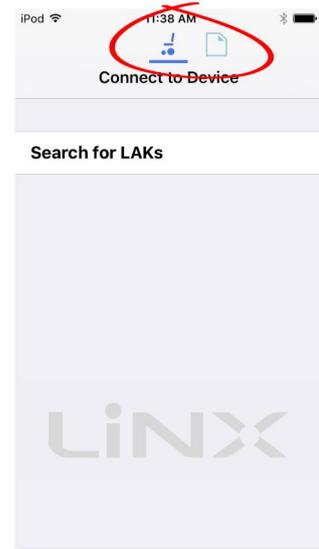


Figure 28: Select a context

## 6.2 Select the context

### 6.2.1 Wheelchair

To work on a connected wheelchair, select  (the **connection context**) from the context switch on the *Navigation bar*.

When you select the connection context, and if you are connected to a LiNX system, the last screen you were working on displays.

Otherwise, the **Connect to Device** screen displays.

(See [6.3.1 Connect and disconnect to the LiNX Access tool](#) for how to connect to a LiNX system from the Connect to Device screen.)

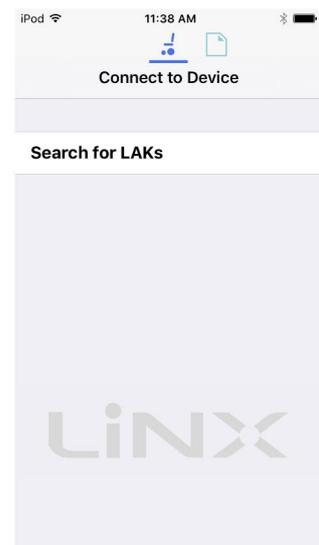


Figure 29: Connect to Device screen

### 6.2.2 File

To work on a saved file, select  (the **file context**) from the context switch on the *Navigation bar*.

When you select the file context, and if you have a file open, the last screen you were working on displays.

Otherwise, the **Load from File** screen displays, showing program files (.lci) at the top, and bundle files (.lcb) underneath.

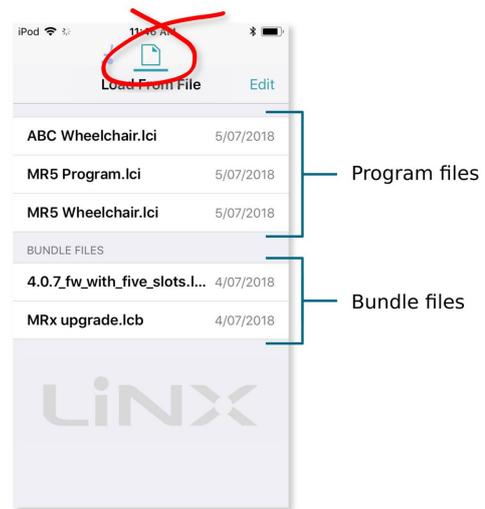


Figure 30: Load from File screen

#### Note

The following system details are displayed at the top of this screen: Access Key Level; WDE Version; Application Version; Link to Dynamic's website; Privacy Policy.

#### See also

See 6.4.1 for how to open a file.  
See 6.4.7.1 for how to share a configuration (.lci) or bundle (.lcb) file.  
See 6.4.7.2 for how to import a configuration (.lci) or bundle (.lcb) file.

### 6.2.3 Toggle between contexts

Tap the icons on the context switch (see *Figure 31*) at any time to toggle between **connection context** and **file context**.

The selected context displays a coloured bar beneath its icon.



Figure 31: Context switch

## 6.3 Connection context actions

The following actions are only relevant when in **connection context**. (For actions related to the **file context**, see *6.4 File context actions*.)

Find out here how to:

- *Connect and disconnect to the LiNX Access tool*
- *Manage chair configurations*
- *Change the program name and system name*
- *Modify a program*
- *Save a program*
- *Upgrade the firmware*
- *Tune the gyro (manufacturer only)*
- *Tune Adaptive Load Compensation (ALC)*
- *Calibrate sip and puff*
- *Store the Access Level Certificate*

### 6.3.1 Connect and disconnect to the LiNX Access tool

#### 6.3.1.1 Connect

To connect the LiNX Access iOS tool to the wheelchair:

1. Power up a LiNX wheelchair system.
2. Insert a LAK into the remote module's XLR port.
3. Open the LiNX Access iOS tool application.
4. Select the connection context button:  (in the *Navigation bar*).
5. Tap the **Search for LAKs** button and select a LAK from the *Select an Accessory* list. A disclaimer screen displays.
6. Read the disclaimer message and tap **I Agree** to continue.

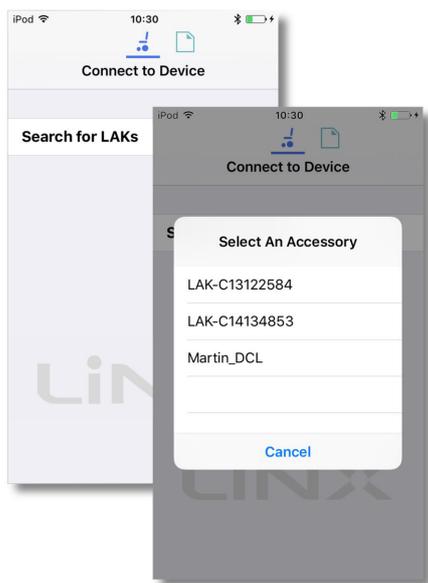


Figure 32: Selecting a LAK

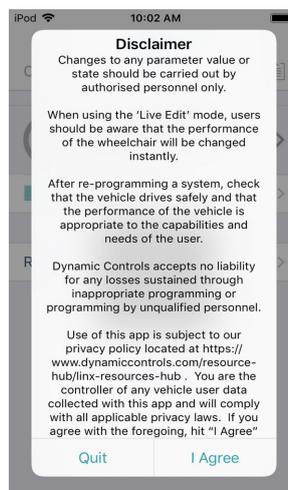


Figure 33: Agree to terms in disclaimer message

#### Note

If the list of available devices takes a long time to populate when you tap on **Search for LAKs**, you may be able to speed the process up by removing the number of previously used devices that appear in your iOS device's Bluetooth list **My Devices**.

To remove devices from My Devices:

1. from your iOS device's home screen, go to **Settings** → **Bluetooth**;
2. tap on a device under **My Devices**
3. tap on **Forget This Device**
4. repeat 1) to 3) for each device under the My Devices heading.

### 6.3.1.2 Disconnect

To disconnect the LiNX Access iOS tool from the wheelchair:

1. Tap **Close** (at the top of the screen).

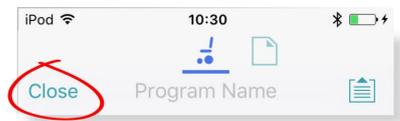


Figure 34: Disconnecting from a connected wheelchair

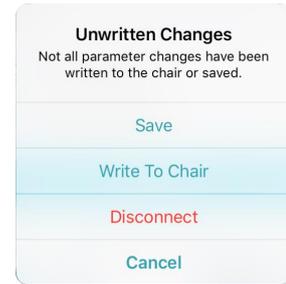


Figure 35: Unwritten changes in the connection context

If all data is saved, the tool returns to the *Connect to Device* screen. If any data is unsaved, the following options display:

- Save** — saves the configuration to a file,
- Write to Chair** — writes the configuration to the chair,
- Disconnect** — disconnects without saving or writing,
- Cancel** — return to the configuration.

#### Warning

If you click **Disconnect**, any unsaved data is lost.

### 6.3.2 Manage chair configurations

This section explains how to:

- *select a chair configuration*
- *add a chair configuration*
- *delete a chair configuration*

#### 6.3.2.1 Select a chair configuration

##### Note

When a new configuration is selected, the system automatically power-cycles before the configuration becomes active.

To select a chair configuration (and make it the active configuration for the wheelchair):

1. Tap on the **Application Menu** button and select **Restore Alternative Configuration** from the menu. The **Chair configs screen** displays.
2. Tap a named configuration.  
A warning message displays.
3. On the warning message, tap **Yes** to proceed with your selection.  
The system returns you to the home screen.

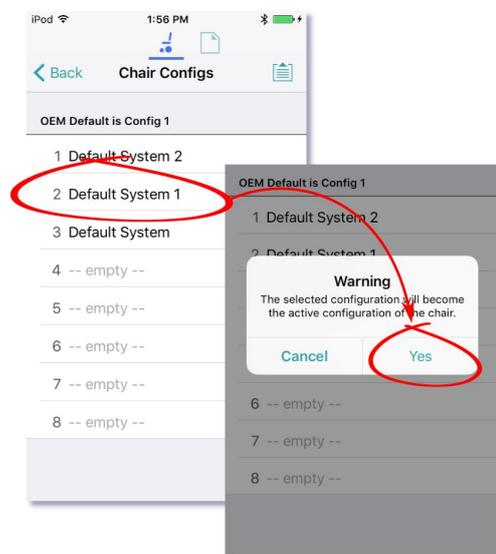


Figure 36: Select a chair configuration

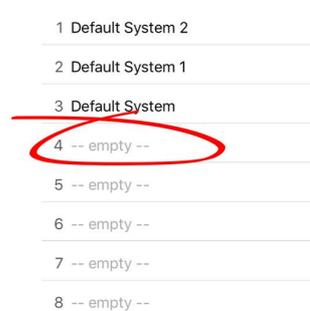
### 6.3.2.2 Add a chair configuration (manufacturer only)

**Note**

If in bulk edit mode: before you add the active configuration to the store, ensure it has been written to the chair. To do this, tap **Write** in the blue bar at the bottom of the screen. Wait for the success message before proceeding.

To add the active chair configuration to the chair configuration store:

1. Tap on the **Application Menu** button and select **Restore Alternative Configuration** from the menu. The chair config screen displays.
2. Tap an **--empty--** configuration slot.  
A **Working** dialogue displays while the configuration is saved to the empty slot, and the empty slot is renamed with the program name.
3. Tap **Back** to return to the Home screen.

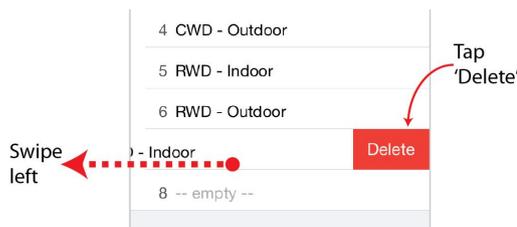


**Figure 37: Adding a chair configuration**

### 6.3.2.3 Delete a chair configuration (manufacturer only)

To delete a configuration from the configuration store:

1. Tap on the **Application Menu** button and select **Restore Alternative Configuration** from the menu. The Chair Configs screen displays.
2. Tap and hold a named configuration until its background turns grey, and then swipe to the left.  
A red **Delete** button displays.
3. Tap **Delete**. The configuration is removed and replaced with an **--empty--** slot.



**Figure 38: Deleting a chair configuration**

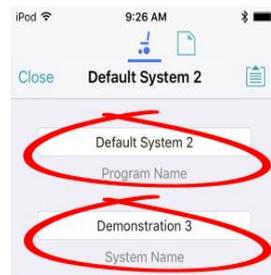
### 6.3.3 Change the program name and system name

The program and system names can be changed depending on your LiNX Access Key version:

- **Distributors** (DLX-HKEY01-A): can edit the Program Name
- **Manufacturers** (DLX-HKEY02-A): can edit the Program Name and System Name

The names are located near the top of the home screen.

1. Type in the name(s) you require.
2. Tap **Return** (on the keyboard).
3. Save the name(s) as required.



**Figure 39: Change program name or system name**

 **Note**

- In **Connection context, live edit**, the new names are saved automatically to the wheelchair.
- In **Connection context, bulk edit**, tap **Write** to write the names to the wheelchair.
- In **File context**, save or write the file from the Application menu.

### 6.3.4 Modify a program

Program parameters can be modified numerically, textually and graphically. (See 6.5 *Modify parameters*.) There are two edit modes in which to modify a program:

- *Live edit*
- *Bulk edit*

 **Note**

When a parameter is modified, its background colour changes to yellow to indicate it has been modified. The yellow background reverts to white when the modified parameter value is written to the controller or saved to a file.

In live edit, it may be difficult to see the background colour changing as the live edit operation can occur rapidly.

### 6.3.5 Save a program

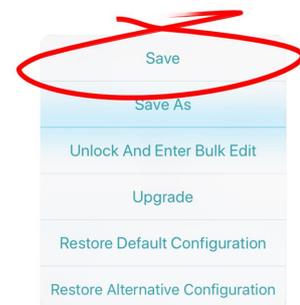
Save a program using:

- *Save*
- *Save As*

#### 6.3.5.1 Using Save

To save the current program as a file to your iOS device.

1. Tap the **Application** menu button .
2. Tap **Save**.
  - If you have previously saved the program to a file in the current session it will automatically save to the same file (and overwrite it).
  - If you have not previously saved the program, you will be prompted to **Save as** with a new file name. After saving the program, the tool displays a confirmation message with the file's name.
3. Tap **Dismiss** to remove the message and continue.



**Figure 40: Using Save**

 **Note**

All files are saved with a *.lci* extension.

If, when you save, you are prompted to *Save As* with a new file name:

- If the program name is set, you can save with the program name.
- If the program name has not been set, the file can be saved with a date/time stamp: **YYYYMMDD-HHMMSS.lci** where: *YYYY* = year; *MM* = month; *DD* = day; *HH* = hour; *MM* = minutes; *SS* = seconds

### 6.3.5.2 Using Save As

To save the current program with a different name to your iOS device:

1. Tap the **Application** menu button .
2. Select **Save as**.
3. Enter a new file name (or use the displayed file name).
4. Tap **Save**.

After saving the program, the tool displays a confirmation message with the file's name.

5. Tap **Dismiss** to remove the message and continue.

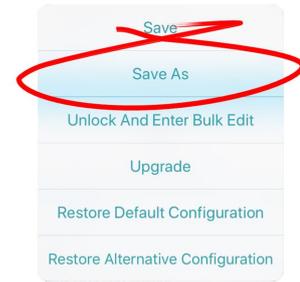


Figure 41: Using Save As

#### Note

All files are saved with a **.lci** extension.

- If the file has not been saved before, and if the program name is set, the save as dialog suggests saving with the program name.
- If the program name has not been set, the file can be saved with a date / time stamp: **YYYYMMDD-HHMMSS.lci** where: YYYY = year; MM = month; DD = day; HH = hour; MM = minutes; SS = seconds.
- If the file has been saved before, the save as dialog suggests saving with "Copy of" prepended before the name. For each subsequent save, it suggests saving with an incremental numerical value appended to the name.

### 6.3.6 Upgrade the firmware

1. Tap the **Application** menu button .
2. Tap **Upgrade**.

The screen displays "Entering Firmware Upgrade Mode. Please Wait...".

If the connected modules are up-to-date, the Upgrade screen displays FIRMWARE UP-TO-DATE with a list of connected modules and their respective versions.

Modules that need upgrading display under NEW FIRMWARE AVAILABLE.

3. If no modules require updating:
  - Tap the **Done** button (top-left, navigation bar) to finish.

Otherwise:

- Tap a single module to upgrade it, or
- Tap the **Upgrade All** button (top-right, navigation bar).  
During a module upgrade, a progress bar displays.  
Once the upgrade has completed, its status displays (succeed or fail).
- Tap **Done** to finish.

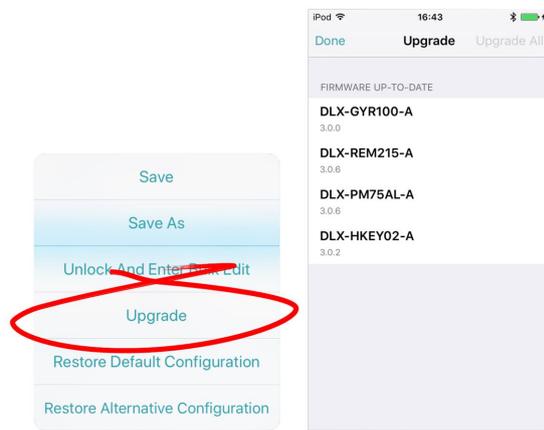


Figure 42: Upgrading the firmware

### 6.3.7 Tune the gyro

**Note**

A gyro module must be connected and enabled in the current drive function before continuing. Gyro tuning is available only in live edit. For more information on gyro tuning, refer to the LiNX Systems Installation Manual (GBK54036).

1. From the **Home** screen, tap **Modules**.
2. Tap **GYR 100**.
3. Tap **Go to Gyro Turn Calibration**.
4. Follow the instructions on the screen.

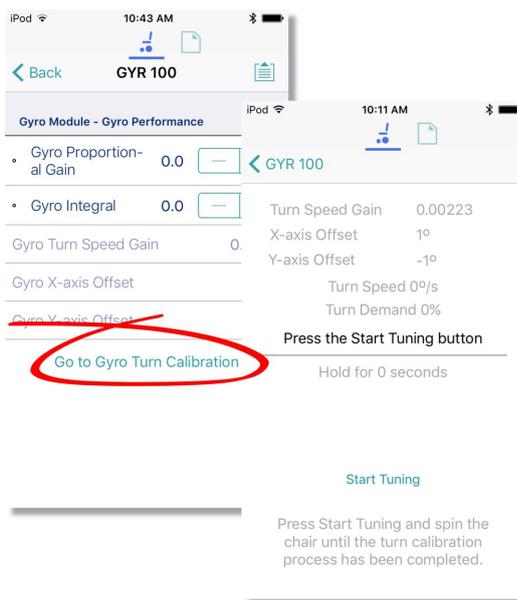


Figure 43: Tuning the gyro

### 6.3.8 Tune Adaptive Load Compensation (ALC)

**Note**

Adaptive Load Compensation (ALC) must be enabled before tuning. To enable ALC:

1. From the **Home** screen, tap **Modules**.
2. Tap **Power Module**.
3. Scroll down to **Load Compensation**, enable **Bulk Edit**, and switch on **Adaptive Load Comp Enabled**.
4. Tap **Write to Chair**.

To tune the adaptive load compensation:

1. From the **Home** screen, tap **Modules**.
2. Tap **Power Module**.
3. Scroll down to **Power Module – Load Compensation**, and tap **Go to ALC Calibration**.
4. Follow the instructions on the screen.

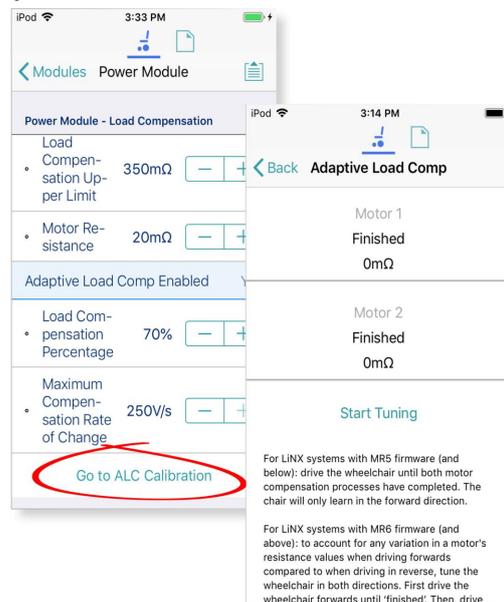


Figure 44: Tuning Adaptive Load Compensation

### 6.3.9 Calibrate sip and puff

 **Note**

An input module must be connected and Sip and Puff enabled in the module before calibrating. To enable Sip and Puff:

1. From the **Home** screen, tap **Modules**.
2. Tap **IN 5xx**.
3. Tap **User Input Configuration**, unlock Bulk Edit, and select Sip and Puff from the **User Input Configuration** drop-down menu.
4. Tap **Write to Chair**.

#### 6.3.9.1 Open sip and puff calibration

1. From the **Home** screen, tap **Modules**.
2. Tap **IN 5xx**.  
The IN5XX screen opens.
3. Ensure *Sip and Puff* is selected in **User Input Configuration**.
4. Tap **Go to Sip and Puff Calibration**.
5. Calibrate *sip*, *puff* and *test* as required.



**Figure 45: Open sip and puff calibration**

#### 6.3.9.2 Calibrate sip

1. Tap the **Sip** tab.
2. Use the sliders on the right of the screen to set the sip levels as required.

#### 6.3.9.3 Calibrate puff

1. Tap the **Puff** tab.
2. Use the sliders on the right of the screen to set the puff levels as required.

#### 6.3.9.4 Test sip and puff

1. Tap the **Test** tab.
2. Use the **Test** screen to test your sip and puff calibrations.

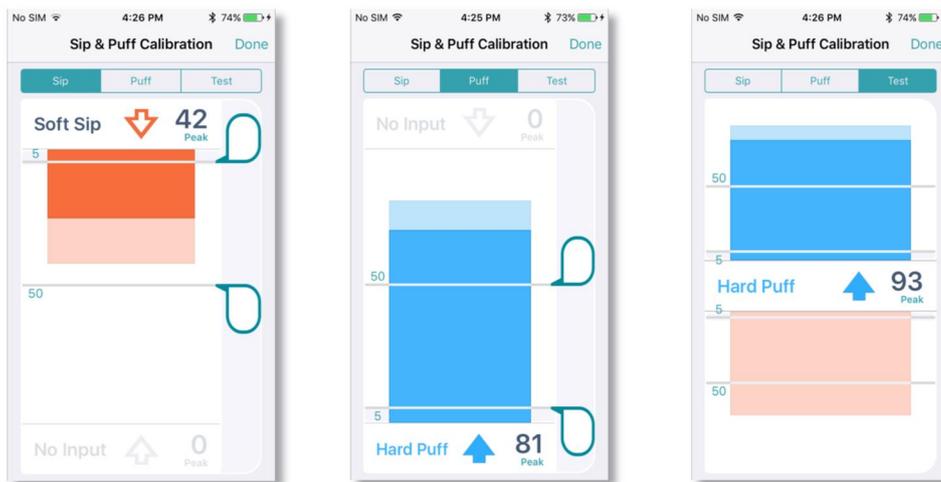


Figure 46: Sip and Puff calibration and test screens



**Note**

Refer to the LiNX System Installation Manual (GBK54036) for technical details on how to calibrate sip and puff.

### 6.3.10 Joystick shaping

1. From the **Home** screen, tap on:  
**Modules | [Remote Module] | User Input - Joystick Shaping**  
 For example, for a REM400 remote module, tap on:  
**Modules | Rem400 | User Input - Joystick Shaping**
2. Tap on the **Go to Joystick Shaping Calibration** button that is located at the end of the Joystick Shaping parameters list (Figure 47). The calibration screen opens with an instruction pop-up explaining how to perform the calibration.

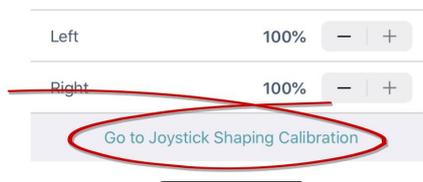
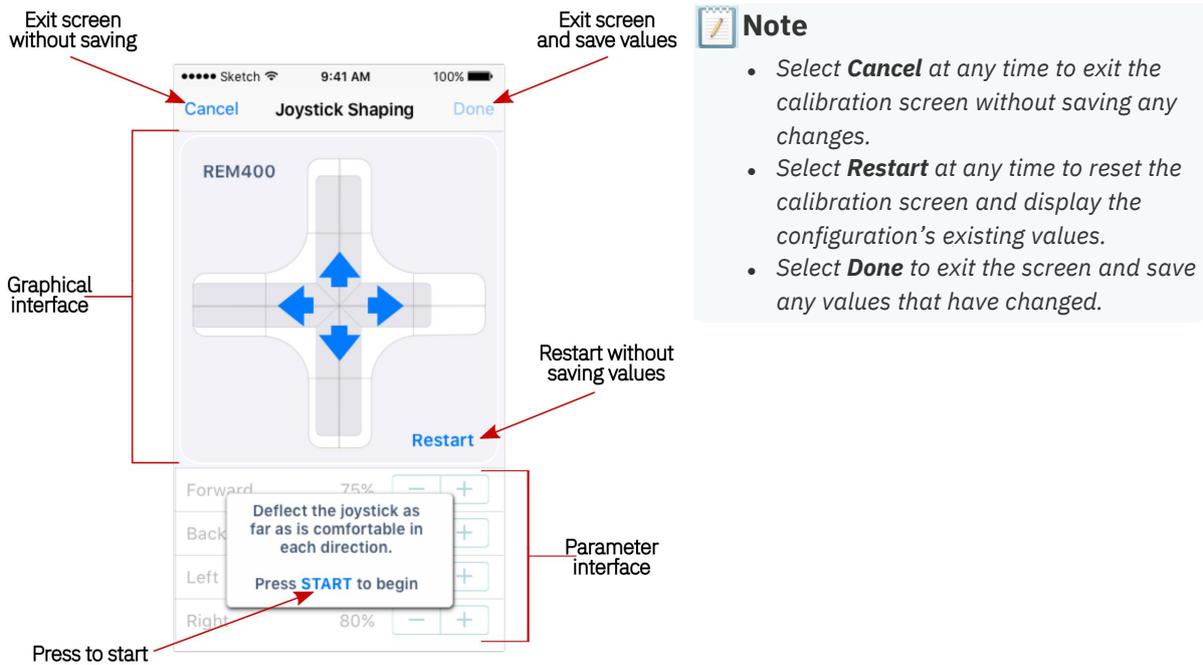


Figure 47: Go to Joystick Shaping Calibration button (LiNX Access iOS)



**Note**

- Select **Cancel** at any time to exit the calibration screen without saving any changes.
- Select **Restart** at any time to reset the calibration screen and display the configuration's existing values.
- Select **Done** to exit the screen and save any values that have changed.

**Figure 48: joystick shaping screen control overview (LiNX Access iOS)**

3. Tap **OK** on the pop-up, or deflect the joystick in any direction to continue.
4. Ask the user to deflect the joystick in all four directions. The user can deflect the joystick in any of the quadrants, in any order, but should be deflected to a point that is comfortable and repeatable.
5. Once the user has completed deflecting the joystick in each quadrant, tap on the **Done** button to exit the calibration screen. At this point, the calibration values, as indicated with the light blue bars and also shown numerically in the parameter interface, will be saved to the configuration.

**Note**  
Refer to the *LiNX System Installation Manual (GBK54036)* for technical details on joystick shaping.

### 6.3.11 Store the Access Level Certificate

The Access Level Certificate determines how you view and edit offline programs (\*.lci files) when in file context.

If you do not store your certificate, you get read-only access to your stored .lci files.

The certificate is taken from a connected LiNX Access Key and provides access to your files on one of two levels:

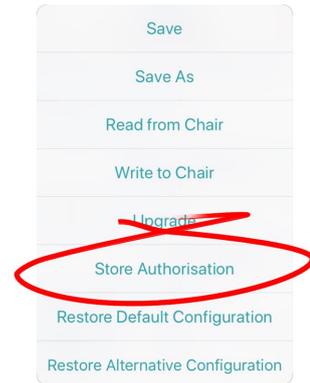
- Distributor – access to a limited number of parameters
- Manufacturer – access to all parameters

To edit files with distributor's access requires an Access Level Certificate from a distributor-level LiNX Access Key (DLX-HKEY01-A).

To edit files with manufacturer's access requires an Access Level Certificate from a manufacturer-level LiNX Access Key (DLX-HKEY02-A).

To store an Access Level Certificate:

1. Connect to a LiNX system.
2. Tap the **Application** menu button .
3. Select **Store Authorisation**<sup>‡1</sup>.
4. Tap **Store** to continue<sup>‡2</sup> or **Don't Store** to cancel.



**Figure 49: Store authorisation**

After storing a certificate, you can edit your stored files.

 **Notes**

<sup>‡1</sup> A message displays showing how many authorisations remain and asking if you want to continue. LiNX Access Keys only permit ten Store Authorisation operations. Once ten authorisations have occurred, the menu item is greyed out.

<sup>‡2</sup> If the LiNX Access iOS tool application is removed from your iOS device, the Access Level Certificate will be lost.

 **Note**

Once a certificate has been stored on your iOS device, the access level granted by the stored certificate does not have to be the same as the access level granted by subsequent LiNX Access Keys. You can mix the access levels of LiNX Access Keys and stored Access Level Certificates.

With mixed access levels, the higher level takes precedence when editing parameters. That is, if either the Access Level Certificate or the LiNX Access Key is at manufacturer-level access, you can edit parameters at manufacturer level: a manufacturer's LiNX Access Key (DLX-HKEY02-A) overrides a stored distributor-level certificate, and a stored manufacturer's-level certificate overrides a distributor's LiNX Access Key (DLX-HKEY01-A).

## 6.4 File context actions

The following tasks are only relevant when in file context. (For tasks related to the connection context, see 6.3 Connection context actions.)

Find out here how to:

- *Open and close a file*
- *Write a file to a wheelchair*
- *Modify a file*
- *Delete a file*
- *Convert configuration*
- *Share a file*
- *Save a file*

### 6.4.1 Open and close a file

#### 6.4.1.1 Open a file

1. Select the file context button:  (in the *navigation bar*).
2. Tap a file from the list in the **Load From File** screen.

 **Note**

If you already have a file open, click **Close** (at the top-left of the screen) to return to the **Load from File** screen.

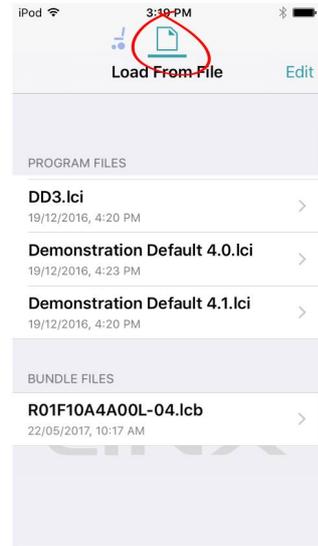


Figure 50: Load from file

#### 6.4.1.2 Close a file

Click **Close** at the top left of the Home screen.

If all data is saved, the tool returns to the *Load from file* screen.

If any data is unsaved, the *Unsaved Changes* options display:

- Save** — save the file,
- Close** — close the file without saving changes,
- Cancel** — return to editing file.

 **Warning**

Click **Close** in the *Unsaved Changes* option and any unsaved data is lost.

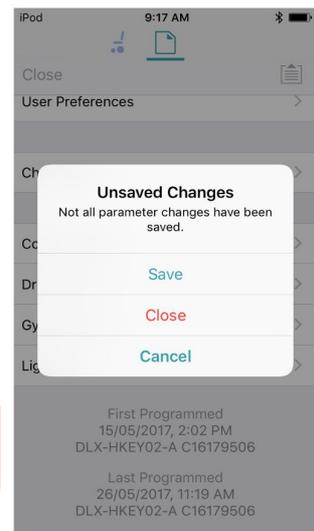


Figure 51: Unsaved changes in file

### 6.4.2 Modify a file

Values and parameters in a file can be edited:

- *textually*
- *numerically*
- *graphically*

(**Note:** Use *Save* or *Save As* after editing a file.)

#### 6.4.2.1 If the file cannot be modified

If the file cannot be edited, or certain parameters are not available, check:

- **the Access Level Certificate has been stored**

The Access Level Certificate from your LiNX Access Key has to be stored on your iOS device before you can edit files. (See section [6.3.11 Store the Access Level Certificate.](#))

- **the access level**

Editing is limited by the stored Access Level Certificate.

- Manufacturers (using the DLX-HKEY02-A Access Key) can edit the full range of available parameters.
- Distributors (using the DLX-HKEY01-A Access Key) can edit a limited range.

To view the access level: open the *System Summary* and view *Access Level* at the bottom of the screen.

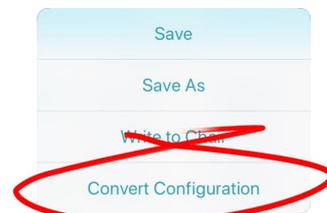
### 6.4.3 Convert configuration

If you have a file with an invalid configuration you will be able to open it but not write it to the chair.

An invalid configuration dialog appears when you open it.

The convert configuration option allows some invalid files to be converted to a valid configuration.

1. Tap the Application menu button . If your file can be converted the Convert Configuration option will be displayed.
2. Tap **Convert Configuration** and follow the screen prompts.



**Figure 52: Convert configuration**

### 6.4.4 Save a file

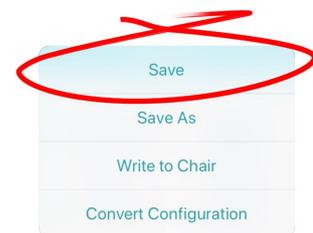
Save a file using:

- *Save*
- *Save as*

#### 6.4.4.1 Using Save

To save the current program as a file to an iOS device:

1. Tap the Application menu button .
2. Tap **Save**. After saving the program, the tool displays a message that the save was successful and with the file's name.
3. Tap **Dismiss** to remove the message and continue.



**Figure 53: Using Save**

 **Note**

All files are saved with a .lci extension.

- *If the program name has been set, the file can be saved with the program name.*
- *If the program name has not been set, the file can be saved with a date / time stamp: YYYYMMDD-HHMMSS.lci where: YYYY = year; MM = month; DD = day; HH = hour; MM = minutes; SS = seconds.*

### 6.4.4.2 Using Save As

To save the current program as a file with a different name:

1. Press the Application menu button .
2. Select **Save As**.  
A dialog displays asking for the new file name.
3. Enter the new file name.
4. Tap **Save**.  
After saving the program, the tool displays a message showing the file's name and that the save was successful.
5. Tap **Dismiss** to remove the message and continue.

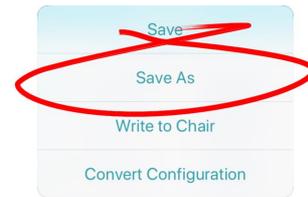


Figure 54: Save As

#### Note

All files are saved with a .lci extension.

- If the file has not been saved before, and if the program name has been set, the save as dialog suggests saving the file with the program name.
- If the program name has not been set, the file can be saved with a date / time stamp: YYYYMMDD-HHMMSS.lci where: YYYY = year; MM = month; DD = day; HH = hour; MM = minutes; SS = seconds.
- If the file has been saved before, the save as dialog suggests saving with "Copy of" prepended before the name. For each subsequent save, it suggests saving with an incremental numerical value appended to the name.

### 6.4.5 Write to the wheelchair

#### Note

This feature is only available when a wheelchair is connected.

There are two options to write a program to a connected wheelchair:

- The Write button (when in bulk edit)
- The Application menu

#### The Write button

When in bulk edit, tap the **Write** button at the bottom of the screen.

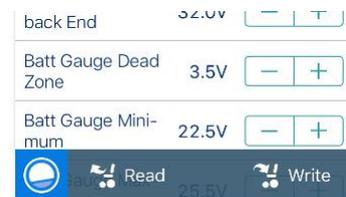


Figure 55: Read/write a file

#### The Application menu

1. Tap the Application menu .
2. Select **Write to Chair**.

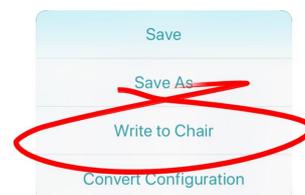


Figure 56: Write to chair

**Note**

After writing to the wheelchair, the tool power-cycles the system and then automatically reconnects to the system when the power returns.

**Warning**

When you write to the wheelchair from File context, the data on the wheelchair is over-written.

### 6.4.6 Delete a file

To delete a file:

1. Select **Edit** from the **Load From File** screen (top-right).
2. Select one or more files from the file list displayed.
3. Tap the trash can (bottom-left of the screen).
4. Tap **Done** to leave the screen.

**Warning**

Files are deleted immediately when you tap the trash can.



Figure 57: Deleting files

### 6.4.7 Share a file

You can:

- share a *.lci* or *.lcb* file from the iOS tool (including by email)
- import a *.lci* or *.lcb* file into the iOS tool

#### 6.4.7.1 Share a *.lci* or *.lcb* file from the LiNX Access iOS tool

To share one or more files with other people:

1. Select **Edit** from the **Load From File** screen (top-right navigation bar).
2. Select one or more files from the file list displayed.
3. Tap the **Share** icon  at the bottom-right of the screen.  
A standard range of Share options displays.
4. Select the Share option you require (Mail, for example).  
Selected program files will be added as attachments to the selected option.
5. Follow the prompts to share or send the files.



Figure 58: Selecting the share options

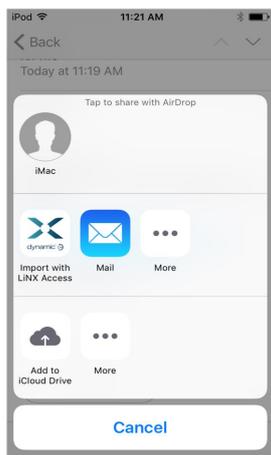


Figure 59: Share options

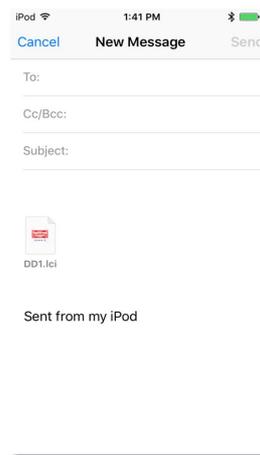


Figure 60: Sending a file via Mail

### 6.4.7.2 Import a .lci or .lcb file into a LiNX Access iOS tool

To import a .lci or .lcb file into the tool:

1. Email the file (as an attachment) to the email app on your iOS device.
2. Tap the file attachment in your email app.  
A range of Share options displays (see *Figure 59: Share options* above).
3. Select the 'Import with LiNX Access' option.  
The file displays in the **Load from File** screen's file list.

### 6.4.8 Program a system from a bundle file

#### Note

You may not be able to use the LiNX Access iOS tool for all bundle file operations. Some LiNX power modules (those with serial numbers prior to **F17119xxx**) do not support bundle files that contain configurations. If this is the case in your system, use the LiNX Access PC tool instead.

To program a system from a bundle file using the LiNX Access iOS tool:

1. Open the LiNX Access iOS tool.
2. Connect to a LiNX system.
3. Make sure you are in file context (tap the context switch to toggle between connection context and file context). The **Load From File** screen displays program files at the top and bundle files underneath.

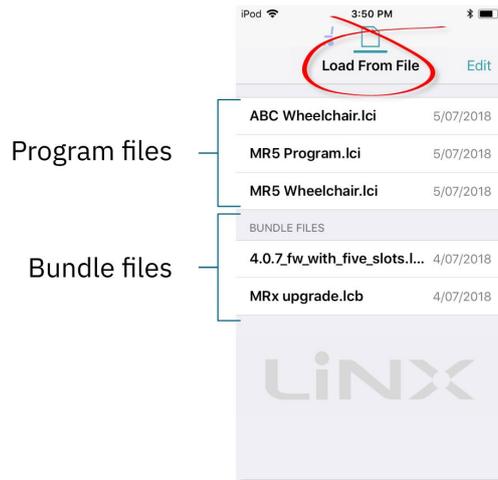


Figure 61: Load from file screen

4. Tap on the bundle file (\*.lcb) that you want to write to the wheelchair. The contents of the bundle file will be displayed — see *Figure 62* — with configurations at the top, and module firmware below.

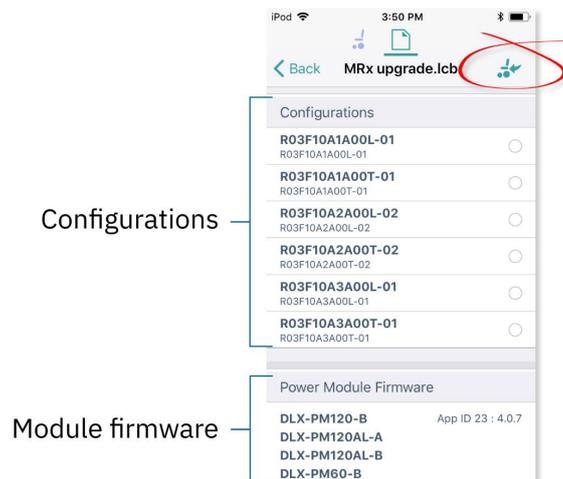


Figure 62: Contents of bundle file

5. Tap on the **Write to Chair** icon (🪑+) at the top-right of the screen. The bundle file will be written to the connected system. As the file is written, the *Writing Bundle* progress bar is displayed — *Figure 63*.



Figure 63: Writing bundle file progress

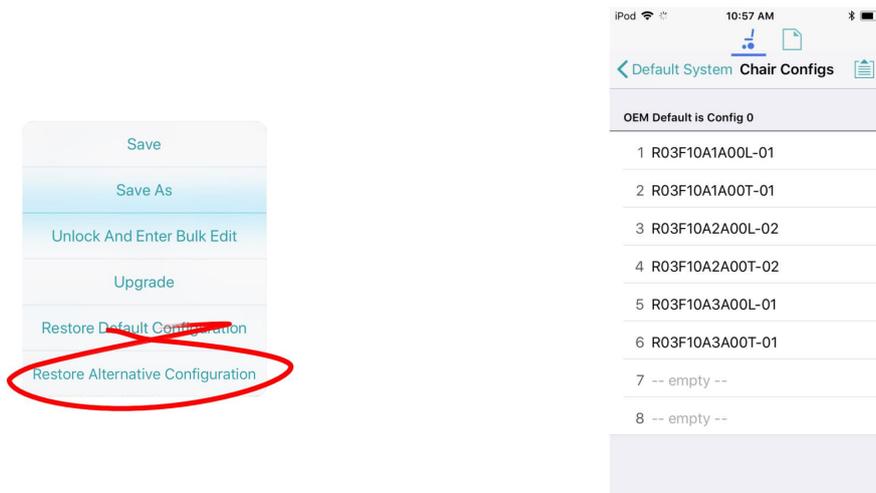
 **Note**

If your system is one that does not support bundle files with configurations, when you tap on the Write to Chair icon, the following warning will be displayed and you will not be able to continue:



If you see this message, then you will need to use the LiNX Access PC tool instead to write your bundle file to the system.

- When the progress bar disappears from the screen, tap on the **Done** button (top left screen). The tool restarts the system and then automatically reconnects to it. At this point, the configuration files will be located in the configuration store.
- To view and select a configuration, tap on the **Application** menu button () at the top of the screen and then select **Restore Alternative Configuration** — the Chair Confgs screen will open — *Figure 64*.



**Figure 64: Opening chair configs**

- Tap on one of the chair configurations from the list to make your chosen configuration the active configuration. At this point, a warning will be displayed telling you that if you proceed, then the *'selected configuration will become the active configuration'* — tap on 'Yes' to continue.

## 6.5 Modify parameters

### Note

When you edit a parameter's value, its background colour changes from white to yellow to indicate it has changed from its previous value. Once the value is written to the controller or file, the background reverts to white. In live edit, it might be difficult to see the parameter background changing since live edits can be very rapid.

You can modify parameters:

- *textually*
- *numerically*
- *graphically*

### 6.5.1 Modify parameters textually

Functions and profiles can have their names changed when in bulk edit mode. To do this:

1. Unlock bulk edit.
2. Tap inside the name you wish to edit.  
A cursor appears in the field.
3. Edit the name as required.
4. Click the **Return** button.  
The new name appears with a yellow background behind the name text field.
5. Continue editing the program, or write or save it, as required.



Figure 65: A function name after editing (and before saving or writing)

### 6.5.2 Modify parameters numerically

1. Tap a parameter's name.  
Its details, including the default, low and high values and summary, display.
  2. Either:
    - Increment and decrement the parameter with the plus (+) and minus (-) buttons, respectively.  
Tap these buttons to change the value in discrete steps, or tap and hold to change them more quickly.
- Or:
- Set the parameter value by tapping the low, default or high button.

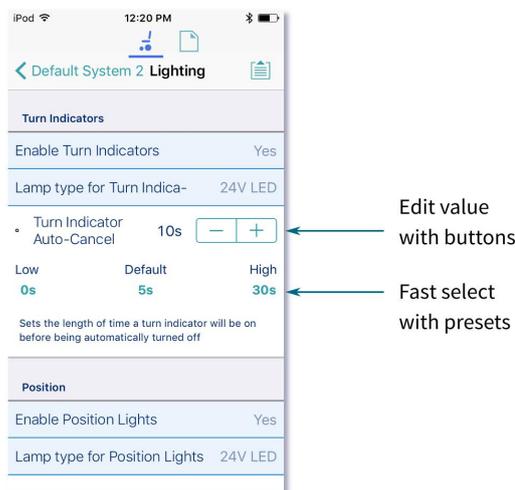


Figure 66: Modifying parameters numerically

### 6.5.3 Modify parameters graphically

A number of parameters can be edited graphically.

These parameters are grouped according to the access level (manufacturer or distributor):

#### **OEM Drive Limits**

- Emergency Deceleration
  - Emergency Deceleration
- OEM Forward
  - OEM Forward Speed
  - OEM Forward Acceleration
  - OEM Forward Deceleration
- OEM Reverse
  - OEM Reverse Speed
  - OEM Reverse Acceleration
  - OEM Reverse Deceleration
- OEM Turn
  - OEM Turn Speed
  - OEM Turn Acceleration
  - OEM Turn Deceleration
- OEM Stability
  - Turn at Max Speed
  - OEM Turn Transition
  - Max Speed in Turn
- Configuration
  - Allow Distributors to Ignore Drive Lockout

#### **Gyro OEM Drive Limits**

- OEM Forward Gyro
  - Gyro OEM Forward Speed
  - Gyro OEM Forward Acceleration
  - Gyro OEM Forward Deceleration
- OEM Reverse Gyro
  - Gyro OEM Reverse Speed
  - Gyro OEM Reverse Acceleration
  - Gyro OEM Reverse Deceleration
- OEM Turn Gyro
  - Gyro OEM Turn Speed
  - Gyro OEM Turn Acceleration
  - Gyro OEM Turn Deceleration
- OEM Stability Gyro
  - Gyro Turn at Max Speed
  - Gyro OEM Turn Transition
  - Gyro Max Speed in Turn

#### **Distributor Drive Function**

- Forward
  - Max Forward Speed
  - Forward Acceleration
  - Forward Deceleration
- Reverse
  - Max Reverse Speed
  - Reverse Acceleration
  - Reverse Deceleration
- Turn
  - Max Turn Speed
  - Turn Acceleration
  - Turn Deceleration
- Stability
  - Turn Transition

To edit parameters graphically, tap a drive setting from the **Home** screen.

They include:

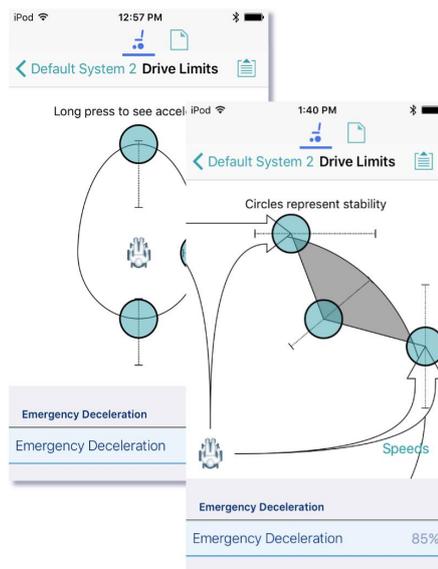
- Drive functions in the profiles
- Drive Limits (manufacturer only)
- Gyro Limits (manufacturer only)

Graphically, you can edit:

- *speed settings*
- *acceleration/deceleration settings*
- *stability settings*

Speed graphs are at the top of the drive parameter lists.

Acceleration/deceleration and stability graphs are accessed from the speed graph.



**Figure 67: Modifying parameters graphically**

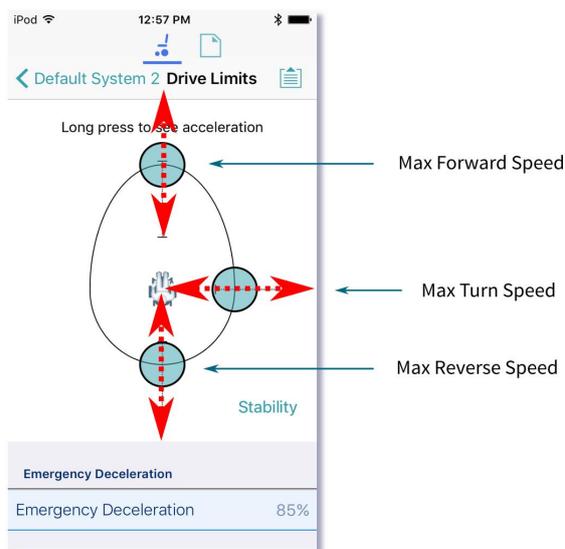
### 6.5.3.1 Edit speed settings

The speed graph allows you to adjust:

- Maximum Forward Speed
- Maximum Turn Speed
- Maximum Reverse Speed

Tap and drag the blue circles inwards or outwards to decrease or increase parameter values respectively.

For example, if you tap and drag the top blue circle in *Figure 68* towards the centre of the graph, the Maximum Forward Speed value decreases.



**Figure 68: Editing speed settings**



**Note**

The exact value for each parameter is shown at the top of the screen when adjusting the parameter, and is also displayed in the parameter list.



**Note**

If a gyro module is enabled, the graphic in the centre of the graph changes from a person in a wheelchair to a gyroscope to indicate that the parameters being changed are gyro-specific.

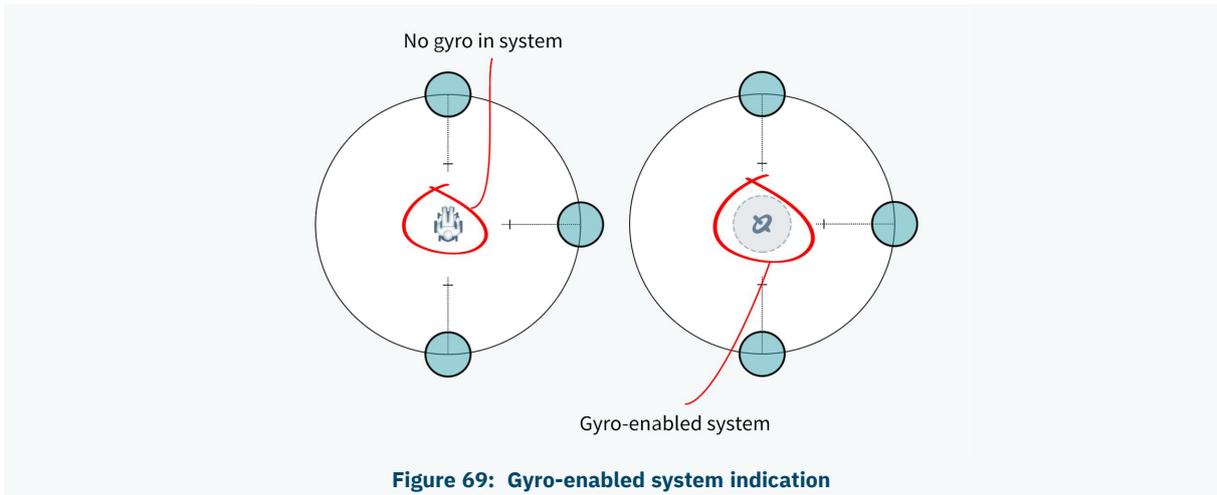


Figure 69: Gyro-enabled system indication

### 6.5.3.2 Edit acceleration / deceleration settings

Acceleration / deceleration parameters are accessible through the speed graph. To edit acceleration or deceleration settings, press and hold one of the blue circles in the speed graph screen (as detailed below).

- Press and hold the **Max Forward Speed** blue circle to be taken to the **Forward Acceleration** and **Forward Deceleration** screen.
- Press and hold the **Max Turn Speed** blue circle to be taken to the **Turn Acceleration** and **Turn Deceleration** screen.
- Press and hold the **Max Reverse Speed** blue circle to be taken to the **Reverse Acceleration** and **Reverse Deceleration** screen.

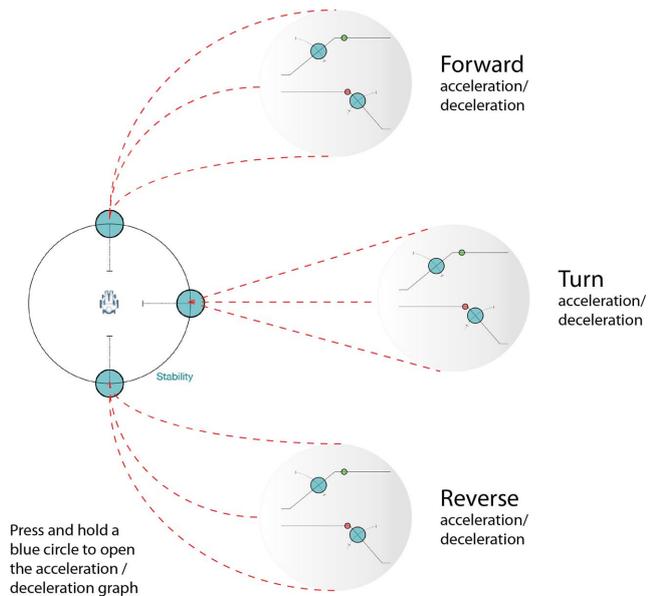


Figure 70: Selecting acceleration / deceleration settings

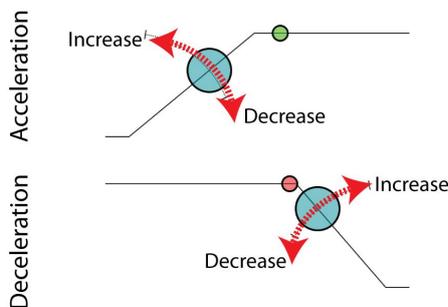


Figure 71: Editing acceleration / deceleration settings

For each acceleration / deceleration parameter (forward, turn and reverse), the acceleration value can be edited with the upper graph, and the deceleration value can be edited with the lower graph. (See [Figure 71](#).)

Press and drag the blue circles to decrease or increase the parameter value. All changes to the acceleration / deceleration values are displayed at the top of the screen.

### 6.5.3.3 Edit stability settings

To edit the stability settings, access the stability settings screen.

To access the stability settings screen:

- Tap the word '**Stability**' shown at the lower-right of the speed setting graph.

To return to the speed settings screen:

- Tap the word '**Speeds**' in the stability setting graph.

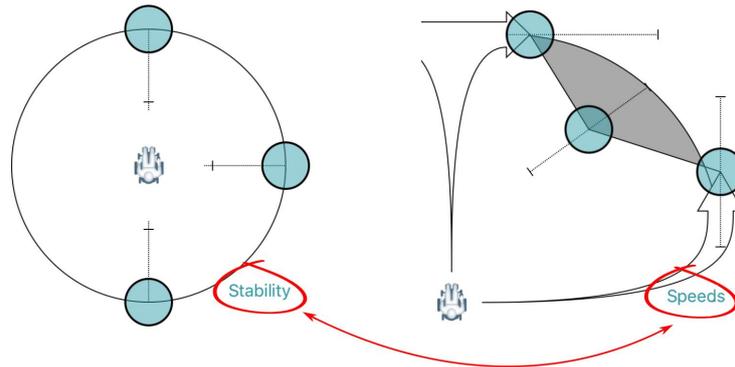


Figure 72: Selecting stability settings

Tap and drag the blue circles, in or out, to decrease or increase parameter values respectively.

In the **Drive Limits** stability graph, the following settings can be set (by the manufacturer only):

- Turn at Max Speed
- OEM Turn Transition
- Max Speed in Turn

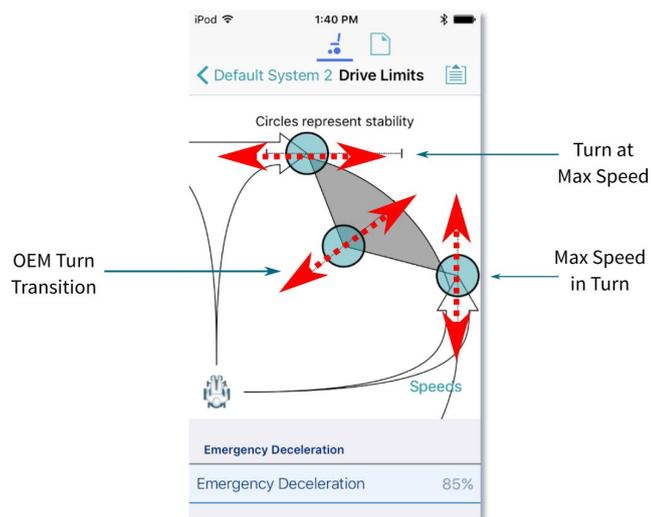


Figure 73: Editing stability settings

## 6.6 Modify profiles and functions

Functions are grouped in profiles. You can:

- *add and delete profiles*
- *add, delete and move functions*

To access this functionality, tap **Edit** in the Functions title bar on the home screen. (Doing this automatically opens the edit screen in bulk edit.)

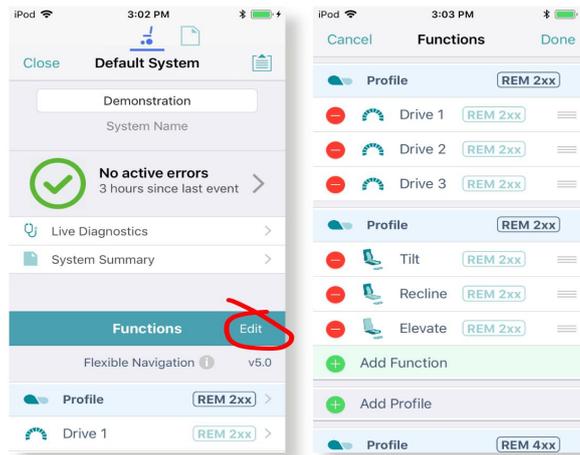


Figure 74: Edit functions

**Note**

To edit the contents of functions and profiles, open them from the home screen.

Just below the *Functions* title bar, you will see the navigation restriction information and the configuration version.

Click on the information link to reveal what navigation restrictions are placed on the system. The information displayed depends on the modules in the system. See the *LiNX Systems Installation Manual* for more information about navigation restrictions.

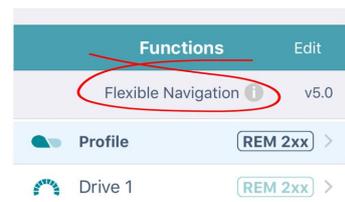


Figure 75: Link to open navigation restriction information

The text to the right of the navigation restriction information link, displays the version of the system's current configuration.

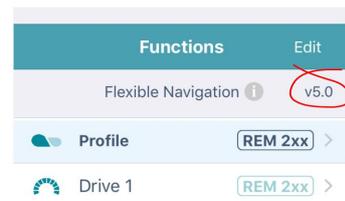


Figure 76: Configuration version

## 6.6.1 Add and delete profiles

### 6.6.1.1 Add a profile

1. Tap the **Add Profile** button.
2. Give your profile a name.
3. Select the required **User Input**.
4. Tap **Done** to return to the **Functions** Edit screen.
5. *Add functions to your profile.*
6. Tap **Done** (top right of the screen) to return to the home screen.
7. From the home screen, tap the **Write** button to write the program to the chair; or, on the Application menu, save your changes to a file.

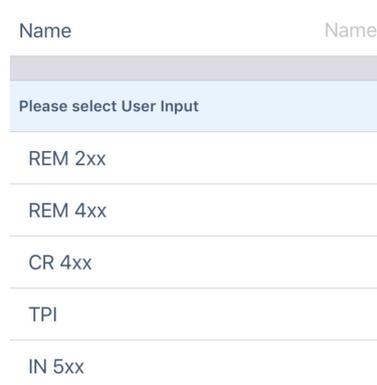


Figure 77: Add profile

#### Note

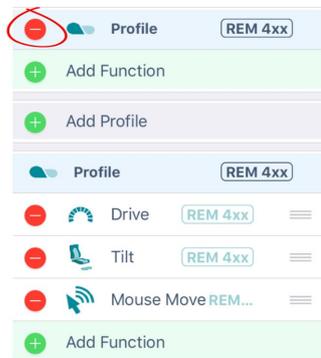
A profile cannot be written to the wheelchair until it contains functions (see *Add a function*).

### 6.6.1.2 Delete a profile

#### Note

A profile cannot be deleted until all its component functions have been deleted. (See *Delete a function*.)

1. Tap the red **Delete** button to the left of the profile name.



2. Tap the **Delete** button that appears.



The profile is deleted.

3. Continue editing, or tap **Done** (top right of the screen) to return to the home screen.
4. From the home screen, tap the **Write** button to write the program to the chair; or, on the Application menu, save your changes to a file.

## 6.6.2 Add, delete and move functions

This section describes how to:

- *Add a function* (including duplicate a function)
- *Delete a function*
- *Move a function*

### 6.6.2.1 Add a function

There are three ways to add a function:

- *Add a new function*
- *Copy a function template* (A function template is a preset function.)
- *Duplicate an existing function*

#### Add a new function

1. Tap the **Add function** button.



2. Tap the **New function** button.



3. Select the **Function type** you require.
4. Select a **User input**.<sup>#1</sup>
5. Tap **Done** (top right of the screen).
6. Continue editing, or tap **Done** again to return to the home screen.
7. From the home screen, tap the **Write** button to write the program to the chair; or, on the Application menu, save your changes to a file.



#### Note

<sup>#1</sup>If you select a user input of "Follow Profile", then when you change the user input at the profile level the function also updates. A function with a user input set to "Follow Profile" displays with a box around its user input.

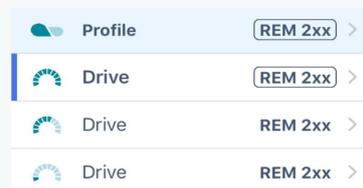


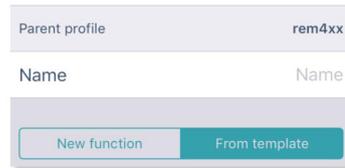
Figure 78: Follow profile

#### Copy a function template

1. Tap the **Add function** button.



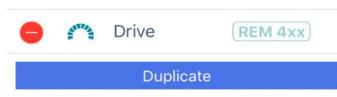
2. Tap the **From template** button.



3. Select the template you require.
4. Tap **Done** (top right of the screen).
5. Continue editing, or tap **Done** again to return to the home screen.
6. From the home screen, tap the **Write** button to write the program to the chair; or, on the Application menu, save your changes to a file.

### Duplicate an existing function

1. Tap a function.  
A blue **Duplicate** button appears.



2. Tap the blue **Duplicate** button. An identical copy of the function is added below it.  
**Note:** The duplicate will have the same name as the original. To give the new function a new name, access it at the functions list on the home screen.
3. Continue editing, or tap **Done** (top right of the screen) to return to the home screen.
4. From the home screen, tap the **Write** button to write the program to the chair; or, on the Application menu, save your changes to a file.

#### Note

You can also duplicate a function from the home screen. To do this:

1. Swipe a function to the left.  
**Duplicate** and **Delete** buttons appear.



2. Tap **Duplicate**.  
An identical copy of the function is added below it.
3. Give the new function a new name.

### 6.6.2.2 Delete a function

1. Tap the red **Delete** button to the left of a function name. A **Delete** button appears on the right.



2. Tap the **Delete** button. The function is deleted.

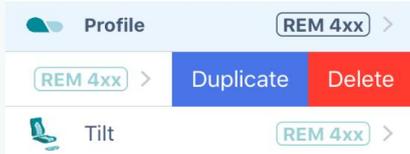


3. Continue editing, or tap **Done** (top right of the screen) to return to the home screen.
4. From the home screen, tap the **Write** button to write the program to the chair; or, on the Application menu, save your changes to a file.

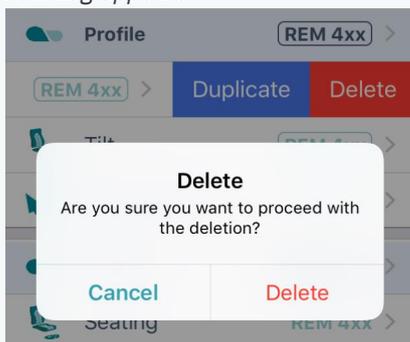
**Note**

You can also delete a function from the home screen. To do this:

1. Swipe a function to the left.  
**Duplicate** and **Delete** buttons appear.



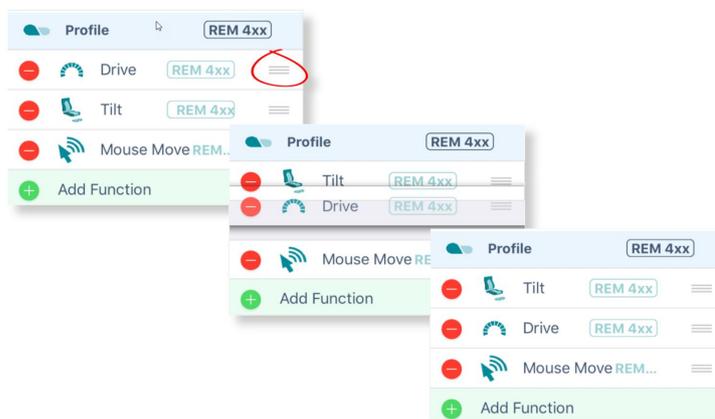
2. Tap **Delete**.  
A dialog appears.



3. Tap **Delete** in the dialog.

### 6.6.2.3 Move a function

1. Tap and hold the three horizontal lines on the right of a function.
2. Drag the function to a new location and release.



**Figure 79: Move a function**

3. Continue editing, or tap **Done** (top right of the screen) to return to the home screen.
4. From the home screen, tap the **Write** button to write the program to the chair; or, on the Application menu, save your changes to a file.



**Note**

A function can be moved to a new location in a profile or to a new profile.

### 6.6.3 Edit function icons

The drive and seating function icons are dynamic to reflect the activity in each function.

#### 6.6.3.1 Drive icon

The drive icon indicates the percentage of maximum speed selected for a drive function.



**Figure 80: Dynamic drive function icons**

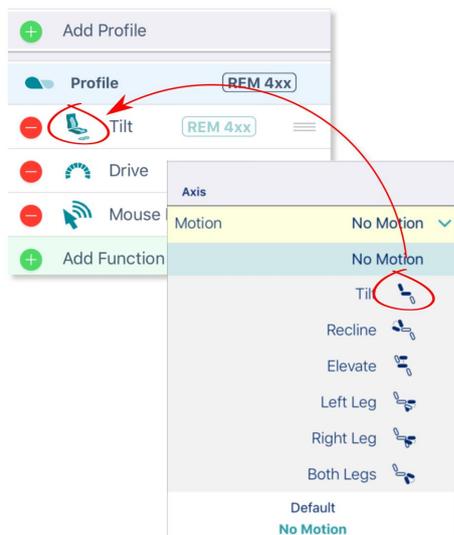
The icon changes when you edit the speed graph.

#### 6.6.3.2 Seating icon

The seating icon can be edited to indicate what part of the seat the function is for.

To do this:

1. From the home screen, open a seating function.
2. Scroll to **Axis**.
3. Open **Motion**.
4. Unlock bulk edit.
5. From the **Motion** drop-down menu, select the motion you require. The function icon changes to the icon of the selected motion.



**Figure 81: Edit a function seating icon**

6. Tap the **Write** button on the home screen to write the icon edit to the chair.

## 6.7 Configure control inputs and outputs (control IO)

On selected LiNX modules, you can configure a control input (CI) to select and control an output (CO) such as another LiNX module, function or feature.

An input, for example, can be an external buddy button connected to a control input pin on a power module, a multi-way switch connected to a CI pin on an input module, or one of the rocker buttons on a remote module. Outputs include seating, lighting, horns, and function selection.

Control IO can be configured with unconditional or conditional rules. An unconditional rule (or **always** rule) is applied to an output when you want to ensure that the output is activated whenever its input is triggered.

A conditional rule (using **if** and **if/else**) is applied to control IO where you want the activation of an output to be subject to the state or function of the system at the time the input is triggered. That is, instead of an output always activating when its input is triggered (like the always rule), it will activate only if the condition is true.

### See also

For more detailed descriptions about conditional control IO, including worked examples, see the LiNX System Installation Manual (GBK54036).

This section describes how to set up control IO for your system:

1. *Select and configure an input*
2. *Configure an always rule*
3. *Configure a conditional rule*
4. *Configure advanced settings* (optional)

### 6.7.1 Select and configure an input

1. From the home screen, scroll down and tap on **Modules**.
2. From the **Modules** screen, select the module that your input is connected to.  
For example, *Power Module*.
3. Scroll down until you find the **Port Settings** for the control input that you want to configure. For example, *Control Input 1 - Port Settings*.
4. Under **Port Settings**, tap on **Input Type** to reveal which input types are available for the input.
5. Tap on one of the Input Types to reveal its control IO slots. For example, Momentary, Switch 1 etc.

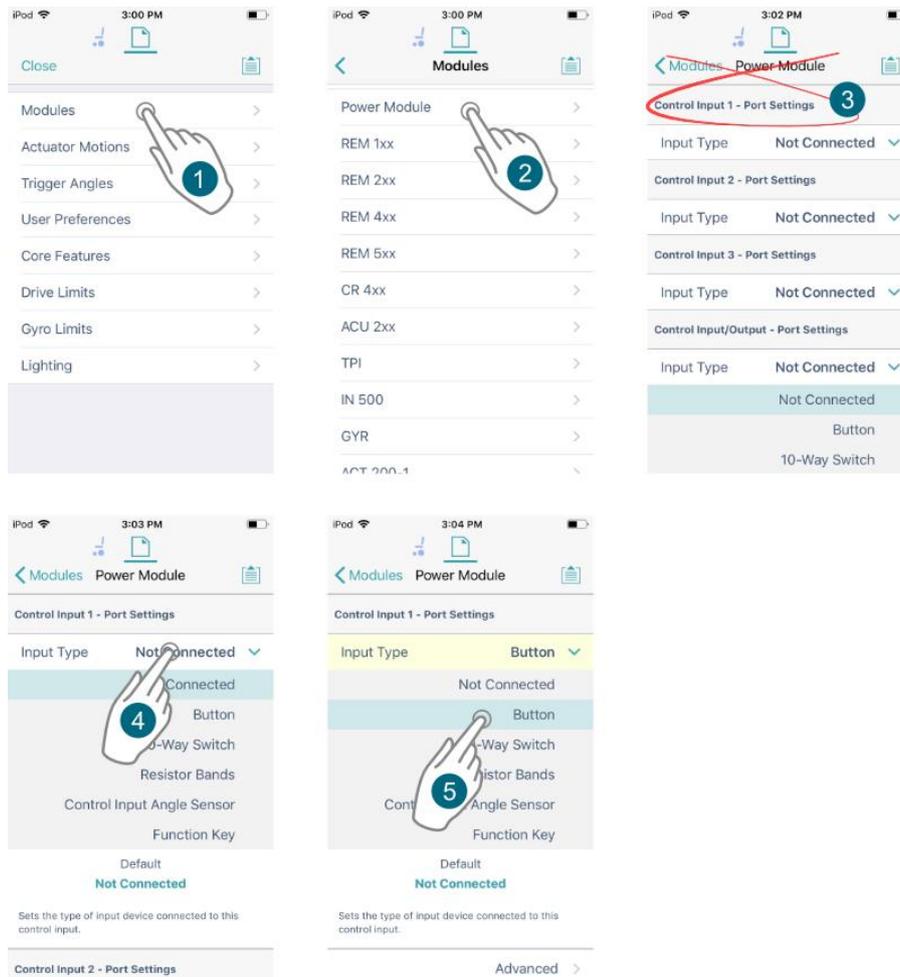


Figure 82: Select an input

**Note**

Control IO slots that are configurable are marked with  and labelled **None** or, if they have been configured, display the configuration summary.

Configurable	→	Momentary		None
Not configurable	→	Momentary		Drive Lockout
Restricted	→	Momentary		Restricted

Figure 83: Complex configurations

Complex configurations, which have been pre-configured for the manufacturer, are not configurable through the tool. For these slots:

- if the slot can display the configuration summary, the slot will display the configuration summary and show this icon: .
- if the slot cannot display the configuration summary, because of its complexity, it will display 'Restricted' and the slot will show this icon: .

### 6.7.2 Configure an always rule

To configure an always rule, you need to select an output from the output list.

The following steps (1–3) are used when no rules have yet been defined. If a rule already exists, and you want to add further outputs to a rule, go to step 4.

1. Open the output list by tapping on the right-hand side of the control IO slot (Figure 84 ①).

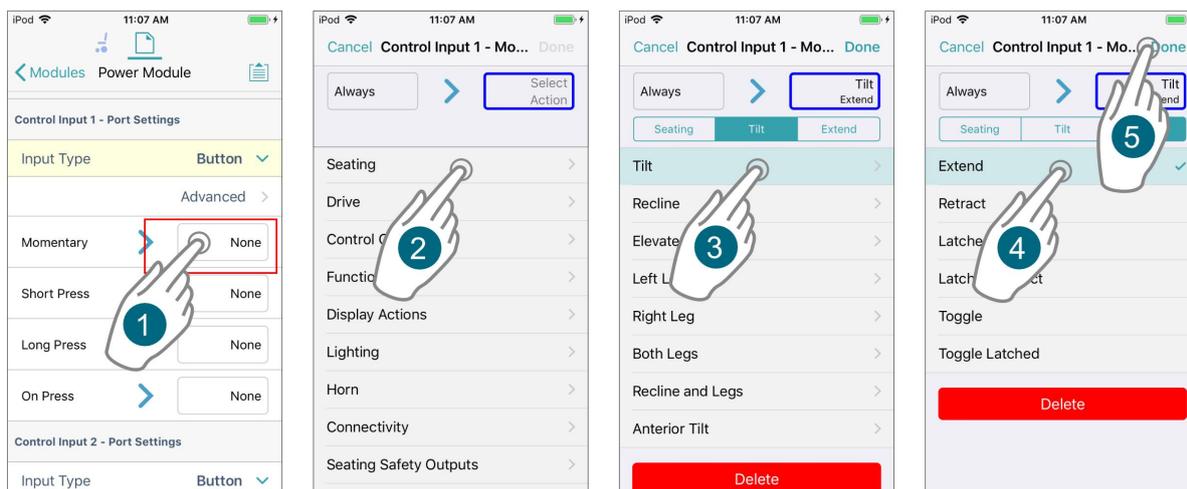


Figure 84: Assigning an output where no rules exist for slot

2. From the output list, select an output, drilling down through the options as they are presented (Figure 84 ②).
3. Tap on **Done** (Figure 84 ③). A summary of the rule is displayed in the control IO slot.

The following steps (4–6) are used when a rule already exists, and you want to add further outputs.

4. Tap on the left-hand side of the control IO slot (Figure 85 ①) to expand the slot and reveal the **Add Rule** button.
5. Tap on **Add Rule** (Figure 85 ②), which opens the conditions list.
6. Tap on the output button (Figure 85 ③) to display the output list (Figure 85 ④).
7. Continue to add an output as described above in steps 2–3.

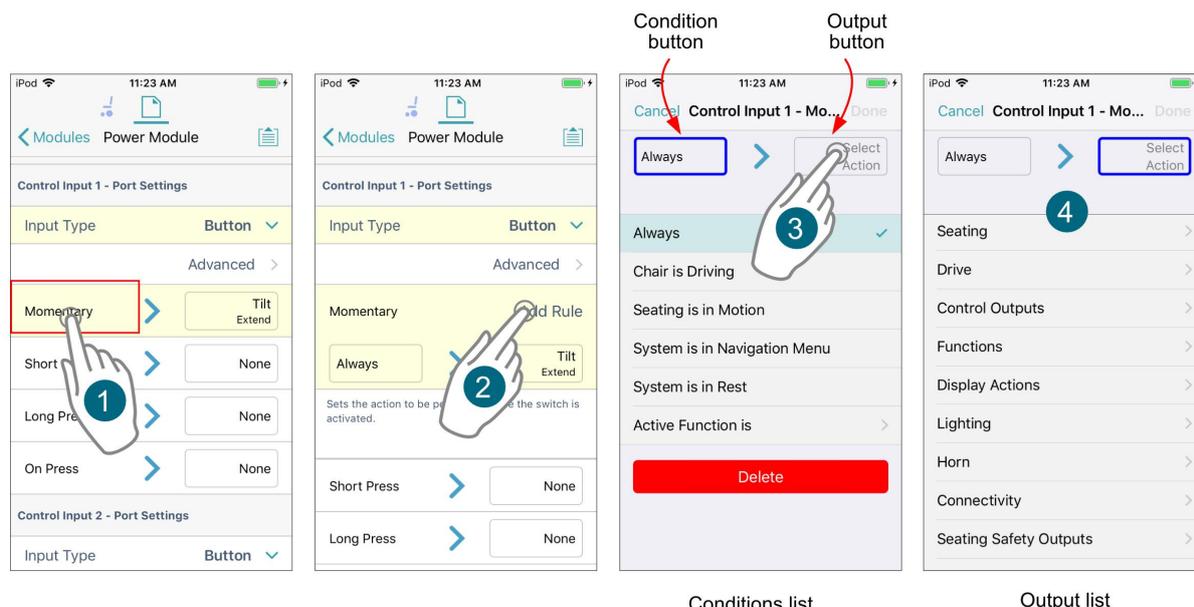


Figure 85: Assigning an output where rules already exist for slot

**Note**

You can easily switch between viewing the conditions list and the output list by tapping on the condition and output buttons, respectively.

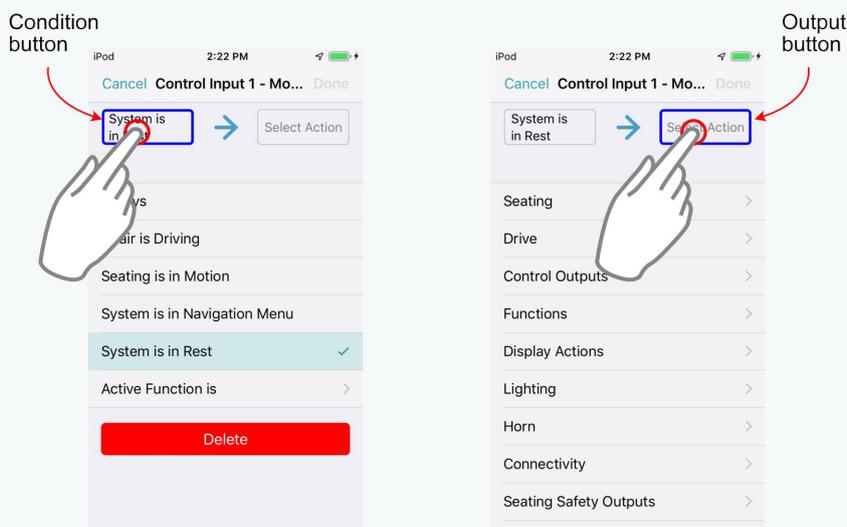
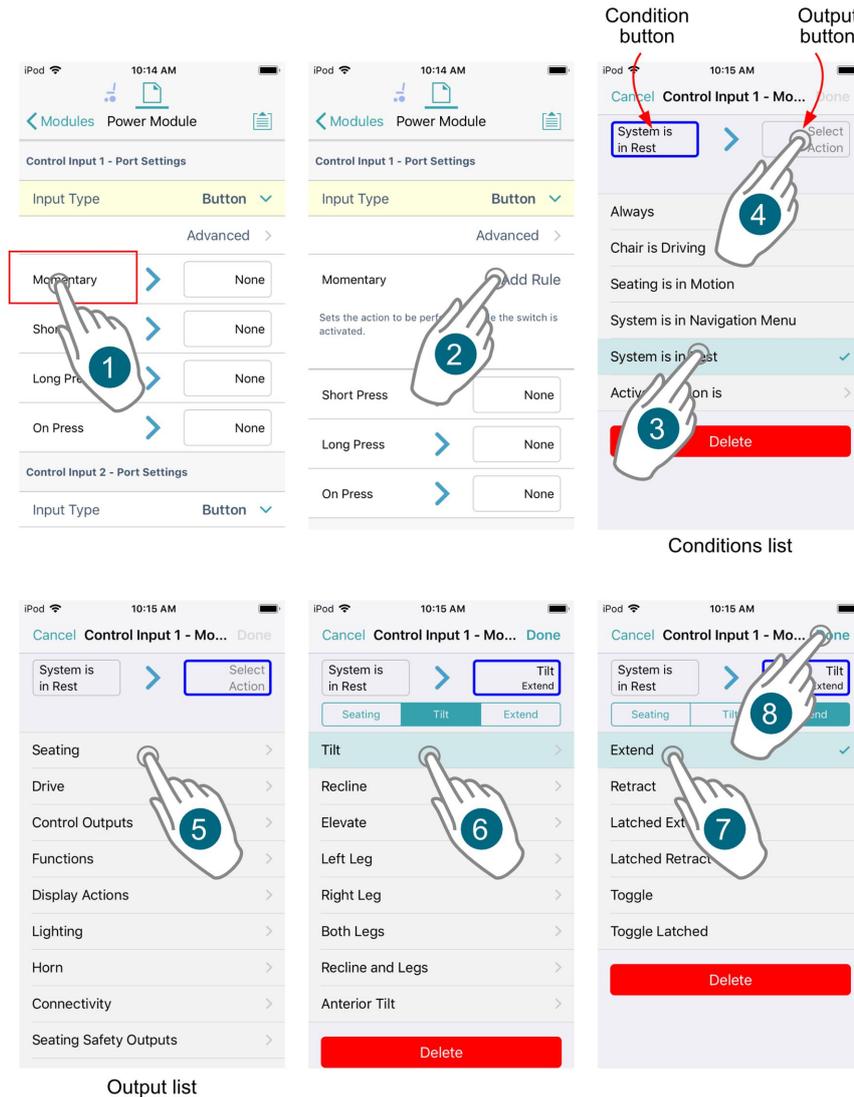


Figure 86: Toggling between conditions list and output list

### 6.7.3 Configure a conditional rule

**Conditions** are selected from the conditions list. To assign a condition to your rule:

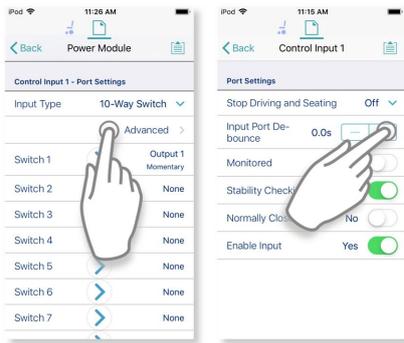
1. Tap on the left-hand side of the control IO slot *Figure 87* ① ) to reveal the **Add Rule** button.
2. Tap on **Add Rule**( *Figure 87* ② ) – the condition list is displayed.
3. Select a condition from this list (*Figure 87* ③ ) – the condition button will display your choice.



**Figure 87: Assigning a condition and output**

4. Tap on the output button (Figure 87 ④ ) to display the output list.
5. From the list, select an output, drilling down through the options as they are presented (Figure 87 ⑤ to ⑦ ).
6. Tap on **Done** (Figure 87 ⑧ ) – a summary of the rule is displayed in the control IO slot.

## 6.7.4 Configure advanced settings



The advanced settings allow you to configure the control inputs further. Tap on the **Advanced** button to reveal the following options:

- Stop Driving and Seating
- Input Port Debounce
- Monitored
- Stability Checking
- Normally Closed
- Enable Input

### Stop Driving and Seating

Stop Driving and Seating Off

This option ensures activation of this control input in any way will cause driving and seating operations to stop.

Tap on the slider button to select **Yes** or **No**.

### Input Port Debounce

Input Port De-  
bounce 0.0s

This option sets the time the signal on the input port has to be stable for before the system responds to the input.

Set the **Input Port Debounce** time by tapping on the **+** and **-** buttons.

If it is set to zero seconds, no additional debounce is applied.

### Note

When Input Port Debounce is set to any value greater than zero, the following button inputs cannot be configured: short press, long press, on press.

### Monitored

Monitored No

This option sets whether this input is monitored for electrical faults.

Tap on the slider button to select **Yes** or **No**.

### Stability Checking

Stability Checking Yes

This option sets whether this input is monitored for signal stability. Tap on the slider button to select **Yes** or **No**.

### Normally Closed

Normally Closed    No

This option sets whether the switch is normally-open or normally-closed.

Tap on the slider button to select **Yes** or **No**.

### Enable Input

Enable Input    Yes

This option sets whether the input is enabled.

Tap on the slider button to select **Yes** or **No**.

### See also

*For more detailed descriptions about the advanced settings, and worked examples using these steps, see the [LiNX System Installation Manual \(GBK54036\)](#).*

## 7 Index

### A

- Access Key Level 37
- Access Level 23, 31
- Access Level Certificate 46
- ACT200-1 33
- ACT400-1 33
- Active Errors 30-31
- Actuation Channels 34
- Actuator Motions 30-31, 34
- Actuators 31, 33
- Actuators - Electrical and Timing 33
- ACU 33
- Adaptive Load Comp Enabled 43
- Adaptive Load Compensation (ALC) 43
  - Calibration 21
- Add a Function 62
- Add a Profile 61
- Add Rule 68-69
- Advanced Settings 71
  - Enable Input 71
  - Input Port Debounce 71
  - Monitored 71
  - Normally Closed 71
  - Stability Checking 71
  - Stop Driving and Seating 71
- Allow Distributors to Ignore Drive
  - Lockout 56
- Always Rule 66
  - Configure 68
- Angle Sensor 31
  - Diagnostics 31
  - Orientation 33
  - Triggers 33
- Anterior Tilt 34
- Anti-rollaway 31
- Application Menu 20, 26, 39-41, 54
  - Read from Chair 27
  - Save 26
  - Save As 26
  - Store Authorisation 27
  - Upgrade 27
  - Write to Chair 27
- Application Version 31, 37

- Audible Cues 31
- Average Battery Voltage 25
- Average Drive Time 26
- Average Motor Current 26
- Axis 32-33

### B

- Band 1 Indicator Time 25
- Band 2 Indicator Time 25
- Band 3 Indicator Time 25
- Band 4 Indicator Time 25
- Band 5 Indicator Time 25
- Battery Charging Time 25
- Battery Management 31
- Battery Usage 24, 31
  - Last Reset 25
  - Statistics 25
    - Average Battery Voltage 25
    - Band 1 Indicator Time 25
    - Band 2 Indicator Time 25
    - Band 3 Indicator Time 25
    - Band 4 Indicator Time 25
    - Band 5 Indicator Time 25
    - Battery Charging Time 25
    - Battery Usage Last Reset 25
    - Last Charge Timestamp 25
    - Number of Charge Cycles 25
    - Number of Deep Discharge
      - Warnings 25
    - Number of High Battery Events 25
    - Number of Low Battery Events 25
- Battery Voltage 22, 31
- Behaviour 34
- Bluetooth 38
- Both Legs 34
- Bulk Edit 18, 41
  - Mode 19
  - Read 19
  - Unlock 19
  - Write 19
- Bundle File 37, 52

### C

- Cancel 39

- Chair Configuration
    - Adding 40
    - Screen 39-40
  - Chair Configuration, Selecting 39
  - Chair Log 31
  - Chair Statistics
    - Battery Usage 24
    - Drive Statistics 24
  - Changing Program and System Names 40
  - Charge Cycles 25
  - Close a File 48
  - Compact Remote 33
  - Conditional Rule 66
    - Configure 69
  - Configuration 10, 31-32, 56
    - Convert 49
    - File 52
  - Connect to Device 36
  - Connected Modules 23
  - Connecting 14
  - Connecting and Disconnecting 38
  - Connection Context 18-19, 36-37, 41
    - Actions 37
  - Context Switch 37
  - Contexts 18
  - Control Inputs/Outputs 33
    - Settings 31, 33
  - Control IO 66
    - Conditions List 69
    - Configure 66
    - Control Input 33, 66
      - Port Settings 33
    - Control Output 66
    - Output List 69
  - Convert Configuration 27, 49
  - Copy a Function Template 62
  - Core Features 20, 30-31
  - Cursor Speeds 32
  - Custom Load Compensation 33
- D**
- Deep Discharge Warnings 25
  - Delete a Function 63
  - Delete a Profile 61
  - Deleting a Chair Configuration 40
  - Deleting Files 51
  - Diagnostics
    - Information 10
    - Screens 20, 22
      - Chair Log 22
      - Chair Statistics 22
      - Live Diagnostics 22
      - System Summary 22
  - Disclaimer Message 38
  - Disconnect 39
  - Display Settings 31
  - Distributor Drive Function 56
  - Distributors 14, 40
    - DLX-HKEY01-A 14, 40
    - DLX-HKEY02-A 14, 40, 47
  - Drive 31-33
    - Limits 20, 30-31
    - Settings 31
    - Statistics 24, 26, 31
      - Average Drive Time 26
      - Average Motor Current 26
      - Drive Statistics Last Reset 26
      - Drive Time 26
      - Maximum Left Motor Current 26
      - Maximum Left Motor Current
        - Time 26
      - Maximum Right Motor Current 26
      - Maximum Right Motor Current
        - Time 26
      - Powered Up Time 26
      - Time Near Maximum Current 26
      - Total Distance Travelled 26
      - Trip Distance 26
  - Drive Functions 57
  - Drive Icon 65
  - Drive Limits 57
  - Drive Statistics Last Reset 26
  - Drive Time 26
  - Duplicate 63
  - Dynamic Controls 10
    - Website 10
- E**
- Edit Function Icons 65

Edit Mode  
     Bulk Edit 18-19  
     Live Edit 10, 18  
 Elevate 34  
 Email 51  
 Emergency Deceleration 31, 56  
 Enable Input 71-72  
 Energy Use Settings 31  
 Event Log 31

**F**

File  
     Close 48  
     Delete 51  
     Modify 48  
     Open 48  
     Save 49  
     Save As 49  
     Share 51  
 File Context 18-19, 37  
     Actions 47  
 Firmware 15, 31, 42  
 Flexible Navigation 60  
 Forget This Device 38  
 Forward 31-33, 56  
 Forward Acceleration 56  
 Forward Deceleration 56  
 Forward Long Press 32  
 Forward Momentary/Short Press 32  
 Function  
     Add 62  
     Copy a Function Template 62  
     Delete 63  
     Duplicate 63  
     Move 64  
 Function Icons  
     Edit 65  
 Function States  
     Function available 21  
     Function inoperable 21  
     Function not available 21  
 Functions  
     Modify 60

**G**

General 32-33  
 Go to ALC Calibration 43  
 Go to Joystick Shaping Calibration 45  
 GYR 100 33  
 Gyro 43  
     Calibration 21  
     Go to Gyro Turn Calibration 43  
     Gyro-enabled System Indication 58  
     Limits 20, 30, 32, 57  
     Module 57  
     Performance 33  
     Tuning the gyro 43  
 Gyro OEM  
     Drive Limits 56  
     Forward 56  
     Forward Acceleration 56  
     Forward Deceleration 56  
     Forward Speed 56  
     Max Speed in Turn 56  
     OEM Turn 56  
     Reverse 56  
     Reverse Acceleration 56  
     Reverse Deceleration 56  
     Reverse Speed 56  
     Turn Acceleration 56  
     Turn at Max Speed 56  
     Turn Deceleration 56  
     Turn Speed 56  
     Turn Transition 56

**H**

High Battery Events 25  
 Home Screen 20, 31  
     Active Errors 30  
     Actuator Motions 30  
     Core Features 30  
     Drive Limits 30  
     Gyro Limits 30  
     Lighting 30  
     Live Diagnostics 30  
     Modules 30  
     Profiles 30  
     Program Name 30

- System Name 30
- System Summary 30
- User Preferences 30
- How To
  - Connect and disconnect to the LiNX Access tool 38
  - Open the LiNX Access iOS tool 36
  - Selecting the context 36
  - Toggle between contexts 37
- I**
- Identification 34
- Import 52
- Input Mode
  - Graphic 10
  - Numeric 10
  - Text 10
- Input Port Debounce 71
- Installing 14
- J**
- Joystick Shaping 45
- L**
- LAK 38
  - Search for LAKs 38
  - Selecting a LAK 38
  - Storing the LAK Certificate 46
- Last Charge Timestamp 25
- Latched 33
- Latched Driving 32
- lcb 51
- lci 42, 51
- Left Leg 34
- Left Long Press 32
- Left Momentary/Short Press 32
- Left Motor 22, 31
- Lighting 20, 30, 32
- Link to Dynamic's Website 37
- LiNX Access
  - Application
    - Connecting 14
    - Installing 14
    - System requirements 14
  - iOS tool 14
- Key 14
  - Distributor 14
  - DLX-HKEY01-A 14
  - DLX-HKEY02-A 14
  - Firmware 15
    - Upgrade 15
  - Inserting 15
  - LAK 10
  - Manufacturer 14
  - Versions 14
- Live Diagnostics 22-23, 30-31
  - Battery Voltage 22
  - Left Motor 22
  - Right Motor 22
  - Speed Demand 22
  - Speed Dial 22
  - Turn Demand 22
- Live Edit 10, 18, 41
- Live Edit Mode Indicator 18
- Load Compensation 33, 43
- Load From File 37, 48, 51
- Lock Settings 31
- Low Battery Events 25
- M**
- Manufacturers 14, 40
- Max Forward Speed 56
- Max Reverse Speed 56
- Max Speed in Turn 56
- Max Turn Speed 56
- Maximum Forward Speed 57
- Maximum Left Motor Current 26
- Maximum Left Motor Current Time 26
- Maximum Reverse Speed 57
- Maximum Right Motor Current 26
- Maximum Right Motor Current Time 26
- Maximum Turn Speed 57
- Modifying a Program 41
- Modifying Files 48
- Modifying Parameters 55
  - Graphically 56
  - Numerically 55
- Modules 20, 30-31, 33
  - Serial numbers 23
  - Software versions 23

Monitored 71  
Motions 20  
Motor Resistance 31  
Motors 33  
Mouse Mover 32  
Move a Function 64  
My Devices 38

## N

Navigation Bar 20, 26  
Normally Closed 71-72  
Notifications 14

## O

### OEM

Drive Limits 56  
Forward 56  
Forward Acceleration 56  
Forward Deceleration 56  
Forward Gyro 32  
Forward Speed 56  
Reverse 56  
Reverse Acceleration 56  
Reverse Deceleration 56  
Reverse Gyro 32  
Reverse Speed 56  
Stability 56  
Stability Gyro 32, 56  
Turn 56  
Turn Acceleration 56  
Turn Deceleration 56  
Turn Gyro 32  
Turn Speed 56  
Turn Transition 56

Open a File 48  
Open the LiNX Access iOS tool 36  
Operation 32-33

## P

Parameter  
Editing 21  
Parameter Editing Screens 20  
Park Brake 33  
Performance 32-33  
Port Settings 33

Position 32  
Power Module 33  
Powered Up Time 26  
Privacy Policy 31, 37  
Profile  
Add 61  
Delete 61  
Profile Name 61  
Profiles 30-32  
Modify 60  
Profiles / Functions 20  
Program Name 20, 30

## Q

Quadrant Actions in Rest 31

## R

Read 19  
Read from Chair 27  
Recline 34  
Recline and Legs 34  
Reset  
Battery Usage 25  
Drive Statistics 25  
Rest 31  
Restore Alternative Configuration 27, 39-40, 54  
Restore Default Configuration 27  
Reverse 31-33, 56  
Reverse Acceleration 56  
Reverse Deceleration 56  
Reverse Long Press 32  
Reverse Momentary/Short Press 32  
Right Leg 34  
Right Long Press 32  
Right Momentary/Short Press 32  
Right Motor 22, 31

## S

Save 26, 39, 41-42, 49  
Save As 26, 42, 49-50  
Saving Programs 41  
Search for LAKs 38  
Seating 32-33  
Seating Icon 65

- Selecting the Context 36
  - Sending Emails 52
  - Settings 38
  - Share a File 51
  - Sip and Puff Calibration 22, 44
  - Sleep 31
  - Sleep and Rest Settings 31
  - Speed Demand 22, 31
  - Speed Dial 22, 31
  - Speed Settings
    - Editing 57
  - Speedometer and Odometer 31
  - Stability 32-33, 56
  - Stability Checking 71
  - Stability Settings 59
    - Editing 59
  - Statistics 31
  - Stop Driving and Seating 71
  - Store 47
  - Store Authorisation 27, 47
  - Switch Control 32
  - Switched Driving 31
  - System
    - Configuration 31
    - Modules 31
    - Name 20, 30
    - Requirements 14
    - Summary 23, 30-31
- T**
- Tilt 34
  - Time Near Maximum Current 26
  - Toggle Between Contexts 37
  - Total Distance Travelled 26
  - TPI 33
  - Trash Can 51
  - Trigger Angles 20, 30-31
    - Configurations 31
  - Trip Distance 26
  - Turn 32-33, 56
    - Acceleration 56
    - At Max Speed 56
    - Deceleration 56
    - Demand 22, 31
    - Indicators 32
    - Transition 56
- U**
- Unlock 19
  - Unlock And Enter Bulk Edit 26
  - Updates 14
  - Upgrade 27, 42
  - Upgrade All 42
  - Upgrading the Firmware 42
  - User Function Change 31
  - User Function Navigation 31
  - User Input 33, 61
  - User Input - Joystick Shaping 45
  - User Preferences 20, 30-31
  - Utility 32
    - Screens 20-21
      - Adaptive Load Compensation Calibration 21
      - Gyro Calibration 21
      - Joystick Shaping Calibration 21
      - Sip and Puff Calibration 21
- V**
- Versions 10, 14
    - LiNX Access iOS tool 10
    - LiNX System 10
    - WDE Version 31
  - Viewing
    - Active Errors 24
    - Chair Statistics 24
    - Event Log 24
    - System Summary 23
- W**
- WDE Version 37
  - Website 31
  - Write 19, 50
  - Write to Chair 27, 39, 43, 50, 53
- X**
- XLR socket 15

## EUROPE

Ph: +44-1562-826-600  
Fax: +44-1562-824-694

[eusales@dynamiccontrols.com](mailto:eusales@dynamiccontrols.com)

## ASIA

Ph: (Taiwan): +886-955-335 243  
Ph: (China): +86-512-6289 2847  
Fax: +886-2-2598 1562

[asiasales@dynamiccontrols.com](mailto:asiasales@dynamiccontrols.com)

## AUSTRALASIA

*CORPORATE OFFICE*

Ph: +64-3-962-2519  
Fax: +64-3-962-2966

[sales@dynamiccontrols.com](mailto:sales@dynamiccontrols.com)

## USA

Ph: +1-440-979-0657  
Fax: +1-440-979-1028

[usasales@dynamiccontrols.com](mailto:usasales@dynamiccontrols.com)



Dynamic Controls is the world's leading manufacturer of electronic controls for power wheelchairs and scooters.

Dynamic Controls was established in 1972 and is headquartered in New Zealand.

Regional centres are located in Europe, United States, Asia, and Australasia.

ISO 13485 certified – Dynamic Controls goes above and beyond industry standard expectations to ensure customers receive the best products possible.

**dynamic**<sup>™</sup>

[www.dynamiccontrols.com](http://www.dynamiccontrols.com)