Which base matches your life style?
In a world that’s not flat

EXTREME OFF-ROAD

ADVENTUROUS OFF-ROAD

EVERYDAY OFF-ROAD

URBAN OUTDOORS

ROOMY INDOORS
The ultimate range of all-terrain powerchairs

EXTREME X8
Extreme X8

- It is a robust outdoor wheelchair tackling remote and rugged terrains
- For people who spend a lot of their time outdoors
- It uses conventional tooling for serviceability in remote areas
- Common seating options with Frontier
- Contemporary styling
- 120A power module for sustained power
- 4 High speed, high torque, high efficiency 700W gear in-line motors
  - Gear in line versus 90 degree.
    - Wear and tear on bronze bush, less efficient – due to larger surface area
    - This is an increase in efficiency. There is generally less energy loss on in line gears compared to 90 degree bevel gears.
X8 Rolling Base

- Traction, 4WD power
- Small footprint compared to competitors, but is a very stable base (passes all ISO standards tests for driving on an incline)
- Small enough to go indoors after a big day out (for a beer or a coffee) for a complete outdoors adventure
- Simplicity, neat compact robust and proven T-spar frame design
- Neat wiring harness
X8 Rolling Base

- Obstacle Climbing, Ground clearance determined by footplate (4” curb climbing ability, can do 5” if driven safely)
- Frame articulation and low pressure knobby tyres providing smooth ride and suspension
- The tires are the suspension of the X8 – they must remain soft, harder tires do not necessarily give better range
- No articulation at back : Keeps it simple
- Patented passive steering system
- 17” floor to seat height
A bit more of the technical stuff

What is passive steering? Why this is good for x8?

- Good for off-road speed, efficient use of current, no power required. People learn how to steer very quickly.
- Passive steering is where the electronics slow the motors on one side which causes the front wheels to turn in that direction ‘passively’. This is opposed to steering via a servo or actuator, which is used by some of our competitors. Servo steering draws more current and can cause the wheels to ‘fight’ the actuator which can result in loss of traction and tyre wear.
- As far we know no other wheelchair uses this steering.
- One competitor doesn’t have any steering on the front or rear wheels. So to turn the chair the wheels on the left and right side have to turn in opposite directions which causes the wheelchair to skid and turn. There can be a slight delay on servo steering as the signal from the joystick has to make the actuator extend or the servo rotate. This can vary depending on the exact setup used. There is virtually no delay with passive steering.
X8 Steering Lock

- X8 reverses in the opposite direction to at standard MWD wheelchair
- Ideal for when you have an attendant control or driving into a vehicle
- Accessible for servicing
- Spring design allows pin to move into position then wait for tie rod alignment
- When releasing, friction can hold it in sometimes
- If tie rod is bent, this is usually a sign of a jammed steering lock
Power to get the job done

https://youtu.be/HU2kx3vAu5w
The ultimate range of all-terrain powerchairs

V6 AT MWD

V6 HYBRID MWD
Combined indoor/outdoor use for MWD, FWD, & RWD

Hybrid drive wheel

All Terrain drive wheel
Two chairs in one

https://www.youtube.com/watch?v=oMjMNCuqcd0
V6 All Terrain MWD

- 4” curb climbing ability. Can do 5” if driven very carefully
- Flexible, durable and serviceable wheelchair suited to a range of environments
- Configurable to the wishes and needs of the user
- Seating system can grow with your client, or go from an indoor to an outdoor chair with a outdoor performance pack
- Crash tested tie downs on base as standard (more room on side rail)
- Low cost of ownership
- Ease of repair in rural locations by non-specialists
V6 Rolling Base

- Obstacle Climbing
- Comfort of Ride
- Traction
- Stability
- Handling
V6 Frame Design

Front bogie arms are designed to:
- Increase obstacle climbing ability
- Articulate to prevent high centering
- Lift casters out of soft terrain (mud, sand, snow)
- Force drive wheel into ground to increase traction

To reduce bogie arm lift (in order of effectiveness):
- Reduce acceleration rate
- Shift user weight forward slightly
- Fit stiffer springs

https://youtu.be/iwqECJ1vWU8
Choosing the right drive train – MWD

**Pros**
- Smallest turning radius
- Most intuitive to drive
- Good stability for power seating
- Stable
- Weight over drive wheel
- Good on side slopes

**Cons**
- Smaller footplate
- Can lose traction
- Longer wheelbase

https://www.youtube.com/watch?v=qfsXe580Wtc&t=36s
The ultimate range of all-terrain powerchairs
Modularly Adaptable to Users Needs

<table>
<thead>
<tr>
<th></th>
<th>OFF-ROAD Frontier</th>
<th>C73</th>
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</thead>
<tbody>
<tr>
<td>Motors</td>
<td>800W</td>
<td>650W</td>
</tr>
<tr>
<td>Batteries</td>
<td>73Ahr gel</td>
<td>60Ahr gel</td>
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<tr>
<td>Wheels</td>
<td>14” x 6” outdoor</td>
<td>14” x 3” indoor</td>
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<tr>
<td>Length x Width</td>
<td>41.5” x 28”</td>
<td>36” x 25”</td>
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<tr>
<td>Turning radius</td>
<td>21.5”</td>
<td>19.5”</td>
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</tbody>
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<OUTDOOR  INDOOR>
Choosing the right drive train – C73 MWD

**Pros**
- Smallest turning radius
- Most intuitive to drive
- Good stability for power seating
- Weight over drive wheel
- Good on side slopes
- Upgradable to 800W motors
- Upgradable front bogie arms (fits AT tire)

**Cons**
- Smaller footplate
- Can lose traction
- 2 actuator functions unless upgrade motors
- Does not fit AT wheels

[https://www.youtube.com/watch?v=qsXe580Wtc&t=36s](https://www.youtube.com/watch?v=qsXe580Wtc&t=36s)
FRONTIER V6 URBAN C73

https://youtu.be/LV-5t-RH_Ko
The ultimate range of all-terrain powerchairs
FWD Rolling Base

- Common chassis with V6 MWD & RWD
- Batteries behind drive wheels
- Inbuilt crash tested tie-down loops
- Swap to hybrid tyres for narrower base
- Powerful 800W motors
- Anti-tips set wide for large footplates
- Good climbing ability
Choosing the right drive train - FWD

**Pros**
- Good for larger clients (keeps weight over drive wheel)
- Good for driving in car
- Good for getting up close to tables, bathroom sinks, etc.
- Can get feet back further
- Larger footplate
- Tight turns around corners
- Doesn’t dig in to soft terrain as much (pulls itself out)

**Cons**
- Can tip forward when braking hard or going downhill
- Can’t see back of chair (can hit things)
- Can veer uphill drive along side slopes
- Driveability isn’t as good (fishtailing). Improving with electronic controls
- More challenging for clients with perceptual difficulties (need to drive down the inside of a hallway to turn into room)
- Can throw driver around (not great for quads)

[https://www.youtube.com/watch?v=qfsXe580Wtc&t=36s](https://www.youtube.com/watch?v=qfsXe580Wtc&t=36s)
The ultimate range of all-terrain powerchairs
RWD Rolling Base

- Common chassis with V6 MWD & FWD
- Batteries either side of drive wheels (max. weight on drive wheels)
- Tracks well at speed
- Stability roller
- Inbuilt crash tested tie-down loops (all Frontier models)
- Swap to hybrid tyres for narrower base
- Powerful 800W motors
- Front suspension gives great downhill stability (not too stiff, not too soft)
- Moving the seat further forward to gain an increased knee angle
Stability Roller

- Better support in soft terrain
- Longer overall length
- Tighter turning radius
- Protects batteries more
Choosing the right drive train - RWD

**Pros**
- Good driveability, especially at high speeds
- Tracks straightest
- Smoother ride than MWD
- Climbs curbs better than FWD
- Good access for attendant control
- Better driving uphill

**Cons**
- Poorer driving downhill (less traction)
- Larger turning radius
- Smaller footplate
- Need to drive past a corner to get around it
- Sensitive to weight distribution
- Can veer downhill on side slopes
- More weight on casters
empowering people to push their boundaries and experience a world that’s not flat