User Manual
AlterG Anti-Gravity Treadmill®
Via400, 400M and 400X
This manual covers operation procedures for the following AlterG products:

AlterG Anti-Gravity Treadmill® Via400, 400M, and 400X

NOTE: The following symbol is used throughout this manual to call attention to Warnings, Cautions or operational procedures that may directly affect the safe operation of the AlterG Anti-Gravity Treadmill. Read and understand these instructions and statements before operating the AlterG Anti-Gravity Treadmill.

Warning, Cautionary statement or operational procedure that may directly affect the safe operation of the treadmill.

Note: The AlterG Anti-Gravity Treadmill has been tested to IEC medical standards for electrical safety.

IEC 60601-1:2005 + A1 2012
IP20

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User Responsibility

The AlterG® Anti-Gravity Treadmill® Via400 will perform as described in this Operation Manual and by accompanying labels and/or inserts when it is assembled, operated, maintained and repaired in accordance with the instructions provided. A defective Via system should not be used. Parts that are broken, missing, plainly worn, distorted or contaminated should be replaced immediately. Should such repair or replacement become necessary, it is recommended that a request for service be made to AlterG, Inc. The Via400 Anti-Gravity Treadmill, or any of its parts, should only be repaired in accordance with instructions provided by AlterG, Inc., certified AlterG, Inc. technicians, or by AlterG, Inc. trained personnel. The Via400 Anti-Gravity Treadmill must not be altered without the prior written approval of the AlterG, Inc. Quality Assurance Department.

The user of this product shall bear the sole responsibility for any malfunction, which results from improper use, faulty maintenance, improper repair, damage, or alteration by anyone other than AlterG, Inc. authorized representatives.

Any unauthorized maintenance; repairs or equipment modification activities may void the Via400 Product Warranty.
AlterG Contact Information
AlterG welcomes your inquiries and comments. If you have any questions or comments, please contact our service and support. Contact information list is below.

### AlterG Headquarters:

<table>
<thead>
<tr>
<th>AlterG Address</th>
<th>48368 Milmont Drive</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Fremont, CA 94538</td>
</tr>
<tr>
<td>Telephone</td>
<td>510-270-5900</td>
</tr>
<tr>
<td>AlterG URL</td>
<td><a href="http://www.alterg.com">www.alterg.com</a></td>
</tr>
</tbody>
</table>

### Service and Support:

<table>
<thead>
<tr>
<th>AlterG Address</th>
<th>48368 Milmont Drive</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Fremont, CA 94538</td>
</tr>
<tr>
<td>Telephone</td>
<td>510-270-5369</td>
</tr>
<tr>
<td>Email address</td>
<td><a href="mailto:support@alterg.com">support@alterg.com</a></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>AlterG Europe, Ltd</th>
<th>The Mill</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Horton Road</td>
</tr>
<tr>
<td></td>
<td>Stanwell Moor</td>
</tr>
<tr>
<td></td>
<td>Staines, Middlesex, TW19 6BJ</td>
</tr>
<tr>
<td>Telephone</td>
<td>07891 251503</td>
</tr>
<tr>
<td>Email address</td>
<td><a href="mailto:support@alterg.com">support@alterg.com</a></td>
</tr>
</tbody>
</table>
Indications for Contraindication for Use

Statement of Intended Use
The AlterG Via400 Anti-Gravity Treadmill provide unweighting of the user’s body weight in addition to normal treadmill functions. The unweighting allows patients and individuals to do standing exercises, walk, or run with reduced impact on their musculoskeletal system.

Indications for Use

Aerobic conditioning
Sport specific conditioning programs
Weight control and reduction
Gait training and neuromuscular re-education in neurologic patients
Strengthening and conditioning in geriatric patients
Rehabilitation following injury or surgery of the lower extremity
Rehabilitation after total joint replacement

Precautions for Use

Cardiovascular disease or respiratory compromise
Exercise induced asthma or angina
Acute and chronic back problems
Ruptured or herniated disc
Safety and effectiveness in pregnant women has not been established
Safety and effectiveness for individuals with Functional Independence Measure score of 1 or 2 (dependent of max assist) has not been established
Treadmill belt does not lock in place. Be sure patient is stable before turning off the treadmill and exiting
Heart rate monitor is not accurate
Any condition where increased intra-abdominal pressure may be a concern (for example urinary incontinence, pelvic floor dysfunction, pelvic floor reconstruction, or other conditions)

Contraindications for Use

Unstable fracture
Cardiovascular hypotension
Deep vein thrombosis

“This appliance is not intended for use by persons with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety. Keep children under the age of 13 away from this machine.”
Important Safety Instructions

Before using the AlterG Treadmill please familiarize yourself with this manual so that you may operate the AlterG Treadmill in a safe and effective manner. Instructions may be found throughout this manual, on the control console and on labels applied to the machine. We want your experience with the AlterG Treadmill to be safe and enjoyable, so please make sure you read and understand this entire manual before operating your system.

⚠️ DANGER: To avoid imminently hazardous situation that will result in serious injury or death.

- DO NOT modify the plug provided with the treadmill. The AlterG Treadmill requires a 20A 220 VAC outlet protected by a 20 amp circuit breaker. The AlterG Treadmill comes equipped with a 6-20P NEMA plug. If the provided plug will not fit in the outlet, have a proper outlet installed by a qualified electrician.
- Do not use any electrical adapters. To do so could result in an electrical shock hazard.
- Do not operate the AlterG Treadmill in wet or damp environments.
- Do not operate the heart rate monitor transmitter in conjunction with an electrical heart Pacemaker or similar device. The transmitter may cause electrical disturbances, which can interfere with pacemaker function.
- NOTE: the disconnect plug is accessible after installation. Always unplug all power to the AlterG Treadmill before cleaning or servicing.
- Do not soak any part of the AlterG Treadmill with liquid during cleaning; use a sprayer or damp cloth. Keep all liquids away from electric components. Always unplug the machine before cleaning and maintenance.
- Only an authorized technician should service the system.
- Do not place any liquids on any part of the AlterG Treadmill.
- Do not unplug or alter any of the internal wiring on the machine after installation.
- Do not operate where aerosol (spray) products are being used or where oxygen is being administered.
WARNING: Potentially hazardous situation to be avoided that could result in serious injury or death.

- Consult with your physician before beginning any exercise program. This is particularly true if you have any of the following: history of heart disease, high blood pressure, diabetes, chronic respiratory disease, elevated cholesterol, if you smoke cigarettes, or have any other chronic disease or physical impairment.
- If you experience dizziness, chest pains, nausea or any other abnormal symptoms while using the treadmill stop immediately. Consult a physician before continuing.
- Close supervision is necessary when this appliance is used by, or near children, invalids, or disabled persons.
- Use this appliance only for its intended use as described in this manual. Do not use attachments not recommended by the manufacturer.
- Never operate this appliance if it has a damaged cord or plug, if it is not working properly, if it has been dropped or damaged, or dropped into water. Return or call a service center for examination and repair.
- Do not carry this appliance by supply cord or use cord as a handle.
- Keep the cord away from heated surfaces.
- Never operate the appliance with the air openings blocked. Keep the air openings free of lint, hair, and the like.
- Never drop or insert any object into any opening.
- Do not use outdoors.
- Do not operate where aerosol (spray) products are being used or where oxygen is being administered.
- To disconnect, turn all controls to the off position, then remove all power to the unit.

SAVE THESE INSTRUCTIONS

CAUTION: Potentially hazardous situation to be avoided that may result in minor or moderate injury.

- Consult a qualified electrician before using any extension cords. Long extension cords cause a voltage drop to the machine, which may cause it to operate improperly.
- ALWAYS USE THE EMERGENCY SAFETY LANYARD SUPPLIED WITH THE ALTERG TREADMILL! It should be attached to the user. This is very important for your safety in case you fall during your workout.
- Read and understand all instructions before using the AlterG Treadmill.
- Read and understand and test the emergency stop feature.
- Inspect the AlterG Treadmill for worn or loose components prior to use. Tighten/replace any worn or loose components or bolts prior to use.
- Pregnant women or women who may be pregnant should consult their physician before using the AlterG Treadmill.
• The AlterG Treadmill must be used under the supervision of a properly trained operator. At no time should a user of the machine exercise without appropriate supervision; even if having been previously trained in the proper operation of the device.
• Set up and operate the AlterG Treadmill on a solid, level surface.
• Keep all loose clothing and towels away from the treadmill running surface. DO NOT store anything (like shorts) inside the bag.
• Prior to beginning a workout, check to make sure there is no debris inside the AlterG Treadmill.
• Always keep the running surface clean.
• Keep the area around the treadmill clear. Make sure you leave at least 2 feet on either side of the AlterG Treadmill to accommodate bag expansion during inflation.
• Keep hands away from the bag and frame structure during inflation to avoid pinching.
• Keep hands away from all moving parts.
• Do not remove the cover or bag unless instructed to do so by an AlterG Technician.
• Wear proper athletic shoes, such as those with rubber or high-traction soles. Do not use shoes with heels or leather soles. Make sure no stones or sharp objects are embedded in the soles.
• As with any treadmill workout, include a cool-down phase at the end of your exercise session. Return to full body weight and exercise moderately before stopping. Avoid abruptly ending or pausing your workout while at reduced body weight or high speed.
• The safety and integrity of the machine can only be maintained when the AlterG Treadmill is regularly examined for damage and wear and is properly repaired. It is the sole responsibility of the user/owner or facility operator to ensure that regular maintenance is performed. Worn or damaged components must be replaced immediately and the AlterG Treadmill removed from service until the repair is made. Only manufacturer supplied or approved parts should be used to maintain and repair the AlterG Treadmill.

SAVE THESE INSTRUCTIONS
Section 1: Introduction

Things to consider before beginning an exercise program

Consult a physician
Anyone considering an exercise program or an increase in activity should consult a physician. If you have cardiovascular disease or there is a history of such disease in your family, are overweight or are not currently involved in an exercise program, it is highly recommended that you follow the guidance of your physician before and during an exercise program or any other increase in physical activity.

Consult a Professional Fitness Trainer
In addition to following the recommendations of a physician it is advisable to consult a professional fitness instructor or personal trainer to develop an overall fitness evaluation/wellness program that is tailored to your particular needs.

Understanding the Importance of Warming Up and Cooling Down
It is important to gradually “warm up” and “cool down” prior to and at the end of each work out, respectively. Always try to incorporate a series of basic stretches before and after each workout. Stretching encourages the necessary flexibility to help prevent sore muscles and injury during daily activities. Do not abruptly end your exercise session on the AlterG Treadmill. Always restore your full body weight slowly and include a few minutes of walking at full body weight and low intensity before stopping your exercise session.

How Often and for How Long Should You Exercise?
The American College of Sports Medicine recommends a frequency of 3 to 5 days per week for duration of 20 to 60 minutes, dependent on the intensity of the exercise session.¹ The United States Department of Agriculture suggests that physical activity should be moderate or vigorous and add up to at least 30 minutes a day. The USDA defines moderate as walking briskly at about 3.5 miles per hour while vigorous activity is running or jogging at 5 miles per hour.² These are general guidelines; you should determine what is appropriate for you with the help of your physician.

¹ Medicine & Science in Sports & Exercise. Volume 30 (6) pages 975-991, 1998
² http://www.mypyramid.gov/pyramid/ physical_activity.html
Section 2: Setup and Installation

An AlterG qualified technician will install the AlterG Anti-Gravity Treadmill after delivery. Please make sure that you inspect the AlterG Treadmill upon delivery for any damage that may have occurred during transportation. Take pictures and immediately report any damage to the shipping company and AlterG. When you sign for the shipment of your AlterG Treadmill, you are taking responsibility for any damage that may occur before installation.

Electrical Requirements
The recommended electrical outlet/power source for the AlterG Anti-Gravity Treadmill is a 20 ampere, 220VAC @ 50/60 Hz dedicated circuit with ground. The plug supplied with the AlterG Anti-Gravity Treadmill is designated by the NEMA configuration system as 6-20P. The corresponding receptacle for the plug is a NEMA 6-20R.

International systems are shipped with the NEMA 6-20P. An appropriate plug for the country and facility in question should be wired as follows:

- Black Conductor: Line
- Black Conductor: Line
- Green/Yellow Conductor: Ground
<table>
<thead>
<tr>
<th>Customer Circuit</th>
<th>Via400 Rating</th>
<th>Cable (mm²)</th>
<th>Connector Type</th>
<th>Region</th>
</tr>
</thead>
<tbody>
<tr>
<td>20A</td>
<td>16A</td>
<td>4</td>
<td>NEMA 6-20R</td>
<td>US, Canada</td>
</tr>
<tr>
<td>16A</td>
<td>12.8A</td>
<td>≥ 1.5 → 2.5</td>
<td>Type F</td>
<td>EU (DEU)</td>
</tr>
<tr>
<td>13A</td>
<td>10.4A</td>
<td>≥ 1.5 → 2.5</td>
<td>Type G</td>
<td>UK</td>
</tr>
<tr>
<td>32A</td>
<td>16A</td>
<td>2.5</td>
<td>No Plug Required On 20A Switch Spur</td>
<td>UK (ring)</td>
</tr>
<tr>
<td>32A</td>
<td>16A</td>
<td>≥ 4.0</td>
<td>IEC 60309 male plug</td>
<td>UK (ring)</td>
</tr>
</tbody>
</table>
Ground Requirements
The AlterG Treadmill must be grounded electrically. If there is an electrical malfunction, grounding provides a path of least resistance for electric current to reduce the risk of electric shock. The AlterG Treadmill is equipped with a power cord with a grounded plug (domestic systems). This plug must be plugged into an appropriate receptacle (NEMA 6-20R) that is properly installed and grounded in accordance with the current National Electrical Code as well as all local codes and ordinances. If you are at all unsure of these requirements, contact AlterG for clarification.

Danger
Improper connection of the equipment-grounding conductor can result in a risk of electric shock. Check with a qualified electrician or serviceman if you are in doubt as to whether the product is properly grounded. Do not modify the plug provided with the product – if it will not fit the outlet; have a proper outlet installed by qualified electrician.

Location Requirements
The AlterG Treadmill is 38 inches wide and 84 inches long. It weighs approximately 750 pounds. It needs to be placed on a structurally sound surface. If it is used above ground level it is advisable to place it near the corner of the room or where the floor will be strongest to ensure maximum support during high-speed, high-impact use. The surface should be level to ensure minimal flexing of the AlterG Treadmill frame. It is recommended that the AlterG Treadmill be placed on a rubber mat or padded indoor/outdoor style carpet. The front of the AlterG Treadmill needs to be within 10 feet (3.05 meters) of the proper electrical outlet. Check with a qualified electrician or AlterG if you plan on extending the cord in any way. Make sure you leave at least 24 inches on either side of the AlterG Treadmill to allow the bag to expand during inflation. Allow 40 inches behind the AlterG Treadmill to accommodate a user getting in and out of the AlterG Treadmill system safely.

We recommend an area at least 12 feet (3.66 meters) long by 8 feet (2.44 meters) wide to provide adequate space for operation and user access. Also check ceiling height to ensure users won’t hit their heads. The treadmill surface is approximately 8” (20 cm) off the floor when level and can be higher when the subject is running on a grade. An 8-foot (2.44 meter) ceiling may be too low for taller users.

Transporting your Treadmill
Contact AlterG if you plan on moving your treadmill. Damage sustained by improperly moving the AlterG Treadmill will not be covered by your warranty.
Section 3: Principle of Operations

AlterG’s technology was originally conceived as part of an effort to help NASA’s astronauts maintain fitness during prolonged space flight. AlterG pioneered the concept of combining this technology with an advanced pressure regulation system and treadmill into a machine that provides the most effective and comfortable body weight support system available today.

Physics & Technology Behind the AlterG Treadmill

Differential Air-Pressure Technology
The physical lifting force generated by the AlterG Treadmill comes from a difference in air pressure around the user’s upper and lower body. The AlterG Treadmill uses this methodology, known as Differential Air Pressure (DAP) technology to unweight the user.

An inflatable fabric enclosure covers the treadmill. In the middle of the enclosure is a hole through which the user steps onto the surface of the treadmill. The user wears a special pair of shorts, and these shorts are zipped into the hole in the enclosure. A blower is used to inflate the enclosure. The pressure generated in the inflated enclosure provides a lifting force against the body. Because the pressure is only slightly above atmospheric and evenly distributed, the force on the lower body is almost imperceptible. The AlterG Treadmill provides a level of comfort while exercising unmatched by other unweighting systems.
**Pressure Regulation System**
AlterG has developed an advanced and very sophisticated pressure regulation system that ensures the AlterG Treadmill has extremely accurate weight control with good reproducibility between sessions. When you run in the AlterG Treadmill, the natural bouncing motion of your body changes the shape and volume of the bag. This effect would change the interior pressure of the bag and your effective exercise weight if it were not for the pressure regulation system in the AlterG Treadmill that monitors and reacts to these changes. This technology makes rapid adjustments to the bag pressure, maintaining the pressure in the bag and your exercise body weight at near constant levels.

**Air Seal Shorts**
In order to seal users into the AlterG Treadmill in a comfortable and convenient manner, AlterG has designed a special pair of shorts. These create an airtight environment around the lower body, and the zipper provides a mechanism to quickly attach and detach from the enclosure. The shorts are easy to take on and off and sealing with the machine is as simple as zipping up a jacket. The shorts are similar to those worn by many professional athletes for compression and support during training activities.

Shorts are manufactured using the following materials: 90% Neoprene, 10% Urethane coated Nylon.

*Figure 2. AlterG Compression Shorts*
Section 4: Operating the AlterG Treadmill

POWERING UP
The AlterG Treadmill is turned on by operating the switch located on the front cover of the system.

Before you turn on the AlterG Treadmill you must do two things:

1. Make sure there is no one standing on the treadmill when you power up the system.
2. Make sure the cockpit is locked in its topmost position so the inflatable enclosure is not sitting on the treadmill surface.

The computer that controls the AlterG Treadmill weighs the treadmill when the system is first turned on. The computer will receive an erroneous reading if either the fabric enclosure or an individual is on the surface of the treadmill. The proper location of the cockpit on power-up is shown in Figure 4.

Note: Once the power switch is turned on, wait 30 seconds before the subject attempts to enter the treadmill. The system requires 30 seconds to run a series of diagnostic tests.
Putting on the Shorts
Your AlterG Treadmill comes with dedicated shorts that ensure an airtight seal in the fabric enclosure. Slip the shorts on in the same manner as a conventional pair. The life of the shorts will be extended and they will be easier to get on if you first remove your shoes.

Note: End of Life Product Disposal: AlterG products contain no waste or residual materials. The products have significant recoverable and recyclable elements. Consult your distributor for the safe and appropriate disposal of product no longer in service.

Select a short size that is snug but not uncomfortable, and make certain the tag is at your back and on the inside of the shorts. The long tail of the zipper should be in front. It is advisable that you wear a pair of running shorts or tights under the AlterG shorts.

Stepping into Out of the Treadmill
Lower the cockpit so it compresses the bag against the treadmill surface (Figure 5). Push it all the way down for ease of entry. Enter from the back and step into the opening in the fabric enclosure. It is fine to step on the fabric as you enter, but make sure that you have no rocks or sharp objects embedded in the soles of your shoes that could mar or damage the bag.
Adjusting the Height of the Cockpit
The cockpit slides up and down on a bearing system and is counter-weighted to make it easy to lift.

CAUTION: Before lifting the cockpit, ensure that the cockpit lock is in the open position, all the way to the left side of its travel. If it is not fully unlocked, it may engage in the lowest position as you lift. See Figure 6.

Stand centered in the hole in the fabric enclosure facing forward with both feet on the treadmill belt. Lower yourself by bending at the knees and grasp the cockpit on either side. With a straight back and good lifting technique, lift the cockpit to the appropriate height and engage the lock by pulling the lock lever to the right. Do not force the lever. You may have to “jiggle” the cockpit up and down slightly to get the lock pins to engage. When fully engaged, the lock lever will be positioned all the way to the right in the slot. See Figure 7.
There is a range of heights at which the cockpit can be placed. For greatest freedom of movement, place the tubing that comprises the cockpit slightly below the greater trochanter of the femur. Figure 8 demonstrates this position.
For more support and stability place the cockpit in a higher position. Some users use the iliac crest as a reference point. Pull up on the zipper sewn to the enclosure and align the zipper with the iliac crest as shown in Figure 9.

![Zipper at level of iliac crest](image)

**Figure 9. Adjustment of the Cockpit to Align the Zipper with the Iliac Crest**

You should never attempt to move the cockpit while the fabric enclosure is inflating or when fully inflated. If you discover while you are exercising that you need to reposition the cockpit, you will have to pause or stop the workout, re-adjust the height of the cockpit and start again.

**Zipping into the Fabric Enclosure**

Once the cockpit is in place, zip yourself into the AlterG Treadmill. The zipper should be started at the front and center of your body and zipped counter-clockwise all the way around until it returns to overlap in the front. Make sure that the zipper is completely closed.
Use of the Safety Lanyard
It is essential that you ALWAYS use the magnetic safety lanyard supplied with the machine. Attach the spring clip to the front of clothing and place the red magnet on the circular locator labeled “Emergency Stop” (Figure 10).

The lanyard and magnet serve as a safety switch mechanism. If you become uncomfortable during exercise you can pull on the lanyard to displace the magnet and stop the system. Should you fall while exercising, the magnet will be pulled from the console and the system will stop.

![Lanyard to be clipped to clothing](image)

Figure 10. Safety lanyard and magnet location

**WARNING:** NEVER attempt to defeat this critical safety feature by attaching the lanyard to the structure of the machine or anywhere else besides your clothing.
Operating the Treadmill and the Unweighting System

All treadmill and pressure functions are controlled from the touch monitor. Prior to accessing treadmill and gait controls, weight calibration must be done.

STEP 1: PREPARATION FOR EXERCISE.
Before pressing START, stand still on the surface of the treadmill belt. Do not hold onto or support yourself on any part of the system structure. The system weighs you prior to exercise and the treadmill must support your full body weight.

Before You Begin
Please check the following items
- Zipper is completely sealed
- Racetrack is secured
- Feet are flat on the deck
- Arms are crossed

Figure 11. Operating Console

Figure 12. Before you Begin
STEP 2: BEGINNING THE EXERCISE SESSION.
Press START to begin the exercise session. The AlterG Treadmill will proceed with a calibration routine that allows the system to determine the relationship between enclosure pressure and your body weight. You will feel the pressure in the bag change as the system calibrates. It is best to cross your arms while the routine runs to avoid touching any part of the structure and ruining the calibration.

You will be promptly notified when the calibration sequence is complete, press START SESSION to start your workout session. Inactivity will cancel your completed calibration.

This screen also displays your lower body weight limit.

MAIN SCREEN BREAKDOWN

Figure 13. Calibration Sequence
Figure 14. Start Session
Figure 15. Display Breakdown
STEP 3: ADJUST YOUR BODY WEIGHT.

⚠️ CAUTION: At 40% body weight and lower, you can become unstable if you jump or perform any other activity besides walking or running. Reduce your body weight percentage slowly so you can become accustomed to the new sensation and adjust your gait mechanics accordingly.

![Treadmill and Body Weight Controls](image)

**Figure 16. Right side Treadmill and Body Weight Controls**

STEP 4: SELECT TREADMILL DIRECTION
When the treadmill turns on, it is programmed for forward ambulation. Press the REVERSE button to walk backwards.

STEP 5: ADJUST TREADMILL SPEED.
Speed is incremented and decremented by pressing the + or – button respectively. In the forward direction, speed will increase in .1mph (.16 km/hr) increments for each button push. When the treadmill is programmed in reverse, speed will increase in .1
mph (.16 km/hr) increments up to a maximum of 3 mph (4.8 km/hr). Holding either button down for more than 2 seconds causes the speed to increment or decrement at a faster rate.

**Note:** For speeds above a value of 10 (for both mph and kph) the speed display alternates between the integer and fractional speed setting.

**STEP 6: ADJUST TREADMILL GRADE**
Press the + button to increase grade, press the – button to decrease grade. Holding the button down for more than 2 seconds will cause grade to change at a more rapid rate.

**Note:** Treadmill grade cannot be adjusted greater than 5% if speed is set for less than .5 mph (.8 km/hr).

**STEP 7: ENDING THE EXERCISE SESSION**
Return the treadmill to 0% incline before stopping your session.

Press the STOP button to end exercise.

**FUNCTION OF THE PAUSE BUTTON**
Press the PAUSE button to place the treadmill in the pause mode. The tread belt will stop but all statistical information will be preserved. Body weight support is maintained while in the pause mode. Press the PAUSE button again to resume exercise.

**STEPPING OUT OF THE TREADMILL**
Wait for the tread belt to stop and the enclosure to fully deflate before exiting the system. Unzip your shorts and pull the top “skirt” of the shorts from under the enclosure lip. Open the cockpit lock to disengage it from its locked position. Lower the cockpit onto the surface of the tread belt and exit to the rear of the system (figure 5). After exiting the system, return the cockpit to an upright, locked position.
Section 5: Session Metrics

Metrics
The session screen gives you a graphical overview of body weight, speed, and inclines. It also includes information on your average speed, calories burned, and total distance (Figure 17).

Session Metrics
The session metrics, by default, is displayed on the top portion of the screen. The session time, calories burned, pace, distance traveled, and heart rate is displayed (Figure 17). Alternative layouts can be set in the facility setting, please see the ‘Settings’ section below.

![Session Metrics](image)

Figure 17

Calories
The calorie count displayed takes into account your body weight percentage, speed, inclined, and distance. As a result, the count is a more accurate reading of how many calories have been burned.

Reference [http://42.195km.net/e/treadsim/](http://42.195km.net/e/treadsim/) for more information on how the Via400 calculates calories burned.

Heart Rate Monitoring

Heart Rate Monitor
The AlterG Treadmill display is designed to receive a user’s heart rate in conjunction with the use of a Polar® (Chest Strap) Heart Rate Monitor. Polar chest straps can be purchased at most popular sporting goods stores or online. In order for the screen to correctly display a user’s heart rate, the receiver within the display must obtain a stable heart rate signal from the Polar transmitter. The Polar Heart Rate System consists of

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3 Polar® is a registered trademark of Polar Electro, Inc. Lake Success, NY
two main elements: 1) the sensor/transmitter and the receiver within the AlterG Treadmill display.

How to Wear the Chest Strap Transmitter
The Sensor/Transmitter is worn just below the chest and at the top of the abdomen, directly on bare skin (not over clothing). The transmitter should be centered below the pectoral muscles. Once the strap is secured, pull it away from the chest by stretching the band, and moisten the conductive electrode strips with plain water. The transmitter operates automatically while you are wearing it; it does not operate while it is disconnected from your body. However, as moisture may activate the transmitter and salt buildup from sweat can be a problem, rinse the transmitter with water and wipe it dry after use. The chest band is washable. After you have detached the transmitter, wash the band in warm water using mild soap and rinse thoroughly in clean water.

The Receiver
You must be within two and a half feet of the receiver in order for the signal to be received. Please take note that your transmitter may fluctuate erratically if you are too close to other Polar equipment. Maintain at least a three-foot distance between other Polar units.

NOTE: Erratic heart rate reception may occur if the Polar Monitor is too close in proximity to strong sources of electromagnetic radiation, such as television sets, Personal Computers, electric motors and some other types of fitness equipment. Only one transmitter should be used inside the range of any one receiver as the receiver may pick up several signals simultaneously, causing an inaccurate readout.

Caution
The heart rate obtained while on the AlterG Treadmill is for reference only. No medical treatment or diagnosis should be based on the Polar Monitor.
Section 6: Operating HD Video Monitoring System

Getting Started
To view the camera, select the camera option on the navigation bar (Figure 18).

Focusing and Positioning Cameras
There is a single camera on the Via400. The front camera will be mounted on the inside of the bag and focused at the factor before shipment (Figure 19).

Camera views
The front camera is permanently affixed inside the treadmill bag. The video feed will be displayed on the touch monitor on the main display window.
Section 7: Operating Gait

Gait Measurements

The Via400 measures the following:

- Weight bearing symmetry
- Cadence
- Stance time symmetry
- Step length symmetry

On the navigation bar, to view Gait, click on the “Gait” button (Figure 21).

Gait measurements are a display of the last 3 steps on each foot.

Gait Recording

Users can record as many gait reports as they would like. There is no time limit to the length of the recording. To record a gait report, navigate to the gait page and click the green “Record Gait” button (Figure 22).

A red bar will appear at the top of the screen signaling that gait is currently being recorded. Press “Stop Recording” when you want to conclude recording (Figure 23).

Once you have completed your recording, reports are automatically listed to the right of the data screen (Figure 23).

You can adjust any of the treadmill controls while recording (body weight %, incline, and speed). We recommend recording different reports so that you can see the effect of body weight, incline, or speed on gait symmetry.
**Gait Features**

There are two additional features for different use cases on the Gait Screen.

**Cross over gait:** If you have a patient with scissoring gait (foot crosses the midline when planted), push the “Cross over gait” button. The button will be highlighted orange when in effect. This allows the software to identify the right foot when the left load cells detect weight, and left foot when the right load cells detect weight (Figure 24).

**Running mode:** Switch to running mode if your patient is jogging or running. The button will be highlighted orange when in effect (Figure x). The software will switch to an alternative algorithm to track gait metrics at faster speeds. If running mode is not detected, but needed, a yellow bar will appear at the top of the screen with a message that says “Gait data may not be accurate.”

**Gait Reports**

To view previous Gait Reports, navigate to the Gait screen. All reports are listed to the right of the Gait Data (Figure 25).

Select which gait report(s) you would like to review from the thumbnails.

A summary of that data session will display on the screen. This is an average of each of the gait measurements over the duration of your recording. (i.e. – If you recorded for 30 seconds, this is a summary of your gait symmetry over those 30 seconds).

The thumbnails are labeled with the starting body weight % and session time of your recording to allow you to easily locate the report you would like to view.
Note: You will be able to email or save gait reports at the end of your session (discussed in section 5).

Section 8: Operating Pain

Pain Recording

While in a session, to record pain, click on the “Pain” button (Figure 26).

Pain can be recorded on a scale of 0-10 (0 = no pain, 10 = maximum pain). To record pain, select a number from 0-10 and click “Set Pain Level.”

There are no prompts during the session to remind you to input pain. It is up to the therapist to ask the patient what their pain level is and input it throughout the session.

Once you have set the pain level, you will automatically be sent to the “View Results” page.

Pain Results

To review previous pain recordings, click on the blue “View Results” button. This is to the right of the green “Set Pain Level” button.

A graph displaying all recorded pain results will be plotted here (Figure 27). The graph displays pain in relation to approximate body weight %. (i.e. – If you recorded a pain level of 8 at 93% body weight, you will see the number 8 listed in-between 90-100%).

Tolerance will also be displayed. This is a measurement of the body weight % where the patient felt the least amount of pain. (i.e. – Patient example in Figure x rated a pain level of 2 at 79% body weight).

Note: Pain results will automatically be included when you email or save your end of session reports (discussed in section 5).
Section 9: End of Session Reporting

Any session reports not emailed or saved at the end of the session will be deleted.

Estimated wait time to email reports is approximately 20 seconds, depending on your Wi-Fi connection. Please be patient and confirm all data has been sent before exiting the treadmill.

Creating End of Session Reports

Once you have hit stop at the end of your session, you will have the opportunity to email or save a copy of your session report, gait data, and pain measurements captured during your session. To create a report, click on the green “Create Report” button (Figure 28).

Select which reports you would like to email or save by clicking on the thumbnails you want. The thumbnails will be highlighted once selected (Figure 29). You can send as many reports as you would like.

The end of session report is a summary of your session details. It will automatically be sent to you along with the selected items in PDF format. It will also include all of the pain data recorded. There will be no patient or athlete name on the report.

Once you have selected all of your items, click “Email Report” or “Export to USB” to save.
Emailing Reports

Add a Report Name before sending (Figure 30). We recommend a non-identifiable patient ID (ex: 12345), or the session time and date (ex: YYMMDD HH:MM). This will help you identify whose data this is. We recommend emailing the information to yourself and later attaching it to the patient’s EMR.

Type your email address into the white text box and press send.

Extracting with USB

If you do not have Wi-Fi and end of session report on a USB key, you can do so by clicking on the “Export to USB” button (Figure 31).

Add a Report Name before sending (Figure x). We recommend a non-identifiable patient ID (ex: 12345), or the session time and date (ex: YYMMDD HH:MM). This will help you identify whose data this is.

Once you have added a Report Name click “Save Report.”

You can save as many reports as you would like, as long as there is enough space on your thumb drive.

The end of session report is a summary of your session details. It will automatically be sent to you along with the selected items in PDF format. It will also include all of the pain data recorded. There will be no patient or athlete name on the report.
Section 10: Facility Settings

Via400 Settings
To access all setting screens, return to the home screen and double tap on the upper-left corner of the screen (Figure 32).

A keypad will pop up (Figure 33). Enter code 5900.

Upon entering the settings menu, you will be greeted with a number of configurations and options as seen on Figure 34.
Settings Menu Navigation
Your facility will have limited access to the Settings Navigation Bar (Figure 34) to aid in troubleshooting and diagnostics. You will be granted access to the GUI, Support and Service and other highlighted tabs. Inaccessible Tabs and Buttons will be ‘grayed’ out.

Adjusting Display Layout – GUI Tab
AlterG has set the default layout in the factory to the first setting listed, alternative layouts can be made to the Navigation Bar, Session Metrics and the Treadmill controls (Figure 35).

To select an alternative layout, press the Change Layout button adjacent to the layout you require.

You can also change from Metric or Standard units by toggling the Use Metric Units button (Figure 34).

Tech Support – Support Tab
If you are having issues with your Stride Smart system and are connected to Wi-Fi, our Service Team may be able to get remote access and help you troubleshoot your unit.

Please call our Service Team, (510) 270-5369, if you would like to grant them remote access. They can walk you through the procedure below.

1. In the Facility Settings under Support Tab, click “Tech Support” (Figure 37).
2. Within 5 seconds you should see a TeamViewer window pop up (Figure 36).
3. After another 5-10 seconds, the ID and password fields will auto-populate. Read the ID and password back to your technician. This will allow them to connect to your unit and control the screen.
**Restart**
If you are experiencing issues with Stride Smart, we may ask you to restart your device. Please do this by logging into the Facility Settings Screen, and clicking the soft “Restart” button.

**Shut Down**
We have designed the Via400 to remain on at all times. The computer and the displays draw exactly 45W, which is less than a 60W light bulb.

The soft Shut Down button should only be used if Stride Smart and the Anti-Gravity Treadmill must be powered down. Please shut down the unit before unplugging anything from the wall.

The system will start up automatically once it is plugged back into the wall.

**Calibrate Deck Weight – Service Tab**
If you are having issues with calibration, you may need to recalibrate the deck weight. Please contact AlterG Service prior to resetting the deck weight.

Select the Service Tab. To recalibrate deck weight, make sure there is no weight on the treadmill deck. There can’t be anyone standing inside, or on the sides of the treadmill.

Click “Set Deck Weight” (Figure 38). This number should be around 200 lbs (+/- 50).

If you continue to have issues with calibration please contact our AlterG Service Team.
Manage Emails – GUI Tab

Shorten the End of Session process by pre-programming your staff’s email addresses. This allows you to select email addresses from a pre-programmed list, and reduce the amount of time spent entering data. Click on “Manage Emails” under the GUI Tab (Figure 34).

Enter the clinician’s name and email address and click “Add (Figure 39).”

You have the option of displaying the pre-programmed list by name or by email (Figure 40).
Section 11: Calibration

If you had your Anti-Gravity Treadmill prior to installing the Via400, you may notice differences in the calibration. We have implemented a smarter calibration process, which can cause:

- Faster calibration process
- Stronger pressure in the calibration process
- More accurate unweighting
- Inability to unweigh every patient down to 20%

The inability to bring someone down to 20% body weight is due to an increased accuracy during the initial calibration process. If the AlterG is unable to get the user down to 20% during calibration, it will only allow them to unweight themselves to the *lowest* accurate body weight point. (i.e. – If a patient is limited at 37% body weight, this means during calibration the AlterG could not get them to go below 37%.) There are a few factors that can cause this, and it should not be of concern unless persistent with all users.

The following may cause an inability to reduce body weight down to 20%:

- User moving during the calibration process
- Body composition
- Wearing old shorts (with leaks, tears, or holes)
- Old bag (with leaks, tears or holes)
Section 12: Wi-Fi Connectivity

The Via400 is Wi-Fi enabled and can be set up upon installation as long as the proper Wi-Fi network information is provided.

The Wi-Fi connection can be set up after installation if the facility has a USB keyboard and the Wi-Fi network information. Please contact the AlterG Service Team if you need assistance in connecting to your Wi-Fi network.

Please note, if your facility has special permissions and security required for Wi-Fi connectivity, we are happy to work with internal IT departments to connect the Via400 to these networks.
Read and understand the labels on the AlterG Anti-Gravity Treadmill. The labels provide information on the operation of the system and should be followed for a safe and enjoyable exercise experience. Should any of the labels become damaged and unreadable, immediately contact AlterG for replacements.

The location of the labels is indicated in Figure 40. Refer to the diagram to locate the label being described.
**Label #1.** This label is located on areas of the Anti-Gravity Treadmill frame that present a pinch hazard. Hands or any other part of the body should not be placed in these areas during operation of the system.

**Label #2.** This label is located within the structure of the Anti-Gravity Treadmill and indicates a high voltage is present in that location. If you see this label, do not get close to or disassemble any of the components to which it is attached. The high voltage can cause serious injury or death. Only a qualified AlterG Service Technician should attempt any repairs in these areas.

**Label #3a.** This label is located on the front of the cockpit structure.

You must be in good health to exercise on the AlterG Treadmill. Consult with your physician before beginning an exercise program. If you experience discomfort or unusual symptoms while exercising on the system, stop immediately and consult your physician before resuming your exercise program. You must be trained in the proper use of the machine and its safety features prior to exercising. Always use the safety lanyard.

Read and understand the Operator's Manual before using the AlterG Anti-Gravity Treadmill.

Lock the cockpit in place by moving the locking lever from left to right. Make sure the lever is all the way to the right prior to operating the system.

**Label #3b.** This label is located on the front of the cockpit structure.

The treadmill belt DOES NOT LOCK when stopped. The belt may slide if enough force is applied. Use caution when leaning on the cockpit for support, in addition to entering and exiting the Anti-Gravity Treadmill.
**Label #4:** The emergency stop label indicates where you should place the emergency stop magnet prior to exercising. In use, if any sort of emergency should arise, a tug on the attached lanyard will displace the magnet and stop the treadmill. The label is located on the front of the cockpit structure.

**Label #5:** This label is located at the front of the treadmill on the base frame. AlterG manufactures the AlterG Anti-Gravity Treadmill in its facilities in Fremont, California, USA.

**Label #6.** Located at the front of the treadmill on the base frame, AlterG complies with EMC (Electromagnetic Compatibility) market requirements in the US and Canada.
SECTION 14: AlterG Treadmill Maintenance

In order to ensure the safe operation and longevity of your AlterG Anti-Gravity Treadmill periodic maintenance should be performed. For the more complex tasks AlterG recommends that you employ the services of a qualified technician.

WARNING: Make sure the AlterG Anti-Gravity Treadmill is turned off and unplugged before performing any of the maintenance detailed below.

General Cleaning and Inspection
Periodic cleaning and inspection will help lengthen the life of your treadmill and keep it looking good. The biggest contributor to the failure of the machine will be dirt and debris accumulation inside the treadmill. To prevent this, ensure users always wear clean shoes while they exercise. Since it is a sealed system, the presence of dirt and debris greatly reduces the longevity of the product.

Keeping the system clean will also make it easier to spot any problems that might not otherwise be found until it is too late. Below is a general guideline on cleaning and maintenance intervals. If the treadmill is in a dirty environment or under heavy use, cleaning and inspection intervals should occur more frequently. Do not use abrasive brushes or cleaners, as they will mar and scratch the paint and plastic surfaces. Also, do not soak any surface with a liquid, as the electronics can be damaged or when wet may, pose an electrical hazard.

Daily:
1. Inspect the interior of the fabric enclosure for any loose debris and remove.
2. Check for abnormal operation.
   Ensure that there are no unusual performance characteristics such as:
   - Unusual sounds (from the treadmill, air blower, or fabric enclosure such as hissing or air leaks).
   - Unusual sights, or smells that appear out of the ordinary.
   - Any operational characteristics that have changed such as reduced speed of treadmill or erratic or low fabric enclosure pressure (Note that low fabric enclosure pressure can be a cause of a mis-calibration so ensure that you have properly followed the calibration steps before you determine there is a pressurization problem).
Weekly:
1. Check overall condition of the treadmill.
2. Inspect the fabric enclosure for tears or leaks.
3. Wipe down exterior surfaces with a damp cloth. A mild soap solution can be used. IMAR™4 Strataglass Cleaner is recommended for cleaning the clear windows.
4. Clean the control console with a mild soap solution to remove grime.
5. Vacuum the interior of the fabric enclosure through the access hole in the top. You can position the cockpit in the highest position and crawl inside for better access.
6. Check shorts for rips or holes.

Monthly:
Perform weekly maintenance items and in addition do the following:
1. Feel the surface of the deck under the tread belt. It should feel slick and slightly moist with lubricant. If there is debris accumulation or if it is dry or tacky perform the following:
   o Wipe the deck and underside of the tread belt with a clean towel. Rotate the belt to expose the remaining section and wipe again.
   o Apply one 1 ounce packet of SlipCoat5 under the tread belt. Walk for one minute on the treadmill at a low speed to disperse the lubricant. SlipCoat is very slippery. If you get it on the top surface of the belt or railings, clean with rubbing alcohol and a sponge.
SlipCoat may be found online or you can order directly from AlterG.

Anually:
*Note: AlterG recommends that you have a qualified technician perform the annual maintenance.*
1. Perform the following procedures annually:
   - Inspect all nuts and bolts. Tighten any that are loose.
   - Clean the running surface, if necessary use a bristle brush to remove heavy grime.
   - Check and adjust tread belt alignment if needed.
   - Wipe down the treadmill deck under the tread belt.
   - Lubricate the treadmill deck with SlipCoat.
   - Vacuum under the treadmill motor cover.
   - Adjust the drive belt tension. Replace the belt if worn or damaged.
   - Inspect the treadmill motor brushes and replace if worn below 3/8 inch. Dress the commutator if needed.

4 IMAR is a trademark of IMAR Products, LLC. Manassas, VA.
5 SlipCoat is a product of Landice Inc., Randolph, New Jersey.
Seasonally:

1. In autumn & winter the drier climate in many regions of the country may cause a static charge build-up to occur when the treadmill is used. Spray the running surface with a Staticide spray to prevent static shock to treadmill users and to prevent interference with the treadmill’s electronic systems. A worn out tread belt can also contribute to a static problem. Examine the belt for excessive wear and replace if necessary.

Cleaning the Windows

The windows on your AlterG Treadmill are made of Strataglass™. Special care must be taken to ensure they remain clean and clear. Strataglass recommends the use of IMAR Strataglass Protective Cleaner for general cleaning. Other cleaning products may dull the clear finish. You should do this cleaning regularly (about once a week, depending on usage).

Once annually, apply IMAR Strataglass Protective Polish. A coat of polish protects against pollutants and will help to keep the Strataglass clear and flexible. Both products are available from AlterG.

Shorts

Always remove your shoes when getting in and out of the shorts if at all possible. Keeping your shoes on while putting on the shorts creates a great deal of stress on their seams and WILL SIGNIFICANTLY REDUCE THE LIFE OF YOUR SHORTS.

Wash the shorts frequently to keep them sanitary. HAND WASH OR USE A GENTLE WASH CYCLE WITH COLD WATER AND LET AIR DRY. DO NOT PUT SHORTS IN THE DRYER!

Lubricate the zipper on the shorts as needed. Zip Care™ is a readily available product designed for this application and is available online or from AlterG.

If any part of the shorts wear out (wire, seams, etc.) discontinue use.

Fabric Enclosure Maintenance

Check the fabric enclosure for any leaks and note any large abnormal hissing sounds. A small leak at the corners of the base or through the shorts and zipper is normal. If these or other leaks start affecting the maximum pressure capabilities of the AlterG Treadmill system, contact AlterG for troubleshooting and support.

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6 Strataglass is a trademark of Strataglass, Inc., Fort Lauderdale, FL
7 Zip Care is a trademark of McNett Corporation, Inc., Bellingham, WA
NOTE: It is highly recommended that you employ the services of a qualified technician to perform the following maintenance tasks.

- ADJUSTING TREAD BELT TRACKING
- ADJUSTING TREAD BELT TENSION
- ADJUSTING DRIVE BELT TENSION
- MOTOR BRUSH INSPECTION/REPLACEMENT
Appendices

A: Specifications
B: Options and Accessories
C: Troubleshooting
D: EMC Statement
E: User/Reader Comment Form
F: Warranty
Appendix A: Via400 Specifications

MODEL Via400, 400m, 400x

- Fits individuals from 4'8" (142 cm) to 6'4" (193 cm); 18.5" (47 cm) hip width, 58" (147 cm) hip circumference.

PERFORMANCE

- User weight capacity: 85 - 400 pounds (181.4 kg)
- Body Weight Range Adjustment:
  - Up to 320 lbs (145.2 kg) 20% – 100% of user’s body weight
  - >320 lbs (145.2 kg) 35% - 100% of user’s body weight
- Running surface area:
  - 20 inches (51 cm) wide
  - 58 inches (147 cm) long
- Speed range:
  - 400/400m
    - Forward: 0 – 12 mph (19.3 km/hr)
    - Reverse: 3 mph (4.8 km/hr)
  - 400x
    - Forward: 0 – 15 mph (24.1 km/hr)
    - Reverse: 5 mph (8.0 km/hr)
- Elevation: 0 - 15%

DIMENSIONS

- Length: 84 inches (213 cm)
- Width: 38 inches (96.5 cm)
- Height: 74 inches (188 cm)
- Weight: 750 pounds (340 kg), approximately
- Step-up height: 8" (20 cm)

RECOMMENDED ROOM DIMENSIONS

- Provide a footprint at least 12ft (3.66 meters) long by 8ft (2.44 meters) wide for adequate spacing around the machine
- A minimum 8 foot (2.44 meters) ceiling height is recommended

ELECTRICAL

- Power Requirements: 220 VAC 20A, 50/60 Hertz, NEMA 6-20R receptacle
- Locate the front of the system within 10ft (3.05 meters) of the electrical outlet.

ENVIRONMENTAL

Operating Conditions:
- Ambient Temperature: 55°F to +84°F (+13°C to +29°C)
- Relative Humidity: 20 to 95%

Transportation & Storage Conditions:
- Temperature Range: 0°F to +120°F (0°C to +49°C)
- Relative Humidity: 20 to 95%
Appendix B: Accessories and Options

**AlterG Shorts** Available in the following standard sizes: XS, S, M, L, XL, XXL, XXXL, 4XL. Performance 2.0 shorts available in the following sizes: XS, S, M, L, XL, XXL, XXXL. Custom sizes are available as options as well.

**Replacement Safety Magnet** – The AlterG Treadmill will not operate without the safety magnet.

**Zip Care Zipper Lubricant** – Prolong the life of your fabric enclosure and zipper.

**Strataglass Cleaner** – Keep the viewing area clear with this special cleaner.

**SlipCoat** – One-ounce packets of lubricant made specifically for the Landice Treadmill. Used as recommended will help prevent premature failure due to friction and excessive wear.

*Contact your AlterG Sales representative for pricing and ordering.*
Appendix C: Troubleshooting

In most cases any repairs to your Anti-Gravity Treadmill will need to be completed by an AlterG qualified technician. There are however, many things that you can do to troubleshoot problems before a repair technician will be required.

Repairs

Contact your AlterG representative for any repairs. You may also request repairs at support@alterg.com. Before doing so, please investigate the following questions, so that we are able to help you as quickly as possible.

- What is the serial number of the Via400? This information can be found on the base of the machine. Look for the manufacturer’s label.
- What happened prior to the problem?
- Did the problem happen unexpectedly or did it get progressively worse over time?
- If it is a noise problem, from where does the noise originate?
- Was someone using the treadmill at the time the problem occurred?
- Explain any other symptoms that you feel are relevant.
- Does the screen display any other error messages?

Diagnostic Codes

The Via400 series Anti-Gravity Treadmill performs numerous operational checks to ensure the system is working properly. If the pressure control system or the treadmill is not operating within specification, an error code will be displayed on the touch monitor.

<table>
<thead>
<tr>
<th>C0 Error Codes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trigger</td>
</tr>
<tr>
<td>1</td>
</tr>
<tr>
<td>2</td>
</tr>
<tr>
<td>3</td>
</tr>
<tr>
<td>4</td>
</tr>
<tr>
<td>5</td>
</tr>
<tr>
<td>6</td>
</tr>
</tbody>
</table>
Table 1. General Error Codes

<table>
<thead>
<tr>
<th></th>
<th></th>
<th>Over pressure during use/calibration</th>
<th>Pressure exceeded set point</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>OOP</td>
<td>Over pressure during use/calibration</td>
<td>Pressure exceeded set point</td>
</tr>
<tr>
<td>8</td>
<td>nPc</td>
<td>Under pressure during use</td>
<td>Pressure did not reach set point</td>
</tr>
</tbody>
</table>

Write down any observed error codes prior to calling AlterG Customer Support (510-270-5369).

Appendix D: EMC Statement

Warning:

- The VIA400 needs special precautions regarding EMC and needs to be installed and put into service according to the EMC information provided in this manual.
- Portable and mobile RF communications equipment can affect the Via400
- The use of accessories, transducers and cables other than those specified by Alter-G Incorporated, may result in increased EMISSIONS or decreased IMMUNITY of the EQUIPMENT.
- This EQUIPMENT should not be used adjacent to or stacked with other equipment and that if adjacent or stacked use is necessary, the EQUIPMENT should be observed to verify normal operation in the configuration in which it will be used.
- List of all cables and maximum lengths. Include manufacturer, model number or part number
- List of all accessories and transducer. Include manufacturer, model number or part number.

<table>
<thead>
<tr>
<th>Guidance and manufacturer’s declaration – electromagnetic emissions</th>
</tr>
</thead>
<tbody>
<tr>
<td>The EQUIPMENT is intended for use in the electromagnetic environment specified below.</td>
</tr>
<tr>
<td>The customer or the user of the EQUIPMENT should assure that it is used in such an environment.</td>
</tr>
<tr>
<td>Emissions Test</td>
</tr>
<tr>
<td>RF emissions CISPR 11</td>
</tr>
<tr>
<td>RF emissions CISPR 11</td>
</tr>
<tr>
<td>Harmonic emissions IEC 61000-3-2</td>
</tr>
<tr>
<td>Voltage Fluctuations/ Flicker emissions IEC 61000-3-3</td>
</tr>
</tbody>
</table>

Table 2. Electromagnetic Emissions
Guidance and manufacturer’s declaration – electromagnetic immunity

The EQUIPMENT is intended for use in the electromagnetic environment specified below. The customer or the user of the EQUIPMENT should assure that it is used in such an environment.

<table>
<thead>
<tr>
<th>Immunity test</th>
<th>IEC 60601 test level</th>
<th>Compliance level</th>
<th>Electromagnetic environment – guidance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electrostatic discharge (ESD) IEC 61000-4-2</td>
<td>±6 kV contact ±8 kV air</td>
<td>±6 kV contact ±8 kV air</td>
<td>Floors should be wood, concrete or ceramic tile. If floors are covered with synthetic material, the relative humidity should be at least 30 %.</td>
</tr>
<tr>
<td>Electrical fast transient/burst IEC 61000-4-4</td>
<td>±2 kV for power supply lines ±1 kV for input/output lines</td>
<td>±2 kV for power supply lines ±1 kV for input/output lines</td>
<td>Mains power quality should be that of a typical domestic, commercial or hospital environment.</td>
</tr>
<tr>
<td>Surge IEC 61000-4-5</td>
<td>±1 kV differential mode ±2 kV common mode</td>
<td>±1 kV differential mode ±2 kV common mode</td>
<td>Mains power quality should be that of a typical domestic, commercial or hospital environment.</td>
</tr>
<tr>
<td>Voltage dips, short interruptions and voltage variations on power supply input lines IEC 61000-4-11</td>
<td>&lt;5 % U_T (&gt;95 % dip in U_T) for 0,5 cycle 40 % U_T (60 % dip in U_T) for 5 cycles 70 % U_T (30 % dip in U_T) for 25 cycles &lt;5 % U_T (&gt;95 % dip in U_T) for 5 sec</td>
<td>&lt;5 % U_T (&gt;95 % dip in U_T) for 0,5 cycle 40 % U_T (60 % dip in U_T) for 5 cycles 70 % U_T (30 % dip in U_T) for 25 cycles &lt;5 % U_T (&gt;95 % dip in U_T) for 5 sec</td>
<td>Mains power quality should be that of a typical domestic, commercial or hospital environment. If the user of the EQUIPMENT requires continued operation during power mains interruptions, it is recommended that the EQUIPMENT be powered from an uninterruptible power supply or a battery.</td>
</tr>
</tbody>
</table>

(50/60 Hz) magnetic field IEC 61000-4-8 | 3 A/m | 3 A/m | Power frequency magnetic fields should be at levels characteristic of a typical location in a typical domestic, commercial or hospital environment. |

NOTE UT is the a.c. mains voltage prior to application of the test level.

Table 3. Electromagnetic Immunity

Recommended separation distances between portable and mobile RF communications equipment and the EQUIPMENT

The EQUIPMENT is intended for use in an electromagnetic environment in which radiated RF disturbances are controlled. The customer or the user of the EQUIPMENT can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and the EQUIPMENT as recommended below, according to the maximum output power of the communications equipment.

<table>
<thead>
<tr>
<th>Rated maximum output power of transmitter W</th>
<th>Separation distance according to frequency of transmitter m</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>150 kHz to 80 MHz</td>
</tr>
<tr>
<td></td>
<td>d = 1.2√P</td>
</tr>
<tr>
<td>0.01</td>
<td>0.12</td>
</tr>
<tr>
<td>0.1</td>
<td>0.38</td>
</tr>
<tr>
<td>1</td>
<td>1.2</td>
</tr>
<tr>
<td>10</td>
<td>3.8</td>
</tr>
<tr>
<td>100</td>
<td>12</td>
</tr>
</tbody>
</table>

For transmitters rated at a maximum output power not listed above, the recommended separation distance d in meters (m) can be estimated using the equation applicable to the frequency of the transmitter, where P is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer.

NOTE 1 At 80 MHz and 800 MHz, the separation distance for the higher frequency range applies.

NOTE 2 These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.

Table 4. Distance Recommendation
Guidance and manufacturer’s declaration – electromagnetic immunity

The EQUIPMENT is intended for use in the electromagnetic environment specified below. The customer or the user of the EQUIPMENT should assure that it is used in such an environment.

<table>
<thead>
<tr>
<th>Immunity test</th>
<th>IEC 60601 Test Level</th>
<th>Compliance level</th>
<th>Electromagnetic environment – guidance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conducted RF</td>
<td>IEC 61000-4-6</td>
<td>3 Vrms 150 kHz to 80 MHz</td>
<td>3 Vrms</td>
</tr>
<tr>
<td>Radiated RF</td>
<td>IEC 61000-4-3</td>
<td>3 V/m 80 MHz to 2.5 GHz</td>
<td>3 V/m</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>d = 2.3√P 800 MHz to 2.5 GHz</td>
</tr>
</tbody>
</table>

Recommended separation distance

where \( P \) is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer and \( d \) is the recommended separation distance in metres (m).

Field strengths from fixed RF transmitters, as determined by an electromagnetic site survey \(^a\), should be less than the compliance level in each frequency range. \(^b\)

Interference may occur in the vicinity of equipment marked with the following symbol:

\(^a\) Field strengths from fixed transmitters, such as base stations for radio (cellular/cordless) telephones and land mobile radios, amateur radio, AM and FM radio broadcast and TV broadcast cannot be predicted theoretically with accuracy. To assess the electromagnetic environment due to fixed RF transmitters, an electromagnetic site survey should be considered. If the measured field strength in the location in which the EQUIPMENT is used exceeds the applicable RF compliance level above, the EQUIPMENT should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as re-orienting or relocating the EQUIPMENT.

\(^b\) Over the frequency range 150 kHz to 80 MHz, field strengths should be less than 3 V/m.

NOTE 1 At 80 MHz and 800 MHz, the higher frequency range applies.

NOTE 2 These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.
### Appendix E: WiFi Specifications

<table>
<thead>
<tr>
<th>WiFi portion Specifications:</th>
<th>Atheros® AR9462</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main Chipset</td>
<td>2T2R</td>
</tr>
<tr>
<td>Standard Conformance</td>
<td>802.11a, 802.11b, 802.11g, and 802.11n</td>
</tr>
</tbody>
</table>
| Frequency Range            | - USA: 2.400 - 2.483GHz, 5.15 - 5.35GHz, 5.47 - 5.725GHz, 5.725 - 5.85GHz  
                            | - Europe: 2.400 - 2.483GHz, 5.15 - 5.35GHz, 5.47 - 5.725GHz  
                            | - Japan: 2.400 - 2.497GHz, 5.15 - 5.35GHz, 5.47 - 5.725GHz  
                            | - China: 2.400 - 2.483GHz, 5.725 - 5.85GHz |
| Form Factor                | half mini card |
| Interface                  | PCI Express® mini-card rev. 1.2 (WLAN) |
| Channel Spacing            | 20MHz          |
| Operating Channels         | - 802.11a/n  
                            |   - USA/Canada: 12 non-overlapping channels  
                            |   - Major Europe Countries: 19 non-overlapping channels  
                            |   - Japan: 19 non-overlapping channels  
                            |   - China: 5 non-overlapping channels  
                            | - 802.11b/g/n  
                            |   - USA/Canada: 11 (1-11)  
                            |   - Major Europe Countries: 13 (1-13)  
                            |   - France: 4 (10-13)  
                            |   - Japan: 14 on 802.11b (1-13 or 14th), 13 on 802.11g (1-13)  
                            | - China: 13 (1-13) |

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**Table 6. WiFi Specifications**

<table>
<thead>
<tr>
<th>PRODUCT</th>
<th>1X1 802.11b/g/b – BT Combo PCIe minicard</th>
</tr>
</thead>
<tbody>
<tr>
<td>MODEL NO.</td>
<td>AR5B225</td>
</tr>
<tr>
<td>FCC ID</td>
<td>PPD-AR5B225</td>
</tr>
<tr>
<td>IC ID</td>
<td>4104A-AR5B225</td>
</tr>
<tr>
<td>POWER SUPPLY</td>
<td>DC 3.3V from host equipment</td>
</tr>
<tr>
<td>MODULATION TYPE</td>
<td>GFSK, π/4-DQPSK, 8DPSK</td>
</tr>
<tr>
<td>MODULATION TECHNOLOGY</td>
<td>FHSS</td>
</tr>
<tr>
<td>TRANSFER RATE</td>
<td>3/2/1 Mbits/s</td>
</tr>
<tr>
<td>OPERATING FREQUENCY</td>
<td>2402MHz ~ 2480MHz</td>
</tr>
</tbody>
</table>
| NUMBER OF CHANNELS | For Bluetooth 2.1+ EDR: 79  
                      | For Bluetooth 4.0: 40 (37 hopping + 3 advertising channel) |
| MAXIMUM OUTPUT POWER | GFSK: 9.8 mW  
                      | 8DPSK: 12.4 mW  
                      | π/4 – DQPSK: 12.0 mW |

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**Table 7. General Description of WiFi Card**
Appendix F: Warranty

Your AlterG Treadmill is covered by the following warranty:

- One-year parts and labor for the entire machine.

AlterG warrants that all products and accessories will be free from manufacturing defects according to the applications listed in this manual. The warranty period commences on the original date of purchase. This warranty is given only to the original purchaser. This warranty does not cover damage or equipment failure resulting from misuse, abuse, or failure to comply with electrical codes. Further, this warranty shall not apply if there is any modification to the product or accessories or if there is a failure to provide maintenance as outlined in this Operation Manual.

ALTERG GIVES NO OTHER WARRANTIES, EITHER EXPRESSED OR IMPLIED. THE WARRANTY OF FITNESS FOR A PARTICULAR USE IS HEREBY DISCLAIMED.

The buyer's remedy for breach of the expressed warranties contained herein shall be limited to the return of the product and accessories and repayment of the original purchase price. Provided, however, at AlterG's discretion, it may repair and replace the non-conforming goods or parts. AlterG shall not be liable for any incidental or consequential damages. This Warranty is voided if non-AlterG parts or service are used in repairs and maintenance.