

Q TRU-BALANCE[®] 4

SETUP GUIDE



QUANTUM[®]

PROVIDING GREATER INDEPENDENCE

 **WARNING!**

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

Chest support is required with anterior tilt functions. Omitting a chest support selection requires the provider to facilitate aftermarket chest supports that best fits consumer needs.

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

The intended use of this Pride Mobility Products device is to provide mobility assistance to persons limited to a seated position who have the capacity to operate a motorized mobility power chair.

Regarding Devices for Prescription Use

 **WARNING!**

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

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

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

NOTE: This product meets IPX4 classification (IEC 660529).

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

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ADVISORY STATEMENT REGARDING CERTAIN COMPONENTRY INCORPORATED BY THIRD-PARTY MANUFACTURERS INTO FINISHED POWER CHAIRS: When Quantum Rehab 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. Quantum Rehab makes 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 governmental standards and requirements for 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_7176-19:2022, 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.

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

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

 **WARNING!**

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

Always fasten the positioning belt when operating the power chair.

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

Quantum TRU-Balance® 4 Setup Guide

The TRU-Balance 4 Power Positioning System will require additional programming and setup by trained professional prior to use. There are several new programming options that **MUST** be setup at delivery. It is important that these are completed along with the installation of the Stealth knee blocks, chest strap and chest bar if the power chair was configured with them.

WARNING!

Read the product's owner's manual and all supplemental information in its entirety before operating the chair.

**STOP:
READ
FIRST**



RECYCLING AND DISPOSAL

Cardboard may be recycled. Dispose of foam in accordance with state or local ordinances.

READ BEFORE UNPACKING

Apparent Loss or Damage

Upon receipt of this shipment, if any evidence of loss or damage is revealed through visual inspection, then it must be noted on the freight bill and signed by the carrier's agent. Failure to do this may result in the carrier's refusal to honor loss or damage claim. The carrier will furnish you with the necessary forms to file the claim.

Concealed Loss of Damage

When loss of damage is not apparent until the unit is unpacked, a claim for concealed loss or damage is required. When damage is discovered, make a written statement to the carrier for inspection. This request must be made within 48 hours of delivery. Keep all cartons and fillers for inspection. Carrier will furnish inspection report and necessary forms to file concealed loss or damage claim, since such damage or loss is the carrier's responsibility.

CAUTIONS Before Trial/Use

WARNING!

Weight bearing or standing clearance should be confirmed with physician or clinical expert for prevention of fracture when bearing weight through the lower extremities in this position.

Known presence of any pain or tone/spasticity throughout the client's body that could be escalated when changing positions.

Be alert and monitor for any significant changes in blood pressure that could contribute to a client passing out. It is recommended blood pressure monitoring occur during initial utilization.

Secure all safety components properly to prevent loss of balance or unwanted position changes by adding, assessing, or securing the following: chest strap, chest bar, knee blocks, lateral or hip guides, foot positioning etc.

DO NOT tighten a client's pelvic belt once in anterior tilt. This will avoid being too tight after returning to a previous position.

Know of any present skin breakdown (pressure injury) that can be impacted by changing angles of the seating system. Also assess once in finalized position for proper pressure distribution throughout seating components to avoid any excess pressure at any one area.

Not appropriate for anterior tilt if recent skin flap surgery unless medical clearance.

Check all lines and tubes of client's medical devices and placement. Examples: ventilator, feeding tube, pulse ox, oxygen, catheter bag tubing.

SETUP Guidelines:

Knee block placement before anterior tilt:

1. Just below the knee cap.
2. Depth: at least 1 hand between the pad and client (1"-1.5" space).
3. Make sure lower extremities are in neutral alignment with additional supports as needed (thigh or knee guides for prevention of abduction).
4. Knee block should not be removed when in an Anterior Tilt position.

Chest Bar:

 **WARNING!**

Chest support is required with anterior tilt functions. Omitting a chest support selection requires the provider to facilitate aftermarket chest supports that best fits consumer needs.

1. This is not to be utilized for upper extremity or trunk support but is an additional safety pad. Please address trunk balance with appropriate positioning straps as needed and arm rest adjustments as needed.

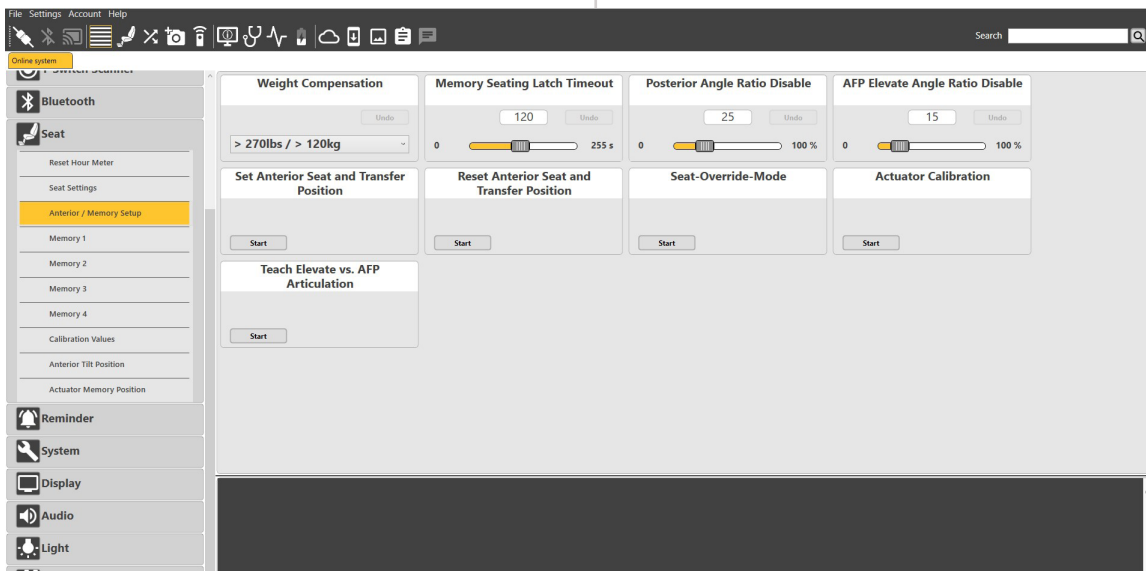
TRU
BALANCE[®]4
POWER POSITIONING SYSTEMS

New Parameters

The new parameters screens are broken down below along with the definition of each. The “**Seat**” option in the programmer was expanded showing and housing more options in which to program as well as the seat configuration screen. These options are available across all programmers.

- 1. Weight Compensation:** Weight ranges for proper timing calculations when positional feedback is used.
- 2. Memory Seating Latch Timeout:** Sets the latch time of the positional feedback functions.
- 3. Teach Anterior Tilt and Transfer Position:** Where the anterior tilt position is learned and also if the consumer requires a transfer position, this will take that position as well. The anterior tilt position is not just the tilt, it will also allow the recline, power adjustable seat lift and dual actuator articulating foot platform to be moved for the consumer into a position that is functional. Once saved, when the consumer goes into anterior tilt, they will go into that saved position each time.
- 4. Reset Anterior Tilt and Transfer Position:** If the saved anterior tilt position needs to be changed, this will simply clear the taught anterior tilt position and transfer position. It will also revert to the default position.
- 5. Seat Override Mode:** If there is a failure within the seating system, this will allow the seating system to override the restrictions in the seat configuration screen. **Important** This parameter should be used for troubleshooting purposes only and make sure not to go past the minimum or maximum stroke of any actuator. It will cause irreversible damage to the actuators.

- 6. Actuator Calibration:** This is only used when an actuator is replaced in the field, or if there is a feedback warning showing on the joystick or display.
- 7. Teach Elevate and AFP Articulation:** If the lower leg length on the AFP is changed or the STF height is changed, the elevate and AFP articulation needs to be retaught. This will ensure that when the independent articulation is used, it will stop at a programmed spot. The Elevate is part of the calculations as well which is why it needs to be set or taught.



Memory Slot 1 - 4

These Memory Slots represent the 4 memory screens in the Q-Logic 3 system. There is a forward command and reverse command available to be programmed in each slot, giving eight (8) potential memory seat positions to be programmed.

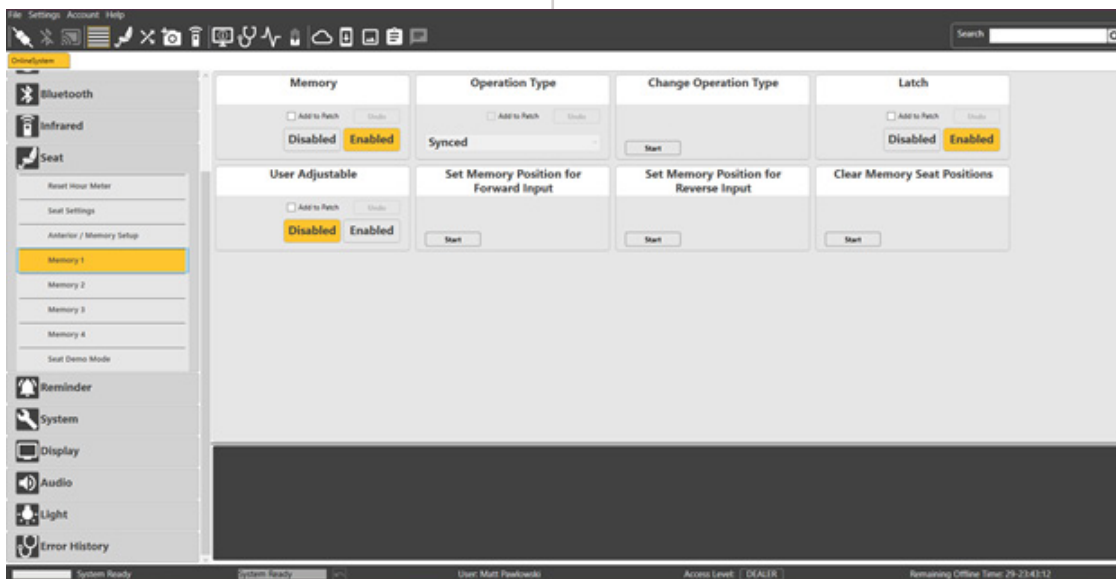
1. **Memory:** Enable or Disable. Makes the memory profile visible within the seat profile.
2. **Operation Type:** Synced or Sequential
 - Synced – All actuators will move within the programmed ranges at the same time to reach the achieved memory saved memory position.
 - Sequential – Each actuator will move at different times until the programmed position is achieved. (The order will depend on the position of tilt system.)

NOTE: If the starting position has less posterior tilt than the memory position, then the order is Tilt, AFP, Recline and Lift.

NOTE: If the starting position has more posterior tilt than the memory position then the order is Recline, AFP, Tilt, Lift.

3. **Change Operation Mode:** Parameter will change the operation (Synced or Sequential) for both the forward and reverse memory position in each memory slot.
4. **Latch:** Will latch the position so the consumer does not need to hold the input command the whole time the actuators are in motion to get to the programmed memory position. (See Memory Seating Setup Section for the latch timing)
5. **User Adjustable:** Allows the consumer to make the memory positions within that memory slot.

6. **Save Forward Memory Position:** Parameter will save the memory position representing the forward command. This memory position will be accomplished when a forward command is on the input device.
7. **Save Reverse Memory Position:** Parameter will save the memory position representing the reverse command. This memory position will be accomplished when a reverse command on the input device is provided.
8. **Clear Seat Memory Slot Positions:** Parameter will delete saved memory positions for the slot to allow reprogramming.



Programming Power Chair Out of Box

When the power chair is received, there are programming parameters that need to be completed in the delivery. It is not recommended to program these functions prior to the consumer sitting in the power chair. It is better to complete these while the consumer is sitting in the seating system to ensure maximum functionality, safety, and comfort.

Programming Weight Compensation

Programming the weight compensation is crucial because when the positional feedback is used, it takes the weight compensation into consideration when the actuators are moving into the memory position programmed so they all reach the same position at the same time.

1. Parameter Settings/Program Adjustments

2. Seat
3. Memory Seating Setup
4. Weight Compensation

Set to the range of the consumer's weight. When programmed, the electronics will enter a programming mode. Once the system goes into programming mode, exit programming mode (see figure below). The power chair is now ready to teach the anterior tilt and transfer position.



Teach Elevate vs AFP Articulation

This parameter will not be used all the time however, it will need to be used if one or both of the following are changed at delivery or after a repair.

Lower Leg Length
STF Height

1. Parameter Settings/Program Adjustments

- Seat
 - Memory Seating Setup
 - Teach Elevate vs AFP Articulation (Start)

Step 1

Teach Elevate vs. AFP Articulation

Move Seat to home position.
Press ok to continue.

Step 2

Teach Elevate vs. AFP Articulation

Start teach Elevate vs. AFP Articulation?

Step 3

Teach Elevate vs. AFP Articulation

Leave Elevate in home position and move AFP Articulation down to bring footplates just above the ground. Make sure to allow enough room not to touch the ground. Press ok when done.

Step 4

Teach Elevate vs. AFP Articulation

Move Elevate up enough to bring AFP Articulating all the way out. Move Elevate down to bring the footplates just above the ground. Make sure to allow enough room not to touch the ground. Press ok when done.

Step 5

Teach Elevate vs. AFP Articulation

Teach elevate vs AFP Articulation successful.
Save new values?

When the articulating foot platform is moved closer to the floor, the power base will go into drive lockout. This is to make sure while the footplates are closer to the ground, that the consumer can not drive their power chair, and potentially cause damage to their foot platform.

NOTE: Ensure, while the anterior tilt and transfer positions are being taught, that the position of the knee block, chest strap, and chest bar are not too tight on the consumer. If these devices are too high or too low, adjust those as necessary to ensure maximum support, safety and comfort are achieved.

NOTE: When the teaching of this function is completed, when the Tru-Balance 4 power positioning system goes into anterior tilt, the first push forward and hold on the input device will put the system into the taught anterior tilt position. The second forward command on the input device will put the system into the taught transfer position. If a separate transfer position is not needed, the transfer position can be set to the same as the anterior tilt system.

Programming Anterior Tilt and Transfer Position:

Programming the anterior tilt and transfer positions are completed at the same time. The Anterior Tilt can also be the transfer position if needed.

Ensure that the consumer is in the power chair and if knee block, chest strap, and chest bar are needed, make sure those are installed on the chair.

1. **Parameter Settings/Program Adjustments**
2. Seat
3. Memory Seating Setup
4. Teach Anterior Tilt and Transfer Position (**Start**)

Step 1

Teach Anterior Tilt and Transfer Position

Start teach Anterior Tilt and Transfer position?
The process has two steps:
-First teach and save Anterior Tilt position.
-Second teach and save Transfer position.

Step 2

Teach Anterior Tilt and Transfer Position

Move actuators to desired Anterior Tilt position.
Press ok when desired position is reached.

Step 3

Teach Anterior Tilt and Transfer Position

Teach Anterior Tilt position successful.
Save Anterior Tilt position?

Step 4

Teach Anterior Tilt and Transfer Position

Move actuators to desired Transfer position.
Press ok when desired position is reached.

Step 5

Teach Anterior Tilt and Transfer Position

Teach Transfer position successful.
Save Transfer position?

Memory Programming

Memory Slot Programming will allow the consumer to have up to eight (8) memory positions in four (4) profiles to best fit their environment. The positions can be programmed to fit the environment in any way.

Enabling

1. **Parameter Settings/Program Adjustments**
2. Seat
3. Memory Slot 1
4. Memory Slot (**Enable**)

Operation mode will default to Synced, which means that each actuator will move at the same time when the memory position is programmed.

NOTE: *This option is only recommended to users that have been deemed safe to make their own programmable adjustments.*

User Adjustable

1. **Parameter Settings/Program Adjustments**
2. Seat
3. Memory Slot 1 (or 2, 3, 4 depending which)
4. User adjustable (**Enable**)

Once this is enabled, the consumer can set or change the memory position within the Q-Logic electronics.

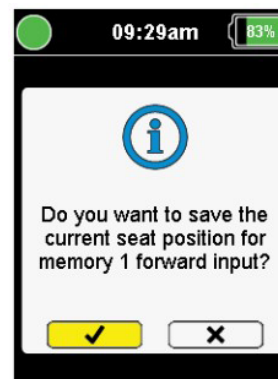
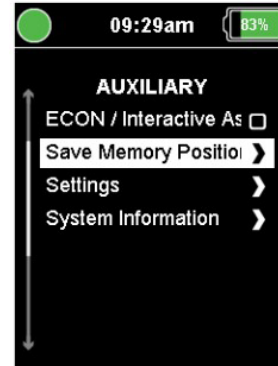
The individual goes into the seating functions that need to be adjusted. They make the adjustment to the desired position to achieve.

Next navigate to the Auxiliary Profile.

1. Highlight "Save Memory Postion".
2. Give a Right command

Save Memory Position

1. Choose which command they want to use for the chosen memory position.
2. Perform a right command with the input device.
3. Choose the check mark, with a forward input, to add position and save it to the system.



Memory Forward = Forward command on their input device when in the seating profile on that memory number.

Memory Reverse = Reverse command on their input device when in the seating profile on that memory number.

If the consumer wants to change their memory seat position or if they are unsure, enabling the User Adjustable allows them to make changes to their memory seat position. The consumer will only be able to see the memory numbers that are user adjustable. If a certain position is required by their therapist, that memory number can stay disabled.



USA

401 York Avenue
Duryea, PA 18642
www.quantumrehab.com

Canada

5096 South Service Road
Beamsville, Ontario L3J 1V4
www.quantumrehab.ca

Australia

20-24 Apollo Drive
Hallam, Victoria 3803
www.quantumrehab.com.au

New Zealand

Unit 5/208 Swanson Road
Henderson, Auckland 0610
www.pridemobility.co.nz

UK

(Authorised UK Representative)
32 Wedgwood Road
Bicester, Oxfordshire OX26 4UL
www.quantumrehab.co.uk

The Netherlands

(Authorised EU Representative)
De Zwaan 3
1601 MS Enkhuizen
www.quantumrehab.eu
www.quantumrehab.nl

Switzerland

(Authorised CH Representative)
SODIMED SA
Chemin Praz Devant 12
1032 Romanel-sur-Lausanne

Italy

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

France

26 Rue Monseigneur Ancel
69800 Saint-Priest
www.quantumrehab.fr

Spain

Calle Las Minas Número 67
Polígono Industrial Urtinsa II, de Alcorcón
28923 Madrid
www.quantumrehab.es

Germany

Hövelrieger Str. 28
33161 Hövelhof
www.quantumrehab.de

China

Room 508, Building #4
TianNa Business Zone
No. 500 Jianyun Road
Pudong New Area
Shanghai 201318
www.pridechina.cn

