

Q·LOGIC 3

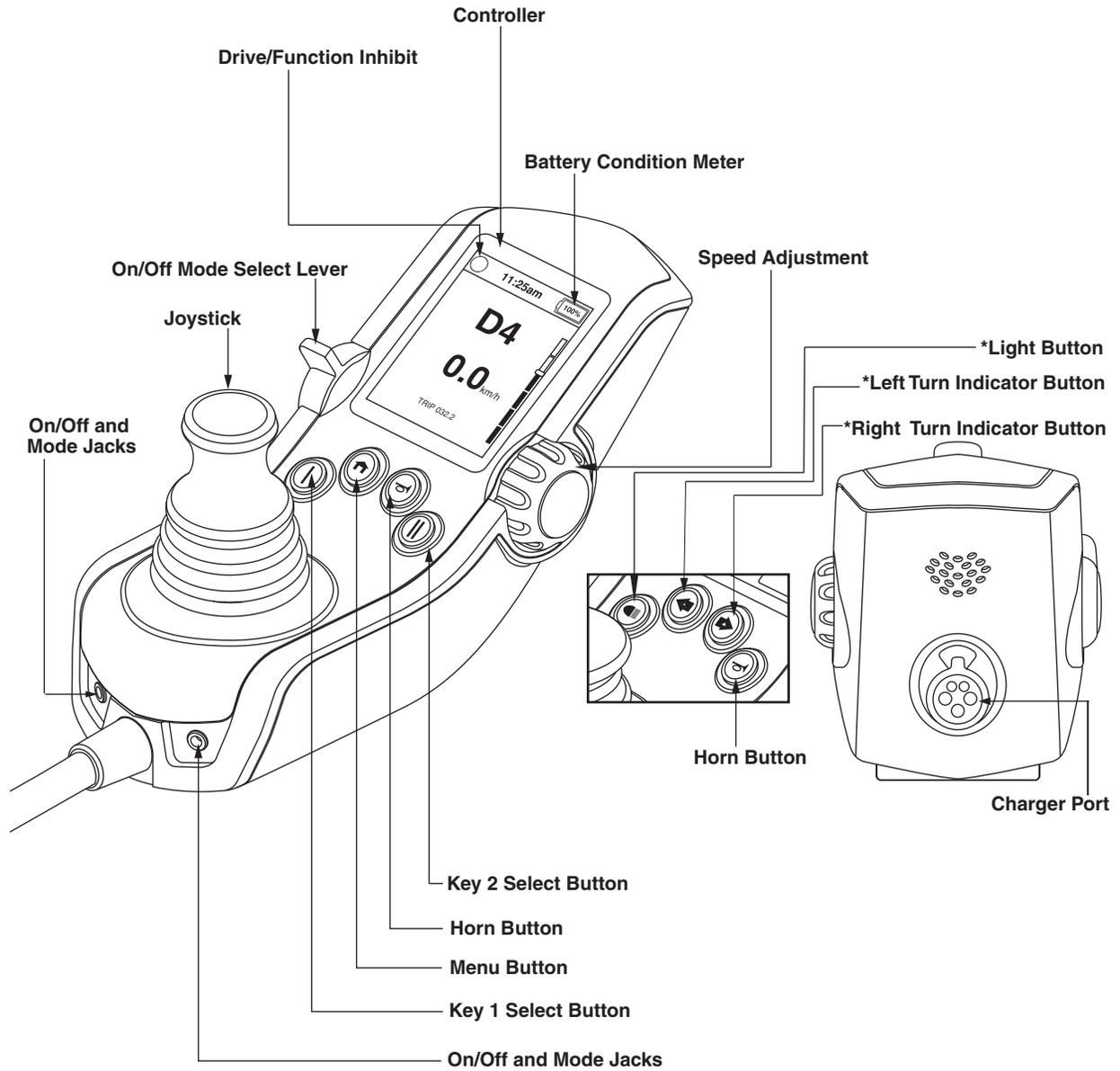
Advanced Drive Control System



QUANTUM®

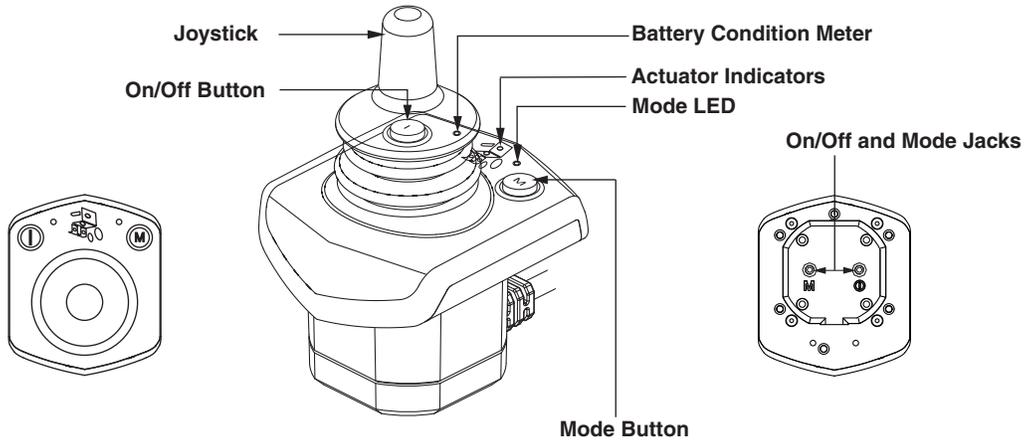
PROVIDING GREATER INDEPENDENCE

IDENTIFICATION KEY

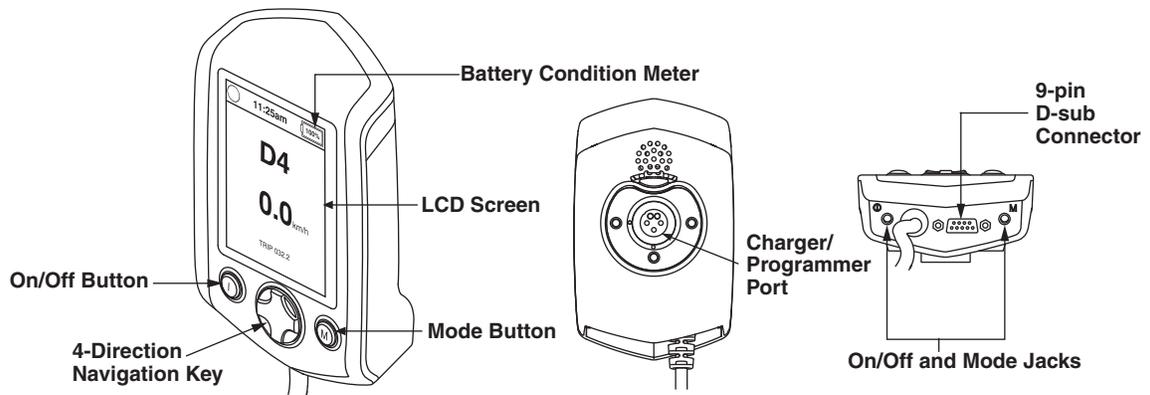


*Optional components available on some models.

Attendant Control



Enhanced Display



Safety Guidelines

WARNING!

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

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

WARNING!

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

MANDATORY!

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

PROHIBITED!

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

Intended Use

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

Regarding Devices for Prescription Use

WARNING!

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

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

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

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

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

ADVISORY STATEMENT REGARDING CERTAIN COMPONENTRY INCORPORATED BY THIRD-PARTY MANUFACTURERS INTO FINISHED POWER CHAIRS: When power bases, seating systems, or other components are incorporated into a finished power chair manufactured or assembled by any third party, that third party is responsible to assure the safety, functionality, and legal compliance of the finished power chair. We make no representation concerning the safety, functionality, or legal compliance of the finished power chair or its componentry manufactured by a third party. While we make every effort to assure that our components are distributed responsibly, manufacturers, distributors, and consumers are reminded that finished power chairs must comply with a variety of standards and requirements for governmental safety and functionality.

If it is necessary to physically modify a power chair, including the addition of third-party componentry, to accommodate the medical needs of the power chair occupant, a risk assessment in conformance with ISO 14971, as outlined in ISO_DIS_7176-19 (preliminary release), should be performed.

Changes to power chairs that are likely to affect conformance and risk evaluation include but are not limited to: moving the securement-point brackets; lowering the back-support height; shortening the seat length; adding secondary postural supports that are not firmly attached to the power chair; adding components that have sharp edges (i.e., edges with less than 0.08 in. [2 mm] radius); or any change that compromises the structural integrity of the power chair frame.

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Product Safety Symbols

The symbols below are used on the controller to identify warnings, mandatory actions, and prohibited actions. It is very important for you to read and understand them completely.



Read and follow the instructions in the owner's manual.



Avoid exposure to rain, snow, ice, salt, or standing water whenever possible. Maintain and store in a clean and dry condition.



EMI/RFI - This product has been tested and passed at an immunity level of 20 V/m.



Disposal and recycling - Contact your Quantum Rehab Provider for information on proper disposal and recycling of your Quantum product and its packaging.

The Q-Logic 3 Controller

The Q-Logic 3 Controller is a fully programmable, modular electronic controller system that allows you to operate your power chair. The Q-Logic 3 has several input devices available that operate through a power module. The hand control will primarily be discussed in this manual along with references to the Enhanced Display, Stand-alone Joystick, and Attendant Control. Additional input devices are also available for the Q-Logic 3. Contact your Quantum Rehab Provider for more information.

The controller has been pre-programmed to meet a typical user's needs. The program is adjusted using either a personal computer with software provided by the controller manufacturer or with a handheld programmer, also provided by the controller manufacturer, by your Quantum Rehab Provider or a trained service technician.

WARNING!

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

Precautionary Guidelines

Before operating the Q-Logic 3 Controller please read the following. These guidelines are provided for your benefit and will aid you in the safe operation of the seating system.

- Turn off the power to the controller before you are seated in your power chair.
- Always have assistance when you are being seated in your power chair.
- Follow all of the procedures and heed the warnings as explained in your power chair owner's manual and Consumer Safety Guide.

Operating the Q-Logic 3 Controller

The Q-Logic 3 hand control is used to operate your power chair and all of its components.

On/Off and Mode Select Lever

The On/Off and Mode Select lever turns the system on and off, is used to recycle the power, and is also used to select drive profiles, seating and auxiliary menus.

WARNING!

When faced with an emergency situation, release the joystick, then press the on/off to stop the power chair. Use caution. Be advised that pressing the on/off button may cause the power chair to stop abruptly.

Always turn the power off when you are stationary to prevent unexpected movement.

Joystick

The joystick controls the driving speed and direction of the power chair and is used to navigate the menus on the LCD screen. When the joystick is at rest, it is in the neutral (center) position and the chair is stationary. In order to drive the chair, the joystick must be taken out of neutral. Moving the joystick in any direction will switch the chair from neutral to drive, and the chair will move in the direction indicated by the joystick position. The farther away from the neutral position the joystick is, the faster the chair will move in that direction. To stop chair movement, simply release the joystick or move it back to the neutral position. The chair's electromagnetic brakes will engage after the chair has come to a controlled stop.

Lock/Unlock Procedure

The Q-Logic 3 Controller comes with a programmable lock/unlock option.

NOTE: The lock-out feature is not programmed at the factory. To have this feature added, contact your Quantum Rehab Provider.

To lock the controller:

1. Push the On/Off and Mode Select Lever up once to power on the chair and the controller.
2. Push and hold the On/Off and Mode Select Lever in the on position until the controller turns off. The controller is now locked.

To unlock the controller:

1. Push the On/Off and Mode Select Lever up once to power on the chair and the controller. The words "System Lock" will appear on the display screen.
2. Move the joystick to the full forward position until you hear a beep.
3. Move the joystick to the full reverse position until you hear a beep.
4. Release the joystick. The controller is now unlocked.

Speed Adjustment Knob

The speed adjustment knob is used to control the speed of the power chair.

To change the speed:

1. Push the On/Off and Mode Select Lever up once to power on the chair and the controller.
2. To increase your speed, turn the speed adjustment knob up.
3. To decrease your speed, turn the speed adjustment knob down.

The speed indicator bar will increase and decrease as the speed knob is moved, providing a visual display of how fast the chair will move.

Keypad

The keypad is located directly in front of the joystick. It contains the components that you will use to control your power chair.

Horn Button 

The horn button activates a warning horn.

Home Button 

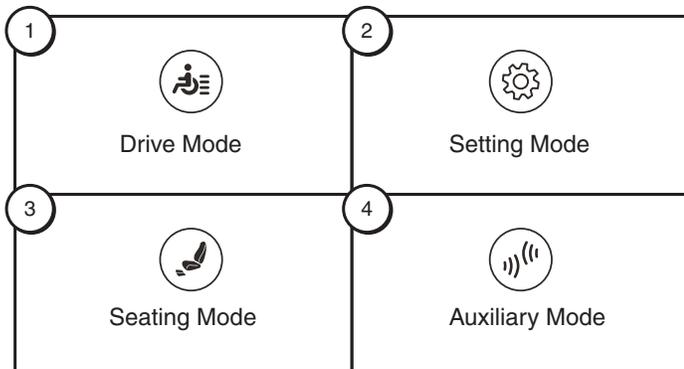
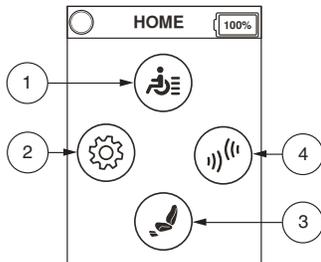
The home button is used to quickly access Drive Mode, Seat Mode (if equipped), Settings Mode, and Environmental Functions.

NOTE: If no Environmental Functions are selected in the Settings, the Environmental Functions icon will not be displayed.

To access the Home Screen if your chair is equipped with a light joystick:

1. Push both the Left/Right Indicators for several seconds.

NOTE: The timing is a programmable parameter that can be reset by your Quantum Rehab Provider.



Key 1 and Key 2 Select Buttons  

The key 1 select button is used to quickly and easily select drive profile 1. The key 2 select button selects the seat. Key 1 and key 2 select buttons can be customized. Contact your Quantum Rehab Provider for more information. See Identification Key on page 2 for reference.

NOTE: If your Q-Logic 3 Controller is equipped with a lighting system, the Home button and key 1/key 2 select buttons will be replaced with a light button and left/right turn indicator buttons.

Light Button

The light button controls the front headlights and rear running lights.

To operate the lights:

1. Push the On/Off and Mode Select Lever up once to power on the chair and the controller.
2. Press the light button once to activate the front headlights and rear running lights.
3. Press the light button again to turn off the lighting system.

Left/Right Turn Indicator Buttons  

The left/right turn indicator buttons toggle either the left or right turn indicators.

To operate the turn indicators:

1. Push the On/Off and Mode Select Lever up once to power on the chair and the controller.
2. Press the desired turn indicator button once to turn on that indicator.
3. Press the same turn indicator button again to turn off that indicator.

NOTE: If the left turn indicator is activated, pressing the right indicator button will turn off the left indicator and activate the right indicator.

NOTE: The turn indicator buttons also control the hazard lights. Press both turn indicator buttons at the same time to activate the hazard lights and press both buttons again to turn off the hazard lights. If the hazard lights are left on and the controller is turned off, the hazard lights will continue to flash. The Q-Logic 3 must be turned back on and both turn indicator buttons must be pressed to deactivate the hazard lights.

LCD Screen 

The Q-Logic 3 provides the user with easily intuited feedback information via the LCD screen. The circle at the top left of the screen represent a stoplight. A green light indicates full drive operation, an amber light indicates limited drive operation, and a red light indicates that drive operation is prohibited.

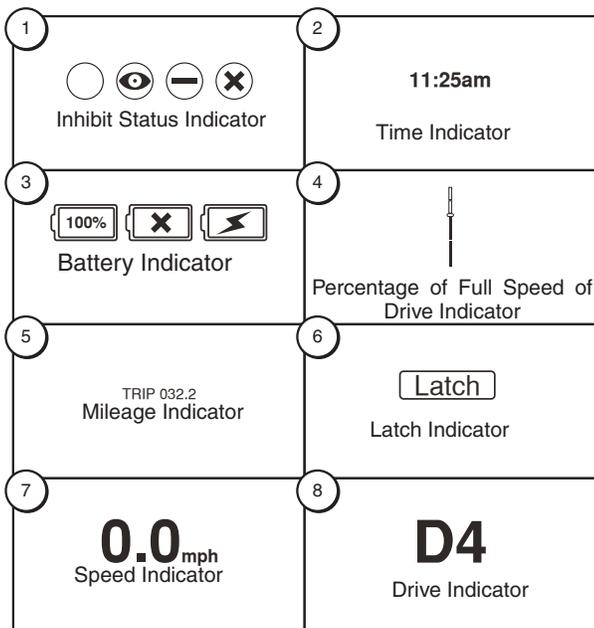
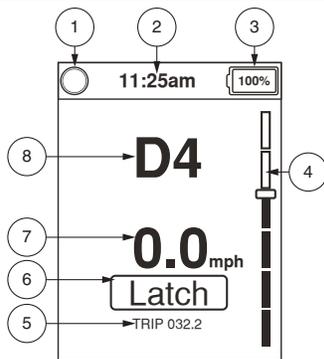
Drive Screen

The LCD provides the current time in either 12- or 24-hour clock format, the current profile, drive operation, the speed adjustment setting, and the trip odometer, or the overall odometer reading.

Drive/Function Inhibit status is depicted as a green light at the top left of the screen. Actuator adjustment will affect the inhibit status. As your seat and/or back angle increases, a red light will indicate full drive lockout. If your power chair is equipped with a seat lift, a yellow light will indicate speed reduction as the seat is elevated. To return your power chair to green status, reverse operation.

To access the Drive Screen

1. Push the Home Screen button.
2. Push the joystick up for the "Drive Screen."



Drive Profile Selection

Your Q-Logic 3 Controller may be programmed for up to four drive profiles that allow the system to be custom-tailored to your environment.

The drive profile may be changed two different ways. Profiles 1 – 4 may be selected by pressing the On/Off and Mode Select Lever in the forward direction. Profile 1 may be selected by simply pressing the key 1 select button. The selected profile is displayed on the Drive Screen.

NOTE: Drive profiles are set by your Quantum Rehab Provider. Contact your Quantum Rehab Provider to change or add a drive profile.

To select a profile setting using the On/Off and Mode Select Lever:

1. Push the On/Off and Mode Select Lever up once to power on the chair and the controller.
2. Push the On/Off and Mode Select Lever up again to select a drive profile. Cycle through the four available drive profiles.
3. Continuing to push the lever up will cycle through the Auxiliary screen and Seat screen (if power positioning is present), then back to Drive profile 1.

NOTE: You can only scroll forward through the drive profiles. Pushing the On/Off and Mode Select Lever down will power off the controller.

WARNING!

Drive/Function Inhibit status is read-only in your actuator adjustment (seat screen). This function is disabled in drive mode in order to prevent unintended loss of function in your power chair. Take caution when negotiating, obstacles, ramps, and inclines. Whenever possible, use an attendant in these conditions.

Operating your power chair on inclines and/or with tilt/recline function will affect your power chair's stability.

Actuator Adjustment (Seat Screen)

The Q-Logic 3 Controller can control five power seat actuators using the mode select lever and the joystick.

To select and adjust an actuator:

1. Push the On/Off and Mode Select Lever up once to power on the chair and the controller.
2. Push the On/Off and Mode Select Lever up several times until the seat screen is displayed on the LCD or push the key 2 select button once to go directly to actuator mode.
3. Push the joystick to the left or right to cycle through the available actuators until the desired actuators are illuminated on the actuator indicator. **See figure 1.**
4. When the desired actuator is selected, give a forward command to the joystick to adjust position in one direction or give a reverse command to the joystick to adjust position in the opposite direction. If you continue to push the lever up, it will cycle through the Drive screens and Auxiliary screen, and then return to Seat Screen.
5. Push up and release the On/Off and Mode Select Lever until you return to the desired drive profile.



Figure 1. Actuator Selection

NOTE: The Drive/Function Inhibit status is affected only in the actuator adjustment (seat screen).

****NOTE:** Only available on seating system with positional feedback.

iLevel Feature (Optional)

Your power chair may be equipped with the iLevel feature that will be used in conjunction with your seating system. The iLevel feature is mounted on a Quantum power base for enhanced stability when the seating system is elevated.

There are certain situations, including some medical conditions, where the power chair user will need to practice operating the power chair equipped with iLevel in the presence of a trained attendant. A trained attendant can be defined as a family member or care professional specially trained in assisting a power chair user in various daily living activities.

As you begin using iLevel during daily activities, you will probably encounter situations in which you will need some practice. Simply take your time and you will soon be in full and confident control.

Elevation (Seat Screen)

The iLevel feature can be activated by selecting the elevating seat actuator.

To select and adjust the seat elevation using the Q-Logic 3 Controller:

1. Push the On/Off and Mode Select Lever up once to power on the chair and the controller.
2. Push the On/Off and Mode Select Lever up several times until the seat screen is displayed on the LCD or push the key 2 select button once to go directly to seat screen. **See figure 1.**
3. Push the joystick to the left or right to cycle through to the elevating seat mode, this is illuminated on the actuator indicator. **See figure 1.**

NOTE: If your Q-Logic 3 settings are different than those described, contact your Quantum Rehab Provider. Your Quantum Rehab Provider may have changed the programming of your Q-Logic 3 Controller.

4. When the elevating seat mode is selected, give a forward command to the joystick to adjust position in one direction or give a reverse command to the joystick to adjust position in the opposite direction.
5. If you want to return to another profile, push up and release the On/Off and Mode Select Lever until you return to the desired drive profile.

To activate the iLevel using a single switch:

1. Press once and hold the single switch once to raise the seat and activate iLevel.
2. Press and hold the single switch to lower the seat.

NOTE: The iLevel feature is automatically engaged when the power elevating seat is activated and the iLevel indicator is displayed on your controller. See figure 2.

The power chair should be used on an indoor, level surface, such as malls, offices, and/or medical facilities to activate iLevel. Once the seating system actuator is started, the iLevel boots inhibit movement on the front caster arms. The seating system can be reclined or tilted up to 20° while the iLevel feature is activated.

⚠ WARNING!

The iLevel feature should be used only on a flat, level, indoor surface, such as in malls, offices, and/or medical facilities. Never raise the seat from its lowest position on an inclined surface. Failure to heed this warning can result in the power chair tipping over.

The iLevel feature is intended for limited outdoor use on only flat level, hardscape surfaces. If you are unsure of your environment, do not use iLevel outdoors.

Never raise the seat into iLevel when operating your power chair on bumpy or uneven surfaces. Failure to heed this warning can result in the power chair tipping over.

Always fasten the positioning belt when operating the power chair.

Do not operate the iLevel or change the seat height in any way while your power chair is positioned under a fixed object, such as a table or a desk. Keep area clear prior to and during movement.

⊘ PROHIBITED!

Never use the iLevel outdoors on uneven terrain (gravel, hills or other uneven, non-compact terrain) or in fields.

Never use iLevel while ascending or descending a curb or uneven surface of any height.

NOTE: The iLevel feature is equipped with a system that allows the power chair to drive at a predetermined, safe speed when the seat is elevated. Always check to be sure this system is operating properly before using your power chair.

NOTE: If a warning or visual indicator appears on your controller stating that iLevel is not engaged, the power chair's speed will be reduced to 25% when elevated. If this warning appears while on level ground, please discontinue use of iLevel feature and consult your Quantum Rehab Provider for assistance.

Tru-Balance® 4 Power Anterior Tilt Feature (Optional)

Your power chair may be equipped with the power anterior tilt feature that will be used in conjunction with your seating system. The power anterior tilt feature is mounted on a Quantum power base for enhanced stability when the seating system is tilted forward.

There are certain situations, including some medical conditions, where the power chair user will need to practice operating the power chair equipped with power anterior tilt in the presence of a trained attendant. A trained attendant can be defined as a family member or care professional specially trained in assisting a power chair user in various daily living activities.

As you begin using power anterior tilt during daily activities, you will probably encounter situations in which you will need some practice. Simply take your time and you will soon be in full and confident control.

Tilt (Seat Screen)

The power anterior tilt feature can be activated by selecting the tilt seat actuator.

To select and adjust the seat tilt using the Q-Logic 3 Controller:

1. Push the On/Off and Mode Select Lever up once to power on the chair and the controller.
2. Push the On/Off and Mode Select Lever up several times until the seat screen is displayed on the LCD or push the key 2 select button once to go directly to seat screen. **See figure 1.**
3. Push the joystick to the left or right to cycle through to the tilt seat mode, this is illuminated on the actuator indicator. **See figure 1.**

NOTE: If your Q-Logic 3 settings are different than those described, contact your Quantum Rehab Provider. Your Quantum Rehab Provider may have changed the programming of your Q-Logic 3 Controller.

1. When the tilt seat mode is selected, give a forward command to the joystick to adjust position in one direction or give a reverse command to the joystick to adjust position in the opposite direction. A forward command, from zero tilt, will result in power anterior tilt mode, on the seat screen. **See figure 1.**
2. When in power anterior tilt mode, the joystick must be returned to neutral and another forward command given to move in power anterior tilt. A reverse command will return to zero tilt.
3. If you want to return to another profile, push up and release the On/Off and Mode Select Lever until you return to the desired drive profile.

NOTE: Your Quantum Rehab Provider may have set an anterior tilt position and a transfer position. If so giving a forward command from zero tilt will move the seat to the anterior tilt position. Releasing the input to neutral and giving another forward command will move the seat to the transfer position.

To activate the Power Anterior Tilt using a single switch:

1. Double press once and hold the single switch once to tilt the seat forward and achieve power anterior tilt.
2. Press and hold the single switch to return the seat to zero tilt.

NOTE: The power anterior tilt feature is automatically engaged when the power tilt seat is activated in the forward direction and the power anterior tilt indicator is displayed on your controller. See figure 2.

The power chair should be used on an indoor, level surface, such as malls, offices, and/or medical facilities to activate power anterior tilt. Once the seating system actuator is started, on chairs with iLevel, the iLevel boots inhibit movement on the front caster arms during power anterior tilt. The seating system can be reclined or elevated fully while the power anterior tilt feature is activated.

WARNING!

The power anterior tilt feature should be used only on a flat, level, indoor surface, such as in malls, offices, and/or medical facilities. Never tilt the seat forward on an inclined surface. Failure to heed this warning can result in the power chair tipping over.

The power anterior tilt feature is intended for limited outdoor use on only flat level, hardscape surfaces. If you are unsure of your environment, do not use power anterior tilt outdoors.

Never tilt the seat forward when operating your power chair on bumpy or uneven surfaces. Failure to heed this warning can result in the power chair tipping over.

Always fasten the positioning belt and/or other physical restraints such as knee blocks or chest bar, when operating the power chair.

Do not operate the power anterior tilt or change the seat height in any way while your power chair is positioned under a fixed object, such as a table or a desk. Keep area clear prior to and during movement.

PROHIBITED!

Never use the power anterior tilt outdoors on uneven terrain (gravel, hills or other uneven, non-compact terrain) or in fields.

Never use power anterior tilt while ascending or descending a curb or uneven surface of any height.

NOTE: The power anterior tilt feature is equipped with a system that allows the power chair to drive at a predetermined, safe speed when the seat is tilted forward. Always check to be sure this system is operating properly before using your power chair.

NOTE: On power chair with iLevel, if a warning or visual indicator appears on your controller stating that iLevel is not engaged, the power chair's speed will be reduced to 0% (full drive lockout) when elevated, during power anterior tilt. If this warning appears while on level ground, please discontinue use of power anterior tilt feature and consult your Quantum Rehab Provider for assistance.

AFP Articulate (Seat Screen)

On your TRU-Balance 4 system the footplates can be moved towards the ground, when not in anterior tilt, by selecting the AFP articulate actuator.

To select and adjust the AFP articulate using the Q-Logic 3 Controller:

1. Push the On/Off and Mode Select Lever up once to power on the chair and the controller.
2. Push the On/Off and Mode Select Lever up several times until the seat screen is displayed on the LCD or push the key 2 select button once to go directly to seat screen. **See figure 1.**
3. Push the joystick to the left or right to cycle through to the AFP articulate mode, this is illuminated on the actuator indicator. **See figure 1.**

NOTE: If your Q-Logic 3 settings are different than those described, contact your Quantum Rehab Provider. Your Quantum Rehab Provider may have changed the programming of your Q-Logic 3 Controller.

1. When the AFP articulate mode is selected, give a forward command to the joystick to adjust position in one direction or give a reverse command to the joystick to adjust position in the opposite direction. A reverse command will result in footplates moving towards the ground, a forward command will result in the footplates moving away from the ground.

NOTE: The Tru-Balance 4 system is set in production to stop the footplates before they contact the ground. If the footplates contact the ground, see your Quantum Rehab Provider to get the system reset.

NOTE: When the footplates are close to contacting the ground, the system restricts the AFP articulation in the down position, restricts the elevate in the down position, and puts the chair into drive lockout.

Memory Seating

If your seating system is equipped with memory seating, a saved seat position can be recalled via the Q-Logic 3 electronics.

NOTE: A memory seat position must be set before use. Consult your Quantum Rehab Provider for assistance.

The memory seat function is displayed on the Q-Logic 3 seat screen with number 1 through 4. **See figure 1.**

Each memory seat number has a position that can be recalled with a forward command, and another position that can be recalled with a reverse command, for eight (8) possible memory seat positions.

The memory positions can be set to operate in a synched movement (all seat functions move at the same time) or a sequential operation (each seat functions moves, one after the other, in a predetermined order). See your Quantum Rehab Provider for more information.

NOTE: An anterior tilt position can only be saved to a memory seat position set for synched movement.

Memory Seat (Seat Screen)

The memory seat feature can be activated by selecting the memory seat screen.

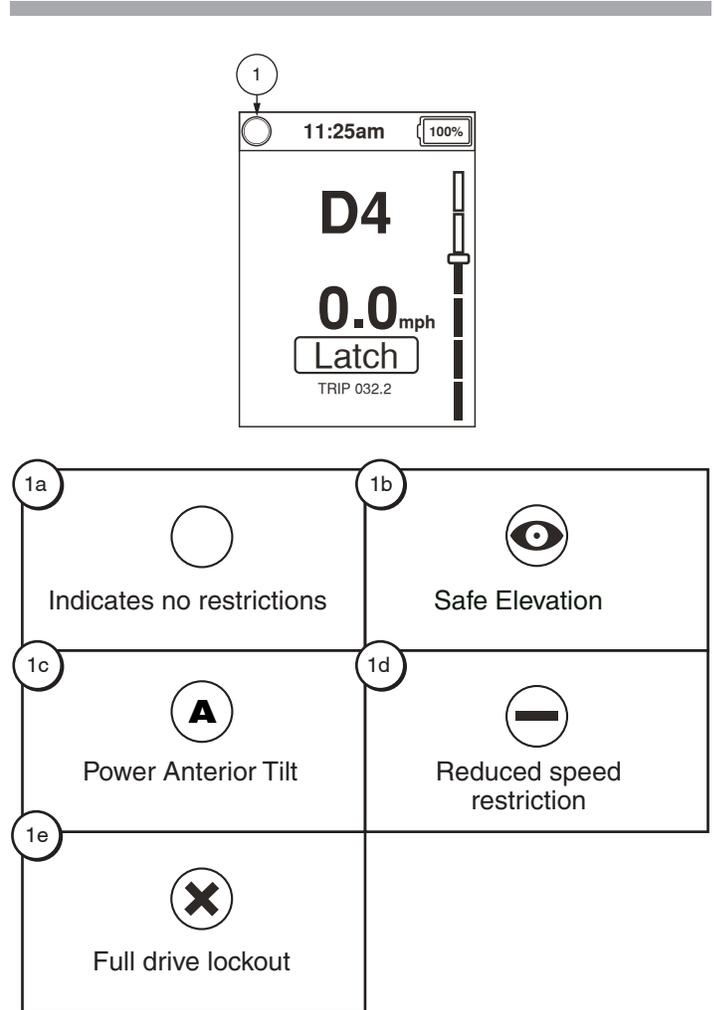
To select and recall the memory seat position using the Q-Logic 3 Controller:

1. Push the On/Off and Mode Select Lever up once to power on the chair and the controller.
2. Push the On/Off and Mode Select Lever up several times until the seat screen is displayed on the LCD or push the key 2 select button once to go directly to seat screen. **See figure 1.**
3. Push the joystick to the left or right to cycle through to the memory seat mode. This is illuminated on the actuator indicator. **See figure 1.**
4. Push the joystick forward to recall the forward memory seat position.
5. Push the joystick in reverse to recall the reverse memory seat position.

NOTE: When trying to recall a memory position, if the seat does not move or stops moving before reaching the memory position, an actuator restriction may be active. Example: Starting with lift fully elevated operating a memory position with full posterior tilt (memory position is set for sequential movement). The seat will start to posterior tilt but must stop at 115 degrees as the lift is elevated. Bringing the lift down all the way and performing the memory position again will result in reaching full memory seat position.

NOTE: A “invalid memory position” message is a result of attempting to perform a sequential memory seat position starting from an anterior tilted position. Move seat to zero tilt, or posterior tilt, to perform the sequential memory seat position.

NOTE: An "Error 174 invalid memory position" message is a result of attempting to perform a sequential memory seat position starting from an anterior tilted position. Move seat to zero tilt, or posterior tilt, to perform the sequential memory seat position.



Definitions of Indicators

- 1a - No restrictions
- 1b - Safe Elevation
- 1c - Power Anterior Tilt
- 1d - Reduced speed restriction
- 1e - Full drive lockout

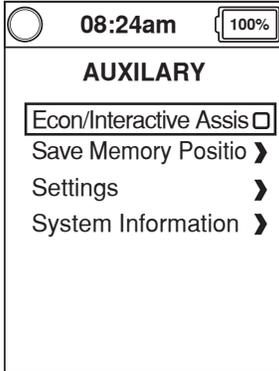
Figure 2. Q-Logic 3 Controller Indicators

User Adjustable Memory Positions

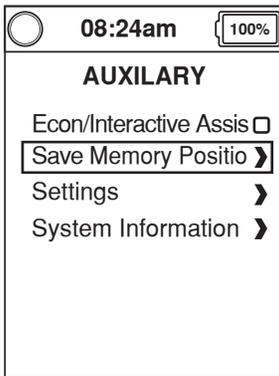
The memory seat numbers 1 through 4 may be designated to be user adjustable. See your Quantum Rehab Provider for more information.

Saving a user adjustable memory position

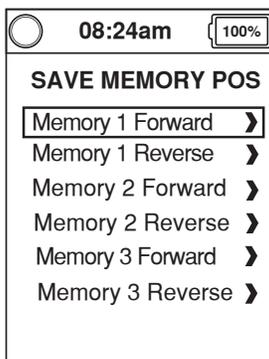
1. Move the seat to the position to be saved.
2. Push the On/Off and Mode Select lever up until the Auxillary menu is displayed.



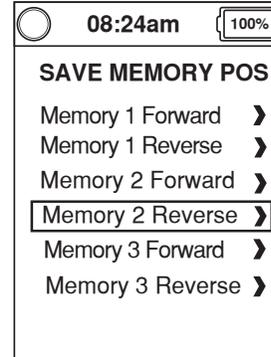
3. Push the Joystick up or down until the "Save Memory Positions" is highlighted.



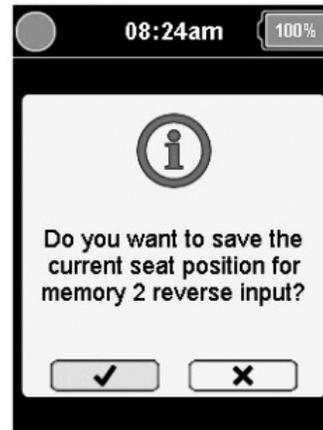
4. Push the Joystick to the right.



5. Push the Joystick up or down until the memory position to be saved is highlighted.



6. Push the Joystick to the right.



7. Push the Joystick forward to confirm.

NOTE: If "Save Memory Positions" is not in the Auxillary Menu, no memory positions are designated to be user adjustable. See your Quantum Rehab provider for more information.

Settings Screens 

The following pages explain the various screens you will use with the Q-Logic 3 Controller. Contact your Quantum Rehab Provider with any questions you may have.

NOTE: Some screens in this Basic Operating Instructions may differ from your system depending on configuration and options selected.

To change a sound setting:

1. Push the Home Screen button.
2. Push the joystick left to enter settings screen.
3. Push the joystick up or down through the available setting subjects.
4. When the desired subject is highlighted on the settings screen, push the joystick to the right to enter that subject.

NOTE: At any time a left command will return to the previous menu.

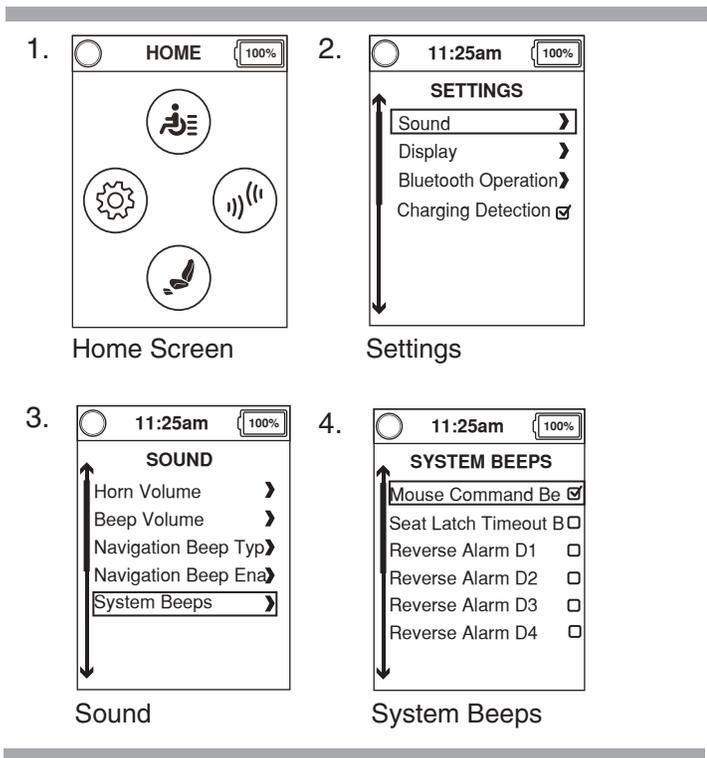
After "Sound" is highlighted, a right command will show.

After "System beeps" is highlighted, a right command will show.

When a setting has a box, a right command "checks" (enables that setting). Another right command will "uncheck" (disable that setting).

NOTE: Any time a setting is changed, the system will back up the configuration to the power base. When the system is turned off, "parameter backup in progress" will be displayed on the screen before the system turns off.

To change a sound setting:



1. Home Screen: Shows icons for Home, Settings, Bluetooth, and Charging Detection. The Settings icon is highlighted.

2. Settings: Shows a list of settings: Sound, Display, Bluetooth Operation, and Charging Detection. The Sound option is highlighted.

3. Sound: Shows sub-options: Horn Volume, Beep Volume, Navigation Beep Typ, Navigation Beep Ena, and System Beeps. The System Beeps option is highlighted.

4. System Beeps: Shows checkboxes for Mouse Command Be, Seat Latch Timeout B, Reverse Alarm D1, Reverse Alarm D2, Reverse Alarm D3, and Reverse Alarm D4. The Mouse Command Be checkbox is checked.

To change the display settings:

1. Push the Home Screen button.
2. Push the joystick left to enter settings screen.
3. Push the joystick up or down through the available setting subjects.
4. When the desired subject is highlighted on the settings screen, push the joystick to the right to enter that subject.

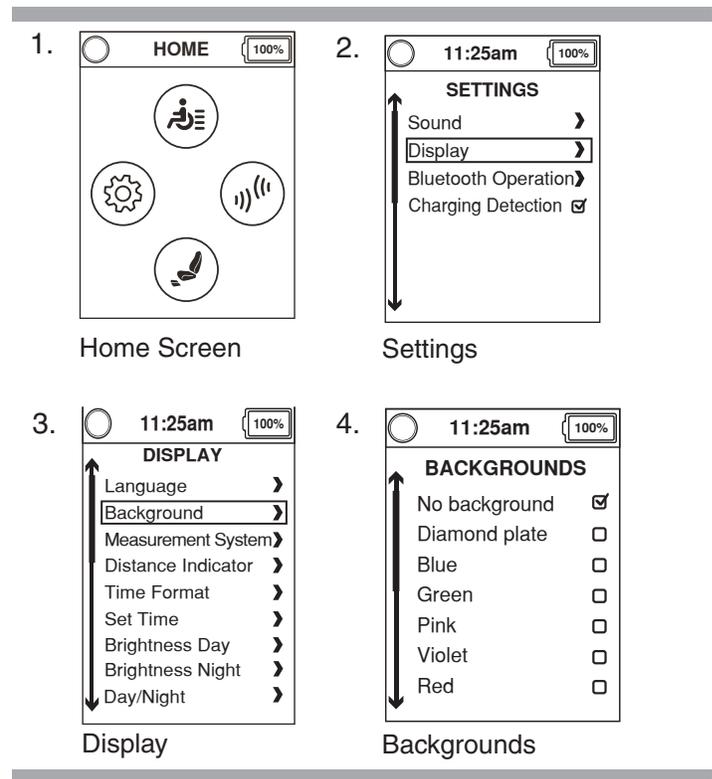
NOTE: At any time a left command will return to the previous menu.

After "Display" is highlighted, a right command will show.

After "Backgrounds" is highlighted, a right command will show.

When a setting has a box, a right command "checks" (enables that setting). Another right command will "uncheck" (disable that setting).

To change the display setting:



1. Home Screen: Shows icons for Home, Settings, Bluetooth, and Charging Detection. The Settings icon is highlighted.

2. Settings: Shows a list of settings: Sound, Display, Bluetooth Operation, and Charging Detection. The Display option is highlighted.

3. Display: Shows sub-options: Language, Background, Measurement System, Distance Indicator, Time Format, Set Time, Brightness Day, Brightness Night, and Day/Night. The Background option is highlighted.

4. Backgrounds: Shows checkboxes for No background, Diamond plate, Blue, Green, Pink, Violet, and Red. The No background checkbox is checked.

To enable/disable an environmental function:

1. Push the Home Screen button.
2. Push the joystick left to enter settings screen.
3. Push the joystick up or down through the available setting subjects.
4. When the desired subject is highlighted on the settings screen, push the joystick to the right to enter that subject.

NOTE: At any time a left command will return to the previous menu.

After "Bluetooth operation" is highlighted, a right command will show.

This Bluetooth screen will enable what Environmental Functions are available on the Environmental Functions Screen.

NOTE: There are two Bluetooth screens: One is located under Settings and the other under Environmental Controls.

To change the clock settings:

1. Push the Home Screen button.
2. Push the joystick left to enter settings screen.
3. Push the joystick up or down through the available settings subjects.
4. When the desired subject is highlighted on the settings screen, push the joystick to the right to enter that subject.

NOTE: At any time a left command will return to the previous menu.

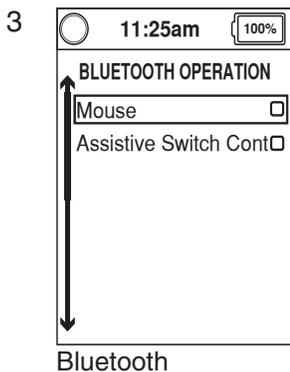
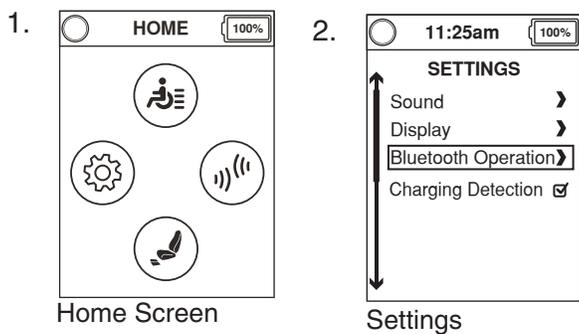
After "Display" is highlighted, a right command will show.

After "Set time" is highlighted, a right command will show.

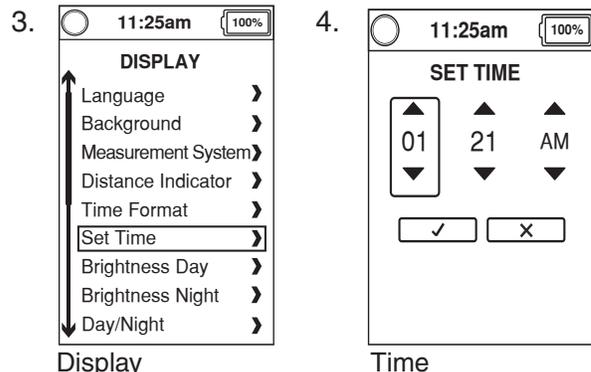
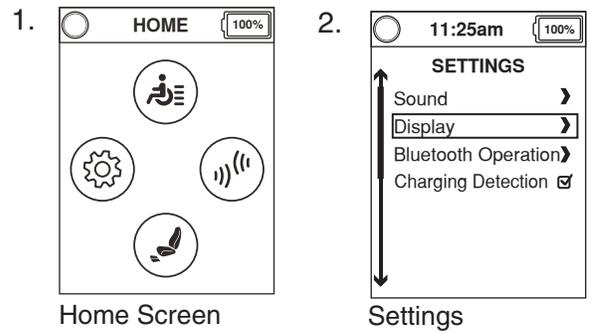
To set time from the set time screen:

1. Push the joystick left or right to highlight the selection to change. Push the joystick up or down to adjust the value.
2. To set or cancel the adjusted value, move the joystick left or right to highlight "set" or "cancel" then move the joystick up to perform the highlighted function.

To enable/disable an environmental function:



To change the clock settings:



The Q-Logic 3 display includes a sensor that will adjust screen brightness for daytime or nighttime. "Brightness Day" sets the brightness of the screen for daytime viewing (bright light). When using the Q-Logic 3 in bright light, use the "Brightness Day" setting to adjust the illumination of the screen. "Brightness Night" sets the screen brightness for nighttime viewing (low light). Use the "Brightness Night" setting to adjust the illumination of the screen in low light.

To change the auto brightness setting:

1. Push the Home Screen button.
2. Push the joystick left to enter settings screen.
3. Push the joystick up or down through the available setting subjects.
4. When the desired subject is highlighted on the settings screen, push the joystick to the right to enter that subject.

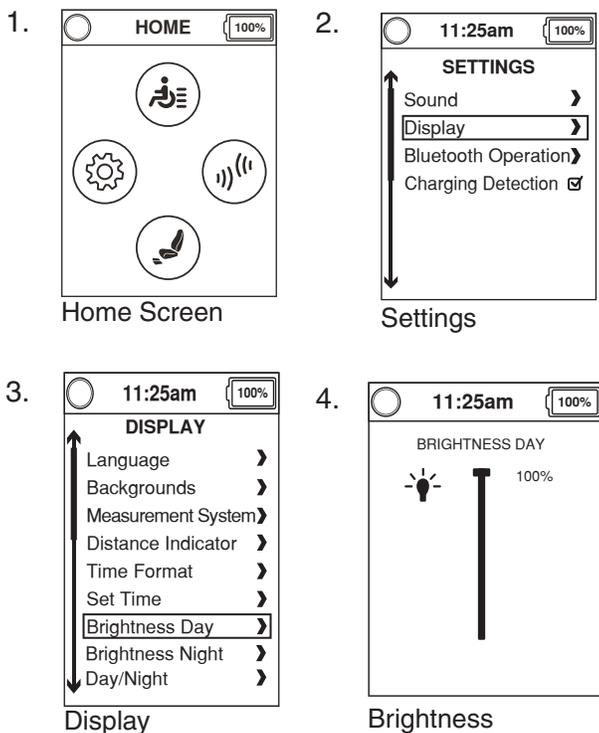
After "Display" is highlighted, a right command will show.

After "Brightness Day" is highlighted, a right command will show.

After "Brightness Day" from the Display screen:

1. Push the joystick right to switch between day and night.
2. Push the joystick up or down to adjust brightness, value will change 5% for every push of joystick.
3. Push the joystick left to exit (and accept setting).

To change the auto brightness setting:

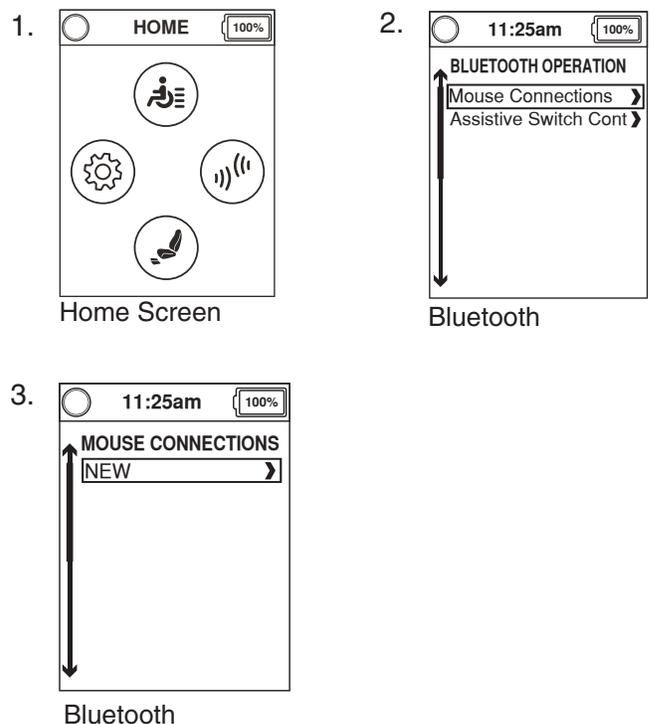


To activate the Bluetooth function:

NOTE: The Q-Logic 3 hand control is equipped with built-in Bluetooth that allows you to connect to a computer, smartphone or tablet.

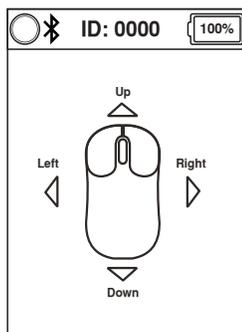
1. Push the On/Off and Mode Select Lever up once to power on the chair and controller.
2. Push the home button to access the home screen.
3. Push the joystick to the right to access the Environmental Functions menu.
4. Use the joystick to highlight the Bluetooth function you wish to enable, then push the joystick to the right to select that function.
5. Once in the Bluetooth function the input of the chair can be used to navigate through the connected device.
6. Press the home button to return to the home screen.

To activate the Bluetooth function:



Mouse Connections is used to pair the Q-Logic 3 to a Bluetooth mouse, allowing the input from the Q-Logic 3 to act as a mouse input in place of the mouse. The mouse feature can be connected to computers that use a Windows or Mac operating system. Bluetooth dongles can also be connected, but refer to the dongles instructions for compatible operating systems.

Prog Access and Prog Access iOS can be enabled by highlighting the desired function then pushing the joystick to the right. Pushing the joystick to the right again will disable the function.



NOTE: Program access may either be in the Settings screen or the Aux screen depending upon configuration.

NOTE: When pairing the Q-Logic 3 system to your device, the Q-Logic 3 Bluetooth ID# is at the top of the screen for easy pairing. Please refer to your device for pairing instructions.

Prog Access Econ-w allows the Q-Logic 3 to be programmed by a dealer of medical equipment through a paired Windows device. Prog Access Econ-w must be enabled to allow the dealer of medical equipment access to the Q-Logic 3 parameters for adjustment. If Prog Access Econ-w is not enabled (even if the dealer of medical equipment has been paired with the Q-Logic 3 previously), the Q-Logic 3 cannot be programmed by the dealer of medical equipment.

Prog Access Econ-i allows the Q-Logic 3 to be programmed by a dealer of medical equipment through a paired iOS device. Prog Access Econ-i must be enabled to allow the dealer of medical equipment access to the Q-Logic 3 parameters for adjustment. If Prog. Access Econ-i is not enabled (even if the dealer of medical equipment has been paired with the Q-Logic 3 previously), the Q-Logic 3 cannot be programmed by the dealer of medical equipment.

NOTE: Once the dealer of medical equipment has completed programming or if the connection is lost, the dealer of medical equipment must re-pair the device with the Q-Logic 3 to perform any additional programming.

To activate the Mouse Connections function through the Environmental Functions Screen:

1. Push the Home Screen button.
2. Push the joystick right for Environmental Functions screen.
3. Push the joystick up or down through the available Environmental Functions.
4. When the "Mouse Connections" subject is highlighted on the Auxiliary screen, push the joystick to the right.

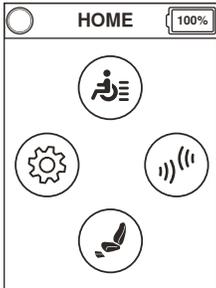
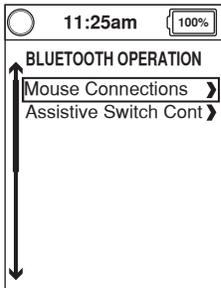
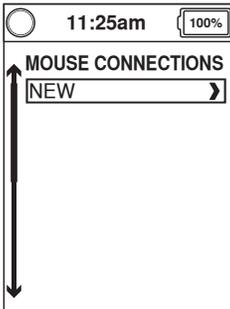
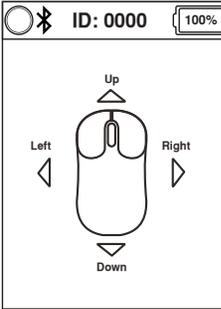
NOTE: At any time a left command will return to the previous menu.

After "Mouse Connections" is highlighted, a right command will show.

NOTE: Gray icons indicate unpaired Q-Logic 3; blue icons indicate paired Q-Logic 3.

NOTE: To leave the mouse screen, press the on/off lever up, key 1, home key, or key 2.

To activate the Mouse connection functions:

1.  Home Screen
2.  Bluetooth
3.  MOUSE CONNECTIONS
NEW
4.  Up
Left Right
Down

To make a selection from the Environmental Functions Screen: 

1. Push the home screen button.
2. Push the joystick to the right to access the Environmental Functions menu.
3. Push the joystick up or down through the available Environmental Functions.

NOTE: When in the Environmental Functions Screen, a left command will show the Auxiliary Screen.

To activate the Assistive Switch Control Connections function through the Environmental Functions Screen:

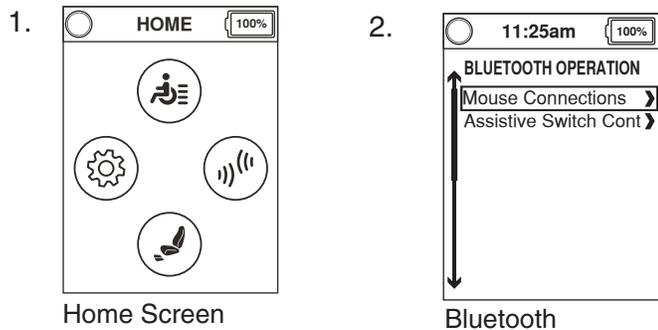
1. Push the home screen button.
2. Push the joystick to the right to access the Environmental Functions menu.
3. Push the joystick up or down through the available Environmental Functions.
4. Assistive Switch Control Connections is highlighted on the Environmental Functions Screen, push the joystick to the right.

NOTE: At any time a left command will return to the previous menu.

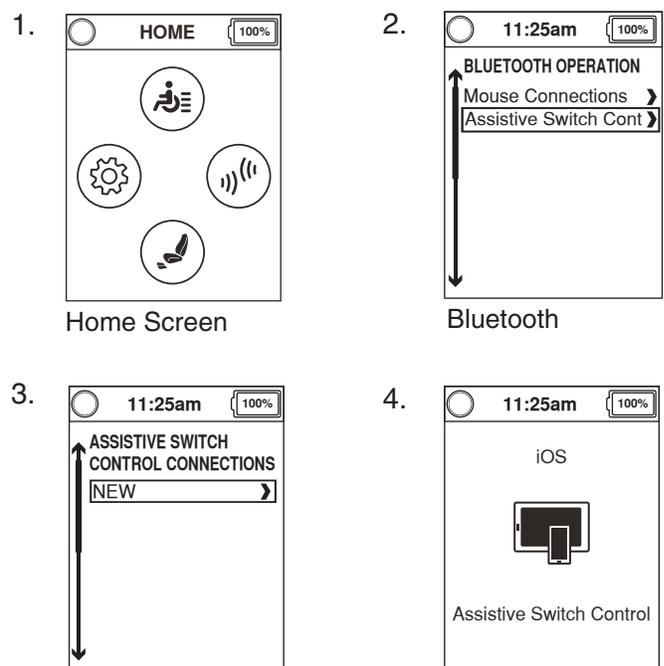
After Assistive Switch Control Connections is highlighted, a right command will show.

NOTE: Gray icons indicate unpaired Q-Logic 3; blue icons indicate paired Q-Logic 3.

To make selection from Environmental Functions screen:



To activate the Assistive Switch Control Connections function:



The Q-Logic 3 system includes Bluetooth, that can be used to program the Q-Logic 3 electronics.

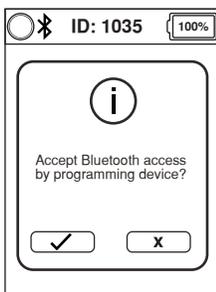
If a programmer is connected to the chair, the Q-Logic 3 screen will ask the user to accept Bluetooth access by programming device.

1. To accept the Bluetooth connection, perform a forward command on the chair's input device.

Interactive Assist

The Interactive Assist uses the Q-Logic 3's Bluetooth connection to allow your provider access to the Q-Logic 3's Diagnostic information. The connection requires the user to accept access similar to the Bluetooth programming. Refer to the Interactive Assist manual for details.

To accept Bluetooth access by programming device:



Bluetooth

NOTE: This product has been tested for Electromagnetic and Radio Frequency Interference (EMI/RFI) and has met standard requirements. Please refer to the Consumer Safety Guide for more information regarding EMI/RFI. Although we do not recommend using a cell phone while operating a power chair, the system is capable of receiving and/or making calls through a cell phone device, accessing music files or contact lists, and navigating a device menu.

Bluetooth Electronic Specifications

Bluetooth Output Power	10 mW
Operation Range	40 m LOS (Line of Sight)
Operating Temperature	-40°F to 185°F / -40°C to 85°C
Storage Temperature	-67°F to 302°F / -55°C to 150°C
RF Wireless Technology Type	Co-existence with IEEE 802.11 (AWMA, AFH)
Encryption Security	128-bit

EMC Testing on Sample Wheelchair

Susceptibility	Tested to 20V/m to IEC 61000-4-3
Emissions	To CISPR11, Group 1, Class B
ESD	To IEC 610000-4-2

FCC ID

FCC Information contains transmitter module

FCC ID:	T7V1316
IC:	216Q-1316

Standby Select Menu

The Standby Select Menu screen appears after the programmed timeout when Standby Select is enabled. Standby Select will navigate the Home Screen allowing the user to access the drive, seat or settings screen, Contact your Quantum Rehab Provider for more information.

Attendant Control and Standalone Joystick

For more information on these applications, contact your Quantum Rehab Provider.

The Attendant Control and the Stand-alone Joystick are similarly laid out:

- On/Off Button
Enables/disables power
- Mode Button
Cycle through Drive Profiles and Seat Mode (if equipped)
- Battery Condition Meter
Indicates battery charge
- Actuator LEDs
Indicates actuators in use
- Mode LED
Used for profile selection
- Joystick
They joystick controls speed and direction in Drive mode. Push the joystick to the right to select actuators in Seat mode. Move the joystick forward or backward to activate the desired actuator(s).
- On/Off and Mode Jacks
Allow for remote On/Off and Mode switch installations

Enhanced Display

The Enhanced Display module is primarily used with specialty control devices such as a head array. It also can be used to provide a graphic display for the Stand-alone Joystick. When used with the hand control, it provides a larger display than the hand control's LCD. The Enhanced Display is mainly used in more advanced applications. Contact your Quantum Rehab Provider for more information.

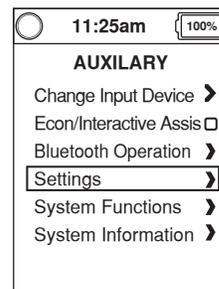
The Enhanced Display has the following controls:

- On/Off Button
Enables/disables power
- On/Off and Mode Jacks
Allow for remote On/Off and Mode Switch installations
- Mode Button
Allows changes to client modes without using the client's switch or input device.
- 9-pin D-sub Connector
Allows for connection of a specialty control device
- LCD Screen
A color LCD display that may be equipped with built-in infrared (IR) for remote control and with Bluetooth mouse control
- 4-Direction Navigation Key
The up/down arrows of the four-direction navigation key activate seating functions while the left/right arrows select previous (left) or next (right) seating functions (multiple seating functions required). The up/down arrows also navigate up and down through the menu on the setting/Aux screens and the left/right arrows function as Esc command (left) and Select (right).

Enhanced Display settings

When the enhanced display is the active input device, cycling through the mode will reveal an Auxiliary screen, after the drive screens and before the seat screen.

The Auxiliary screen gives the user access to the settings. The settings in the Enhanced Display are the same as the setting found under the "Home Button Section" of this manual. All adjustments are performed the same way.



AUXILIARY

Sleep Mode

The Q-Logic 3 Controller offers a sleep mode feature that will shut off the main power if the joystick remains stationary for a programmed period of time from 0 to 240 minutes. To restore power and resume operation of the chair, push the On/Off and Mode Select Lever up once. A set time of 0 minutes disables the sleep mode feature.

Thermal Rollback

The Q-Logic 3 Controller is equipped with a thermal rollback circuit that monitors the temperature of the chair's motors and controller. If either exceeds the safe operating temperature, the controller reduces the output to 20% of full operation level. This reduces the chair's speed and allows a cool-down period. Once the temperature returns to a safe level, the chair will resume normal operation.

Battery Condition Meter

The battery condition meter is located in front of the joystick on the hand control and as an LED on the Attendant Control and Stand-alone Joystick.

BATTERY CONDITION METER



Or



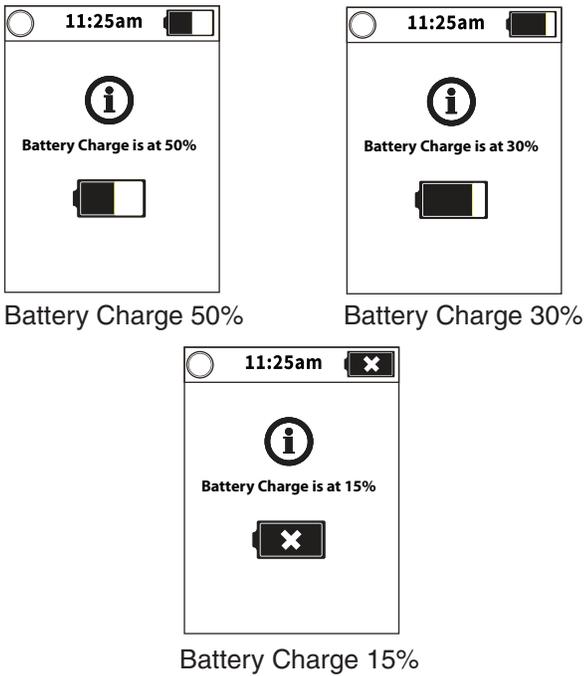
GREEN: ~100%–50%
 YELLOW: ~49%–25%
 RED: ~24%–0%



Figure 3. Battery Condition Meter

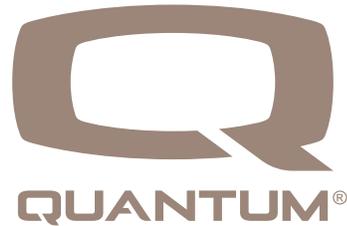
Battery Life Indicator

The Q-Logic 3 Controller system uses pop-ups to indicate the remaining battery life of the power chair. The system will show information screens when the battery voltage is at 50%, 30%, and 15%. If the pop-ups are not needed, this feature can be disabled using the Settings menu on the controller. If an audible indicator is needed, this can be enabled using the controller's Setting menu.



To enable/disable the battery life indicator feature:

- Home Screen
- Settings
- Display



To enable/disable the audible tone:

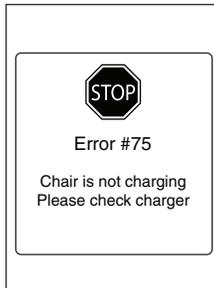
- Home Screen
- Settings
- Sound
- System Beeps

Q-Logic 3 Battery Charging Indicator

If your battery charger is connected to the controller but not the electrical outlet, the Q-Logic 3 controller system will display a warning to indicate the system is not charging.

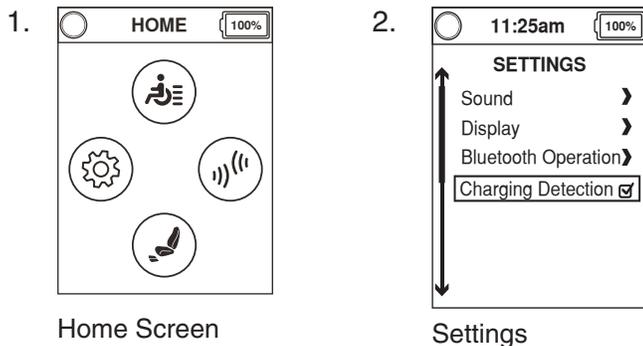
To clear this error when it occurs:

1. If the system is turned off with the charger plugged into the controller, unplug the charger from the controller.
2. If the system is powered on, unplug the charger from the controller then turn the system off and back on.



Programming

The charging detection can be enabled/disabled through the settings menu or by a programming device.

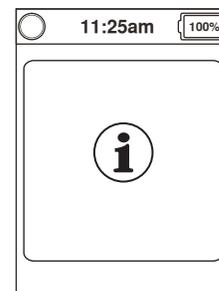


Q-Logic 3 Error Codes

The Q-Logic 3 Controller displays three types of messages: information, warning, and error. See figure 4.

- **Information:** Displays information that does not impact power chair functionality or performance.
- **Warning:** Alerts you to conditions that may affect power chair functionality and performance.
- **Error:** Alerts you to conditions that influence power chair functionality and performance.

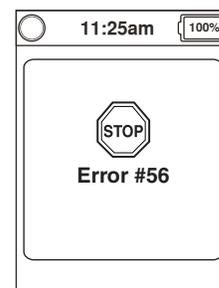
Error codes are displayed on the LCD by number. The following table identifies the error codes that may be easily rectified, probably causes, and possible solutions. If you receive one of these error codes, follow the recommended solution, and if the problem persists, you receive any other error code or experience any other problem with your power chair, contact your Quantum Rehab Provider.



INFORMATION



WARNING



ERROR

Figure 4. Error Codes

Error Code	Popup Text	Description (programming device)	Help text (programming device)
1	Motor 1 not connected	Error: Motor 1 not connected	Motor 1 error detected. 1. Turn power off. 2. Inspect motor connections. 3. Turn power on.
2	Motor 2 not connected	Defect: Motor 2 not connected	Motor 2 error detected. 1. Turn power off. 2. Inspect motor connections. 3. Turn power on.
3	Brake 1 not connected	Error: Brake 1 not connected	Brake 1 error detected. 1. Turn power off. 2. Disengage then re-engage brake lever. 3. Inspect motor connections. 4. Turn power off.
4	Brake 2 not connected	Error: Brake 2 not connected	Brake 2 error detected. 1. Turn power off. 2. Disengage then re-engage brake lever. 3. Inspect motor connections. 4. Turn power off.
20	Undervoltage	Error: Undervoltage	Charge Battery.
21	Overvoltage	Error: Overvoltage	Check the battery voltage. Batteries may be overcharged. Avoid driving downhill fast with fully charged batteries.
23	Motor 1 output defect	Error: Motor 1 output defect	Motor 1 error detected. 1. Turn power off. 2. Inspect motor connections. 3. Turn power on.
24	Motor 2 output defect	Error: Motor 2 output defect	Motor 2 error detected. 1. Turn power off. 2. Inspect motor connections. 3. Turn power on.
25	Brake 1 error	Error: Brake 1 error	Brake 1 error detected. 1. Turn power off. 2. Disengage then re-engage brake lever. 3. Inspect motor connections. 4. Turn power on.
26	Brake 2 error	Error: Brake 2 error	Brake 2 error detected. 1. Turn power off. 2. Disengage then re-engage brake lever. 3. Inspect motor connections. 4. Turn power on.
32	Speed reduction (Overtemperature)	Error: Speed reduction (Overtemperature)	Chair speed is reduced to protect system electronics. 1. Turn power off to let system cool down. NOTE: This is the normal system behavior.
34	Joystick not centered	Error: Joystick not centered	Joystick deflected at power up. 1. Turn power off. 2. Release joystick to neutral position. 3. Turn power on.
35	Joystick out of center	Defect: Joystick out of center	Joystick deflected at power up. 1. Turn power off. 2. Release joystick to neutral position. 3. Turn power on.
46	Bluetooth not working	Defect: Bluetooth not working	Bluetooth error detected. Please reboot system. 1. Turn power off. 2. Wait 5 seconds. 3. Turn power on.
47	Suspension lock not engaged - Seek level ground	Defect: Suspension lock not engaged - Seek level ground	Suspension lock not engaged. 1. Seek level ground. 2. Check suspension lock mechanism.
174	Invalid memory position	Error: Memory position invalid	Memory position contains inconsistent data or position cannot be reached Action 1. Bring system out of anterior tilt and retry memory position 2. Memory position could not be achieved, reset memory position, and retry

Care and Maintenance

Refer to your power chair owner's manual for proper cleaning and disposal instructions.

Temperature

Some of the parts of your power chair are susceptible to extreme changes in temperature. Always keep your power chair between the temperatures of 18°F (-8°C) and 122°F (50°C).

Warranty

Refer to your power chair owner's manual for specific information on controller warranty.

Q·LOGIC 3

Advanced Drive Control System

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