Quinton
FITNESS EQUIPMENT

HR CLUBTRACK PLUS™ TREADMILL

USER'S GUIDE

0425-840 Rev New

The general quality system at Quinton Instrument Company has been certified by British Standards Institution (BSI) to ISO 9001/EN 46001 standards under Certificate Number 0357.

This is the CE marking of conformity indicating that the device having this symbol on its immediate label meets the applicable requirements of the European Machinery, Low Voltage, and EMC Directives.

Trademarks

Operator Manual
Publication Number 000425-840 Rev New

Quinton Instrument Company
3303 Monte Villa Parkway, Bothell, WA 98021-8906
Telephone 425/402-2000 Fax 425/402-2001
USA and Canada: Sales 800/426-0337, ext. 2440
Technical Service: 800/426-0538

Visit Quinton on the World Wide Web at www.quinton.com

INTERNATIONAL SALES
Latin America & Asia-Pacific
Telephone 425/402-2000 Fax 425/402-2001

Europe/Hoofddorp, The Netherlands
Telephone 31-23-5672400 Fax 31-23-5672410

Preface

This manual contains operating and maintenance instructions for the Quinton® HR ClubTrack Plus™ treadmill P/N 00425. The manual is designed for use by club owners and fitness trainers. It is expected that owners and trainers will instruct the client in the proper use of the treadmill and its accessories. Please read the manual carefully, noting the Safety Requirements in Appendix A, before using the treadmill.

Upon request, Quinton will provide a technical document containing block-level theory of operation, troubleshooting, removal and replacement instructions (by module), maintenance, and other information that will assist appropriately-trained personnel to repair those parts of the equipment designated by Quinton as repairable.

Liability Notice

Failure to follow the conditions set forth below shall absolve Quinton Instrument Company from any responsibility for the safety, reliability, and performance of this equipment:

- The operator manual must be read in full by each owner and trainer before the product is first used. Each user must be instructed in the proper use of the treadmill and its accessories.
- Assembly operations, extensions, readjustments, modifications, or repairs must be carried out only by Quinton-trained or Quinton-authorized personnel.

- The electrical wiring within the treadmill setting and the electrical installation of the treadmill must comply with the applicable local or provincial requirements.
- The equipment must be used in accordance with the instructions for use.

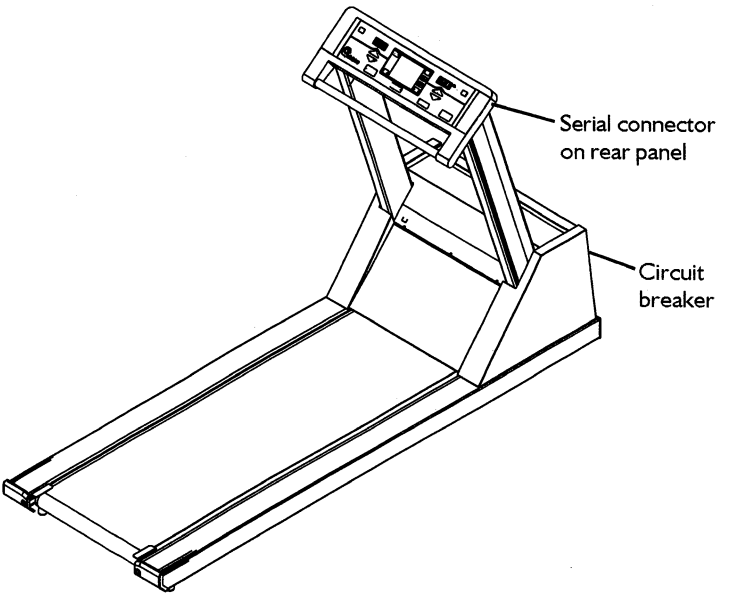
CONTENTS

Maintenance and Troubleshooting

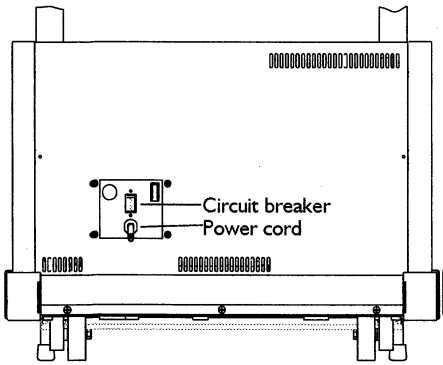
Introduction

The HR ClubTrack Plus is a motorized treadmill intended for use in fitness clubs and corporate fitness centers. The HR controller displays the user's heart rate during exercise and features four modes of operation: manual, preprogrammed, heart rate control, and intervals. The user can display graphs of workout status, heart rate, speed and grade any time during workout. The RS-232 serial-interface connector lets you connect the treadmill to a computer for exercise monitoring.

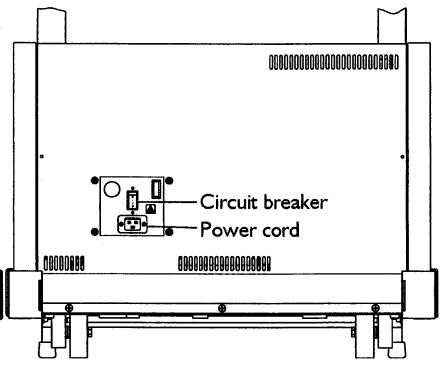
Your Quinton representative or fitness dealer will install your treadmill for you. See Appendix C for installation requirements.



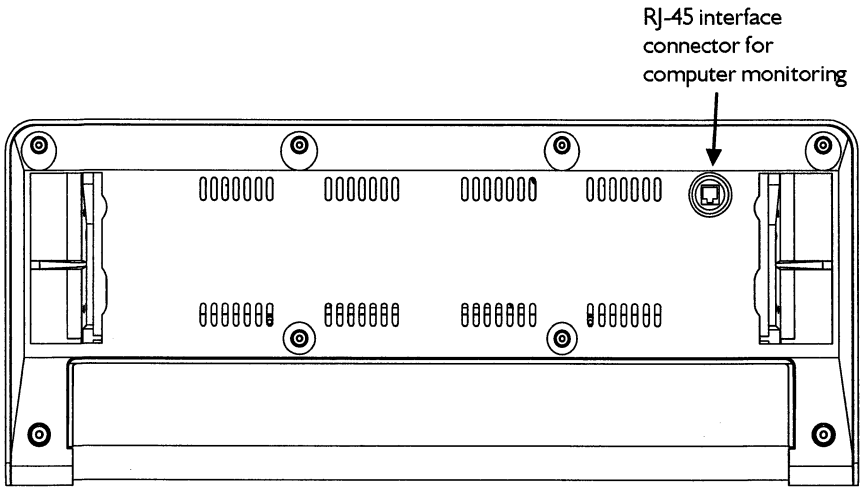
HR ClubTrack Plus with Heart Rate Controller



Treadmill Hood, power connection, USA



Detachable power cord, outside USA



Rear Panel of Controller

Accessories & Options

An operator manual (P/N 000425-840) is shipped with each treadmill. The following options are available:

Part Number	Description
30005-004	Left Handrail Kit
30005-005	Right Handrail Kit
30005-006	Left and Right Handrails
34198-003	Transmitter Belt with Strap
35371-001	HR ClubTrack Plus Upgrade Kit
00377-83*x*	Service Manual (English language only)

(*X* signifies latest revision.)

How to Reach Us

In the United States and Canada

Technical Assistance and Parts: 800/426-0538
Treadmill Accessories: 800/426-0337 ext. 2440.

Outside the U.S. and Canada

See addresses and phone numbers listed at the front of this manual.

➤ **To avoid potential safety and electrical problems, use parts and accessories that meet Quinton specifications.**

Power

The circuit breaker on the front of the treadmill hood controls the power to the treadmill. The circuit breaker must be set to *ON* for the treadmill to run. The **Power** key on the controller activates the controller functions.

➤ **Turn off treadmill circuit breaker before connecting /disconnecting treadmill to outlet.**

Operation

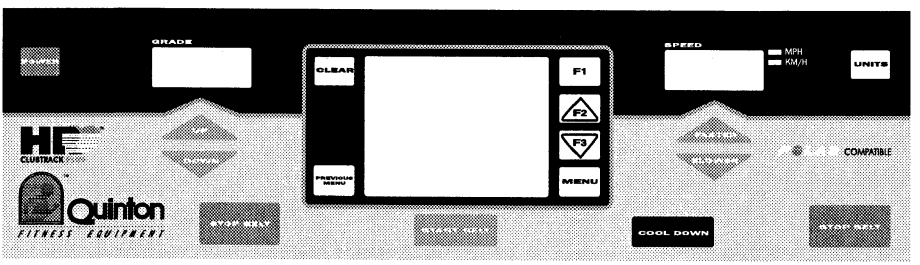
All commands are entered by pressing a key on the controller. The treadmill cannot operate when the controller power is off.

WARNING

The Power key on the controller does not turn off the electrical current to the treadmill. The treadmill continues to draw power, even when the controller is off. To avoid electric shock, do not remove the treadmill hood or place your hands beneath the treadmill while the treadmill is plugged into a power source.

Controller

The controller, mounted above the front handrail, is a computerized panel used to operate the treadmill. All commands, including power, are entered by pressing a soft-touch key on the panel. LED indicators and a central LCD display show the operational status and exercise results. The controller provides 15 Quinton-programmed and five unprogrammed exercise routines that you can customize.



HR ClubTrack Plus™ Controller

Controller Keys

Key	Function
POWER	Activates and deactivates the controller.
START BELT	Starts the walking belt, timer, and distance and calorie counter.
STOP BELT	Stops the walking belt. There are two functionally identical keys. Either one can be used at any time
FASTER	Increases belt speed. You can change at any time during the exercise. Range: 1 to 12 mph.
SLOWER	Decreases belt speed. You can change at any time during the exercise. Range: 1 to 12 mph.
UP	Increases treadmill grade (incline). Range: 0 to 15%
DOWN	Decreases treadmill grade (incline). Range 0 to 15%.
COOL DOWN	Slows treadmill to minimum speed and 0% grade.
CLEAR	Clears accumulated time, distance, and calories. Resets default weight after Stop Belt
UNITS	Changes units of measurement used in calculations and displayed values from U.S. to metric
F1	Selects adjacent option.
F2	Selects adjacent option or increments the selection.
F3	Selects adjacent option or decrements the selection
MENU	Displays the options screen and enter-data screens.
Previous Menu	Displays previous screen

Displays and Indicators

Display	Function
Grade	Displays treadmill grade in percent.
Speed	Displays belt speed in mph or km/h.
Center LCD	Displays error messages, workout options, exercise parameters, course selections, heart rate graph, speed and grade graph,and workout status.
Time	Manual Mode: shows the elapsed time in mins:secs. Programmed Mode: shows the remaining exercise time in mins:secs. Also indicates that the treadmill is recording total time in the cool-down stage or in manual mode.
Distance	Shows the total distance run in miles or kilometers.
Pace	Shows the pace of the exerciser in min/mi or min/km.
METS	Shows the metabolic units at the current speed and grade settings.
Calories	Shows the total number of calories burned during the exercise.
Calories/Min	Shows the number of calories burned each minute at the current speed and grade settings.
Stage Time	Shows the time remaining in the current stage (course mode only).
Continuous Scan (graphs only)	Shows time, distance, pace, calories, calories/min, and METS displayed sequentially for three seconds each.
Indicator	**Meaning**
MPH	The system is set to U.S. units.
KM/H	The system is set to metric units.

Limited-access Control

A limited-access control lets you restrict treadmill use to authorized personnel. It also lets you stop the treadmill in an emergency. The magnetically-activated control is located under the Quinton logo on the controller. When the treadmill is shipped from the factory, the limited-access control is deactivated and anyone can turn on the treadmill.

Activation

To activate the limited-access control and restrict access, place the magnetic key supplied with the treadmill precisely over the Quinton logo on the front panel of the controller. The magnet will activate the control. If you remove the key once the control is activated, you will be able to turn on the power and select menus, but you will not be able to start the treadmill—when you press Start Belt, the screen will display the words *MAGNETIC KEY STOP. PLACE MAGNETIC KEY OVER QUINTON LOGO!* You must replace the key or override the control to start the walk belt.

Deactivation

To deactivate the limit control and permit unlimited access:

1. Remove the magnetic key and press the **Power** key off.

2. Simultaneously press and hold the **F2** and **F3** keys next to the LCD display, then press **Power**.

The limit control remains inactive, granting unrestricted access, until you place the magnetic key over the logo again.

Magnetic Key as Emergency Stop

The magnetic key has a cord with a clip that you can attach to the user's wrist or belt during exercise. If the user moves too far from the controller, the cord will pull the key off the controller and stop the walk belt. The Start Belt and Grade keys will be disabled, and the words *MAGNETIC KEY STOP . . .* will appear. Accumulated values will remain on display until you turn off the power or press Clear. To restart the treadmill, replace the magnetic key and press Start Belt and or Resume.

Heart Rate Monitoring

Heart rate monitoring helps users monitor their levels of exertion by displaying the heart rate during exercise. The monitoring function uses a Polar transmitter belt, supplied with the treadmill, to detect the heart rate. The function also works with any Polar or Polar-compatible chest belt and transmitter.

The user wears a Polar Heart Rate Monitor to transmit the heart beat signal to the receiver in the controller. The controller displays the heart rate in beats per minute and uses the heart rate value in heart rate control mode.

The monitoring function is activated as soon as the user straps on the chest belt and steps within range of the receiver in the controller. Two electrodes on the underside of the chest belt sense the heart rate signal and send it to the controller. The small heart-symbol on the LCD blinks in synch with the heart beat to indicate that the controller is receiving a valid signal. A microprocessor in the controller calculates the heart rate and displays it on the LCD screen.

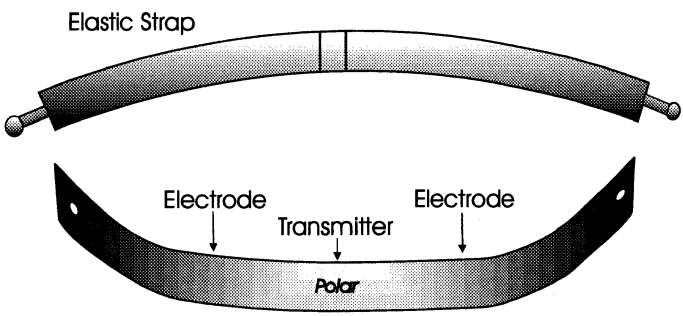
Chest Belt and Transmitter

WARNING

Pacemaker users should not use the Polar transmitter before consulting their doctors.

Instruct clients to put on the belt as follows:

1. Wet the electrodes on the underside of the belt thoroughly with water. (The electrodes are the two grooved rectangular areas.)



2. Place the chest belt against the skin just under the pectoral muscles (breasts). It should fit snugly and comfortably and permit normal breathing. To ensure the electrodes are properly wet, pull the belt away from the chest in the center and remoisten the electrodes.

When you turn on the treadmill, the heart-shaped symbol on the greeting display blinks in synch with the heart beat to indicate that it is receiving the heart rate signal. If it does not blink, try the following adjustments:

- Have the user move closer to the controller: the signal receiving range is 32 inches (81 cm).
- Tighten the elastic part of the chest belt.
- Adjust the belt higher or lower on the chest.
- Remoisten the electrodes.

➤ **The heart symbol does not blink while the treadmill is changing grade.**

After each use, wipe the belt and electrodes thoroughly dry. Do not bend or stretch the electrode strips, especially when storing. Do not expose the belt to direct sunlight or extreme temperatures for extended periods.

Displaying Heart Rate

The heart rate appears automatically in the lower right corner of the LCD. If you remove the chest belt, the signal will stop and the controller will display a dashed line in place of the heart symbol.

Guidelines for Safe Operation

- Do not remove the treadmill hood or place your hands beneath the treadmill while the treadmill is plugged into a power source.
- Keep the treadmill area clear. Maintain a minimum open space of 1.5 feet (0.5 meter) on each side and 6 feet (2 meters) at the rear.
- Be sure the power plug is connected to an approved, dedicated AC outlet. Ensure that handrails are securely attached.
- Before permitting anyone to use the treadmill, warn them of the risk of falling during exercise. Remind them to exercise caution during use. Instruct them in the safe and proper use of the treadmill as described below.
- Secure long hair and loose clothing before using the treadmill.
- Do not press Start Belt when anyone is standing on the belt. Be sure all users are so instructed.
- Keep speed and grade at minimum settings when getting on and off the treadmill. Instruct users to check speed and grade before standing on the belt.

Tip: Quinton recommends that the owner post a copy of these pages near the treadmill or make this information readily available in some way. This is not, however, a substitute for proper training of users by the club's personnel.

Getting On and Off the Treadmill

Instruct each user in the following guidelines for getting on and off the treadmill.

> ➤ **The walking belt should be moving *before* the user steps onto the treadmill.**

1. Stand next to the treadmill and place both hands on the front handrail.
2. Straddle the walking belt or step onto the side of the deck. Step onto the moving belt and begin walking.

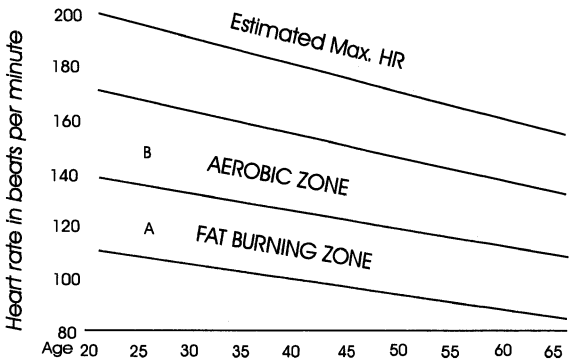
   (Optional) To first get the feel of the moving belt, place the foot nearest the treadmill on the walking belt and let it move backwards. Lift it and repeat several times until comfortable with the treadmill speed, then step onto the treadmill belt and begin walking.
3. When walking comfortably on the treadmill, let go of the handrail.
4. While walking on the treadmill:
   - Face forward.
   - Avoid looking down at the walk belt.
   - Maintain speed by keeping a consistent distance from the handrail.
   - Adjust the speed and grade as required.
   - Hold the handrail as the speed and grade change.
5. Before stepping off the treadmill, place one hand on the handrail, wait for the belt to stop, then step off.

Exercising

➤ **No single fitness program is suitable for all. All fitness programs should be designed by fitness professionals who are trained to tailor the program to the individual goals and fitness levels of each client. The following information on exercise intensity, duration, and frequency is based on averages and is included here only as a guideline for use by fitness professionals. Programs should be altered for comfort and safety when necessary.**

Intensity

Exercise intensity depends upon the capacity of the individual to do the specific type of exercise. The exercise should exceed mild demand, but should not produce fatigue, breathlessness, or mental confusion. Choose a target zone according to personal fitness goals.



A: 55% - 70% B: 70% - 85%

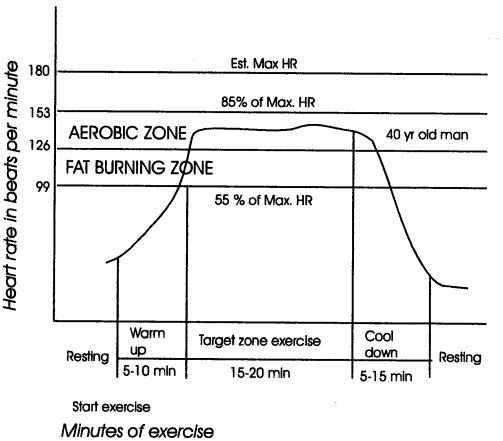
Intensity levels (% of max. Heart rate)

A typical conditioning intensity for a healthy adult is between 50 to 80 percent of functional capacity, which is equivalent to 55 to 85 percent of maximal heart rate. For clients wanting to reduce body fat, who have been sedentary, who are in poor physical condition, or who are just starting an exercise program, an exercise intensity at 50 to 65 percent of functional capacity or 55 to 70 percent of maximal heart rate is recommended. For healthy, active clients

wanting to improve their cardiovascular condition, an intensity at 65 to 80 percent of functional capacity or 70 to 85 percent maximal heart rate is recommended. Begin exercise at low intensity, especially for sedentary persons. As fitness improves, vary the exercise within the target zone.[1]

Frequency & Duration

Fitness experts recommend that exercise be done at least three times a week and should last between 15 and 60 minutes. Spread workouts throughout the week to let the body recover properly. Begin each workout slowly and let the body warm up at least five minutes below the target zone. Gradually increase the intensity until the client is in the target zone. Maintain the target zone for 15 to 20 minutes (15 to 60 minutes as fitness increases). Gradually reduce the intensity to let the heart rate fall below the target zone with a five minute cool-down period.[1]



The American College of Sports Medicine. *Guidelines for Exercise Testing and Prescription.* th Edition, Lea & Febiger, Philadelphia, PA, 1991, pp. 93-120.

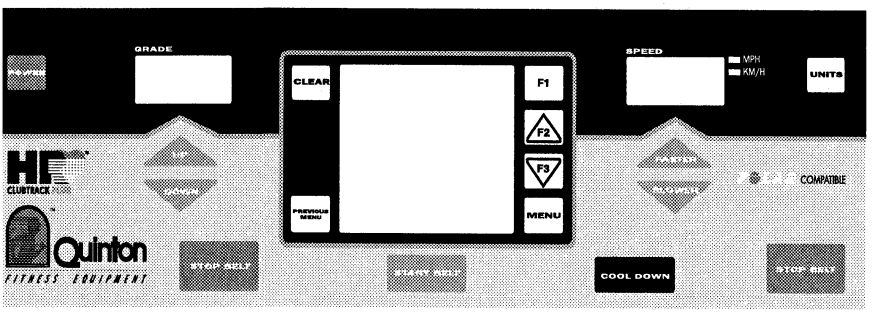
2

Operating the Treadmill

Follow the safety guidelines for using the treadmill given in Chapter 1. If using the heart rate monitor, strap on the Polar transmitter as described in Chapter 1.

Power

1. If the limited-access control is on, place the magnetic key over the Quinton logo on the controller. Attach the cord of the key to the user's wrist or belt if desired.
2. Press the **Power** key. The screen displays the greeting while the system runs a self-test. At the end of the test, a flashing heart appears at the bottom of the screen. The grade display shows the current grade and the speed display shows zero speed.



HR ClubTrack Plus™ Control Panel

Error Codes

If the controller finds a fault in the system, it displays an error code and description (example: *E202, speed check error*). If an error code appears, press **Power** twice to restart the system. If the error code appears again, record the code number, then turn off the treadmill and call a Quinton-trained service representative (see Maintenance and Troubleshooting, Chapter 3).

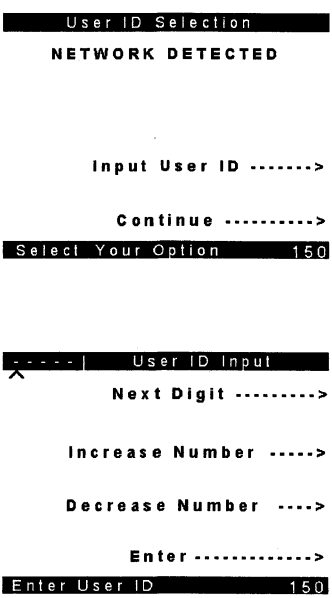
Units

3. To change the Units setting between the U.S. and metric settings:

   a. Press **Power** off.

   b. While pressing the **Units** key, press **Power** on. Hold the **Units** key down until the self-test is complete. You can change the units option at any time.

User ID Number



If the treadmill is connected to a computer network, the system will ask you for a user ID number when you press *MENU*. Entering an ID number connects you to the computer that stores your exercise results.

To enter your assigned ID number, select **Input User ID**. Select **Continue** to go directly to the workout options menu without entering a number.

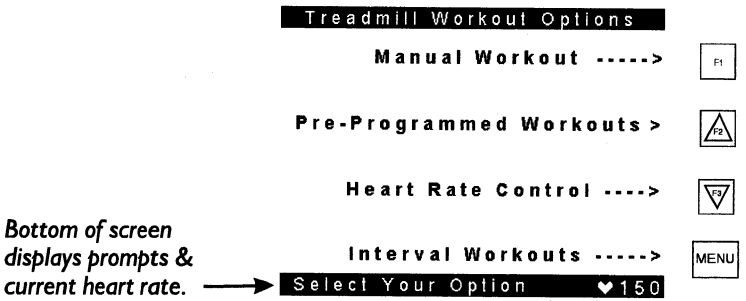
If you select Input User ID, the screen displays the input screen. The top left shows a flashing cursor below a line of five dashes. This is where you enter your number.

1. Use the **Increase/Decrease** keys to enter the first number (the number may be from 0 to 9).
2. Select **Next Digit** to move the cursor to the second position and repeat the above to add the remaining numbers. When all five digits are filled, select **Enter**, then **Continue.**

▶ **If the number you enter is incorrect or incomplete, the screen will read *Invalid ID, not accepted.* Check your ID number and re-enter it.**

Treadmill Workout Options

Press **Menu** to select one of the four workout options: manual, pre-programmed, heart rate, or interval. Press the key next to your choice.



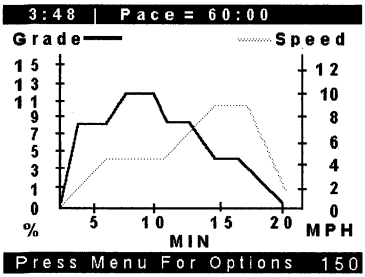
Treadmill Workout Options	Function
Manual	User controls speed and grade of treadmill.
Pre-Programmed	User selects from 15 pre-programmed or 5 user-preprogrammed workouts. User can scale the speed or grade of the workout before starting or during the workout.
Heart Rate Control	System controls the speed or grade of the treadmill while attempting to keep the user at a preselected target heart rate. User can modify speed and grade during the process.
Interval	User selects speed, grade, and time for exercise and recovery phases of an interval cycle, then selects the number of intervals to perform during the workout.

*Tip: Press **Previous Menu** at any time to return to the previous screen.*

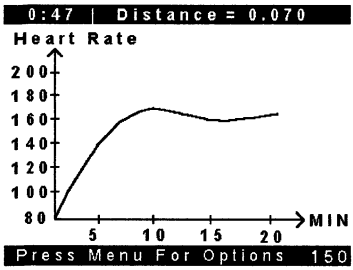
➤ You can press **Start Belt** at any time; however, if you press Start Belt before selecting a workout, the treadmill runs in manual mode. If you press Start Belt before entering a weight or exercise time, the controller uses the 150 lb (68 kg) default for calorie calculations and the exercise timer counts up from 00:00.

Status Screens

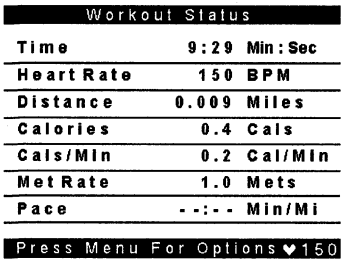
All workout modes let you view graphs of your progress during the workout. While exercising, press **Menu** to display the options, then press the key next to your choice. On all graph screens, individual parameters appear at the top of the screen sequentially for three seconds each:



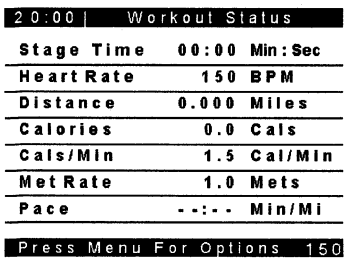
Grade and Speed Graph
Shows changes in grade and speed throughout workout.



Heart Rate Graph
Depicts heart rate versus time.



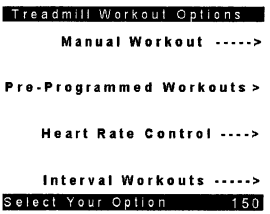
Workout Status: Manual and Heart Rate Modes
Displays the workout status: elapsed time, heart rate, distance, calories, calories/minute, MET rate, and pace.



Workout Status: Programmed and Interval Modes
Displays the remaining stage time, heart rate, distance, pace, calories, calories/minute, MET rate, and pace. Total remaining time appears in top left corner.

Manual Workout

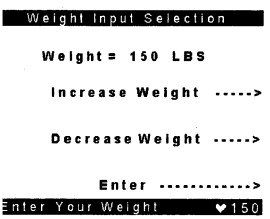
In manual mode, the user controls the workout. You can change the speed and grade at any time by pressing the Faster, Slower, Up and Down keys on the controller.



1. Press the key next to **Manual Workout** to enter manual mode.
2. Enter your weight:

➤ **All four modes prompt you to enter your weight and your preferred exercise time. The procedure is the same for all modes and is described below:**

Weight

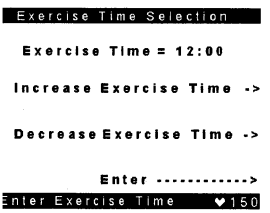


Enter your weight by pressing the increase or decrease weight keys next to the LCD screen until the correct value is in the display; or press Enter to use the default weight. The system uses the weight to compute the number of calories consumed each minute of exercise and the total number of calories burned during exercise.

Once the weight is entered, you can start the walk belt or press Enter to select the exercise time. If you press Start Belt before entering an exercise time, the timer counts up from zero.

3. Enter an exercise time.

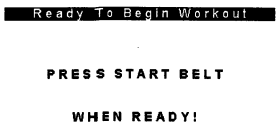
Exercise Time



You can set your exercise time to any value up to the owner-set maximum. Change the exercise time by pressing the increase and decrease keys next to the LCD until the correct value is in the display, then press Enter. If the owner has set a maximum exercise time, you cannot increase exercise time past the limit.

- If you do not enter a time, the timer will count up from zero.
- If you press Start Belt anytime before choosing an exercise time, the timer will count up from zero. (Once you open the time-selection screen, the system considers the exercise time chosen.)

- If you select an exercise time, the timer function counts down from the selected value.
- When the timer reaches zero in count-down mode, or when the treadmill reaches the owner-maximum in the count up mode, the treadmill goes to cool down and the timer begins counting up.



4. Press **Start Belt**.
5. Grasp the handrail and step onto the treadmill.

➤ **If you do not use the treadmill within five minutes after entering parameter values or starting the walk belt, the controller automatically resets to default values.**

6. While exercising:
   - You can press **Faster, Slower, Up**, or **Down** to change the speed or grade.
   - You can press **MENU** for status screen selections.
   - You can view the status screens by pressing the key next to your choice.

Tip: Press Cool Down at any time to return to minimum speed and grade.

7. To end the exercise, press **Cool Down**.
8. When grade is zero, press **Stop Belt**. When the belt stops moving, step off the treadmill.
9. Select *Clear for New User* to reset the displays.
10. Press the **Power** key to turn off the controller.

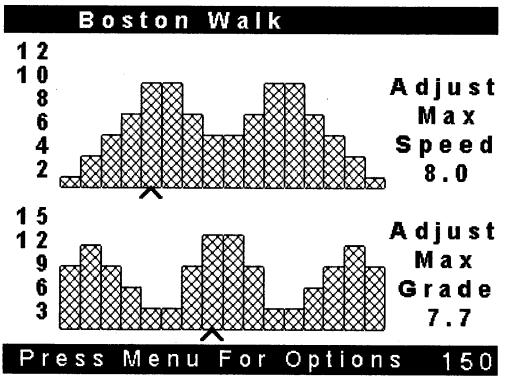
Pre-Programmed Workouts

In Pre-Programmed Mode, you can select any of 20 courses. The selected course appears in bargraph format on the LCD; each course protocol is divided into 16 equal stages. The treadmill runs at the designated speed and grade for each stage, then changes automatically when the next stage begins.

Tip: Select the Workout Status screen to view the remaining stage time, elapsed distance, pace, heart rate, calories, and METS. Remaining exercise time is in the upper left corner.

➤ **Although the default total protocol time is 20 minutes, the owner can set a time limit between 10 and 95 minutes. You can set the workout length up to the owner-selected time limit.**

1. To choose a protocol, select *Pre-Programmed Workouts*. The name of the first protocol appears at the top of the LCD. To change the protocol, press the increase or decrease key repeatedly to cycle through the 20 choices; the speed and grade profiles for the courses appear:



2. Modify Scale (optional): After the course profile appears on the LCD, you can increase or decrease the difficulty of the workout by adjusting the speed and grade: press Up, Down, Faster, or Slower, as needed. The LCD displays the changes in the course as you complete each stage.

Tip: To backup to a previous selection, press the **Previous Menu** *key.*

➤ **You can scale a course at any time after the program begins; however, you cannot override an owner-set maximum. The change will apply to all subsequent stages unless changed again.**

3. Press **Menu**.

Exercise Parameters for Quinton-programmed Courses								
No.	**Name**	**Description**	**Speed MPH**	**Grade (%)**	**METS min.**	**METS max.**	**METS aver.**	**Dist. (mi)**
0	Time Clock	Manual Mode	—	—	—	—	—	—
WALKING COURSES								
1	Boston	Light Walk	1.7 - 2.2	2 - 5	2.8	3.6	3.3	0.64
2	Cross Country	Moderate Walk	1.8 - 2.5	2 - 7	2.9	4.1	3.8	0.70
3	Tour de USA	Moderate Walk	2.0 - 3.0	2 - 7	3.1	5.2	4.5	0.86
4	Aerobic Training	Hard Walk	2.2 - 3.3	2 - 7	3.3	6.5	4.7	0.95
5	The Rockies	Hard Walk	2.4 - 3.6	2 - 7	3.5	6.2	5.0	1.06
RUNNING COURSES								
6	Seattle	Light Run	4.4 -5.0	2 - 5	7.1	9 .2	8.5	1.58
7	Cross Country	Moderate Run	4.4 -5.2	2 - 7	7.1	10.1	9.2	1.60
8	Tour de Italy	Moderate Run	4.8 - 5.4	1 - 7	7.9	10.4	9.8	1.67
9	Aerobic Training	Hard Run	4.7 - 5.3	2 - 7	8.0	10.9	9.7	1.67
10	The Alps	Hard Run	4.3 - 5.6	0 - 11	7.2	10.9	10.0	1.66
RANDOM COURSES								
11	Random Hill Walk	Hard Walk	3.7	0 - 9	3.8	8.4	5.6	1.22
12	Random Hill Run	Moderate Run	5.5	0 -6	9.4	11.7	10.5	1.81
13	Speed Play (Fartlek)	Moderate Run	5.4 - 6.5	0 - 7	9.3	11.9	10.5	1.89
14	Calorie Burn Walk	Moderate Walk	2.4 - 3.2	1 - 7	3.2	5.3	4.8	0.92
15	Calorie Burn Run	Moderate Run	5.4 - 6.2	1 - 5	9.6	11.7	11.1	1.92
CUSTOM COURSES (User-defined)								
16	Custom 1							
17	Custom 2							
18	Custom 3							
19	Custom 4							
20	Custom 5							

NOTE: These values may vary for your club if the owner has reprogrammed any of the courses. Refer to this table only as a general guide.

4. Select **Enter** (Menu key).

5. Enter weight and exercise time.

6. When you are ready to begin, press **Start Belt**. The speed and grade move to the preprogrammed values for the first stage.

   ▶ **If you select *Next Stage* during the program, the next stage in the current program begins and the previous stage fills in with black.**

7. While exercising, you can change stage and/or display workout graphs. Press **Menu** to display the options, then press the key next to your choice.

   Stage Changes

   The current stage is indicated by a blinking caret (^) placed below the respective speed and grade graph. Five seconds before a stage change, the current stage bar on the LCD blinks, indicating speed and/or grade will soon change. After a stage is completed, the speed and grade graph are filled in and become solid black.

   End of Protocol

   At the end of the protocol, the controller enters manual mode. The grade and speed return to the treadmill minimum. The timer begins counting up and you can change speed and grade.

   - If you press **Cool Down** during the program, the grade changes to zero and the speed decreases to the minimum. After cool down, the system enters manual mode. You can re-adjust the speed and/or grade at any time.
   - If you press **Clear** while the belt is running, the covered distance and calories reset to zero.
   - If you press **Clear** after pressing the Stop Belt key, all timers are cleared and default values reappear. The controller displays the power up screen and is ready for the next user.
   - If you press the **Stop Belt** key during the program, all timers and all calculations remain suspended for five minutes. The system presents an option screen letting you resume course, display workout status or heart rate graph, or clear for the next user. If, after five

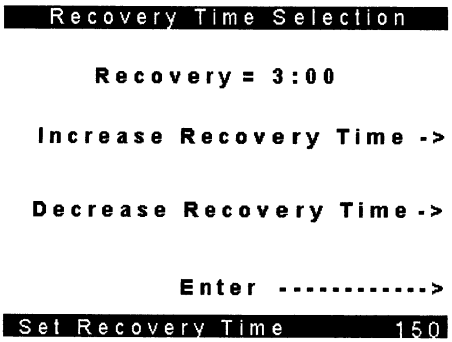
minutes, you do not select an option, the controller displays the greeting screen.

8. Press **Stop Belt** when exercise is over.
9. Press **Power** to turn off the controller.

Interval Workouts

Each interval cycle consists of an exercise phase and a recovery phase. Interval mode lets you define the number of intervals and the speed, grade, and time of each phase.

When you select Interval Workout mode, the system displays a series of screens for defining interval phases. Press the increase or decrease keys to change the values, then select **Enter**.



Default values

	Exercise	Recovery
Time	3:00	3:00
Speed	6.0 mph	3.0 mph
Grade	3%	0%
Intervals	4	4

The minimum time for exercise or recovery is 1:00. The time selection scrolls in five-second increments and changes more quickly if you hold the button down for three seconds. Use the speed and grade

increase and decrease keys to select the speed and grade for the interval phases.

Number of Intervals

The default number of intervals is four. You can change that to a maximum of 48 intervals; however, if the owner has programmed a time limit into the controller, the maximum number of intervals becomes the number of whole intervals that will fit into the time limit. The interval number displayed will not scroll past the maximum allowable intervals.

Display

The graphics displayed for this mode show the two phases of the interval: exercise and recovery. The system fills in the graphics bars as the phase is completed; the time for each bar is approximately the total cycle time divided by 16. After a complete cycle finishes, the graphics display restarts and the filling process repeats.

- **The total time for all interval cycles appears in the upper left corner of the display and counts from the total time down to zero.**

- **The banner at the top of the LCD displays continuous workout data that changes every three seconds. The workout status information sequence is: stage time, heart rate, distance, calories, calories/minute, met rate, the interval number, and pace.**

Speed and Grade

Once the interval workout is underway, you can scale the speed and/or grade up or down. The scaling applies only to the current interval phase and the new speed and grade selected is retained for the rest of the interval cycles.

- If you press **Cool Down**, the interval mode ends and the treadmill goes to minimum speed and grade.

- If you press **Stop Belt**, the system lets you choose to display the workout status, heart rate graph, or clear for a new user. You can resume the interval

workout anytime within the next five minutes. If at the end of five minutes the workout is not resumed, the controller restores the initial workout parameters and displays the greeting screen.

During Exercise

While exercising:

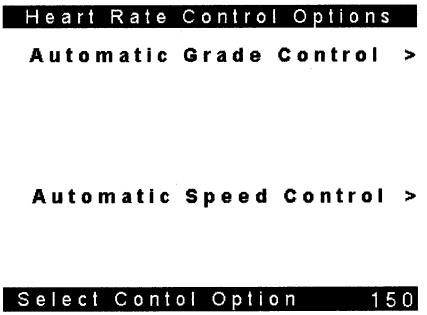
- You can press **Faster, Slower, Up**, or **Down** to change the speed or grade.
- You can press **Menu** for status screen selections.
- You can view the status screens by pressing the key next to your choice.

Intervals—Summary

1. Select *Interval Workouts*.
2. Enter weight.
3. Enter exercise time.
4. Adjust exercise stage speed and grade.
5. Enter recovery time.
6. Adjust recovery stage speed and grade.
7. Enter number of intervals.

Heart Rate Control Workout

In Heart Rate Control mode, you choose whether the system uses grade or speed to maintain your target heart rate. Both modes begin at 3 mph and zero grade.



Automatic Grade Control

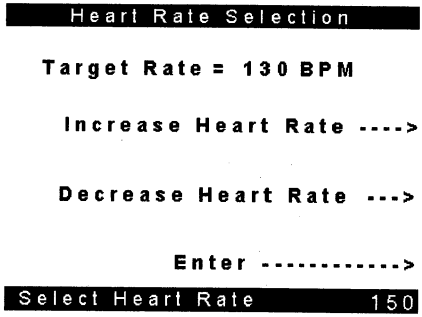
If you choose Automatic Grade Control, the controller adjusts the grade automatically and you adjust the speed manually. The controller increases the grade so that your heart rate increases at approximately 10 BPM per minute. Once your heart rate is within ± 5 BPM of the target rate, the controller changes grade as necessary to maintain the heart rate within ± 5 BPM of target. You can select a different speed at any time during exercise.

Automatic Speed Control

If you choose Automatic Speed Control mode, the controller automatically adjusts the speed and you adjust the grade manually. The controller increases the speed so that your heart rate increases at approximately 10 BPM per minute. Once your heart rate is within ± 5 BPM of the target rate, the controller changes the speed as necessary to maintain the heart rate within ± 5 BPM of target. You can change the grade manually at any time.

Target Rate

After choosing either speed or grade HRC mode, enter your target heart rate, weight, and exercise time.



Exercise Time

Exercise time is the total time spent during the heart rate control exercise. Once the exercise time has elapsed, the treadmill enters the cool-down mode. The maximum selectable exercise time is 95 minutes (or less if the exercise time limit has been changed). If you press *Enter* when the time selection is 0:00 minutes, there is no time limit.

- The heart rate graph displays minutes on the horizontal axis and BPM on the vertical axis.
- The time scale begins at 20-minutes length. If you exercise longer than 20 minutes, the scale increases by 5 minutes and the graph compresses accordingly. This process continues at 5-minute intervals until you press **Stop Belt**.
- The controller increases speed or grade to get a constant heart rate increase over time. If the user is in poor condition, the controller changes speed slowly because the heart rate is changing quickly. If the user is in good condition, the speed changes more quickly because the heart rate is changing more slowly.

Exercising

While exercising, you can override the automatic settings and can select menu options:

User Overrides

You can override the automatic speed and grade adjustments at any time:

- **In Grade mode,** press the *Down* button.
- **In Speed mode**, press the *Slower* button.

Once you override the grade or speed, the controller does not continue to push you to the selected target, but does restrict you from exceeding the target. If you press the *Up* (or *Faster*) button, the controller re-enters the automatic control mode and stays in this mode until you override the grade (or speed) again. *

The controller will display a five-second message informing you that the automatic HRC mode has been overridden, and how to re-enable automatic HRC when ready.

* *To increase speed beyond the maximum 10 mph, use manual mode.*

Menu Options

Press **Menu** to select options for changing heart rate and for viewing workout graphs, then press the key next to your choice.

Heart Rate Control - Summary

- You can change speed and grade at any time during heart rate control. By increasing speed or grade, you can shorten your time to target heart rate.
- You can override automatic speed or grade increases at any time during HRC exercise.
- The treadmill holds the heart rate at ± 5 BPM of the target setting with small speed changes in both the Speed and Grade HRC modes.
- In Speed mode, if you decrease speed, the controller will not increase it until you press *Faster*. In Grade mode, if you decrease grade, the controller will not increase it until you press *Up*.

- In Speed HRC mode, the factory limit for increased speed is 10 mph; any speed above 10 mph must be initiated by the user. The limit for grade increase in Grade HRC mode is 15%.
- You can change the target heart rate At any time during the workout. A change in target does not reset any speed or grade overrides made prior to the target change.

3

Maintenance and Troubleshooting

The treadmill should be visually inspected and cleaned regularly.

Daily Visual Inspection

- Inspect the power cord and walk belt for wear.
- Check the position of the walk belt; be sure it is not rubbing against the frame. The belt should be evenly spaced on the deck within 0.25 inch; adjust if necessary.
- Check siderails to be sure they are fastened securely.
- Remove potential hazards from the treadmill area.

Cleaning

Daily: Keep the treadmill and controller free of dust and debris. Use a damp sponge to wipe the exteriors and walk belt; do not soak surfaces. Dry thoroughly.

Caution

- **Never wipe the deck under the belt, even when replacing a belt. Wiping can ruin the proprietary friction-control surface.**
- **Do not use detergents or cleaning agents on any part of the deck.**
- **Do not let liquid enter the treadmill or controller. If it does, the equipment must be inspected and tested for safety by a**

Quinton-approved technician before it can be used again.

Weekly: Elevate the treadmill to maximum grade and vacuum the floor under it to prevent excess dust and dirt from interfering with operation.

Interior

Depending upon the treadmill environment, dust and or lint can accumulate under the hood. Periodic internal cleaning should be done by qualified service personnel.

WARNING

Do not remove the treadmill hood: Dangerous voltages are present. Components are serviceable ony by qualified service personnel.

Transmitter Belt

Clean the chest belt regularly with mild soap and water, then dry thoroughly—residual sweat and moisture keep the transmitter active and drain the battery in the transmitter. Do not use abrasives or chemicals such as steel wool or alcohol for cleaning, as they can damage the electrodes permanently.

Transmitter Battery

The estimated life of the belt transmitter is 2500 hours of use. For a replacement belt and for recycling the old transmitter belt, contact Polar Electro at 800/227-1314.

Storage

Store the belt in a warm, dry place away from direct sunlight. Do not store in plastic or other material that can trap moisture. Do not store in soap and water bath —moisture keeps the transmitter active and drains the battery in the transmitter.

Adjustments

Tools Required: ½-inch hex socket wrench,
#2 Phillips screwdriver

WARNING

Secure long hair and loose clothing before working near the treadmill walk surface or pulleys.

Belt Tension

Adjust the belt tension whenever the belt slips or moves unsteadily during operation:

1. Start the treadmill and increase speed to 2.5 mph.

2 a. Hold onto the handrail for balance and walk heavily on the treadmill by marching flat-footed. If the belt hesitates or lags noticeably, tighten the belt as in Step 4.

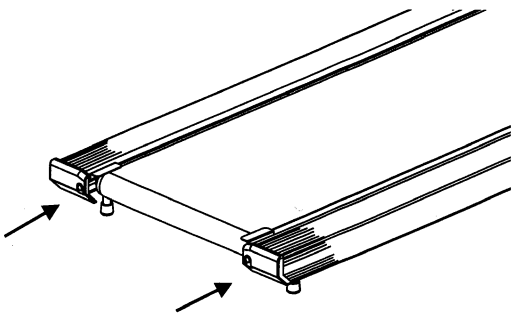
WARNING

Do not use all your weight to resist the belt movement. Too much resistance applied too long (more than two seconds) will shut down the system. (Error message 203 appears if this occurs. Press Power twice to resume normal operation.)

b. Increase the speed to 4.5 mph (7.1 km/h) and jog on the treadmill. If the belt hesitates or lags noticeably, tighten the belt as in Step 4.

C. Increase the speed to 6.5 mph (10.3 km/h) and run on the treadmill. If the belt hesitates or lags noticeably, tighten the belt as in Step 4.

3. Locate the two adjustment bolts at the rear of the treadmill (figure below).



Adjustment Bolts

4. Turn both adjustment bolts clockwise ¼ turn. Test the belt tension as in Step 2. Repeat if necessary until the belt runs smoothly without slipping. If more than three adjustments are necessary, remove the hood and check for other problems.

Caution

Do not over tighten the walk belt. This can damage the belt and rollers. Do not torque adjustment screws beyond 80 in-lbs (9N-m) maximum.

5. Stop the treadmill.

Belt Tracking

Perform this procedure whenever the belt moves to one side or the other. **Stay off the belt when adjusting the tracking.**

1. Start the treadmill at minimum speed and grade.
2. Increase speed to 6 mph (9.5 km/h) and make the following adjustment (previous figure shows the location of the bolts):
   a. If the belt moves to the right, turn the *right* tension bolt ¼ turn clockwise.
   b. If the belt moves to the left, turn the *left* tension bolt ¼ turn clockwise.
3. After making an initial adjustment, run the treadmill for five minutes and observe how the belt tracks. If the belt continues to move away from the center, adjust the appropriate side as in Step 2 until properly centered.

Caution

Do not overtighten the walk belt. This can damage the belt and rollers. Do not torque adjustment screws beyond 80 in/lbs (9N/m) maximum.

4. Stop the treadmill.

Replacing Walk Belt

If the walk belt becomes worn from heavy usage, it may need to be replaced. Call Quinton Technical Service if you have a question.

Moving and Storing the Treadmill

➤ Moving the treadmill requires **two** people.

1. Set the treadmill to 3 to 5 percent grade.
2. Disconnect the treadmill power cord from the power source to avoid electric shock.

WARNING

As long as the treadmill is plugged into a powered outlet and the treadmill circuit breaker is ON, the treadmill is receiving power, even when the controller is turned off.

3. Together, lift the rear of the treadmill, then roll it to the new site using the wheels on the front of the treadmill.

When storing for prolonged periods, cover the treadmill with a dust cover. Do not store in damp areas. Do not store the treadmill on its end as it could fall on someone.

Re-use

Before using the treadmill again after moving or storage, check the power cord and all attachments to be sure they are undamaged and securely connected, then test the system for proper operation.

Custom Mode

Custom Mode is designed for the owner to tailor treadmill operation to club applications. Changes made in custom mode are retained when the treadmill is unplugged.

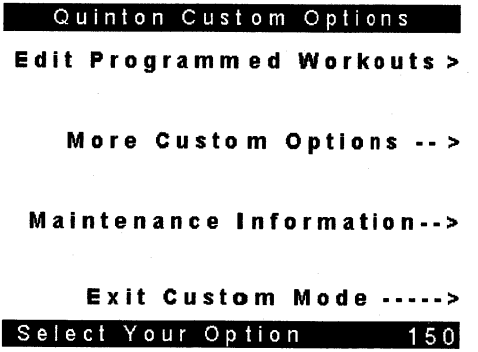
In custom mode the owner can:

- limit exercise time and speed
- modify the greeting displayed on the opening screen
- modify courses.

To open Custom Mode,

1. Press the **Power** key to turn *off* the controller.
2. Press *and hold* the **Menu** key, then press **Power**.

Custom Mode Screen

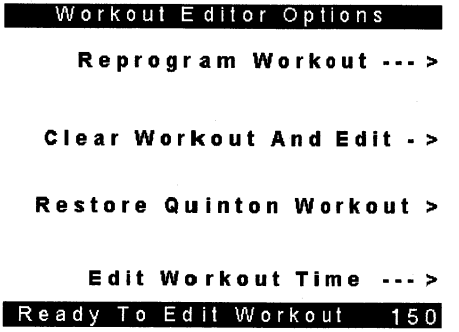


IMPORTANT!

When using the custom mode screens, you must select *Enter* to store your changes. If you press Previous Menu before pressing Enter, the change will not be saved.

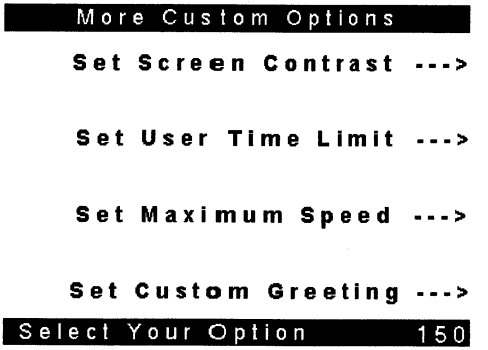
Edit Programmed Workouts

In this mode, you can modify the speed, grade, and total protocol time for any of the factory-default programs. You can zero the speed and grade profiles for subsequent modification, or restore the course as delivered from the factory.



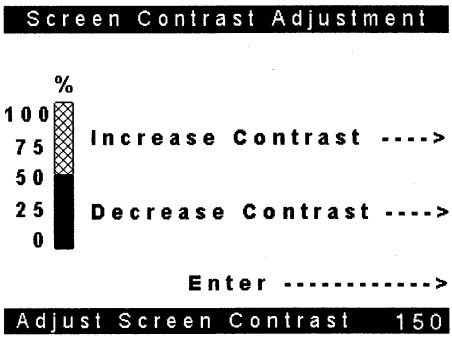
More Custom Options

This screen lets you set the screen contrast, set time and speed limits, and type your custom greeting. Press the key next to the option you want to set. The controller will display the screen for that option.



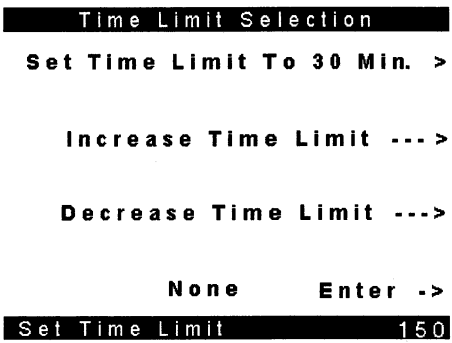
Screen Contrast

Press the up or down key to adjust the contrast. The bar shows the level of increase or decrease.



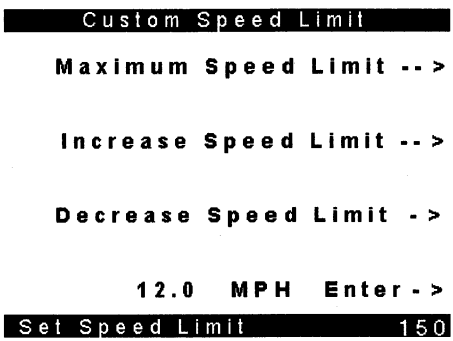
Time Limit

You can set the workout time limit to a minimum of 10 minutes and to a maximum of no limit. To set the limit, scroll the timer up and down. Use the *Set to 30-minute* key to set a 30-minute limit with a single keystroke.



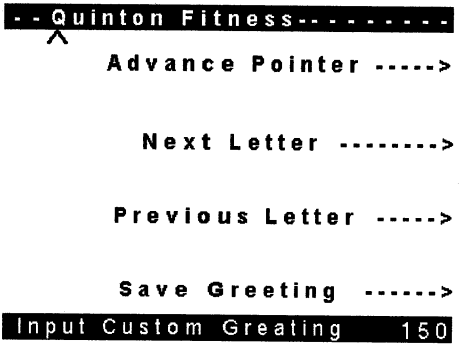
Speed Limit

You can set the maximum speed limit to a value less than the treadmill maximum. The user will not be able to increase speed past the set limit. Use *Max. Speed Limit* to set the speed to the treadmill maximum with a single keystroke.



Customize Greeting

Use this option to change the greeting on the opening screen (typically displays the club's name). Press the key adjacent to the choices to type in the wording. The greeting is centered automatically when saved.

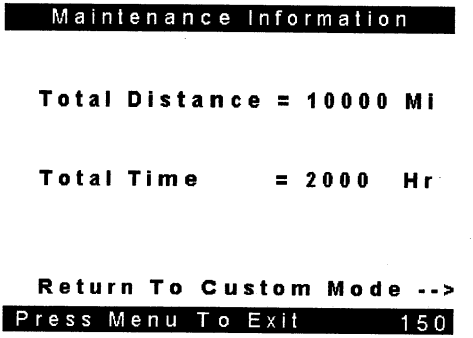


Be sure that the cursor is under the* *last* *letter of the greeting before saving it.

Maintenance Information

(Cumulative Usage)

Select this screen to check the cumulative mileage and hours of operation on the treadmill. You can use this information to schedule treadmill maintenance and determine whether one treadmill is receiving significantly more use than another.



- Total time, total distance and current distance is calculated and saved in the HRC; therefore any controller replacement restarts the maintenance counters. Total time and distance are saved into non-volatile memory every time the stop belt function is activated.

Exit Custom Mode

To exit Custom Mode, press **Power**.

Troubleshooting

If there is a problem with the treadmill, press **Power** twice; this may eliminate the fault. If problems persist, refer to the Troubleshooting Guide at the end of this chapter. Problems beyond the scope of this table may require service assistance to isolate and correct. Contact Quinton Technical Service for information.

- ▶ Servicing should be done only by qualified service personnel who should consult the service manual before attempting any in-depth troubleshooting.

WARNING

Do not remove the treadmill hood: Dangerous voltages are present. Components can be serviced only by qualified service personnel.

Error Codes

If the controller detects a problem in the system, it displays an error message (for example, E202, speed check error) in the display. If an error occurs during operation, the treadmill decelerates and the walk belt stops. Only the E201 error code permits the treadmill to keep running. The error code remains on the display until the power is turned off. If an error code appears, record the number, then press **Power** twice to recycle the power. If the error persists, call Quinton Technical Service: 1-800-426-0538.

SELF-TEST ERRORS

Code	Explanation
E001	Treadmill CPU chip failure
E002	Treadmill CPU EPROM failure
E003	Treadmill CPU Stuck Interrupt
E004	Treadmill CPU A/D failure
E005	Drive communications data error
E101	Controller CPU chip failure
E102	Controller CPU EPROM failure
E103	Controller CPU stuck interrupt
E104	Interprocessor communications data error
E105	Controller CPU NVRAM failure
E106	Controller graphics RAM failure
CP—	Indicates no configuration code has been programmed into the controller. A configuration code must be programmed into the controller before normal operation can begin.

OPERATION CODES

Code	Explanation
E201	Grade system error
E202	Speed check error
E203	Motor is drawing more than the specified current
E204	The two microcontrollers are not communicating
E205	Software tachometer fault
E206	Treadmill or controller microcontroller received an inadvertent reset
E207	External UART failure
EPHI	Motor supply voltage too high
EPLO	Motor supply voltage too low

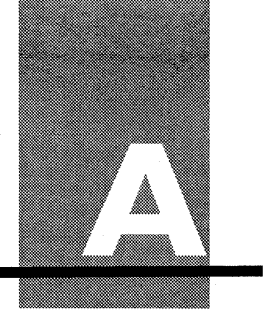
Transmitter Belt

The Polar system for heart rate detection and transmission has been time-tested and shown to be accurate and reliable; however, there is a small percentage of people for whom the system will not work. If all the steps in the following trouble-shooting table are performed and the belt and controller are deemed to be operating correctly, the user's heart rate may not be detectable by the system.

TROUBLESHOOTING THE TRANSMITTER BELT

Problem	Possible Cause	Remedy
Heart rate reading is erratic or absent.	Poor electrode contact	• Be sure logo on belt is facing out and that electrodes are flat against the skin. • Moisten the electrodes again. • Be sure the receiver is within range: 32 in /81cm. • Wash belt.
Heart rate is erratic or above 200.	1. Treadmills are too close together and are receiving signals from two users. 2. Interference from other electromagnetic signals (e.g., T.V., computers, other belt transmitters, motors, etc)	1. Move HR treadmills at least 18 inches (46 cm) apart. 2. Move the treadmill away from the source of interference.
No signal on controller	1. No electrode contact 2. Faulty chest belt 3. Transmitter battery worn out. 4. Faulty receiver	1. Reposition chest belt, re-wet electrodes. 2. Test signal using different belt transmitter: replace old belt if faulty. 3. Replace transmitter. 4. Test belt transmitter by using a different receiver. If the belt transmitter is working correctly, replace the receiver.

TROUBLESHOOTING GUIDE: TREADMILL		
Problem	**Possible Cause**	**Remedy**
Treadmill does not run, error message does not appear.	Treadmill not turned on	Press **Power** key on controller to activate treadmill.
	Circuit breaker on treadmill hood is off.	Set treadmill circuit breaker to *ON*.
	Treadmill power cord not plugged in	Plug in power cord, then press **Power** and **Clear.**
	Limited-access magnet not in place	Place magnet over Quinton logo on the controller, then press **Power** to turn on treadmill; or, deactivate the magnetic switch by pressing the increase and decrease keys in the LCD display (**F2** and **F3**) and **Power** simultaneously.
	No power at wall outlet	Check building circuit breaker.
	Internal problem	Call service representative.
Treadmill does not run, **E**xxx appears on display.	Problem with electronic circuitry	Record error number and call service representative.
Walking belt is too far left or right.	Improper belt tracking	Adjust tracking.
Walking belt slips, but front roller turns.	Improper belt tension	Adjust belt tension.
Walking belt hesitates; adjusting walk belt tension is ineffective.	Internal drive belt slipping	Call service representative.
Treadmill will not change grade.	Excess weight on treadmill	See Appendix B for rated load.
	Internal problem	Call service representative.
Treadmill will not reach maximum speed.	Speed limit control may be activated.	See page 3-7, *Speed Limit Control*.
Treadmill will not reach maximum time.	Time limit control may be activated.	See page 3-7, *Time Limit Control*.
Circuit breaker trips during normal operation.	Power fault	Call service representative.
Error messages appear	Varied	Call service representative.



Safety Requirements

- Read this manual in full before operating the controller.
- The controller **Power** key does not turn off the electrical current to the treadmill; the treadmill continues to draw power, even when the controller is off. To avoid electric shock, do not remove treadmill hood or place hands beneath the treadmill while the treadmill is plugged into a power source.
- Do not press the Start Belt key when someone is standing on the belt.
- Keep speed and grade at the lowest settings when someone is getting on and off the treadmill.
- To avoid potential safety and electrical problems, use parts and accessories that meet Quinton specifications.
- This equipment is classified Class I, Type B, ordinary equipment. Not protected against fluid ingress. Rated for continuous operation. Do not operate this equipment in the presence of flammable anesthetic mixtures.
- Do not let liquid enter the controller. If it does, the controller must be inspected and tested for safety by an approved technician before it can be used again.
- Increased risk due to leakage current can result if this equipment is not grounded properly.
- Incorrect installation by unauthorized personnel can lead to equipment damage and may void the warranty.

- The treadmill must be on an appropriate, dedicated electrical circuit. Nothing else should be connected to the circuit.

- **Failure to follow these guidelines can produce a serious or possibly fatal electrical shock hazard or other serious injury. Consult a qualified electrician as required.**

B

Specifications

Treadmill

PERFORMANCE	
Maximum Rated Load	320 lb (145 kg)
Belt Speed Range (Continuously Adjustable)	1.0 to 12 mph (1.6 to 19.3 k/h)
Grade Range	0 to 15%
PHYSICAL	
Weight	400 lb (181.4 kg)
Nominal Walking Surface	20 in x 60 in (51 cm x 150 cm)
Dimensions (Width x Length x Height)	31in x 87.25 in x 53 in (78.7 cm x 221.6 cm x 134.6 cm)
Walking Surface Height from floor	6 in (15.24 cm)
Handrail Height from walking surface	39 in (99 cm)
ENVIRONMENTAL	
Temperature	Operating: 50 to 90°F (10 to 32°C) Storage: –13 to 122°F (–25 to 50°C)
Humidity (non-condensing)	Operating: 3 to 95% relative Storage: 3 to 95% relative
Atmospheric Pressure	Operating: 8.60 to 15.0 psia , 445 to 775 mmHg absolute Shipping & Storage: 8.22 to 15.0 psia, 425 to 775 mmHg absolute

(Continued)

TREADMILL POWER REQUIREMENTS

Part No.	Voltage (min - max) / Hertz	Current Draw (Amps)	Min. Branch Circuit Amps
00425-001	99 - 132V, 60 Hz	20*	20
00425-002 through 006	198 - 250V, 50/60 Hz	10	10
00425-007	90 - 132V, 50/60 Hz	20	20
00425-008	180 - 250V, 50/60 Hz	10	10
00425-009	198 - 250V, 60 Hz	10*	15

*Full-load current is computed as described in section 430-24 of the National Electrical Code.

F1 and F2	250VAC, 4A T, 5 x 20 mm (nominal)
F3, F4, F5, F6	250VAC, 2A T, 5 x 20 mm (nominal)

Controller

SPEED	3-digit display
Units	Miles per hour (mph) or kilometers per hour (km/h)
Range	0 to 12 mph, 0 to 19.3 km/h
Increment	0.1 mph, 0.16 km/h
Accuracy	Within ± 0.2 mph (0.32 km/h) of actual speed during unchanging operation, 1 mph (1.6 km/h) during speed decrease. Shows target, not actual, speed during speed changes.
GRADE	3-digit display
Units	percent
Range	0 to 15%
Increment	0.5%
Accuracy	Within ± 0.5% actual grade during unchanging operation

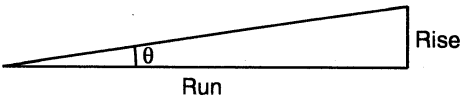
(continued)

Controller (continued)

LCD DISPLAY	Displays workout modes, exercise parameters, weight, time, and error messages.
Time	Units: min:sec Range: 00.00 to 99.59
Elapsed Distance	0 to 99.9 miles or kilometers
Pace	5:00 to 99:59 min:sec/mile or 3:07 to 99:59 min:sec/kilometer When treadmill speed is between 0 and .7 mph, the pace display is 99:59. When treadmill speed is zero, the pace display indicates "—.—".
Calories	Total calories expended or caloric rate expenditure. 0.001 to 999.9 calories or calories/min
Caloric Rate[1]	0.001 to 999.9 cal/min
METS	0.001 to 999.9
Heart Rate	50 to 200 BPM: Values above and below are filtered out.
Continuous scan (on graphics screens only)	Cycles through parameters, displaying each sequentially for three seconds.
Weight	Default: 150 lb or 68 kg Minimum: 30 lb or 13 kg Maximum: 400 lb or 181 kg Increment: 1 lb or 1kg
Target Heart Rate	Default: 140 BPM Minimum: 80 BPM Maximum: 200 BPM
Exercise Time	Default: 20 min Minimum: 10 min Maximum: No limit or owner-set max.
Serial Interface	RS-232, complies with CSAFE standard for external computer interface.

[1] *Caloric rate expenditure calculated based on formulas written by the American College of Sports Medicine in Guidelines for Exercise Testing and Prescription, published by Lea & Febiger.*

% Grade vs Angle Relationship



$$\text{Grade} = \frac{\text{Rise}}{\text{Run}} \qquad \tan\theta = \frac{\text{Rise}}{\text{Run}}$$

$$\text{Grade} = \tan\theta \qquad \theta = \arctan(\text{Grade})$$

(Note: 15% Grade $\Longrightarrow$ Grade = 0.15)

Grade	Angle°	Grade	Angle°	Grade	Angle°
0.0 %	0.00°	5.0 %	2.86°	10.0 %	5.71°
0.5 %	0.29°	5.5 %	3.15°	10.5 %	5.99°
1.0 %	0.57°	6.0 %	3.43°	11.0 %	6.28°
1.5 %	0.86°	6.5 %	3.72°	11.5 %	6.56°
2.0 %	1.15°	7.0 %	4.00°	12.0 %	6.84°
2.5 %	1.43°	7.5 %	4.29°	12.5 %	7.13°
3.0 %	1.72°	8.0 %	4.57°	13.0 %	7.41°
3.5 %	2.00°	8.5 %	4.86°	13.5 %	7.69 °
4.0 %	2.29°	9.0 %	5.14°	14.0 %	7.97°
4.5 %	2.58°	9.5 %	5.43°	14.5 %	8.25°
5.0 %	2.86°	10.0 %	5.71°	15.0 %	8.53°

C

Receiving and Installation

Receiving

When the carrier delivers your order, verify that the number of items received equals the number listed on the freight bill or express receipt.

Inspect the containers for damage. Itemize discrepancies and damage on the waybill and have the agent sign it. Failure to describe external evidence of loss adequately may result in the carrier refusing to honor your claim. Do not discard the packing materials until you have verified physical condition and proper operation.

nstallation Notice

The treadmill and controller must be installed correctly before being used. Quinton recommends that you contact your treadmill dealer or sales representative when your equipment arrives. The representative will help unpack, install, and demonstrate it to ensure that:

- equipment is free from shipping damage.
- the treadmill is connected correctly to the appropriate AC power source.
- installation and operation are in accordance with Quinton standards.

Incorrect installation by unauthorized personnel can lead to equipment damage and may void the warranty.

WARNING

The treadmill must be on a dedicated branch circuit. No other device should be connected to that circuit.

Excessive risk current (leakage) can result if the equipment is not properly grounded.

Failure to follow these guidelines will produce a serious or possibly fatal electrical shock hazard. Consult a qualified electrician as required.

Site Requirements

The treadmill requires a dedicated AC power line. To ensure electrical safety, the treadmill is equipped with a three-wire power cord and three-pronged plug. To maintain ground reliability, the plug must be connected to an equivalent receptacle.

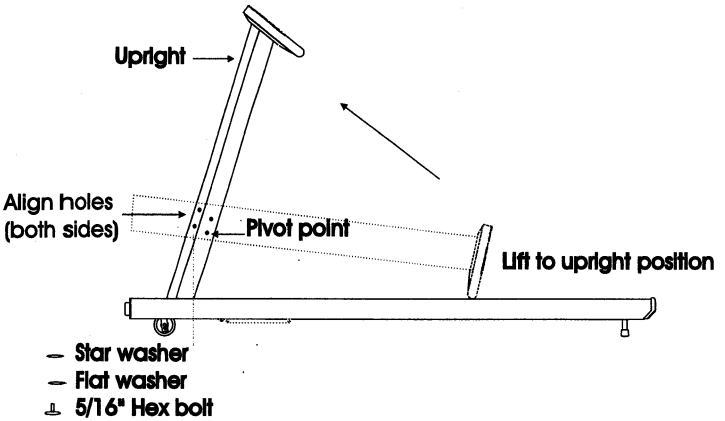
The treadmill is designed to operate in a typical fitness environment with adequate heat dissipation (1850 Watts maximum). Place the treadmill on a flat surface, free of moisture and debris. Maintain a minimum clearance of 1.5 feet on each side and 6 feet at the rear.

Installation

If you choose to install your treadmill without the assistance of your Quinton representative, follow the procedure given below:

Tools: Phillips screwdriver (12 in length preferable), small flat-blade screwdriver, ½-in hex socket wrench, torque wrench if available.

1. Grasp the controller uprights and pivot into position (see next figure).
2. Align the holes in the base of the uprights with the holes in the upright brackets; there are three holes in *each* bracket (see figure). Fasten the uprights into place with the hardware supplied with the treadmill: 5/16-18 x 7/8 hex bolt, 5/16-in lock washer, and 5/16-in flat washer.
3. Tighten each bolt securely with the ½ -in socket wrench. Tighten to 200 in/lb. **Do not overtighten**.



Controller Uprights

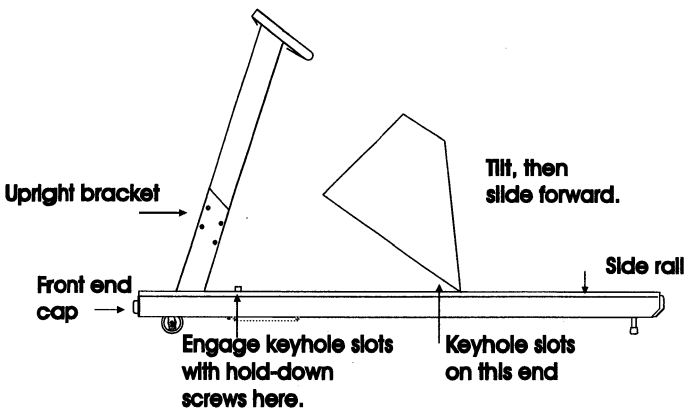
4. Remove the treadmill hood and hood cover from the two boxes. Position the hood on the treadmill deck and tilt as shown.

5. Slide the hood forward while holding it in the tilted position. (Spread the hood apart slightly to clear the upright.)

6. Lower the hood, aligning the slots in the bottom of the hood with the screws in the side rails.

7. With the screws engaged in the slots, slide the hood forward approximately ½ in and tighten it in place.

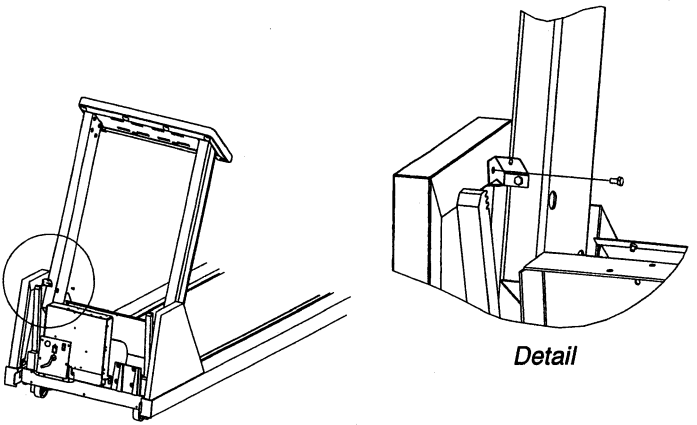
8. Align the two holes inside the front of the hood with the holes in the side rail. Install a star washer onto the two ¼ -20 x 1 in Phillips-head



Placing Hood on Treadmill

screws supplied with the treadmill, then use the screw to fasten the hood to the frame.

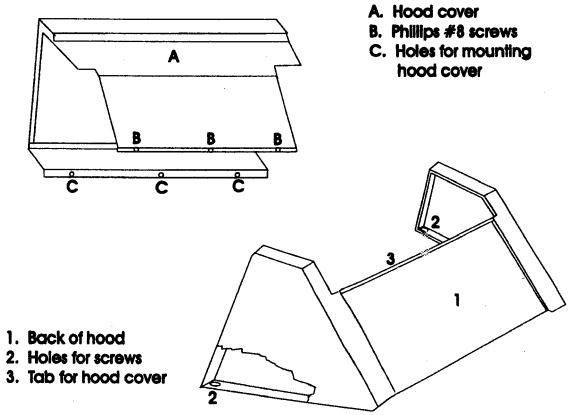
Due to regulatory requirements in some countries, your treadmill may have a grounding bracket attached to each upright. Use the two #10 self tapping screws provided to connect the brackets to the treadmill hood (next figure).



Detail

9. To install the hood cover, place the cover over the tab on the hood.

10. Lower the hood cover to align the three screw holes at the bottom of the cover. Fasten the cover using the three ¼ -20 x 7/8 in buttonhead screws, flat washers, and star washers supplied). To ensure proper grounding, stack the hardware so that the star washer is against the hood cover.



Installing the Hood

11. Align the holes in the hood with those in the hood cover. Install three #8 black Phillips screws and tighten securely.
12. Install the four #10 screws and external star washers in the front of the hood cover to secure it to the power input plate.
13. Install the two front-end caps (included) on the front ends of the treadmill frame (Figure on C-3).
14. Verify that the voltage for the power source matches the voltage on the nameplate on the front of the treadmill hood, then plug in the power cord.
15. To connect the treadmill to a computer, plug an RJ-45 telephone cable into the serial connector on the rear panel of the controller, then into the input connector on the computer.
16. Set the circuit breaker switch on the treadmill hood to ON.
17. Test all operational functions, including speed, grade, timer, heart rate control, intervals, parameters, all limit controls, and serial communication.

Testing the Treadmill and Controller

1. Press the **Power** key on the controller. After a second the heart symbol should flash in the LCD display.
2. Press the **Start Belt** key. Verify that the treadmill accelerates gradually to minimum speed.
3. Press and hold the **Down** key until the treadmill reaches zero grade.
4. Press the **Up** and **Faster** keys until the treadmill is running at maximum speed and grade.
5. Let the treadmill run for 15 minutes.
6. Watch the walking belt carefully to ensure that it does not drift left or right. Listen for unusual noises, such as squeals or squeaks.

7. Walk on the moving belt and verify proper operation at representative speeds and grades. If the walk belt slips, but the front roller turns, adjust the walk belt tension (Chapter 3).

8. Check operating limit controls (access, time, speed).

9. Check menu displays and functionality (see Chapter 2).

10. When the test is finished,

    a. Press **Down** until the treadmill is at zero grade.

    b. Press **Stop Belt**.

    c. Press **Power** to turn off the controller.

If the treadmill does not run smoothly, contact your Quinton sales representative before using it.

D

Symbols and Labels

The following symbols and labels are used on Quinton products. No one product displays them all.

	Attention: Consult accompanying documents.		Earth ground: protective
	Off: power disconnected from mains		Type B equipment provides adequate protection against electic shock, particularly regarding allowavle leakage current; reliability of the protective earth connection when present.
	On: power connected to mains		Type BF equipment contains an F-type isolated patient-applied part providing a high degree of protection against electric shock.
	Alternating current		Type BF equipment with defibrillation protection
	Hazardous voltage		Type CF equipment contains an F-type isolated patient applied part and provides a degree of protection against electric shock higher than that for type BF equipment regarding allowable leakage currents.

Earth ground: functional	Type CF equipment with defibrillation protection
Replace fuse only as marked	Fuse
Mains power	Equipotentiality
Warning	T Time-delayed fuse (slo-blow)
Brightness	Contrast
QRS sync	Analog output
Treadmill connection	Ergometer connection
Cardiograph to exercise monitor connection	V Volts
Hz Hertz	VA Volt Amperes
A Amperes (Amps)	

DEX

V

W