

tréxō robotics



Trexo Plus User Manual
QMS-USR-753.006 Rev 1- Trexo Plus Manual

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Important Safety Instructions

ALL OPERATORS OF THE TREXO PLUS DEVICE MUST UNDERSTAND THAT POTENTIALLY SEVERE INJURY MAY OCCUR FROM MISUSE. TREXO ROBOTICS INC. IS NOT RESPONSIBLE FOR ANY INJURY, LOSS, OR DAMAGE THAT OCCURS IN CONNECTION WITH YOUR USE OF THE DEVICE.

Please read this entire user manual carefully before you use the device and keep the manual for future reference. Additional copies are available on request.

BASIC TERMINOLOGY

The Trexo Device - Your Trexo robot attached to the Rifton Dynamic Pacer

The Trexo User - The individual using the Trexo device

The Trexo Trained Supervisor - The individual who are trained and certified by the Trexo Robotics Customer Success team, to operate the Trexo device for Trexo users

WARNING – To reduce the risk of **fire, electric shock, or injury to persons:**

- Treat the Trexo Device with care. Do not drop it or expose it to any heavy shocks.
- Do not operate the device if the power supply battery, power and control cables, or the device itself have been damaged in any way, there is liquid spilling out, or objects have fallen into the device.
- In the case that the device has been dropped or damaged, start the device and run it without a Trexo User. Discontinue use of the Trexo Device if it does not operate normally and inform the Trexo Robotics Customer Success team using the Trexo Chat App.
- Do not use the device if any separate Trexo Device components or the device in its entirety have been exposed to rain or moisture and it does not operate normally.
- Do not use the Trexo Device in wet surroundings (e.g. in the rain, near a swimming pool, by the lake) as battery exposure to water can be dangerous.
- Do not immerse any Trexo Device components, including the robotic leg attachments, battery and cables in water or rinse under the tap. Refer to cleaning instructions (page 38) on how to care for your device properly
- Do not use the Trexo Device if there is visible damage, broken components, or missing parts.



Important Safety Instructions

Please read this entire user manual carefully before you use the device and keep the manual for future reference. Additional copies are available on request.

WARNING – To reduce the risk of **fire, electric shock, or injury to persons (continued)**

:

- Do not operate the Trexo Device if the power supply battery, power and control cables, or the device itself have been damaged in any way, there is liquid spilling out, or objects have fallen into the device.
- Only use the original battery and chargers provided. If either component is damaged, contact Trexo Robotics at the Trexo Chat app for assistance.
- Check that the voltage indicated on the charger corresponds to your power outlet voltage before you charge the Trexo Device.
- Do not use or run the Trexo Device while the charger is plugged into the device.
- Make sure the cables remain unobstructed during the use of the device. Protect all cables from being pinched, particularly the plugs at the outlet and cables where they exit the joints.
- Do not expose the device to rain or liquid spills.
- In the event the Trexo User is caught in the rain, the Trexo Trained Supervisor must turn off the device immediately, and seek shelter. Once in shelter, do not turn on the device or charge the device. Inform the Trexo Robotics team that the Trexo Device has sustained water damage.
- Do not store the device outdoors
- If experiencing any interference or difficulty operating another device in the vicinity of a Trexo device, move away and/or turn off the Trexo device.



Important Safety Instructions

CAUTION - To ensure the Trexo device is used correctly and safely:

- The Trexo Device must be used under the supervision of a Trexo Trained Supervisor.
- Trexo Users must be within 3 meters of a Trexo Trained Supervisor at all times. The Trexo User must never be left unattended in the Trexo Device. Trexo Users left unattended and unsupervised in the Trexo Device may be liable to injury.
- All new operators must be trained by a member of the Trexo Robotics Customer Success team. The Trexo Device must never be operated by individuals who have not been certified by the Trexo Robotics Customer Success team to operate the device.
- The Trexo Device is not capable of turning by itself and requires assistance from the Trexo Trained Supervisor.
- Use the device on stable, even, and non-slippery surfaces without any obstacles in the way. Do not use the device on grassy surfaces, carpeted surfaces, muddy surfaces, rocky surfaces, hilly surfaces and/or other similar terrains.
- All four Rifton wheels must be firmly planted on solid ground at all times. The locks on the wheels must be unlocked with the wheels in a non-ratcheting position.
- Do not use the Trexo Device in areas which could lead to injury or harm, including near stairwells and inclined or elevated surfaces.
- Do not attach the Trexo Robotic legs to other pacers, gait-trainers, or walkers. The Trexo Device is only meant to be used with the provided Rifton Dynamic Pacer Gait Trainer.
- The Trexo User must be using the Rifton Chest prompt anytime they are using the device.
- The Trexo Device is not meant to be used for extensive periods of time. The Trexo Device must only be used to a maximum of 2 times daily for 1 hour per session.
- The Trexo Device can be used with an Trexo Certified Treadmill (Optional)
- The Trexo Device must never be used in conjunction with any treadmills or similar equipment other than the Trexo Certified Treadmill created by the Trexo Robotics team. Using a non-Trexo Certified Treadmill may result in serious injury.
- Trexo Trained Supervisors must be familiar with the Trexo User's displays of pain, discomfort, fatigue and any signs of distress so when they display it, the Trexo Trained Supervisor must stop the device.



Important Safety Instructions

CAUTION - To ensure the Trexo device is used correctly and safely:

- All Trexo Users must be consulted by a Physical Therapist or Physician prior to their Trexo Use
- In the event the Trexo User is in any significant pain, discomfort, or is displaying a high degree of spasticity, the Trexo Trained Supervisor must stop the device immediately and discontinue use.
- The Trexo Trained Supervisor must discontinue use if the Trexo User experiences any allergic reaction, skin irritation, abrasions, or burns at any points of contact with the Trexo Device.
- The Trexo Trained Supervisor is responsible for ensuring the Trexo User is using the Trexo Device in a safe environment at all times.
- Trexo Users with any open abrasions, or wounds should not use the Trexo Device to minimise the chance of further infection or injury and/or cross-infection with another Trexo User.
- To prevent infection, the Trexo Device must be cleaned using alcohol based wipes prior to each session.
- The Trexo User must wear long trousers which cover the user's knees when using the Trexo Device to avoid friction burns and minimize the effects of hot surfaces.
- The Trexo User must wear shoes and/or AFOs to prevent injury or harm to the User's feet.
- The Trexo Device will perform when operating between 5° C - 35° C degrees (41° F - 95° F).
- The Trexo Device has an emergency stop for use in the event of a dangerous situation. The Trexo Trained supervisor must be within reach to stop it at all times.
- The Trexo User must be removed and strapped into the Trexo Device correctly based on the training provided by the Trexo Robotics Customer Success team.
- The Trexo User must be reassessed by their Primary Care Physician and Physical Therapist on an annual basis to ensure that the Trexo Device is appropriate for usage.

Introduction

Welcome to the Trexo Plus family!

About the Trexo Plus

The Trexo Plus is a wearable lower limb robotic device that is attached to a Rifton Dynamic Pacer Gait Trainer. It utilizes principles of powered lower limb robotics to enhance gait training and locomotion training. Motors power the device joints at the hip and knee while motion is controlled through a tablet interface operated by a Trexo trained individual.

Trexo Robotics does not claim/guarantee clinical benefits. Results may vary.

For more information about the Trexo Plus, visit us at www.trexorobotics.com.

Audience

This manual is intended to be read and used as a reference by care providers and/or individuals who have received training in the correct use of the Trexo Plus. The trained individual is responsible for the correct operation of the Trexo device.

FDA Information

The Trexo Plus is a Class II medical device.

Health Canada Information

The Trexo Plus is a Class I medical device.

Trexo Device Weight Restrictions

	Trexo Device Sizes		
	Small/Medium	Large	X-Large
Weight (lbs)	80	125	150
Weight (kg)	36.3	56.7	68

The Trexo Device weight restrictions exist for the safety of the Trexo User. Please ensure the Trexo User is using the correct size Trexo Device for their weight.

Recommended Use

The Trexo Device enables children to receive gait training using robot-assisted technology in a mobile and stable manner. The Trexo Device is intended to be used as an exercise tool, operated under close supervision by a Trexo Trained Supervisor.

The Rifton frame should be fitted to the child's height and the Trexo legs should be fitted to the child's thigh and shin length. Please ensure you are using the correct height device. User height requirements can be found on page 10 (next page) of this manual.

Any individuals exhibiting the following, may not be candidates for the Trexo Device:

- Knee flexion contracture > 20°
- Knee valgus > 40°
- Hip subluxation > 40% migration percentage with pain during walking
- Hip subluxation > 50% migration percentage unless with orthopedic clearance for weight bearing with the Trexo
- Hip extension < -10°
- Spasticity, resistance, or behavioural concerns that interfere with the use of the device may limit use
- Weight bearing restrictions (including from any recent Orthopaedic surgery, e.g. soft tissue releases and lower limb bony surgery)
- Moderate to severe Osteogenesis Imperfecta

Trexo Device Users should be monitored by their physical therapist and cleared for Trexo Device use annually.

Facilities with more than one Trexo Device should configure their tablet to only remember one device's network, and each tablet should be labelled with device serial number.

May contain contraindications for users and each user needs to get contraindications reviewed by their physician every year.



Device specifications

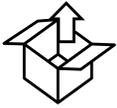
User Sizes (cm)	Small		Medium		Large		X-Large	
	Min	Max	Min	Max	Min	Max	Min	Max
Hip to floor	40	47	43	53	29	76	62	94
Hip to knee	18	18	21	24	26	34	29	39
Knee to floor	22	29	22	29	29	42	33	55
Hip width	20	33	20	33	20	35	22	41
Thigh girth	20	38	20	50	20	70	20	70
Shin girth	12	30	12	38	12	50	12	50
Weight (kg)	0	36	0	36	0	56	0	68

Technical specs

	Small/Medium	Large	X-Large
Dimensions of device (cm)	76 x 66	91 x 71	101 x 80
Height of device (cm)	55 - 69	72 - 98	79 - 104
Weight of device (kg)	43	45	47

	Minimum	Maximum
Speed	10 steps/min	70 steps/min

	Extension	Flexion
Hip joints	30°	50°
Knee joints	0°	90°



What comes with the Trexo device

The Trexo Plus comes fully equipped with everything required for operation. Trexo Plus is designed to work with a Rifton Pacer Gait Trainer K630 or K640 or K650 (included) for which additional accessories may be purchased separately.



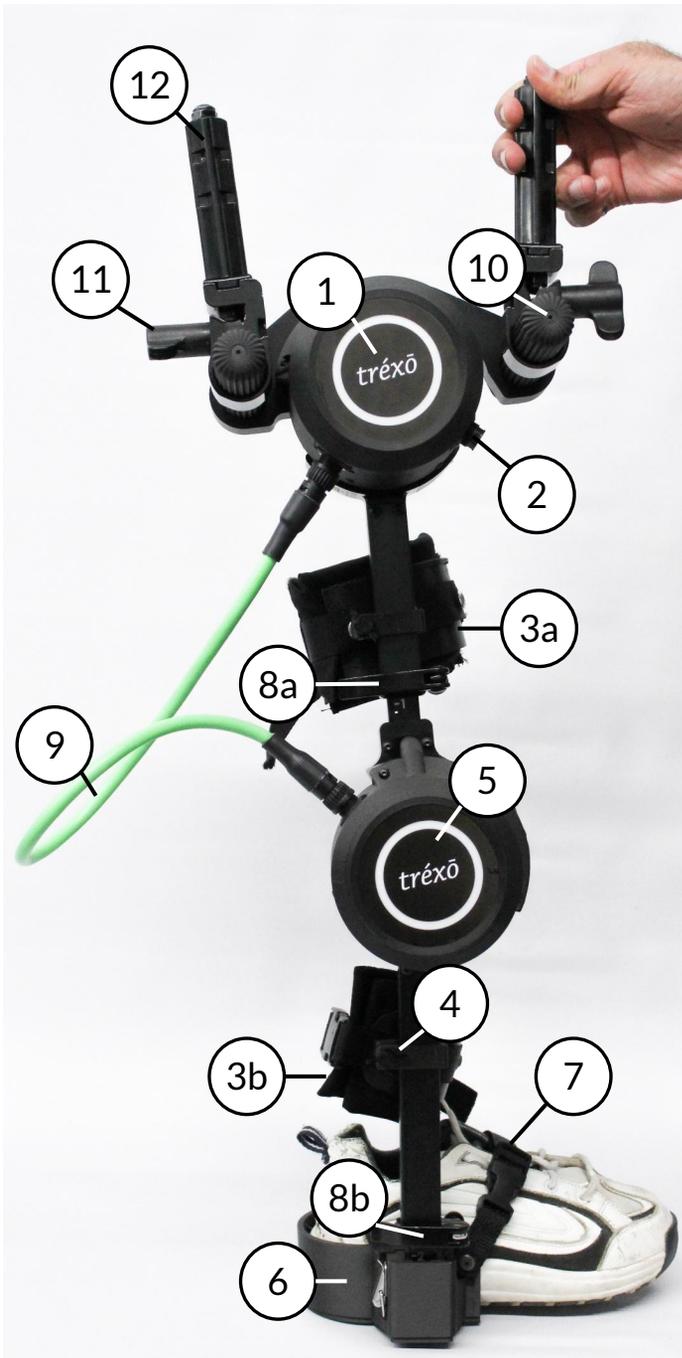
A fully assembled and ready for use Trexo Plus is displayed in the image above.

The device consists of the following parts:

1. Two robotic legs
2. Set of straps for calves and thighs (large only)
3. Ankle joints of different sizes
4. Emergency stop button
5. Battery, Wi-Fi transceiver & Charger
6. Tablet with preinstalled Trexo app
7. Rifton Pacer Gait Trainer (K630 or K640 or K650) with saddle and select accessories
8. Maintenance kit



Familiarize yourself with the Trexo robotic legs



Robotic leg components

Your Trexo device comes equipped with two robotic legs which can be attached to the Rifton walker.

Each leg consists of several parts displayed in the figure to the left.

The components are as follows:

1. Powered hip joint
2. Cable receptacle to connect battery
3. Straps
 - a) Thigh strap (removable)
 - b) Calf strap (removable)
4. Strap cuff fasteners
5. Powered knee joint
6. Ankle joint (removable)
7. Ankle strap
8. Height adjustment clamps
 - a) Thigh clamp
 - b) Shin clamp
9. Power and control cable
10. Leg attachment slider
11. Rifton leg width adjustment knob
12. Rifton post

Inspect the Trexo legs each time you use the device for any visible damage. If you find any components that are missing or are damaged, do not proceed with the use of the device.

*Shoes are not included. Pictured for display purposes.



Familiarize yourself with the Rifton Dynamic Pacer



This guide is for quick reference on Rifton features. For full user guide and instructions on using your Rifton, please refer to the manual encloser with the Rifton Dynamic Pacer.

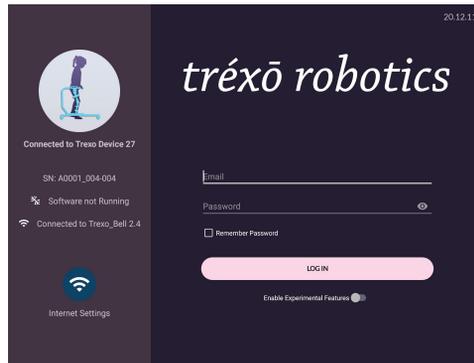
The components are as follows:

- | | |
|------------------------|--------------------------------|
| 1. Dynamic upper frame | 5. Swivel lock |
| 2. Standard base | 6. Brake |
| 3. Swivel wheel | 7. Direction lock |
| 4. Swivel release | 8. Multi-position saddle |
| | 9. Seat location adjustment |
| | 10. Saddle tilt adjustment |
| | 11. Saddle height adjustment |
| | 12. Side-to-side movement lock |
| | 13. Dynamic movement lock |
| | 14. Frame height adjustment |



Connect your Trexo Plus to Wi-Fi

- 1 Select “Internet Settings” in your login screen.
- 2 Provide you wi-fi network credentials and select “connect to Wi-Fi”



The tablet should auto-connect to the Wi-Fi network called “Trexo Device”. If unable to connect automatically, check **Settings > Wi-Fi** in the tablet and try to connect to “Trexo Device” manually.

Please do not connect your tablet directly to your local wi-fi. The tablet should only connect to the Trexo device. Internet access should be connected through the Trexo app only.

The tablet comes pre-loaded with the network information needed to connect with the device. If you are having trouble connecting, please contact Trexo at support@trexorobotics.com for assistance.



Trexo interface – user profile

Logout *tréxō robotics* 2.2.0-DEBUG

1

2

- Eliza
- Leeam
- Noah
- Thomas
- Daniel Gradinaru
- Adrian Lee
- Manmeet Maggu

3

4

5 edit profile

6 activity

7 new session

8

239
steps taken

12 sessions completed	71 average duration	16 average cadence
-----------------------------	---------------------------	--------------------------

9 +

- 1 Search by first or last name.
- 2 List of current profiles.
- 3 User information.
- 4 User picture.
- 5 Edit user information.
- 6 See previous activity and session information history.
- 7 Start a new session for selected user.
- 8 Activity summary since start of usage.
- 9 Add new user.



Trexo interface – user profile

3

< Discard *tréxō robotics* 2.2.0-DEBUG

Search

× Add Patient Save 2

1

First Name*

Last Name

Email

Eliza

Leeam

Noah

Thomas

Daniel Gradinaru

Adrian Lee

Manmeet Maggu +

- 1 Provide user information.
- 2 Save once ready.
- 3 Exit without saving.

Note: you may add user picture to the profile after it has been created.



Trexo interface – activity information

← Select Patient 6
tréxō robotics 2.2.0-DEBUG

1 Leeam
Joined in July 23, 2019

2 Overall

Jul 2019
10 sessions
211 steps

3 🚶 Wednesday, July 31
12:35 PM

🚶 Friday, July 26
1:21 PM

🚶 Friday, July 26
1:08 PM

🚶 Wednesday, July 24
12:13 PM

🚶 Wednesday, July 24
12:11 PM

🚶 Wednesday, July 24
11:24 AM

🚶 Wednesday, July 24
11:22 AM

	steps taken	average duration	average cadence	weight bearing	average initiation
	4				

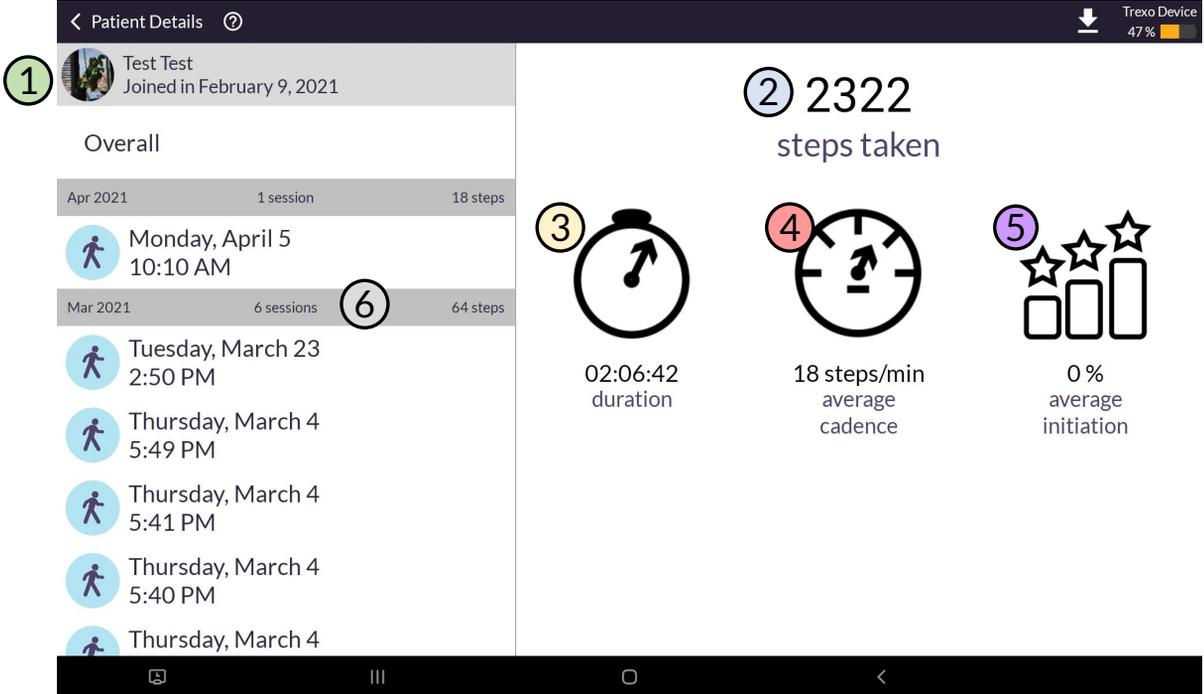
5

Date	Steps
23-07 18:24	~5
23-07 18:27	~3
23-07 18:27	~21
24-07 11:22	~10
24-07 11:22	~1
24-07 12:11	~25
24-07 12:11	~1
26-07 13:08	~1
26-07 13:08	~65
31-07 12:35	~78

- 1 Selected user.
- 2 Summary graphs of the last ten sessions.
- 3 Session specific history.
- 4 Menu for summary graphs.
- 5 Graph summarizing selected usage data.
- 6 Back to patient profile and selector screen.



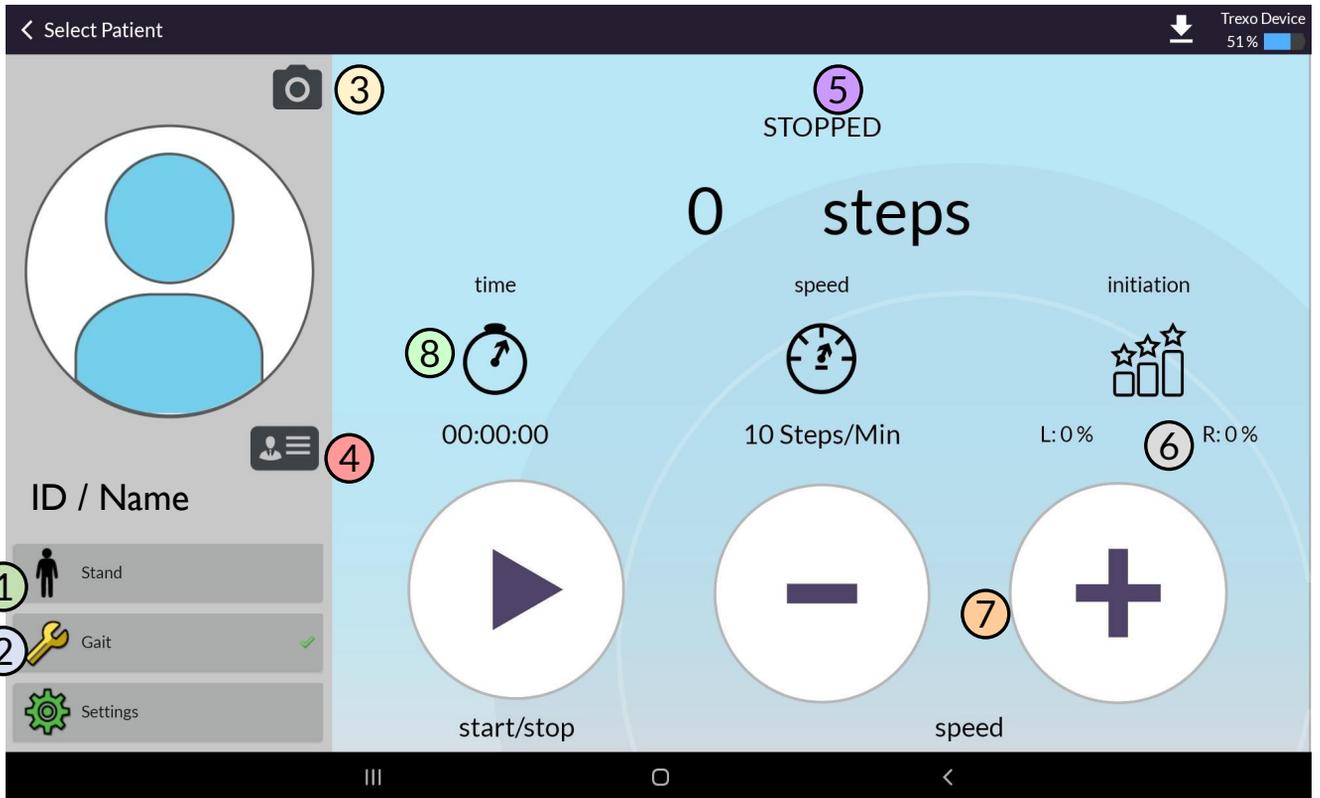
Trexo interface – activity information



- ① Selected user.
- ② Total number of steps taken during the session.
- ③ Active walking time.
- ④ Average cadence during session.
- ⑤ Average initiation during session.
- ⑥ Total number of sessions and steps taken in a month.



Trexo interface – user session



- ① Set Trexo legs to standing position.
- ② Use to set and adjust gait and support force of device.
- ③ Take user profile picture.
- ④ Open Patient Info containing measurements.
- ⑤ Current status of device.
- ⑥ Initiation: how often the user is actively helping the Trexo take steps.
- ⑦ Speed adjustment controls.
- ⑧ Walking time

 Quick Trexo joint LED guide



Rotating purple

Joint is powered, not ready to run due to E-Stop/ not calibrated/ error.



Purple

Joint is ready or running.



Orange

Joint is detecting resistance. Check for spasticity and stop session if persists.



Blue (hips only)

Child is actively participating.



Trexo interface – setting and modifying gait

Set Gait can only be used when the Trexo device is paused or not running.

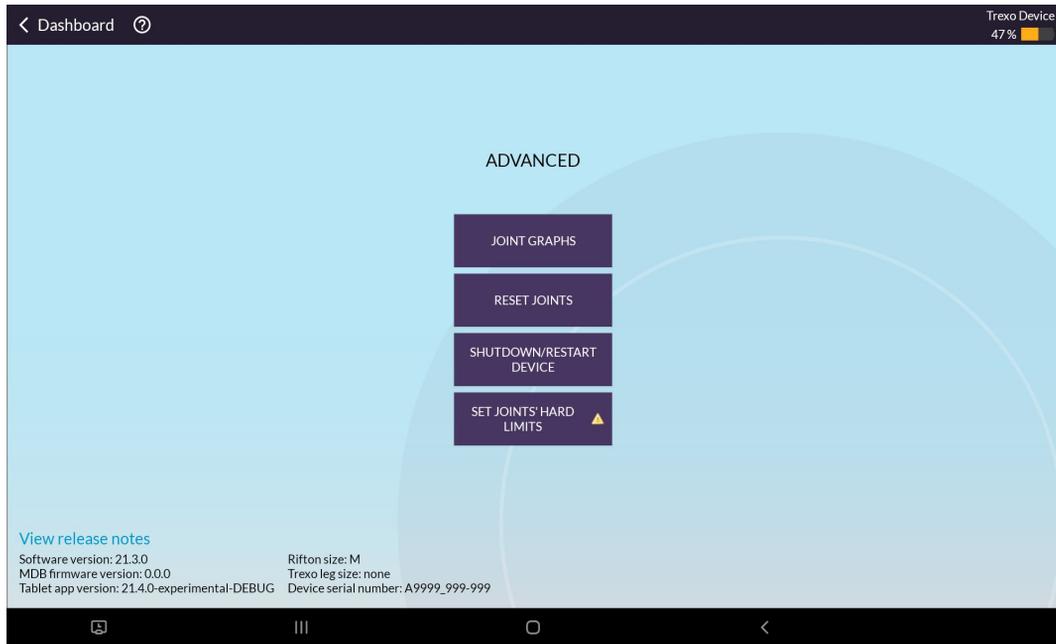
Adjust Gait can only be used while the Trexo device is running a session.

The screenshot shows the 'Configure standard gait' screen. The interface is divided into sections for 'LEFT LEG' and 'RIGHT LEG'. A central silhouette of a person is used to visualize joint angles. The left leg settings include Hip Max Extension (15) and Knee Max Flexion (75). The right leg settings include Hip Max Flexion (35), Hip Support Force (10), Knee Min Flexion (0), and Knee Support Force (10). A 'COPY FROM RIGHT LEG' button is visible. The bottom status bar shows 'Hip: 5.48°' and 'Knee: -33.90°'. Numbered callouts 1-9 point to various UI elements: 1 (Save all changes), 2 (Copy from right leg), 3 (Clear all settings), 4 (Up arrow), 5 (Max angle), 6 (Current angle), 7 (Current range of motion), 8 (Support force up arrow), and 9 (Support force value).

- ① Save all changes.
- ② Copy all information from other leg onto current leg.
- ③ Use to reset the gait pattern, then run each leg through the desired motion (only available while device is not walking).
- ④ Modify joint angles with up and down arrows.
- ⑤ Maximum angles of joints in the gait.
- ⑥ Current angles or joints (white line).
- ⑦ Current range of motion.
- ⑧ Increase or decrease support force at each joint separately.
- ⑨ Current support force.



Trexo interface - settings



Joint graphs

Provides real-time readings of the joint positions, velocities, accelerations and torques.

Reset joints

Resets the joints in case of troubleshooting.

Shutdown/ Reset device

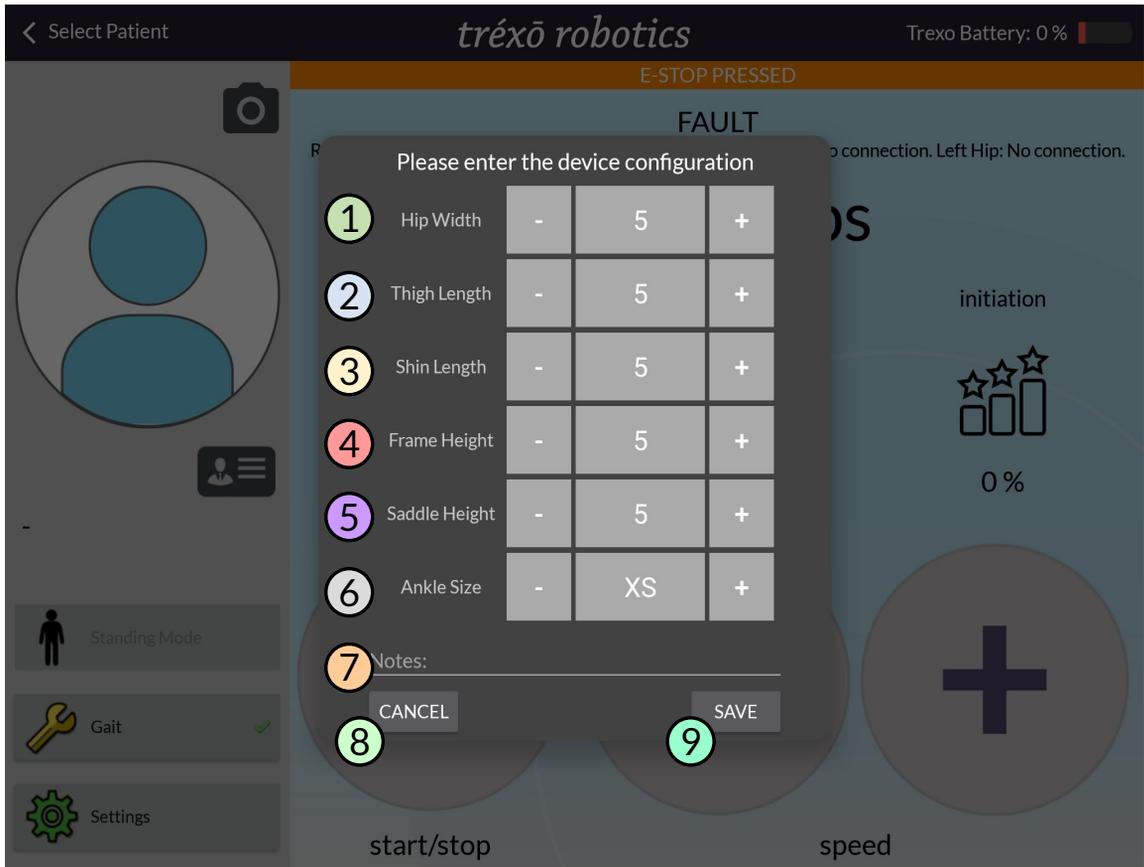
Reboots the Trexo system in case of troubleshooting. Save all your sessional information before you reboot to prevent loss of data.

Set joints hard limits

Calibrates the joints manually, only use if trained. See instructions on page 34 for more information.



Trexo interface – user information



- ① Hip width position using the markers on the Trexo leg posts.
- ② Thigh length as indicated on the Trexo leg between knee and hip.
- ③ Shin length as indicated on the Trexo leg between the knee and ankle.
- ④ Frame height as indicated on the Rifton pacer frame (in front).
- ⑤ Saddle height as indicated on the saddle seat.
- ⑥ Ankle size provided on the inside of the ankle.
- ⑦ Included any additional notes on the set-up of the Trexo.
- ⑧ Cancel, all changes will be lost.
- ⑨ Save the set-up.



Starting your Trexo Plus

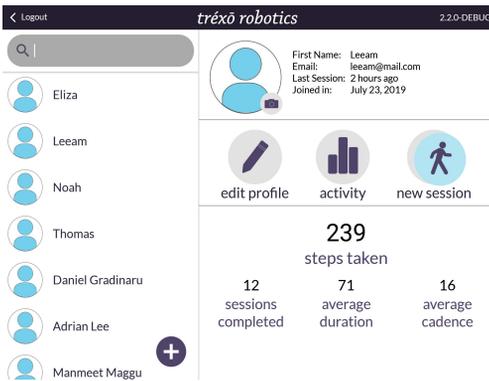
- 1 Power on the system by pressing the power button on the battery box.
Wait 1-2 minutes for device to boot up.



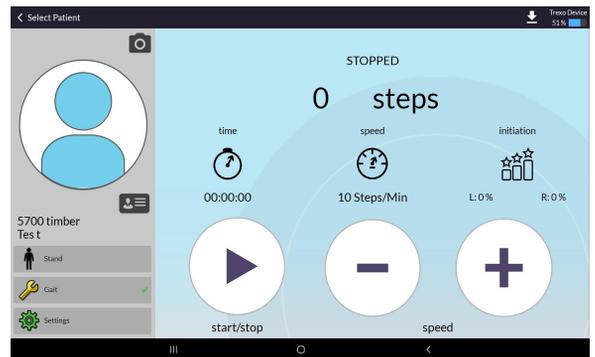
- 2 Open Trexo app and connect to the Trexo Device to the internet.



- 3 Select "new session".



- 4 Start when ready.





Setting the Trexo leg lengths



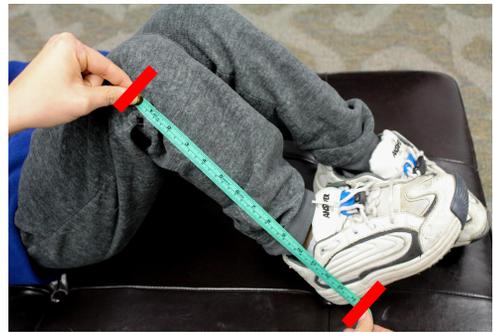
Store the measurements for future use in
“User profile > Patient info”

The child should be measured on their back as shown below.

1 Hip to knee

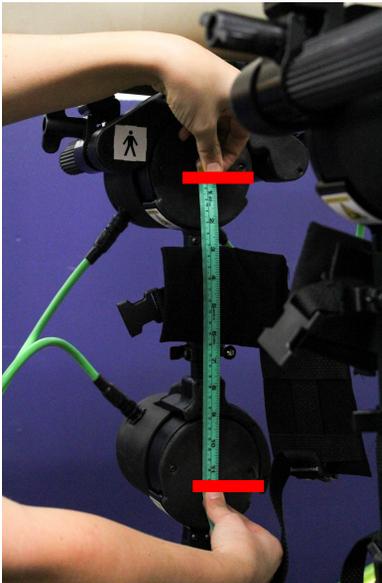


2 Knee to floor

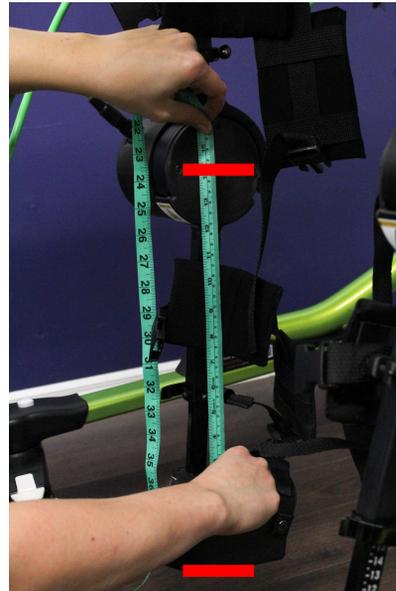


Set up the device leg height to correspond with the child's leg height.

3 Hip to knee



4 Knee to floor





Running a session

- 1 Ensure breaks are secured on the Rifton Pacer.



- 2 Put ankles on child's foot and secure with strap.



- 3 Seat child comfortably on saddle and adjust to align hips.



- 4 Bring the Trexo device closer to child by sliding the hips inwards.



- 5 Clip the ankle attachments into the Trexo leg.



- 6 Secure and tighten the thigh and shin straps using the buckles.



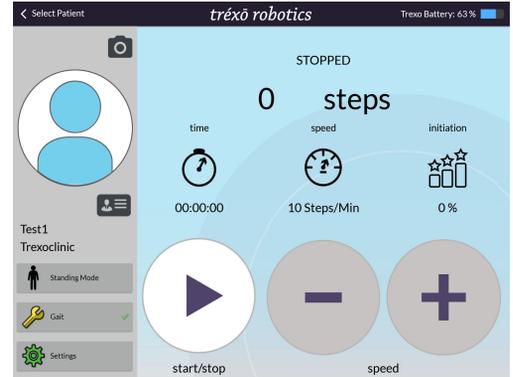


Running a session - continued

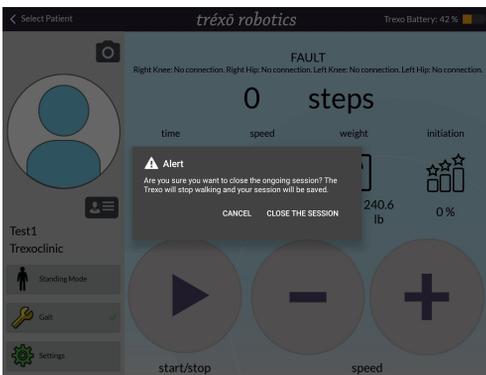
7 Release the breaks on the Rifton.



8 Start new session using Trexo app.



9 At end of session, close the session to save data.



After you have completed the session, make sure you close the session on the tablet by going back to the main screen.

Shutting down the device without closing the session may lead to loss of session data.

The Trexo trained supervisor must ensure that the cuffs on the user's legs must be unstrapped before unstrapping the chest prompt.



Readjusting device height - continued

- 1 Raise the Rifton to its maximum height.



- 2 Put ankles on child's foot and secure with strap.



- 3 Set up the device with child. Feet won't touch the ground yet.



- 4 Adjust the robotic leg lengths as necessary using the clamps or screw.



- 5 Clip in all straps and conduct a visual check to confirm correct leg coupling.



- 6 Adjust frame height as necessary (instruction on next page).





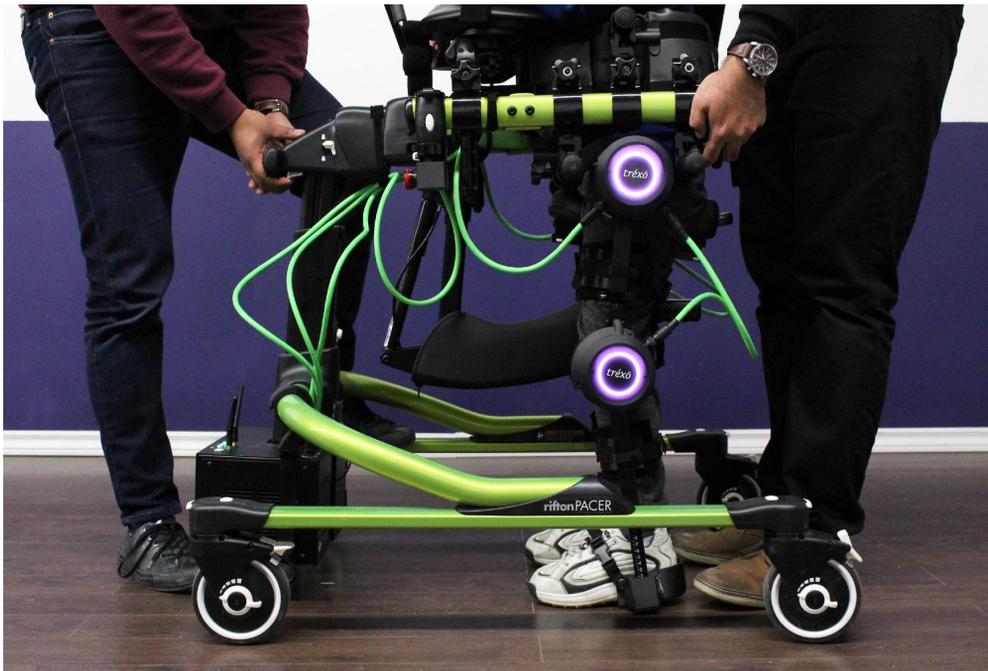
Adjusting device height - continued

Two person activity

You will need to adjust the frame height in first session and if you adjust the leg length.

To proceed with raising or lowering the frame:

1. Adjust the Rifton frame by gently pressing and holding the white button located at the front of the pacer frame.
2. Lower the device until both heels are comfortably on the ground.
3. Observe for foot clearance and heel to ground contact. Read just the height of the frame if necessary.
4. Note height of the frame for subsequent use in the Trexo app.

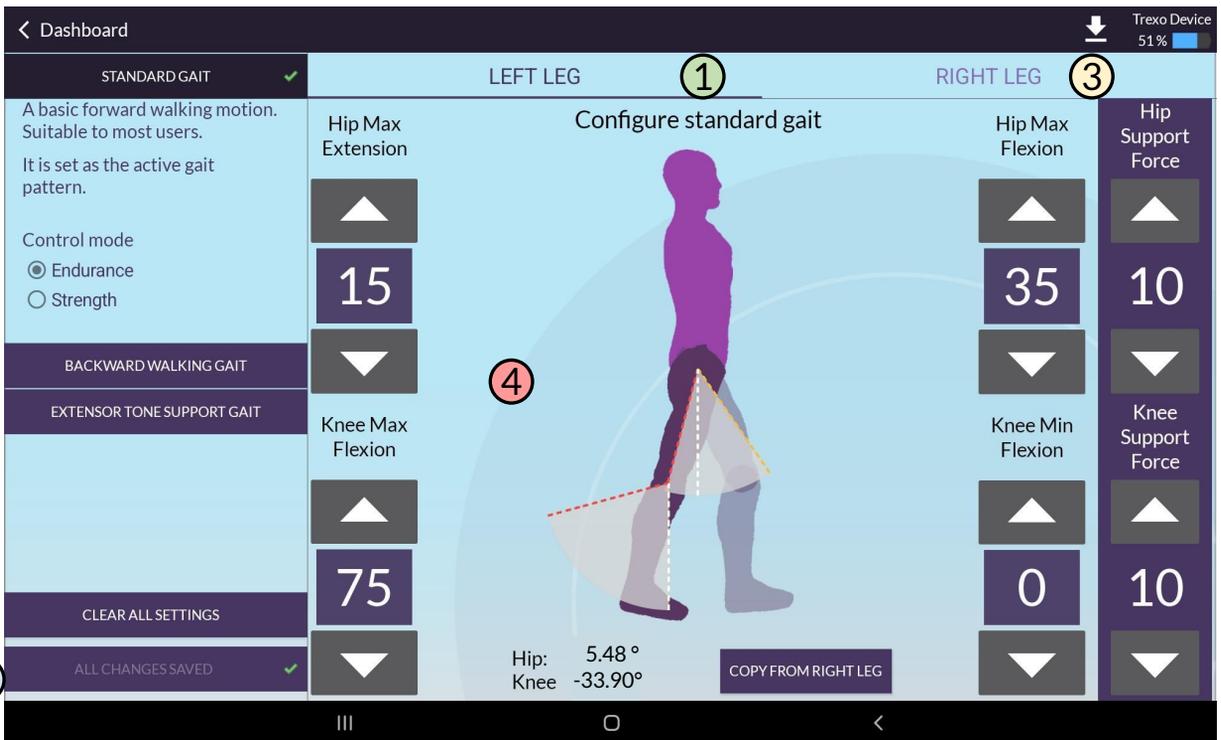




Setting gait pattern

In the event you need to readjust the safe range of motion and gait pattern, you may do so using the Trexo app.

Before starting, set up the child in the device and make sure it is not walking. Proceed by selecting “Gait” in the User profile.

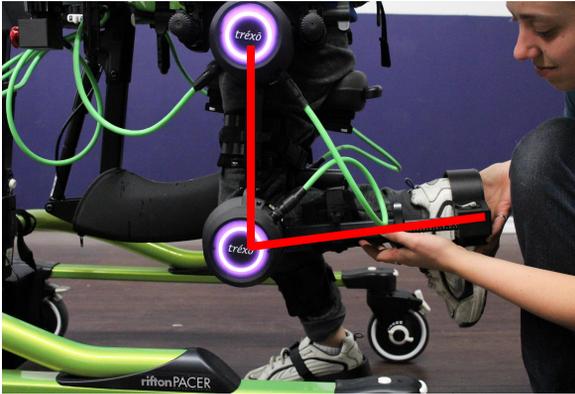


- ① Select left leg and move it through the range of motion as shown on the next page.
2. Click save.
- ② Select the right leg and repeat steps one and two.
- ③ Using arrows, adjust to a comfortable gait pattern.
- ④ Make sure all settings are saved and return to main dashboard.
- ⑤

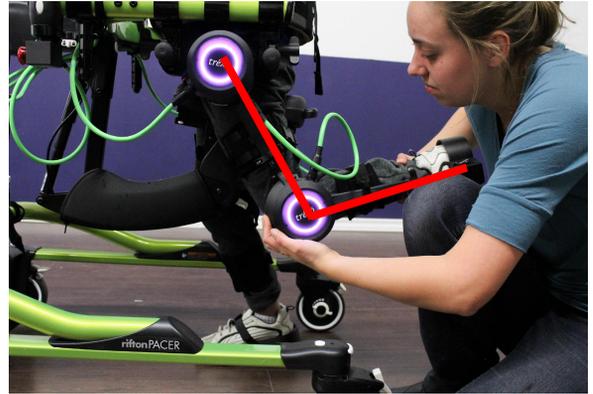


Setting gait pattern - continued

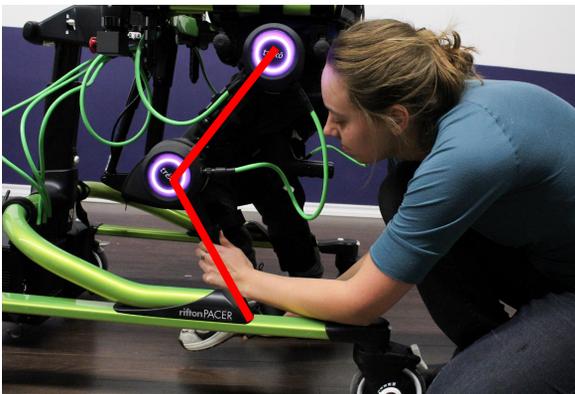
Move each leg through the entire comfortable range of motion. You may have to move each leg back and forth a few times to get the full range.



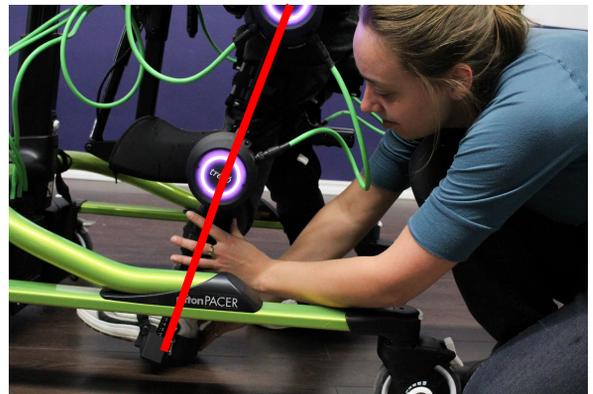
Start by flexing the knee.



Pull the leg back into hip extension.



Push the leg forward into hip flexion.



Extend the knee.



Conducting an inspection check



Store the measurements for future use in
“User profile > Patient info”



Final inspection

Once set-up, do a visual check for the following:

- The child is seated comfortably
- There are no asymmetries
- The straps are in a comfortable place with no pinching or pulling
- The legs are coupled with the device
- Knees are in line with the knee joints
- Hips are in line with the hip joints

Be cautious around the moving parts of the Trexo Device and do not obstruct it.

If everything looks correct during the inspection, proceed to the next step.



Turning

The device is not capable of turning independently and requires assistance. You may assist the user in turning if there is sufficient space available. Prior to turning, ensure the direction lock is released from the wheels.



Slow down the Trexo when approaching a turn.



Slowly pull the device in the desired direction.



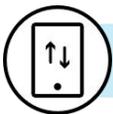
Turn the device with each step.



Set device straight when turn is complete.



Quick Trexo battery box LED guide



Tablet connection indicator

- Tablet disconnected
- Tablet connected



System status indicator

- Not calibrated
- Ready
- Walking
- (flashing)
Fault, check device



Battery status

- Low battery
- Full charge
- Good battery
- (flashing)
Critically low battery
- (flashing)
Charging



Charger status

- Fast charging
- Initializing
- Charged
- (flashing)
Charging error
- (flashing)
Trickle charge



Warranty

The Trexo device has a service life of 5 years. Subject to separate coverage for certain parts and the exclusions and limitations described in this Warranty, the Warranty covers the repair or replacement necessary to correct defects in the materials or workmanship of any parts manufactured or supplied by Trexo Robotics Inc. (Company) that occur under normal use for a period of 2 years.

Battery: The Battery, like all Nickle-Cadmium batteries, will experience gradual energy or power loss with time and use. Loss of Battery energy or power over time or due to or resulting from Battery usage is NOT covered under this Warranty.

This Warranty does not cover any damage or malfunction directly or indirectly caused by, due to or resulting from normal wear or deterioration, abuse, misuse, negligence, accident, improper maintenance, operation, storage or transport, including, but not limited to, any of the following:

1. Failure to take the Trexo Plus to, or make repairs or service recommended by the Company upon discovery of a defect covered by this Warranty;
2. Accidents, collisions, or objects striking the Trexo Plus;
3. Any repair, alteration or modification of the vehicle that was made inappropriately, or the installation or use of parts or accessories, made by a person or facility not authorized by the Company;
4. Any damage to the Trexo Plus hardware or software, or any loss or harm to any personal information/data uploaded to the Trexo Plus resulting from unauthorized access to the data or software from any source, including non-Trexo parts or accessories, third party applications, viruses, bugs, malware, or any form of interference or cyber-attack;
5. Theft or vandalism;
6. Fire, explosion, lightning, hail, flood, or water exposure;
7. Using the device over rough, uneven or hazardous surfaces;
8. Overloading the Trexo Plus beyond the maximum weight rating;
9. The environment or an act of God.

In addition to the above exclusions and limitations, expendable items such as footplates, ankle joints, paddings, straps, and cuffs are limited in coverage for a period of 6 months, subject to the exclusions and limitations already described in this Warranty.

The Rifton Dynamic Pacer gait trainer, if provided with the Trexo Plus, is NOT part of this Warranty, and has its own warranty provided by Rifton Equipment. Please contact Rifton for any issues relating to the gait trainer.



Response procedures for faults

In the event you receive an error or fault message, proceed with the following steps:

- Reset joints
- If persists reboot device
- If still doesn't resolve error, contact Trexo support

You may receive the following error messages:

- Overcurrent
- Overvoltage
- Not Initialized
- Hall Sensor Error
- Conflicting Data (Hall & Incremental)
- Conflicting Data (Absolute & Incremental)
- Absolute Encoder Error
- Incremental Encoder Error
- EEPROM Failure
- Extreme Limits
- Communication Timeout
- Communication Bad Packet
- Communication Bad Command

If you receive any of the following commands, please follow these instructions:

Unknown Fault	Contact Trexo support
Undervolt	Charge device for at least 3 hours while turned off. If persists, contact Trexo support
No Voltage	Reboot device, if persists, contact Trexo support
No Connection	Check the cable connection by unplugging and re-plugging the cables connected to the fault joint If persists reset joints If issues is not resolved then reboot device If issue is not resolved, contact Trexo support



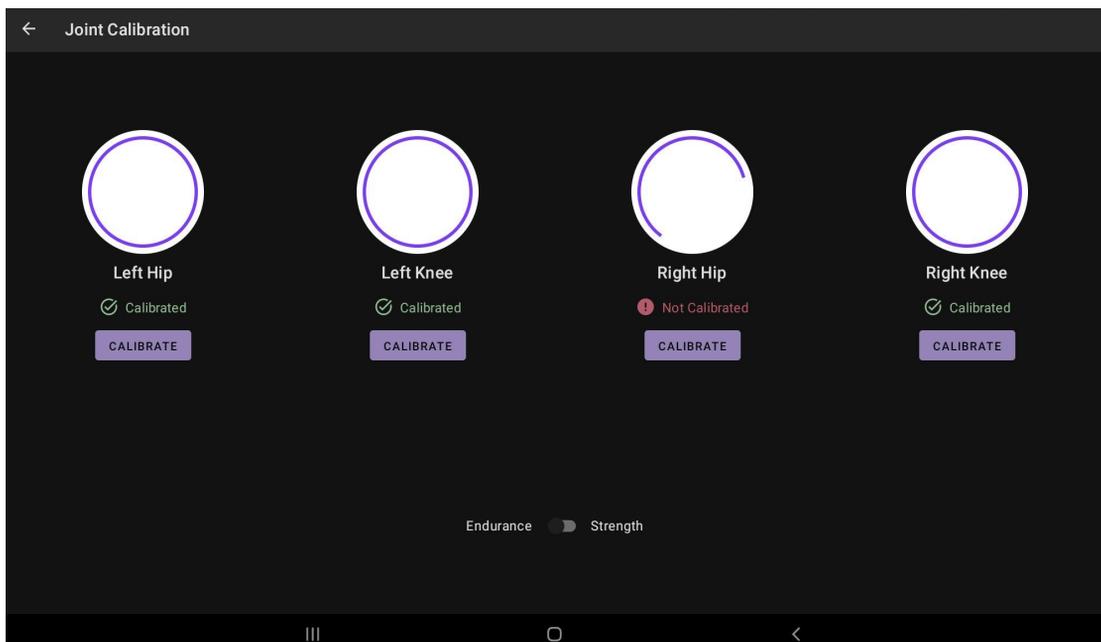
Response procedures for “No Absolute Encoder Calibration Data”

If you receive the “No Absolute Encoder Calibration Data” error message, you will need to manually calibrate the faulty joint on the device.

You can only calibrate the device without a child in it.

Follow these steps:

1. From the session screen, go to **Settings** and then select “**Set joints hard limits**”.
2. Enter the **password “trexo”**.
3. Click “**Start Calibration**” for the faulty joint, a screen as pictured below should appear.
4. Move the faulty joint to it’s maximum flexion and tap “**Set Max**”.
5. Move the faulty joint to it’s minimum by putting it into full extension and tap “**Set Min**”.
6. Tap “**Submit**”.
7. The joint should now appear as “**Calibrated!**”.
8. Exit back to settings and tap “reset joints”.



If you continue to experience issues, please contact Trexo support.



Maintenance instructions

Regular maintenance of the hardware should be conducted every **6 months**. The system will require routine maintenance for at least five years of operation.

Maintenance checklist:

- Inspect each joint for cracks
- Inspect each strap and paddings for tears or damage
- Inspect each cable and connector points for exposed or pinched wiring
- Confirm the fan in the battery box is running by turning the device on

Troubleshooting instructions

If the device is experiencing issues, please contact Trexo Robotics by emailing support@trexorobotics.com or messaging on the Trexo Chat App.



Cleaning instructions

- The Trexo should be cleaned before each use with disinfectant wipes.
- Do not clean with excessive amounts of water or place under running water.
- The strap cushioning uses a hospital grade fabric that can be wiped with standard disinfectant tools. The cushions are fluid-proof and breathable with anti-bacterial and anti-fungal properties.
- The outer straps can be wiped with disinfectant wipes, machine washed and/or replaced as necessary.

Storage instructions

Keep your Trexo in a dry place with access to an outlet. Charge your Trexo and accompanying tablet between uses.



Charging Instruction

Following these practices will ensure that the Trexo's battery life is maximized and remains in good condition.

- ❑ Turn off the Trexo before charging it. The battery will not properly charge if it's on.
- ❑ When you see a green light on the charger, the battery is fully charged and you should unplug it.
- ❑ Occasionally deplete the battery entirely. Using the battery's full capacity once every few weeks will extend its useful life.
- ❑ A fully drained battery can take up to 9 hours to fully recharge. If it is only partially drained, it should take 2-3 hours to recharge.



New Features

The Following Features were recently integrated into the Trexo Robotics software Update. We send updates through the Trexo Tablet so your Trexo can get new features as we release them.

- ❑ **Backwards Walking:** Studies have shown that backwards walking contributes to coordination and strength and overall this transfers to walking forwards.
- ❑ **Stander Mode:** Children can use trexo as a standing frame or to take breaks from walking
- ❑ **Extensor Tone Mode:** This gait pattern helps reduce knee extensor tone spasticity in the walking pattern by limiting full knee extension.
- ❑ **Initiation for both legs:** Now you can track initiation on both left and right leg independently.



Assistance

For assistance

Website: www.trexorobotics.com/contact

Call (US): 650-646-7511

Call (Canada): 647-697-1110

Email: support@trexorobotics.com

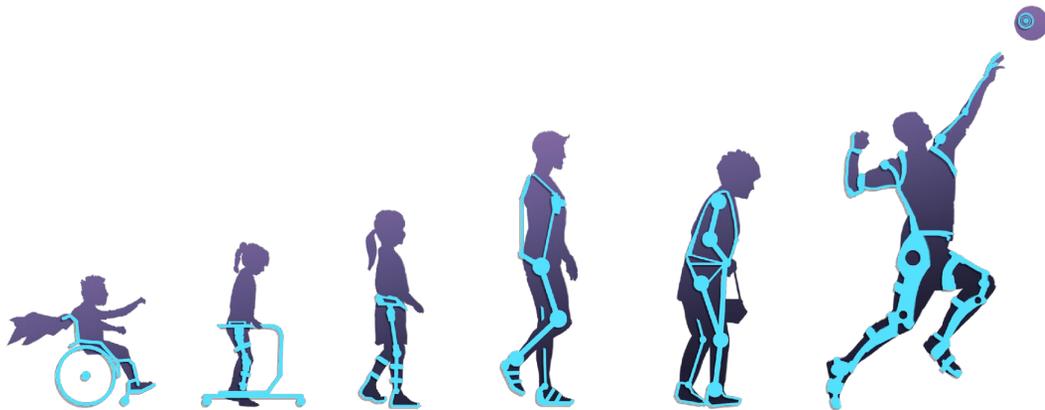
Attach product label here:

Trexo Robotics

6705 Millcreek Dr Unit 3,

Mississauga, ON L5N 5M4

Canada



tréxō robotics

Specifications are subject to change.

2021 Trexo Robotics Inc.

QMS-USR-753.006 Rev 1 - Trexo Plus Manual