Q

QUANTUM®

#1 FOR REHAB POWER

Q·LOGIC 3

Advanced Drive Control System

Joystick
Drive Parameters

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1) **USER DRIVE PROFILES** — Allow various parameters to be programmed differently for safety and function in various environments. An individual can have access to anywhere from 1-6 profiles at a time, maximum of 4 driving, 1 auxiliary, and 1 seating profile.

How many drive profiles does the individual need?

- Consider the number of environments that the individual needs to access
- What is their ability to complete mode changes and adjust the speed dial?
- Minimum and maximum speed settings are adjusted in each profile so the individual can change speeds by adjusting dial and/or changing profiles based off their ability and preference

2) **FORWARD SPEED** — Defines the speed limit of the wheelchair when a full forward input is applied.

Does the forward speed allow the individual independent, safe, and timely mobility in the intended environment of use?

YES	NO
• Consider leaving the forward speed as is • Will increasing the speed improve function or quality of life while maintaining safety? If yes, consider increasing forward speed	• If they are unsafe, consider decreasing the speed • If they are safe, but not timely, consider increasing the speed and reassess for safety

3) **FORWARD ACCELERATION** — Defines the forward acceleration of the wheelchair or how quickly the chair gets to top programmed speed. A higher value represents a shorter acceleration time and a faster start.

Does the power wheelchair transition smoothly from a stopped position to moving forward?

YES	NO
• Consider leaving forward acceleration as is	• If the wheelchair takes off too slow or seems sluggish, then increase the forward acceleration in small increments • If the wheelchair takes off too quickly or abruptly, then decrease forward acceleration

4) **FORWARD DECELERATION** — Defines the forward deceleration of the wheelchair or how quickly the chair stops. A higher value represents a shorter deceleration time and a faster stop.

Does the power wheelchair transition smoothly from moving forward to a stopped position?

YES	NO
• Consider leaving forward deceleration as is	• If the wheelchair glides too much when the drive command is released, then increase forward deceleration setting • If the wheelchair stops too abruptly when the drive command is released, then decrease the forward deceleration setting

SPECIAL CONSIDERATION FOR DECELERATION SETTINGS...

If deceleration parameters (forward, reverse, and turn) are set too high and the chair stops too abruptly, it can be difficult for an end user with impaired trunk control and balance to control.

5) REVERSE PARAMETERS

- Adjust reverse setting in a similar manner
- Typically, the individual will not need reverse parameters turned up much from factory settings
- Caution should be taken when increasing reverse parameters due to safety concerns

6) TURN SPEED — Defines the turning speed limit of the wheelchair when a full left or right input is applied. The turn speed is normally set to a value lower than the forward speed

When a direct turn command is given (no forward/reverse command), does the chair turn at a reasonable speed so the individual can make a sharp turn when needed?

YES	NO
• Consider leaving the turn speed as is • Will increasing the turn speed improve function or quality life while maintaining safety? If yes, consider increasing turn speed	• If they are unsafe, consider decreasing the turn speed • If they are safe, but not timely, consider increasing the turn speed and reassess for safety

7) TURN ACCELERATION — Defines the turning acceleration of the wheelchair or how quickly the chair gets to top programmed turn speed when a full left or right input is applied. A higher value represents a shorter turning acceleration time and a faster direction response. High turn acceleration values provide abrupt direction changes and should only be used cautiously to ensure safety.

Does the power wheelchair transition smoothly from a stopped position directly to turning?

YES	NO
• Consider leaving the turn acceleration as is	• If the wheelchair takes off too slow or seems sluggish, then increase the forward acceleration • If the wheelchair takes off too quickly or abruptly, then decrease forward acceleration

SPECIAL CONSIDERATION FOR TURN SPEED AND ACCELERATION...

If using the chair on softer/thicker surfaces, such as carpet, and the chair is slow to respond to the turn initially then quickly accelerates into the turn, increase the turn acceleration up in small increments. It may also be necessary to turn the turn speed down in small increments to smooth out the turn on that surface.

8) TURN DECELERATION – Defines the turn deceleration of the wheelchair or how quickly the chair stops turning. A higher value represents a shorter turning deceleration time and a faster direction response. High turn deceleration values provide abrupt direction changes and should only be used cautiously to ensure safety.

Does the power wheelchair transition smoothly from direct turning to a stopped position?

YES	NO
• Consider leaving the turn deceleration as is	• If the wheelchair glides too much when the drive command is released, then increase turn deceleration setting • If the wheelchair stops too abruptly when the drive command is released, then decrease the turn deceleration setting

9) **VELOCITY K-TURN SHAPE** – Defines the amplitude or responsiveness of the power wheelchair going into turns while moving forward. The programming parameter ranges from 0 to 1. Moving the parameter closer to 0 will make the chair slow down less into a turn (sharper turn), while increasing the parameter closer to 1 will cause the power wheelchair to slow down more into a turn (wider turn).

Does the power wheelchair transition smoothly into a turn while moving forward?

YES	NO
• Consider leaving velocity k-turn shape parameter as is	• If the power wheelchair slows down or seems sluggish going into the turn, then decrease the velocity k-turn shape parameter • If the power wheelchair seems too responsive going into the turn then increase the velocity k-turn shape parameter

10) **VELOCITY TURN REACTIVITY** – This parameter increases the power wheelchair reactivity to turn commands at higher speeds.

Does the power wheelchair transition smoothly when making small course corrections while driving forward?

YES	NO
• Consider leaving the turn reactivity parameter as is	• If the power wheelchair is slow to correct the course, then increase the turn reactivity parameter • If the power wheelchair seems too responsive to small course corrections, then turn down the turn reactivity parameter