

# FAN BIKE



## Owner's Manual

- Assembly
- Usage
- Parts



**CAUTION:** Weight on this product should not exceed 113 kgs.

**CAUTION:** Exercise of a strenuous nature, as is customarily done on this equipment, should not be undertaken without first consulting a physician. No specific health claims are made or implied as they relate to the equipment. Measurements made by the equipment are believed to be accurate, but only the measurements of your physician should be relied upon.

**IMPORTANT:** Read all instructions carefully before using this product. Retain this owner's manual for future reference.

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## SAFETY PRECAUTIONS

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 product has been designed for home use only. Product liability and guarantee conditions will not be applicable to products being subjected to professional use or products being used in a gym center.

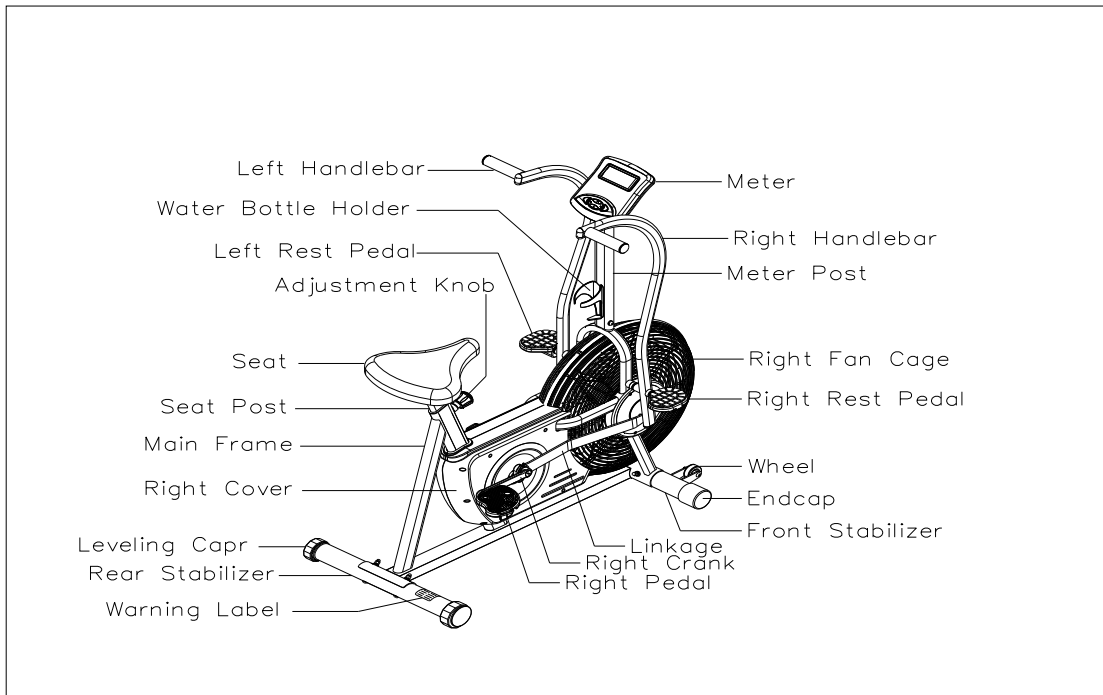
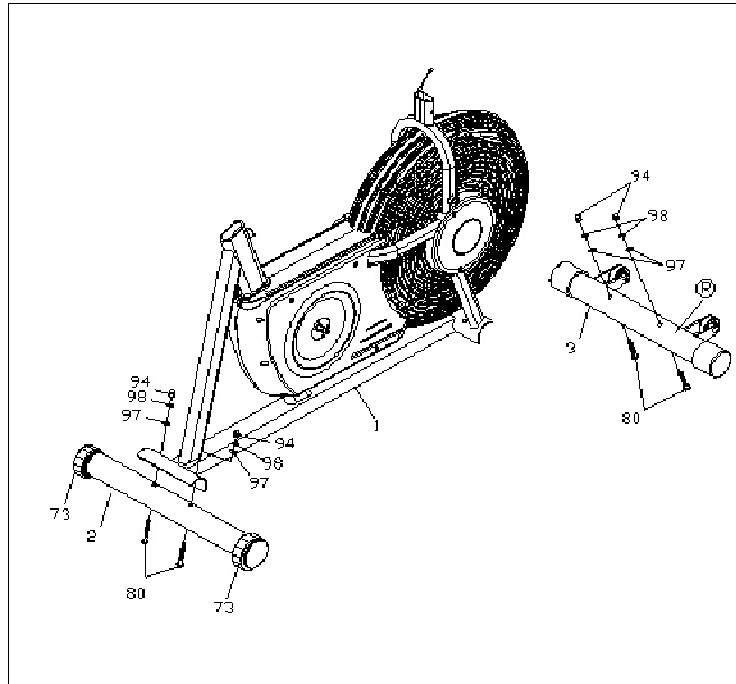
This exercise equipment was designed and built for optimum safety. However, certain precautions apply whenever you operate a piece of exercise equipment. Be sure to read the entire manual before assembly and operation of this machine. Also, please note the following safety precautions:

1. Read this OWNER'S OPERATING MANUAL and all accompanying literature and follow it carefully before using your upright cycle.
2. 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.
3. Inspect your exercise equipment prior to exercising to ensure that all nuts and bolts are fully tightened before each use.
4. The upright cycle must be regularly checked for signs of wear and damage. Any part found defective must be replaced with a new part from the manufacturer.
5. Fitness equipment must always be installed on a flat 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.
6. No changes must be made which might compromise the safety of the equipment.
7. It is recommended to have a minimum of 2' safe clearance around the exercise equipment while in use.
8. Keep children and pets away from this equipment at all times while exercising.
9. 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.
10. Never hold your breath while exercising. Breathing should remain at a normal rate in conjunction with the level of exercise being performed
11. Always wear suitable clothing and footwear while exercising. Do not wear loose fitting clothing that could become entangled with the moving parts of your upright cycle.
12. Care must be taken when lifting or moving the equipment, so as not to injure your back. Always use proper lifting techniques.
13. User weight should not exceed 250 lbs.
14. Tie all long hair back.
15. Remove all personal jewelry before exercising.
16. After eating, allow 1-2 hours before exercising as this will help to prevent muscle strain.
17. Injuries may result from incorrect or excessive training and using the equipment otherwise than as directed or recommended by your doctor.

**WARNING:**





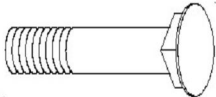
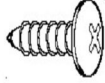
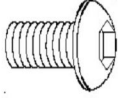








BEFORE BEGINNING ANY EXERCISE PROGRAM CONSULT YOUR PHYSICIAN. THIS IS ESPECIALLY IMPORTANT FOR INDIVIDUALS OVER THE AGE OF 35 OR PERSONS WITH PRE-EXISTING HEALTH PROBLEMS. READ ALL INSTRUCTIONS BEFORE USING ANY FITNESS EQUIPMENT. WE ASSUME NO RESPONSIBILITY FOR PERSONAL INJURY OR PROPERTY DAMAGE SUSTAINED BY OR THROUGH THE USE OF THIS PRODUCT.

**PRE-ASSEMBLY CHECK**



## HARDWARE PACKING LIST

After unpacking the unit, open the hardware bag and make sure that you have all the following items. Some hardware may be already attached to the part.

	Part Number and Description	Qty
	45 Tooth Lock Washer (M10)	2
	46 Left Flange Nut, Brass Color (M10 x 1.25, Left Hand Threads)	1
	47 Right Flange Nut, Black Color (M10x1.25, Right Hand Threads)	1
	49 Wavy Washer (ø17 x ø22 x 0.4mm)	2
	80 Carriage Bolt (M8 x 1.25 x 75mm)	4
	85 Screw, Round Head (M5 x 15mm)	2
	87 Bolt, Button Head (M8 x 1.25 x 15mm)	4
	94 Acorn Nut (M8 x 1.25)	4
	97 Arc Washer (M8)	6
	60 Washer (ø16.2 x ø22 x 1.5mm)	2
	61 Washer (ø10 x ø25.4 x 2mm)	2
	96 Washer (M8)	8
	92 Nylock Nut (M8x1.25)	6
	98 Lock Washer (M8)	8
	58 Plastic Washer (ø10 x ø18 x 2mm)	4

## ASSEMBLY INSTRUCTIONS

This manual is designed to help you easily assemble, adjust and use this machine. Please read this manual carefully. For the sake of familiarizing yourself with the parts identified in the instruction, first study the overview drawing. Set all parts in a clear area on the floor and remove the packing material. Refer to the parts list for help to identify the parts. It will take two people to assemble your unit.

### STEP 1

Position the FRONT STABILIZER (3) with the R mark on the right side so the WHEELS (76) face the front.

Attach the FRONT STABILIZER (3) to the MAIN FRAME (1) with CARRIAGE BOLTS (M8x1.25x75mm)

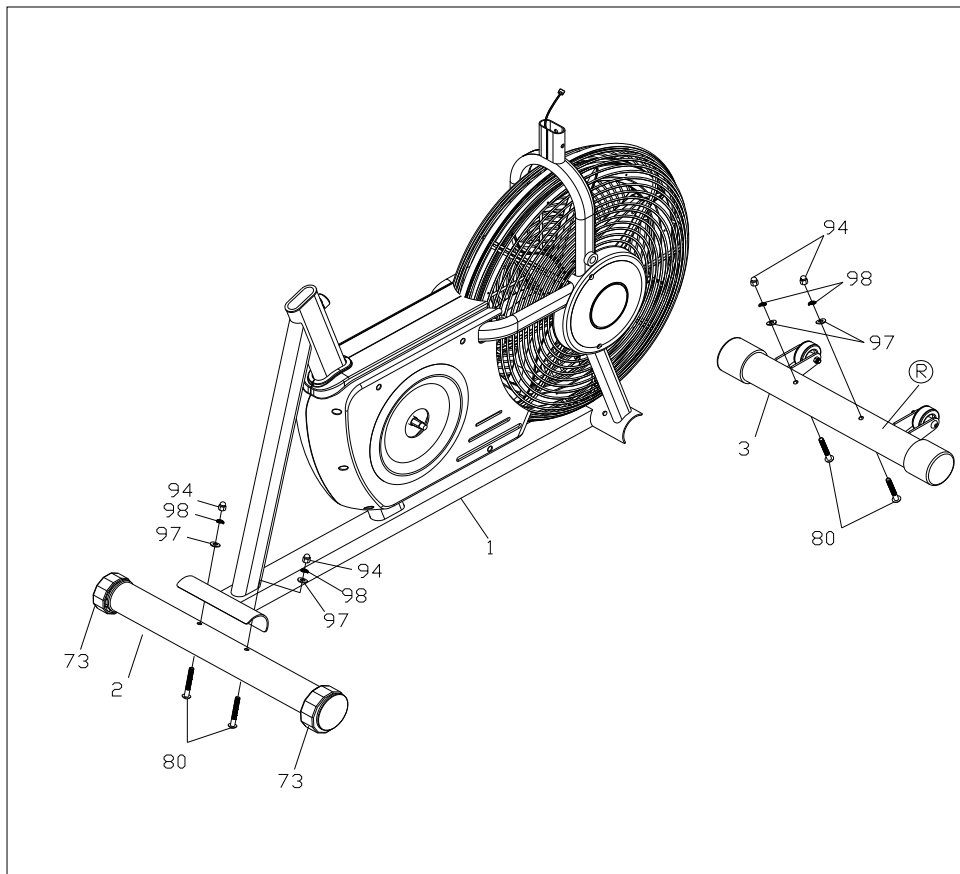
(80), ARC WASHERS (M8)(97), LOCK WASHERS(M8)(98), and ACORN NUTS (M8x1.25)(94).

### STEP 2

Attach the REAR STABILIZER (2) to the MAIN FRAME (1) with CARRIAGE BOLTS (M8x1.25x75mm)

(80), ARC WASHERS (M8)(97), LOCK WASHERS(M8)(98), and ACORN NUTS (M8x1.25)(94).

NOTE: You can adjust the LEVELING CAPS (73) on the REAR STABILIZER (2) to keep the Fan bike level

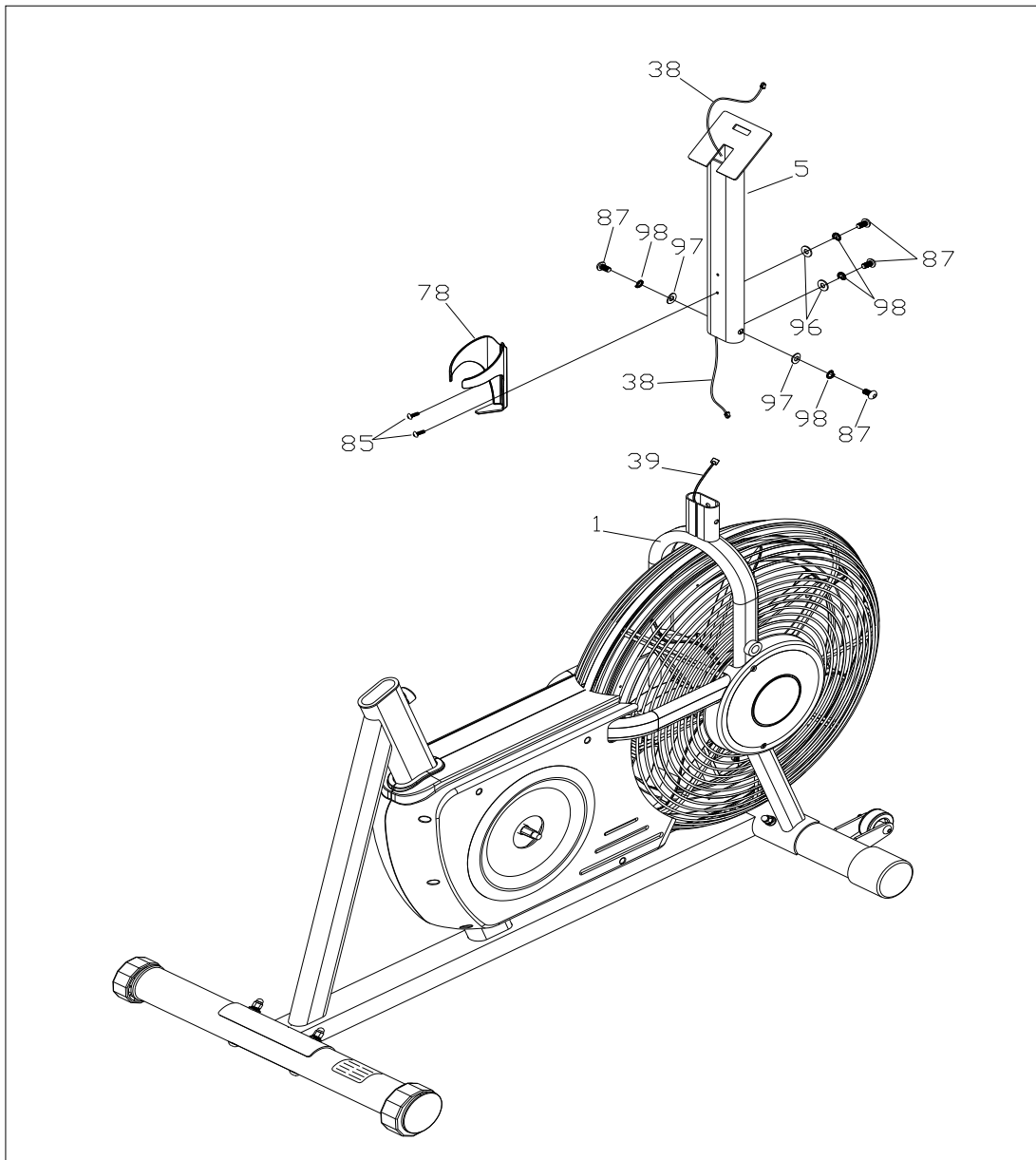


**STEP 3**

Connect the CONNECTION WIRE (38) to the SENSOR WIRE (39). Insert the METER POST (5) onto the MAIN FRAME (1) and secure with BUTTON HEAD BOLTS (M8x1.25x15mm)(87), WASHERS (M8)(96), WASHERS(M8)(97), and LOCK WASHERS(M8)(98).

**STEP 4**

Attach the WATER BOTTLE HOLDER (78) to the METER POST (5) with ROUND HEAD SCREWS (M5x15mm)(85).



**WARNING:** The SMALL CRANKS (44) require a special tool to remove once assembled. Read all of the following ASSEMBLY INSTRUCTIONS before attaching the SMALL CRANKS (44).

**NOTE: 1.** Align the ARROW MARK on the SMALL CRANK (44) with the WHITE MARK on the AXLE (9) when installing the two SMALL CRANKS (44) onto the AXLE (9). Refer to inset drawing A.

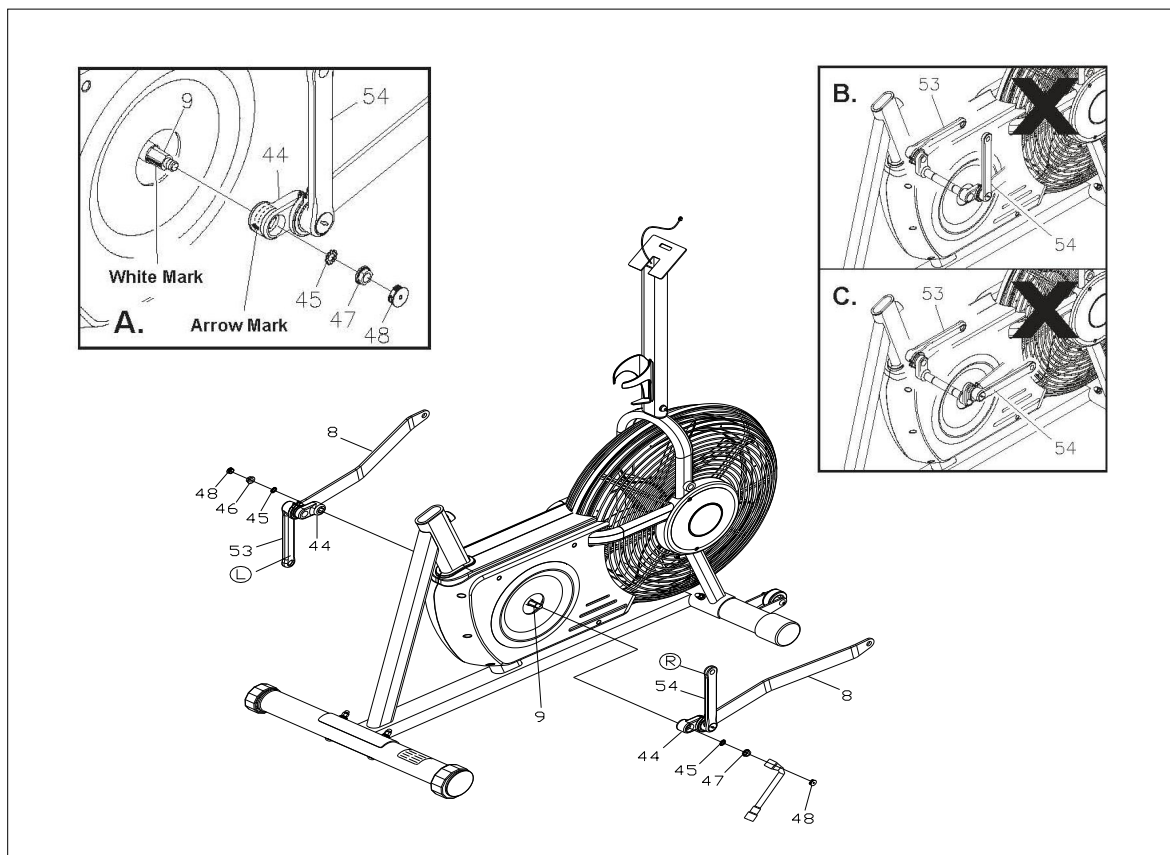
**NOTE: 2.** The RIGHT FLANGE NUT (M10x1.25)(47), black color, has right hand threads and is tightened by turning clockwise. The LEFT FLANGE NUT (M10x1.25)(46), brass color, has left hand threads and is tightened by turning counterclockwise.

**NOTE: 3.** There is an "L" decal on the LEFT CRANK(53), and an "R" decal on the RIGHT CRANK(54).

### STEP 5

To assemble the RIGHT CRANK (54), install the SMALL CRANK (44) onto the AXLE (9) with LOCK WASHER (M10)(45) and RIGHT FLANGE NUT (M10x1.25)(47). Insert an Allen wrench through the hole in the socket wrench to be the handle. SECURELY TIGHTEN the RIGHT FLANGE NUT (M10x1.25) (47) with the socket wrench. Push the CRANK CAP(48) into the SMALL CRANK(44).

**CAUTION:** It is possible to assemble the LEFT CRANK (53) and the RIGHT CRANK (54) the wrong way shown in inset drawings B and C. The SMALL CRANK (44) on the LEFT CRANK (53) must be assembled the opposite direction from the right side. Refer to the below illustration. Use the same procedure as above to assemble the LEFT CRANK (53).





**STEP 6**

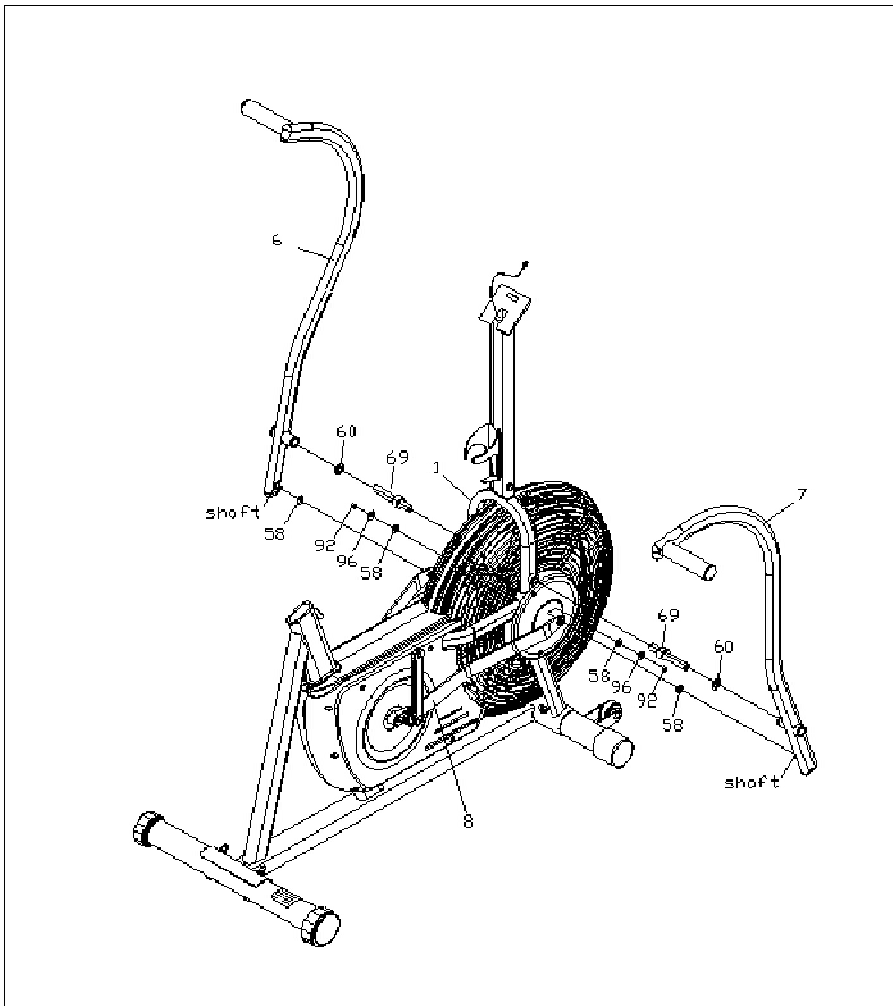
Bolt the HANDLEBAR SHAFTS (69) to the MAIN FRAME (1) on both sides and securely tighten.

**STEP 7**

Slide the WASHER ( $\varnothing 16.2 \times \varnothing 22 \times 1.5 \text{mm}$ )(60) onto the HANDLEBAR SHAFT (69). Slide the RIGHT HANDLEBAR (7) onto the HANDLEBAR SHAFT (69) in approximately the center of the sliding range.

Place the PLASTIC WASHER ( $\varnothing 10 \times \varnothing 18 \times 2 \text{mm}$ )(58) on the SHAFT on the lower end of the RIGHT HANDLEBAR (7). Connect the right LINKAGE (8) to the RIGHT HANDLEBAR (7), then slide the RIGHT HANDLEBAR (7) completely onto the HANDLEBAR SHAFT (69). Secure the right LINKAGE (8) with the PLASTIC WASHER ( $\varnothing 10 \times \varnothing 18 \times 2 \text{mm}$ )(58), WASHER (M8)(96), and NYLOCK NUT (M8x1.25)(92).

Repeat on other side.



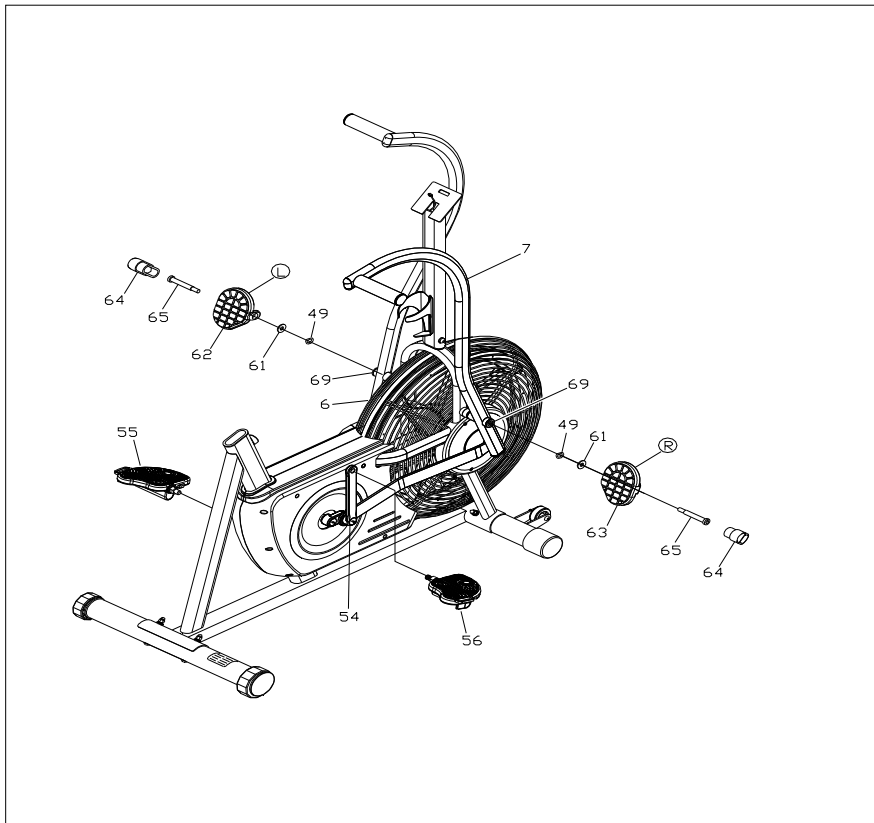
**STEP 8**

There is an “L” mark on the bottom side of the LEFT REST PEDAL (62), and an “R” mark on the bottom side of the RIGHT REST PEDAL (63). Attach the RIGHT REST PEDAL (63) to the HANDLEBAR SHAFT (69) in the RIGHT HANDLEBAR (7) with WAVY WASHER ( $\varnothing 17 \times \varnothing 22 \times 0.4 \text{mm}$ )(49), WASHER ( $\varnothing 10 \times \varnothing 25.4 \times 2 \text{mm}$ )(61), and the SHAFT BOLT (65). Press the PEDAL COVER (64) into the RIGHT REST PEDAL (63). Repeat on other side.

**STEP 9**

NOTE: The RIGHT PEDAL (56) has R stamped on the end of the pedal shaft. The RIGHT PEDAL (56) has right hand threads and is tightened by turning clockwise. The LEFT PEDAL (55) has L stamped on the end of the pedal shaft. The LEFT PEDAL (55) has left hand threads and is tightened by turning counterclockwise.

Thread the RIGHT PEDAL (56) into the RIGHT CRANK (54) as shown. Tighten the pedal securely. Repeat on the left side to attach the LEFT PEDAL (55) to the LEFT CRANK (53).



**STEP 10**

Attach the SEAT (70) to the SEAT POST(4) with NYLOCK NUTS(M8x1.25)(92) and WASHERS(M8)(96). Insert the SEAT POST (4) into the MAIN FRAME (1) and secure with the ADJUSTMENT KNOB (72).

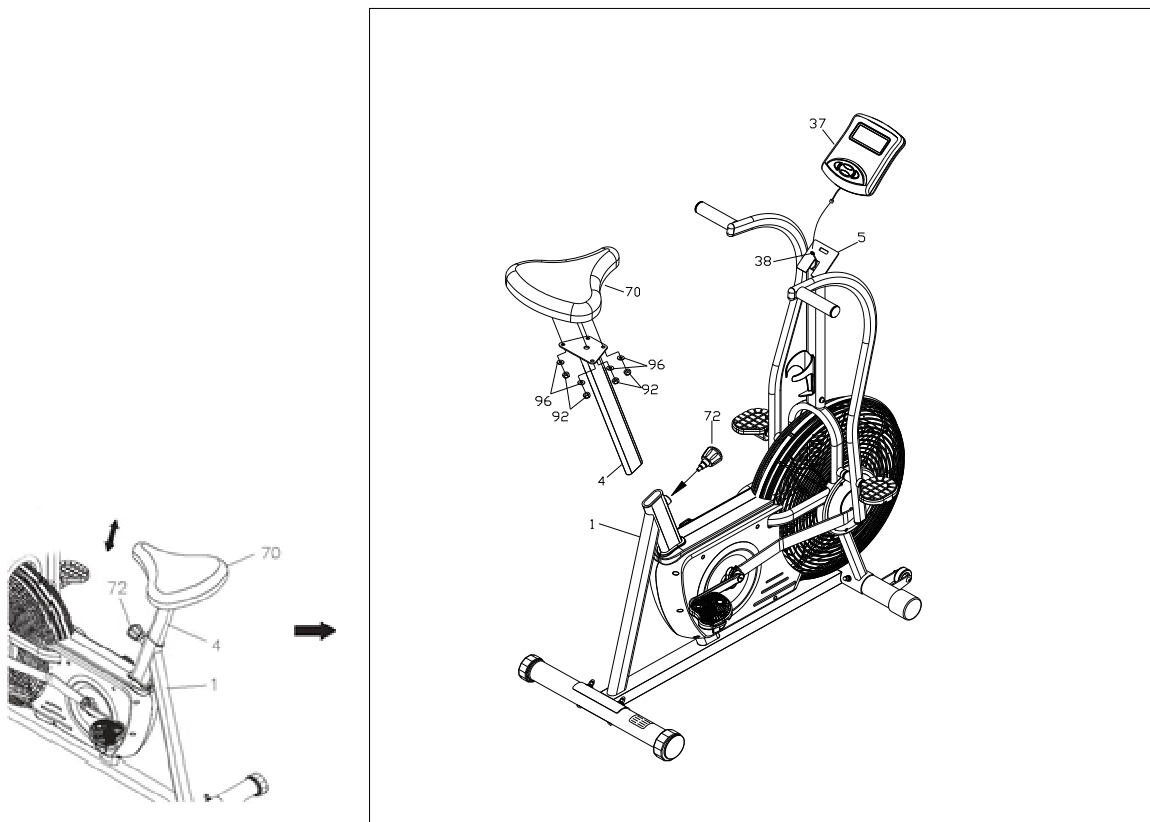
Proper seat height is important for efficient exercise. To determine proper seat height, sit on the Fan bike and center the ball of your foot on the pedal in the down position.

If your leg is too straight or if your foot cannot touch the pedal when extended at the down stroke, you will need to lower the seat. If your leg is bent too much, you will need to raise the seat. Loosen and pull the ADJUSTMENT KNOB (72), then lower or raise the SEAT(70) to the desired height, and secure with the ADJUSTMENT KNOB (72). Make all adjustments to seat height while off of the bike.

**NOTE:** The pin of the ADJUSTMENT KNOB (72) must be inserted into one of the adjustment holes in the SEAT POST (4) and the ADJUSTMENT KNOB (72) must be screwed in tight to ensure that the SEAT POST (4) will fit securely in the MAIN FRAME (1).

**STEP 11**

Install two AA batteries into the METER (37), the batteries are not included. See page 15 for detailed battery installation instructions. Plug the CONNECTION WIRE (38) into the METER (37), and push the excess wires back into the METER POST (5). Slide the METER (37) onto the plate on the METER POST (5). Be careful not to damage the wires when attaching the METER (37).

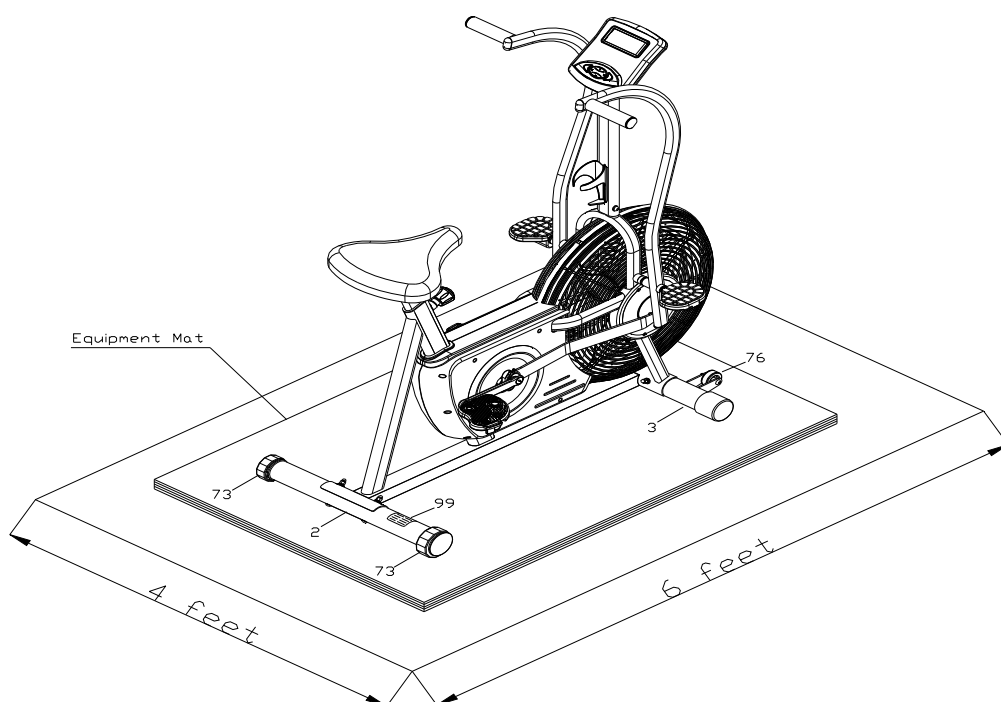


## SET UP INSTRUCTIONS

Place the Fan bike in the area where it will be used. It is recommended that the Fan bike be placed on an equipment mat. The Fan bike is approximately 48 inches long x 24.6 inches wide x 52 inches tall. An area 4 feet wide x 6 feet long is required for safe operation of the Fan bike. Make sure that adequate space is available for access to and passage around the Fan bike.

**LEVELING:** Adjust the LEVELING CAPS (73) on the REAR STABILIZER (2) so that the Fan bike sits on the floor without rocking.

**MOVING:** The Fan bike has a pair of WHEELS (76) on the FRONT STABILIZER (3). Lift up the REAR STABILIZER (2) to move the Fan bike.



### FUNCTIONAL INSPECTION:

Visually inspect the Fan bike to verify that assembly is as shown in the above illustration. Check the function of the Fan bike by turning the crank slowly through one complete revolution to verify that the drive train functions properly.

### STORAGE:

1. To store the Fan bike, simply keep it in a clean dry place.
2. The Fan bike is approximately 48" long x 24.6" wide x 52" tall. These dimensions may vary. Please measure your Fan bike if exact dimensions are needed.
3. To move the Air 525, lift the REAR STABILIZER (2) and use the wheels (76) on the FRONT STABILIZER(3).
4. To avoid damage to the electronics, remove the batteries before storing the Fan bike for one year or more.

## COMPUTER INSTRUCTIONS

**POWER ON:** By Pedal movement or pressing the MODE button.

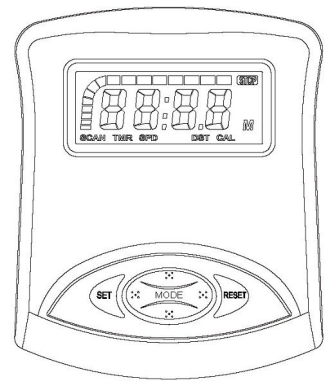
**POWER OFF:** Automatic shut off after four minutes of inactivity.

### FUNCTION BUTTONS:

**MODE:** Press and release to select functions for display or to preset target values.

**SET:** Press to set target values for TIME, DISTANCE, and CALORIES.

**RESET:** This button will reset each function to zero. To reset all functions Functions to zero, press the button and hold it down for four seconds.



### SPEED INDICATOR:

When pedaling, the LCD will display a bar to show the approximate current speed.

### PRESET VALUES OPERATION:

Stop pedaling for four seconds. When "STOP" appears, the meter is in setting mode. The meter will cycle through the functions as follows and allow you to set the function values.

**Time (0:00 to 99:00) → Distance (0.0 to 99.99 miles) → Calorie (0.0 to 999.9 Kcal)**

Use the SET and RESET buttons to choose desired setting values, and press MODE button to confirm.

Or, just press the MODE button to skip the setting and move on to the next function. After all the desired settings are chosen, begin pedaling to start the workout.

### FUNCTIONS:

**SCAN:** Automatically scans TIME, SPEED, DISTANCE, and CALORIES in sequence with a change every four seconds. Press and release the MODE button until "SCAN" appears on display.

**TIME:** Press the MODE button until "TMR" appears to display the time from one second up to 99:59 minutes. Counts down from preset value.

**SPEED:** Press the MODE button until "SPD" appears to display the current speed from zero to 999.9 miles per hour.

**DISTANCE:** Press the MODE button until "DST" appears to display the distance from zero to 99.99 miles. Counts down from the preset value.

**CALORIE:** Press the MODE button until "CAL" appears to display the calorie consumption from zero to 999.9 Kcal. Counts down from the preset value. The calorie readout is an estimate for an average user. It should be used only as a comparison between workouts on this unit.

**NOTE:** The meter will shut off automatically after four minutes of inactivity. All function values will be kept. Press the RESET button and hold it down for four seconds to reset all functions to zero.

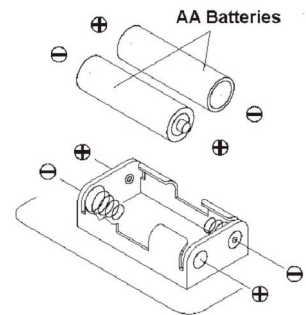
## USE AA Batteries

### HOW TO INSTALL AND REPLACE BATTERIES:

1. Open the Battery Door on the back of the meter.
2. The meter operates with two AA batteries, the batteries are not included. Refer to the illustration to install or replace the batteries.

### NOTE:

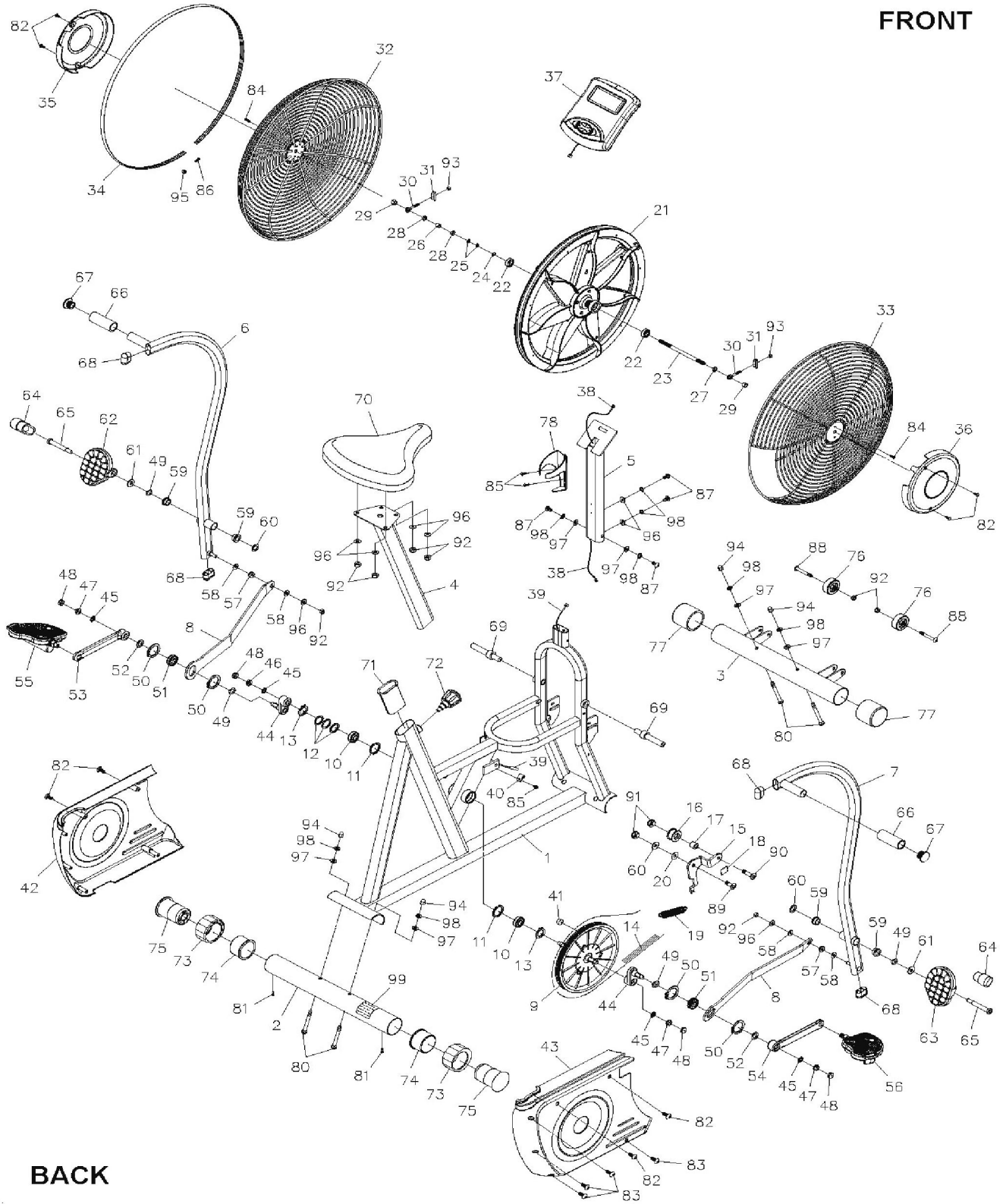
1. Do not mix a new battery with an old battery.
2. Use the same type of battery. Do not mix an alkaline battery with another type of battery.
2. Rechargeable batteries are not recommended.



# EXPLODED DIAGRAM

## PRODUCT PARTS DRAWING

FRONT



BACK

**PARTS LIST**

<b>KEY NO.</b>	<b>DESCRIPTION</b>	<b>QTY</b>
1	Main Frame	1
2	Rear Stabilizer	1
3	Front Stabilizer	1
4	Seat Post	1
5	Meter Post	1
6	Left Handlebar	1
7	Right Handlebar	1
8	Linkage	2
9	Pulley and Axle	1
10	Bearing (6003z)	2
11	Inner C Ring (35mm)	2
12	Spacer Washer (ø17 x ø22 x 0.5mm)	3
13	C Ring (17mm)	2
14	V-Ribbed Belt	1
15	Idler Arm	1
16	Idler Wheel	1
17	Idler Wheel Spacer	1
18	Foam Pad	1
19	Tension Spring	1
20	Large Washer (ø16 x ø32 x 0.5mm)	1
21	Fan Wheel	1
22	Bearing (6000z)	2
23	Fan Axle	1
24	Wavy Washer (ø10 x ø13 x 0.4mm)	1
25	Spacer Washer (ø10 x ø13 x 0.5mm)	2
26	Spacer (ø10 x ø16 x 13.5mm)	1
27	Thin Nut (3/8" - 26 x 0.2" thick)	1
28	Thin Nut (3/8" - 26 x 0.28" thick)	2
29	Thin Nut (3/8" - 26 x 0.35" thick)	2
30	Eye Bolt (M6 x 1 x 50mm)	2
31	Tension Bracket	2
32	Left Fan Cage	1
33	Right Fan Cage	1
34	Trim Strap	1
35	Left Cage Cover	1
36	Right Cage Cover	1



37	Meter	1
38	Connection Wire	1
39	Sensor Wire	1
40	Sensor Clip	1
41	Magnet	1
42	Left Cover	1
43	Right Cover	1
44	Small Crank	2
45	Tooth Lock Washer (M10)	4
46	Left Flange Nut, Brass Color (M10x1.25, Left Hand Threads)	1
47	Right Flange Nut, Black Color (M10x1.25, Right Hand Threads)	3
48	Crank Cap	4
49	Wavy Washer ( $\varnothing 17 \times \varnothing 22 \times 0.4\text{mm}$ )	4
50	C Ring (35mm)	4
51	Bearing (6003z)	2
52	Plastic Spacer ( $\varnothing 17 \times \varnothing 22 \times 4\text{mm}$ )	2
53	Left Crank	1
54	Right Crank	1
55	Left Pedal	1
56	Right Pedal	1
57	Linkage Bushing	2
58	Plastic Washer ( $\varnothing 10 \times \varnothing 18 \times 2\text{mm}$ )	4
59	Handlebar Bushing	4
60	Washer ( $\varnothing 16.2 \times \varnothing 22 \times 1.5\text{mm}$ )	3
61	Washer ( $\varnothing 10 \times \varnothing 25.4 \times 2\text{mm}$ )	2
62	Left Rest Pedal	1
63	Right Rest Pedal	1
64	Pedal Cover	2
65	Shaft Bolt	2
66	Foam Grip	2
67	Round Plug (25.4mm)	2
68	Oval Plug (20mm x 40mm)	4
69	Handlebar Shaft	2
70	Seat	1
71	Sleeve	1
72	Adjustment Knob	1
73	Leveling Cap	2
74	Cap Bushing	2

<b>75</b>	<b>Securing Cap</b>	<b>2</b>
<b>76</b>	<b>Wheel</b>	<b>2</b>
<b>77</b>	<b>End cap (60mm)</b>	<b>2</b>
<b>78</b>	<b>Water Bottle Holder</b>	<b>1</b>
<b>80</b>	<b>Carriage Bolt (M8 x 1.25 x 75mm)</b>	<b>4</b>
<b>81</b>	<b>Screw, Round Head (M4 x 12mm)</b>	<b>2</b>
<b>82</b>	<b>Screw, Round Head (M4 x 15mm)</b>	<b>8</b>
<b>83</b>	<b>Screw, Round Head (M4 x 25mm)</b>	<b>4</b>
<b>84</b>	<b>Screw, Round Head (M5 x 10mm)</b>	<b>2</b>
<b>85</b>	<b>Screw, Round Head (M5 x 15mm)</b>	<b>3</b>
<b>86</b>	<b>Screw, Round Head (M4 x 0.6 x 35mm)</b>	<b>1</b>
<b>87</b>	<b>Bolt, Button Head (M8 x 1.25 x 15mm)</b>	<b>4</b>
<b>88</b>	<b>Bolt, Button Head (M8 x 1.25 x 38mm)</b>	<b>2</b>
<b>89</b>	<b>Bolt, Flat Head (M10 x 1.5 x 25mm)</b>	<b>1</b>
<b>90</b>	<b>Bolt, Flat Head (M10 x 1.5 x 35mm)</b>	<b>1</b>
<b>91</b>	<b>Nylock Nut (M10 x 1.5)</b>	<b>2</b>
<b>92</b>	<b>Nylock Nut (M8 x 1.25)</b>	<b>8</b>
<b>93</b>	<b>Nylock Nut (M6 x 1)</b>	<b>2</b>
<b>94</b>	<b>Acorn Nut (M8 x 1.25)</b>	<b>4</b>
<b>95</b>	<b>Nut (M4 x 0.6)</b>	<b>1</b>
<b>96</b>	<b>Washer (M8)</b>	<b>8</b>
<b>97</b>	<b>Arc Washer (M8)</b>	<b>6</b>
<b>98</b>	<b>Lock Washer (M8)</b>	<b>8</b>
<b>100</b>	<b>Socket Wrench</b>	<b>1</b>
<b>101</b>	<b>Allen Wrench w/ Screwdriver (6mm)</b>	<b>1</b>
<b>102</b>	<b>Large Wrench</b>	<b>1</b>
<b>103</b>	<b>Wrench</b>	<b>1</b>
<b>104</b>	<b>Manual</b>	<b>1</b>

**TROUBLE SHOOTING**

<b>Problem</b>	<b>Cause</b>	<b>Correction</b>
<b>Monitor does not display</b>	<b>Batteries not installed</b>	<b>Insert batteries</b>
<b>No speed or distance displays on the monitor</b>	<b>Connected wire doesn't connect with extension wire of computer or sensor wire</b>	<b>Securely plug connected wire into extension wire of computer and sensor wire</b>
	<b>Connected wire or sensor wire damaged</b>	<b>Replace connected wire or sensor wire</b>
	<b>Computer not working properly</b>	<b>Replace computer</b>
<b>No tension</b>	<b>Belt drops off the belt pulley and groove of wheel</b>	<b>Put the belt back to the belt pulley and groove of wheel</b>
<b>Grinding</b>	<b>Idler pulley defective</b>	<b>Replace idler pulley</b>
	<b>Fan wheel defective</b>	<b>Replace fan wheel</b>
<b>Squealing</b>	<b>Poly V-belt slipping</b>	<b>Adjust poly v-belt</b>
	<b>Crank bearing defective</b>	<b>Replace crank bearing</b>
	<b>Idle wheel bearing defective</b>	<b>Replace idle wheel bearing</b>
	<b>Fan wheel bearing defective</b>	<b>Replace fan wheel bearing</b>

**MAINTENANCE:**

The safety and integrity designed into the Fan bike can only be maintained when the Fan bike is regularly examined for damage and wear. Special attention should be given to the following:

1. Pedal slowly to verify that the Air Resistance System provides tension. The Air Resistance System should provide many years of use.
2. Use a wrench to verify that the pedals are tightened securely. If tightening is required, remember that the left pedal has left hand threads and is tightened by turning counterclockwise.
3. Verify that all nuts and bolts are present and properly tightened. Replace missing nuts and bolts. Tighten all loose nuts and bolts.
4. It is the sole responsibility of the user/owner to ensure that regular maintenance is performed.
5. Worn or damaged components shall be replaced immediately or the Fan bike removed from service until a repair is made.
6. Keep your Fan bike clean by wiping it off with an absorbent cloth after use.

## 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 of 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 sports people.

**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 the most 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 (MVo<sub>2</sub>). 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 MVO<sub>2</sub> 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, in a 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 you 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 to the central circulation, pooling of blood may occur in the muscles

**Heart Rate:** As you exercise, so the rate at which your heart beat 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 obtain a good training effect with a heart rate of 110-120 beats per minute (BPM) but 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

**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	26	26	25	24	23	22	22	21	20
Beats per Minute	156	156	150	144	138	132	132	126	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 principal 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 for 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.

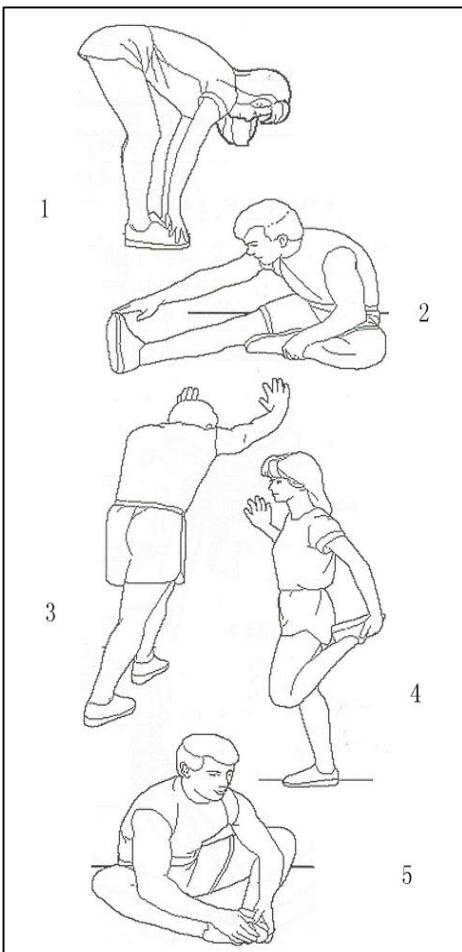
**What to Wear:** Wear clothing that will not restrict your movement in any way while exercising. Clothes should be light enough to allow the body to cool. Excessive clothing that causes you to perspire more than you normally would while exercising, gives you no advantage. The extra weight you lose is 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, not 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.

### Warm Up Exercises:



It is better to do some warm-up exercise. Warm the muscles by easy stretching, and use 5-10 minutes to warm-up. Then stop and the illustrated methods do stretch exercises repeating five times, and then for each foot do 10 seconds or more every time. After running, repeat these stretch exercises.

1. Reach Downs: Knees slightly bent and body slowly bent forward, back and shoulders relax, trying to touch your toes. Keep 10-15 seconds, and relax. Repeat 3 times (See picture 1).

2. Hamstring Stretches: Sitting on a soft cushion, put one leg straight, the other inward and close to the inside of the straight leg. Try to touch your toes by hand. Keeping 10-15 seconds, and relax. Repeat 3 times for each leg (See picture 2).

3. Crus and Feet Tendon Stretches Standing with two hands on the wall, one leg behind. Keeping your legs straight and the heel on the ground, tilt to the wall or tree. Keep 10-15 seconds, and relax. Repeat 3 times for each leg (See picture 3).

4. Quadriceps Stretches keeping your balance with your left hand holding on the wall or table, then stretch your right heel toward your buttocks slowly, until you feel very tense in the front of your thigh. Keep 10-15 seconds, and relax. Repeat 3 times for each leg (See picture 4).

5. Sartorius (Inner Muscles of the Thigh) Muscle Stretches Sitting down with your soles opposite and knees outward. Pull feet toward groin Keep 10-15 seconds, and relax. Repeat 3 times (See picture 5).

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