# **Owner's Manual**

**Model No.** 16211088000 CR800ENT

- Assembly
- Operation
- Adjustments
- Parts
- Warranty

# **CAUTION:**

Read and understand this manual before operating unit





Retain For Future Reference

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Thank you for purchasing our product, please save these instructions. Please do not perform or attempt any customizing, adjustments, repair or maintenance that is not described in this manual.



# CONGRATULATIONS ON YOUR NEW BIKE AND WELCOME TO THE SPIRIT FAMILY!

Thank you for your purchase of this quality stationary bike trainer from Dyaco Canada Inc. Your new bike was manufactured by one of the leading fitness manufacturers in the world and is backed by one of the most comprehensive warranties available. Through your dealer, Dyaco Canada Inc. will do all we can to make your ownership experience as pleasant as possible for many years to come. The local dealership where you purchased this bike is your administrator for all Dyaco Canada Inc. warranty and service needs. Their responsibility is to provide you with the technical knowledge and service personnel to make your experience more informed and any difficulties easier to remedy.

Please take a moment at this time to record the name of the dealer, their telephone number, and the date of purchase below to make any future needed contact easy. We appreciate your support, and we will always remember that you are the reason that we are in business. Please go to www.dyaco.ca/warranty.html and complete the online warranty registration.

Yours in Health, Dyaco Canada Inc.

Name of Dealer	
Telephone Number of Dealer_	
Purchase Date	

# **Product Registration**

#### RECORD YOUR SERIAL NUMBER

Please record the Serial Number of this fitness product in the space provided below.

Serial Number	

### **REGISTER YOUR PURCHASE**

Please visit us at www.dyaco.ca/warranty.html to register your purchase.

#### **BEFORE YOU BEGIN**

Thank you for choosing the SPIRIT CR800ENT Bike. We take great pride in producing this quality product and hope it will provide many hours of quality exercise to make you feel better, look better, and enjoy life to its fullest. It's a proven fact that a regular exercise program can improve your physical and mental health. Too often, our busy lifestyles limit our time and opportunity to exercise. The SPIRIT CR800ENT Bike provides a convenient and simple method to begin your assault on getting your body in shape and achieving a happier and healthier lifestyle. Before reading further, please review the drawing below and familiarize yourself with the parts that are labelled.

Read this manual carefully before using the SPIRIT CR800ENT Bike. Although Dyaco Canada Inc. constructs its products with the finest materials and uses the highest standards of manufacturing and quality control, there can sometimes be missing parts or incorrectly sized parts. If you have any questions or problems with the parts included with your SPIRIT CR800ENT Bike, please do not return the product. Contact us **FIRST!** If a part is missing or defective, call us toll-free at 1-888-707-1880. Our Customer Service Staff are available to assist you from 8:30 A.M. to 5:00 P.M. (Eastern Time) Monday through Friday. Be sure to have the name and model number of the product available when you contact us.



# SAFETY PRECAUTIONS

# IMPORTANT SAFETY INFORMATION THIS UNIT IS INTENDED FOR HOUSEHOLD USE ONLY READ ALL INSTRUCTIONS BEFORE USING THIS BIKE

**CAUTION:** Before starting any exercise program, it is recommended that you consult your physician.

Thank you for purchasing our product. Even though we go to great efforts to ensure the quality of each product we produce, occasional errors and/or omissions do occur. In any event, should you find this product to have either a defective or a missing part, please contact us for a replacement.

This exercise equipment was designed and built for optimum safety. However, certain precautions apply whenever you operate a piece of exercise equipment. Be sure to read the entire manual before assembly and operation of this machine. Also, please note the following safety precautions:

- 1. Read the OWNER'S OPERATING MANUAL and all accompanying literature and follow it carefully before using your bike.
- 2. It is the responsibility of the facility to ensure that all users of the bike exerciser are adequately informed of all precautions.
- 3. If dizziness, nausea, chest pains, or any other abnormal symptoms are experienced while using this equipment, STOP the workout at once. CONSULT A PHYSICIAN IMMEDIATELY.
- 4. Inspect your exercise equipment prior to exercising to ensure that all nuts and bolts are fully tightened before each use.
- 5. The bike must be regularly checked for signs of wear and damage. Any part found defective; the part must be replaced with a new spare part from the manufacturer.
- 6. Fitness equipment must always be installed on a flat surface, do not place the unit on a loose rug or uneven surface. It is recommended to use an equipment mat to prevent the unit from moving while it is being used, which could possibly scratch or damage the surface of your floor. Keep the bike exerciser indoors, away from moisture and dust.
- 7. No changes must be made which might compromise the safety of the equipment.
- 8. It is recommended to have a minimum of 1' safe clearance around the exercise equipment while in use.
- 9. Keep children and pets away from this equipment at all times while exercising.
- 10. Warm-up 5 to 10 minutes before each workout and cool down 5 to 10 minutes afterward. This allows your heart rate to gradually increase and decrease and will help prevent you from straining muscles.
- 11. Never hold your breath while exercising. Breathing should remain at a normal rate in conjunction with the level of exercise being performed.
- 12. Always wear suitable clothing and footwear while exercising. Do not wear loose-fitting clothing that could become entangled with the moving parts of your bike.
- 13. Always hold the handlebars when mounting, dismounting, or using the bike exerciser.
- 14. Keep your back straight when using the bike exerciser; do not arch your back.
- 15. If decals on the bike exerciser are missing or illegible, please call our customer service department toll-free at 1-888-707-1880 and order a replacement decal.
- 16. Care must be taken when lifting or moving the equipment so as not to injure your back. Always use proper lifting techniques
- 17. User weight should not exceed 450 lbs. (204 kgs)

**WARNING**: Before beginning any exercise program, consult your physician. This is especially important for individuals over the age of 35 or persons with pre-existing health problems. Read all instructions before using any fitness equipment. We assume no responsibility for personal injury or property damage sustained by or through the use of this product.

# SAVE THESE INSTRUCTIONS

# IMPORTANT **SAFETY INSTRUCTIONS**

**WARNING** - Read all instructions before using this equipment.

**DANGER** - To reduce the risk of electric shock, disconnect your Recumbent bike from the electrical outlet prior to cleaning and/or service work.

**WARNING** - To reduce the risk of burns, fire, electric shock, or injury to persons, install the Recumbent bike on a flat level surface with access to a 120-volt, 15-amp grounded outlet with only the recumbent bike plugged into the circuit.

# DO NOT USE AN EXTENSION CORD UNLESS IT IS A 14 AWG OR BETTER, WITH ONLY ONE OUTLET ON THE END: DO NOT ATTEMPT TO DISABLE THE GROUNDED PLUG BY USING IMPROPER ADAPTERS OR IN ANY WAY MODIFYING THE CORD SET.

- Do not operate Recumbent bike on a deeply padded, plush or shag carpet. Damage to both carpet and bike may result.
- Keep children away from the Bike. There are obvious pinch points and other caution areas that can cause harm.
- Keep children under the age of 13 away from the bike. There are obvious pinch points and other caution areas that can cause harm.
- Keep hands away from all moving parts.
- Never operate the Recumbent bike if it has a damaged cord or plug. If the Recumbent bike is not working properly, call your dealer.
- Keep the cord away from heated surfaces.
- Do not operate where aerosol spray products are being used or where oxygen is being administered. Sparks from the motor may ignite a highly gaseous environment.
- Never operate the equipment with the air openings blocked. Keep the air openings free of lint, hair, and the like.
- Do not use outdoors.
- To disconnect, turn all controls to the off position and then remove the plug from the outlet.
- Please make sure that the power-supply cord and adapter are placed in a dry area and kept away from heat.
- Do not attempt to use your bike for any purpose other than for the purpose it is intended.
- The hand pulse sensors are not medical devices. Various factors, including the user's movement, may affect the accuracy of heart rate readings. The pulse sensors are intended only as exercise aids in determining heart rate trends in general.
- Wear proper shoes. High heels, dress shoes, sandals or bare feet are not suitable for use on your bike. Quality athletic shoes are recommended to avoid leg fatigue.
- This exercise equipment is not intended for use by persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge.
- Before beginning this or any exercise program, consult a physician. This is especially important for persons over the age of 35 or persons with pre-existing health conditions.

**WARNING:** Injuries to health may result from incorrect or excessive training.

# SAVE THESE INSTRUCTIONS - THINK SAFETY!

Customer Service 1-888-707-1880 Email: customerservice@dyaco.ca

# IMPORTANT ELECTRICAL INSTRUCTIONS

#### **WARNING!**

**NEVER** remove any cover without first disconnecting AC power. If voltage varies by ten percent (10%) or more, the performance of your recumbent bike may be affected. Such conditions are not covered under your warranty. If you suspect the voltage is low, contact your local power company or a licensed electrician for proper testing. **NEVER** expose this recumbent bike to rain or moisture. This product is NOT designed for use outdoors, near a pool or spa, or in any other high humidity environment. The temperature specification is 40 degrees C, and humidity is 95%, non-condensing (no water drops forming on surfaces).

**Circuit breakers:** Avoid AFCI/GFCI circuit breakers if possible. These breakers may trip occasionally during use because of the high inrush currents from the recumbent bike drive motor. This condition is an issue with all recumbent bike and other products with large motors or electric heating elements like ovens.

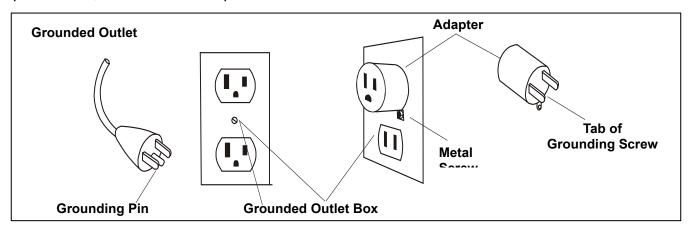
New laws in your area may require these breakers. If you do have these breakers and outlets in your home and are experiencing nuisance tripping, you should check to see if there are any other devices plugged into the same circuit like fluorescent lights with electronic ballasts, coffee maker, space heater, etc. Optimally the recumbent bike should be the only device plugged into the circuit.

Our bikes have surge suppressors built in to help avoid nuisance tripping. We have tested several AFCI/GFCI breakers and outlets with our products that do not trip when only the recumbent bike is connected. Brands we have tested are: Eaton (Cutler Hammer Series), Leviton (Smart lock pro) and Schneider Electric (Canadian home series).

# GROUNDING INSTRUCTIONS

This product must be grounded. If the recumbent bike should malfunction or breakdown, grounding provides a path of least resistance for electric current, reducing the risk of electric shock. This product is equipped with a cord having an equipment-grounding plug. The plug must be plugged into an appropriate outlet that is properly installed and grounded in accordance with all local codes and ordinances.

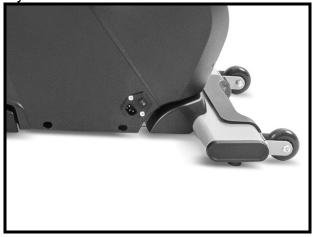
**DANGER** Improper connection of the equipment-grounding conductor can result in a risk of electric shock. Check with a qualified electrician or serviceman if you are in doubt as to whether the product is properly grounded. Do not modify the plug provided with the product if it will not fit the outlet; have a proper outlet installed by a qualified electrician. This product is for use on a nominal 120-volt circuit, and has a grounding plug that looks like the plug illustrated below. A temporary adapter that looks like the adapter illustrated below may be used to connect this plug to a 2-pole receptacle as shown below if a properly grounded outlet is not available. The temporary adapter should be used only until a properly grounded outlet, (Shown below) can be installed by a qualified electrician. The green colored rigid ear-lug, or the like, extending from the adapter, must be connected to a permanent ground such as a properly grounded outlet box cover. Whenever the adapter is used, it must be held in place.



Customer Service 1-888-707-1880 Email: customerservice@dyaco.ca

# IMPORTANT OPERATION INSTRUCTIONS

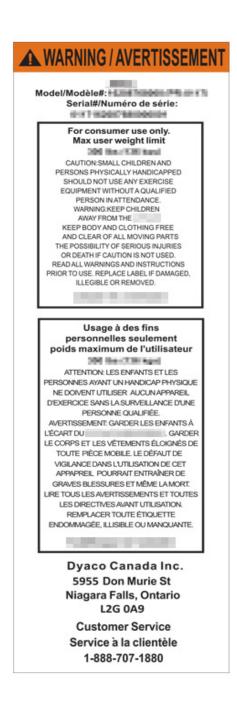
- **NEVER** operate this bike without reading and completely understanding the results of any operational change you request from the computer.
- **NEVER** use your Recumbent bike during an electrical storm. Surges may occur in your facility or household power supply that could damage Recumbent bike components. Unplug the Recumbent bike during an electrical storm as a precaution.
- **All users** should have medical clearance before starting any rigorous exercise program. This is especially important for persons with a history of heart disease or other high-risk factors.
- The user should adjust the seat to a position that is comfortable during exercise.
- Understand that changes in resistance do not occur immediately. Set your desired resistance on the computer console and release the adjustment key. The computer will obey the command gradually.
- Use caution while participating in other activities while pedaling on your bike, such as watching television, reading, etc. These distractions may result in serious injury.
- Always hold on to a handlebar while making control changes.
- Do not use excessive pressure on console control keys. They are precision set to function properly with little finger pressure. If you feel the buttons are not functioning properly with normal pressure, contact your dealer.



POWER CONNECTOR - FRONT, RIGHT SIDE OF UNIT

# WARNING DECAL REPLACEMENT

The decal shown below has been placed on the bike. If the decal is missing or illegible, please call our Customer Service Department toll-free at 1-888-707-1880 to order a replacement decal.

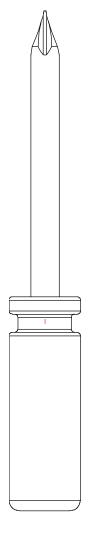


# **ASSEMBLY INSTRUCTIONS**

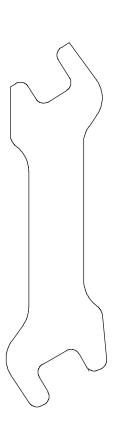
# **UNPACKING**

- 1. Cut the straps, then lift the box over the unit and unpack.
- 2. Locate the hardware package. The hardware is separated into four steps. Remove the tools first. Remove the hardware for each step as needed to avoid confusion. The numbers in the instructions that are in parenthesis (#) are the item number from the assembly drawing for reference.

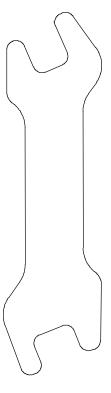
# **ASSEMBLY TOOLS**



**#114.** Phillips Head Screwdriver (1 pc)



**#132.** 14/15mm Wrench (1 pc)



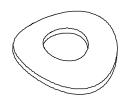
**#112.** 12/14mm Wrench (1 pc)

# ASSEMBLY PACK CHECKLIST

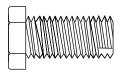
STEP 1



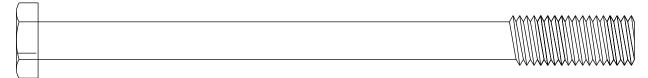
**#77 -** 3/8" x 19 x1.5T Flat Washer (6pcs)



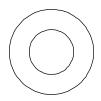
**#203 -** 3/8" x 23 x 2.0T Curved Washer (2 pcs)



#176 - 3/8"× 3/4" Hex Head Bolt (6 pcs)



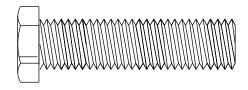
#65 - 3/8" x 135mm Hex Head Bolt (2 pcs)



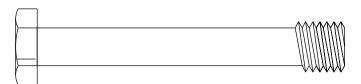
**#77 -** 3/8"x19 x1.5T Flat Washer (4 pcs)



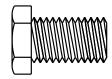
**#89 -** 3/8"×7T Nylon Nut (4 pcs)



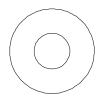
**#71 -** 3/8"×1-3/4" Hex Head Bolt (2 pcs)



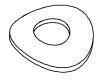
#175 - 3/8"×2-3/4" Hex Head Bolt (2 pcs)



**#68 -** 5/16" x 5/8" Hex Head Bolt (8 pcs)



**#76 -** 8 x19 x1.5T Flat Washer (6 pcs)



**#83 -** 5/16"×19×1.5T Curved Washer (2 pcs)



**#82 -** 5/16"x1.5T Split Washer (2 pcs)



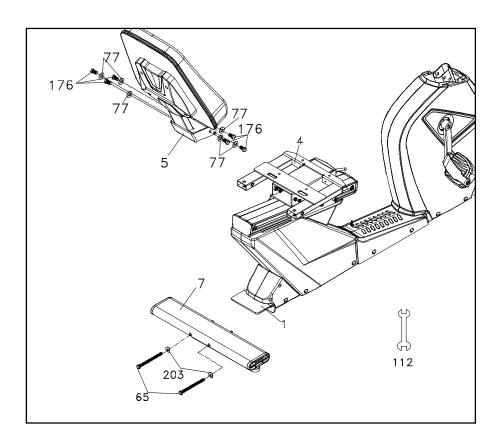
**#105 -** 4 x 16mm Sheet Metal Screw (4 pcs)



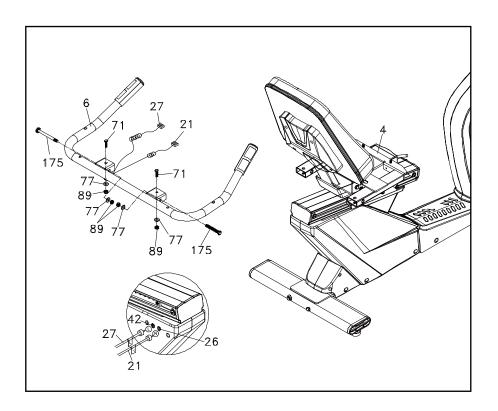
**#99 -** M5 x 12mm Phillips Head Screw (4 pcs)



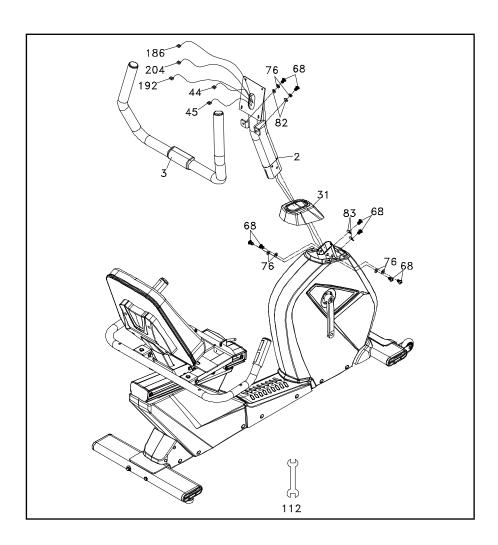
**#98** - M6 x 15mm Phillips Head Screw (4 pcs)



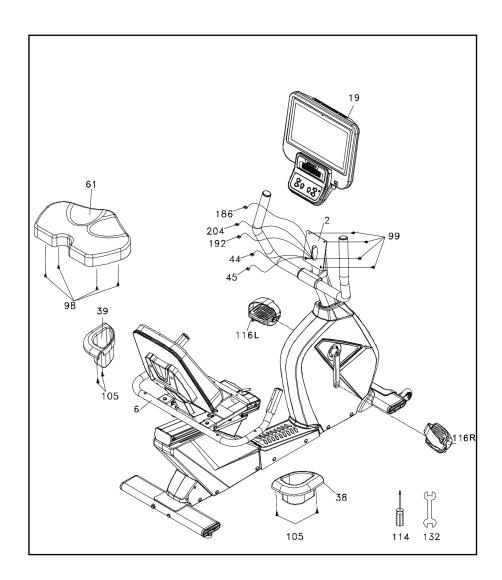
- 1. Install the Rear Stabilizer (No.7) onto the Main Frame with 2 Bolts (No.65) and 2 Washers (No.203).
- 2. Secure the Seat Back Bracket (No. 5) to the Seat Carriage (No.4) using 6 Bolts (No.176) and 6 Flat Washers (No.77).



- 1. To install the Rear Handlebar (No.6) to the Seat Carriage (No.4), use 2 Bolts (No.71), 2 Flat Washers (No.77), and 2 Nylon Nuts (No.89). From the side, secure with 2 Bolts (No.175), 2 Flat Washers (No.77), and 2 Nylon Nuts (No.89).
- 2. To connect the Handpulse with Cable Assembly-R (No.21) and the Handpulse with Cable Assembly-L (No.27) to the Handpulse Wire (No.26) and the Handpulse Wire (No.42).



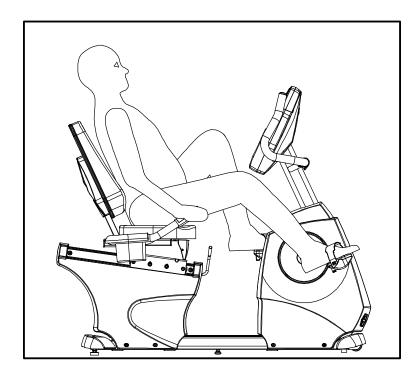
- 1. Feed the Console Mast Cover (No.31) onto the Console Mast (No.2).
- 2. Thread the Wires (No. 44, 45, 204, 192, 186) through the Console Mast (No.2).
- 3. Secure the Console Mast (No.2) to the Main Frame (No.1) using 2 Bolts (No.68) and 2 Curved Washers (No.83) from the back of the Mast. On the sides of the Mast, use 4 Bolts (No. 68) and 4 Flat Washers (No.76).
- 4. Connect the Front Handlebar (No.3) to the Console Mast (No.2) using 2 Bolts (No.68), 2 Flat Washers (No.76), and 2 Split Washers (No.82).



- 1. Secure the Seat (No.61) to the Seat Carriage (No.4) using 4 Screws (No.98) using the Philips Screwdriver (No.114).
- 2. Connect the Wires on the back of the console to their respective places: Computer Cable (No.44), Handpulse Wire (No.45), CSAFE Connecting Wire (No.204), Network Connecting Cable (No.192), HDMI Connecting Wire (No.186). Tuck excess cable into the Console Mast (No.2), being careful not to pinch the wires.
- 3. Secure the Console (No.19) to the Console Mast (No.2) using 4 Screws (No.99) using the Screwdriver (No.114).
- 4. Fasten the Drink Bottle Holders (No.39/38) to the Rear Handlebar (No.6) using 4 Screws (No.105).
- 5. Install the Pedals (No.116R/116L) onto the Crank Arms (No. 51L/51R) carefully using the Wrench (No.132) to hold the Pedal pivot, then firmly fasten the pivot clockwise.

# **Suggested Posture:**

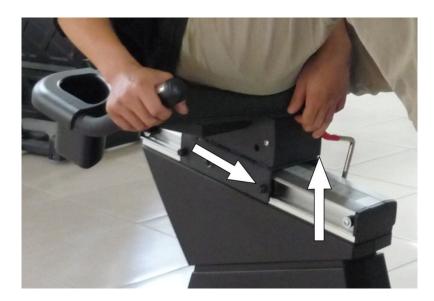
Sit straight on the saddle, grab the handles with both hands, position feet on the pedal through the pedal strap.



# **Seat Adjustment Instruction:**

# **Height Adjustment**

Pull adjusting lever upward to slide the seat to a proper position and then push down the lever to fix the position.

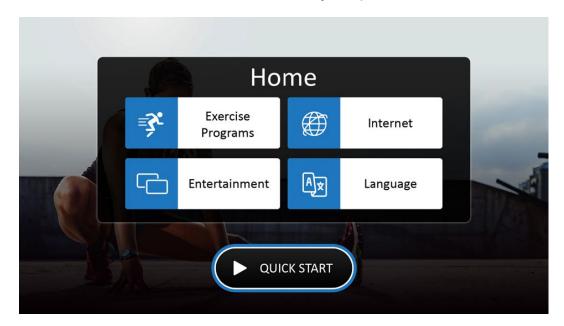


# OPERATION OF YOUR CONSOLE



# STARTING OPERATION

When the power is turned ON, the screen will show a brief loading screen and then display the Home Screen, which indicates that the machine is ready to operate.



Home Screen: Begin operation by touching the icons.



Quick operating buttons are conveniently located for basic Recumbent bike functions.

#### How to connect with Bluetooth

Click the Bluetooth icon to enter into the pairing page. The system will search for the available BT signal device around the bike. Then choose the device that you would like to connect with.



### CSAFE FEATURE

Your console is equipped with a CSAFE feature. The Power (POWER) port can be used for powering a remote-controlled audio-visual system by connecting a cable from the remote to the Power port at the back of the console. The Communication port (COMM) can be used to interact with fitness software applications.

# **FUNCTIONS OF THIS RECUMBENT BIKE**

The Touchscreen is used for operating all functions. You can directly touch any button on the screen or through the quick buttons on the bottom to control functions. On the lower portion of the console, there is the Start button to begin the workout, the Stop button to pause/stop programs, Level button to change workload.

# **QUICK START**

This is the quickest way to start a workout. After the console powers up, you just press the Start button to begin. This will initiate the Quick Start mode. In Quick Start, the Time will count up from zero, all workout data will start to accrue, and the workload may be adjusted manually by pressing on the screen or the Up and Down buttons on the lower control panel.

# **HEART RATE FEATURE**

The Pulse (Heart Rate) on the screen shows the current value of the heartbeats per minute. You must use both left and right stainless steel sensors to pick up your pulse. Pulse values are displayed anytime the computer is receiving a signal from the hand pulse sensors. You may use the hand pulse sensors while in Heart Rate Control. The CR800ENT will also pick up wireless heart rate transmitters that are Polar and Bluetooth compatible.

## **TOUCHSCREEN OPERATION**

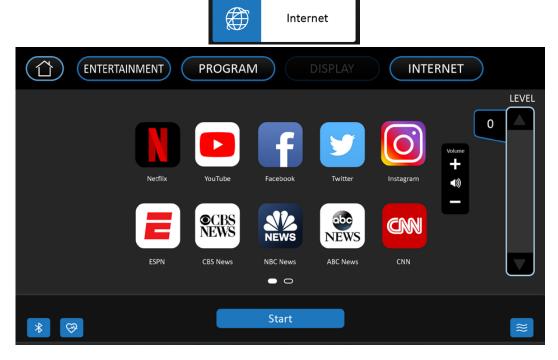
#### LANGUAGE

There are 13 languages to choose from. Select your desired language by tapping it on the screen. Once selected, the system will return to the Home Screen with your new language being used. To return to the Home Screen without selecting a new language, press the Home button in the upper left corner of the screen.



# INTERNET

The Internet section offers various streaming, news, and social media options. The machine must be connected to the internet in order for the apps to work. Simply click on the app of your choice to connect. Follow any on-screen prompts to continue login or other authorizations as needed.



## **ENTERTAINMENT OPTIONS**

From the Home Screen, tap Entertainment to go to the entertainment menu. You will be given the options of Screen Mirroring and TV mode interface.

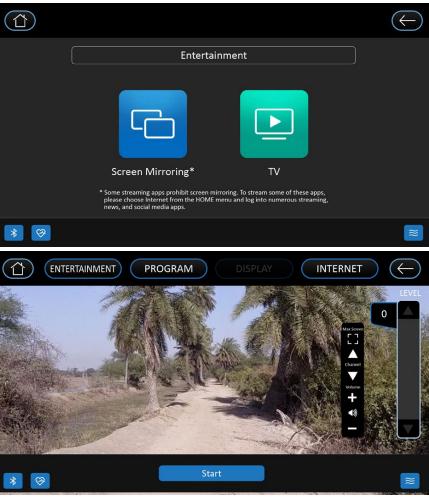
#### TV Mode

When properly connected to the Set-Top Box (STP) via the HDMI port and TV mode selected, you can enjoy TV programs after selecting TV mode from the Entertainment screen on your recumbent bike.

#### Once TV mode has begun:

- Use the ▲/▼ buttons on the right-hand side of the touchscreen to switch between channels.
- Use the +/- volume buttons on the right-hand side of the touchscreen to control the sound volume level.
- Tap the " [ ] " button to display the media in full-screen mode. To resume to normal screen size, simply tap the " [ ] " button again to minimize the screen view back to normal size.
- Use the on-screen or physical Resistance controls to make updates to your workout while in TV mode.
- Use the on-screen or physical Level controls to make updates to your workout while in TV mode.
- To Pause, press the Stop button once.
- To end your workout, press the Stop button twice to show the workout summary. Pressing the Stop button a third time will return you to the Home Screen.





## SCREEN MIRRORING

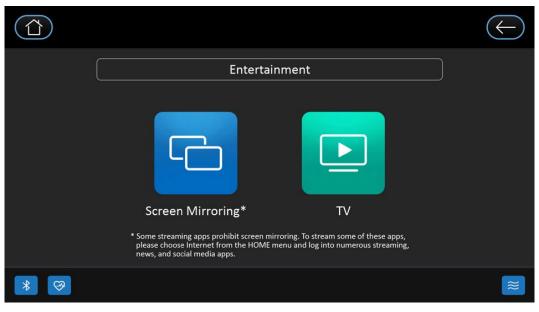
When Screen Mirroring is selected from the Entertainment screen, you may begin pairing your device.

#### iOS

Screen Mirroring displays your phone's screen on the touchscreen of the Recumbent bike. Please note that your device must be running iOS 8 or higher.

- 1. Connect your phone or tablet to the facility's WiFi.
- 2. Find and select the Screen Mirroring button on your phone or tablet by swiping up from your phone's main screen or by swiping down from the top left corner of the screen if you have a newer iOS installed.

Note: When using an iOS device for Screen Mirroring, your Bluetooth headphones must be connected to the console.





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### **SCREEN MIRRORING**

#### **Android**

- 1. Connect your phone or tablet to the facility's WiFi.
- 2. Scan the QR code or search for "Spirit Mirroring" in the Google Play store on your phone or tablet.
- 3. Download the app.
- 4. Open the Spirit Mirroring App and select the device name. Then, click Start Mirroring to complete the screen mirroring process.
  - Note: When using an Android device for Screen Mirroring, your Bluetooth headphones must be connected to your device.



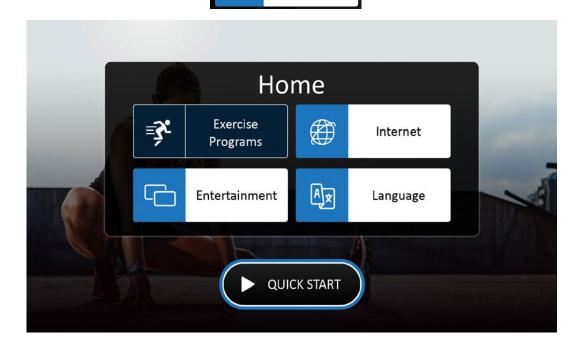


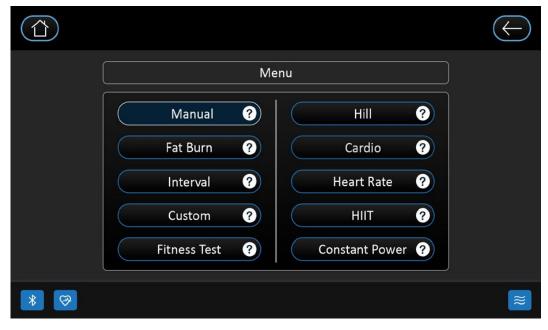
# **ENTERING A PROGRAM & CHANGING SETTINGS**

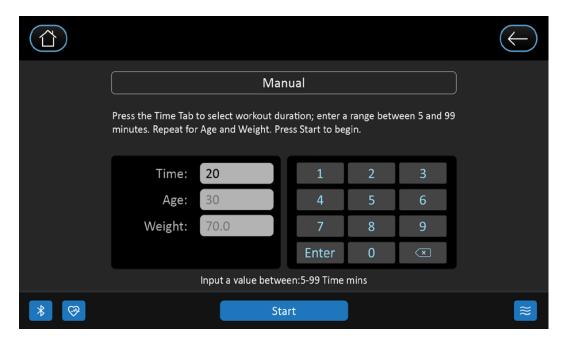
When the Exercise Programs button is selected from the Home Screen, the screen displays a menu of the different programs available: Manual, Hill, Fat Burn, Cardio, HIIT, Interval, Heart Rate, Custom, Constant Power, and Fitness Test. To select and start a preset program:

- Select a program by tapping it on the screen, then press Enter to begin. Customize the
  program on the following screens by entering your data, or press the Start button to begin the
  program using the default settings.
- 2. Press the Start button to begin your workout, or press the Stop button to return to the previous screen.

Exercise Programs









#### **EXERCISE PROGRAM**

#### CHANGING THE WORKOUT DISPLAY

During your workout, you may change the display based on the view that works best for your needs. Once your workout begins, you will see 3 preset views available at the bottom of the screen: Simple, Track, and Dashboard.

#### **SIMPLE**

To switch the display to Simple view, simply tap the Simple button at the bottom of the screen. This view shows a muscle activation profile for the current workout, an overview of the Resistance level profile, as well as the elapsed Distance, Calories/Hr, Total Time, Heart Rate, and RPM, as well as other exercise data.



#### **TRACK**

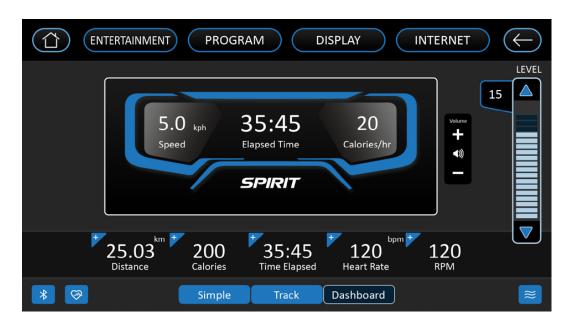
To switch the display to Track view, simply tap the Track button at the bottom of the screen. This view shows a virtual track that corresponds with the current workout, as well as the elapsed Distance, number of Laps, Calories, Total Time, Heart Rate, and RPM, as well as other exercise data.



# **EXERCISE PROGRAM**

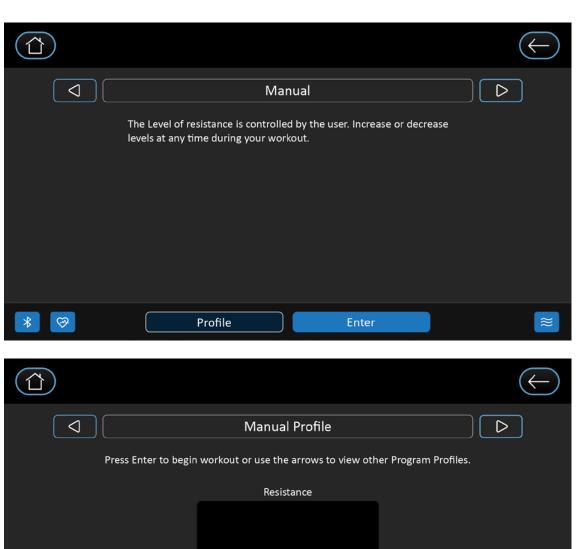
#### **DASHBOARD**

To switch the display to Dashboard view, simply tap the Dashboard button at the bottom of the screen. This view shows a virtual dashboard mimics a typical Recumbent bike display with information that corresponds with the current workout. Metrics such as elapsed Distance, Calories/Hr, Calories, Total Time, Heart Rate, and RPM are displayed as well as other exercise data.



# **MANUAL**

The level of resistance is controlled by the user. Increase or decrease levels at any time during your workout.

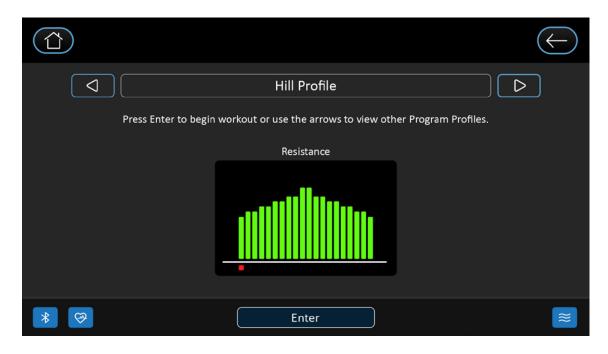


.......

Enter

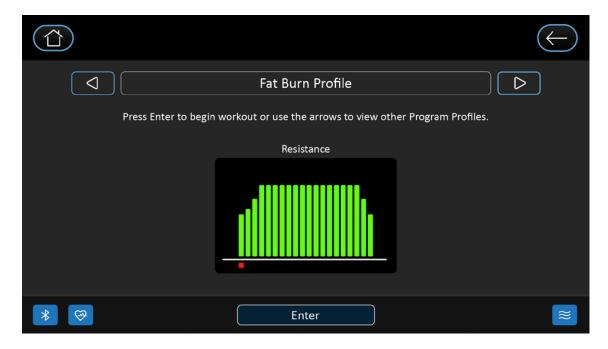
## HILL

This program follows a triangle or pyramid type of gradual progression from approximately 10% of maximum effort (the level that you chose before starting this program) up to a maximum effort which lasts for 10% of the total workout time, then a gradual regression of resistance back to approximately 10% of maximum effort.



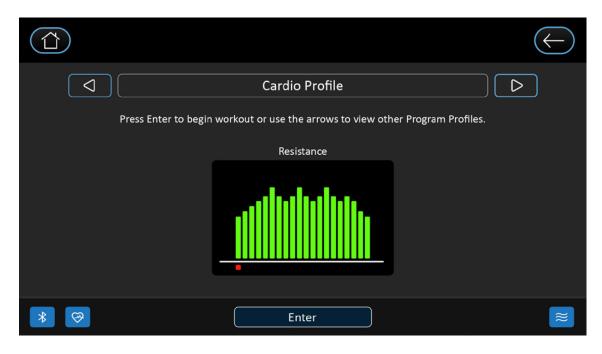
# **FAT BURN**

This program follows a quick progression up to the maximum resistance level (default or user input level) that is sustained for 2/3 of the workout. This program will challenge your ability to sustain your energy output for an extended period of time.



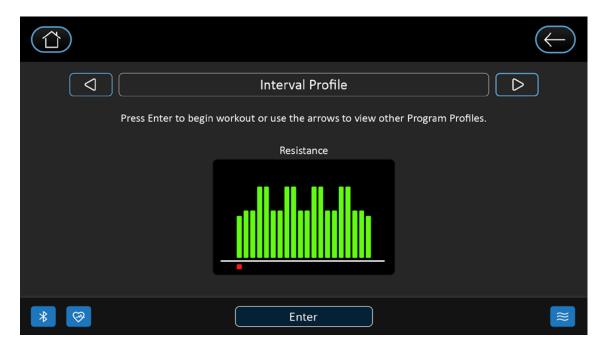
#### **CARDIO**

This program presents a quick progression up to near maximum resistance level (default or user input level). It has slight fluctuations up and down to allow your heart rate to elevate and then recover repeatedly before beginning a quick cool down. This will build up your heart muscle and increase blood flow and lung capacity.



# **INTERVAL**

This program takes you through high levels of intensity, followed by recovery periods of low intensity. This program utilizes and develops your fast-twitch muscle fibres, which are used when performing tasks that are intense and short in duration. These deplete your oxygen level and spike your heart rate, followed by periods of recovery and heart rate drop to replenish oxygen. Your cardiovascular system gets programmed to use oxygen more efficiently.



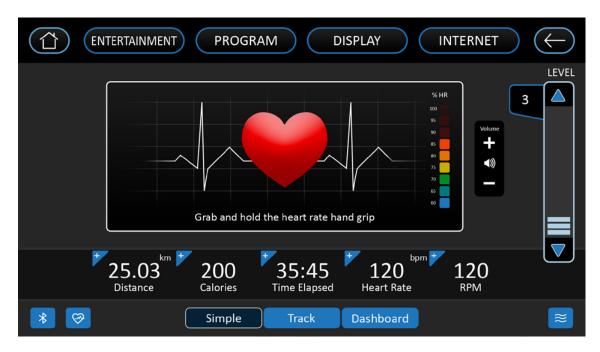
### **CONSTANT POWER**

A watts program is a controllable constant power whose level adjusts when the speed is changed. Choose either faster pedalling at a lower resistance level or slower pedalling at a higher resistance level.



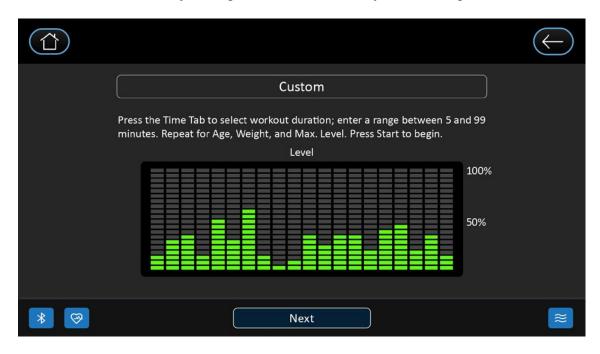
### **HEART RATE**

The default value is 65% of your projected rate maximum. You have the option of changing your target heart rate. The machine will attempt to keep you within five beats of your target heart rate.



# **CUSTOM**

You will create the desired resistance levels for each of the 20 segments of the program using the keyboard on the screen. You may change these levels at any time during the workout.

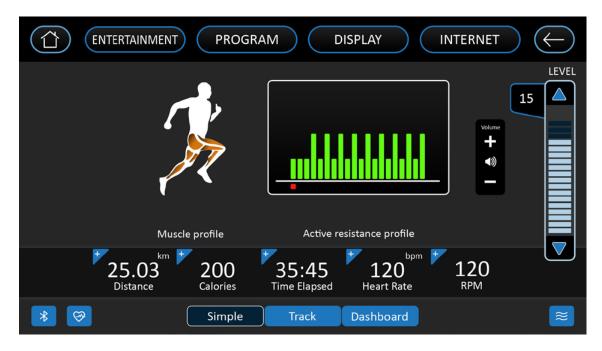


# TO BEGIN A CUSTOM PROGRAM:

- 1. Select the Custom program, then press the Enter key to begin customizing the program with your personal data, or just press the Start key to begin the program with the default settings.
- 2. The window will show the corresponding level profile, use the on-screen interface to achieve desired workout profiles. Once complete, press Next to save and continue.
- 3. The following screens will ask you to enter the desired Time, the user Age, and Weight. You may use the default values or adjust as needed. Press Start once complete to begin your new custom workout program!

## HIIT PROGRAM

The HIIT, or High-Intensity Interval Training program, takes advantage of the latest trend in fitness. During the program, you will perform short bursts of high-intensity sprinting followed by short rest periods. HIIT is a fully customizable interval training program. You can enter the number of intervals, time of each interval Sprint and Rest periods and the work intensity of the levels.

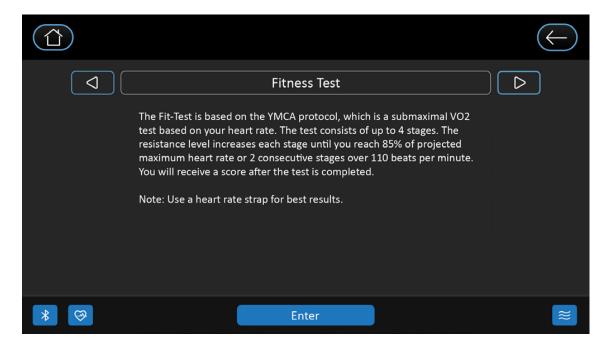


- 1. Select a program, then press the Enter key to begin customizing the program with your personal data, and you are asked for and the number of intervals you want to do. The default is 10, and the range available is 3 to 15. One interval equals 1 Sprint and 1 Rest segment.
- Next is entering the Interval time, Sprint time and Rest time. You may select the Sprint time or Rest time from 20 to 90 seconds. After the interval time is set, set the intensity training to Sprint level and Rest level. This is the resistance level you will experience during the HIIT program workout.
- 3. You may now press Start to begin the HIIT program after adjusting the level. The program starts with a 3-minute warm-up period with the resistance level set to 50% of the sprint level selected previously. You can manually adjust the resistance level during warm-up if you wish.

## **FITNESS TEST**

The VO2 program is based on the YMCA protocol and is a sub-maximal test that uses pre-determined, fixed work levels that are based on your heart rate readings as the test progresses. The test will take anywhere between 6 to 15 minutes to complete, depending on your level of fitness. The test ends when your heart rate reaches 85% of maximum at any time during the test, or your heart rate is between 110 bpm and 85% at the end of two consecutive stages. At the end of the test, a VO2max score will be given. VO2max stands for Volume of Oxygen uptake, which is a measurement of how much oxygen you need to perform a known amount of work. The YMCA protocol uses two to four 3 minute stages of continuous exercise (see charts below). You will be asked to choose either, Male or Female at the beginning of the test.

This choice determines which test parameters will be used during the test, as shown in the charts below.



Workload chart for male or very fit female:

1st Stage				300 kgm/min					
HR		< 90			90 - 105			> 105	
2nd Stage		900 kgm/min			750 kgm/min			600 kgm/min	
HR	HR <120	HR 120-135	HR >135	HR <120	HR 120-135	HR >135	HR <120	HR 120-135	HR >135
3rd stage	1350 kgm/min	1200 kgm/min	1050 kgm/min	1200 kgm/min	1050 kgm/min	900 kgm/min	1050 kgm/min	900 kgm/min	750 kgm/min

Workload chart for female or de-conditioned male

1st Stage			150 kgm/min	
Heart Rate	HR<80	HR: 80-90	HR: 90-100	HR>100
2nd Stage	750 kgm/min	600 kgm/min	450 kgm/min	300 kgm/min
3rd Stage	900 kgm/min	750 kgm/min	600 kgm/min	450 kgm/min
4th Stage (if needed)	1050 kgm/min	900 kgm/min	700 kgm/min	600 kgm/min

# **Before the Test:**

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

# **During the Test**

- The console must be receiving a steady heart rate for the test to begin. You may use the hand pulse sensors or wear a heart rate chest strap transmitter.
- You must maintain a steady 50 rpm pedal speed. If your pedal speed drops below 48 rpm or goes above 52 rpm, the console will emit a steady beeping sound until you are within this range.
- You may scroll through the various data readings by pressing the Display button under the Message Window.
- The Message Window will always display your pedal speed on the right side to help you maintain 50 rpm.
- The data shown during the test is:
  - 1. Work in KGM is actually an abbreviated form of kg-m/min. which is a work measurement of kilogram-force meter/minute
  - 2. Work in Watts (1 watt is equal to 6.11829727787 kg-m/min.)
  - 3. HR is your actual heart rate; TGT is the target heart rate to reach to end of the test.
  - 4. Time is the total elapsed time of the test.

## **After The Test:**

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

# What your score means:

VO2max Chart for males and very fit females

	18-25	26-35	36-45	46-55	56-65	65+
	years old	years old	years old	years old	years old	years old
			_,			
excellent	>60	>56	>51	>45	>41	>37
good	52-60	49-56	43-51	39-45	36-41	33-37
above	47.54	40.40	00.40	05.00	00.05	00.00
average	47-51	43-48	39-42	35-38	32-35	29-32
average	42-46	40-42	35-38	32-35	30-31	26-28
below						
average	37-41	35-39	31-34	29-31	26-29	22-25
poor	30-36	30-34	26-30	25-28	22-25	20-21
very poor	<30	<30	<26	<25	<22	<20

**VO2max Chart for females and de-conditioned males** 

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

# HEART RATE PROGRAMS

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

To determine the benefit range in which you wish to train, you must first determine your Maximum Heart Rate. This can be accomplished by using the following formula: 220 minus your age. This will give you the Maximum heart rate (MHR) for someone of your age. To determine the effective heart rate range for specific goals you simply calculate a percentage your MHR. Your Heart rate training

zone is 50% to 90% of your maximum heart rate. 65% of your MHR is the zone that burns fat while 85% is for strengthening the cardio vascular system. This 65% to 85% is the zone to stay in for maximum benefit.

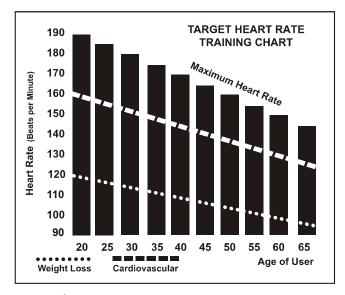
For someone who is 40 years old their target heart rate zone is calculated:

220 - 40 = 180 (maximum heart rate)

180 x .65 = 117 beats per minute (65% of maximum)

 $180 \times .85 = 153$  beats per minute (85% of maximum)

So for a 40 year old the training zone would be 117 to 153 beats per minute.



If you enter your age during programming the console will perform this calculation automatically. Entering your age is used for the Heart Rate control programs. After calculating your Maximum Heart Rate you can decide upon which goal you would like to pursue.

The two most popular reasons for, or goals, of exercise are cardiovascular fitness (training for the heart and lungs) and weight control. The black columns on the chart above represent the Maximum Heart Rate for a person whose age is listed at the bottom of each column. The training heart rate, for either cardiovascular fitness or weight loss, is represented by two different lines that cut diagonally through the chart. A definition of the lines' goal is in the bottom left-hand corner of the chart. If your goal is cardiovascular fitness or if it is weight loss, it can be achieved by training at 85% or 65%, respectively, of your Maximum Heart Rate on a schedule approved by your physician. Consult your physician before participating in any exercise program.

With all Heart Rate Control bike equipment, you may use the heart rate monitor feature without using the Heart Rate Control program. However, when using the heart rate monitor feature in conjunction with the Heart Rate programs, the machine will automatically adjust speed or incline to maintain the desired heart rate.

# **CAUTION!**

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

# RATE OF PERCEIVED EXERTION

Heart rate is important but listening to your body also has a lot of advantages. There are more variables involved in how hard you should work out than just heart rate. Your stress level, physical health, emotional health, temperature, humidity, the time of day, the last time you ate and what you ate all contribute to the intensity at which you should workout. If you listen to your body, it will tell you all of these things.

The rate of perceived exertion (RPE), also known as the Borg scale, was developed by Swedish physiologist G.A.V. Borg. This scale rates exercise intensity from 6 to 20 depending upon how you feel or the perception of your effort.

The scale is as follows:

Rating Perception of Effort

6 Minimal

7 Very, very light

8 Very, very light +

9 Very light

10 Very light +

11 Fairly light

12 Comfortable

13 Somewhat hard

14 Somewhat hard +

15 Hard

16 Hard +

17 Very hard

18 Very hard +

19 Very, very hard

20 Maximal

You can get an approximate heart rate level for each rating by simply adding a zero to each rating. For example, a rating of 12 will result in an approximate heart rate of 120 beats per minute. Your RPE will vary depending on the factors discussed earlier. That is the major benefit of this type of training. If your body is strong and rested, you will feel strong, and your pace will feel easier. When your body is in this condition, you are able to train harder, and the RPE will support this. If you are feeling tired and sluggish, it is because your body needs a break. In this condition, your pace will feel harder. Again, this will show up in your RPE, and you will train at the proper level for that day.

# USING HEART RATE TRANSMITTER (Optional)

How to wear your wireless chest strap transmitter:

- 1. Attach the transmitter to the elastic strap using the locking parts.
- 2. Adjust the strap as tightly as possible as long as the strap is not too tight to remain comfortable.
- 3. Position the transmitter centred in the middle of your body facing away from your chest (some people must position the transmitter slightly left of center). Attach the final end of the elastic strap by inserting the round end and, using the locking parts, secure the transmitter and strap around your chest.





- 4. Position the transmitter immediately below the pectoral muscles.
- 5. Sweat is the best conductor to measure very minute heartbeat electrical signals. However, plain water can also be used to pre-wet the electrodes (2 black square areas on the reverse side of the belt and either side of the transmitter). It's also recommended that you wear the transmitter strap a few minutes before your workout. Some users, because of body chemistry, have a more difficult time achieving a strong, steady signal at the beginning. After "warming up," this problem lessens. As noted, wearing clothing over the transmitter/strap doesn't affect performance.
- 6. Your workout must be within range the distance between transmitter/receiver to achieve a strong, steady signal. The length of the range may vary somewhat but generally stay close enough to the console to maintain good, strong, reliable readings. Wearing the transmitter immediately against bare skin assures you of proper operation. If you wish, you may wear the transmitter over a shirt. To do so, moisten the areas of the shirt that the electrodes will rest upon.

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

# **ERRATIC OPERATION**

Caution! Do not use this bike for Heart Rate programs unless a steady, solid Actual Heart Rate value is being displayed. High, wild, random numbers being displayed indicate a problem. Areas to look for interference which may cause erratic heart rate:

- 1. Bike is not properly grounded.
- 2.. Microwave ovens, TV's, small appliances, etc.
- 3. Fluorescent lights.
- 4. Some household security systems.
- Electric fence for a pet.
- 6. Some people have problems with the transmitter picking up a signal from their skin. If you have problems try wearing the transmitter upside down.
- 7. The antenna that picks up your heart rate is very sensitive. If there is an outside noise source, turning the whole machine 90 degrees may de-tune the interference.
- 8. Another Individual wearing a transmitter within 3' of your machine's console.

If you continue to experience problems contact your dealer.

# GENERAL MAINTENANCE

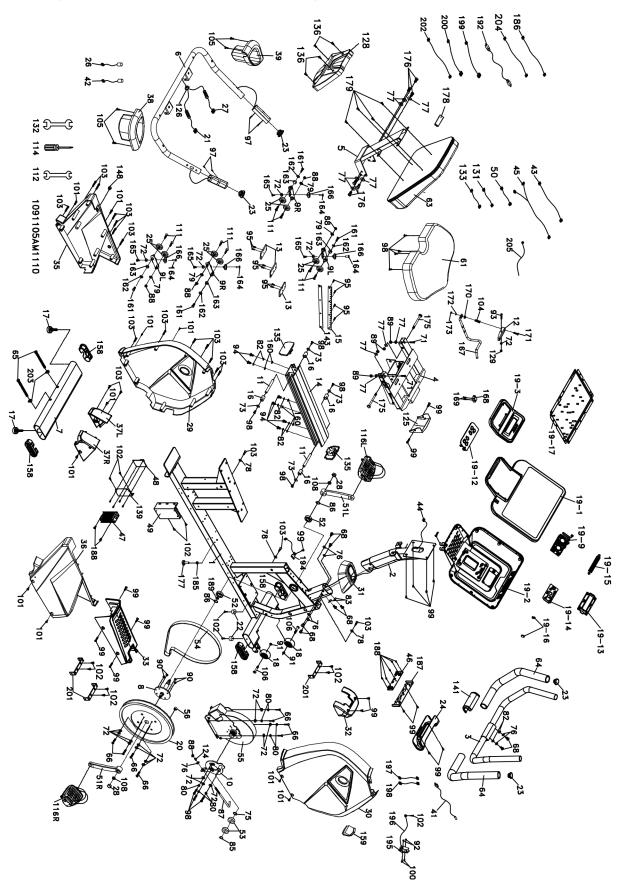
- 1. Wipe down all areas in the sweat path with a damp cloth after each workout.
- 2. If a squeak, thump, clicking, or rough feeling develops, the main cause is most likely one of two reasons:
  - a. The hardware was not sufficiently tightened during assembly. All bolts that were installed during assembly need to be tightened as much as possible. It may be necessary to use a larger wrench than the one provided if you cannot tighten the bolts sufficiently. I cannot stress this point enough; 90% of calls to the service department for noise issues can be traced to loose hardware.
  - b. The crank arm nut needs to be retightened. If squeaks or other noises persist, check that the unit is properly levelled. There are 2 levelling pads on the bottom of the rear stabilizer. Use a 14mm wrench (or an adjustable wrench) to adjust the levelers.

# WARNING

The effect that the safety level of the equipment can be maintained only if it is examined regularly for damage and wear.

- i. Replace defective components immediately and/or keep the equipment out of use until repair.
- ii. The components which are most susceptible to wear: Belt \ PU wheel \ Bearing \ Idler.

# EXPLODED VIEW DIAGRAM



# PARTS LIST

KEY NO.	PART NO.	DESCRIPTION	Q'TY
1	CC010107-S13	Main Frame	1
2	CC020089-S13	Console Mast	1
3	RCC030099-S13	Front Handlebar	1
4	RCC040012-S13	Seat Carriage	1
5	RCC040013-S13	Seat Back Bracket	1
6	RCC030012-S13	Rear Handlebar	1
7	CC050038-S13	Rear Stabilizer	1
8	RC140011-YC-02	Crank Axle	1
9L	CC060017-Z3	Seat Wheel Adjustment Plate (L)	2
9R	CC060018-Z3	Seat Wheel Adjustment Plate (R)	2
10	RB140033B-Q2	Idler Wheel Assembly	1
11	C050001-Z1	Seat Stop Axle	2
12	B112200-Z3	Seat Position Latch	1
13	B031800-Z3	Backing Plate	3
14	RM020002B-Z0	Aluminum Track	1
15	B135300-Z3	Rack	1
16	P060148-A1	Spacer for Stopper Axle	4
17	N270027	Rubber Foot Assembly	2
18	P050021-A1	Transportation Wheel	2
19	ZYB037-01	Console Assembly	1
20	PP060090-A1-B	Drive Pulley	1
21	F090206	950m/m_Handpulse W/Cable Assembly(R)	1
22	P060252-A1	Ø25 × Ø25 × 15T Rubber Foot Pad	2
23	P060253-A1	Ø32 (1.8T) Button Head Plug	4
24	P190054-A1	TVC Cover	1
25	P050016-A1	Seat Track Wheel	8
26	E030042-01	300m/m Handpulse Wire	1
27	F090205	750m/m Handpulse W/Cable Assembly(L)	1
28	P280033-A1	Crank Arm End Cap	2
29	P100083-A1	Front Shroud (L)	1
30	P100084A-A1	Front Shroud (R)	1
31	P100085-A1	Console Mast Cover	1
32	P190052-A1	Front Stabilizer Cover	1
33	P190055-A1	Beam Cover	1
35	RP100073-A1-02	Rear Shroud (L)	1
36	RP100074-A1-02	Rear Shroud (R)	1
37L	P190056-A1	Rear Stabilizer Cover (L)	1
37R	P190057-A1	Rear Stabilizer Cover (R)	1
38	PP060145-A1	Drink Bottle Holder (R)	1
39	PP060146-A1	Drink Bottle Holder (L)	1
41	E060001	Power Cord	1
42	E030070-01	300m/m Handpulse Wire	1
43	E011202-01	850m/m Wire Brake Coil Harness (Red)	1
44	E022203	2300m/m Computer Cable	1
45	E030504	2200m/m Handpulse Wire	1

KEY NO.	PART NO. DESCRIPTION						
<b>46</b> D020629		Board	1				
47	D024802	Power Adaptor	1				
48	D020627	Control Power Board	1				
49	D020628	EMS Controller	1				
50	E011510	150m/m Connecting Wire,Power Cord	1				
51L	K030001-W1	Crank Arm(L)	1				
51R	K030002-W1	Crank Arm (R)	1				
52	K056004C	6004 Bearing	2				
53	K056203-A1	6203 Bearing	2				
54	N010003	Drive Belt	1				
55	K500046	Induction Brake	1				
56	N040002	Magnet(Ø15×7T)	1				
61	N120007	Seat	1				
63	N120008	Seat Back	1				
64	L120035-A1	Handgrip Foam	2				
65	J011024L-Z1	3/8" × 135mm Hex Head Bolt (30mm)	2				
66	J010002-ZH	1/4" × UNC20 × 3/4" Hex Head Bolt	8				
68	J010503-Z1	5/16" × UNC18 × 5/8" Hex Head Bolt	8				
<u>71</u>	J011007-Z1	3/8" × 1-3/4" Hex Head Bolt	2				
72	J210016-Z1	Ø1/4" × 13 × 1.0T Flat Washer	20				
73	J210010 Z1	Ø1/4" × 19 × 1.5T Flat Washer	4				
75 75	J210017-Z1	Ø17 × Ø23.5 × 1.0T Flat Washer	1				
76	J210011-21 J210075-Z1	Ø8 × Ø19 × 1.5T Flat Washer	7				
77	J210073-Z1	Ø3/8" × Ø19 × 1.5T Flat Washer	10				
	J210003-21 J210020-Z1	Ø3/16" × Ø15 × 1.5T Flat Washer	3				
	J230001-Z1	_					
79	J260001-21 J260006-Z1	Ø8 × Ø18 × 3T_Knurled Lock Washer	7				
80	J260006-21 J260007-Z1	Ø1/4"_Split Washer	8				
82		Ø5/16" × 1.5T_Split Washer					
83	J220003-Z1 J310002-Z4	Ø5/16" × 19 × 1.5T_Curved Washer	2				
85		Ø17_C Ring	1				
86	J310004-Z4	Ø20_C Ring	2				
87	J083012K-Z1	M8 × 170m/m_J Bolt	1				
88	J139261-Z4	M8 × 7T_Nylon Nut-Blacking	5				
89	J139011-Z1	3/8" × 7T_Nylon Nut	4				
90	J139461-Z1	1/4" × 8T_Nylon Nut	4				
91	J139061-Z1	5/16" × 6T_Nylon Nut	2				
92	J139411-Z1	M4 × P0.7 × 5T_Nylon Nut	2				
93	J032513I-ZQ	M6 × 38m/m_Socket Head Cap Bolt (Alloy Steel)	1				
94	J010502-Y4	5/16" × UNC18 × 3/4"_Hex Head Bolt	6				
95	J552002-Z1	M5 × 12m/m_Flat Head Socket Screw	10				
97	J517007-Z1	3 × 20m/m_Tapping Screw	4				
98	J092503-Z1	M6 × 15m/m_Phillips Head Screw	11				
99	J092002-Z1	M5 × 12m/m_Phillips Head Screw	17				
100	J094502-Z1	M4 × 12m/m_Phillips Head Screw	2				
101	J367105-Z1	Ø5 × 16L_Tapping Screw	10				
102	J367114-Z1	5 × 19m/m_Tapping Screw	13				
103	J396805-Z1	3.5 × 16m/m_Sheet Metal Screw	19				
104	K010006	Ø13.5 × 30m/m_Spring	1				

KEY NO.	PART NO. DESCRIPTION						
105	J386905-Z1	386905-Z1 4 × 16m/m Sheet Metal Screw					
106	J020507AB-Z1	5/16" × UNC18 × 1-3/4"" Button Head Socket Bolt	2				
108	J160003B-Z4	M10 × P1.25 × 10T Nut	2				
111	J602001-Z1	M5 × P0.8 × 10L_Flat Phillips Head Screw	8				
112	J330005-ZA	12/14m/m Wrench	1				
114	J330008-Z1	Phillips Head Screwdriver	1				
116R	N150052	Pedal R					
116L	N150052	Pedal L	1				
124	C080008-Z1	Ø11.9 × Ø8.5 × 15m/m Rod End Sleeve	1				
125	P060222-A1	Seat Carriage Cover	1				
126	P040042-A1	HGP Wire Grommet	1				
128	P190021-A1	Seat Back Cover	1				
129	J139601-Z1	M6 × 6T Nylon Nut	1				
131	E010331-01	150m/m_Connecting Wire (Black)	1				
132	J330010-ZA	14/15m/m Wrench	1				
133	E010330-01	150m/m Connecting Wire (White)	1				
135	P040032-A1	Aluminum Axle End Cap	2				
136	J092003-Z1	M5 × 15m/m Phillips Head Screw	4				
139	B060105-Z1	Controller Back Plate	1				
141	PP060780-A1	Handlebar Cover	1				
143	B020003-Z3	Seat Track Fixing Plate	1				
148	P280004-A1	Block	1				
158	PP040224-A1	End Cap	4				
159	P270031-A1	Electronic Module	1				
160	J210032-Z1	Ø5/16" × 16 × 1.5T Flat Washer	6				
161	J602501-Y2	M6 × 10m/m_Flat Phillips Head Screw	4				
162	J210023-Z4	Ø1/4" × Ø16 × 1.0T Flat Washer	4				
163	C070095-Z4	Sleeve	4				
164	J160007-Z4	M6 × 19L Nut	4				
165	J022501-Z4	M6 × 10m/m_Button Head Socket Bolt	4				
166	P050027-A1	PU Wheel	4				
167	C120100-Z1	Seat Front/Aft Adjustment Lever	1				
168	P270006-A1	Lever Anchor	1				
169	J552005-Z1	M5 × 25m/m Flat Head Socket Screw	2				
170	PP060409	Ø15 × Ø6 × 4T Nylon Washer	1				
170	J032009C-Y3	M5 × P0.8 × 45L Socket Head Cap Bolt	1				
171	J210004-Z1	Ø5 × Ø10 × 1.0T Flat Washer	1				
172	J139161-Z1	M5 × 5T Nylon Nut	1				
175	J011011P-Z1	3/8" × 2-3/4" Hex Head Bolt (12mm)	2				
175	J631002-Z1		6				
176	P270008-A1	3/8" × UNC16 × 3/4"_Hex Head Bolt	1				
		Rubber Foot Pad					
178	P040074-A1	Square End Cap	1				
179	J023003-Z1	M8 × 15m/m_Button Head Socket Bolt	4				
185	J129022-Z1	3/8" × 4T_Nut	1				
186	E070923-01	1600m/m_HDMI Connecting Wire	1				
187	B110034-Z3	Transfer board	1 7				
188 189	J354001-Z1 P060629-A1	M3 × 10m/m_Phillips Head Screw  Rubber Pad	7				

KEY NO.	PART NO.	DESCRIPTION	Q'TY
192	F092012	Network Connecting Cable	1
194	F030434	1350m/m_Sensor W/Cable	1
195	F030071	AC Electronic Module	1
196	E040007-01	200m/m_Ground Wire	1
197	E010083	80m/m_Connecting Wire (White)	1
198	E010084	80m/m_Connecting Wire (Black)	1
199	E010465	1500m/m_Connecting Wire (Black)	1
200	E010464	1500m/m_Connecting Wire (White)	1
201	B100123-S13	Chain Cover Attaching Plate	3
202	E022606	300m/m_Computer Cable	1
203	J220004-Z1	Ø3/8" × 23 × 2.0T_Curved Washer	2
204	E070065	1400m/m_CSAFE Connecting Wire	1
205	E040059	300m/m_Ground Wire	1

# TRAINING GUIDELINES

# **EXERCISE**

Exercise is one of the most important factors in the overall health of an individual. Listed among its benefits are:

- Increased capacity for physical work (strength endurance)
- · Increased cardiovascular (heart and arteries/veins) and respiratory efficiency
- · Decreased risk of coronary heart disease
- · Changes in body metabolism, e.g. losing weight
- · Delaying the physiological effects of age
- · Physiological effects, e.g. reduction in stress, increase in self-confidence, etc.

# BASIC COMPONENTS OF PHYSICAL FITNESS

There are four all-encompassing components of physical fitness, and we need to briefly define each and clarify its role.

**Strength** is the capacity of a muscle to exert a force against resistance. Strength contributes to power and speed and is of great importance to a majority of sportspeople.

**Muscular Endurance** is the capacity to exert a force repeatedly over a period of time, e.g. it is the capacity of your legs to carry you 10 Km without stopping.

**Flexibility** is the range of motion about a joint. Improving flexibility involves the stretching of muscles and tendons to maintain or increase suppleness and provides increased resistance to muscle injury or soreness.

**Cardio-Respiratory Endurance** is an essential component of physical fitness. It is the efficient functioning of the heart and lungs

### **AEROBIC FITNESS**

The largest amount of oxygen that you can use per minute during exercise is called your maximum oxygen uptake (MVo2). This is often referred to as your aerobic capacity.

The effort that you can exert over a prolonged period of time is limited by your ability to deliver oxygen to the working muscles. Regular vigorous exercise produces a training effect that can increase your aerobic capacity by as much as 20 to 30%. An increased MVO2 indicates an increased ability of the heart to pump blood, of the lungs to ventilate oxygen and of the muscles to take up oxygen.

#### **ANAEROBIC TRAINING**

This means "without oxygen" and is the output of energy when the oxygen supply is insufficient to meet the body's long-term energy demands. (For example, 100-meter sprint).

## The Training Threshold

This is the minimum level of exercise which is required to produce significant improvements in any physical fitness parameter.

#### **Progression**

As your become fitter, a higher intensity of exercise is required to create an overload and therefore provide continued improvement

#### Overload

This is where you exercise at a level above that which can be carried out comfortably. The intensity, duration and frequency of exercise should be above the training threshold and should be gradually increased as the body adapts to the increasing demands. As your fitness level improves, so the training threshold should be raised.

Working through your program and gradually increasing the overload factor is important.

## Specificity

Different forms of exercise produce different results. The type of exercise that is carried out is specific both to the muscle groups being used and to the energy source involved. There is little transfer of the effects of exercise, i.e. from strength training to cardiovascular fitness.

That is why it is important to have an exercise program tailored to your specific needs.

## Reversibility

If you stop exercising or do not do your program often enough, you will lose the benefits you have gained. Regular workouts are the key to success.

# **WARM-UP**

Every exercise program should start with a warm-up where the body is prepared for the effort to come. It should be gentle and preferably use the muscles to be involved later.

Stretching should be included in both your warm-up and cool-down and should be performed after 3-5 minutes of low-intensity aerobic activity or callisthenic type exercise.

#### Warm Down or Cool Down

This involves a gradual decrease in the intensity of the exercise session. Following exercise, a large supply of blood remains in the working muscles. If it is not returned promptly o the central circulation, pooling of blood may occur in the muscles

#### **Heart Rate**

As you exercise, so the rate at which your heartbeat also increases. This is often used as a measure of the required intensity of exercise. You need to exercise hard enough to condition your circulatory system and increase your pulse rate, but not enough to strain your heart.

Your initial level of fitness is important in developing an exercise program for you. If you are starting off, you can get a good training effect with a heart rate of 110-120 beats per minute (BPM). If you are fitter, you will need a higher threshold of stimulation.

To begin with, you should exercise at a level that elevates your heart rate to about 65 to 70% of your maximum. If you find this is too easy, you may want to increase it, but it is better to lean on the conservative side.

As a rule of thumb, the maximum heart rate is 220 minus your age. As you increase in age, so your heart, like other muscles, loses some of its efficiency. Some of its natural loss is won back as fitness improves.

The following table is a guide to those who are "starting fitness."

Age	25	30	35	40	45	50	55	60	65
Target heart Rate 10 Second Count	23	22	22	21	20	19	19	18	18
Beats per Minute	138	132	132	126	120	114	114	108	108

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#### **Pulse Count**

The pulse count (on your wrist or carotid artery in the neck, taken with two index fingers) is done for ten seconds, taken a few seconds after you stop exercising. This is for two reasons: (a) 10 seconds is long enough for accuracy, (b) the pulse count is to approximate your BPM rate at the time you are exercising. Since heart rate slows as you recover, a longer count isn't as accurate.

The target is not a magic number but a general guide. If you're above average fitness, you may work quite comfortably, a little above that suggested for your age group.

The following table is a guide to those who are keeping fit. Here we are working at about 80% of maximum.

Age	25	30	35	40	45	50	55	60	65
Target heart Rate 10 Second Count Beats per Minute	_	-		24 144	23 138	22 132	22 132	21 126	20 120

Don't push yourself too hard to reach the figures on this table. It can be very uncomfortable if you overdo it. Let it happen naturally as you work through your program. Remember, the target is a guide, not a rule; a little above or below is just fine.

Two final comments:(1) don't be concerned with day-to-day variations in your pulse rate; being under pressure or not enough sleep can affect it;(2) your pulse rate is a guide, don't become a slave to it.

#### **ENDURANCE CIRCUIT TRAINING**

Cardiovascular endurance, muscle, strength, flexibility and coordination are all necessary for maximum fitness. The principle behind circuit training is to give a person all the essentials at one time by going through your exercise program moving as fast as possible between each exercise. This increases the heart rate and sustains it, which improves the fitness level. Do not introduce this circuit training effect until you have reached an advanced program stage.

#### **Body Building**

Is often used synonymously with strength training. The fundamental principle here is OVERLOAD. Here, the muscle works against greater loads than usual. This can be done by increasing the load you are working against.

## **Patronization**

This is the term used to vary your exercise program for both physiological and psychological benefits. In your overall program, you should vary the workload, frequency and intensity. The body responds better to variety, and so do you. In addition, when you feel yourself getting "stale', bring in periods of lighter exercise to allow the body to recuperate and restore its reserves. You will enjoy your program more and feel better about it.

#### **Muscle Soreness**

For the first week or so, this may be the only indication you have that you are on an exercise program. This, of course, does depend on your overall fitness level. A confirmation that you are on the correct program is a very slight soreness in most major muscle groups. This is quite normal and will disappear in a matter of days.

If you experience major discomfort, you may be on a program that is too advanced, or you have increased your program too rapidly.

If you experience PAIN during or after exercise, your body is telling you something. Stop exercising and consult your doctor.

## WHAT TO WEAR

Wear clothing that will not restrict your movement in any way while exercising. Clothes should be light enough to allow the body to cool. Excessive clothing that causes you to perspire more than you normally would while exercising gives you no advantage. The extra weight you lose is body fluid and will be replaced with the next glass of water you drink. It is advisable to wear a pair of gym or running shoes or "sneakers."

## **Breathing during Exercise**

Do not hold your breath while exercising. Breathe normally as much as possible. Remember, breathing involves the intake and distribution of oxygen, which feeds the working muscles.

## Rest periods

Once you start your exercise program, you should continue through to the end. Do not break off halfway through and then restart at the same place later on without going through the warm-up stage again.

The rest period required between strength training exercises may vary from person to person. This will depend mostly on your level of fitness and the program you have chosen. Rest between exercises by all means, but do not allow this to exceed two minutes. Most people manage with half-minute to one minute rest periods

# STRETCHING

Stretching should be included in both your warm-up and cool-down and should be performed after 3-5 minutes of low-intensity aerobic activity or callisthenic type exercise. Movements should be performed slowly and smoothly, with no bouncing or jerking. Move into the stretch until slight tension; no pain is felt in the muscle and hold for 20-30 seconds. Breathing should be slow, rhythmical and under control, making sure never to hold your breath.

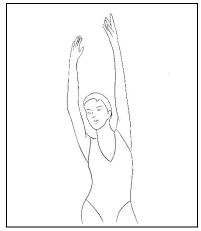
#### **HEAD ROLLS**

Rotate your head to the right for one count, feeling the stretch up the left side of your neck. Next, rotate your head back for one count, stretch your chin to the ceiling, and let your mouth open. Rotate your head to the left for one count, and finally, drop your head to your chest for one count.



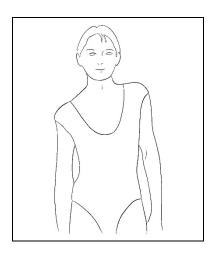
#### SIDE STRETCHES

Open your arms to the side and continue lifting them until they are over your head. Reach your right arm as far upward toward the ceiling as you can for one count. Feel the stretch up your right side. Repeat this action with your left foot left arm.



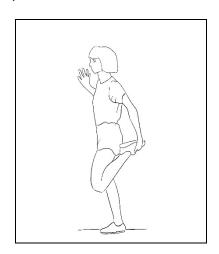
#### SHOULDER LIFTS

Lift your right shoulder toward your ear for one count. Then lift your left shoulder for one count as you lower your right shoulder.



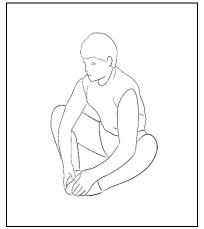
#### QUADRICEPS STRETCH

With one hand against a wall for balance, reach behind you and pull your right foot up. Bring your heel as close to your buttocks as possible. Hold for 15 counts and repeat with left foot up.



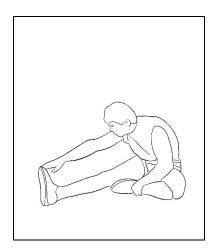
#### **INNER THIGH STRETCH**

Sit with the soles of your feet together with your knees pointing outward. Pull your feet as close to your groin as possible. Gently push your knees towards the floor. Hold for 15 counts.



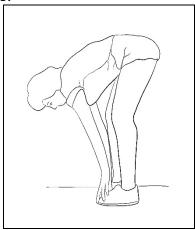
#### HAMSTRING STRETCHES

Sit with your right leg extended. Rest the sole of your left foot against your right inner thigh. Stretch your toe as far as possible. Hold for 15 counts. Relax and then repeat with left leg extended.



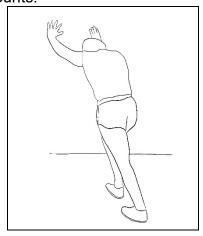
#### **TOE TOUCHES**

Slowly bend forward from your waist, letting your back and shoulders relax as you stretch toward your toes. Reach down as far as you can and hold for 15 counts.



#### **CALF / ACHILLES STRETCH**

Lean against a wall with your left leg in front of the right and your arms forward. Keep toward your right leg straight, and the left foot on the floor, then bend the left leg and lean forward by moving your hips toward the wall. Hold, then repeat on the other side for 15 counts.



# MANUFACTURER'S LIMITED WARRANTY

Dyaco Canada Inc. warrants all its Spirit bikes for a period of time listed below, from the date of retail sale, as determined by a sales receipt. Dyaco Canada Inc.'s responsibilities include providing new or remanufactured parts, at Dyaco Canada Inc.'s option, and technical support to our independent dealers and servicing organizations. In the absence of a dealer or service organization, these warranties will be administered by Dyaco Canada Inc. directly to the facility. The warranty period applies to the following components:

Home Warranty Light Commercial Warranty (Non-dues paying facility)

Frame, Motor & Deck Lifetime Frame Lifetime Electronics 10 Years Electronics 5 Years Parts 10 Years Parts 5 Years

Labour 2 Years Labour 2 Years (Console 1 year)

This warranty is not transferable and is extended only to the original owner.

#### NORMAL RESPONSIBILITIES OF THE FACILITY

The facility is responsible for the items listed below:

- 1. The warranty registration can be completed online. Visit www.dyaco.ca/warranty.html and complete the warranty registration.
- 2. Proper use of the bike in accordance with the instructions provided in this manual.
- 3. Proper installation in accordance with instructions provided with the bike and with all local electric codes.
- 4. Proper connection to a grounded power supply of sufficient voltage, replacement of blown fuses, repair of loose connections or defects in facility wiring.
- 5. Expenses for making the bike accessible for servicing, including any item that was not part of the bike at the time it was shipped from the factory.
- 6. Damages to the bike finish during shipping, installation or following installation.
- 7. Routine maintenance of this unit as specified in this manual.

#### **EXCLUSIONS**

This warranty does not cover the following:

- CONSEQUENTIAL, COLLATERAL, OR INCIDENTAL DAMAGES SUCH AS PROPERTY DAMAGE AND INCIDENTAL EXPENSES RESULTING FROM ANY BREACH OF THIS WRITTEN OR ANY IMPLIED WARRANTY. Note: Some areas do not allow the exclusion or limitation of incidental or consequential damages, so this limitation or exclusion may not apply to you.
- Service call reimbursement to the facility. Service call reimbursement to the dealer that does not involve malfunction or defects in workmanship or material, for units that are beyond the warranty period, for units that are beyond the service call reimbursement period, for bikes not requiring component replacement.
- 3. Damages caused by services performed by persons other than authorized Dyaco Canada Inc. service companies; use of parts other than original Dyaco Canada Inc. parts; or external causes such as corrosion, discoloration of paint or plastic, alterations, modifications, abuse, misuse, accident, improper maintenance, inadequate power supply, or acts of God.
- 4. Products with original serial numbers that have been removed or altered.
- 5. Products that have been: sold, transferred, bartered, or given to a third party.
- 6. Products that do not have a warranty registration card on file at Dyaco Canada Inc. Dyaco Canada Inc. reserves the right to request proof of purchase if no warranty record exists for the product.
- 7. THIS WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES EXPRESSED OR IMPLIED, INCLUDING THE WARRANTIES OF MERCHANTABILITY AND/OR FITNESS FOR A PARTICULAR PURPOSE.
- 8. Warranties outside of Canada may vary. Please contact your local dealer or Dyaco Canada for details.

#### **SERVICE**

The sales receipt establishes the labour warranty period should service be required. If service is performed, it is in your best interest to obtain and keep all receipts. This written warranty gives you specific legal rights. Service under this warranty must be obtained by following these steps, in order:

- 1. Contact your selling authorized Spirit dealer or Dyaco Canada.
- 2. If you have any questions about your new product or questions about the warranty contact Dyaco Canada Inc. at 1-888-707-1880.
- 3. If no local service is available, Dyaco Canada Inc. will repair or replace the parts, at Dyaco Canada Inc.'s option, within the warranty period at no charge for parts. All transportation costs, both to our factory and upon return to the facility, are the responsibility of the facility. The facility is responsible for adequate packaging upon return to Dyaco Canada Inc. is not responsible for damages that occur during shipping. Make all freight damage claims with the appropriate freight carrier. DO NOT SHIP ANY UNIT TO OUR FACTORY WITHOUT A RETURN AUTHORIZATION NUMBER. All units arriving without a return authorization number will be refused.
- 4. For any further information, or to contact our service department by mail, send your correspondence to:

Dyaco Canada Inc. 5955 Don Murie Street Niagara Falls, ON L2G 0A9

Product features or specifications as described or illustrated are subject to change without notice. All warranties are made by Dyaco Canada.



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For more information, please contact Dyaco Canada Inc.
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