⟨TRUE®

CS5.0 & CS3.0 Treadmill Owner's Manual

THANK YOU FOR SELECTING TRUE

In 1981, Frank Trulaske launched TRUE Fitness®, and began manufacturing premium hand-crafted treadmills.

His team's obsession with quality has propelled TRUE to the top of the fitness industry and has created one of America's oldest, largest and most respected fitness equipment manufacturers.

Over the years, TRUE has designed, developed, patented and fabricated many new cutting-edge innovations for their products. Such advancements include ground-breaking new features, state-of-the-art manufacturing components, and technological breakthroughs.

"OUR ORIGINAL GOAL WAS TO BUILD THE WORLD'S BEST FITNESS EQUIPMENT, AND TODAY WE BELIEVE WE'RE DOING IT!"

-FRANK TRULASKE

While TRUE has expanded its line of products, intensive quality control standards guarantee excellence in every phase of production. This results in the finest products available in the marketplace.

TRUE is the choice for cardio workouts among beginners, rehab patients and top athletes world-wide.

Today TRUE Fitness offers a full line of premium elliptical trainers, treadmills, upright and recumbent bikes, and flexibility equipment.

When using this exercise machine, basic precautions should always be followed, including the following:

Read all instructions before using this treadmill.

Consult your physician before beginning any exercise program.

Do not use if you have a cold or fever.

Warning: to reduce the risk of burns, fire and electric shock and injury to persons, follow these instructions:

Danger: To reduce the risk of electric shock, always unplug the treadmill before cleaning.

Unplug it from the outlet when not in use and before any service is performed.

Keep the power cord away from heated surfaces.

Never operate this treadmill if it has a damaged power cord or plug, if it is not working properly, if it has been damaged or dropped, or if it has been submerged in water. In these cases, this treadmill should be examined by a qualified service technician.

Other safety precautions:

Close supervision is necessary when the treadmill is being used by or near children, or disabled persons.

Use this treadmill only for its intended use as described in this manual.

Do not use attachments not recommended by the manufacturer. Never drop or insert any object into any opening.

Do not allow animals on or near the treadmill.

Use the treadmill indoors only.

Never use the treadmill near water or while wet. Using this treadmill around a pool, hot tub or sauna will void the warranty.

Do not operate where aerosol (spray) products are being used or where oxygen is being administered.

Allow only trained personnel to service this equipment.

Avoid the possibility of bystanders being struck or caught between moving parts by making sure that they are out of reach of this treadmill while it is in motion.

Allow only one person at a time on this treadmill.
Ensure that the back of the treadmill is placed at least 39" away from a wall or other obstructions.

Ensure that the sides of the treadmill are placed at least 20" away from a wall or other obstructions.

Quick Start into a manual workout by pressing , or set up a different workout by selecting a workout and adjusting settings if necessary. Use keys or numeric keys and press *enter* to accept each setting.

Adjust speed or incline at any time by using the dedicated *speed* and *incline* keys on the control pod or keyboard.

Change data readouts by pressing .

Pause your workout by pressing .

Place your feet on the straddle covers.

Attach the safety lanyard to your waistband.

Place the safety key on the key holder.

Set up your workout (see Chapter 1) and press .

Stop the treadmill by reducing speed to 2 mph, then press .

Table of Contents

Specifications/Features/Software are subject to change

Basic Operation

In This Chapter:

Using the Keyboard
Manual Operation
Heart Rate Monitoring
CHR (Contact Heart rate)
Pre-Set Workouts

Selecting Workouts: Press any of the workout keys and press **START** QUICKSTART to begin your workout using the default settings.

Before pressing **START** QUICKSTART , you may adjust other settings like Workout Time and Body Weight, pressing *enter* after adjusting each setting. Press **START** QUICKSTART at any time to begin your workout. Note that HRC workouts require settings adjustment.

Adjusting Settings: Use the numeric keypad or the ➕ ➖ keys to adjust numeric settings. Press *enter* to accept each settings adjustment.

Control Pod / Primary Controls: During your workout, press **stop** PAUSE to stop the treadbelt and pause your workout. Press **START** QUICKSTART to resume your workout. Press and hold **stop** PAUSE RESET to clear your workout.

Change Data Display: During your workout, press **change display** to change the data displayed.

Safety Lanyard: This magnetized cord must be in place on the treadmill balance bar location, and should be attached to your clothing. The treadmill will not operate if the lanyard is not attached.

Important: QuickSpeed keys change speed with a single key press, so take care in the keys you press.

Press (activate quickspeed), lighting the enable LED. Now the numeric keys function as speed change keys from 1 mph to 9 mph. QuickSpeed is functional in any workout except fitness tests and HRC. Disable QuickSpeed by pressing (activate quickspeed) again.

QUICKSPEED

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During workout set up, set a correct body weight *including clothes* so the treadmill can better estimate your calorie expenditure.

BODY WEIGHT

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This treadmill can monitor your heart rate using either a chest strap or the metal grips on the hand rails (called contact heart rate or CHR pads). A chest strap transmits your heart rate to the treadmill via radio, and the CHR pads connect to a special computer circuit to extract your heart rate.

Monitoring Your Heart Rate

Although this treadmill functions fine without using the heart rate monitoring feature, this kind of monitoring gives you valuable feedback on your effort level. Chest strap monitoring also allows you to use HRC (Heart Rate Control)®, the most advanced exercise control system available.

When you wear a Polar® or compatible transmitter strap, the treadmill will display your heart rate as a digital beats-per-minute (bpm) readout.

The transmitter strap should be worn directly against your skin, about one inch below the pectoral muscles/breast line (see picture). Women should be careful to place the transmitter below their bra line.

Some moisture is necessary between the strap and your skin. Sweat from your exercise works best, but ordinary tap water may be used prior to your workout if desired.

Chest Strap Heart Rate Monitoring

TRUE

The CHR system lets you monitor your heart rate without wearing a strap.

Gently grasp the contact heart rate pads as shown below.

When the system detects your hands, the Heart Rate label will start flashing in time with your heart beat. During this time, the system is analyzing and locking in your heart rate. Within about 15 seconds, your digital heart rate in beats per minute should be displayed.

Important: The CHR System should only be used while walking at speeds of 4 mph or lower. Above this speed the CHR accuracy is unavoidably unreliable due to large muscle movements.

CONTACT HEART RATE (CHR)

1. Exercise with smooth body motions.

2. Breathe smoothly and regularly, and avoid talking. (Talking will cause unrepresentative heart rate spikes of 5 to 10 bpm.)

3. Grip the pads lightly, not tightly.

4. Make sure your hands are clean, free of both dirt and hand lotions.

5. See Appendix A for more details on Heart Rate Monitoring.

When using an HRC workout, it is best to use chest strap monitoring. These workouts work best with the extra accuracy gained from a chest-contact heart rate monitoring system.

FOR BEST CHR RESULTS

A Note on CHR Accuracy

CHR monitoring may be a bit less accurate than a chest strap, since the heart rate signals are much stronger at the chest.

About 5% of the population cannot be picked up by any CHR system. This is because their heart is positioned in a more up-and-down manner in their chest, as opposed to leaning over to one side.

Each workout has a four-minute warm up and a two-minute cool down. Speed or grade changes stay in effect until the next change is requested by the program. Changing the default workout time adds or removes segments; it does not stretch or compress the workout profile.

Change workout levels during your workout by pressing the key for the workout you are using (its LED will be lit), adjusting the numeric level, then pressing ⬭enter⬭ . Change to a new pre-set workout during your workout by pressing any of the pre-set workout keys and pressing ⬭enter⬭ at your desired workout.

In a walking workout, all speeds are under 4 mph. Increasing levels increases speed from 2 to 4 mph and grade from 4% to 10%; speed and grade stay constant in the work section. Speed or grade changes in the work section are permanent
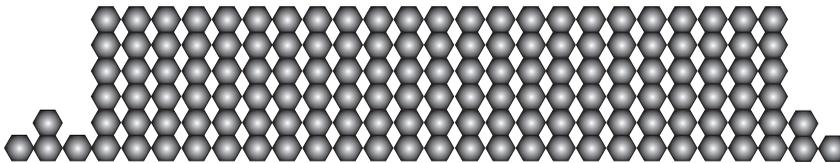
Changes in Grade

Walking intervals with grade alternate between hills and nearly flat *in two-minute segments*. Speed changes are permanent; grade changes affect the current two-minute segment only.
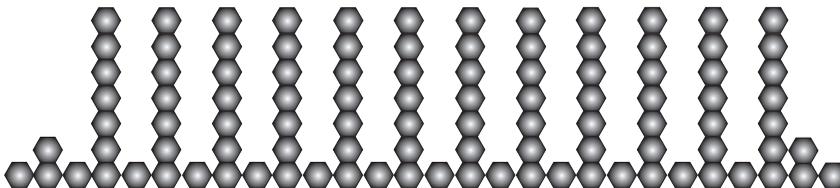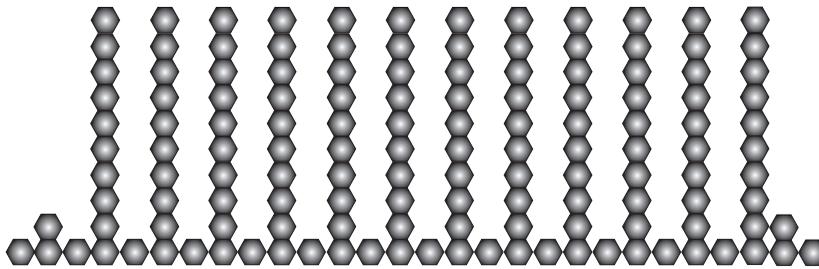

Changes in Grade

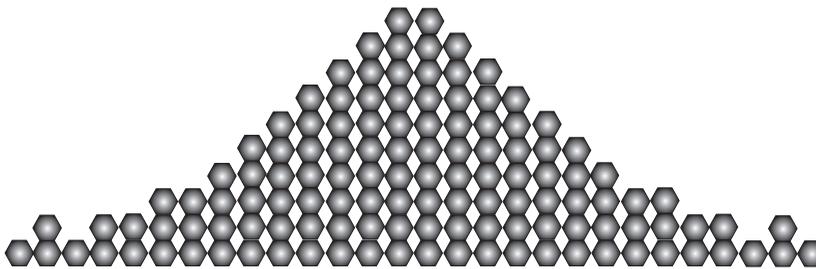**Pre-Set Workouts**

Walking: Calorie Burn

Walking: Hill Intervals

Zero-grade walking or running intervals are *in one-minute segments.* Grade changes are permanent; speed changes affect the current one-minute segment only.

Changes in Speed

Zero-grade gradually increases speed then decreases speed, *changing once per minute.* Grade changes are permanent; speed changes affect the current one-minute segment only.

Changes in Speed

**WALKING AND RUNNING: SPEED INTERVALS**

WALKING AND RUNNING: SPEED RAMP-UP

These are TRUE's original four pre-set workouts. Changing the workout time stretches and compresses the workout profile, in ontrast to the four new pre-set workouts. Other differences are explained below in the individual workout sections.
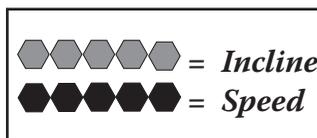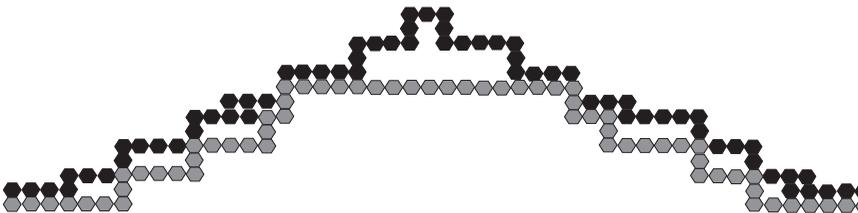
Incline changes in varying amounts in contrast to the new Hills workout, which has hills of the same size all throughout the workout.
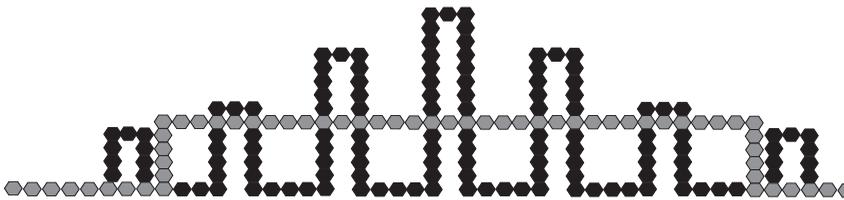
GLUTE BUSTER

Very similar to Hill Intervals, with varying incline changes.
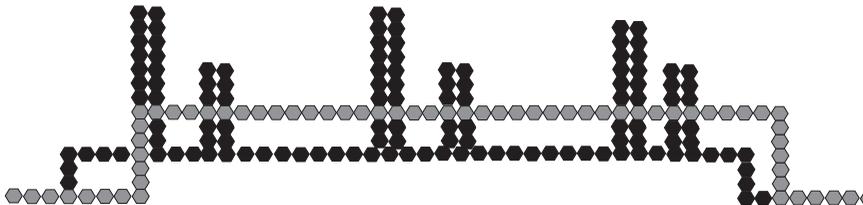
LEG SHAPER

Similar to Speed Ramp, except both speed and grade change.

CARDIO CHALLENGE

= *Incline*
= *Speed*

Different from Speed Intervals 2 with the speed changing in varying amounts.
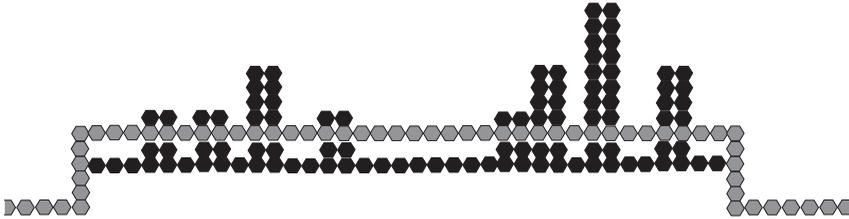
When the treadmill is changing to a new target speed, the matrix display readout will display the actual speed. As the speed is changing, the message center will display

TARGET = 12.0 MPH

Once the treadmill reaches the new target speed, the Speed readout will show the target speed.

THE CONSOLE

IN THIS CHAPTER:

KEYBOARD FUNCTION
DISPLAY

CS3.0 TREADMILL KEYBOARD

Activate Quickspeed
Enables the numeric keys to function as speed change keys from 1 mph to 9 mph. This is functional in any workout except fitness tests and heart rate control.

Clear Entry
Clears entry on diplay.

Numeric Keys
Direct entry of numeric data.

Incline Up/Down
Adjusts incline. Also used to choose programs.

Start/Quick Start
Starts the belt and begins the workout.

Stop/Pause
Stops the belt and pauses workout. If held for 3 seconds, resets all workout information.

Speed Slow/Fast
Adjusts speed in 0.1 mph increments. Also used to set weight and other workout parameters.

Enter
Accepts workout parameters, and toggles the dual function displays.

CS3.0 TREADMILL DISPLAY

COMMERCIAL SERIES

heart rate   time   pace   incline   calories   distance   track   speed

POLAR®

truefitness.com

INTERVAL TRAINERS
to quickly change between different speeds
press **activate quickspeed** + **ANY QUICKSPEED NUMERIC KEY 1-9**

CS5.0 TREADMILL KEYBOARD

Numeric Keys
Direct entry of numeric data.

Activate Quickspeed
Enables the numeric keys to function as speed change keys from 1 mph to 9 mph. This is functional in any workout except fitness tests and heart rate control.

Clear Entry
Clears entry on diplay.

Cool Down
Time period to cool down muscles and lower heart rate

Enter
Accepts workout parameters, and toggles the dual function displays.

HRC Cruise Control
In any workout, set your current heart rate as the target heart rate.

Incline Up/Down
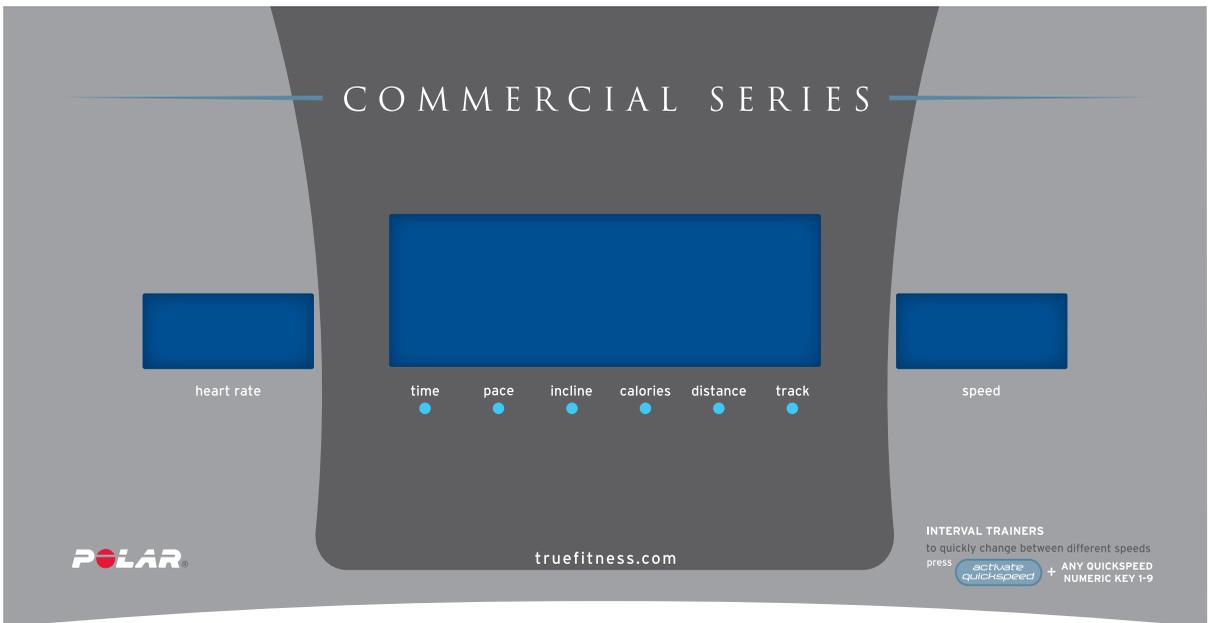Adjusts incline. Also used to choose programs.

Start/Quick Start
Starts the belt and begins the workout.

Stop/Pause
Stops the belt and pauses workout. If held for 3 seconds, resets all workout information.

Speed Slow/Fast
Adjusts speed in 0.1 mph increments. Also used to set weight and other workout parameters.
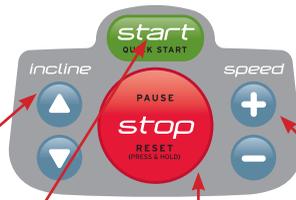
CS5.0 TREADMILL DISPLAY

COMMERCIAL SERIES

INTERVAL TRAINERS
to quickly change between different speeds
press _activate quickspeed_ **+ ANY QUICKSPEED NUMERIC KEY 1-9**

SIMPLE HEART RATE CONTROL (HRC)
during any workout, to set your current heart rate
as your target heart rate press _HRC cruise control_

POLAR ®

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HRC **TARGET HEART RATE CHART**

AGE	60%	75%	85%
20	120	150	170
25	117	146	166
30	114	143	162
35	111	139	157
40	108	139	153
45	105	131	149
50	102	128	145
55	99	124	140
60	96	120	136
65	93	116	132
70	90	112	128
75	87	109	123
80	84	105	119
85	81	101	115

WEIGHT LOSS RANGE
AEROBIC TRAINING RANGE
INCREASED PERFORMANCE RANGE

values from
ACSM guidelines

HRC™
Heart Rate Control

User Workouts

In This Chapter:

How to Record and Run User Workouts

During a manually-controlled workout, the CS treadmill always "records" the changes you make in speed or incline. It can save up to three User Programs

Note that this workout recording *only* takes place when you press Quick Start **START** and will use only the default manual mode settings; you cannot choose a target workout time or distance. Time must count up during your workout in order to be recorded.

Up to 36 changes in speed or incline can be recorded. Each speed/incline pair of changes must be separated by at least 30 seconds.

To save a manual workout, press **stop** as you normally would to end your workout. Now press and hold _enter_ until the display shows Save User 1.

You can save your workout in User 1, or press ⬤ to select User 2 or User 3. Press and hold _enter_ to save the workout program you have selected.

To use a User Program that you have saved, simply select it from the list of programs under the Advanced Options _advanced options_ key.

HOW TO RECORD AND RUN USER WORKOUTS

HRC (Heart Rate Conrol)®

In This Chapter:

HRC Introduction
HRC Types and a Workout Guide
During Your workout
Tips and How HRC Works
Examples of HRC Workouts
Walking & Running Workouts
Important Points About HRC
HRC Safety

TRUE

TRUE's HRC workouts let the treadmill monitor your relative exercise intensity by way of your heart rate, then automatically adjust the workload to keep you at your target heart rate and thus your desired exercise intensity.

Your heart rate is a good measure of your body's exercise stress level. It reflects differences in your physical condition, how tired you are, the comfort of the workout environment, even your diet and emotional state. Using heart rate to control workload takes the guesswork out of your workout settings.

Consult your physician before using HRC workouts for advice on selecting a target heart rate range. Also, it is important to use the treadmill for several workouts in the manual mode while monitoring your heart rate. Compare your heart rate with how you feel to ensure your safety and comfort.

See Appendix A for a chart that may help you pick a target heart rate.

You need to wear a heart rate monitoring chest strap to use HRC. See the "Monitoring Your Heart Rate" section in *Chapter 1* for a guide to proper usage. It is not recommended that you use the contact heart rate system for heart rate control workouts.

HRC Workout Introduction

THE EASY STEPS TO AN HRC WORKOUT

Time-based constant HRC: pick a target heart rate and exercise for an amount of time you select.

Cruise Control: while in any workout, set your current heart rate as your target heart rate by pressing a single key.

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1 - Put on a Polar® or compatible transmitter chest strap as described in Chapter 1.
2 - Press the (HRC workouts) key until you reach your desired workout, then press (enter) .
3 - Enter your workout parameters. This includes target heart rate, maximum treadbelt speed, workout time or distance, and maximum incline.
4 - Press (START QUICKSTART) .
5 - *Warm up*. At the beginning of an HRC workout, the treadmill is in full Manual Control mode. Gradually increase your work level to slowly raise your heart rate to within 10 beats per minute (bpm) of your target heart rate.
6 - *HRC stage*. Now the treadmill takes control of speed and incline, keeping your heart rate within a few bpm of your target.
7 - *Cool-down*. At the end of your workout time or distance, the treadmill reduces workload by half and goes back into Manual Control mode, where you directly control your cool-down.

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- Pressing any key other than (enter) or (stop) will exit HRC mode.

- Adjust your target heart rate at any time during your workout by pressing (enter), using the ➕➖ keys as needed, and pressing (enter) again. If you are lowering your target, you are limited to a 5 bpm change.

- The time and distance accumulated during warm up are not counted against your selected workout time or distance; those values start at zero when the treadmill reaches HRC mode. This time and distance are accumulated into the workout summary data, as is your cool down exercise.

Increase speed and incline gradually to slowly increase your heart rate to within 10 bpm of your target. For best results, you should take about five minutes to get to that point.

The treadmill operates in a manual control mode during the warm-up stage. You control both speed and incline. You may only increase speed and incline to the preset maximum values entered.

It is important that you start at a low level of effort and gradually increase your work load over several minutes until you approach your target heart rate. This allows your body to adapt to your workout. Increasing work load gradually will allow you to enter the HRC stage without overshooting your target.

HOW THE HRC SYSTEM CONTROLS YOUR HEART RATE

Warming up too fast may cause you to overshoot your target. If this occurs, it may take several minutes before the computer software can control your heart rate. You may overshoot and undershoot your target for several minutes until stable control is achieved.

To raise your heart rate in HRC mode, speed will always increase until maximum speed is attained, followed by incline (if incline is used in the workout).

To lower your heart rate in the HRC mode, incline will always decrease until zero incline is reached, followed by speed (if incline is used in the workout).

Speed changes are in 0.1 mph increments. Incline changes are in 0.5% incline increments. This is equal to between 0.10 and 0.15 METs.

1 - A user who physically cannot walk over 2.5 mph can safely use heart rate control by entering maximum speed of 2.5 in an HRC workout.

2 - A runner can run up to a speed of 10 mph, without hills, by entering a maximum speed of 10 mph and a maximum incline of 0%.

3 - A walker enters a maximum speed of 4.0 mph and a maximum incline of 6%. The walker is limited to a maximum speed of 4.0 mph and incline will be used if required to elevate the heart rate up to a maximum of 6%.

Cruise Control

HRC Cruise Control is the simplest way to enter target heart rate training. While in manual or any program you can enter HRC by simply pressing the ⬤ key. Your current heart rate will be set as the target.

For best results, you should be at least five minutes into your workout and warmed up. This will allow Cruise Control to more accurately control your heart rate.

Remember, you must be wearing a chest strap, and your heart rate should be displayed in the Heart Rate window.

To change your target heart rate press ⬤. Edit the target using ⬤⬤ and press ⬤. If you are lowering your target, you are limited to a 5 bpm change. It is important to note that if you are raising your target, the speed and grade change safety limits (described next) may prevent the treadmill from raising your heart rate to your desired new target.

If you enter the HRC stage below 5 mph, the speed you enter will be the maximum speed of your workout. If you like to walk at a maximum speed of 3.8 mph, you should enter HRC at 3.8 mph.

If you enter the HRC stage above 5 mph, you will have an additional 1 mph of speed. If you enter HRC at 6 mph, your maximum attainable speed in the HRC stage will be 7 mph.

If at any time you enter the HRC stage with incline, you will have an additional 4% of incline available in the HRC stage. If you enter the HRC stage at 1% incline, your maximum attainable incline will be 5%.

If you do not enter the HRC stage with incline, no incline will be available during the HRC stage of your workout. Only speed will be used to control your heart rate.

HOW CRUISE CONTROL DETERMINES HOW TO CHANGE YOUR EXERCISE INTENSITY

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EXAMPLES OF WALKING WORKOUTS USING CRUISE CONTROL

1 - Enter HRC at 3.5 mph and 4% incline to allow a maximum speed of 3.5 mph and 8% incline.

2 - Enter HRC at 4.2 mph and 6% incline to allow a maximum speed of 4.2 mph and 10% incline.

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EXAMPLES OF RUNNING WORKOUTS USING CRUISE CONTROL

1 - Enter HRC at 6 mph and 0% incline to allow a maximum of 7 mph and 0% incline.

2 - Enter HRC at 5 mph and 2% incline to allow a maximum of 6 mph and 6% incline.

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The heart rate monitor transmitter strap provided with your treadmill should be worn directly against your skin at about one inch below the pectoral muscles/breast line. Women should be careful to place the transmitter below their bra line.

Some moisture is necessary between the strap and your skin. Sweat from your exercise works best, but ordinary tap water may be used prior to your workout if desired.

If the transmitter strap is adjusted or moved while exercising, communication may be temporarily affected.

If communication is lost for 30 seconds, the treadmill will automatically shut off.

The transmitter strap sends a low-level radio signal to the treadmill, so interference from other radio and sound waves (including everything from cordless telephones to loudspeakers) is possible. The good news is that interference is usually quite brief. If you continue to have intermittent heart rate display problems, consult your local service technician, as the transmitter strap batteries may be low.

Make sure you breathe smoothly and regularly.

Talking during your workout usually causes heart rate spikes of five beats per minute or more, so avoid talking as much as possible.

Maintain a smooth walking or running motion.

A grounded outlet is critical for the HRC system to function properly. Use a dedicated 120 VAC, grounded outlet to help prevent interference.

Two users wearing the same kind of transmitter at the same time and in close proximity may cause false heart rate display readings.

Use a Polar® brand standard transmitter or compatible transmitter.

TRUE's HRC is patented under USPTO #5,462,504.

If your heart rate exceeds your target by 12 beats, there will be a 30% MET reduction in workload to reduce your heart rate.

If your heart rate exceeds your target by 20 beats, the unit will automatically shut off as a precautionary measure. (Be cautious when selecting your target heart rate so the 20 beat variance will not exceed your maximum heart rate as determined by your physician).

TECHNICAL TIPS

HRC SAFETY FEATURES

Fitness Tests

In This Chapter:

Gerkin Fitness Test
Accuracy of the Gerkin Test
Military Fitness Tests

One way to measure your overall fitness is to take a Gerkin fitness test. Named after the Arizona researcher who designed this test, this submaximal treadmill test (submaximal means you work below maximum effort) is used to predict VO_2 max: the volume of oxygen you can consume while exercising at your maximum capacity. This particular test has gained great popularity in the firefighter and law enforcement community. Like most fitness tests, it is classified as a graded exercise test (GXT). The test is stopped at the point your heart rate reaches 85% of your age-predicted maximum.

Select the Gerkin test under the Advanced Options [advanced options] key. Enter your age, which is used to calculate your test termination point.

The Gerkin protocol starts at 4.5 miles per hour at a 0% incline. It then increases speed or incline every 60 seconds. For example, at the seven-minute mark, the speed increases to 6 miles per hour while the incline raises to 8%.

When your heart rate reaches 85% of your age-predicted maximum, the test waits for your heart rate to exceed the target for 15 seconds, then terminates the test.

> *The version of the Gerkin Protocol that TRUE uses in its exercise machines is the new equation of 205.8 – 0.685*age. To better understand why we selected this method over the outdated "220 – age" maximal heart rate equation, you can review the scientific paper in Journal of Exercise Physiology, a PDF document located at http://www.asep.org/ Documents/Robergs2.pdf.*

The scientific journal, <u>Occupational Medicine</u>, published a study in 2004 on the accuracy of the Gerkin test. The conclusion:

"The Gerkin treadmill protocol overpredicts VO_2max in healthy men and women and, therefore, should not be used for predicting VO_2max in individual firefighters, particularly if VO_2max is a criterion for inclusion or exclusion from duty. At this time, a valid treadmill running test is needed for predicting the VO_2max value of individual firefighters."

However, for the fitness enthusiast who is interested in monitoring their fitness level, the Gerkin test can be used to measure progress over time.

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Each of the four service branches has their own fitness test protocol. All of them work in the same basic way: you input personal information, then run a set distance as fast as you can. A score will then be displayed based on the scoring table for the chosen protocol.

Warning: You must take great care when running a maximal test on a treadmill. As you tire, your balance may diminish. Always use extreme caution to prevent excessive fatigue.

Army Test

1. Enter sex.
2. Enter age.
3. Press Start to run 2-mile test.

Navy Test

1. Enter sex.
2. Enter age.
3. Enter above or below 5000-foot altitude.
4. Press Start to run 1.5-mile test.

Air Force Test

1. Enter sex.
2. Enter age.
3. Press Start to run 1.5-mile test.

Marines Test

1. Enter sex.
2. Press Start to run 3-mile test.

FANS

IN THIS CHAPTER:

FAN ACCESSORY

The fans have two speeds and an Off button. The default is low speed.

OFF

MEDIUM   HIGH

DESIGNING AN EXERCISE PROGRAM

IN THIS CHAPTER:

THE F.I.T. CONCEPT DEFINED
UTILIZING THE F.I.T. CONCEPT
BEGINNING YOUR F.I.T. PROGRAM
ESTABLISHING AND MAINTAINING FITNESS
WEIGHT & SPORTS TRAINING PROGRAMS

The workout portion of your exercise program consists of three major variables: Frequency, Intensity, and Time.

Frequency: How Often You Exercise

You should exercise three to five times a week to improve your cardiovascular and muscle fitness. Improvements are significantly smaller with less frequent exercise.

Intensity: How Hard You Exercise

Intensity of exercise is reflected in your heart rate. Exercise must be sufficiently rigorous to strengthen your heart muscle and condition your cardiovascular system. Only your doctor can prescribe the target training heart range appropriate for your particular needs and physical condition.

Start with exercise that stimulates you to breathe more deeply.

Alternate days of moderate and easy exercise to help your body adapt to new levels of exertion without unnecessary strain.

If you are just beginning an exercise program, you may be most comfortable walking at a speed of 1-2 mph. As you use your treadmill regularly, higher speeds may be more comfortable and more effective.

Inability to maintain a smooth, rhythmic motion suggests that your speed and/or elevation may be too great.

If you feel out of breath before you have exercised 12 minutes, you are probably exercising too hard.

WHAT IS THE F.I.T. CONCEPT?

As your fitness level improves, you will need to increase your workout intensity in order to reach your target heart rate. The first increase may be necessary after two to four weeks of regular exercise. Never exceed your target heart rate zone. Increase the speed and/or incline on the treadmill to raise your heart rate to the level recommended by your doctor. The incline feature can be used to greatly increase the workload without increasing speed.

METs

One MET is the amount of energy your body uses when you're resting. If a physical activity has an equivalent of six METs, its energy demands are six times that of your resting state. The MET is a useful measurement because it accounts for differences in body weight. See ***Appendix B and C*** for more details.

Time: How Long You Exercise

Sustained exercise conditions your heart, lungs, and muscles. The longer you are able to sustain exercise within your target heart range, the greater the aerobic benefits.

To begin, maintain two to three minutes of steady, rhythmic exercise and then check your heart rate.

The initial goal for aerobic training is 12 continuous minutes.

Increase your workout time approximately one or two minutes per week until you are able to maintain 20-30 continuous minutes at your training heart rate.

The F.I.T. concept and chart are designed to help you begin a program tailored to your needs. You may wish to keep an exercise log to monitor your progress.

USING THE F.I.T. CONCEPT

You can get valuable fitness benefits from your TRUE Treadmill. Using the treadmill regularly may increase the ability of your heart and lungs to supply oxygen and nutrients to exercising muscles over an extended period of time. The treadmill will also help you develop added muscle endurance and balanced strength throughout your body.

YOUR FITNESS PROGRAM

Calculate your maximum heart rate as a first step in developing your fitness program. The formula to calculate average maximum heart rate for one minute is 220 beats per minute minus your age. To find your pulse, locate a vein on your neck or inside your wrist, then count beats for ten seconds, then multiply by six. (See chart in *Appendix A*.)

DETERMINING YOUR NEEDS

It's also important to know your target training zone or target heart rate. The American Heart Association (AHA) defines target heart rate as 60-75 percent of your maximum heart rate. This is high enough to condition, but well within safe limits. The AHA recommends that you aim for the lower part of the target zone (60 percent) during the first few months of your exercise program. As you gradually progress you can increase your target to 75 percent. According to the AHA, "Exercise above 75 percent of the maximum heart rate may be too strenuous unless you are in excellent physical condition. Exercise below 60 percent gives your heart and lungs little conditioning."

In addition to monitoring your heart rate as you exercise, be certain of how quickly your heart rate recovers. If your heart rate is over 120 beats per minute five minutes after exercising, or is higher than normal the morning after exercising, your exertion may be too strenuous for your current level of fitness. Reducing the intensity of your workout is recommended.

The age-adjusted target heart rates indicated in the chart in *Appendix A* reflect averages. A variety of factors (including medication, emotional state, temperature, and other conditions) can affect the exercise heart rate appropriate for you.

Warning: Consult your doctor to establish the exercise intensity (target heart rate zone) appropriate for your age and condition before beginning any exercise program.

Warm-Up: Slow and Deliberate Exercise

You are not warmed up until you begin to perspire lightly and breath more deeply. Warming up prepares your heart and other muscles for more intense exercise and helps you avoid premature exhaustion. Begin each workout by walking even if you plan to run. Start slowly, exploring different speeds until you can comfortably sustain your speed.

A good suggestion is a minimum of three minutes. Perspiration on your brow is a good indicator of a thorough warm-up. The older you are, the longer your warm-up period should be.

BEGINNING YOUR EXERCISE PROGRAM

Workout: Brisk and Rhythmic Exercise

The workout trains and conditions your heart, lungs, and muscles to operate more efficiently. Increase exercise in response to your heart rate to train and strengthen your cardiovascular system. Concentrate on moving your arms and legs smoothly. Walk naturally and avoid jerking motions that can cause pulled muscles, sprained joints, and loss of balance.

Cool-Down: Slow and Relaxed Exercise

Cooling down relaxes your muscles and gradually lowers your heart rate. Slowly reduce your workload until your heart rate is below 60 percent of your maximum heart rate. The cool down should last at least five minutes, followed by some light stretching to enhance your flexibility.

Beginning a Fitness Program

If you cannot sustain 12 continuous minutes in your target heart rate zone, exercise several times a day to get into the habit of exercising.

Try to reach and maintain 60-65 percent of your maximum heart rate. Alternate exercise with periods of rest until you can sustain 12 continuous minutes of exercise at 60-65 percent of your maximum heart rate.

Begin exercising in three to five minute sessions.

If you can sustain 12 but not 20 continuous minutes of exercise in your target heart rate zone:

Exercise three to five days a week.

Rest at least two days per week.

Try to reach and maintain 60-75 percent of your maximum heart rate with moderate rhythmic exercise.

Begin with 12 continuous minutes. Increase your time by one to two minutes per week until you can sustain 20 continuous minutes.

——————————

If you can sustain 20 continuous minutes in your target heart rate zone, begin to increase the length and intensity of your workout:

Exercise four to six days a week or on alternate days.

Try to reach and maintain 70-85 percent of your maximum heart rate with moderate to somewhat hard exercise.

Exercise for 20-30 minutes.

Consistent aerobic exercise will help you change your body composition by lowering your percentage of body fat. If weight loss is a goal, combine an increase in the length of your workouts with a moderate decrease in caloric intake. For weight control, how long and how often you exercise is more important than how hard you exercise.

Establishing Aerobic Fitness

Maintaining Aerobic Fitness

Managing Weight

Here are some tips to achieving your weight management goal:

Consume most of your dietary calories at breakfast and lunch, and eat a light dinner. Do not eat close to bedtime.

Exercise before meals. Moderate exercise will help suppress your appetite.

Take exercise breaks throughout the day to help increase metabolism (calorie expenditure).

MANAGING WEIGHT

When you are training to improve strength and performance:

Exercise four to five days a week. Alternate exercise days and intervals of hard to very hard exercise with easy to moderate exercise.

Exercise for 30 minutes or longer.

Warning: these strategies are intended for average healthy adults. If you have pain or tightness in your chest, an irregular heartbeat, shortness of breath or if you feel faint or have any discomfort when you exercise, *stop!* Consult your physician before continuing. Remember, every workout should begin with a warm-up and finish with a cool-down.

SPORTS TRAINING

CARE & MAINTENANCE

IN THIS CHAPTER:

REGULAR CLEANING
CALIBRATION
BELT AND DECK MAINTENANCE
TREADBELT ADJUSTMENT

Caution: except for the areas described below, all service on this treadmill should be performed by a qualified fitness equipment technician. During the warranty period, please contact your dealer for service.

GENERAL CLEANING

The treadmill console and handrails should be wiped down with a clean, dry towel after every workout.

Once a day, the treadmill console and handrails should be wiped down with a mild, dilute soap solution. Do not use any other kind of cleaner or solvent.

WEEKLY INSPECTION

To extend the life and appearance of the treadmill, perform the following tests and inspections weekly:

1. Test all the keys.
2. Inspect the power cord for frayed or damaged areas.
3. Inspect the power cord ground plug.
4. Inspect the circuit breaker to see if it is tripped.
5. Inspect the treadbelt for proper tension and alignment.
6. Check that the handrail screws are tight.
7. Check that the ON/OFF switch toggles on and off.
8. Check that the pedestal screws, pedestal hinge screws, and motor cover screws are tight.
9. Check that the CHR pads are working.

Clean the treadmill of dust and dirt that might accumulate under and behind the treadmill. Vacuum small rubber particles that accumulate alongside the belt and behind the treadmill — these particles are from the soles of running shoes.

Monthly Cleaning

This procedure is used to ensure speed and incline accuracy. It should be done following any moving of the treadmill to a different location in your facility, as well as following any internal service.

Calibration

1. Remove safety key and straddle treadbelt with your feet on the straddle covers.
2. On the balance bar control pod, press and hold incline up and down. The display should read CALIBRATION.
3. Press Start. The treadmill will slowly increase speed and incline to maximum values then decrease to zero.
4. The display should read CALIBRATION SUCCESSFUL. If it does not, repeat steps 1 - 3. If it still does not calibrate successfully, call your dealer for service.
5. Remove safety key to exit calibration mode.

When the belt and deck are properly maintained, your treadmill will work at maximum efficiency. In return you will see a reduction in energy consumption and an increase in long-term performance.

Belt and Deck Maintenance

For average use of your treadmill, TRUE recommends you lubricate under the treadbelt once per year. For heavy use, which is more than 10 hours per week, TRUE recommends lubricating every three months.

Your treadmill's running belt has been properly aligned at the factory. However, when the treadmill is used on an uneven surface, please follow these instructions:

1 - Stand beside the treadmill, place the safety key onto the control panel and follow operating instructions for running the treadmill at 5 mph.

2 - If the belt is off-center to the right, turn the left roller adjustment bolt counter clock-wise 1/4 turn. If the belt is off-center to the left, turn the left roller adjustment bolt 1/4 turn clockwise.

3 - Let the machine run for several minutes to check the alignment. (Belt alignment does not need to be perfect). If more correction is needed, turn the adjustment bolt 1/4 turn and check again.
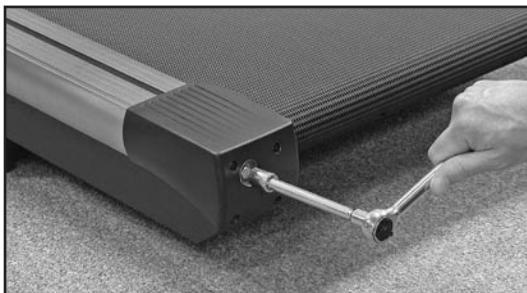
TARGET HEART RATE CHART

A GUIDE TO HELP YOU PICK AN INITIAL TARGET HEART RATE

TARGET HEART RATE CHART

AGE	60%	75%	85%
20	120	150	170
25	117	146	166
30	114	143	162
35	111	139	157
40	108	139	153
45	105	131	149
50	102	128	145
55	99	124	140
60	96	120	136
65	93	116	132
70	90	112	128
75	87	109	123
80	84	105	119
85	81	101	115

WEIGHT LOSS RANGE

AEROBIC TRAINING RANGE

INCREASED PERFORMANCE RANGE

values from ACSM guidelines

METs Table

How Speed and Incline Affect Workload, Expressed in METs

Grade

METs Table		0.0	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0	11.0	12.0	13.0	14.0	15.0
Walking	1.0	1.8	1.9	2.0	2.2	2.3	2.5	2.6	2.7	2.9	3.0	3.1	3.3	3.4	3.6	3.7	3.8
	2.0	2.5	2.8	3.1	3.4	3.6	3.9	4.2	4.5	4.7	5.0	5.3	5.6	5.8	6.1	6.4	6.7
	3.0	3.3	3.7	4.1	4.5	5.0	5.4	5.8	6.2	6.6	7.0	7.4	7.8	8.3	8.7	9.1	9.5
In-Between	4.0	5.6	6.0	6.4	6.8	7.2	7.7	8.1	8.5	8.9	9.3	9.7	10.1	10.6	11.0	11.4	11.8
	5.0	8.7	9.0	9.3	9.7	10.0	10.4	10.7	11.1	11.4	11.8	12.1	12.4	12.8	13.1	13.5	138
Running	6.0	10.2	10.6	11.0	11.4	11.8	12.3	12.7	13.1	13.5	13.9	14.3	14.7	15.2	15.6	16.0	16.4
	7.0	11.7	12.2	12.7	13.2	13.6	14.1	14.6	15.1	15.6	16.1	16.5	17.0	17.5	18.0	18.5	19.0
	8.0	13.3	13.8	14.4	14.9	15.5	16.0	16.6	17.1	17.7	18.2	18.8	19.3	19.9	20.4	21.0	21.5
	9.0	14.8	15.4	16.0	16.6	17.3	17.9	18.5	19.1	19.7	20.4	21.0	21.6	22.2	22.8	23.5	24.1
	10.0	16.3	17.0	17.7	18.4	19.1	19.8	20.4	21.1	21.8	22.5	23.2	23.9	24.6	25.3	26.0	26.7
	11.0	17.8	18.6	19.4	20.1	20.9	21.6	22.4	23.2	23.9	24.7	25.4	26.2	26.9	27.7	28.5	29.2
	12.0	19.4	20.2	21.0	21.9	22.7	23.5	24.3	25.2	26.0	26.8	27.6	28.5	29.3	30.1	31.0	31.8

Miles Per Hour

METs Explanation and Formulas

A Note About Calorie Expenditure Calculations

TRUE treadmills use the calorie expenditure formula as described in *Guidelines for Exercise Testing and Prescription* from the American College of Sports Medicine. This is the most widely accepted formula for running and walking.
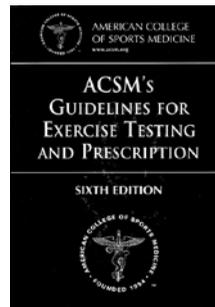
The ACSM guide says that running burns calories twice as fast as walking, e.g., a 150-pound person jogging at 5 mph requires 548 calories per hour, while walking at 5 mph requires 274 per hour.

(Other respected researchers such as David Costill think the ACSM overstates the energy difference between running and walking. Costill believes running requires 60% more energy than walking, not 100% as calculated by the ACSM. Using the same example, Costill's calculations result in 496 cal/hour for running 5 mph, with 313 cal/hour for walking 5 mph.)

One potential source of calorie estimate error is that the treadmill doesn't know if you are running or walking, so it has to make some assumptions. It assumes you are walking at 3 mph and slower, and running at 5 mph and faster. Between those two speeds, the treadmill combines the walking and running formulas to make its best guess.

Variations in human exercise efficiency are another potential source of error, with differences of plus or minus 20% common in the population.

Specifications

The Size and Performance Attributes of Your CS Treadmill

	CS5.0	CS3.0
Motor	TRUE 4hp AC Enduara-Drive	TRUE 4hp AC Enduara-Drive
Frame	11-Guage Heavy Duty Welded Steel	11-Guage Heavy Duty Welded Steel
Pedestals	Hydroformed Steel	Hydroformed Steel
HRC Cruise Control	YES	N/A
Pre-Set Workouts	10	2
User Defined	3	N/A
Footprint	82"L x 33" W (208 cm x 84 cm)	82"L x 33" W (208 cm x 84 cm)
Running Surface	60"L x 22"W (152 cm x 56 cm)	60"L x 22"W (152 cm x 56 cm)
Maximum User Weight	400 lbs.	400 lbs.
Incline	0% to 15%	0% to 15%
Speed	0-12 mph (0-19 kph)	0-12 mph (0-19 kph)
Full/Light Commercial Warranty	Frame (Lifetime), Motor (5 yrs), Parts (3 yrs), Labor (1 yr)	Frame (Lifetime), Motor (5 yrs), Parts (3 yrs), Labor (1 yr)
Light Commericial Warranty	Frame (Lifetime), Motor (5 yrs), Parts (3 yrs), Labor (3 yrs)	Frame (Lifetime), Motor (5 yrs), Parts (3 yrs), Labor (3 yrs)

TRUE®