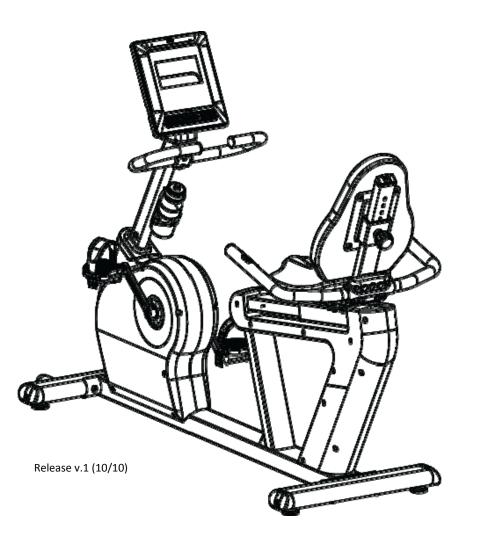
DIAMONDBACK Fitness

510Sr RECUMBENT CYCLE OWNER'S MANUAL





510Sr

Recumbent Cycle Diamondback Fitness



INTRODUCTION

Congratulations on the purchase of your new Diamondback Fitness recumbent cycle. You have made a great choice and are about to enjoy one of the most effective and technically-advanced methods of low-impact cardio-vascular exercise available today.

Founded in 1991 as an off-shoot of the legendary bicycle company, Diamondback Fitness was in many ways a complimentary addition to the Diamondback brand. One might even say this extension grew as a natural evolution...an evolution from classic outdoor bicycle usage, toward indoor-based cycling and cross training. It turns out that many fitness enthusiasts were searching for ways to maintain conditioning during times of inclement weather or simply looking for new and different cross-training options.

This trend still continues today, twenty years later, as the strong Diamondback brand resonates with both the boomers who grew up with the bicycles, as well as the younger generations riding them today.

Diamondback Fitness continues to build upon this legendary brand identity by offering the cardio enthusiast a full line of upright exercise bikes, recumbent cycles, and elliptical trainers, each offering superior value and quality with intuitive and visually-appealing design. Let's just say, we are already planning our next twenty years.

Thank you for choosing Diamondback Fitness.

Diamondback Fitness

6004 South 190th Street, Suite 101 ● Kent WA 98032 ● Ph. 1.800.776.7642 ● Fax: 1.800.776.2073
For more information or questions regarding your equipment, please visit our website at DiamondbackFitness.com.

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SAFETY INSTRUCTIONS & WARNINGS

Every piece of Diamondback Fitness equipment is built for maximum safety and meets or exceeds all applicable domestic and international standards. However, certain precautions must be taken when operating any piece of fitness equipment.

NOTE: Please read the entire owner's manual before operating the unit. Save this manual for future reference.

Cautions – For Safe Operation

- Keep hands and feet away from all moving parts and pinch points.
- If you have a history of heart disease, high blood pressure, diabetes, chronic respiratory diseases, elevated cholesterol, or if you smoke cigarettes or experience any other chronic diseases or physical complaints, consult with a physician before beginning any exercise program.
- If overweight or above the age of 35, consult with your physician before beginning an exercise program.
- Pregnant women should consult with their physician before beginning an exercise program.
- If you experience dizziness, nausea, chest pains or other abnormal symptoms during exercise, stop the exercise session immediately and consult your physician.
- Consume water before, during and after each exercise session.

Warnings - To Reduce the Risk of Injury to Yourself and Others

- To ensure proper functioning of your unit, do not install attachments or accessories not provided or recommended by Diamondback Fitness.
- Always wear proper clothing and shoes when exercising.
- User weight is not to exceed 300 pounds (147.4 Kg) for this unit.
- Keep children away from the unit. Hands and feet may become entangled with the moving parts and could result in serious injury.
- Place the unit in an area that will meet minimum clearance requirements:

front & sides = 24 inches rear = 12 inches.

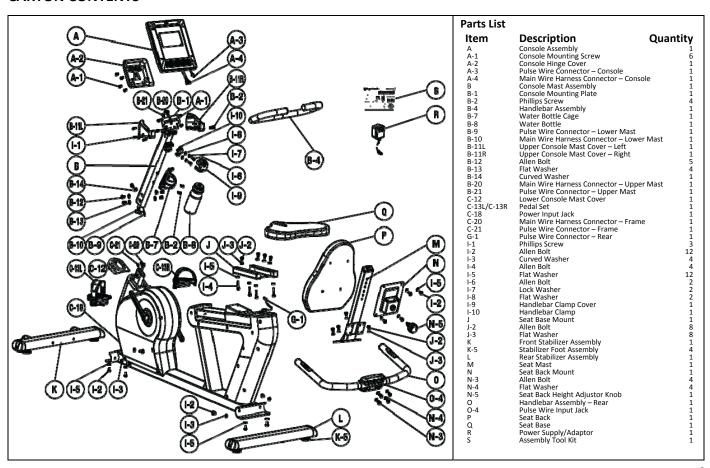
- The unit is intended for indoor use only.
- Place the unit on a solid, level surface. Always adjust the leveling feet before using to ensure stability.
- Ensure all adjustment knobs and levers are fastened securely before using the unit and after making an adjustment.

- Use the handlebars when stepping on and off the unit.
- The unit is heavy. Do not attempt to move alone.
- Never operate the unit if it is damaged or broken. Contact your local authorized Diamondback Fitness Dealer for service.
- Please unplug the unit after exercising.
- Always unplug the unit from the power source before moving or servicing.
- Do not remove the covers or other components. Only Authorized Diamondback Fitness Dealers or Authorized Technicians should perform service on the unit.

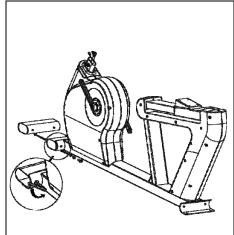
Assembly of Technical Items

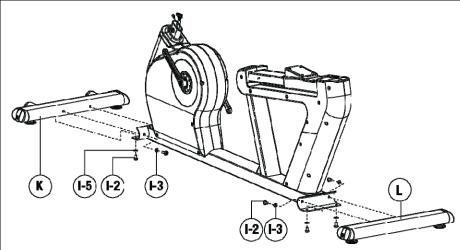
Assembly of all Diamondback Fitness products should be performed by a Diamondback Fitness Dealer or Authorized Technician. A significant amount of technical knowledge is required for the safe and complete assembly of the unit. Many retailers will offer delivery and assembly as part of the sales agreement. If this unit was sold unassembled (in the carton) and you do not feel you can perform the assembly successfully, please call the dealer for service. Service calls for improper assembly are not covered by the Warranty Policy and any associated charges will be the responsibility of the owner.

CARTON CONTENTS

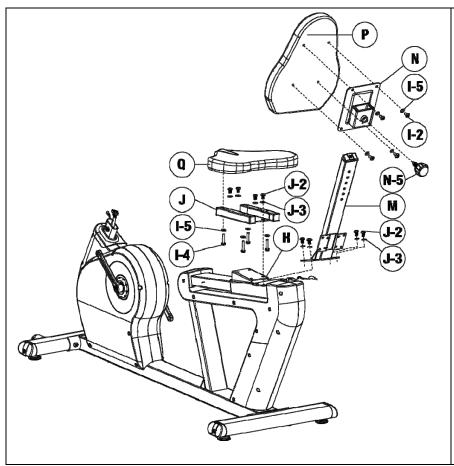


ASSEMBLY INSTRUCTIONS

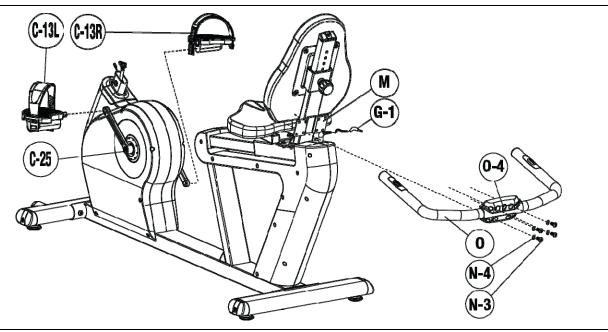




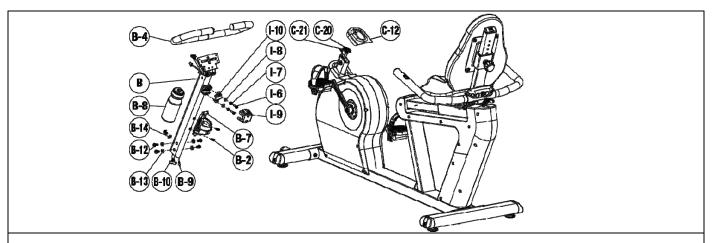
- Unpack the 510Sr from the carton. Please recycle.
- 2. Verify the carton contains all parts from the list.
- Remove the short section of steel tubing from the front stabilizer receiver by removing the two (2) Allen fixing bolts with the enclosed wrench. Discard this item.
- Align the front stabilizer assembly (K) with the receiver mounted to the frame and loosely install two (2) sets of the Allen bolt and curved washer assemblies (I-2 & I-3) through frame and into the front stabilizer (K).
- 5. Loosely install two (2) sets of the Allen bolt and flat washer assemblies (*I-2* & *I-5*) through the underside of the frame receiver and into front stabilizer (*K*).
- 6. Align the rear stabilizer (*L*) with the frame and loosely install two (2) sets of Allen bolt and curved washer assemblies (*I*-2 & *I*-3) through frame and into the rear stabilizer (*L*).
- 7. Loosely install two (2) sets of Allen bolt and flat washer assemblies (*I-2* & *I-5*) through underside of the frame receiver and into rear stabilizer (*L*).
- Tighten all eight (8) Allen bolts (I-2) firmly with the provided Allen wrench to fix the front and rear stabilizers.



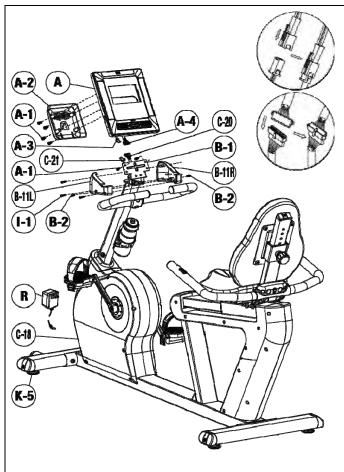
- Thread the four (4) Allen bolt and flat washer assemblies (J-2 & J-3) through the base of the seat back assembly (M) and into the seat slide assembly (H). Tighten firmly after all bolts are engaged.
- Thread the four (4) Allen bolt and flat washer assemblies (*I-2* & *I-5*) through the seat back mount (*N*) and into the threaded holes in the backside of the seat back (*P*). Tighten firmly after all bolts are engaged.
- 3. Thread the seat height adjuster knob (*N-5*) into the seat back mount (*N*) two turns.
- 4. While pulling outward on the seat height adjuster knob (N), slide the seat back onto the seat mast (M). Release the knob to engage set the pin. Ensure the seat back assembly is indexed in one of the height adjustment holes. Rotate the knob (N-5) clockwise to lock the position.
- Thread the four (4) Allen bolt and flat washer assemblies (J-2 & J-3) through the seat base mount (J) and into the seat slide assembly (H). Tighten all bolts firmly.
- Thread the four (4) Allen bolt and flat washer assemblies (*I-4* & *I-5*) through the underside of the seat base mount (*J*) and into the threaded holes in the underside of the seat base (*Q*). Tighten all bolts firmly.



- 7. Identify the left and right pedals. The ends of the pedal axles are marked with an "L" for left and "R" for right. Install the right pedal (*C-13R*) into the right crank by hand, rotating the axle in a <u>clockwise</u> direction.
- 8. Thread the left pedal (*C-13L*) into the left crank by hand in a <u>counter-clockwise</u> direction.
- 9. Use the enclosed pedal wrench to firmly affix the pedals to the cranks. Retighten pedals after approximately ten (10) hours of use.
- 10. Tighten the left and right crank Allen bolts (C-25) with the Allen wrench provided. Retighten after roughly ten (10) hours of use.
- 11. Remove the four (4) Allen screw and flat washer assemblies (**N-3** & **N-4**) from the back of the seat back mast (**M**). Reinstall these assemblies through the back side of the handlebar assembly (**O**) and into the seat back mast (**M**). Tighten firmly.
- 12. Plug rear heart rate connector (G-1) into the pulse wire input jack (O-4).



- 13. Remove the five (5) Allen bolts (B-12), four (4) flat washers (B-13) and one (1) curved washer (B-14) from the frame and set aside.
- 14. Orient and slide the lower console mast cover (*C-12*) upward onto the console mast (*B*) and hold in place, half the way up the mast. While supporting the console mast (*B*), carefully join connector *B-10* with *C-20* and connector *B-9* with *C-21*. Make sure the connection is complete.
- 15. Slide the console mast (*B*) into place onto the main frame (taking care to not damage the cables). Install the two (2) bolt and flat washer assemblies (*B*-12 & *B*-13) through the lower holes on each side of console mast and into the frame. Tighten firmly.
- 16. Re-install the Allen bolt and curved washer assembly (B-12 & B-14) into the front of the console mast. Tighten firmly.0
- 17. Slide the console mast cover (C-12) downward, align with the sidecase plastics and snap into place.
- 18. Re-install the final two (2) Allen bolt and flat washer assemblies (B-12 & B-13) into upper holes on each side of the console mast.
- 19. Position the handlebar assembly (*B-4*) in front of the clamp near the top of the console mast (*B*). Install the handlebar clamp fixing assembly by loosely threading the two fixing bolt, lock washer and flat washer assemblies (*I-6*, *I-7* & *I-8*) through the front clamp (*I-10*) and into the holes in the console mast (*B*). With the provided Allen wrench, tighten the two (2) Allen bolts (*I-6*) so the gaps between the console mast clamp and the front clamp are equal. Align and press the handlebar clamp cover (*I-9*) into place.
- 20. Remove the two (2) Phillips screws (*B-2*) from the console mast (*B*). Install the water bottle cage (*B-7*) by re-installing screws *B-2* through the mounting holes in the cage and into the console mast (*B*). Place the water bottle (*B-8*) in the water bottle cage (*B-7*).



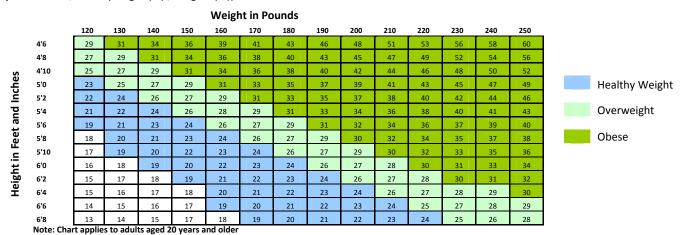
- 21. Remove the six (6) Phillips screws (A-1) from the backside of the console (A) and set aside.
- 22. Feed wire connectors C-20 & C-21 through the backside of the console hinge cover (A-2). While supporting the console (A), join connectors A-4 & C-20. Join connectors A-3 with C-21. Ensure that all connections are firm.
- 23. Tilt the console mounting plate (*B-1*) toward the rear of the unit. Install two (2) Phillips screws (*A-1*) through the underside of the console mounting plate and into the backside of the console. The screws must be installed in the two uppermost holes as shown.
- 24. Align the console hinge cover (*A-2*) with the mounting holes on the backside of the console by sliding the cover's slots over the base of the hinge mount. It may be necessary to tuck any extra cables into the console mast.
- 25. Re-install the four (4) remaining Phillips screws (*A-1*) through the backside of the console hinge cover (*A-2*) and tighten firmly.
- 26. Bring the upper console mast covers (*B-111* & *B-11R*) together over the top of the console mast as shown in the figure to the left. Install the three (3) Phillips screws (*I-1*).
- 27. Install the two (2) Phillips screws (*B-2*) through the covers (*B-11L* & *B-11R*) and into the console mast.
- 28. Roll the cycle to its final position by lifting the rear stabilizer until the wheels on the front stabilizer touch the ground. Carefully return the unit to the floor. This may require more than one person.
- 29. Plug one end of the power supply (*R*) into a 120V power source. Plug the opposite end into the input jack (*C-18*) located near the floor at the front of the unit.
- 30. Ensure the unit is stable and does not rock from side to side. Level the four (4) stabilizer feet (*K-5*) as needed. To extend a stabilizer foot toward the ground, rotate it clockwise when viewing from above.

WORKOUT GUIDELINES

Good Health is an Exercise in Common Sense

In the study titled, "The Surgeon General's Call-To-Action To Prevent and Decrease Overweight and Obesity", the surgeon general indicates that 61% of American adults are either overweight or obese. The study indicates that being overweight increases the risk of health problems, such as heart disease, certain types of cancer, as well as Type-2 diabetes among other afflictions.

Body Mass Index; BMI = (weight (lb) / height² (in)) x 703



Heart Rate is an Important Key to Your Exercise

The Surgeon General also released a report on physical activity and health. This report dictates that exercise and fitness are beneficial for a person's health and reiterated the need for exercise as a key component for disease prevention and healthier living.

The best way to determine exercise intensity is to monitor your pulse rate. Your heart rate can easily be determined by counting the number of heart beats per minute at the chest, wrist or the carotid artery on your neck. It is difficult however to count your own pulse while exercising as it is not possible to count fast enough to accurately track the number of beats per minute. This Diamondback Fitness unit is equipped with a set of touch heart rate sensors.

Using the Touch Heart Rate Sensors

While the unit is powered-on and a workout program is operating, gently grasp both touch heart rate sensors on the handlebar. The computer

will detect your pulse rate and register the value as a two or three digit number in the PULSE window on the LCD display.

NOTE: If an inconsistent heart rate is displayed while using the hand pulse sensors:

- Ensure the palms of both hands are touching the contact areas of the touch heart rate sensors.
- Maintain constant and even pressure on the grips.
- Do not clutch the touch heart rate sensors tightly.
- Try to keep both hands still while griping the touch heart rate sensor.
- Make sure the contacts are clean.

Calculated Maximum Heart Rate & Target Training Zone

Your target heart rate depends primarily upon your age. It is important to work within a safe and productive zone, for if the exercise intensity is too low or too high, only modest gains will be made in strength and cardio-vascular fitness. A workout at a very low intensity will not offer maximum benefits. Conversely, if the workout intensity is

too high, injury or fatigue may slow the progression of your exercise goals as the body attempts to recover.

Note: It is most effective to train at a heart rate between 60% and 85% of your maximum heart rate. Maximum heart rate is calculated as a percentage of your maximum heart rate (estimated as 220 beats-per-minute minus your age).

To calculate your maximum heart rate and find the appropriate target training zone, use the following formulas. For example, the following estimation would be relevant for a 35 year-old user:

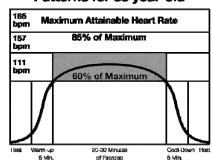
220 – 35 = 185 BPM (220 – Age = Calculated Maximum Heart Rate in Beats-per-minute/BPM)

• 0.60 x 185 = 111 BPM (60% of 185 BPM [Calculated Maximum Heart Rate] = 111 BPM)

0.85 x 185 = 157 BPM (85% of 185 BPM [Calculated Maximum Heart Rate] = 157 BPM)

Based on these calculations, the recommended heart rate training zone for this user would be between 111 BPM and 157 BPM. The graph below displays the recommended heart rate training zone for users twenty years of age to seventy-five years of age.

Typical Target Zone Exercise Patterns for 35 year-old



WORKOUT QUALITY AND QUANTITY

It is recommended that you accumulate at least thirty (30) minutes of physical activity most days of the week. The American College of Sports Medicine makes the following recommendations for the quantity and quality of training for developing and maintaining cardio-respiratory fitness in healthy adults:

An activity that uses large muscle groups, maintained continuously, and is rhythmical and aerobic in nature.

Duration: 20 to 60 minutes of continuous aerobic activity, including a warm-up and cool-down period for each session.

Frequency: 3 to 5 times per week.

Intensity: 60% to 85% of maximum heart rate.

In addition to aerobic exercise, strength training of moderate intensity twice per week is recommended. Women especially may benefit from weight-bearing exercises. Select activities you enjoy and can fit into daily life. Having Diamondback Fitness equipment at home offers you the opportunity to work out without going to the gym.

Get a Smart Start on Exercising

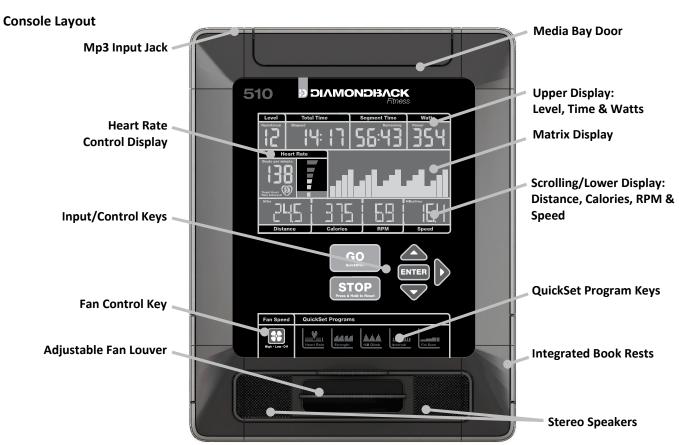
Anyone over the age of 35, as well as younger persons whom are overweight, should check with his/her physician before commencing an exercise program. Persons who have diabetes or high blood pressure, a family history of heart disease, high cholesterol or have led sedentary lifestyles should protect themselves with a medical check-up and stress test administered by a healthcare professional.

- Stretching and massaging major muscles (such as your quadriceps) following a workout session will aid in the dissipation of lactic acid and speed your body's recovery.
- The first few minutes of your workout should be devoted to warming up the muscles before a vigorous workout. Concentrate on raising your heart rate slowly.
- After an aerobic workout of roughly 20-30 minutes, spend 10 minutes gradually reducing your heart rate by moving slower or with less resistance.

NOTE: Start slow, with intensity low until you build up endurance and strength. Always consult your physician before beginning any exercise program.



510 CONSOLE OVERVIEW



CONSOLE DISPLAYS

Level / Resistance



The resistance level currently being applied is displayed in the Level field. Alternatively, the load or resistance level is also displayed in the display matrix as a flashing column. There are sixteen (16) resistance levels to choose from.

Time Displays (Total Time & Segment Time)

Located in the count up the display will user can toggle



center of the upper display are the *Total Time* and *Segment Time* clocks. The Total Time field will total elapsed time for the current program, then switch to display the total time remaining. The switch between these two values every five seconds unless this featured is disabled by the user. The the switching feature on and off by pressing the RIGHT ARROW key. The Segment Time display time



will alternate the display between the *elapsed* and *remaining* time for the current segment of the program. The segment time is equal to $1/20^{th}$ of the total program time and is graphically displayed in the Display Matrix field. The user can toggle the switching feature on and off by pressing the RIGHT ARROW key.

Watts



Watts are units of energy generation and are frequently adopted within the fitness industry to track the amount of work generated at any given time during a workout. Watts are calculated with input from the user's current Speed and Level/Resistance.

Heart Rate / Beats-per-minute (BPM)



When the user's heart rate signal is detected via the heart rate sensors on the fixed handlebar, the heart and DB symbols will flash and the user's current heart rate will be displayed. If the user's heart rate signal is not





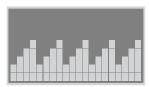
detected, No Signal will light and the heart rate display will post "- - -". When operating a heart rate control program, Target Heart Rate Achieved will be lit if the user's current heart rate is within the defined range. The "DB/Heart" logo will flash to indicate that a heart rate signal is being received.

Heart Rate Bar Graph



The Heart Rate Bar Graph provides the user with meaningful heart rate feedback in an easy-to-read format. When a heart rate signal is detected, the bars of the graph will light to indicate at which percentage of the user's maximum heart rate and training zone (Warm Up, Fat Burn, Cardio, or Peak) the user is operating within. The Heart Rate Bar Graph will not light if the user is operating in *guest* mode or no heart rates signal is detected. If the QuickStart program is running, the default age value will be used to calculate the estimated maximum heart rate.

Matrix Display



When the console operates in the program run mode, the matrix will graphically display the resistance level and profile for the selected program. A higher stack represents a higher resistance level, while a flashing column indicates the user's progress in the program at any given time. Each vertical column represents a time interval determined by the total length of the program. Each column will equal 1/20th of the total program length. For example, if the program length is 30 minutes, each column will equal 1-½ minutes. The Matrix Display will also provide messaging and feedback during the setup modes.

Distance



Distance will be displayed in either Miles or Kilometers, depending upon the selection made in the console setup mode (see section titled <u>English Unit Mode and Metric Unit Mode</u> on page 25). The distance calculation is an estimation based upon the user's RPM.

Calories



The *Calories* field tracks the estimated number of calories burned from the beginning of the program and is a derivative of the *Watts* generated, the user's *RPM* and the *resistance level*.

Speed



Speed is displayed as Miles-per-Hour or Kilometers-per-Hour (depending upon the current console setting) and is based upon the revolutions per minutes (RPM).

RPM



RPM or revolutions-per-minute. A revolution is defined as one complete foot rotation. RPMs are the number of complete rotations a single foot completes in sixty seconds.

Scrolling Messaging Display



The Distance, Calories, Speed & RPM fields also serve as a messaging center. During the user and console setup modes, information will post or scroll information and instructions to aid the user.

CONSOLE KEYS

GO / QuickStart Key



From the Idle, Banner or Demo modes press the GO/QuickStart key to immediately launch the QuickStart program and bypass data entry. Pressing the GO/QuickStart key in the Setup mode will launch the displayed program.

STOP Key



Pressing the STOP key during the Program Run mode will pause the unit for five (5) minutes.

Pressing the STOP key consistently for two seconds will reset the unit, erase all user-entered data and return the console to the Idle mode.

UP & DOWN Arrow Keys



The UP and DOWN arrow keys are the primary method for adjusting values in the setup modes. During the Program Setup mode, the UP/DOWN keys will adjust Age, Weight and Time entries. During the operation of a workout program, the UP and DOWN keys will adjust the resistance level or target heart rate setting.

RIGHT Arrow Key



The RIGHT arrow key allows the user to select the displayed data when in the setup modes. During program run mode, the Right Arrow Key toggles the data switching feature for the Total Time and Segment Time on and off.

ENTER Key



The ENTER key will confirm the selection of the displayed data during the setup modes.

QuickSet Program Keys



The QuickSet Program keys allow the user to quickly launch a program category.

CONSOLE FEATURES

Two-Speed Fan



This unit is equipped with a high-output fan to offer greater comfort during the workout. The adjustable louver allows the user to direct the airflow. Pressing the FAN SPEED button once will power the fan on in the *low* airflow setting. Pressing the button a second time will increase the fan speed to the *high* setting and maximum output.

Media Bay

At the top of the console is a flip-top door which conceals a small tray. The tray is designed to support the user's Mp3 player or cellular telephones. A USB charging port can be found inside the media bay.

USB Charging

To allow charging of small electronics, including cellular telephones and Mp3 players, the 510 console is equipped with a USB charging port which can be found inside the *media bay*. Some electronics may not charge. Power cords are not supplied.

MP3/iPod Input Jack and Speakers

The 510 console offers an on-board amplifier and pair of stereo speakers which can be connected to an Mp3 player, iPod® or iPhone®. Connect one end of a male-to-male stereo cable (not included) to the headphone jack (or audio out) on the device. Plug the other end of the cable into the port located inside the *media bay*.

Sound levels are controlled by the device so be sure to check the internal device settings if the noise level is not satisfactory.

Tilt Viewing

The 510 is equipped with a tilting console to provide all users with a clear and direct view of the displays. The console rotates at the base. To tilt the console, firmly grasp the top of the console. Do not over-extend the rotation as damage may occur.

CONSOLE OPERATION

NOTE: It is advised that new users read this entire section prior to beginning their first workout session.

Banner/Idle Mode	The Banner Mode may also be described as the Idle Mode. Power is supplied to the console and all segments will
	light in sequence to indicate that the unit is ready for operation. Programs and Setting modes may be launched

from the Banner Mode. The Banner Mode will time out in four (4) minutes and enter Power Save Mode if no input

is received in the form of console key presses or pedal rotation.

Demo/Idle Mode The Demo Mode operation is identical to the Banner Mode except the console will never power off and enter

Power Save Mode. Primarily used for in-store displays, the console ships with the factory default of "Demo Mode *On*". The user may choose between the Demo Mode and the Banner Mode in Console Setup mode (see the

section titled Console Setup on page 26).

Power Save Mode The unit will be plugged in, but no power will be supplied to the console. Pressing any key on the console or

rotating the pedals will launch the Banner Mode.

LCD An acronym for liquid crystal display. The 510 display screen is an LCD with integrated backlighting for excellent

visibility.

Watts A unit of measurement which correlates to the rate energy is generated.

Resistance Level Also called intensity level. The load applied to the workout by the unit. The higher the intensity level, the higher

the resistance. There are sixteen (16) resistance levels.



Heart Rate Also called Interactive or Heart Rate Control. To maintain a constant heart rate target, the computer

Control console will automatically adjust the resistance or load up or down to increase and decrease the user's heart rate.

Heart Rate Sensors

Located on the fixed handlebar, the user can monitor their heart rate during a workout by simply

gripping the touch heart rate sensors.

Sensors Default Values

Age 35 years

Weight 150 pounds (68 kg if system is operating in metric mode)

Time 30 minutes

Resistance Level 1

NOTE: The default values for Age, Weight and Time will update when changed in the User Settings Mode.

English Unit Mode and Metric Unit Mode

The default unit setting for the console is the *English* (or *Standard*) system. To toggle between the English and Metric unit modes, press and hold the UP and DOWN keys, simultaneously for two (2) seconds while in the Banner or Demo modes. The brickyard matrix will display "ENG" or "MET" to designate English or metric units. Press the UP or DOWN keys until the desired unit mode is displayed. Press ENTER to accept the selection.

Operating Notes

Power On and Off When the AC adapter is plugged into the unit, all LCD segments on the console will light to confirm power has

reached the unit.

Power Save Mode

In the power save mode, press any key or move the step arms to wake up the console and begin operation.

Reset

To reset the console and erase all user data, press and hold the STOP key for two (2) seconds. When the program

resets, the console returns to the Idle mode.

Pause and Resume The user may interrupt or pause a program for up to five (5) minutes during a workout. To pause the program,

simply press the STOP button. To resume the program, press the GO key before the five (5) minute Pause mode

times out.

Resistance Levels During the workout program, the user may press the UP or DOWN keys to adjust the resistance level. Manual

resistance adjustments are not available in the heart rate interactive programs.

Calculated Maximum
Heart Rate

An estimated maximum heart rate which may be used to determine a threshold for safe exertion

levels. The calculation is 220 – AGE = Calculated Maximum Heart Rate.

PROGRAMMING FEATURES

Elapsed Time and Remaining Time Switching

While running a program, the Total Time and Segment Time values will switch between *elapsed* and *remaining*. The user may stop the switching and display the current view by pressing the Right Arrow key. Pressing the key again will return the display to switching mode.

Workout Summary

For additional user feedback, the 510 console provides a brief Workout Summary immediately following the completion of the workout session. "END" will post in the Matrix Display and total Time, Distance and Calorie values for the workout will be displayed for thirty (30) seconds. The console will then return to the Idle screen.

CONSOLE SETUP

Console Default Settings

This unit is shipped with the default values appropriate for the U.S. market.

<u>Setting</u>	Default/Factory Setting	Available Settings
Units	English or standard	English, Metric
Model	Will match the current unit model	510Er, 510Sr, 510Ub
Sound	On	On, Off
Backlight	High	High, Low
Demo Mode	On	On, Off

Console Setup Launch

If the user would like to update the default values and personalize one of the two custom user profiles, pressing the UP and DOWN arrows keys simultaneously for two (2) seconds will launch the Console Setup mode.

Units Setup	When the Console Setup mode is launched, "SET UNITS" will post in the lower display field. "Eng" or "Met" will
	flash in the Matrix Display, depending upon current setting. Use the UP or DOWN arrow keys to scroll through the
	available settings and press the ENTER key to select the displayed option. Press ENTER to launch the Model
	Number Selections mode.

Note: Changing the units will erase all user data.

Model Number "SET MODEL NUMBER" will post in the lower display field. "510Sr", "510Ub" or "510Er" will scroll in the Matrix

Display, depending upon current setting. Confirm the model number of your unit. Use the UP and DOWN arrow keys to view the available settings. When the correct model is displayed, press ENTER to select and launch the

Sound Settings mode.

Sound Settings "SOUND SETTINGS" will post in the lower display. "On" or "Off" will flash in the Matrix Display, depending upon the

current setting. Scroll between the two settings via the UP and DOWN arrow keys, pressing the ENTER key to

confirm the selection and launch the Backlight Settings mode.

Backlight Settings "BACKLIGHT LEVEL" will post in the lower display. "Hi" or "Low" will flash in the Matrix Display, depending upon the

current setting. Scroll between the two settings via the UP and DOWN arrow keys. Confirm the setting by pressing

the ENTER key. Demo Mode Settings will launch

Demo Mode Setting "DEMO MODE ON/OFF" will post in the lower display. "Off" or "On" will flash in the Matrix Display depending upon

the current setting. Scroll between the two setting via the UP and DOWN keys.

■ Demo Mode On = console never powers off.

Demo Mode Off = console power off after thirty (30) seconds of inactivity.

QUICK START PROGRAM

The QuickStart program option is for users who wish to bypass the User Setup mode and immediately launch a workout session. Adjustments to the resistance can be made at any time via the UP and DOWN keys.

Selection Press the GO/Quick Start key to launch the Manual program with the following defaults values:

- Time = 30 minutes
- Resistance Level = 1

Launch Once the program begins:

- Program Run Time will count down from 30:00 minutes.
- The Pulse display will show a heart rate if a signal is detected via the touch heart rate sensors.
- The Matrix Display will show the workout profile.
- The lower data display fields will track Distance, Calories, RPM & Speed.
- The user may adjust the resistance level from 1 to 16 during the program via the UP and DOWN arrow keys.
- Press the STOP key once to enter the Pause mode. Pressing the STOP key again will return the console to Program Run mode.

End When thirty (30) minutes have elapsed, the Workout Summary will be displayed.

HEART RATE PROGRAMS

Diamondback's Heart Rate programs can also be described as a *heart rate control programs*. Heart rate control programs automatically increase and decrease the load or resistance levels during the workout to help keep the user's heart rate +/- four (4) BPM (Beats-per-minute) of the selected heart rate target.

For example, if the heart rate target is 132 BPM, and the user's pulse begins to fall, the 510 computer will slowly increase the resistance level. Eventually, the amount of work being performed by the user will increase and so will the heart rate. Conversely, if the user's heart rate climbs above the target, the resistance will decrease, allowing the user's heart rate to fall.

The advantages of heart rate control programs are the simplicity and accuracy by which the ideal cardio-vascular training zone is maintained thereby offering a very efficient workout.

For the Target Heart Rate programs to operate, the computer must receive a heart rate signal from the touch heart rate sensors. If no signal is detected, the Pulse field will display "- - -" and the No Signal icon will light. When a pulse signal is received, the rate will be displayed and the DB/Heart icon will be flash.

For the greatest cardio-vascular benefit, most persons should target a heart rate that is between 60% and 85% of their *calculated maximum heart rate*. An individual's calculated maximum heart rate is estimated as 220 BPM, minus their age. It is unsafe to exceed 90% of this calculated heart rate.

- NOTE: The computer bases all heart rate targets and maximums on the data entered during the Program Setup & User Setup modes. For an effective and safe workout, please enter the correct data for the current user.
- NOTE: The 510 is programmed to warn the user if the heart rate exceeds 95% of their maximum. If use is continued at an unsafe level, the console will end the program.

See the sections titled <u>Heart Rate is an Important Key to Your Exercise</u> and <u>Your Estimated Maximum Heart Rate & Target Training on Zone</u> for more information regarding target heart rate calculations.

There are two types of heart rate control programs embedded in the 510 console: *Target Heart Rate* and *Percentage Heart Rate* (50%, 60%, 70% & 80%).

Target Heart Rate Program - Overview, Selection, Setup, Launch & End

Overview The Target Heart Rate program allows the user to select a heart rate value (in beats-per-minute). The console will automatically vary the resistance to ensure the desired heart rate value is maintained throughout the workout.

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Selecting From the Idle screen, press the HEART RATE key on the console one time. The Heart icon will post in the Matrix Display. "TARGET HEART RATE" will post in the lower display. Press the ENTER key to launch the Heart Rate Program Setup Mode for the Target Heart Rate program.

Setup

User: "SELECT USER" will scroll in the lower display. "User 1" or the custom name for the User 1 profile will scroll in the Matrix Display. Select this profile or use the UP and DOWN arrow keys to scroll through the available profiles. Press the ENTER key to confirm.

Age: If the Guest profile is selected, the user is prompted to enter their age. This data is not stored and will be reset at the conclusion of the program. Adjust the flashing value via the UP and DOWN arrow keys, confirming the selection by pressing the ENTER key.

When the User 1 or User 2 profiles are selected, any previously-stored user data will be referenced to operate the program. If no data has been entered for these profiles, the User Setup mode will launch (see the section titled User Setup Mode), allowing the user to update the selected profile.

Target Heart Rate Value: The user will be prompted to enter a target heart rate value. Choose a heart rate that is between 50% and 85% of your calculated maximum heart rate via the UP and DOWN arrow keys.

Launch

Press ENTER to confirm heart rate target and launch the Target Heart Rate program.

A heart rate signal must be received for the heart rate programs to operate. If a signal is not received, the No Signal symbol will light and the lower display will prompt the user.

All console fields will be begin tracking the workout data. The heart rate field will display the current heart rate, while the bar graph provides an estimate of the current user's calculated maximum heart rate percentage.

Resistance adjustments will be controlled by the program to ensure that the user's heart rate remains within +/- four (4) BPM of the selected target heart rate.

The Matrix Display will post a horizontal line of segments to represent the user's selected heart rate target. The flashing segment will indicate the user's progress within the program. A flashing segment that is below the horizontal line indicates that the user's heart rate is lower than the selected target. Conversely, a flashing segment above the horizontal line signifies a heart rate that exceeds the user's target.

If the current heart rate is within the target range, the Target Heart Rate Achieved icon will light.



End To end the program at any time, press the STOP key, twice. The workout summary will be displayed for thirty (30) seconds then the console will return to the Idle mode. Press STOP again to return to the Idle mode.

Percentage Heart Rate Programs - Overview, Selection, Setup, Launch & End

Overview The Percentage Heart Rate programs can also be described as "percent-of-maximum heart rate" programs. The setup and operation of these programs is similar to the Target Heart Rate programming except the console will automatically determine the specific pulse rate target based on the data entered in the user profile and the selected percentage (50%, 60%, 70% & 80%) of their calculated maximum heart rate. See the section titled *Calculated Maximum Heart Rate*.

- Selecting From the Idle screen, press the HEART RATE key on the console two times. The Heart icon will post in the Matrix Display followed by "50%". "50% MAX" will post in the lower display. This program will automatically adjust the workout resistance level so that user's effort will generate a heart rate equal to 50% of their calculated maximum. Scroll through the available programming options (50%, 60%, 70% & 80%) and make a selection by pressing the ENTER key.
- Setup User: "SELECT USER" will scroll in the lower display. "User 1" or the custom name for the User 1 profile will scroll in the Matrix Display. Select this profile or use the UP and DOWN arrow keys to scroll through the available profiles (User 1, User 2) and press the ENTER key to confirm.

Age: If the Guest profile is selected, the user is prompted to enter their age. This data is not stored and will be reset at the conclusion of the program. Adjust the flashing value via the UP and DOWN arrow keys, confirming the selection by pressing the ENTER key.

When the User 1 or User 2 profiles are selected, any previously-stored user data will be referenced to operate the program. If no data has been entered for these profiles, the User Setup mode will launch (see the section titled <u>User Setup Mode</u>), allowing the user to update the selected profile. The selected program will then launch.

Press ENTER to confirm heart rate target and launch the Target Heart Rate Program. A heart rate signal must be received for the heart rate programs to operate. If a signal is not received, the No Signal symbol will light and the lower display will prompt the user.

All console fields will begin tracking the workout data. The heart rate field will display the current heart rate, while the bar graph provides an estimate of the current user's calculated maximum.

Resistance adjustments will be controlled by the program to ensure the user's heart rate remains within +/- four (4) BPM of the selected target heart rate.

The Matrix Display will post a horizontal line of segments to represent the user's selected heart rate target. The flashing segment will indicate the user's progress within the program. A flashing segment that is below the horizontal line indicates that the user's

Launch



heart rate is less than the selected target. Conversely, a flashing segment above the horizontal line signifies a heart rate that exceeds the, user's target.

If the current heart rate is within the target range, the Target Heart Rate Achieve icon will light.

End To end the program at any time, press the STOP key. The workout summary will be displayed for thirty (30) seconds then the

console will return to Idle mode. Press STOP again to immediately return to the Idle mode.

CLASSIC PROGRAMS

Classic Programs Overview & Selection

Strength, Hill Climb, Interval and Fat Burn programs are considered *classic* programs. Each offer identical setup and data entry. Once the desired program has been selected, jump to the section entitled *Classic Programs Setup Mode*.

Strength Programs

- **Overview** The Strength program category offers four (4) workout profiles. Each is designed to gradually increase the resistance to help build the users strength and endurance.
- **Selecting** From the Idle mode, press the STRENGTH key on the console. Use the UP or DOWN arrow keys to scroll through the Strength profile options and press the ENTER key to select the option displayed in the brickyard.

Hill Climb Programs

- **Overview** The Hill Climb programs simulate climbing exercises with five (5) preset hill profiles.
- **Selecting** From the Idle mode, press the HILL CLIMB key on the console. Use the UP and DOWN arrow keys to view the available course profiles, followed by the ENTER key to select the displayed profile.

Interval Programs

- **Overview** The five (5) Interval programs offer profiles with periods of high exertion alternating with periods of rest. Intervals are an excellent way to increase endurance.
- **Selecting** From the Idle mode, press the INTERVAL key on the console. Use the UP and DOWN arrow keys to view the available course profiles, followed by the ENTER key to select the displayed profile.

Fat Burn Programs

- **Overview** The two (2) Fat Burn programs are designed to maintain a relatively low level of exertion over the course of the workout. Keeping the heart rate at the lower range encourages weight loss.
- **Selecting** From the Idle mode, press the FAT BURN key on the console. Use the UP and DOWN arrow keys to view the available course profiles, followed by the ENTER key to select the displayed profile.

Classic Programs Setup Mode

Once a Classic Program has been selected, on-screen messaging will guide the user throughout the Setup Mode.

NOTE: The user may press the GO key at any time during the Setup mode to skip the setup and begin the workout immediately the with previously-saved default values. Note that the heart rate feedback will only be accurate if values for the selected profile are correct for the current use.

User Selection

"User 1" or the previously-entered User 1 name value will scroll in the Matrix Display. Use the UP and DOWN arrow keys to view the user selection options ("User 1", "User 2", "Guest"). When the desired user profile is displayed, press the ENTER key to select. Guest user will run with default data and will not operate all functions of the heart rate programming.

If the User Setup steps for the selected profile has not been completed, the console will launch the User Setup mode (see the section titled *User Setup Mode* for more information), otherwise, the program will launch immediately.

Classic Programs Launch Mode

Once the Classic program has launched:

- The Matrix Display will post the workout profile and the current progress in the program will be indicated by a flashing stack of segments. The height of the stacks represents the level of resistance; the higher the stack, the greater the resistance. The resistance may be adjusted manually via the UP and DOWN arrow keys.
- The Level display will indicate the current resistance level. The range is from 1 to 16.
- Total Time field will display the progress made in the total workout. Segment Time will display the progress made in the current segment. The displays will switch between *elapsed* and *remaining* time. *Elapsed time* will count up, while *remaining time* will count down. To freeze the switching and display only elapsed or remaining time, press the RIGHT arrow key while the desired display is visible. Press the RIGHT arrow key again to resume switching mode.
- The Watts field will display the current output or work being generated by the user.
- Total Distance for the current workout session will be displayed.

- The Calories field will record the number of calories burned during the workout session.
- RPM or revolutions per minute and Speed will be displayed.

Ending a Classic Program

At any time during the program, the user may press the STOP key to pause the programming. To end the program and view the Workout Summary, press the STOP key twice while the program is running. Pressing the STOP key three (3) times while the program is running will end the program, bypass the Workout Summary and return the console to Idle mode.

USER SETUP MODE

The User Setup mode may be launched in two ways:

- To manually enter the User Setup mode, press and hold the RIGHT arrow key for two (2) seconds.
- During the Program Selection mode, if a user profile is selected for the first time, User Setup mode will launch automatically, then
 return to the Program Setup mode.

When the User Setup mode is launched, "User 1" will display in the Matrix Display. Use the UP and DOWN arrow keys to view the user profile options ("User 1" or "User 2"). Press ENTER when the desired profile is displayed.

User Name Data Entry

"User 1 Name" or "User 2 Name" will post in the lower display and "U1" or "U2" will post in the Matrix Display field (depending upon which user profile was selected). If the user name has been previously adjusted, the entered name will then scroll once and post with the first character blinking. Adjust this character of the user name via the UP and DOWN arrow keys. Press the RIGHT arrow key to confirm the character selection and move to cursor the next character. The choice of available characters is A - Z, a - z, 0 - 9 and the "_" (space). The user may store up to ten (10) characters for each user name. If the desired name is less than ten (10) characters, press ENTER to save settings and launch Workout Time data entry.

User Workout Time Data Entry

"Workout Time" will post in the lower display and the default value of "30:00" (or the previously-adjusted value) will flash in the Total Time display. Use the UP and DOWN arrows to adjust the workout time for this user profile. The range for workout time is 01:00 to 1:59:00. Press ENTER to confirm the workout time and enter Age data entry.

User Age Data Entry

"User 1 Age" or "User 2 Age" will post in the lower display (depending upon which user profile was selected). The default or previously-adjusted user age value will flash in the Matrix Display. Use the UP and DOWN arrows to adjust the age for this user profile. The available user age value must be between ten (10) and ninety-nine (99) years, inclusive. Press the ENTER key to confirm the age setting and enter User Weight entry.

User Weight Data Entry

"User 1 Weight" or "User 2 Weight" will post in the lower display (depending upon which user profile was selected). The default or previously-adjusted user weight value will flash in the Display Matrix. Use the UP and DOWN arrows to adjust the weight for this user profile. The available user weight value must be between 23 and 350 pounds (10 and 150 Kilograms in the console is is set to metric unit), inclusive. Press the ENTER key to confirm the weight setting and enter User Gender entry.

User Gender Data Entry

"User 1 Gender" or "User 2 Gender" will post in the lower display (depending upon which user profile was selected). The default or previously-adjusted user gender value will scroll in the Display Matrix. Use the UP and DOWN arrow keys to view the user gender options ("Male", "Female"). To select the displayed gender setting, press the ENTER key. Press the ENTER key to return to the User Setup selection mode, or press GO or STOP to save all adjusted settings and return to banner mode or previous program.

MAINTENANCE

All Diamondback Fitness products are engineered for years of near-silent operation. Let noise be your first indication that a repair or adjustment is required. Please, discontinue use immediately and contact an Authorized Service Technician or Diamondback Fitness Dealer if an unusual noise, scraping, knocking, grinding or vibration is detected. Often, a minor issue will become a major repair if ignored and use is continued.

Prior to each workout, confirm that all adjustment levers and screws are tightened.

Your Diamondback Fitness product is manufactured of the most durable materials available. The plastics are molded of strong and chemical-resistant ABS and PVC. The frame is produced of high-tensile steel and protected with an industrial-grade, powder paint coating for the highest level of corrosion resistance. It is important to note however, that perspiration can be extremely corrosive if allowed to accumulate on the machine. After training, always wipe down the unit with a mild soap solution followed by a thorough drying with a clean towel. Positioning a small spray bottle and towel near the unit will help ensure that your Diamondback Fitness equipment looks new for many years.

NOTE: Perspiration is very corrosive and if allowed to remain on the machine, will cause discoloration, fading, rust and odors. Unfortunately, these conditions are not covered under the Warranty Policy.

WARRANTY INFORMATION

Diamondback Fitness warrants this unit to be free from defects in material and workmanship under normal use in the home environment. Diamondback Fitness's obligation under this warranty is limited to the repair or replacement of any defective part, provided free of charge through an Authorized Service Agent. This warranty is extended to the original purchaser. The following conditions apply:

Who is Covered

The warranty is extended to the individual whose name appears on the Warranty Registration filed with Diamondback Fitness and may not be transferred to any other individual or legal entity. In the absence of a valid Warranty Registration, the original sales receipt will serve as satisfactory documentation of the valid warranty status.

To Obtain Service

To obtain service, you must contact your Authorized Diamondback Fitness Dealer. Your dealer is also your Authorized Service Agent. An Authorized Service Agent must diagnose your unit to begin the warranty claim process.

Warranty Registration

Warranty commitments are valid only with a completed Warranty Registration. Registration is available online at www.diamondbackfitness.com. Alternatively, a warranty card may be mailed to Diamondback Fitness. (See page 33)

Proof of Purchase

Proof of purchase from a Diamondback Fitness Authorized Dealer will be required if the warranty card is not registered.

What is Covered - For Interior Residential Use Only.

Frame Limited lifetime warranty;

(covers defects in welds, materials, and workmanship; some exclusions apply).

Parts & Electronics 3 years
Labor 1 year
Wear Items 90 days

NOTE: If proof of purchase cannot be confirmed, the Warranty's coverage period will begin on the date six (6) months after the date of manufacture.

NOTE: Limited lifetime refers to warranty coverage of the unit's expected service life, not the lifetime of the purchaser. The expected lifetime of this unit is five (5) years from the date of purchase although other factors can extend this period. Support and maintenance of the unit may become difficult or impossible after this period expires.

Voided Warranty

The warranty does not apply to any failure of the product or its components due to alterations or modifications, misuse and abuse, accidental damage, lack of maintenance or improper assembly. Improper assembly can be avoided if the unit is assembled by an authorized technician. Damage due to improper assembly is not covered by the warranty. Common assembly errors can include damaged wire harnesses, stripped screws and nuts, crank arms or damaged threads.

If the serial number has been removed, altered or defaced, the warranty for the affected unit is voided.

Parts & Service

Contact the Authorized Diamondback Fitness Dealer which originally sold the unit. If you have moved, or the retailer is unavailable, visit the Diamondback Fitness dealer locator site at www.diamondbackfitness.com to help locate an alternate Authorized Dealer.

Diamondback Fitness is not responsible for securing warranty service and/or honoring extended warranties provided by dealers.

NOTE: Authorized service technicians do not reside in all areas of the country. If you live beyond the reasonable service area or metropolitan area, Diamondback Fitness may not be able to support the labor portion of the product warranty.

Travel fees charged by technicians are not covered by the warranty.



Other Exclusions

The warranty for this unit is void if it is placed in commercial or light commercial environments such as health clubs, schools, hotels, condominium common areas, correctional facilities, or any other non-residential setting.

The warranty will not be honored if this unit is employed for commercial or rental purposes.

This unit is for indoor use only.

Additional Rights

This Warranty is expressly in lieu of all other warranties, and any implied warranties of merchantability or fitness for a particular purpose created hereby, and are limited to the same duration as the express warranty herein. Diamondback Fitness shall not be liable for any incidental or consequential damages. Some states do not allow the exclusion or limitations of implied warranties, incidental or consequential, so the above limitations and exclusions may not apply to you.

Retailers and wholesale outlets for Diamondback Fitness products are not authorized to modify this warranty in any way.

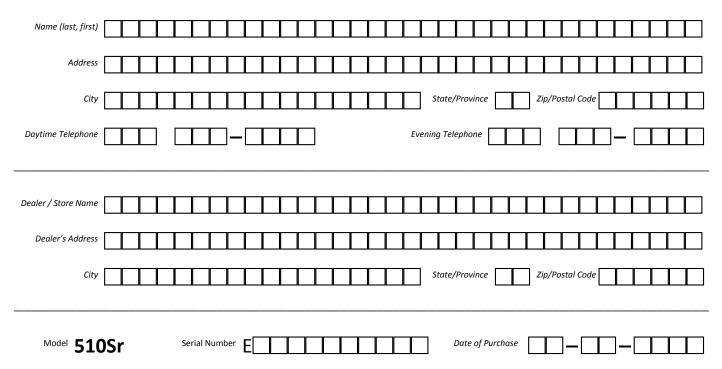
This warranty gives the original owner specific legal rights. Other additional rights may vary from state to state.

Although current at the time of this printing, specifications for this model may have changed in our continuing effort for improvement. Diamondback Fitness reserves the right to modify and improve the specifications of its products without prior notice.

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WARRANTY REGISTRATION CARD

Please return the completed warranty registration card to Diamondback Fitness within 15 days of purchase. Failure to comply may void the warranty. You may register your product at <u>www.diamondbackfitness.com</u>.



Mail Completed Form To: Diamondback Fitness – Warranty Card 6004 S 190th Street Suite 101 Kent, Washington 98032



PURCHASER'S REFERENCE INFORMATION Product Name: Diamondback Fitness 510Sr Recumbent Cycle Serial Number: E_____ Record the serial number here. Serial Number Location The serial number will be located on the rear of the unit (see figure to the right). **Record of Purchase** NOTE: Please record details associated with the purchase of your Diamondback Fitness 510Sr below. This information will be required in the event the unit requires future service. ATTACH THE PURCHASE RECEIPT. Dealer Name: ______ Dealer Telephone Number: (________ Dealer Address: Date Purchased: ______ Dealer Contact Name: _____

To Activate Your Warranty

Please register the unit at www.diamondbackfitness.com. Failure to comply may limit or void your warranty coverage.

DIAMONDBACKFitness



DIAMONDBACK FITNESS

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