Power Wheelchair Driving Methods that can be Independently Programmed

Typically, a power wheelchair driving method is connected to and programmed through the base electronics (please refer to the Complex Rehab Power Wheelchair Electronics Comparison Matrix). More and more power wheelchair driving methods now include some independent programming.

	ASL ATOM Head Array	ASL Fusion Head Array	ASL Alternative Joysticks	Mo-Vis Alternative Joysticks	Stealth Products i-Drive Alternative Driving Methods	Switch It Dual Pro Head Array
General						
Power Wheelchair Electronics supported *Most driving methods work on more than one manufacturer's power wheelchair electronics*	-MK6i -LiNX -R-Net -Q-Logic -DX2	-MK6i -LiNX -R-Net -Q-Logic -DX2	-MK6i -LiNX -R-Net -Q-Logic -DX2	-MK6i -LiNX -R-Net -Q-Logic	-MK6i -LiNX -R-Net -Q-Logic	-R-Net -Q-Logic -DX2
Can be used separate from PWC, using battery pack	-Yes	-Yes	-Yes	-No	-Yes	--No
Software Updates *Allows for updates to driving method software and/or firmware*	-N/A	-N/A	-N/A	-Yes -Using Configurator Software & assistance from Mo-Vis. -Updates unlock new features/Bug fixes	-Yes -Firmware updates via USB using i-Drive Config for Windows PC or Surface. - Updates unlock new features/Bug fixes	-N/A
Factory Reset *Resets all settings to factory default*	-No	-Yes	-No	-Yes	-Yes	-No
Programming						
How is driving method programmed?	-Interface on back of rear pad	-Separate programmer	-Dip switch settings on the interface	-Computer -Mo-Vis Configurator software	-Computer, tablet, or smartphone –i-Drive Config for Windows, iOS, & Android	-Interface on back of rear pad
In programming, what input method should be selected?	-LiNX TPI automatically programs 9 Pin Head Array -R-Net 3 Switch -Q-Logic 3 Switch head	-LiNX Prop 3 dir -R-Net 3 Prop -Q-Logic 3 Prop Head	-3 prop	-Proportional -Q-Logic prop or mini prop	-R-Net 3 Switch or 3 prp -Q-Logic 3 Switch head or 3 dir prop head (depends on output style of i-Drive)	-R-Net 3 Prp -Q-Logic 3 direction proportional

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How is programming updated?	-N/A	-Updates at ASL -Remote updates pending	-N/A	-Can update programming software through Stealth or Mo-Vis websites	-Apps will auto update or you can choose whether and when to update	-N/A
Can the User program the driving method?	-No	-Yes -If the user has a programmer and has been instructed on how to program	-No	-No -User can view device information only.	-No -User can view Diagnostics and device information only	-N/A
Memory backup *Can programming be saved?*	-No	-No	-No	-Yes -Through computer	-No	-N/A
"Real time" programming *Change driving without system restart?*	-Yes	-Yes	-Yes	-Yes	-Yes	-Yes
Diagnostics *Can the electronics diagnose system errors?*	-Yes -The LEDs indicate if the system is functioning correctly	-Yes -Diagnostics confirms the setting by pad of digital and proportional input in real time	-No	-Yes -Via Configurator, faults recorded in a log in alphabetical order. -Can reset each fault log individually. -Can run a field test to check status of J/S.	-No	-N/A
Monitoring *Can system functions be monitored?*	-No	-Yes -In real time only	-No	-N/A	-Yes -Via i-Drive Config app under "Diagnostics". -Monitor voltage, channel activations, channel connections	-N/A
Joystick – also see mini proportional joystick chart						
Applicable Joysticks	-N/A	-N/A	-Molecule -MEC -Extremity Control	-All Round -All Round Lite -Multi -Micro	-PMP	-N/A

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Initial travel (distance) of the joystick is ignored	-N/A	-N/A	-Yes -(Molecule only)	-Yes -Center deadband, programmable. -Recommend leave at default	-Yes -Center deadband, programmable in each axis independently. -Recommend leave at default	-N/A
3 Direction driving	-N/A	-N/A	-Yes -Reverse can be programmed to be Mode -Mode can then be used to access Reverse and other functions	-No	-No	-N/A
Road Compensation *Slows speed automatically on varied terrain*	-N/A	-N/A	-No	-Road Compensation can be enables/disabled, -Level of compensation is adjustable in X & Y axes	-No	-N/A
Drive Lock-out	-N/A	-N/A	-No	-Yes -Tilt sensing When J/S position exceeds 45 degree angle (referenced to earth's gravitation).	-No	-N/A
Head Array						
Head Array Properties	-Default 1 proximity switch in each of 3 head pads. -Can combine proximity and mechanical switches -3 driving switches	-1 proximity and 1 electronic pressure sensor in each of 3 head pads -Proportional (speed and direction) and Digital control -Increased force results in increased speed	-N/A	-N/A	- Default 1 proximity switch in each of 3 head pads. -Can combine proximity and mechanical switches -3 driving switches	-1 proximity and 1 force switch in each of 3 head pads -Proportional (speed) and Digital control -Increased force results in increased speed

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Head Array Programming Options	Adjustable Switch Timer for Mode and User Port -sets time to allow 'long hold' or double tap for Mode function -sets time for 'long hold' on User port 6 dip switches -1: changes SEL switch port from mode to reverse -2: when on, HA is discoverable for BT pair -3: On: HA turns on when PWC turns on. Off: HA turned on with attendant switch. -4/5: future use -6: On: auditory beeps when switches activated User switch can be programmed to send BT wireless switch signal to a receiver	**Standard settings** -can turn on or off: Power, Bluetooth, Next Function, Profile **R-Net settings** -Can turn on or off: Toggle F/R, User menu, Seating in R-Net **Pad settings** -program each pad type (proportional or digital), direction, or disable **User settings** -Auditory feedback when switch activated on/off -Time out: changes switch activation delay from 1 – 5 sec, or off **Power up Idle** -Turns HA off when the chair is turned on **R- Net enable** -helps manage R-Net menus **Feature list** -turns off features that are not used **Performance** **Veer adjust** -changes deadband to improve tracking for more efficient driving **Set Minimum speed** -changes the sensitivity of digital input from Off to 30% -Increased force results in increased speed (proportional speed)	N/A	N/A	-assign function to each switch (directions, mode, emergency stop)	Can choose mode of operation -1: proximity switches only -2: force switches only -3: both switches active -Each pad and switch can be configured individually. Proximity switch speed (Crawl) Force switch (Force) -Increased force results in increased speed (proportional speed) -Tilt Sensor Adjustment makes Center Pad inactive past a specified tilt angle. Angle is programmable. Tilt sensor can be disabled.
Access to Reverse	6 dip switches -1: changes SEL switch port from mode to reverse	-can program R-Net to toggle F/R	-N/A	-N/A	-reverse function is assignable or use separate switch for Reverse	–a proximity or mechanical switch plugged into the Center pad can be used to toggle Forward and Reverse or drive in reverse depending on programming.

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Switch Programmability						
Switch Access Programmable	-No	-No	-N/A	-Proximity switches -can program debounce (activation delay) -can program activation distance digitally	-Proximity and Fiberoptic Switches (1-6 switches) -sensitivity is individually adjustable (using screw on proximity sensor and Tune feature on FOs) -assign function to each switch (directions, mode, emergency stop) -Link feature: simultaneous activation of Left/Right results in Forward.	-N/A
Bluetooth						
Mouse emulation	-With ATOM Wireless Mouse Emulator -Plugs into USB port on device (computer, communication device, etc.) Or -Tecla E: connects with up to 8 BT enabled devices	-With ATOM Wireless Mouse Emulator -Plugs into USB port on device (computer, communication device, etc.) Or -Tecla E: connects with up to 8 BT enabled devices	-With ATOM Wireless Mouse Emulator -Plugs into USB port on device (computer, communication device, etc.) -Totally customizable -3,4, or 5 switch Or -Tecla E: connects with up to 8 BT enabled devices	-No -Requires PWC Bluetooth or external mouse emulator	-iClick -Built into iDrive interface. -Controls mouse on Computer-Windows, Android, Mac, PC devices. Not compatible with iOS13 currently. -Designed for HA use	-No -Requires PWC Bluetooth or external mouse emulator
Mouse Movement	-Right moves cursor right and left -Forward moves cursor up and down -Must be in User Switch mode	-Right moves cursor right and left -Forward moves cursor up and down -Totally customizable -Must be in User Switch mode	-Movement can be set to Up/Down in one direction and Right/Left in another direction		-switches defined through programming -1st switch moves up/down -2nd switch moves left/right	
Mouse emulation Clicks	-Left controls left click, double click, drag -Right click requires separate switch	-Any direction can control left click, double click, drag -Right click requires separate switch	-Two directions can be set for Left Click/Drag and Right click	-N/A	-3rd switch - click -Short hold left click -Long hold right click -Dragging can be enabled	-N/A