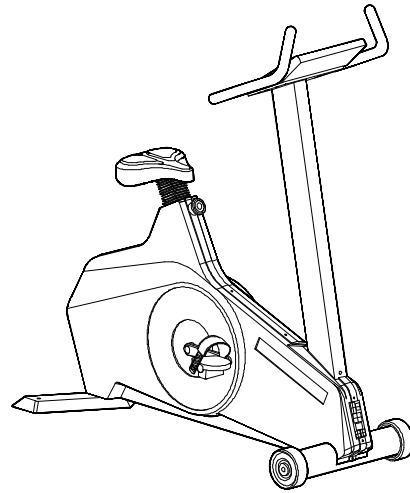
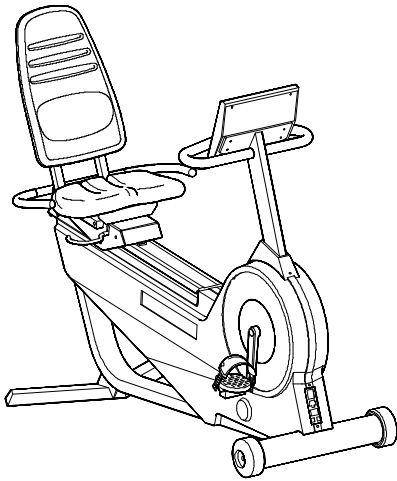




LT-03052

A PDF file was made for this manual, (see additional pages) but the quark files are NOT in the released directory.



BikeMax™

Owner's Manual



Tectrix Fitness Equipment

68 Fairbanks
Irvine, California 92618
(800) 767-8082 in USA
(714) 380-8082

Important Safety Instructions: Read and Save

1. Read all instructions before using this equipment.
2. DANGER: DISCONNECT FROM SUPPLY CIRCUIT BEFORE OPENING.
AVERTISSEMENT: DECONNECTEUR DU CIRCUIT D'ALIMENTATION AVANT D'OURVRIR.
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 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 on this equipment.
8. Do not use outdoors.
9. To disconnect, switch off power switch (just above power cord plug), then remove plug from outlet.

In the presence of power line “noise” such as fast transients, the equipment may require that power be switched off and then back on again, to resume normal operation.

IMPORTANT GROUNDING INSTRUCTIONS

Warning:

Connect This Equipment to a Properly Grounded Outlet

ATTENTION -

**BRANCHER CET EQUIPMENT UNE PRISE CORRECTEMENT RELIÉE À LA
TERRE**

This equipment is for use only on a nominal 120-volt circuit and has a grounding outlet that looks like the outlet 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.

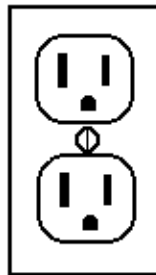


FIGURE A - Grounded Outlet

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All other trademarks and product names are the property of their respective holders.

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CHAPTER 1 - INTRODUCTION

Welcome to BikeMax, the perfect bike for any health club or other group exercise environment. BikeMax's durability, ease of use, flexible programming, and group racing capability make it ideal for both individual and partnered workouts.

BikeMax's features include:

- **Simple to Use:** Press any key and BikeMax's console leads you through the simple steps to start a workout. Or, just get on and start pedaling.
- **Continuous Performance Monitoring:** The convenient, easy-to-read console shows the progress of the workout—distance, speed, calories burned, and lots more.
- **Built-in Workout Profiles:** Six standard workouts offer combinations of calorie burning, strength training, and endurance training to satisfy almost everyone.
- **Programmable:** Bikers who want a specific workout profile that's not included in the standard set can create their own.
- **Calorie Goals:** Tell BikeMax how long you want to work out and how many calories you want to burn, and it will set the optimum workout level for you.
- **Optional Heart Rate Programs:** With an optional heart rate monitor, BikeMax can program a workout to reach and keep you at your optimal heart rate.
- **Group Races:** Connect up to eight bikes, and have your riders compete against each other.
- **Setup Mode:** You can change BikeMax's default settings and limits to match the way you want to operate.

So, BikeMax is ideal for all of these exercisers:

- Someone who's never used a bike before uses manual mode, choosing a gear and pedaling speed to match what he or she can do.
- Regular exercisers who want to push themselves can use the standard programs to increase strength and endurance.
- Serious athletes who know their abilities and needs can custom-tailor the exact workouts they want.

About This Book

This book is for you, the BikeMax owner. While it includes complete details on using BikeMax for a workout, it also contains assembly and setup information which the casual user doesn't need to know.

Besides this introduction, this book contains:

Chapter 2 - Assembly and Setup

Everything about getting the BikeMax ready to use, from taking it out of its shipping crate to setting its operation limits.

Chapter 3 - Let's Ride

How to use BikeMax. Starting a workout, choosing a program, the console display, and more.

Chapter 4 - Advanced Uses

Setting up individual or group races, custom programming, and using the fitness test and calorie goal features.

Chapter 5 - Heart Rate Programs

How to use the optional heart rate programming features.

Chapter 6 - Testing

How to make sure your BikeMax is operating properly.

Appendix A

About the optional CardioTouch™ heart rate monitor.

CHAPTER 2 - ASSEMBLY AND SETUP

This chapter describes how to unpack and assemble your BikeMax, how to network two to eight bikes if you want to be able to use the group race feature, and how to use setup mode to configure the bike for your situation.

Assembly Overview

It's easy to assemble BikeMax—it will probably take about 10 minutes. You need these common tools:

- 3/16" Hex (Allen) wrench
- 7/16" wrench or socket wrench and ratchet
- #2 Phillips screwdriver

Here's an overview of the steps in the assembly:

1. Unpack BikeMax and make sure you have all the parts.
2. Follow the detailed instruction for your bike; there are separate sections for the upright BikeMax and the recumbent BikeMax-R.
3. Plug in the power cord.
4. If you have more than one BikeMax, connect the communications ports to allow group racing.

Unpack BikeMax

Use the 7/16" socket or wrench to remove the brackets holding the chassis feet to the pallet. Remove all the other parts from the shipping carton. Make sure you have all the parts by checking against the parts list for your bike model in the next section.

Parts Lists

The following parts are included with BikeMax (upright model):

#	Part Name	Part#	Qty.
1	Main Chassis Base	70312	1
3	Display Upright	70357	1
4	Handlebar	61224	1
5	5/16"-18 x 3/4" Button Head	41072	4
6	5/16" Split Lock Washer	53018	6
7	5/16" x 1" Button Head	41126	2
8	Washer	43042	2
9	Display Console	Varies	1
10	Screw, 10-24 x 3/4" (console)	41109	7
11	Power Cord	14007	1
12	Line Jump Cord	14004	1
13	Communications Cable	61033	1
14	Termination Plug	61026	1
15	Water Bottle Holder	51595	1
16	Owners Manual	03052	1

The following parts are included with BikeMax-R (recumbent model):

#	Part Name	Part#	Qty.
1	Main Chassis Base	70338	1
2	Seat Back Assembly	61309	1
3	Display Upright	70356	1
4	Display Collar (already mounted)	51961	1
7	#10-24 x 3/4" Screw	41109	7
8	5/16-18 x 3/8" Cap Screw	41104	4
9	5/16-18 x 1-3/4" Cap Screw	41107	4
10	Power Cord	14007	1
11	Communications Cable	61033	1
12	Line Jump Cord	14004	1
13	Water Bottle Holder	51595	1
14	Termination Plug	61026	1
15	Lock Washer	53018	8
16	Owner's Manual	03019	1
17	Service Manual	03052	1
18	Wrench, 3/16 Hex Key	40019	1
19	Display Console	Varies	1

Upright BikeMax Assembly

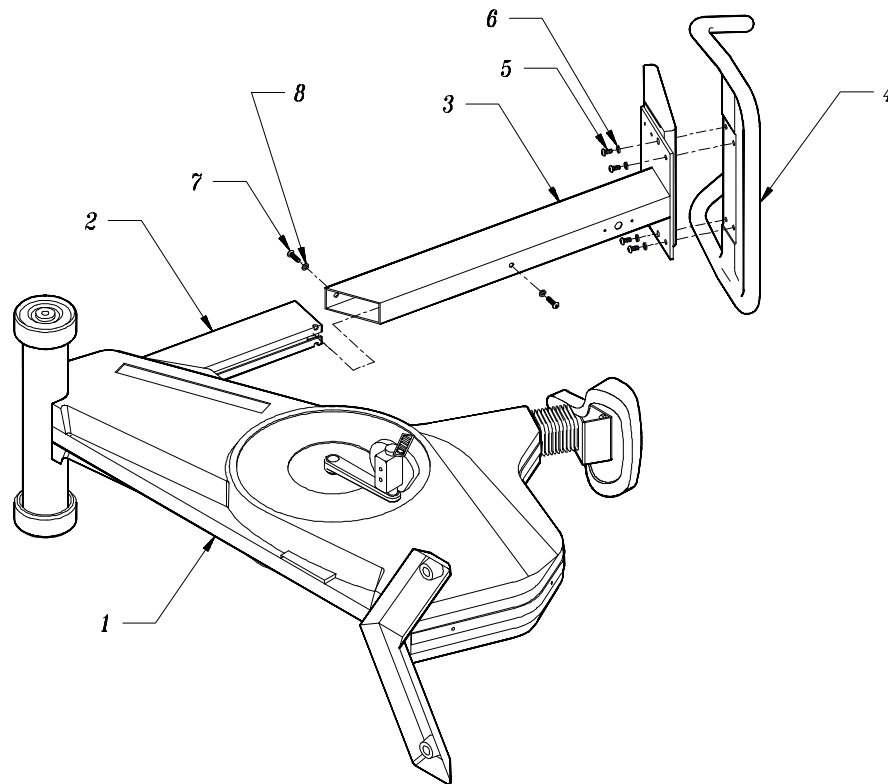


Figure 1

Attach the Display Upright

Position the display upright (3) over the chassis and plug the ribbon cable from the upright to the ribbon cable in the chassis. Tuck the cables inside the chassis upright tube to make sure they don't get pinched when you attach the upright. Slide the upright (3) down over the upright on the chassis. Using a 3/16" hex wrench, secure them with two 5/16" by 1" button-head screws (7) and washers (8).



If your bike has a CardioTouch heart rate monitor:

Remove the upper three round plugs from the display upright. Feed the cable from the CardioTouch handlebars through the large hole in the display upright until it emerges through the hole in the display console mounting plate. Attach the handlebars to the display upright with two 1/2" screws. See Figure 2.

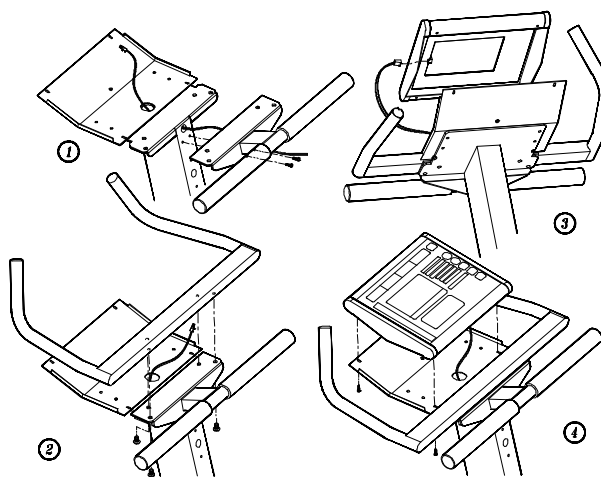


Figure 2

If your bike has a Polar heart rate receiver:

Remove the lower three round plugs from the display upright. Find the Polar cable in the Configuration Kit—it's the short cable with small brown connectors on each end. Feed the unlabelled end of the cable through the largest of the three holes until it emerges through the hole in the display console mounting plate. The end with the "POLAR" label should stick out of the lower part of the display upright.

Plug the "POLAR" end of the cable into the receiver module. Push the cable and connector into the frame hole so the receiver module rests against the display upright. Attach the receiver to the upright with the two provided screws.

Attach the Display Console

Remove the display console (9) from the configuration kit. Attach the ribbon cable from the display upright to the back of the display board. The connector is keyed so you cannot insert it backwards. Attach the green ground cable to the single flat connector next to the ribbon cable connector. Make sure the cables are firmly connected before continuing.



If you have the CardioTouch or Polar heart rate monitor option, attach the heart rate monitor cable to the back of the console.

Use the four Phillips head screws (10) from the configuration kit to attach the display console to the console back-plate. See Figure 2.

Attach the water bottle holder to the back plate using three screws. **Important:** if you choose not to install the water bottle holder, you must still screw the three screws into the open holes in the back plate to protect the electronics from the environment.

Attach the Handlebar

Use the 3/16" hex wrench to attach the handlebar (4) to the console back-plate with four 5/16" button-head screws (5) and lock washers (6).

Recumbent BikeMax Assembly

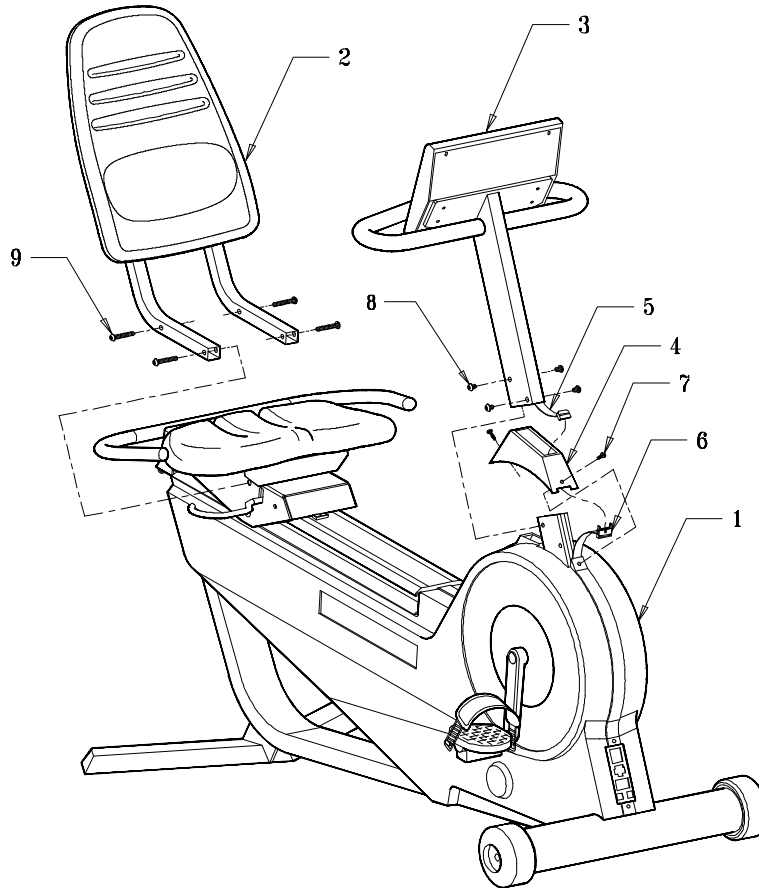


Figure 3

Attaching the Seat Back Assembly

Attach the seat back assembly (2) to the seat shuttle with four 5/16 x 1-3/4 button-head cap screws (9) and lock washers (14), using a 3/16" hex wrench. (See Figure 3.) If you have difficulty aligning the screws, loosen the four button-head cap screws on the back of the seat. Attach seat supports to the seat shuttle and fully tighten, then tighten screws on seat back.

Attaching the Display Upright

Connect the two ends of the ribbon cable (5 and 6) which emerge from the bike base and the display upright (3). To help support the display upright, carefully rest the top of the console back plate down on the shroud in front of the seat rail.



If your bike has a CardioTouch heart rate monitor:

Find the CardioTouch cable in the Configuration Kit—it has a telephone-jack style connector on one end and a brown connector on the other. Use the provided phone cable connector to connect to the phone-style cable which emerges from the display upright. Feed the connected cable down into the display upright. Clip the last five inches of the cable in the cable clip attached to the console back plate.

If your bike has a Polar heart rate monitoring system:

Take the Polar cable—the short cable with a larger white connector on one end and a small brown connector on the other—from the Configuration Kit. Feed the white end of the cable into the opening in the display upright. Clip the last five inches in the cable clip attached to the console back plate.

Lift the display upright and slide the display console tube down over the neck, taking care not to pinch the ribbon cable. Remove the screws from display collar (4) and remove collar to expose the screw holes. Fasten the display console assembly using four 5/16 x 3/8 button-head cap screws (8) and lock washers (14). Reattach collar.

Attach the Display Console

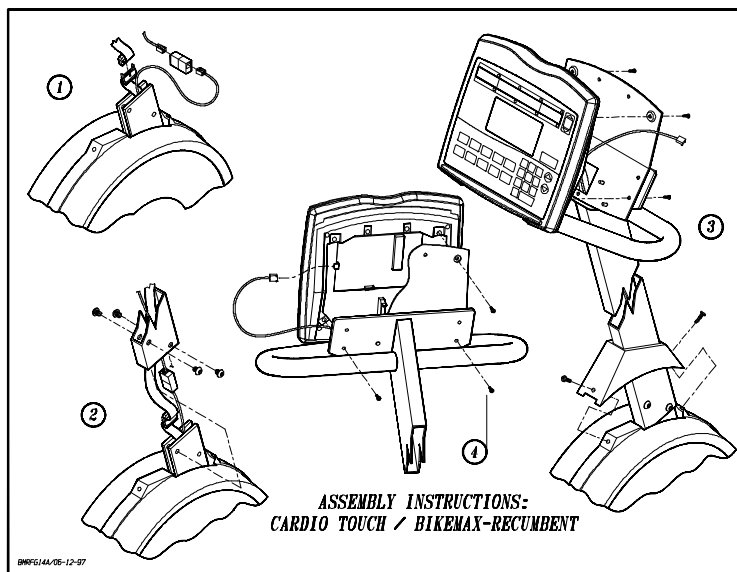


Figure 4

Remove the display console (9) from the configuration kit. Attach the ribbon cable from the display upright to the back of the display board. The connector is keyed so you cannot insert it backwards. Attach the green ground cable to the single flat connector next to the ribbon cable connector. Make sure the cables are firmly connected before continuing.



If you have the CardioTouch or Polar heart rate monitor option, attach the heart rate monitor cable to the back of the console.

Use the four Phillips head screws (10) from the configuration kit to attach the display console to the console back-plate.

Attach the water bottle holder to the back plate using three screws. **Important:** if you choose not to install the water bottle holder, you must still screw the three screws into the open holes in the back plate to protect the electronics from the environment.

Installing the Optional Polar Heart Rate Receiver

Remove the lifting handle from the rear of the BikeMax seat extrusion by unscrewing the bolt and nut. Plug the small brown connector end of the cable into the receiver. Attach the receiver to the handle plate. Attach the handle to the rear of the bike using the original bolt and nut.

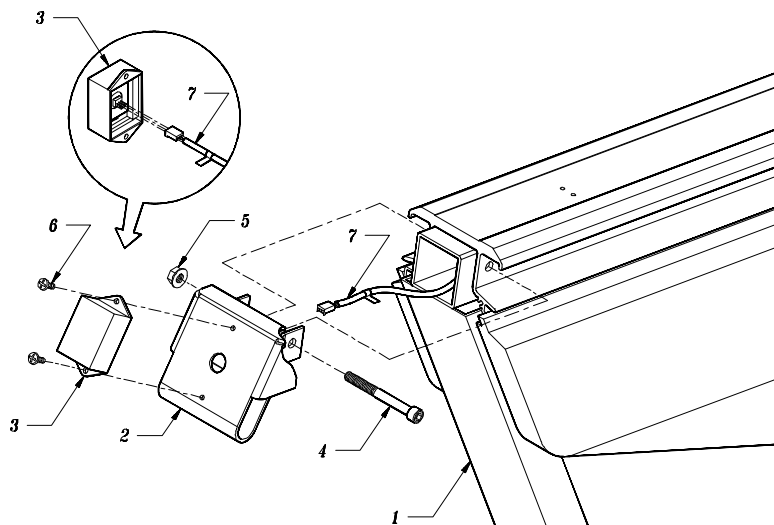


Figure 5

Plug in the BikeMax

As shown in Figure 6, the BikeMax has both power in (A) and power out (B) sockets. This lets you string power cords from one BikeMax to the next. Plug the power cord into the “in” socket; you can plug the other end into a wall socket or the power out socket on another BikeMax.

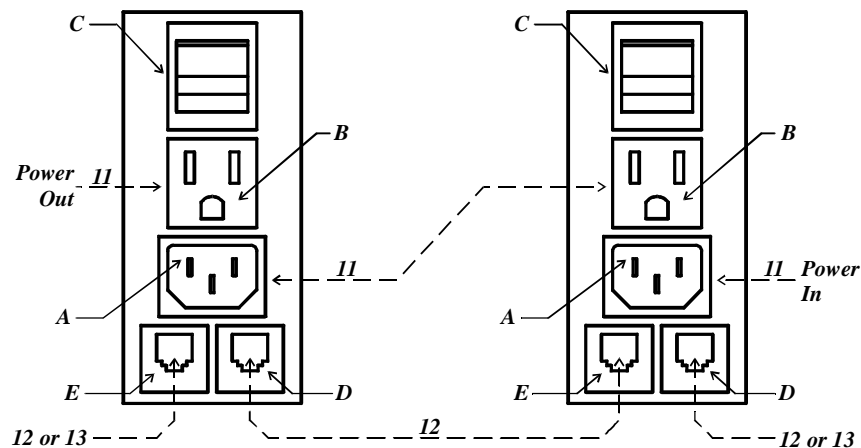


Figure 6

Connecting Bikes for Racing

BikeMax offers a group race feature, where two to eight users compete against each other. To use this feature, you need to use the telephone-style SmartLink cables to attach the bikes. You can link up to 32 bikes in this manner:

1. Each BikeMax is shipped with a termination plug already inserted in one of the communications sockets. You may need to remove this plug before making the connections described below.
2. Place a termination plug in the left socket of the first bike. Run a SmartLink cable from the right socket on that bike to the left socket on the second.
3. Run another cable from the right socket on the second bike to the left socket on the third.
4. Continue in this way until you reach the last bike. Place a termination plug in the right socket of the last bike.



While the SmartLink cables look like standard telephone cables, their internal wiring is different. You cannot use telephone cables to connect the bikes; you must use SmartLink cables.

Setting Options

BikeMax offers an easy-to-access setup menu to let you match the bike's default settings and limits to your users' needs and the way you want to run your facility. You can set the maximum workout length, the language and measurement units used on the display, and more.

To set options:

1. Enter Setup Mode by turning the bike off, then holding down the **Switch Display** key while turning it back on.
2. The first option shown is Language. For each of the following settings, use the up and down arrows to choose the value you want, then press **Enter** to move on to the next option.
 - Language: Choose between English (the default), French, German, and Spanish. The rest of the prompts will display in the language you choose.
 - Units: This appears only if you choose English as the language. Choose either English (miles) or Metric (kilometers). All other languages use metric units automatically.
 - Maximum Workout Time: The longest time a user is allowed to set for his or her workout. The original setting is 30 minutes. You can change this to up to the absolute maximum of 60 minutes.
 - First Workout Time: This is the default time shown when a user begins a workout. The factory setting is 20 minutes; you can set this to up to the Maximum Workout Time.

- **Time-Out:** How long the bike remembers workout information when someone stops during a workout. You can set this to 30 seconds, one minute, or two minutes. You can also choose to have no time-out; the bike will remember the information until someone starts a new workout.
- **Always Prompt or Get On and Go:** If you choose “Get On and Go,” a user can get on the BikeMax and start pedaling, without entering any workout information. The default is “Always Prompt.”



When a user chooses “get on and go” operation, BikeMax uses the default workout length (the one set as “First Workout Time”).

- **Announce Races:** When someone else is starting a group race, should it be announced on this bike if the bike isn't being used? Choose Yes or No. See Chapter 4 for information on group races.
 - **Key Beep:** Should the console keys beep when pressed? Choose Yes or No
3. When you're done setting options, press the **Clear** key twice to save your settings and leave setup mode.

If you decide not to change the settings, turn the bike off without leaving setup mode. All settings keep their previous values.

CHAPTER 3 - LET'S RIDE

So far, we've discussed what the club or facility owner needs to do to get the BikeMax ready to use. This chapter describes how to use it; what each exerciser needs to do to get the most out of his or her BikeMax workout.

Overview

This is how you work out on BikeMax:

1. Get on.
2. Select manual mode, a program, or one of the advanced features.
3. Enter how long you want to work out.
4. Press **Start**.
5. Start pedaling!

During your workout, watch your progress on the console; if you want, you can change the pedaling resistance or program at any time. When you're done, BikeMax shows your total distance pedaled, calories burned, and average speed.

The rest of this chapter tells you more about your choices at each of these steps. The advanced features are discussed in Chapter 4.

Before You Start

To get the most out of a BikeMax workout, be sure to follow these general exercise rules:

- Check with your doctor before starting any new exercise program.
- Wear comfortable workout clothing.
- Drink plenty of water or other fluids before, during, and after exercising.
- Stay loose and relaxed while working out.
- If you start to hurt, *stop pedaling*.

When pedaling, you should have a smooth, even stroke, using both legs equally. Have the seat adjusted so your knees are still slightly bent at full extension. For best results, pedal at 50 RPM or faster. If you have the built-in CardioTouch™ heart rate monitor, you must keep your hands on the handles to get a heart rate reading on the display.

Bicycle Mode and Exercise Mode

BikeMax offers two types of controlled resistance, to give you your choice of workout. In manual mode or during a race, BikeMax is in *bicycle mode*; during a program (including custom and heart rate programs), it is in *exercise mode*.

- Bicycle mode simulates riding a real bicycle across level ground. You choose from eighteen gear settings; at higher settings, there is more resistance—it's harder to pedal, but you go farther for every pedal revolution. At any given setting, you can do more work by pedaling faster.

Higher speeds require much more work than lower: 20 mph, for example, takes three times as much effort as 10 mph. At high speeds, you can stop pedaling temporarily and “coast,” just as on a real bicycle.

- In exercise mode, the level you set determines the amount of work you do when you pedal. If you change your pedaling speed, BikeMax adjusts the resistance so you are doing the same amount of work. If you want to do more or less work, you change the setting, not your pedaling speed. This lets BikeMax control the amount of work you are doing at any time, so you get the maximum benefit from the various programs.

If you slow your pedaling speed below 40 RPM, BikeMax decreases the resistance (and workload). This is necessary so you can begin pedaling from a stop. Also, you can reach the highest work level only at high pedaling speeds.

In summary: in manual mode and during races, you are in bicycle mode: changing the level setting changes the resistance on the pedals, just like shifting gears on a real bike. During programs, you are in exercise mode: changing the level changes your total workload; BikeMax adjusts the resistance on the pedals to keep the work constant if you change pedaling speeds.

Your Workout

There are two basic ways to use BikeMax: in manual mode or using one of the preset workout programs. The following sections tell you how to use each of these modes.

BikeMax's advanced features—races and goal setting—are covered in Chapter 4.

Manual Mode

In manual mode, you tell BikeMax how long you want to work out; you can adjust your pedaling speed and level (“gear”) at any time during the workout. Follow these steps:

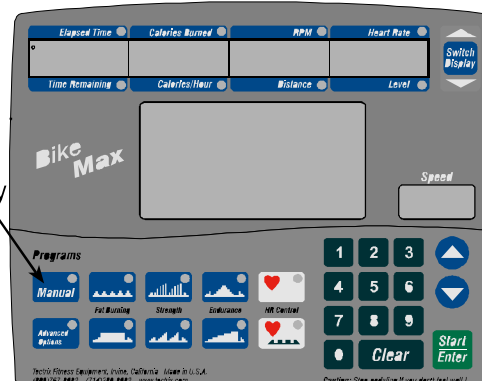
1. Get on BikeMax.



If your BikeMax is set for “get on and go” operation, you can just step on the pedals and start pedaling. BikeMax will automatically go into manual mode and use the default workout length.

2. Press the **Manual** program key. If you press a key somewhere else on the console, an arrow will point toward the program keys, instructing you to select one.
3. The display will show the default workout length. You can change this using the up and down arrow keys, or use the keypad to type the number of minutes you want to work out. If you try to enter a time longer than the maximum for this BikeMax, it won't accept your entry.

Manual key



4. Press **Start**.

While you're pedaling, the console shows your progress and statistics about your workout. For details about these displays, see the section "The Workout Display," later in this chapter.

You can raise or lower the workout level while you're pedaling by pressing the up and down arrows. If you hold the key down, the setting will continue to change. Pick a gear that gives you a good workout at a comfortable pedaling speed without causing pain. If you feel like you're straining, decrease the level. Remember, you're in bicycle mode during a manual workout; setting a new level changes the resistance on the pedals.



You can also change from manual mode to one of the programmed workouts or an advanced feature program, such as a race, during your workout. Just press the key for the program you want, then follow the instructions elsewhere in this manual.

If you need to pause during a workout, the bike will remember your workout information for a fixed amount of time. If you stop for longer than this "time-out interval," the BikeMax resets itself, and you'll have to start a new workout. (See Chapter 2 for information on setting the time-out interval.)

When you finish, you see a workout summary giving the total distance you pedaled, calories burned, and more. See "The Workout Display," later in this chapter, for a description.

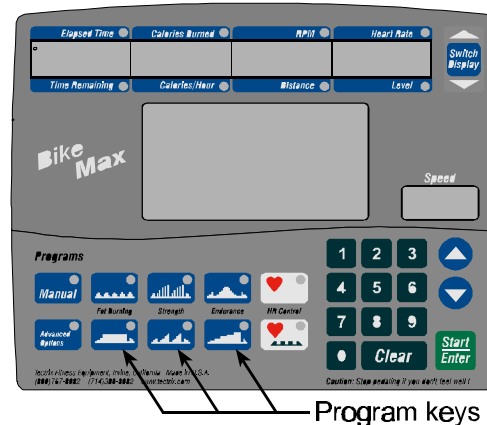
Using the Preset Programs

BikeMax includes six preset workout profiles you can choose from. (If you have the heart rate monitor option, there are eight. The heart rate programs are described in Chapter 5). These profiles vary the bike level at set intervals to maximize either fat burning, strength training, or endurance building. During a program, the BikeMax is in exercise mode; if you change your pedaling speed, it varies the resistance to keep your workload at the right level for that part of the program.

1. Get on BikeMax.

1. Press the key for the program you want. If you press a key somewhere else on the console, an arrow will point toward the program keys, instructing you to select one.

The graphs on the program keys show a “profile” of each workout. The higher bars indicate higher workloads. Each program begins with a warm-up and ends with a cool-down period; as you can see, the middle sections vary according to the type of workout.



If the BikeMax is set for “get on and go” operation, if you want to use the default workout length, just get on the bike and start pedaling, then press the program key. If you want to set the workout length, press the program key **before** you start pedaling.

3. The display will show the default workout length. You can change this using the up and down arrow keys, or use the keypad to type the number of minutes you want to work out. If you try to enter a time longer than the maximum for this BikeMax, it won't accept your entry. Press Enter.

When you change the length of a program, BikeMax intelligently adjusts the program's profile to match your setting. For the top fat burning program and both strength programs, it adds or removes repetitions of the center section; for the bottom fat burning and the endurance workouts, it increases or decreases the length of the center section. The warm-up and cool-down periods stay the same. If you set the workout length to five minutes, you do just the warm-up and cool-down.

4. Press **Start**.

While you're pedaling, the console shows your progress and statistics about your workout. For details about these displays, see the section “The Workout Display,” later in this chapter.

BikeMax starts at the default level for the program. You can raise or lower the level while you're pedaling. This adjusts the entire program up or down the same number of levels. Pick a setting that gives you a comfortable workout, without causing pain at the hardest parts of the program. If you feel like you're straining, decrease the level.



You can also change to manual mode, another program, or an advanced feature program, such as a race, during your workout. Just press the key for the program you want, then follow the instructions elsewhere in this manual.

If you need to pause during a workout, the bike will remember your workout information for a fixed amount of time. If you stop for longer than this “time-out interval,” the BikeMax resets itself, and you'll have to start a new workout. (See Chapter 2 for information on setting the time-out interval.)

When you finish, you see a workout summary giving the total distance traveled, calories burned, and more. See “The Workout Display,” later in this chapter, for a description.

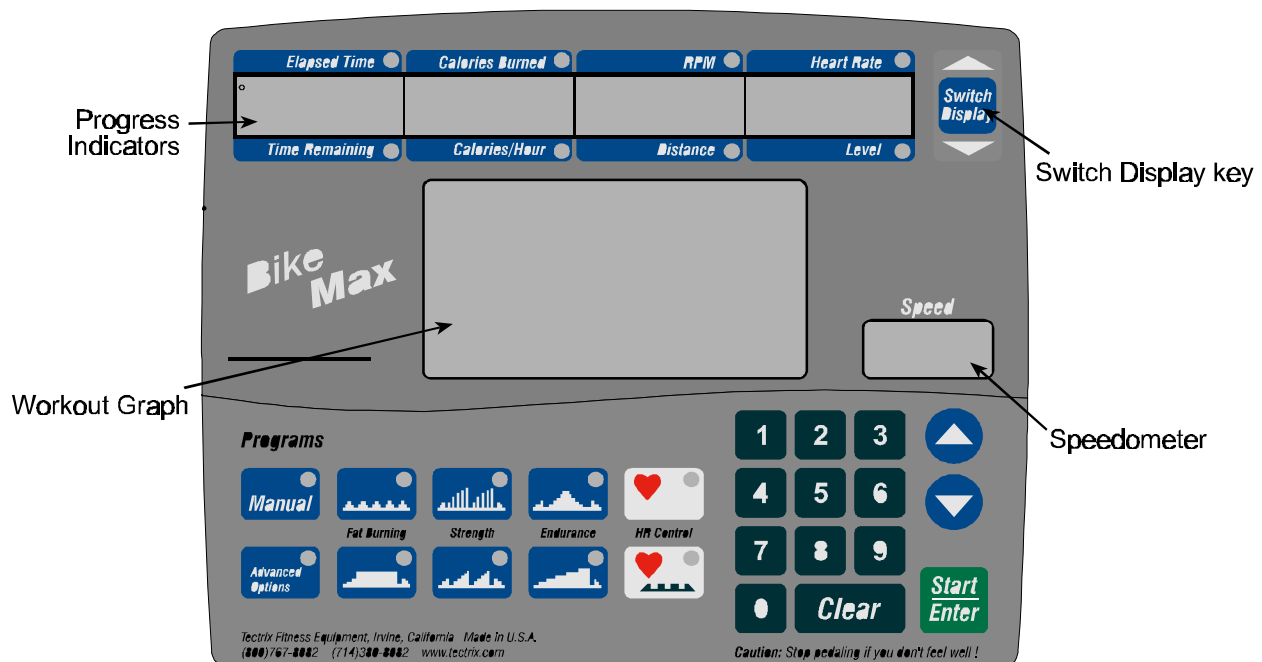
The Workout Display

During your workout, the BikeMax console keeps you continuously updated about your progress. Three areas of the screen show different types of information:

- The four Progress Indicators at the top of the console show up to eight categories of information. At the beginning of a workout the four top categories are shown. Pressing the **Switch Display** button at the right of the fields switches between categories; the lights over and under each field indicate which information is currently displayed. If you hold down **Switch Display** for half a second, the fields will alternate between displays every five seconds.

The top four categories are:

Elapsed Time	How long you've cycled so far.
Calories Burned	The number of calories you've burned in this workout.
RPM	Your current revolutions per minute.
Heart Rate	Your current heart rate in beats per minute. This is available only if you have the heart rate monitor option.

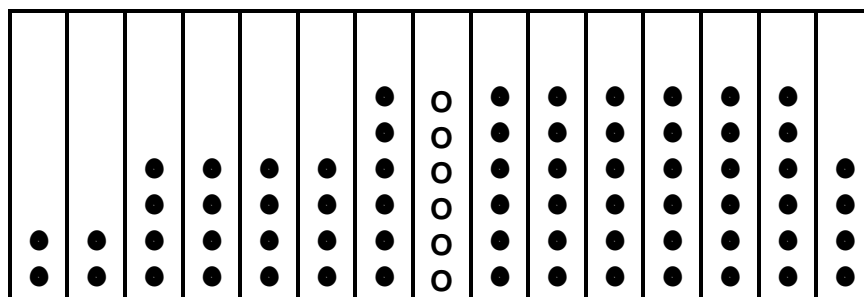


The four bottom categories are:

Time Remaining	The time left in your workout.
Calories/Hour	How fast you're burning calories—the number of calories you'll burn in an hour-long workout if you maintain your current pace for the entire time.
Distance	In miles or kilometers. This is based on the power required by an average cyclist on a road bike on a level surface.
Level	The current speed setting for the bike. In bicycle mode, this is the gear: the amount of resistance on the pedals; in exercise mode, it's a measure of the work you're performing.

- The Workout Graph in the middle of the console uses columns of lights to show the progress of your workout. In manual mode, each column represents 1/15th of your workout and shows the highest speed you reached in that period.

In a program, the Workout Graph shows a detailed view of the current portion of your workout: each column of lights represents a 15 second segment, so the entire display covers 225 seconds (a little under four minutes). The height of the columns shows the relative level (power required); the blinking column is where you are right now. As you go through your workout, the blinking column moves slowly from left to right; when it reaches the right-most column, your workout is almost over. For example:



The blinking column (shown as empty circles) indicates the workout is approximately half over. The power required will stay the same for the next 90 seconds (six columns), then decrease.

- The Speedometer field to the right of the Workout Graph shows your current speed, in miles or kilometers per hour. As with the distance traveled, this is calculated based on the power required by an average cyclist on a road bike on a level surface

Workout Summary

After your workout, the Progress Indicators show a summary of your workout. The summary display rotates three different values, or four if you have the heart rate monitor option:

- The total distance you traveled, in miles or kilometers.
- The calories you burned during the workout.
- Your average speed for the entire workout.
- If you have a heart rate monitor, your current heart rate. This lets you monitor your recovery. You must continue to hold the handles (for a CardioTouch monitor) or stay in the correct position (for a Polar monitor).

CHAPTER 4 - ADVANCED FEATURES

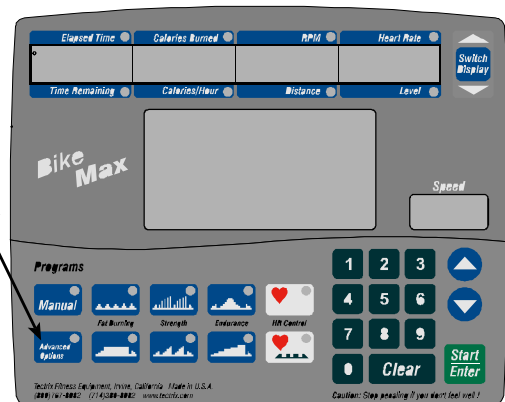
In addition to manual and program modes, BikeMax includes features to make workouts more enjoyable and useful: group races let users compete against each other, while solo races or calorie goal setting can help you get the maximum benefit from your workout. You use all of these options, or the fitness test feature, by pressing the **Advanced Options** button.

Setting a Calorie Goal

If it's important to you to burn a certain number of calories during your workout, the calorie goal option is for you. With this feature, the BikeMax sets the pedaling level so you burn the number of calories you want in the time you have allotted. During a calorie goal program, BikeMax is in exercise mode; if you change your pedaling speed, it will change the resistance to keep your workload constant. To set a calorie goal:

1. Get on BikeMax.
2. Press the **Advanced Options** key. If you press a key somewhere else on the console, an arrow will point toward the program keys, instructing you to select one.

Advanced Options key



- The top display should read “Calorie Goal.” If it doesn’t, press **Advanced Options** until it does, then press **Enter**.
3. The display will show the default workout length. You can change this using the up and down arrow keys, or use the keypad to type the number of minutes you want to work out. If you try to enter a time longer than the maximum for this BikeMax, it won’t accept your entry. Press **Enter**.
4. Set the number of calories you want to burn during the workout. Either type the number or use the arrow keys to raise or lower the value shown.
5. Press **Start**.

BikeMax calculates the level you’ll need to reach your calorie goal in the time you’ve entered. It ramps up to this level, then keeps you there for the duration of the workout. You can change your calorie goal during the workout; BikeMax will adjust the level to match.

The level display shows your calorie goal. During the workout, you can adjust this by pressing the arrow keys and entering a new goal. The rest of the display is as described in “The Workout Display” in Chapter 3.

Group Racing

In a group race, you compete against from one to seven other exercisers to reach a goal distance. The progress of each person in the race is shown on your console. This section describes how you can start a race, and how you can join a race being started by someone on another BikeMax.

To start a group race:

1. Get on BikeMax.
2. Press the **Advanced Options** key. If you press a key somewhere else on the console, an arrow will point toward the program keys, instructing you to select one.

Press **Advanced Options** until the top display reads “Group Race,” then press **Enter**

3. The display will show the default workout length. You can change this using the up and down arrow keys, or use the keypad to type the number of minutes you want to work out. You should enter a time that’s long enough to reach the goal distance for the race, which you’ll set later. It’s all right if the workout length is too long for the race, but it shouldn’t be too short. If you try to enter a time longer than the maximum for this BikeMax, it won’t accept your entry. Press **Enter**.
4. Select the goal distance for the race. Use the arrow keys to raise or lower the value shown. Any other exerciser can also press **Advanced Options** until he or she is in Group Race mode, then adjust the goal distance. When any one of the people in Group Race mode presses **Enter**, the goal is set and the countdown starts.
5. During the countdown phase, any biker can join the race in one of two ways:
 - Press **Advanced Options** until he or she is in Group Race mode, then press **Enter**.
 - If an unused BikeMax is announcing the race, someone can get on it and press **Enter**.

Even if you first started the race, if someone else pressed **Enter** to set the goal, you must now press **Enter** to join the race.

If you change your mind about being in the race after you press **Enter**, press **Clear** during the countdown to drop out.

The countdown starts from ten seconds; each time another racer joins, the countdown resets to ten seconds. When ten seconds goes by with no more racers joining, the race begins.

6. Start pedaling!

To join a race started by another rider:

- If you’re already on a bike, press **Advanced Options** until you’re in Group race mode, then press **Enter**. If the goal hasn’t yet been set, you can change it using the arrow keys, as described above.
- If you see a race announcement on an unused BikeMax, just get on and press **Enter**.

- If an unused BikeMax isn't announcing the race, but is attached to the other bikes, you can still join. Get on it, press **Advanced Options** until you're in Group Race mode, then press **Enter**.

If you change your mind during the countdown, press **Clear** to leave the race.

Wait for the countdown to end, as described above, and start pedaling.

The BikeMax is in bicycle mode during a race; for best results, choose the gear setting that gives you maximum speed for your effort.

During the race, horizontal rows of dots on the Workout Graph show the progress of each racer. The first racer to join is at the top; your row is blinking. The race goal is at the far right of the display. The level readout shows the distance to the leading competitor. If you're behind, the distance has a plus sign; if you're ahead, it shows a minus sign. The rest of the display is as described in "The Workout Display" in Chapter 3.

Solo Racing

In solo racing, you pedal a predetermined distance against a computerized pacer. You can see both your progress and the pacer's during the workout. To start a solo race:

1. Get on BikeMax.
2. Press the **Advanced Options** key. If you press a key somewhere else on the console, an arrow will point toward the program keys, instructing you to select one.

Press **Advanced Options** until the top display reads "Solo Race." Press **Enter**.

3. The display will show the default workout length. You can change this using the up and down arrow keys, or use the keypad to type the number of minutes you want to work out. You should enter a time that's long enough to reach the goal distance for your race, which you'll set later. It's all right if the workout length is too long for the race, but it shouldn't be too short. If you try to enter a time longer than the maximum for this BikeMax, it won't accept your entry. Press **Enter**.
4. Select your goal distance for the race. Either type the number or use the arrow keys to raise or lower the value shown. Press **Enter**.
5. Select a speed, in miles or kilometers per hours, for the pacer. Your progress will be compared to the pacer's throughout the race. If you don't want a pacer, set the pacer's speed to zero.
6. Press **Start**.

The BikeMax is in bicycle mode during a solo race; choose the gear setting that gives you maximum speed for your effort.

After a short countdown, your workout begins. The Workout Graph shows two rows of dots: the top row is your progress, the bottom row is the pacer. Your goal distance is at the right side of the display. The level readout shows the distance to the pacer. If you're ahead, the distance has a plus sign; if you're behind, it shows a minus sign. The rest of the display is as described in "The Workout Display" in Chapter 3.

Fitness Test

BikeMax offers a twelve-minute fitness test. You can take this test only on a BikeMax with a heart rate monitor. It works this way:

In exercise mode, the BikeMax starts at a low setting and increases the power required each three minutes. It measures your heart rate periodically during the test. After the test, BikeMax calculates and displays your fitness score. The score is an estimate of your VO_2 Max; it measures the rate at which you can supply oxygen to your cells. The table at the end of this section will help you interpret your score.



Your score will be an accurate measure of your condition only if your heart rate is at its resting level when you begin.

To start the fitness test:

1. Get on BikeMax.
2. Press the **Advanced Options** key. If you press a key somewhere else on the console, an arrow will point toward the program keys, instructing you to select one.

Press **Advanced Options** until the top display reads "Fitness Test." Press **Enter**.

3. BikeMax asks for your age. Type it or use the arrow keys to raise or lower the age shown. Press **Enter**.
4. The display then shows "Sex = Male." If you are a woman, press the up arrow to show "Female." Press **Enter**.

This starts the test. You cannot change the speed setting during the test. The display is the same as described in "The Workout Display" in Chapter 3.

At the end of the test, BikeMax displays your estimate VO_2 Max, as described above. Use this table to interpret your score:

Fitness Classifications						
	Age	Low	Fair	Average	Good	High
Women	20-29	< 24	24-30	31-37	38-48	49+
	30-39	< 20	20-27	28-33	34-44	45+
	40-49	< 17	17-23	24-30	31-41	42+
	50-59	< 15	15-20	21-27	28-37	38+
	60-69	< 13	13-17	18-23	24-34	35+

	Age	Low	Fair	Average	Good	High
Men	20-29	< 25	25-33	34-42	43-52	53+
	30-39	< 23	23-30	31-38	39-48	49+
	40-49	< 20	20-26	27-35	36-44	45+
	50-59	< 18	18-24	25-33	34-42	43+
	60-69	< 16	16-22	23-30	31-40	41+

Custom Program

There are two steps to using a custom program: designing it and selecting it. You design it once, using Setup Mode; you can then select it whenever you workout. A BikeMax can have only one custom program saved at a time.

A custom program consists of up to 60 segments. You set the level for each segment when you design the program, as described below. When you select your custom program during a workout, BikeMax divides the workout length you enter by the number of segments to determine the length of each segment.

Since this is a program, BikeMax will be in exercise mode when you use it, not bicycle mode.

Designing a Custom Program

1. Put the BikeMax into Setup mode by turning the bike off, then holding down the **Switch Display** key while turning it back on.
2. Press **Advanced Options**.
3. If there's an existing custom program on this BikeMax, it is displayed; if there isn't, the workout graph is blank.

Now you choose the setting for the first segment of the program. Press the up arrow to raise the setting or the down arrow to lower it. When the height is correct, press **Enter** to move to the next segment. The display scrolls to the left as you move through the program.

4. Repeat this process for each segment of the program: use the arrow keys to set the height, then **Enter** to move to the next segment.
5. If the program has less than 60 segments, enter a segment with a level of 0 to end the program.



If you make a mistake while defining the program, you can press **Advanced Options** to move back to a previous segment and correct it.

6. When you're done, press **Clear** to save the program and leave Setup Mode.

Using a Custom Program

1. Get on BikeMax.
2. Press the **Advanced Options** key. If you press a key somewhere else on the console, an arrow will point toward the program keys, instructing you to select one.

Press **Advanced Options** until the top display reads “Custom.” Press **Enter**.

3. The display will show the default workout length. You can change this using the up and down arrow keys, or use the keypad to type the number of minutes you want to work out. If you try to enter a time longer than the maximum for this BikeMax, it won’t accept your entry. Press **Enter**.

BikeMax will take the workout length you enter and divide it by the number of segments in your custom program to determine the length of each segment. For example, if you have a program with 15 segments, and enter a workout length of 30 minutes, each segment is 2 minutes long.

4. Press **Start**.

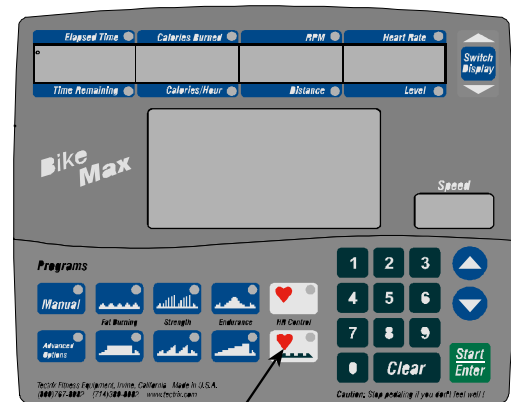
While you’re pedaling, BikeMax operates just like it does during one of the preset programs. The console shows statistics about your workout, and you can raise or lower the overall level of the program, or pause during it, all as described in Chapter 3.

CHAPTER 5 - HEART RATE PROGRAMS

As an option, the BikeMax includes a heart rate monitor, either a CardioTouch monitor built into the handles of the bike itself, or a monitor in a harness you wear. In either manual mode or using any of the programs described earlier, the heart rate monitor merely gives you more information—it lets you see your current heart rate at any time.

However, used with BikeMax Heart Rate Control programs, this option lets you design a workout tailored to your age and condition:

1. Get on BikeMax.
2. Press one of the two HR Control program keys:
 - The top key is the Constant HR program: it gradually builds to your target heart rate, then keeps you there.
 - The bottom key is the Heart Rate Interval program: it alternates you between an upper heart rate target and a lower heart rate target.
3. The display will show the default workout length. You can change this using the up and down arrow keys, or use the keypad to type the number of minutes you want to work out. If you try to enter a time longer than the maximum for this BikeMax, it won't accept your entry. Press **Enter**.
4. Type your age or use the up and down arrow keys to set it. Press **Enter**.
5. The display will show your target heart rate (based on your age) and the percentage of your maximum heart rate. Set the target heart rate you want for this workout and press **Enter**. For the Interval Heart Rate program, set the upper target rate, press **Enter**, then set the lower target and press **Enter** again.
6. Start pedaling.



Heart Rate Control Program keys

Over the first few minutes of your workout, BikeMax will gradually build you up to your target heart rate. For the Constant program, it will then keep you at this rate until the cool-down at the end of the workout. For the Interval program, it will gradually alternate you between the upper and lower target rates, giving you a variable cardiovascular workout. The BikeMax is in exercise mode during a heart rate program; it controls the amount of work you're doing by adjusting the resistance on the pedals.

While you're pedaling, the fields at the top of the console show statistics about your workout. For details about this display, see the section "The Workout Display," in Chapter 3. During a Constant program, the workout graph shows a horizontal line representing your target heart rate. Each column of lights is your heart rate for a segment of the workout, moving from right to left. Each light represents ten beats per minute. The blinking column is your current heart rate.

During an Interval program, the display is similar: two lines represent your upper and lower targets and a blinking dot represents your current heart rate.

If you need to pause during a workout, the bike will remember your workout information for a fixed amount of time. When you resume, it will gradually bring you back to your target heart rate. If you stop for longer than this “time-out interval,” the BikeMax resets itself, and you’ll have to start a new workout. (See Chapter 2 for information on setting the time-out interval.

When you finish, you see a workout summary giving the total distance you traveled, calories burned, and more, including your heart rate as you recover. See “The Workout Display” in Chapter 3 for a description.

CHAPTER 6 - TESTING BIKEMAX PERFORMANCE

You can test the electronics inside BikeMax by using test mode. In test mode, you can adjust the tension of the drive belt, check the odometer reading, and test each segment of the LEDs in the progress indicators.

To enter test mode, turn the BikeMax off, then press and hold the upper **HR Control** key while turning it back on. All displays will light until you release the key.

In test mode, the eight red lights above and below the Progress Indicator fields show the state of the BikeMax's various input/output signals:

Indicator	Signal	Normal
Elapsed Time	Smart Link Out	off
Time Remaining	Smart Link In	off
Calories Burned	Pedal RPM	Blink
Calories/Hour	Force Sensor	Off
RPM	RPM sensor off	-
Distance	RPM sensor on	-
Heart Rate	CardioTouch signal	Off
Level	Polar signal	Off

The Progress Indicator fields themselves display the word "Test" followed by the version number of the BikeMax's internal software. The Speedometer shows a number indicating the raw output signal from the force sensor.

While the bike is in test mode, some of the console keys have special functions:

Switch Display	Displays the odometer reading (total distance traveled, in miles). It also begins and ends a simple test of the Smart Link electronics. The Distance LED indicator should flicker when the test begins; if the bike's In and Out jacks are connected together, both the Elapsed Time and Time Remaining LED indicators should turn on steadily. Press Clear to return to the normal test mode display.
Up Arrow	Loosens the belt. The belt tensioning motor runs for as long as you hold the key down. Don't loosen the belt for too long, or it may come off the drive wheel.
Down Arrow	Tighten the belt. The belt tensioning motor runs for as long as you hold the key down.
Upper HR Control	Tests each LED digit group, in turn. Press the key again to go to the next group. Press Clear to return to the normal test mode display.

Lower HR Control	Tests each LED segment, in turn. Press the key again to go the next segment. Press Clear to return to the normal test mode display.
Enter	Lights all display LEDs. Press Clear to return to the normal test mode display.
Clear	Clears special displays and returns to normal test mode display. From normal display, ends test mode.

To leave test mode, press **Clear**. If the odometer reading or a display test pattern is displayed, this returns to the normal test mode display. Press **Clear** again to leave test mode and display the **TECTRIX BikeMax** sign-on.

For more information about maintaining and servicing your BikeMax, see the *BikeMax Maintenance and Repair Manual*.

APPENDIX A - *CARDIOTOUCH*™ HEART RATE MONITOR

Your BikeMax may be equipped with CardioTouch™ technology, bringing you the convenience and accuracy of the most advanced heart rate monitoring system available.

♥ Easy to Use

Using CardioTouch is simple, because no special setup is required. Just select the workout routine you prefer and begin exercising. To see your pulse, simply touch both right and left CardioTouch sensors. The pulse symbol will begin flashing in the “Heart Rate” field of your console, indicating that CardioTouch has gone to work. Your heart rate will display within a few seconds.

♥ Heart Rate Control Compatible

If you prefer to use one of the built-in Heart Rate Control workout routines, simply select the workout of your choice, as described in Chapter 5, touch the CardioTouch sensors, and begin to exercise. Although it is best to remain in contact with the sensors, it is okay to let go occasionally.

♥ Versatile

The CardioTouch grip is made of a conductive rubber for comfort. This system requires only a light touch from each hand on the grips to register the heartbeat. In fact, the CardioTouch system is so sensitive that it can sense your pulse by making contact with any combination of wrists, forearms, fingers, or palms. Just remember, you must touch the grips on the left and right sides at the same time to get the heartbeat signal.

Not Getting a Reading?

If your heart rate does not appear on the console, or if it changes erratically, the reason could be:

- **Biological differences:** Due to biological differences among people, the clarity of the electrical heartbeat signal that *CardioTouch* senses can vary greatly. For this reason, *CardioTouch* may not be able to calculate the correct heart rate for some people. This is a common limitation among all handgrip style heart rate monitors.

Declaration of Conformity

We declare that to best of our knowledge that the fitness equipment listed below, and
manufactured by:

Tectrix Fitness Equipment Inc.

68 Fairbanks

Irvine CA, 92618, USA

conforms to:

Directive : EMC 89/336/EEC

Standards : IEC335-1, EN55014, EN50082-1,

Product Name : BikeMax (Series)

Model Numbers : 93000-93999

**European Contact : Tectrix International, U.K. Ltd, 20 Hornsby Square, Southfields Industrial Park,
Laindon, Basildon, Essex, SS15 6SD, UK Phone 011-44-1268-412292**

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Declaration of Conformity

We declare that to best of our knowledge that the fitness equipment listed below, and
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Tectrix Fitness Equipment Inc.

68 Fairbanks

Irvine CA, 92618, USA

conforms to:

Directive : EMC 89/336/EEC

Standards : IEC335-1, EN55014, EN50082-1

Product Name : BikeMax, Recumbent (Series)

Model Numbers : 96000-96999

**European Contact : Tectrix International, U.K. Ltd, 20 Hornsby Square, Southfields Industrial Park,
Laindon, Basildon, Essex, SS15 6SD, UK Phone 011-44-1268-412292**

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