NAUTILUS

CHANGING THE GAME IN HEALTH AND FITNESS™

Model T9.16

Be Strong.

Model T9.16

Nautilus® Commercial Series Treadmill Owner's Manual

NAUTILUS®

INTRODUCTION

Thank you for purchasing the Nautilus® Commercial Series T9.16 Treadmill. For more than 30 years Nautilus has been producing the world's finest fitness equipment used in health clubs and homes around the globe. We hope this product exceeds your expectations and is a valuable tool for your facility.

Please carefully read through this manual to familiarize yourself with the operation of your new Nautilus® treadmill. Doing so will help to insure that your users get the most out of your treadmill, enjoying safe and effective workouts in the many miles ahead.

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Model T9.16

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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.

WARNING Do not begin an exercise program without first consulting a physician.

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.

WARNING Secure long hair and loose clothing before use.

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 de-conditioned 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 Nautilus, 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.

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: Read this manual in full before operating the treadmill. Failure to follow these guidelines can produce a serious or possibly fatal electrical shock hazard or other serious injury. Consult a qualified electrician as required.

1. The controller Stop Key does not turn off the electrical current to the treadmill. The treadmill continues to draw power, even when the controller is off. To avoid electric shock, do not remove treadmill hood or place hands beneath the treadmill while the treadmill is plugged into a power source.
2. Do not start the treadmill when someone else is standing on the belt.
3. Keep speed and incline at the lowest settings when someone is getting on and off the treadmill.
4. Keep the area underneath and around the treadmill clear.
5. **WARNING** Never position the treadmill with the back end (direction of belt travel) facing a wall or any other objects such as furniture or other pieces of fitness equipment. Failure to do so can prevent safe exit of the treadmill in an emergency situation such as falling. Allow a minimum of four feet behind the treadmill and any objects.
6. Before each use of this equipment, check the power receptacle for signs of damage. Do not operate the equipment if the integrity of this item is in question.
7. To avoid potential safety and electrical problems, replace with manufacturers' specified parts only.
8. This equipment is classified Class I, Type B, ordinary equipment. Not protected against fluid ingress. Rated for continuous operation. Do not operate this equipment in the presence of flammable anesthetic mixtures.
9. Do not let liquid enter the controller. If it does, the controller must be inspected and tested for safety by an approved technician before it can be used again.
10. Increased risk due to leakage current can result if this equipment is not grounded properly.
11. The treadmill must be on an appropriate, dedicated electrical circuit. Nothing else should be connected to the circuit.
12. Do not stand on treadmill hood or front trim cover.
13. Close supervision is necessary whenever the machine is used by or near children, invalids, or disabled persons.

Failure to follow the conditions set forth below shall limit, to the extent allowed by law, Nautilus 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 treadmill and its accessories.

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

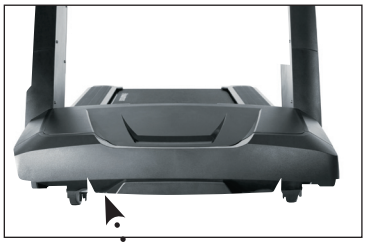
- The electrical wiring within the treadmill setting and the electrical installation of the treadmill must comply with the applicable local or provincial requirements.
- The equipment must be used in accordance with the instructions for use.
- For further information or instruction on use, maintenance or specifications, please contact your Authorized Nautilus® Fitness Dealer or Service Technician.

Treadmill Power Plug Receptacles

Attach power cord here if your treadmill will be facing a wall or will be parallel to a wall.

The Commercial Series T19.16 Treadmill has two power plug receptacles allowing you to plug in the treadmill from the front or the rear of the machine. The rear power cord receptacle, located underneath the right side of the side rail, should be used if the treadmill is going to be placed in the center of the room facing away from the wall. The front power cord receptacle, located on the front side of the motor pan, can be used if the treadmill is placed facing a wall or parallel to a wall.

Attach power cord here if your treadmill will face away from the wall .



Power Switch

Turning On the Power

After you have determined which end of the treadmill to plug in, the treadmill can be turned on by moving the power switch located at the front of the treadmill, to the ON position.

Understanding the Display and Controls

The treadmill display is a computerized panel used to operate the treadmill and see all workout data and operational status. You should familiarize yourself with the operation of the treadmill and the location of all keys before beginning use.

Limited Access Control/Magnetic Safety Stop

Limited-access control lets you restrict treadmill use to authorized personnel. It also lets you stop the treadmill in an emergency. The magnetically-activated control is located on the bottom of the display as shown. The limited-access control is deactivated on machines shipped from the factory.

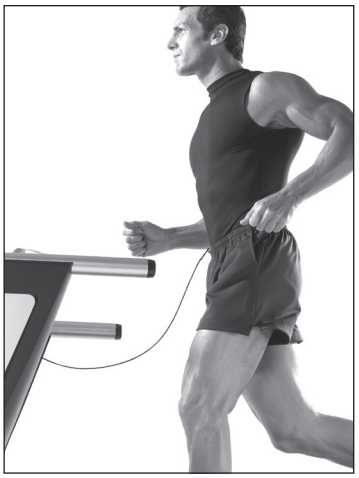
Emergency Stop Magnet

Magnetic Safety Stop Activation

To activate the limited-access control and restrict access, place the magnetic safety stop cord supplied with the treadmill in the designated area located below the display.

The magnet will activate the control. If you remove the key, the treadmill belt will stop and the controller will not respond to any key presses. Accumulated values will remain on the display until you turn off the power, or press [Clear].

The console will display a message, REPLACE MAGNET when you remove the magnetic key from its designated area. You must replace the key or deactivate the control to start the walk belt.



Attach magnetic safety cord onto clothing as shown.

Magnetic Safety Stop Deactivation

To deactivate the Safety Stop Cord and permit unrestricted access of the treadmill follow the steps below.

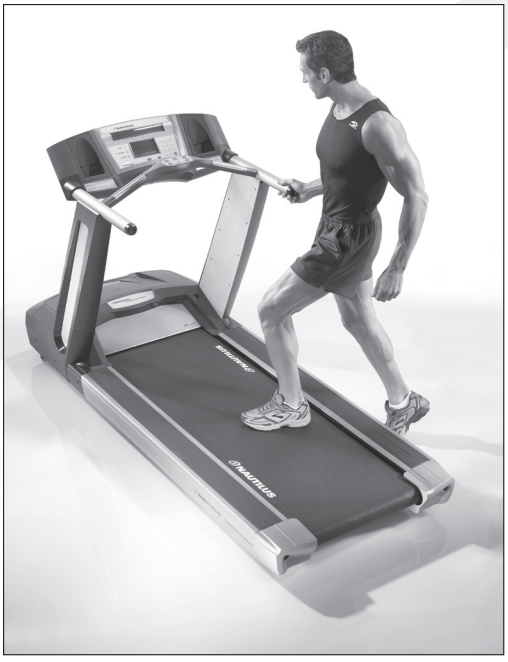
1. With the magnet key in place and the display at the opening message, SELECT WORKOUT, or, if the magnet key is removed and the display reads, REPLACE MAGNET, press [Speed UP], [3], [ENTER]. The display will read "CUSTOMIZE". Use the [Speed UP] or [Speed DOWN] keys to scroll through the options until the console displays ENABLE MAGKEY.
2. Press [ENTER], and the display will either read ON or OFF. Press [SPEED +] or [SPEED -] to toggle between ON and OFF. With OFF displayed, press [ENTER] to select OFF.
3. The display will show UPDATING for a few seconds, then display the OFF setting.
4. Next, turn off the power to the treadmill from the circuit breaker switch. The circuit breaker switch is located on the bottom front panel of the treadmill.
5. With the power to the treadmill off, remove the magnet key. Then, turn the power to the treadmill back ON at the circuit breaker switch.
6. The display will show the SELECT WORKOUT screen. The limited access control remains inactive, granting unrestricted access, until you turn the magnetic key option back on, or place the magnet back in its designated area.

IMPORTANT **If at any time the safety key is put back in place THE SAFETY CORD FEATURE REACTIVATES AUTOMATICALLY and must be turned off again using the above steps.**

Guidelines For Getting On and Off the Treadmill

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

1. The walking belt should be moving at minimum speed before the user steps onto the treadmill.
2. Stand next to the treadmill and place both hands on the front handrail.
3. Straddle the walking belt or step onto the side of the deck. Step onto the moving belt and begin walking.
4. (Optional) To get the feel of the moving belt place the foot nearest the treadmill on the walking belt and let it move backwards. Lift it and repeat several times until comfortable with the treadmill speed.
5. When walking comfortably on the treadmill, let go of the handrail.
6. While walking on the treadmill:
    - Face forward. Avoid looking down at the walking belt.
    - Maintain speed by keeping a consistent distance from the handrail.
    - Adjust the speed and incline as desired. Hold the handrail as the speed and incline change.
7. Before stepping off the treadmill, place one hand on the handrail, wait for the belt to stop, then step off.



Treadmill Display Functions

The following describes the display functions and specifications for the Commercial Series T9.16 Treadmill.

Incline — The treadmill incline is displayed in percentage of elevation. The T9.16 treadmill has an incline range of 0 to 15%.

Time — The selected 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.

Interval Time — The interval time is displayed in the lower display, upper left area. The interval timer counts down the remaining time within each interval.

Speed — The treadmill speed is displayed in miles per hour (or kilometers per hour). The Commercial Series T9.16 treadmill has a speed operation range of 0.5 mph to 12 mph (0.8 kph to 19.2 kph).

Heart Rate — Current heart rate is displayed next to the heart icon, in beats per minute, in the lower display, upper right area.

Percentage of Maximum Heart Rate — An approximation of maximal heart rate is calculated based on the latest American College of Sports Medicine predictive equation.

See the Heart Training programs starting on page 15 for more information.

Distance — Provides a cumulative total of the equivalent distance, in miles (or kilometers if your display is set to metric units), you have traveled.

Calories — Provides a current total of the number of calories burned during a workout. Note: this number is only an approximation as a user's caloric expenditure will vary significantly based on a persons age, gender, weight and metabolism.

Calories/Hour — Provides the rate at which calories are burned per hour at the current speed and incline.

Pace — Displays the walking/running pace in minutes per mile (or minutes per kilometer), or the time it will take you to complete one mile (or one kilometer) at your current rate. Pace is shown in the top text line.

Watts — During a workout, this statistic displays the power output at the

TREADMILL DISPLAY DEFINITIONS

current speed and incline, 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 display shows the current MET level. During the workout summary, the average MET level is displayed.

Workout Profile — The dot-matrix area of the display shows the actual course profile of the selected exercise program. The taller the column, the higher the incline and/or speed for that interval. The flashing column shows your current interval.

TREADMILL KEY FUNCTIONS

Remote Operation Controls (ROC™) — The Remote Operation Controls are located on the ergo bar in front of the console. The treadmill can be controlled from these keypads. The ROC™ keypad includes a Quick Start key, Speed UP and DOWN keys, Incline UP and DOWN keys, and a STOP key.

Quick Start Key — The Quick Start Key provides an immediate start to a workout session without having to provide any user information.

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.

Numeric Keypad (0-9) — The numeric keypad is located on the right side of the console. During program setup, this keypad allows you to quickly enter requested information such as time, age, speed, incline , weight, and heart rate.

Enter – The ENTER Key confirms workout selections and stores the information used by the console to calculate workout statistics.

Clear – During data entry, the CLEAR Key erases information from the console memory and backs up to the previous data entry prompt.

Incline Up & Down Keys — The treadmill incline may be changed at any time during a workout. Pressing the INCLINE UP key increases the incline and pressing the INCLINE DOWN key decreases the incline. The treadmill incline increases or decreases by increments of 0.5%.

Speed Faster & Slower Key — The treadmill belt speed may be changed at any time during a workout. Pressing the SPEED DOWN Key decreases the belt speed and pressing the SPEED UP key increases the belt speed. The belt speed increases or decreases by increments of 0.1 MPH (0.15 KM/H).

TREADMILL KEY FUNCTIONS

IMPORTANT **It is important to know that the speed change up or down is not immediate. Speed will gradually increase or decrease so be sure to allow the treadmill to adjust to a new speed before changing again to avoid overshooting your desired speed.**

Workout Program Keypad

The workout program keypad is located to the left of the display. There are six workout program keys, including a More Workouts key with multiple advanced program options.

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.
- Speed – 2.0 mph in Fat Burner, Calorie Burner or HR Zone Trainer. 1.0 mph in Manual.
- 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 programs do not have a specified default time. In this program, the console timer will count up to the maximum time of 99 minutes.

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 SPEED** – type in your desired speed. The T9.16 treadmill has a speed range of 0.5 mph – 12 mph.
- **ENTER TIME 5 - 99** – select the workout duration in one minute increments from five to 99.

Program Overview

The Commercial Series T9.16 treadmill has a wide variety of programming options with a great amount of flexibility to allow anyone of any fitness level to use.

The Quick Start Feature

Provides an immediate start from the intro display, 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, ENJOY WORKOUT is displayed, the workout begins with exercise statistics accumulating.

2. During the workout:

    - Speed may be changed at any time during the workout by pressing the [SPEED UP] key to increase the speed, or the [SPEED DOWN] key to decrease the speed. The new speed will continue through the rest of the workout until changed using the Speed keys.

    - Incline may be changed at any time during the workout by pressing the [Incline: UP] key to increase the incline, or the [Incline: DOWN] key to decrease the incline. The new incline will continue through the rest of the workout until changed using the Incline keys.

3. Press [STOP] to pause the workout. Press [STOP] again to end the workout. The workout statistics will be displayed, and then the console will revert back to the SELECT WORKOUT message.

5 Minute Demo

This is a five minute instructional program that guides the user through the operation of the machine and functions of the console keys. Once the 5 Minute Demo workout key is pressed, you will be guided through a five minute demonstration. At the end of the demo you can continue working out by pressing the T916 Workout key when prompted, or stop the workout.

T916 Treadmill Workout

This 20 minute workout is designed with various prompts to “coach” the user through the workout. Once the T916 Treadmill Workout key is pressed, the workout will progress throuh a pre-programmed routine with regular prompts to change speed or incline. You will have the option to add time to the end of the workout to go longer than 20 minutes.

The Manual Program

The Manual Program allows you to control the speed and incline of the treadmill during the workout, while accurately calculating exercise statistics based on your weight. The default speed is 1.0 mph unless changed during the data entry mode. The incline is 0%. The workout profile in the display window is divided into 30 equal intervals within the selected workout time. The profile is based on the MET level, with every 1 MET equating to one vertical bar. MET level is based on a combination of incline and speed.

To use the Manual program:

1. Press the [MANUAL] key. The message, MANUAL WORKOUT will be displayed in the text line and the workout profile displayed in the lower display.

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 SPEED - MPH (or ENTER SPEED – KMH if in Metric mode). Enter the desired speed 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 99:00.

5. The console will display ENJOY WORKOUT and the timer will begin.

   - Speed may be changed at any time during the workout by pressing the [SPEED UP] key to increase the speed, or the [SPEED DOWN] key to decrease the speed. The new speed will continue through the rest of the workout until changed using the Speed keys.

   - Incline may be changed at any time during the workout by pressing the [Incline: UP] key to increase the incline, or the [Incline: DOWN] key to decrease the incline. The new incline will continue through the rest of the workout until changed using the Incline 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 Custom Intervals Program

In the Custom Intervals workout, users can create a custom interval program by entering Rest Speed and Time, Work Speed and Time, and total # of intervals.

To use the Custom Intervals Program:

1.Press the MORE WORKOUTS key. Then, use the SPEED or INCLINE UP or DOWN keys to scroll through the program options. When the console displays "CUSTOM INTERVALS", press [ENTER] to accept.

2.The console will then 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.

3.The console will display "ENTER WORK SPEED – MPH" (or "ENTER WORK SPEED – KMH" if in Metric mode). Enter the desired work speed using the numeric keypad and press (ENTER). Or, press [ENTER] to accept the default value.

4.The console will then display "ENTER WORK TIME". Enter the desired time up to 9:59 and press (ENTER). Or, press [ENTER] to accept the default value.

5.The console will display "ENTER REST SPEED - MPH" (or "ENTER REST SPEED – KMH" if in Metric mode). Enter the desired rest speed using the numeric keypad and press (ENTER). Or, press [ENTER] to accept the default value.

6.The console will then display "ENTER REST TIME". Enter the desired time up to 9:59 and press (ENTER). Or, press [ENTER] to accept the default value.

7.The console will display "# OF INTERVALS". Enter the desired number of intervals, up to 15, using the numeric keypad and press (ENTER). Or, press [ENTER] to accept the default value.

8.The console will display "ENJOY WORKOUT" and the timer will begin.

- Speed may be changed at any time during the workout by pressing the [SPEED UP] key to increase the resistance, or the [SPEED DOWN] key to decrease the speed. Any changes to the speed will only change the speed in the current rest or work phase. To change the speed of the work phase, you must change the speed during a work phase. To change the speed of the rest phase, you must change the speed during a rest phase. Changing the speed will not change the look of the remaining profile; however, the new speed will continue through the rest of the workout.

- Incline may be changed at any time during the workout by pressing the [Incline: UP] key to increase the incline, or the [Incline: DOWN] key to decrease the incline. Any changes to the incline will only change the

incline in the current rest or work phase. To change the incline of the work phase, you must change the incline during a work phase. To change the incline of the rest phase, you must change the incline during a rest phase. Changing the incline will not change the look of the remaining profile; however, the new incline will continue through the rest of the workout.

Heart Rate (HR) Zone Trainer Program

WARNING!

User should consult a physician to determine an appropriate target heart rate in which to exercise in based on age, weight and physical condition. While Nautilus provides some target heart rate ranges, these are only approximations and should not be viewed as a medical recommendation.

The Heart Rate Zone Trainer program allows you to exercise at a selected target heart rate by automatically varying the intensity level (speed or incline) during the workout. The default target heart rate is equal to 70% of your maximum heart rate which is calculated by the following equation: Max HR = 215 – (.75 * Age). Target HR = Max HR * .7. To choose a different target heart rate (between 100 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.For best results, use a telemetry heart rate chest belt. However, you can also use the contact HR grips located on the ergo bar in front of the console. If you use contact HR, speed will be limited to a maximum of 4.5 mph. Further, HR Control will be limited to Incline changes only.

If you are using the telemetry HR method, 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.

If you will be using contact HR, then place your hands on the contact HR grips below the console.

2.Press the MORE WORKOUTS key. Then, use the SPEED or INCLINE UP or DOWN keys to scroll through the program options. When the console displays “HR ZONE TRAINER”, press [ENTER] to accept.

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: Max HR = 215 – (.75 * Age). Target HR = Max HR * .7. 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].

•During a workout, change to a new target heart rate that is between 100 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 SPEED – MPH" or ("ENTER SPEED – KMH" if in Metric mode). Enter the desired speed using the numeric keypad and press (ENTER). Or, press "ENTER" to accept the default value.

8.The console will display "HR CONTROL MODE, 1 – SPEED, 2 – INCLINE" (only when using telemetry HR – if using contact HR, skip to step 9). Enter the desired form of HR Control by pressing 1 for SPEED or 2 for INCLINE. Or, press (ENTER) to accept the default value. If contact HR is being used, then this message is skipped and INCLINE control is automatically selected.

9.The console will display "ENTER TIME 5-99." Enter the desired time and press [ENTER]. Or, press [ENTER] to accept the default value.

10.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 telemetry heart rate signal has been missing for the last 30 seconds.

•"HOLD HR SENSORS" – Indicates that the contact 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.

11.Press [STOP] to end the workout. The workout statistics will be displayed, and then the console will revert back to the "SELECT WORKOUT" message.

HR Intervals Program

The HR Intervals program allows the user to define an exercise Target HR, time at exercise Target HR, rest Target HR, time at rest Target HR and total exercise time. This program will change the intensity level by increasing or decreasing the speed or incline to keep the user in their defined Target HR zones.

To use the HR Intervals Program:

1.Press the MORE WORKOUTS key. Then use the SPEED or INCLINE UP or DOWN keys to scroll through the program options. When the console displays "HR INTERVALS", press [ENTER] to accept.

2.The console will then 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.

3.The console will display "ENTER AGE 10 - 99." Enter your age using the numeric keypad. Or, press [ENTER] to accept the default value of 40 years old.

4.The console will then display "ENTER WORK TARGET HR". Enter the desired Target HR using the numeric keypad and press (ENTER). Or, press [ENTER] to accept the default value.

5.The console will display "WORK 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 80% of your maximum heart rate which is calculated by the following equation: Max HR = 215 – (.75 * Age). Target HR = Max HR * .8. 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].

•During a workout, change to a new target heart rate that is between 100 and 180 beats per minute at any time by using the numeric keypad to enter the new target heart rate, and then pressing [ENTER].

6.The console will display "ENTER WORK TIME". This is the amount of time you want to exercise in the work target heart rate zone. Entire desired work time using the numeric keypad and press (ENTER). Or, press (ENTER) to accept the default value.

7.The console will then display "REST 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 65% of your maximum heart rate which is calculated by the following equation: Max HR = 215 – (.75 * Age). Target HR = Max HR * .65. 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].

9.The console will display "ENTER REST TIME". This is the amount of time you want to exercise in the rest target heart rate zone. Enter desired rest time using the numeric keypad and press (ENTER). Or press (ENTER) to accept the default value.

10.The console will display "ENTER SPEED – MPH" (or "ENTER SPEED – KMH" if in Metric mode). Enter the desired speed using the numeric keypad and press (ENTER). Or, press [ENTER] to accept the default value.

11.The console will display "HR CONTROL MODE, 1 – SPEED, 2 – INCLINE". Enter the desired form of HR Control by pressing 1 for SPEED or 2 for INCLINE. Or, press (ENTER) to accept the default value. If contact HR is used, then this message is skipped and Incline control will be automatically selected.

12.The console will then display "ENTER TIME". Enter desired total workout time using the numeric keypad and press "ENTER". Or, press (ENTER) to accept the default value.

13.The console will display "ENJOY WORKOUT" and the timer will begin.

The Fat Burner Program

The Fat Burner program is a 30 interval workout designed with moderate changes in the incline designed to stimulate fat store assimilation for users on a weight control program. The profile in the center display indicates the 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 MORE WORKOUTS key. Then, use the SPEED or INCLINE UP or DOWN keys to scroll through the program options. When the console displays "FAT BURNER", press [ENTER] to accept.

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 SPEED – MPH" (or "ENTER SPEED – KMH" if in Metric mode). Enter the desired speed 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.

Speed may be changed at any time during the workout by pressing the [SPEED UP] key to increase the speed, or the [SPEED DOWN] key to decrease the speed. The new speed will continue through the rest of the workout until changed using the Speed keys.

Incline may be changed at any time during the workout by pressing the [Incline: UP] key to increase the incline, or the [Incline: DOWN] key to decrease the incline. The new incline will continue through the rest of the workout until changed using the Incline keys.

The Calorie Burner Program

The Calorie Burner program is a 30 interval workout designed for users wanting to increase their aerobic capacity. The changes of intensity in the program are greater than the changes in the Fat Burner program, and are 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 MORE WORKOUTS key. Then, use the SPEED or INCLINE UP or DOWN keys to scroll through the program options. When the console displays "CALORIE BURNER", press [ENTER] to accept.

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 SPEED - MPH" or ("ENTER SPEED – KMH" if in Metric mode). Enter the desired speed 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.

- Speed may be changed at any time during the workout by pressing the [SPEED UP] key to increase the speed,

or the [SPEED DOWN] key to decrease the speed. The new speed will continue through the rest of the workout until changed using the Speed keys.

Incline may be changed at any time during the workout by pressing the [Incline: UP] key to increase the incline, or the [Incline: DOWN] key to decrease the incline. The new incline will continue through the rest of the workout until changed using the Incline 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.

Distance Goal

1. Press the MORE WORKOUTS key. Then, use the SPEED or INCLINE UP or DOWN keys to scroll through the program options. When the console displays "DISTANCE GOAL", press [ENTER] to accept.

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 SPEED - MPH" or ("ENTER SPEED – KMH" if in Metric mode). Enter the desired speed using the numeric keypad and press [ENTER]. Or, press [ENTER] to accept the default value.

4. Next, the console will display "ENTER DISTANCE – MILES" (or "ENTER DISTANCE – KM" if in Metric mode). Enter the desired distance and press [ENTER]. Or, press [ENTER] to select the default distance (2 miles/3.2 km).

5. The console will display "ENJOY WORKOUT" and the timer will begin.

- Speed may be changed at any time during the workout by pressing the [SPEED UP] key to increase the speed, or the [SPEED DOWN] key to decrease the speed. The new speed will continue through the rest of the workout until changed using the Speed keys.

Incline may be changed at any time during the workout by pressing the [Incline: UP] key to increase the incline, or the [Incline: DOWN] key to decrease the incline. The new incline will continue through the rest of the workout until changed using the Incline keys.

Calorie Goal

1. Press the MORE WORKOUTS key. Then, use the SPEED or INCLINE UP or DOWN keys to scroll through the program options. When the console displays "CALORIE GOAL", press [ENTER] to accept.

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 SPEED - MPH” or (“ENTER SPEED – KMH” if in Metric mode). Enter the desired speed using the numeric keypad and press [ENTER]. Or, press [ENTER] to accept the default value.

4. Next, the console will display “ENTER CALORIE GOAL”. Enter the desired calorie goal and press [ENTER]. Or, press [ENTER] to select the default goal (350 calories).

5. The console will display “ENJOY WORKOUT” and the timer will begin.

- Speed may be changed at any time during the workout by pressing the [SPEED UP] key to increase the speed, or the [SPEED DOWN] key to decrease the speed. The new speed will continue through the rest of the workout until changed using the Speed keys.

Incline may be changed at any time during the workout by pressing the [Incline: UP] key to increase the incline, or the [Incline: DOWN] key to decrease the incline. The new incline will continue through the rest of the workout until changed using the Incline keys.

Random Play Workout

The Random Play Workout is a program that randomly changes the intensity throughout the workout time.

1. Press the MORE WORKOUTS key. Then use the SPEED or INCLINE UP or DOWN keys to scroll through the program options. When the console displays “RANDOM PLAY”, press [ENTER] to accept.

2. The console will then 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.

3. The console will display “ENTER SPEED – MPH” (or “ENTER SPEED – KMH” if in Metric mode). Enter the desired workout speed using the numeric keypad and press (ENTER). Or, press [ENTER] to accept the default value.

4. The console will then display “ENTER TIME”. Enter the desired time and press (ENTER). Or, press [ENTER] to accept the default value.

5. The console will display “ENJOY WORKOUT” and the timer will begin.

The Nautilus Fit Test Program

Understanding Sub-maximal Exercise Testing

Before using the Nautilus T9.16 treadmill 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 $VO_{2\,max}$ 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. The T9.16 treadmill uses the most current published equation developed to estimate the average maximal heart rate as follows:

- **Maximal heart rate = 215 minus (0.75 x age)**

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 $VO_{2\,max}$ 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?

Nautilus Sub-maximal Fit Test

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

The Nautilus 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 $VO_{2\,max}$. 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 Nautilus 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 VO2max 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 underneath the chest strap, over the electrodes. For test accuracy, use of a telemetry chest strap is required.

2. Press the [MORE WORKOUTS] key. Then use the Speed or Incline UP or DOWN keys to scroll through the program options. When the console displays NAUTILUS FIT TEST, press [ENTER] to select.

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 $VO_{2\,max}$. 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 (VO2max)

	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, Philidelphia, PA, 2000, p. 77.

FireFighter Fit Test (Gerkin Test)

The Firefighter Fit Test has a total of 16 stages lasting one minute each. The first 3 stages are a warm-up set with a speed of 3 mph and 0% incline. The following stages increase speed or incline from the previous stage. When the test terminates, the "Cool Down" mode will be entered. The "Cool Down" mode will set the speed to 1 mph and the incline to 0%.

To use the Firefighter Fit Test program:

1. Put the chest strap on. Remember to wet the underneath of the chest strap, over the electrodes.

2. Press MORE WORKOUTS key. Then use the SPEED or INCLINE UP or DOWN keys to scroll through the program options. When the console displays "GERKIN TEST", press [ENTER] to select.

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 and press [ENTER].

4. The console will display "ENTER AGE 10 - 99." Enter your age using the numeric keypad and press [ENTER].

5. The console will display "ENTER GENDER / 1 - MALE / 2 - FEMALE. Enter your gender code using the numeric keypad and press [ENTER].

6. The console will display "PRESS START". Press the [START] key to begin the test. Follow the onscreen prompts. The first 3 stages represent a 3-minute warm-up at 3 mph and 0% incline. The exercise time does not start until the warm-up is completed. At the beginning of the test, the timer will count up from 0:00.

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.
- 85% of the age predicted maximum heart rate is achieved.
- If after the 16 stages have been completed, the age predicted heart rate has not been achieved.
- The heart rate response to each work level must be greater than the heart rate response to the last level.

8. The test is complete when the subject's HR reaches 85% of their age-predicted maximum HR according to the following formula:

Max Heart Rate (MaxHR) = 215 – {0.75 * Age}

Target Test Heart Rate = 0.85 * Max Heart Rate

9. Following the test, the program enters cool down, the treadmill speed decreases to 1 mph and incline to 0%. The subject's heart rate is measured at the end of one minute.

10. At the end of the 1 minute Cool Down, the "Test Complete" message is displayed and the test statistics are scrolled twice as follows:

Total Exercise Time

Target Heart Rate

Target Speed

Target Incline

Target METs

Recovery Heart Rate

Military Fit Tests

The Military Fit Tests allow the user to select one of four military physical readiness tests: Air Force PFT, Army PFT, Marine PFT and Navy PRT.

Air Force Physical Fitness Test (PFT)

The Air Force PFT on the treadmill is a 1.5 mile run. The time that it takes for the subject to complete the 1.5 miles is compared to the table and a component point total is given.

The test is comprised of up to a 3 minute warm-up followed by the test session. During the warm-up period, the subject can press the START or QUICK START key at any time to begin the test session. During the warm-up, the subject can adjust incline or speed as desired. If the START or QUICK START key is not pressed during the warm-up, then, at the end of the 3 minutes, the test automatically enters the test session.

At the start of the test session, the treadmill incline goes to 1% incline and stays in that position. The subject cannot change the incline. The subject changes the speed of the treadmill as desired to complete the test as quickly as possible. At the beginning of the test session, the time and distance begin to accumulate from 0.

When 1.5 miles is achieved, the time stops accumulating, and the treadmill enters the Cool Down state. During Cool Down and after the STOP key is pressed, the test summary is scrolled, displaying the test time in minutes and seconds, and the component point value associated with the test time based on sex and age group.

To use the Air Force PFT:

1. Press MORE WORKOUTS key. Then use the SPEED or INCLINE UP or DOWN keys to scroll through the program options. When the console displays “MILITARY TESTS”, press [ENTER] to select.

2. Use the SPEED UP or DOWN keys to scroll through the Military Fit Test options. When the console displays “AIR FORCE PFT”, press [ENTER] to select.

3. The console will display “ENTER AGE 10 - 99.” Enter your age using the numeric keypad and press [ENTER].

4. The console will display “ENTER GENDER / 1 - MALE / 2 - FEMALE. Enter your gender code using the numeric keypad and press [ENTER].

5. Press the [START] key to begin the test. The console will display “3 MINUTE WARM-UP.”

6. At the end of 3 minutes or if the [START] key is pressed, the console will display “BEGIN TEST” and the test session will begin.

7. The test is complete when the subject achieves 1.5 miles.

8. Following the test, the program enters the Cool Down state and the test time is displayed.

Army Physical Fitness Test (PFT)

The Army PFT on the treadmill is a 2.0 mile run. The time that it takes for the subject to complete the 2 miles is compared to the table and a component point total is given.

The test is comprised of up to a 3 minute warm-up followed by the test session. During the warm-up period, the subject can press the START or QUICK START key at any time to begin the test session. During the warm-up, the subject can adjust incline or speed as desired. If the START or QUICK START key is not pressed during the warm-up, then, at the end of the 3 minutes, the test automatically enters the test session.

At the start of the test session, the treadmill incline goes to 1% incline and stays in that position. The subject cannot

change the incline. The subject changes the speed of the treadmill as desired to complete the test as quickly as possible. At the beginning of the test session, the time and distance begin to accumulate from 0.

When 2.0 miles is achieved, the time stops accumulating, and the treadmill enters the Cool Down state. During Cool Down and after the STOP key is pressed, the test summary is scrolled, displaying the test time in minutes and seconds, and the component point value associated with the test time based on sex and age group.

To use the Army PFT:

1. Press MORE WORKOUTS key. Then use the SPEED or INCLINE UP or DOWN keys to scroll through the program options. When the console displays "MILITARY TESTS", press [ENTER] to select.

2. Use the SPEED UP or DOWN keys to scroll through the Military Fit Test options. When the console displays "ARMY PFT", press [ENTER] to select.

3. The console will display "ENTER AGE 10 - 99." Enter your age using the numeric keypad and press [ENTER].

4. The console will display "ENTER GENDER / 1 - MALE / 2 - FEMALE. Enter your gender code using the numeric keypad and press [ENTER].

5. Press the [START] key to begin the test. The console will display "3 MINUTE WARM-UP."

6. At the end of 3 minutes or if the [START] key is pressed, the console will display "BEGIN TEST" and the test session will begin.

7. The test is complete when the subject achieves 2.0 miles.

8. Following the test, the program enters the Cool Down state and the test time is displayed.

Marine Physical Fitness Test (PFT)

The Marine PFT on the treadmill is a 3.0 mile run. The time that it takes for the subject to complete the 3 miles is compared to the table and a component point total is given.

The test is comprised of up to a 3 minute warm-up followed by the test session. During the warm-up period, the subject can press the START or QUICK START key at any time to begin the test session. During the warm-up, the subject can adjust incline or speed as desired. If the START or QUICK START key is not pressed during the warm-up, then, at the end of the 3 minutes, the test automatically enters the test session.

At the start of the test session, the treadmill incline goes to 1% incline and stays in that position. The subject cannot change the incline. The subject changes the speed of the treadmill as desired to complete the test as quickly as possible. At the beginning of the test session, the time and distance begin to accumulate from 0.

When 3.0 miles is achieved, the time stops accumulating, and the treadmill enters the Cool Down state. During Cool Down and after the STOP key is pressed, the test summary is scrolled, displaying the test time in minutes and seconds, and the component point value associated with the test time based on sex and age group.

To use the Marine PFT:

1. Press MORE WORKOUTS key. Then use the SPEED or INCLINE UP or DOWN keys to scroll through the program options. When the console displays "MILITARY TESTS", press [ENTER] to select.

2. Use the SPEED UP or DOWN keys to scroll through the Military Fit Test options. When the console displays "MARINE PFT", press [ENTER] to select.

3. The console will display "ENTER AGE 10 - 99." Enter your age using the numeric keypad and press [ENTER].

4. The console will display "ENTER GENDER / 1 - MALE / 2 - FEMALE. Enter your gender code using the numeric keypad and press [ENTER].

5. Press the [START] key to begin the test. The console will display "3 MINUTE WARM-UP."

6. At the end of 3 minutes or if the [START] key is pressed, the console will display "BEGIN TEST" and the test session will begin.

7. The test is complete when the subject achieves 3.0 miles.

8. Following the test, the program enters the Cool Down state and the test time is displayed.

Navy Physical Readiness Test (PRT)

The Navy PRT on the treadmill is a 1.5 mile run. The time that it takes for the subject to complete the 1.5 miles is compared to the table and a component point total is given.

The test is comprised of up to a 3 minute warm-up followed by the test session. During the warm-up period, the subject can press the START or QUICK START key at any time to begin the test session. During the warm-up, the subject can adjust incline or speed as desired. If the START or QUICK START key is not pressed during the warm-up, then, at the end of the 3 minutes, the test automatically enters the test session.

At the start of the test session, the treadmill incline goes to 1% incline and stays in that position. The subject cannot change the incline. The subject changes the speed of the treadmill as desired to complete the test as quickly as possible. At the beginning of the test session, the time and distance begin to accumulate from 0.

When 1.5 miles is achieved, the time stops accumulating, and the treadmill enters the Cool Down state. During Cool Down and after the STOP key is pressed, the test summary is scrolled, displaying the test time in minutes and seconds, and the component point value associated with the test time based on sex and age group.

To use the Navy PRT:

1. Press MORE WORKOUTS key. Then use the SPEED or INCLINE UP or DOWN keys to scroll through the program options. When the console displays "MILITARY TESTS", press [ENTER] to select.

2. Use the SPEED UP or DOWN keys to scroll through the Military Fit Test options. When the console displays "NAVY PRT", press [ENTER] to select.

3. The console will display "ENTER AGE 10 - 99." Enter your age using the numeric keypad and press [ENTER].

4. The console will display "ENTER GENDER / 1 - MALE / 2 - FEMALE. Enter your gender code using the numeric keypad and press [ENTER].

5. Press the [START] key to begin the test. The console will display "3 MINUTE WARM-UP."

6. At the end of 3 minutes or if the [START] key is pressed, the console will display "BEGIN TEST" and the test session will begin.

7. The test is complete when the subject achieves 1.5 miles.

8. Following the test, the program enters the Cool Down state and the test time is displayed.

Options During a Workout

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

Incline

Speed

Calories / Hour

Distance

Vertical Climbed

Power in watts

METs

Target Heart Rate (in Heart Rate Control programs only)

The 20 x 30 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 Speed, Incline or Target Heart Rate During a Workout

- The speed may be changed at any time during the workout by pressing the [SPEED UP] key to increase the speed, or the [SPEED DOWN] key to decrease the speed. The console will display SPEED – MPH, or (SPEED – KMH if in Metric mode).
- During the workout, the incline may be changed at any time by pressing the [Incline: UP] key to increase the incline, or the [Incline: Down] to decrease the incline. The console will display INCLINE.
- **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 TARGET HR.

  Once you enter your desired target heart rate, press [ENTER] to accept, and the console will gradually change the speed and/or incline 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, WORKOUT PAUSED, PRESS STOP OR, PRESS START.

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 Incline, Speed, Distance, Calories/Hour, Watts, METs, and Heart Rate.

HEART RATE MONITORING

Telemetry (e.g. using a Polar® or Polar-compatible transmitter belt). A Polar-compatible heart rate chest belt transmits the heart beat signal to the receiver in the display. The display shows 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 controller.

Heart rate monitoring helps users monitor their levels of exertion by displaying the heart rate during exercise. There are two methods of monitoring heart rate on the Commercial Series T9.16 treadmill:

Telemetry Heart Rate

The telemetry heart rate monitoring system consists of the receiver, located in the display, 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 far right decimal point in the Heart Rate Display pulses to indicate that the display is receiving a valid signal. A microprocessor in the controller calculates the heart rate and shows it, in beats per minute, on the display.

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. The transmitter belt should fit snugly and comfortably, and allow normal breathing.

After the initial heart rate signal is detected, the display 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.

If your heart rate is not being displayed, try the following:

- Move closer to the display.
- Tighten the elastic band on 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.

WARNING!

Pacemaker users should not use the telemetry transmitter without first consulting with their doctor.

Maintaining the Transmitter Belt

Clean the chest belt regularly with mild soap and water, 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. Replacement belts can be purchased from an Authorized Nautilus® Fitness Retailer or at www.nautilus.com.

Contact Heart Rate

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. As with the wireless telemetry chest belt, the heart rate is shown on the display in the same manner.

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 controller 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 controller will not recognize telemetry heart rate signals. The controller 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.

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 [SPEED 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 [SPEED UP] and [SPEED 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.

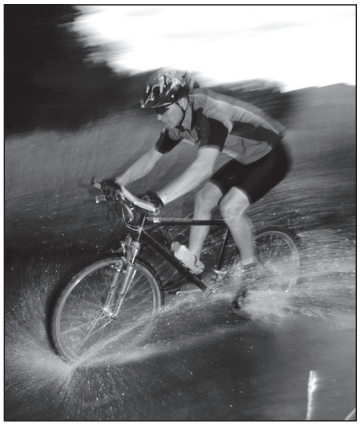
   TELEMETRY ONLY – locks out contact heart rate signals and will only detect telemetry signals.

   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.

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.



Exercise and Health

It is not a secret that lack of exercise is increasingly becoming a major health issue. Obesity is on the rise, and being overweight can contribute to an increased risk in heart attack, diabetes, high blood pressure and other life threatening illnesses.

Most people do not get enough activity during the day to make up for the time they spend at their desks, driving their cars or sitting in front of their televisions. We have learned that exercising is not simply something we must do to look good and have a great body. Exercise is a requirement for health, and overall wellness, not to mention it can help you feel great!

The good news is that we are seeing more and more research that indicates we don't have to work out intensely to see the benefits. Sure, it is great if you can workout for 30-40 minutes at a time, five days a week. But it is not essential. Shorter bouts of exercise can have a great effect (especially if you are just starting out), and a little bit of exercise at a time is much better than none at all.

And what is really exciting is that research indicates that whether you are young or old, people who workout at light to moderate intensities may have an easier time sticking to their exercise programs than those people who work out harder and more often.

So, you do not need to be an athlete or a fitness "die-hard" to benefit from exercise… you just need to get started, work out at levels that are comfortable and enjoyable to you and stick with it!

Steps to Getting Started

Once you have made the commitment to start an exercising program, here are some suggestions that may help you stay motivated.

The first step is the most difficult. Any new habit is difficult to establish at first, but it can be done. Be patient, and plan to start slow and easy. Less is more when you are first starting out… don't overdo it!

Get a physical exam. If you have been inactive for several years or new to an exercise program, be sure to ask your doctor before beginning any exercise program. Especially if you are over 30, have health problems or have a history of heart disease in your family.

Find an exercise buddy. Research has shown that starting an exercise program with someone can increase your chances of sticking to it. If you have a buddy that is also starting a program, you can encourage, motivate and challenge each other.

Make fitness a part of your schedule. Include it in your daily planner just as you would any other appointment. Plan ahead for the week so that you can be sure to fit it in. Even if you are pressed for time one day, a little exercise is better than none at all. Do what you can to fit it in, even if you have less time than you hoped for.

Use positive affirmations. Affirmations will help you program your subconscious to accept new beliefs. Saying to yourself a couple of times a day, "I am living a healthier lifestyle by exercising several times per week at home," can help you stay on track.

Set goals. Setting goals can be helpful in keeping you motivated, but remember to keep them realistic. Short-term and long-term goals can make this easier. How many days do you want to exercise this week? How many workouts would you like to have done in 90 days or a year?

Components of Fitness

Over the past 25 years, many people have focused on walking, running, cycling, swimming and other types of aerobic activity as their only means of exercise.

However, we have learned that two other components of fitness are just as important. These other two components are muscle strength and flexibility. So in addition to having a strong heart and lungs, we also need to be able to pick up a full bag of groceries and tie our shoes without having to sit down.

When developing a fitness program, it is only appropriate that you develop all three components in order to achieve balanced overall fitness. Let's take a look at all three components:

Cardiovascular Fitness is training the heart and lungs to be stronger and deliver more oxygen throughout your body with less effort. It can help reduce the risk of heart disease, and help you manage your weight. It is the cornerstone of fitness, and can be achieved in many ways such as walking or running on the treadmill or outdoors, climbing stairs, cycling, using a StairMaster® stepper or swimming in the pool or ocean.

For many years, it was suggested that moderate level cardiovascular activity (activities that make you sweat and breathe and a moderate pace) should be done 3 – 4 days a week for 15 – 45 minutes at a time. It is now recommended that you attempt to do some cardiovascular activity EVERY day, if possible.

The good news is that the cardiovascular activity does not need to be moderately intensive everyday, nor does it need to be sustained for 15 – 45 minutes at a time.

So while it is ideal to challenge your heart and lungs by doing something like a strong power walk every other day for 15 – 45 minutes, it is more important to make sure you do at least a little bit of cardiovascular activity every day, even if you don't do it for very long or very intensely.

For example, you might try using a Nautilus® treadmill for a scheduled, moderate level workout for 20 – 30 minutes on Monday, Wednesday, Friday and Sunday (see the intensity monitoring section for further details on how hard to workout). On the other days, you might try going for a leisurely stroll 10 minutes in the morning and in the evening (or whenever you can fit it in).

Whatever you do, just make sure you get your body moving, and your heart and lungs pumping for some period of time every day.

EXERCISE & FITNESS GUIDELINES

Muscular Strength is training your muscles to remain strong using resistance such as Nautilus® strength machines, dumbbells, elastic tubing or your body weight. In the past decade, we have learned that building or maintaining muscular strength is extremely important for a balanced fitness program. And it is especially important as we get older.

We have learned through a variety of studies that those individuals who just train aerobically (without strength training) do maintain their cardiovascular endurance over the years, but they generally lose lean muscle mass as they get older. However, those individuals who combine strength training and cardiovascular training can maintain their lean body mass as they get older. What this means is that if you just do cardiovascular activity, your body will naturally lose muscle mass as you get older, and that means that you will actually get "fatter" as you age, unless you incorporate strength training.

We have also learned that consistent strength training helps maintain bone and muscle mass as we get older. For women, strength training (along with cardiovascular training) may also protect against post-menopausal bone loss and osteoporosis in their later years.

And strength training is not complicated. It is recommended that you do 8 – 12 repetitions of 8 – 10 major muscle groups at least 2 days a week. However, you don't have to do all these exercises at once. You can break them up into shorter workouts throughout the day. For example, you can do just upper body exercises in the morning, and your lower body exercises in the evening. Or, you can alternate strength exercises with cardiovascular exercise (often known as circuit training) by switching back and forth every couple of minutes.

Flexibility is being able to bend, reach, twist and turn with comfort and ease as we perform daily tasks, play or exercise. It is perhaps the most ignored component of fitness, but certainly the easiest one to incorporate into our daily lives because it can be done anywhere and almost at any time.

To maintain your flexibility, you simply need to stretch. This could be as simple as reaching for your toes, or reaching overhead when you wake up in the morning. Or maybe you enjoy it so much that you would be interested in trying the Nautilus® yoga workout video. You can even incorporate stretching into your strength training workouts by stretching the muscles you have used immediately after you have completed your exercise set.

Like cardiovascular training, it is recommended that you stretch every day. However, you do not need to create a formalized program. You can simply make sure that you stretch your major muscle groups throughout the day. Make sure you include your thighs, calves, hamstrings, back, chest, neck and shoulders.

Do what feels good, but also remember to mix it up. Don't just do traditional "reach and hold" stretches. Also, try gently moving through a range of motion that is comfortable to you. For example, you don't have to stretch your neck simply by pulling on your head with your hand. You can also just rotate the neck slowly around and look side to side.

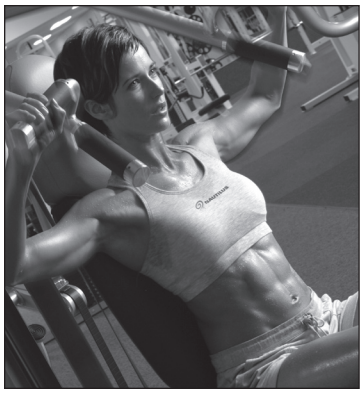
Nutrition

Of course, every good health and fitness program will also include a good nutrition component. Good nutrition is likely the most important factor in maintaining ideal body weight and managing weight loss.

There are a variety of schools of thought regarding which nutrition program, diet or eating plan is best. While we do not promote or endorse any particular one, here are some things to consider that will help you get on the road to a healthy diet:

Understand caloric balance. How many Calories you intake, and how many Calories you burn off will determine whether you will gain or lose weight day to day. It is impossible to achieve weight loss without some sort of "Caloric deficit" that can be obtained through cutting Calories, or burning off more than you take in. The wisest approach is to do a little of both – cutting Calories and exercising. It is the only proven long-term weight management program that is successful. You should ensure that you are consuming at least 1,200 Calories per day total. A total weight loss of no more than 2 pounds per week is recommended for long-term weight management.

Eat a variety of foods. Regardless of your eating plan, you should be sure to include a variety of foods in your diet, maximizing your intake of fruits and vegetables whenever possible. Colorful meals and snacks that are divided amongst the 4 food groups will ensure that you obtain the nutrients needed for your body to function at optimal levels. Any diet that focuses on just one food group source or processed foods can be unhealthy in the long run, and should be avoided. Don't focus too much on any particular meal or snack, but rather on your overall intake of a variety of different foods during any given day.



Drink water. Our bodies are made up of over 70% water, and most of us don't drink enough. Carry water with you everywhere you go, and drink as often as you can. This helps the body function at optimum levels, and can significantly help with weight management.

Eat more often and be mindful of your portions. Research has shown that it can be helpful to eat smaller meals more often versus 3 larger meals a day if you are looking to promote healthy weight maintenance or weight loss. And we have discovered that many portions we eat are much larger than necessary, and can be laden with Calories. So, try snacking more and not eating so many large meals, and share your snacks or food with others (or break your portions in half) to help manage your Caloric intake.

Monitoring Your Intensity

When you are doing cardiovascular workouts, it is important that you work at the appropriate intensities when you are first starting out. It is also important that you workout at a variety of intensities after you have built a fitness base.

Research in recent years has indicated that one of the best ways to monitor your cardiovascular intensity is to pay close attention to how you are feeling when you workout. Most individuals can do a very good job of choosing the correct intensities if they simply categorize how they feel into one of four intensity "zones."

These zones could be described the following ways:

Zone 1	**• Easy** **• Warm-up** **• Cool-down**
Zone 2	**• Challenging, but comfortable** **• Steady endurance pace**
Zone 3	**• Challenging, and slightly uncomfortable** **• Race pace** **• Borderline out of breath**
Zone 4	**• Breathless** **• Not maximum, but winded** **• Can't keep the pace for very long**

When you are first starting out, you should exclusively work in the Zone 1 and Zone 2 intensities. After a few weeks, you can occasionally incorporate Zone 3 and Zone 4 intensities for short periods of time. Remember, when you begin to incorporate Zone 3 and Zone 4 intensities, you will find that you will likely have to drop down to Zone 1 intensities shortly thereafter as brief recovery periods.

For variety, you can spend a little bit of time in each of the four Zones during one workout, and then spend your time in just one Zone during the next workout.

Prenatal woman should always remain at Zone 1 and Zone 2 intensities, and anyone unaware of their current medical condition should also avoid Zone 3 and Zone 4 without prior clearance from their doctor.

These Zones can be translated into target heart rate numbers if your fitness product has a grip or telemetric heart rate counter. Research has shown the best way to do this is not to establish heart rate numbers based upon age, but rather based upon how you feel.

The following chart will allow you to log your heart rate numbers based upon how you feel when working out. Simply log the heart rate numbers you find when you feel you are working at each of the specific intensities.

Zone	Description of Workout Intensity	Approximate Percentage of Maximum Heart Rate	Log Your Heart Rate	Your Heart Rate
1	• Easy • Warm-up • Cool-down	50% – 65%	Enter the heart rate you get when you are working in Zone 1 ▶	
2	• Challenging, but comfortable • Steady endurance pace	65% – 75%	Enter the heart rate you get when you are working in Zone 2 ▶	
3	• Challenging, and slightly uncomfortable • Race pace • Borderline out of breath	75% – 85%	Enter the heart rate you get when you are working in Zone 3 ▶	
4	• Breathless • Not maximum, but winded • Can't keep the pace for very long	85% – 90%	Enter the heart rate you get when you are working in Zone 4 ▶	

As you get in better shape, the heart rate number you obtain for each zone will get higher and higher, which means your heart is able to handle higher intensities. Or you may find that your numbers don't change, but you are able to stay in Zone 3 and Zone 4 longer than you used to.

Don't get too attached to any specific number or target heart rate. If you train properly, you will notice numbers that used to be difficult have now become easier. You will also notice that if you are sick or over-tired, you may find that numbers that usually feel fairly easy are one day much harder, and it is a good sign to take a break. If you notice that numbers that are usually very challenging are one day fairly easy, then it is a good time to push yourself.

Listening to your body, and using your heart rate numbers (when available) will enable you to keep track of your intensity and see your progress as you train.

Beating The Dropout Odds

The Surgeon General's Report on Physical Activity and Health summarizes a few main points:

1. Regular physical activity offers substantial improvements in health and well-being for a majority of Americans.

2. If you exercise regularly, you'll reduce your risk of heart attack, cancer, diabetes, high blood pressure, osteoporosis and even the common cold.

3. Regular exercise, regardless of the intensity, can help you control stress, sleep problems and depression.

The benefits of exercise and activity are AMAZING! And yet, only 22 percent of Americans engage in exercise for 20 minutes a day. And even among individuals who begin exercise programs, the dropout rate is about 50 percent.

So, how do you beat these odds? The answer appears to be in how your start and maintain your exercise program as well as how you create a habit of exercise.

Why are you starting an exercise program? For most individuals, it is to lose weight and look better, which are great reasons. However, since changes in your body shape and size can be gradual, and won't happen overnight, it is important to focus on other benefits so that you will remain motivated.

Thrive on the energy that exercise gives you. Watch your health risks scores go down. Pay attention to how much easier everyday activity is. Notice how much better you are sleeping. These kinds of additional benefits will continue to keep you motivated if you make them just as important to you as weight loss.

Additionally, try not to view exercise as punishment. Look at it as an investment in your health. If you don't feel motivated to workout one day, think of something that is appealing to you that is active, and change your workout. Try not to let your workout become routine or mundane, and always remember that some exercise is better than none at all. So, if you feel you are not motivated to continue, stop your workout early, or skip a day. It just might be the thing you need to get you excited about your next workout.

Possibly the most important thing is to keep progressing your exercise program slowly. Big increases in time or intensity can set you up for injury, and cause you to drop out. Unless you are a world-class athlete, there is no reason to workout at world-class levels. Remember to give yourself some days off and get proper rest.

Finally, try to anticipate lapses. If you are traveling, or your schedule is becoming busier, and you are fearful you may get off track, try planning ahead. For example, book a hotel that has a workout facility or change up your workout so that you keep your interest high and your boredom low. The bottom line is you must be creative and innovative to keep up your fitness program. With some imagination and planning, it is easy to do.

Suggested Reading:

The Complete Home Fitness Handbook by Edmund Burke, Human Kinetics Publisher.

Full Body Flexibility by Jay Blahnik, Human Kinetics Publisher.

Building Strength and Stamina by Wayne Wescott, PhD, Human Kinetics Publisher.

Cross-Training for Dummies by Tony Ryan and Martica Heaner, For Dummies Publisher.

There are 4 groups of console codes as follows: Customization (codes starting with 2 or 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 T9.16 Treadmill

You can customize several parameters on the T9.16 to conform to your individual requirements, including changing the workout default values and setting custom parameters such as time limits, changing screen contrast, changing language, and changing units.

To change the workout default values:

1. Press [SPEED UP], [2], [ENTER]. The console will display DEFAULTS.

2. Press [SPEED UP] or [SPEED DOWN] to scan through the default choices. Select the option you want to change by pressing [ENTER]. Then, use the [SPEED UP] or [SPEED DOWN] keys to view the choices for the selected option. Press [ENTER] to accept the choice for that option.

   The default options are as follows:

   Change default weight

   Use the numeric keypad or [SPEED UP] or [SPEED DOWN] keys to change the desired default weight for your facility. Press [ENTER] to accept the new value.

   Change default workout time

   Use the numeric keypad or [SPEED UP] or [SPEED DOWN] keys to change the desired default workout time between 10 and 99 minutes. Press [ENTER] to accept the new value.

   Change default age

   Use the numeric keypad or [SPEED UP] or [SPEED DOWN] keys to change the desired default age used to calculate target heart rate. Valid age range is between 10 and 99 minutes. Press [ENTER] to accept the new value.

   Change default % Target HR

   Use the numeric keypad or [SPEED UP] or [SPEED DOWN] keys to change the desired target HR value based on maximum HR. This is used to calculate the target heart rate value based on the % of maximum HR. Valid target HR % is between 40 and 90%. Press [ENTER] to accept the new value.

   Change default Speed

   Use the numeric keypad or [SPEED UP] or [SPEED DOWN] keys to change the desired default speed for your facility. Valid speed range is 0.5 - 12 mph (0.8 - 19.2 kph) Press [ENTER] to accept the new value.

   Change Quick Start start speed

   Use the numeric keypad or [SPEED UP or DOWN] keys to change the desired start speed for the Quick Start feature. Valid speed values are either 0.5 mph or 1.0 mph. (0.8 kph or 1.6 kph).

To customize the console for your use:

1. Press [SPEED UP], [3], [ENTER]. The console will display “CUSTOMIZE.”

2. Press [SPEED UP or DOWN] to scan

through the customize choices. Select the option you want to change by pressing [ENTER]. Then, use the [SPEED UP or 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

- Use the numeric keypad to enter the desired time limit between 5 and 99 minutes. Press [ENTER] to accept the new time limit.

Change default Cool Down Time

- Use the numeric keypad or [SPEED UP or DOWN] keys to change the desired default cool down time between 1 and 10 minutes. Press [ENTER] to accept the new value.

Change units

- Use the [SPEED UP or 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.

Select Stats

Use the [Speed UP or DOWN] keys to view the choices (Vertical Feet, Calories/Hour, Watts and METs). Press [ENTER] to select your option. Press [SPEED UP or DOWN] to toggle between ON and OFF. Press [ENTER] to confirm your selection.

Choose console language

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

Adjust upper LCD screen contrast

- Use the [SPEED UP or DOWN] keys to increase or decrease the contrast level of the upper LCD. Press [ENTER] to select your option.

Adjust lower LCD screen contrast

- Use the [SPEED UP or DOWN] keys to increase or decrease the contrast level of the upper LCD. Press [ENTER] to select your option.

Change Max Speed

- Use the numeric keypad or the [SPEED UP or DOWN] keys to change the desired max speed for your facility. Valid speed range is 0.5 mph – 12 mph (0.8 – 19.2 kph).

Enable Mag Key

Use the [SPEED UP or DOWN] keys to enable or disable the Magnetic Safety Stop feature. Press [ENTER] to select your option.

Auto Stop

- Use the [SPEED UP or DOWN] keys to enable or disable the Auto Stop feature. 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 [SPEED UP], [4], [ENTER]. The console will display "MACHINE STATUS".
2. Press [SPEED UP or 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 in hours. The console will display "RUN HOURS #####".

Number of workouts

- Display the number of times a workout key has been pressed. The console will display "WORKOUTS ####".

Distance traveled

- Display the total distance traveled in miles (or kms if console is set to Metric units) . The console will display "DISTANCE #####".

Software revision

- Display the console software revision number. The console will display "CONS 41376-###".

Machine type

- Display the machine type the console is currently configured to. The console will display "T9.16" or other machine type.

TM Drive version

- Display the treadmill drive version. The console will display " # "

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

- Display the machine run time since last cleared. 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 [SPEED UP], [6], [ENTER]. The console will display "DIAGNOSTICS".
2. Press [SPEED UP or 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 [ENTER] when the message, "DISPLAY TEST" is displayed. 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 [ENTER] when the message, "KEY TEST" is displayed. 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 [ENTER] when the message, "SERIAL TESTS" is displayed. 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".

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

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

Error log

- To display the machine's error log, press [ENTER] when the message, "ERROR LOG", is displayed. 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 [ENTER] when the message, "MAINT HOURS" is displayed. Selecting this code will reset the maintenance timer to 0 hours.

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

HELPFUL HINTS

If you keep your Nautilus treadmill properly maintained and serviced, it will operate more efficiently and last longer. Read all maintenance instructions thoroughly before beginning work. In some cases, an assistant is required to perform the necessary tasks. All references to the right or left side and to the front or back are made as if you were on the machine ready to exercise.

MAINTENANCE RECORDS

For ease of maintenance the T9.16 console will keep track of hours, number of workouts, time between last servicing, etc. You can quickly access any of the custom menus by pressing [SPEED UP], [4], [ENTER]. The console will then display MACHINE STATUS. Use the [SPEED UP] and [SPEED DOWN] keys to scroll through the options. For details, refer to the Machine Status Console Codes in the previous section.

RESETTING THE MAINTENANCE HOUR TIMER

After each maintenance period reset the counter. Press [SPEED UP], [7], [ENTER]. Then use the Speed keys to scroll through the options. When MAINT HOURS is displayed, press [ENTER]. The console will display RESET SERVICE. Press [ENTER]. The console wil display DONE. Press [CLEAR] to return to the opening screen.

INITIAL SERVICE

Upon receiving your machine, use a soft, clean towel to wipe off the dust, which may have accumulated during shipping. Your new machine will require minor assembly. Refer to the “Installation Instructions” section for details.

Cleaning

1. DO NOT USE GLASS CLEANERS OR ANY OTHER HOUSEHOLD CLEANERS ON THE CONSOLE. Clean the console daily with a water-dampened cloth and wipe dry after cleaning.
2. Clean the exterior of the machine daily using soap and water or a diluted, non-mineral based household cleaner such as Fantastic®.
3. Elevate the treadmill to maximum incline and vacuum the floor under weekly it to prevent excess dust and dirt from interfering with operation.
4. Depending upon the treadmill environment, dust and or lint can accumulate under the hood. Periodic internal cleaning should be done by a qualified service personnel.

Inspection

1. Frame: Inspect the frame for any rust, bubbling, or paint chips during the weekly cleaning. The salt in perspiration can damage the unpainted surfaces. Repair the damaged area with a touch-up paint kit purchased from Nautilus (call Customer Service for order information).
2. Inspect the power cord and walking belt for wear.
3. Check the position of the walking belt; be sure it is not rubbing against the frame. The belt should be evenly spaced on the deck within 0.25 inch; adjust if necessary.
4. Remove potential hazards from the treadmill area.

WARNING DRY MOP THE DECK UNDER THE BELT ONLY. DO NOT ADD ANY LUBRICANTS. ADDING LUBRICANTS CAN RUIN THE PROPRIETARY FRICTION-CONTROL SURFACE.

DO NOT USE DETERGENTS OR CLEANING AGENTS ON ANY PART OF THE DECK.

DO NOT LET LIQUID ENTER THE TREADMILL OR DISPLAY.

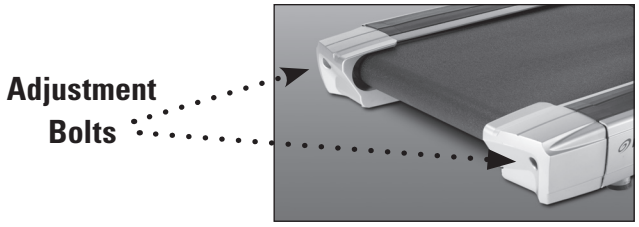
WARNING DO NOT REMOVE THE TREADMILL HOOD: DANGEROUS VOLTAGES ARE PRESENT. COMPONENTS ARE SERVICEABLE ONLY BY QUALIFIED SERVICE PERSONNEL.

Treadmill Belt Adjustments

WARNING SECURE LONG HAIR AND LOOSE CLOTHING BEFORE WORKING NEAR THE TREADMILL WALKING SURFACE OR PULLEYS.

As the treadmill walking belt stretches through use it will become necessary to tension the belt. This often occurs within the first few months of use. Adjust the belt tension whenever the belt slips or moves unsteadily during operation. The belt tension is adjusted by moving the rear roller of the treadmill back to reduce slack. This is accomplished by turning the adjustment bolts located on the back of the treadmill.

IMPORTANT Do not over tighten walking belt! The belt need only be tight enough to prevent it from slipping during use. Excessive belt tension will decrease belt life and can damage the treadmill rollers and drive system.



1. Using a 1/2" socket, turn the left and right adjusting bolts clockwise 1/2 turn. Use care to make each adjustment equal to insure proper belt alignment.

2. Test the belt by running on the belt at about 4 MPH. Hold the handrail lightly and resist the belt movement with your feet. If walking belt slips, repeat step 1.

Belt Tracking

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

1. Start the treadmill at minimum speed and incline.

2. Increase speed to 5 mph and make the following adjustment. The figure above shows the location of the bolts:

   a. If the belt moves to the right, turn the right tension bolt 1/4-turn clockwise.

   b. If the belt moves to the left, turn the left tension bolt 1/4-turn clockwise.

3. After making an initial adjustment, run the treadmill for five minutes and observe how the belt tracks. If the belt continues to move away from the center, adjust the appropriate side as in Step 2 until properly centered.

IMPORTANT Do not over tighten walking belt! The belt need only be tight enough to prevent it from slipping during use. Excessive belt tension will decrease belt life and can damage the treadmill rollers and drive system.

Belt Replacement

If the walking belt becomes worn from heavy usage, it may need to be replaced. Call an Authorized Nautilus® Fitness Dealer or a Service Technician to obtain service.

Moving and Storage of Treadmill

IMPORTANT Treadmill is extremely heavy and awkward and requires two people to safely move!

1. Set the treadmill to maximum incline.

2. To avoid electrical shock, turn off the power switch on the treadmill, then remove the treadmill power cord from the power source before moving the treadmill.

WARNING AS LONG AS THE TREADMILL IS PLUGGED INTO A POWERED OUTLET AND THE TREADMILL CIRCUIT BREAKER IS ON, THE UNIT IS RECEIVING POWER, EVEN IF THE DISPLAY IS TURNED OFF.

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

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

Using After Storage Period

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

COMMERCIAL MARKET WARRANTY INFORMATION

All Nautilus exercise products are warranted to the commercial market purchaser to be free from defects in materials and workmanship. Warranty coverage valid to the original purchaser only and proof of the purchase will be required. Any product sold or placed in an application not recommended by Nautilus will void any warranty coverage set forth by Nautilus warranty policies and procedures.

Time Period

15 -Years - Frame and AC-motor
3 - Years- Mechanical and electrical parts
1-Year- Labor
1 Year - Wear items

What this warranty does not cover

1. Any damage, failure or loss caused by accident, misuse, neglect, abuse, improper assembly, improper maintenance or failure follow instructions or warnings in Owner's Manual.
2. Use of product in a manner or environment for which it was not designed.

Limitations

The foregoing warranties are in lieu of and exclude all other warranties not expressly set forth herein, whether expressed or implied by operation of law or otherwise, including, but not limited to, warranties of merchantability or fitness for a particular purpose. Nautilus shall in no event be liable for incidental or consequential losses, damages or expenses in connection with its exercise products. Nautilus' liability hereunder is expressly limited to the replacement of goods not complying with this warranty or, at Nautilus' election, to the replacement amount of the purchase price of the exercise product in question. Some states do not permit the exclusion or limitation of implied warranties or incidental or consequential damages, so the preceding limitations and exclusions may not apply to you.

Procedures

Warranty service will in most cases be performed by an authorized Nautilus Fitness Dealer or Service Technician. The original purchaser must provide proof of purchase, Service calls and/or transportation to and from the Nautilus Dealer is the responsibility of the purchaser.

1. Nautilus will have the option to repair or replace any exercise product, which requires service.
2. Nautilus will replace any equipment frame that is structurally defective with a new frame or replace the unit with a unit of equal value.
3. Nautilus is not responsible for dealer labor charges for the component changeovers completed after the labor related warranty period stated herein.
4. If you elect to repair an exercise product or part yourself, using the services of someone other than an authorized Nautilus Fitness Dealer or Service Technician, or use a replacement part not supplied by Nautilus, Nautilus shall not be liable for any cost, damage, failure or loss caused by the use of such unauthorized service or parts.

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

OFFICES IN THE UNITED STATES

• NAUTILUS INNOVATION CENTER
Nautilus, Inc.
1886 Prairie Way
Louisville, Colorado, USA 80027
Phone: 800-864-1270
Fax: 800-898-9410

• TECHNICAL/CUSTOMER SERVICE
Nautilus, Inc.
10757 East Ute Street
Tulsa, Oklahoma. USA 74116
Phone: 800-864-1270
Fax: 800-764-7380
E-mail: customerservice@nautilus.com

• CORPORATE HEADQUARTERS
Nautilus, Inc.
World Headquarters
16400 SE Nautilus Drive
Vancouver, Washington, USA 98683
Phone: 800-NAUTILUS

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, Inc.
World Headquarters
16400 SE Nautilus Drive
Vancouver, Washington, USA 98683
Phone: 800-864-1270
Fax: 800-764-7380
E-mail: customerservice@nautilus.com

• GERMANY OFFICE
Nautilus GmbH
Tel: 02204 61027
Fax: 02204 62890

• ITALY OFFICE
Nautilus Italy s.r.l.
Tel: 031 51 10 86
Fax: 031 34 24 97

• SWISS OFFICE
Nautilus International S.A.
Rue Jean Prouvé 6
1762 Givisiez / Switzerland
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Model T9.16

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