

Nautilus *Health & Fitness Group*

**StairMaster[®]
ClubStride[™] Elliptical Trainers**

**User's Guide
for the
5100 NSL Elliptical Trainer**



StairMaster[®]
THE RESULTS YOU WANT[™]



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SAFETY REQUIREMENTS

WHEN USING ELECTRICAL EQUIPMENT, ALWAYS FOLLOW THESE BASIC PRECAUTIONS:

IMPORTANT SAFETY INSTRUCTIONS

The following definitions apply to the words "Danger" and "Warning" found throughout this manual:

DANGER - Used to call attention to IMMEDIATE hazards which, if not avoided, will result in immediate, serious personal injury or loss of life.

WARNING - Used to call attention to POTENTIAL hazards that could result in personal injury or loss of life.

READ ALL INSTRUCTIONS BEFORE USING THE MACHINE.

DANGER To reduce the risk of electrical shock, always unplug the external power supply from the electrical outlet before cleaning, maintaining, or repairing.

WARNING To reduce the risk of burns, electric shock, or injury to persons:

1. The external power supply should always be unplugged from the AC wall outlet before removing or installing parts. Never make adjustments or repairs while an exercise program is in progress.
2. Close supervision is necessary whenever the machine is used by or near children, invalids, or disabled persons.
3. Keep your hands away from all moving parts and keep your feet on the pedals while exercising. Do not operate the machine with the side covers removed, or outdoors.
4. Use this machine only for its intended use as described in this Manual. Do not use parts, attachments, or accessories other than those provided by StairMaster Health & Fitness Products.
5. Do not use the external power supply if it has a damaged cord or plug, it is not working properly, if it has been dropped or damaged, or dropped in water. Contact our Technical Service Department to arrange for the return of damaged parts.

SAFETY REQUIREMENTS (continued)

6. To avoid potential safety and electrical problems, replace with manufacturer's specified parts only.
7. Connect the external power supply to a properly grounded AC wall outlet. Keep all cords away from heated surfaces. To disconnect the external power supply, remove the plug from the AC wall outlet.
8. Do not let liquid enter the console. If it does, the console must be inspected and tested for safety by an approved technician before it can be used again.
9. Never drop or insert any object into any opening on the machine. Keep the area underneath and around the machine clear.
10. Do not operate where aerosol (spray) products are being used.
11. Always wear insulated gloves when handling batteries.
12. Do not crush, incinerate, or dismantle the battery. The electrolyte contains sulfuric acid, which can cause serious damage to eyes and skin. Should this occur, flush profusely with water and seek medical attention.

The safety level provided by the design of this equipment can only be maintained when the equipment is regularly examined for damage and wear. Inoperable components should be replaced immediately or the equipment be put out of use until it is repaired. Failure to follow the guidelines may compromise the effectiveness of the exercise experience, expose you (and possibly others) to injury, and reduce the longevity of the machine. Follow all training instructions listed in the manual and/or on the machine. Physical injury may result from incorrect or excessive training.

Failure to follow the conditions set forth below shall limit, to the extent allowed by law, StairMaster Health & Fitness Products, Inc. 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 machine and its accessories.
- Only StairMaster-trained or StairMaster-authorized personnel carry out assembly operations, extensions, readjustments, modifications, or repairs.
- The equipment must be used in accordance with the instructions for use.

SAVE THESE INSTRUCTIONS

UNPACKING and INSTALLATION INSTRUCTIONS

Please refer to the ClubStride Unpacking & Installation Instructions that shipped with the elliptical trainer. These instructions provide information regarding receiving your order, site requirements, unpacking and installation steps, and testing the elliptical trainer and console.

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

- The equipment is free from shipping damage.
- Installation and operation are in accordance with StairMaster standards.

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

Accessories and Options

An operator manual (P/N 40727) is shipped with each elliptical trainer. The following options are available:

Part No.	Description
34198-003	Transmitter Belt with strap (HRM)

- To avoid potential safety and electrical problems, use parts and accessories that meet StairMaster specifications.

How to Reach Us

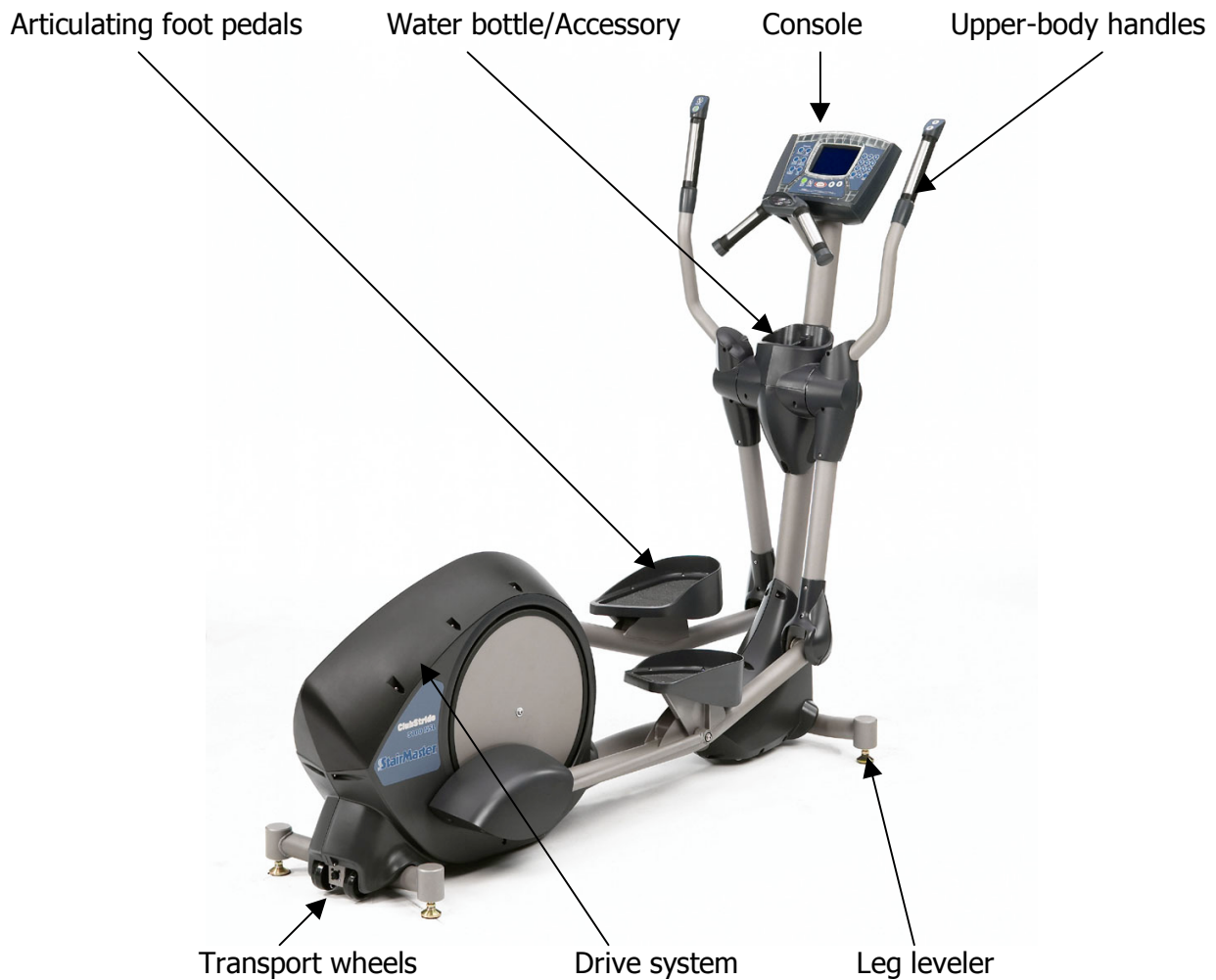
For Technical Assistance / Parts:

North America: 800-331-3578
International: 800-864-1270 x1603

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

INTRODUCTION

Before leaving the manufacturing facility in Tulsa, Oklahoma, your StairMaster® ClubStride™ 5100 elliptical trainer was thoroughly inspected and tested to ensure proper operation. The major parts of the machine are shown below.



Throughout this Manual, all references to the left or right side and to the front or back are made as if you were on the machine, ready to exercise. For example, the console is located on the front of the machine.

BASIC OPERATING INSTRUCTIONS

General Guidelines For Safe Operation

WARNING

THESE GUIDELINES ARE DIRECTED TO YOU, AS THE OWNER OF THE MACHINE.
YOU SHOULD INSIST THAT ALL USERS FOLLOW THE SAME GUIDELINES.
YOU SHOULD MAKE THIS MANUAL AVAILABLE TO ALL USERS.

1. Obtain a complete physical examination from your medical doctor and enlist a health/fitness professional's aid in developing an exercise program suitable for your current health status.
2. When working out for the first time, use the MANUAL exercise program at the lower levels until you feel comfortable and capable of higher workloads.
3. The intensity and duration of your exercise program should always be subject to how you feel. Never permit peer pressure to override your personal judgment while exercising.
4. Overweight or severely deconditioned individuals should be particularly cautious when using the machine for the first time. Even though such individuals may not have histories of serious physical problems, they may perceive the exercise to be far less intense than it really is, resulting in the possibility of overexertion or injury.
5. Although all equipment manufactured by StairMaster® Health & Fitness Products, Inc. has been thoroughly inspected by the manufacturing facility prior to shipment, proper installation and regular maintenance are required to ensure safety. Maintenance is the sole responsibility of the owner.

Your First Workout on the StairMaster ClubStride 5100 Elliptical Trainer

1. Warm up with light calisthenics and easy stretching exercises for at least five minutes before beginning your exercise program.

WARNING

IF AT ANY TIME DURING YOUR WORKOUT YOU FEEL CHEST PAIN, EXPERIENCE SEVERE MUSCULAR DISCOMFORT, FEEL FAINT, OR ARE SHORT OF BREATH, STOP EXERCISING IMMEDIATELY. IF THE CONDITION PERSISTS, YOU SHOULD CONSULT YOUR MEDICAL DOCTOR IMMEDIATELY.

2. Hold onto the handlebars and step up onto the pedals. Stand up straight. Begin striding slowly at a pace just fast enough to activate the console. You should see the "SELECT WORKOUT" message on the display.
3. Select the MANUAL exercise program so you can control the pace of your first workout and get used to the exercise motion. Press [MANUAL] and then press [ENTER]. The console will return to the start screen if you do not press [ENTER] within 30 seconds.
4. The console will prompt you to enter your body weight. Enter your weight in pounds (or kilograms if the console is set to metric units). Correct entry errors by pressing [CLEAR] before you press [ENTER].
5. The console will prompt you to enter your intensity level. Enter your desired intensity level. First time users may want to select a low intensity level, for example, level 3. Correct entry errors by pressing [CLEAR] before you press [ENTER].
6. The console will prompt you to enter the workout time in one-minute increments between 5 and 99 minutes. Press [1], [0], [ENTER] to exercise for ten minutes. If you do not start exercising within 30 seconds, the console will return to the start screen.

Begin Exercising

7. Begin striding at a comfortable, natural rate. Stand up straight and hold out the static bars in front or the moving upper-body handles to the sides of the console. When you begin to exercise, the MANUAL program starts at the level you selected during data entry.
8. As you become comfortable with the exercise motion, press [LEVEL: □] and [LEVEL: □] to adjust the resistance.
9. Relax and stand up straight while exercising. Use the handlebars for balance (see the Figure below).
10. Select an intensity level that allows you to stay at a comfortable pace. Harder is not always better. Exercise at a level that is consistent with your fitness level.



Rest Periods

11. You can stop and rest as many times as necessary for up to one minute for each rest period during all programs. To stop, either press [STOP] or step off the machine. The console will shut off if you rest longer than the allotted rest period. Follow the onscreen prompt to continue your work out after a rest period.

Cool Down

12. When you are finished with your workout, the machine will slow down and the message "GOAL ATTAINED" will be displayed. You can cool down on the machine by continuing to stride. The console timer will continue to count up from the selected time to the maximum time, and the intensity level will default to level 3. For example, if the time limit was set for 30 minutes and you worked out for 25 minutes, the cool down period would last for 5 minutes, or until you stepped off the machine. If no time limit is set, the console will count up to 99, return to 0, and start counting up again. Press [STOP] to end the cool down.
13. You can also cool down by getting off the machine walking or stretching for at least five minutes.

HEART RATE MONITORING

Heart rate monitoring helps users monitor their level of exertion by displaying the heart rate during exercise. There are two methods of monitoring heart rate on the ClubStride elliptical trainer:

- Telemetry (e.g., Polar®) belt. A Polar-compatible heart rate chest belt transmits the heart beat signal to the receiver in the console. The console displays the heart rate in beats per minute and uses the heart rate value in heart rate control mode.
- Contact heart rate (handgrip). Sensors on the handgrip detect heart rate and display it on the console.

Telemetry Heart Rate

The telemetry heart rate monitoring system consists of the receiver, located in the console, and a transmitter belt (purchased separately) worn across your chest. The monitoring function is activated as soon as you strap on the chest belt and step within range of the receiver in the machine. Two electrodes on the underside of the chest belt sense the heart rate signal and send it to the receiver. The heart symbol on the console pulses to indicate that the console is receiving a valid signal. A microprocessor in the console calculates the heart rate and displays it, in beats per minute, on the console.

WARNING

PACEMAKER USERS SHOULD NOT USE THE TELEMETRY TRANSMITTER BEFORE CONSULTING WITH THEIR DOCTOR.

Before you put the transmitter belt on, wet the two electrode patches (the grooved rectangles on the reverse side of the belt). Secure the transmitter belt as high under the pectoral muscles (chest) as is comfortable (at the level of the xyphoid process). The transmitter belt should fit snugly and comfortably, and allow normal breathing. When the console detects a heart rate signal, heart rate is shown in the display automatically. Your heart rate in beats per minute and a pulsing heart icon are displayed on the console.

After the initial belt signal is detected, the console will enter a validation phase in which four good heart beat signals lasting four seconds are required before locking on telemetry heart rate signals for the duration of the workout session. During the validation phase the console will not recognize contact heart rate signals. If you do not see a heart rate on the console, try one of the following:

- Move closer to the console.
- Tighten the elastic part of the chest belt.
- Adjust the belt higher or lower on your chest.
- Remoisten the electrodes.
- Test your chest strap with a machine that you know is working, or with a heart rate watch that you know is working.
- Check the heart rate priority setting. See the HR Priority section for details.

HEART RATE MONITORING (cont.)

Maintaining the Transmitter Belt

Clean the chest belt regularly with mild soap and water, and then dry thoroughly — residual sweat and moisture keeps the transmitter active and will 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. You can order replacement belts from StairMaster or your local fitness store.

Contact Heart Rate

The StairMaster® exercise system features a digitized contact heart rate monitoring system. Through the use of stainless steel sensors built into the handle bar and using sophisticated software, heart rate can be checked at any time during a workout. The heart rate is displayed on the console.

The contact heart rate system's ability to detect a heart rate signal is influenced by several factors. Movement of the muscles of the upper body produces an electrical signal (muscle artifact) that will interfere with the detection of the heart rate signal by the sensors. Movement of the hands while they are in contact with the sensors also produces interference. Calluses and hand lotion act as an insulating layer to reduce the signal strength. Also, the EKG signal generated by some individuals is not strong enough to be detected by the sensors. These individuals should opt for the telemetry method of heart rate monitoring.

Contact heart rate input signals are acquired only during contact between your hands and the stainless steel sensors on the handrails. To use the contact heart rate feature, place your hands around the handles so that your hands touch both the top and the bottom of the sensors. After the initial contact heart rate signal is detected, the console will enter a validation phase requiring a good heart beat signal within 10 to 15 seconds, or until the system acquires a valid signal. During the validation phase the console will not recognize telemetry heart rate signals. The console will display a heart icon. If, during exercise, the heart rate displayed is erratic, it may be helpful to remove your hands from the handles, wipe them and place them back on the handles. In all programs, the heart rate is shown automatically in the display window the first time the sensors are touched.

EXERCISE INTENSITY, FREQUENCY, & DURATION

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.

WARNING

**DO NOT BEGIN AN EXERCISE PROGRAM
WITHOUT CONSULTING A PHYSICIAN.**

Intensity

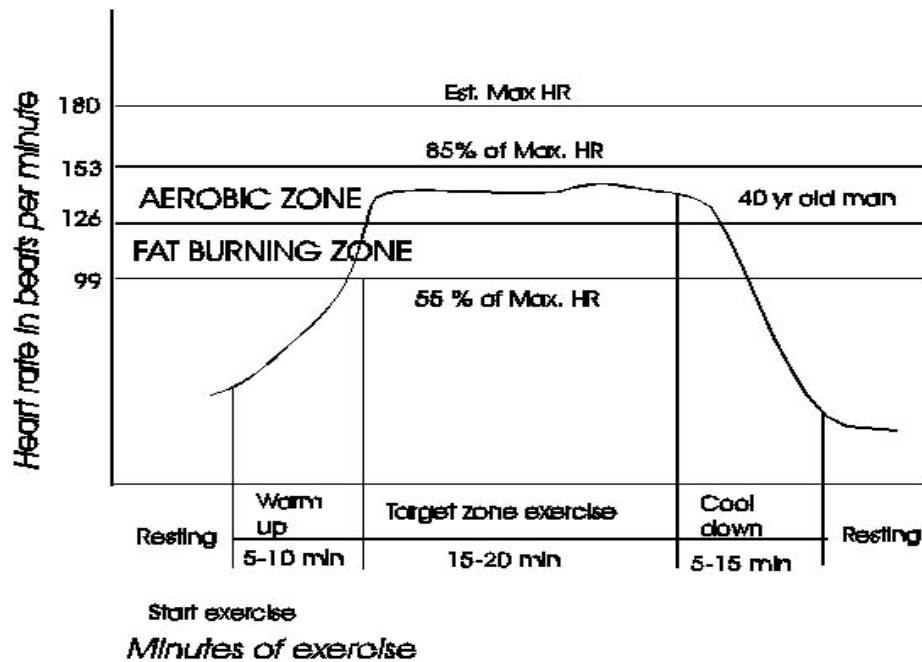
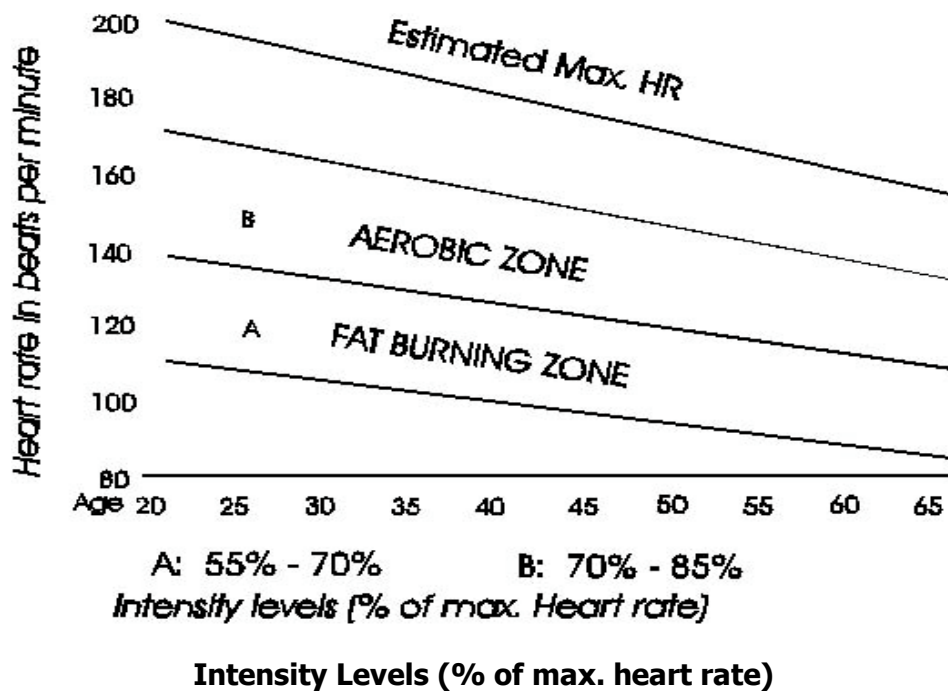
Exercise intensity depends upon the capacity of the individual to do the specific type of exercise. The exercise should exceed mild demand, but should not produce fatigue, breathlessness, or mental confusion. Choose a target zone according to personal fitness goals.

- A typical conditioning intensity for a healthy adult is from 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, 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, and intensity from 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 and 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 for 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 increase). Gradually reduce the intensity to let the heart rate fall below the target zone with a five-minute cool-down period (see graph below). ¹

EXERCISE INTENSITY, FREQUENCY, & DURATION (continued)



1. The American College of Sports Medicine, Guidelines for Exercise Testing and Prescription, 4th Edition, Lea & Febiger, Philadelphia, PA, 1991, pp. 93-120.

OPERATING THE CLUBSTRIDE 5100 ELLIPTICAL TRAINER

Follow the safety guidelines for using the equipment given in the Safety Requirements section.

Understanding the Console

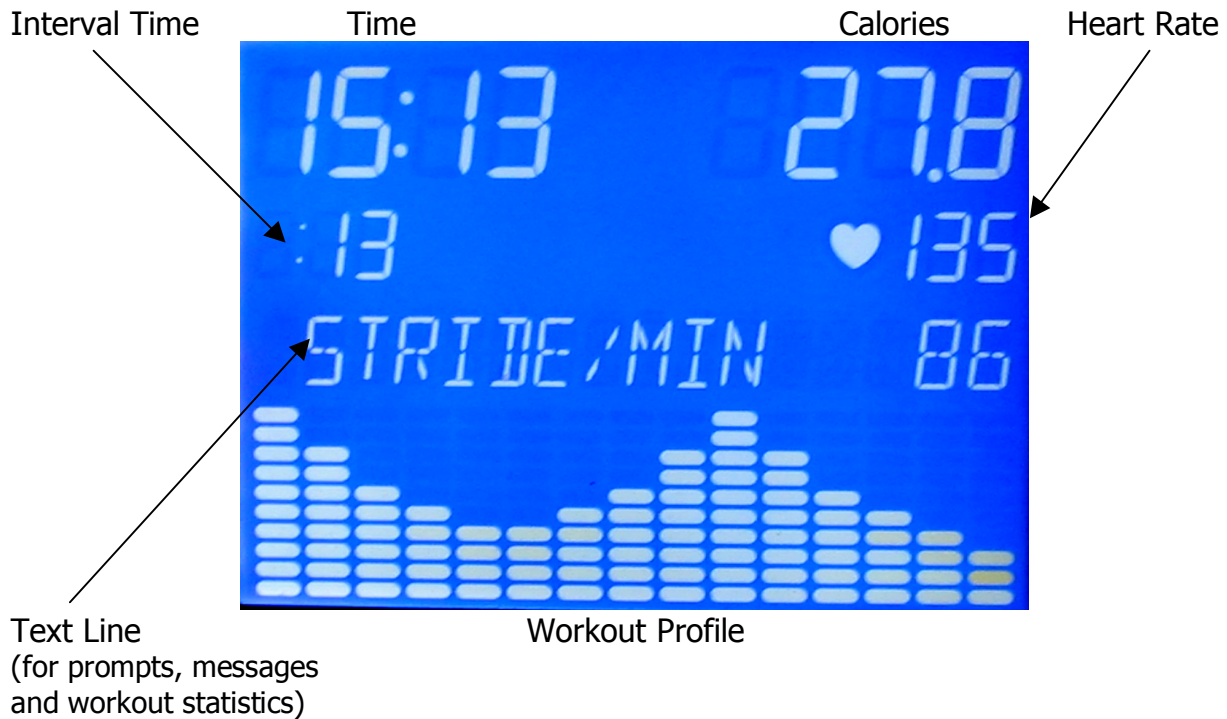
The ClubStride console, which is mounted above the front handrail, is a computerized panel used to operate the elliptical trainer. Pressing a soft-touch key on the panel enters all commands. Visual indicators and displays show the operational status and exercise results. The console is divided into the following sections: the display window, the workout options, the numeric keypad, Quick Start key, the Stop key, the Display Lock / Unlock key, and the Level (intensity) Up and Down keys.



ClubStride 5100 Console

Console Displays and Keys

ClubStride 5100 Display



The following describes the display, console keys and their function on the ClubStride 5100 elliptical:

Time - The workout time is displayed in the upper left section of the display window. In most of the workouts, the timer will count down, in minutes and seconds, until the workout is finished or stopped. If [0] is entered in the [MANUAL] or [HR ZONE TRAINER] workout, the timer will count up.

Calories – The amount of calories burned is continually updated and displayed in the upper right section of the display window.

Interval Timer – The interval timer is displayed below the Time. The interval timer counts down the remaining time within each interval.

Heart Rate - Current heart rate is displayed next to the heart icon, below the Calories.

Text Line - Message prompts and statistics are displayed in the text line that is located on the middle line of the display.

Workout Profile - A profile of the selected exercise program appears in the lower section of the display window during a workout. The taller the column, the higher the intensity (METs) for that interval. The flashing column shows your current interval. The flashing column moves from left to right across the display as you complete each interval.

Numeric keypad



The numeric keypad is located on the right side of the console. Before the exercise program begins, the numbers are used to enter data in response to the console prompts.

- **Enter** - Confirms workout selections and stores the information used by the console to calculate workout statistics.
- **Clear** - During data entry, erases information from the console memory and backs up to the previous data entry prompt.

Level (Intensity) UP [↑] / DOWN [↓] Keys



The exercise intensity level may be changed at any time during a workout. Pressing the [↑] key increases the workload intensity and pressing the [↓] key decreases the workload intensity. After the first press of a Level key, the text line will show the target level. Further presses will increase or decrease the Level.

Stop Key



Press the [STOP] key any time you want to pause the workout program for up to one minute. Press the [STOP] key a second time, or press [1], and the workout statistics will be displayed, then the console will return to the "SELECT WORKOUT" prompt.

Display LOCK / UNLOCK - Statistics Key



During the exercise program, the Display LOCK / UNLOCK key is used to track workout statistics which are shown in the text line of the display window. When a workout is started, the display is in an unlocked mode and the various exercise statistics will scroll in order. Press the [DISPLAY] key once to turn off the scan feature and show the current statistic in the display window. Press the [DISPLAY] key a second time and the scan feature will turn back on to scroll through the different statistics.

When in the Display Unlock mode, the console will cycle through the following statistics in order:

- **Distance** - Provides a cumulative total of the equivalent distance, in miles (or kilometers if your console is set to metric units), you have traveled.
- **Calories/Hour** - Provides the rate at which calories are burned per hour based on the current intensity level, stride rate, and user weight.
- **Stride Rate** - Displays the number of strides per minute.
- **Level** - Displays the current intensity level between 1 (the easiest) and 20 (the hardest).
- **Watts** - During a workout, this statistic displays the power output at the current intensity level and stride rate, displayed in watts (746 watts = 1 hp).
- **METs** - Gives you the relative energy cost of exercise. MET stands for multiples of the resting metabolic rate. While you are sitting quietly, your body consumes oxygen at the rate of about 3.5 milliliters per kilogram of body mass per minute. When you exercise, your body needs more oxygen in order to function. For example, exercising at 10 METs requires ten times the resting rate of oxygen consumption, or about 35 milliliters per kilogram per minute. During a workout, the current MET level is displayed. During the workout summary, the average MET level is displayed.
- **Target Heart Rate** - Available only during the Heart Rate Control programs (HR Zone Trainer). Shows the selected target heart rate. During a HR ZONE TRAINER workout, you can change the target heart rate by using the numeric keys.

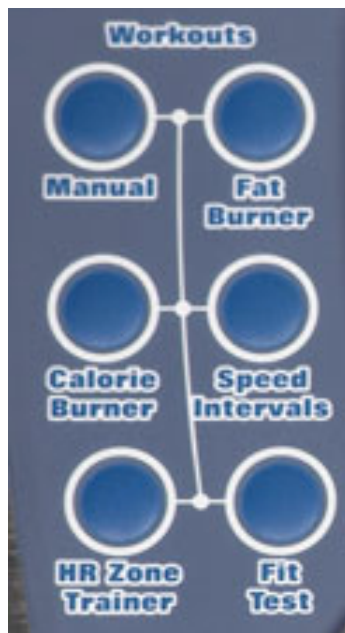
At the completion of a workout, the statistic averages are calculated based on the accumulation of data during the workout program.

Remote Operation Controls (ROC)



The Remote Operation Controls are located on the upper-body arms above the contact heart rate grips. The elliptical can be controlled from these keypads. The ROC keypad on the left upper-body arm includes a Quick Start key and a Display LOCK/UNLOCK key. The ROC keypad on the right upper-body arm includes the Level UP and DOWN keys. These keys work exactly the same as the keys on the console. Refer to the explanation of the Quick Start key, Level UP and DOWN keys, and the Display LOCK/UNLOCK key previously defined.

Workout Program Keypad



The workout program keypad is located to the left of the display. There are six workout program keys, including a Fit Test key.

While the console is in the "SELECT WORKOUT" mode, press one of the exercise program keys to preview the desired workout. After selecting the desired workout, simply follow the prompts to enter the required user data for that program.

When entering data, the user can select the standard default values by pressing [ENTER] at the display prompt without first typing data. This will set up the console with the following default data:

- **Weight** - 175 lbs.
- **Intensity Level** – 3
- **Age** (HR Zone Trainer program only) - 40 years
- **Workout Time** - The default time in the programmed workouts and Quick Start is 20 minutes. The Manual and HR Zone Trainer program does not have a specified default time. In this program, the console timer will count up to the maximum time of 99 minutes, return to 0, and count up again.

Once you have selected a program, follow the console prompts.

- **"ENTER BODY WEIGHT"** -- type in your body weight in pounds (or kilograms if your console is set to metric units).
- **"ENTER LEVEL"** – type in your desired intensity level. The ClubStride 5100 has 20 intensity levels (1 to 20).
- **"ENTER TIME 5 - 99"** – select the workout duration in one minute increments from five to 99.

The Quick Start Program

Provides an immediate start, without having to enter any user information. This program uses the standard default settings to calculate calories burned during a workout session.

To use the Quick Start program:

1. Press the [QUICK START] key. A message similar to the following will be displayed:

				E	N	J	O	Y		W	O	R	K	O	U	T			
--	--	--	--	---	---	---	---	---	--	---	---	---	---	---	---	---	--	--	--

2. Begin the workout.
 - The intensity level may be changed at any time during the workout by pressing the [Level: UP] key to increase the resistance, or the [Level: DOWN] key to decrease the resistance. Any changes to the intensity level will be displayed in the current flashing column. The new intensity level will continue through the rest of the workout until changed using the Level keys.
3. Press [STOP] to end the workout. The workout statistics will be displayed, and then the console will revert back to the "SELECT WORKOUT" message.

The Manual Program

The Manual Program allows you to control the intensity level of the elliptical during the workout, while accurately calculating exercise statistics based on your weight. The default intensity level is 3 unless changed during the data entry mode. The workout profile in the display window is divided into 15 equal intervals within the selected workout time. The profile is based on the MET level, with every 2 METs equating to one vertical bar. MET level is based on a combination of intensity level and stride rate.

To use the Manual program:

1. Press the [MANUAL] key. A screen similar to following will be displayed:

				M	A	N	U	A	L		W	O	R	K	O	U	T			
--	--	--	--	----------	----------	----------	----------	----------	----------	--	----------	----------	----------	----------	----------	----------	----------	--	--	--

2. The console will display "ENTER WEIGHT - LBS" (or "ENTER WEIGHT - KG" if in Metric mode). Enter your weight using the numeric keypad and press [ENTER]. Or, press [ENTER] to accept the default value.
 - Your weight is used to calculate the number of calories burned for each minute of exercise and the total number of calories burned for the exercise session.
3. The console will display "ENTER LEVEL 1 - 20". Enter the desired intensity level using the numeric keypad and press [ENTER]. Or, press [ENTER] to accept the default value.
4. Next, the console will display "ENTER TIME 5 – 99". Enter the desired time and press [ENTER]. Or, press [ENTER] to select the default time.

If you press [0], then the timer will count-up from 0:00 to the maximum time of 99:59, reset to 0:00, and begin counting up again.

5. The console will display "ENJOY WORKOUT" and the timer will begin.
 - The intensity level may be changed at any time during the workout by pressing the [Level: UP] key to increase the resistance, or the [Level: DOWN] key to decrease the resistance. Any changes to the intensity level will be displayed in the current flashing column. The new intensity level will continue through the rest of the workout until changed using the Level keys.
6. Press [STOP] to end the workout. The workout statistics will be displayed, and then the console will revert back to the "SELECT WORKOUT" message.

The Fat Burner Program

The Fat Burner program is a 60 interval workout designed with moderate changes in intensity level designed to stimulate fat store assimilation for users on a weight control program. The profile in the center display indicates relative intensity. Any changes to the intensity level will not change the look of the remaining profile; however, the new intensity level will continue through the rest of the workout.

To use the Fat Burner program:

1. Press the [FAT BURNER] key. A message similar to following will be displayed:

						F	A	T			B	U	R	N	E	R						
--	--	--	--	--	--	----------	----------	----------	--	--	----------	----------	----------	----------	----------	----------	--	--	--	--	--	--

2. The console will display "ENTER WEIGHT - LBS" (or "ENTER WEIGHT - KG" if in Metric mode). Enter your weight using the numeric keypad and press [ENTER]. Or, press [ENTER] to accept the default value.
 - Your weight is used to calculate the number of calories burned for each minute of exercise and the total number of calories burned for the exercise session.
3. The console will display "ENTER LEVEL 1 - 20". Enter the desired intensity level using the numeric keypad and press [ENTER]. Or, press [ENTER] to accept the default value.
4. Next, the console will display "ENTER TIME 5 – 99". Enter the desired time and press [ENTER]. Or, press [ENTER] to select the default time.
5. The console will display "ENJOY WORKOUT" and the timer will begin.
 - The intensity level may be changed at any time during the workout by pressing the [Level: UP] key to increase the resistance, or the [Level: DOWN] key to decrease the resistance. Any changes to the intensity level will not change the look of the remaining profile; however, the new intensity level will continue through the rest of the workout.
6. Press [STOP] to end the workout. The workout statistics will be displayed, and then the console will revert back to the "SELECT WORKOUT" message.

The Calorie Burner Program

The Calorie Burner program is a 60 interval workout designed for users wanting to increase their aerobic capacity. The changes of the intensity in the program is greater than the changes in the Fat Burner program, and designed specifically to tax the cardiorespiratory system. The profile in the center display indicates relative intensity. Any changes to the intensity level will not change the look of the remaining profile; however, the new intensity level will continue through the rest of the workout.

To use the Calorie Burner program:

1. Press the [CALORIE BURNER] key. A message similar to the following will be displayed:

			C	A	L	O	R	I	E		B	U	R	N	E	R			
--	--	--	---	---	---	---	---	---	---	--	---	---	---	---	---	---	--	--	--

2. The console will display "ENTER WEIGHT - LBS" (or "ENTER WEIGHT - KG" if in Metric mode). Enter your weight using the numeric keypad and press [ENTER]. Or, press [ENTER] to accept the default value.
 - Your weight is used to calculate the number of calories burned for each minute of exercise and the total number of calories burned for the exercise session.
3. The console will display "ENTER LEVEL 1 - 20". Enter the desired intensity level using the numeric keypad and press [ENTER]. Or, press [ENTER] to accept the default value.
4. Next, the console will display "ENTER TIME 5 – 99". Enter the desired time and press [ENTER]. Or, press [ENTER] to select the default time.
5. The console will display "ENJOY WORKOUT" and the timer will begin.
 - The intensity level may be changed at any time during the workout by pressing the [Level: UP] key to increase the resistance, or the [Level: DOWN] key to decrease the resistance. Any changes to the intensity level will not change the look of the remaining profile; however, the new intensity level will continue through the rest of the workout.
6. Press [STOP] to end the workout. The workout statistics will be displayed, and then the console will revert back to the "SELECT WORKOUT" message.

The Speed Intervals Program

The Speed Intervals program is an interval workout containing 8 alternating rest intervals with 7 exercise intervals. An interval cycle consists of an exercise phase and a recovery phase. You may scale the recovery intensity level and the exercise intensity level independently - which will be saved for the remainder of the workout.

For example, if you decrease the intensity level during a recovery phase then subsequent recovery phases will be the same intensity level. However, the intensity level in the exercise phase remains unchanged. To change the intensity level of the exercise phase, you must change the intensity level during an exercise phase. The two phases are independent of each other in regard to intensity levels. The *relative* intensity level is indicated on the profile and any changes to the intensity level will not change the look of the remaining profile.

To use the Speed Intervals program:

1. Press the [SPEED INTERVALS] key. A message similar to the following will be displayed:

		S	P	E	E	D		I	N	T	E	R	V	A	L	S			
--	--	---	---	---	---	---	--	---	---	---	---	---	---	---	---	---	--	--	--

2. The console will display "ENTER WEIGHT - LBS" (or "ENTER WEIGHT - KG" if in Metric mode). Enter your weight using the numeric keypad and press [ENTER]. Or, press [ENTER] to accept the default value.
 - Your weight is used to calculate the number of calories burned for each minute of exercise and the total number of calories burned for the exercise session.
3. The console will display "ENTER LEVEL 1 - 20". Enter the desired intensity level using the numeric keypad and press [ENTER]. Or, press [ENTER] to accept the default value.
4. Next, the console will display "ENTER TIME 5 - 99". Enter the desired time and press [ENTER]. Or, press [ENTER] to select the default time.
5. The console will display "ENJOY WORKOUT" and the timer will begin.
 - The intensity level may be changed at any time during the workout by pressing the [Level: UP] key to increase the resistance, or the [Level: DOWN] key to decrease the resistance. Any changes to the intensity level will only change the level in the current recovery or exercise phase. To change the intensity level of the exercise phase, you must change the intensity level during an exercise phase. To change the intensity level of the recovery phase, you must change the intensity level during a recovery phase. Changing the intensity level will not change the look of the remaining profile; however, the new intensity level will continue through the rest of the workout.
6. Press [STOP] to end the workout. The workout statistics will be displayed, and then the console will revert back to the "SELECT WORKOUT" message.

Heart Rate (HR) Zone Trainer Program (requires chest strap)

The Heart Rate Zone Trainer program allows you to exercise at a selected target heart rate by automatically varying the intensity level (resistance) during the workout. The default target heart rate is equal to 70% of your maximum heart rate which is calculated by the following equation: $220 - (\text{Age}) * .70$. To choose a different target heart rate (between 80 and 180 beats per minute) at any time during the workout, use the numeric keypad to enter the new target heart rate, followed by the [ENTER] key.

To use the HR Zone Trainer program:

1. Put the chest strap on. Remember to wet the electrodes underneath the chest strap. The console must detect a heart rate signal to allow selection of the HR Zone Trainer program.
2. Press the [HR ZONE TRAINER] key. A message similar to following will be displayed:

		H	R		Z	O	N	E		T	R	A	I	N	E	R			
--	--	---	---	--	---	---	---	---	--	---	---	---	---	---	---	---	--	--	--

3. The console will display "ENTER WEIGHT - LBS" (or "ENTER WEIGHT - KG" if in Metric mode). Enter your weight using the numeric keypad and press [ENTER].
Or, press [ENTER] to accept the default value.
 - Your weight is used to calculate the number of calories burned for each minute of exercise and the total number of calories burned for the exercise session.
4. The console will display "ENTER AGE 10 -99." Enter your age using the numeric keypad and press [ENTER]. Or, press [ENTER] to accept the default value of 40 years old.
5. The console will display "TARGET HR." A suggested target heart rate will be displayed, based on your age. Press [ENTER] to accept the calculated target heart rate, or enter a different target heart rate using the numeric keypad and then press [ENTER].
Or, press [ENTER] to accept the default value.
 - The target heart rate selected by the console is based on age, and is equal to 70% of your maximum heart rate which is calculated by the following equation: $(220 - (\text{Age}) * .70)$. If desired, change the target heart rate at this point by using the numeric keypad to enter the new target heart rate, and then press [ENTER].
 - Change to a new target heart rate that is between 80 and 180 beats per minute at any time during a workout by using the numeric keypad to enter the new target heart rate, and then pressing [ENTER].
7. The console will display "ENTER TIME 5-99." Enter the desired time and press [ENTER].
Or, press [ENTER] to accept the default value.
8. The console will display "ENJOY WORKOUT" and the timer will begin.

The following messages may be displayed during a workout:

- **"CHECK HR BELT"** - Indicates that the heart rate signal has been missing for the last 30 seconds.
- **"HR BELT NEEDED"** – No telemetry belt signal has been sensed during the initial setup time.
- **"HR MODE DISABLED"** – No heart rate signal is allowed due to the set up option that was chosen. Heart rate monitoring is not possible. To change HR option, refer to the HR Priority section of this manual.

To change your target heart rate during the workout:

- To change your target heart rate during the workout, use the numeric keypad to enter the desired target heart rate and press ENTER to accept. The new target heart rate will be used and the intensity level will change automatically to achieve the new target heart rate.
9. Press [STOP] to end the workout. The workout statistics will be displayed, and then the console will revert back to the "SELECT WORKOUT" message.

The Fit Test Program

Understanding Sub-maximal Exercise Testing

Before using the StairMaster ClubStride for sub-maximal exercise testing, it should be noted that all sub-maximal tests make several assumptions:

- That a steady-state heart rate is obtained for each exercise workload.
- That a linear relationship exists between heart rate, oxygen uptake and workload.
- That the maximal heart rate for a given age is uniform.
- That the mechanical efficiency of the physical activity performed (i.e., oxygen uptake at a given workload) is the same for everyone.

It should be kept in mind that any one or all of the above mentioned assumptions may not be met during a sub-maximal exercise test. If for any reason one of the assumptions is not met, then errors in predicting $VO_{2\text{ max}}$ will occur.

Unfortunately, it is often quite difficult to meet all of the requirements for the four listed assumptions. For example, exercising at a given workload for only a few minutes can involve an insufficient amount of time for many individuals to achieve a true steady-state. To ensure that a steady-state has been achieved, the heart rate should be measured after two minutes of exercise at a given workload and again after the third minute of exercise at that workload. These two heart rates should then be compared. If a difference of more than five beats per minute between the two is found, the subject should continue to exercise at one-minute intervals at the same workload until two successive heart rates differ by less than five beats per minute.

It is also important that the sub-maximal heart rates obtained be between 115 and 150 beats per minute, because it is within this heart rate range that a linear relationship tends to exist between heart rate and oxygen uptake or workload for most adults. When the heart rate is less than 115, many external factors (e.g., talking, laughing, apprehension, etc.) can greatly influence heart rate. Once the heart rate reaches a level between 115 and 150, external factors no longer influence heart rate, and a linear relationship exists. As the heart rate rises above 150, the heart-rate/oxygen uptake relationship becomes curvilinear.

The third assumption involves maximal heart rate. Maximal heart rate is the greatest heart rate that can be measured when an individual is exercising to the point of volitional fatigue (i.e., exhaustion) during a graded exercise test. Several equations have been developed to estimate the average maximal heart rate for humans:

- Maximal heart rate = 220 minus age (low estimate)
- Maximal heart rate = 210 minus [0.5 x age] (high estimate)
- Maximal heart rate = 226 minus age (estimate for older individuals)

Maximal heart rate can, however, vary greatly among different individuals of the same age. One standard deviation is ± 12 bpm, which means that two-thirds of the population varies an average of plus or minus 12 heart beats from the average given by a prediction equation. If an individual's age-predicted maximal heart rate is higher than that person's true maximal heart rate, then his/her estimated $VO_{2\text{ max}}$ will be an overestimation of the correct or actual value.

The final assumption addresses the issue of mechanical efficiency. Oxygen uptake at any given work rate can vary by approximately 15% between different individuals. Therefore, individuals vary in the amount of oxygen they require to perform a certain exercise workload. Some individuals are more efficient at performing a given task than others. As a result, the average oxygen consumption associated with a given workload may vary significantly from one person to another. Thus, $VO_{2 \max}$ predicted by sub-maximal exercise tests tends to be overestimated for those who are mechanically efficient and underestimated for those who are inefficient.

The point to remember is that sub-maximal exercise testing, though not as precise as maximal exercise testing, is not without advantages. For example, the results of such testing can provide a fairly accurate reflection of an individual's fitness status without the cost, risk, effort (on the part of the subject) and time involved in max testing. If an individual is given repeated sub-maximal exercise tests and that person's heart rate response to a fixed workload is found to decrease over time, it is reasonably safe to conclude that the individual has made improvements in aerobic (cardiorespiratory) fitness, irrespective of the accuracy of the $VO_{2 \max}$ prediction.

Pretest Screening

Prior to any exercise test (maximal or sub-maximal), participants should complete a brief health/medical questionnaire, have their resting blood pressure and heart rate measured, and provide an informed consent form. The Physical Activity Readiness Questionnaire (PAR-Q) is an example of a valid health/medical questionnaire for screening individuals prior to sub-maximal exercise testing. Canadian health and fitness practitioners have extensively (and quite successfully) used the PAR-Q to determine whether individuals should be given an exercise test. A "yes" answer to any of the following seven questions taken from the PAR-Q would disqualify a participant from taking part in an exercise test until appropriate medical clearance was obtained.

PHYSICAL ACTIVITY READINESS QUESTIONNAIRE (PAR-Q)

1. Has your doctor ever said you have a heart condition and recommended only medically supervised physical activity?
2. Do you have chest pain brought on by physical activity?
3. Have you developed chest pain within the past month?
4. Do you tend to lose consciousness or fall over as a result of dizziness?
5. Do you have a bone or joint problem that could be aggravated by the proposed physical activity?
6. Has a doctor ever recommended medication for your blood pressure or a heart condition?
7. Are you aware, through your own experience or a doctor's advice, of any other physical reason against your exercising without medical supervision?

StairMaster Sub-maximal Fit Test

The StairMaster Fit Test is a program that estimates maximal aerobic capacity based on heart-rate response to sub-maximal exercise.

The StairMaster branching protocol is a series of 3-minute stages of continuous exercise at increasing intensity. The first stage is a warm-up at approximately 4 METs. The intensity of the remaining stages is based on the heart rate response to the warm-up. The test is designed to raise the steady state heart rate of the subject to at least 115 beats/minute. It is important to remember that two consecutive heart rate measurements must be obtained above 115 beats/minute to predict VO_{2max} . The test typically lasts from 6 to 15 minutes. The test will terminate if the heart rate does not continue to rise from state to stage.

In the StairMaster protocol, each work rate is performed for 3 minutes, with heart rates recorded during the final 4 seconds of the second and third minutes of each stage. If the heart rates are within 5 beats/min, then the heart rate during the last minute is plotted against the work rate, and the program advances to the next 3-minute stage. The program continues for two to four stages until two steady state heart rates above 115 beats/min are obtained in two consecutive stages. The line generated from the plotted points is then extended to the age-predicted maximal heart rate. A corresponding maximal work rate and VO_{2max} can then be calculated.

At the end of the 3rd minute of each stage, if the heart rates at the end of the 2nd and 3rd minute are not within 5 beats/min of each other, then that work rate is maintained for an additional minute. At the end of the 4th minute, the heart rate is compared to the heart rate at the end of the 3rd minute. If the heart rates are within 5 beats/min, then the heart rate during the 4th minute is plotted against the work rate. If the heart rate at the end of the 3rd and 4th minute are not within 5 beats/min, then the work rate is maintained for one more additional minute. If the heart rate at the end of the 4th and 5th minutes are within 5 beats/min, then the heart rate at the end of the 5th minute is plotted against the work rate. If the heart rate at the end of the 4th and 5th minutes are not within 5 beats/min, then the test failed.

Once two consecutive heart rate measurements are obtained above 115 beats/min range, then the test ends successfully and the results are displayed. Estimated maximum aerobic capacity is shown in ml/kg/min and METs. Next, the results are compared to normative values for others of the same age range and gender.

To use the Fitness Test program:

1. Put the chest strap on. Remember to wet the underneath of the chest strap, over the electrodes.
2. Press the [FIT TEST] workout key. The console will display "STAIRMASTER FIT TEST."
3. The console will then display "ENTER WEIGHT - LBS" (or "ENTER WEIGHT - KG" if in Metric mode). Enter your weight using the numeric key keypad.
4. The console will display "ENTER AGE 10 -99." Enter your age using the numeric keypad.
5. The console will display "ENTER GENDER / 1 - MALE / 2 - FEMALE. Enter your gender

code using the numeric keypad.

6. The console will display "BEGIN FIT TEST". Follow the onscreen prompts. The following messages may be displayed during a fitness test:
 - **"CHECK HR BELT"** - Indicates that the heart rate signal has been missing for the last 30 seconds.
7. The test will be terminated early, and the messages "TEST TERMINATED / TRY AGAIN LATER" will be displayed if:
 - The user stops exercising at any point during the test.
 - The [STOP] key is pressed.
 - The heart rate response to each work level is the same or less than the previous work level.
 - The heart rate never reaches 115 beats/minute.
 - The heart rate continues to rise after the fifth minute.
8. The test is complete when two consecutive steady-state heart rates are obtained above 115 beats/minute. The test can be as short as 6 minutes, or as long as 15 minutes.
 - No cool down is done at the end of the test.
9. The estimated maximal aerobic capacity is displayed in METs, and VO_{2max} . The results are compared to normative values of the same age and gender¹ (see below), and given a fitness rating of "Low", "Fair", "Average", "Good", or "High."

Fitness Rating Norms (VO_{2max})

	AGE				
	20 – 29	30 – 39	40 – 49	50 – 59	60 +
Men					
High	51.4 +	50.4 +	48.2 +	45.3 +	42.5 +
Good	51.3 – 46.8	50.3 – 44.6	48.1 – 41.8	45.2 – 38.5	42.4 – 35.3
Average	46.7 – 42.5	44.5 – 41.0	41.7 – 38.1	38.4 – 35.2	35.2 – 31.8
Fair	42.4 – 39.5	40.9 – 37.4	38.0 – 35.1	35.1 – 32.3	31.7 – 28.7
Low	39.4 or less	37.3 or less	35.0 or less	32.2 or less	28.6 or less
Women					
High	44.2 +	41.0 +	39.5 +	35.2 +	35.2 +
Good	44.1 – 38.1	40.9 – 36.7	39.4 – 33.8	35.1 – 30.9	35.1 – 29.4
Average	38.0 – 35.2	36.6 – 33.8	33.7 – 30.9	30.8 – 28.2	29.3 – 25.8
Fair	35.1 – 32.3	33.7 – 30.5	30.8 – 28.3	28.1 – 25.5	25.7 – 23.8
Low	32.2 or less	30.4 or less	28.2 or less	25.4 or less	23.7 or less

¹ The American College of Sports Medicine, Guidelines for Exercise Testing and Prescription, 6th Edition, Lippincott Williams & Wilkins, Philadelphia, PA, 2000, p. 77.

Options During a Workout

After the message, "Enjoy Workout", is displayed, your workout statistics will begin to accumulate. The exercise statistics include, in order:

- Distance
- Calories / Hour
- Stride Rate (strides/minute)
- Intensity Level
- Power in watts
- METs
- Target Heart Rate (in Heart Rate Control programs only)

The 10 x 15 brickyard in the lower half of the display will show the exercise profile of the workout program selected. Each column represents an equal portion of the total workout and the flashing column will advance across the brickyard as you progress through your workout.

Changing Intensity Level or Target Heart Rate During a Workout

- During the workout, the intensity level may be changed at any time during the workout by pressing the [Level: UP] key to increase the resistance, or the [Level: DOWN] key to decrease the resistance.

If the user presses the [Level: UP] or [Level: DOWN] key, then the text line will display the Level value and show the new target Level selected:

						L	E	V	E	L			#	#
--	--	--	--	--	--	---	---	---	---	---	--	--	---	---

As the Level is changed, the resistance changes to the new level.

- **In Heart Rate Control programs**, you can use the numeric keys to change the Target Heart Rate. If the user presses a numeric key in a Heart Rate Control program, then the message line will display the target heart rate change prompt as follows:

			T	A	R	G	E	T		H	R		#	#	#
--	--	--	---	---	---	---	---	---	--	---	---	--	---	---	---

Once you enter your desired target heart rate, press [ENTER] to accept, and the console will gradually change the resistance to move you to the new target heart rate.

Pausing Your Workout

The program automatically enters the PAUSE state from a workout when the STOP key is pressed. The workout will be suspended, and the program will display the following alternating messages every 3 seconds for up to 1 minute:

P	R	E	S	S		1		T	O		R	E	S	E	T
O	R		2		T	O		C	O	N	T	I	N	U	E

When the program enters a PAUSE state, the interval timer begins to count down from 1 minute to show you the time remaining in the pause condition.

To leave the PAUSE state:

- At the end of the one minute count down, the current workout ends, the accumulated exercise statistics are scrolled, and the program returns to the opening message.
- If the user presses STOP or CLEAR or [1], then the program ends, the accumulated exercise statistics are scrolled, and the program returns to the opening message.
- If the user presses the [2] key, then the workout proceeds from where it was suspended.

End of Your Workout

The program is at the end of the workout when the workout time is completed, or from the PAUSE state when the STOP key is pressed. At this point, each workout statistic is scrolled with averages calculated and displayed for Stride Rate, Calories/Hour, Level, Watts, METs, and Heart Rate.

After the statistics are scrolled, the program returns to the opening message. If the user wants to replay the exercise statistics, press the **Display LOCK/UNLOCK** key, and each exercise statistic will be scrolled once for 3 seconds.

INSTRUCTION PAGE

For the convenience of all users, we strongly encourage you to copy the information on this page and place a copy near the elliptical trainer. These brief instructions will assist the user with basic operating steps.

Using the ClubStride™ 5100 Elliptical Trainer

This page is a summary only. Each first-time user must be instructed in the proper use of the elliptical trainer, as described in the ClubStride User's Guide.

1. Follow the Safety Guidelines listed below.
2. Step up onto the foot pedals of the elliptical trainer and begin striding fast enough for the console display to power on.
3. Select a Workout Program (Manual, Fat Burner, Calorie Burner, Speed Intervals, HR Zone Trainer or Fit Test). Or, to begin exercising immediately, press [QUICK START].
4. If you have selected a Workout Program, then follow the prompts to enter the required user data.
5. After entering your data, the console will display "ENJOY WORKOUT" and the timer will begin.
6. Grasp either the upper-body arms or the grips at the center of the machine and begin striding at your desired rate.
7. Use the [Level: UP] and [Level: DOWN] keys to adjust the workload.
8. When finished exercising, press [STOP].

SAFETY GUIDELINES

- Secure long hair and loose clothing before use.
- Keep area around the elliptical clear of objects.

HEART RATE PRIORITY

Both contact heart rate and telemetry (e.g., Polar®) heart rate signal detection is available. The default priority of heart rate input is "LOCKED INPUT." If a telemetry signal is detected first, contact heart rate signals are inhibited from being detected throughout the rest of the workout session and vice-versa.

Locked/Non-Locked Heart Rate Signal Options

When the "EITHER INPUT" option is selected the heart rate source signal is not fixed during the workout session (if the signal is lost either input will be valid). If the "LOCKED INPUTS" option is selected then the heart rate source signal is locked on the first detected signal during the workout. To set a heart rate signal input, or to turn off the heart rate option all together, perform the following steps:

1. On the console keypad, press [Level: UP], [3], [2]. At this point the screen will display "HR INPUTS." Press [ENTER] to select this option.
2. There are five options to handle heart rate input signals. Press the [Level: UP] and [Level: DOWN] keys to scroll through the options until you find the option that you want. Press the [ENTER] key to select that option.

The options are as follows:

" **LOCKED INPUTS**" - allows either telemetry or contact heart rate signals to be detected. Once the console has detected a valid input signal it will lock out the opposite type of signal for the duration of the workout session. For example, if you start out using contact heart rate then you are limited to using only contact heart rate during your workout session, even if the signal is lost while performing the workout, and vice-versa.

" **EITHER INPUT**" - allows either telemetry or contact heart rate signals to be detected. Does not lock out a particular input signal for the entire workout. This option will detect either input signal during a workout session, but only one at a time, and only until the other signal terminates.

" **TELEMETRY ONLY** " - locks out contact heart rate signals and will only detect telemetry signals.

" **HAND ONLY** " - locks out telemetry signals and will only detect contact heart rate signals.

" **BOTH HR OFF** " - turns off the ability to detect any heart rate signal. Used in rare situations where there is excessive interference with the heart rate signals.

- During workouts where heart rate is necessary, such as the HR Zone Trainer and the Fitness Test, the console will pick up telemetry heart rate signals so that the programs are not disabled.

CONSOLE CODES

There are 4 groups of console codes as follows: Customization (codes starting with 3), Machine Status (codes starting with 4), Diagnostic (codes starting with 6 or 7), and Configuration (codes starting with 8). Each group of codes is defined below. To access these console codes and the options within each group, follow the instructions for each section.

Customizing the ClubStride 5100

You can customize several parameters on the ClubStride 5100 to conform to your individual requirements, including setting time limits, changing screen contrast, changing language, and changing units. To customize the console for your use:

1. Press [Level: UP], [3], [ENTER]. The console will display "CUSTOMIZE."
2. Press [Level: UP] or [Level: DOWN] to scan through the customize choices. Select the option you want to change by pressing [ENTER]. Then, use the [Level: UP] or [Level: DOWN] keys to view the choices for the selected option. Press [ENTER] to accept the choice for that option.

The customize options are as follows:

Max time limit

- For no time limit, press [0], [ENTER]. The screen will display "TIME LIMIT OFF."
- Use the numeric keypad to enter the desired time limit between 5 and 99 minutes. Press [ENTER], [ENTER] to accept the new time limit.

Change units

- Use the [Level: UP] and [Level: DOWN] keys to toggle between USA units and Metric units. Press [ENTER] to select your option.

Choose the type of heart rate input.

- See Heart Rate Priority in the previous section for details of the choices.

Choose console language

- Use the [Level: UP] and [Level: DOWN] keys to view the choices (English, German, French, Spanish, Italian, Dutch, Swedish, Japanese). Press [ENTER] to select your option.

Adjust screen contrast

- Use the [Level: UP] and [Level: DOWN] keys to increase or decrease the contrast level. Press [ENTER] to select your option.

Reset Defaults

- This code will reset all exercise parameters to the factory defaults. Press [ENTER], to accept the default values.

3. To exit "CUSTOMIZE", press the [CLEAR] key.

Machine Status Codes

To view maintenance information such as the run time in hours, number of workouts and distance, as well a machine type and software revision:

1. Press [Level: UP], [4], [ENTER]. The console will display "MACHINE STATUS"
2. Press [Level: UP] or [Level: DOWN] to scan through the choices. Select the option you want to view by pressing [ENTER]. Press [CLEAR] to exit the machine status codes.

The machine status options are as follows:

Machine run time in hours

- Display the machine run time by pressing [LEVEL: UP], [4], [0]. The console will display "RUN HOURS #####".

Number of workouts

- Display the number of workouts by pressing [LEVEL: UP], [4], [1]. The console will display "WORKOUTS #####".

Distance traveled

- Display the total distance traveled by pressing [LEVEL: UP], [4], [2]. The console will display "DISTANCE #####".

Software revision

- Display the console software revision number by pressing [LEVEL: UP], [4], [3]. The console will display "CONS 40229-####".

Machine type

- Display the machine type by pressing [LEVEL: UP], [4], [4]. The console will display "ELLIPTICAL" or other machine type.

Machine run time in hours since last cleared (used for maintenance)

- Display the machine run time since last cleared by pressing [LEVEL: UP], [4], [6]. The console will display "MAINT HOURS #####". This will provide the number of hours between service or maintenance calls. The machine run time is reset to zero in the following Diagnostics section.

3. To exit "MACHINE STATUS", press the [CLEAR] key.

Diagnostic Codes

Diagnostic codes are used to test various components of the machine such as the display, keyboard, serial port, alternator, and tachometer, as well as viewing the error log information and resetting the time between service or maintenance calls. To run diagnostics and view diagnostic information:

1. Press [Level: UP], [6], [ENTER]. The console will display "DIAGNOSTICS"
2. Press [Level: UP] or [Level: DOWN] to scan through the choices. Select the option you want to view by pressing [ENTER].

The diagnostic options are as follows:

Test display

- To test the LCD display, press [LEVEL: UP], [6], [0]. The console screen alternates turning on all LCD segments and a representative program screen. Verify that all LCD segments turn on.

Test keyboard

- To test all the keys on the keyboard, press [LEVEL: UP], [6], [1]. Then, press any key on the keyboard and that key's name will be displayed in the text line. Press [CLEAR] as the last key to exit this test.

Test serial port

- To test the serial port, press [LEVEL: UP], [6], [2]. This test performs a serial loop back test. Select the CSAFE RS-232 selection. You will need a loop-back test cable (PN 040051-001) inserted into the appropriate connector port to successfully run this test. Console will display either "PASS" or "FAIL".

Test alternator

- To test the machine's alternator, press [LEVEL: UP], [6], [3]. This test verifies the alternator field routines through the console. Position yourself on the machine and press [LEVEL: UP] for "field on". After exercising briefly you should build up resistance. For "field off", press [LEVEL: DWN].

Test tach response

- To test the machine's tachometer, press [LEVEL: UP], [6], [6]. Start exercising on the machine. The console should regulate the alternator resistance based on the tach signal to maintain approximately 2,000 RPMs while you are exercising. If not, there is a possible problem in the AC tap or field circuit. Check the alternator, the AC tap wire, the field wire, the diode, the terminal posts, and the main cable.

3. To exit "DIAGNOSTICS", press the [CLEAR] key.

3. To review the error log and reset the service timer, press [Level: UP], [7], [ENTER]. The console will display "DIAGNOSTICS2". Press [Level: UP] or [Level: DOWN] to scan through the choices. Select the option you want by pressing [ENTER].

Error log

- To display the machine's error log, press [LEVEL: UP], [7], [0]. The console will report various error messages in the display window. The total amount of errors will be displayed in the upper right window. Note that only the highest priority reported error will be displayed. Errors are handled in two ways. First, as a non-fatal "WARNING" which will display the text message but continue system operation until you press the [CLEAR] key. The second way is a fatal "ERROR" which will stop the exercise and return the system to an idle intensity state. The console will display the error text and not let you restart the program unless power has been turned off and then back on.

Reset service time

- To reset the time between service or maintenance calls, press [LEVEL: UP], [7], [1]. Selecting this code will reset the maintenance timer to 0 hours.

3. To exit "DIAGNOSTICS2", press the [CLEAR] key.

Configuration Codes

- To change the machine type from Stepper, StepMill, Bike or Elliptical, press [LEVEL: UP], [8], [0]. Press [Level: UP] or [Level: DOWN] to scan through the choices. Select the machine type you want by pressing [ENTER]. Press the [CLEAR] key to exit configuration.

TROUBLESHOOTING

If there is a problem with the elliptical trainer, refer to the Troubleshooting Guide in the Service Manual. Problems beyond the scope of this table may require service assistance to isolate and correct. Contact StairMaster Technical Service at 800-331-3578.

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

IMPORTANT PHONE NUMBERS

If you need assistance, please have both the serial number of your machine and the date of purchase available when you contact the appropriate StairMaster office listed below.

OFFICES IN THE UNITED STATES

CORPORATE HEADQUARTERS

Nautilus Health & Fitness Group
1886 Prairie Way
Louisville, CO 80027
Phone: 800-864-1270
Fax: 800-898-9410
E-mail: customerservice@nautilushfg.com

TECHNICAL SERVICE

StairMaster Technical Service
10757 East Ute Street
Tulsa, OK 74116
Phone: 800-331-3578
Fax: 800-764-7380
E-mail: customerservice@nautilushfg.com

INTERNATIONAL OFFICES

For technical assistance and a list of distributors in your area, please call or fax one of the following numbers.

INTERNATIONAL CUSTOMER SERVICE

NORTH AMERICA OFFICE

Nautilus Health & Fitness Group
1886 Prairie Way
Louisville, CO 80027
Tel: 800-864-1270 x1603 or 1658
Fax: 303-402-4817
E-mail: international@stairmaster.com

EUROPE HEADQUARTERS

Nautilus Health & Fitness Group International S.A.
Rue Jean Prouvé 6
1762 Givisiez / Switzerland
Tel: + 41 26 460 77 77
Fax: + 41 26 460 77 70
E-mail: international@stairmaster.com

GERMANY OFFICE

Nautilus Health & Fitness Group GmbH
Tel: 02204 61027
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U.K. OFFICE

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Tel: 01 908 267 345
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E-mail: stairmasteruk@msn.com

ITALY OFFICE

Nautilus health & Fitness Group Italy s.r.l.
Tel: 031 51 10 86
Fax: 031 34 24 97