



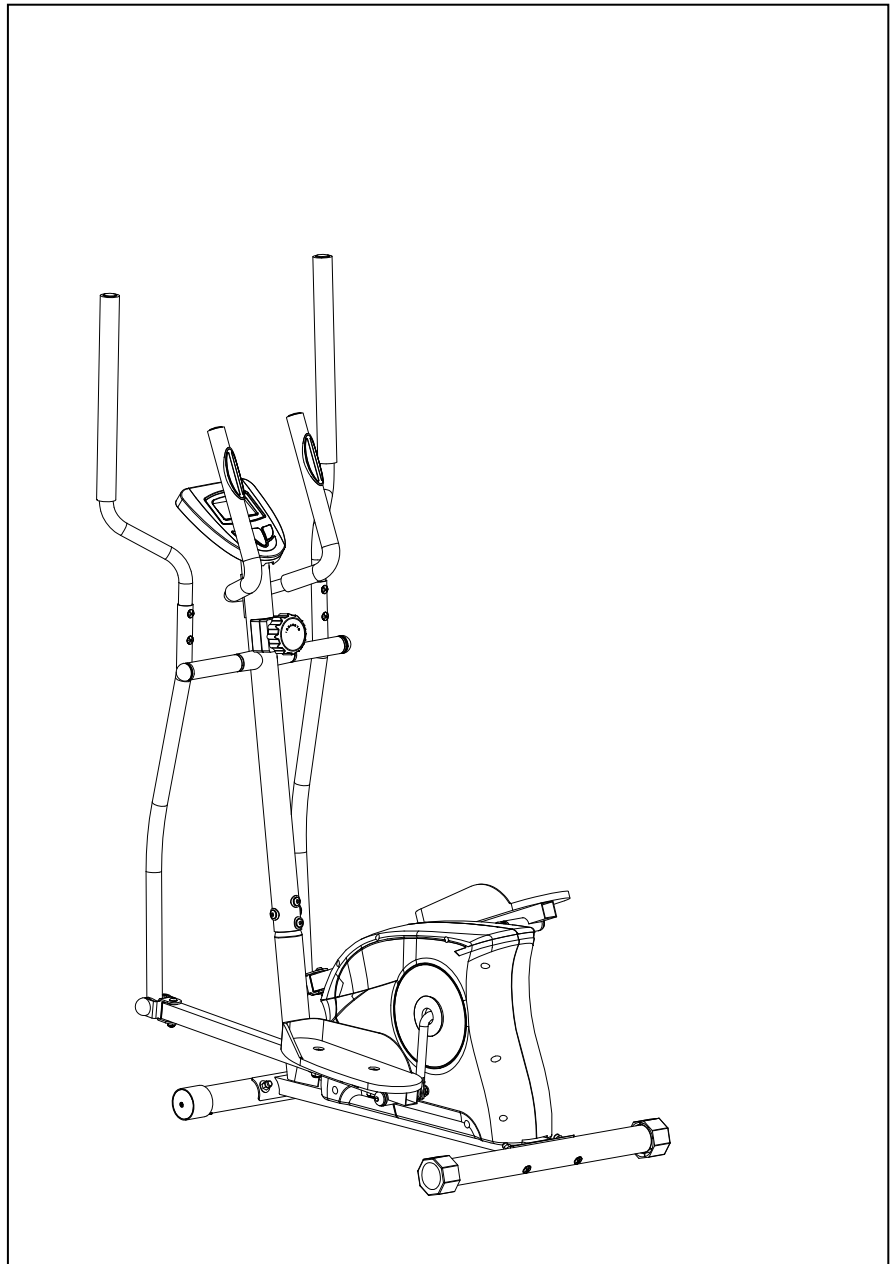
OWNER'S MANUAL

Model No.
16117002LUS

Sirius Fitness *Elliptical* Trainer

- *Assembly*
- *Operation*
- *Exercise*
- *Parts*
- *Warranty*

Elliptical



Retain for Future reference

CAUTION: You must read and understand this owner's manual before operating unit.

Manufacture's One-Year Limited Warranty

Your **Sirius Fitness** Elliptical trainer is warranted for one year from the date of purchase against defects in material when used for the purpose intended, under normal conditions and provided it receives proper care. Any part found defective or missing will be sent at no cost when returned in accordance with the terms of this warranty.

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

The warranty shall not apply to exercise units which are (1) used for commercial or other income producing purposes, or (2) subject to misuse, neglect, accident or unauthorized repair and alterations.

This warranty provided herein is lieu of all other express warranties, any implied warranties, including any implied warranties of merchantability of fitness for particular purpose, are limited in duration to the first 12 months from date of purchase. All other obligations or liabilities, including liability for consequential damages are hereby excluded.

REPAIR PARTS AND SERVICE

All of the parts for the elliptical shown in figure can be ordered from **Dyaco Canada** Inc. 6050 DON MURIE STREET, NIAGARA FALLS, ONTARIO L2G 0B3. When ordering parts, the parts will be sent and billed at the current prices. Prices may be subject to change without notice. Check or money order must accompany all orders. Standard hardware items are available at your local hardware store.

To ensure prompt and correct handling of any errors, or to answer any questions, please call our Toll Free number: 1-888-707-1880, or local number 1-905-353-8955 or fax 1-905-353-8968 or email customerservice@dyaco.ca or visit us at: www.dyaco.ca Office hours are from 8:30 AM to 5:00 PM Monday to Friday Eastern Standard Time.

Always include the following information when ordering parts

- Model number
- Name of each part
- Part number of each part

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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 centre.

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 elliptical.
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 elliptical must be regularly checked for signs of wear and damage. Any part found defective, the part must be replaced with new spare part from the manufacturer.
5. 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.
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. Handicapped individuals should have medical approval and close supervision when using this elliptical.
10. Do not place hands or feet under the elliptical. Always keep hands and legs off of the elliptical when others are using it.
11. Always hold the handlebars when mounting, dismounting, or using the elliptical. Keep your back straight when using your elliptical; do not arch your back. When you stop exercising, allow the pedals to slowly come to a complete stop. The elliptical does not have a free wheel; the pedals will continue to move until the flywheel stops.
12. Use the elliptical only for its intended use as described in this manual. Do not use any attachments that are not recommended by the manufacturer.
13. Never allow more than one person on the elliptical at once.
14. The pulse sensor is not a medical device. Various factors, including the user's movement, may affect the accuracy of heart rate readings. The pulse sensor is intended only as an exercise aid in determining heart rate trends in general.
15. Start slowly and very gradually increase your speed and distance.
16. 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.
17. Never hold your breath while exercising. Breathing should remain at a normal rate in conjunction with the level of exercise being performed
18. Always wear suitable clothing and footwear while exercising. Do not wear loose fitting clothing that could become entangled with the moving parts of your elliptical.
19. Care must be taken when lifting or moving the equipment, so as not to injure your back. Always use proper lifting techniques
20. User weight should not exceed 250lbs.

21. Decal is found on the frame of the elliptical. If decal is missing, not legible or damaged please call toll free -1-888-707-1880 for replacement decal.
22. This elliptical is intended for in-home use only. Do not use the elliptical in any commercial, rental or institutional setting.

▲ 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 from personal injury or property damage sustained by or through the use of this product.

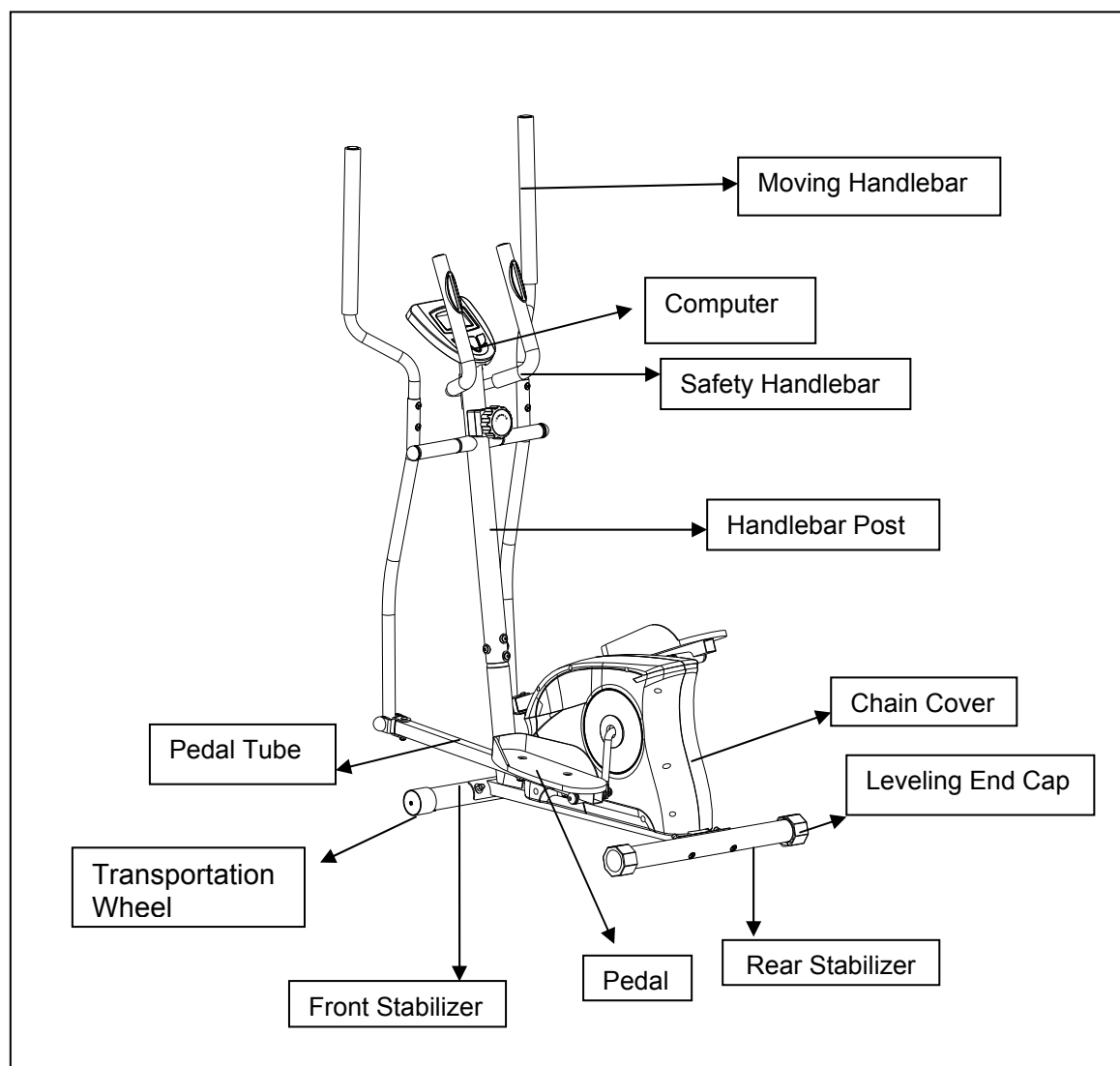
SAVE THESE INSTRUCTIONS

HOW THE ELLIPTICAL WORKS

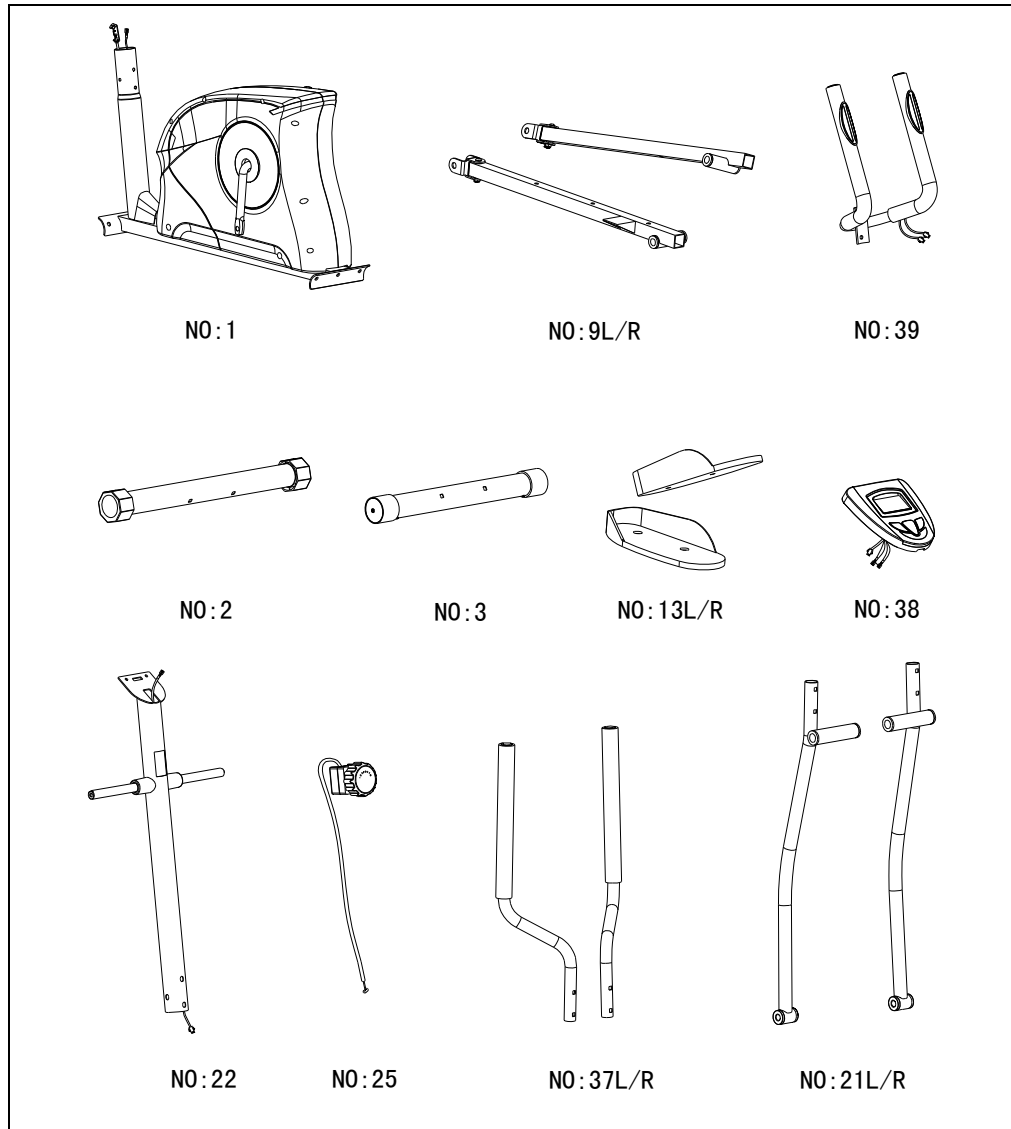
The elliptical allows your feet to move in a natural elliptical path, minimizing the impact on your knees and ankles.

The elliptical provides smooth, quiet and variable exercise capabilities with:

- Dual Action Handles for total body workout
- Stationary handlebar for stability

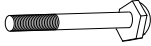
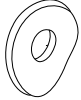
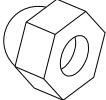
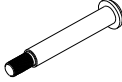




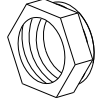

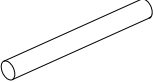
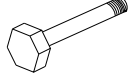
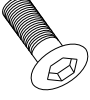
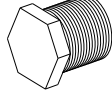



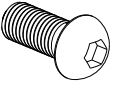
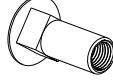
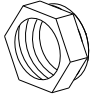
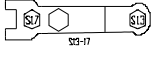

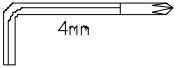
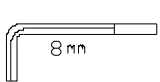


PRE-ASSEMBLY CHECK LIST



PART NO.	DESCRIPTION	Q'TY
1	Main frame	1
2	Rear stabilizer	1
3	Front stabilizer	1
9 L / R	Pedal tube left / right	1 / 1
13 L / R	Pedal left / right	1 / 1
21 L / R	Bottom handlebar left / right	1 / 1
22	Upright	1
25	Tension knob w/upper tension cable	1
37 L / R	Top handlebar left / right	1 / 1
38	Monitor	1
39	Stationary handlebar	1
	Hardware bag	1
	Manual	1

HARDWARE PACKING LIST

Part NO	Description	Q'ty	Drawings	
6	Carriage bolt M8*60	4		
7	Curved washer $\Phi 8 * \Phi 20 * 1.5$	10		
8	Domed nut M8	4		
10 L / R	Hinge bolt left / right	1 / 1		
11	Wave washer	2		
12	Flat washer	2		
14	Carriage bolt M10*45	4		
15	PVC cap	6		
16	Nylon lock nut M10	6		
17	Washer $\Phi 22 * \Phi 10 * 1.5$	6		
18	Sleeve	2		
20	Hex head bolt M10*65	2		
23	Allen screw M8*16	6		
29	Hex head bolt M10*20	2		
30	Spring washer $\phi 10$	2		
31	Flat washer $\Phi 32 * \Phi 10 * 1.5$	2		
32	D type washer	2		
35	Allen screw M6*12	4		
36	Carriage bolt M6*20	4		
51 L / R	Nylon lock nut left / right	1 / 1		
69	Allen wrench S13,17	2		
70	Allen key 6mm	1		
71	Allen key 4mm	1		
72	Allen key 8mm	1		

ASSEMBLY INSTRUCTION

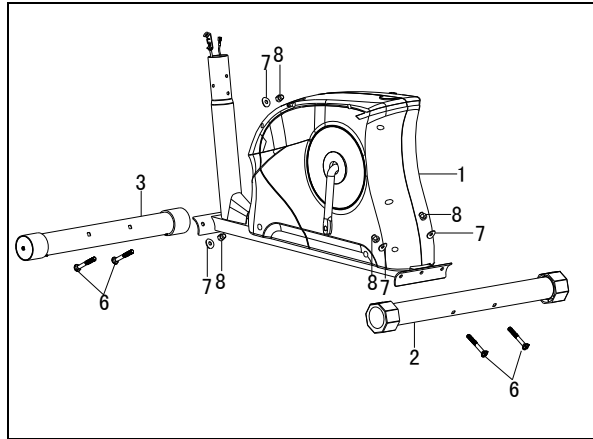
This manual is designed to help you easily assemble, adjust and use this machine. Please read this manual carefully. For the sake of familiarizing yourself with the parts identified in the instruction, first study the overview drawing.

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

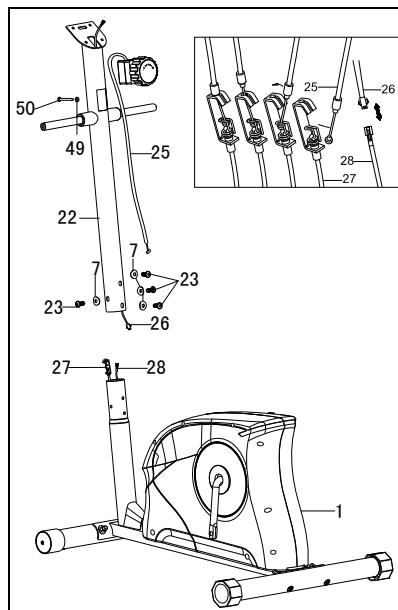
- Attach the front stabilizer (3) to the main frame (1), securing with two carriage bolts (6), two washers (7) and two domed nuts (8).
- Attach the rear stabilizer (2) to the main frame (1), securing with two carriage bolts (6), two washers (7) and two domed nuts (8).



STEP 2

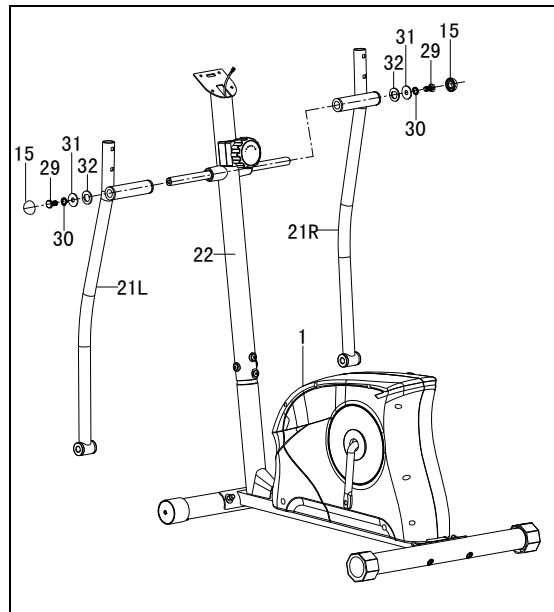
- Insert the upper tension cable (25) into the hole of the upright (22), secure by using one bolt (50) and one flat washer (49) on the back of the upright (22).
- Connect the cable from the tension control (25) to the lower tension cable (27).
- Connect the extension sensor wire (26) to the sensor wire (28).
- Insert the upright (22) into the main frame (1) and secure using four allen screws (23) and four curve washers (7).

Note: Be careful not to pinch the wires when you tighten the bolts.



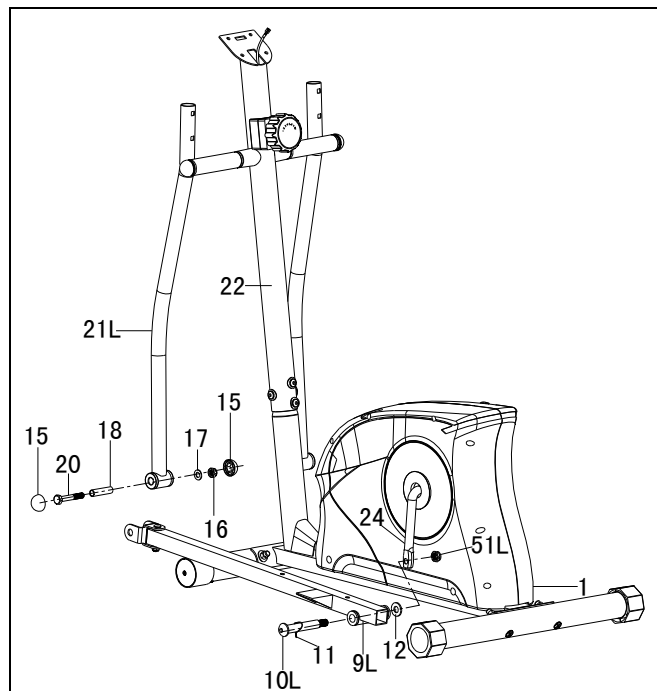
STEP 3

- Attach the left bottom handlebar (21L) to the left axle of the upright (22). Secure using D type washer (32), one flat washer (31), one spring washer (30) and one hex head bolt (29). Attach the PVC cap (15) onto the hex head bolt (29).
- Repeat for the right bottom handlebar (21R).



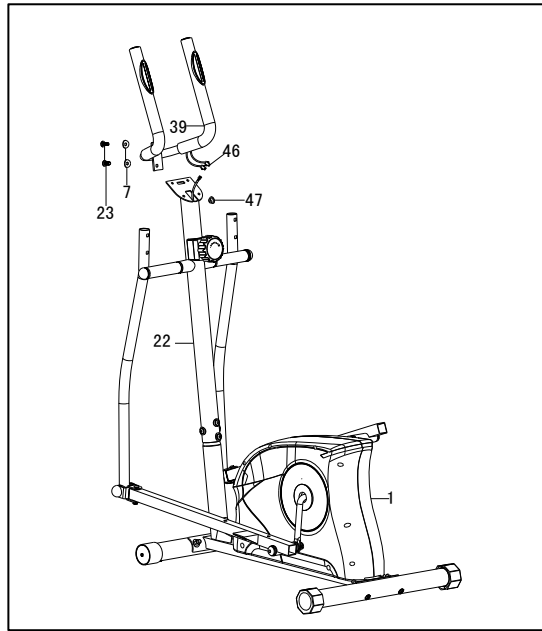
STEP 4

- Attach the left pedal tube (9L) to the left bottom handlebar (21L). Slide the sleeve (18) into the left pedal tube (9L) and the left bottom handlebar (21L). Secure using one hex head bolt (20), one washer (17), one nylon lock nut (16) and two PVC caps (15).
- Repeat for the right side.
- Attach the left pedal tube (9L) to the left side of the crank arm (24). Secure using one left hinge bolt (10L), one wave washer (11), one flat washer (12) and one nylon lock nut (51L).
- Repeat for the right side.



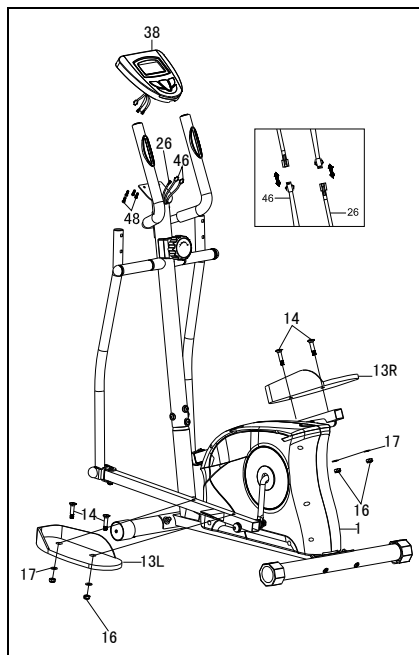
STEP 5

- Attach the stationary handlebar (39) to the back of the upright (22). Secure using two allen screws (23) and two curve washers (7).
- Remove the grommet (47) from the upright (22) and insert the hand pulse wires (46) through the grommet (47) and slide up through the opening of the upright (22).



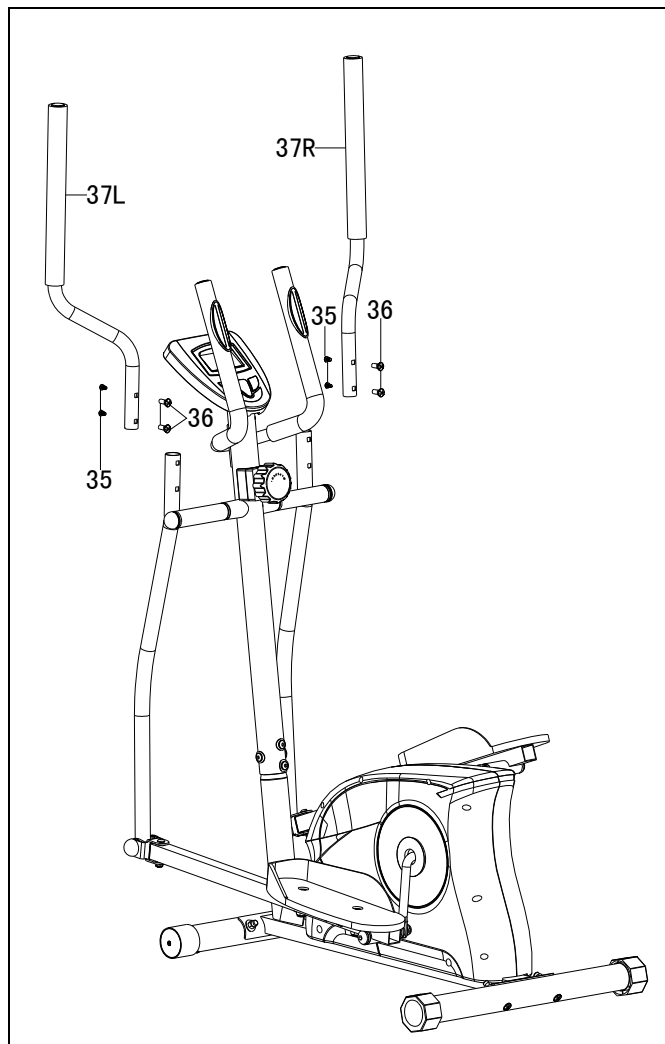
STEP 6

- Connect the pulse wires from the monitor (38) to the pulse wires (46).
- Connect the sensor wire from the monitor (38) to the extension sensor wire (26).
- Attach the monitor (38) to the top of the upright (22) and secure using four screws (48) which were pre-assembly on the computer.
Note: Ensure that the wires are away from the bracket when sliding onto the computer.
- Attach the Left Pedal (13L) to the left pedal tube (9L) and secure using two sets of carriage bolts (14), washer (17) and nylon lock nut (16).
Noted: The pedal position is optional. Normally, please attach the pedal by first two holes. If you attach the pedal by last two holes, please don't touch the crank & chain cover by fingers during exercise.
- Repeat for the right pedal (13R).



STEP 7

- Attach the left top handlebar (37L) to the left bottom handlebar (21L) and secure using two allen screws (35) and two carriage bolts (36).
- Repeat for the right top handlebar (37R).



**NOW FIRMLY TIGHTEN ALL NUTS AND BOLTS
YOUR UNIT IS NOW FULLY ASSEMBLED**

**Your elliptical is equipped with adjustable end caps.
If the unit is wobbly, please turn the leveling caps on
the rear stabilizer to level the unit.**

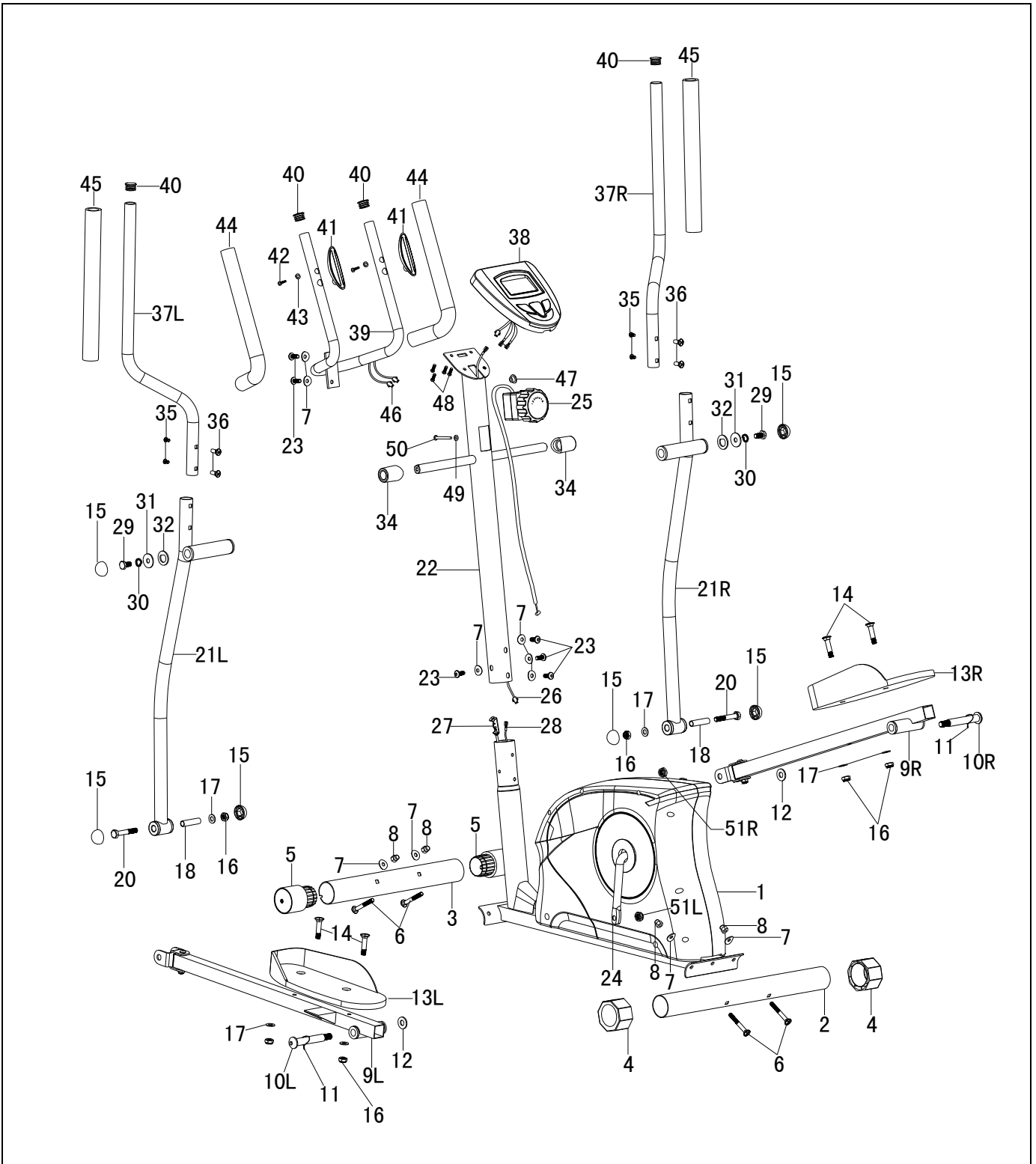
PART LIST

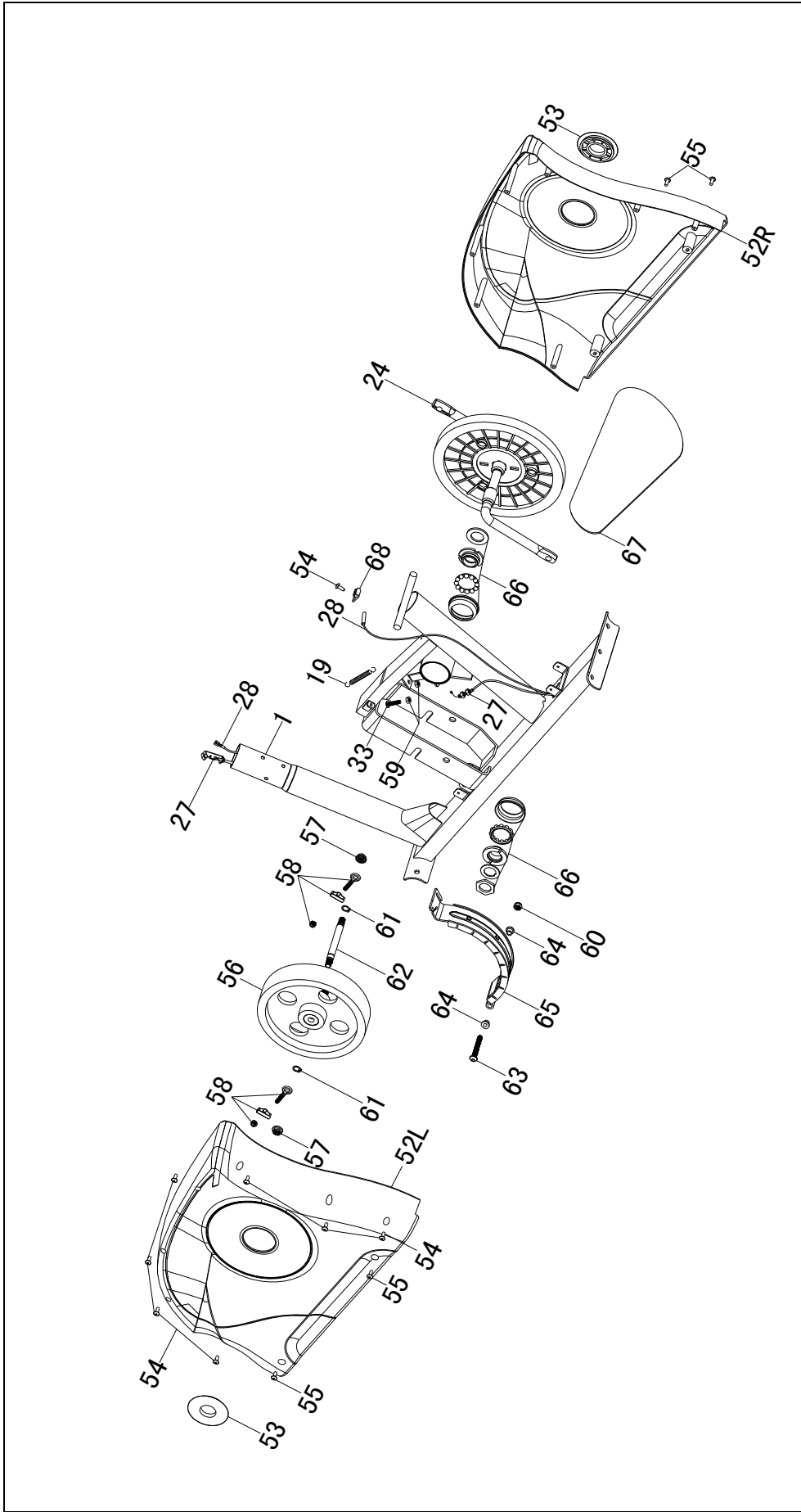
KEY NO.	PART	DESCRIPTION	QTY
1	1700201	Main frame	1
2	1700202	Rear stabilizer	1
3	1700203	Front stabilizer	1
4	1700204	Leveling end cap	2
5	1700205	Transportation wheel	2
6	1700206	Carriage bolt M8*60	4
7	1700207	Curved washer $\Phi 8 \times \Phi 20 \times 1.5$	10
8	1700208	Domed nut M8	4
9L	1700209L	Pedal tube left	1
9R	1700209R	Pedal tube right	1
10L	1700210L	Hinge bolt left	1
10R	1700210R	Hinge bolt right	1
11	1700211	Wave washer	2
12	1700212	Flat washer	2
13L	1700213L	Pedal left	1
13R	1700213R	Pedal right	1
14	1700214	Carriage bolt M10*45	4
15	1700215	PVC cap	6
16	1700216	Nylon lock nut M10	6
17	1700217	Washer $\Phi 22 \times \Phi 10 \times 1.5$	6
18	1700218	Sleeve	2
19	1700219	Spring	1
20	1700220	Hex head bolt M10 x 65	2
21L	1700221L	Bottom handlebar Left	1
21R	1700221R	Bottom handlebar Right	1
22	1700222	Upright	1
23	1700223	Allen screw M8 x 16	6
24	1700224	Crank arm w/pulley	1
25	1700225	Tension control knob w/cable	1
26	1700226	Extension sensor wire	1
27	1700227	Lower Tension Cable	1
28	1700228	Sensor wire	1
29	1700229	Hex head bolt M10*20	2
30	1700230	Spring washer $\phi 10$	2
31	1700231	Flat washer $\Phi 32 \times \Phi 10 \times 1.5$	2
32	1700232	D type washer	2
33	1700233	Hex head bolt M6*25	1
34	1700234	Plastic spacer	2
35	1700235	Allen screw M6 x 12	4
36	1700236	Carriage bolt M6*20	4

PART LIST

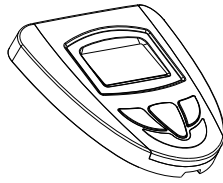
KEY NO.	PART	DESCRIPTION	QTY
37L	1700237L	Top handlebar left	1
37R	1700237R	Top handlebar right	1
38	1700238	Monitor	1
39	1700239	Stationary handlebar	1
40	1700240	End cap of handlebar	4
41	1700241	Hand pulse sensor	2
42	1700242	Self-tapping screw	2
43	1700243	Washer $\Phi 6 \times \Phi 12 \times 1$	2
44	1700244	Foam grip for handlebar	2
45	1700245	Foam grip for top handlebar	2
46	1700246	Pulse wire	2
47	1700247	Grommet	1
48	1700248	Screw M5 x10	4
49	1700249	Flat washer	1
50	1700250	Bolt	1
51L	1700251L	Nylon lock nut left	1
51R	1700251R	Nylon lock nut Right	1
52L	1700252L	Chain cover left	1
52R	1700252R	Chain cover right	1
53	1700253	Crank cover	2
54	1700254	Self-tapping screw ST5 x 15	8
55	1700255	Self-tapping screw ST5 x 15	4
56	1700256	Flywheel	1
57	1700257	France nut	2
58	1700258	Adjustor set	2
59	1700259	Hex head bolt M6	2
60	1700260	Nylon nut M8	2
61	1700261	C-clip	2
62	1700262	Axle for flywheel	1
63	1700263	Hex head bolt M8*55	1
64	1700264	Bushing	2
65	1700265	Magnet assembly	1
66	1700266	Bearing assembly	1
67	1700267	Belt	1
68	1700268	Sensor bracket	1
69	1700269	Allen wrench S13,17	2
70	1700270	Allen key 6mm	1
71	1700271	Allen key 4mm	1
72	1700272	Allen key 8mm	1

DIAGRAM





MONITOR INSTRUCTIONS



FUNCTION BUTTONS :

- Mode:** Press to select functions between: scan, time, speed, distance , Odometer , calories and pulse
- Set:** Press to preset the target value of time, distance , Calories and pulse.
- Reset:** Press to reset your preset value to zero.
Press and hold for 2 seconds to reset all values to zero except odometer.

FUNCTIONS:

- Scan:** Displays each function in sequence every 6 seconds. The display loop is Time-Speed-Distance- Odometer -Calories-Pulse
- Time:** Shows your elapsed workout time up to 99:59
Counts down from your preset target time to 00:00 during your workout.
- Speed:** Displays the current speed up to 99.9 mile.
- Distance:** Displays the cumulative distance traveled during your workout up to 99.99m
Counts down from your preset target distance to 0.0 during your workout.
- Calories:** Displays the cumulative calories burned at any given time during your workout up to 999 cal.
Counts down from your preset target calories to 0.0 during your workout.
Note: This is a rough guide used for comparison of different exercise sessions, which cannot be used for medical purposes.
- Odometer:** Displays the total distance accumulated up to 9999 mile.
- Pulse:** Displays your pulse rate in beats per minute during your workout.
Counts down from your preset target pulse to 0.

Monitor Function:

How to preset time, distance, calories and pulse.

Press the mode button until desired function is displayed.

Press the set until your desired number is displayed.

Press the mode button to accept value

The monitor will count down from your preset value once you start exercising.

The monitor will beep to indicate the completion of your preset value. Press any button to stop the beep and the monitor will now start to count up.

If more than one value is preset, the first to reach the value will sound the alarm. Once you have stopped the alarm the next preset value will sound the alarm until you have reached all preset values.

Remarks

1. Monitor requires two "AA" batteries
2. The monitor will turn on automatically by pressing any key or when you start pedaling.
3. The monitor will turn off automatically if no signal is detected for four minutes.
4. To reset the odometer, you must remove the batteries.
5. If monitor is illegible or partial segments appear, remove batteries and wait 15 seconds to re-install.
6. The batteries must be removed from the appliance before it is scrapped and that they are disposed of safely.

TROUBLE SHOOTING

Problem	Cause	Correction
Monitor does not display	Batteries not installed	Insert batteries
No speed or distance displays on the monitor	Sensor wire not connected	Securely plug sensor wire into extension wire and at the back of the monitor
	Sensor wire not working properly	Replace sensor wire
	Monitor not working properly	Replace monitor
No tension	Tension control not connected	Securely connect the tension control into the extension tension control wire
	Magnetic wheel not working properly	Replace magnetic wheel
Heart rate not displaying	Pulse wire not connected	Securely plug wires together
	Hand pulse defective	Replace hand pulse grip
	Monitor not working properly	Replace monitor
Grinding noise	Crank bearing defective	Replace crank bearings
	Mag wheel defective	Replace magnetic wheel
Squealing	V-belt slipping	Adjust v-belt

Getting on / off your elliptical

IMPORTANT

The elliptical comes with two Dual Action Handles and a Stationary Handlebar. Always hold the Stationary Handlebar when getting on and off the elliptical. First time users should familiarize themselves with using the elliptical by using the Stationary Handlebar first and then progressing to the Dual Action Handles.

Once you have familiarized yourself with using the elliptical, you can progress to using the Dual Action Handles to provide a total body workout. Hands can be positioned on the Dual Action Handles at the most appropriate position for your height and arm length.

Caution should always be taken when getting on and off any exercise machine. Please follow the safety steps below.



Ensure the left Foot Pedal is in the lowest position and grasp the Stationary Handlebar with both hands.

Place your left foot on the left Foot Pedal and get secure.

Lift your right foot over machine and place on right Foot Pedal. Get balanced and begin your workout.



Important

To get off, come to a complete stop and reverse the procedure.

Always wear rubber-soled shoes, such as tennis shoes.

It is recommended that you keep at least one hand on the Stationary Handlebar at all times, especially when getting on or off. If you are performing a walking action with your arms, or doing upper body strength training exercises, ensure you are well balanced.

All equipment should be set-up and operated on solid, level surfaces.

Correct Position



Your body should be in an upright position so that your back is straight. Keep your head up to minimize neck and upper back strain. Always try and use the elliptical in a rhythmical and smooth motion. If you find yourself feeling uncomfortable, or experience a surging type feeling, there is probably too much tension.



The elliptical can be used in forward or reverse motion.



When going in reverse, bend your knees slightly more. More emphasis is on the buttocks and hamstrings in the reverse motion.

MOVING YOUR ELLIPTICAL

The elliptical can be easily moved from room to room.



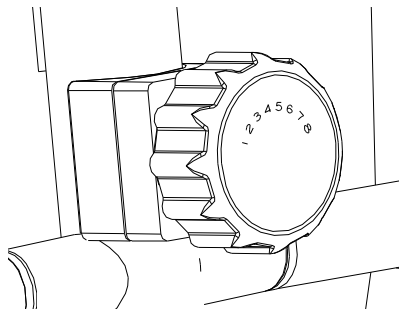
1. Move to the front of the machine and ensure swing arms are even (one foot pedal at top of Elliptical Chain Cover and other at bottom).



2. Grasp both Dual Action Handles together and pulling back on handles, tip machine towards you.

HOW TO ADJUST THE RESISTANCE OF THE PEDALS

As you exercise, you can adjust the resistance of the pedals with the resistance knob mounted on the upright. To increase the resistance, turn the knob clockwise; to decrease the resistance, turn the knob counter-clockwise.



MAINTENANCE

To clean the elliptical, use a damp cloth and a small amount of mild soap.

IMPORTANT: To avoid damage to the console, keep liquids away from the console and keep the console out of direct sunlight.

HOW TO ADJUST THE REED SWITCH

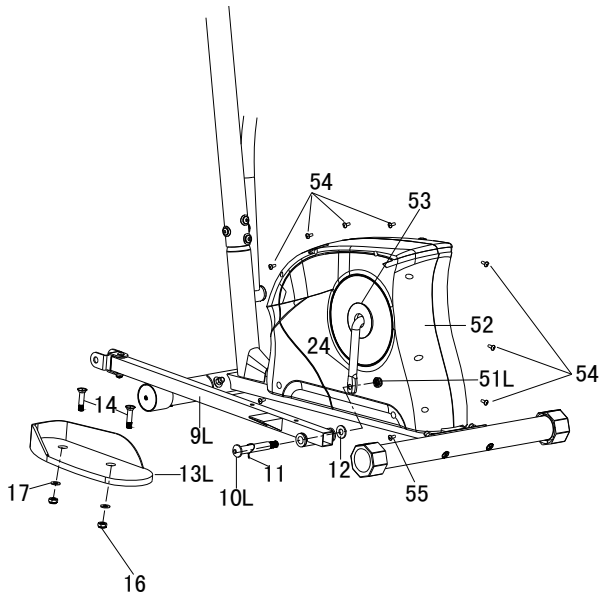
If the console does not display correct feedback, the reed switch should be adjusted. To adjust the reed switch, the Chain Cover (52) must first be removed.

Remove the Carriage Bolt (14), the Washer (17) and Nylon Lock Nut (16) from the Left Pedal (13L). Remove the Left Hinge Bolt (10L), Wave washer (11), Flat Washer (12) and Nylon Lock Nut (51L) from the rear of left Pedal Tube (9L). Repeat for the right side (not shown) in the same way. Remove the two ST5 x 15 Self-tapping Screws (55) from each side of the Chain Cover (52). Remove another seven ST5 x 15 Self-tapping Screws (54) from left Chain Cover (52L). Remove the Crank Cover (53) from the Chain Cover (52). Hold the Chain Cover (52) near the back and pull it apart slightly until the Chain Cover can be lifted off the ends of the Crank (24).

Do not pull the Chain Cover apart at the top or the seam may be broken.

Next, locate the Sensor Wire (28). Turn the Pulley until the Magnet is aligned with the Reed Switch. Loosen, but do not remove, the ST5 x 15 Screw (54). Slide the Reed Switch slightly toward or away from the Magnet. Make sure that the Magnet will not hit the Reed Switch. Retighten the Screw. Turn the Pulley for a moment. Repeat until the console displays correct feedback.

When the Reed Switch is correctly adjusted, reattach the Chain Cover and the Crank Covers.

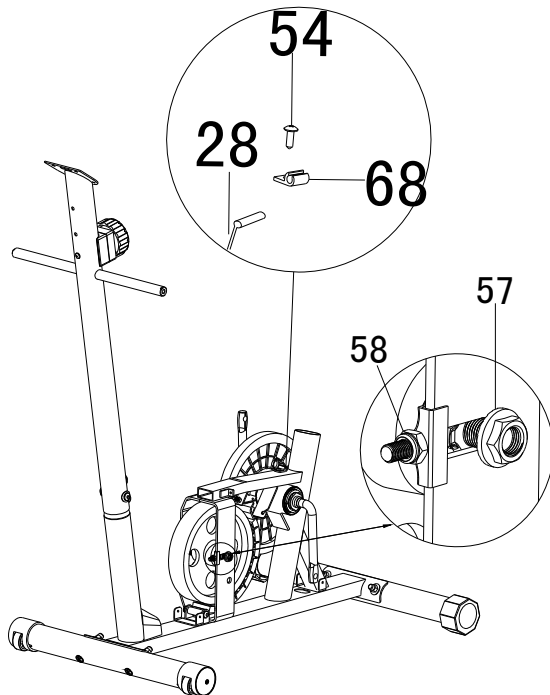


HOW TO ADJUST THE DRIVE BELT

If you can feel the pedals slip while you are pedaling, even when the resistance is adjusted to the highest level, the drive belt may need to be adjusted. To adjust the drive belt, the Chain Cover (52) must first be removed.

Next, loosen the France nut (57), and turn the Idler Adjustment Bolt (58) counter-clockwise until the Drive Belt (67) is tight. Then, retighten the France nut (57).

When the drive belt is correctly adjusted, reattach the Chain Cover and the Crank Covers.



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 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** (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 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 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

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.

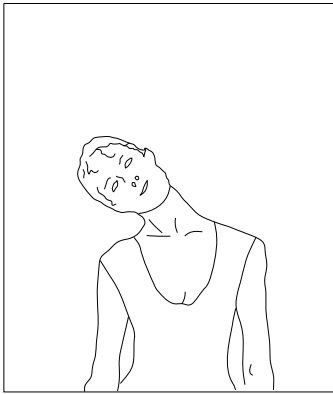
The rest period required between strength training exercises may vary from person to person. This will depend mostly on your level of fitness and the program you have chosen. Rest between exercises by all means, but do not allow this to exceed two minutes. Most people manage with half minute to one minute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

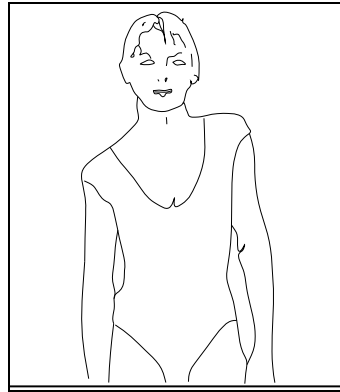
HEAD ROLLS

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, stretching your chin to the ceiling and letting your mouth open. Rotate your head to the left for one count, and finally, drop your head to your chest for one count.



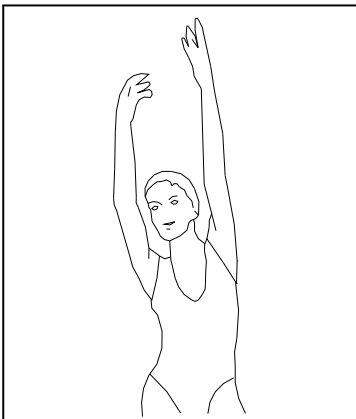
SHOULDER LIFTS

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



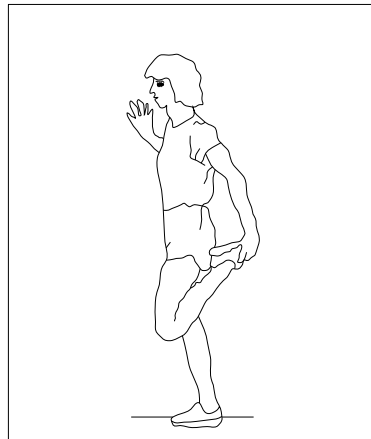
SIDE STRETCHES

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 arm.



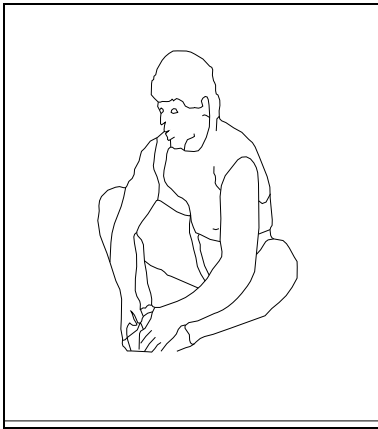
QUADRICEPS STRETCH

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.



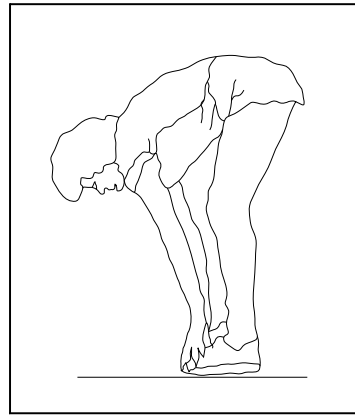
INNER THIGH STRETCH

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



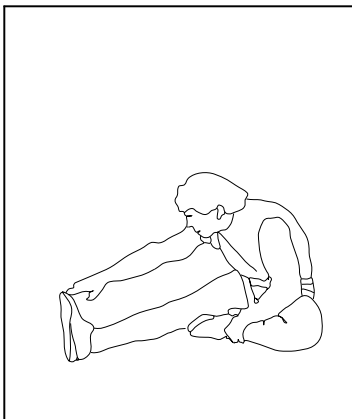
TOE TOUCHES

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.



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.



CALF / ACHILLES STRETCH

Lean against a wall with your left leg in front of the right and your arms forward. Keep 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.

