

FREEDOM TRAX MANUAL

FT X MODEL



INTRODUCTION AND SAFETY INFORMATION

Welcome to the Freedom Trax User Manual. Freedom Trax is a revolutionary motorized track attachment designed to transform manual wheelchairs into powerful, all-terrain vehicles. Whether you're navigating sandy beaches, snowy paths, gravel trails, or muddy terrain, Freedom Trax empowers you to explore new environments with ease.

Key Features:

- **All-Terrain Capability:** Traverse sand, snow, gravel, and mud effortlessly.
- **Adjustable Design:** Compatible with most standard manual wheelchairs.
- **Modular Components:** Easy to assemble, disassemble, and transport.
- **User-Friendly Controls:** Joystick operation with speed and battery indicators.

If your wheelchair doesn't fit properly, please contact us for assistance to ensure your safety and optimal device performance.

Safety Information for Freedom Trax (FTX)

WARNING: Before operating your Freedom Trax device, it is essential that you **read and fully understand** this manual. If you have difficulty understanding the manual or need additional clarification, please **contact a healthcare professional** before attempting to use the equipment. **Improper setup** or usage of the equipment may result in **personal injury** or **damage** to the device.

DANGER:

1. **Secure Wheelchair Attachment:**

Always ensure the wheelchair is **securely and safely mounted** to the Freedom Trax

device. **Failure to properly mount the wheelchair** may lead to **serious injury** or damage to both the user and the device. If your wheelchair does not fit correctly, or if you have any doubts about the setup, **contact us immediately** for assistance. We will do our best to help accommodate your needs.

2. **Tipping Hazard:**

The device is equipped with **rear anti-tip wheels**; however, **shifting your weight** during operation or attempting to navigate over **rocky or uneven terrain** can still result in tipping. Exercise caution and maintain proper balance while operating.

3. **Stair Navigation:**

Do not attempt to move up or down stairs using the device. This unit is **not a stair-climbing device**, and attempting to do so can result in **serious injury**.

Warnings:

- **Avoid Water, Curbs, and Steep Terrain:**

Do not drive the device through water, over curbs, or over obstacles, and avoid navigating **terrain steeper than 10 degrees**. These actions may cause damage to the device and could lead to accidents.

- **Inclement Weather:**

Never leave the device exposed to **rain, snow**, or other types of **inclement weather**. Prolonged exposure to these conditions can cause damage to both the device and its components.

- **Humidity Exposure:**

Do not use or leave the device in the **shower** or in a **humid bathroom** while taking a shower. This can damage the electrical components of the Freedom Trax.

- **Proper Lifting Techniques:**

When moving the device **without a user**, use caution and follow proper **lifting techniques** to avoid injury. The device can be heavy, and improper lifting may cause physical strain or injury.

- **Battery Safety:**

Always **turn off** the device and **unplug the battery connection** when it is not in use or when mounting or dismounting the unit. This helps prevent accidents and unintended activation of the device.

- **Leaning or Reaching:**

Never attempt to lean or reach while attached to the device. Doing so may affect your balance and increase the risk of tipping or injury.

- **Oxygen Use:**

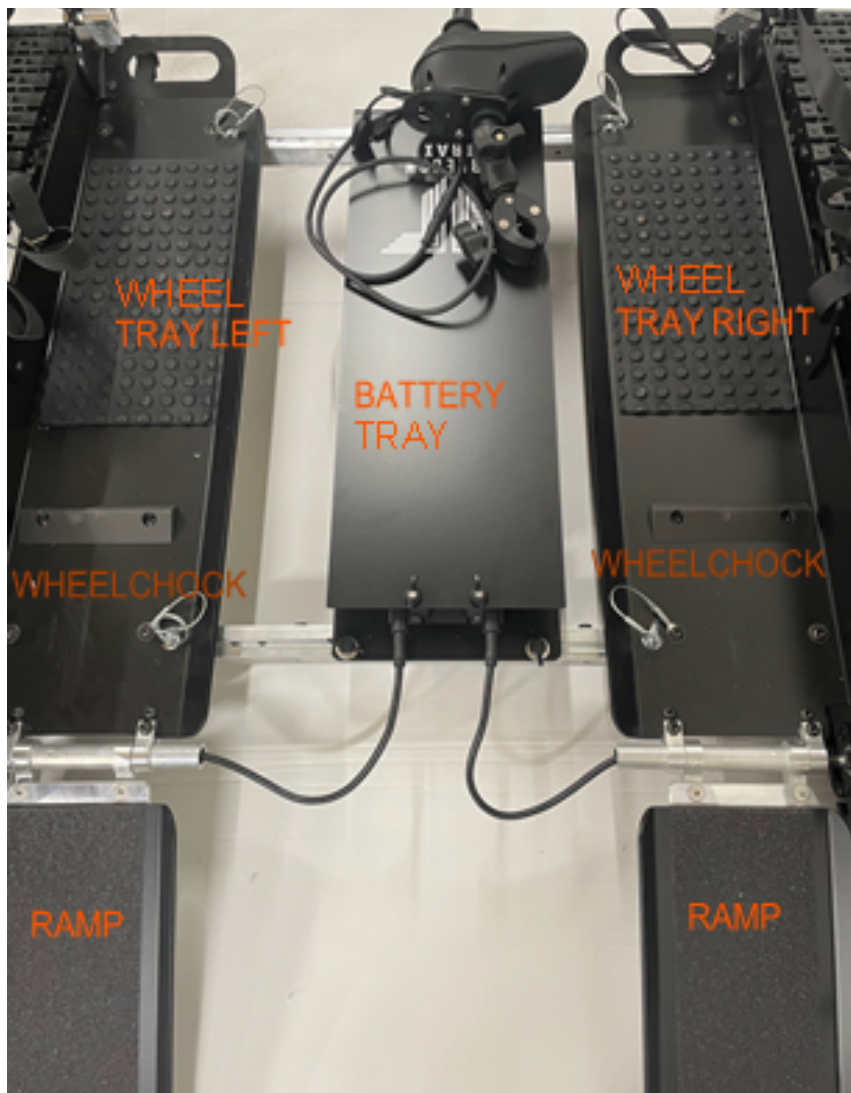
Exercise caution when using oxygen around the device, as it may present additional safety risks due to the potential for flammability or electrical interference.

- **Adjustment While Mounted:**

Never attempt to adjust the device while a wheelchair is mounted. Make all necessary adjustments before securing the wheelchair to the device.

By adhering to these safety guidelines, you help ensure a safe and efficient experience with your Freedom Trax device. Always use common sense and caution when operating the device.

1. **Introduction**
2. **Safety Information**
3. **Storage and Transport**
4. **Unboxing and Assembly**
5. **Mounting Instructions**
6. **Controller Overview**
7. **Charging Instructions**
8. **Maintenance and Care and Battery Safety**
9. **Liability**



SAFETY INFORMATION

Safety Information

Safety is our top priority. Please follow all instructions and warnings carefully to prevent injury or damage.

General Safety Guidelines:

- **Read the Manual:** Always read and understand the manual before use. If you have questions, consult a healthcare professional.
- **Secure Mounting:** Ensure the wheelchair is securely attached to the device before operation.
- **Avoid Hazardous Terrain:** Do not attempt to climb stairs or traverse steep inclines greater than 10 degrees.
- **Water Exposure:** Avoid driving through water or using the device in wet conditions, such as rain, snow, or in the shower.
- **Weight Shifts:** Sudden shifts in weight can cause tipping. Remain seated and balanced.

Warning Labels:

- **DANGER:** Do not operate if any part of the device appears loose or damaged.
- **CAUTION:** Ensure all straps and harnesses are properly secured before use.
- **NOTICE:** Regular maintenance is essential to ensure long-term functionality.

Proper storage and transport ensure the longevity of your Freedom Trax.

Do's	Don'ts
● Short-Term Storage: Disconnect the battery when not in use. Store in a dry, cool environment.	● Weather Protection: Avoid exposure to extreme temperatures and inclement weather.
● Long-Term Storage: Remove the battery and store it separately in a location between 40-70°F to prevent degradation.	● Vehicle Transport: Disassemble Freedom Trax into its three main parts for easy transport. Use padded covers to protect components from scratches or damage.
● Air Travel: Secure the wheelchair's wheels to the rear wheel cradle using a cam strap or similar device. This prevents complications during handling.	● If the controller remains with the Freedom Trax, it must be rigidly fixed to the unit so that it does not move, and the battery cable must be detached.



ASSEMBLY

Unboxing and Assembly

Freedom Trax is shipped in three modular parts: the battery tray, left track, and right track.

Unboxing Steps:

1. Carefully remove all components from the packaging.
2. Check for any shipping damage or missing parts.
3. Retain packaging materials for future transport or storage.

Assembly Instructions: Detailed information to follow:

1. **Align Components:** Position the left and right tracks beside the battery tray.
2. **Attach Tracks and ramps:** Insert the bolts from the tray into the slots on the tracks.
3. **Adjust Width:** Slide the tracks until they reach the desired width.
4. **Secure Pins:** Insert the locking pins to prevent movement.

Ramp Installation for Freedom Trax (FTX)

The Freedom Trax (FTX) unit is shipped with the ramps **detached** to allow for easier handling and transport. These ramps are designed to pivot, making them convenient to store and deploy as needed. Follow the steps below to properly install the ramps.

Steps for Installing the Ramps:

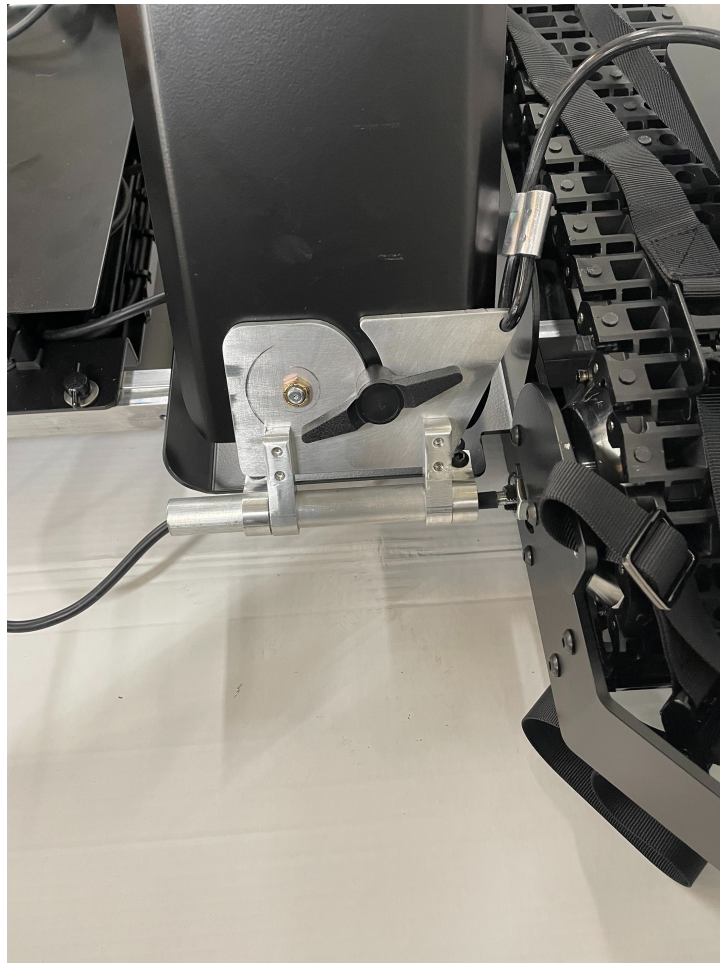
1. **Identify the Ramps:**
 - The FTX is equipped with two ramps: **left** and **right**. Each ramp is specifically designed to fit its respective side.
 - Ensure you have identified the correct ramp for each side before proceeding.
2. **Position the Ramps:**
 - Align the ramp with the **ramp mounting plate** located on the left and right sides of the unit. The mounting plates have pre-drilled holes that match the slots on the ramps for precise alignment.
3. **Attach the Ramp:**
 - Insert the bolts from the ramp into the corresponding holes on the mounting plate.
 - Ensure the ramp sits flush against the mounting plate for stability.
4. **Tighten the Nut:**
 - Using a **1/2" wrench**, tighten the nut onto the bolt.
 - **Note:** The nut should be **snug** but not overly tight. Over-tightening may hinder the ramp's ability to pivot smoothly.
5. **Check for Mobility:**
 - Once installed, test the ramp by pivoting it up and down to ensure smooth movement.

- The ramp should move freely without obstruction while remaining secure in its mounted position.

Important Considerations:

- **Pivot Functionality:** The ramps are designed to **fold away** for easier storage and transport. Ensure they are not obstructed by any cables or accessories.
- **Regular Inspections:** Periodically inspect the ramps for wear, looseness, or any signs of damage. Tighten or replace any components as necessary to maintain safety and functionality.
- **Weight Limit Awareness:** Always adhere to the recommended weight limit of the FTX when using the ramps to prevent damage or injury.

Proper installation of the ramps ensures safe, efficient loading and unloading of your wheelchair onto the Freedom Trax device.



Disassembly of Freedom Trax (FTX)

To disassemble the Freedom Trax for **storage** or **transport**, follow these steps:

1. **Remove All Locking Pins:**
Begin by **removing all locking pins** that secure the various components of the unit. This will allow you to adjust and separate the sections.
2. **Adjust to Widest Setting:**
Adjust the unit to its **widest setting** by pushing or pulling the track until the bolts are fully aligned with the track slots. This will provide the necessary clearance for disassembly.

3. **Disconnect the Motor Connectors:**

Disconnect the motor connectors to safely separate the tracks from the battery tray.

4. **Remove the Track Sections:**

Slide each **track section** towards the rear of the unit. This will free the track sections from the battery tray. Be sure to **gently handle** the components to avoid any damage during disassembly.

5. **Separate the Components:**

Once the tracks are free from the battery tray, you can **separate** the three components: the **battery tray, left track, and right track.**

6. **Take Care with the Joystick Controller:**

Unplug the joystick controller from the machine before storage or transport. Be careful not to **damage** the controller during this process. Store the controller in a safe and secure location to avoid any damage during transport.

After disassembly, the individual components can be stored separately to ensure their safety during transport or long-term storage. Always remember to keep the unit in a dry, cool environment to preserve its functionality and prevent damage.

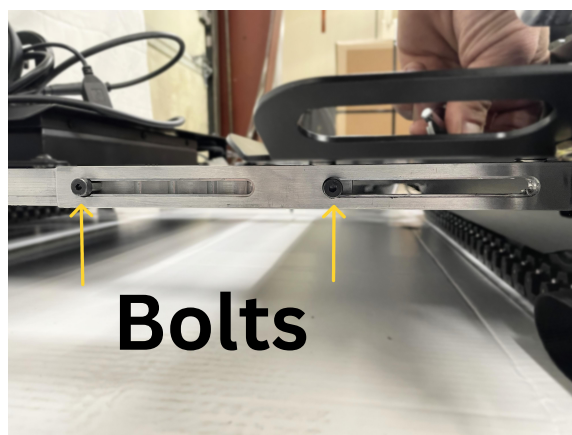
ADJUSTING THE WIDTH FOR YOUR CHAIR

Adjusting the Width of Freedom Trax (FTX)

Freedom Trax (FTX) is designed to accommodate a variety of manual wheelchair sizes by offering an adjustable width feature. This allows users to customize the track spacing for a secure fit.

Steps for Adjusting the Width:

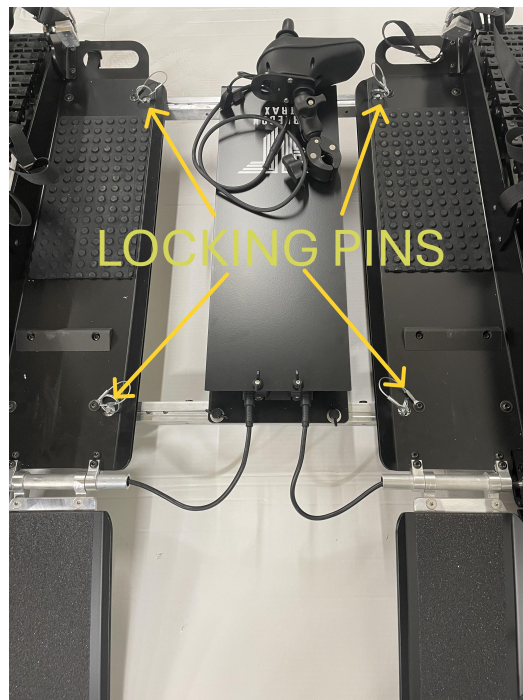
- 1. Identify the Locking Pins:**
 - Locate the **four locking pins** that secure the left and right tracks to the central battery tray. See Locking pins picture below.
- 2. Remove the Locking Pins:**
 - Remove the locking pins on **one side at a time** to maintain control and ease the process.
 - Avoid removing all four pins simultaneously as this could make alignment more difficult.
- 3. Initial Setup – Widest Setting:**
 - Before adjusting the width, ensure the bolts from the **center tray** align with the **widest slot setting**. The bolts must pass through the slots in this position before width adjustment can begin. see picture below. See bolts picture below.
- 4. Adjust the Width:**
 - **Push or pull** the track on each side to widen or narrow the gap to fit your wheelchair.
 - Adjust slowly and carefully to avoid misalignment of the tracks.
- 5. Reinstall the Locking Pins:**
 - Once the desired width is achieved, reinsert the locking pins into their respective slots.
 - The pins prevent the bolts from sliding and keep the tracks securely in place.
- 6. Double-Check Security:**
 - Ensure all four locking pins are fully engaged and properly seated.
 - Test the width adjustment by gently pushing the wheelchair onto the tracks, ensuring it fits without forcing.



Important Notes:

- **Single-Side Adjustments:** Adjusting one side at a time helps maintain stability and prevents misalignment during the process.
- **Regular Inspections:** Periodically inspect the locking pins and bolts for wear or looseness. Replace any worn components to maintain safety.
- **Firmly Locked:** Always confirm that the pins are fully locked before operating FTX to prevent shifting or detachment during use.

By following these steps, you can ensure your FTX device is properly adjusted to securely accommodate your wheelchair, enhancing both safety and comfort during use.



NEED HELP? CALL OR EMAIL US ANYTIME

EMAIL	INFO@FREEDOMTRAX.COM
PHONE	303-550-6268
WEBSITE	WWW.FREEDOMTRAX.COM FOR HOW TO VIDEOS

Mounting your wheelchair onto Freedom Trax is a straightforward process. Follow these steps for a secure fit:

1. **Position the Ramps:** Lower the ramps to ground level.
2. **Engage FTX parking brake.**
3. **Roll Onto the Unit:** Carefully roll the wheelchair onto Freedom Trax from the rear.
4. **Engage Parking Brake:** Activate your wheelchair's parking brake to prevent movement.
5. **Secure Rear Wheels:** Use the push wheel harness to secure each wheel, ensuring the straps are tight and correctly positioned.
6. **Attach Front Straps:** Wrap the front straps around the wheelchair frame and tighten them securely.
7. **Lift the Ramps:** Use the provided bungee cord to lift and secure the ramps in an upright position.
8. **Install the Controller:** Mount the joystick controller in a convenient location, ensuring the cable is clear of the tracks.

Note: Always ensure the device is on level ground when mounting or dismounting. Never have the controller powered on during this process.

Wheelchair Securing System

Freedom Trax (FTX) ensures a secure and stable attachment of your manual wheelchair with a **four-point contact system**, designed for optimal safety and stability during operation.

Rear Push Wheel Securing:

1. **Strap Placement:** Wrap the rear strap around each push wheel. Ensure that the strap loop rests approximately **one-third from the top of the wheel** for maximum grip and stability.
2. **Adjust the Strap:** Pull the strap tight until the loop is firmly positioned around the wheel. This prevents any movement or slippage while the device is in operation.
3. **Wheel Size Adjustment:** If your wheelchair has non-standard-sized wheels, adjust the strap length accordingly to ensure a snug fit.

Forward Frame Securing:

1. **Front Strap Attachment:** The forward straps are designed to wrap around the **front frame of the wheelchair**, anchoring it securely to the FTX unit.
2. **Tightening the Straps:** Once in position, pull the straps tight to eliminate any slack, ensuring the wheelchair remains stable during use.

3. **Double-Check:** Always confirm that both rear and front straps are tight and secure before operating Freedom Trax. This will prevent the wheelchair from shifting or detaching unexpectedly.

Tip: Periodically inspect the straps for signs of wear or damage. Replace any worn straps to maintain safety and performance.



Joystick Controller

Installation Instructions:

1. Mounting the Controller:

- Use the **adjustable clamp** provided to securely attach the joystick controller to a convenient location on your wheelchair, such as the armrest or frame.
- Adjust the clamp as necessary to ensure a snug fit.

2. Cable Management:

- Carefully route the controller cable, ensuring it remains **free and clear of the tracks**.
- Use the **included reusable twist tie** or cable clips to secure excess cable and prevent it from dangling near the tracks.

3. Connection Check:

- Plug the controller into the designated port on the FTX unit.
- Confirm that the connection is secure before powering on the device.

Safety Guidelines:

- **Avoid Cable Obstruction:** Ensure the cable does not hang near or touch the tracks during operation. Failure to do so may result in **cable damage**, which could impair controller functionality.
- **Routine Inspections:** Regularly inspect the controller cable for **wear or damage**. Replace the cable immediately if any fraying, cuts, or weaknesses are detected.
- **Power Off When Not in Use:** Always turn off the controller and unplug it when not in use, during mounting or dismounting, or when storing the device.

Proper installation and handling of the joystick controller ensure smooth, safe operation and prolong the lifespan of the FTX system.



Charging Instructions

CHARGING STEPS

1. **Prepare the Charger:**
 - Ensure the **charger** is compatible with a **standard 120V wall outlet**.
 - Verify that both the charger and the battery are clean, dry, and free from any debris before connecting.
2. **Connect the Charger to the Battery:**
 - Plug the charger directly into the battery connector.
 - Ensure the connection is secure and free from obstructions.
3. **Power On and Monitor:**
 - Plug the charger into the wall outlet.
 - The **indicator light** on the charger will display the following statuses:
 - **Red Light:** The battery is actively charging.
 - **Green Light:** Charging is complete or the charger is not connected to the battery.
4. **Disconnect After Charging:**
 - Once the green light appears, unplug the charger from the wall outlet first, then disconnect it from the battery.

Battery Storage and Safety Tips:

- **Charge Before Storing:** Always ensure the battery is **fully charged** before storing to prevent capacity loss over time.
- **Temperature Considerations:** Store the battery in a location with temperatures between **40°F and 70°F**. Avoid **extreme heat or cold** as this can damage the battery or reduce its lifespan.
- **Moisture Avoidance:** Never charge or store the battery in **wet or humid environments**.
- **Safety Precautions:** Do not sit in the wheelchair while charging, and never attempt to use the device during charging.

Following these guidelines will help maintain the battery's performance, extend its life, and ensure safe operation of the Freedom Trax system.

Maintenance Guide for Freedom Trax (FTX)

Proper maintenance of your Freedom Trax (FTX) ensures optimal performance and longevity. Regular cleaning, inspections, and minor adjustments will keep the device in excellent working condition.

Routine Cleaning:

1. General Cleaning:

- **Do not remove the battery cover** while washing and avoid spraying water directly onto the **battery or motors**.
- After exposure to **saltwater**, rinse the entire device with **fresh water** to prevent corrosion.
- Ensure no water enters the internal components or electronics.
- **Never submerge the unit** in water.

Periodic Inspections:

1. Tracks:

- Inspect for **rocks, debris, cracks, or chips**.
- Contact support for **replacement options** if any damage is found.

2. Cleats and Paracord:

- Check that all cleats are free from **cracks, deformation, or foreign objects**.
- Inspect the **hold-down paracord** for wear, and ensure the **backstops** are in good condition.

3. Ball Bearings:

- All ball bearings are **sealed** and require **no additional oiling**.

4. Battery:

- Monitor battery capacity over time. If the battery loses capacity after several years, replace it with an certified **Freedom Trax battery**.
- Refer to the **“Battery Safety” section** for charging and replacement guidelines.

Track Retightening Instructions:

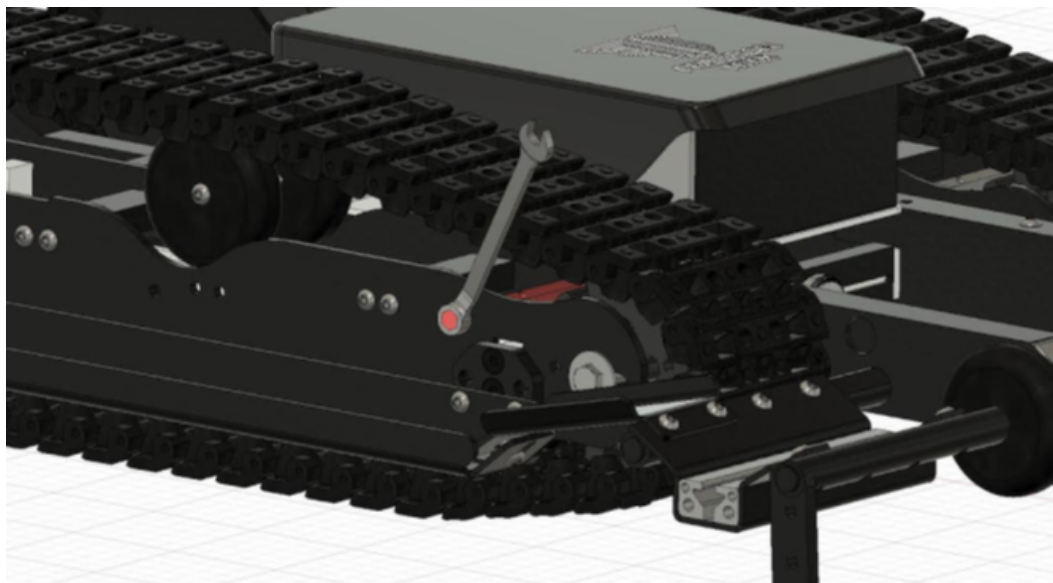
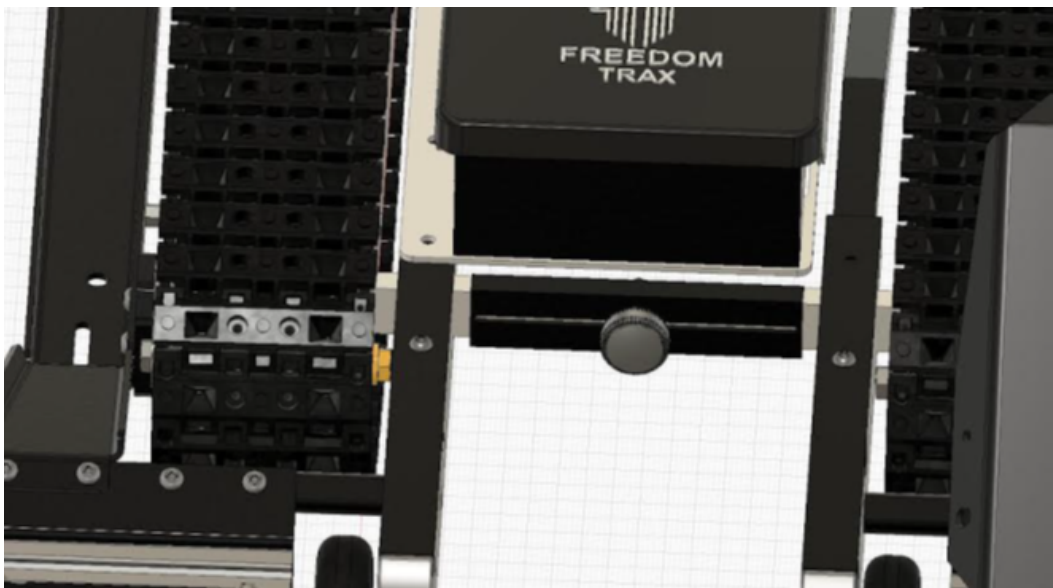
Over time, the track may loosen after an initial break-in period. Follow these steps to retighten the track:

Tools Needed:

- **Two 9/16" open-box wrenches**
- **One 3/8" open-box wrench or socket wrench**

Procedure:

1. **Loosen the Flange Nut:**
 - Locate the **3/8" flange nut** (marked in **YELLOW**).
 - Use a **9/16" wrench** to loosen this nut without fully unthreading it.
2. **Adjust the Hex Shaft:**
 - Use a **3/8" wrench** or socket to rotate the **hex shaft** (marked in **RED**) towards the **front** of the unit.
 - This will remove any slack in the track.
3. **Retighten the Flange Nut:**
 - While keeping tension on the hex shaft, re-tighten the **YELLOW flange nut**.
 - Ensure there is **no visible slack** in the track after retightening.
4. **Secure the Front Axle:**
 - Use the **second 9/16" wrench** to secure the front axle. Tighten the nut and bolt firmly to prevent loosening during use.



Important Notes:

- **Check Before Every Ride:** Regularly inspect all components to ensure they are in proper working order before operating the device.
- **Professional Assistance:** If you're unsure about any maintenance procedure or need a replacement part, contact customer support for assistance.

Following these maintenance steps will help keep your Freedom Trax safe, reliable, and efficient.

Battery Safety for Freedom Trax (FTX)

To ensure the safety, performance, and longevity of your Freedom Trax (FTX) system, please adhere to the following battery safety guidelines:

General Safety Guidelines:

- **Lithium-Ion Batteries:**
The FTX uses **lithium-ion batteries**, which are designed for long-lasting performance but should only be serviced by a **Tour Engineering Technician**. Never attempt to service the battery yourself.
- **Charging with the Supplied Charger:**
Always use the **supplied charger** for recharging the battery. Using any other charger can damage the battery or cause unsafe conditions.
- **Never Attach Cables Directly to Battery Terminals:**
NEVER attempt to recharge the batteries by directly attaching cables to the **battery terminals**. This could lead to electrical damage or hazards.
- **Avoid Charging After Exposure to Moisture:**
Do not recharge the batteries if the wheelchair has been exposed to any form of moisture, whether rain, snow, or humidity. This can create an electrical hazard.

Storage Guidelines:

- **Proper Temperature Range:**
Store the Freedom Trax and its battery in an environment with temperatures between **40°F and 70°F**. Storing the battery outside of this range could affect its lifespan and efficiency.

By following these safety guidelines, you ensure the continued safe and effective use of your Freedom Trax (FTX) and prolong the life of the battery system.

- **Avoid Using Multiple Chargers Simultaneously:** **DO NOT** attempt to recharge the batteries using both the **on-board charger** and an **independent charger** (connected to the joystick charger port) at the same time. This could result in electrical damage.

- **Do Not Sit in the Wheelchair While Charging:** **Never sit** in the wheelchair while it is connected to the charger. Always ensure you are not seated when charging the battery to avoid potential safety risks

- **Do Not Recharge While Operating:** Do not attempt to recharge the battery while **operating the wheelchair**. Charging and operation should never be done simultaneously to prevent overheating and possible damage.

- **Do Not Recharge Outdoors:** **DO NOT** recharge the batteries if the wheelchair is outside or exposed to the elements. Keep the device indoors while charging.

LIABILITY WAIVER

Liability Release Waiver

Waiver of Liability Release, Express Assumption of Risk, and Indemnity Agreement

By purchasing or using the **Freedom Trax**, I acknowledge the inherent risks involved, including personal injury, death, and property damage. I understand that my use of this unit is voluntary and based on my own assessment of the risks. I also understand that **Tour Engineering, LLC** and its affiliates are not liable for any potential damage to the attached wheelchair.

Assumptions and Acknowledgements:

- I confirm that I possess the necessary skills, physical health, and mental fitness to safely use the **Freedom Trax**.
- I agree that any expenses related to emergency rescue or evacuation will be my sole responsibility, and not that of **Tour Engineering, LLC** or any other entity.

Release and Indemnity:

- I **release, waive, and relinquish** all claims against **Tour Engineering, LLC** for personal injury, wrongful death, or property damage arising from my use of the **Freedom Trax**. This includes any claims based on negligence or other faults of the company.
- I also agree to **indemnify, defend, and hold harmless Tour Engineering, LLC** from any claims related to injury, death, or damage caused by my conduct.

Voluntary Agreement:

- I affirm that I am signing this document voluntarily and that **Tour Engineering, LLC** has not coerced me into signing it. I also understand that this agreement binds me, my heirs, assigns, executors, and administrators.

By using Freedom Trax, I acknowledge that I am forfeiting important legal rights and responsibilities.

User Information:

- Name of User: _____
- Address: _____
- Phone: _____
- Cell Phone: _____
- Email: _____

Signatures:

- User's Signature: _____ Date: _____
- Signature of Parent/Guardian (if under 18): _____
- Name of Parent/Guardian (if applicable): _____

Liability Disclaimer

- The **Freedom Trax** product should **not** be submerged in water.
- The device should **not** be used on curbs higher than 4 inches.
- The maximum slope for safe operation is **10 degrees**.
- An **assistant attendant** should accompany the user until they demonstrate the ability to operate the unit safely within the above limitations.

User Responsibility:

- The user is solely responsible for the safe operation of the **Freedom Trax**. Any injuries resulting from use in rough terrain are the user's responsibility, and they waive all rights to legal recourse.

Signature: _____ Date: _____

Contact Information:

- Email: info@freedomtrax.com
- Mailing Address:
Tour Engineering, LLC
4323 Kilmer Street, Golden, Colorado 80403

By using the **Freedom Trax**, I agree to the above terms and conditions. If I do not agree, I will return the unused unit for a restocking fee.