CYBEX® International

Defining Fitness

Cybex Pro+ Treadmill
Owner's & Service Manual

Cardiovascular Systems

Part Number LT-17730-4 Rev D

10 Trotter Drive Medway, MA 02053 • 800-766-3211 • 508-533-4300 • FAX 508-533-5183
www.eCybex.com • techhelp@cybexintl.com • techpubs@cybexintl.com • LT-17730-4 Rev D • April 2003

About This Manual

An Owner's & Service Manual is shipped with each Cybex Pro+ Treadmill. To purchase additional copies of this manual or any other Cybex manual, please do one of the following:

- Order online at www.eCybex.com
- Fax your order to 508-533-5183
- For customers living within the USA, contact Cybex Customer Service at 800-766-3211 then press 63
- For customers living outside the USA, contact Cybex Customer Service at 508-533-4300

To contact Cybex with comments about this manual you may send email to techpubs@cybexintl.com.

FCC Compliance Information

! WARNING: Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception (which can be determined by turning the equipment off and on) the user is encouraged to try to correct the interference by one or more of the following measures:

Reorient or relocate the receiving antenna.
Increase the separation between the equipment and receiver.
Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
Consult the dealer or an experienced radio TV technician for help.

Declaration of Conformity

We declare that to the best of our knowledge that the fitness equipment listed below, and manufactured by:
Cybex International, Inc.
10 Trotter Drive
Medway MA, 02053, USA
Conforms to:
Directives: 73/23/EEC, 89/336/EEC
Standards: EN957-1, EN957-6, EN60335-1, EN50081-1

Product Name:	Cybex TROTTER Elite, Cybex Sport, Cybex Pro, Cybex Pro+
Models:	450T, 500T, 520T, 530T
European Contact:	Attention: European Sales Director Floor 2, 56 Bridge Street, □ Newport, South Wales, NP20 4BL United Kingdom Phone 011-44-1633-251222

NOTE: *For European customers only.*

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1- Safety

IMPORTANT: *Read all instructions and warnings before using the treadmill.*

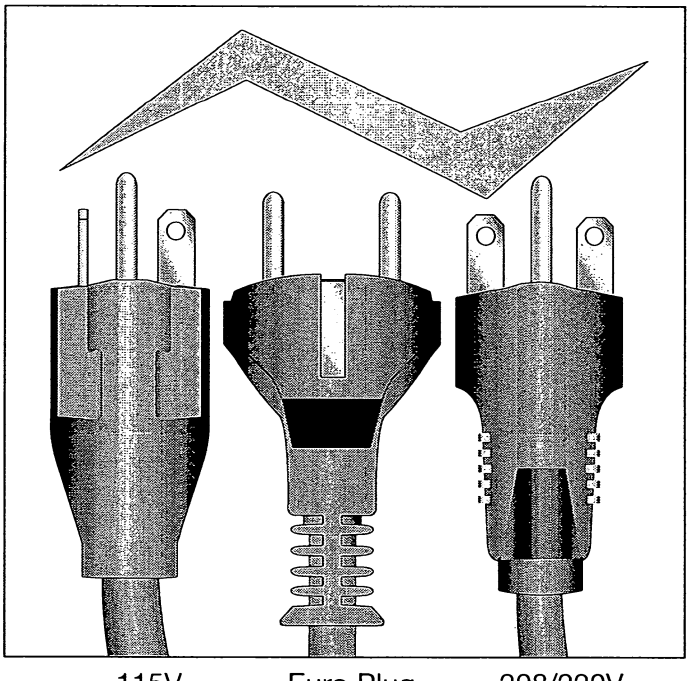
Important Voltage Information

Before plugging the power cord into an electrical outlet, verify that the voltage requirements for your area match the voltage of the treadmill that you have received. The power requirements for the Cybex Pro+ treadmill include a grounded, dedicated circuit, rated for one of the following: 115 VAC ±5%, 60 Hz and 20 amps; 208/220 VAC, 60 Hz, 15 amps or 230 VAC ±5%, 50 Hz and 15 amps. See the serial number decal for the exact voltage requirements of your treadmill.

! WARNING: Do not attempt to use this unit with a voltage adapter.
Do not attempt to use this unit with an extension cord.

Grounding Instructions

This treadmill must be grounded. If it should malfunction or break down, grounding provides a path of least resistance for electric current to reduce the risk of electric shock. This product is equipped with a cord having an equipment-grounding conductor and a grounding plug. The plug must be plugged into an appropriate outlet that is properly installed and grounded in accordance with all local codes and ordinances.



115V NEMA 5-20 | Euro Plug CEE 7/7 | 208/220V NEMA 6-15

! DANGER:
Improper connection of the equipment-grounding conductor can result in a risk of electric shock. Check with a qualified electrician or service provider if you are in doubt as to whether the treadmill is properly grounded. Seek a qualified electrician to perform any modifications to the cord or plug. Cybex is not responsible for injuries or damages as a result of cord or plug modification.

This treadmill is for use on a nominal 115 VAC ±5%, 60 Hz and 20 amps, 208/220 VAC, 60 Hz, 15 amps or 230 VAC ±5%, 50 Hz and 15 amps and a grounded, dedicated circuit. Make sure that the treadmill is connected to an

outlet having the same configuration as the plug. Do not use a ground plug adapter to adapt the power cord to a non-grounded outlet.

Important Safety Instructions

(Save These Instructions)

! DANGER: ***To reduce the risk of electric shock, always unplug this treadmill from the electrical outlet immediately after using it and before cleaning it.***

! WARNING: ***Serious injury could occur if these precautions are not observed. To reduce the risk of burns, fires, electric shock, or injury:***

User Safety Precautions

- **DO NOT** wear loose or dangling clothing while using the treadmill.
- Use the treadmill handrails for support and to maintain balance.
- Stop exercising if you feel faint, dizzy, or experience pain at any time.
- Obtain a medical exam before beginning any exercise program.
- Read and understand emergency stop procedures.
- Replace any warning labels if damaged, worn or illegible.
- Report any malfunctions, damage or repairs to the facility.
- Place your feet on the two top steps when starting or stopping the treadmill.
- Stop and place the treadmill at 0 degrees incline (level) after each use.
- Keep children away from the treadmill. Teenagers and disabled persons must be supervised while using.
- Obtain instruction before using.
- Keep all body parts, hair, towels, water bottles and the like free and clear of moving parts.
- Read and understand the Owner's Manual and all warnings posted on the unit before using.
- **DO NOT** use the unit if you exceed 400 lbs. (181 kg). This is the rated maximum user weight.

Facility Safety Precautions

- Instruct all users on how to clip the e-stop clip onto their clothing and carefully test it prior to using the treadmill.

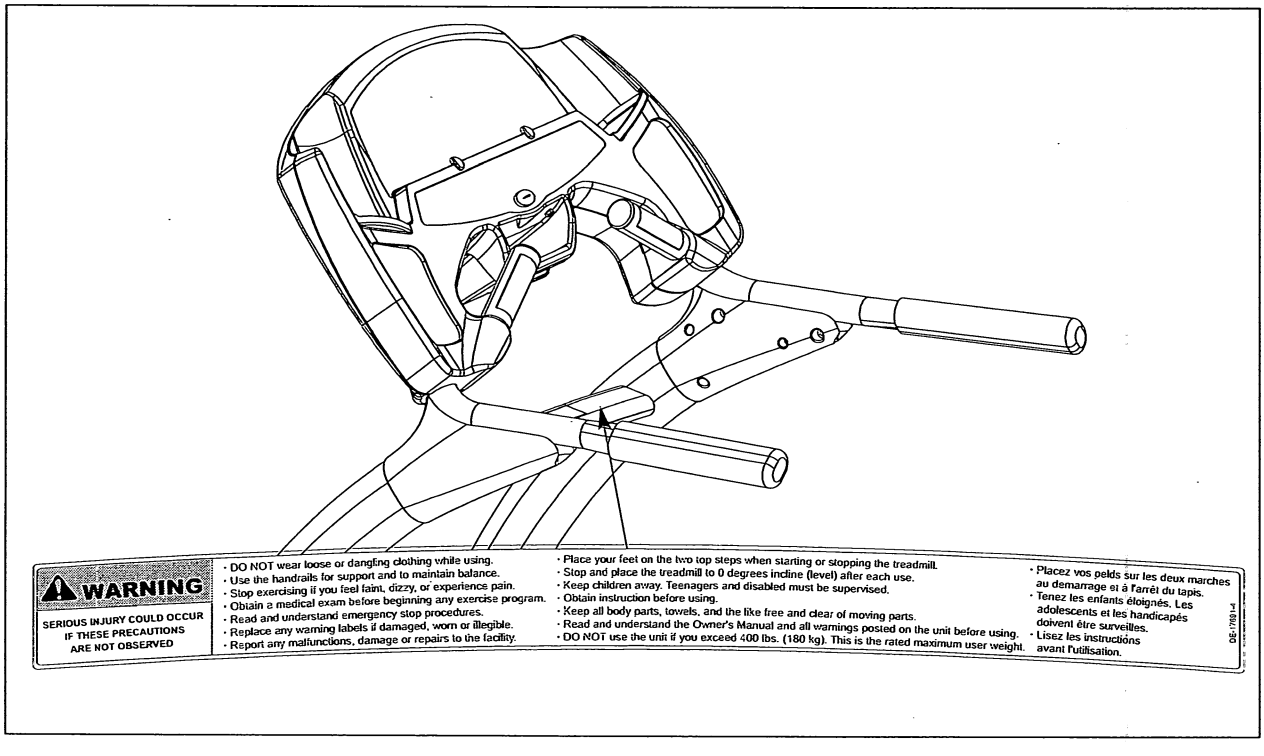
- Instruct all users to use caution when mounting and dismounting the treadmill.
- Disconnect all power before servicing the treadmill.
- Use a dedicated line when operating the treadmill.
- Connect the treadmill to a properly grounded outlet only.
- **DO NOT** operate electrically powered treadmills in damp or wet locations.
- Keep the running belt clean and dry at all times.
- Use this treadmill for commercial use only.
- **DO NOT** leave the treadmill unattended when plugged in and running. ***NOTE:*** *Before leaving the treadmill unattended, always wait until the treadmill comes to a complete stop and is level. Then, turn all controls to the STOP or OFF position and remove the plug from the outlet. Remove the e-stop key from the treadmill.*
- Immobilize the treadmill (when not in use) by removing the e-stop key.
- Inspect the treadmill for worn or loose components before each use. Do not use until worn or damaged parts are replaced.
- Maintain and replace worn parts regularly. Refer to "Preventive Maintenance" section of Owner's Manual.
- **DO NOT** operate the treadmill if: (1) the cord is damaged; (2) the treadmill is not working properly or (3) if the treadmill has been dropped or damaged. Seek service from a qualified technician.
- **DO NOT** place the cord near heated surfaces or sharp edges.
- **DO NOT** use the treadmill outdoors.
- **DO NOT** operate the treadmill around or where aerosol (spray) or where oxygen products are being used.
- Read and understand the Owner's Manual completely before using the treadmill.
- Ensure all users wear proper footwear on or around all Cybex equipment.
- Set up and operate the treadmill on a solid, level surface. Do not operate in recessed areas or on plush carpet.
- Provide the following clearances: 19.7 inches (0.5 m) at each side, 39 inches (1.0 m) at the back and enough room for safe access and passage at the front of the treadmill. Be sure your treadmill is clear of walls, equipment and other hard surfaces.
- **DO NOT** attempt repairs, electrical or mechanical. Seek qualified repair personnel when servicing. If you live in the USA, contact Cybex Customer Service at 800-766-3211 (then press 64). If you live outside the USA, contact Cybex Customer Service at 508-533-4300.

- Use Cybex factory parts when replacing parts on the treadmill.
- **DO NOT** modify the treadmill in any way.
- **DO NOT** use attachments unless recommended for the treadmill by Cybex.
- Ensure all User and Facility safety precautions are observed.
- Carefully read and understand the following before using the Cybex Pro+ treadmill:
  - Warning Decals
  - Caution Decals

To replace any worn or damaged decals do one of the following: Visit eCybex.com to shop for parts online, fax your order to 508-533-5183 or contact Cybex Customer Service at 800-766-3211. If you live outside of the USA, call 508-533-4300. For location or part number of labels, see the parts list and exploded-view diagram. This information can be found in the *Service* chapter in this manual or on Cybex web site at ecybex.com.

Warning Decals

Warning decals indicate a potentially hazardous situation, which, if not avoided, could result in death or serious injury. The warning decals used on the Cybex Pro+ are shown below.



⚠ WARNING

All maintenance activities shall be performed by qualified personnel. Failure to do so could result in serious injury.

Service Schedule (for Models Trotter Elite, Sport and Pro)

NOTE: *This is the minimum recommended service.*

1. Determine mileage.

A. Enter *Test Mode* by holding down any key while turning the treadmill to the on (I) position.

B. Press **dist** (except on Sport). DIST appears on the display.

First 500 Miles
- *A* Check Running Belt Tension & Tracking

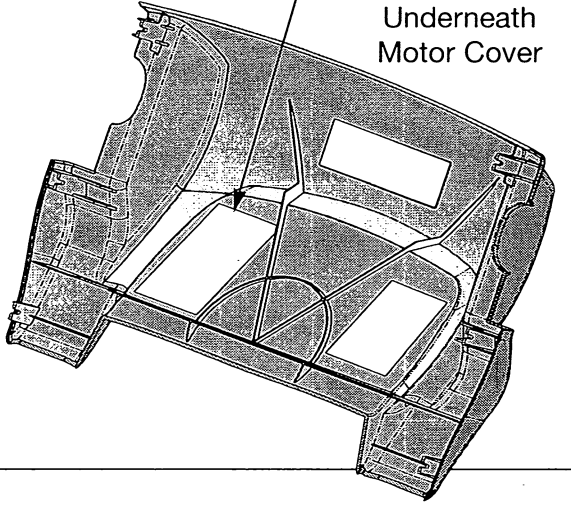
Every 5000 Miles
- *A* Check Running Belt Tension & Tracking
- *B* Move Treadmill & Vacuum Underneath
- *C* Remove Motor Cover to Clean Underneath with a Dry Cloth & Vacuum

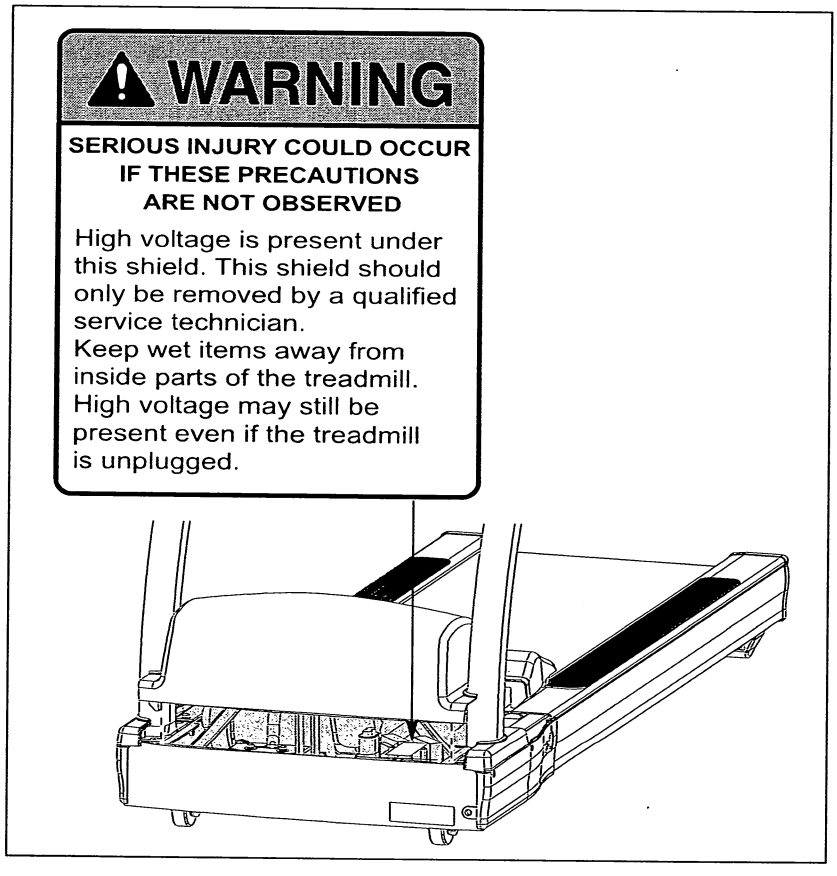
Every 10,000 Miles
- *D* Replace Belt & Flip Deck
- *E* Check Motor Brushes & Replace If Needed
- *F* Check Current Draw
- *G* Measure Motor Voltage at Max Speed with No Load
- *H* Check Elevation Assembly & Replace Worn Parts
- *I* Lubricate Elevation Bushings

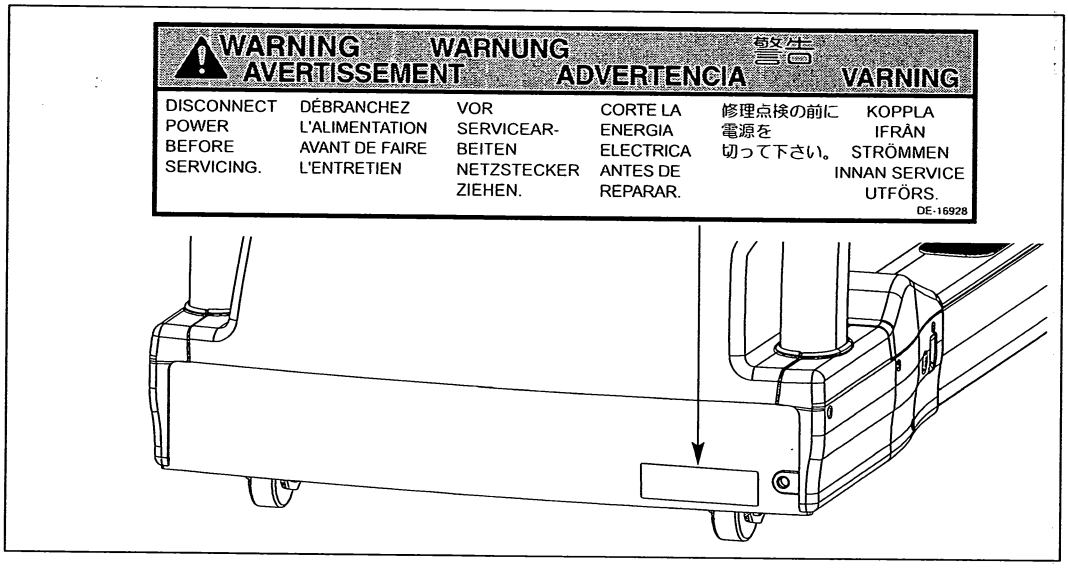
Every 20,000 Miles
- *J* Replace Belt & Deck

Date	*Mileage*	*Service*	*Initials*

DE-16609-4

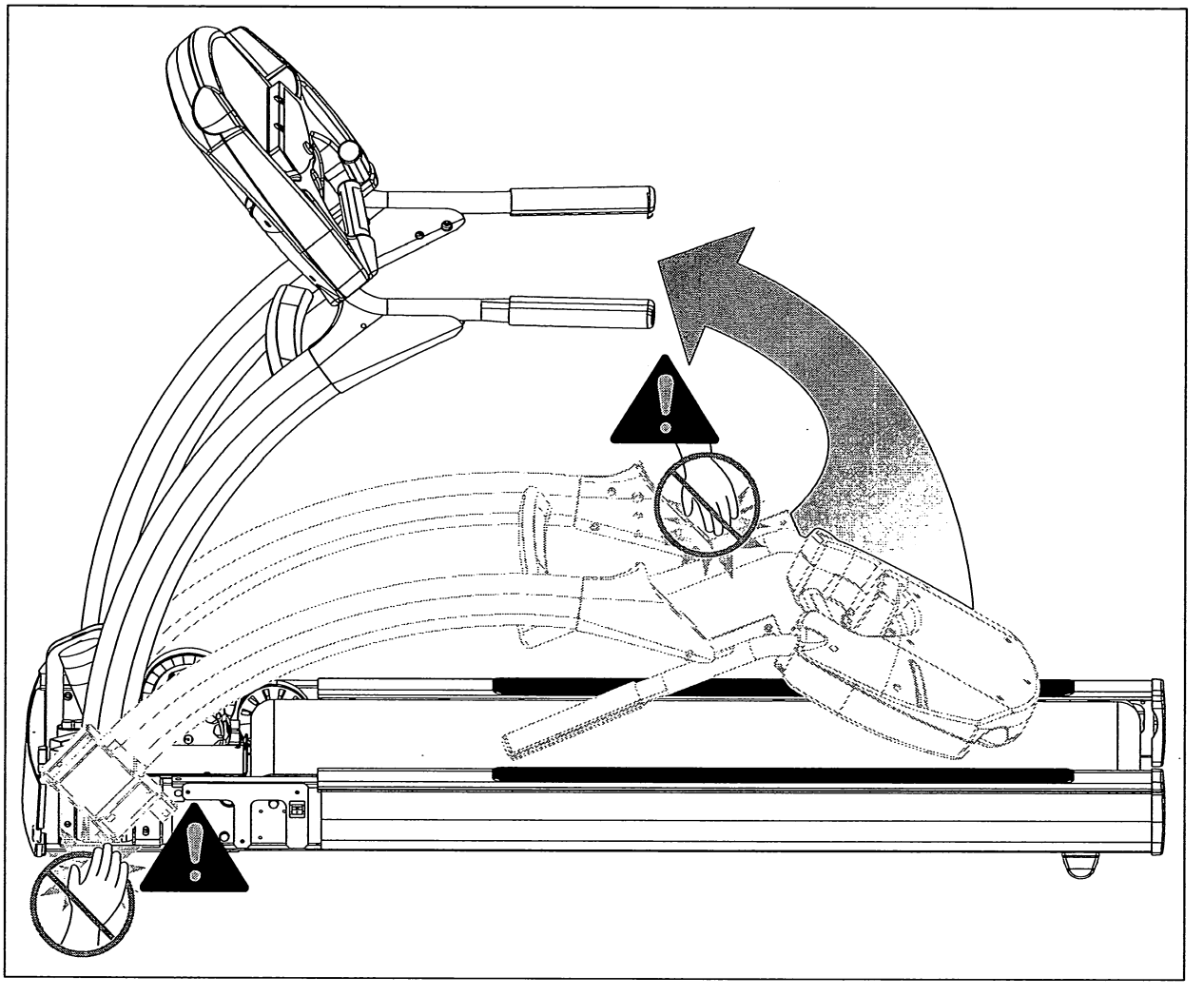



WARNING
SERIOUS INJURY COULD OCCUR IF THESE PRECAUTIONS ARE NOT OBSERVED
High voltage is present under this shield. This shield should only be removed by a qualified service technician.
Keep wet items away from inside parts of the treadmill.
High voltage may still be present even if the treadmill is unplugged.


WARNING WARNUNG 警告 AVERTISSEMENT ADVERTENCIA VARNING
DISCONNECT POWER BEFORE SERVICING.
DÉBRANCHEZ L'ALIMENTATION AVANT DE FAIRE L'ENTRETIEN
VOR SERVICEARBEITEN NETZSTECKER ZIEHEN.
CORTE LA ENERGIA ELECTRICA ANTES DE REPARAR.
修理点検の前に電源を切って下さい。
KOPPLA IFRÅN STRÖMMEN INNAN SERVICE UTFÖRS.
DE-16928

Caution Decals

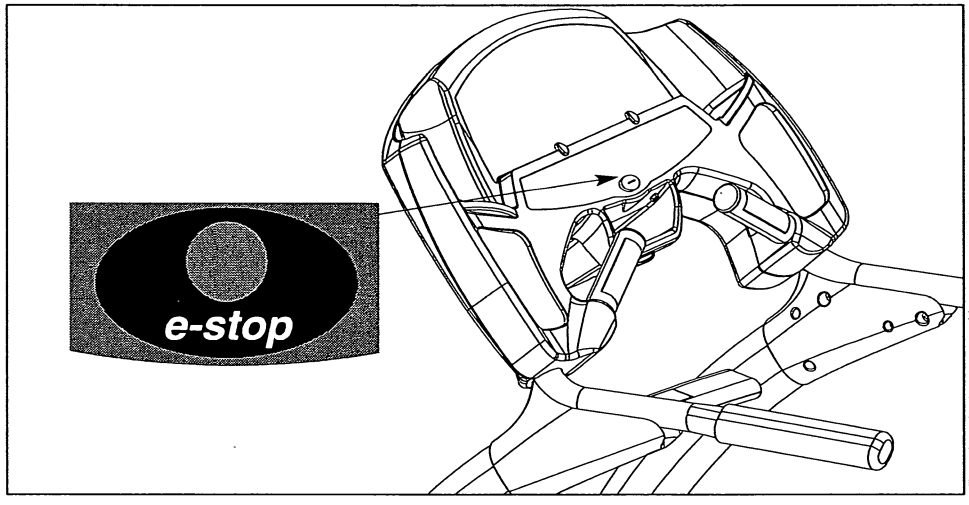
Caution decals indicate a potentially hazardous situation, which, if not avoided, may result in minor or moderate injury. There are no caution decals used on the Cybex Pro+ treadmill. However, there is a caution in the installation instructions for initial installation only. See below.



Emergency Stop Key (e-stop)

The e-stop key functions as the emergency stop. In an emergency situation, remove the e-stop key and the treadmill will come to a stop. Before using the treadmill, clip the e-stop key as described below.

1. Clip the e-stop key to your clothing. ***NOTE:*** *Be sure the string is free of knots and has enough slack for you to run comfortably with the e-stop key in place.*
2. Without falling off the treadmill, carefully step backward until the e-stop falls off the treadmill. ***NOTE:*** *If the e-stop clip falls off your clothing then the test has failed. Reclip the e-stop clip to your clothing and repeat this step.*
3. Replace e-stop after successfully testing the e-stop key. See the illustration shown below.



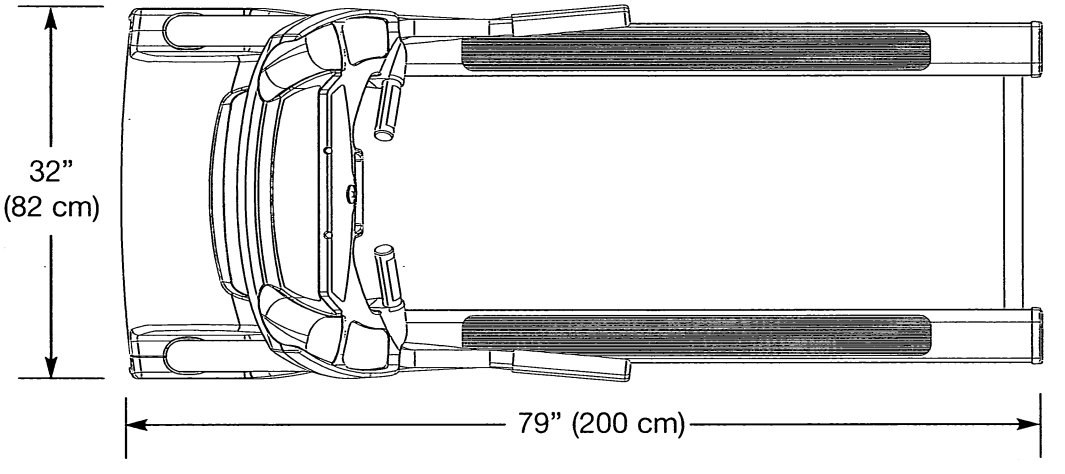
4. The treadmill is now ready to be used.
5. After use, remove the e-stop key from the treadmill.

NOTE: *The e-stop key shall be removed to help prevent unauthorized use. Refer to the Stopping the Treadmill section in the Operation chapter for more information about the e-stop key.*

2 - Technical Specifications

Specifications

Length:	79" (200 cm)
Width:	32" (82 cm)
Running Area:	20" x 58" (51 cm x 147 cm)
Weight of Product:	385 lbs. (173 kg)
Shipping Weight	415 lbs. (187 kg)
Speed Range:	0.5 to 12.4 mph (0.8 to 20 kph) in 0.1 mph or 0.1 kph increments
Incline Range:	-2 to 15% grade
Levels of Difficulty:	Minimum of 10 per program
Manual Mode:	Yes
Programs:	Quick Start plus Manual, Cardio, 9 Holes, 5K Run, Heart Rate and Weight Loss
Standard Features:	Safety Sentry™, Contact Heart Rate, Polar and CSAFE, frame color choices include white texture, black texture, silver vein, black chrome and platinum sparkle
Optional Features:	Full length handrails, unlimited custom colors available
Power Requirement:	Grounded, dedicated circuit and one of the following: • 115 VAC ±5, 60 Hz and 20 amps, • 208/220 VAC, 60 Hz 15 amps • 230 VAC ±5, 50 Hz and 15 amps
Motor:	3.0 hp, DC continuous duty
Emergency Stop:	Pull the emergency stop key (lanyard)
Maximum User Weight:	400 lbs. (181 kg)



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3 - Operation

Read and understand all instructions and warnings prior to using the treadmill. See all of the safety related information located in chapter 1.

Terms & Symbols Used

This section lists some of the common terms and symbols used in this chapter. Other terms and symbols are listed in this chapter as appropriate.

Dormant Mode — This occurs when the treadmill is plugged in, turned to the on (I) position and not in use. The control panel will display a beating heart when the treadmill is in *Dormant Mode*.

Program Setup Mode — This begins after pressing any program key. Upon entering a program the LEDs flash, prompting the user to adjust the appropriate settings.

Active Mode — This begins immediately after pressing the **Quick Start** key *(Manual Mode)*, or after the *Program Setup Mode*. The beginning of *Active Mode* is marked by the 3 second countdown and running belt acceleration. *Active Mode* continues until you reach the end of a program, disengage the e-stop key or press the **Stop** key.

Quick Start — This begins by pressing the **Quick Start** key. *Quick Start* skips the *Program Setup Mode* and begins immediately in *Manual Mode.*

Manual Mode — This begins immediately after pressing the **Quick Start** key. In *Manual Mode* you can customize your workout **Time, Speed**, **Incline** and enter your **Weight** by pressing those keys. You can also begin *Manual Mode* by pressing the **Manual** program key (and be prompted to enter your weight).

Workout Review — This begins after pressing the **Stop** key once, at the end of a program or when the treadmill detects that you are not there (see *Safety Sentry in this chapter*). The workout statistics accumulated during the previous workout session will display for 20 seconds (default setting) or until **Stop** is pressed again. ***NOTE:*** *You can change the 20 second default. See Setting Operation Options in chapter 5.*

Pause Mode — This begins when the treadmill detects that you are not there and enters *Workout Review* (see *Safety Sentry in this chapter*). While in *Workout Review* you can press the **Quick Start** key to resume your workout. The time, calories burned and other accumulated data is remembered and added to.

▲▼ — These keys adjust **Time**, **Level**, **Weight** or **Age** up or down.
⬆⬇ — These keys adjust **Incline** higher or lower.
+ — — These keys adjust **Speed** up (**+**) or down (**—**).

Quick Operation Guide

NOTE: *Maximum user weight is 400 lbs. (181 kg).*

The following is a quick overview of the operation of the treadmill. For more information read *Detailed Operation Guide* in this chapter. ***NOTE:*** *Times specified in this chapter reflect the treadmills defaults. To change the defaults see Setting Operation Options in chapter 5.*

1. Place your feet on the two top steps located on each side of the running belt.

! CAUTION: Do not stand on the running belt when starting the treadmill. Always place your feet on the two top steps when beginning a workout.

2. Clip the e-stop clip onto your clothing and test it as described under *Emergency Stop* in the *Safety* chapter.
3. Press any program key or press **Quick Start** to skip the settings and begin *Manual Mode* immediately.
4. If you pressed a program key to select a program, you will now be prompted for workout **Time, Weight, Level** and **Age** as appropriate. Adjust these settings with the ▲▼ arrows and press **Enter** to proceed.
5. The treadmill begins a countdown, "3...2...1," after which it accelerates the belt to 1.0 mph (1.6 kph) (for *Manual Mode*) or the speed of the program that you selected.
6. Hold the handrails while you step onto the running belt and begin walking.
7. Press the **Speed + —** keys to change the belt speed at any time. The right display will show the current speed.
8. Press the **Incline** ⬆⬇ keys to change the incline at any time. The left display will show the current incline.
9. Press the **Stop** key at any time.

Detailed Operation Guide

NOTE: *Maximum user weight is 400 lbs. (181 kg).*

1. Plug the treadmill power cord into a power outlet from a grounded, dedicated circuit, rated for one of the following: 115 VAC ±5%, 60 Hz and 20 amps; 208/220 VAC, 60 Hz, 15 amps or 230 VAC ±5%, 50 Hz and 15 amps.
2. Locate the on/off (I/O) power switch on the left side of the treadmill. Toggle it to the on (I) position to supply power to the internal treadmill components and illuminate the control panel.

! CAUTION: Do not stand on the running belt when starting the treadmill. Always place your feet on the two top steps when beginning a workout.

3. Place your feet on the two top steps located on each side of the running belt.

4. Clip the e-stop clip onto your clothing and carefully test the e-stop key to ensure it will fall off properly in case of an emergency. See *Emergency Stop Key (e-stop)* in chapter 1 for properly testing the e-stop key. Also, see *Stopping the Treadmill* in this chapter for further information about the e-stop key. ***NOTE:*** *Be sure the string is free of knots and has enough slack for you to run comfortably with the e-stop key in place.*

5. You now have the option to select a program or enter *Manual Mode*.

   To select a program, press a program key and follow the prompts. Upon entering a program the LEDs flash, prompting you to adjust the appropriate settings. This is referred to as *Program Setup Mode*. If the **Quick Start** key is pressed now, all defaults for that program will be accepted. After 10 seconds, if no key has been pressed, the first default will be accepted. After another 10 seconds the second default will be accepted and so on until the last default. The program will not enter *Active Mode* until you press the **Enter** or **Quick Start** key. If no key has been pressed for 20 seconds after displaying the last default, then the treadmill will return to the *Dormant Mode*.

   If you choose to enter *Manual Mode* instead of choosing a program, press the **Quick Start** or the **Manual** key. ***NOTE:*** *No prompts will occur when you press* **Quick Start**. While in *Manual Mode*, customize your workout **Time, Speed, Incline** and enter your **Weight** by pressing those keys.

NOTE: *For the most accurate calorie count, you must set your correct weight before beginning your workout (including clothing).*

NOTE: *You must press* **Enter** *after each adjustment.*

6. The treadmill begins a countdown, "3...2...1" and sounds a tone for each count. When it reaches one (1) the treadmill gives a longer tone and then starts accelerating the belt. In *Manual Mode* the belt will begin accelerating to 1 mph (1.6 kph) and the incline will remain at zero percent. In a program the belt will begin accelerating and the incline will change to the corresponding speed and incline of the program and level you selected.

NOTE: *The left display will flash the actual incline until the desired incline is reached and then revert to time. The right display will show the speed set point. The top center window begins showing your program profile at the left side.*

7. Hold the handrails while you step onto the running belt and begin walking.

8. Observe the three displays. During your workout the time will show in the format of minutes:seconds. If your workout exceeds sixty minutes the time format will change to minutes only. The center window will scan (every three seconds) through **Distance**, **Calories**, **Mets**, **Pace** and **Heart Rate**. Press the **Scan** key to toggle this feature on or off. ***NOTE:*** *Heart Rate is scanned only when you are holding the contact heart rate grips or using Polar compatible heart rate transmitter.* See Figure 1.

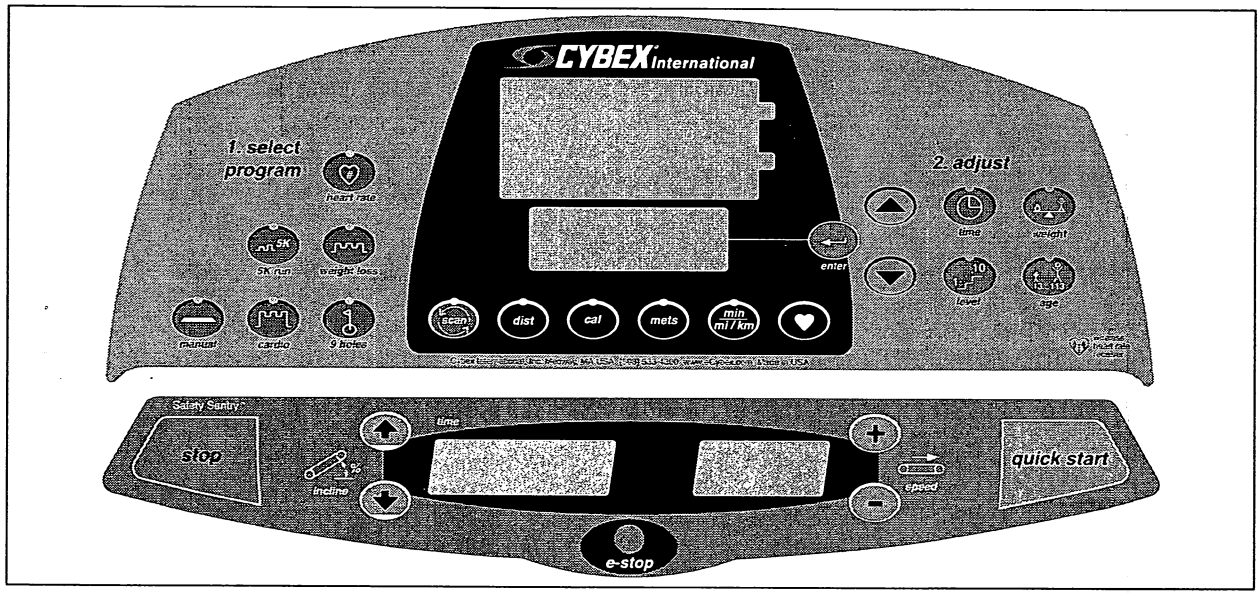


Figure 1

9. Press the **Speed + —** keys to change the belt speed at any time. The right display will show the set speed.

10. Press the **Incline** ⬆⬇ keys to change the incline at any time. The left display will show the current incline only while it is adjusting, then revert to time.

11. Press the **Stop** key at any time to stop your workout. Press **Stop** once to pause your workout and begin your *Workout Review.* As you press **Stop** once, the treadmill will return to 0% incline. Press **Stop** twice to clear the *Workout Review* and return to *Dormant Mode*.

12. If the e-stop key is removed during a workout, the power shuts off immediately, causing the belt to stop. The right window changes to "OFF" and the left window shows an alternating pattern of "O" and "o". Replacement of the key causes *Workout Review* to begin.

13. When you complete a program the treadmill begins a countdown, "3...2...1," and sounds a tone for each count. The belt slows to a stop and *Workout Review* displays for 20 seconds (default setting) or until you press the **Stop** key.

14. The treadmill returns to *Dormant Mode*.

Stopping the Treadmill

Press **Stop** once to pause your workout for 20 seconds (default setting) and to enter the *Workout Review*. The belt will stop and the elevation will return to 0%, but all workout settings and data will remain in memory for the pre-selected time. Press the **Quick Start** key within 20 seconds to continue your workout at the speed and elevation where you left off. If the **Quick Start** key has not been pressed during the 20 second pause, workout data will be cleared and the display will change to *Dormant Mode*.

Press **Stop** a second time to interrupt workout data from cycling and to change the display to *Dormant Mode*.

The function of the immobilization method: The purpose of immobilizing the treadmill is to prevent unauthorized use. This can be accomplished by removing the e-stop key from the console, unclipping it from the cord and putting it in a non-accessible place. See Figure 2.

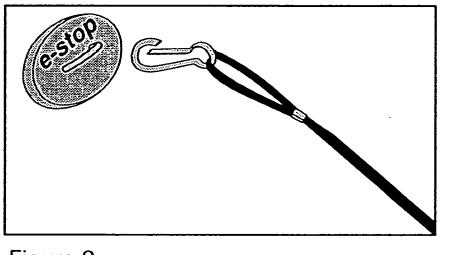


Figure 2

The emergency dismount: Follow the steps listed below if you experience pain, feel faint or need to stop your treadmill in an emergency situation:

1. Grip handrails for support.
2. Step onto the top steps.
3. Pull the e-stop key off the console.

The function of the emergency stop: The e-stop key functions as the emergency stop. In an emergency situation, remove the e-stop key from the console and the treadmill will come to a stop. On the console, the e-stop location looks like Figure 3.

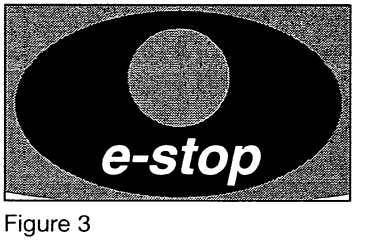


Figure 3

Safety Sentry

If you step off your treadmill during a workout, it may detect that you are not there. After the pre-selected waiting period "run?" will appear in the center window for a few seconds then Safety Sentry™ will stop the belt. If you press **Quick Start** within the time selected you can resume your workout. ***NOTE:*** *If you are less than 100 lbs. and you are not using Polar the treadmill may not detect you are there and cause the treadmill to come to a stop. Safety Sentry is disabled above 11% grade. It can also be disabled by setting* ***SAFE*** *time to "none". If changes in elevation or speed occur while you are not there (such as during a programmed workout) Safety Sentry resets its waiting period.*

Control During Operation

Control keys on the display are usable during operation and may be pressed at any time to make adjustments in speed, elevation or data readouts.

Changing Speed — Press the **Speed + —** keys to change the speed in increments of 0.1 mph or 0.10 kph. Minimum to maximum speed is from 0.5 - 12.4 mph (0.8 - 20 kph). ***NOTE:*** *During a Manual or Quick Start workout the ▲▼ keys temporarily revert to speed keys.*

Changing Incline — Press the **Incline ⬆⬇** keys to change the elevation in increments of 1%. Elevation ranges from -2 to 15%. ***NOTE:*** *Elevation is defined as the ratio of rise or fall over run of the treadmill deck.*

Changing Level — You can change the level during a programmed workout. Press the **Level** key to display the current program and level status. Then press ▲▼ keys to change the level. The level will change immediately and will continue to accumulate performance data without interruption.

Changing Programs — When changing programs, your data from the previous program will transfer only when changing from one program to *Manual Mode*. You cannot transfer data when changing from one program to another program or from *Manual Mode* to a program.

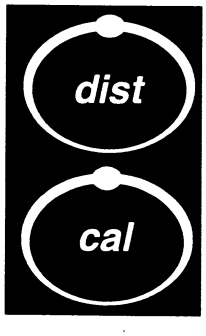
Changing Workout Time — Press **Time** to alter the amount of time you plan to workout. You can change **Time** before or during a workout. ***NOTE:*** *The **Max** time may limit your time. See Setting Operation Options in chapter 5. **Time** is disabled for distance based programs such as 9 Hole and 5K.*

Changing Data Readouts — Press **Scan** once and it will continually review each set of data. Press **Scan** again to continue to display a set of data. ***NOTE:*** *The automatic scan is a feature that can be turned on or off. See Setting Operation Options in chapter 5.*

Quick Start Reset — Press **Quick Start** when within a Quick Start workout to clear all accumulated data (time calories and distance). This can be used to reset the data after a warm-up in Quick Start workout.

Data Readouts

As you exercise, the treadmill keeps track of the following data:



Distance — The total accumulated distance, in miles or kilometers, during your workout. ***NOTE:*** *Depending on the defaults you've chosen this measurement will show in English or Metric.*

Calories — The total accumulated calories burned during your workout. Your weight must be correctly set before beginning your workout for this measurement to be most accurate.

Metabolic Equivalent — Relates to the user's energy expenditure. 'One met' is the amount of oxygen consumed at rest. For example two mets would be twice that amount. See *Heart Rate* in this chapter for a more detailed description.

Pace — At your current speed, how long it would take to cover a mile (or kilometer), displayed in minutes:seconds.

Heart Rate — Your current heart rate. Heart rate will appear when a signal is introduced. Use either the handgrips for Contact Heart Rate or a Polar compatible heart rate transmitter. See *Heart Rate LED* for a description of colors.

To review accumulated data after a program: The display automatically cycles through your accumulated workout data during the *Workout Review* for 20 seconds (default setting).

Displaying Heart Rate

In order for the Cybex Pro+ to display your heart rate, you must either use a Polar compatible heart rate transmitter belt (not included) or hold the handgrips to use Contact Heart Rate.

Contact Heart Rate — Hold the handgrips on the console crossbar until a heart rate is displayed, typically less than thirty seconds. For best results, hold the handgrips lightly and ensure that your hands contact both the front and back sensors of each grip. ***NOTE:*** *Hold your hands as steady as possible as movement can cause interference on the contacts.*

Factors that can interfere with the heart rate signal include:

- excessive movement
- body composition
- hydration
- too loose grip
- too tight grip
- running
- excessive dirt, powder or oil
- leaning or resting on grips

NOTE: *Cybex does not recommend continuous holding onto the contact heart rate grips during exercise.*

Contaminants, such as hand lotions, oils or body powder, may come off on the contact heart rate grips. These can reduce sensitivity and interfere with the heart rate signal. Therefore, ensure you have clean hands when using the contact heart rate.

NOTE: *When wearing a Polar compatible transmitter, the contact heart rate will dominate only when the grips are held.*

Polar Compatible Reception — To use this feature, a Polar compatible heart rate transmitter belt must be worn. To view heart rate continuously, press the **Scan** key when the Heart LED is lit or press the Heart key.

Heart Rate LED

When the handgrips are held the center display switches to show the heart rate in beats per minute (BPM) if you are not scanning. For several seconds the display will show "---". Once the actual heart rate is determined the center window displays the BPM and the Heart LED lights up. See Figure 4. The color of the light represents a scale of low to high target heart rate.

Blue = 0-69 beats per minute (RESTING)
Green = 70-93 beats per minute (WARM-UP)
Yellow = 94-120 beats per minute (FAT BURN ZONE)
Red = 121-170 beats per minute (CARDIO ZONE)
Purple = 171 & up beats per minute

NOTE: *A label is on the console to remind you what the color represents while you are working out. See Figure 4.*

The color of the heart LED indicates the range of beats per minute as shown on this decal.

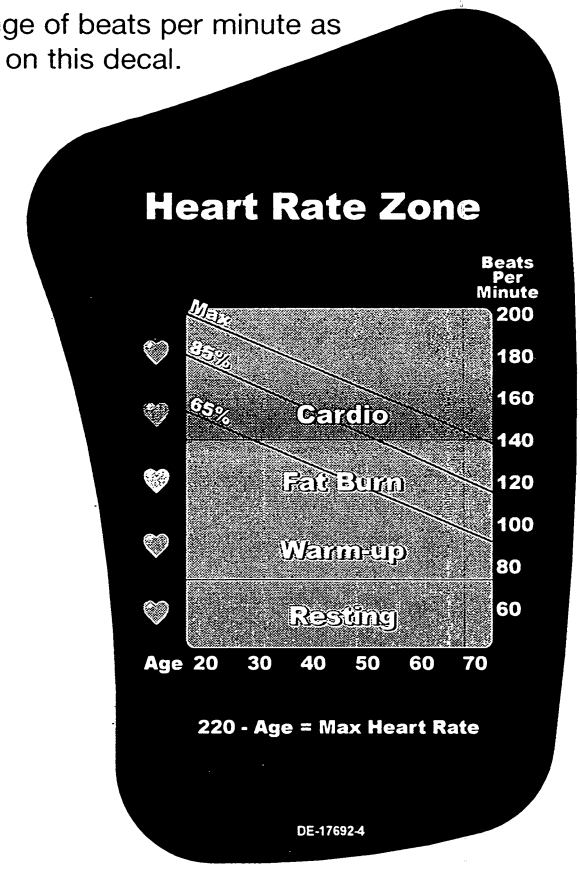


Figure 4

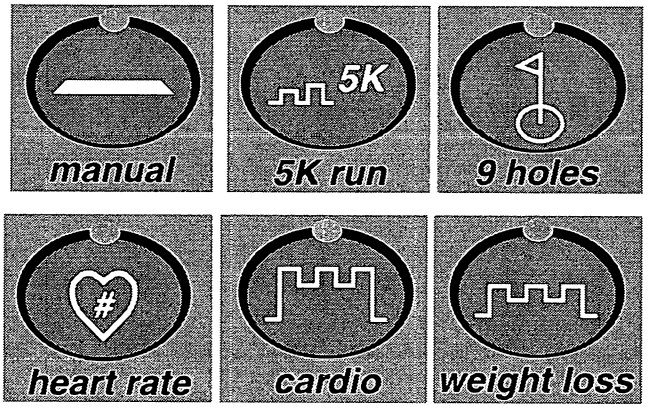
Use of Programs

! WARNING: Obtain a medical exam before beginning any exercise program. Begin comfortably with a lower level and progress with higher levels as you become acclimated.

With the Cybex Pro+, you may choose from five different programs. Each program provides ten levels of difficulty for a choice of fifty different preprogrammed options. You may also use *Manual Mode*. With this unique combination of programs, you can tailor your workout to

achieve exactly the fitness goals you desire, including: weight loss, conditioning, endurance or maintenance of overall health. The program choices are summarized as follows:

Manual Mode	You control speed, elevation, and time.	
5K Run	10 Levels	(5 kilometers) Time varies according to speed
9 Holes	10 Levels	(1 mile) Time varies according to speed
Heart Rate	Level is your Target Heart Rate	Minutes vary according to time selected
Cardio	10 Levels	Minutes vary according to time selected
Weight Loss	10 Levels	Minutes vary according to time selected



Manual Mode

Manual Mode is not a preprogrammed workout. Instead, it allows you to choose settings as you workout. You may choose your settings according to how you feel or your endurance level. Since you remain in control, *Manual Mode* may be the best choice for beginners or for those who have not worked out in a long time.

Press the **Quick Start** key to workout in *Manual Mode*. To increase or decrease the speed while in *Manual Mode* use the **Speed + —** keys. To increase or decrease the incline while in *Manual Mode* use the ⬆⬇ arrows.

When you workout in *Manual Mode*, be sure to include a three-to-five minute warm-up and cool-down period. You can warm-up by setting a slow speed for walking/jogging on the treadmill at zero incline and then gradually increase the speed to the target for your workout. Reverse this process for your cool-down period, slowing down the speed gradually and returning the incline to zero.

The Workout Profile

The Workout Profile matrix in the center of the display uses columns of lights to show the progress of your workout. The height of the column represents METS, specifically the highest METS you reached in that period. Each column represents 1 minute of your total workout time when in *Manual Mode* and 15 seconds in every other program.

NOTE: *It is conceivable to have two segments of different speed and elevation combinations in the same met range.*

Meaning of % Grade

A 1% grade is not the same as a 1 degree incline.The % grade is the relationship of the measurement of rise over the measurement of run (also called slope). For example, a 1 foot (meter) rise in height over a length of 100 feet (meters) is a 1% grade. Expressed as a mathematical formula, the grade is calculated as follows:
1 ft. (m) / 100 ft. (m) = 0.01 = 1%

With respect to treadmills, the percent grade is roughly equal to the increase in height (rise) of the treadmill divided by the length (run) of the treadmill.

The degree of incline can be related to % grade by taking the Tangent of the grade. For instance, 15% grade is equal to 8.53 Degrees (Tan(.15)=8.53°). The opposite is true to determine % Grade from Degree of incline (ArcTan (8.53°)=.15).

5K Run

Program Overview
This program is designed to help the user train for a 5K race in a systematic fashion. It uses a predefined speed for each level to establish the "race pace". Throughout the program the elevation changes from a baseline (0% incline) level into both incline and decline. The frequency of the use of elevation is based on the level of the program. The higher the level the more frequent the use of elevation including decline. These may also be thought of as elevation intervals. Each use of elevation is considered a "work" segment, in levels 1 through 3 each work segment is followed by three rest or level segments, in levels 4 through 7, each work segment is followed by two rest segments. In level 8 though 10 the ratio is 1:1. Each segment is 400 meters in length. See table below and Figure 5.

Level	Speed mph (kph)	/Pace min mi (km)	Down %	Uphill %	No Elevation distance	No Elevation distance
1	6	/ 10	none	none	n/a	n/a
2	6.6	/ 9	none	2	400 yds	1200 yds
3	7.0	/ 8.5	none	2	400 yds	1200 yds
4	7.5	/ 8	(1)	3	400 yds	1200 yds
5	8.0	/ 7.5	(1)	3	400 yds	800 yds
6	8.5	/ 7	(1)	4	400 yds	800 yds
7	9.2	/ 6.5	(1)	4	400 yds	800 yds
8	10	/ 6	(2)	6	400 yds	400 yds
9	10.8	/ 5.5	(2)	6	400 yds	400 yds
10	12	/ 5	(2)	6	400 yds	400 yds

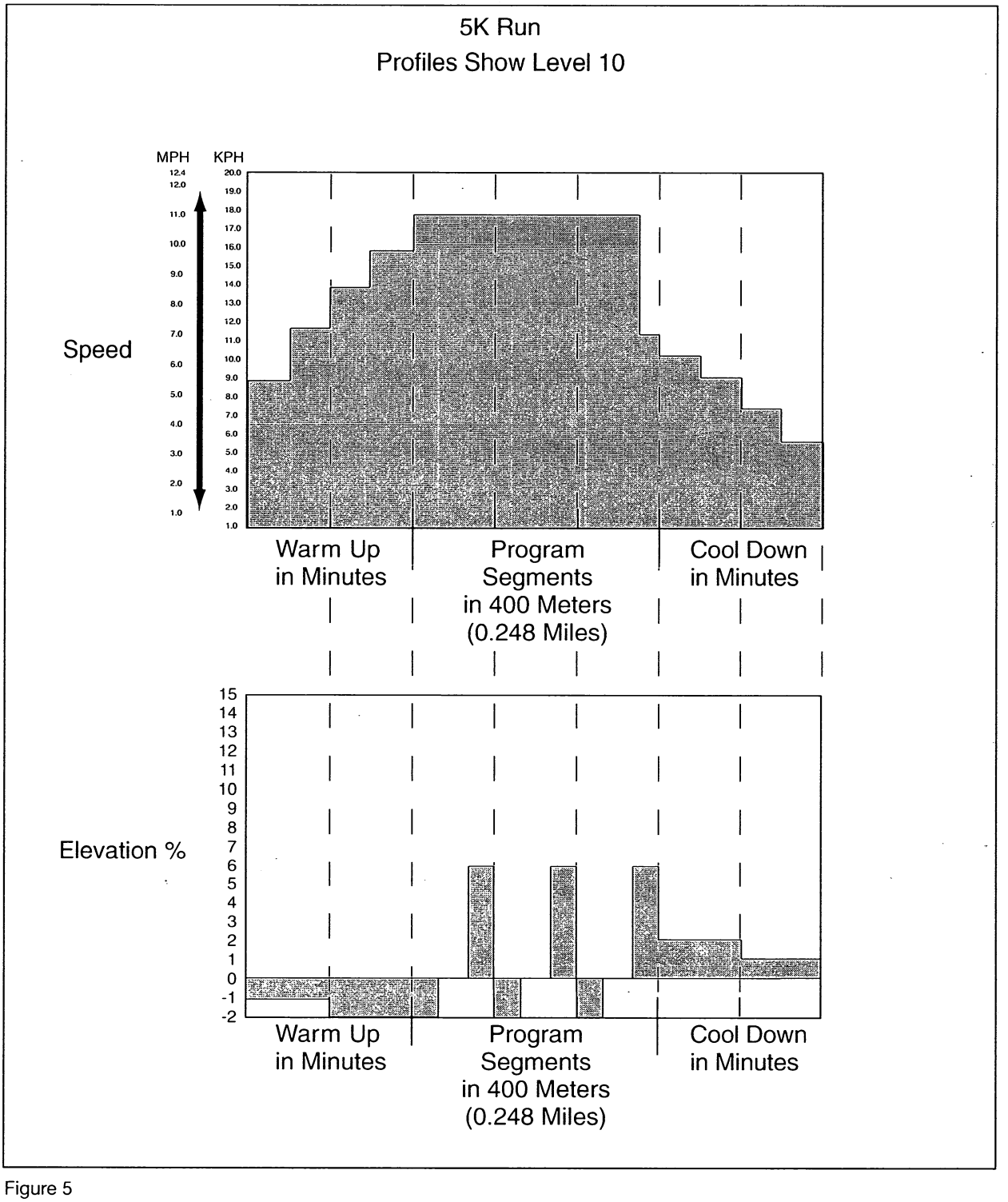


Figure 5

NOTE: *This program includes both a two-minute warm up and cool down in addition to the actual 5K portion of the program.*

9 Holes

Program Overview

In this program, the user chooses their speed as they go. The level of the program uses variations in the elevation. As the level goes up so does the level of intensity. Like the golf course, there are uphill and downhill sections, which not only contribute to the intensity of the exercise but also provide the additional adaptation to covering varied terrain. See table below and Figure 6.

Elevation Patterns and Distance in Meters (1600 meters = 1 mile)

Level 1	Incline	0	-2	0	2	4	2	0	-2	0	2	4	2	4	2			
	Meters	225	25	225	100	50	100	225	25	225	100	50	100	50	100			
Level 2	Incline	2	-2	2	4	6	2	0	-2	0	2	4	6	4	2	4	0	-2
	Meters	100	50	100	100	25	100	200	50	200	100	100	25	100	100	100	100	50
Level 3	Incline	2	4	6	4	-2	0	-2	2	4	6	4	2	-2	0	6	4	6
	Meters	150	50	50	50	50	200	100	100	100	50	100	100	200	100	50	100	50
Level 4	Incline	2	0	-2	2	6	8	6	4	8	4	2	0	2	6	4	6	4
	Meters	100	50	25	50	100	25	100	200	25	200	50	50	200	100	200	50	75
Level 5	Incline	4	8	6	4	-2	4	0	6	4	6	8	10	8	6	4	8	0
	Meters	100	50	125	200	25	25	125	125	100	125	50	25	50	125	200	50	100
Level 6	Incline	4	-2	0	6	8	6	4	6	8	2	8	0	8	2	-2		
	Meters	100	50	200	50	100	25	100	200	50	200	100	200	25	150	50		
Level 7	Incline	6	4	-2	2	6	8	6	10	6	8	0	4	-2	8	10	8	0	4
	Meters	50	50	100	25	200	50	100	25	50	50	200	200	25	100	25	100	200	50
Level 8	Incline	6	8	0	-2	2	4	8	10	8	10	6	0	6	10	4			
	Meters	50	100	200	25	50	200	100	50	200	50	200	100	100	50	125			
Level 9	Incline	8	4	0	-2	4	-2	4	6	8	10	6	12	10	4	0			
	Meters	25	150	25	50	200	50	100	200	200	50	100	50	100	200	100			
Level 10	Incline	8	6	12	8	-2	0	10	6	12	0	6	0	12					
	Meters	25	200	100	200	50	100	200	150	100	200	50	100	125					

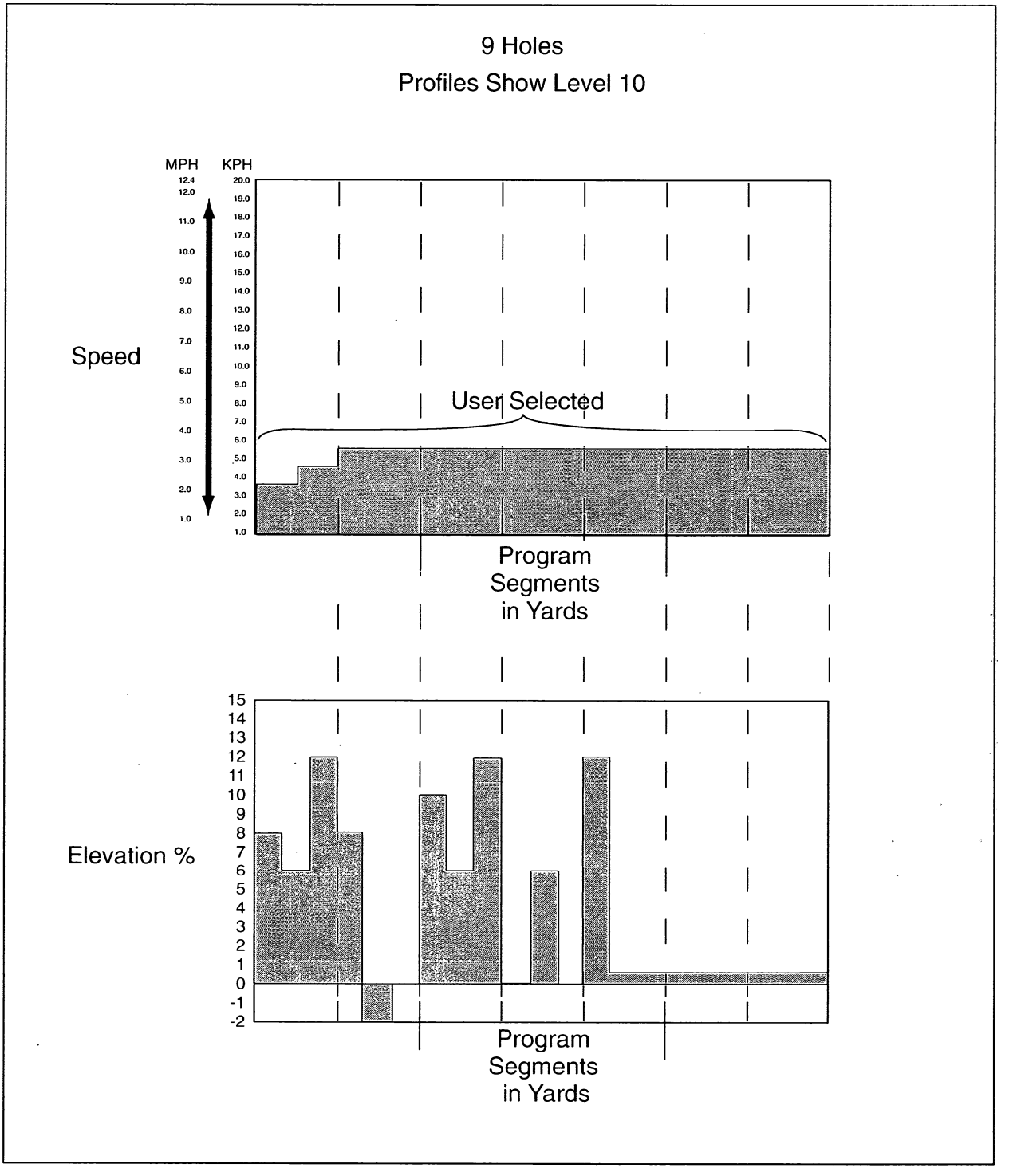

9 Holes
Profiles Show Level 10
MPH
KPH
Speed
User Selected
Program Segments in Yards
Elevation %
Program Segments in Yards

Figure 6

Heart Rate

Program Overview

The Heart Rate Control program is interactive. By selecting a predetermined heart rate, the treadmill will adapt the elevation and speed to keep the users heart rate at that level. This program is exceptionally useful for those individuals just starting out as well as the athlete. By maintaining the predetermined heart rate, the user is less likely to over or under exert themselves thereby ensuring they get all they should out of their training. Over time, the user will notice that as their fitness level improves and using a given time and heart rate that they will see more ground covered, more calories burned and a higher MET level during the program. See Figure 7.

A MET is a basic unit of measurement that is used to compare relative work between individuals and activities. One MET is the amount of oxygen an individual consumes at rest. If an individual were working at four METs he/she would be consuming oxygen at a rate equal to four times their resting consumption. METs can be used to compare walking on a grade with running or even to cycling and other activities.

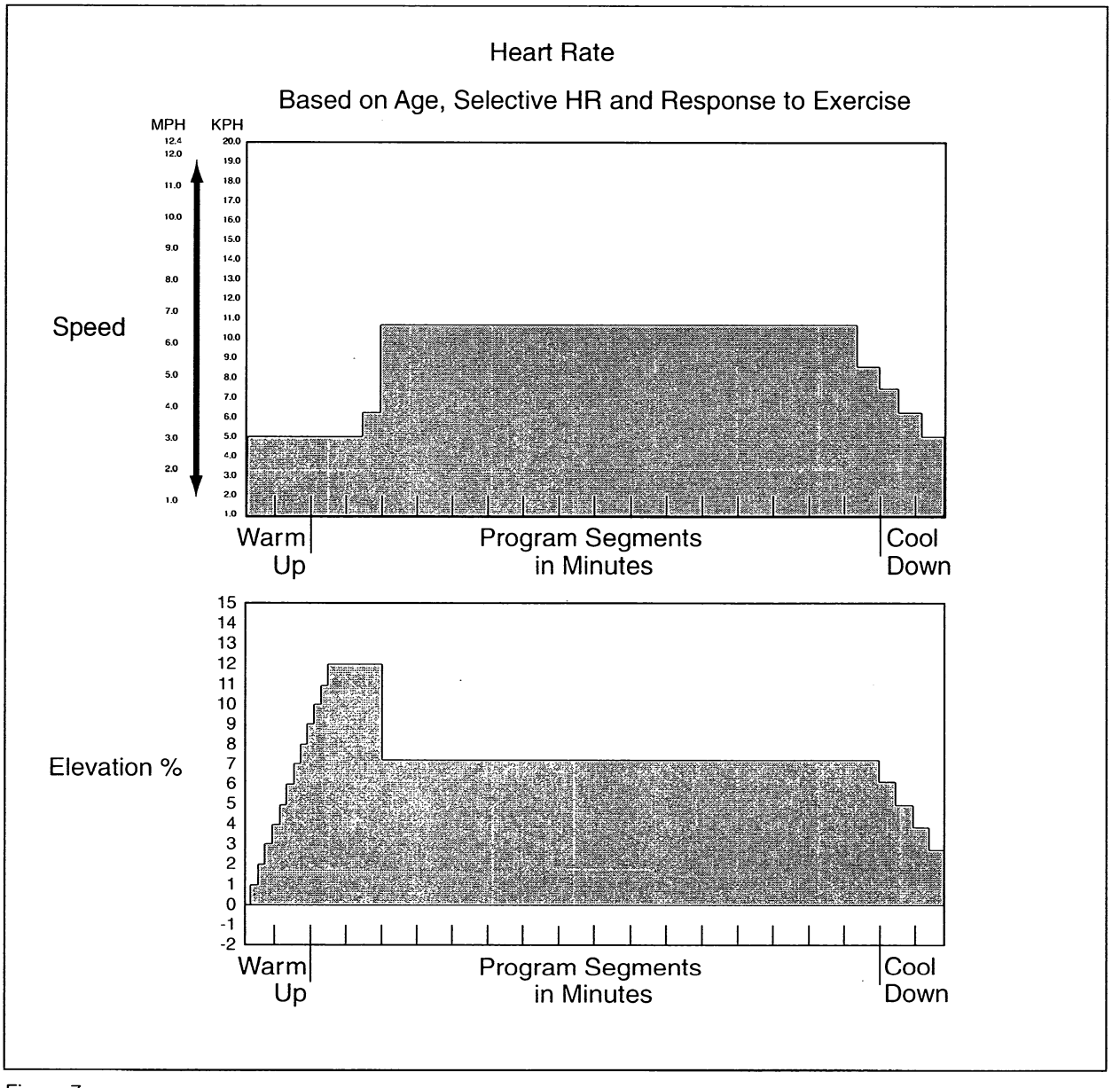

Heart Rate
Based on Age, Selective HR and Response to Exercise
MPH
KPH
Speed
Warm Up
Program Segments in Minutes
Cool Down
Elevation %
Warm Up
Program Segments in Minutes
Cool Down

Figure 7

Cardio

Program Overview

This program was designed for the exercise participant who wants to improve the overall efficiency of their cardio-respiratory system. Unlike some of the other treadmill programs that incorporate low and moderate intensity segments, the Cardio program contains overall higher intensity levels with more moderate recovery segments.

The speed range of the program includes walking speeds at the lower levels up through a moderate jog in the higher levels.

Elevation is used to emphasize the high intensity portion of this program while decreased elevation and a small increase in speed mark the recovery segment. High intensity and recovery segments are always in a one-to-one time based ratio and make up the core eight minutes of the program. See table below and Figure 8.

	Base Speed / Peak Elevation		Base Speed / Peak Elevation	
	mph	% grade	mph	% grade
Level 1	3.2	2%	3.5	0%
2	3.5	3%	3.8	0%
3	3.8	4%	4.0	0%
4	4.0	5%	4.2	0%
5	4.2	5%	5.0	2%
6	5.0	5%	5.5	2%
7	5.5	5%	5.8	2%
8	6.0	6%	6.2	2%
9	6.2	6%	6.5	2%
10	6.5	6%	6.8	2%

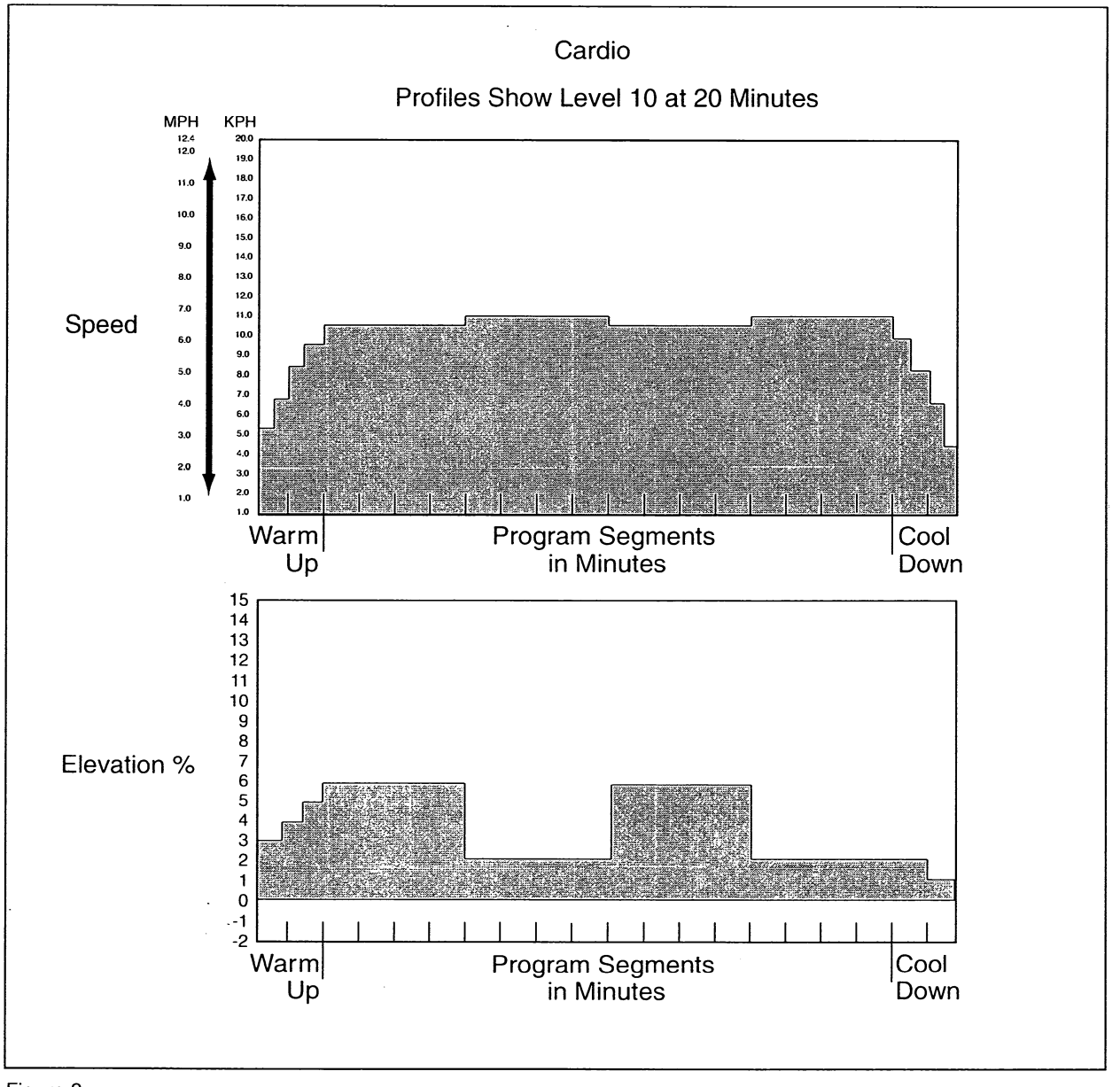

Cardio
Profiles Show Level 10 at 20 Minutes
MPH
KPH
Speed
Warm Up
Program Segments in Minutes
Cool Down
Elevation %
Warm Up
Program Segments in Minutes
Cool Down

Figure 8

Weight Loss

Program Overview

This program was designed to help individuals of all fitness levels achieve their weight loss goals through a protocol that incorporates both low and moderate intensity activity. Because walking has become a popular mode of exercise for those looking to lose weight, all levels of this program are performed at walking speeds.

The core of the program is made up of five one-minute segments. The first segment represents the baseline of the program and may also be considered to be a "rest" segment later. In minutes two and three, elevation will be increased. In minute four, the program returns to the first segment baseline or rest level. In the fifth minute, the speed will increase. The total number of segments used is dictated by the time selected by the user.

Higher levels of the Weight Loss program incorporate jogging speeds in short segments. This allows the advanced walker to alternate walking and jogging.

- At levels 1-6 walkers maintain walking speeds only.

- At levels 7-10, experienced walkers can jog intermittently.

By mixing the use of speed and elevation separately, the user receives the benefits of added intensity intervals but the variety does not allow for either speed or elevation to dominate and therefore overtax the user. See table below and Figure 9.

Level	Base Speed mph		Uphill Elevation % Grade	Increased Speed mph	
1	3.4	WALK	2%	3.5	WALK
2	3.4		3%	3.5	
3	3.7		4%	3.8	
4	3.7		6%	3.8	
5	3.8		4%	4.0	
6	3.8		6%	4.0	
7	4.0		6%	4.5	WALK-JOG
8	4.0		8%	5.0	
9	4.2		8%	5.5	
10	4.2		10%	6.0	

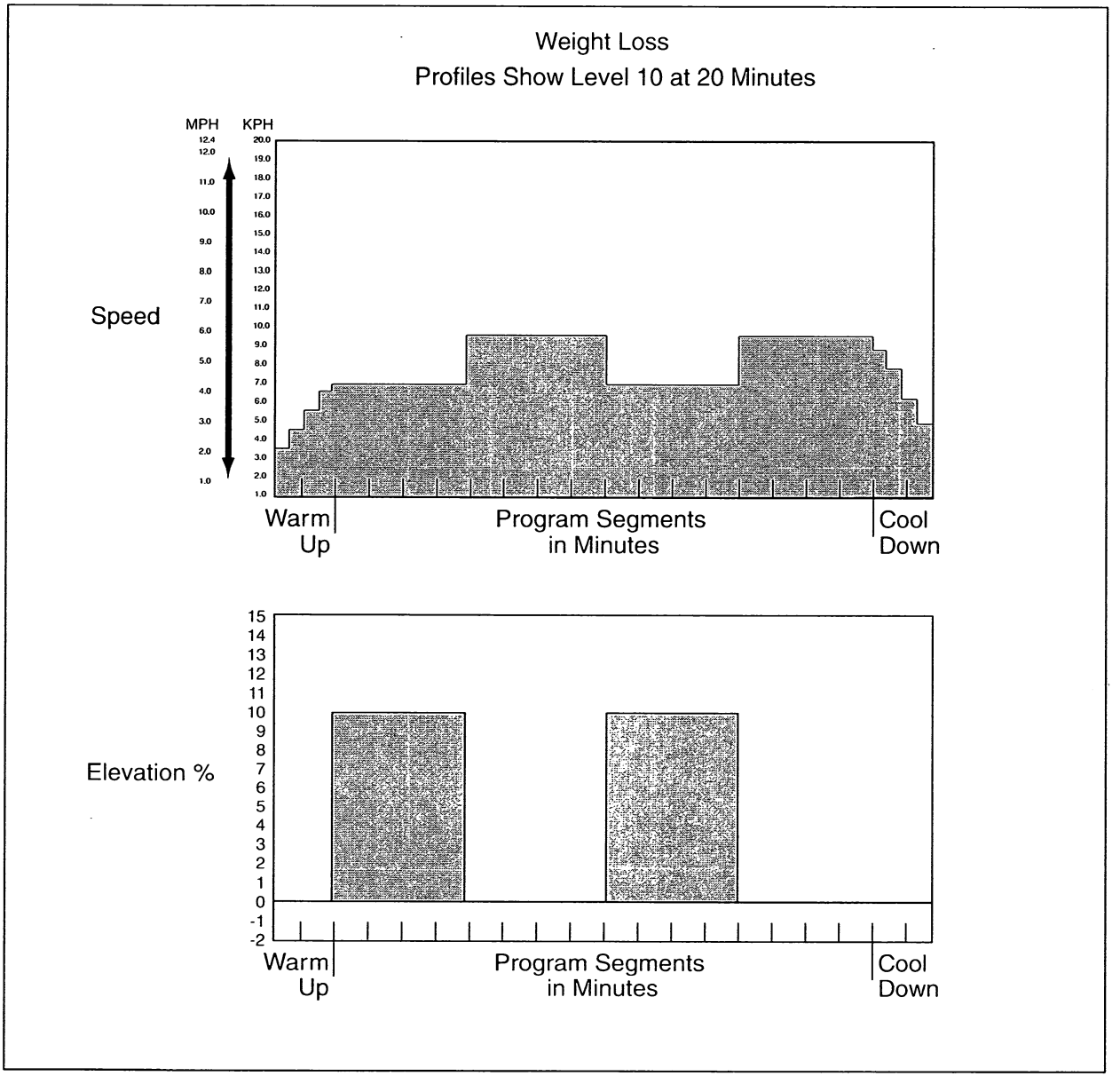


Figure 9

Manual

Program Overview

Manual Mode is available both through **Quick Start** and through the **Manual** program where it includes the program time and user weight adjustment. ***NOTE:*** *There is no diagram because incline and speed are user-controlled.*

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4 - Preventive Maintenance

Warnings/Cautions

All warnings and cautions listed in this chapter are as follows:

! WARNING: All maintenance activities shall be performed by qualified personnel. Failure to do so could result in serious injury.

! WARNING: To prevent electrical shock, be sure that power is shut off and the treadmill is unplugged from the electrical outlet before performing any cleaning or maintenance procedures.

! WARNING: Keep wet items away from inside parts of the treadmill. Electrical shock could occur even if the treadmill is unplugged. Do not touch components on the lower board. A charge can remain after unplugging the power cord and turning off the treadmill.

! CAUTION: Be careful not to over tighten the belt. Over tightening the belt can cause the belt to stretch and require replacement.

Regular Maintenance Activities

! WARNING: All maintenance activities shall be performed by qualified personnel. Failure to do so could result in serious injury.

Preventive maintenance activities must be performed to maintain normal operation of your treadmill. Keeping a log sheet of all maintenance actions will assist you in staying current with all preventive maintenance activities. See *Service Schedule* and *Log Sheet* located at the end of this chapter.

NOTE: *Worn or damaged components shall be replaced immediately or the treadmill removed from service until the repair is made.*

NOTE: *Cybex is not responsible for performing regular inspection and maintenance actions for your treadmill. Instruct all personnel in equipment inspection and maintenance actions and also in accident reporting/recording. Contact Cybex Customer Service at 800-766-3211 or 508-533-4300 for any preventive maintenance or service concerns.*

Cleaning Your Treadmill

When cleaning your treadmill spray a mild cleaning agent, such as a water and dishsoap solution, on a clean cloth first and then wipe the treadmill with the damp cloth.

NOTE: *Do not spray cleaning solution directly on the treadmill. Direct spraying could cause damage to the electronics and may void the warranty.*

! WARNING: To prevent electrical shock, be sure that power is shut off and the treadmill is unplugged from the electrical outlet before performing any cleaning or maintenance procedures.

After Each Use — Wipe up any liquid spills immediately. After each workout, use a cloth to wipe up any remaining perspiration from the handrails and painted surfaces.

Be careful not to spill or get excessive moisture between the edge of the display panel and the console, as this might create an electrical hazard or cause failure of the electronics.

As Needed — Vacuum any dust or dirt that might accumulate under or around the treadmill. Motors are especially susceptible to dust and dirt, and restricted airflow can prevent adequate cooling that could shorten motor life. Cleaning this area should be done as often as indicated in the *Service Schedule.*

! WARNING: Keep wet items away from inside parts of the treadmill. Electrical shock could occur even if the treadmill is unplugged. Do not touch components on the lower board. A charge can remain after unplugging the power cord and turning off the treadmill.

To clean the motor components, you must loosen the six Phillips head screws that hold the motor cover in place. Lift the cover straight up; the screws and side covers will stay in place. Use a vacuum attachment or hand vacuum to clean the exposed elevation assembly, drive motor, lower electronics and the surrounding areas.

Also use a dry cloth for the areas that you can't reach with the vacuum cleaner. If the machine has not been used for some time or is excessively dirty, use a *dry* cloth to wipe all exposed areas. Replace the cover and tighten the screws when finished.

Lift the rear of the treadmill and roll it back from its present position so as to vacuum the floor area underneath the unit. Wipe clean the underside of the treadmill to prevent dirt and dust build-up. When finished, return the treadmill to its normal position.

Contact Heart Rate Grips — Contaminants, such as hand lotions, oils or body powder, may come off on the contact heart rate grips. These can reduce sensitivity and interfere with the heart rate signal. It is recommended that the user have clean hands when using the contact heart rate. Clean the grips using a cloth dampened with a cleaning solution containing alcohol. The grips are the only part of the treadmill you should use a cleaning solution containing alcohol.

Running Belt Maintenance

Belt and Deck — Clean the belt and the deck surfaces to minimize the effect of friction between the wood deck and the running belt. Clean the underside of the running belt and the top of the running deck surface by wiping them with a clean dry towel. This should be done

often to prevent premature wear of the deck, running belt, and the drive motor system. See the *Service Schedule* in this chapter to determine the minimum recommended cleaning.

The running belt may become loose and slip on the drive roller with each foot plant. If it does, follow the *Tensioning and Centering the Belt* in this chapter. See the *Service Schedule* in this chapter for a minimum schedule for checking the belt tension.

Tension and Center the Belt — If the belt is slipping under each step perform this procedure:

Tools Required

- 3/4" Socket wrench

1. Tension the belt.

A. Use a 3/4" socket wrench to turn each bolt 1/2 turn clockwise. See Figure 1. ***NOTE:*** *Be sure to adjust each bolt equally on each side.*

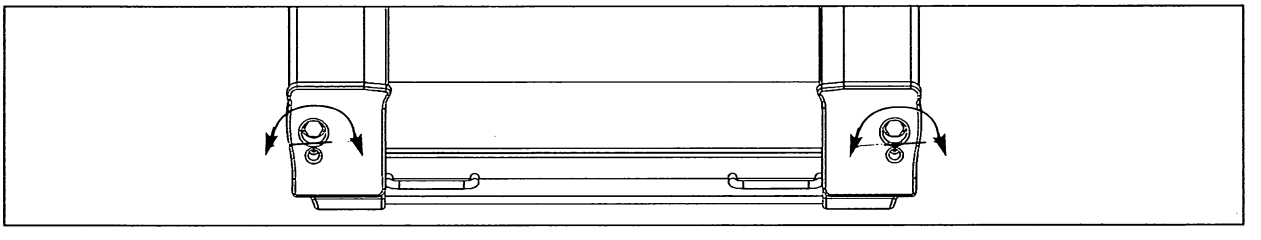

Figure 1

B. Turn the power on and press the **Quick Start** key.

C. Press the **Speed +** to bring the speed up to 3.5-4 mph (5.6-6.4 kph). Allow the treadmill to run for a minute.

D. Observe the belt to be sure it stays centered. If it is not centered follow step 2.

E. Walk on the belt to see if it still slips. If it does restart this procedure at step 1 A. If you have to do this procedure three times and it still slips check the drive belt tension in the *Service* chapter or call Cybex Customer Service. Follow the next step to be sure the belt is centered.

! CAUTION: Be careful not to over tighten the belt. Over tightening the belt can cause the belt to stretch and require replacement.

2. Center the belt.

NOTE: *While centering the belt choose one bolt to adjust. Do not adjust both bolts.*

A. With the treadmill running at 5 mph (8 kph) observe the running belt. If the belt tracks off center to the right or left the deck will become exposed. Use a 3/4" socket wrench to tighten the rear roller bolt on the side of the treadmill toward which the belt is moving. For example: If the belt moves to the right and the deck becomes exposed on the left, tighten the bolt on the right side of the frame, tighten about 1/2 of a turn (clockwise) and wait 30 seconds. If the belt does not move back to the center of the treadmill, make another adjustment to the ***same bolt***. Once the running belt has been adjusted closer to the center of the treadmill use about 1/4 of a turn until the belt has been stabilized.

B. After the belt has been centered, check the belt tension again. Make sure the running belt tension is tight enough so that the belt does not slip or hesitate when stepped on. Walk on the treadmill at 3.5-4 mph (5.6-6.4 kph) and every 4th to 5th step throw your weight into your step to feel if the belt is slipping. If the belt does slip, use a wrench to equally tighten ***both*** rear roller adjustment bolts 1/2 of a turn (clockwise). Adjust the belt until no further slipping is felt. If the running belt continues to slip the drive belt could be loose.

Checking the Belt and Deck Surfaces — The running belt and deck should be checked periodically for any excessive wear. In an effort to make sure that the running belt operates properly, visually inspect the belt often to make sure that there are no tears or fraying in the belt material.

Inspect the edges of the belt as described below. ***NOTE:*** *It is necessary to remove the motor cover and plastic side panels.*

Tools Required
- Phillips head screwdriver
- Dry towel

1. Disconnect the external power source.

A. Turn the main power switch on the left side to the off (O) position.

B. Unplug the treadmill from the power outlet.

2. Remove the motor cover.

A. Using a Phillips head screwdriver, loosen three screws on each motor cover side (left and right). See Figure 2.

B. Lift the motor cover up and off the treadmill. The screws will stay in place. See Figure 2.

3. Remove the end caps.

A. Using a Phillips head screwdriver, remove the screw that holds each end cap in place. See Figure 3.

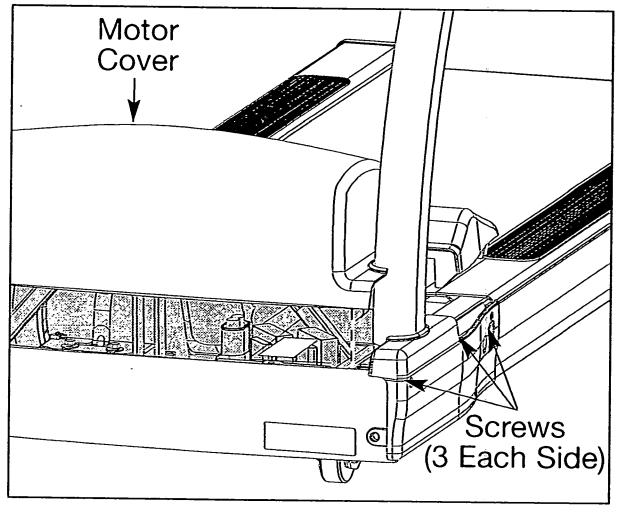

Figure 2

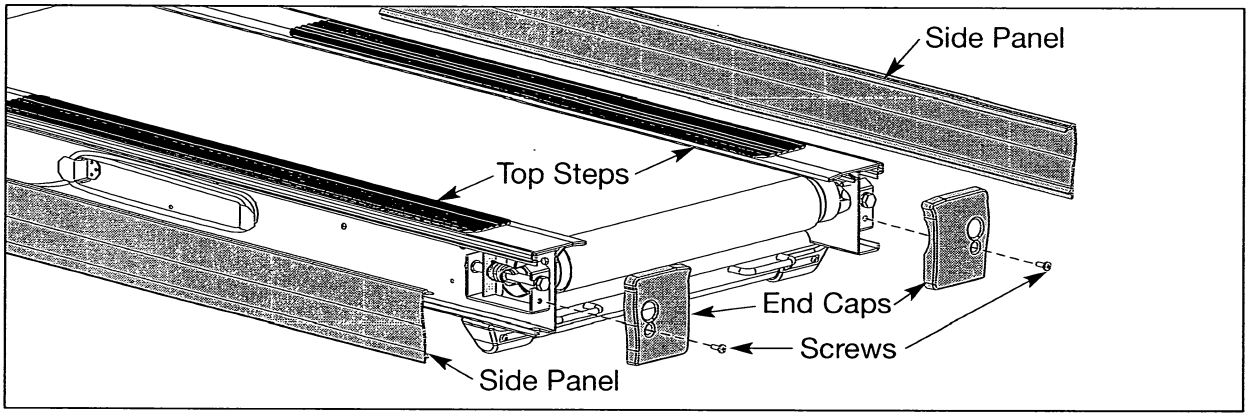

Figure 3

4. **Remove the side panels.**

   A. Pull each side panel out and off the treadmill. See Figure 3.

5. **Remove the top steps.**

   A. Using a Phillips head screwdriver, remove the three screws that hold each top step in place. See Figure 4.

   B. Grasp each top step and lift it out and off the treadmill. See Figures 3 and 4.

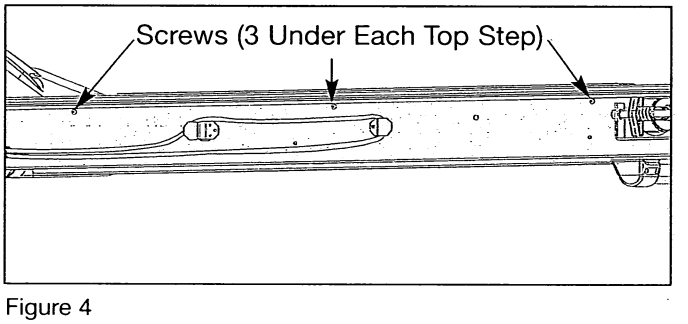

Figure 4

6. **Check the belt and deck condition.**

   A. Look at the edges of the belt while you roll it by hand. If the belt has any rips or looks excessively worn the belt needs to be replaced.

   B. Run your hand under the belt on the top of the deck surface. If you feel excessive ridges or cracks, or if the deck feels grooved yet highly polished, the deck should be flipped to an unused surface or replaced. In time, a worn belt and deck can cause high current draw and ultimately, motor failure. For instructions on replacing the belt and deck, see *Running Belt and Deck* in the *Service* chapter.

7. **Clean under the belt.**

   A. To minimize the effect of friction between the deck and the running belt, Cybex recommends cleaning the underside of the running belt and the top of the running deck surface by wiping them with a clean, dry towel. This cleaning should be done each time you check the belt and deck condition to prevent premature wear of the deck, running belt and the drive motor system. See the *Service Schedule* in this chapter.

8. **Secure the top steps.**

   A. Place each top step in position. See Figure 4.

   B. Using a Phillips head screwdriver, tighten the three screws that hold each top step in place. See Figure 4.

9. **Secure the end caps.**

   A. Using a Phillips head screwdriver, tighten the screw securing each end cap in place. See Figure 3.

10. **Secure the side panels.**

    A. Place each side panel into position slightly under the end cap and use your hand to push all along the bottom edge of the side panel to snap it in place. See Figure 3.

11. **Secure the motor cover.**

    A. Lower the motor cover center into position. See Figure 2.

    B. Using a Phillips head screwdriver, tighten the three screws on each side. Be sure the screws are catching the center motor cover's holes.

Other Preventive Maintenance

Other preventive maintenance activities must be completed by a qualified service technician at the recommended intervals listed in the *Service Schedule* (shown on the next page). These activities include:

- Measure the motor brushes and replace worn motor brushes
- Rotate and replace the running deck
- Replace the running belt
- Check the current draw
- Measure motor voltage at maximum speed, with no load

NOTE: *See the Service chapter of this manual for detailed procedures for the maintenance activities listed above.*

Elevation Motor Lubrication — In time the elevation motor pivot points may develop a squeak. If a squeak is present, remove the elevation motor by following the *Elevation Motor* procedure in the *Service* chapter. Lubricate the upper and lower bolts and the spacers with a small amount of lithium grease. ***NOTE:*** *You can buy lithium grease at an auto parts store.*

Static Electricity — Depending upon where you live, you may experience dry air, causing a common experience of static electricity. This may be especially true in the winter time. You may notice a static build-up just by walking across a carpet and then touching a metal object. The same can hold true while working out on your treadmill. You may experience a shock due to the build-up of static electricity on your body and the discharge path of the treadmill. If you experience this type of situation, you may want to increase the humidity to a comfortable level through the use of a humidifier.

Service Schedule

⚠ WARNING

All maintenance activities shall be performed by qualified personnel. Failure to do so could result in serious injury.

Service Schedule (for Models Trotter Elite, Sport and Pro)

NOTE: *This is the minimum recommended service.*

1. Determine mileage.

A. Enter *Test Mode* by holding down any key while turning the treadmill to the on (I) position.

B. Press dist (except on Sport). DIST appears on the display.

First 500 Miles
- *A* Check Running Belt Tension & Tracking

Every 5000 Miles
- *A* Check Running Belt Tension & Tracking
- *B* Move Treadmill & Vacuum Underneath
- *C* Remove Motor Cover to Clean Underneath with a Dry Cloth & Vacuum

Every 10,000 Miles
- *D* Replace Belt & Flip Deck
- *E* Check Motor Brushes & Replace If Needed
- *F* Check Current Draw
- *G* Measure Motor Voltage at Max Speed with No Load
- *H* Check Elevation Assembly & Replace Worn Parts
- *I* Lubricate Elevation Bushings

Every 20,000 Miles
- *J* Replace Belt & Deck

Date	*Mileage*	*Service*	*Initials*

DE-16609-4

Log Sheet

Serial Number _____ Date of Installation _____

Date of Data Collection									
Total Miles/Kilometers									
Total Hours									
Motor Current @ 3 mph (4.8 kph)									
Motor Voltage @ 12.4 mph (20 kph)									
- without load									
- with load (indicate user lbs/kg)									
Notes:									
Total Miles/Kilometers									
Total Hours									
Motor Current @ 3 mph (4.8 kph)									
Motor Voltage @ 12.4 mph (20 kph)									
- without load									
- with load (indicate user lbs/kg)									
Notes:									
Total Miles									
Total Hours									
Motor Current @ 3 mph (4.8 kph)									
Motor Voltage @ 12.4 mph (20 kph)									
- without load									
- with load (indicate user lbs/kg)									
Notes:									
Total Miles/Kilometers									
Total Hours									
Motor Current @ 3 mph (4.8 kph)									
Motor Voltage @ 12.4 mph (20 kph)									
- without load									
- with load (indicate user lbs/kg)									
Notes:									

5 - Setup & Assembly

Warnings/Cautions

All warnings and cautions listed in this chapter are as follows:

! WARNING: Use extreme caution when assembling the treadmill. Failure to do so could result in injury.

! CAUTION: A minimum of two people are required to lift, move and assemble this treadmill. Always use proper lifting methods when moving heavy items.

! CAUTION: Do not pinch your hands or other body parts while pivoting the treadmill. See Figure 3.

! CAUTION: During this procedure STAY OFF THE RUNNING BELT! Stand with your feet on the two steps.

Choosing & Preparing a Site

Before assembling the treadmill you must select a suitable site and have the proper electrical outlet power available for optimum operation and safety. See the *Electrical Power Requirements* section (located on the next page) for direction in locating your treadmill's voltage requirements.

The area you select for the treadmill should be well lit and well ventilated. Locate the treadmill on a structurally sound and level surface (do not place in recessed areas or on plush carpet) a few feet away from walls and other equipment. Each side of the treadmill should have a 19.7" (0.5 m) minimum space. Behind the treadmill should be 39" (1.0 m) minimum of space. Allow enough clearance for safe access and passage during use of the machine. If the treadmill is to be located above the first floor, place it near or above major support beams. If the area has a heavy, plush carpet, the airflow around the base of the machine may be restricted or the carpeting may interfere with the moving parts. To protect the carpeting and the machinery, place a 3/4" (1.9 cm) thick wood base under the treadmill.

Do not install the treadmill in an area of high humidity, such as in the vicinity of a steam room, sauna, indoor pool, or outdoors. Exposure to extensive water vapor, chlorine, and/or bromine could adversely affect the electronics as well as other parts of the machine.

Electrical Power Requirements

The power requirements for this treadmill are a grounded, dedicated circuit, rated for one of the following: 115 VAC ±5%, 60 Hz and 20 amps; 208/220 VAC, 60 Hz, 15 amps or 230 VAC ±5%, 50 Hz and 15 amps. Contact your electrician to ensure the power supply complies with local building codes.

Do not use a ground plug adapter to adapt the 3-prong power cord plug to a non-grounded electrical outlet. Do not use an extension cord.

Assembling the Treadmill

! WARNING: Use extreme caution when assembling the treadmill. Failure to do so could result in injury.

! CAUTION: A minimum of two people are required to assemble this treadmill.

Tools Required

- 9/16" Socket wrench with a 4" extension
- Phillips head screwdriver
- Hex key, 3/16" (supplied)

NOTE: *The words "left" and "right" denote the treadmill user's orientation.*

1. Read and understand all instructions thoroughly before assembling the treadmill.

NOTE: *Each step number in the assembly instructions tells you what you will be doing. The lettered steps following each step number describe the procedure required. Do not continue with step 2 until you have carefully read all of the assembly instructions.*

2. Verify you have received the correct package.

A. Read the sticker on the outside of the box and verify that the model number, color and voltage are what you ordered. ***NOTE:*** *During step 3 and 6 you will verify that the contents of the box match the sticker.*

3. Unpack and verify the contents of the boxes.

A. Lift up and remove the cardboard sleeve that surrounds the treadmill.

B. Check to be sure that the following items are present. Check off (☑) each item as you find it. See Figure 1. If any of the parts are missing contact Cybex Customer Service.

Item	Qty	Part Number	Description
☐ 1	1	Varies	Base with uprights and console attached
☐ 5	1	AX-16724	Motor cover, center, with decals
☐ 6	1	PL-16465	Motor cover, right (in box)
☐ 7	1	PL-16464	Motor cover, left (in box)
☐ NA	1	AX-16956	Hardware pack (in box)
☐ NA	1	LT-17730-4	Cybex Pro+ Manual (in box)
☐ NA	1	LT-17718	Assembly Poster

NOTE: *NA means not applicable.*

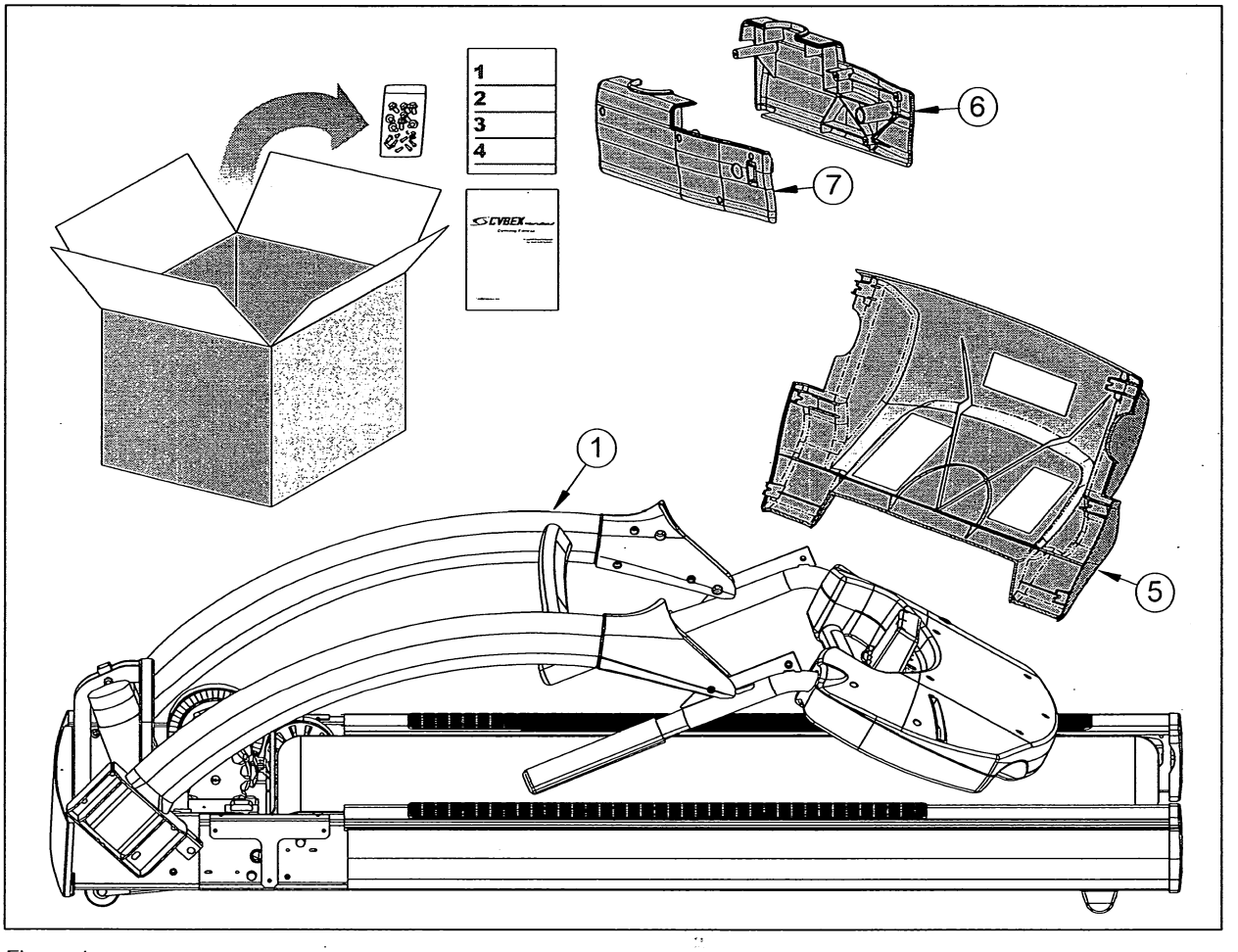

Figure 1

C. Check off (☑) each item in the hardware pack as you find it. See Figure 2.

Item	Qty	Part Number	Description
☐ 2	8	HS-16929	Screw, hex head whiz-lock 3-8-16 x 5-8
☐ 3	2	HS-16950	Screw, button head 5-16-18 x 7-8
☐ 4	8	HS-16939	Screw, Phillips head sems 10-32 x .75
☐ 8	1	HX-00438	Hex key, 3/16"

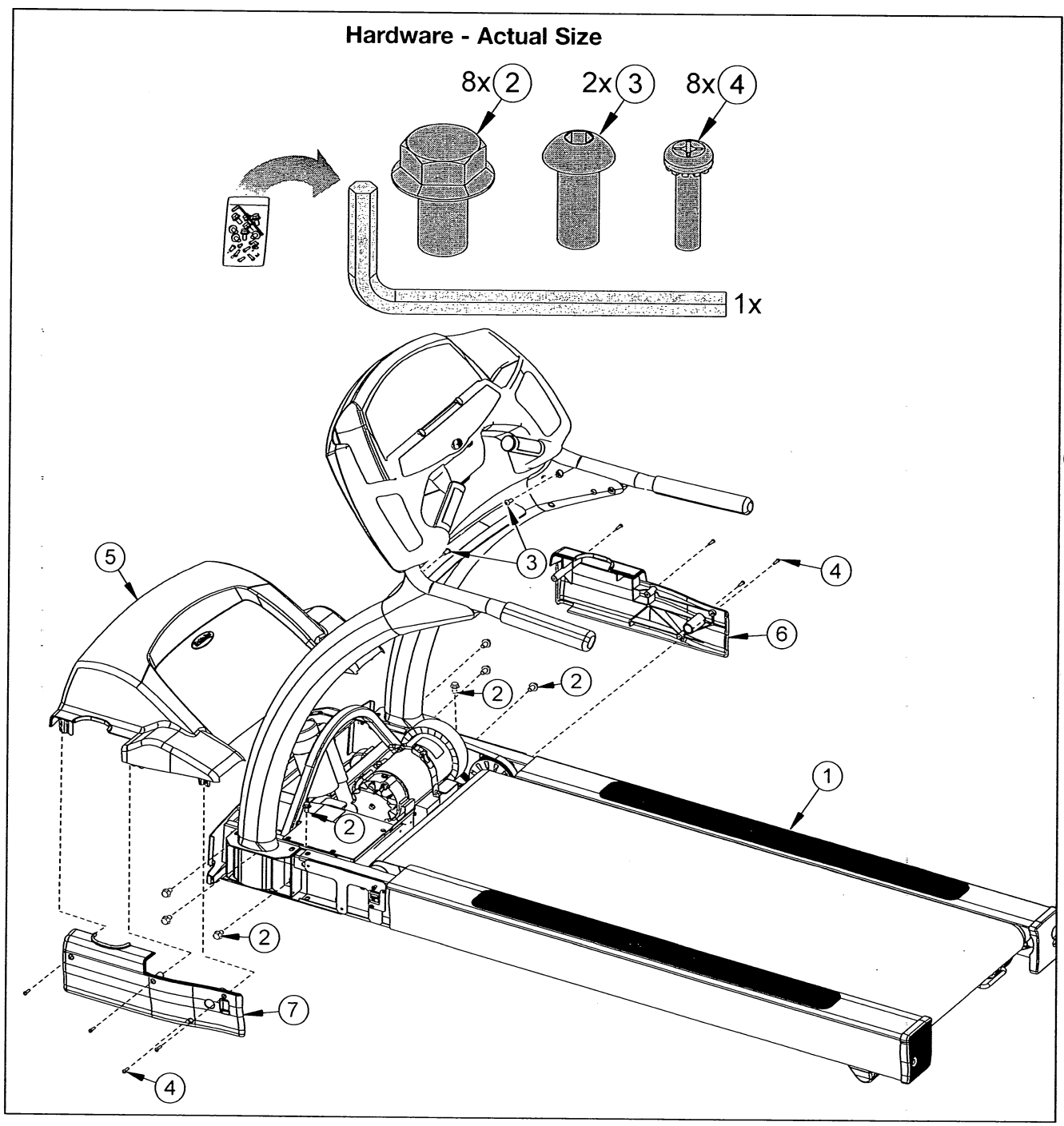

Figure 2

! CAUTION: A minimum of two people are required to lift, move and assemble this treadmill. Always use proper lifting methods when moving heavy items.

4. Lift and move the treadmill.

A. At least two people should lift and move the treadmill to a level location where you intend to leave it. Use proper lifting methods.

! CAUTION: Do not pinch your hands or other body parts while pivoting the treadmill. See Figure 3.

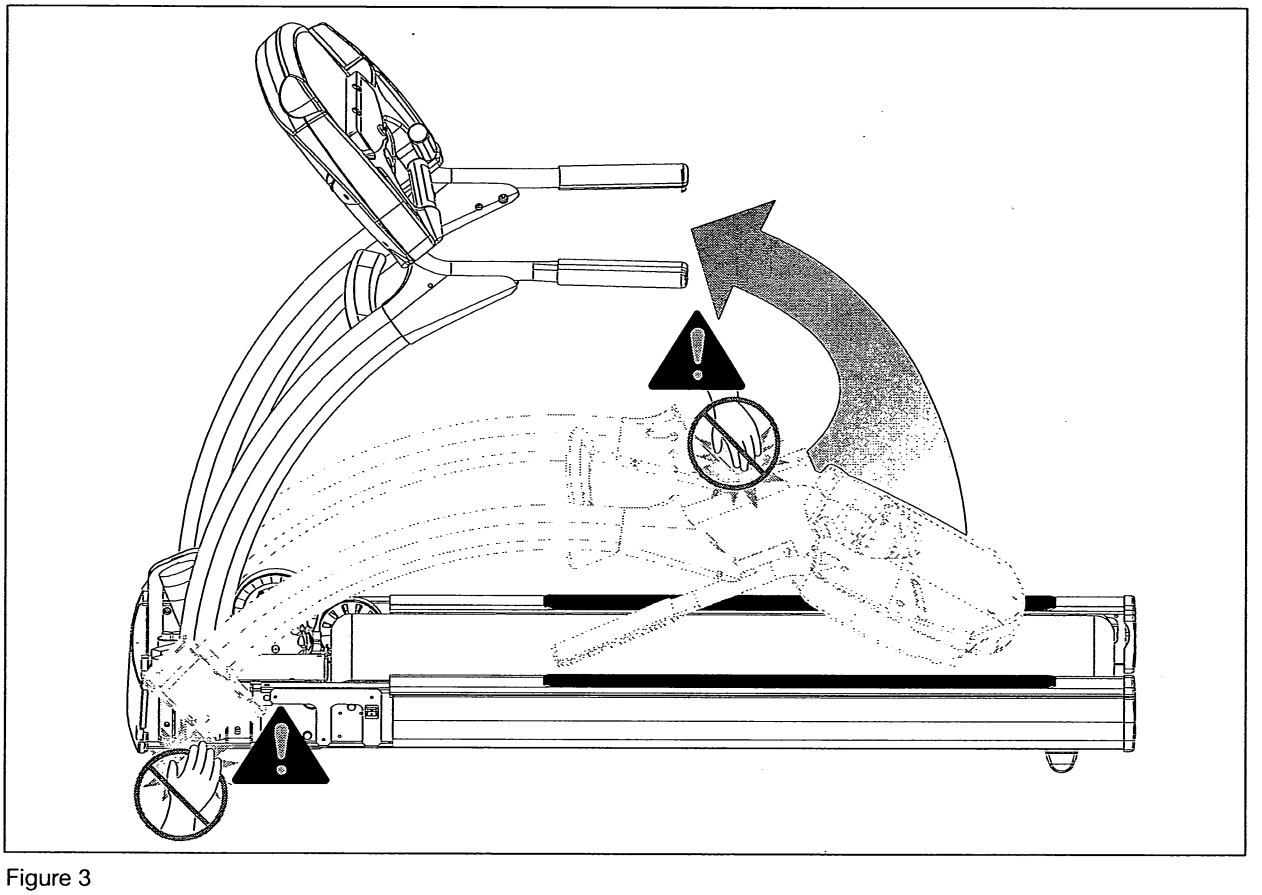

Figure 3

5. Pivot the console and uprights into position.

A. Remove all plastic wrapping except the white wrapping on the uprights.

B. Ensure that the display cable does not get pinched in step C.

C. Raise the console and uprights into position (they will pivot into place). ***NOTE:*** *Confirm that no cables are pinched while raising the unit.* See Figure 3.

D. Have a second person continue to hold the uprights in place until after step 7A so that they do not fall.

6. **Verify the model, voltage and color.**

   A. Verify that you have the correct model by looking at the console and reading the model name.

   B. Verify that you have the correct voltage by looking at the lower board and reading the voltage sticker.

7. **Secure the uprights.**

   A. Using a 9/16" socket wrench, loosely attach the uprights with two of the 3-8-16 x 5-8 hex head whiz-lock screws. ***NOTE:*** *Do not securely tighten the screws until step 7C.* See Figure 4.

   B. Using a 9/16" socket wrench with a 4" extension, attach the uprights with six of the 3-8-16 x 5-8 hex head whiz-lock screws. ***NOTE:*** *Do not securely tighten the screws until step 7C*. See Figure 5.

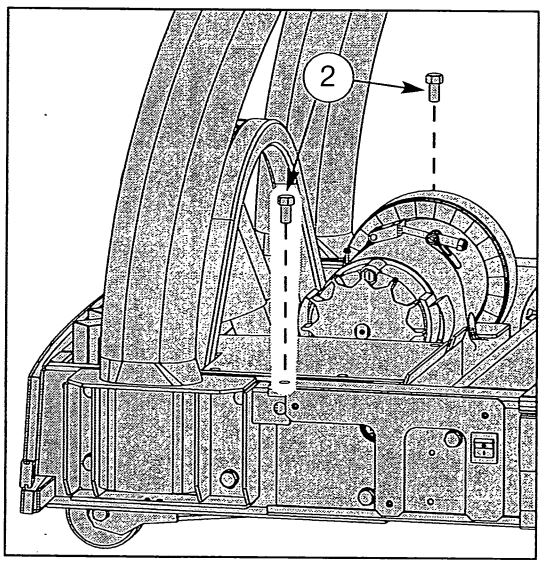

Figure 4

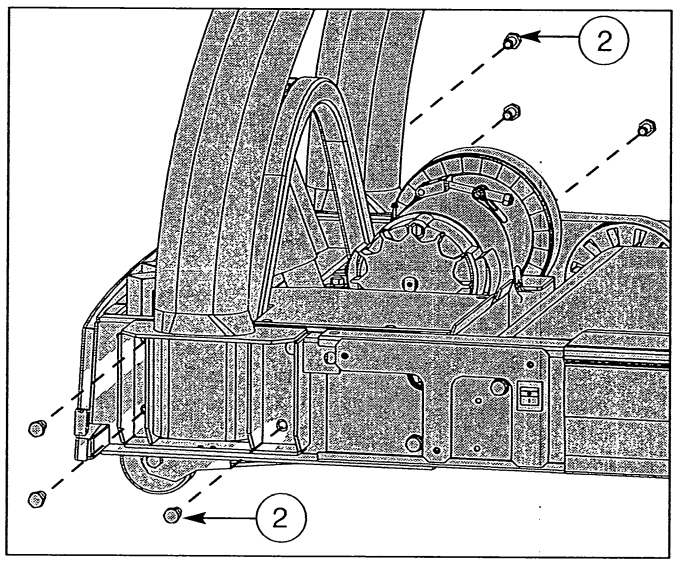

Figure 5

   C. Tighten all 9/16" screws used during steps 7A and 7B including the two pivot screws (one on each side). See Figure 6.

8. **Secure the handrail.**

   A. Using the hex key provided, secure the handrail with two 5-16-18 x 7-8 screws. See Figure 7. ***NOTE:*** *You may need to lift the console slightly to line up the holes.*

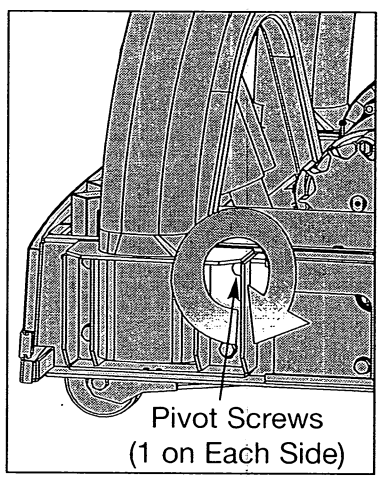

Figure 6

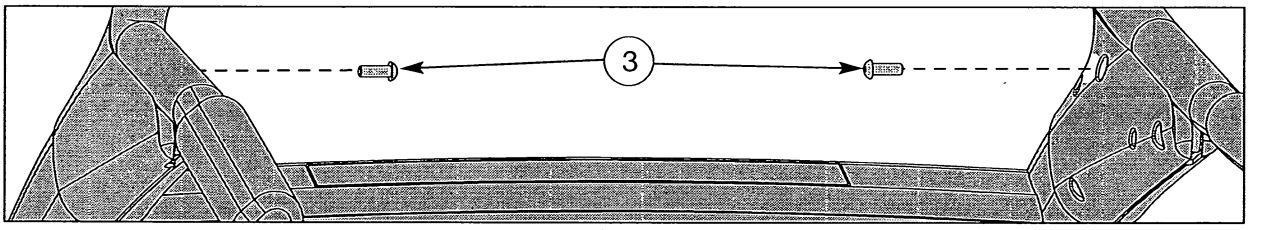

Figure 7

B. Using the hex key provided, tighten the two pivot screws on the handrail. See Figure 8.

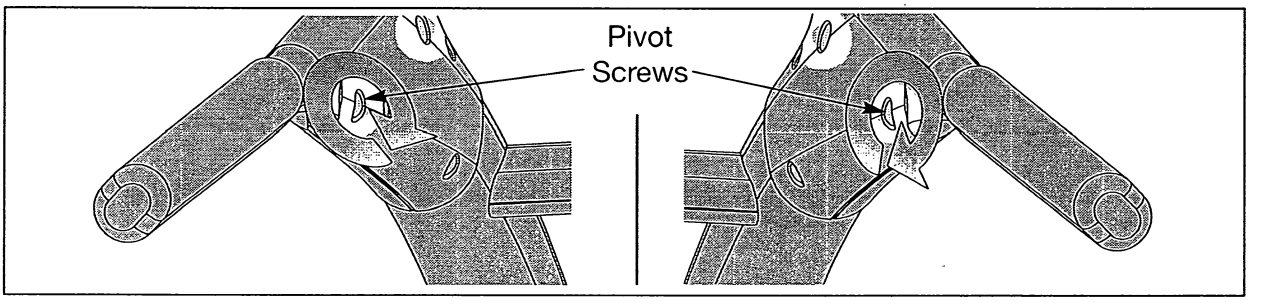

Figure 8

9. Remove the left side panel.

A. Pull the left side panel away from the base. See Figure 9.

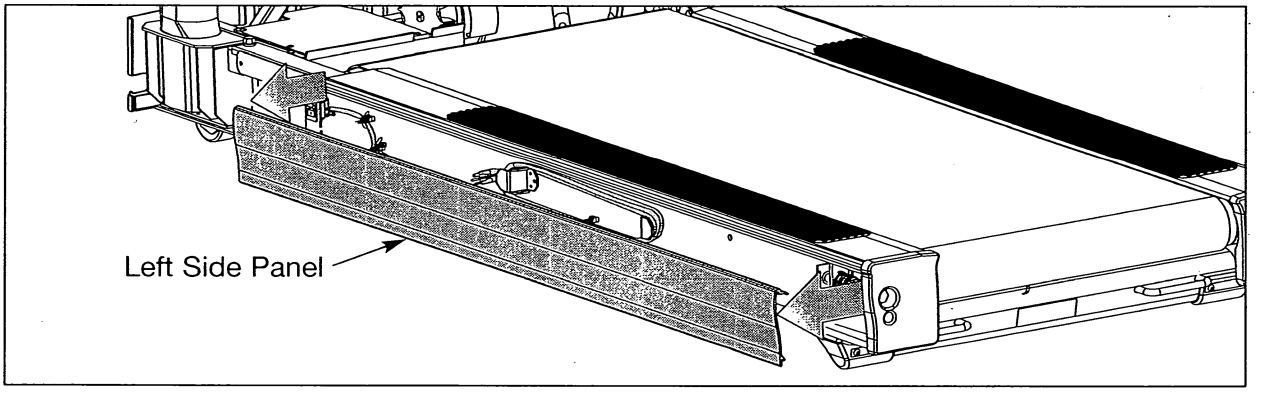

Figure 9

10. Arrange power cord.

A. Decide whether you will plug the power cord into an outlet near the front of the treadmill or the back of the treadmill. Follow the corresponding routing procedure below. ***NOTE:*** *Do not plug in the power cord at this time.*

Front routing:

a. Unwind the power cord and route it under the upright.

b. Slide the grommet into the front exit hole with the curved end first. See Figure 10.

c. Wire tie the cord down. See Figure 10.

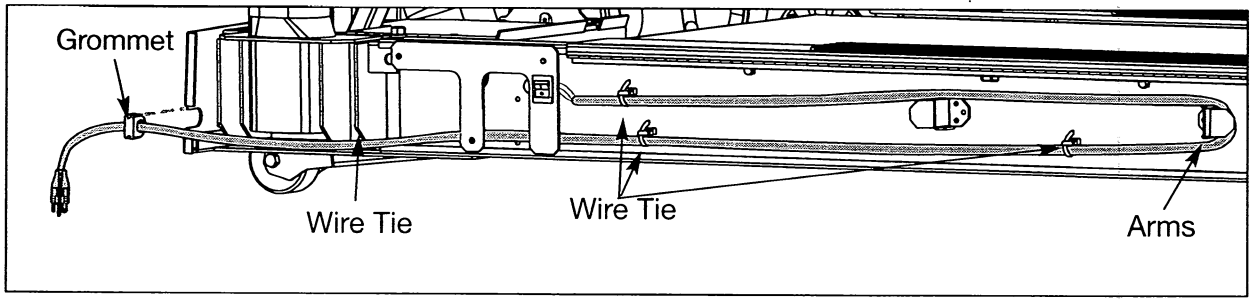

Figure 10

Back routing:

a. Using a Phillips head screwdriver, remove the left end cap.

b. Remove the grommet from the back exit hole and slide it into the front exit hole.

c. Slide the grommet on the power cord into the back exit hole with the curved end first.

d. Using a Phillips head screwdriver secure the left end cap. See Figure 11.

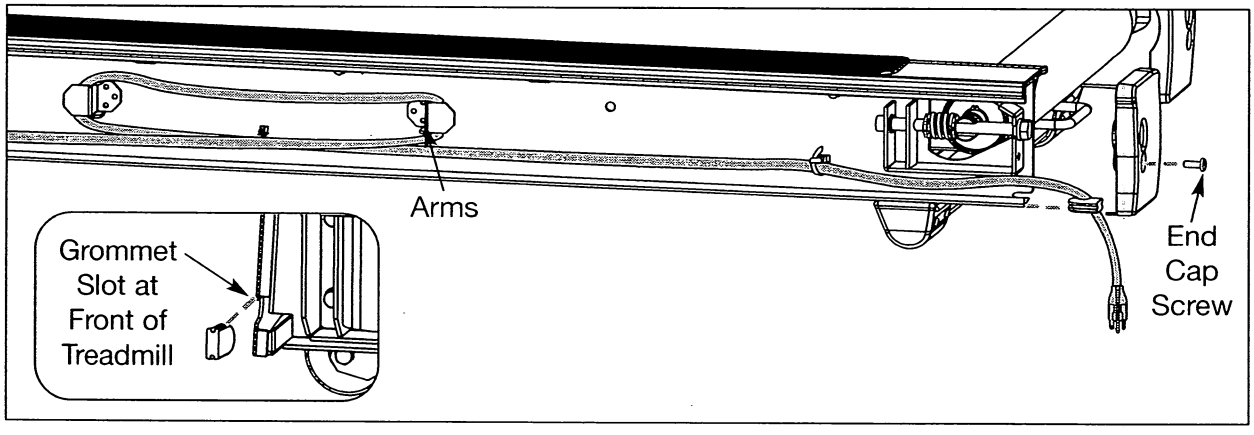

Figure 11

B. Wind the excess power cord onto the arms. See Figure 11.

C. Place the left side panel into position slightly under the end cap and use your hand to push all along the bottom edge of the side panel to snap it in place.

11. Attach the motor cover (three pieces).

A. Using a Phillips head screwdriver, partially tighten each motor cover side (left and right) with four 10-32 x .75 Phillips head screws. See Figure 12.

B. Place the motor cover center into position. See Figure 12.

C. Using a Phillips head screwdriver, finish tightening all eight screws. Be sure the screws are catching the motor cover's holes.

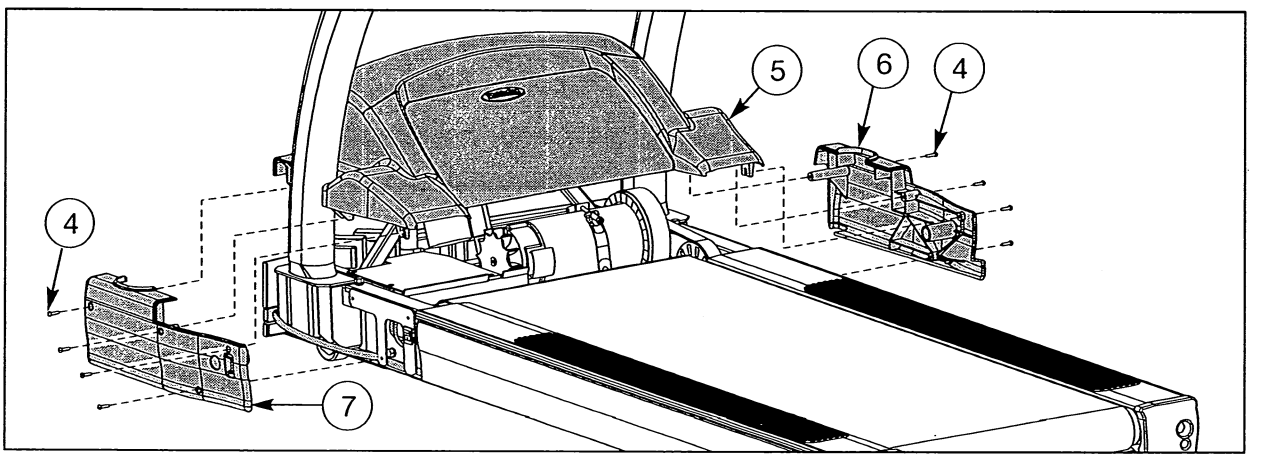

Figure 12

12. Level your treadmill.

A. Confirm that your treadmill is on a level surface.

13. Attach emergency stop key.

A. Confirm that the emergency stop key is in place over the e-stop button. See Figure 13. ***NOTE:*** *The treadmill will not run without the key (or other metal) in place.*

14. Visually inspect the treadmill.

A. Carefully examine the treadmill to ensure that the assembly is correct and complete.

B. Test for proper operation as noted in the *Testing The Treadmill Operation* section of this manual.

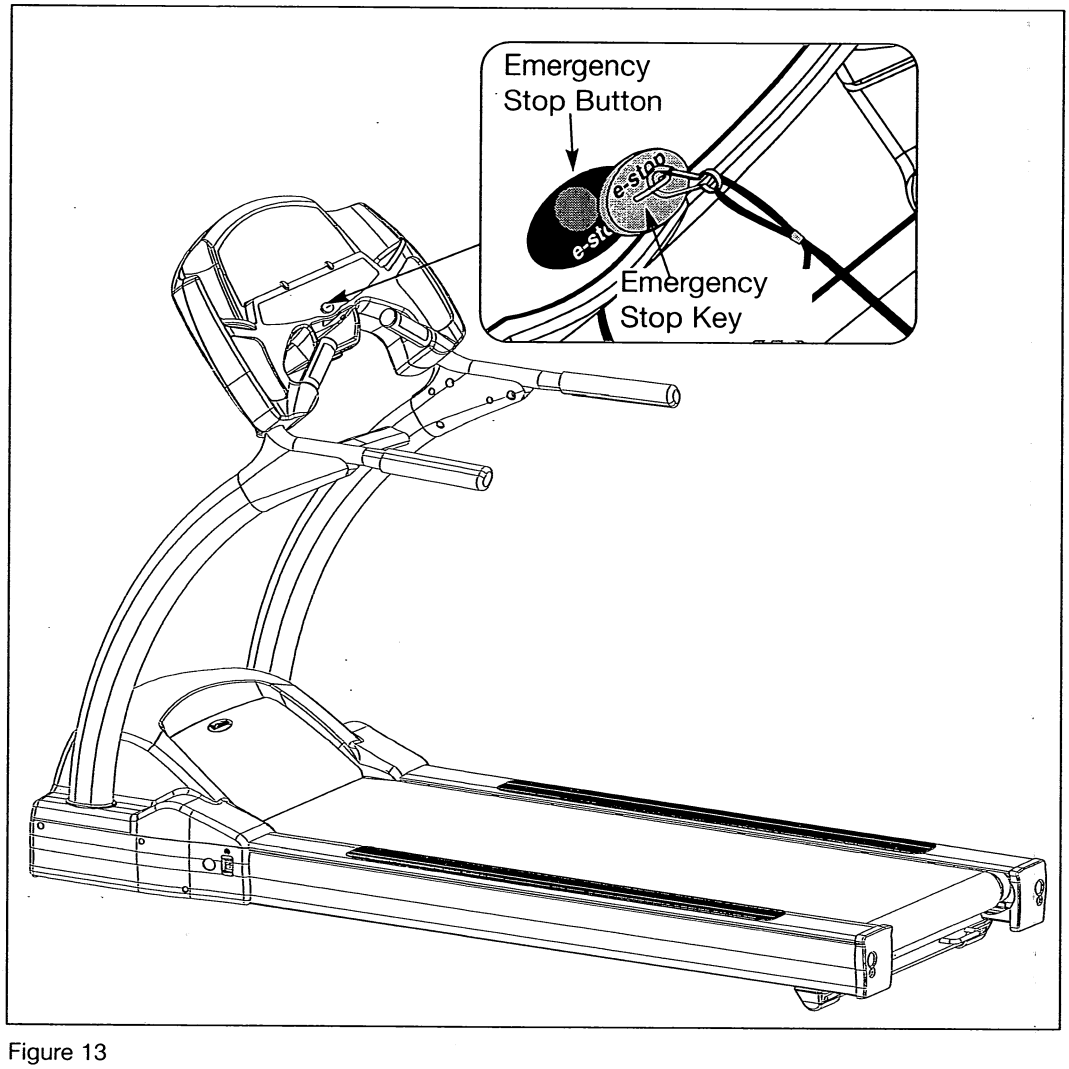

Figure 13

! WARNING: Be sure that all electrical requirements are met as indicated in the specifications at the front of the manual and at the beginning of this chapter prior to proceeding.

Testing the Treadmill Operation

Use the following instructions to test the full speed and incline range of the treadmill and to check the belt for proper operation.

! CAUTION: During this procedure STAY OFF THE RUNNING BELT! Stand with your feet on the two steps.

1. Without anyone on the treadmill, plug the power cord into a power outlet from a grounded, dedicated circuit as described under *Electrical Requirements* in this chapter.
2. Locate the on/off (I/O) power switch on the left side of the treadmill. Toggle it to the on position (I).
3. The control panel will light up and be in the *Dormant Mode*.

   NOTE: *Cybex recommends that the treadmill be unplugged or the on/off (I/O) power switch turned off (O) when it is not in use.*

4. Press the **Quick Start** key. The treadmill begins a countdown "3...2...1" and sounds a tone for each count. After it reaches one (1), the treadmill gives a longer tone and then begins accelerating the belt to reach 1 mph (1.6 kph).
5. The bottom left display will flash the time and the right display will show the actual speed.
6. Press and hold down the **Speed +** key until the treadmill reaches a speed of approximately 4 mph (6.4 kph), as indicated on the display.
7. Observe the belt to see that it is running properly; it should stay centered in the middle of the deck. If you have problems with the running belt operation, see *Running Belt Adjustments* in the *Preventive Maintenance* chapter.
8. Run the treadmill through its full speed range. First press the **Speed +** key until the treadmill reaches its highest speed, 12.4 mph (20 kph). Then press the **Speed -** key until the treadmill is back to 1.0 mph (1.6 kph).
9. As you press the **Incline** ⬆ ⬇ or **Speed + -** keys, the respective displays will show the actual incline or speed.
10. When the treadmill reaches the set incline and speed, the displays will stop flashing and remain steadily illuminated to indicate that the desired settings have been reached.

11. Run the treadmill through its full % grade range. Press the **Incline** ⬆ key until the treadmill reaches its highest grade (15%). Next press the **Incline** ⬇ key until the treadmill is down to -2% grade. Ensure the power cord is not being pinched under the front of the treadmill. Then press the **Incline** ⬆ key until the treadmill is back to 0% grade.

12. Press **Stop** twice to stop the running belt, end the workout review, and return the display to *Dormant Mode*.

Setting Operation Options

1. Enter *Test Mode* by holding down any key while turning on (I) power. The display will read "Pro".

NOTE: *After changing any value, you must press* **Enter** *to save that value. When you press enter the display will read "updt" (updated) to confirm your selection.*

2. Press the **Weight** key to set options, change values with ▲ and ▼ keys and press **Enter** to save your selection. Each time you press **Weight** the next set of data is displayed in the following order:

   Unit — Choices are "Eng" or "Euro" measurements. English is the default.

   Line: — This is the frequency of the power line that supplies power to your treadmill. The default setting is 50 Hz for metric consoles and 60 Hz for English consoles. ***NOTE:*** *If you have an English console and a 50 Hz power line frequency, then you must change the default setting from 60 Hz to 50 Hz for the proper elevation frequency.*

   Scan — This turns on or off the data readout scan (unless a specific data key is pressed during a workout). Default is on.

   Def — This is the default time for time based programs if a user doesn't re-set **Time**. For example, if you press **Time** you can decrease or increase the set workout time up to the amount that the **Max** time is set. Choices are between 20 minutes and 60 minutes. Default is 60.

   Max: — This is the maximum amount of time the treadmill can run per use. You can limit the users time or choose "none" for unlimited time. Choices are between none and 120 minutes; default is 60. ***NOTE:*** *If the* ***Max*** *time is limited too much it may be difficult for the user to reach their goals. For example, a user may not be able to burn 300 calories if you limit their* ***Max*** *time to 20 minutes.*

   Idle (or Workout Review/Pause Time): — This is how long the treadmill retains and displays your current workout data during a pause in the workout or after a workout. Choices include: 20 seconds; 30 seconds, 40 seconds; 1 minute and 5 minutes; default is 20 seconds.

Safety Sentry **—** This is how long the running belt will keep moving if the user steps off the treadmill. Choices are between 0 seconds (none) and 60 second. Default is 20 seconds. Choosing "none" will disable this feature. ***NOTE:*** *See Safety Sentry in Chapter 3 for further detail.*

Remember: You must press* Enter *after changing a value for that value to be stored.

3. To exit *Test Mode* press the **Stop** key twice.

Your treadmill is now ready for use. Follow the instructions in the *Operation* chapter to learn how to operate the treadmill. You should begin with walking speeds first, to be sure everything is functioning properly.

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6 - Customer Service

Contacting Service

Hours of phone service are Monday - Friday from 8:00 a.m. - 6:00 p.m. Eastern Time.

For Cybex customers living in the USA, contact Cybex Customer Service at **800-766-3211**. Your options at this number include:

- Press **63** to place a parts order or to check parts order status.
- Press **64** to speak to a technical support representative regarding trouble shooting or to schedule a field service call.
- Press **65** to check status of a repair order only and you have your RRM number.
- Press **66** to check status of a dispatched field service call and you have your inquiry number.
- Press **67** for service of a medical or isokinetic product.
- Press **0** to go to the Cybex operator.

For Cybex customers living outside of the USA, contact Cybex Customer Service at **508-533-4300** or fax **508-533-5183**.

Order parts and find information on the web at www.eCybex.com or by email at techhelp@cybexintl.com.

Serial Number & Voltage

Your serial number and voltage can be found on the front of your treadmill. For your convenience record your serial number and voltage below so that you will have it ready if you call Cybex Customer Service.

Serial Number _____ Voltage _____

Return Material Authorization (RMA)

The Return Material Authorization (RMA) system outlines the procedures to follow when returning material for replacement, repair, or credit. The system assures that returned materials are properly handled and analyzed. Follow the following procedures carefully.

Contact your authorized Cybex dealer on all warranty-related matters. Your local Cybex dealer will request an RMA from Cybex, if applicable. Under no circumstances will defective parts or equipment be accepted by Cybex without proper RMA and an Automated Return Service (ARS) label.

1. Call the Customer Service Hotline listed above for the return of any item that is defective.

2. Provide the technician with a detailed description of the problem you are having or the defect in the item you wish to return.

3. Provide the model and serial number of your treadmill. The serial number is located on the front panel of your treadmill. The serial number begins with a letter, for example: R09-101331100.

4. At Cybex's discretion, the technician may request that you return the problem part(s) to Cybex for evaluation and repair or replacement. The technician will assign you an RMA number and will send you an ARS label. The ARS label and RMA number must be clearly displayed on the outside of the package that contains the item(s) to be returned. Include a description of the problem, the serial number of the treadmill and the name and address of the owner in the package along with the part(s).

5. Forward the package through UPS to Cybex.
   Attn: Customer Service Department
   Cybex International, Inc.,
   10 Trotter Drive
   Medway, MA 02053

NOTE: *Merchandise returned without an RMA number on the outside of the package or shipments sent C.O.D. will not be accepted by the Cybex receiving department.*

Damaged Parts

Materials damaged in shipment should not be returned for credit. Shipping damages are the responsibility of the carrier (UPS, Federal Express, trucking companies, etc.)

Apparent Damage — Upon receipt of your shipment, check all boxes carefully. Any damage seen with a visual check must be noted on the freight bill and signed by the carrier's agent. Failure to do so will result in the carrier's refusal to honor your damage claim. The carrier will provide you with the required forms for filing such claims.

Concealed Damage — Damage not seen with a visual check upon receipt of a shipment but noticed later must be reported to the carrier as soon as possible. Upon discovery of the damage, a written or phone request to the carrier asking them to perform an inspection of the materials must be made within ten days of the date of delivery. Keep all shipping containers and packing materials: they will be needed as part of the inspection process. The carrier will provide you with an inspection report and the necessary forms for filing a concealed damage claim. Concealed damage is the carrier's responsibility.

Ordering Parts

Visit eCybex.com to shop for parts online or fax your order to **508-533-5183**. To speak with a customer service representative, call **800-766-3211** (for customers living within the USA) or **508-533-4300** (for customers outside the USA).

⚠ CAUTION

Use only Cybex replacement parts when servicing. Failure to do so could result in personal injury.

Cybex will void warranty if non-Cybex replacement parts are used.

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7 - Service

Warnings/Cautions

All warnings and cautions listed in this chapter are as follows:

! WARNING: All maintenance activities shall be performed by qualified personnel. Failure to do so could result in serious injury.

! CAUTION: Use only Cybex replacement parts when servicing. Failure to do so could result in personal injury.

! WARNING: Disconnect the power cord before beginning this procedure.

! WARNING: Do not touch components on the lower board. A charge can remain after unplugging the power cord and turning off the treadmill.

! CAUTION: The belt will be jerky during the next step. Hold the handrail to support yourself.

! CAUTION: During this procedure STAY OFF THE RUNNING BELT! Stand with your feet on the two steps.

! WARNING: Disconnect the power cord before beginning this procedure. Keep wet items away from inside parts of the treadmill. Electrical shock could occur even if the treadmill is unplugged. Do not touch components on the lower board. A charge can remain after unplugging the power cord and turning off the treadmill.

! CAUTION: If the drive motor is warm wait until it is cool to the touch before proceeding. The inside components may be hot.

! WARNING: Keep the motor dry. Do not get the inside of the motor wet.

! WARNING: Wait until the armature LED is off before removing the motor brush covers.

! WARNING: Disconnect the power cord before beginning this procedure. Keep wet items away from inside parts of the treadmill. Electrical shock could occur even if the treadmill is unplugged.

! CAUTION: A minimum of two people will be required to properly lift the treadmill. Always use proper lifting methods when moving heavy items.

! WARNING: All maintenance activities shall be performed by qualified personnel. Failure to do so could result in serious injury.

For any service related concerns, call Cybex Customer Service at 800-766-3211 (for Cybex customers living within the USA). For customers living outside the USA, call 508-533-4300 or fax 508-533-5183.

***NOTE:** Read and understand each procedure thoroughly before servicing. Unless otherwise noted "right" and "left" denote user orientation for all procedures.*

⚠ CAUTION

Use only Cybex replacement parts when servicing. Failure to do so could result in personal injury.

Cybex will void warranty if non-Cybex replacement parts are used.

Test Mode

To enter *Test Mode* press and hold down any key on the display while turning the power switch to the on (I) position. When all keys are released "PRO" and the software revision "rx.x" are shown on the display. To exit *Test Mode* press **Stop**.

Stuck Key List

If *Test Mode* occurs without holding any keys, a key may be stuck closed or Error 7 may have occurred. You may need to replace the upper and/or lower display overlay. See Figure 1.
If "KEY#" is displayed you can determine which key is stuck closed by referring to the number list below.

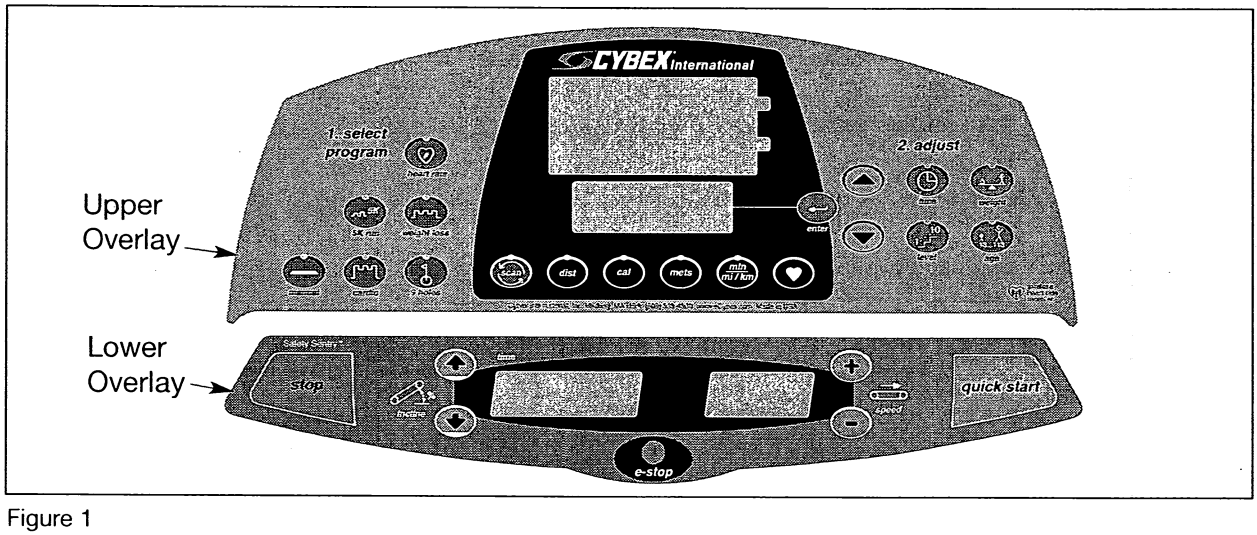


Figure 1

1	Stop	7	Heart Rate	12	Center Up	17	Enter	22	Time
2	Incline Down	8	Manual Up	13	9 Holes	18	Cardio	23	Scan
3	Speed Down	9	Incline	14	Level	19	Center Down	24	Age
4	Weight	10	Speed Up	15	Mets	20	Calories	25	Pace
5	Distance	11	Quick Start	16	5K	21	HR Control	26	Weight Loss

LED Functions

LEDs are used to indicate the status of many of the treadmill inputs. After entering *Test Mode* refer to the following list to check that these LEDs are functioning properly:

Heart LED — Blinks on with every signal from the contact heart rate receiver.
Weight LED — Blinks on when CSAFE data is being received.
Level LED — Blinks on when CSAFE data is being transmitted.
Lower Left Window — The numbers indicate actual elevation. A '-' sign indicates the treadmill is below 0% grade. The decimal point before the numbers shows the activation of the 0% switch in the elevation motor (on above 0%). If dashes are shown in the display, the treadmill is either above or below the 0% switch, requiring it to be manually run through the switch to begin indicating actual elevation. The right most decimal point indicates the status of the E-stop relay, on when the E-stop relay is on, off when it is deactivated. ***NOTE:*** *The right most decimal point may be difficult to see. Lean your head to the left to see this.*
Lower Right Window — The numbers indicate actual belt speed. The right most decimal point indicates the pulses from the speed sensor on the motor.

Key Functions

While in *Test Mode* press the following keys for desired information:

Quick Start — Starts the belt at 1.0 mph (1.6 kph). Also will run calibration if held for 3 seconds.
Heart Rate Program key — Lights all of the LEDs for a short period of time.
Weight Loss key — Lights only the columns.
9 Holes key — Lights only the rows.
Incline ⬆ — Run elevation motor up.
Incline ⬇ — Run elevation motor down.
Speed + — Increase drive motor speed.
Speed - — Decrease drive motor speed.
Distance — Press once for odometer information (DST) to appear in the speed window.
Press again for hourmeter information (HRS) to appear in the speed window.
Press three times for number of starts information (USES) to appear in the speed window.
Press four times for brush wear mileage up to 100 miles since activated or "0" if it has not been activated (BRSH).
Pace — Displays and cycles through error log. Up to 10 errors can be stored.
Scan — Clears error log when pressed twice while in error log mode.
Mets — Value of motor load in A/D counts. The number range is relative to motor current and goes from 0-225. (LOAD).
Calories — Displays motor pulse width (PWM) value.
Enter — Required to save setup values.

Error Codes

Error codes notify you of a problem condition and are displayed on the center of the console. These codes can also help to indicate the part of the treadmill most likely to be causing the problem. Errors that present a hazard to the user provide a measure of safety by causing a one second beep, stopping the treadmill and locking out operation of the treadmill.

A log of errors can be viewed and cleared. Enter *Test Mode* and press the **Pace** (Min/km) key to display the log. The most recent error is always first in the log. Press the **Pace** key again to cycle to the next the error stored. Up to 10 errors can be stored. Press the **Scan** key twice to clear the error log. Press **Stop** to exit *Test Mode*.

NOTE: *A processor upset can cause a bAd#. See H then G.*

Error	Description
bAd0	Bad checksum. See H then G.
bAd2	Internal RAM error. See H then G.
bAd3	Watchdog timeout. See H then G.
Err1	Belt didn't start (or no speed sense). See I, E, D, B then A.
Err2	Underspeed (2 mph for 2 seconds without correction in process). See I, E, C then B.
Err3	Speed sense lost. See I, E, A, B and C.
Err5	No 0 switch sense within timed limits. This is declared when the timed elevation reaches -2% without tripping the index. See F and A.
Err6	Overspeed (1 mph for 1 second or 2 mph for 0.2 seconds without correction). See I, E.
Err7	EEPROM error (memory lost, loads new defaults, enters *Test Mode*). See G.
Err9	Brush wear too low. Indicator has been activated for over 100 miles. See D.
ErrE	0% always on (or switch disconnected or wired backwards). This means that timed elevation has gone up 2% and the index is still sensed. See F.

Action	
A	Check lower board
B	Check drive motor
C	Check belt and deck
D	Check motor brushes
E	Check speed sensor
F	Check elevation motor
G	Replace display board
H	Turn the treadmill to the off (O) position and back on (I)
I	Perform speed calibration procedure

Motor Current & Voltage

Motor current draw and motor voltage must be checked by a qualified service technician at the recommended intervals listed in the *Service Schedule* in the *Preventive Maintenance* chapter of this manual. For your convenience a service schedule decal is provided under the

motor cover of each Cybex Pro+ treadmill. By performing these procedures you can evaluate the performance of your drive motor and help prevent premature failure.

Tools Required

- Phillips head screwdriver
- Voltage meter

1. **Measure current draw.**

   A. Enter *Test Mode* by holding down any key on the display while turning the power switch to the on (I) position.

   B. Press the **Quick Start** key. The belt will move at 1 mph (1.6 kph).

   C. Without standing on the belt, bring the speed of the treadmill up to 3 mph (4.8 kph) and take note of the load value in the top center display.

   D. Have a second person walk on the belt at 3 mph (4.8 kph) and take note of the load value in the top center display and the weight of the person. ***NOTE:*** *Call Cybex Customer Service to confirm that the load is within acceptable range. Loads over 200 are generally unacceptable.*

   E. Press **Stop** to exit *Test Mode*.

2. **Disconnect the external power source.**

   A. Turn the main power switch on the left side to the off (O) position.

   B. Unplug the treadmill from the power outlet.

3. **Remove the motor cover.**

   A. Using a Phillips head screwdriver, loosen three screws on each motor cover side (left and right). See Figure 2.

   B. Lift the motor cover center up and off the treadmill. The screws will stay in place.

4. **Check the belt and deck condition.**

   A. Follow the *Checking Belt and Deck Surfaces* procedure on page 4-4 of the *Preventive Maintenance* chapter of this manual and then proceed with step 5.

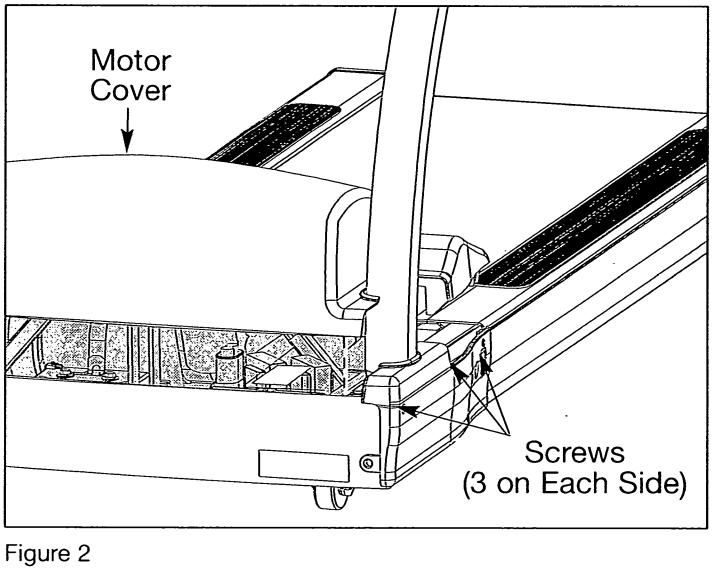


Figure 2

5. **Check the motor voltage.**

   A. Plug the treadmill back in and turn it to the on (I) position.

   B. Without standing on the belt, press the **Quick Start** key.

   C. Press the **+** key to adjust the speed of the treadmill up to its highest speed 12.4 mph (20 kph). ***NOTE:*** *Safety Sentry may turn off the treadmill if no activity is detected within 20 seconds. Therefore, do this test quickly or press a key as needed or turn off Safety Sentry.*

   D. Using a voltage meter, pierce the sharp end of the meter's red lead into the plastic coating of the motor's red lead, and the meter's black lead into the plastic coating of the motor's black lead.

   E. Note the reading on the voltage meter then carefully remove both leads. Call Cybex Customer Service to find out if the reading is within an acceptable range.

6. **Attach the motor cover.**

   A. Lower the motor cover center into position. See Figure 2.

   B. Using a Phillips head screwdriver, tighten the three screws on each side.

Speed Sensor Adjustment

Tools Required

- Phillips head screwdriver

! WARNING: Disconnect the power cord before beginning this procedure.

1. **Disconnect the external power source.**

   A. Turn the main power switch on the left side to the off (O) position.

   B. Unplug the treadmill from the power outlet.

2. **Remove the motor cover.**

   A. Using a Phillips head screwdriver, loosen three screws on each motor cover side (left and right).

   B. Lift the motor cover center up and off the treadmill. ***NOTE:*** *The screws will stay in place.*

3. **Visually inspect the target disk on the flywheel.**

   A. Turn the flywheel slowly and look for dirt, scratches or other damage on the target disk. ***NOTE:*** *If the target disk or sensor is dusty use a soft dry cloth to wipe off the dust.*

4. **Adjust the speed sensor gap (if needed).**

   A. Using a Phillips head screwdriver, loosen the screw that attaches the speed sensor to the motor saddle. See Figure 3 (speed sensor screw).

   B. Adjust the gap between the speed sensor and the flywheel to 3/16" (.48 cm) and tighten the screw. See Figure 3.

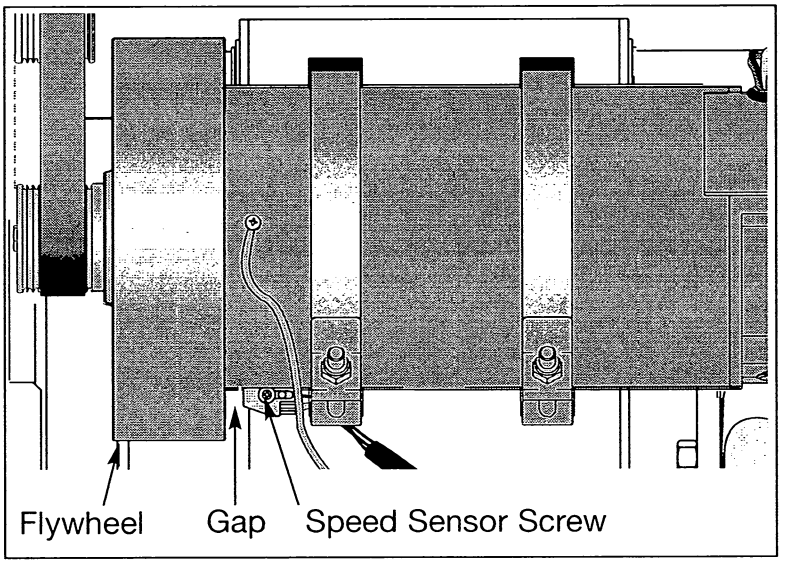


Figure 3

5. **Test for speed errors.**

   A. Connect the power cord to a power outlet.

   B. Enter *Test Mode.*

   C. Bring the speed of the treadmill up to maximum speed, 12.4 mph (20 kph).

   D. After reaching maximum speed take note of the actual speed that is displayed in the lower left window. If it fluctuates in over 0.5 mph increments then your speed sensor gap needs to be readjusted.

   E. Press **Stop** and turn the power switch to the off (O) position.

   F. Enter *Test Mode* again and check the error log for Error 3. If Error 3 occurred readjust the speed sensor and test again. ***NOTE:*** *If you are unsure whether an error is new you can clear the error log by pressing the* ***Scan*** *key and then repeat steps 4A through 5F.*

   G. Exit *Test Mode* by pressing **Stop**.

6. **Attach the motor cover.**

   A. Lower the motor cover center into position. See Figure 2.

   B. Using a Phillips head screwdriver, tighten the three screws on each side.

IR Compensation

NOTE: *This procedure is required after replacing the lower control board or the drive motor.*

Tools Required

- Phillips head screwdriver
- Plastic (or non-conductive), flat head screwdriver

1. **Please read instructions thoroughly before performing this procedure.**
2. **Remove the motor cover.**
   - **A.** Using a Phillips head screwdriver, loosen three screws on each motor cover side (left and right). See Figure 2.
   - **B.** Lift the motor cover center up and off the treadmill. The screws will stay in place. See Figure 2.
3. **Perform the IR compensation procedure.**
   - **A.** Enter *Test Mode* by pressing and holding down any key on the display while turning the power switch to the on (I) position. When the key is released "PRO" and the software revision "rx.x" are shown on the display.
   - **B.** While standing on the ground, press **Start** and then press the **Speed Up** key once to set the treadmill speed to 1.0 mph (1.6 kph).

! WARNING: Do not touch components on the lower board. A charge can remain after unplugging the power cord and turning off the treadmill.

! CAUTION: The belt will be jerky during the next step. Hold the handrail to support yourself.

   - **C.** Hold on to the handrails as you step on the running belt, begin walking and notice how the belt feels, (the belt may surge, vibrate or slack). ***NOTE:*** *If the belt doesn't need to be adjusted skip to step 4A.*
   - **D.** Pull up on the lower board shield. It will snap out. ***NOTE:*** *Newer versions of the shield will have a hole directly over the IR compensation. If you have the new shield, place the plastic screwdriver through the hole to adjust the IR compensation instead of removing the shield.*
   - **E.** Locate the control called "IR COMP" on the lower board. ***NOTE:*** *DO NOT use a metal screwdriver. DO NOT adjust the other two controls that look identical to the IR COMP control.*

F. Using a plastic small flat head screwdriver, turn the IR control slightly in one direction as follows:
- Turn clockwise to remove the slack from the belt
- Turn counter-clockwise to remove the vibration or surging from the belt

G. Retest by walking on the belt and adjusting the IR COMP control until the running belt does not surge, vibrate or feel too slack. ***NOTE:*** *You should not be able to stop the belt with your feet easily.*

H. Press **Stop**.

I. Place the lower board shield into position (if applicable) and snap it in.

4. Secure the motor cover.

A. Lower the motor cover into position. See Figure 1.

B. Using a Phillips head screwdriver, tighten the three screws on each side. ***NOTE:*** *Be sure the screws are catching the center motor cover's holes.*

Speed Calibration

NOTE: *This procedure is required after replacing the upper display board, the lower control board or the drive motor. If you've replaced the lower board, perform the IR Compensation procedure first, then the Speed Calibration procedure.*

1. Calibrate the speed.

A. Stay off the running belt during this procedure.

! CAUTION: During this procedure STAY OFF THE RUNNING BELT! Stand with your feet on the two steps.

B. In *Test Mode* press and hold the **Quick Start** key for three seconds. The display will show "CAL" then "SAV", "CAL". The running belt will accelerate and when completed the display will show "PRO". Press **Stop** to exit *Test Mode*. ***NOTE:*** *This procedure should be completed after replacing the upper display board, the lower control board or the drive motor. If you press* **Stop** *during this procedure the calibration will not be stored. Exiting Test Mode while the belt is moving may generate an error condition.*

Running Belt & Deck

NOTE: *During this procedure you will have the option to remove the running deck, running belt, rubber mounts, rear roller, front roller and drive belt. Follow this procedure from step 1 even though the heading for some of these procedures will appear before the step where you remove that part.*

Tools Required

- Phillips head screwdriver
- 7/16" Open end wrench
- 3/4" Open end or socket wrench
- 9/16" Socket wrench with a 3" extension

! WARNING: Disconnect the power cord before beginning this procedure.

1. **Disconnect the external power source.**

   A. Turn the main power switch on the left side to the off (O) position.

   B. Unplug the treadmill from the power outlet.

2. **Remove the motor cover.**

   A. Using a Phillips head screwdriver, loosen the three screws on each motor cover side (left and right). See Figure 2.

   B. Lift the motor cover center up and off the treadmill. ***NOTE:*** *The screws will stay in place.* See Figure 2.

3. **Remove the end caps.**

   A. Using a Phillips head screwdriver, remove the screw that holds each end cap in place. See Figure 4.

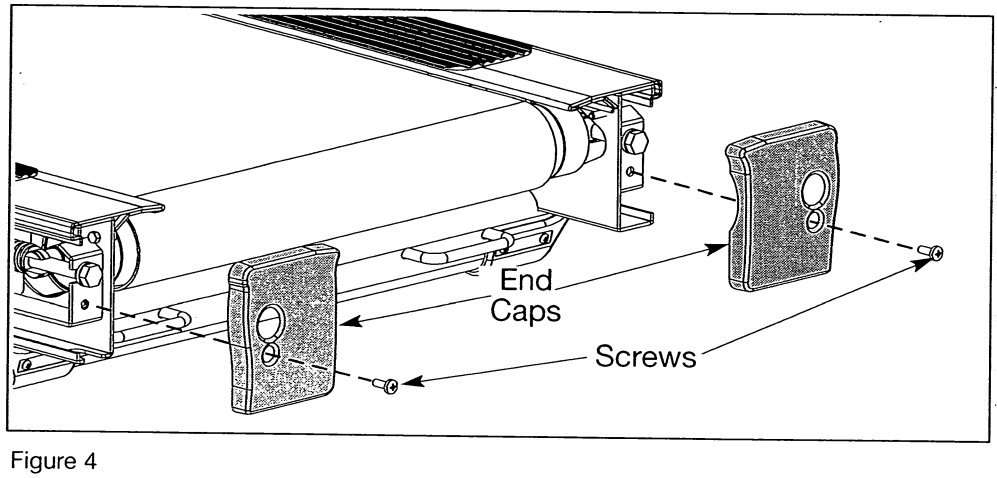


Figure 4

4. **Remove the side panels.**

   A. Pull each side panel out and off the treadmill. See Figure 5.

5. **Remove the top steps.**

   A. Using a Phillips head screwdriver, remove the three screws that hold one of the top steps in place. Repeat this step for the other side. See Figure 5.

   B. Grasp each top step and slide it out and off the treadmill. See Figure 5.

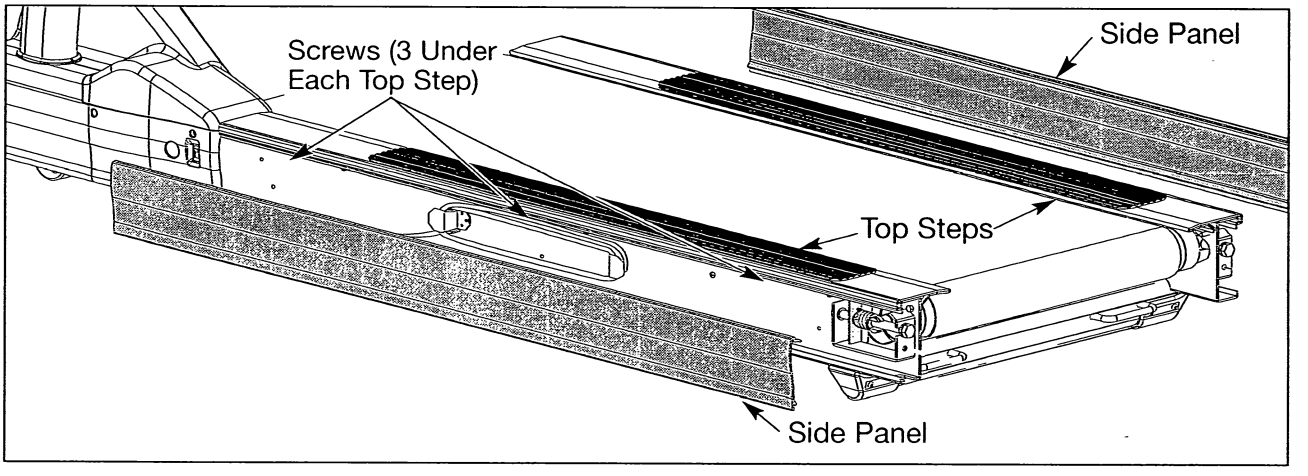


Figure 5

Rear Roller

6. **Remove the rear roller.**

   A. Using a 3/4" open end or socket wrench, loosen the two rear roller bolts (one roller bolt on each side). ***NOTE:*** *Loosen each bolt evenly, making sure not to loosen either bolt too many turns before moving to the other bolt.* See Figure 6.

   B. While holding the rear roller, remove the hardware from each side. ***NOTE:*** *Pivot the bolt, washers, spring and nut holder out together.* See Figure 6.

   C. Lift one side of the rear roller and slide the roller out of the running belt. See Figure 6.

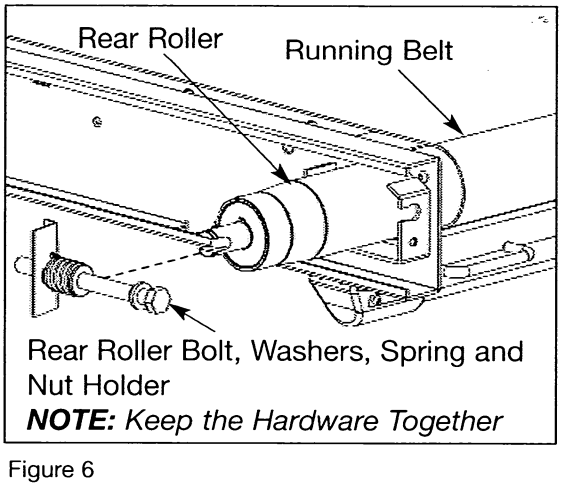


Figure 6

7. Loosen the deck.

A. Using a 7/16" open-end or socket wrench, remove the ten screws and ten washers that hold the deck in place. See Figure 7. ***NOTE:*** *Leave the deck in place until step 9B.*

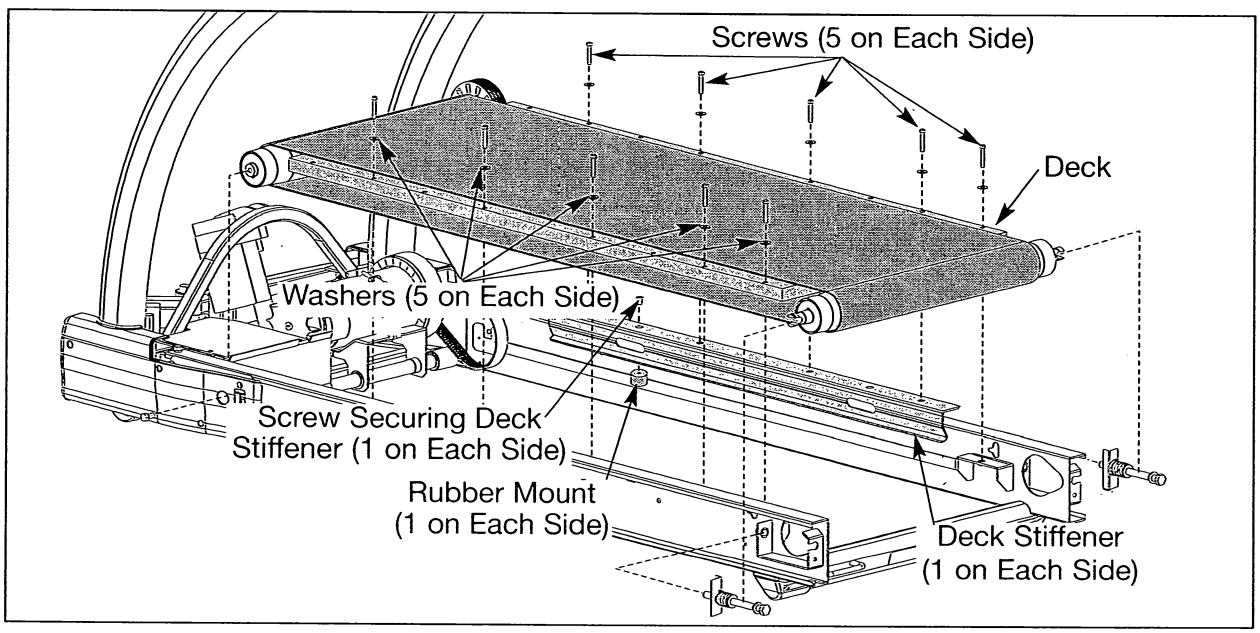


Figure 7

Front Roller

8. Loosen the front roller.

A. Place a 9/16" socket wrench with a 3" extension in the right front roller access hole. Loosen but do not remove the right front roller screw. See Figure 8. ***NOTE:*** *The right screw will stay on the front roller. You do not need to remove it for this procedure.*

B. Place a 9/16" socket wrench with a 3" extension in the left front roller access hole. Remove the left front roller screw. See Figure 8. ***NOTE:*** *Leave the front roller in place until step 9B.*

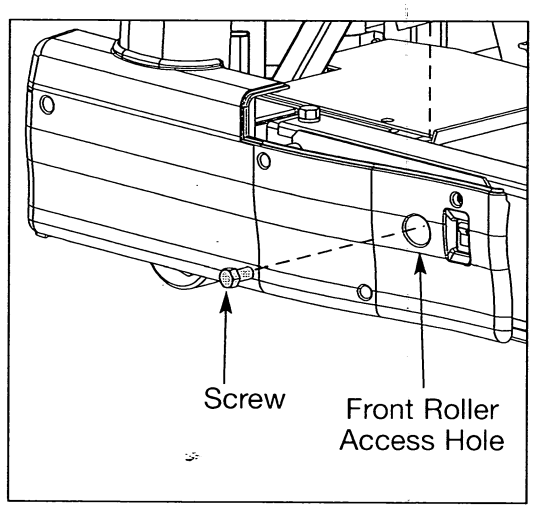


Figure 8

9. Remove the running deck and running belt.

A. If rotating or flipping the deck, make a note on the deck so you know which way it was positioned.

B. Lift one side of the deck and slide it out of the running belt.

C. Tilt up the left side of the front roller and slip the running belt off.

10. Inspect the rubber mounts.

A. Using a Phillips head screwdriver, remove the screw securing each deck stiffener. See Figure 7.

B. Inspect the rubber mounts under the deck stiffeners for cracks or wear. ***NOTE:*** *Unscrew and replace the rubber mounts if the rubber is cracked or worn.*

C. Using a Phillips head screwdriver, secure each deck stiffener with screws removed from step 10A.

Drive Belt

NOTE: *If you are replacing the drive belt follow steps 11-12 and 14. If not, skip to step 13. See the Drive Motor procedure for an alternative way to change the drive belt.*

11. Release the drive belt tension.

A. Using a 1/2" socket wrench, loosen but do not remove the two screws on the motor saddle. See Figure 9.

12. Remove the drive belt.

A. If you are changing the drive belt, slip the drive belt around the flywheel pulley and off the motor. See Figure 9.

B. Slide the new drive belt around the flywheel pulley. ***NOTE:*** *There will be some slack in the drive belt until step 14 is complete.*

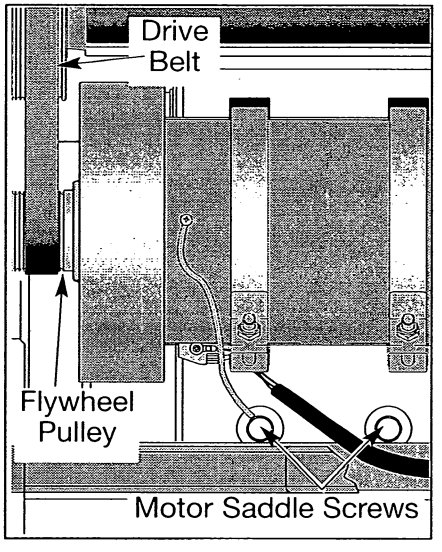


Figure 9

13. Secure the front roller.

A. Slide the front roller into the running belt. ***NOTE:*** *It doesn't matter which way the running belt goes.*

B. Be sure the drive belt is around the flywheel pulley and the front roller before attaching the front roller.

C. Using a 9/16" socket wrench with a 3" extension, attach the two screws that fasten the front roller to the frame. ***NOTE:*** *Tighten each of the two screws evenly, making sure not to tighten one screw too many turns before moving to the other screw.*

D. Confirm that the drive belt is positioned three grooves over from the face of the flywheel and three grooves over from the face of the pulley. See Figure 10. ***NOTE:*** *Failure to align the drive belt could cause squeaking.*

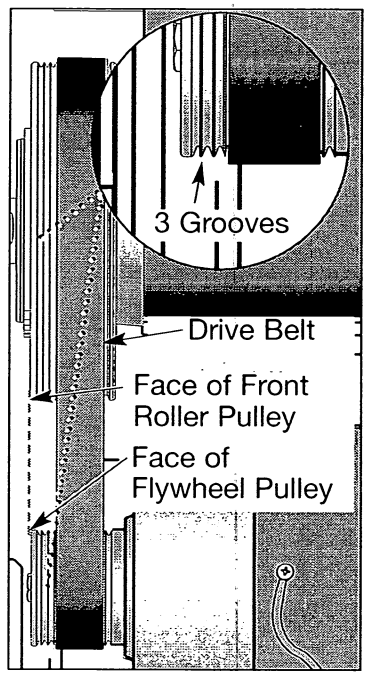


Figure 10

14. Secure the drive belt tension.

NOTE: *Follow this step only if you replaced the drive belt.*

A. Using a 1/2" socket wrench, tighten the two screws on the motor saddle. See Figure 9.

15. Secure the running deck.

A. Place the deck in position as noted in step 9A. ***NOTE:*** *Make a note of the service you performed on the Service Schedule under the motor cover.*

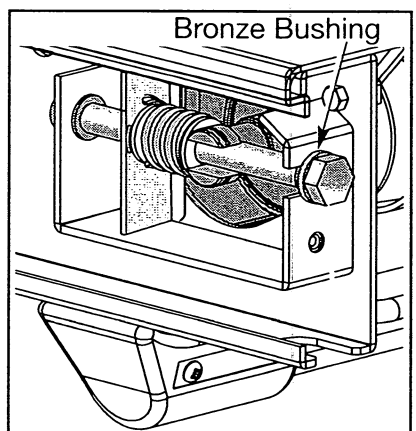
B. Using a 7/16" open end or socket wrench, attach the ten washers and screws that hold the deck to the treadmill frame. See Figure 7.

16. Secure the rear roller.

A. Slide the rear roller into the running belt. See Figure 6.

B. Slide the hardware for each side into position. ***NOTE:*** *Place the end of the bolt in first and then hold the rear roller up while you pivot the group of hardware into the rear roller slot. Be sure the bronze bushing is touching the head of the bolt.* See Figure 11.

C. Using a 3/4" socket wrench, tighten each rear roller bolt evenly, making sure not to tighten either bolt too many turns before moving to the other bolt. ***NOTE:*** *Do not overtighten the belt. You will tension and center the belt in step 21.* See Figure 11.



NOTE: *Be sure the bronze bushing is touching the head of the bolt.*

Figure 11

17. Secure the top steps.

A. Place each top step in position. See Figure 4.

B. Using a Phillips head screwdriver, secure the three screws that hold each top step in place. See Figure 4.

18. Secure the side panels.

A. Place each side panel into position on the bottom edge and use your hand to push all along the top edge of the side panel to snap it in place. See Figure 5.

19. Secure the end caps.

A. Using a Phillips head screwdriver, tighten the screw that holds each end cap in place. See Figure 4.

20. Secure the motor cover.

A. Lower the motor cover center into position. See Figure 2.

B. Using a Phillips head screwdriver, tighten the three screws on each side. ***NOTE:*** *Be sure the screws are catching the center motor cover's holes.*

21. Adjust the running belt tension and tracking.

A. Follow the *Tension and Center the Belt* procedure located in the *Preventive Maintenance* chapter of this manual.

Drive Motor

NOTE: *This procedure will cover the drive motor, drive belt and motor brushes.*

Tools Required

- Phillips head screwdriver
- 7/16" Open end wrench
- 7/16" Socket wrench with a deep socket
- 1/2" Socket wrench
- 3/4" Socket wrench
- 9/16" Socket end wrench with a 3" extension
- Needle nose pliers

! WARNING: Disconnect the power cord before beginning this procedure. Keep wet items away from inside parts of the treadmill. Electrical shock could occur even if the treadmill is unplugged. Do not touch components on the lower board. A charge can remain after unplugging the power cord and turning off the treadmill.

1. Disconnect the external power source.

A. Turn the main power switch on the left side to the off (O) position.

B. Unplug the treadmill from the power outlet.

2. Remove the motor cover.

A. Using a Phillips head screwdriver, loosen three screws on each motor cover side (left and right). See Figure 2.

B. Lift the motor cover center up and off the treadmill. The screws will stay in place. See Figure 2.

3. Release the drive belt tension.

A. Using a 1/2" socket wrench, loosen (but do not remove) the two screws on the motor saddle. See Figure 12. ***NOTE:*** *The tension is now released. You will remove motor ground cable in step 5A.*

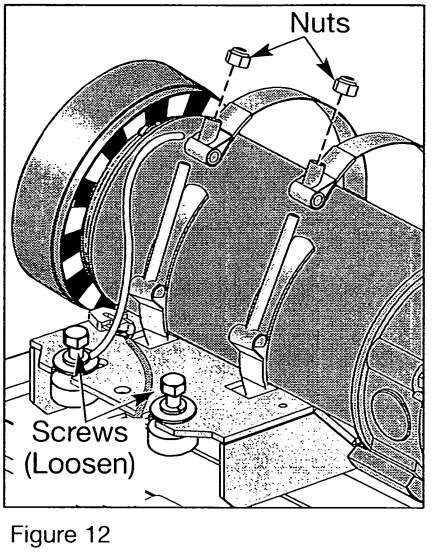


Figure 12

4. Remove the old drive motor.

A. Using 7/16" open end wrench, remove the nut on each motor strap and remove the motor straps from the motor saddle. See Figure 12.

B. Slip the drive belt around the flywheel pulley and off the motor. See Figure 13.

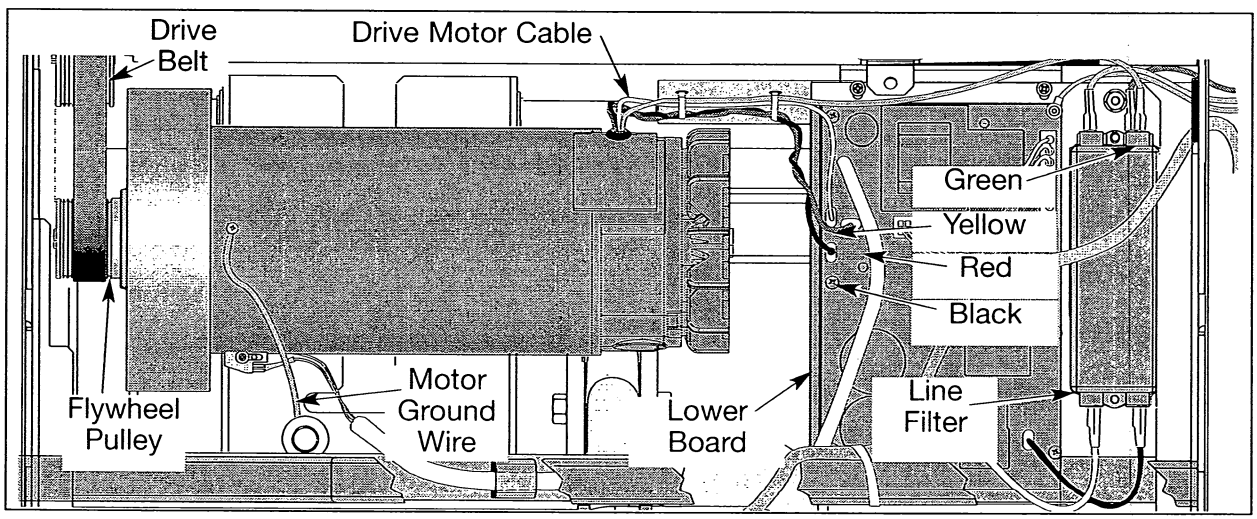


Figure 13

5. Disconnect the motor cables.

! WARNING: Do not touch components on the lower board. A charge can remain after unplugging the power cord and turning off the treadmill.

A. Using a 1/2" socket wrench, remove the screw, split washer, flat washer and motor ground wire from the motor saddle. See Figure 13.

B. Pull up on the lower board shield. It will snap out.

C. Disconnect the motor cable from the lower board and line filter. ***NOTE:*** *You will disconnect four wires (red, black, yellow and green).* See Figure 13.

D. Carefully remove the drive motor.

NOTE: *If you are replacing the drive belt with a new one follow step 6B - 8A. If not, skip to step 8.*

6. Remove the drive belt (optional).

A. Using a 3/4" socket wrench, loosen each rear roller bolt 10-12 revolutions to release tension on the running belt.

B. Using a 9/16" socket wrench with a 3" extension, remove the two front roller screws. See Figure 8.

C. Tilt the left side of the front roller up and then the right side.

D. If you are replacing the drive belt, slip the drive belt off the front roller pulley and discard it.

7. Attach the front roller.

A. Slide the new drive belt around the front roller.

B. Using a 9/16" socket wrench with a 3" extension, insert the two screws that fasten the front roller to the frame. ***NOTE:*** *Tighten each of the two screws evenly, making sure not to tighten one screw too many turns before moving to the other screw.* See Figure 8.

8. Secure the rear roller bolts.

A. Using a 3/4" socket wrench, tighten each rear roller bolt evenly, making sure not to tighten either bolt too many turns before moving to the other bolt. ***NOTE:*** *Do not overtighten the belt. You will tension and center the belt in step 23C.*

NOTE: *If you are replacing the motor with a new one follow step 9. If not, skip to step 10.*

9. Transfer the flywheel to the new motor.

A. Using a 7/16" socket wrench, remove the flywheel, screw, washers and motor (ansi square) key from the old motor. See Figure 14.

B. Place the flywheel in position on the new motor and slide the motor key into the slot on the flywheel. See Figure 14.

C. Using a 7/16" socket wrench, install the flat washer, split washer and screw that hold the flywheel on the motor and then tighten securely (80 in-lbs). See Figure 14.

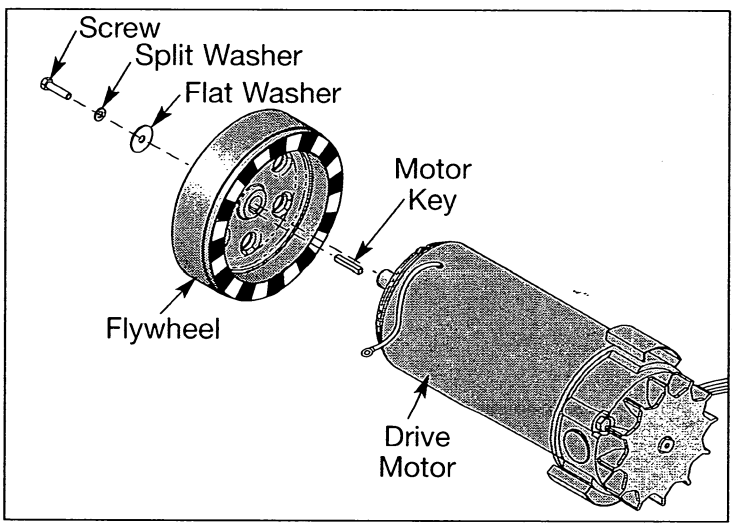


Figure 14

Motor Brushes

NOTE: *Motor brushes are wear items that will periodically need to be replaced. Both drive motor brushes must be replaced as a pair. This will ensure even commutator contact and brush wear. However, the one brush may wear faster than the other brush. Therefore, always measure both brush lengths to determine whether you should replace the pair. Check both brushes for cracks or chips.*

NOTE: *When "Err9" appears on screen it indicates motor brush wear. The treadmill will run 100 miles (161 kilometers) longer and then be inoperable until brushes are replaced.*

! CAUTION: If the drive motor is warm wait until it is cool to the touch before proceeding. The inside components of the drive motor may be hot.

! WARNING: Keep the motor dry. Do not get the inside of the motor wet.

NOTE: *If you are checking and/or replacing the motor brushes follow steps 9-14. If not, skip to step 15.*

! WARNING: Wait until the armature LED is off before removing the motor brush covers.

10. Check the armature LED.

A. Observe the "armature LED" on the lower board (labeled ILT4).

B. After the armature LED goes off proceed to step 5C.

11. Remove the drive brush access covers.

A. Squeeze each of the two rectangular brush covers to remove it from the motor. See Figure 15.

B. Lift off the round brush cover. See Figure 15. If necessary carefully pry the cover up using a flathead screwdriver.

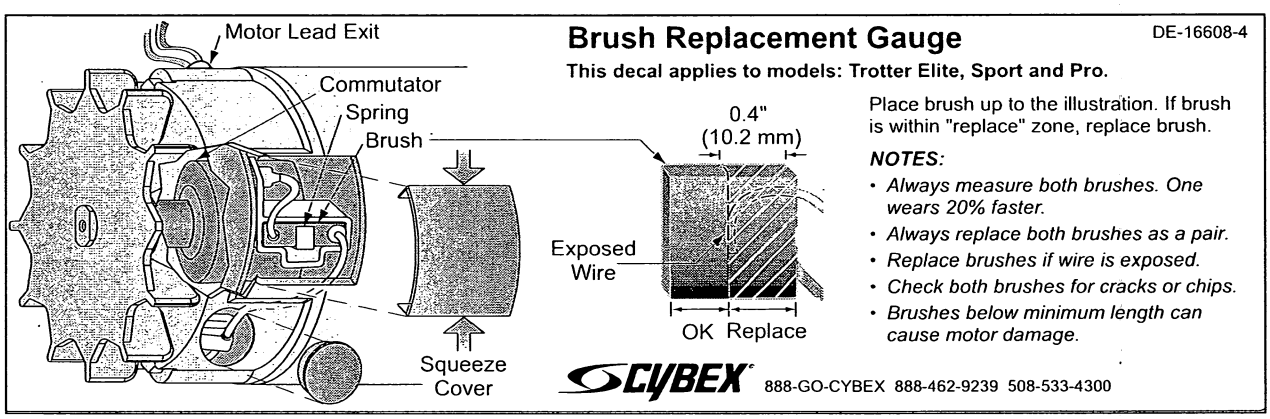


Figure 15

12. Remove the brushes.

A. Using needle nose pliers, unplug the yellow brush wear indicator wire from the round access hole and the brush wire from the rectangular hole.

B. Press each brush spring in and slowly pull it out. It will be spring loaded. ***NOTE:*** *Before you pull out the brushes, take note which way the brushes are orientated. You will need to replace them in the same orientation.*

C. Pull each brush out from the drive motor.

13. Examine the brushes and commutator.

A. Inspect the commutator by looking through the top brush holder into the motor. Slowly spin the motor by turning the flywheel. Look for noticeable damage and for signs of

wear such as arcing, pitting, burning, or uneven wear. Commutator bars that are 'dirty penny' brownish copper are in great condition. However, some commutator bars may be pitted or blackened on one edge. Too many of these indicate a worn commutator, and the motor should be replaced. The commutator may be cleaned with narrow commutator stone if carbon build-up is present. ***NOTE:*** *File down the stone if it won't fit in the brush holder hole. Brush dust can be loosened from the brush holder area by lightly filing the surfaces.*

B. Inspect the brushes for signs of excessive wear or cracks. The motor brushes must be replaced if one or both is worn to 0.4" (10.2 mm) or less in length, is broken or chipped, has a broken spring or binds in the motor. ***NOTE:*** *For your convenience the decal shown in Figure 15 is under the motor hood cover.*

NOTE: *If a new brush does not slide in and out easily, the edges or corners of the brush can be lightly filed down. The motor may make a clicking noise as new brushes wear in.*

14. Replace the brushes.

NOTES: *If a new brush does not slide in and out easily, the edges or corners of the brush can be lightly filed down. The motor may make a clicking noise as new brushes wear in. If you reinstall the original brushes it is good to install them facing their original position. Reversing the orientation of the brush can cause a clicking noise during operation until the brushes wear in.*

A. Locate the brush with the two wires and slide it into the motor brush holder (located nearest the round access hole).

B. Locate the brush with the one wire and slide it into the motor brush holder on the opposite side.

C. Place a spring clip under each brush and push in and down. The spring hooks will grasp on to the end of the brush holder.

D. Using needle nose pliers, plug the yellow brush wear indicator wire onto the fast-on inside the round access hole.

E. Using needle nose pliers, plug each brush wire onto the fast-on inside the rectangular access hole.

15. Secure the drive motor access panels.

A. Squeeze each rectangular brush covers, insert it into the holes and then release.

B. Push the round brush cover into its hole until it is flush with the motor. ***NOTE:*** *If a cover is damaged, order Cybex replacement part number EH-16954 for the round cover or EH-16955 for the rectangular cover.*

16. Align the drive motor.

A. Carefully lower the drive motor in position on the motor saddle. ***NOTE:*** *Do not crush the speed sensor or scratch the speed decal on the flywheel.*

B. Turn the motor so the exit cable is positioned at a 3 o'clock angle toward the front roller. See Figure 16.

C. Using a straight-edge (such as the lower board shield), line up the face of the flywheel pulley with the face of the front roller pulley until they are flush. See Figure 10. ***NOTE:*** *Do not put the drive belt on until step 18A.*

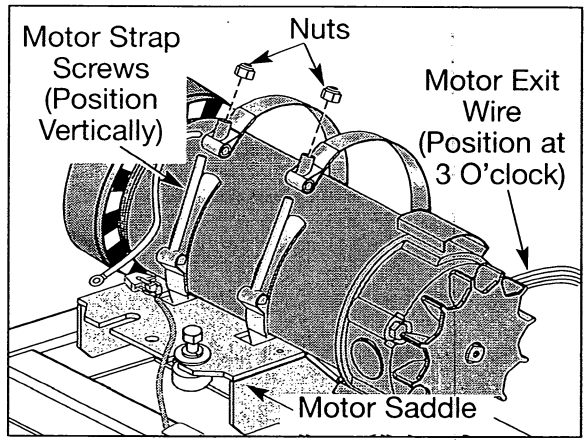


Figure 16

17. Secure the motor straps.

NOTE: *Tighten motor strap to 80 in-lbs.*

A. Loop each strap through the motor saddle and position each screw vertically as shown in Figure 16. ***NOTE:*** *The motor strap will be creased slightly where it pressed against the motor saddle, be sure the strap is in its original position.*

B. Close each motor strap and use a 7/16" wrench with a deep socket to tighten each nut securely (80 in-lbs). See Figure 16.

18. Align the drive belt.

A. Place the drive belt over the flywheel pulley and confirm that the drive belt is positioned three grooves over from the face of the flywheel and three grooves over from the face of the pulley. See Figure 10.

19. Connect the motor cables.

A. Connect the motor cable to the lower board and line filter as shown in Figure 13 (red to A1, black to A2, yellow to BW and green to the line filter). ***NOTE:*** *For internationally installed treadmills only, the green cable goes on the ground stud tab.*

B. Place the flat washer on the motor saddle followed by the ground terminal, split washer and screw. See Figure 17. ***NOTE:*** *Be sure that the spacers are still in place below the saddle.*

C. Using a 1/2" socket wrench, tighten both screws on the motor saddle.

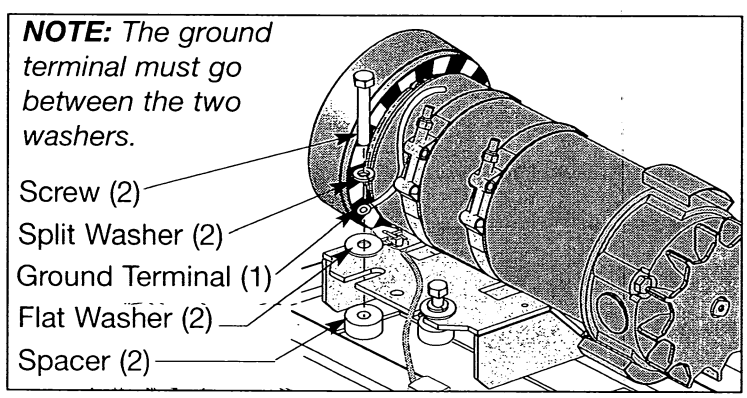


Figure 17

D. Using wire ties, tie the motor cable to the base so that no wires get pinched. See Figure 18. ***NOTE:*** *Be sure that the wires are tied away from the fan and running belt. For internationally installed treadmills only, place the ferrite (shown in Figure 18) removed in between the wire ties.*

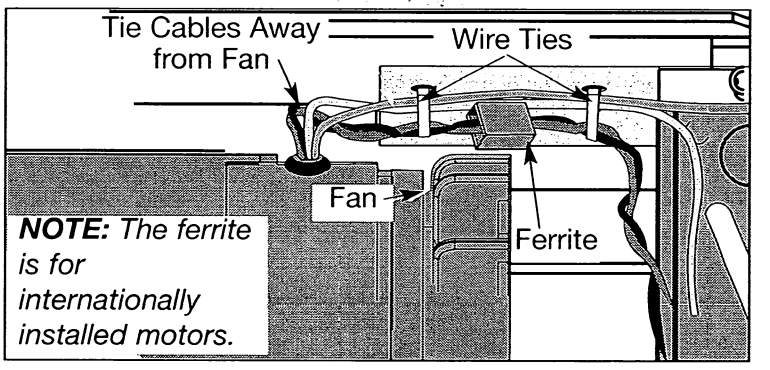


Figure 18

E. Refer to the lower board shield to confirm the locations for the connectors and check to see that all of the cables are connected firmly. See Figure 19.

F. Place the lower board shield in position and push the clips down. ***NOTE:*** *The clips will snap in.* See Figure 19.

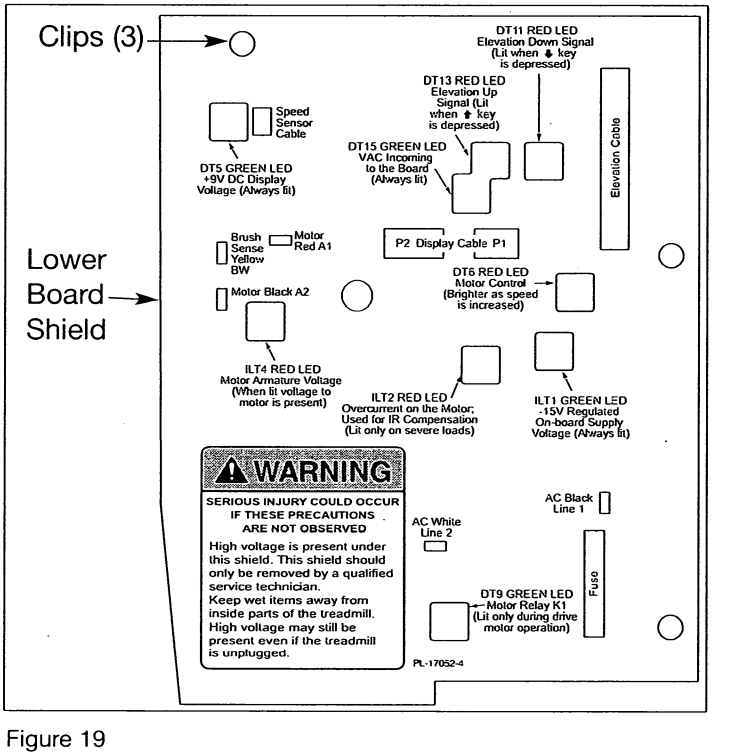


Figure 19

20. Secure the motor cover.

A. Lower the motor cover center into position. See Figure 2.

B. Using a Phillips head screwdriver, tighten the three screws on each side. ***NOTE:*** *Be sure the screws are catching the center motor cover's holes.*

21. Perform the appropriate procedures.

A. Follow the *Speed Calibration* procedure located in this chapter (required).

B. If you replaced the motor follow the *IR Compensation* procedure located in this chapter.

C. If you loosened the tension on the running belt (step 8A) follow the *Tension and Center the Belt* procedure located in the *Preventive Maintenance* chapter.

Elevation Motor

Tools Required

- Phillips head screwdriver
- Wooden block 4" (10 cm) tall (2)
- 9/16" Open end wrench
- 9/16" Socket wrench

! WARNING: Disconnect the power cord before beginning this procedure. Keep wet items away from inside parts of the treadmill. Electrical shock could occur even if the treadmill is unplugged.

1. **Disconnect the external power source.**

   A. Turn the main power switch on the left side to the off (O) position.

   B. Unplug the treadmill from the power outlet.

2. **Remove the motor cover.**

   A. Using a Phillips head screwdriver, loosen three screws on each motor cover side (left and right). See Figure 2.

   B. Lift the motor cover center up and off the treadmill. The screws will stay in place. See Figure 2.

3. **Place wooden blocks under the frame.**

! CAUTION: A minimum of two people will be required to properly lift the treadmill. Always use proper lifting methods when moving heavy items.

   A. While two people are lifting the front of the treadmill, have a third person place a wooden block under the each side of the frame to support the front end of the treadmill. ***NOTE:*** *This will get the weight of the treadmill off the elevation wheels and provide support.*

4. **Disconnect the elevation motor cable.**

! WARNING: Do not touch components on the lower board. A charge can remain after unplugging the power cord and turning off the treadmill.

   A. Pull up on the lower board shield. It will snap out.

   B. Disconnect the elevation motor cable from the lower board and remove it from the wire tie.

5. **Remove the elevation motor.**

   A. Using a 9/16" open end wrench and a 9/16" socket wrench, remove the two bolts on the elevation motor (one at the top and one at the bottom). ***NOTE:*** *Hold the motor while you remove the second bolt so that it doesn't fall.*

   B. Carefully lift and remove the elevation motor from the treadmill.

6. **Calibrate the elevation motor.**

   A. The switch should be at zero elevation before adjusting the tube nut. If necessary connect the elevation motor, bring the elevation up to 1% incline and then back down to 0%.

   B. Turn the tube with your fingers until it measures 12.517" (31.8 cm) from the center of the top hole to the center of the bottom hole. See Figure 20.

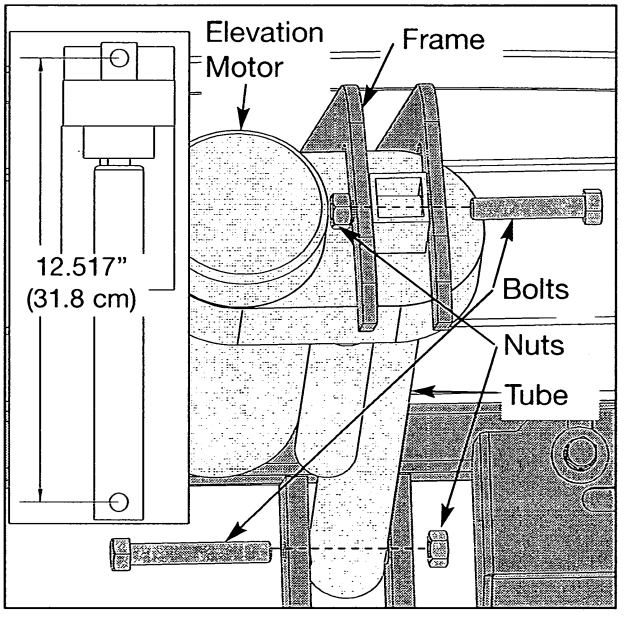


Figure 20

7. **Secure the elevation motor.**

   A. Carefully place the elevation motor in position on the treadmill. See Figure 20.

   B. Slide both bolts into the slots before tightening. See Figure 20. ***NOTE:*** *The top bolt goes from the left to the right. It doesn't matter which way the bottom bolt is positioned.*

   C. Using a 9/16" open end wrench and a 9/16" socket wrench, securely tighten the nuts and two bolts installed in step 7B.

   D. Connect the elevation motor cable to the lower board. ***NOTE:*** *The board is labeled P3 at the elevation port. The connector can only fit in one direction.*

   E. Place the lower board shield in position and push the clips down. ***NOTE:*** *The clips will snap in.*

   F. Tie the elevation cable with the tie from step 4B so that it is clear of the motor fan. Be sure no wires get pinched.

8. **Test the elevation motor.**

   A. Connect the main power cord into the power outlet and turn the power switch on (I).

   B. Start the treadmill in *Manual Mode* and raise the elevation to 6%.

   C. Carefully remove the wooden blocks from under the front end assembly. This will load the elevation assembly.

   D. Lower the elevation to zero percent.

   E. Stop the treadmill and turn the main power switch in the front panel to the off (O) position.

9. **Secure the motor cover.**

   A. Lower the motor cover center into position. See Figure 2.

   B. Using a Phillips head screwdriver, tighten the three screws on each side. ***NOTE:*** *Be sure the screws are catching the center motor cover's holes.*

Lower Control Board

NOTE: *You will remove and replace the entire lower bracket in this procedure.*

Tools Required

- Phillips head screwdriver
- 3/8" Nutdriver or socket wrench
- ESD (Electro Static Discharge) grounding strap

! WARNING: Disconnect the power cord before beginning this procedure. Keep wet items away from inside parts of the treadmill. Electrical shock could occur even if the treadmill is unplugged. Do not touch components on the lower board. A charge can remain after unplugging the power cord and turning off the treadmill.

1. **Disconnect the external power source.**

   A. Turn the main power switch on the left side to the off (O) position.

   B. Unplug the treadmill from the power outlet.

2. **Remove the motor cover.**

   A. Using a Phillips head screwdriver, loosen three screws on each motor cover side (left and right). See Figure 2.

   B. Lift the motor cover center up and off the treadmill. The screws will stay in place. See Figure 2.

3. **Disconnect the cables from the lower control board and bracket.**

   A. Pull up on the lower board shield. It will snap out.

   B. Disconnect the cables from the lower control board. This includes: the elevation motor cable; display cable (P1 and P2); AC line 1 (black); AC line 2 (white); drive motor (black red, yellow) and speed sensor cable.

   C. Using a 3/8" nutdriver or socket wrench, remove the one nut and one washer from the ground wire on the lower control bracket.

4. **Remove the line filter.**

   A. Using a Phillips head screwdriver, remove the two screws that hold the line filter to the lower control board bracket. ***NOTE:*** *You should not need to disconnect the cables that are connected to the line filter.*

5. **Remove the lower control board bracket.**

   A. Using a Phillips head screwdriver, remove the four screws that hold the lower control bracket to the base.

B. Remove the entire bracket with its lower board. ***NOTE:*** *Cybex may want this part back for evaluation. Contact Cybex Customer Service at 800-766-3211 and press 64 when prompted.*

6. Replace the lower control board and bracket.

NOTE: *Wear an ESD strap for the rest of this procedure.*

A. Position the lower control board bracket in place on the base. ***NOTE:*** *The elevation motor connector and ground stud will be positioned toward the back left corner.*

B. Using a Phillips head screwdriver, secure the four screws that hold the bracket to the base.

7. Connect the cables to the lower control board.

A. Connect the cables to the lower control board. This includes: the elevation motor cable; display cable (P1 and P2); AC line 1 (black); AC line 2 (white); drive motor (black, red, yellow) and speed sensor cable. See Figure 21.

B. Put the ground wire terminal on the stud on the lower board bracket.

C. Using a 3/8" nutdriver, secure the one nut over the ground wire terminal.

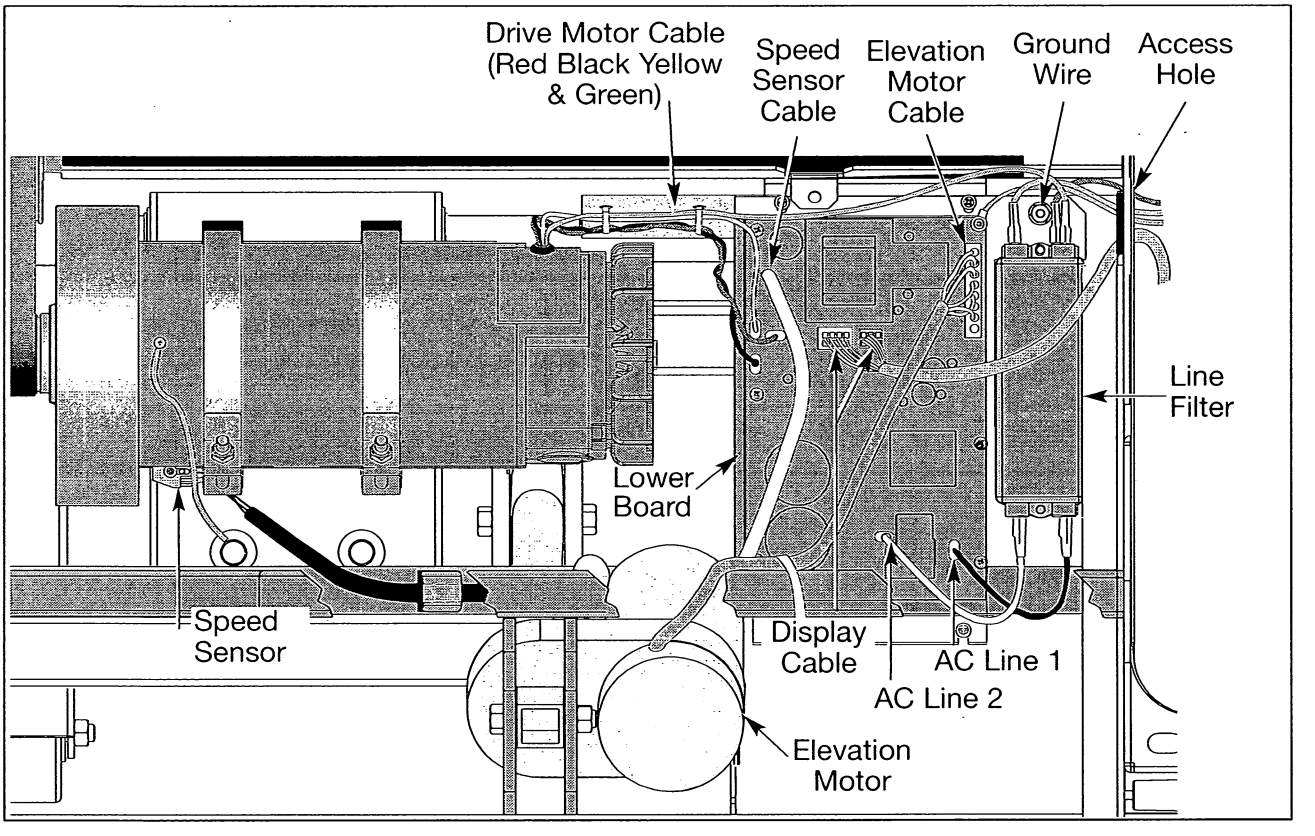


Figure 21

8. **Secure the line filter.**

   A. Using a Phillips head screwdriver, secure the two screws that hold the line filter to the lower control board bracket.

9. **Secure the wires.**

   A. Check to see that all of the cables are connected firmly in their proper place.

   B. Tie the wires back with the wire ties on the base and be sure no wires get pinched.

   C. Place the lower board shield in position and push the clips down. ***NOTE:*** *The clips will snap in.*

10. **Perform IR Compensation procedure.**

    A. Follow the *IR Compensation* procedure located in this chapter.

11. **Secure the motor cover.**

    A. Lower the motor cover center into position. See Figure 2.

    B. Using a Phillips head screwdriver, tighten the three screws on each side. Be sure the screws are catching the center motor cover's holes. See Figure 2.

12. **Calibrate speed.**

    A. Follow the *Speed Calibration* procedure located in this chapter.

Power Cord

NOTE: *This procedure will cover the power cable, line filter and power switch.*

Tools Required

- Phillips head screwdriver
- 3/8" Nutdriver or socket wrench
- ESD (Electro Static Discharge) grounding strap

! WARNING: Disconnect the power cord before beginning this procedure. Keep wet items away from inside parts of the treadmill. Electrical shock could occur even if the treadmill is unplugged. Do not touch components on the lower board. A charge can remain after unplugging the power cord and turning off the treadmill.

1. **Disconnect the external power source.**

   A. Turn the main power switch on the left side to the off (O) position.

   B. Unplug the treadmill from the power outlet.

2. **Remove the motor cover.**

   A. Using a Phillips head screwdriver, loosen three screws on each motor cover side (left and right). See Figure 2.

   B. Lift the motor cover center up and off the treadmill. The screws will stay in place. See Figure 2.

   C. Remove the left plastic side cover.

3. **Remove the left end cap.**

   A. Using a Phillips head screwdriver, remove the screw that holds the left end cap in place. See Figure 4.

4. **Remove the left side panel.**

   A. Pull the left side panel out and off the treadmill.

Power Switch

5. **Remove the power switch.**

   A. Using a Phillips head screwdriver, remove the two screws that hold the switch and its plate to the treadmill.

   B. Disconnect the four fast-on connectors that go into the power switch.

   C. Using a 3/8" nutdriver, remove the one nut and one washer from the ground wire on the lower control bracket.

6. **Remove the power cord.**

   A. Remove the old power cord and discard the power cord (and power switch if applicable). See Figure 22.

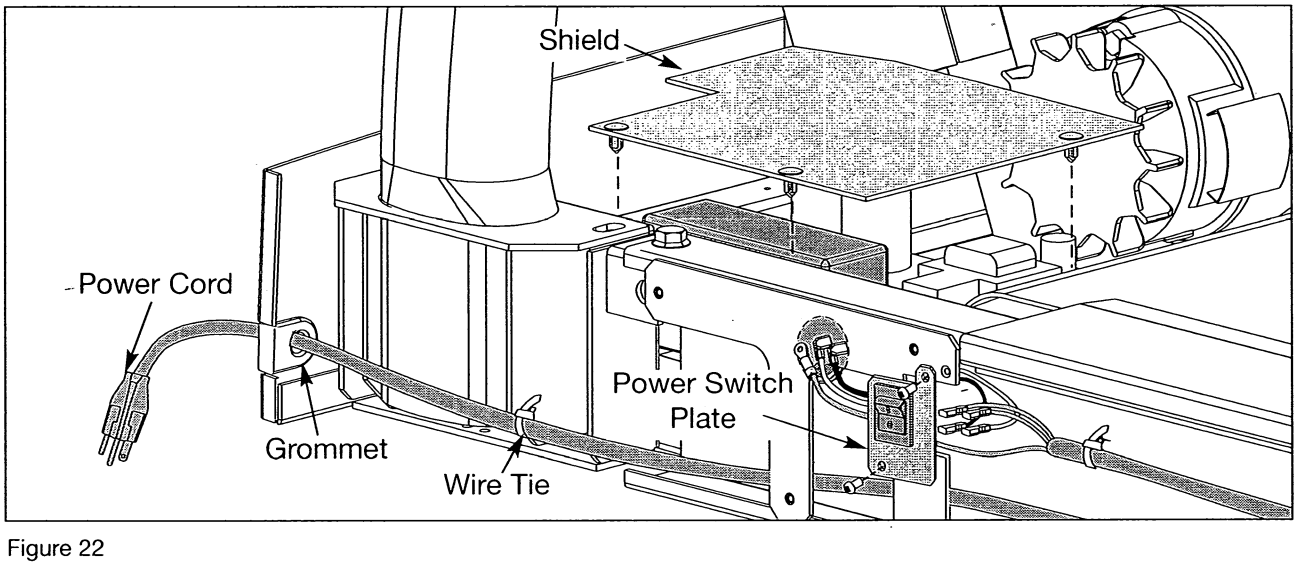


Figure 22

Line Filter

NOTE: *If you are replacing the line filter follow steps 7 and 8. If not skip to step 9.*

7. Replace the line filter (optional).

A. Disconnect the fast-on that goes from the line filter to the drive motor (green cable).

B. Disconnect the two fast-ons that go from the line filter to the lower board (cables labeled AC Line 1 and AC Line 2 on the lower board).

C. Using a Phillips head screwdriver, remove the two screws that hold the line filter to the lower control bracket and discard the old line filter if applicable.

D. Place the new line filter in position on the lower control bracket.

E. Using a Phillips head screwdriver, secure the two screws that hold the line filter to the lower control bracket.

8. Connect the line filter cables (if applicable).

A. Connect the white cable to the front right fast-on on the line filter and route it through the access hole.

B. Connect the black cable to the front left fast-on on the line filter and route it through the access hole.

C. Connect the ends of these two cables to the lower board. The white connects to the fast-on labeled AC Line 1. The black connects to the fast-on labeled AC Line 2.

D. Connect the drive motor cable (green) to the line filter's front left fast-on connector.

9. Route the power cord.

A. Route the power cord behind the base brackets and route the fast-ons out the power switch access hole. ***NOTE:*** *The power cord can exit the front or back of the treadmill. Position it the way you intend to leave it.*

10. Connect the power cable.

A. Hold the power switch and its plate so that the I (on) is toward the top. See Figure 23.

B. Connect these two power cord cables to the power switch:
- The blue cable connects to the top left switch fast-on.
- The brown cable connects to the top right switch fast-on

NOTE: *You will connect the ground in step 10D.*

C. Connect the line filter fast-ons to the power switch.
- The white cable connects to the bottom right switch fast-on.
- The black cable connects to the bottom left switch fast-on

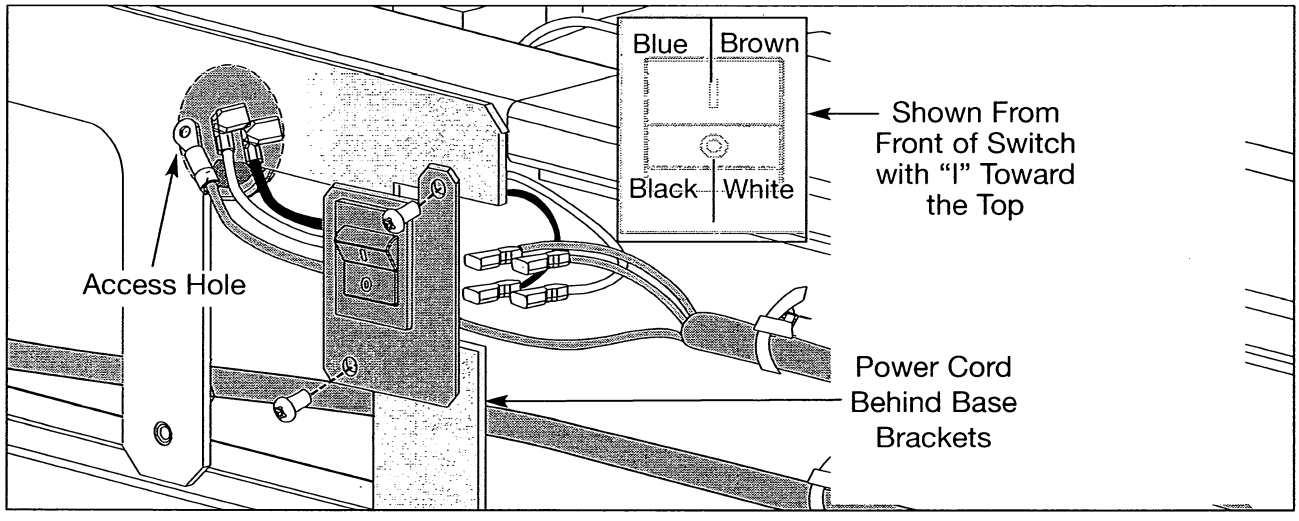


Figure 23

D. With the ground wire through the access hole to the lower control bracket, put the ground wire terminal on the stud on the lower board bracket.

E. Using a 3/8" nutdriver, secure the one nut over the ground wire terminal.

F. Using a Phillips head screwdriver, secure the switch plate to the treadmill with the I (on) toward the top.

Upper Display Board

Tools Required

- Phillips head screwdriver
- ESD (Electro Static Discharge) grounding strap

1. Disconnect the external power source.

A. Turn the main power switch on the left side to the off (O) position.

B. Unplug the treadmill from the power outlet.

NOTE: *The display board is susceptible to damage from a discharge of static electricity. While handling parts underneath the console cover use an ESD grounding strap. This eliminates the potential voltage (static) difference between you and the equipment you are working on. Wear an ESD strap for the rest of this procedure.*

2. Remove the console back from the handrail.

NOTE: *If you have a cable plugged into the RJ-45 port disconnect it.*

A. Using a Phillips head screwdriver, remove the nine screws that hold the console back to the console front.

B. Gently pull off the console back.

3. Remove the display board.

A. Disconnect these cables from the display board: the display cable (2 connectors), the two upper switch membranes, the lower switch membrane, the contact heart rate cable, the CSAFE board to display board jumper and the upper to lower board jumper. See Figure 24.

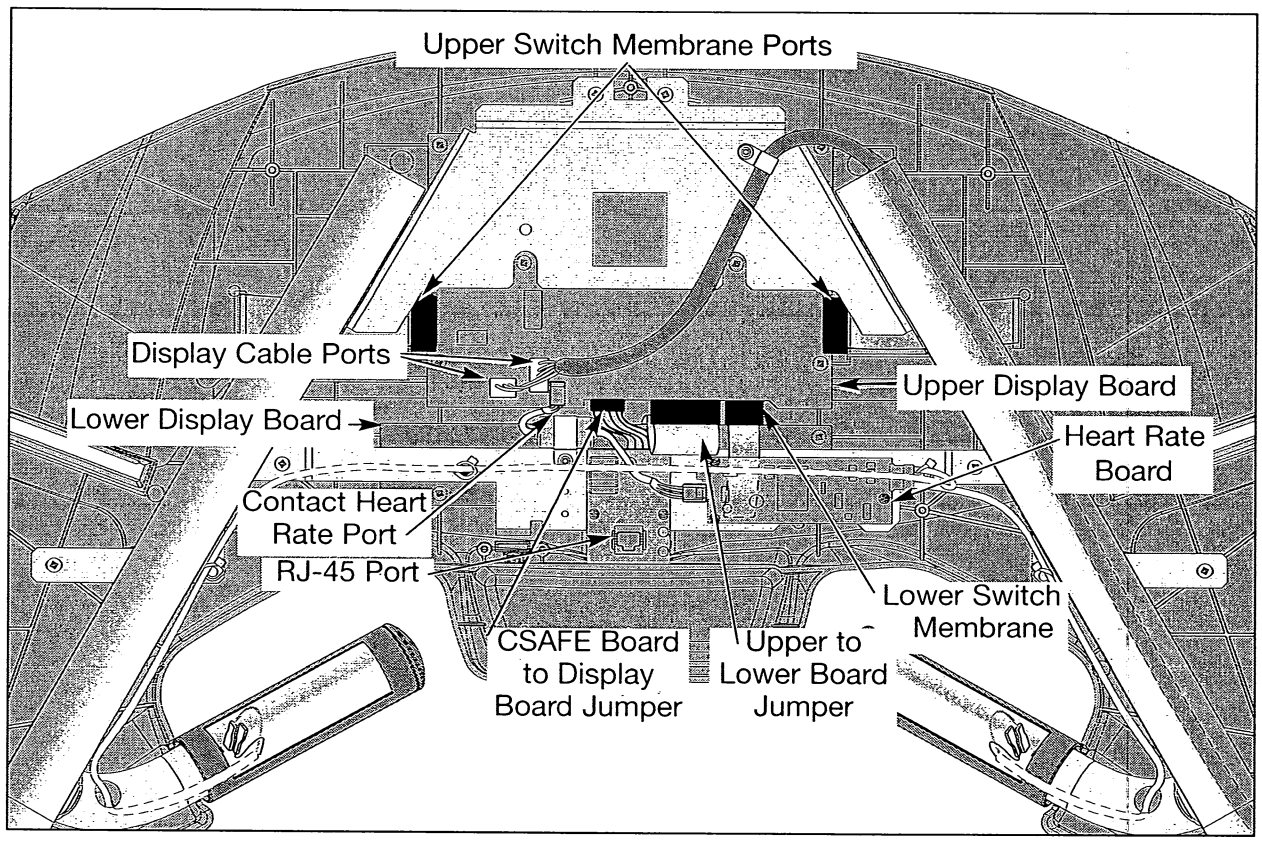


Figure 24

B. Using a Phillips head screwdriver, remove the six Phillips head screws that hold the display board to the console.

4. Attach the display board.

A. Place the display board in position on the front console.

B. Using a Phillips head screwdriver, secure the six screws that hold the display board to the console.

5. **Connect the cables.**

   A. Connect these cables into the display board: the display cable (2 connectors), the two upper switch membranes, the lower switch membrane, the contact heart rate cable, the CSAFE board to display board jumper and the upper to lower board jumper. See Figure 24.

6. **Check the connections.**

   A. Check to see that all of the cables are connected firmly in their proper place.

7. **Secure the console back.**

   A. While being sure not to pinch any cables, use a Phillips head screwdriver to secure the nine screws that hold the back cover to the console front.

8. **Calibrate speed.**

   A. Follow the *Speed Calibration* procedure located in this chapter.

Contact Heart Rate Board

NOTE: *This procedure will cover the contact heart rate board, grips and cable.*

Tools Required

- Phillips head screwdriver
- ESD (Electro Static Discharge) grounding strap

1. **Disconnect the external power source.**

   A. Turn the main power switch on the left side to the off (O) position.

   B. Unplug the treadmill from the power outlet.

NOTE: *Wear an ESD strap for the rest of this procedure.*

2. **Remove the console back.**

NOTE: *If you have a cable plugged into the RJ-45 port disconnect it.*

   A. Using a Phillips head screwdriver, remove the nine screws that hold the console back to the console front.

   B. Gently pull off the console back.

3. **Remove the heart rate board.**

   A. Using a Phillips head screwdriver, remove the three screws from the heart rate board.

   B. If you're not replacing the cable, disconnect the two cables and one molex placeholder from the heart rate board. (You will re-attach the molex connector in step 4A). See Figure 25.

4. Attach the new heart rate board.

A. Locate the side of the heart rate board with the two holes and place the molex placeholder over the top three pins. See Figure 25.

B. Place the heart rate board in position with the two holes to the left and, using a Phillips head screwdriver, attach the heart rate board with the three screws removed in step 3A.

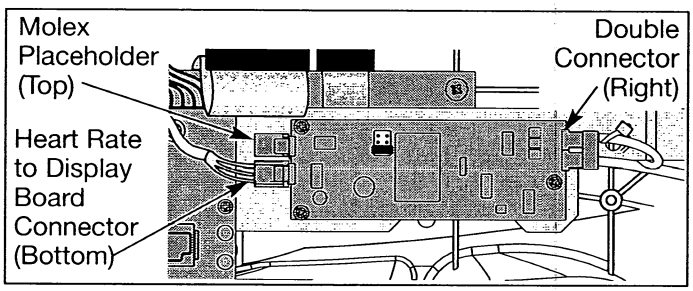


Figure 25

NOTE: *If you are replacing the grips and cable follow steps 5 to 8. If not skip to step 9.*

Contact Heart Rate Grips

Tools Required

- Knife or small flathead screwdriver
- Needle nose pliers
- Wire cutters

5. Remove the old heart rate grips and cable.

A. Using a knife or flathead screwdriver, pry up the four metal contacts from the two grips. ***NOTE:*** *The metal contacts are taped on securely and prying them up will destroy them.*

B. Using a needle nose pliers, carefully disconnect the wire from each metal contact.

C. Using a Phillips head screwdriver, remove the two bolts and two nuts from each grip.

D. Pull the plastic housing and cap off each handrail (the housing is secured with double-sided tape). See Figure 26.

E. Gently push each connector out of the rectangular hole in the plastic housing. See Figure 26.

F. Remove any remaining double-sided tape from each handrail.

G. Remove the old o-ring from each handrail. See Figure 26.

H. Using wire cutters, cut the four wire ties that hold the heart rate cable to the handrail.

I. Pull the old heart rate cable out of the handrail.

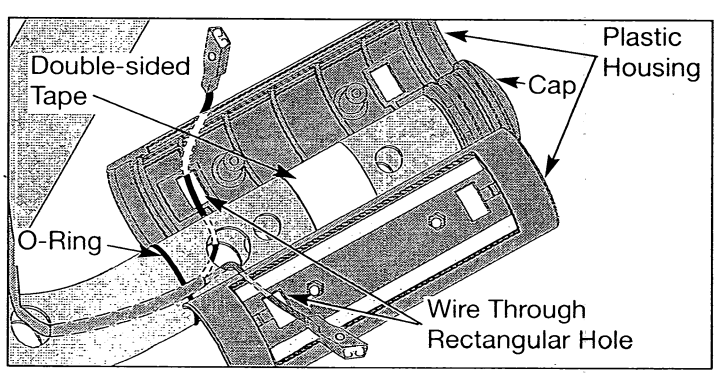


Figure 26

6. Route the new heart rate cable.

A. Connect the double connector into the right side of the heart rate board. See Figure 25.

B. Locate the short and long side of the heart rate cable.

C. Route the short cable end to the left (from treadmill user's viewpoint) and the long end to the right.

D. Place the cable behind the handrail and tie with four wire ties in the locations they were removed in step 5D.

E. Fold the each cable and place it into the hole that leads to the grip. See Figure 27.

F. Push each wire out a hole (red out the front hole and black out the back hole). See Figure 27.

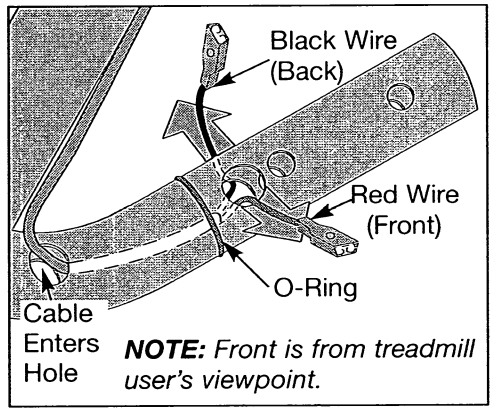


Figure 27

7. Secure the new plastic housing.

A. Slide an o-ring on each handrail and roll it over the wires so that it is positioned just after the hole where the wires emerge. See Figure 27.

B. Remove the protective paper from the loose pieces double-sided tape and stick each one between two small holes in the handrail. See Figure 28.

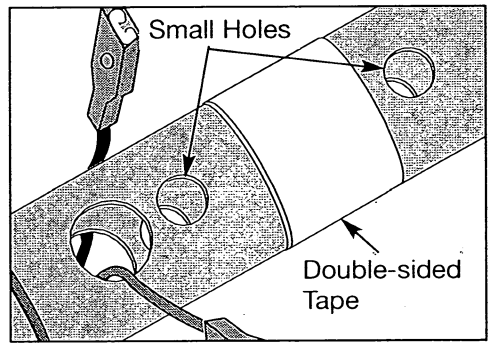


Figure 28

C. Position each set of plastic housing so that the grooves fit together snugly. ***NOTE:*** *If the grooves don't fit and the housing gets taped down in the wrong position pulling it up will destroy the tape. Do not let the plastic housing touch the double-sided tape until step 7E.*

D. Place each plastic grip near the handrail and pull each wire through a rectangular hole. See Figure 29. ***NOTE:*** *Don't let the wires slip back into their holes.*

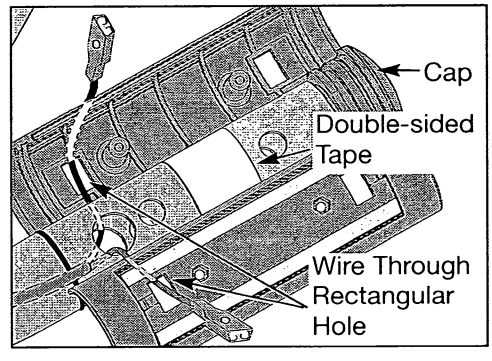


Figure 29

E. Fit the three plastic parts in position (the housing (2) and the cap (1)) and continue holding all plastic parts through the next step. See Figure 29.

F. While being careful not to overtighten and crack the housing, place the nuts in their holes and secure them with the bolts. ***NOTE:*** *It is easier to place the nuts on the top and the bolts from the bottom.* See Figure 30.

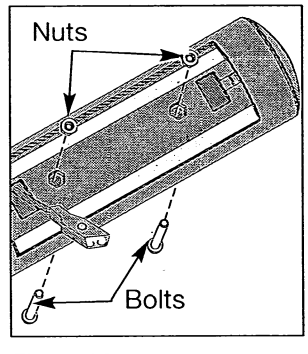


Figure 30

8. Secure the new metal contacts.

A. Remove the protective paper from the four metal contacts and from the eight strips of tape on the plastic housing.

B. Locate the small bump on the metal contact prong and on the connectors. See Figure 31.

C. Connect the each cable to a metal prong with the bumps lined up. See Figure 31.

D. Push the excess wire into its rectangular hole.

E. Press each metal contact into the grooves (one groove at a time) on the plastic housing. ***NOTE:*** *They will snap in.*

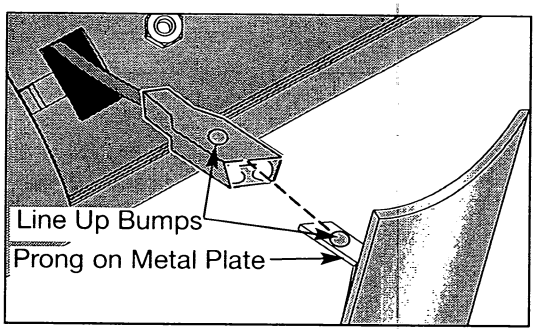


Figure 31

9. Connect the cables removed in step 3A.

A. Confirm that the two cables and one molex placeholder are firmly connected to the heart rate board in their proper places. See Figure 25.

10. Secure the console back.

A. While being sure not to pinch any cables, use a Phillips head screwdriver to secure the nine screws that hold the console back to the console front.

11. Connect the external power source.

A. Plug the treadmill into the power outlet.

12. Calibrate speed (if you replaced the display board).

A. Follow the *Speed Calibration* procedure located in this chapter.

CSAFE Board

Tools Required

- Phillips head screwdriver

1. Disconnect the external power source.

A. Turn the main power switch on the left side to the off (O) position.

B. Unplug the treadmill from the power outlet.

2. Remove the console back.

NOTE: *If you have a cable plugged into the RJ-45 port disconnect it.*

A. Using a Phillips head screwdriver, remove the nine screws that hold the console back to the console front.

B. Gently pull off the console back.

3. Remove the old CSAFE board.

A. Pull the CSAFE connector out of the display board. See Figure 24.

B. Using a Phillips head screwdriver, remove the three screws that hold the CSAFE board to the console.

4. **Attach the new CSAFE board.**

   A. Gently push the CSAFE connector into its port on the display board. See Figure 24.

   B. Using a Phillips head screwdriver, secure the CSAFE board with the three screws removed during step 3B. ***NOTE:*** *Do not overtighten.*

5. **Secure the console back.**

   A. While being sure not to pinch any cables, use a Phillips head screwdriver to secure the nine screws that hold the console back to the console front.

Display Cable

Tools Required

- Phillips head screwdriver
- ESD (Electro Static Discharge) grounding strap
- Wire cutters

! WARNING: Disconnect the power cord before beginning this procedure. Keep wet items away from inside parts of the treadmill. Electrical shock could occur even if the treadmill is unplugged. Do not touch components on the lower board. A charge can remain after unplugging the power cord and turning off the treadmill.

1. **Disconnect the external power source.**

   A. Turn the main power switch on the left side to the off (O) position.

   B. Unplug the treadmill from the power outlet.

NOTE: *The display board is susceptible to damage from a discharge of static electricity. While handling parts underneath the console cover use an ESD grounding strap. This eliminates the potential voltage (static) difference between you and the equipment you are working on. Wear an ESD strap for the rest of this procedure.*

2. **Remove the console back.**

   A. Using a Phillips head screwdriver, remove the nine screws that hold the console back to the console front.

   B. Gently pull off the console back.

3. **Remove the motor cover.**

   A. Using a Phillips head screwdriver, loosen three screws on each motor cover side (left and right). See Figure 2.

B. Lift the motor cover center up and off the treadmill. The screws will stay in place. See Figure 2.

4. Remove the left junction covers.

A. Using a Phillips head screwdriver, remove the three screws that hold the left junction covers in place.

5. Remove the display cable.

! WARNING: Do not touch components on the lower board. A charge can remain after unplugging the power cord and turning off the treadmill.

A. Pull up on the lower board shield until the shield snaps out.

B. Disconnect the display cable (P1 and P2) from the lower board. See Figure 16 .

C. Disconnect the display cable (P3 and P8) from the upper display board. See Figure 19.

D. Using a Phillips head screwdriver, loosen the wire retaining screw that holds the display cable in place near the display board.

E. Remove the cable from the wire ties at the junction and near the bottom of the upright.

F. Using wire cutters, cut the cable at its center near the junction and pull both ends out of the treadmill. ***NOTE:*** *Pull the upper end up and out and the lower end down and out.*

NOTE: *Display cables have a revision number label so that you can verify that you have the latest revision of the cable.*

6. Attach the new display cable.

A. Locate the P1 and P2 end of the display cable.

B. Push the P2 connector down into the top handrail hole with the P1 connector pointing up. See Figures 32 and 33.

C. Push the display cable down through the handrail and out the handrail's bottom hole. ***NOTE:*** *Twisting the cable as you push will help it go through.*

D. Push the display cable down through the upright and out the exit hole. ***NOTE:*** *There is a black line on the display cable to show you how far to pull out the cable. When you see the line, stop pulling the cable out.*

E. Route the cable into the access hole.

F. Connect the display cable to the lower control board at P1 and P2.

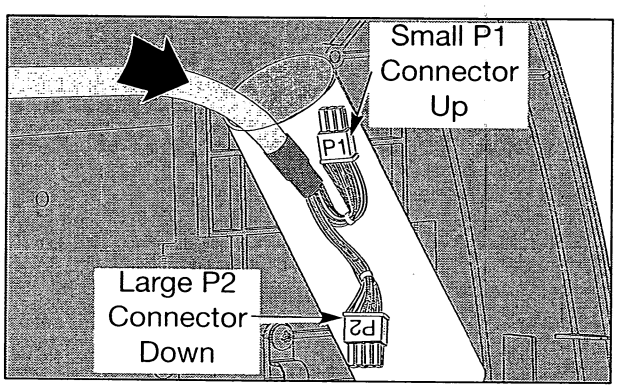


Figure 32

7.

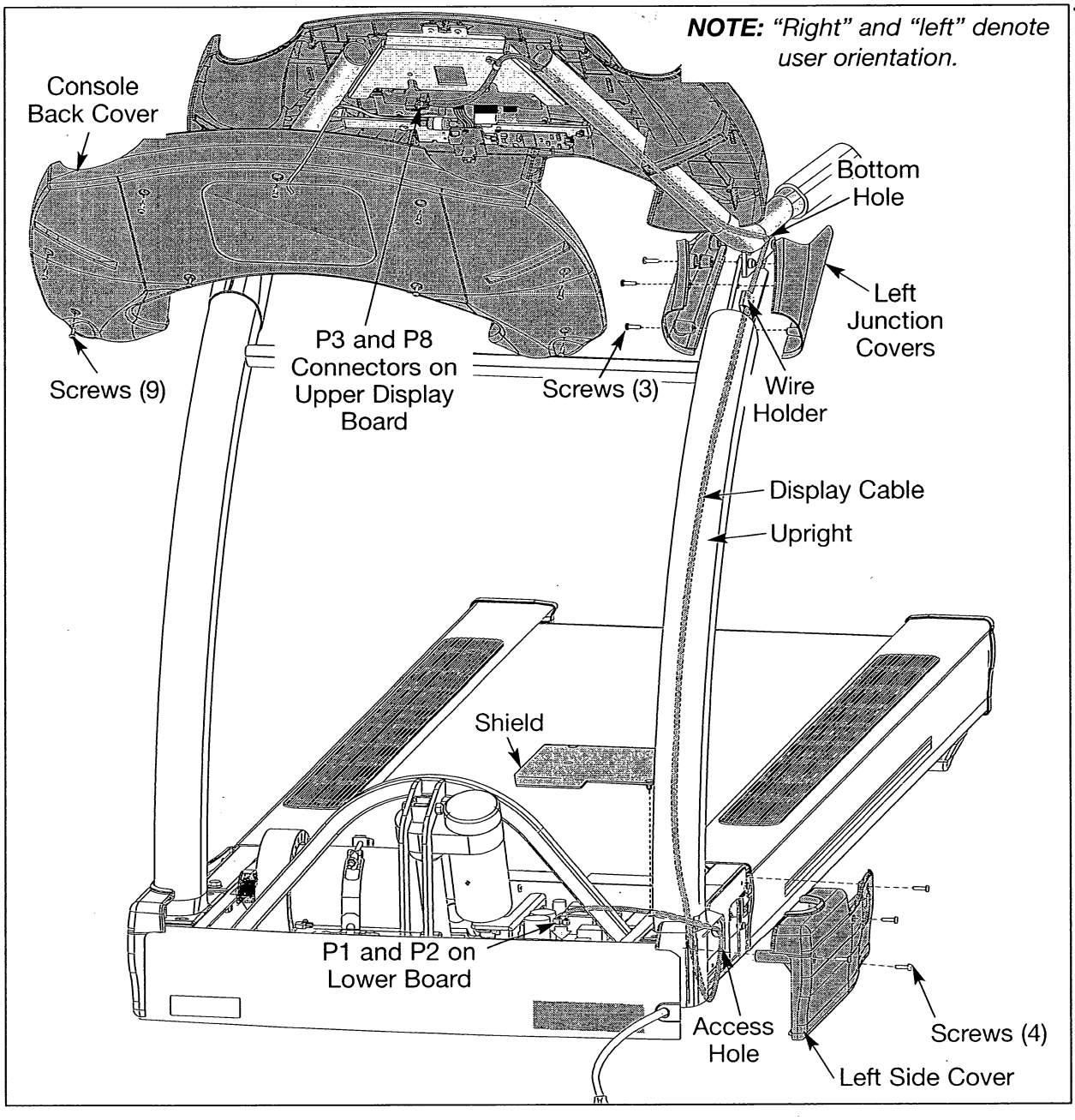


Figure 33

Secure the cable.

A. Using a Phillips head screwdriver, open the clip described in step 5D and secure the cable in the clip.

B. Locate the line on the display cable described in step 6D and tie the cable with the wire tie near the bottom of the upright.

C. Open the wire holder at the junction, put the cable inside and close the wire holder.

D. Check to see that all of the connectors are connected firmly in their proper place.

E. Place the lower board shield in position and push the clips down. ***NOTE:*** *The clips will snap in.*

8. Secure the left junction covers.

A. Using an Phillips screwdriver, tighten the three screws that hold the junction covers in place.

9. Secure the motor cover.

A. Lower the motor cover center into position. See Figure 2.

B. Using a Phillips head screwdriver, tighten the three screws on each side. ***NOTE:*** *Be sure the screws are catching the center motor cover's holes.*

10. Secure the console back.

A. While being sure not to pinch any cables, attach the console back to the console front with the five Phillips head screws.

Display Overlays

NOTE: *This procedure will cover the upper and/or lower display overlay. They are removed and replaced the same on the Cybex Pro+ treadmill.*

Tools Required

- Phillips head screwdriver
- ESD (Electro Static Discharge) grounding strap
- Razor blade

1. Disconnect the external power source.

A. Turn the main power switch on the left side to the off (O) position.

B. Unplug the treadmill from the power outlet.

2. Remove the console back.

A. Using a Phillips head screwdriver, remove the nine screws that hold the console back to the console front.

B. Gently pull off the console back.

C. Loosen the six screws that hold the front console in place. ***NOTE:*** *This allow clearance for the switch membranes to fit behind the handrail.*

NOTE: *The display board is susceptible to damage from a discharge of static electricity. While handling parts underneath the console cover use an ESD grounding strap. This eliminates the potential voltage (static) difference between you and the equipment you are working on. Wear an ESD strap for the rest of this procedure.*

3. **Remove the display overlay.**

   A. While wearing an ESD strap, disconnect the switch membranes (two upper and one lower) from the display board. See Figure 19.

   B. Use a razor blade to peel up a corner of the display overlay and pull off the overlay.

4. **Attach the display overlay.**

   A. Remove the paper backing from the new display overlay.

   B. Slide the ribbon cable through the (upper two or lower one) slot.

   C. Carefully place the display overlay in position within the indentation on the console front and firmly rub the display overlay so that it adheres to the console.

   D. Route the ribbon cables under the frame tubes and connect them to the display board.

5. **Secure the console covers.**

   A. Using a Phillips head screwdriver, tighten the six screws that hold the console front to the frame.

   B. While being sure not to pinch any cables, secure the console back to the console with the five Phillips head screws.

6. **Test the new display overlay.**

   A. Turn the main power switch to the on (I) position.

   B. Plug the treadmill into the power outlet.

   C. Try each key to be sure that it functions properly.

Parts List

ITEM NO.	PART NO.	DESCRIPTION
1	AF-16240	Frame, Weldment
2	HS-16929	Screw, 3-8-16 x 5-8Lg H x HD whiz-lock GR5
3	HS-16950	Screw, 5-16-18 x 7-8Lg H x Soc BTNHD w/patch, B-Zn
4	HS-16939	Screw, SEM 10-32 x .75 Pnhd Ext blk Zn
5	PL-16256	Cover, Motor
6	PL-16465	Cover, Upright Outer, Right
7	PL-16464	Cover, Upright Outer, Left
8	HW-13799	Washer, Flat
9	AX-16721	Deck Stiffener Assy
10	HX-16706	Tape Strip, 1.88 x 41.0 x .010thk
11	HX-16707	Tape Strip, 1.32 x 4.30 x .010thk
12	HS-15682	Screw, 5/16-18 x .50 FLHD Phil undercut ZN
13	AX-17726	Side Extrusion Assy, Cybex Pro+, Right
14	AX-17727	Side Extrusion Assy, Cybex Pro+, Left
15	AF-17677	Upright Weldment (Choose a Standard or Custom Color)
16	AX-16722	Top Platform Assy, (Choose a Standard or Custom Color)
17	DE-16705	Decal, Safety-walk
18	HS-16875	Screw, SEM ext 1-4-20 x 1-2 PNHD Phil
19	EH-10291	Anchor, Cable Tie
20	EH-00986	Cable Tie, (without anchor)
21	PL-16737	Plug, Power Cord Grommet
21	AW-17273	Power Cord 220V 60Hz (NOT SHOWN)
21	AW-17272	Power Cord 230V 50Hz (NOT SHOWN)
21	AW-17274	Power Cord 115V 60Hz (NOT SHOWN)
22	PL-16738	Plug, Power Cord Grommet

ITEM NO.	PART NO.	DESCRIPTION
23	DE-16992	Decal, ETL UL-1647 Only
24	Removed	
25	PC-16496	End Cap, Left, (Choose a Standard or Custom Color)
26	PC-16497	End Cap, Right, (Choose a Standard or Custom Color)
27	HX-15678	Bushing Deck 5/16-18 40 lb max shear 185 max comp
28	EH-16809	Grommet, 1.12 x .091-.125 nylon
29	HX-14416	Clip, Cable Retainer
30	DE-16928	Label, Disconnect Power, Multi-languages
31	HW-00590	Bushing Nylon 1-2" Nf810-5-0
32	HX-13771	Ring, Retain 5-8" .579 Fr.Id
33	HX-16510	Foot, Rubber, Rear
34	FS-16511	Plate, Rear Rubber Foot Mount
35	HS-16509	Screw, #10 x .5LG,T-S PLT, PNHD,TYB-B
36	HS-15480	Bolt, Tap 1/2-13unc x 6 H x HD GR5
37	HB-16367	Bushing, .50ID x .62OD x .31LG, flanged
38	HW-10028	Washer, B 1-2 Narrow Zinc
39	HX-11049	Spring 1" O.D.360 Max Ld.
40	AX-16723	Rear Roller Hardware Assembly
40	AF-17591	Nut Holder Bracket
41	AF-16382	Elevation, Weldment
42	HS-60022	Bolt, Hhcs 0.375 x 2.25 blk zn G5
43	CW-16712	Wheel, Rubber, 3" Dia
44	HN-60064	Nut, Jam 3-8"-16 blk zn
45	DE-17144	Decal, International only, (specify language)
46	HS-60021	Bolt, Hhcs 0.375 x 2 blk zn G5
47	HS-60023	Bolt, Hhcs 0.375 x 2.5 blk zn G5
48	MR-16412	Motor, Elevation 115 VAC
48	MR-16541	Motor, Elevation 230 VAC
49	SK-17079	Tube Nut, Motor, Elevation Kit
50	FT-16825	Sleeve, Elevation Mounting, Top
51	FT-16826	Sleeve, Elevation Mounting, Bottom
52	EC-15783	Filter, Line 20 Amp Spade
52	EC-16948	Filter, Power Line 20 Amp 20EQ1
53	HS-15732	Screw, SEM 8-32 unc x .62 PNHD phil pl
54	HW-10856	Washer, (for ground)
55	HN-11925	Nut, Keps 10-32 Hex Stl Zinc
56	PL-17052-4	Cover, Lower Controller English
57	HX-16943	Clip, Christmas Tree, Single Head
58	SK-17253	Lower Control Assy, 115V
58	SK-17252	Lower Control Assy, 230V
58	SK-17251	Lower Control Assy, 230V 50Hz, International use only
59	DE-16608-4	Brush Replacement Gauge, English
60	DE-16610-4	Label, Error Codes, English
61	DE-16609-4	Label, Service Schedule English
62	DE-16708	Decal, Stableflex Logo
63	DE-17691-4	Label, User Precautions, 15 x 1.3"
64	DE-17693-4	Label, Start Instructions, Profiles, English
65	DE-17692-4	Label, HR Zone, Heart Icons, English
66	EH-16977	Fan, Drive Motor, Leeson
67	AW-17704	Motor Ground Wire
68	HW-40004	Washer, Wavy
69	AX-17762	Motor Base Plate Assy
70	HS-16849	Screw, 5-16-18 x 2.0LG H x HD,GR5,Tap
71	HW-00165	Washer, Lock Ex 5-16 Zinc
72	FM-16774	Spacer, Motor Base
73	HB-16426	Bushing, Flanged,1.0ID x 1.12OD x .75LG
74	HX-16425	Ring, Retaining Ext Crescent
75	FT-16352	Shaft, Motor Mount
76	AW-16830	Cable, Opto Sensor, Armored
77	HW-10772	Washer, Flat No. 4
78	HW-10761	Washer, Lock Ex No.6 Zinc
79	HS-00156	Screw, 4-40 x 0.62 Pnhd Phil
80	AF-17792	Clamp, Motor Drive (includes nut)
81	SK-17246	Motor, 3.0 Hp 110v, PMDC 3500RPM GR
81	SK-17245	Motor, 3.0 Hp 220v, PMDC 3500RPM WH
82	DE-16542	Disc, Speed Sensor
83	FM-16463	Flywheel, Drive Pulley Machined
84	HX-11593	Key, Ansi Square 3-16 x 1 3-16
85	HW-16966	Washer, Flat .280 x 1.0 x .125 Steel, Zinc

ITEM NO.	PART NO.	DESCRIPTION
86	HW-00180	Washer, Lock Split 1/4
87	HS-15757	Bolt, Tap 1/4-28 x 1.0 H x HD PLTD
88	PC-16379	Cover, Junction Outer, Right, (Choose a Standard or Custom Color)
89	PC-16380	Cover, Junction Inner, Right, (Choose a Standard or Custom Color)
90	PC-16328	Cover, Junction Inner, Left, (Choose a Standard or Custom Color)
91	PC-16327	Cover, Junction Outer, Left, (Choose a Standard or Custom Color)
92	DK-16932	Deck, Plywood 23.3 x 51.5 x 1.0 (Double Sided)
93	BD-16853	Belt, Running, 20.63 x 58 Commercial
94	HW-00431	Washer, 1-4 x .75 x .062 Zinc
95	HS-16628	Screw, .25-20 x 1.5 Hxhd Grade 8
96	AL-16245-1	Roller, Front Assy
97	AL-16235-1	Roller, Rear Assy
98	BD-16829	Drive, Belt, 8 Rib.
99	PL-17659	Console, Back, Plastic
100	DE-17712	Decal, Logo, Cybex Intl, 9 x 7"
101	AC-17695-4	Entire Console, Cybex Pro+, English
101	PL-17658	Front Console, Plastic
102	SW-17185-4	Switch Membrane, Cybex Pro+ Top, English
103	SW-17187-4	Switch Membrane, Cybex Pro+ Bottom, English
104	AX-16944	Lanyard, E-stop Assembly
105	PL-17686	Tab, Bookholder
107	AD-16559	PCA, Handset Display with Wireless Heart Rate
108	AD-17105	PCA, Cybex Pro+ Display Board, 4 Layer
109	FS-16841	Mount, E-stop Magnet
110	AD-17690	PCA, CSAFE Port Board, W-TVS
111	EC-17763	PCA Salutron Serial Output
112	AW-17707	Cable, CHR to display with ferrite
113	AF-17684	Handrail, Weldment
114	SK-17827	Kit, Assembly, Contact Heart Rate Grip, Pair
115	HX-17788	Double-sided Tape
116	HX-15499	Grip Handlebar
117	HX-16931	Clamp, Cable, 5-16 dia Standard
118	HS-10716	Screw 4-40 x 0.38 PNHD Phil
119	EH-00472	Wire Tie Ty-23M
120	HX-17696	Clamp, Cable 5-8 Dia.
121	HS-16940	Screw, Sems 10-32 x 3-8 PNHD ext, BL ZN
122	FS-16990	Plate, Switch, Power On-Off
123	SW-10523	Switch, On-Off
124	HS-41187	Screw, 8-16 x 5-16 Plastite
125	HS-15706	Screw, 8-16 x .50 PNHD STL BLK Phil
126	HX-17711	Plug, Hole Plastic 7-16 Black
127	ET-17165	Tab, Faston .250 Series AMP, International Only
128	DE-16784	Decal, Side Stripe
129	DE-17714	Decal, Cybex, Side
130	HX-17822	O-Ring
NS	LT-17730-4	Owner's & Service, Manual Cybex Pro+, English
NS	LT-17718	Poster, Assembly
NS	LT-17446	Warranty Sheet, Cybex Pro+, Pink
NS	HX-00438	Hex Key 3-16"
NS	EH-16954	Cap, Motor Brush Access, Round
NS	EH-16955	Cover, Motor Brush Access
NS	SK-17269	Brush Kit, Pair, High Voltage, 2.5 & 3.0hp Leeson Motor
NS	AX-17217	Handrail Extension Kit, Left & Right - Complete kit with instructions
NS	AX-17174	Handrail Extension Kit, Left Only - Complete kit with instructions
NS	AX-17175	Handrail Extension Kit, Right Only - Complete kit with instructions
NS	HS-16921	Bolt, 5/8-11 x 4.75, Black Zinc - Bottom hardware
NS	AX-16273	Clamp Assy, Handrail Ext.
NS	HX-16852	Grip, Handrail Extension
NS	HS-16935	Screw, Set 1-2 13 x 1-2, Knurl pt - Top Hardware
NS	FT-16278	Spacer, Handrail Ext - Bottom hardware
NS	AW-16572	Jumper, Switch-Filter, White
NS	AW-16938	Jumper, Switch-Filter, Black
NS	AW-16578	Jumper, Filter-cntl, White
NS	AW-16579	Jumper, Filter-cntl, Black
NS	AW-16561	Cable, Univ. Tread Display
NS	AW-17706	Cable, Contact HR Grip
NS	AW-17732	Cable, 4" Ribbon C-SAFE
NS	DE-17713	Cybex Pro+ Decal for Side Extrusions
NS	CN-10418	Connector, Molex (Placeholder)

NOTE: *NS = Not Shown*

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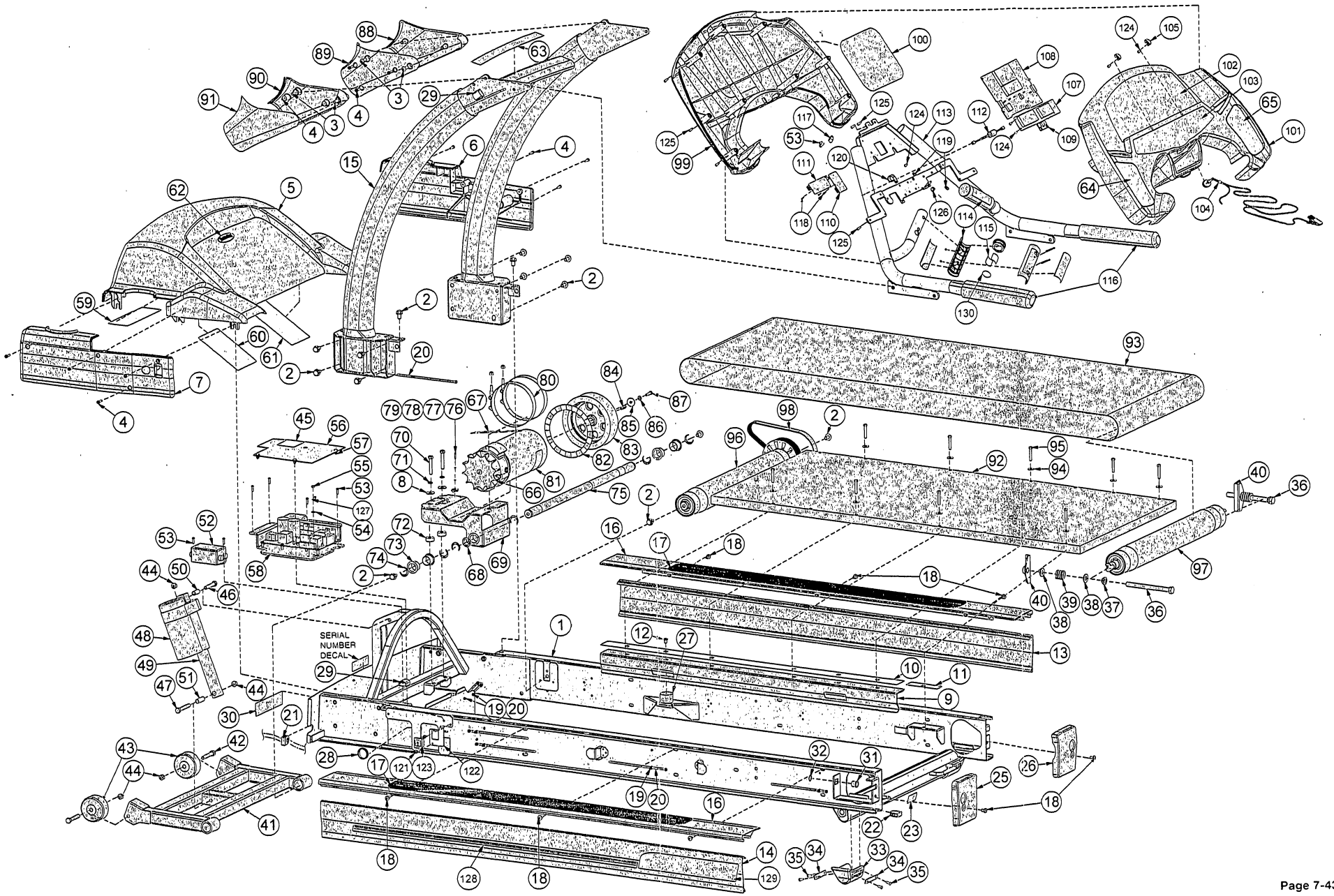
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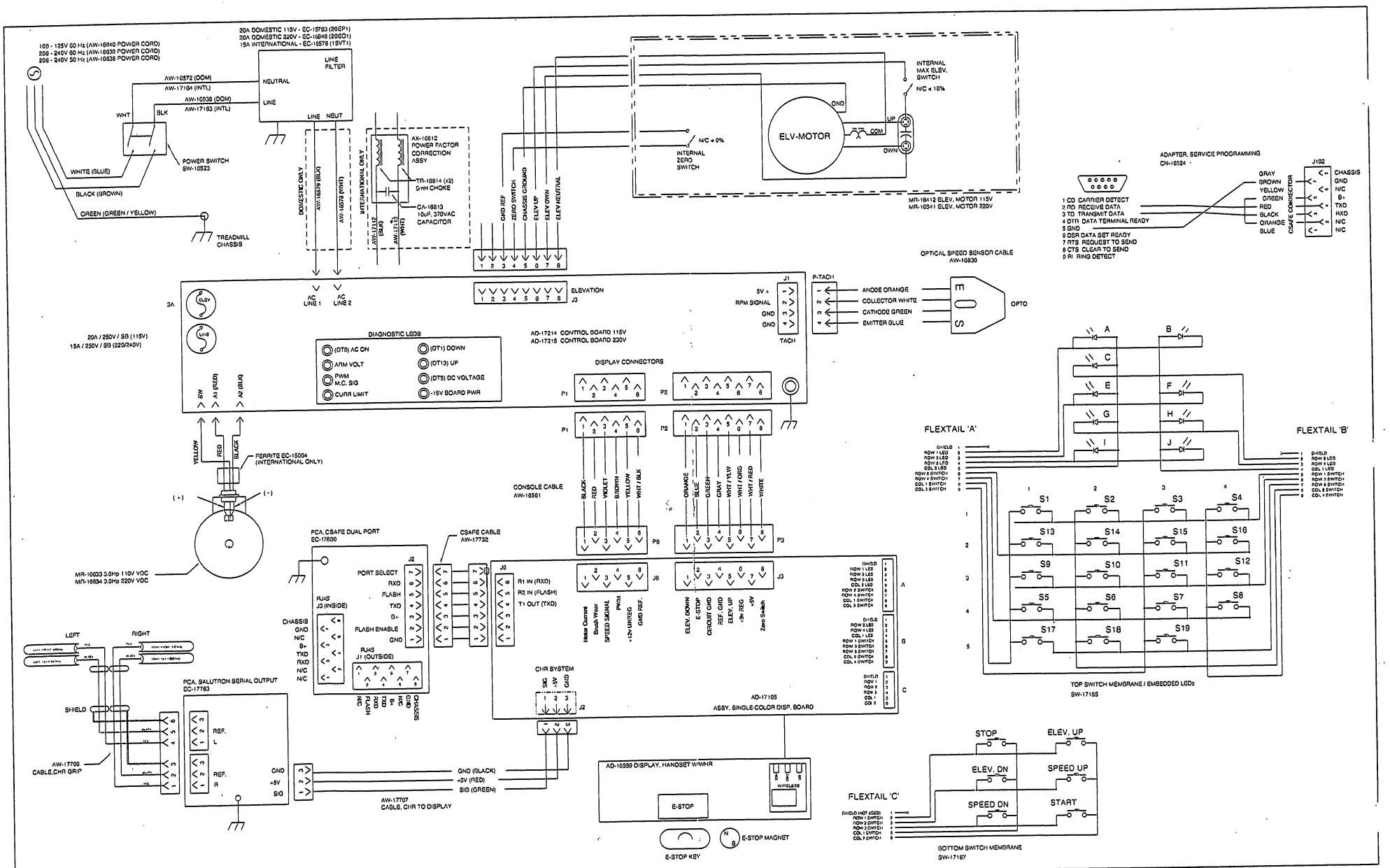
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209 - 240V 60 Hz (AW-16839 POWER CORD)
208 - 240V 50 Hz (AW-16838 POWER CORD)
20A DOMESTIC 115V - EC-15783 (20EP1)
20A DOMESTIC 220V - EC-16848 (20EC1)
15A INTERNATIONAL - EC-16578 (15VT1)
LINE FILTER
NEUTRAL
LINE
AW-16572 (DOM)
AW-17164 (INTL)
AW-16938 (DOM)
AW-17163 (INTL)
WHT
BLK
POWER SWITCH SW-10523
WHITE (BLUE)
BLACK (BROWN)
GREEN (GREEN / YELLOW)
TREADMILL CHASSIS
DOMESTIC ONLY
AW-16579 (BLK)
AW-16578 (WHT)
INTERNATIONAL ONLY
AW-17112 (BLK)
AW-17112 (WHT)
AX-16812 POWER FACTOR CORRECTION ASSY
TR-16814 (x2) 5mH CHOKE
CA-16813 10uF, 370VAC CAPACITOR
GND REF
ZERO SWITCH
CHASSIS GROUND
ELEV UP
ELEV DWN
ELEV NEUTRAL
INTERNAL MAX ELEV. SWITCH N/C < 16%
GND
ELV-MOTOR
UP
COM
DWN
N/C < 0%
INTERNAL ZERO SWITCH
MR-16412 ELEV. MOTOR 115V
MR-16541 ELEV. MOTOR 220V
ADAPTER, SERVICE PROGRAMMING CN-16924
1 CD CARRIER DETECT
2 RD RECEIVE DATA
3 TD TRANSMIT DATA
4 DTR DATA TERMINAL READY
5 GND
6 DSR DATA SET READY
7 RTS REQUEST TO SEND
8 CTS CLEAR TO SEND
9 RI RING DETECT
GRAY
BROWN
YELLOW
GREEN
RED
BLACK
ORANGE
BLUE
CSAFE CONNECTOR
J102
CHASSIS
GND
N/C
B-
TXD
RXD
N/C
N/C
OPTICAL SPEED SENSOR CABLE AW-16830
P-TACH
ANODE ORANGE
COLLECTOR WHITE
CATHODE GREEN
EMITTER BLUE
OPTO
20A / 250V / SB (115V)
15A / 250V / SB (220/240V)
3A
AC LINE 1
AC LINE 2
ELEVATION J3
J1
5V +
RPM SIGNAL
GND
GND
TACH
DIAGNOSTIC LEDS
(DT8) AC ON
ARM VOLT
PWM M.C. SIG
CURR LIMIT
(DT1) DOWN
(DT13) UP
(DT5) DC VOLTAGE
+15V BOARD PWR
AD-17214 CONTROL BOARD 115V
AD-17215 CONTROL BOARD 230V
DISPLAY CONNECTORS
P1
P2
SW
A1 (RED)
A2 (BLK)
YELLOW
RED
BLACK
FERRITE EC-15004 (INTERNATIONAL ONLY)
(+)
(-)
MR-16633 3.0Hp 110V VDC
MR-16634 3.0Hp 220V VDC
CONSOLE CABLE AW-16561
BLACK
RED
VIOLET
BROWN
YELLOW
WHT / BLK
ORANGE
BLUE
GREEN
GRAY
WHT / YLW
WHT / ORG
WHT / RED
WHITE
P8
P3
FLEXTAIL 'A'
FLEXTAIL 'B'
A
B
C
E
F
G
H
I
J
S1
S2
S3
S4
S5
S6
S7
S8
S9
S10
S11
S12
S13
S14
S15
S16
S17
S18
S19
TOP SWITCH MEMBRANE / EMBEDDED LEDs SW-17165
PCA, CSAFE DUAL PORT EC-17600
CSAFE CABLE AW-17732
J2
PORT SELECT
RXD
FLASH
TXD
D+
FLASH ENABLE
GND
RJ45 J3 (INSIDE)
RJ45 J1 (OUTSIDE)
CHASSIS
GND
N/C
B+
TXD
RXD
N/C
N/C
J9
R1 IN (RXD)
R2 IN (FLASH)
T1 OUT (TXD)
J8
J3
Motor Current
Brush Wear
SPEED SIGNAL
PWM
+12V UNREG
GND REF.
ELEV. DOWN
E-STOP
CIRCUIT GND
REF. GND
ELEV. UP
+5V REG
+5V
Zero Switch
CHR SYSTEM
SIG
+5V
GND
J2
AD-17105 ASSY, SINGLE-COLOR DISP. BOARD
LEFT
RIGHT
SHIELD
PCA, SALUTRON SERIAL OUTPUT EC-17783
REF. L
REF. R
GND
+5V
SIG
AW-17706 CABLE,CHR GRIP
GND (BLACK)
+5V (RED)
SIG (GREEN)
AW-17707 CABLE, CHR TO DISPLAY
AD-10359 DISPLAY, HANDSET W/WHR
E-STOP
WIRELESS
E-STOP KEY
E-STOP MAGNET
FLEXTAIL 'C'
STOP
ELEV. UP
ELEV. DN
SPEED UP
SPEED DN
START
BOTTOM SWITCH MEMBRANE SW-17167