



dynamic™

P/N SM100709 Rev. A

**Dynamic™ LiNX™
Rehab Remote Modules
REM400 | REM500**

Instructions for Use



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ISO 7010-M002
**Instruction manual/
booklet must be read!**
(Blue Icon)

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1.0 About this manual

Welcome to the installation manual for the LiNX complex remote modules.

This manual will help you to understand and operate the LiNX complex remote modules — please read and understand this and all other relevant LiNX system manuals before installing and operating.

1.1 Using this manual

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 can lead to equipment failure.

See also

The “See also” box provides cross-references to further information with clickable links to help you navigate the manual more easily.

1.2 Important information

Do not install, maintain or operate this equipment without reading, understanding and following this manual – including the Safety and Misuse Warnings – otherwise injury or damage may result. This manual contains integration, set up, operating environment, test and maintenance information needed in order to ensure reliable and safe use of the product.

The products described in this manual are not user-serviceable. Specialized tools are necessary for the repair of any component. Any attempt to gain access to or in any way abuse the electronic components and associated assemblies that make up the wheelchair controller system renders the manufacturer’s warranty void and the manufacturer free from liability.

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.

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1.4 Contact

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1.5 Related documentation

For any information or instruction relative to installation and programming of parameters of the LiNX System please visit: www.dynamiccontrols.com

2.0 REM400 overview

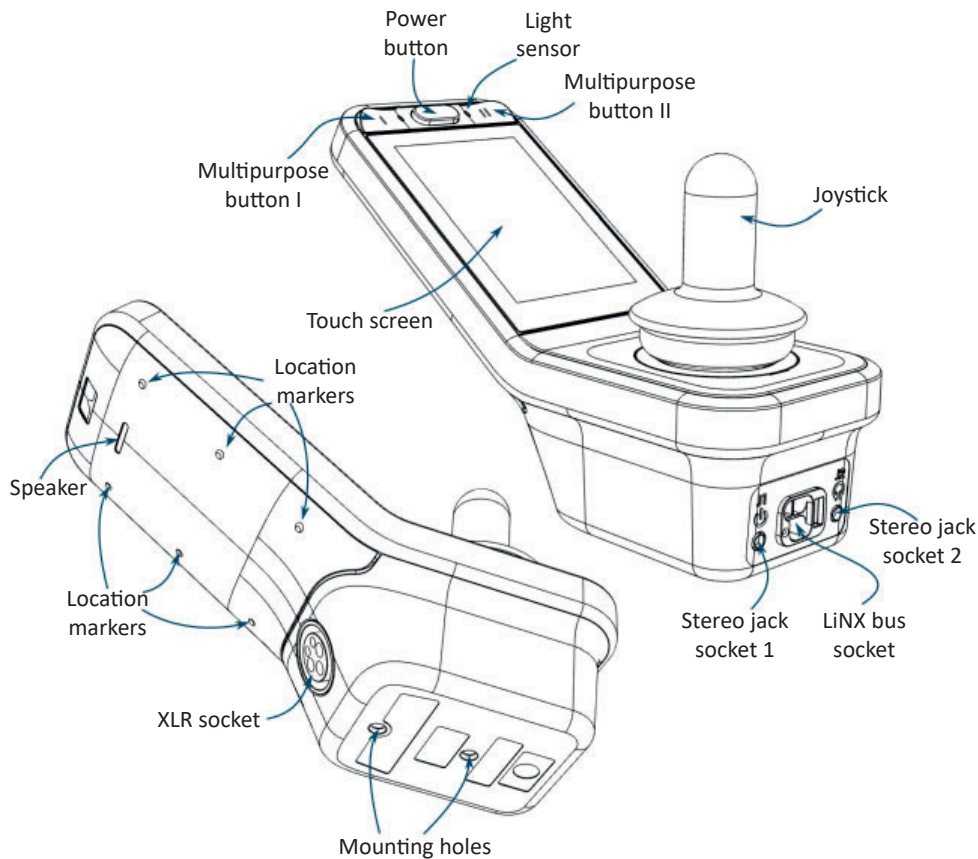


Figure 2.1: REM400 overview

Table 1: REM400 overview

| Item | Purpose |
|-----------------------------|---|
| Power button | Use to power up and down the system; includes a built-in status indicator. |
| Light sensor | Used for detecting ambient light. |
| Multipurpose buttons I & II | These buttons can be configured to perform common operations, based on the user's needs. |
| Touch screen | 3.5" color capacitive touch screen with customizable contextual menus. Use swipe or tap actions to navigate through drive, seating, utility and connectivity cards. |
| Stereo jack sockets | 2 x stereo jack sockets that can connect to an external power switch (J1 tip only) and other multi-way switches. |
| LiNX bus socket | A single cable connects to the LiNX bus for both communication and power. |
| Joystick | A user input to control the speed and direction of driving and seating motions. |
| Speaker | Horn. |
| Location markers | Three location markers are placed on either side of the REM400's back plate to guide the user's hand. |
| XLR socket | The XLR socket can be connected to a battery charger or the LiNX Access Key. |
| Mounting holes | Standard-spaced LiNX mounting holes. |

3.0 REM500 overview

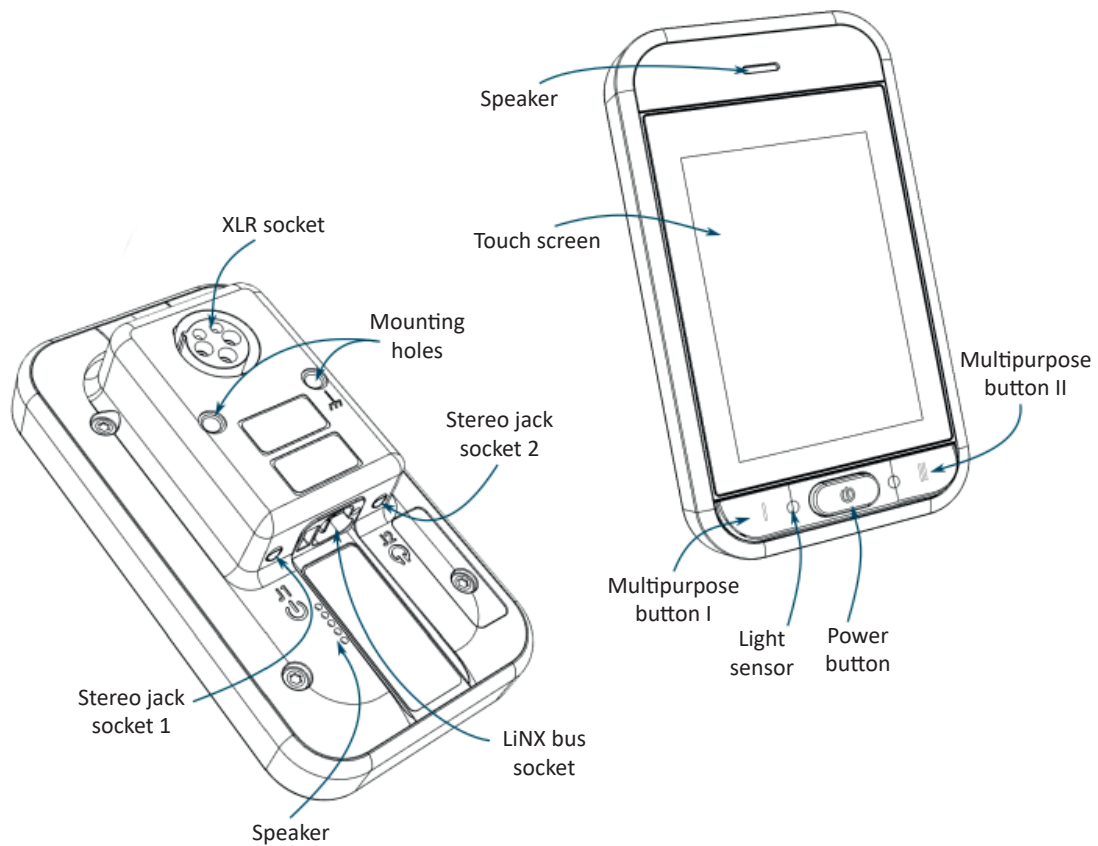


Figure 3.1: REM500 overview

Table 2: REM500 overview

| Item | Purpose |
|----------------------|---|
| Power button | Use to power up and down the system; includes a built-in status indicator. |
| Light sensor | Used for detecting ambient light. |
| Multipurpose buttons | These buttons can be configured to perform common operations, depending on the user. |
| Touch screen | 3.5" color capacitive touch screen with customizable contextual menus. Use swipe or tap actions to navigate through drive, seating, utility and connectivity cards. |
| Stereo jack sockets | 2 x stereo jack sockets that can connect to an external power switch (J1 tip only) and other multi-way switches. |
| LiNX bus socket | A single bus cable connects to the LiNX system for both communication and power. |
| Speaker | Horn (rear) and audio out. |
| XLR socket | The XLR socket can be connected to a battery charger or the LiNX Access Key. |
| Mounting holes | Standard-spaced LiNX mounting holes. |

4.0 Common tasks

4.1 Powering up and down

NOTE

In the unlikely event that the wheelchair is in a runaway situation, the user can press the remote module's power button to perform an EMERGENCY STOP. See section **4.2 Performing an emergency stop**.



Figure 4.1:
Power OFF

To switch **ON** the LiNX complex remote module, press the power button.

If there is no fault with the system, the touch screen displays the power up splash screen — see **Figure 4.4** — the status indicator (through the power button) lights up green, and a function card is displayed along with the status and battery bars.



Figure 4.2:
Power ON

If there is a fault with the system when powering up, the status indicator displays the fault with a series of red flashes (see LiNX System Manual for more information on fault indication).

To switch **OFF** the system, press the power button; the touch screen displays the power down screen — see **Figure 4.5** — the system powers down and the status indicator switches off.



Figure 4.3:
Fault indication

The power button is also used to perform an EMERGENCY STOP—see next section— disable Bluetooth, and lock the system—see section **4.2 Performing an emergency stop**.



Figure 4.4: Power up splash screen



Figure 4.5: Power down screen

WARNING!

A power button can power down a system only if its status light is active (green or flashing red). If a power button's status light is not active (that is, the power button's status light is off), the power button cannot be used to power down the system. Similarly, control I/O power buttons, including toggles, can power down a system only if the status light on the module that they are connected to is active. If the status light on the module that they are connected to is not active, the control I/O power buttons, including toggles, cannot be used to power down the system.

i See also

5.1 *The status indicator and flash codes*



NOTE

Before operating a user input, such as the joystick or head array, the user should check which user function is selected and what that function's speed is set to, to prevent unexpected operation.

4.2 Performing an emergency stop

If the user needs to stop the wheelchair quickly, or stop a seating motion quickly, the power button can be pressed to perform an EMERGENCY STOP. If driving, the wheelchair stops quickly; the rate at which it comes to a stop is set by the **Emergency Deceleration** parameter.

i See also

See the *LiNX System Manual* for more information on the **Emergency Deceleration** parameter.



Figure 4.6:
The joystick

4.3 Using the joystick (REM400 only)

The joystick controls the direction and speed for both drive and seating functions. It can be configured to work in proportional or discrete modes.

Direction control — driving

By default, when the joystick is deflected from the neutral position, the wheelchair moves in the same direction as the joystick. This default behavior, however, can be modified by configuring the joystick rotation angle, swapping the joystick axes, or reassigning joystick quadrants. See the *LiNX Systems Installation Manual* for more details.

Direction control — seating

For seating functions, the direction of the seating motion (extend / retract) depends on how the input control has been configured. See the *LiNX Systems Installation Manual* for more details.

Speed control — proportional mode

In proportional mode, the speed of the drive or seating function is proportional to the joystick deflection, so that the further the joystick is moved from the neutral position, the faster the drive or seating function travels.

Speed control — discrete mode

In discrete mode, the speed of the drive or seating function is fixed and is activated when the joystick is deflected past a configurable threshold — see **Joystick Switch Threshold** in the *LiNX System Installation Manual*.

Stopping

In general, to stop driving or to stop a seating motion, either pull the joystick back to the neutral position, or release the joystick and it will automatically return to the neutral position.

However, this operation does not work for latched driving modes. For latched driving, see the *LiNX Systems Installation Manual*.

The joystick can also be used to wake up the system when in sleep mode — see **4.5 Using the sleep function**.

i See also

See LiNX System Manual for more information on:

- *Drive Delay At Startup*
- *Neutral Window*
- *Joystick Throw*

! WARNING!

As the joystick is deflected, the size of the gap between the joystick skirt and the top of the remote module's body reduces; this can be a pinching hazard. The user should be instructed to release the joystick if any body part becomes pinched from deflecting the joystick.

4.4 Using the lock function

The lock function is used, primarily, to restrict who can use the system, but also it can help prevent unintentional use of the controls for when the system is not required for any length of time. When a system is locked, the system is powered down, and the user controls are not responsive. If the power button is pressed when the system is locked, the locked status is displayed to the user with the padlock screen.

To unlock the system, an unlock sequence must be performed by the user within a specific time frame. If the sequence is not performed correctly, within the time frame, the system remains locked and the system powers down again.

4.4.1 Locking

To lock a powered-up system, press and hold the power button for four seconds. When entering the locked state, the touch screen shows the padlock screen — see **Figure 4.7**.

4.4.2 Unlocking

To unlock the system, press the power button once. The start-up splash screen is displayed, followed by the padlock screen.

Press and hold the padlock screen until it is replaced with a function card — the padlock screen must be pressed and held within 10 seconds of powering up. To indicate unlocking, a white border is drawn around the screen.

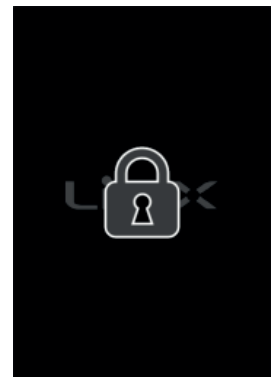


Figure 4.7: Padlock screen

The border, which starts at the bottom of the screen, changes its color at the top of the screen according to the function that it unlocks into. That is: green for drive function, orange for seating function, blue for connectivity function and purple for utility function. See **Figure 4.8**, **Figure 4.9**, and **Figure 4.10**.

If the user does not apply the unlock sequence, or the power button is pressed again before the unlock sequence is complete, the system returns to the locked state and then powers down.

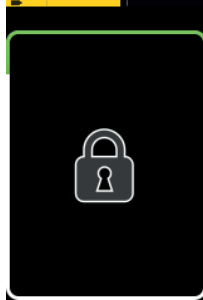


Figure 4.8: Unlocking into drive function

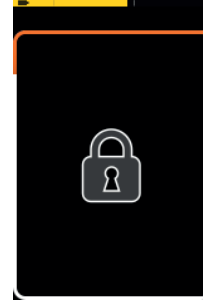


Figure 4.9: Unlocking into seating function

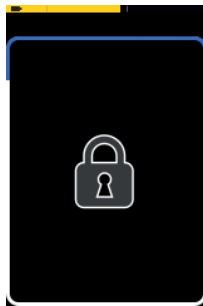


Figure 4.10: Unlocking into connectivity function

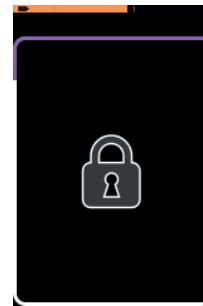


Figure 4.11: Unlocking into utility function

 **NOTE**

- the lock function is only available when the *Enable Lock* parameter is set to *Yes*;
- the LiNX system can be programmed when in a locked state;
- the wheelchair's battery can be charged when the LiNX system is locked;
- if more than one remote module is used within the system, the unlock sequence only operates with the remote module that powered up the system. Furthermore, the locked status indication is only displayed on the remote module that powered up the system;

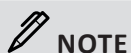
4.5 Using the sleep function

The sleep function switches off the touch screen and all indicators after a period of user inactivity. This is useful, for example, for users who do not want to be disturbed or distracted by light in darker environments.

Before a system goes to sleep, the system enters a transition period, indicating to the user that it is about to enter sleep mode. During the transition period, the touch screen and all indicators slowly dim until they are switched off. If sleep is unwanted, the user can interrupt the process during this transition period by tapping on the touch screen.

The system is woken from sleep by:

- momentarily deflecting the joystick (see note below), or
- pressing the power button.



NOTE

Your prescriber is responsible for setting the **Enable Joystick Wakeup** parameter to enable this functionality.

4.6 Disabling Bluetooth



The embedded Bluetooth functionality can be disabled when powering up the system by pressing and holding the power button for more than three seconds. The disabled Bluetooth functionality is indicated to the user by the status LED pulsing for a duration of six seconds.

Bluetooth functionality resumes the next time that the system is powered up.

5.0 Status and error indicators

5.1 The status indicator and flash codes



Figure 5.1:
Power OFF

The status indicator is located underneath the power button. When the system is not powered up, the status indicator is not lit.



Figure 5.2:
Power ON

When the system is powered up, and there are no faults with the system, the status indicator is lit green.



Figure 5.3:
Fault indication

If, when powered up, there is a fault with the system, then the status indicator flashes red. The number of flashes indicates the type of error. This flash code is shown on the status bar as well — see **6.4 Status bar**. For more information on flash codes, see Error indication in the LiNX System Installation Manual.

5.2 OON indications

OON (“**Out Of Neutral**”) is a safety feature that prevents accidental operation of wheelchair functions (driving, seating etc.) when the system's primary input is in an out of neutral position.

For proportional joysticks, an out of neutral position is when the joystick is deflected such that it would normally produce demand in the system. For discrete (switch) joysticks, an out of neutral position is when the joystick is outside, or greater than, the switch threshold. For switches, out of neutral is when one or more switches are activated.

An OON indication is displayed when the primary input is out of neutral and one of the following:

- the system is powering up,
- after a function change,
- when the system comes out of an inhibit or drive lock-out
- when the settings menu is exited
- when indirect navigation is exited
- when Rest is exited
- on Live Handover (switching user input)



NOTE

OON activation is slightly different between a drive function and a non-drive function for quadrants that have no programmed output.

- *For non-drive functions, such as seating, OON is not activated if the primary input is in an out of neutral position in a quadrant that has NOT been programmed for an output. This is particularly useful, for example, for head-array users who may have just the left and right pads programmed for output, allowing them to rest their head on the middle pad without the fear of activating an OON.*
- *For drive functions, no matter how the quadrants are programmed, OON will always activate when the primary input is out of neutral when powering up or when waking up from sleep.*

There are three types of OON:

- Drive OON
- Seating OON (if applicable to system)
- Utility OON (if applicable to system)

5.2.1 Drive OON warning

During a drive OON warning, the OON overlay, as shown in [Figure 5.4](#), is displayed, and the wheelchair will not drive. If the primary input is returned to the neutral position, the warning clears and the wheelchair drives normally.

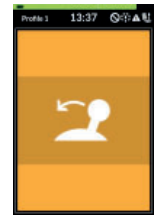


Figure 5.4:
Drive OON warning

5.2.2 Seating OON warning

During a seating OON warning, the OON overlay, as shown in [Figure 5.5](#), is displayed, and the seating motions do not operate. If the joystick is returned to the center position, or the switches are deactivated, the warning clears and the seating motions operate normally.

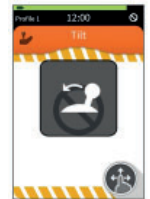


Figure 5.5:
Seating OON warning

5.2.3 Utility OON warning

During a utility OON warning, the OON overlay, as shown in [Figure 5.6](#), is displayed, and utility functions do not operate. If the primary input is returned to the neutral position, the warning clears and the utility functions operate normally.

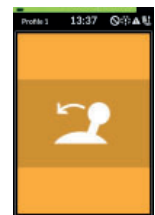


Figure 5.6:
Utility OON warning

6.0 Understanding the touch screen

The REM400 and REM500 remote modules allow the user to interact with the LiNX wheelchair through the touch screen. The touch screen provides the user with useful, realtime information about the system as well as providing the ability to control aspects of the wheelchair for driving, seating and lighting.

System information and controls are presented to the user through a number of different screens, such as splash screens (**Figure 6.1**), function cards (**Figure 6.2**), and overlays (**Figure 6.3**).



Figure 6.1: Power-up splash screen



Figure 6.2: Function cards

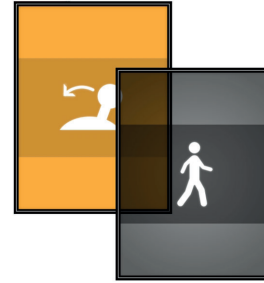


Figure 6.3: Overlays

Splash screens are temporary, provide information only, and require no user-input. Function cards provide the means to interact with the wheelchair, such as controlling the speed of the wheelchair, or switching on the indicator lights. Overlays, which are often placed over a function card, provide information or instructions that may require subsequent user action, depending on their purpose. While an overlay is displayed, the touch screen cannot be used.

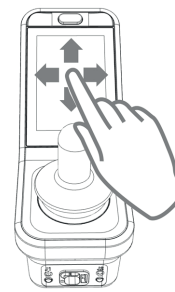
Faults and other system information are displayed with the status indicator (an LED under the power button), and the status bar.

6.1 Interacting with the touch screen

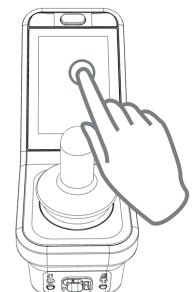
The user can interact with the touch screen in one of two ways:

- swipe-and-tap mode
- tap-only mode.

In swipe-and-tap mode, the user can use swiping actions as well as tapping actions to navigate and select options. In tap-only mode, the touch screen provides areas and buttons for the user to tap (rather than swipe) to navigate and select options.



**Figure 6.4:
Interaction mode:
swipe-and-tap**



**Figure 6.5:
Interaction
mode: tap-only**

6.2 Touch screen components

Typically, the user interacts with the REM400 and REM500 through a function card. With a function card active, the touch screen includes the following components:

- battery bar
- status bar
- function card (with header)
- navigation button
- function information

These components are described further in the table below.

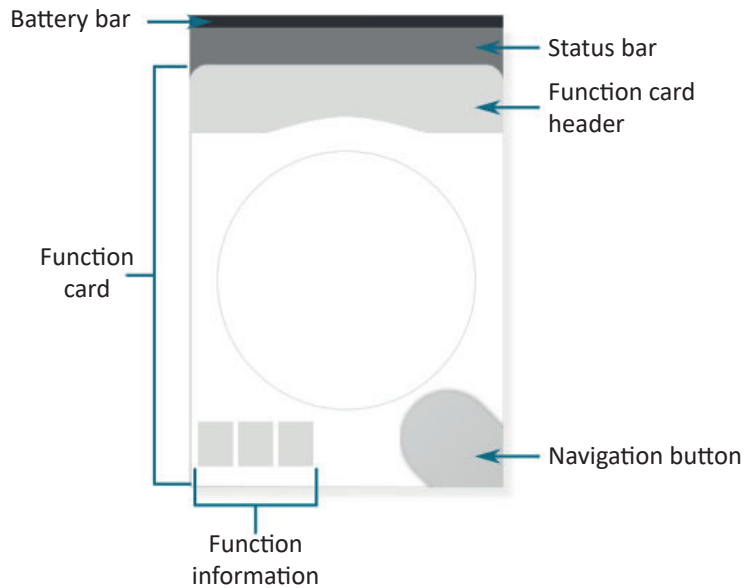




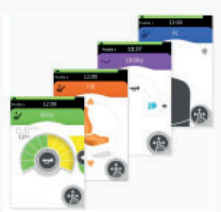



Figure 6.6: Typical screen components





Table 3: Typical screen components

| Component | Purpose | Further information |
|---|---|---|
|  | The battery bar provides information about the state of charge of the batteries. | See 6.3 Battery bar |
|  | The status bar displays: <ul style="list-style-type: none"> • the current profile name • the time • icons indicating drive and seating status information | See 6.4 Status bar |
|  | The navigation button: <ul style="list-style-type: none"> • displays the current interaction mode; • opens the function card preview (short press) • opens the status and settings menu (long press) | See 6.5 Navigation button |
|  | Function card header displays: <ul style="list-style-type: none"> • function type: green for drive, orange for seating, blue for connectivity, purple for utility • primary input indicator • function card name | See 6.6 Function card header |
|  | Function cards provide the user the means to observe and interact with the system. There are four types available: drive, seating, utility and connectivity. | See 6.7 Function cards |
|  | Function information displays icons relating to: <ul style="list-style-type: none"> • gyro status • latched driving status • ignore drive lockout. | See 6.8 Function information. |

6.3 Battery bar

The battery bar provides a graphical display of the battery's current state of charge and the charging status when a battery charger is connected. The battery states are shown in **Table 4**.

Table 4: Battery states of charge

| Battery bar | State of charge |
|---|--|
|  | Displays green when the state of charge is between 60 and 100%. This level is set by the Batt Gauge Maximum parameter. See the LiNX System Manual for more information. |
|  | Displays orange when the state of charge is between 20 and 59%. |
|  | Displays red when the state of charge is less than 20%. This level is set by the Batt Gauge Minimum parameter. See the LiNX System Manual for more information. |
|  | Charging. See 13.0 Battery charging . |

Further information about the battery's state of charge is displayed in the status bar. See **6.4 Status bar** for more information.

6.4 Status bar

The status bar can be divided into three sections:

- profile name
- time
- status information



Figure 6.7: The Status Bar

Profile name

Your prescriber is responsible for setting the profile name with a LiNX Access programming and diagnostic tool using Functions | Profile Name.






Time

The time is displayed as a 12 or 24-hour clock. It is set using the coordinated universal time (UTC) and an offset based on the location (country) of the user. The UTC is automatically acquired when a system is connected to a programming and diagnostic tool. The country-based offset is set by the user through the remote module's setting screen.

Status information

The status information displays the current state of the LiNX system with status icons. The icons include: flash codes; Bluetooth disabled; drive slowdown; drive lockout / inhibit; seating lockout. These status icons are explained in **Table 5**, below.

Table 5: Status information icons


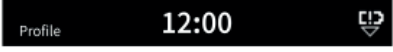
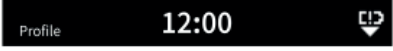
| Status icon | Meaning |
|---|---|
|  | Drive lockout — This notifies the user that a drive lock-out is active. A drive lock-out is a state that prevents the wheelchair being driven. |
|  | Drive slowdown — This notifies the user that a drive slow-down is active. A drive slow-down is a state that prevents the wheelchair being driven at the standard speed for safety reasons. Instead, the wheelchair is allowed to drive at a reduced speed for the duration of the active drive slowdown. |
|  | Flash code — This notifies the user that an error is active. The flash code is a value between 1 and 7 (see the LiNX Systems Manual for more information about errors and flash codes) — this flash code is flashed on the status indicator at the same time. |
|  | Seating inhibit — This notifies the user that a seating inhibit is active. A seating inhibit is a state that prevents the wheelchair's seating being operated. |
|  | Bluetooth disabled — This notifies the user that Bluetooth connectivity is disabled. See section 4.6 Disabling Bluetooth for more information about disabling Bluetooth. |

Three battery conditions are shown on the right-hand side of the status bar. These are:

- high voltage
- low voltage
- cut-off voltage

These are described in **Table 6**.

Table 6: Battery conditions shown on the status bar

| Battery voltage | Meaning |
|---|---|
|  | High voltage — this is displayed when the battery voltage goes above the Batt Gauge High Voltage Warning set-point. |
|  | Low voltage — this is displayed when the battery voltage falls below the Batt Gauge Low Voltage Warning set-point. |
|  | Cut-off voltage — this is displayed when the battery voltage falls below the voltage set by Cut Off Voltage . This indicates that the battery is empty and battery damage will occur if the battery is discharged any further. The horn also sounds once every ten seconds for the duration that the deep discharge status is active. |

6.5 Navigation button



Figure 6.8: The navigation button

The navigation button has two important functions. Firstly, with the use of different colors and icons, it provides a visual indication (or reminder) of the configured interaction mode: swipe-and-tap, or tap-only — see [Table 7](#).






Secondly, when activated (tapped by the user's finger), it performs a navigation function, depending on context and activation duration:

- a **short press** causes the function card preview to be displayed;
- a **long press** causes the status and settings menu to be displayed.

See [12.1.1 Selecting function cards and profiles in swipe-and-tap mode](#) and [12.1.3 Selecting function cards and profiles with control inputs \(CI\)](#).

The navigation button's appearance varies according to the configured interaction mode (swipe-and-tap or tap-only) and its status. When in swipe-and-tap mode, an icon with a finger and three arrows is displayed; in tap-only mode, an icon with a finger and a circle is displayed. These icons change color, from grey to blue, when activated. This is summarized in [Table 7](#).

Table 7: Navigation button variations

| Inactive navigation button | Indication | Active navigation button | Indication |
|---|---------------------|---|---------------------------------------|
|  | Swipe-and-tap mode. |  | Responding to a swipe-and-tap action. |
|  | Tap-only mode. |  | Responding to a tap-only action. |
|  | Screen lock active | | |

6.6 Function card header

The function card type is identified by the color of the function card's header: green indicates a drive card, orange for seating, blue for connectivity and purple for utility card.



Figure 6.9: Drive card header example



Figure 6.10: Connectivity card header example



Figure 6.11: Seating card header example










Figure 6.12: Utility card header example

The text in the middle of the header is programmable and is used to identify the function.

The icon on the left of the header indicates the type of primary input that is assigned to the selected function. These are shown in the table next.

Table 8: Primary input indicators

| Indicator | Meaning | Indicator | Meaning |
|---|---------------------------------------|--|-----------------|
|  | REM400 |  | REM2xx CR400 |
|  | Input module or third-party interface |  | Head array |
|  | Attendant control unit |  | User switch |
|  | Sip and puff | | |

6.7 Function cards

Function cards are the user's primary interface to the LiNX system. There are four types that can be added to a profile:

- *drive card*;
- *seating card*;
- *connectivity card*;
- *utility card*.

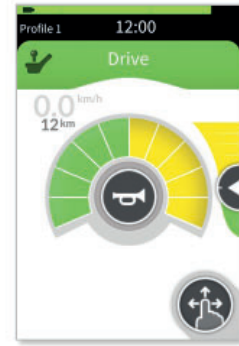


Figure 6.13: Drive card example

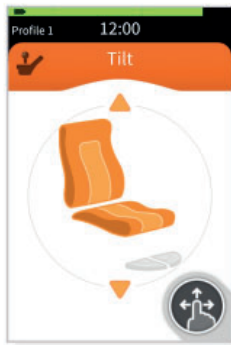


Figure 6.14: Seating card example

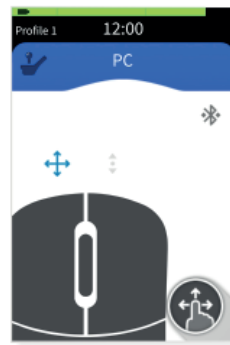


Figure 6.15: Connectivity card example

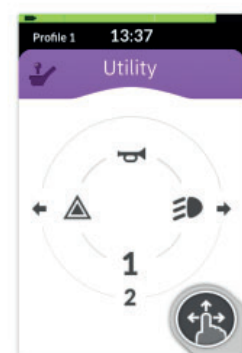


Figure 6.16: Utility card example

A drive card is selected when the user wants to drive the wheelchair, control the wheelchair's speed, operate lights and sound the horn.

A seating card is selected when the user wants to reposition the seating.

A connectivity card is selected when the user wants to communicate with an external device, such as moving the cursor on a computer with the mouse mover function.

A utility card is selected to easily control lighting, horn and other control outputs using both 4 quadrant-based and 3 quadrant-based primary inputs.

i See also

See "Drive cards" in section 7.0

See "Seating cards" in section 8.0

See "Connectivity cards" in section 9.0

See "Utility cards" in section 10.0

6.8 Function information

To provide the user with extra function-specific information, the area towards the lower-left of the function card can display indicators relating to:

- *gyro status*
- *latched driving status*
- *ignore drive lockout*

6.8.1 Gyro status



Gyro enabled

The gyro status indicates if the gyro module is enabled or disabled for the current function. No indicator is shown if a gyro is not installed or connected.



Gyro disabled

6.8.2 Latched driving status



If the function is operating in a latched driving mode, the latched driving status indicator reminds the user which type of latched driving has been selected. No indicator is shown if latched driving is not enabled for the selected function.

See **Table 15** for all indicators.

6.8.3 Ignore drive lockout



If the function operates with the **Drive Lockout Ignored** feature enabled, the ignore drive lockout indicator is displayed to remind the user that a drive lockout does not occur in this function.

6.9 Toggle switches

The REM400 can be fitted with option toggle switches, alternative means to switch commonly used controls.

Once installed, power cycle the LiNX system and it will recognize the fitted toggles — no further set-up is required.

The toggles operate a switch action when pushed fully forwards or pulled fully backwards. Each toggle can be programmed as a power button or a general purpose button. General purpose buttons can be configured further to perform a specific action, such as driving, seating, or menu navigation.

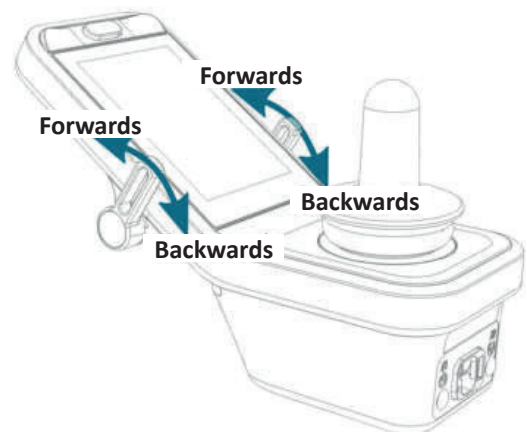


Figure 6.17: Operating the toggle switches

7.0 Drive cards

A drive card is selected to drive the wheelchair. The drive card comprises a speed dial, speed slider and speedometer/odometer (see **Figure 7.1**) for viewing and controlling the speed of the wheelchair when driving.

Drive cards also provide access to the lights (see **7.2 Lighting control and dashboard**) and horn (see **7.3 Sounding the horn**).



Figure 7.1: Drive card showing speedometer/odometer, speed dial and speed slider

7.1 Controlling and viewing speed

The speed dial

The speed dial displays the user and wheelchair speed settings. It is divided into ten segments, representing the speed range of the wheelchair. Each segment can show one of three colors: green, yellow and grey.

The green region (1 in **Figure 7.2**) shows the drive function's speed range, which is set by the user with the position of the speed slider — see next section **The speed slider**.

The yellow region (2 in **Figure 7.2**) shows the maximum possible range available to the user within this drive function.

The grey region (3 in **Figure 7.2**) shows the maximum range for the wheelchair; any area colored grey is not available for this drive function.

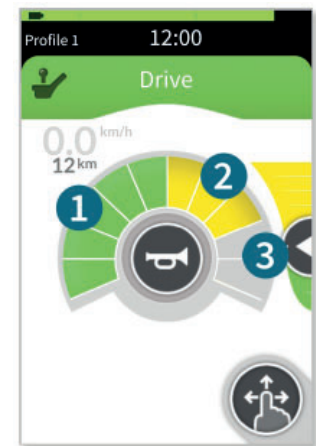
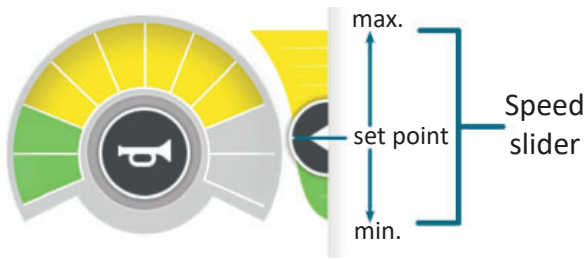


Figure 7.2: Drive card — not driving

The speed slider



The speed slider is adjusted by the user to reduce the selected drive function's maximum speed. The proportion of the green and yellow areas (1 and 2 in **Figure 7.2**) correspond to the position of this slider. Move the slider down to reduce the available speed. As the available speed reduces, the green area reduces and the yellow area increases (**Figure 7.4**, left-hand side).

Figure 7.3: The speed slider

Move the slider up to increase the available speed. As the available speed increases, the green area increases and the yellow area decreases (**Figure 7.4**, right-hand side).



Figure 7.4: Using the speed slider (minimum setting, left, and maximum setting, right)



Figure 7.5: Adjusting the speed slider in swipe-and-tap mode



Figure 7.6: Adjusting the speed slider in tap-only mode

The speedometer and odometer

Figure 7.7 shows the speedometer and odometer on the drive card, while driving.

The speedometer displays the wheelchair's current speed and the odometer displays the distance travelled by the wheelchair since it was last reset to zero, or rolled over to zero (see note below).

At any time, the user can reset the odometer back to zero — see **11.6 Resetting the odometer and changing units**.

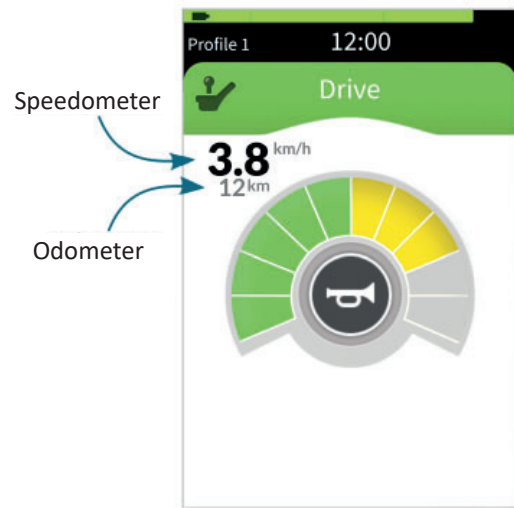


Figure 7.7: Drive card — driving

NOTE

The odometer can display up to a maximum distance of 9999 km or miles, after which it rolls over to zero.

NOTE

When there is a drive demand, the navigation button and the speed slider are removed from the drive card to reduce visual clutter — see **Figure 7.7** — they return when the drive demand is removed.

7.2 Lighting control and dashboard

For systems with lighting, the **lighting control button** and the **lighting dashboard** are displayed. The lighting control button, at the top of the drive card, opens and closes the lighting button panel. The lighting dashboard, which is displayed beneath the horn button, shows the four lighting telltales (left and right indicators, hazard and position lights) that become illuminated when active. **Figure 7.9** shows the difference between drive cards for a system with no lighting (left image) and a system with lighting (right image).

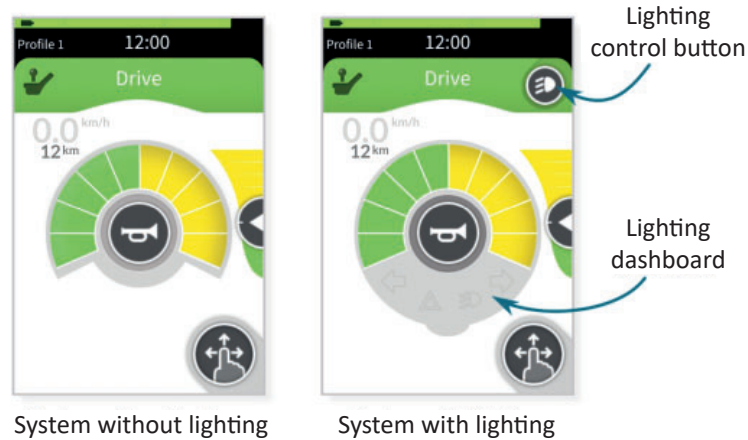


Figure 7.9: Drive card — with and without lighting

To control the wheelchair's lights, tap on the lighting control button to display the lighting control panel. Tap on any lighting button to switch the lights on or off. Tap on the lighting control button to close the lighting control panel. Activated lights are displayed using the telltale indicators (left and right indicators, hazard and position lights) on the lighting dashboard.

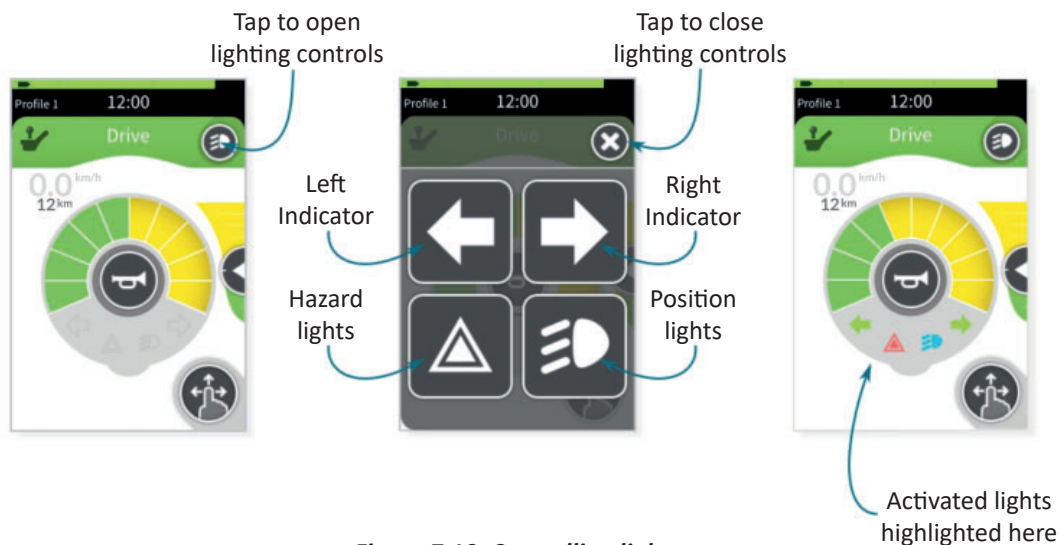


Figure 7.10: Controlling lights

7.3 Sounding the horn

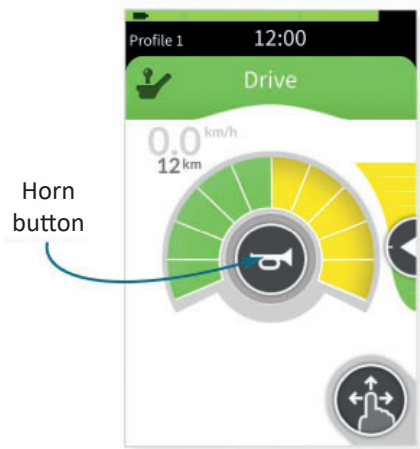


Figure 7.11: Horn button location

The horn button is displayed in the center of the drive card's speedometer. Tap to sound the horn. The horn sounds for the duration the horn button is activated.

! WARNING!

The horn button becomes unavailable while operating seating functions. A separate control input should be configured to enable operating the horn in this situation.

8.0 Seating cards

A seating card is selected by the user to operate a seating function.

Typically, a seating card comprises:

- the seating card name
- one or more seating functions
- one or more motions/memory positions
- the quadrant ring

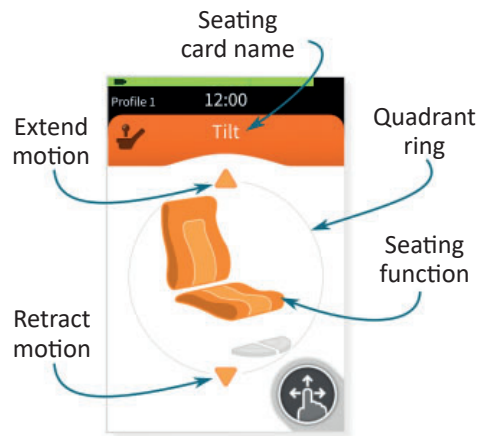


Figure 8.1: Example seating card

A seating card may be configured for a single seating function (motion or memory position) — **Figure 8.2**, or may offer multiple seating functions (all motions, or all memory positions, or a mix of motions and memory positions) — **Figure 8.3**. The seating icons identify the function or functions that are performed with the seating card; the full range is shown in **Table 13**.



Figure 8.2: Example seating card -two quadrants

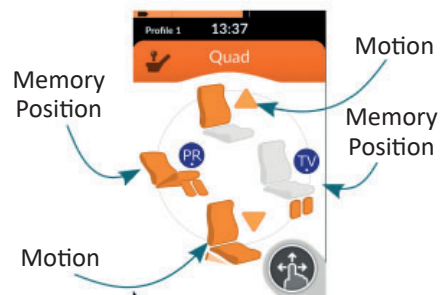


Figure 8.3: Example seating card -four quadrants showing motions and memory positions

To differentiate between motions and memory positions, an orange arrow beside the seating icon identifies a motion, and a blue circle identifies a memory position (**Figure 8.3**). For motions, an arrow pointing up signifies extend; an arrow pointing down signifies retract. For both motion and memory position identifiers, a white dot indicates that the function latches.

If a motion or memory position is inhibited, a grey strike-out icon (⊘) is displayed on top of the motion or memory position identifier. These are summarized in **Table 9** and **Table 10**.

Table 9: Seating motions — extend and retract

| Seating action | Display | Seating action | Display |
|------------------|---------|-------------------|---------|
| Extend | | Retract | |
| Extend inhibited | | Retract inhibited | |

Table 10: Seating motions — latched extend and retract

| Seating action | Display | Seating action | Display |
|--------------------------|---------|---------------------------|---------|
| Extend latched | | Retract latched | |
| Extend latched inhibited | | Retract latched inhibited | |

Table 11: Memory positions -non-latched

| Seating action | Display | Seating action | Display |
|---------------------------|---------|---------------------------|---------|
| Inactive memory position | | Active memory position | |
| Completed memory position | | Memory position inhibited | |

Table 12: Memory positions -latched

| Seating action | Display | Seating action | Display |
|-----------------------------------|---------|-----------------------------------|---------|
| Inactive latched memory position | | Active latched memory position | |
| Completed latched memory position | | Latched memory position inhibited | |

8.1 Operating a motion



Figure 8.4: The quadrant ring

To show the user which motions are available and how to operate them, motions are displayed in one of the four quadrants (forward, reverse, left and right) of the quadrant ring.

A user operates a motion by activating the configured input (joystick or control input) in the direction indicated by the position of the motion on the quadrant ring.

For example, in **Figure 8.5**, the seating card shows a two-quadrant seating function with two motions:

1. extend (the orange arrow pointing up in the forward quadrant) and
2. retract (the orange arrow pointing down in the reverse quadrant).

To operate the extend motion, the user must activate the user input configured for forward operation, such as deflecting the joystick forward. To operate the retract motion, the user must activate the user input configured for reverse operation, such as deflecting the joystick backwards.

Likewise, in **Figure 8.6**, the seating card shows a four-quadrant seating card with four motions:

1. recline extend (forward quadrant);
2. both legs retract-latched (reverse quadrant);
3. tilt retract (left quadrant);
4. elevate extend-latched (right quadrant);

In this example, to operate the elevate extend-latched motion, the user must activate the user input configured for right operation, such as deflecting the joystick right.

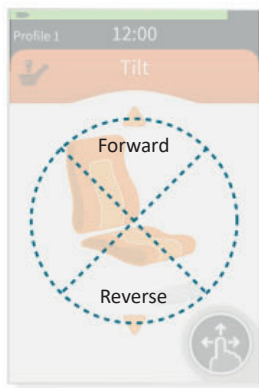


Figure 8.5: Two-quadrant seating card

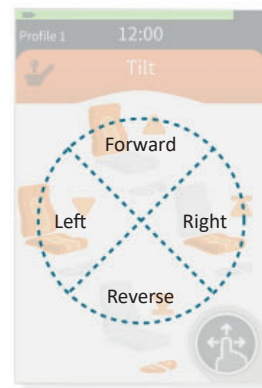


Figure 8.6: Four-quadrant seating card
















Figure 8.7: Active and inactive motion display

When operating a motion, the navigation button is removed from the screen for the duration of the operation. At the same time, the motions' arrows change according to the user input — see **Table 9** and **Table 10**.

8.2 Controlling the seating with seating functions

Table 13 shows the available seating functions (not all seating functions are available in every profile) and their corresponding images.

| Seating function | Display | Seating function | Display | Seating function | Display |
|------------------|---|-------------------|--|------------------|---|
| Tilt |  | Recline |  | Recline and legs |  |
| Elevate |  | Left leg |  | Unspecified |  |
| Right leg |  | Both legs |  | None |  |
| Anterior tilt |  | Elevate footplate |  | Armrest |  |
| Stand |  | | | | |

For each seating function, a number of seating actions are available, depending on how the system has been configured. Available seating functions are dependent on chair configuration.

8.3 Controlling the seating with direct access

Seating motions can be controlled without selecting a seating function via control inputs using, for example, buddy buttons and 10-way switches.

When the seating motions are activated by direct access, a small overlay is displayed on the touch screen to inform the user that the seating is being controlled externally to the REM400/500. The overlays remain on the touch screen for the duration of the seating operation. These overlays are shown in **Table 14**.



Figure 8.8: Direct access overlay example

Table 14: Direct access seating function overlays

| Seating function | Display | Seating function | Display | Seating function | Display |
|------------------|---------|-------------------|---------|------------------|---------|
| Tilt | | Flat | | Uplift | |
| Recline | | Anterior tilt | | Stand | |
| Elevate | | Elevate footplate | | A | |
| Left leg | | Armrest | | B | |
| Right leg | | Pressure relief | | C | |
| Both legs | | Unspecified | | D | |
| Recline and legs | | None | | | |

Available seating functions are dependent on chair configuration.

8.4 Operating a memory position

Memory positions can be considered as the *automated* version of motions. With motions, a user controls seating movements manually, selecting both the direction of the motion and when to stop the motion (unless a limit switch is activated). With memory positions, the LiNX system controls the seating movements automatically, selecting both the direction of the actuator movement and when to stop the actuators.

A user can select and activate any pre-defined memory position via a seating function, or by direct access, depending on their chair's configuration. Additionally, any memory position that uses angle feedback can also be updated through a remote module. The following sections show you how memory positions are selected and activated. See **11.5 Update a memory position** for instructions on updating a memory position using the REM400 or REM500.

8.4.1 Selecting memory positions

To operate a memory position using a display remote module, select the seating function that includes the memory position you want to move to, and then select the memory position with the appropriate joystick action (left / right / forward / reverse). To differentiate between memory positions and motions on a seating card, a position identifier (blue circle, white text) is placed next to the memory position icon.

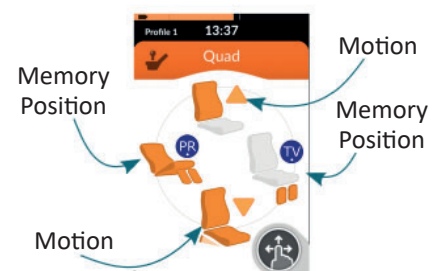


Figure 8.9: Selecting and operating a memory position (REM400/500)

For example, **Figure 8.9** shows a seating function with two motions (forward and reverse quadrants) and two memory positions (left and right quadrants). To activate one of the memory positions, deflect the joystick either left or right.



Figure 8.10: Position overlay (REM400/500)

On activation, the selected memory position is shown on the display as an overlay for the duration that the memory position is active. The overlay, as shown in **Figure 8.10**, shows the selected memory position icon, the memory position identifier, and the angle of a specific angle sensor, if enabled.

 **NOTE**

Only one angle can be displayed for each memory position — the angle displayed is selected when the memory position is configured.

To indicate that a memory position is active, the position identifier displays a light blue outer circle that fades in and out — **Figure 8.11**. When the memory position reaches its target, the outer light blue circle is replaced with a static, dark blue circle.

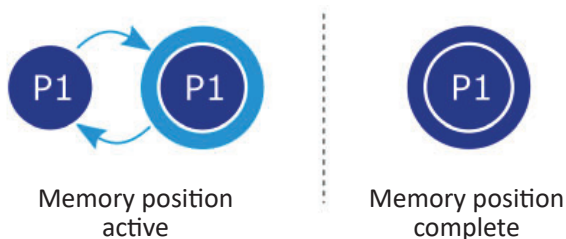


Figure 8.11: Memory position active indication

If a memory position is inhibited, a grey strike-out icon (⊘) is displayed alongside the memory position identifier (**Figure 8.12**) — see also **Table 11** and **Table 12**.

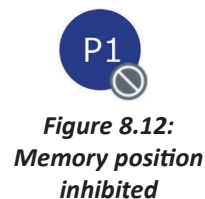


Figure 8.12: Memory position inhibited

8.4.2 Operating modes

Memory positions activated from seating functions, and using a joystick-based remote module, operate in one of three modes:

- proportional
- switched
- latched

In **proportional mode**, the selected memory position drives its actuators towards its target for the duration that the joystick is deflected or until the target position is reached. If the joystick is released before the target is reached, the memory position stops driving the actuators. The speed of the memory position is proportional to the joystick's deflection within the memory position's quadrant.

In **switched mode**, the selected memory position drives its actuators towards its target for the duration that the joystick is deflected or until the target position is reached. If the joystick is released before the target is reached, the memory position stops driving the actuators. The speed of the memory position is selected and fixed through the LiNX Access tools.

In **latched mode**, the selected memory position drives its corresponding actuators towards its target until the target position is reached. The speed of the memory position is selected and fixed through the LiNX Access tools.

NOTE

If you need to deactivate the memory position before it reaches its target:

- in **latched** mode: move the joystick into the same quadrant that activated the memory position and then release it again
- in **switched** or **proportional** mode: move the joystick back to the neutral position

NOTE

See 11.5 Update a memory position for instructions on updating a memory position using the REM400 or REM500.

9.0 Connectivity cards

Connectivity cards allow the user to interact wirelessly with external devices. There are two connectivity functions available: **mouse mover** and **switch control**.

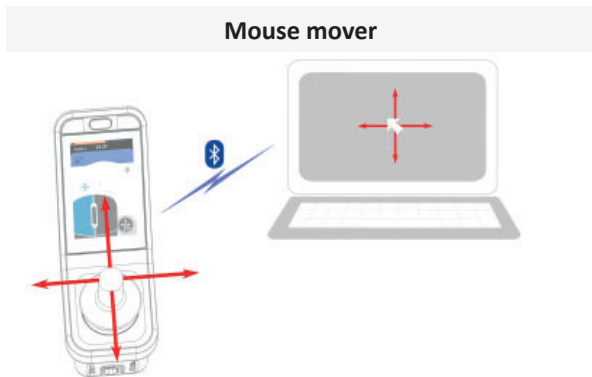


Figure 9.1: Mouse mover

Mouse mover allows the user to control the cursor on a PC or laptop's screen from a user input on the wheelchair, such as the joystick on the remote module, touch screen buttons, or buttons connected via control inputs.

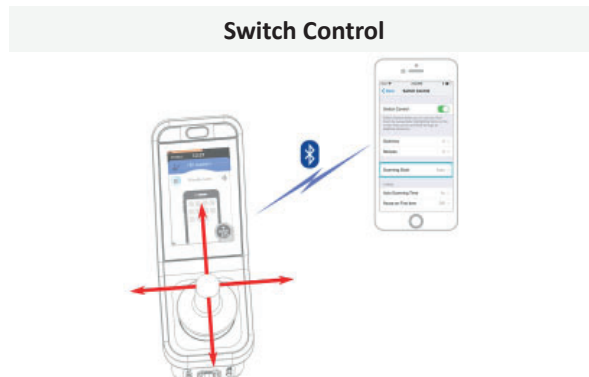


Figure 9.2: Switch control

Switch control is an accessibility feature that allows the user to navigate and select items on their iOS or Android device using any primary input, control inputs, or the REM400/500's touch screen.

A connectivity card, which has a blue header, typically includes:

- the connectivity card name
- Bluetooth connection status

The name is used to uniquely identify the card's purpose. For example, PC for connecting and controlling the cursor on a computer.

The Bluetooth connection status indicator shows when the Bluetooth connection between the LiNX system and the user's device is:

- ✖ disconnected
- ✖) connecting
- ✖ connected

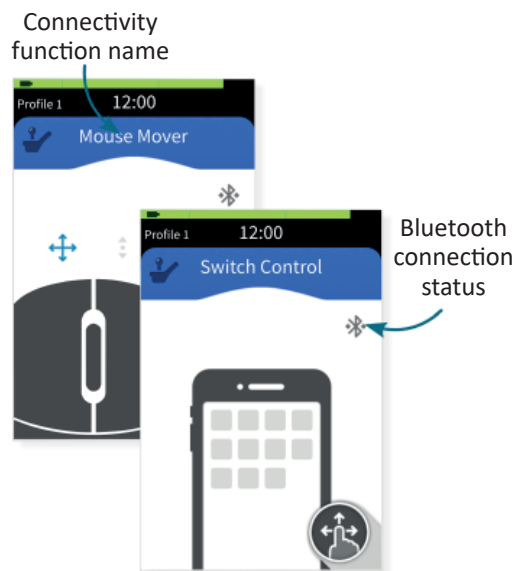


Figure 9.3: Connectivity card examples

9.1 Setting up a connectivity card

The following set up procedure assumes that a connectivity card is available and selectable in one or more profiles. It also assumes that the user's device (PC, laptop, iOS or Android), to which the LiNX system connects to, has an active Bluetooth connection.

Before you can use a connectivity card, you will need to:

1. **pair** the LiNX system with the user's device, and
2. **link** the connectivity card with the user's device.

These actions are described in more detail below.

NOTE

Typically, you only need to pair a device once (unless you purposefully forget it — See “**Forgetting devices**” in section 9.6), while a device can be linked to multiple functions.

9.1.1 Pair the LiNX system with the user's device

To pair the LiNX system with the user's device (PC, laptop, iOS or Android), open the connectivity settings menu. To open this menu, tap and hold the:

Navigation button

until the status and settings screen is displayed, and then tap on:

Settings | Connectivity

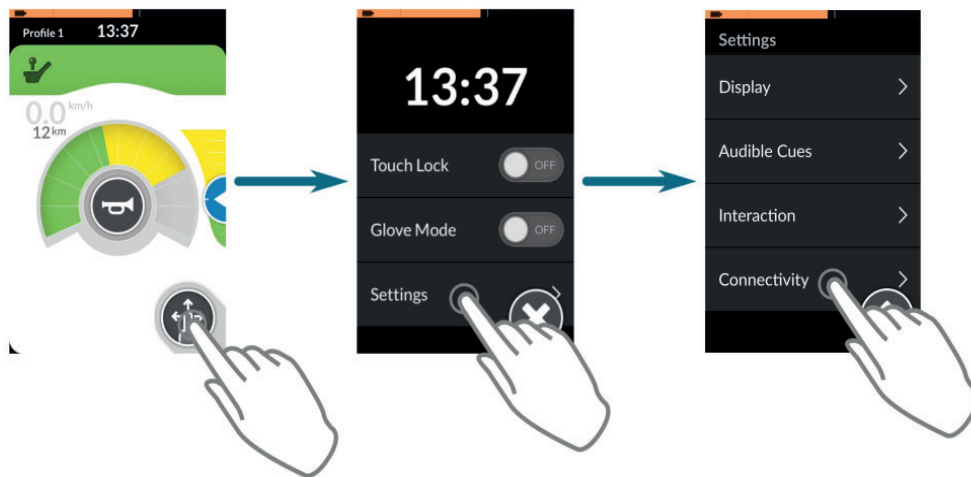


Figure 9.4: Opening the connectivity settings menu

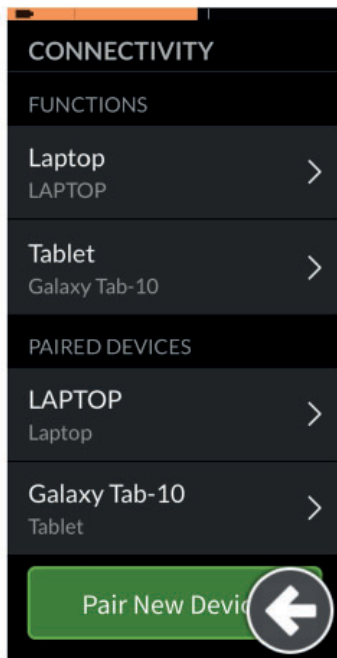


Figure 9.5: Connectivity menu

The connectivity settings menu displays. This menu is split into two sections:

- **Functions** (top section)
- **Paired devices** (bottom section)

At the bottom of this menu, tap on the **Pair New Device** button. The pairing passkey displays on the touch screen with the name of your LiNX device to pair with — for example: REM-J16130951.

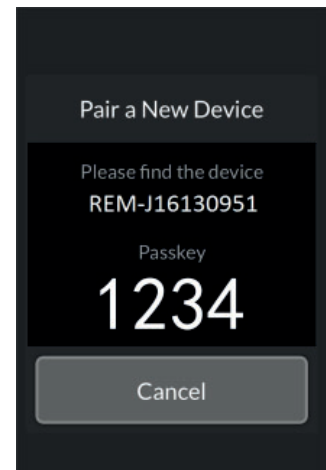


Figure 9.6: Pair New Device

Depending on your device, follow one of the three pairing instructions below:

- *Pairing with a PC or laptop*
- *Pairing with an iOS device*
- *Pairing with an Android device*

Pairing with a PC or laptop

On the Windows PC or laptop, open the Devices and Printers dialog box. There are a number of ways to do this, such as:

Start -> Devices and Printers, or

Start -> Control Panel->Devices and Printers, or

Icon tray -> click on the Bluetooth Devices icon

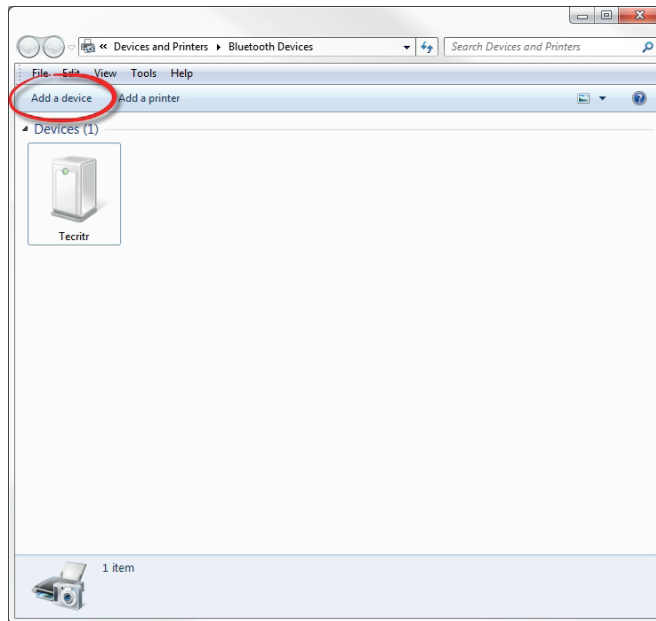


Figure 9.7: Add a device

From the opened **Devices and Printers** dialog box, click on the **Add a device** button.

Locate the LiNX device name that was displayed on the touch screen (e.g. REMJ16130951). Click on **Next**.

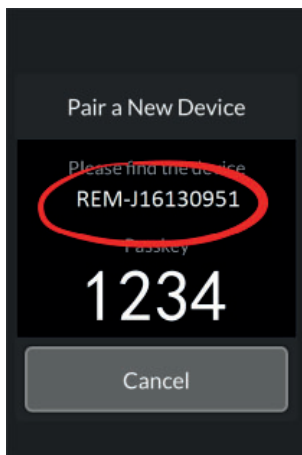


Figure 9.8: Pair new device

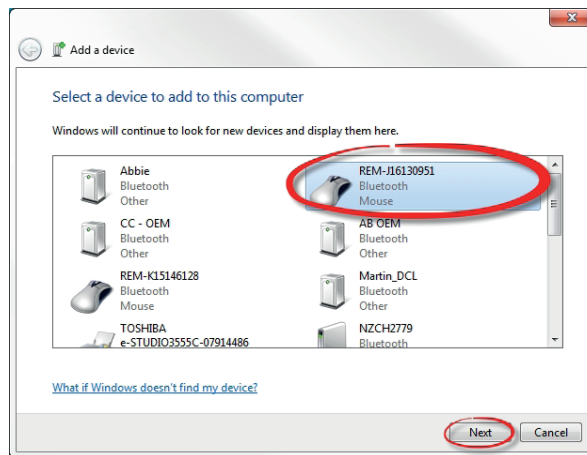


Figure 9.9: Selecting a device to add

Wait for the device to connect. Click on **Next**.

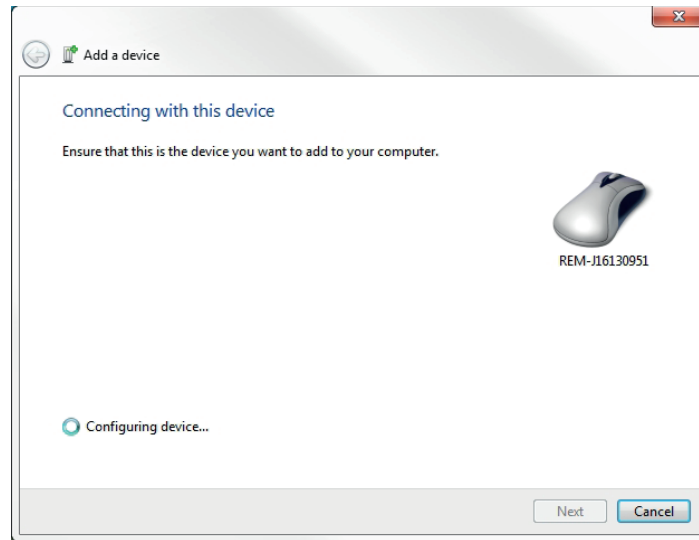


Figure 9.10: Configuring device...

Click on the **Close** button to complete the **Add a device** action.

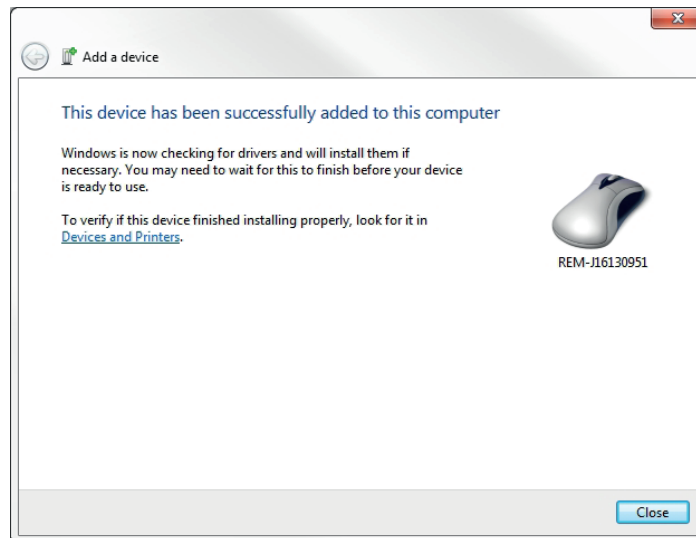


Figure 9.11: Close Add a device

Pairing with an iOS device



On your iOS device, open the Bluetooth menu:

Settings | Bluetooth

If Bluetooth is not switched on, then switch it on now.



From the list of Bluetooth devices displayed on your iOS device, locate and tap on the name of the LiNX device that you wish to pair with (e.g. REM-J16130951) — the Bluetooth status of the selected LiNX device changes to "Connecting" while attempting to pair.

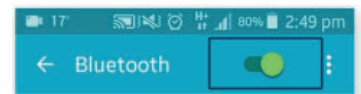
| | | |
|---------------|---------------|---|
| REM-G16138663 | Not Connected |  |
| REM-J16130896 | Connected |  |

Pairing with an Android device

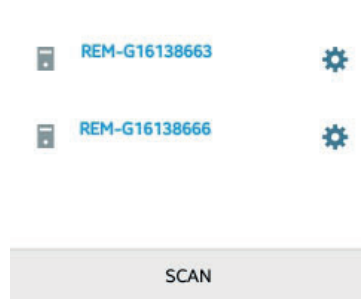
On your Android device, open the Bluetooth menu:

Settings | Bluetooth

If Bluetooth is not switched on, then switch it on now.



From the list of Bluetooth devices displayed on your Android device, locate and tap on the name of the LiNX device that you wish to pair with (e.g. REM-G16138663) — the Bluetooth status of the selected LiNX device changes to "Connecting" while attempting to pair.



If the device pairs successfully, a confirmation screen is displayed on the remote module. Tap on the **OK** button to proceed.

If no device is paired within the set timeout period, a message is displayed "No device was paired". Tap on the **OK** button to proceed.

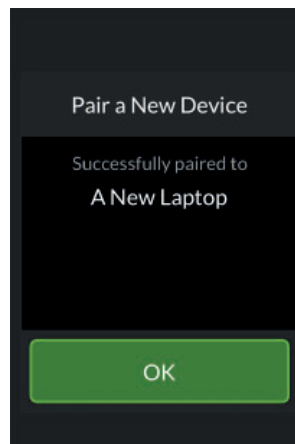


Figure 9.12: Successfully paired

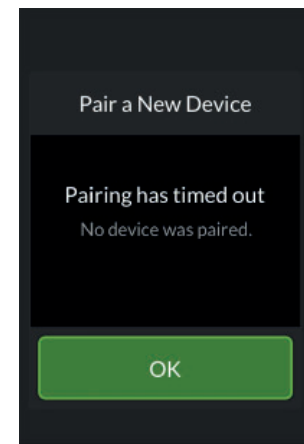


Figure 9.13: Timed out

NOTE

The LiNX system permits up to 10 devices to be paired at any one time. If you have reached this limit, and you need to add more devices, consider "forgetting" devices that have already been paired — see 9.6 Forgetting devices.

9.1.2 Link the connectivity card with the user's device

Connectivity cards must be linked to a paired device. To link a connectivity card to a device, open the connectivity settings menu and then tap and hold the:

Navigation button

And then tap on:

Settings | Connectivity Settings

The connectivity settings menu displays. This menu is split into two sections:

- Functions
- Paired devices

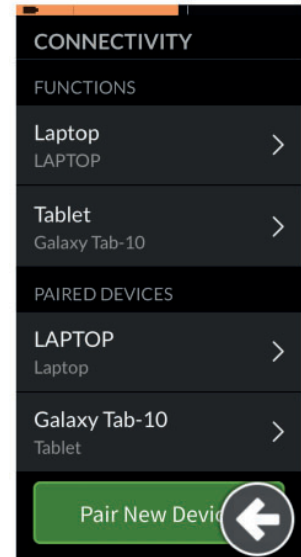


Figure 9.14: Connectivity menu



Figure 9.15: Linked functions and devices

The names of the connectivity cards are displayed in the Functions section (top section of the menu).

For each menu item, the connectivity card's name is displayed at the top, and the user's device, if any, is displayed at the bottom. If the connectivity card has no device linked to it, then "Not Linked" is displayed.

For connectivity cards that have not been linked, tap on the appropriate menu item.

Tap on the **Not Linked** button and select one of the paired devices in the list, or tap on **Pair New Device** button to pair with a new device.

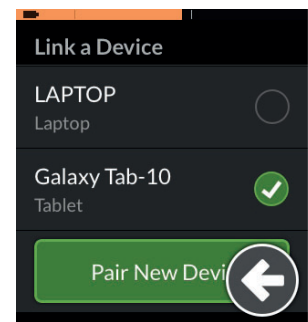





Figure 9.16: Link a device

9.2 Connecting devices

To connect to a device, select the appropriate connectivity function from a profile. If the connectivity function is paired to a device, and the device is linked to the function, then it attempts to connect to the device via Bluetooth.

The Bluetooth connection status indicator shows when the Bluetooth connection between the LiNX system and the user's device is:

| | |
|---|--------------|
|  | disconnected |
|  | connecting |
|  | connected |

If the Bluetooth fails to connect, the status reverts to disconnected. To attempt to connect again, reselect the connectivity function from the profile (that is: deselect it, and then reselect it).

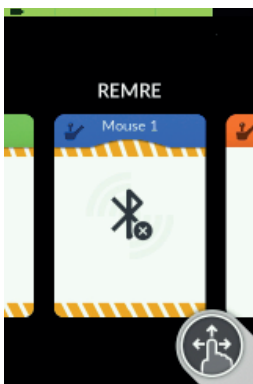


Figure 9.17: Select a mouse mover connectivity card from a profile

If a connectivity card in the profile has not been configured fully, or is subject to an error, it is classed as inoperable. An inoperable card is identified by an orange chevron-like border, with an error icon indicating the type of error.

There are a number of reasons that a connectivity card is inoperable. These are:

- the function's primary input is missing;
- there are hardware errors from the Bluetooth module;
- there is no device linked;
- Bluetooth has been disabled.

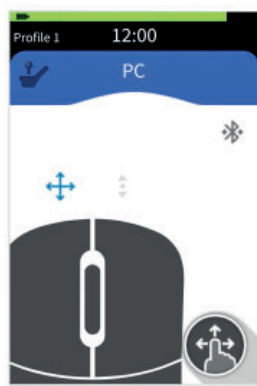


Figure 9.18: Operable function

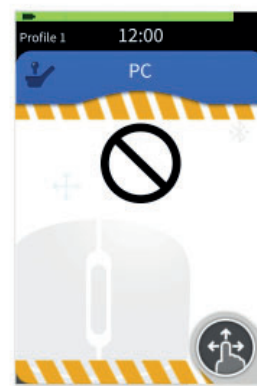


Figure 9.19: Inoperable function

9.3 Configuring and operating mouse mover

9.3.1 Configuring

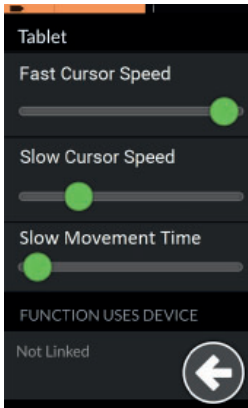


Figure 9.20: Cursor speed settings

Cursor speed settings are configured depending on individual needs. These settings are found in the connectivity function's menu. To view these settings, tap and hold on:

Navigation button

And then tap on:

Settings | Connectivity Settings | [Function Name]

For each mouse mover function, the following cursor settings are set:

- Fast Cursor Speed
- Slow Cursor Speed
- Slow Movement Time

Fast Cursor Speed — sets the speed at which the mouse cursor ramps up to after the Slow Movement Time has expired. During the Slow Movement Time however, the mouse cursor speed moves at the speed set by Slow Cursor Speed — see **Figure 9.21**. The Fast Cursor Speed is set so that the user can move the cursor quickly over large distances. Fast Cursor Speed should be set equal to, or greater than, Slow Cursor Speed.

Slow Cursor Speed — sets the speed at which the mouse cursor moves when initially deflected. It remains at this speed for the duration set by the Slow Movement Time — see **Figure 9.21**. The Slow Cursor Speed is set so that the user can move the cursor slowly over small distances, which is useful for small adjustments, especially when moving between screen items that are close together. Slow Cursor Speed should be set equal to, or less than, Fast Cursor Speed.

Slow Movement Time — sets the length of time for which the mouse moves at the Slow Cursor Speed before increasing to the Fast Cursor Speed. The ramp time, between end of Slow Cursor Speed and start of Fast Cursor Speed, is equal to the time set by this setting — see **Figure 9.21**.

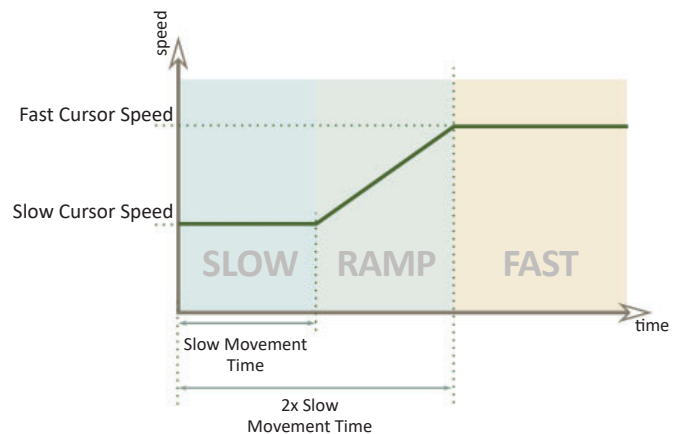


Figure 9.21: Slow to fast ramp time

9.3.2 Operating

The following operation description assumes that a connectivity card with a mouse mover function has been set up as described in the previous sections.

9.3.2.1 Operation indication

Mouse mover lets the user control a mouse cursor on a Bluetooth-connected PC or laptop. This includes moving the cursor as well as typical left-click and right-click actions such as selecting items and displaying the context menu.

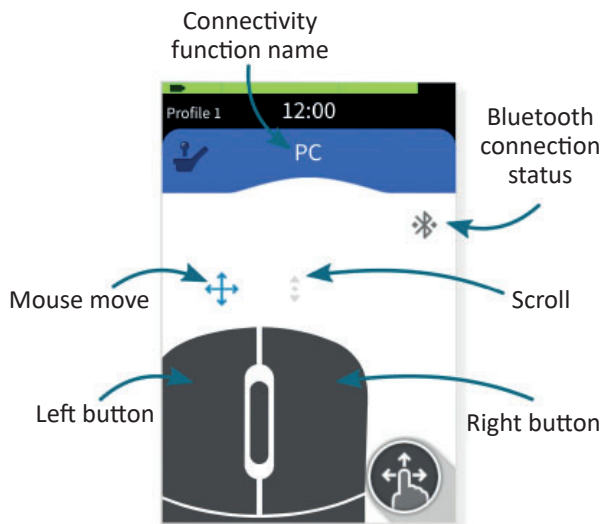


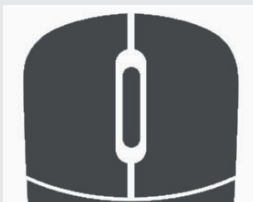


Figure 9.22: Mouse mover components

| | | |
|------------------------------|---|---|
| Mouse move indicator |  | The mouse move indicator changes from grey to blue when active — that is, when the user input is controlling the connected device's cursor. |
| Scroll indicator |  | The scroll indicator changes from grey to blue when the scroll feature is switched on. |
| Left and right mouse buttons |  | Tap on the touch screen's left and right mouse buttons to perform left and right mouse clicks. |

9.3.2.2 Moving the cursor

The cursor moves on the user's device in the direction that is mapped to the input. As outlined in section 9.3.2, the speed of the cursor is slow initially, which is ideal for close or fine movements, and then speeds up after a short period (defined by **Slow Movement Time**) to allow the cursor to move a greater distance in a shorter time frame.

9.3.2.3 Right/left click

To perform a left or right click, either:

- tap on the corresponding button on the touch screen, or
- use external buttons that have been configured through the control inputs for right and left clicks.

When a button is tapped, it changes color from grey to blue.

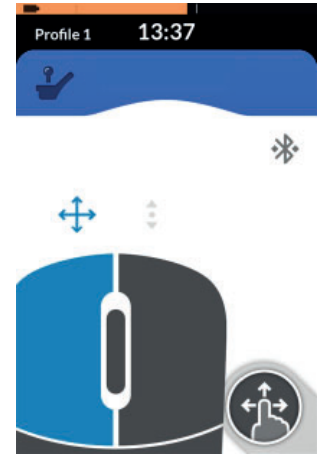


Figure 9.23: Left click example

9.4 Configuring and operating switch control

9.4.1 Configuring

Before you can use switch control, you need to identify the switches you will be using and then assign an action to each switch. For example, if you want your device to return to its **Home** screen when you tap on the REM400's touch screen, you will need to identify the REM400 touch screen as a switch input, and then assign that switch's action to **Home Button**.

9.4.1.1 Assign actions to switches — iOS devices

To identify and assign actions to switches:

Open the iOS device's switch control menu:

Settings | General | Accessibility | Switch Control

- Tap on **Switches**
- Tap on **Add New Switch...**
- Tap on **External** — you are prompted to activate your external switch.

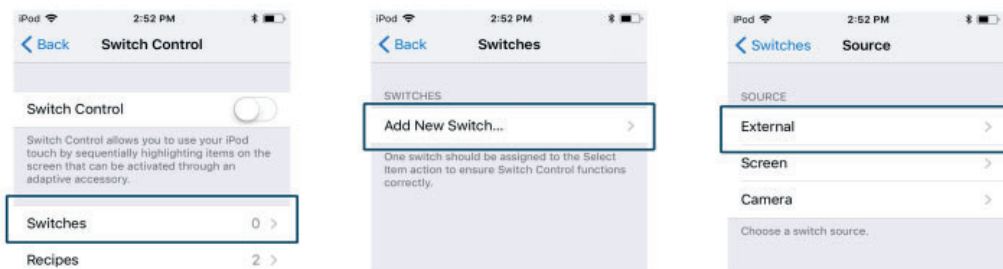


Figure 9.24: Selecting external switches

Activate your external switch — for example, tap on the REM400's touch screen or deflect the joystick in a single direction (forward, reverse, left or right) and then name the external switch — for example: *Touch screen* — so that you can identify it later.

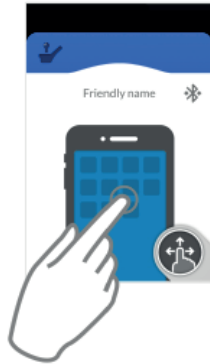


Figure 9.25: Activate external switch

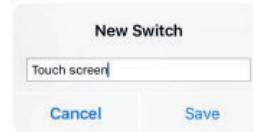


Figure 9.26: Name the external switch

Assign an action to the switch. From the **Actions** menu, choose a switch action, such as **Home Button** or **Select Item**.

If required, repeat the above instructions to add more switches.

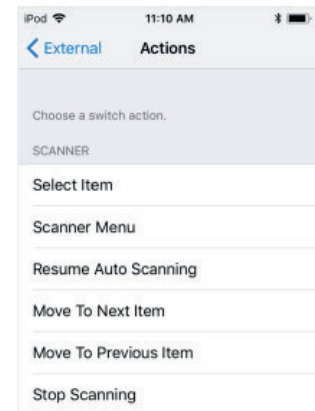


Figure 9.27: Assigning actions to switches

9.4.1.2 Turn on switch control

After assigning switches to actions, turn on the switch control.

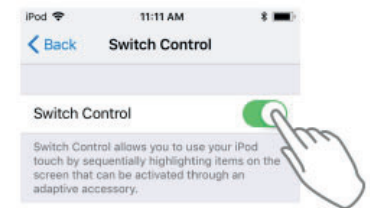


Figure 9.28: Turn on switch control

9.4.1.3 Assign actions to switches — Android devices

NOTE

The following instructions are illustrative only as the steps may differ slightly between different Android versions.

To identify and assign actions to switches:

Open the Android device's **Switch Access** menu:

Settings | Accessibility | Switch Access

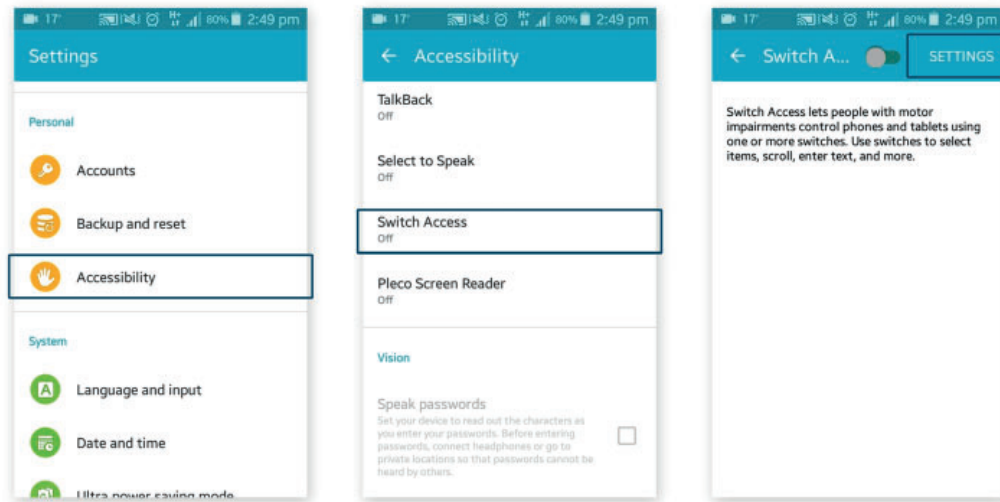


Figure 9.29: Selecting Switch Access

Tap on **Settings** (top right-hand corner).

NOTE

If there is no Switch Access option in the accessibility menu, consider installing Android Accessibility Suite from Google Play.

NOTE

The following instructions are illustrative only. Switches can be assigned to many actions, the extent of which is beyond the scope of this manual.

If this is the first time that your device has used Switch Access and you enable Switch Access before assigning switches, your Android device may automatically enter its set-up guide, which leads you through the set-up process. On certain Android devices, it has been found that the setup stalls during the Bluetooth pairing process, displaying a pop-up stating:

'Device unavailable... Couldn't connect to device...'

If you encounter this pop-up, and cannot progress, you can either:

- ignore the prompt and hit **Next** on the screen, or
- exit the automatic set-up and manually set up Switch Access through the Switch Access settings menu instead, as outlined in these instructions.

Tap on **Assign switches for scanning**, or **Assign switches to actions**

Select one of the actions in the list. For example, tap on **Select**.

A notification displays asking you to:

Press a switch combination to add or remove it from the list.

At this point, activate the external switch (this could be a tap on the remote module's touch screen or a joystick movement in one of the four quadrant directions: forward, reverse, left and right). This assigns the switch to the selected action. Tap **OK** on the notification. Repeat for as many switches that need to be assigned.

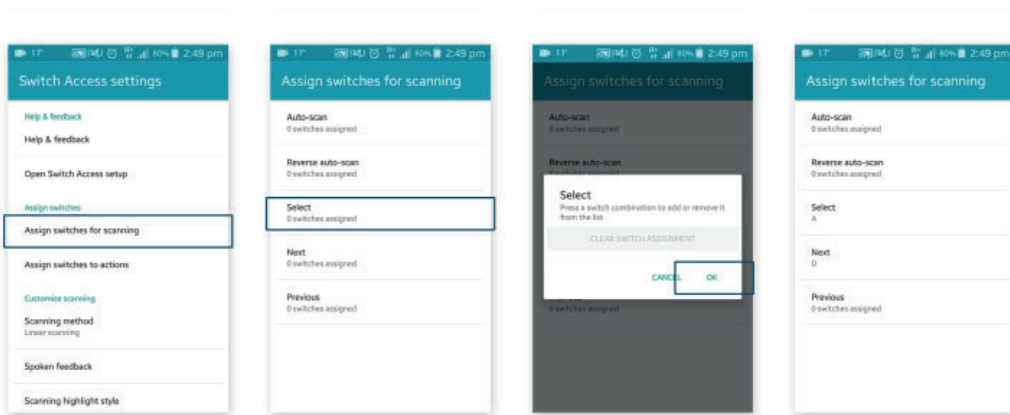


Figure 9.30: Selecting external switches

9.4.1.4 Turn on switch access

After assigning switches to actions, enable **Switch Access**. A notification displays "Use Switch Access?" — tap on **OK**.

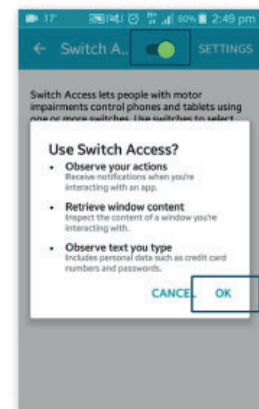


Figure 9.31: Turn on switch control

9.4.2 Operating

The following operation description assumes that a connectivity card with a switch control function has been set up as described in the previous sections.

9.4.2.1 Operation indication

The switch control function allows the user to navigate and select items on their iOS or Android device.

The switch control indication varies depending on if a user's device is connected via Bluetooth and whether or not a switch control input is active — see below.

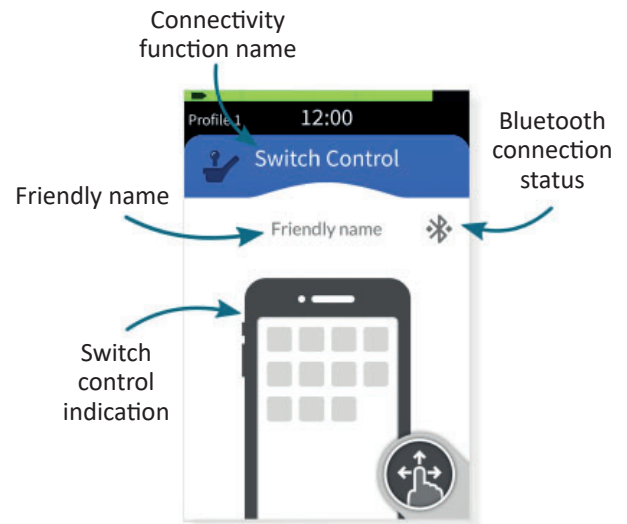


Figure 9.32: Switch control components

Switch control indication — not connected.



This is shown when a switch control card is selected, but no user device is connected.

Switch control indication — connected.



This is shown when a switch control card is selected, and a user device is connected.

Switch control indication — active.



This is shown when a switch control card is selected, a user device is connected, and a switch is active.

9.4.2.2 Device navigation and operation

Use the switches that were assigned in section 9.4.1.1 and 9.4.1.3 to navigate menus and operate applications on the user's iOS or Android device.

9.5 Disconnecting devices

To stop using a connectivity card, select a different function card from a profile. When the connectivity card is deselected, the Bluetooth connection disconnects.

9.6 Forgetting devices

To forget a device, tap and hold on:

Navigation button

Then tap on:

Settings | Connectivity Settings

Select the paired device under **PAIRED DEVICES**.

Check the details on the next screen and then tap on **Forget this Device**. Tap on **Forget this Device** button again, or the **Cancel** button to cancel this operation.

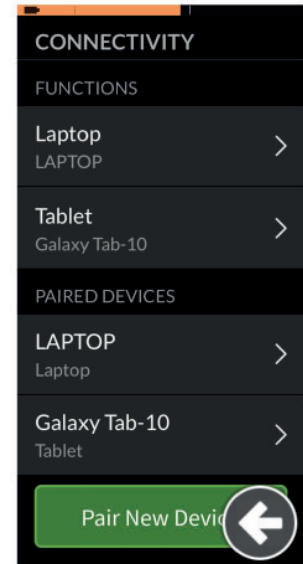


Figure 9.34: Connectivity menu

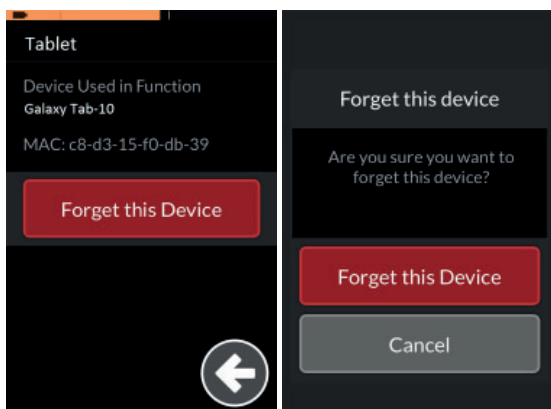


Figure 9.33: Forgetting a device

NOTE

Forgetting a device will unlink it from any functions it is linked to, as well as unpair it from the system.

10.0 Utility cards

The utility card allows users to operate system controls (lights, horn, etc.) as well as control outputs, such as those available on the LiNX Output module.

The utility function is suitable for both 3 quadrant and 4 quadrant navigation, and can be operated from a range of user inputs such as remote modules, switches and head arrays.

Utility functions can be added to any profile (except the attendant profile) and can be configured to operate:

- the horn
- the hazard lights
- the position lights
- the indicators
- control outputs (such as those on a LiNX Output module).



Figure 10.1: Example utility card

NOTE

The position lights and turn indicators must be enabled before they are used.

To enable the indicators, set the **Enable Turn Indicators** parameter to 'Yes'.

To enable the position lights, set the **Enable Position Lights** parameter to 'Yes'.

10.1 Operating overview

A utility card displays a selection of icons (representing the outputs) located on two circular activation bands — an inner band and an outer band — within four quadrants (see **Figure 10.2**). The quadrant and the position of the icons on the bands indicates to the user how to select and operate the outputs with their user input.

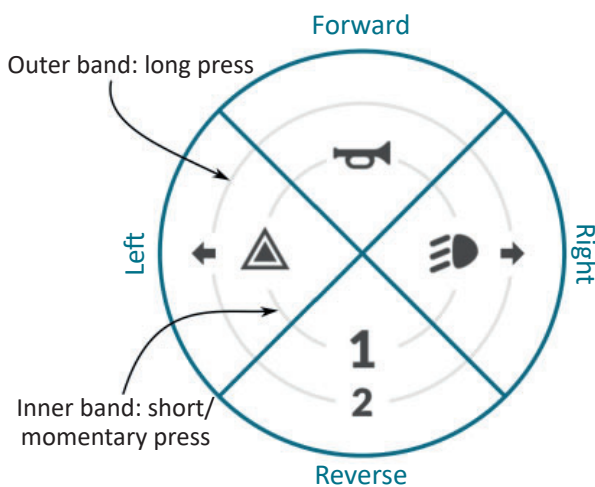


Figure 10.2: Quadrants and activation bands with example icons

The inner and outer activation bands correspond to one of three switch types: short press, long press and momentary press.

Short and momentary presses are placed on the inner band, and long presses are placed on the outer band.

NOTE

The terms 'short press' and 'long press' refer to the duration that the user input is activated, not how far it is deflected.

The icons available are shown in the table below:

Table 15: Display icon selection

| | | | | | | | |
|----------|-------|---|-----------------|---|-------------------|---|-------------------|
| | None | ← | Left Arrow | ↶ | Left Turn Signal | ▲ | Latched Up |
| 1 | One | ↑ | Forward Arrow | ↷ | Right Turn Signal | ▶ | Latched Right |
| 2 | Two | → | Right Arrow | ⚠ | Hazard Lights | ▼ | Latched Down |
| 3 | Three | ↓ | Reverse Arrow | 📢 | Horn | ↔ | Left-Right Arrow |
| 4 | Four | ✓ | Select | ◀ | Momentary Left | ↕ | Up-Down Arrow |
| 5 | Five | ↷ | Next | ▲ | Momentary Up | 🖱 | Mouse Click Left |
| 6 | Six | ↶ | Previous/ Back | ▶ | Momentary Right | 🖱 | Mouse Click Right |
| 7 | Seven | 🏠 | Home | ▼ | Momentary Down | | |
| 8 | Eight | ☰ | Position Lights | ◀ | Latched Left | | |

10.2 Selecting an inner band output

An icon on the inner band represents an output that can be controlled with either a short-press or a momentary-press switch.

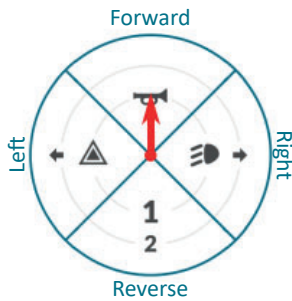


Figure 10.3: Selecting a momentary-press inner band output

Momentary-press

For outputs configured with momentary switches, select and hold the icon's quadrant. For example, to select the horn icon in **Figure 10.3**:

- with a joystick-based user input, deflect and hold the joystick in the forward quadrant;
- with a switch-based user input, press and hold the forward switch.

A momentary switch does not latch its output and so the output will be activated for the duration that the switch is selected. Likewise, the selected icon is highlighted for the duration that the switch is selected.

Release the switch to deactivate the output.

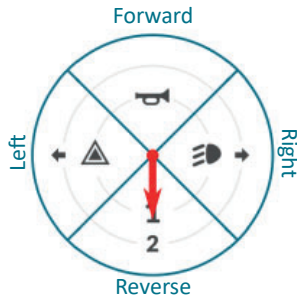


Figure 10.4: Selecting a short-press inner band output

Short-press

For outputs configured with short-press switches, select the icon's quadrant and then release the switch immediately. For example, to select the control output 1 icon in

Figure 10.4:

- with a joystick-based user input, deflect the joystick into the reverse quadrant and then release it immediately;
- with a switch-based user input, press and release the reverse switch.

Short-press switching provides one of three activation modes:

- latch on
- latch off
- toggle

If the activation mode is configured as **latch on**, then the output is activated when switched and then remains activated when the switch is deselected.

If the activation mode is configured as **latch off**, then the output is deactivated when switched and remains deactivated when the switch is deselected.

If the activation mode is configured as **toggle**, then the output changes state (activated → deactivated, or deactivated → activated) when switched and remains in the new state when the switch is deselected.

The selected icon is highlighted for the duration that the output is activated.

10.3 Selecting an outer band output

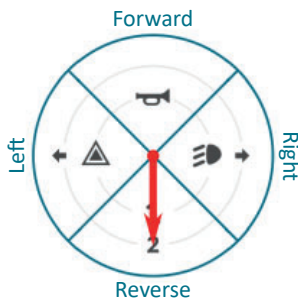


Figure 10.5: Selecting an outer band output

An icon on the outer band represents an output that can be controlled using a long-press. For outputs configured with long-press switches, select the icon's quadrant and then release the switch when the output is activated. For example, to select the control output 2 icon in

Figure 10.5:

- with a joystick-based user input, deflect the joystick into the reverse quadrant and then release it when the output is activated;
- with a switch-based user input, press the reverse switch until the output is activated.

Long-press switching provides one of three activation modes:

- latch on
- latch off
- toggle

If the activation mode is configured as **latch on**, then the output is activated when switched and then remains activated when the switch is deselected.

If the activation mode is configured as **latch off**, then the output is deactivated when switched and remains deactivated when the switch is deselected.

If the activation mode is configured as **toggle**, then the output changes state (activated → deactivated, or deactivated → activated) when switched and remains in the new state when the switch is deselected.

The selected icon is highlighted for the duration that the output is activated.

10.4 Selecting multiple outputs

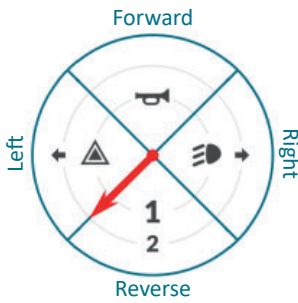


Figure 10.6: Selecting multiple outputs


By default, only a single quadrant can be selected at any one time to switch a single output. However, if **Allow Multiple Quadrants** is set to **On**, then two outputs can be switched simultaneously by selecting two adjacent quadrants at the same time.

Adjacent quadrants are selected by deflecting a joystick-based user input diagonally, between quadrants, or selecting the following switch combinations with a switch-based user input: forward/left, forward/right, reverse/left and reverse/right.

The selected icons are highlighted for the duration that the outputs are activated.

11.0 Configuring — status and settings

A number of REM400 and REM500 display settings are configured from the status and settings screen.

To open this screen, tap and hold the navigation button  or press and hold both multi-purpose buttons (I and II) simultaneously on the remote module until the status and settings screen is displayed (**Figure 11.1**). From this screen and its sub-menus, the user can:

- view and change the time
- activate the screen lock
- activate glove mode
- change settings (display, audible cues, interaction and connectivity)
- update a memory position
- reset odometer / change units

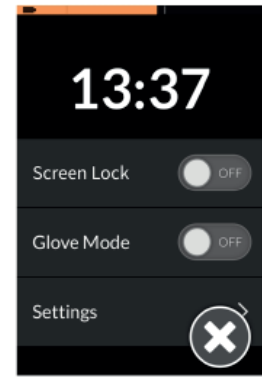


Figure 11.1: Selecting multiple outputs



To navigate back from a sub-menu, tap on the arrow button . To close the status and settings screen, tap on the cross .

Figure 11.2 shows the status and settings menu structure, starting on the left-hand side, and moving right, through 3 sub-levels.

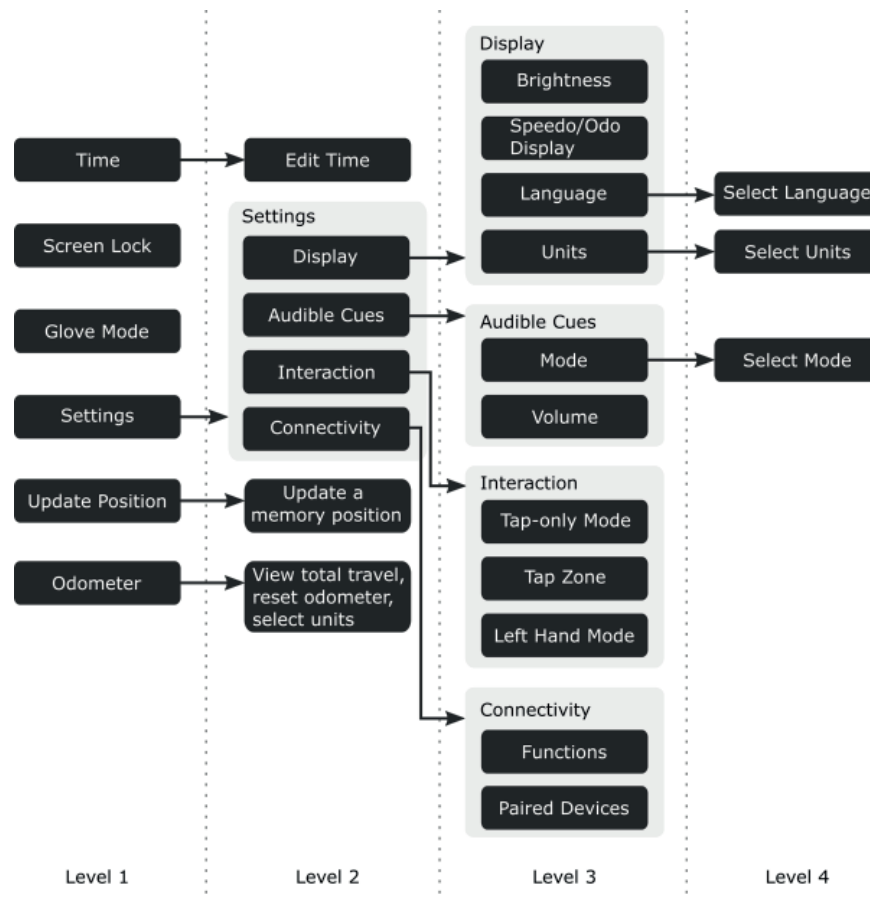


Figure 11.2: Status and settings menu structure

NOTE

The status and settings menu on the REM400 or REM500 is not accessible when connected to a programming tool (PC or iOS), — that is, the status and settings menu is not displayed with a long press of the navigation button.

11.1 Viewing and changing the time

Tap on the clock to edit the time. In edit mode, the clock displays the time picker where the hour and minute values are changed independently using the green up and down arrows.

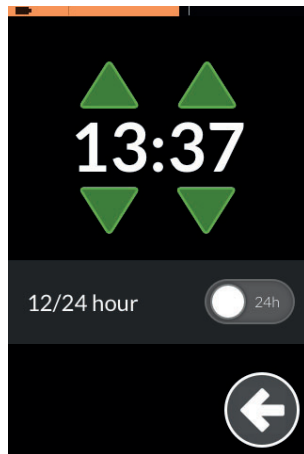


Figure 11.3: Setting the time

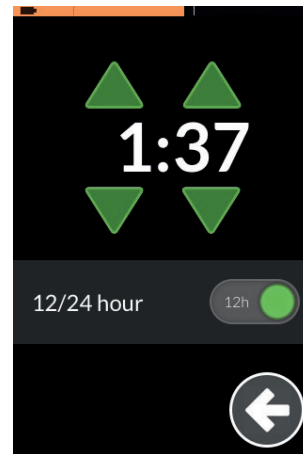


Figure 11.4: Setting 12/24 hour clock

- Tap on the arrows to adjust the time.
- Tap on the **12/24 hour** switch to toggle between 12 and 24 hour display.
- Tap on the arrow at the bottom of the screen to return to the settings menu.

11.2 Activating the screen lock

The screen lock is a security feature that the user can activate to prevent other people accidentally or intentionally interfering with the touch screen. It also prevents any unintentional response caused by rain or other liquids that may land on the touch screen.



Figure 11.5: Activating the screen lock

To activate the screen lock, tap on the Screen Lock button — the slider position changes to ON. The screen lock is activated when you leave the settings menu. When the screen lock is activated, the display continues to display normally but does not respond to any tap or swipe gesture from the user. To deactivate the lock, power-cycle the system, or activate a control input that has been set up to open the settings menu.

NOTE

For users that do not wish to interact with the touch screen, the dealer or therapist can set the screen lock to be activated permanently using the Screen Lock parameter. When this parameter is set:

- the display continues to display normally but does not respond to any tap or swipe gesture from the user, and
- the position of the Screen Lock slider is set to **ON** and cannot be changed by the user.

The Screen Lock parameter is located in the programming tools under:

Chair Setup | Modules | REM400/REM500

11.3 Activating glove mode

To activate glove mode, switch glove mode on by tapping on the Glove mode button — the slider changes to ON.

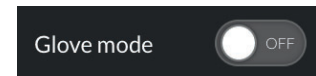


Figure 11.6: Activating glove mode

When the system is in glove mode, the touch screen becomes more sensitive allowing users wearing gloves to continue to interact with the display. To deactivate glove mode, tap on the Glove mode button — the slider position changes to OFF.

NOTE

It might not be possible to activate glove mode while wearing gloves since the screen is not sensitive enough. If this is the case, the glove should be removed, or assistance sought.

11.4 Changing settings

To change the settings, tap on the **Settings** button on the Status screen. The user can change the following:

- Display settings
 - *brightness*
 - *speedo/odo*
 - *language*
 - *units*
- Audible Cues
 - *mode*
 - *tempo*
 - *volume*
- Interaction settings
 - *tap-only mode*
 - *tap zone*
 - *left hand mode*
- Connectivity
 - *mouse cursor speed*
 - *paired devices*
 - *linked devices*



Figure 11.7: Settings menu button

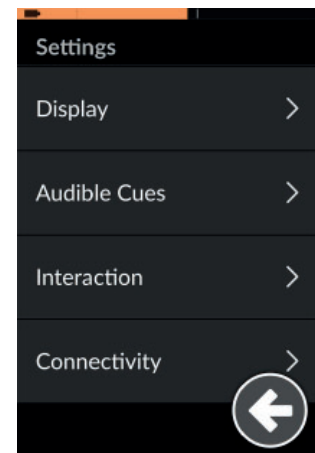


Figure 11.8: Settings menu

11.4.1 Changing display settings

Under display settings, the user can change the brightness of the screen, enable the speedometer/odometer display, select the user interface language, and select the user interface units.

Brightness

Slide the **Brightness** slider to the left to decrease the screen brightness, and to the right to increase the brightness.

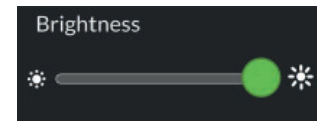


Figure 11.9: Brightness control

Speedo/Odo Display

Tap on the **Speedo/Odo Display** button to switch on/off the speedometer/odometer information displayed on the drive cards.

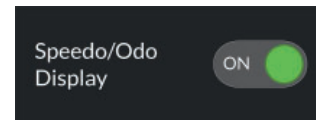


Figure 11.10: Speedo/Odo Display (On/Off)

Language

Tap on the Language button, and then select your preferred language from the language list; the selected language will be used across the user interface. Languages supported are:

- English
- French
- German
- Dutch
- Italian
- Spanish
- Swedish

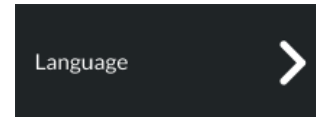


Figure 11.11: Language button

Units

Tap on the Units button, and then select one of the units: **Metric**, or **Imperial**. Your preference is displayed with a checkmark.



Figure 11.12: Units button



NOTE

The preferred units can also be set through the Odometer settings. See [11.6 Resetting the odometer and changing units](#).

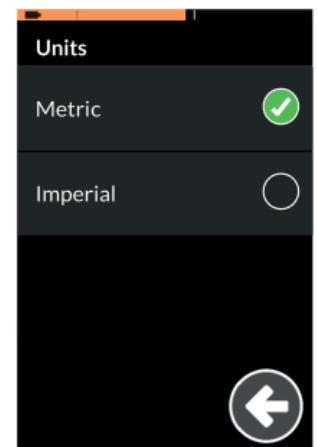


Figure 11.13: Units selection screen

11.4.2 Enabling and setting audible cues

Audible cues are sounds played through a remote module's speaker in response to certain system events or navigation actions performed by the user. They are designed to help users understand where they are in a LiNX system.

From the Audible Cues menu (see **Figure 11.14**), the user can enable the audible cues feature, set its tempo, and set its volume.

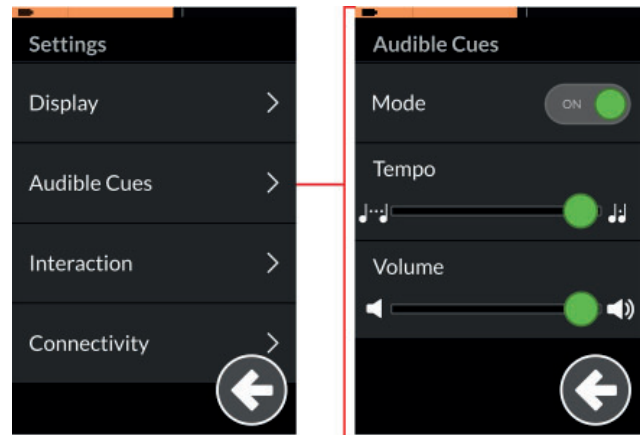


Figure 11.14: Setting audible cues

To enable audible cues, including setting its tempo and volume from a remote module:

Enable audible cues

1. Open the **Settings** menu from a REM400 or REM500 remote module.
2. Tap on the **Audible Cues** menu item.
3. Tap on the Mode button to select **On**.

Set the tempo

4. Adjust the speed at which the audio cues are played using the tempo slider. The slowest speed is to the left, and the fastest is to the right.

Set the volume

5. Set the volume using the **Volume** slider — you will need to complete this for each remote module in your system. The quietest is to the left and the loudest is to the right.

NOTE

When setting audible cues on a REM500, two volume settings are displayed: one for the front speaker, and one for the rear speaker.

11.4.3 Changing interaction settings

Under interaction settings, the user can:

- switch between swipe-and-tap and tap-only mode,
- tune the size of the tap zone, and
- swap the display between a right and a left-handed view.

Tap-only Mode

To set the touch screen for tap-only mode, tap on the **Tap-only Mode** button — the slider position changes to **ON**. For swipe-and-tap mode, leave the **Tap-only Mode** set to **OFF**.

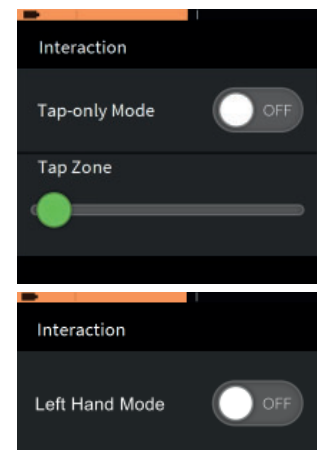


Figure 11.15: Interaction menu

Tap Zone

For users with limited dexterity, the action of selecting an item on the touch screen with a single, precise tap may be difficult, and the system may determine their tap as a slide if they are still touching and moving along the screen after the initial tap action. If this is the case, then the boundary around the initial point of contact — the tap zone — is increased with the **Tap Zone** slider.

Drag the slider to the left (small tap zone) for users with good dexterity, and to the right (large tap zone) for users with poor dexterity.

NOTE

The tap zone does not change the area around fixed inputs (buttons, links, etc.) — it is solely for the area around the first point of contact when tapping or swiping.

Left Hand Mode

The **Left Hand Mode** switch allows the user to swap the user interface between left and right-handed views.

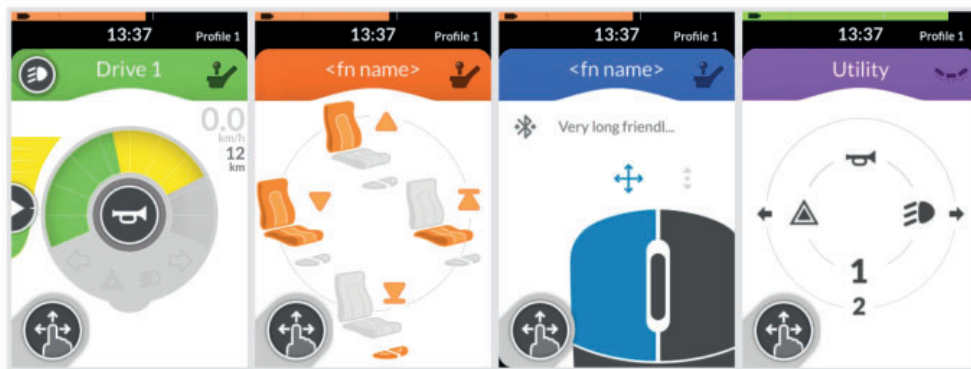


Figure 11.16: Example screens showing function cards with the left hand mode switched on

When the switch is set to **Off**, all user controls (navigation button, speed slider, lighting controls etc.) are displayed and operable from the right-hand side of the screen.

When the switch is set to **On**, all user controls (navigation button, speed slider, lighting controls etc.) are displayed and operable from the left-hand side of the screen.

11.4.4 Changing connectivity settings

The connectivity menu is split into two sections:

1. functions, and
2. paired devices

Change the cursor speed

To change the cursor speed for a mouse mover function, select the appropriate function from the FUNCTIONS section of the Connectivity menu and then use the sliders at the top of the function's menu to change:

- Fast Cursor Speed
- Slow Cursor Speed
- Slow Movement Time

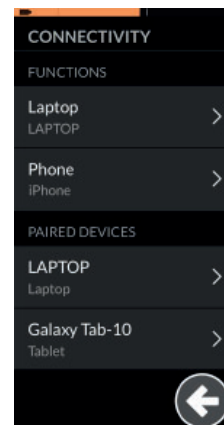


Figure 11.17:
Connectivity menu

See [9.3 Configuring and operating mouse mover](#).

Link a device

To link a device to a function, select the appropriate function from the FUNCTIONS section of the Connectivity menu and then scroll to the bottom of the function's menu to FUNCTION USES DEVICE. Tap on the **Not Linked** button and then tap on a device to link to the function.

Pair a device

To pair a device, scroll to the **Pair New Device** button, which is under the PAIRED DEVICES section of the Connectivity menu. For more information about pairing, see [9.1.1 Pair the LiNX system with the user's device](#).

11.5 Update a memory position

Memory positions can be updated by the user from their remote module by overwriting¹ the target angles of an existing, pre-defined memory position. This is useful for the user for both fine-tuning a memory position or replacing a memory position. Note that not all memory positions are reconfigurable, such as those not configured to 'Allow Occupant to Update Position', or those that use only switch feedback.

To update a memory position using a REM400 or REM500:

1. reposition the seating to the new target position using motions (such as recline, tilt etc.)
2. open the settings menu on the remote module ([Figure 11.18](#))
3. select **Update Position** from the menu — a list of pre-defined memory positions is displayed
4. select one of the pre-defined memory positions to overwrite (choose one that you do not use regularly)
5. an overlay will prompt you to confirm that you want to overwrite this pre-defined memory position with your new seating position:
 - select **Yes** to proceed — your new memory position will overwrite the existing memory position and will be ready to use immediately;
 - select **No** to go back to the list of pre-defined positions.

¹ Only the target angles of the actuators configured for use in the existing position are updated.

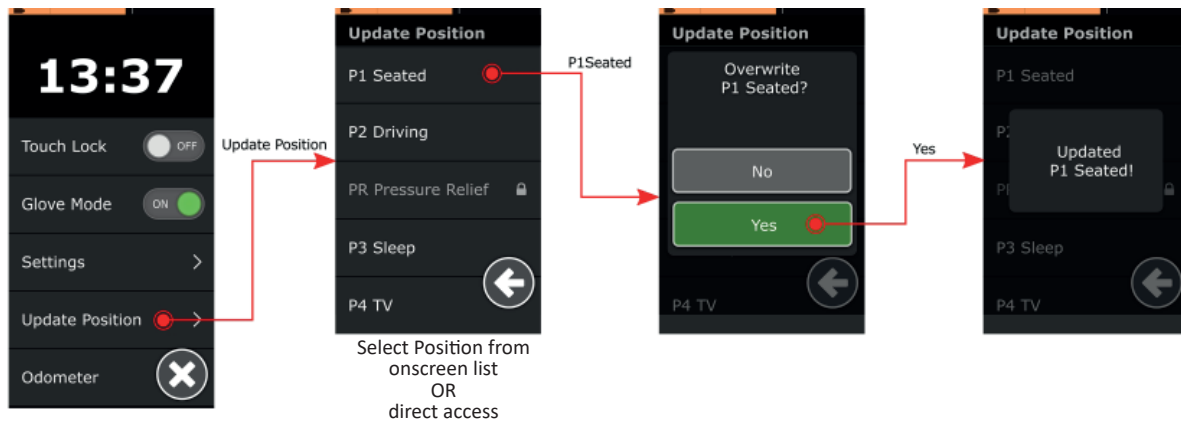


Figure 11.18: Updating memory positions — REM400/500

After a memory position is updated, the remote module’s screen will return to the list. To update another pre-defined memory position, repeat the above from step 1.

11.6 Resetting the odometer and changing units

There are two meters on the Odometer screen (**Figure 11.19**):

- **total distance**, and
- **trip**

The **total distance** meter shows the cumulative value of all trips.

The **trip** meter displays the current trip value — this is the value that is displayed on the drive cards. To reset the trip value, tap on the **Reset to zero** button.

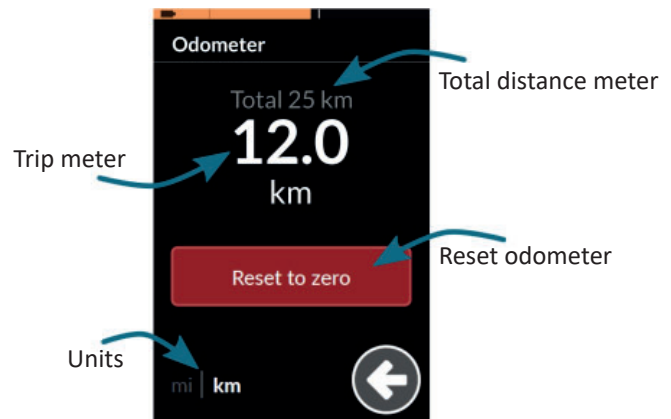


Figure 11.19: Odometer screen

Tap on the units selector to change the displayed units: **mi** for miles, **km** for kilometers.



NOTE

The units can also be set through the display configuration settings. From the status and settings screen, tap Settings | Display | Units and select **Metric** or **Imperial**. See **Units** in section 11.0 Configuring — status and settings.

12.0 Selecting functions — profile and function navigation

A user locates and selects a function by navigating through the programmed profiles and functions. There are a number of navigation methods available, depending on the user's needs and abilities. These methods fall into two groups:

- direct navigation, and
- menu navigation.

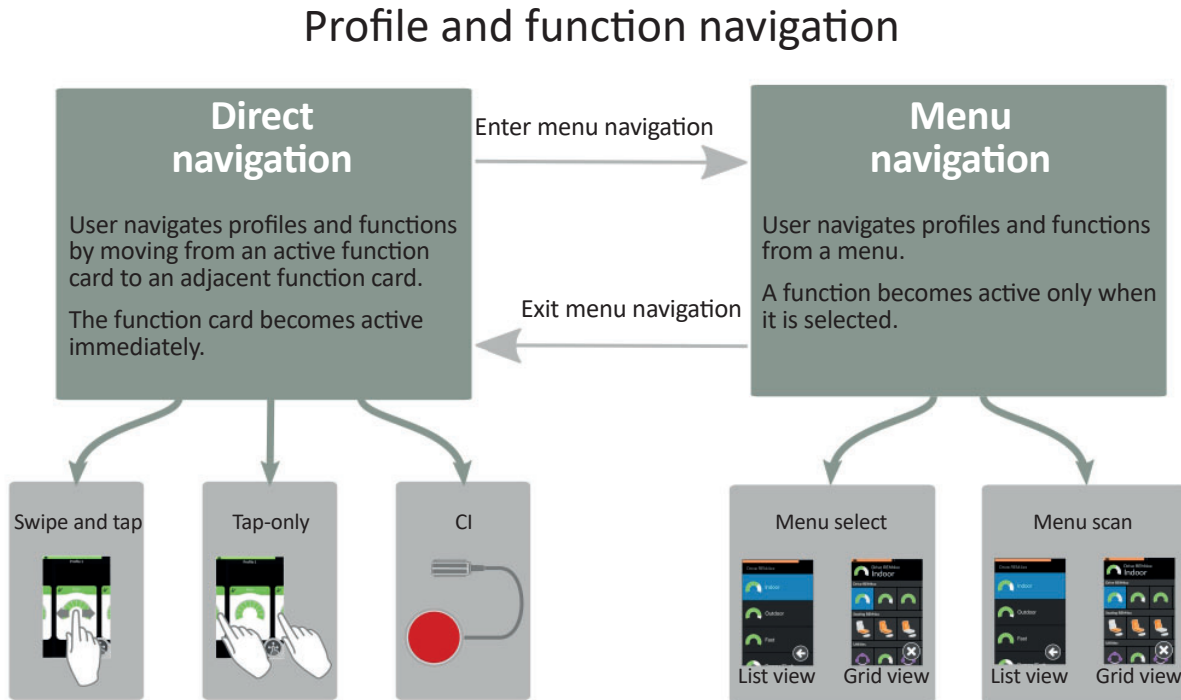


Figure 12.1: Selecting functions — profile and function navigation

Direct navigation

Direct navigation allows the user to navigate through profiles and functions by moving from an active function card to an adjacent function card, one function card at a time using one of the following direct navigation methods:

- swipe-and-tap
- tap-only
- control inputs (CI)

Direct navigation is available to the user at all times.

Menu navigation

Menu navigation allows the user to navigate through profiles and functions via a menu, using one of the menu navigation methods:

- menu select (using list view or grid view)
- menu scan (using list view or grid view)

To enter menu navigation, the user or system must do one of the following:

- activate a pre-configured control input,
- perform a function change when at either end of a profile that has been set up to enter navigation instead of wrapping, or
- wait for a pre-configured time-out.

The system reverts back to direct navigation when:

- a function has been selected, or
- the user selects exit from the menu, or
- the user activates a control input to exit the menu.

12.1 Direct navigation — detailed

Direct navigation allows the user to select a function by traversing the system's profiles and functions (see **Figure 12.4**) using the touch screen, or other programmed switches attached to control inputs. There are three direct navigation methods available:

- swipe-and-tap
- tap-only
- control inputs (CI)

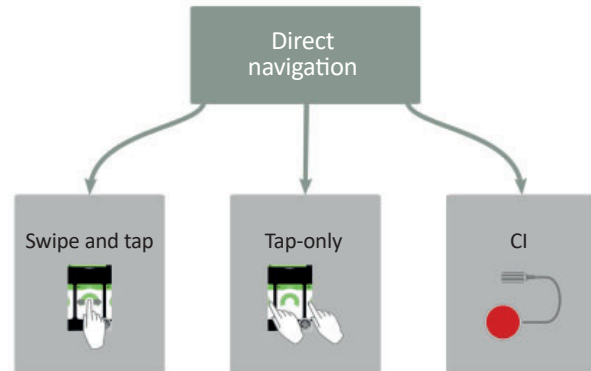


Figure 12.2: Direct navigation methods

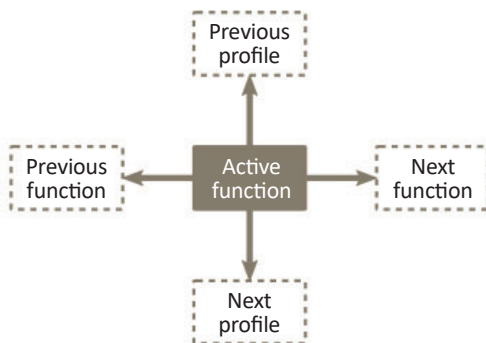


Figure 12.3: Navigating with direct navigation

With each method, the user navigates through profiles and functions by moving from an active function card to an adjacent function card.

It should be noted that direct navigation is not performed with the active user input, since the active user input is used to operate the active function only. Instead, the user navigates through the profiles and functions using the touch screen or other control inputs.

Conceptually, function cards are arranged in rows of profiles — see **Figure 12.4**. Each profile can hold any number of user function cards+1, which can be of the same type (for example, all drive cards) or a mixture of functions cards (drive, seating, utility, etc.).

| | | Functions | | | | | |
|----------|----|-----------|----|----|----|----|----|
| | | F1 | F2 | F3 | F4 | F5 | F6 |
| Profiles | P1 | | | | | | |
| | P2 | | | | | | |
| | P3 | | | | | | |
| | P4 | | | | | | |

Figure 12.4: Row and column placement of profiles and user functions

NOTE

#1 The maximum number of functions across all profiles is 40.

12.1.1 Selecting function cards and profiles in swipe-and-tap mode

This section assumes that you are in swipe-and-tap mode. See **11.4.3 Changing interaction settings** for instructions on switching between the modes swipe-and-tap and tap-only.

To select a different function card in swipe-and-tap mode, swipe the screen or tap on the navigation button (short press). The screen changes from displaying the active function card to displaying the function card preview — **Figure 12.5**.

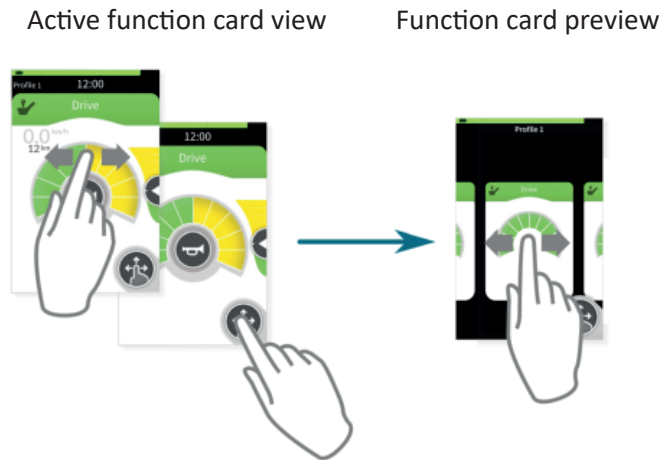


Figure 12.5: Active function card view (left) and function card preview (right)

When the function card preview is displayed, swipe left or right to view other function cards within the current profile. To select a function card, either tap on the required function card when it comes into view or, when the required card is in the middle of the display, wait a few seconds and the card is selected automatically.

To view and select function cards in another profile, swipe up or down in the function card preview screen. The screen view will focus on the first function in the profile or the last-used function in the profile depending on how **Profile Change Uses Last Used Function** is set up. Swipe left or right to choose the required function in the selected profile.

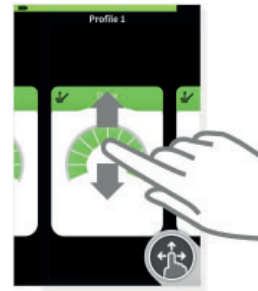


Figure 12.6: Selecting a profile in swipe-and-tap mode

NOTE

#1 — If **Profile Change Uses Last Used Function** is off, the focus is on the first function in the profile. If **Profile Change Uses Last Used Function** is on, the focus is on the function that was used when in the profile the previous time.

#2 — For convenience, your prescriber could set **Cycle Profiles** to “On”, to allow you to scroll through the list of profiles without changing their scrolling direction. Otherwise, if **Cycle Profiles** is “Off”, you must scroll in the opposite direction when they reach either the beginning or the end of the profile list.

12.1.2 Selecting function cards and profiles in tap-only mode

This section assumes that you are in tap-only mode. See **11.4.3 Changing interaction settings** for instructions on switching between the modes swipe-and-tap and tap-only.

To select a different function card in tap-only mode, tap on the navigation button (short press). The screen changes from displaying the active function card to displaying the function card preview — **Figure 12.5**.

Active function card view Function card preview

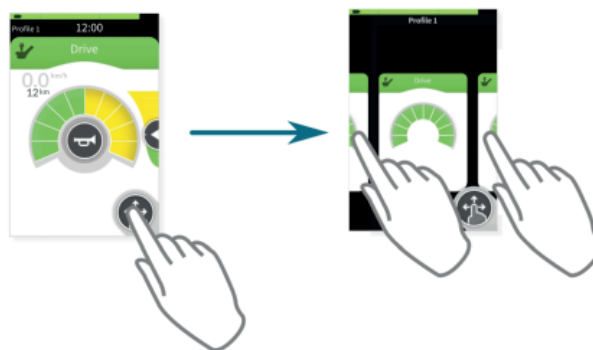


Figure 12.7: Active function card view (left) and function card preview (right)

When the function card preview is displayed, tap to the left or right of the card that is in the middle of the display to view other function cards within the current profile. To select a function card, either tap on the required function card when it comes into view or, when the required card is in the middle of the display, wait a few seconds, after which, the card is selected automatically.

NOTE

For convenience, your prescriber can set **Enable Function Wrap** to “On”, to allow you to tap through the list of functions in the profile without changing their tapping position. Otherwise, if **Enable Function Wrap** is “Off”, you must tap on the opposite side of the card when they reach either the beginning or the end of the function list

To view and select function cards in another profile, tap above or below the function card that is displayed in the preview screen. The screen view will focus on the first function in the profile or the last-used function in the profile depending on how **Profile Change Uses Last Used Function**^{#1} is set up. Tap to the left or right of the card that is displayed in the preview screen to choose the required function in the selected profile^{#2}.



Figure 12.8: Selecting a profile in tap-only mode

NOTE

#1 — If **Profile Change Uses Last Used Function** is off, the focus is on the first function in the profile. If **Profile Change Uses Last Used Function** is on, the focus is on the function that was used when in the profile the previous time.

#2 — For convenience, your prescriber can set **Cycle Profiles** to “On”, to allow you to tap through the list of profiles without changing their tapping position. Otherwise, if **Cycle Profiles** is “Off”, you must tap on the opposite side of the cards when they reach either the beginning or the end of the profile list.

12.1.3 Selecting function cards and profiles with control inputs (CI)

Control inputs can be used to navigate and select functions and profiles using actions such as **Next Function**, **Previous Function**, **Next Profile** and **Previous Profile**.

These actions can be selected from a number of control input types, such as a buddy button, 10-way switch, or resistor bands. If the control input type is a button, an action is selected depending on how the button is activated — that is: **Momentary**, **Short Press**, **Long Press** or **On Press**. If 10-way switch or resistor bands is set as the control input type, the action is determined by the selected switch (1 to 10) or resistor band (1 to 10), respectively.

12.2 Menu navigation — detailed

Menu navigation lets the user navigate manually or semi-automatically through user profiles to select a function from a menu. There are two methods available:

- menu select
- menu scan

Menu select provides a manual mode of operation where the user performs both the navigation and the function selection. **Menu scan**, on the other hand, provides a semiautomatic mode of operation where the system performs the navigation and the user makes the function selection.

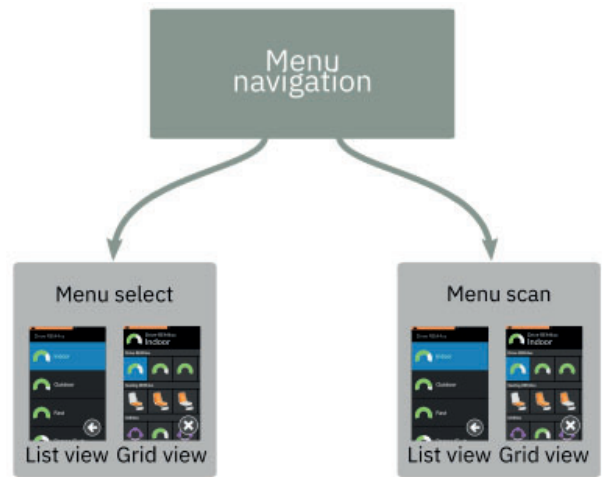


Figure 12.14: Menu navigation

Both menu select and menu scan provide two types of view to navigate: **list view** and **grid view**. List view (see **Figure 12.15**) presents the menu items in one of two vertically selectable lists, where one list presents the profiles, and the next presents the selected profile's functions. Grid view (see **Figure 12.16**) presents the menu items in a single grid, displaying both the profiles (rows) and the functions (columns) at the same time. Unlike list view, where navigation is restricted to the vertical direction, grid view permits both vertical and horizontal directions, simplifying the transition between profiles and functions.

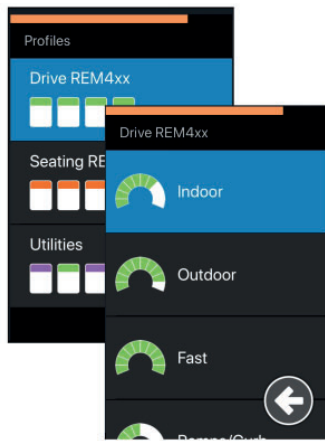


Figure 12.15: List view

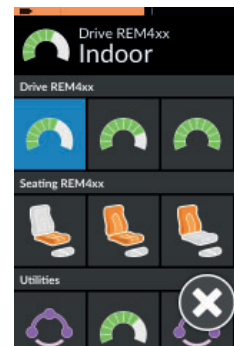


Figure 12.16: Grid view

NOTE

The number of functions in a single profile that can be displayed in list view is limited to 23, meaning any functions that exist beyond this number will not be selectable via the menu. These functions may still be navigated to via other methods such as control input or interaction with the touch screen. This limitation does not apply to grid view.

13.0 Battery charging

The battery charging socket of the LiNX system is a 5-pin XLR type, located on the LiNX remote module.

WARNING!

The dealer must ensure that the XLR charger connector and cable, provided to the user to charge the wheelchair, is rated for the full current capacity of the charger.

Make sure that the battery charger that is used with the wheelchair has a drive inhibit function that is correctly connected for use with the controller. The maximum voltage on the inhibit pin must not exceed 3 V if a battery voltage is to be detected when the battery charger is connected. If you are not sure, ask your distributor or wheelchair dealer.

The XLR charger connector on the remote module is to be used exclusively for the intended purpose. Warranty will be voided if any unauthorized device is connected to this port.

To charge the wheelchair's battery, plug the battery charger into the remote module's XLR socket.

The LiNX system does not have to be powered up when charging the battery, however, if it is not powered up, then the battery gauge will not display the charging state.

The battery charger's connector plug must be wired with a drive inhibit connection, as shown below.

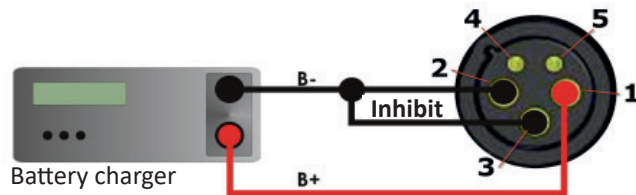


Figure 13.1: Battery charger inhibit wiring

| Pin | Signal |
|-----|-------------------------|
| 1 | Battery positive (B+) |
| 2 | Battery negative (B-) |
| 3 | Drive inhibit |
| 4 | Communications bus high |
| 5 | Communications bus low |

The drive inhibit signal ensures that the wheelchair does not drive when connected to the charger. This signal must be provided within the battery charger plug as a connection between pin 2 and pin 3. Ensure that the battery charger is compatible with this configuration before connecting it to the charging socket.

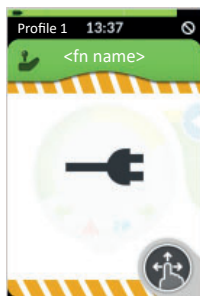


Figure 13.2: Drive inhibit while charging

Drive inhibit while charging is indicated with three visual elements on the REM400/500. This is:

- the drive lockout symbol in the status bar
- the inoperable function indication (orange-chevron on function's header and footer)
- the charger connected overlay

The touch screen indicates that the system is connected to the charger by changing the battery status bar as follows:

- the battery icon changes to the charger connection icon,
- the gauge shows 10% steps
- the approximate battery charge state is displayed with the upper segment flashing

Battery charging — colored red when charge is <20%



Figure 13.6: Battery charging 0–20%

Battery charging — colored orange when charge is between 20 and 60%



Figure 13.7: Battery charging 20–60%

Battery charging — colored green when charge is between 60 and 100%



Figure 13.8: Battery charging 60–100%

⚠ WARNING!

1. Sunrise Medical complies with the requirements of ISO7176, Part 25 regarding batteries and chargers.
2. The maximum charging current for the LiNX wheelchair control system is:
 - 12 A -with PM120
3. **Do not exceed the maximum charging current as displayed above.**

14.0 Warranty

THIS GUARANTEE DOES NOT AFFECT YOUR LEGAL RIGHTS IN ANY WAY.

Sunrise Medical* provides a guarantee, as set out in the warranty conditions, for wheelchairs to its customers covering the following.

WARRANTY CONDITIONS:

1. FOR ONE (1) YEAR - We warrant all Sunrise-made parts and components of this wheelchair including: motors, gearboxes, and electronic components, against defects in materials and workmanship for one year from the date of first consumer purchase.

2. LIMITATIONS:

1. We do not warrant:
 - a. Tires and tubes, upholstery, pads, and push handle grips.
 - b. Damage from neglect, accident, misuse, or from improper installation or repair.
 - c. Products modified without Sunrise Medical's express written consent.
 - d. Damage from exceeding the weight limit.
2. This warranty is VOID if the original chair serial number tag is removed or altered.
3. This warranty applies in the USA and Canada only. Check with your authorized dealer to find out if international warranties apply.
4. This warranty is not transferable and only applies to the first consumer purchase of this wheelchair through an authorized Sunrise Medical dealer.
5. This guarantee is subject to the law of the country in which the product was purchased from Sunrise Medical.

3. WHAT WE WILL DO - Our sole liability is to repair or replace covered parts. This is the exclusive remedy for consequential damages.

4. WHAT AUTHORIZED DEALER MUST DO -

1. Obtain from Sunrise Medical, while this warranty is in effect, prior approval for return or repair of covered parts. Contact Customer Service for a Returned Material Authorization (RMA) number and information as to where to return the product. Upon contacting Customer Service please provide Model number, Serial number, description of what is required for service/repair, and any additional information as to reason for service being performed to the wheelchair.

5. NOTICE TO CONSUMER -

1. You must pay the cost of labor to repair, remove or install parts even if they are covered under warranty.
 2. If allowed by law, this warranty is in place of any other warranty (written or oral, express or implied, including a warranty of merchantability, or fitness for a particular purpose).
 3. This warranty gives you certain legal rights. You may also have other rights that vary from state to state or province to province.
6. This guarantee is subject to the law of the country in which the product was purchased from Sunrise Medical.

* Denotes the Sunrise Medical facility from which the product was purchased.

Additional Notes For Australia Only:

1. For goods provided by Sunrise Medical Pty Ltd in Australia, our goods come with a guarantee by Sunrise Medical that cannot be excluded under Australian Consumer Law.
2. You are entitled to a replacement or refund for a major failure and for compensation for any foreseeable loss or damage.
3. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure.
4. The benefits to you given by this warranty are in addition to your other rights and remedies under a law in relation to the goods to which the warranty relates.

Record your serial number here for future reference: _____



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