



ElliptiMill® Cardio Trainer
Owner's Manual



CARDIO TRAINER

LANDICE

Quick User's Guide

Important Safety Instructions

WARNING: Failure to observe the following operating instructions can result in serious injury!



To start the elliptical:

Pressing **START** powers up the elliptical and lights up the displays. The starting effort level is set to Level 1.



To pause the elliptical:

Pressing **PAUSE** will stop your workout clock, but all statistical information will be preserved. When you are ready to continue, press **START** to resume your workout.



To turn off the elliptical:

Pressing **OFF** will shut down the elliptical. All current statistical information will be cleared.



To change effort level:

Hold **EFFORT "+"** key down to increase effort level.

Hold **EFFORT "-"** key down to decrease effort level.



To view your speed in different units:

Press the **UNITS "+/-"** to select MPH, Km/hr, and Revolutions per Minute.



To view different display screens during your workout:

Press **NEXT** at any time to choose the display screen that best suits your workout.



To enter your weight:

Press **WEIGHT** to enter your weight for more accurate calorie and "running" speed calculation.



To enter your age:

Press **AGE** to enter your age. This will automatically calculate a recommended target heart rate based on your age (See *Heart Rate Monitoring*).

- [1] If you are suffering from any illness, condition, or disability which affects your ability to run, walk or exercise, do not use this product without consulting your doctor first.
- [2] If you are suffering from any illness, condition, or disability which affects your ability to run, walk or exercise, do not use this product without supervision present. Failure to do so can result in serious injury should you fall while the machine is in motion.
- [3] Failure to leave ample clearance around the elliptical could result in the user becoming trapped between the mechanism and a wall, resulting in serious injury.

Allow a minimum clearance of 6 inches on each side of the elliptical.
Allow a minimum clearance of 1 foot at the rear of the elliptical.
- [4] Be sure to familiarize yourself with this manual. Look it over carefully. Be sure you understand the control panel operation before using the elliptical.

When using an electrical appliance, basic precautions should always be followed. Read all instructions before using.

DANGER: Always unplug the elliptical before cleaning or removing any shrouds. To reduce the risk of electric shock in the event of an electrical storm, always unplug the elliptical from the electrical outlet immediately after using.

SAVE THESE INSTRUCTIONS

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

- [1] An appliance should never be left unattended when plugged in. Unplug from outlet when not in use.
- [2] Close supervision is necessary when this unit is used by or near children or disabled persons.
- [3] Use this elliptical only for its intended use as described in this manual.
- [4] Never operate this elliptical if it has a damaged cord or plug, if it is not working properly, or if it has been damaged. Call your selling dealer immediately for examination and repair.
- [5] Keep the power cord away from heated surfaces. Be sure the line cord has plenty of slack and does not get pinched underneath the elliptical.
- [6] Never drop or insert any object into any opening. Be sure no objects are near or underneath the elliptical.
- [7] Do not use outdoors.
- [8] Do not operate where aerosol (spray) products are being used or where oxygen is being administered.
- [9] Connect this appliance to a properly grounded dedicated outlet only.
- [10] To disconnect, press the OFF button, and unplug the unit from the wall outlet.

GROUNDING INSTRUCTIONS

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

120 VOLT ELLIPTICALS

Ellipticals marked 120 VAC are intended for use in a nominal 120-volt circuit with a grounding plug. Make sure the product is connected to an outlet having the same configuration as the plug. No adapter should be used with this product.

200 - 250 VOLT ELLIPTICALS

Ellipticals marked 200-250 VAC are intended for use on a circuit having a nominal rating more than 120V and are factory-equipped with a specific cord and plug to permit connection to a proper electric circuit. Make sure the product is connected to an outlet having the same configuration as the plug. No adapter should be used with this product. If the product must be reconnected for use on a different type of electric circuit, qualified service personnel should make the reconnection.

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

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Congratulations! You've made a very smart investment! Your Cardio Trainer elliptical is a high-quality fitness tool that will give you years and years of fitness benefits.

One of the great things about your new ElliptiMill is that it uniquely monitors your workout intensity in "treadmill terms". Meaning, if your speed readout displays 7 mph, you are exerting the same energy as running 7 mph.

Regardless of the application, unpleasant weather is not an obstacle. Cold, windy, wet days will never discourage you again, nor will the heat and humidity of the summer months. If you're the type of person that likes to do two things at once, now you can watch your favorite program on TV or keep an eye on your kids and take care of your health at the same time.

Your ElliptiMill was a smart purchase, but you already knew that, so let's move on and get started.

BEFORE YOU BEGIN

Following are some things you should do before you start to exercise on your elliptical:

INSTRUCTION MANUAL

Be sure to familiarize yourself with this manual. Look it over carefully. Be sure you understand the control panel operation before using the elliptical.

WARRANTY INFORMATION

Fill out your warranty registration card and mail it in today. Landice backs your elliptical with a strong warranty. For the factory to respond to any problems you may have, we need your warranty information on file. Do it today.

Landice will send you a complimentary Landice T-shirt upon receipt of your warranty registration card.

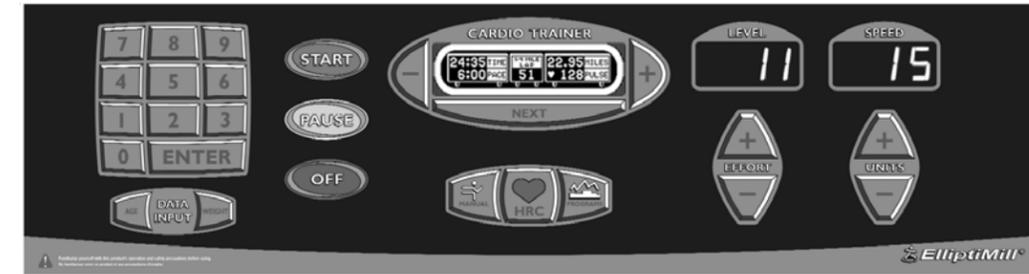
SELECTING A LOCATION

Place the elliptical in a climate-controlled room. Failure to do so may effect warranty.

Allow a minimum clearance of **6 inches on each side** of the elliptical.
Allow a minimum clearance of **1 foot at the rear** of the elliptical.

Failure to leave ample clearance around the elliptical could result in the user becoming trapped between the mechanism and the wall should the user accidentally trip and fall while exercising.

Be sure the line cord has plenty of slack and does not get pinched underneath the elliptical. Make sure the elliptical is plugged into a dedicated line.



Press **START** to power up the elliptical and light up the displays. The starting effort level is set to Level 1.



Press **PAUSE** to stop your workout clock, all statistical information will be preserved. When you are ready to continue, press **START** to resume your workout.



Pressing **OFF** will shut down the elliptical. All current statistical information will be cleared.



To change effort level:
Hold **EFFORT "+"** key down to increase effort level.

Hold **EFFORT "-"** key down to decrease effort level.



Press **NEXT** at any time to choose the display screen that best suits your workout.



To use the built-in workout programs:

Press **PROGRAMS** at any time to display the programs selection screen. Scroll through built-in and user-defined program previews with center "+/-" keys and select the program that best suits your desired workout by pressing **NEXT**. You will now be asked to enter the program's specific parameters (Maximum Effort, Program Time, etc...). Use the numeric keypad and the center "+/-" keys to select the desired values and press **START** to begin the program.



To use the heart rate controlled programs:

Press **HRC** at any time and choose either a built-in or user defined cardio program. The heart rate control programs automatically adjust the effort level in order to maintain a constant heart rate.



To return to manually controlling the elliptical at any time:

Press **MANUAL** button at any time and the elliptical is at your command to adjust the effort level.

The Cardio Trainer ElliptiMill combines a versatile liquid crystal display (LCD) with a variety of program options including multiple heart rate control programs. These features and options combine to offer an exciting and fun workout so you can reach your fitness goals.

It's about options:



MANUAL CONTROL

The Cardio Trainer begins a user-defined workout via the Manual Mode. While in the Manual Mode the elliptical is at your command. There are no time limits and no program parameters to enter. Changes in effort level will only happen when you make them happen by pressing one of the buttons. You can get back to the Manual Mode at any time by simply pressing the **MANUAL** button.



NUMERIC KEYPAD

The keypad is an excellent feature that allows you to spend less time pressing buttons and more time enjoying your workout.



5 BUILT-IN PROGRAMS

The Cardio Trainer offers five built-in programs to help you attain your fitness goals. These programs take you through a predetermined twenty-segment effort level profile but at the same time allow you to override each segment to tailor the program to your specific needs.



5 USER-DEFINED PROGRAMS

The Cardio Trainer allows you to create your own custom programs as you go. Any manual changes (effort level) you make during your user-program will be saved and stored. You can also create and modify the user-program using the elliptical's Edit Mode.



3 SPECIFIC GOAL PROGRAMS

Specific Goal Programs are designed to motivate your fitness goals in a variety of different ways. Before your workout, select a Time, Distance, or Calorie goal. During your workout you will be updated with real-time statistics reflecting your progress toward your specific goal.



HEART RATE CONTROL

The Cardio Trainer comes standard with contact grips and transmitter strap, which are used in conjunction with any of the 4 Heart Rate Control (HRC) programs provided. The first two standard heart rate control programs maximize workout time by directing the elliptical to automatically change effort level in order to maintain the targeted heart rate(s) for the duration of the program. Furthermore, the two User HRC programs allow you to create separate custom HRC programs. Each HRC program is broken down into 20 programmable segments for more variety in your heart rate controlled workouts.

3 FITNESS TESTS

The Cardio Trainer also includes three different programs that accurately measure your fitness level. The Balke and Fire Fighter Fitness Tests use HRC to monitor your heart and how it reacts to speed and effort level changes through a specific protocol. Based on your age, gender, and cardiovascular performance, you will receive a fitness rating upon completion. On the other hand, the Army 2 Mile Fitness Test is a manually controlled 2 mile test. Based on your age, gender, and completion time, you will receive a fitness score upon completion.

SELF-DIAGNOSTICS

If the Cardio Trainer ever malfunctions, it has the ability to seek out and self diagnose the problem, clearly displaying it in detail in the center LCD. This feature aims at minimizing elliptical down time, helping you maintain your fitness goals.

You will be prompted with self-diagnostics as soon as the elliptical detects any errors. However, you can also manually launch self-diagnostics by pressing the center "+", "-", and **START** button at the same time while the elliptical is off.

ENGLISH/METRIC MODE

The Cardio Trainer display comes standard in English units and can be changed to display metric units by pressing **MANUAL**, **PROGRAMS**, and **START** simultaneously while the elliptical is off. Then press **OFF**. Repeat the same steps to return back to English units.

Make sure you read and understand this owner's manual. Now you are ready to begin.

SET YOUR STRIDE

Prior to your workout, check to see what stride setting the elliptical is currently set at. The current stride setting is the number (17, 19, 21 or 23) that is located directly behind the positional arrowhead.

To change it, loosen the black knob and red T-handle (1/4 turn will do). While pulling the black knob, slide the positional arrowhead up or down grabbing the red T-handle. **Be sure to retighten both knobs and T-handles prior to commencing your workout.**



Start by standing on the rear step and stepping onto each foot pedal.

Press the  button. The displays will power up and the effort level will default to Level 1.

MANUAL MODE

Upon startup the elliptical enters Manual Mode. In this mode, you control all of the elliptical functions. Any changes in effort level will be a direct result of you touching the control panel.

ENTER YOUR WEIGHT

Press  and use the numeric keypad or the center “+/-” keys to dial in your weight.

Entering your weight is crucial for Calorie and “running” speed calculations.

ENTER YOUR AGE

Press  and use the numeric keypad or the center “+/-” keys to dial in your age.

Entering your age will generate an age based weight loss target pulse (see *Heart Rate Monitoring*).

You can see your target pulse at any time by pressing  until you bring up the Heart Rate Status Screen (shown below).



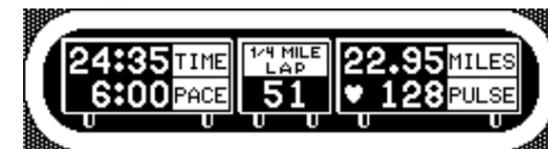
Your target pulse is displayed at the top of the screen. You can adjust this number higher or lower by pressing the center “+/-” keys.

Upon exiting the weight input the elliptical enters the Manual Mode. In this mode you control all elliptical functions.

In Manual Mode you can change the effort level at any time as well as select from one of the three multifunction display screens.

Selectable display

 allows you to choose the screen that best suits your workout.



TRACK SCREEN



STAT SCREEN



HEART RATE STATUS SCREEN

Display features

FEATURE	Description
EFFORT	20 levels, select using EFFORT “+/-” keys
SPEED*	Displayed in MPH, Km/Hr or Revolutions per Minute, select using UNITS “+/-”
TIME	Time logged on elliptical displayed as “Minutes: Seconds”
DISTANCE*	Miles logged on elliptical (kilometers when in metric)
PACE*	Time to complete 1 mile (1 kilometer when in metric)
CALORIES	Total calories burned, based on user's weight
CALS/HR	Rate in calories/hour, based on user's weight
METS**	Current MET level, based on user weight / effort level / speed
LAP (PROGRESS)*	1/4-mile (400 meter in metric) track in manual mode
LAP (COUNTER)*	Number of laps completed
PULSE	Current heart rate
TIME IN ZONE	Time spent in target zone (zone is 16 beats wide)
“IN ZONE”	User is in the target zone (within 8 beats of the target pulse)
“OUT OF ZONE”	User is outside the target zone (greater than 8 beats from target pulse)
“ABOVE MAX”	User is above the Maximum allowable heart rate in zone
MAX	Maximum allowable heart rate to remain in zone
TARGET PULSE	The target pulse (user defined in Zone Screen)
MIN	Minimum allowable heart rate to remain in zone
“BELOW MIN”	User is below the Minimum allowable heart rate in zone
TOTAL TIME	The total time of the user's workout

You can return to the Manual Mode at any time by pressing the  button.

* Speed and distance are calculated using an advanced metabolic running equivalent algorithm. Your pedal speed and effort level will yield a “running” speed with the equivalent energy consuming intensity.

** One MET is defined as the energy consumed at rest by the average adult.

The Cardio Trainer is equipped with a numeric keypad, which serves multiple functions to make the elliptical easier to control. It can be used to change effort level, enter user settings, and configure programs.



ENTERING USER WEIGHT

Press the Weight key to bring up the prompt that allows you to dial in your weight. This is important because this value helps calculate accurate calorie and MET values.

PROGRAM CONFIGURATION

In program setups you will be asked different information based on that particular program's parameters. After you enter each value using the keypad, press **ENTER**, **NEXT**, or wait 3 seconds to advance to the next screen.

In the 5 Built-in programs, the keypad is used to enter the program's maximum time, maximum effort level.

In the Specific Goal Programs, the keypad is used to enter a variety of different information. Time Goal: Time, Distance Goal: Distance, Calorie Goal: Calorie.

In the 5 User programs, the keypad is used to enter the program's maximum time. It can also be used to set the effort level for each individual segment. This will be explained in more detail under the **USER PROGRAM** section of this manual.

In the Heart Rate Control (HRC) programs, the keypad is used to enter the program's maximum effort level, target heart rate, and program time.

In the User Heart Rate Control programs, the keypad is used to enter the total time, and the target heart rate for each individual segment. This will be explained in more detail under the **HEART RATE** sections of this manual.

In the 3 fitness tests, the keypad is used to enter your age.

Programs have been added to the Cardio Trainer so you can add some variety to your workouts. You can choose from one of 5 built-in programs, which will run you through a pre-selected effort level profile. When choosing a program you select a maximum effort level and a time from 10 to 99 minutes. Once set, the elliptical will not go above the maximum effort level unless you manually override it. Each program is divided into 20 segments of equal time, beginning with 3 warm-up segments and ending with 2 cool-down segments. For example, a 40-minute program will contain 20 two-minute segments.

Built-In Programs descriptions:

FAT BURN

The overall goal of this program is to elevate your heart rate, maintain the elevated heart rate for most of the workout, then gradually bring your heart rate down via the last three cool down segments.

INTERMEDIATE

The overall goal of this program is to vary your heart rate by elevating and lowering it several times, providing you with a challenging cardiovascular workout.

ADVANCED

The overall goal of this program is to raise your heart rate with high effort levels for an advanced cardiovascular workout.

INTERVALS

The overall goal of this program is to vary your workout load, taking you from peak level to recovery eight times throughout your workout.

ENDURO

The overall goal of this program is to increase intensity toward a peak without recovery until the cooldown.



SELECT PROGRAM

Press **PROGRAMS** at any time to display the programs selection screen. Scroll through the program previews with center “+/-” keys and select the program that best suits your desired workout by pressing **NEXT**. The display will now ask you to enter the program parameters.



SELECT PROGRAM MAXIMUM EFFORT LEVEL

The display will prompt you to set a Max Effort using the keypad or center “+/-” keys. This will scale the effort level curve so that the maximum effort equals your selection. Select your maximum effort level and press **ENTER**, **NEXT**, or wait three seconds.



SELECT PROGRAM TIME

The display will prompt you to set a Program Time using the keypad or center “+/-” keys. You can enter a time between 10-99 minutes. This will scale the 20 segments of the program equally throughout your selected time. Select your time and press **ENTER**, **NEXT**, or wait three seconds.

Press the  button to begin.



As soon as you begin, the Program Progress screen becomes available. The effort level is shown as 20 bars of a bar graph. The higher the bar, the higher the effort level for that segment will be. Program progress is indicated by the lines that fill in each of the grade segments as they are completed.

Push **NEXT** at any time to view any of the other display screens during your program. If you are in a display screen other than the Program Progress screen during a segment change, the display will temporarily show the Program Progress screen then bring you right back to the screen you were in. During a segment change, the grade window will flash only if there is a change in either of them in the next segment.

If you wanted to run the Advanced Program with a program time of 25:00 minutes, a maximum effort level of 16, you would...

1. Press the  button.
2. Press center “+” key 2 times and then **NEXT**.
3. When asked to enter Max Effort, press “1”, “6”, **ENTER** on the keypad.
4. When asked to enter Program Time, press “2”, “5”, **ENTER** on the keypad.
5. Press the  button to begin.

NOTE: All numeric entries can also be entered or modified by adjusting the entry value with the center “+/-” keys.

The Cardio Trainer has storage capacity for five User Program Profiles, which you can create and change. The elliptical will remember these programs even if you unplug it from the wall. Each of the five User Program profiles will be pre-loaded with copies of the five built-in programs, until you use and change these programs.

As you use the User Programs, simply make effort level changes to suit your needs. The Cardio Trainer will remember your changes via its Learn Mode.

Follow these steps to run a User Program:



SELECT PROGRAM

Press **PROGRAMS** at any time to display the programs selection screen. Scroll through the program previews with center “+/-” keys and select one of the five User Programs by pressing **NEXT**. The display will now ask you to enter the program time.



SELECT PROGRAM MAXIMUM EFFORT LEVEL

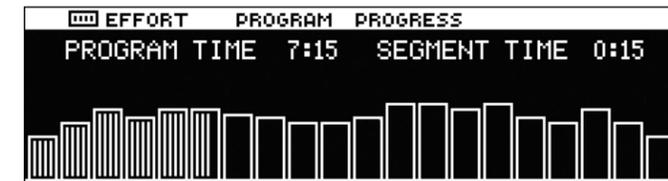
Using the keypad, select a Program Time from 10-99 min. This will scale the 20 segments of the program equally throughout your selected time. Select your time and press **ENTER**, **NEXT**, or wait three seconds.



SELECT PROGRAM TIME

The display will prompt you to set a Program Time using the keypad or center “+/-” keys. You can enter a time between 10-99 minutes. This will scale the 20 segments of the program equally throughout your selected time. Select your time and press **ENTER**, **NEXT**, or wait three seconds.

Press the  button to begin.



As soon as you begin, the Program Progress screen becomes available. The grade is shown as 20 bars of a bar graph. The higher the bar, the higher the effort level for that segment will be. Program progress is indicated by the lines that fill in each of the effort level segments as they are completed. As the program advances to the next program segment, whatever effort level settings you made in the previous setting will be stored in memory.

If you wanted to run for 30:00 minutes and edit User Program 1 as you go by adjusting effort level during the workout, you would...

1. Press the  button.
2. Press center “+” key 5 times and then **NEXT**.
3. When asked to enter Program Time, press “3”, “0”, **ENTER** on the keypad.
4. Press the  button to start the program.
5. Adjust the effort level during your workout to customize your User Program.

Edit Mode allows you to edit the effort level for each of the 20 program segments without actually exercising on the elliptical. The Edit Mode is an excellent way to modify a program that you have created while exercising in a User Program.

Follow these steps to edit the User Program using Edit Mode:



SELECT PROGRAM

Press **PROGRAMS** at any time to display the program selection screen. Scroll through the program previews with center “+/-” keys and select one of the five User Programs to edit by pressing **NEXT**. The display will now ask you to enter the program time.



SELECT PROGRAM TIME

Using the keypad, select a Program Time from 10-99 min. This will scale the 20 segments of the program equally throughout your selected time. Select your time and press **ENTER**, **NEXT**, or wait three seconds.



The screen will read, “**PRESS START TO BEGIN OR NEXT TO EDIT**”, PRESS **NEXT** to enter Edit Mode.



EDITING SEGMENTS

When you first enter Edit Mode, you are in control of Segment 1 (noted by triangle cursor). Use the Effort “+/-” keys and to manually set the effort level in each segment.

MOVING FROM SEGMENT TO SEGMENT

Use the center “+” key to move right and the center “-” to move left.

EXITING EDIT MODE

Once you have completed editing your User Program, you can start your User Program by simply pressing **START** at any time. Furthermore, if you attempt to advance the cursor past the 20th segment, you will be prompted with “**PRESS START TO BEGIN OR NEXT TO EDIT**” screen. You can also exit Edit Mode by pressing **MANUAL**, **HRC**, or **PROGRAMS** at any time. Any changes you make during edit mode are permanently saved in that User Program even if you unplug the elliptical.

If you wanted to manually create a 30 minute User Program prior to your workout starting with an effort level of 10% and then progressing to an effort level of 15%, you would...

1. Press the button.
2. Press center “+” key 5 times and then **NEXT**.
3. When asked to enter Program Time, press “3”, “0”, **ENTER** on the keypad.
4. Press to enter **EDIT MODE**.
5. Press the effort “+/-” keys to set the effort level to 10%.
6. To edit the 1st Segment elevation using the keypad, press **QUICK GRADE**, “3”, **ENTER**.
7. Press center “+” key to advance to the Segment 2.
8. Press Speed “+/-” keys to set the effort level to 15%.
9. Press to start the program.

These specialty programs have been designed to monitor and achieve a specific goal you may have every time you get on your Cardio Trainer. Whether you want to go for a 3-mile run, burn 1,000 calories, or simply exercise for 15 minutes, the Goal Progress screen will accurately assess your progress with a variety of stats. During these programs you will retain full manual control.

Using Specific Goal Programs

Press **PROGRAMS** at any time to display the programs selection screen. Scroll through the program previews with center “+/-” keys and select the Goal Program that best suits your desired workout by pressing **NEXT**. The display will now ask you to enter the program parameter.



TIME GOAL PROGRAM:

The display will prompt you to set a Program Time Goal using the keypad or “+/-” center keys. You can enter a time between 10-99 minutes. Select your time and press **ENTER**, **NEXT**, or wait three seconds.



DISTANCE GOAL PROGRAM:

The display will prompt you to set a Program Distance Goal using the keypad or “+/-” center keys. You can enter a distance between 0.1-99.9 miles (km in metric). Select your distance and press **ENTER**, **NEXT**, or wait three seconds.



CALORIE GOAL PROGRAM:

The display will prompt you to set a Program Calorie Goal using the keypad or “+/-” center keys. You can enter a calorie goal between 10-9,999 calories. Select your calories and press **ENTER**, **NEXT**, or wait three seconds.

Press the button.



As soon as you begin, the Goal Progress screen becomes available. This screen shows your Specific Goal, time remaining until completion, and other statistics. If you are in the Distance or Calorie Goal programs, your goal statistic will be counting down (noted by negative sign).

Push **NEXT** at any time to view any of the other display screens during your program.

If you wanted to burn 650 calories in the Calorie Goal program you would...

1. Press the button.
2. Press center “-” key 2 times and then **NEXT**.
3. When asked to enter **CALORIE GOAL**, press “6”, “5”, “0”, **ENTER** on the keypad.
4. Press to begin.

Heart Rate Control programs require the use of the contact grips or wireless chest strap (see *Heart Rate Monitors*).

The Cardio Trainer has the ability not only to display your heart rate, but also to automatically vary the effort level based upon your heart rate via its Heart Rate Control (HRC) programs. Target training allows you to maximize your workout performance while minimizing your workout time.

Program Protocols: HRC vs. Interval HRC

- HRC Program maintains the user's heart rate at the target throughout the duration of the training segments.
- Interval HRC Program alternates between the target and 80% of target, giving the user an opportunity to exercise at different intensity levels.

Segment	Stage	% of Target Heart Rate	
		HRC	Interval HRC
1	Warm up	70	70
2	Warm up	80	80
3	Warm up	90	90
4-18	Training	100	Alternating 100 & 80
19	Cool Down	90	90
20	Cool Down	80	80

Whether you are in a Heart Rate Control program or in Manual Mode, the Cardio Trainer allows you to accurately monitor your heart rate via its Heart Rate Status Screen. To access it, simply press NEXT to scroll through the selectable displays in the center LCD.

Heart Rate Status Screen:



Features:

- HEARTRATE STATUS
- TIME IN TARGET ZONE
- TOTAL TIME
- MINIMUM, MAXIMUM, WARMUP, TARGET, AND COOL DOWN PULSE
- ANIMATED ZONE HEART AND ZONE LIMITS
- ADJUSTABLE TARGET PULSE

Follow these steps to run an HRC program:



SELECT PROGRAM

To select an HRC program press the HRC button. Scroll through the program previews with center “+/-” keys and select HRC or INTERVAL HRC by pressing NEXT.



3.5

SELECT TARGET PULSE

The display will prompt you to enter your Target Pulse using the keypad or center “+/-” keys. This will set the target pulse and the elliptical will vary the effort level in an effort to reach this heart rate.

Select your target pulse and press ENTER, NEXT, or wait three seconds.



20:00

SELECT PROGRAM TIME

The display will prompt you to set a Program Time using the keypad or “+/-” center keys. For HRC, you can enter a time between 20-99 minutes. This will scale the 20 segments of the program equally throughout your selected time.

Select your time and press ENTER, NEXT, or wait three seconds.



Press the START button.

Remember, you can adjust the program's target heart rate in the middle of your workout in the Heart Rate Status Screen using the center “+/-” keys

If you wanted to work out with the HRC program with a target pulse of 140, for 30:00 minutes, but you realize into the program that your Warm Up Pulse (98 bpm) is too difficult and want to lower it to 88 bpm, you would...

1. Press the button.
2. NEXT to select the Heart Rate Control Program.
3. When asked to enter Target Pulse, press “1”, “4”, “0”, ENTER on the keypad.
4. When asked to enter TIME, press “3”, “0”, ENTER on the keypad.
5. Press to begin.
6. Press center “-” key ten times so that the Warm Up Pulse lowers to 88 in the Heart Rate Status Screen.

The User Heart Rate Control (HRC) program is designed to allow you to set the target heart rate for each of the 20 program segments during or before your workout. To customize a User HRC Program during your workout, simply adjust your Target Heart Rate using the center “+/-” keys in the Heart Rate Status Screen. Any Target Heart Rate changes you make during your workout will be saved in that User HRC Program.

If you want to edit your User HRC Program before your workout, follow these steps:



SELECT PROGRAM

To select an HRC program to edit press the HRC button. Scroll through the program previews with center “+/-” keys and select one of the 2 User HRC Programs to edit by pressing NEXT.

SELECT PROGRAM

The display will prompt you to set a Max Speed using the keypad or center “+/-” keys. Select your speed and press ENTER, NEXT, or wait three seconds.

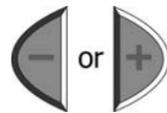
SET PROGRAM TIME

The display will prompt you to set a Program Time using the keypad or “+/-” center keys. For HRC, you can enter a time between 20-99 minutes. This will scale the 20 segments of the program equally throughout your selected time. Select your time and press ENTER, NEXT, or wait three seconds.

The screen will read, “PRESS START TO BEGIN OR NEXT TO EDIT”. Press START to run the program displayed in the program preview or NEXT to enter Edit Mode and make changes.

EDIT MODE

When you first enter Edit Mode, you are in control of Segment 1 (noted by triangle cursor). Use the numeric keypad to enter the target pulse for that segment. Alternatively, you can use the Speed “+/-” keys to manually set the target pulse for each segment.



MOVING FROM SEGMENT TO SEGMENT

Use the center “+” key to move right and the center “-” to move left.

EXITING EDIT MODE

Once you have completed editing your User HRC Program, you can start your User HRC Program by simply pressing START. Furthermore, if you attempt to advance the cursor past the 20th segment, you will be prompted with “PRESS START TO BEGIN OR NEXT TO EDIT” screen. You can also exit Edit Mode by pressing MANUAL MODE, HRC, or PROGRAMS at any time. Any changes you make during edit mode are permanently saved in that User HRC Program even if you unplug the elliptical.

If you wanted to edit the USER 1 HRC Program prior to your workout with a program time of 30:00 minutes to have a 1st Segment Target Heart Rate of 105 and the 2nd of 110, you would...

1. Press the  button.
2. Press center “+” key 2 times and then NEXT.
3. When asked to enter Max Speed, press “4”, “5”, ENTER on the keypad.
4. When asked to enter TIME, press “3”, “0”, ENTER on the keypad.
5. Press Next to enter EDIT MODE (pressing START starts program in preview).
6. To edit the 1st Segment Target Pulse using the keypad, press “1”, “0”, “5”, ENTER.
7. Press center “+” key to advance to Segment 2.
8. Press Speed “+/-” keys to adjust to a Target Pulse of 110.
9. Press  to start the program.

The Cardio Trainer includes 2 fitness tests and 1 fitness protocol. Based on your specific age, gender, and performance they calculate your fitness level. The Balke and the Firefighter Fitness Tests are heart rate controlled.

Balke Fitness Test (HRC: must use AccuTrack or Wireless Chest Strap)



Test Parameters

- Maximum Speed: 55 RPM
- Maximum Heart Rate: 80% of Maximum Heart Rate (see *Heart Rate Monitoring*)

Description

It’s a heart rate controlled, walking pace, variable effort fitness test. The test increases in difficulty in an effort to raise your heart rate to a target. Upon reaching your target heart rate, the test will terminate and calculate a fitness assessment based on your performance (VO₂ Max Score).

Firefighter (Gerkin) Fitness Test (HRC: must use AccuTrack or Wireless Chest Strap)



Test Parameters

- Maximum Speed: 60 RPM
- Maximum Heart Rate: 85% of Maximum Heart Rate(see *Heart Rate Monitoring*)

Description

It’s a heart rate controlled, variable speed and effort fitness test. The test increases in difficulty in an effort to raise your heart rate to a target. Upon reaching your target heart rate, the test will terminate and calculate a fitness level based on your performance (VO₂ Max Score).

What is VO₂ Max?

A person’s fitness level can be measured by the amount of oxygen his or her body can consume while exercising at maximum capacity. VO₂ Max is a measurement of the maximum amount of oxygen in milliliters an individual can use in one minute per kilogram of body weight. For years, only fitness trainers and doctors had access to this intricate fitness calculation. Fortunately, the Cardio Trainer not only takes care of all the complex VO₂ Max calculations, but also gives you a simple evaluation anyone can understand.

Scores may vary due to different line voltages, component tolerances, and individual’s affinity towards each test’s parameters. For a more accurate VO₂ Max calculation, take the average of the two scores (Balke and Firefighter Fitness Test).

Fitness Protocols:

Army 2-Mile Fitness Test



Description

These are hands free, complete as fast as you can fitness assessment runs. Fitness Protocols come equipped with Automatic Transmission software. As you pedal faster to increase your speed, the elliptical will automatically increase the effort level yielding a faster “running” (MPH) speed. Vice versa, when you slow down, the elliptical will automatically decrease effort level yielding a slower “running” (MPH) speed. Upon completion you will receive an assessment score (0-100) or superlative.

If you want to take the Army 2 Mile Fitness Test, follow these steps:



SELECT PROGRAM

Press **PROGRAMS** at any time to display the programs selection screen. Scroll through the program previews with center “+/-” keys and select the Army 2 Mile Fitness Test by pressing **NEXT**. The display will now ask you to enter your age.



ENTER YOUR AGE

Using the keypad or center “+/-” keys, select your age from 10-99 and press **ENTER**, **NEXT**, or wait three seconds. This affects the scaling of the fitness score since it references the user’s demographics.



ENTER YOUR GENDER

Using the center “+” key, toggle between **MALE** and **FEMALE** to select your gender. Once your gender is displayed on the center display, press **ENTER**, **NEXT**, or wait three seconds. This affects the scaling of the fitness score since it references the user’s demographics.

Press the button.

Complete the 2-mile run as fast as possible by manually controlling your speed. Hitting **PAUSE**, **STOP**, **MANUAL**, **HRC**, or **PROGRAMS** during the test will invalidate and terminate the test.

As soon as you begin, the Goal Progress screen becomes available. This screen shows your Specific Goal (2 Miles), time remaining until completion, Projected Score and other statistics. The distance statistic is counting down (noted by negative sign).

DISTANCE	ARMY 2 MILE RUN	CALORIES
- 0.99	PROJECTED SCORE 83	118
PACE	TIME REMAINING	CAL/HR
7:30	7 MIN 25 SEC	934
LAP		PULSE
4		128

As you pedal faster to increase your speed, the elliptical will automatically increase the effort level yielding a faster “running” (MPH) speed. Vice versa, when you slow down, the elliptical will automatically decrease effort level yielding a slower “running” (MPH) speed.

Upon completion, you will receive a score 0-100 and fitness assessment based on your time and demographics.

Score	Rating
85-100	Excellent
70-84	Good
32-69	Average
17-31	Fair
0-16	Low

If you were 25 years old, a female, and wanted to take the Army 2 Mile Fitness Test, you would...

1. Press the button.
2. Press center “-” key 1 time and then **NEXT**.
3. When asked to enter **YOUR AGE**, press “2”, “5”, **ENTER** on the keypad.
4. When asked to enter **YOUR GENDER**, press center “+” key once and press **NEXT**.
5. Press to begin.

If you want to take the Balke Fitness Test, follow these steps:



SELECT PROGRAM

Press the **HRC** button at any time to display the HRC programs selection screen. Scroll through the program previews with center “+/-” keys and select the Balke Fitness Test by pressing **NEXT**. The display will now ask you to enter your age.



ENTER YOUR AGE

Using the keypad or center “+/-” keys, select your age from 10-99 and press **ENTER**, **NEXT**, or wait three seconds. This determines the test’s target pulse and the scaling of the fitness assessment since it references the user’s demographics.



ENTER YOUR GENDER

Using the center “+” key, toggle between **MALE** and **FEMALE** to select your gender. Once your gender is displayed on the center display, press **ENTER**, **NEXT**, or wait three seconds. This affects the scaling of the fitness score since it references the user’s demographics.

Note: Before pressing start, you will be prompted with the heart rate that the fitness test will target. This heart rate calculation is derived from statistical heart rate capacity averages (see **Heart Rate Monitoring**). If you are uncomfortable with the target heart rate displayed or feel discomfort at any point during the fitness test, stop the test.

Press the button.

You must hold the contact grips or wear your wireless chest strap during the entire test. If the elliptical loses a heart rate signal for more than 30 seconds, the test will be invalidated and terminated.

This HRC fitness test is fully automated and will increase in difficulty from segment to segment until the user achieves the target heart rate (80% of maximum heart rate). Once you reach the target pulse, a 30 second countdown will follow and end the test. Any key-strokes during the test besides **NEXT** will invalidate and terminate the test.

As soon as you begin, the Heart Rate Status screen becomes available. This screen shows your Target Pulse, Time, Heart Rate Status, and Time in Zone.

Upon completion, you will receive a VO₂ Max score and fitness assessment based on your performance versus your demographics.

Men

AGE	<20	20-29	30-39	40-49	50-59	60-69	>69	RATING
VO ₂ Max	>65	>62	>58	>54	>52	>50	>48	SUPERIOR
	57-65	54-62	50-58	46-54	44-52	42-50	40-48	EXCELLENT
	47-56	44-53	40-49	37-45	35-43	32-41	30-39	GOOD
	37-46	35-43	32-39	28-36	26-34	24-31	22-29	AVERAGE
	<37	<35	<32	<28	<26	<24	<22	LOW

Women

AGE	<20	20-29	30-39	40-49	50-59	60-69	>69	RATING
VO ₂ Max	>62	>58	>54	>51	>47	>44	>42	SUPERIOR
	54-62	50-58	46-54	43-51	39-47	36-44	34-42	EXCELLENT
	42-53	39-49	35-45	32-42	29-38	25-35	23-33	GOOD
	34-41	32-38	29-34	25-31	22-28	19-24	15-22	AVERAGE
	<34	<32	<29	<25	<22	<19	<15	LOW

If you were 25 years old, a female, and wanted to take the Balke Fitness Test, you would...

1. Press the button.
2. Press center “-” key 1 time and then **NEXT**.
3. When asked to enter **YOUR AGE**, press “2”, “5”, **ENTER** on the keypad.
4. When asked to enter **YOUR GENDER**, press center “+” key once and press **NEXT**.
5. Press to begin.

If you want to take the Firefighter Fitness Test, follow these steps:



SELECT PROGRAM

Press the HRC button at any time to display the HRC programs selection screen. Scroll through the program previews with center “+/-” keys and select the Firefighter Fitness Test by pressing **NEXT**. The display will now ask you to enter your age.



ENTER YOUR AGE

Using the keypad or center “+/-” keys, select your age from 10-99 and press **ENTER**, **NEXT**, or wait three seconds. This determines the test’s target pulse.



ENTER YOUR GENDER

Using the center “+” key, toggle between MALE and FEMALE to select your gender. Once your gender is displayed on the center display, press **ENTER**, **NEXT**, or wait three seconds.

Note: Before pressing start, you will be prompted with the heart rate that the fitness test will target. This heart rate calculation is derived from statistical heart rate capacity averages (see *Heart Rate Monitoring*). If you are uncomfortable with the target heart rate displayed or feel discomfort at any point during the fitness test, stop the test.



Press the **START** button.

You must wear the heart rate transmitter strap during the entire test. If the elliptical loses a heart rate signal for more than 30 seconds, the test will be invalidated and terminated.

VO ₂ Max	RATING
>59	SUPERIOR
50-58	EXCELLENT
40-49	GOOD
32-39	AVERAGE
<32	LOW

This HRC fitness test is fully automated and will increase in difficulty from segment to segment until the user achieves the target heart rate (85% of maximum heart rate). Once you reach the target pulse, a 30 second countdown will follow and end the test. Any keystrokes during the test besides **NEXT** will invalidate and terminate the test.

As soon as you begin, the Heart Rate Status screen becomes available. This screen shows your Target Pulse, Time, Heart Rate Status, and Time in Zone.

Upon completion, you will receive a VO₂ Max score and fitness assessment based on your performance versus the general population.

If you were 25 years old, a female, and wanted to take the Firefighter Fitness Test, you would...

1. Press the button.
2. Press center “-” key 1 time and then **NEXT**.
3. When asked to enter YOUR AGE, press “2”, “5”, **ENTER** on the keypad.
4. When asked to enter YOUR GENDER, press center “+” key once and press **NEXT**.
5. Press to begin.

The Cardio Trainer is equipped with onboard self-diagnostics. If the elliptical experiences any errors during operation, the elliptical will display the error message and the option to further investigate by commencing the elliptical’s self-diagnostics software.



When you choose the option to enter diagnostics you will be prompted with a warning screen (shown below). After reading it, straddle the elliptical by stepping on the traction strips on the sides of the running surface and press **NEXT**.



The elliptical will now systematically test all of the individual components of the elliptical. During some of its tests, it will prompt you with simple “Yes or No” questions to assist with the diagnosis. Answer the questions using the center “+/-” keys when prompted.



Once the Self-Diagnostics has completed all of the tests, it will read one of the two messages along the bottom: “No Errors Detected” or “Error Detected, Contact Service Provider”.



Note: You can also manually initiate the self-diagnostics mode by holding the center “+”, “-”, keys and then pushing **START** when the elliptical is off.

The Cardio Trainer elliptical comes standard with a wireless heart rate monitoring device and contact heart rate grips (see Heart Rate Monitors) to give you feedback on how your body is affected by your workout. We will take a look at a few basic concepts of heart rate monitoring so you can better understand how it all works and how to maximize its use to allow you to reach the fitness level you desire.

WHAT IS EXERCISE INTENSITY?

Exercise intensity is a measure of how hard you are working at a given time during exercise. The American College of Sports Medicine (ACSM), the world's leading medical and scientific authority on sports medicine and fitness, recommends that every individual involved in an exercise program know how hard his/her body is working during exercise.

Your heart provides key information for determining how intensely you are working during exercise. Your heart rate (how many times your heart beats per minute) is really an efficiency rating for your entire body. The number of times your heart beats during each minute of exercise is a measurement of the intensity of the exercise. If your heart rate is low, exercise intensity is low; if your heart rate is high, your exercise intensity is high.

WHAT IS MAXIMUM HEART RATE?

Maximum Heart Rate (MHR) is the maximum attainable heart rate your body can reach before total exhaustion. True maximum heart rate is measured during a fatigue or "stress" test. This test must be done in a clinical setting and is not practical or accessible for most people. Fortunately, your maximum heart rate can be established with a high degree of accuracy using the following simple formula:

Estimated Maximum Heart Rate = 220 minus your age.
If John is 35 years old, what is his estimated maximum heart rate?
 $220 - 35 = 185$
John's Estimated Maximum Heart Rate = 185

WARNING: The use of this formula assumes no underlying heart or respiratory disease or other condition, which could be adversely affected by exercise. Consult your doctor before using this chart!!!

185 beats per minute is the estimated maximum number of times John's heart can beat before his body would fatigue or "max out". This number is extremely helpful because it tells us the absolute highest exercise intensity John can handle before his body wears out. The ACSM says that during exercise, John should keep his heart rate below his maximum so that he will not become exhausted and have to quit. In fact, the ACSM gives John a specific percentage range of his maximum heart rate to exercise in, known as his Target Heart Rate Zone (THRZ).

Why should I monitor exercise intensity?

Your heart is the most important muscle in your body and, like all muscles, must be exercised regularly to remain strong and efficient. According to fitness experts, exercise is more effective when you work out in a specific heart rate range or zone. This is referred to as your Target Heart Rate Zone (THRZ) and is reflected by the number of beats per minute your heart pumps. This zone can vary greatly depending on your age, fitness level and various other factors. If your heart rate is too low during exercise, your body reaps little or no benefit. This means you're not likely to see the results you want, like weight loss or increased endurance. If your heart rate is too high during exercise, you may tire too quickly and become frustrated, or even run the risk of injury. In this case, you're likely to quit exercising because it's simply too difficult.

Monitoring exercise intensity helps you to stay at a level of exercise that allows you to accomplish your goals. In fact, the American College of Sports Medicine (ACSM) recommends that, in order to get the most benefit from your cardiovascular exercise, you should work within your Target Heart Rate Zone for at least 20 to 60 minutes per workout, 3 to 5 times per week. Knowing your exercise intensity (heart rate) will allow you to work at the right level of exercise to accomplish this.

How do I determine my Target Heart Rate Zone?

Your Target Heart Rate Zone represents the minimum and maximum number of times your heart should beat in one minute of exercise. The ACSM recommends that all individuals should work within a Target Heart Rate Zone of 60% to 85% of Maximum Heart Rate. This means that your heart rate during exercise should not fall below 60% or rise above 85% of your maximum heart rate. Let's look at John from our earlier example. John is 35 years old, so his estimated maximum heart rate is 220 minus 35, or 185 beats per minute (bpm). The ACSM says that John should exercise between 60% and 85% of 185 beats per minute to stay in his THRZ. Let's determine John's THRZ:

John's Estimated Maximum Heart Rate:	185 bpm
Lower Target Limit: $185(\text{MHR}) \times 0.6$	111 bpm
Upper Target Limit: $185(\text{MHR}) \times 0.85$	157 bpm
John's Target Heart Rate Zone	111-157 bpm

111-157 beats per minute is the range or zone John will want to keep his heart rate in during exercise in order to achieve his goals. If John is a beginning exerciser, he'll want to stay at the low end of his THRZ. If John is a more advanced exerciser, he may want to work at the higher end of his THRZ to challenge himself more.

DIFFERENT INTENSITY LEVELS WITHIN A TARGET HEART RATE ZONE

Beginner:	60% of MHR
Weight Loss:	75% of MHR
Aerobic:	85% of MHR

What is a heart monitor?

A monitor consists of two parts: a transmitter and a receiver. Each time your heart beats, the electrodes detect the beat and send the information to the receiver on the elliptical. Your current heart rate (bpm) is visible on the elliptical's display.

Every ElliptiMill comes with AccuTrack Contact Heart Rate Grips that can be used in place of the wireless chest strap.

CONTACT GRIPS (shown on right)

To use the Contact Grips follow these steps:

Grab the contact grips.

The center display will start flashing to communicate that the system is active and acquiring a signal.

After about 5-10 seconds, your heart rate will be displayed and remain displayed as long as you hold on to the grips.

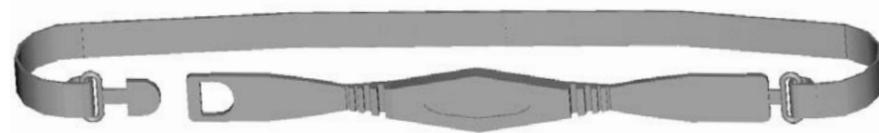
Once you release them, the display will automatically revert to the statistic displayed prior to grabbing the grips.

Note: If you are wearing the wireless chest strap, the AccuTrack Contact Heart Rate Grips will override the wireless signal while your hands are on the grips. Once you release the grips, the elliptical will default back to the wireless signal.

The contact grips are designed to reliably operate up to approximately 70 RPM. Higher speeds can cause the user's hands to shift and hinder the heart rate signal acquisition. For the most reliable results, use the wireless chest strap.



WIRELESS HEART RATE CHEST STRAP TRANSMITTER (shown below)



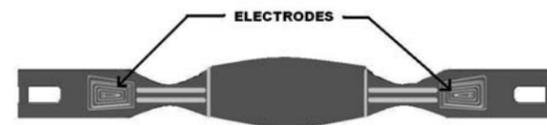
To use the Wireless Chest Strap follow these steps:

SECURE THE CHEST STRAP

Center the transmitter on the chest as high under the pectoral muscles (breasts) as possible. Tighten the strap so that the belt is as tight as possible without being uncomfortable.

APPLY CARDIO GEL TO THE ELECTRODES

A tube of Landice Cardio Gel was shipped with your ElliptiMill. Pull the belt away from your chest and apply a small dab to each electrode. This will ensure a strong electrical contact between the transmitter and your chest.



The Heart Rate Transmitter works best against bare skin. Since sweat (saltwater) is an electrical conductor, the transmitter will work over a T-shirt if the shirt is wet with sweat. If you are having trouble getting an accurate pulse reading, try wearing the belt against bare skin.

CARE AND MAINTENANCE

The transmitter activates when the belt is properly wetted. In order to conserve battery life, wipe the electrodes dry when not in use. Clean monthly with mild soap and water and wipe dry. Do not use abrasives in cleaning, as they can cause permanent damage to the electrodes. Do not bend or stretch the electrode strips, especially when storing the belt transmitter.

Using Heart Rate Monitors

KEEPS YOU SAFE

Exercising too hard can put you at risk for injury. A heart rate monitor reminds you of the safe and effective heart rate intensity at which you should exercise and warns you when your workouts go too far.

KEEPS YOU IN YOUR ZONE

If you want to reach your exercise goals, it's important to stay in your THRZ during workouts. A heart rate monitor is your constant reminder of the intensity and quality of each workout session.

SAVES YOU TIME

Our heart rate monitor is wireless and easy to use, so you can view valuable heart rate information at any time during exercise without interrupting or stopping your workout.

GIVES YOU ACCURATE FEEDBACK

Our heart rate monitor is more accurate so you know exactly what your level of exercise intensity is during workouts. Pulseometers have a high margin for error. Manual pulse measurements during exercise can result in errors as high as plus or minus 15 beats per minute, with the risk of potential error increasing as heart rate increases.

The ElliptiMill includes two separate heart rate monitoring systems: The Wireless Heart Rate Chest Strap Transmitter and the AccuTrack Contact Grips.

Workout Tips

FREQUENCY OF EXERCISE

Exercise 3-5 times a week; 20-60 minutes per day.

DURING YOUR WORKOUT

- Monitor your breathing. Can you carry on a normal conversation or are you out of breath? If you use the heart rate method of monitoring intensity, are you within the heart rate zone?
- Change the speed and effort level as needed to stay within the breathing and heart rate criteria.

AFTER YOUR WORKOUT

- Drink a large glass of water (you'll recover faster).
- Do some light stretching exercises.
- Record that you completed the workout on your calendar.

KEEPING TRACK OF PROGRESS

- Keep a calendar that shows scheduled and actual workouts.
- Record every workout you complete.
- Compare planned with actual workouts completed. Aim for 90% completion. If you're averaging less than 90%, reevaluate your schedule and examine why you're missing 10% of your workouts (and the extra benefits from those missing workouts).

CALORIE COMPUTATIONS

- Calories and calories/hour are calculated using the formulas developed by the ACSM.
- The computations are based on a 150-pound person, which is a close enough estimate for most people. If you wish the equations to be more precise, you may enter your weight into the elliptical (see **Getting Started**).



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