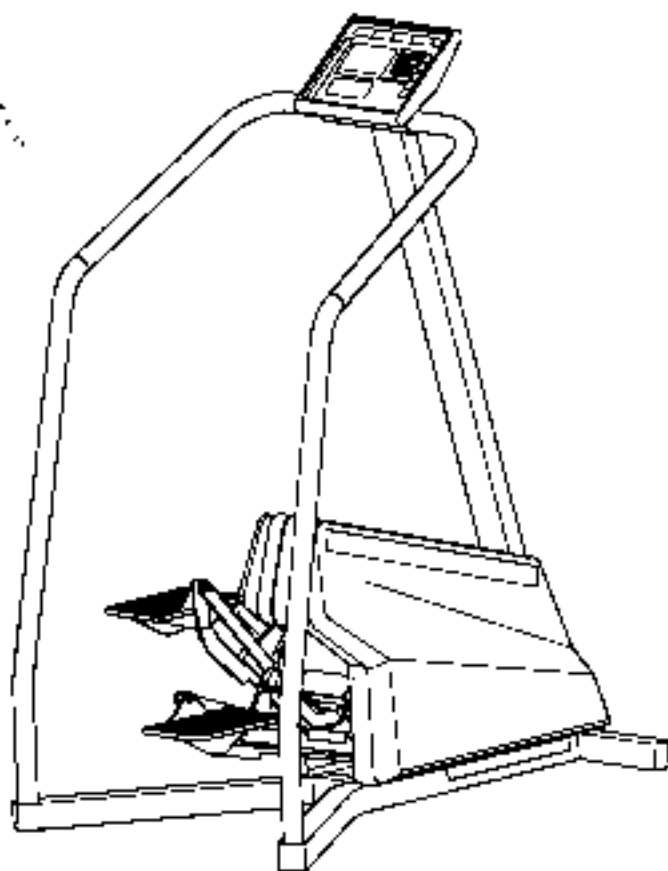


# *Climb* **Max<sup>2</sup>**

MADE IN U.S.A.

Everyone Should Be This Well Built

## OWNERS MANUAL



**Tectrix**

TECTRIX FITNESS EQUIPMENT

68 FAIRBANKS  
IRVINE, CA 92618  
(800) 767-8082  
(714) 380-8082

## SAVE THESE IMPORTANT SAFETY INSTRUCTIONS

1. Read all instructions before using this equipment.
2. **DANGER: DISCONNECT FROM SUPPLY CIRCUIT BEFORE OPENING.**  
*AVERTISSEMENT: DECONNECTER DU CIRCUIT D' ALIMENTATION AVANT D' OUVRIIR.*
3. Unplug all electrical appliances before cleaning and after use.
4. Close supervision is necessary when this equipment is used by, or near children, or disabled persons.
5. Use this equipment only for the intended use as described in this manual.
6. Never operate equipment that has a damaged power cord or plug.
7. Never drop or insert any object into any opening.
8. Do not use outdoors.
9. To disconnect, switch off power switch (on the front of the equipment), then remove plug from outlet.

## IMPORTANT GROUNDING INSTRUCTIONS

**WARNING:**  
**CONNECT THIS EQUIPMENT TO A PROPERLY GROUNDED OUTLET**  
*ATTENTION -*  
*BRANCHER CET EQUIPEMENT UNE PRISE CORRECTEMENT*  
*RELIEE A LA TERRE*

This equipment is for use on a nominal 120-volt circuit and has a grounding plug that looks like the plug illustrated in 'FIGURE A' below. This equipment *must* be grounded. No adapter should be used. It has been supplied with a cord having an equipment grounding conductor and plug. This plug must be plugged *only* into a properly installed grounded outlet. Failure to do so can result in the risk of electrical shock. Do not modify the plug provided with this product — if it does not fit, have a qualified electrician install the proper style outlet.

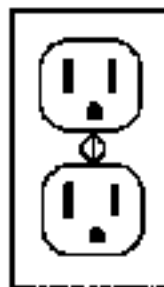


FIGURE A - Grounded Outlet

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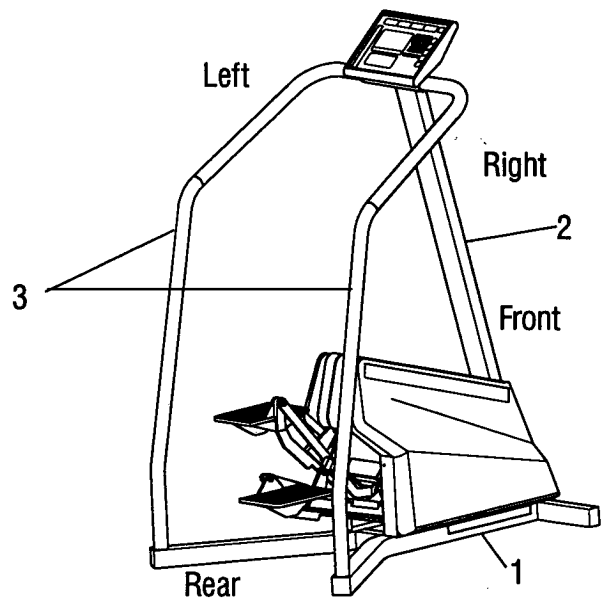
# 1. Assembly Instructions

The *ClimbMax<sup>2</sup>* is quite easy to assemble and should take around 30 minutes to complete. It will require the following common tools:

- 1/4" Allen Wrench
- 3/16" Allen Wrench
- 7/16" Wrench or Socket & Ratchet
- 1/2" Wrench

## Unpacking your new *ClimbMax<sup>2</sup>*

Remove the Chassis base from the pallet by removing the clamps and screws (use the 7/16" socket and ratchet). Remove all the parts from the box and check that they are all present. **CAUTION:** Do not at any time lean the display console upright tube up on its end. The display ribbon cable could be damaged.



## Parts List:

#	Part Name	Part #	Qty.
1	Main Chassis Base	Color	1
2	Display Console Upright	70103	1
3a	Left Hand Rail	Color	1
3b	Right Hand Rail	Color	1
	<b>Configuration Kit (see items 4-16)</b>	70105	1
4	5/16" - 18 x 2" Button Cap Screw	41048	2
5	5/16" Nut	42033	2
6	5/16" - 18 x 2" Socket Screw	41011	2
7	5/16" Flat Washer	53017	2
8	5/16" Lock Washer	53018	2
9	Handrail Clamp	52035	1
10	Friction Belt	61077	1
11	Power Cord	14007	1
12	Owners Manual	03015	1
13	Maintenance Manual	03016	1
14	Warranty Card	03006	1
15	Screw, console	41027	4
16	Display Console	Configured	1

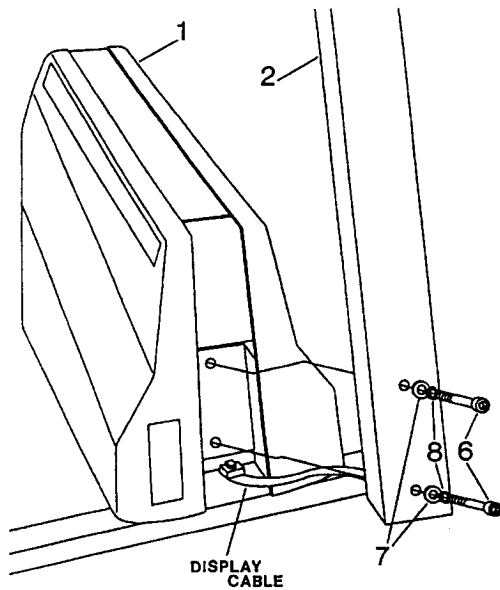


Fig. 1

## Attaching The Display Console Upright

Attach the hand rail upright (2) to the chassis (1) using two 5/16" socket screws (6), flat washers (7) and lock washers (8) as shown in Fig. 1. Make sure that the display cable goes through the slot and the display is facing toward the chassis. Finger tighten screws, wrench tighten after hand rails are installed.

## Attaching the Display Console

Remove the display console from the configuration kit. The display console attaches to the console back-plate via four Phillips head screws (15), also located in the configuration kit. Before screwing the console on, make sure the display ribbon cable is firmly connected to the back of the display board electronics. The cable connector is identical to the connector located on the power board (see figure 3). Tighten the four screws.

## Attaching The Hand Rails

Slip the left (3a) and right (3b) handrails over the plugs on top of the rear feet (use a spray cleaner as lubricant). Now, rotate the handrails into the clamp bracket on the display console upright (2). Slip the handrail clamp (9) behind the handrails, line up the holes and insert two 5/16" x 2" button cap screws (4) and tighten the nuts (5). Tighten the screws at the base of the display console upright (2) (see Fig.1).

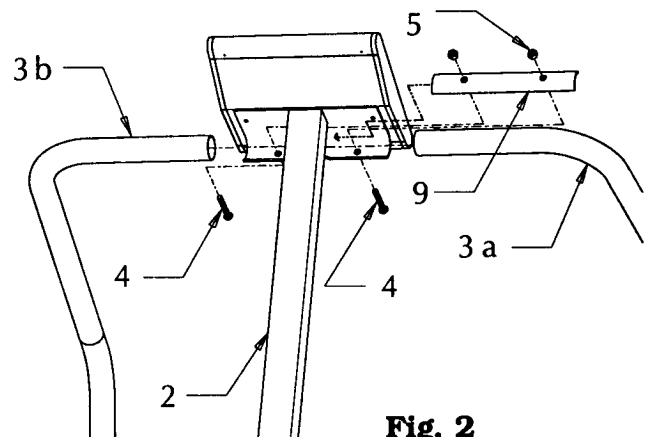


Fig. 2

## Connecting The Display Cable

Lay the *ClimbMax<sup>2</sup>* on its right side and locate the display ribbon cable. As shown in Fig.3, fold the display cable (A), attach the cable to the connector (B). Stand the *ClimbMax<sup>2</sup>* up.

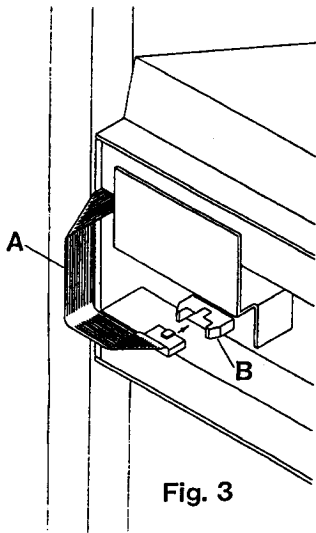


Fig. 3

## Leveling The *ClimbMax<sup>2</sup>*

Move the *ClimbMax<sup>2</sup>* to where it will be used. Check for rocking by pressing on both sides of the front foot. If it rocks back and forth, lower or raise one of the glides on the front foot by loosening the lock nut and screwing the glide in or out. Once it is level, tighten the glide locknuts.

## Power Connector

The *ClimbMax<sup>2</sup>* has both a power in (A) and power out (B) connector (see Fig. 4). This allows you to string power from one *ClimbMax<sup>2</sup>* to the next and eliminates the need for extension cords. One end of the power cord (11) plugs in to the power in (A) and the other end plugs into either the power out (B) of the next *ClimbMax<sup>2</sup>* or the wall socket. (C) is the power switch.

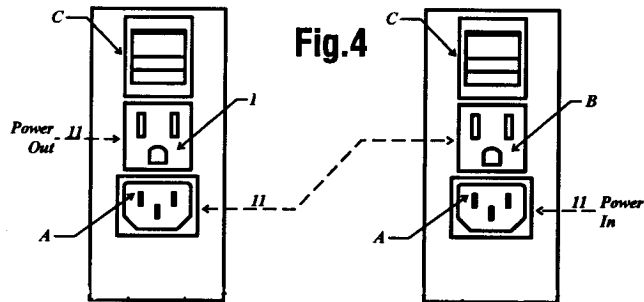


Fig.4

## 2. Overview of *ClimbMax<sup>2</sup>* Features

### **Easy to use**

You don't need to read this manual to get started. Just press any key and follow the instructions that appear on the display. First, *ClimbMax<sup>2</sup>* will ask for your weight, then for the length of the workout in minutes, then for a choice of program and exercise level.

### **Continuous Readout**

The digital readouts give you continuous information on distance climbed, total calories burned, work effort in watts and calories per hour, the time elapsed so far and the time remaining.

### **Variety of Programs**

*ClimbMax<sup>2</sup>* provides a wide variety of exercise programs. You can select the length of your program, from five to sixty minutes, and choose from nine different pre-set programs.

After you select a program you have a choice of fifteen levels of effort to tailor the program to your needs. If you prefer, you can control your workout directly in Manual, creating your own program while you climb.

### **Racing**

You can also run a race by yourself or against a programmable pacer. You can set your goal to a particular height or to a certain number of calories. Just select the goal, set the pacer speed and start climbing.

### **Programmable Options**



*ClimbMax<sup>2</sup>* has a number of programmable options which may be changed in Setup Mode, including maximum program time, use of English or metric units, prompted or 'Step and Go' operation, and more. See **Setup Mode** for details.

### **Help Function**

Press *HELP* any time you need assistance.



## 3. Getting Started

### Weight

When you press any key to start your workout, you need to tell the climber how much you weigh so that it can calculate watts and calories correctly. The display prompts you with WEIGHT = 150. Use  and  to select your actual weight, then press **ENTER**.



*(If you rest your weight on the hand rails, the Watts and Calories readouts will not be accurate, because you aren't lifting your full body weight at each step)*

### Time

Next you need to tell the climber how long you are going to exercise. The display shows the program time like this: MINUTES= 20. Use  and  to adjust the time, then press **ENTER**.

(Both the first time and the maximum time can be adjusted in **Setup Mode**)

### Program

After entering your weight and time, you are offered a choice of exercise programs, beginning with MANUAL. Press  to move downward through the pre-set programs starting with Program 9, or press  to move up to SOLO RACE, then the first pre-set program, 1. ROLLING HILLS.

When you see the program you want, press **ENTER** to begin.

- |                  |   |
|------------------|---|
| <b>Manual</b>    | Manual operation: you control your climbing speed directly.   |
| <b>Programs</b>  | There are nine pre-set programs for each length of program time. Programs 1-3 are for calorie burning, 4-6 are for strength training, and 7-9 are for endurance training. |
| <b>Solo Race</b> | You can climb to a distance goal or a calorie goal in competition with a programmable pacer.  |

## 4. Manual Operation





Manual is the simplest and most flexible way to operate *ClimbMax<sup>2</sup>*. All you have to do is climb, adjusting your speed as you go.

If the climber is set up for 'Step and Go' operation, you can just start climbing on it with no further programming required. On the other hand, if the climber is set up for 'Prompted' operation, just enter your weight and workout time, and accept **MANUAL OPERATION** as your exercise program.

(See **Setup Mode** for instructions on choosing 'Step and Go' or 'Prompted' operation.)

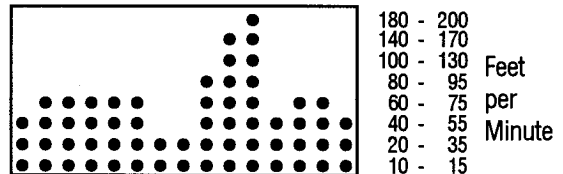
During the first minute of your workout, you can return to the **WEIGHT** prompt by pressing **ENTER**. After the first minute, **ENTER** allows you to change your program selection.

### Speed Control

The climber starts you at 25 feet per minute. Use  and  to control your climbing speed. Each time you press an arrow key your speed increases or decreases by five feet per minute. To change your speed rapidly, hold the key down and it repeats automatically. For safety's sake,  repeats twice as fast as .

### Interval Display

The Interval display keeps a record of your climbing speed during the exercise. Each column represents 1/15 of the total program time, and shows your highest speed for that period.



### Readouts

When you select Manual Mode, the readouts switch to show Program and Exercise Level, Average Speed, Calories per Hour, and Elapsed Time.

Press **DISPLAY SHIFT** key to change the display to Distance, Watts, Calories and Time Remaining. Press and hold **DISPLAY SHIFT** key to start the display scan alternating between the two readout groups.

## 5. Programs

### Overview

*ClimbMax<sup>2</sup>* has a variety of built-in programs. Program time is adjustable in five minute intervals up to the maximum (which is changed in *Setup Mode*). Each program time offers a choice of nine different exercise programs.

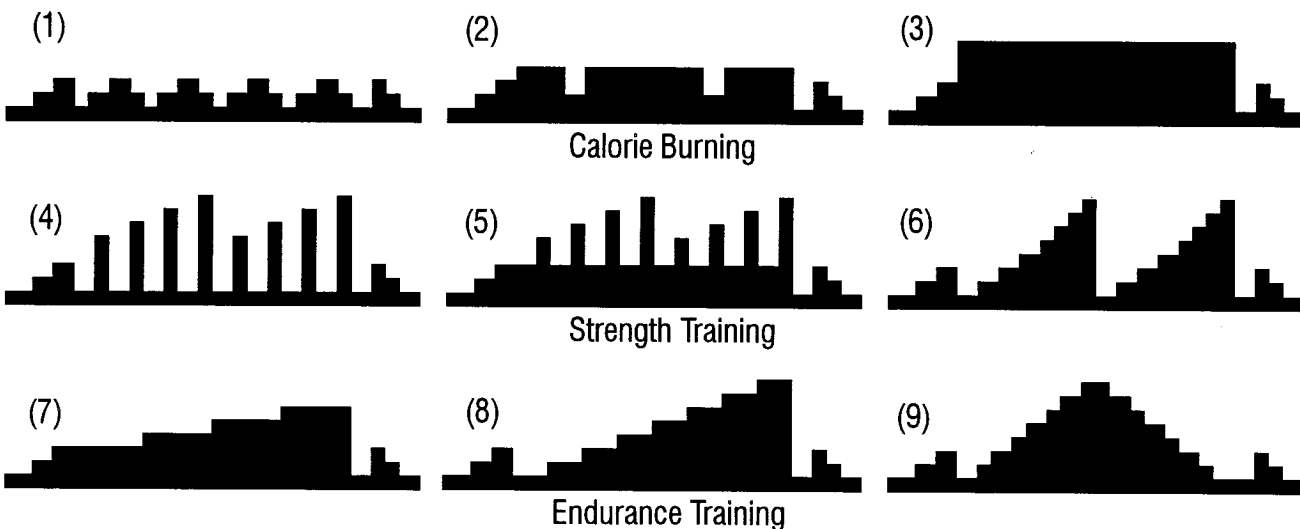
The programs are grouped into three categories: *Calorie Burning*, *Strength Training* and *Endurance Training*. Each category has three different programs, generally increasing in difficulty.

**Calorie Burning** programs (number 1-3) maintain a moderate, fairly even intensity of effort. For best results in weight reduction and aerobic training, these should be used for prolonged workouts of thirty minutes or more.

**Strength Training** programs (number 4-6) are interval programs which alternate periods of high intensity work with low- to medium-intensity rest periods. They provide both aerobic and anaerobic conditioning.

**Endurance Training** programs (number 7-9) provide sustained intense exercise. These are meant to challenge highly-trained individuals, although they can be used at lower exercise levels by anyone for aerobic training.

Each program begins with a 2½-minute warm up and ends with a 2½-minute cool-down. The 5-minute programs are just the warm-up followed by the cool-down.



Program 3, *Long Plateau*, and the three Endurance Training programs have a continuous center section which you travel through once.

Each of the other five programs has a 5-minute long repeating section which repeats once in a 10-minute program, twice in a 15-minute program, and so on, up to eleven times in a 60-minute program.



Exercise Level

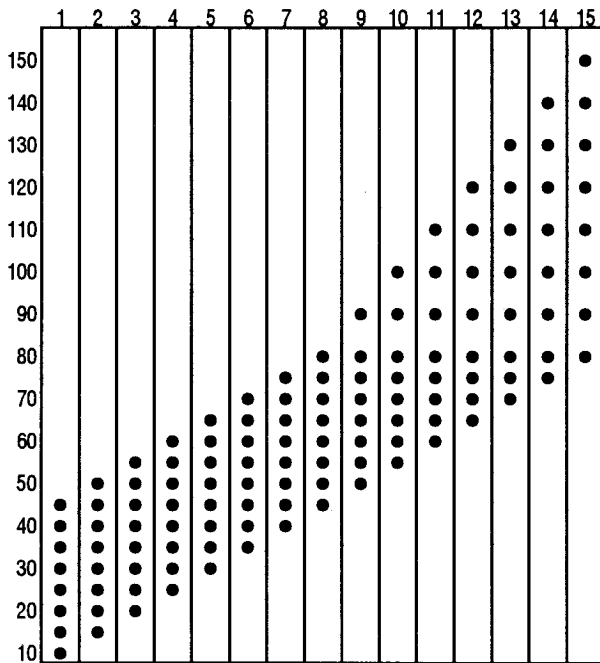


Fig. 5

### Exercise Level

After you have selected a program, the readouts ask LEVEL = 4. The speedometer shows the highest and lowest speeds used at the current level. Use  $\uparrow$  and  $\downarrow$  to select an exercise level between 1 and 15, then press **ENTER**. You can use the arrow keys to change exercise level at any time during the program.

Climbing speed is related to interval height and exercise level according to fig. 5, which shows the speed in feet per minute for each interval height and level.

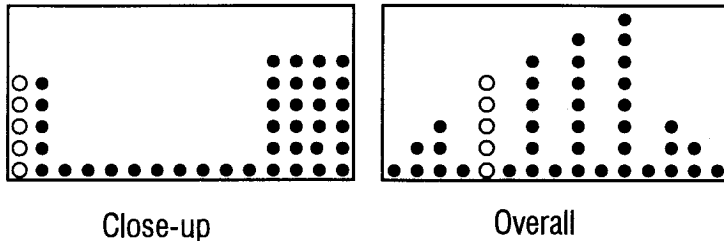
### Readouts

After you enter a level, the readouts switch to show Program and Exercise Level, Average Speed, Calories per Hour, and Elapsed Time.

Press **DISPLAY SHIFT** to change the display to Distance, Watts, Calories and Time Remaining. Press and hold it to start the display scan alternating between the two readout groups.

## Zoom In and Out

The Interval display shows the close-up view, a window into the next 75 seconds of the program. Each column represents five seconds of climbing. The height of the column shows the relative climbing speed for that interval:



Press **ENTER** to zoom out to an overall view of the program. The overall view shows each climbing speed in the program. The central section may be repeated more than once. A flashing column shows your current position within the program. Press **ENTER** again to zoom back in to the close-up view.

## Changing Programs

You can press **CLEAR** to switch to manual operation. The Interval display changes to show your actual climbing speeds during the program. You can resume your program or choose another program by pressing **ENTER** and using the arrow keys to view the program choices. As you preview the different choices, a blinking column in the Interval display shows your current position within each program.




## Workout Summary

At the end of the program, a tone sounds and FINISHED! is displayed. After ten seconds, the readout shows the distance climbed in floors (ten feet per floor), followed by total calories burned, total distance climbed in feet, and average climbing speed. The summary repeats until the sign-on message appears.

## 6. Racing

In a race you have a choice between racing to a distance or a calorie goal, and you can race against a programmable pacer or alone.



### Distance Goal

Choose the racing option by pressing  after entering your weight and time. The display shows RACE GOAL = 100 (100 feet). Pressing  or  increases or decreases the goal 50 feet at a time, between 50 and 4000 feet.

### Calorie Goal

To select a calorie goal, press **DISPLAY SHIFT**. The display changes to CALORIES = 40. The arrow keys change the calorie goal in increments of 20 between 20 and 1600 calories. (Someone who weighs 150 pounds burns about one calorie for every four feet climbed.)

### Pacer

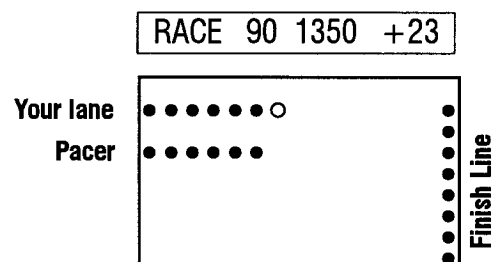
Press **ENTER** when the goal is correct. The Interval display shows a blinking dot at the left of the top row. The display now prompts for a pacer speed in feet per minute, for example PACER = 25. Use  and  to adjust the pacer speed, which is also indicated by a blinking LED on the speedometer. Setting the speed to zero turns the pacer off. A dot on the third row shows the pacer's position.

Press **ENTER** again to begin the race. The readout changes to COUNTING -0:03, and a three-second count-down to the race begins. When the count reaches -2, a low beep signals GET READY; at -1 a medium beep signals GET SET, and at zero, a high beep signals the start of the race. Start climbing as fast as you can — the pacer is already up to speed!

### Race

The Interval display shows an overall view of the race. The blinking indicator in the top row shows your position, and the third row shows the pacer's position. The vertical column at the right represents the finish line.

If you beat the pacer, you are rewarded by a brief victory tune and a display of WINNER! If the pacer wins, when you reach the finish line the readouts show YOU PLACED 2nd.





After the race, you can press **CLEAR** to resume climbing in manual mode. Press **ENTER** to start another race or continue with a pre-set program.

## 7. Setup Mode

Setup Mode is used to adjust program times, to select various options, including Prompted or Step and Go operation, and to set the jackpot count.

Enter Setup Mode by holding the **DISPLAY SHIFT** key while turning the *ClimbMax<sup>2</sup>* on. The readouts show SETUP MODE and the Interval display shows a moving pattern.

The keys have special functions in Setup Mode:

<b>DISPLAY SHIFT</b> or <b>ENTER</b>   <b>HELP</b> <b>CLEAR</b>	Scroll Through Programmable Options  Increase value or change option Decrease value or change option Display a brief message about the current option Clear the display or exit setup
--	--



**CLEAR** restores the SETUP MODE sign-on if a programmable time or option or the Jackpot count is being displayed. If the sign-on is displayed, **CLEAR** exits Setup Mode and displays the normal "ClimbMAX 2" sign-on. If any changes were made, the new values are written to memory at this time.

If you make a mistake in Setup Mode and you haven't used **CLEAR** to exit, you can restore the previous setup values by turning the climber off and on again. In other words, no permanent changes are made until you press **CLEAR** and "ClimbMAX 2" is displayed.

### Programmable Options

**SHIFT** displays the following options, one at a time:

Option	Factory Setting	Alternatives
1. Maximum Time	MAX TIME = 30	(5-60)
2. First Time	FIRST TIME = 20	(5-60)
3. Time-out Period	TIME OUT = 0:30	NONE, 30, 1:00, 2:00
4. Prompting	PROMPTED	STEP AND GO
5. Measurement system	FEET AND POUNDS	METRIC READOUT
6. Speaker Control	BEEP ON	BEEP OFF

Press  or  to change the displayed value or switch between alternatives. Press **ENTER** to advance to the next option. The **HELP** key provides a brief message about the current option. When all options have been entered, SETUP MODE reappears.

---

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## PROGRAMMABLE TIMES

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### 1. MAX TIME

The length of the longest workout can be adjusted in 5-minute increments from 5 to 60.

---

### 2. FIRST TIME

The number of minutes first offered after weight has been entered also ranges from 5 to 60. It can't be longer than the maximum time.

---

### 3. TIME OUT

The length of time that the climber retains its settings before resetting and displaying the sign-on message if the user quits stepping. The period can be set to thirty seconds, one minute, two minutes, or NONE, which keeps it from timing out.

---

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## OPTIONS

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### 4. Prompting

#### PROMPTED

Prompting begins when you press a key or when you start climbing.

#### STEP AND GO

If you start climbing without pressing a key, the climber starts in Manual. If you press a key first, prompting begins. Pressing **ENTER** in Manual always begins the prompt-in sequence.

---

### 5. Measurement System

#### FEET AND POUNDS

Distance is displayed in feet and weight is entered in pounds.

#### METRIC READOUTS

Distance is displayed in meters and weight is entered in kilograms

---

### 6. Speaker Control

#### BEEP ON

The speaker operates.

#### BEEP OFF

Turns the speaker off completely.




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## Jackpot Count

The Jackpot features are accessed by pressing the unlabeled key below the **CLEAR** key.

When the unlabeled key is first pressed, it displays the current Jackpot Count as XXXXX USES. The Jackpot Count is the number of workouts until the jackpot triggers.



Press  or  to change the number of workouts between jackpots between 0 and 15000. A count of zero disables the jackpot feature. You can select a count of 1 by decreasing the count to zero, then pressing  once. The jackpot will trigger after the next workout, after which the count remains zero.

When the jackpot triggers, the readouts display JACKPOT!, the Interval display shows a star burst pattern, and a little tune is played. To demonstrate the jackpot, decrease the count to zero, then press  again. Press **CLEAR** to restore the display.

## 8. Test Mode




Test Mode is used to test the climber's electronic hardware. You enter Test Mode by holding the **ENTER** key down while turning the *ClimbMax<sup>2</sup>* on. All the displays light up as long as you hold the key down. When you release the key, the readouts show the version number of the microprocessor software and the state of the slack switch (SLACK or TIGHT). The Interval and speedometer displays show moving patterns.

The keys have these special functions in Test Mode:

<b>DISPLAY SHIFT</b>	Display odometer and RPM sensor data
	Loosen Belt
	Tighten Belt
<b>ENTER</b>	Test LED digit groups
<b>HELP</b>	Test LED Segments
<b>CLEAR</b>	Clear Function display or Exit

The indicators show the state of the various input/output signals:

<b>Calories</b>	Slack Switch	on
<b>Elapsed Time</b>	RPM sensor off	-
<b>Time Remaining</b>	RPM sensor on	-

The  and  keys run the belt tensioning motor as long as you hold them down. Don't hold the  to loosen the belt for too long, or you may tangle or unsnap the belt.

**DISPLAY SHIFT** displays the odometer reading (the total distance climbed). The Interval display shows a graphic display of the output of the speed sensor. At high speeds only the bottom row is lit; at low speeds the entire display lights. Except at very low speeds the columns ought to be nearly the same. Variations in height of more than one LED may indicate a problem with the RPM sensor or its encoder disk.

**ENTER** lights up each display grouping (a matrix column together with an alphanumeric digit or a group of sixteen LED's in the bar graph) in turn to locate shorted display drive lines.

**HELP** lights up each display segment in order to locate segments that are shorted together.

**CLEAR** restores the version readout if the odometer reading or a display test pattern is displayed; otherwise it exits Test Mode and displays the "*ClimbMAX 2*" sign-on.

## 9. Reference

### Climber Speed & Energy Conversions for 150 lb. User

<i>Ft/min</i>	<i>M/min</i>	<i>MPH</i>	<i>Km/H</i>	<i>METS</i>	<i>KPM/S</i>	<i>Watts</i>	<i>Cal/Hr</i>
10	3.0	3.2	5.2	1.6	3.5	34	146
15	4.6	3.7	5.9	2.4	5.2	51	219
20	6.1	4.1	6.7	3.1	6.9	68	292
25	7.6	4.6	7.4	3.9	8.6	85	365
30	9.1	5.0	8.1	4.7	10.4	102	438
35	10.7	5.5	8.9	5.5	12.1	119	511
40	12.2	5.9	9.6	6.3	13.8	135	584
45	13.7	6.4	10.4	7.1	15.5	152	656
50	15.2	6.8	11.1	7.8	17.3	169	729
55	16.8	7.3	11.8	8.6	19.0	186	802
60	18.3	7.8	12.6	9.4	20.7	203	875
65	19.8	8.2	13.3	10.2	22.5	220	948
70	21.3	8.7	14.0	11.0	24.2	237	1021
75	22.9	9.1	14.8	11.8	25.9	254	1094
80	24.4	9.6	15.5	12.5	27.6	271	1167
85	25.9	10.0	16.2	13.3	29.4	288	1240
90	27.4	10.5	17.0	14.1	31.1	305	1313
95	29.0	10.9	17.7	14.9	32.8	322	1386
100	30.5	11.4	18.5	15.7	34.5	339	1459
110	33.5	12.3	19.9	17.2	38.0	373	1605
120	36.6	13.2	21.4	18.8	41.5	406	1751
130	39.6	14.1	22.9	20.4	44.9	440	1896
140	42.7	15.0	24.3	21.9	48.4	474	2042
150	45.7	15.9	25.8	23.5	51.8	508	2188
160	48.8	16.8	27.3	25.1	55.3	542	2334
170	51.8	17.8	28.8	26.6	58.7	576	2480
180	54.9	18.7	30.2	28.2	62.2	610	2626
190	57.9	19.6	31.7	29.8	65.6	644	2772
200	61.0	20.5	33.2	31.4	69.1	677	2918

*The Calories/Hour and METS figures are based on an estimate of 20% metabolic efficiency. (Only KPM/S, Watts, and Cal/Hr are affected by the 150 lb. weight assumption.) The horizontal equivalent speeds (MPH and Km/H) are approximations based on average energy expenditure. Actual caloric usage will vary with the individual.*

$$\text{Kilopond-meters/sec (KPM/S)} = (\text{speed in meters/sec}) \times (\text{weight in Kg})$$

$$\text{Watts} = (\text{speed in meters/sec}) \times (\text{weight in Kg}) \times (9.8 \text{ meters/sec}^2)$$

## 10. *ClimbMax<sup>2</sup>* Specifications

<i>Speed:</i>	10-200 feet/minute (3-61 meters/minute)
<i>Step height:</i>	2-16 inches, optional limits at 6, 9, & 12 inches
<i>Brake system:</i>	Servo-controlled friction brake
<i>Drive system:</i>	Steel cable drive rated at 2000 lb. tensile strength
<i>Program times:</i>	5-60 minutes, user-selectable
<i>Exercise Programs:</i>	101 total (9 for each program time, plus Manual), 15 levels
<i>Racing:</i>	50-4000 feet (20-1600 meters) with programmable pacer
<i>Displays:</i>	16 alphanumeric, 10 x 15 matrix, 29-element bar graph
<i>Power:</i>	75 watts, ¾ amp @ 110VAC, ½ amp @ 250VAC, 50/60 Hz
<i>Cord chaining:</i>	Up to 10 climbers can share one 10 amp outlet.
<i>Weight:</i>	160 lb. (73 kg)
<i>Dimensions:</i>	59" x 31" x 44" (150 x 79 x 112 cm)
<i>U.S. Patents:</i>	4,938,474; 4,949,993
<i>Warranty:</i>	One year parts and labor

