

# *SPIRIT*



## **CU900 ENT** Upright Bike **OWNER'S MANUAL**

Please carefully read this entire manual before operating your new upright bike.

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# IMPORTANT SAFETY INSTRUCTIONS

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

**WARNING** - Heart rate monitoring systems may be inaccurate. Over exercising may result in serious injury or death. If you feel faint stop exercising immediately.

- Do not operate bike on 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 hands away from all moving parts.
- Never drop or insert any object into any openings.
- Do not use outdoors.
- 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 (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the exercise equipment by a person responsible for their safety.
- This exercise equipment can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the exercise equipment in a safe way and understand the hazards involved. Children shall not play with the exercise equipment. Cleaning and user maintenance shall not be made by children without supervision.
- Children should be supervised to ensure that they do not play with the exercise equipment.
- Notes on the correct posture and the fact the pedal crank training equipment of class B and C are not suitable for therapeutic purposes
- "WARNING! Heart rate monitoring systems may be inaccurate. Over exercising may result in serious injury or death. If you feel faint stop exercising immediately".
- Do not operate where aerosol (spray) products are being used or where oxygen is being administered.
- Never operate the exercise equipment with the air openings blocked. Keep the air openings free of lint, hair, and the like.
- Use this exercise equipment only for its intended use as described in this manual. Do not use attachments not recommended by the manufacturer.
- **WARNING:** Injuries to health may result from incorrect or excessive training.
- 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.
- Close supervision is necessary when this exercise equipment is used by, on, or near children, invalids, or disabled persons.

SAVE THESE INSTRUCTIONS - THINK SAFETY!

# IMPORTANT ELECTRICAL INSTRUCTIONS

## ***WARNING!***

**NEVER** expose this 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.

**WARNING** - To reduce the risk of burns, fire, electric shock, or injury to persons, install the bike on a flat level surface with access to a 100 to 240-volt AC, 50/60 Hz grounded outlet. Do not use an extension cord unless it is 16awg or larger, with only one outlet on the end. The bike should be the only exercise equipment in the electrical circuit. Do not attempt to disable the grounded plug by using improper adapters, or in any way modify the cord set; a serious shock or fire hazard may result along with computer malfunctions.

## 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 bike during an electrical storm. Surges may occur in your facility power supply that could damage the bike's components.
- **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 level 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 cause you to lose balance which may result in serious injury.
- Always hold on to a handle bar 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.



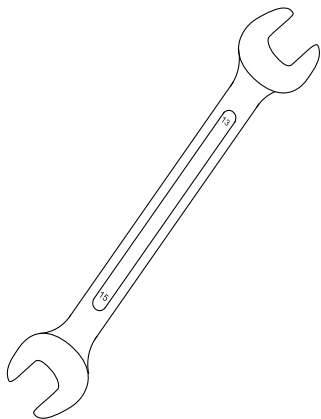
# ASSEMBLY INSTRUCTIONS

Max. user's weight.: 205 kg

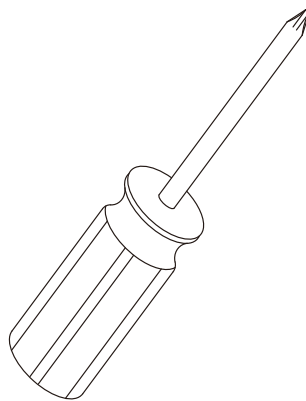
## UNPACKING

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.

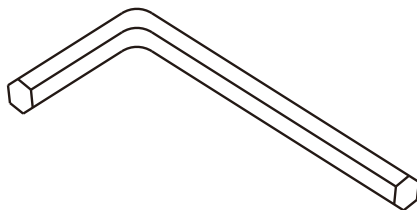
## ASSEMBLY TOOLS



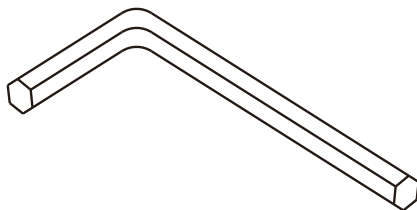
**#100.** 13/15mm Wrench (1 pc)



**#97.** Phillips Head Screw driver (1 pc)

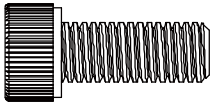


**#107.** 8mm L Allen Wrench (1 pc)

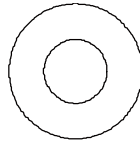


**#99.** 6mm L Allen Wrench (1 pc)

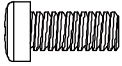
## STEP 1



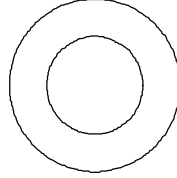
**#52** - M8 × 20mm  
Socket Head Cap Bolt  
(4pcs)



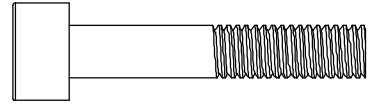
**#53** - Ø8.5 × Ø18 × 1.5T  
Flat Washer (4pcs)



**#59** - M5 × 12mm  
Phillips Head Screw  
(4pcs)

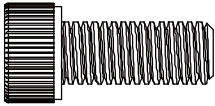


**#60** - Ø13 × 23 × 2.0T  
Flat Washer  
(3pcs)

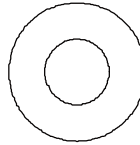


**#61** - M10 × 55mm  
Socket Head Cap Bolt  
(3pcs)

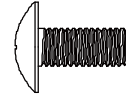
## STEP 2



**#52** - M8 × 20mm  
Socket Head Cap Bolt  
(6pcs)

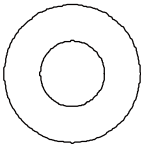


**#112** - Ø8.5 × Ø18 × 1.5T  
Flat Washer (6pcs)



**#54** - M5 × 12mm  
Phillips Head Screw  
(4pcs)

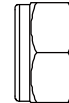
## STEP 3



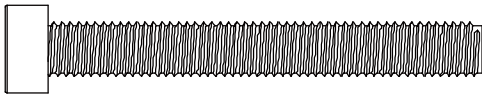
**#53** - Ø8.5 × Ø18 × 1.5T  
Flat Washer (8pcs)



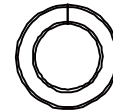
**#66** - M5 × 6mm  
Phillips Head Screw  
(2pcs)



**#58** - M8 × 7T  
Nyloc Nut (4pcs)

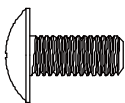


**#56** - M8 × 65mm  
Socket Head Cap Bolt  
(4pcs)

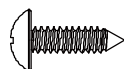


**#57** - Ø8 × 1.5T  
Split Washer (4pcs)

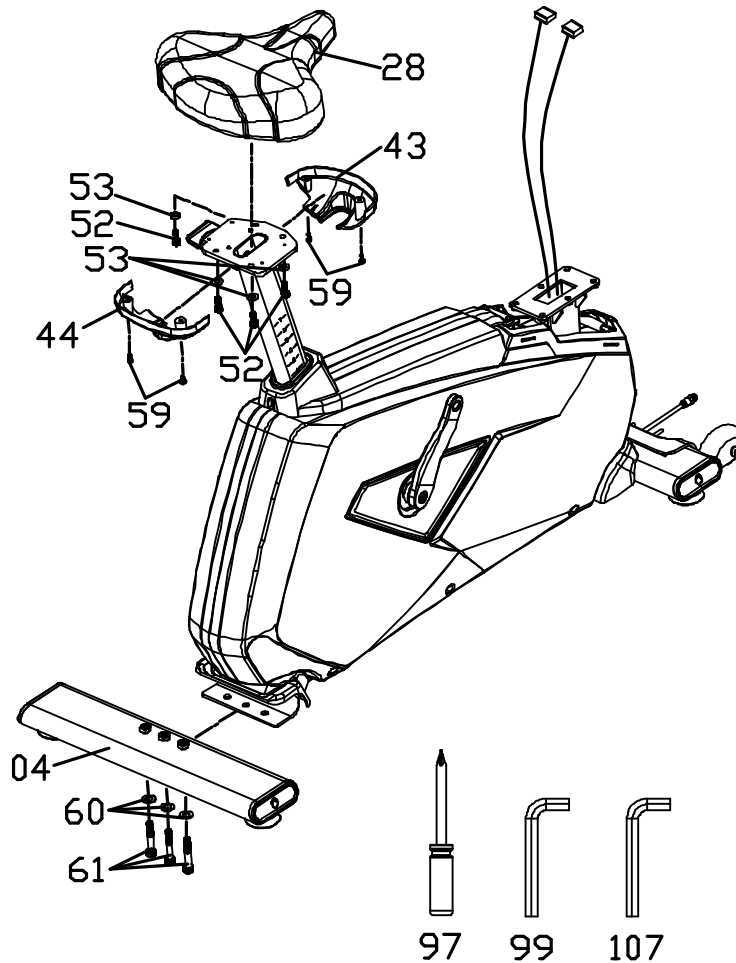
## STEP 4



**#54** - M5 × 12mm  
Phillips Head Screw  
(2pcs)

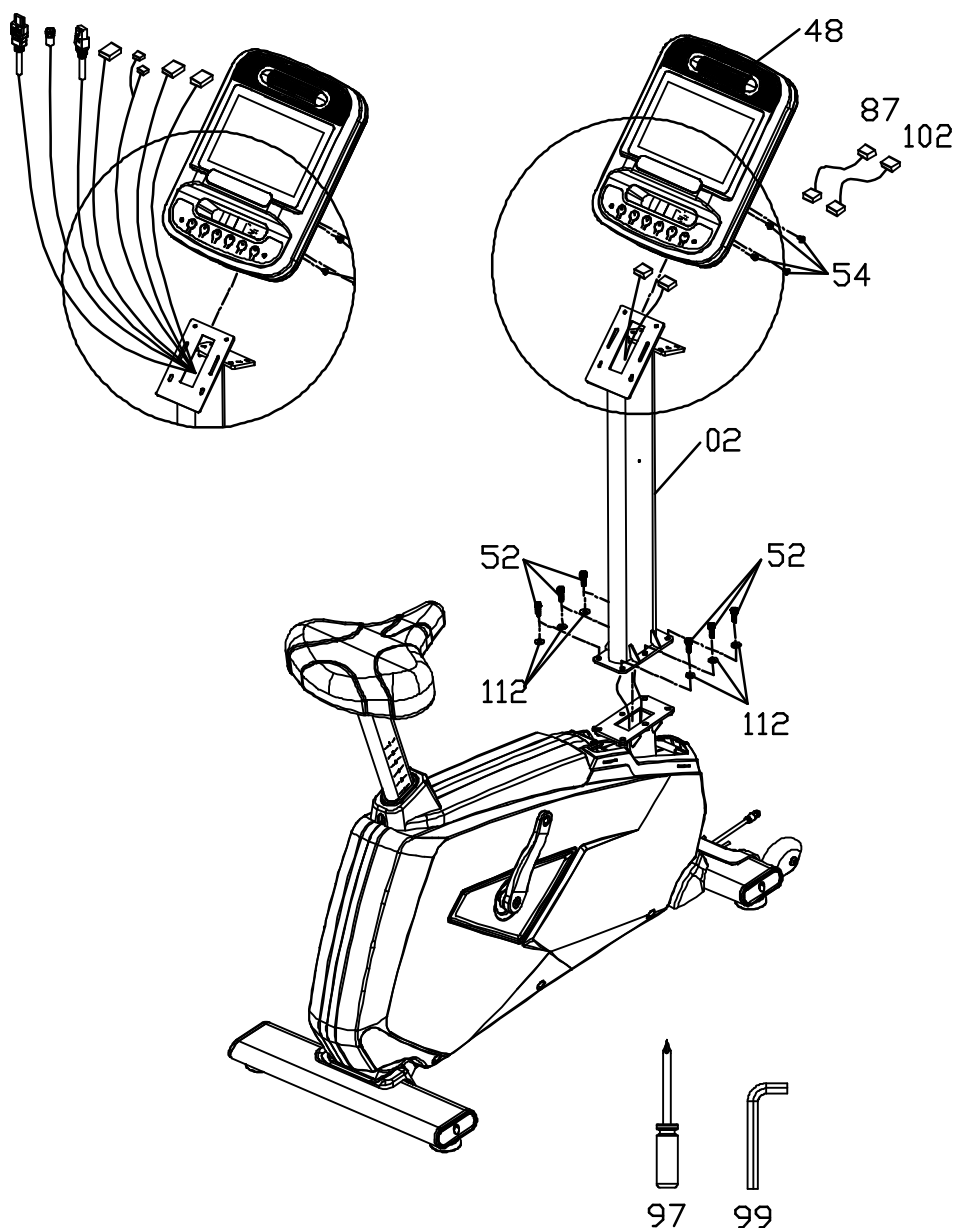


**#55** - 3.5 × 12mm  
Sheet Metal Screw  
(4pcs)



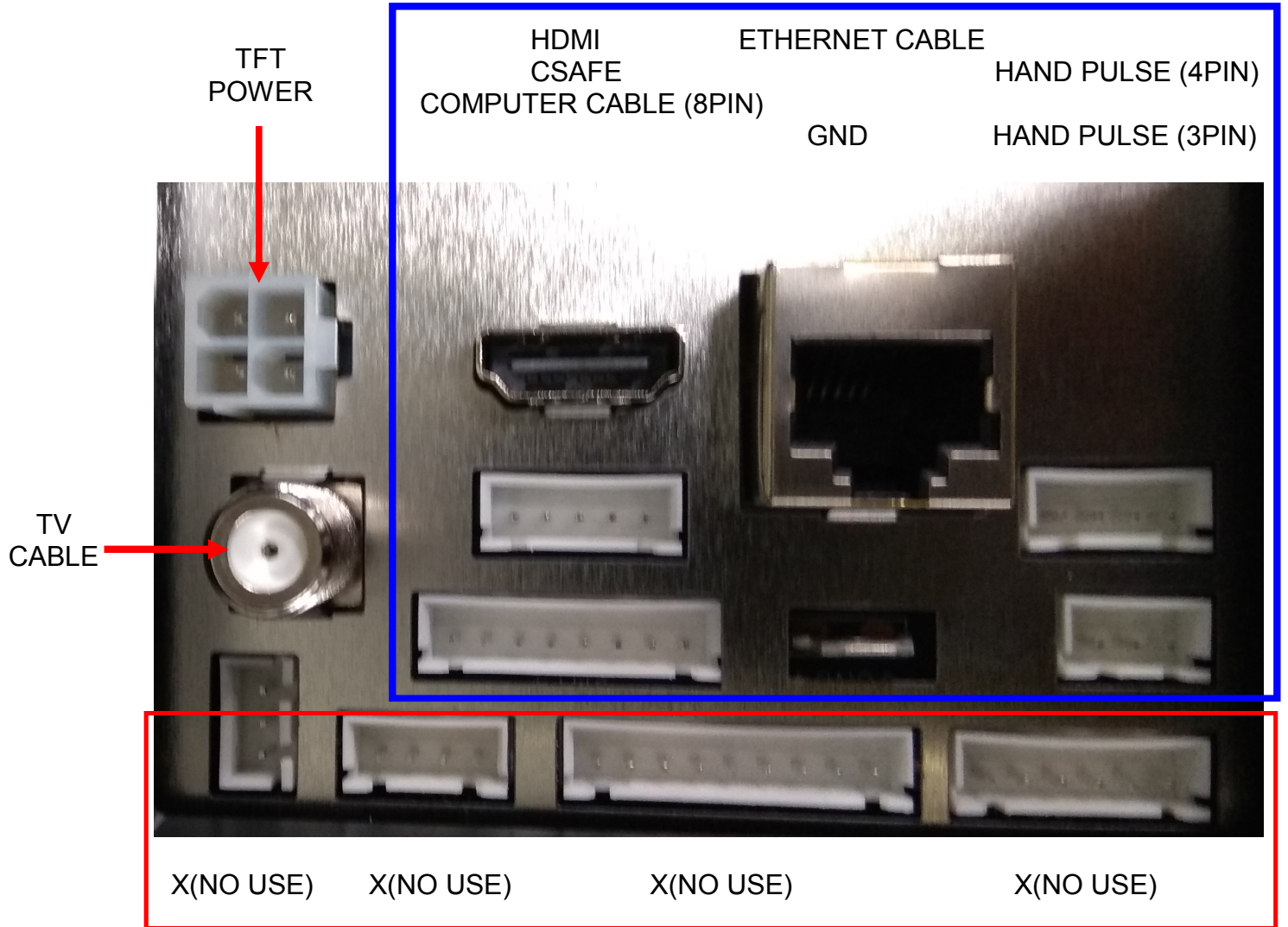
## STEP 1

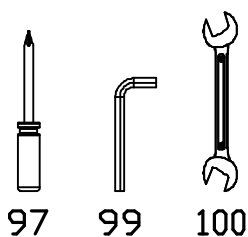
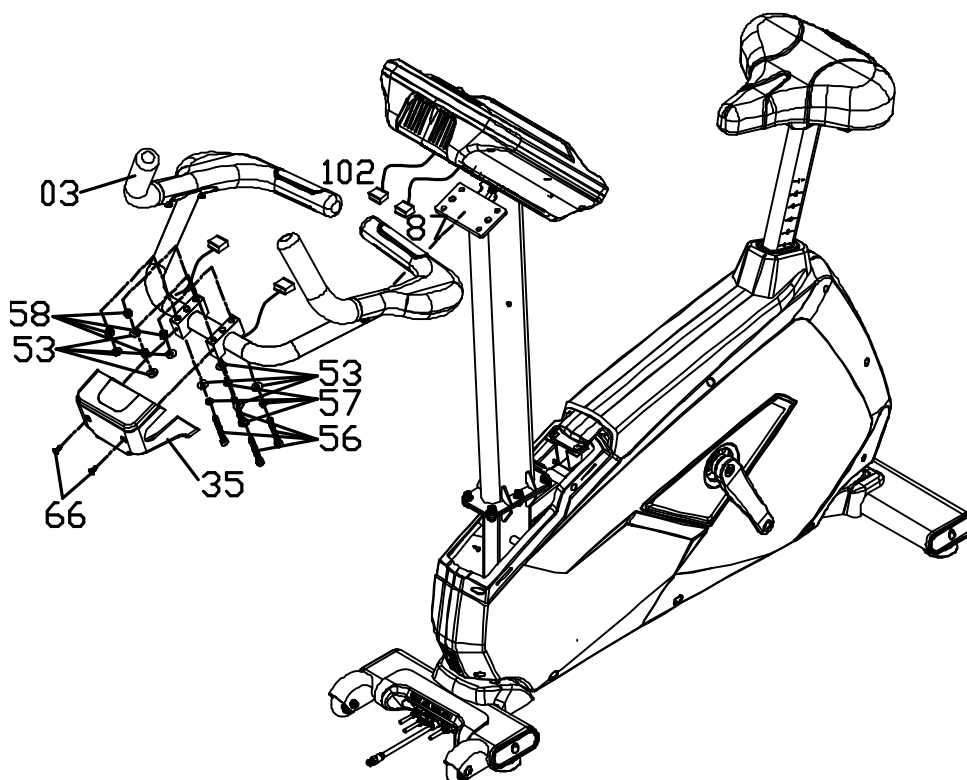
1. Install REAR STABILIZER (4) to MAIN FRAME (1) with 3 BOLTS (61) and 3 WASHERS (60).
2. Install SEAT (28) to SEAT POST (8) with 4 BOLTS (52) and 4 WASHERS (53).
3. Attach SEAT BRACKET COVERS (43 & 44) to SEAT POST (8) with 4 round head SCREWS (59).



## STEP 2

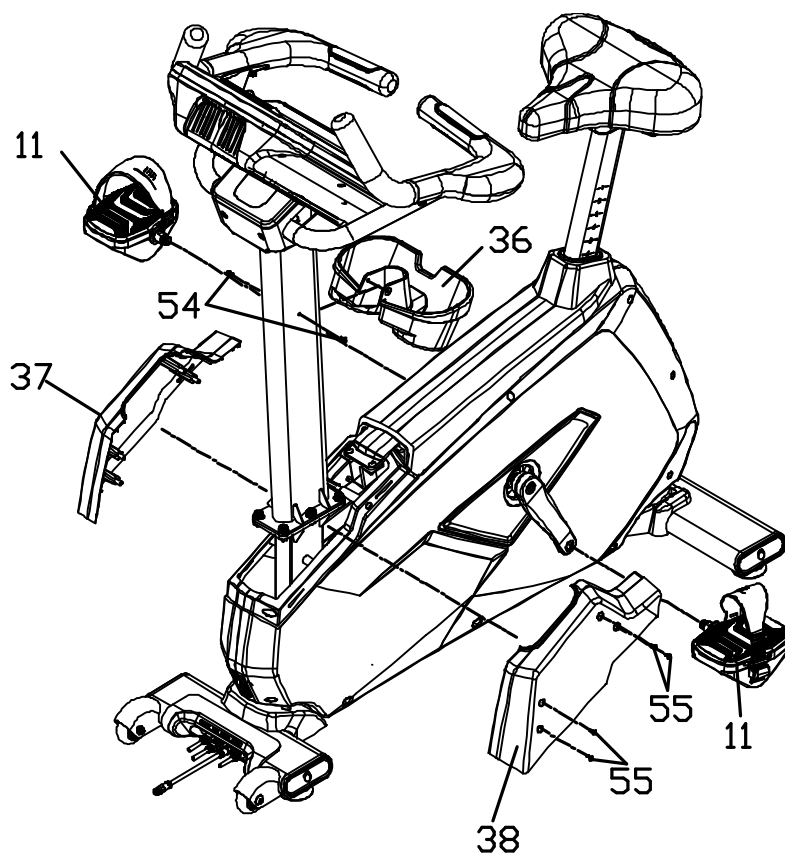
1. Run the WIRING HARNESS through the CONSOLE MAST (2) and out the top.
2. Install CONSOLE MAST (2) to MAIN FRAME (1) with 6 BOLTS (52) and 6 WASHERS (112). Do not pinch any wires.
3. Connect HGP CONNECTOR CABLES (87 & 102) to CONSOLE (48). Run cables through center of console bracket and out the back.
4. Connect all WIRING HARNESSES to corresponding connectors at the back of the CONSOLE (48).
5. Attach CONSOLE (48) to CONSOLE MAST (2) using 4 SCREWS (54). Be careful not to pinch any wires.





## STEP 3

1. Install HANDLEBARS (3) to CONSOLE MAST (2) with 4 BOLTS (56), 4 LOCK WASHERS (57), 8 WASHERS (53), and 4 NUTS (58). 4 WASHERS (53) should be installed on each side of the handlebars (3).
2. Connect HGP CONNECTOR CABLES (87 & 102) to HGP cables coming out of HANDLEBARS (3).
3. Attach CONSOLE BRACKET COVER (35) to HANDLEBARS (3) using 2 SCREWS (66).



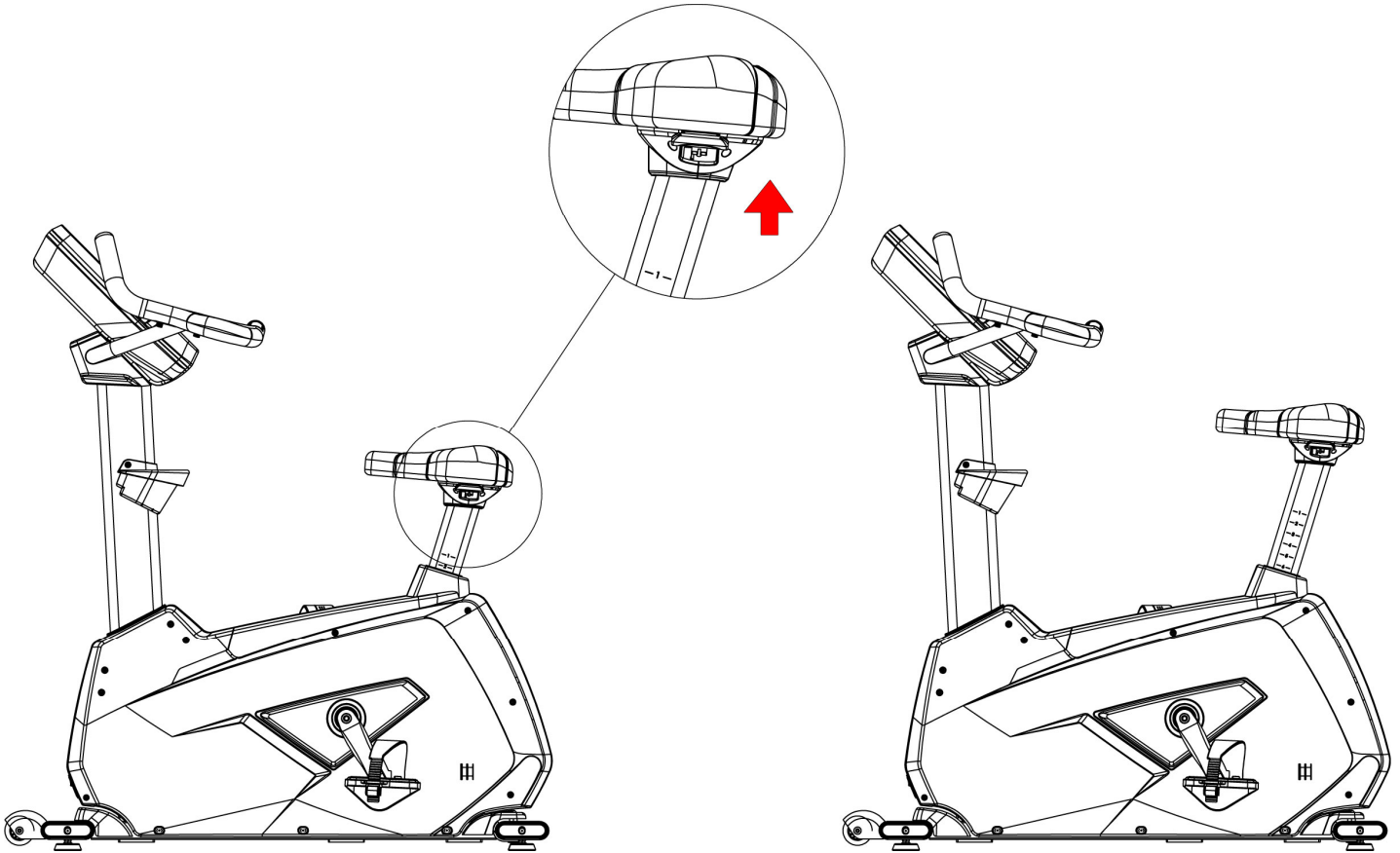
97

## STEP 4

1. Attach CUP HOLDER (36) to CONSOLE MAST (2) using 2 SCREWS (54).
2. Attach CONSOLE MAST COVERS (37 & 38) over CONSOLE MAST (2) using 4 SELF-TAPPING SCREWS (55).
3. Install PEDALS (11) into CRANK ARMS (9 & 10). The left pedal has a reverse thread and will be screwed in counterclockwise. Tighten to 300 in-lb (34 Nm) of torque.

# Seat Adjustments

1. When you sit on the Seat Bottom Cushion, pull the Release Lever upward. Using your feet, push down on Pedals to lessen the weight upon the seat, and adjust the Seat Bottom Cushion upward.
- 2 If you want to adjust the Seat Bottom Cushion downward, please sit on the front end of Seat Bottom Cushion, then pull the Release Lever upward adjust.



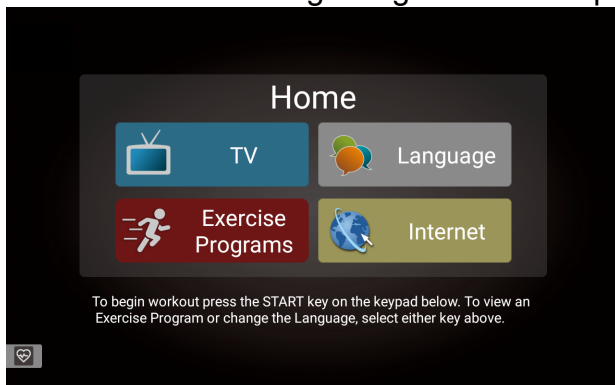


# CONSOLE OPERATION



## Starting the operation

- Plug in the power cord at the front of the bike.
- When the power cord is plugged in the screen will show the initial image and then enter the ready mode which is the beginning of the bike operation.



Main Home page: Begin operation by touching the icons.



Quick operating buttons are convenient for basic bike functions.

## QuickStart

- Press **Start** button and the console starts the Quick Start program. Press **Level** up/down buttons to change the resistance level you desire.
- Press first page Home button or Stop button to stop the program.

## Featured functions of this bike

The Touch-control screen is used for operating all functions of the bike. You can directly touch any key on the screen or through quick keys on the bottom to control functions. On the lower portion of the console there is the **Start** key to begin the workout, **Stop** button to pause/stop programs, **Level** keys to change workload and a **Fan** key to turn the fan on or off.

## Pause/Stop

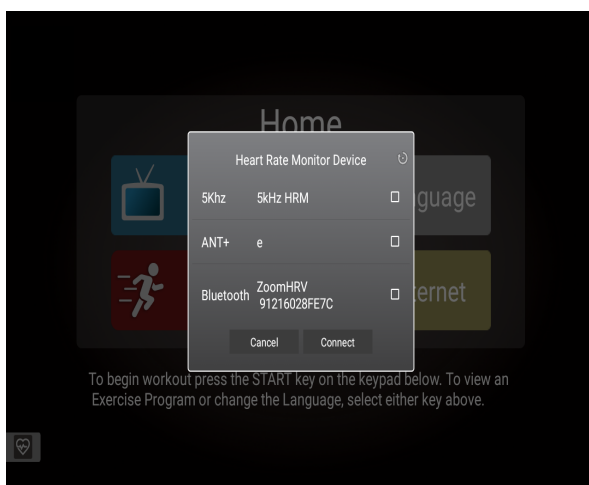
- Press **Stop** key once or **Home** key on the screen, the bike will stop and keep values of time, distance and calorie on the screen. The screen will count down for 5 minutes then reset and return to the initial status.
- Press **Start** key to continue the workout during pause.
- Press **Stop** key twice will terminate the setting with displaying the workout summary. If **Stop** key is pressed the third time, the console will return to the initial status (the beginning).

## Heart Rate Feature

The Pulse (Heart Rate) on the screen shows the current value of your heart rate in beats 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 Grip Pulse signal. You may use the Grip Pulse feature while in Heart Rate Control. The Console will also pick up wireless heart rate transmitters that are 5 khz Polar compatible.



Wireless heartbeat device



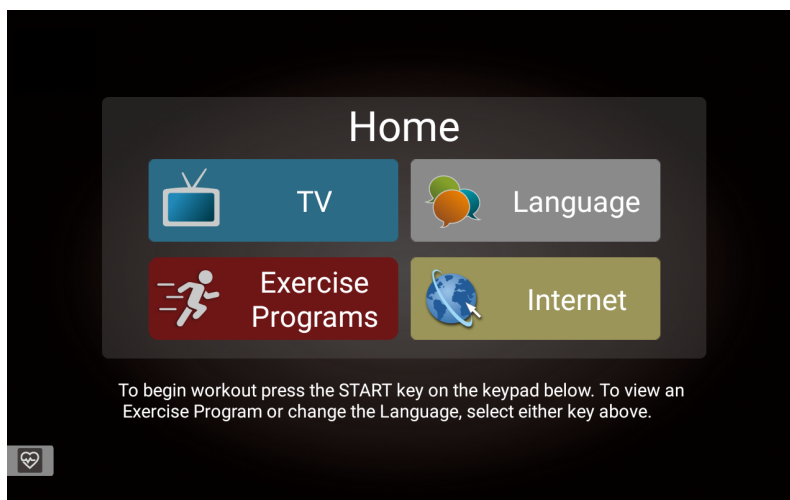
Click on this screen to set the wireless chest strap pairing, check the paired use of the 5KHz wireless chest strap, or the Bluetooth wireless chest strap.

## To Turn the Bike Off

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

## Below is the instruction for touch screen operation:

- First page HOME



There are four selections. Usually the “Language” is the first selection.

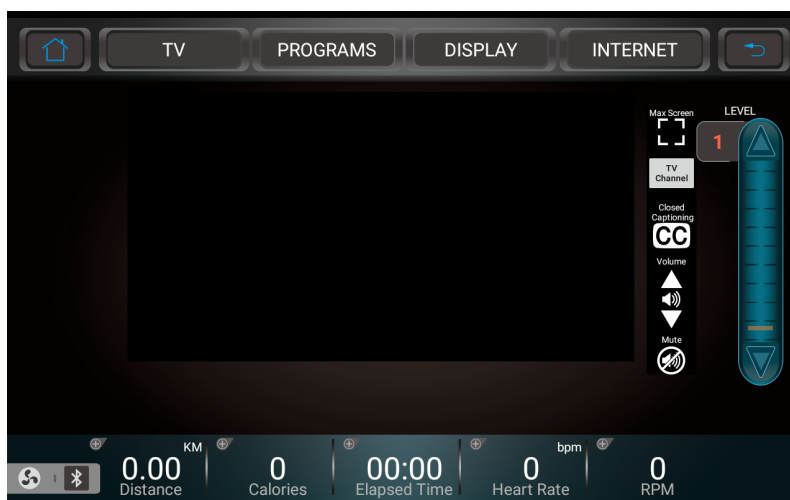
- When you press “Language” button, it enters the menu with all language selections.



There are 13 languages to choose from.

Touch the desired language button and the system will return to the first page for the program operation. If you don't want to change the language, press HOME button at the upper left corner to return to the first page or touch the return button at right upper right corner to return to the previous page to continue the operation.

- When TV button on the first page HOME is pressed, it enters TV interface.

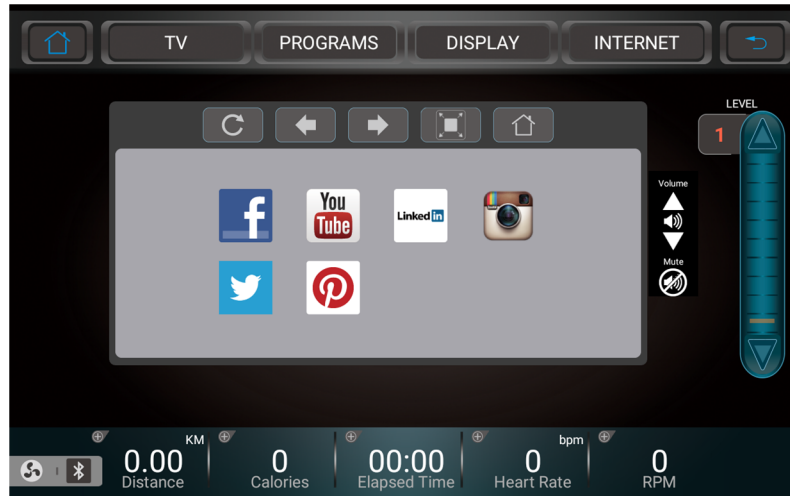


Now you can enjoy TV programs. If you want to workout and enjoy TV program simultaneously, press "START" button to start the bike.



You can change the TV channel by using up/down buttons on the TV channel or channel remote control at bottom right to change the channel. You can use the Volume up/down keys to change the sound levels. Press "Mute" button to switch to silence. Touch Max Screen icon to switch to full screen. Touching anywhere on the screen will return it to the original screen size. Use level up/down buttons to control the resistance level. When you want to pause, just press "HOME" button at left top of the screen or press "STOP" button once and the pause window will show up. If you want to stop, you can choose to end the program or press "STOP" button again to end the program and display the workout summary. Pressing the "STOP" button third time and the console returns to the initial status (the beginning).

- When you touch “Internet” button on HOME page, it rapidly enters internet interface.



There are 6 internet connections to choose for you to go internet while you are exercising. (internet cable connection or WIFI connection is required) Press “START” button of the bike to begin exercise.

Use “level up/down buttons to control the resistance level during the exercise. When you want to pause, just press “HOME” button at left top or press “STOP” button once and the pause window will show up. If you want to end, you can choose to end the program or press “STOP” button again to show the workout summary. If “STOP” button is pressed the third time, the console will return to the initial status. (the beginning)

- When you touch “Exercise Program” button on HOME page, it enters “Menu” interface.



There are 10 program modes in Menu interface.

If you want to choose Manual Program, just touch Manual button on the screen to enter the program for Manual.

## MANUAL program:



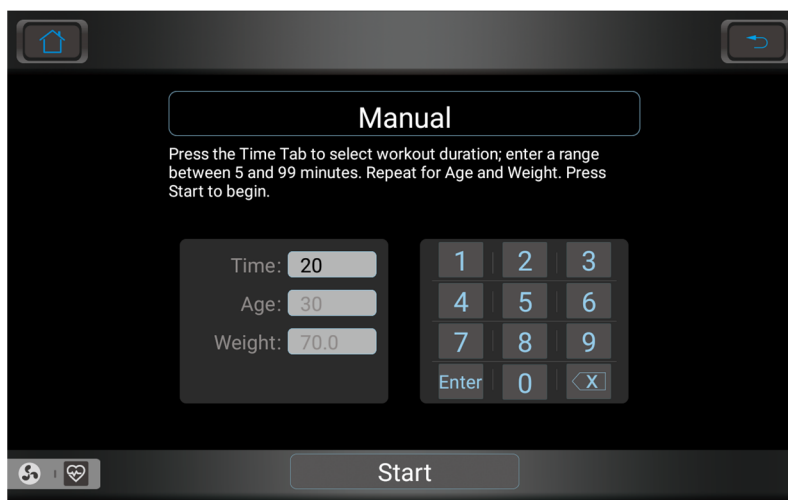
Then touch the “Profile” button to enter profile interface. If you do not want to do this program, just touch “HOME” icon at left top corner to return to the first page or press “Return” icon at right top corner to return to continue the previous operation. If profile selection is desired, press left or right arrow button to select the program you want.



The image entering the “Profile” interface is as below.



After entering the profile image which is the program you want to perform, press “ENTER” button to enter next image. If not, touch “HOME” icon at left top corner to return to the first page or press “Return” icon at right top corner to return to continue the previous operation. If profile selection is desired, press left or right arrow button to select the program you want.



This image is for setting program time, user’s age and weight. Press “ENTER” button after entering parameters to confirm. Then press “START” button to start the Manual Program. If not, press “HOME” button at left top corner to return to the first page or press “Return” icon at right top corner to return to continue the previous operation.



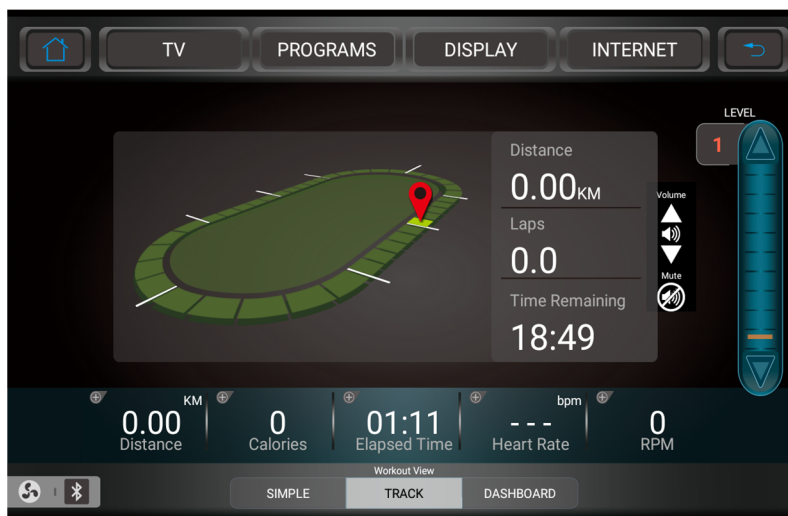
The “SIMPLE” display screen will be shown when the program begins.



The initial screen shown after start is the “SIMPLE” display which shows all values on the bottom concerning your workout. The resistance level is at the right side and is adjustable with “UP” or “DOWN” button.

The bar chart for the resistance level is in the middle. TV interface button is on top to touch for entering the TV mode, or touch “INTERNET” for entering the internet interface. If “PROGRAM” button is touched, the system will ask you if you want to return to the first page. To select a different type of exercise information display press either the Track or Dashboard keys at the bottom of the screen.

Touch “TRACK” button to enter the track interface.



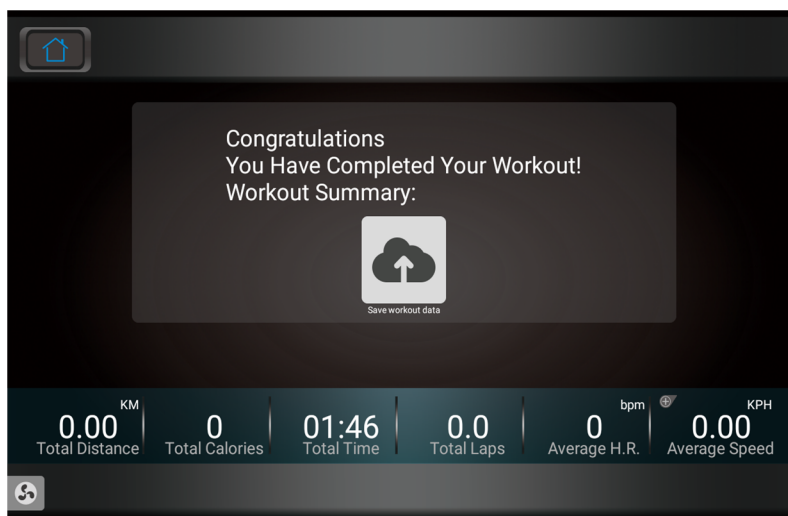
The operating is similar with different interface only. The image shows the track with number of laps and other values.

Touch “DASHBOARD” button on the bottom to enter the dashboard interface.



The operating is similar with different interface only. You can choose one of three interfaces on the bottom with your own preference.

When using the first page button or “STOP” button to end the program, it enters the summary image.



On the summary image, all accumulating values concerning the workout are displayed.

You can touch the HOME button at left top or press “STOP” button to return to the first page image; touch the cloud button upload fitness data to SPIRIT APP.

## Programmable Features

The console offers ten preset programs, HILL, FAT BURN, CARDIO, INTERVAL, HR, CUSTOM, HIIT, Fitness Test, Constant Power and one Manual program.



### Preset Features:

#### To choose and start preset program:

- Select a program then press the ENTER key to begin customizing the program with your personal data, or just press the start key to begin the program with the default settings.
- After selecting a program and pressing ENTER to set your personal data, the touch Time window will darken with the default value of 20 minutes. You may use numeric keypads to adjust the time. After adjusting the time, press ENTER confirm and continue.  
(Default time is 20 minutes)
- The touch Age window will now display a value indicating your Age. Entering the correct Age will affect the Heart rate bar graph accuracy and also needed for the HR programs. Use numeric keypad to make adjustments, and then press ENTER confirm and continue.  
(Default age is 30 years old)
- The touch Weight window will now display a value indicating your Bodyweight. Entering your correct bodyweight affects the Kcal readout accuracy. Use numeric keypad to make adjustments, and then press ENTER confirm and continue.  
(Default weight is 70KG)
- The Max Level window will now display a value indicating the top resistance level you will experience during the program. Use the numeric keypad to make adjustments, and then press ENTER confirm and continue. (Default max Level is 5)
- Now press the START key to begin your workout.

## Preset program

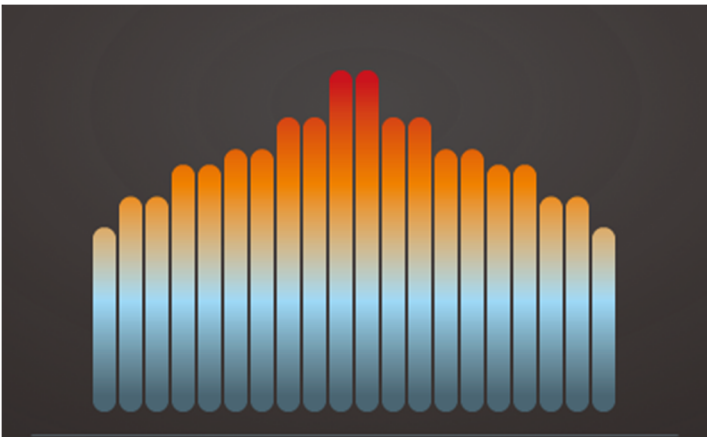
The bike has four different programs that have been designed for a variety of workout goals. These four programs have factory preset profiles for achieving these different goals. The initial built-in level of difficulty for each program is set to a relatively easy level. You may adjust the level of difficulty (Max level) for each program before beginning by following the instructions in the message window after selecting your program.

Prog	SEG	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Hill	Resistance	50	62.5	62.5	70	70	75	75	87.5	87.5	100	100	87.5	87.5	75	75	70	70	62.5	62.5	50
Fatburn	Resistance	50	62.5	75	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	75	50
Cardio	Resistance	50	62.5	70	75	87.5	100	87.5	75	87.5	100	87.5	75	87.5	100	87.5	75	87.5	75	62.5	50
Interval	Resistance	50	62.5	62.5	100	100	62.5	62.5	100	100	62.5	62.5	100	100	62.5	62.5	100	100	62.5	62.5	50

### Hill program:

The Hill program simulates going up and down a hill. The resistance in the pedals will steadily increase and then decrease during the program.

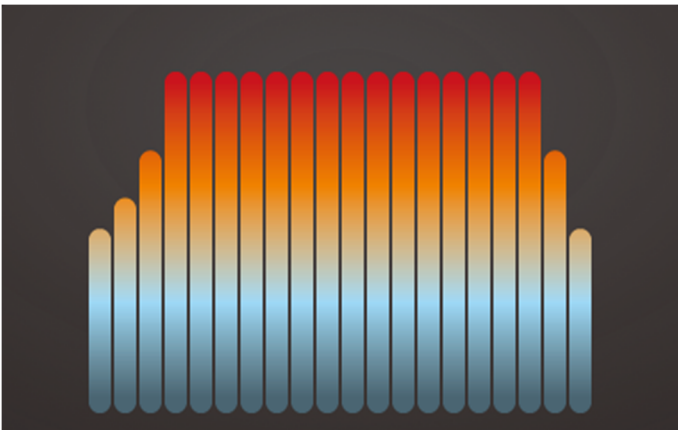
#### Work Profile



### Fat Burn program:

The Fat Burn program is designed, as the name implies, to maximize the burning of fat. There are many schools of thought on the best way to burn fat but most experts agree that a lower exertion level that stays at a steady workload is the best. The absolute best way to burn fat is to keep your heart rate at around 60% to 70% of its maximum potential. This program does not use heart rate but simulates a lower, steady exertion workout.

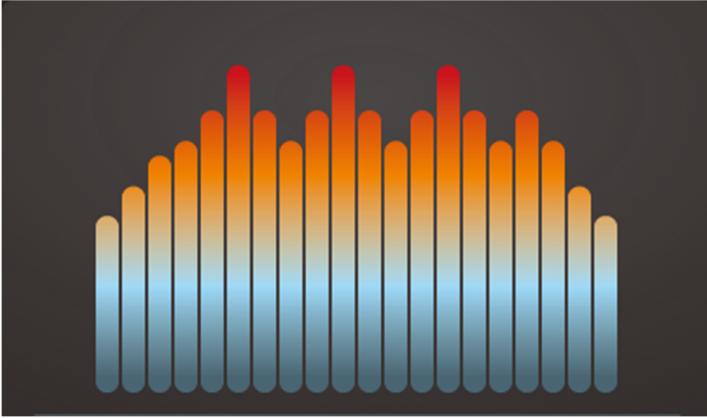
#### Work Profile



### **Cardio program:**

The Cardio program is designed to increase your Cardio vascular function. This is exercise for your heart and lungs. It will build up your heart muscle and increase blood flow and lung capacity. This is achieved by incorporating a higher level of exertion with slight fluctuations in work.

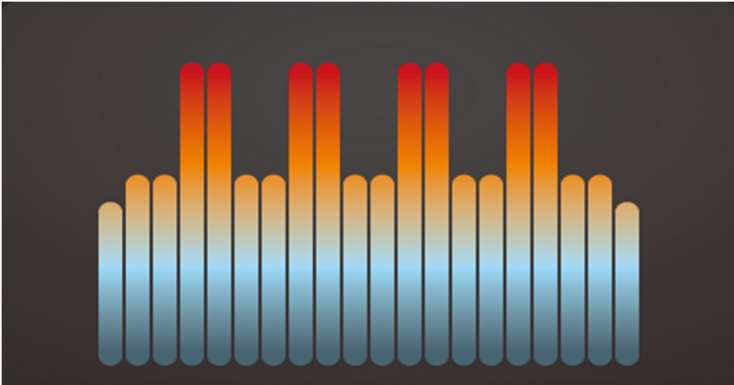
#### **Work Profile**



### **Interval program:**

The Interval program takes you through high levels of intensity followed by periods of low intensity. This program increases your endurance by depleting your oxygen level followed by periods of recovery to replenish oxygen. Your cardio vascular system gets programmed to use oxygen more efficiently this way.

#### **Work Profile**



## Custom Program:

- Select a 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.
- The window will show the corresponding level profile, user can choose rename program by touching rename icon and entering profile. After new setting, level profile will be show on screen for adjustment.
- Press next key save icon for new level profile then pop out next message window for Time · Age, Weight and Mix level entry.
- Now press the START key to begin your workout test for new 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.

- 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 8 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. And you are asked to adjust the Sprint Level. This is the resistance level you will experience during the Sprint segments of the program. At the same time, you are asked to adjust the Rest Level. This is the resistance level you will experience during the Rest segments of the program. Adjust the level and then press START to begin workout.
- The Time window will now display the total time for the HIIT workout, and you can manually adjust the resistance levels during the Sprint and Rest segments. You should maintain at least 90 rpm throughout the Sprint segment. The rest segment of the HIIT program are set to low resistance level, and you can pedal at any speed you choose as your heart rate recovers.
- There is a 3-minute warm-up period before the first Sprint begins, and at the end of the last Sprint there is a 3-minute cool-down. The resistance level during warm-up is set to 5 but can be adjusted manually.

## Fit-Test program:

The fitness test 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  $VO_{2max}$  score will be given.  $VO_{2max}$  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. The only caveats are that if you are a very de-conditioned Male you need to choose option Female. If you are a very conditioned female you need to choose option Male.

### Workload chart for male or very fit female:

<b>1st Stage</b>				50 watts - 300 kgm/min					
<b>HR</b>		< 90			90 - 105			> 105	
<b>2nd Stage</b>		150 watts - 900 kgm/min			125 watts - 750 kgm/min			100 watts - 600 kgm/min	
<b>HR</b>	HR <120	HR 120-135	HR >135	HR <120	HR 120-135	HR >135	HR <120	HR 120-135	HR >135
<b>3rd stage</b>	225 watts - 1350 kgm/min	200 watts - 1200 kgm/min	175 watts - 1050 kgm/min	200 watts - 1200 kgm/min	175 watts - 1050 kgm/min	150 watts - 900 kgm/min	175 watts - 1050 kgm/min	150 watts - 900 kgm/min	125 watts - 750 kgm/min

### Workload chart for female or de-conditioned male

		<b>1st Stage</b>	25W 150 kgm/min	
Heart Rate	HR<80	HR: 80-90	HR: 90-100	HR>100
<b>2nd Stage</b>	125W 750 kgm/min	100W 600 kgm/min	75W 450 kgm/min	50W 300 kgm/min
<b>3rd Stage</b>	150W 900 kgm/min	125W 750 kgm/min	100W 600 kgm/min	75W 450 kgm/min
<b>4th Stage</b>	175W 1050 kgm/min	150W 900 kgm/min	117W 700 kgm/min	100W 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.
- Adjust the seat to the proper position so that when your leg is extended during pedaling there is a slight bend at the knee of about 5 degrees.
- Make sure you have warmed up and stretched before taking the test.
- Do not take in caffeine before the test.
- Hold the hand grips gently, do not tense up.

## **Fitness test programming:**

Press the Fitness-test button and press ENTER.

1. The message window will ask you to enter your gender. You may adjust the Age and Weight setting by using numeric keypads.
2. Now press START to begin the test.

## **During the test:**

- The console must be receiving a steady heart rate for the test to begin. You may use the hand pulse sensors or wear a heart rate chest strap transmitter.
- 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 through the various data readings in the message window by pressing the change under the message window.
  1. The message window will always display your pedal speed on the right side to help you maintain 50RPM.
  2. The data shown during the test is:
    - a. Work in KGM is actually an abbreviated form of kg-m/min. which is a work measurement of kilogram-force meter/minute
    - b. Work in Watts (1 watt is equal to 6.11829727787 kg-m/min.)
    - c. HR is your actual heart rate; TGT is the target heart rate to reach to end the test.
    - d. Time is the total elapsed time of the test.

## **After the test:**

- Take note of your score because the console will automatically return to the start-up mode after a few minutes.



## What your score means:

### VO2max Chart for males and very fit females

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

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

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

## Heart Rate Control (HR) Program operation:

To start the HR program follow the instructions below or just press the HR key then the Enter button and follow the directions in the message window.

1. Press the HR key then press the Enter key.
2. The touch window will ask you to enter your Time. You may use numeric keypads to adjust the time, After press ENTER confirm and continue.
3. The touch window will ask you to enter your Age. You may use numeric keypads to adjust the Age, After press ENTER confirm and continue.
4. The touch window will ask you to enter your Weight. You may use numeric keypads to adjust the Weight, After press ENTER confirm and continue.
5. The touch window will calculate to enter your Target HR (65%) from your Age.
6. Now you are finished editing the settings and can begin your workout by pressing the Start key.
7. If you want to increase or decrease the workload at any time during the program press the Up or Down key. This will allow you to change your target heart rate at any time during the program.

## Constant Power ( Watts ) program:

The Watts program is a computer controlled constant power program whose Level adjusts when the speed is changed. To start the Constant Power program follow the instructions below or just press the Constant Power key, then the Enter button and follow the directions in the Message Window.

1. Press the Constant Power key, then press the Enter key.
2. The display will ask you to enter your Time. You may use numeric keypads to adjust the time then press ENTER confirm and continue.
3. The touch window will ask you to enter your Age. You may use numeric keypads to adjust the Age then press ENTER confirm and continue.
4. The touch window will ask you to enter your Weight. You may use numeric keypads to adjust the Weight then press ENTER confirm and continue.
5. The touch window will ask you to enter your Target Watts. You may use numeric keypads to adjust the Target Watts then press ENTER confirm and continue.  
(Default Target Watts is 50. Range=50 to 200 )
6. Now you are finished editing the settings and can begin your workout by pressing the Start key.
7. If you want to increase or decrease the workload at any time during the program, press the Up/Down key. This will allow you to change your target Watt level at any time during the program.
8. When the program ends, press Stop key again to exit the program.

# HEART RATE TRAINING

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 usual choice of exercise intensity was 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. 60% of your MHR is the zone that burns fat while 80% is for strengthening the cardiovascular system. This 60% to 80% 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)  
 $180 \times .6 = 108$  beats per minute (60% of maximum)  
 $180 \times .8 = 144$  beats per minute (80% of maximum)

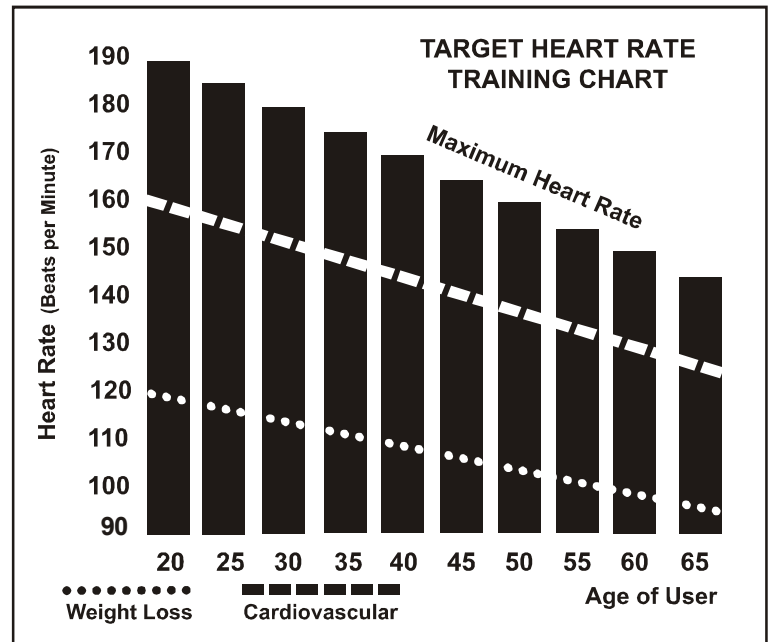
So for a 40 year old the training zone would be 108 to 144 beats per minute.

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 80% or 60%, respectively, of your Maximum Heart Rate on a schedule approved by your physician. Consult your physician before participating in any exercise program.

With all Heart Rate Control bike machines you may use the heart rate monitor feature without using the Heart Rate Control program. This function can be used during manual mode or during any of the nine different programs. The Heart Rate Control program automatically controls resistance at the pedals.

**”WARNING”** Heart rate monitoring system may be inaccurate. Over exercise may result in injury or death. If you feel faint stop exercising immediately.



# 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 workout 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

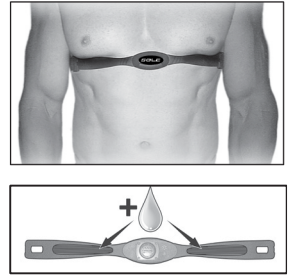
- 6 Minimal
- 7 Very, very light
- 8 Very, very light +
- 9 Very light
- 10 Very light +
- 11 Fairly light
- 12 Comfortable
- 13 Somewhat hard
- 14 Somewhat hard +
- 15 Hard
- 16 Hard +
- 17 Very hard
- 18 Very hard +
- 19 Very, very hard
- 20 Maximal

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



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

## ERRATIC OPERATION

**CAUTION!** Do not use this bike for Heart Rate 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. Microwave ovens, TV's, small exercise equipments, etc.
2. Fluorescent lights.
3. Some household security systems.
4. Perimeter fence for a pet.
5. Some people have problems with the transmitter picking up a signal from their skin. If you have problems try wearing the transmitter upside down. Normally the transmitter will be oriented so the logo is right side up.
6. The antenna that picks up your heart rate is very sensitive. If there is an outside noise source, turning the whole machine 90 degrees may de-tune the interference.
7. Another Individual wearing a transmitter within 3' of your machine's console.

If you continue to experience problems contact your dealer.

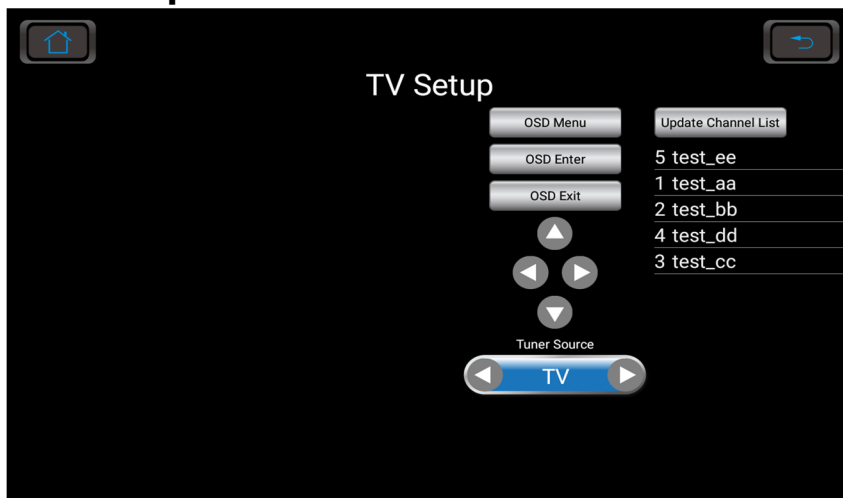
# SYSTEM MAINTENANCE SUITE

Press the “Home” icon 10 consecutive repetitions to enter the Maintenance suite.



The two most commonly used menus for setting up the exercise machine are described below; the TV Setup and Maintenance menus. For information on other sections of the Maintenance suite refer to the technical service manual or call Spirit service.

## TV Setup

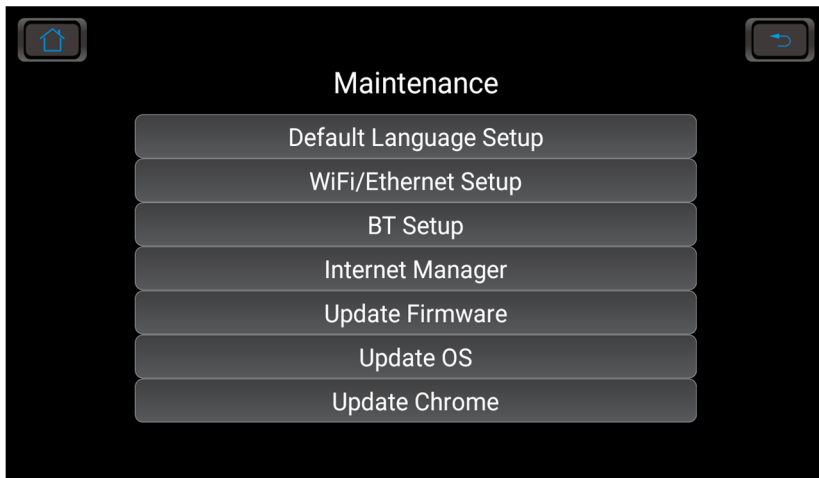


1. Begin by selecting either TV or HDMI as the tuner source.



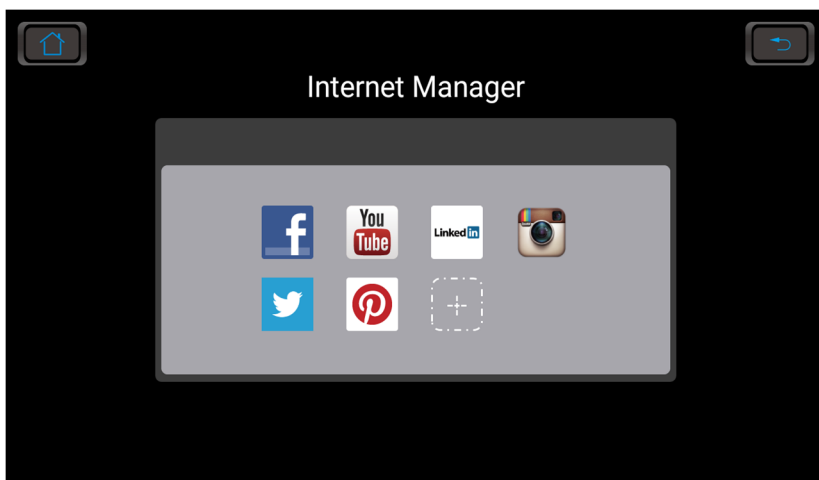
2. If TV is chosen press 'OSD Menu'. The first highlighted item on the menu is 'Air/Cable' and then 'Cable' or 'Air' afterward (Air = TV signals broadcasted over the air instead of a cable). Press the 'OSD Enter' to change the selection between Cable and Air Signal source, usually Cable).
3. After selecting Cable or Air use the arrows located below the 'OSD Exit' key to navigate down to 'Auto Scan' then press 'OSD Enter'. The tuner will now scan for all available channels. Press 'OSD Exit' when done. You can modify the channels by pressing the 'Update Channel List'.
4. The 'OSD Command' button is for engineering use only.

## Maintenance Menu



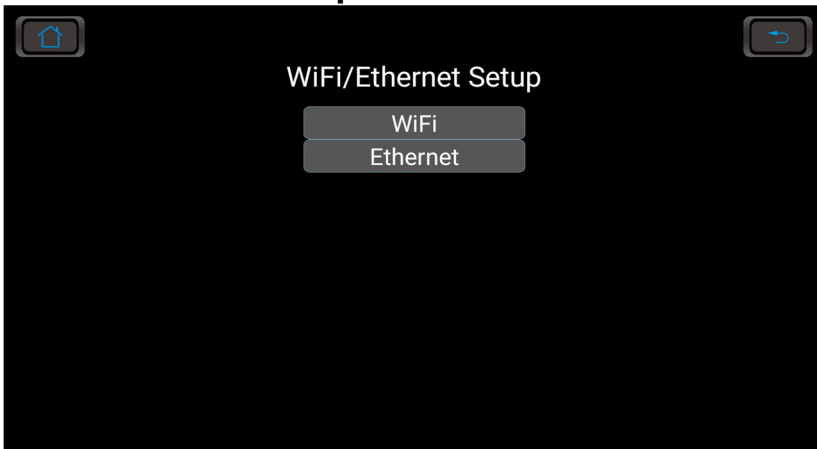
- The **Default language setup** allows you to select the main language that will be shown when the console is turned on. You are able to select the language in the Home menu, but once the user finishes using the machine the console will return to this default language.
- **Wifi / Ethernet setup** Is for selecting a Wifi signal or Ethernet addresses.
- **BT setup** Is for selecting a Bluetooth device.
- **Internet manager** Allows you to modify the internet sites that are shown in the Internet menu.
- **Update firmware** Update firmware of console.
- **Update OS** Update console operating system.
- **Update Chrome** Update Chrome to new version.

## Internet Manager



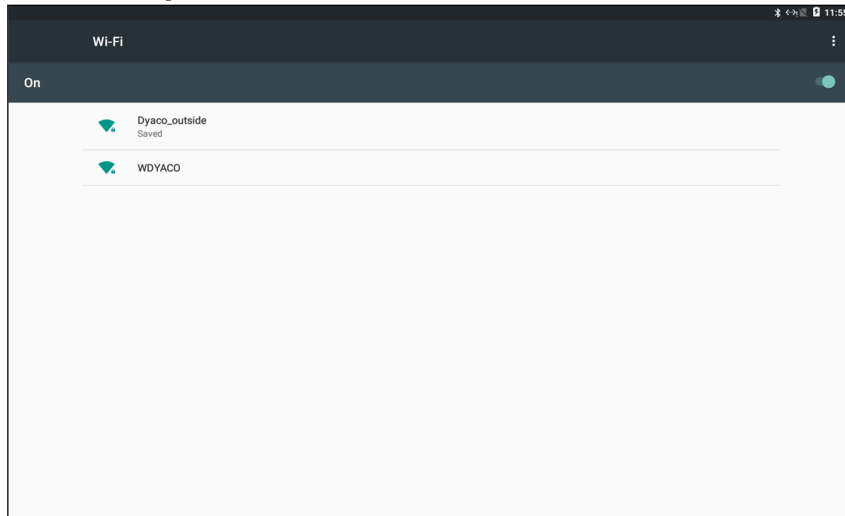
- Remove a link by pressing the icon of the site you want to remove for 2 seconds. A pop-up window will ask you to confirm the removal.
- To add a website press the dotted outline box. A pop-up window will ask you to enter the web address and upload a picture for the final button if you wish. You could also just use a default-look button and type in the name of the site, which will then be the button icon.

## Wifi /Ethernet Setup



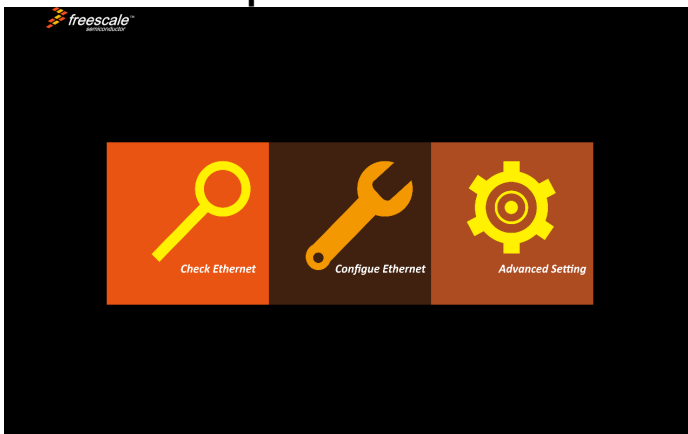
- Press the desired button for setting up Wifi or Ethernet.

## Wifi Setup

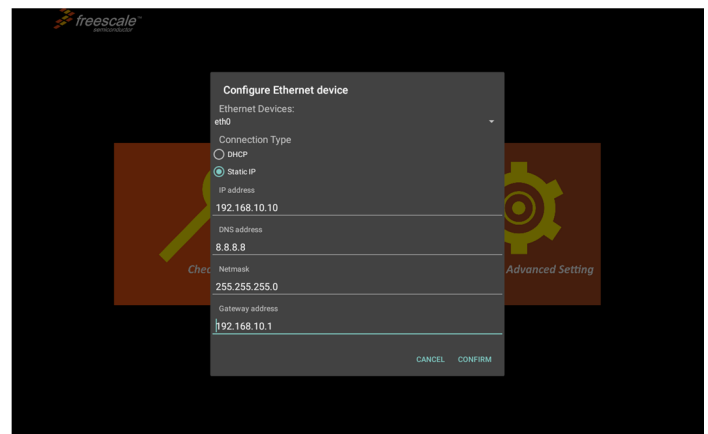


- Turn Wifi on and press scan for available Wifi connections. Press desired connection and follow the on-screen directions.

## Ethernet Setup



- Press Ethernet Configuration to set up



- Select DHCP to search for connection or a new connection.



## GENERAL MAINTENANCE

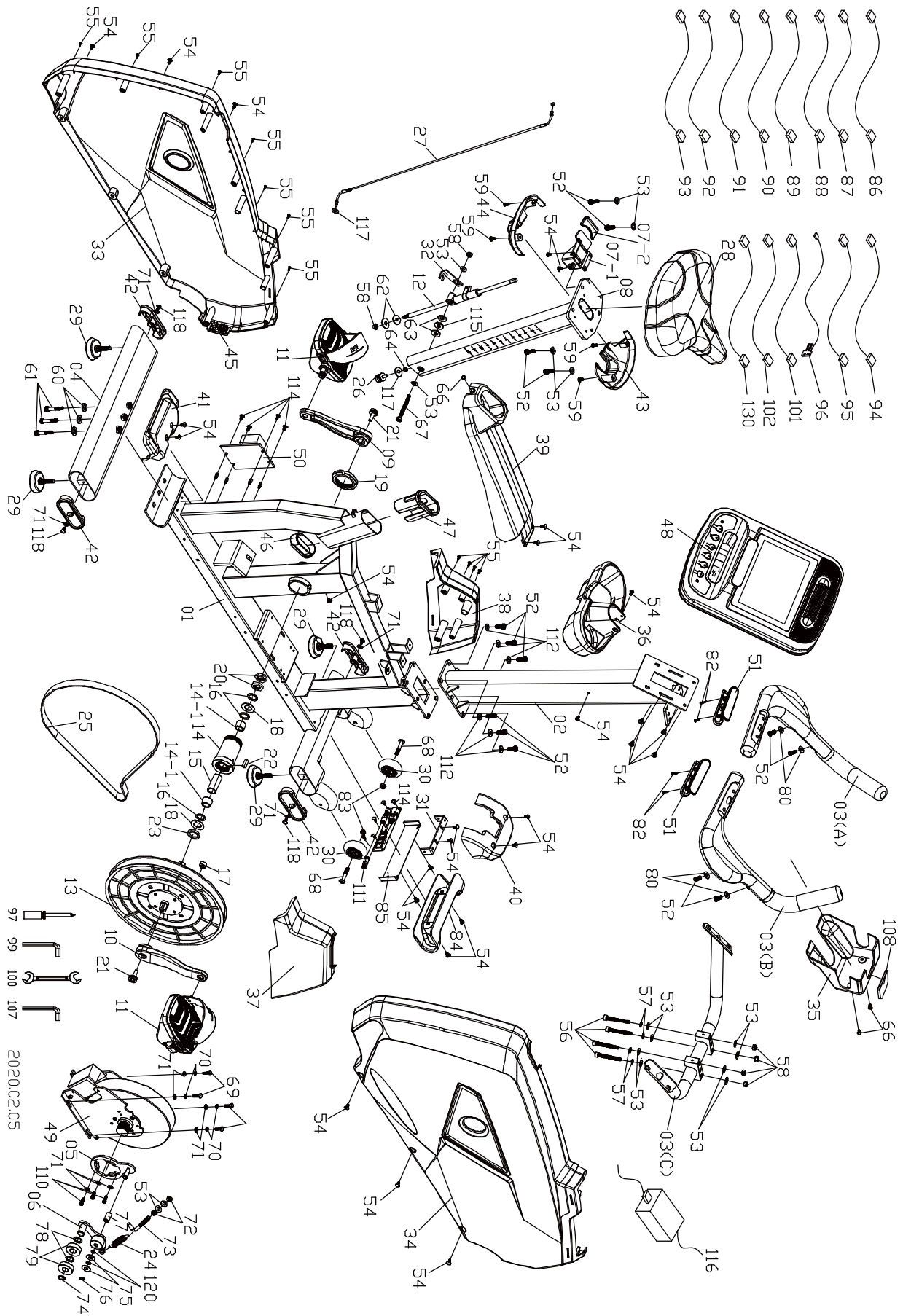
1. Wipe down all areas in the sweat path with a damp cloth after each workout.
2. If a squeak, thump, clicking or rough feeling develops the main cause is most likely one of two reasons:
  - 1) The hardware was not sufficiently tightened during assembly. All bolts that were installed during assembly 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.
  - 2) The crank arm nut and/or the pedals need to be retightened.
3. If squeaks or other noises persist, check that the unit is properly leveled. There are 2 leveling pads on the bottom of the rear stabilizer, use a 14mm wrench (or 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.

- 1) Replace defective components immediately and/or keep the equipment out of use until repair.
- 2) The components which are most susceptible to wear: Belt · Shaft · Bearing · Idler · Pedal °

# EXPLODED VIEW DIAGRAM



# PARTS LIST

NO.	DESCRIPTION	Q'TY
1	Main Frame	1
2	Console Mast	1
3(A)	Seat Handle Bar (L)	1
3(B)	Seat Handle Bar (R)	1
3(C)	Handgrip Stabilizer Assembly	1
4	Rear Stabilizer	1
5	Idler Bracket	1
6	Idler Wheel Assembly (Lower)	1
7~01	Release Lever	1
7~02	Nylon Handgrip	1
8	Rail Assembly	1
9	Crank Arm(L)	1
10	Crank Arm(R)	1
11	Pedal	1
12	Shaft	1
13	Drive Pulley	1
14	Bearing Bracket	1
15	Core	1
16	Back Plate	3
17	Ø15 × 7T_Magnet	1
18	Plate	2
19	M50 × P1.5 × 11T_Nut	1
20	M20 × P1.0 × 6T_Nut	2
21	M8 × P1.0 × 25L_Arbor Screw	2
22	Woodruff Key	1
23	Axle Back Plate	1
24	Tension Spring, Idler Assembly	1
25	Drive Belt	1
26	Rubber Foot	1
27	Steel Cable	1
28	Seat	1
29	Adjustment Foot	4
30	Transportation Wheel	2
31	Chain Cover Attaching Plate	1
32	Fixing Plate	1
33	Side Case (L)	1
34	Sider Case (R)	1
35	Rear Cover	1
36	Beverage Holder	1
37	Console Mast Cover-R	1
38	Console Mast Cover-L	1
39	Console Mast Cover	1

<b>NO.</b>	<b>DESCRIPTION</b>	<b>Q'TY</b>
<b>40</b>	Front Stabilizer Cover	1
<b>41</b>	Rear Stabilizer Cover	1
<b>42</b>	Cap	4
<b>43</b>	Front Seat Cover	1
<b>44</b>	Rear Seat Cover	1
<b>45</b>	Electronic Module	1
<b>46</b>	Slider Sleeve,Ø40×80×23L	1
<b>47</b>	Slider Sleeve,Ø40×80	1
<b>48</b>	Console Assembly	1
<b>49</b>	Induction Brake	1
<b>50</b>	Generator/Brake Controller	1
<b>51</b>	30m/m_Handpulse W/Cable Assembly	2
<b>52</b>	M8 × P1.25 × 20L_Socket Head Cap Bolt	14
<b>53</b>	Ø8.5 × Ø18 × 1.5T_Flat Washer	16
<b>54</b>	M5 × P0.8 × 12L_Phillips Head Screw	27
<b>55</b>	3.5 × 12m/m_Sheet Metal Screw	11
<b>56</b>	M8 × P1.25 × 65L_Socket Head Cap Bolt	4
<b>57</b>	Ø8 × 1.5T_Split Washer	4
<b>58</b>	M8 × 7T_Nyloc Nut-Blacking	6
<b>59</b>	M5 × P0.8 × 12L_Phillips Head Screw	4
<b>60</b>	Ø13 × 23 × 2.0T_Flat Washer	3
<b>61</b>	M10 × P1.5 × 55L_Socket Head Cap Bolt	3
<b>62</b>	Ø8.5 × Ø26 × 2.0T_Flat Washer	2
<b>63</b>	Ø10 × Ø24 × 3T_Nylon Washer	2
<b>64</b>	M6 × P1.0 × 5.0T_Nut	1
<b>66</b>	M5 × 6m/m_Phillips Head Screw	3
<b>67</b>	M8 × 80m/m_Socket Head Cap Bolt	1
<b>68</b>	5/16" × UNC18 × 1-3/4" _Button Head Socket Bolt	2
<b>69</b>	1/4" × UNC20 × 3/4" _Hex Head Bolt	4
<b>70</b>	Ø1/4" _Split Washer	4
<b>71</b>	Ø1/4" × 13 × 1.0T_Flat Washer	11
<b>72</b>	M8 × 6T_Nut	2
<b>73</b>	M8 × 80m/m_J Bolt	1
<b>74</b>	Ø17_C Ring	1
<b>75</b>	Ø10 × Ø25 × 0.8T_Nylon Washer	2
<b>76</b>	Ø10_C Ring	1
<b>77</b>	Podwer metallurgy Sleeve	1
<b>78</b>	Ø17 × Ø23.5 × 1.0T_Flat Washer	2
<b>79</b>	6203_Bearing	2
<b>80</b>	Ø8 × Ø20 × 3T_Flat Washer	4
<b>82</b>	3 × 20m/m_Tapping Screw	4
<b>83</b>	5/16" × 6T_Nyloc Nut	2
<b>84</b>	TVC Cover	1
<b>85</b>	Transfer board	1

<b>NO.</b>	<b>DESCRIPTION</b>	<b>Q'TY</b>
<b>86</b>	800m/m_Handpulse Wire	1
<b>87</b>	150m/m_Connecting Cable	1
<b>88</b>	1350m/m_Communication Cable	1
<b>89</b>	1300m/m_TV Signal Cable	1
<b>90</b>	1350m/m_Connecting Wire	1
<b>91</b>	1900m/m_8P Computer Cable	1
<b>92</b>	2000m/m_TFT Power Cord	1
<b>93</b>	200m/m_DC Power Cord	1
<b>94</b>	1100m/m_Connecting Wire	1
<b>95</b>	400m/m_Wire Brake Coil Harness(Red)	1
<b>96</b>	800m/m_Sensor W/Cable	1
<b>97</b>	Phillips Head Screw Driver	1
<b>99</b>	6_L Allen Wrench(6×27×120L)	1
<b>100</b>	13/15m/m_Wrench	1
<b>101</b>	800m/m_Handpulse Wire	1
<b>102</b>	150m/m_Connecting Cable	1
<b>107</b>	L Allen Wrench(M10,M8×36×96L)	1
<b>108</b>	End Cap	1
<b>110</b>	M5 × 15L_Socket Head Cap Bolt	3
<b>111</b>	Combo Board	1
<b>112</b>	Ø8.5 × 16 × 1.5T_Flat Washer	6
<b>114</b>	M3 × 6m/m_Phillips Head Screw	9
<b>115</b>	Ø8.5 × Ø26 × 2.0T_Flat Washer	1
<b>116</b>	Power Adaptor	1
<b>117</b>	Ø6 × Ø19 × 3.0T_Flat Washer	2
<b>118</b>	M5 × 15m/m_Phillips Head Screw	4
<b>119</b>	Power Cord(Optional)	1
<b>120</b>	Rubber Pad	2
<b>130</b>	1300m/m_Connecting Wire	1