



Operation Manual

AlterG® Anti-Gravity Treadmill®



Defy Gravity™

This manual covers operation procedures for the following AlterG products:

AlterG Anti-Gravity Treadmill® M320 / F320

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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US

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Contents

USER RESPONSIBILITY	3
AlterG CONTACT INFORMATION.....	4
INDICATIONS AND CONTRAINDICATIONS FOR USE.....	5
IMPORTANT SAFETY INSTRUCTIONS	6
SECTION 1: INTRODUCTION.....	9
THINGS TO CONSIDER BEFORE BEGINNING AN EXERCISE PROGRAM ...	9
SECTION 2: SETUP AND INSTALLATION	10
ELECTRICAL REQUIREMENT	10
GROUNDING REQUIREMENTS.....	12
DANGER.....	12
LOCATION REQUIREMENTS.....	12
TRANSPORTING YOUR TREADMILL.....	12
SECTION 3: PRINCIPLES OF OPERATION	13
PHYSICS & TECHNOLOGY BEHIND THE ALTERG TREADMILL.....	13
DIFFERENTIAL AIR-PRESSURE (DAP) TECHNOLOGY	13
PRESSURE REGULATION SYSTEM	14
AIR SEAL SHORTS	14
SECTION 4: OPERATING THE ALTERG TREADMILL	15
POWERING UP	15
PUTTING ON THE SHORTS	16
STEPPING INTO THE ALTERG TREADMILL.....	16
Figure 5. Cockpit in the Lowered Position	16
ADJUSTING THE HEIGHT OF THE COCKPIT	18
OPERATING THE TREADMILL AND UNWEIGHTING SYSTEM.....	22
STEPPING OUT OF THE TREADMILL.....	25
HEART RATE MONITORING.....	26
SECTION 5: LABELS, LOCATIONS, INTERPRETATION	28
SECTION 6: AlterG TREADMILL MAINTENANCE	31
GENERAL CLEANING AND INSPECTION	31
CLEANING THE WINDOWS.....	33
SHORTS	33
FABRIC ENCLOSURE MAINTENANCE	33
APPENDICES	35
APPENDIX A: ALTERG TREADMILL SPECIFICATIONS.....	37
APPENDIX B: OPTIONS AND ACCESSORIES	39
APPENDIX C: TROUBLESHOOTING.....	41
APPENDIX D: EMC STATEMENT	43
APPENDIX E: USER/READER COMMENT FORM	44
APPENDIX F: WARRANTY INFORMATION	47
APPENDIX G: CONTACT INFORMATION	48

USER RESPONSIBILITY

This Product will perform as described in this Operator's Manual and by accompanying labels and/or inserts, when it is assembled, operated, maintained and repaired in accordance with the instructions provided. This Product must be checked periodically as described in this manual. A defective Product 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 telephone or written request for service advice be made to AlterG Inc. (See: AlterG Contact Information Section). This Product or any of its parts should not be repaired other than in accordance with instructions provided by AlterG Inc. authorized representatives or by AlterG Inc. trained personnel. The Product must not be altered without the prior written approval by AlterG Inc. Customer Service 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 an AlterG Inc. authorized representatives.

Any unauthorized maintenance; repairs or equipment modification activities may void the AlterG Treadmill Product Warranty

AlterG CONTACT INFORMATION

AlterG Inc. welcomes your inquiries and comments. Professional staff, including physiologists, applications engineers, and customer support specialists are available to assist you with any questions you may have regarding your AlterG Anti-Gravity Treadmill system.

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INDICATIONS AND CONTRAINDICATIONS FOR USE

Statement of Intended Use

The AlterG M320 and F320 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 intraabdominal 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

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.

UNDERSTAND 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 a 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 REQUIREMENT






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

Customer Circuit	M/F320 Rating	Cable (mm ²)	Connector Type	Region
20A	16A	4 LAPP USA # 321203 ANIXTER # 4A-1203EC-UL	NEMA 6-20R 	US, Canada
16A	12.8A	$\geq 1.5 \rightarrow 2.5$ LAPP USA # 321203 ANIXTER # 4A-1203EC-UL	Type F 	EU (DEU)
13A	10.4A	$\geq 1.5 \rightarrow 2.5$ LAPP USA # 321203 ANIXTER # 4A-1203EC-UL	Type G 	UK
32A	16A	2.5 LAPP USA # 321203 ANIXTER # 4A-1203EC-UL	No Plug Required On 20A Switch Spur 	UK (ring)
32A	16A	≥ 4.0	IEC 60309 male plug 	UK (ring)

GROUNDING 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: PRINCIPLES OF OPERATION

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 (DAP) TECHNOLOGY

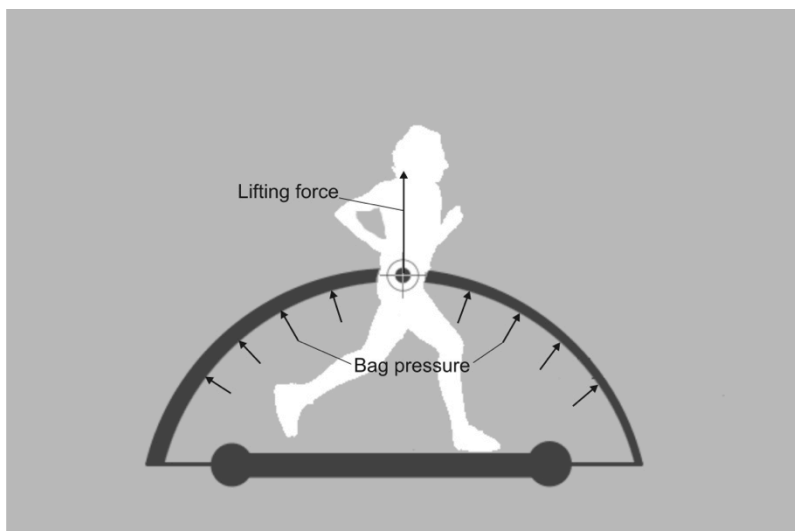


Figure 1. Diagrammatic Representation of Lifting Force

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.***



Figure 3. On/Off Switch Location

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. The weight control display will show 0 and the treadmill display will be blank when the system is ready to be used.

Figure 4. Proper Location of Cockpit on Power-up

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 THE ALTERG 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.

Figure 5. Cockpit in the Lowered Position



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.



Figure 6. Cockpit Lock in Open Position

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.

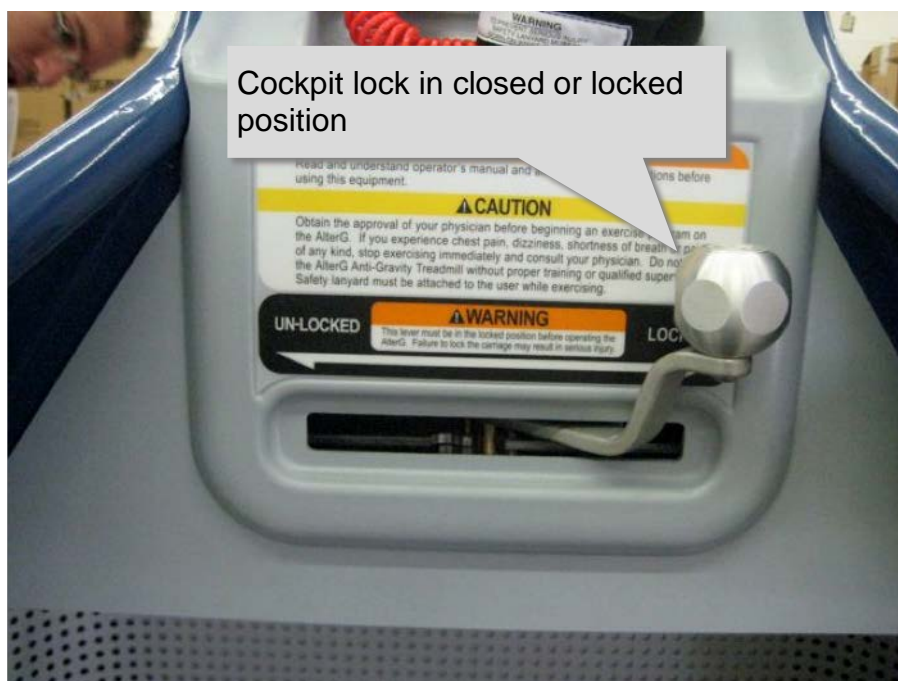


Figure 7. Cockpit Lock Fully Engaged

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.



Figure 8. Cockpit Location Relative to Trochanter

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.

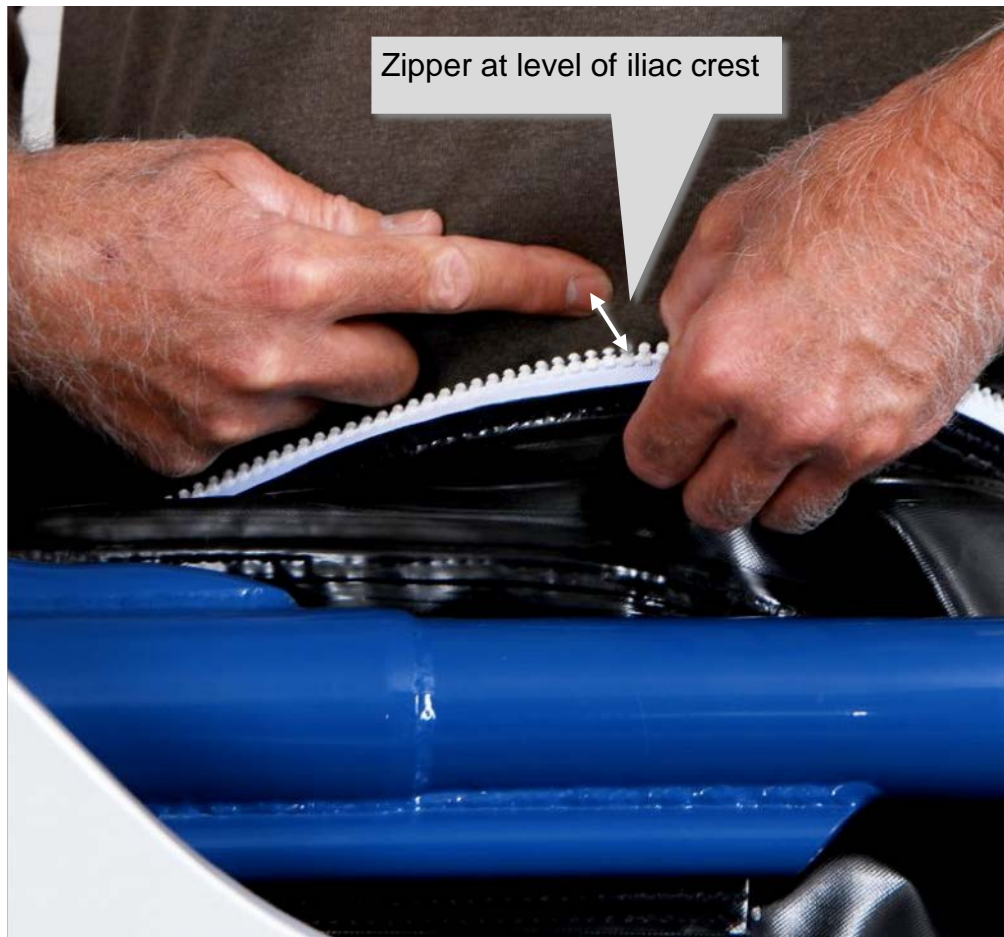


Figure 9. Adjustment of the Cockpit to Align the Zipper with the Iliac Crest

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”.

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.



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 UNWEIGHTING SYSTEM



Figure 11. Operating Console

All treadmill and pressure functions are controlled from the console. Graphic icons and labels identify button locations and functions. Buttons are touch sensitive and require light pressure to operate.



Figure 12. Left Side Console Controls

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.

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. During this routine the display will say CAL and the single green LED next to the word Calibrating will light. 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.

The READY LED will light at the end of the calibration routine. The Weight Control display will now read 100%, indicating you are at full body weight on the surface of the treadmill. Power will be applied to the treadmill and its' displays will light and the buttons will become functional.

STEP 3: ADJUST YOUR BODY WEIGHT.

Adjust your body weight with the + and – button controls. Pressing – decreases your body weight, pressing + increases your body weight. Your body weight is displayed as a percentage of your full body weight. You can adjust your body weight at any time during your exercise session.



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.

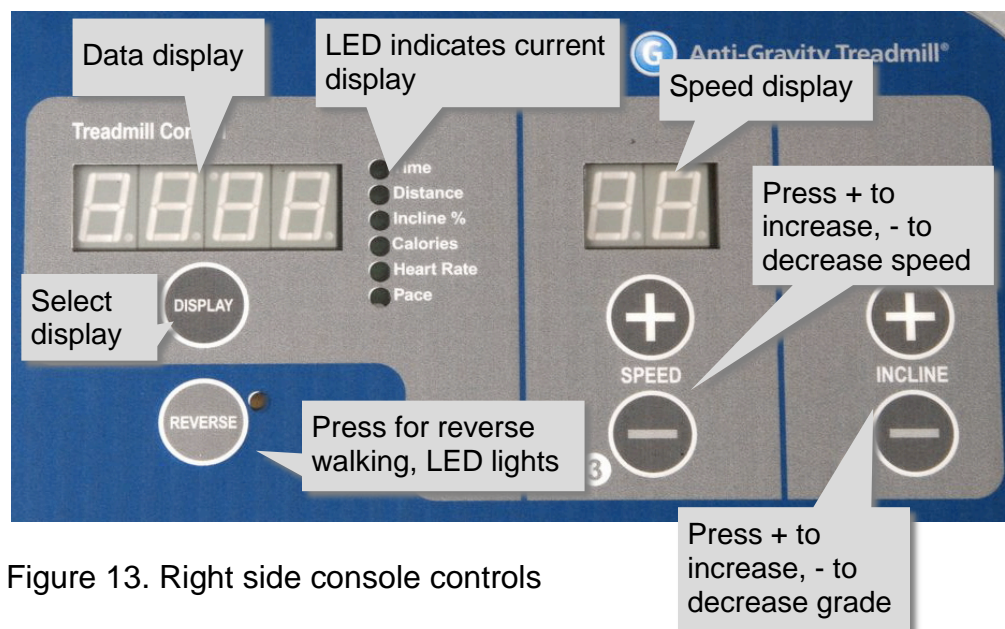


Figure 13. Right side console controls

STEP 4: SELECT TREADMILL DIRECTION

When the treadmill turns on, it is programmed for forward ambulation. Press the REVERSE button to walk backwards. The green LED next to the button will light when the treadmill is programmed for reverse.

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. The treadmill will run through a shutdown routine and the pressure will be released from the inflated enclosure. All exercise information will be cleared from the display.

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.

FUNCTION OF THE DISPLAY BUTTON

Press DISPLAY to choose a different statistic to be displayed. Each button push causes the display to proceed to the next exercise variable. The green LED will light next to the variable being displayed. The following statistics are available for display:

1. Time
2. Distance
3. Incline %
4. Calories burned (an estimate at 100% BW and 0% grade)
5. Heart Rate
6. Pace (minutes/mile)

If the DISPLAY button is held down for more than 2 seconds, the display will cycle through the data continuously. A second press will stop the cycling.

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. After exiting the system, return the cockpit to an upright, locked position.

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.³ 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 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.

³ Polar® is a registered trademark of Polar Electro, Inc. Lake Success, NY

SECTION 5: LABELS, LOCATIONS, INTERPRETATION

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 14. Refer to the diagram to locate the label being described.

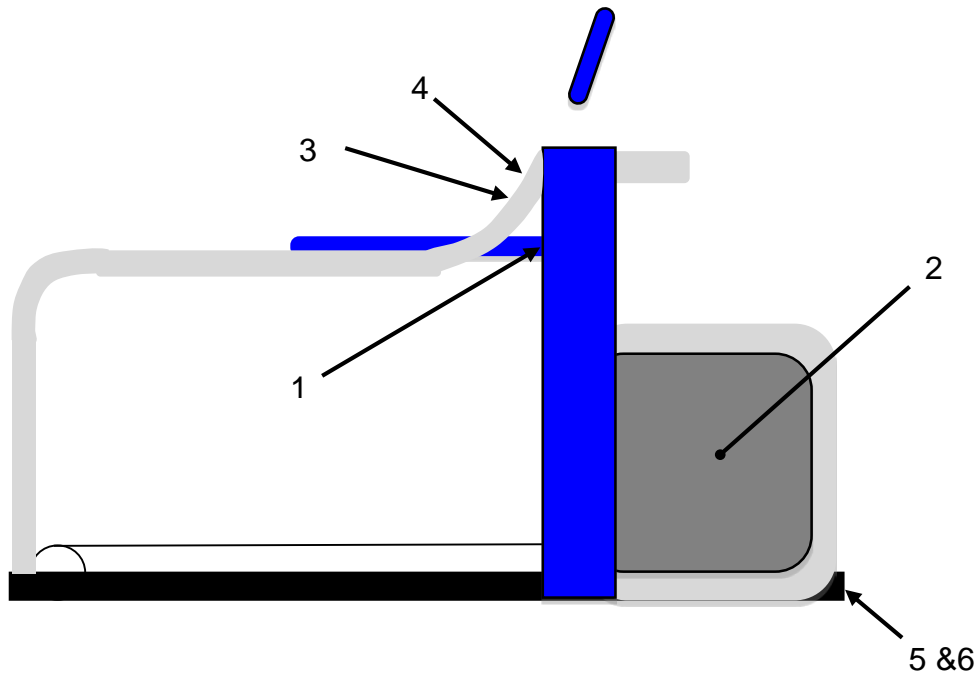


Figure 14. Label Locations

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 #3. 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.



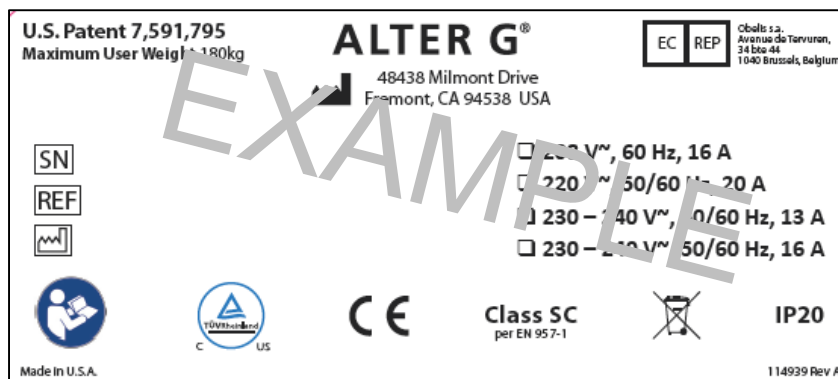
Read and understand the Operator's Manual before using the AlterG Anti-Gravity Treadmill.

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.

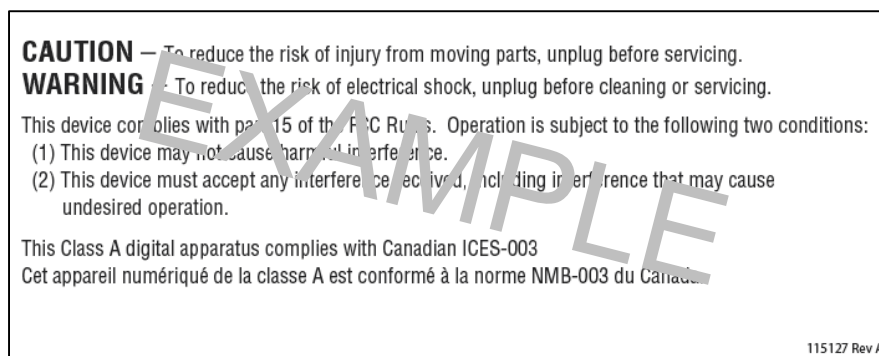
Label #4: The emergency stop label indicates where you should place the emergency stop magnet prior to exercising. In use, if any sort of emergency should arise, a tug on the attached lanyard will displace the magnet and stop the treadmill. The label is located on the front of the cockpit structure.



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 6: 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 IMAR is a trademark of IMAR Products, LLC. Manassas, VA.

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:
 - Wipe the deck and underside of the tread belt with a clean towel. Rotate the belt to expose the remaining section and wipe again.
 - 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.

ANNUALLY:

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.

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.

⁵ SlipCoat is a product of Landice Inc., Randolph, New Jersey.

CLEANING THE WINDOWS

The windows on your AlterG Treadmill are made of Strataglass™⁶. 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™⁷ 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.

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

⁶ Strataglass is a trademark of Strataglass, Inc., Fort Lauderdale, FL

⁷ Zip Care is a trademark of McNett Corporation, Inc., Bellingham, WA

APPENDICES

A: Specifications

B: Options and Accessories

C: Troubleshooting

D: EMC Statement

E: User/Reader Comment Form

F: Warranty

APPENDIX A: ALTERG TREADMILL SPECIFICATIONS

MODEL M320, F320

- 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:
 - Forward M320/F320 0 – 12 mph (19.3 km/hr)
 - Reverse M320/F320 3 mph (4.8 km/hr)
- Elevation: M320/F320 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: OPTIONS AND ACCESSORIES

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 AlterG Treadmill system will need to be completed by a member of the AlterG service team. There are however, many things that you can do to troubleshoot problems before a repair technician will be required.

REPAIRS

Contact AlterG for any repairs. 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 AlterG Treadmill? This information can be found on the label located on the front of the base frame.
- 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.
- Immediately after the problem, were there any diagnostic codes displayed on the console LED displays?

DIAGNOSTIC CODES

The M320/F320 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 either the treadmill or %BW display.

Error Codes displayed on the %BW display:

Code	Explanation	Action to be Taken
E	The safety magnet has been displaced.	Place the safety magnet in proper location and press START.
L	The cockpit has not been locked prior to START.	Ensure the cockpit is fully locked in position and press START.
OPR	Over pressure error. The pressure is higher than requested for a particular degree of unweighting. Outflow from the pressure control valve may be blocked or the valve may not be operating correctly.	Press START. If the error persists call AlterG Customer Support.
UPR	Under pressure error. The system is unable to reach the requested pressure for a particular degree of unweighting. There may be a leak, the subject may be too heavy, or the output of the blower may be blocked.	Check system for leaks. Press START. If error persists call AlterG Customer Support.

Error Codes displayed on the %BW display (continued):

Code	Explanation	Action to be Taken
SCO	The scale offset value is out of range. The weighing scales or electronics may be damaged. The system may have been turned on with someone standing on the	Remove the subject from the system. Raise the cockpit and cycle the power switch off-on. Wait 30 seconds before attempting to use the system again. If error

	treadmill.	persists call AlterG Customer Support.
PRS	The pressure offset value is out of range. The pressure sensor may need replacement.	Remove the subject from the system. Raise the cockpit and cycle the power switch off-on. Wait 30 seconds before attempting to use the system again. If error persists call AlterG Customer Support.
CE#	Indicates an error during the calibration process. The subject may be moving too much, there may be an air leak or the system may have been turned on with someone standing on the treadmill.	Check for leaks. Instruct patient to stand still. Press START. If error persists, remove the subject from the system. Raise the cockpit and cycle the power switch off-on. Wait 30 seconds before attempting to use the system again. If error persists call AlterG Customer Support.

Error codes displayed on the Treadmill display:

Code	Explanation	Action to be taken
L5	Treadmill motor control board, speed sensor or treadmill motor may be bad.	Call AlterG Customer Support
PO	The treadmill elevation motor may need replacing, the elevation function may need to be re-calibrated or the elevation potentiometer may be bad.	Call AlterG Customer Support

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

APPENDIX D: EMC STATEMENT

Warning:

- MEDICAL ELECTRICAL EQUIPMENT 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 MEDICAL ELECTRICAL EQUIPMENT.
- 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.

APPENDIX E: USER/READER COMMENT FORM

In order to improve the quality and utility of our manuals, AlterG needs the active cooperation and participation of its user readership. Your comments as a user will be greatly appreciated and reviewed for information to improve the next revision of this document.

Did you find this manual to be complete in its information?

YES ☐

NO ☐

If no, what information would you like to see included?

Are the instructions in this manual clearly expressed and easy to understand? (circle one)

Difficult to understand

Adequate

Very understandable

Did you find any errors or inaccuracies in this document? If so, please write down the page number(s) below.

How would you rate the usefulness of this document? (circle one)

Not useful

Adequate

Very useful

How can this manual be improved to better meet your needs?

Do you have any other comments to add?

Please fill in the contact information below:

Name:	Title:
Facility:	Phone:
Address 1:	Email:
Address 2:	Date:
City:	
State:	
Postal Code:	
Country:	

Thank you for taking the time to fill out this survey. Please mail to:

AlterG Incorporated
Attention: Customer Support
48438 Milmont Drive
Fremont, CA. 94538

Should you have any questions please feel free to call Customer Support at 510-270-5369 or email us at support@alter-g.com

APPENDIX F: WARRANTY INFORMATION

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.

APPENDIX G: CONTACT INFORMATION

AlterG Headquarters:



AlterG Address: 48438 Milmont Drive
Fremont, CA 94538
Telephone: 510-270-5900
AlterG URL: www.alter-g.com

Service and Support:

AlterG Address: 48438 Milmont Drive
Fremont, CA 94538
Telephone: 510-270-5369
Email address: support@alter-g.com

Authorized European Representative:



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