CONSOLE OPERATION

Getting familiar with the control panel

■ Console

Getting Started:

Power the treadmill on by plugging it into an appropriate wall outlet, then turn on the power switch located at the front of the treadmill below the motor hood. Ensure that the safety key is installed, as the treadmill will not power on without it.

When the power is turned on, all the lights on the display will light for a short time. Then the **Time** and **Distance** windows will display Odometer readings for a short time. The **Time** window will show how many hours the treadmill has been in use and the **Distance** window will show how many Kilometers (or Miles if the treadmill is set to english readings; see maintenance for changing settings) the treadmill has gone. A message will be displayed showing the current software version. The treadmill will then enter idle mode, which is the starting point for operation.

Quick-Start Operation:

- Press and release any key to wake display up if not already on.
- Press and release the **Start** key to **begin belt movement** at 0.8km, then adjust to the desired speed using the **Fast / Slow** keys. You may also use the rapid speed keys 3 through 9 to set to a specific speed directly.
- To slow tread-belt press and hold the **Slow** key (console or hand rail) to the desired speed. You may also press the rapid speed adjust keys, 3 through 9.
- To stop the tread-belt press and release red **Stop** key.

TREADMILL FEATURES:

Pause/Stop/Reset:

- When the treadmill is running the pause feature may be utilized by pressing the red **Stop** key once. This will slowly decelerate the tread-belt to a stop. The Time, Distance and Calorie readings will hold while the unit is in the pause mode. After 5 minutes the display will reset and return to the start up screen.
- To resume your exercise when in Pause mode, press the **Start** key.
- Pressing the **Stop** key twice will end the program and a workout summary will be displayed. If the **Stop** button is pressed a third time, the console will return to the idle mode (start up) screen.
- If the **Stop** button is held down for more than 3 seconds the console will reset.
- When you are setting data, such as age and time, for a program pressing the stop key will allow you to go back one step for each key press.

Incline:

- Incline may be adjusted anytime after the belt starts moving.
- Press and hold the **Adjust ▲▼** keys to achieve desired level of effort. You may also choose a more rapid increase / decrease by selecting a quick key, 2 through 6, on left hand side of console (incline).
- The display will indicate incline numbers as percent of grade (the same as grade of a road) as adjustments are made.

Dot Matrix Center Display:

Ten rows of dots indicate each level of a workout in manual mode. The dots are only to show an approximate level (speed/incline) of effort. They do not necessarily indicate a specific value - only an approximate percent to compare levels of intensity. In Manual Operation the Speed / Incline dot matrix window will build a profile “picture” as values are changed during a workout. There are twenty-four columns, indicating time. The 24 columns are divided into 1/24th of the total time of the program. When the time is counting up from zero (as in quick start) each column represents 1 minute.

Next to the Dot Matrix window are three LED lights labeled: Track, Speed and Incline, along with a display button. When the Track LED is lit the dot matrix displays the Track profile, when the Speed LED is lit the Dot matrix displays the Speed profile and when the Incline LED is lit the Dot Matrix displays the Incline profile. You may change the Dot Matrix profile view by pressing the Display button. After scrolling through the three profiles the Dot matrix will automatically scroll through the three displays showing each one for four seconds. The LED associated with each profile will blink while that view is displayed. One more press of the Display button will return you to the Track profile.

0.4 km Track:

The 0.4km track (1/4 mile) will be displayed around the dot matrix window. The flashing dot indicates your progress. In the center of the track there is a lap counter for reference.

Heart Rate Feature:

The Pulse (Heart Rate) window will display your current heart rate in beats per minute during the workout. You must use both left and right stainless steel sensors to pick up your pulse. Pulse values are displayed anytime the computer is receiving a Grip Pulse signal. You may use the Grip Pulse feature while in Heart Rate Control. The TREADMILL will also pick up wireless heart rate transmitters that are Polar compatible, including coded transmissions.

Heart Rate Bar Graph:

Displays a graphical representation of your heart rate as a percentage of your maximum heart rate. When you enter your age during programming, the console will calculate your maximum heart rate then light up the graph to show the percent of maximum heart rate you are currently achieving.

Message Window Display:

Displays messages that help guide you through the programming process. During a program the message window displays your workout data.

To Turn Treadmill Off:

The display will automatically turn off (go to sleep) after 30 minutes of inactivity. This function is called sleep mode. In sleep mode, the treadmill will power down most everything except for a minimum of circuitry for detecting key presses and the safety key so it will start up again if these are activated. There is only a tiny amount of current used in sleep mode (about the same as your TV when it is turned off) and it is perfectly fine to leave the main power switch on in sleep mode.

Of course you may also remove the safety key or turn off the main power switch to power down the treadmill.

PROGRAMMABLE FEATURES

The New SPIRIT TREADMILL offers five preset programs, a Custom facility defined program, two heart rate control programs, a Gerkin protocol based Fitness Test and one Manual program.

To Select and Start a Preset Program:

- Select a program then press the enter key to begin customizing the program with your personal data, or just press the start key to begin the program with the default settings.
- After selecting a program and pressing enter to set your personal data, the **Time** window will blink with the default value of 20 minutes. You may use any of the up/down keys to adjust the time. After adjusting the time, press enter. (Note: You may press start at any time during the programming to begin with only settings you have modified at that point).
- The **Incline** window will now be blinking a value indicating your **Age**. Entering the correct Age will affect the Heart rate bar graph accuracy and also needed for the HR programs. Use the Up/Down keys to adjust, and then press enter.
- The **Distance** window will now be blinking a value indicating your **Bodyweight.** Entering your correct bodyweight affects the Kcal readout accuracy. Use the Up/Down keys to adjust, and then press enter.
- The **Speed** window will now be blinking, showing the preset top speed of the selected program. Use the Up/Down keys to adjust, and then press enter. Each program has various speed changes throughout; this allows you to limit the highest speed the program will attain during your workout.
- Now press the Start key to begin your workout.
- There will be a 3 minute warm-up to begin. You can press the start button to bypass this and go straight to the workout. During the warm-up the clock will count down from 3 minutes.

Preset programs speed and incline settings

The preset program speed and incline levels are shown in the chart below. The Speed numbers shown in the chart indicate a percentage of the top speed of the program. For instance, the first Speed setting for P1 (Program 1, HILL) shows the number 20. This means that this segment of the program will have a speed that is 20% of the top speed for the program (The user sets the top speed in the procedure above). If the user sets the top speed to 10 mph, then the first segment will be 2 mph. You will notice that segment 12 shows 100 which means, the speed will be set to 100% of 10 mph or simply 10 mph.

Prog	SEG	Warm up			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Cool down		
P1	Speed	20	30	40	50	60	60	70	70	70	80	80	70	80	80	100	100	70	80	80	70	70	80	80	70	60	60	50	40	30	20
	Incline	0	0	0	0	1	2	3	3	4	3	3	4	4	5	3	3	4	3	3	4	4	5	4	3	1	1	0	0	0	0
P2	Speed	20	30	40	50	60	60	70	80	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	80	70	60	50	40	30	20
	Incline	0	0	0	0	1	2	3	3	3	4	5	3	3	4	4	3	3	2	2	3	4	5	6	4	2	1	0	0	0	0
P3	Speed	20	30	40	50	60	60	70	70	70	80	70	70	80	80	60	70	80	80	70	70	70	100	70	80	60	60	50	40	30	20
	Incline	0	0	0	0	1	1	1	2	2	3	2	2	3	3	1	2	3	3	2	2	4	4	2	3	1	1	0	0	0	0
P4	Speed	20	30	40	50	60	60	70	80	100	60	60	70	80	100	60	70	100	60	70	100	60	70	80	70	60	60	50	40	30	20
	Incline	0	0	0	0	1	2	3	5	6	2	3	5	6	7	2	3	7	2	3	8	2	3	5	4	3	1	0	0	0	0

P1= Hill ; P2=Fatburn; P3=Cardio; P4=Interval

Custom Program:

- Select the Custom program then press **Enter**. Note that the dot matrix display portion will light a single row of dots at the bottom (Unless there is a previously saved program).

- The clock (Time) window will be flashing. Use the up and down adjustment keys to set the program for the desired time. Press the **ENTER** key. This is a must to continue even if the time is not adjusted.

- The **Incline** window will now be blinking a value indicating your **Age**. Entering the correct Age will affect the Heart rate bar graph accuracy. Use the Up/Down keys to adjust and then press enter.

- The **Distance** window will now be blinking a value indicating your **Bodyweight.** Entering your correct bodyweight affects the Kcal readout accuracy. Use the Up/Down keys to adjust, and then press enter.

- The first speed setting column (segment) will now be blinking. Using the **Fast / Slow** keys, adjust the speed to your desired effort level for the first segment then press enter. The second column will now be blinking. Note that the previous segment value has been carried over to the new segment. Repeat the above process until all segments have been programmed.

- The first column will be blinking again. The console is now ready for the incline settings. Repeat the same process used to set the speed values for programming the segments for incline.

- Press the **Start** button to begin the workout and also save the program to memory.

5K Run:

This program automatically sets a 5k (5 kilometer) distance as your goal. The track display will show one loop that is the equivalent of 5 kilometers and the Distance window will also show 5k to start. When the program begins the Distance will count down; once it reaches zero the program ends. *Please note that the Speed readout is in MPH if the console is not set to Metric readings.

Fitness Test:

The fitness test is based on the Gerkin protocol, also known as the fireman's protocol, and is a submax Vo2 (volume of oxygen) test. The test will increase speed and elevation alternately until you reach 85% of your Max heart rate. The time it takes for you to reach 85% determines the test score as shown in the chart below.

Stage	Time	Speed	Grade	VO2 Max
1	0 to 1:00	7.2KPH	0%	31.15
2.1	**1:00**	7.2KPH	2%	32.55
2.2	1:30	7.2KPH	2%	33.6
2.3	1:45	7.2KPH	2%	34.65
2.4	2:00	8.0KPH	2%	35.35
3.1	2:15	8.0KPH	2%	37.45
3.2	2:30	8.0KPH	2%	39.55
3.3	2:45	8.0KPH	2%	41.3
3.4	3:00	8.0KPH	4%	43.4
4.1	3:15	8.0KPH	4%	44.1
4.2	3:30	8.0KPH	4%	45.15
4.3	3:45	8.0KPH	4%	46.2
4.4	4:00	8.8KPH	4%	46.5
5.1	4:15	8.8KPH	4%	48.6
5.2	4:30	8.8KPH	4%	50
5.3	4:45	8.8KPH	4%	51.4
5.4	5:00	8.8KPH	6%	52.8
6.1	5:15	8.8KPH	6%	53.9
6.2	5:30	8.8KPH	6%	54.9
6.3	5:45	8.8KPH	6%	56
6.4	6:00	9.6KPH	6%	57
7.1	6:15	9.6KPH	6%	57.7
7.2	6:30	9.6KPH	6%	58.8
7.3	6:45	9.6KPH	6%	60.2
7.4	7:00	9.6KPH	8%	61.2
8.1	7:15	9.6KPH	8%	62.3
8.2	7:30	9.6KPH	8%	63.3
8.3	7:45	9.6KPH	8%	64
8.4	8:00	10.4KPH	8%	65
9.1	8:15	10.4KPH	8%	66.5
9.2	8:30	10.4KPH	8%	68.2
9.3	8:45	10.4KPH	8%	69
9.4	9:00	10.4KPH	10%	70.7
10.1	9:15	10.4KPH	10%	72.1
10.2	9:30	10.4KPH	10%	73.1
10.3	9:45	10.4KPH	10%	73.8
10.4	10:00	11.2KPH	10%	74.9
11.1	10:15	11.2KPH	10%	76.3
11.2	10:30	11.2KPH	10%	77.7
11.3	10:45	11.2KPH	10%	79.1
11.4	11:00	11.2KPH	10%	80

Stage	Time	Speed	Grade	VO2 Max
1	0 to 1:00	4.5MPH	0%	31.15
2.1	**1:00**	4.5MPH	2%	32.55
2.2	1:30	4.5MPH	2%	33.6
2.3	1:45	4.5MPH	2%	34.65
2.4	2:00	5.0MPH	2%	35.35
3.1	2:15	5.0MPH	2%	37.45
3.2	2:30	5.0MPH	2%	39.55
3.3	2:45	5.0MPH	2%	41.3
3.4	3:00	5.0MPH	4%	43.4
4.1	3:15	5.0MPH	4%	44.1
4.2	3:30	5.0MPH	4%	45.15
4.3	3:45	5.0MPH	4%	46.2
4.4	4:00	5.5MPH	4%	46.5
5.1	4:15	5.5MPH	4%	48.6
5.2	4:30	5.5MPH	4%	50
5.3	4:45	5.5MPH	4%	51.4
5.4	5:00	5.5MPH	6%	52.8
6.1	5:15	5.5MPH	6%	53.9
6.2	5:30	5.5MPH	6%	54.9
6.3	5:45	5.5MPH	6%	56
6.4	6:00	6.0MPH	6%	57
7.1	6:15	6.0MPH	6%	57.7
7.2	6:30	6.0MPH	6%	58.8
7.3	6:45	6.0MPH	6%	60.2
7.4	7:00	6.0MPH	8%	61.2
8.1	7:15	6.0MPH	8%	62.3
8.2	7:30	6.0MPH	8%	63.3
8.3	7:45	6.0MPH	8%	64
8.4	8:00	6.5MPH	8%	65
9.1	8:15	6.5MPH	8%	66.5
9.2	8:30	6.5MPH	8%	68.2
9.3	8:45	6.5MPH	8%	69
9.4	9:00	6.5MPH	10%	70.7
10.1	9:15	6.5MPH	10%	72.1
10.2	9:30	6.5MPH	10%	73.1
10.3	9:45	6.5MPH	10%	73.8
10.4	10:00	7.0MPH	10%	74.9
11.1	10:15	7.0MPH	10%	76.3
11.2	10:30	7.0MPH	10%	77.7
11.3	10:45	7.0MPH	10%	79.1
11.4	11:00	7.0MPH	10%	80

Before the test:

- Make sure you are in good health; check with your physician before performing any exercise if you are over the age of 35 or persons with pre-existing health conditions.
- Make sure you have warmed up and stretched before taking the test.
- Do not take in caffeine before the test.
- If using the hand pulse sensors hold the hand grips gently, do not tense up.

Fitness test programming:

1. Press the Fit-test button and press enter.
2. The message window will ask you to enter your **Age**. You may adjust the age setting, shown in the Incline window, using the Up and Down keys then press the Enter key to accept the new number and proceed on to the next screen.
3. You are now asked to enter your **Weight**. You may adjust the weight setting, shown in the Distance window, using the Up and Down keys then press enter to continue.
4. Now press Start to begin the test.

During the test:

- The console must be receiving a steady heart rate for the test to begin. You may use the hand pulse sensors or wear a heart rate chest strap transmitter.
- The test will start with a 3 minute warm-up at 4.8kph (3mph) before the actual test begins.
- The data shown during the test is:

a. **Time** indicates total elapsed time
b. **Incline** in percent grade
c. **Distance** in Miles or Kilometers depending on preset parameter.
d. **Speed** in MPH or KPH depending on preset parameter.
e. **Target** Heart Rate and **Actual** Heart Rate are shown in the message window.

After the test:

- Cool down for about one to three minutes.
- Take note of your score because the console will automatically return to the start-up mode after a few minutes.

What your score means:

VO2max Chart for males and very fit females

	18-25 years old	26-35 years old	36-45 years old	46-55 years old	56-65 years old	65+ years old
excellent	>60	>56	>51	>45	>41	>37
good	52-60	49-56	43-51	39-45	36-41	33-37
above average	47-51	43-48	39-42	35-38	32-35	29-32
average	42-46	40-42	35-38	32-35	30-31	26-28
below average	37-41	35-39	31-34	29-31	26-29	22-25
poor	30-36	30-34	26-30	25-28	22-25	20-21
very poor	<30	<30	<26	<25	<22	<20

VO2max Chart for females and de-conditioned males

	18-25 years old	26-35 years old	36-45 years old	46-55 years old	56-65 years old	65+ years old
excellent	56	52	45	40	37	32
good	47-56	45-52	38-45	34-40	32-37	28-32
above average	42-46	39-44	34-37	31-33	28-31	25-27
average	38-41	35-38	31-33	28-30	25-27	22-24
below average	33-37	31-34	27-30	25-27	22-24	19-22
poor	28-32	26-30	22-26	20-24	18-21	17-18
very poor	<28	<26	<22	<20	<18	<17

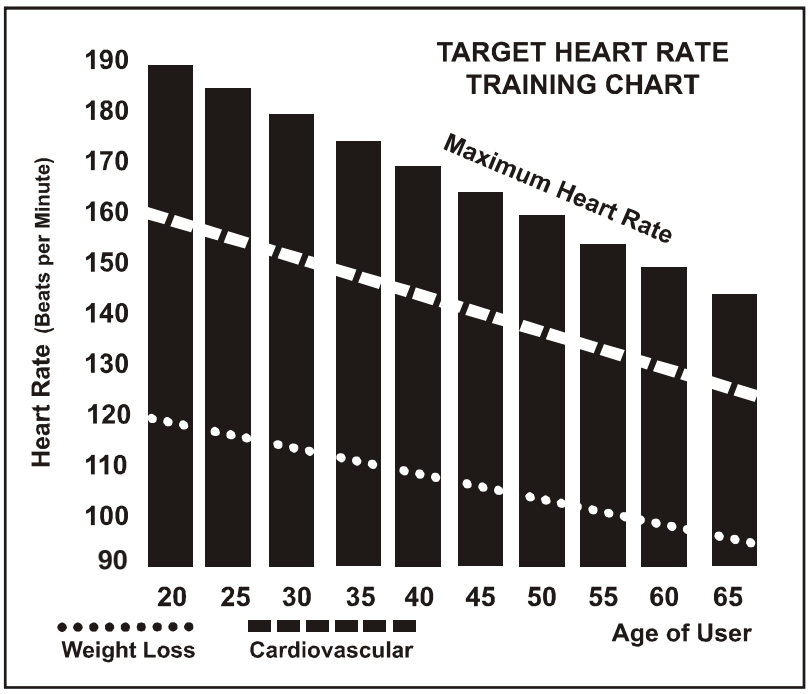
HEART RATE PROGRAMS

The old motto, “no pain, no gain”, is a myth that has been overpowered by the benefits of exercising comfortably. A great deal of this success has been promoted by the use of heart rate monitors. With the proper use of a heart rate monitor, many people find that their choice of exercise intensity is either too high or too low and exercise is much more enjoyable by maintaining their heart rate in the desired benefit range.

- To determine the benefit range in which you wish to train, you must first determine your Maximum Heart Rate, which is the highest your heart rate should go to. This can be accomplished by using the following formula:

220 - User’s Age = Maximum Heart Rate

(If you enter your age during programming of the console the console will perform this calculation automatically).



This is used for the HR control programs and also for the Heart rate bar graph. After calculating your Maximum Heart Rate, you can decide upon which goal you would like to pursue. The two most popular goals of exercise are cardiovascular fitness (training for the heart and lungs) and weight control. The black columns on the chart above represent the Maximum Heart Rate for a person whose age is listed at the bottom of each column. The heart rate training zone for either cardiovascular fitness or weight loss is represented by two different lines, which cut diagonally through the chart. A definition of the lines’ goal is in the bottom left-hand corner of the chart. If your goal is cardiovascular fitness or if it is weight loss, it can be achieved by training at 80% or 60%, respectively, of your Maximum Heart Rate on a schedule approved by your physician. Consult your physician before participating in any exercise program. With all SPIRIT Heart Rate Control treadmills, you may use the heart rate monitor feature without using the Heart Rate Control program. This function can be used during any of the different programs. The Heart Rate Control program automatically controls incline.

CAUTION!

The target value used in HR-1 and HR-2 programs is a suggestion only for normal, healthy individuals. Do not exceed your limits! You may not be able to obtain your chosen target. If in question, enter a higher age value that will set a lower target goal.

USING A HEART RATE TRANSMITTER (OPTIONAL)

How to wear your wireless chest strap transmitter:

1. Attach the transmitter to the elastic strap using the locking parts.
2. Adjust the strap as tightly as possible as long as the strap is not too tight to remain comfortable.
3. Position the transmitter with the logo centered in the middle of your body facing away from your chest (some people must position the transmitter slightly left of center). Attach the final end of the elastic strap by inserting the round end and, using the locking parts, secure the transmitter and strap around your chest.
4. Position the transmitter immediately below the pectoral muscles.
5. Sweat is the best conductor to measure very minute heart beat electrical signals. However, plain water can also be used to pre-wet the electrodes (2 ribbed oval areas on the reverse side of the belt and both sides of the transmitter). It's also recommended that you wear the transmitter strap a few minutes before your work out. Some users, because of body chemistry, have a more difficult time in achieving a strong, steady signal at the beginning. After "warming up", this problem lessens. As noted, wearing clothing over the transmitter/strap doesn't affect performance.
6. Your workout must be within range - distance between transmitter/receiver – to achieve a strong steady signal. The length of range may vary somewhat but generally stay close enough to the console to maintain good, strong, reliable readings. Wearing the transmitter immediately against bare skin assures you of proper operation. If you wish, you may wear the transmitter over a shirt. To do so, moisten the areas of the shirt that the electrodes will rest upon.

Note: The transmitter is automatically activated when it detects activity from the user's heart. Additionally, it automatically deactivates when it does not receive any activity. Although the transmitter is water resistant, moisture can have the effect of creating false signals, so you should take precautions to completely dry the transmitter after use to prolong battery life (estimated transmitter battery life is 2500 hours). The replacement battery is Panasonic CR2032.

Erratic Operation:

Caution! Do not use this treadmill for Heart Rate Control unless a steady, solid Actual Heart Rate value is being displayed. High, wild, random numbers being displayed indicate a problem.

Areas to look for on interference:

(1) Treadmill not properly grounded - **A must!**
(2) Microwave ovens, TV's, small exercise equipments, etc.
(3) Fluorescent lights.
(4) Some household security systems.
(5) Perimeter fence for a pet.
(6) The antenna that picks up your heart rate is very sensitive. If there is an outside noise source, turning the whole machine 90 degrees may de-tune the interference.
(7) If you continue to experience problems contact your dealer.

WARNING!
DO NOT USE THE HEART RATE CONTROL PROGRAM IF YOUR HEART RATE IS NOT REGISTERING PROPERLY ON THE TREADMILL'S DISPLAY!

HEART RATE CONTROL

How the Heart Rate Control Program Works:
Heart Rate Control (HRC) uses your treadmill's incline system to adjust your heart rate. Increases and decreases in elevation affect heart rate much more efficiently than changes in speed alone. The HRC program automatically changes elevation gradually to achieve the programmed target heart rate.

Selecting a Heart Rate Control Program:
You have the option, during the setup mode, to choose either the Weight Control (HR-1) program or the Cardiovascular (HR-2) program. The Weight Control program will maintain your heart rate at 70% of your Maximum Heart Rate. The Cardiovascular program will maintain your heart rate at 90% of your Maximum Heart Rate. Your Maximum Heart Rate is based upon a formula that subtracts your age from a constant of 220. Your HR setting is automatically calculated during the setup mode when you enter your age.

HEART RATE CONTROL PROGRAMMING

You must receive a strong / steady value in heart rate window or the program will not start.

- Press HR1 or HR2 button.
- The Pulse window will be blinking, showing the default HR for this program. You may adjust it and press enter if you want or just press enter to accept the default value.
- The Calorie will now be blinking showing bodyweight. Adjust and press enter or press enter to accept default.
- The Pulse window will now be blinking showing age. Adjust and press enter or press enter to accept default. Adjusting Age will change the Target HR value.
- The Time window will now be blinking. Adjust the time and press enter.
- Press Start to begin program.
- During the program you may increase or decrease the target heart rate by pressing the incline up or down buttons.