

**OWNER'S MANUAL
MODEL NO.
164174500US**

- **Assembly**
- **Operation**
- **Trouble –Shooting**
- **Parts**
- **Warranty**



CAUTION:

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

Keep this manual for future reference.

Serial number

Write the serial number in the space above for reference. Serial number can be found at the front bottom section of the elliptical.



Manufacture's Limited Warranty

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

Home Use Limited WARRANTY

Frame	Lifetime
All Other Components	2 Years
Labour	1 Year

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. You can 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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IMPORTANT SAFETY INFORMATION
THIS UNIT IS INTENDED FOR HOUSEHOLD USE ONLY
READ ALL INSTRUCTIONS BEFORE USING THIS ELLIPTICAL

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:

 WARNING

It is the responsibility of the owner to ensure that all users of this elliptical are adequately informed of all warnings and precautions. Read the OWNER'S OPERATING MANUAL and all warnings posted on the elliptical and follow it carefully before using your elliptical..

Review all warnings labels that affixed to the elliptical. Inspect your exercise equipment prior to exercising to ensure that all nuts and bolts are fully tightened before each use. Functional and

1. Visual inspection of the equipment shall be made after assembling your elliptical
2. Never operate the elliptical if it is not working properly, if it has been dropped, damaged, or exposed to water.
3. Set up and operate the elliptical on a solid level surface. Do not use outdoors or near water. 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. It is recommended to have a minimum of 3 metres safe clearance on all sides of the elliptical while in use.
4. Keep the elliptical indoors, away from moisture and dust. Do not put the elliptical in a garage, covered patio or near water.
5. Do not operate the elliptical where aerosol products are used or where oxygen is being administered.
6. Do not insert any objects into any openings.
7. Inspect and properly tighten all parts of the elliptical regularly.
8. Keep children and pets away from this equipment at all times and 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. To disconnect, turn all controls to the off position, then remove plug from outlet.
13. 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.
14. User weight should not exceed **300lbs (136 kgs)**.
15. Never allow more than one person on the elliptical at once.
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 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. 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.
18. 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.
19. Start your program slowly and very gradually increase your speed and distance.
20. 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. Do not walk or jog barefoot, in stocking feet or loose fitting shoes or slippers.
21. Always hold on to a handlebar while making control changes
22. Use caution while participating in other activities while using your elliptical such as watching television, reading, etc. These distractions may cause you to lose balance, resulting in serious injury.



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

Important Safety Instructions

When using an electrical appliance, basic precautions should always be followed, including the following: Read all instructions before using this appliance.



WARNING - To reduce the risk of burns, fire, electric shock, or injury to persons:

1. An appliance should never be left unattended when plugged in. Unplug from outlet when not in use, and before repairing or cleaning.
 2. Never operate this appliance if it has a damaged cord or plug, if it is not working properly, if it has been dropped or damaged, or dropped into water. Return the appliance to a service center for examination and repair.
 3. Do not carry this appliance by supply cord or use cord as a handle.
 4. Keep the cord away from heated surfaces or flames.
 5. Never operate the appliance with the air openings blocked. Keep the air openings free of lint, hair, and things alike.
 6. Connect this appliance to a properly grounded outlet only.
- The use of an extension cord with this product is not recommended. If an extension cord is needed, use a short (less than 10 feet) heavy gauge (14 gauge or better) extension cord with a three prong (grounded) plug and receptacle

NEVER remove any cover without first disconnecting AC power supply.

- If A.C. voltage varies by ten percent (10%) or more, the performance of your elliptical may be affected. Such conditions are not covered under your warranty. If you suspect the voltage is low, contact your local power company or a licensed electrician for proper testing.
- **NEVER** expose this elliptical to rain or moisture. This product is NOT designed for use outdoors, near a pool or spa, or in any other high humidity environment. Maximum environmental ratings are 40-120 degrees Fahrenheit, 95% humidity non-condensing (no water droplets forming on surfaces).
NEVER use your elliptical during an electrical storm. Surges may occur in your household power supply that could damage elliptical components.

Failure to follow all guidelines may compromise the effectiveness of the exercise experience, expose yourself (and possibly others) to injury, and reduce the longevity of the equipment.

SAVE THESE INSTRUCTIONS - THINK SAFETY!

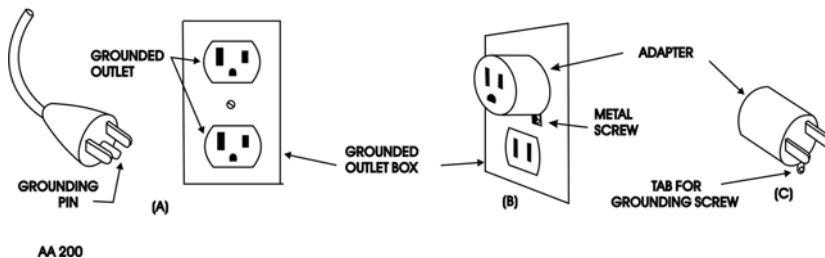
Grounding Instructions

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

Improper connection of the equipment-grounding conductor can result in a risk of electric shock. Check with a qualified electrician or serviceman if you are in doubt as to whether the product is properly grounded. Do not modify the plug provided with the product if it will not fit the outlet, have a proper outlet installed by a qualified electrician.

This product is for use on a nominal 120-volt circuit, and has a grounding plug that looks like the plug illustrated below. A temporary adapter that looks like the adapter illustrated below may be used to connect this plug to a 2-pole receptacle as shown below if a properly grounded outlet is not available. The temporary adapter should be used only until a properly grounded outlet (below) can be installed by a qualified electrician. The green colored rigid ear-lug, or the like, extending from the adapter, must be connected to a permanent ground such as a properly grounded outlet box cover. Whenever the adapter is used, it must be held in place by a metal screw.

Figure 1.
Grounding methods

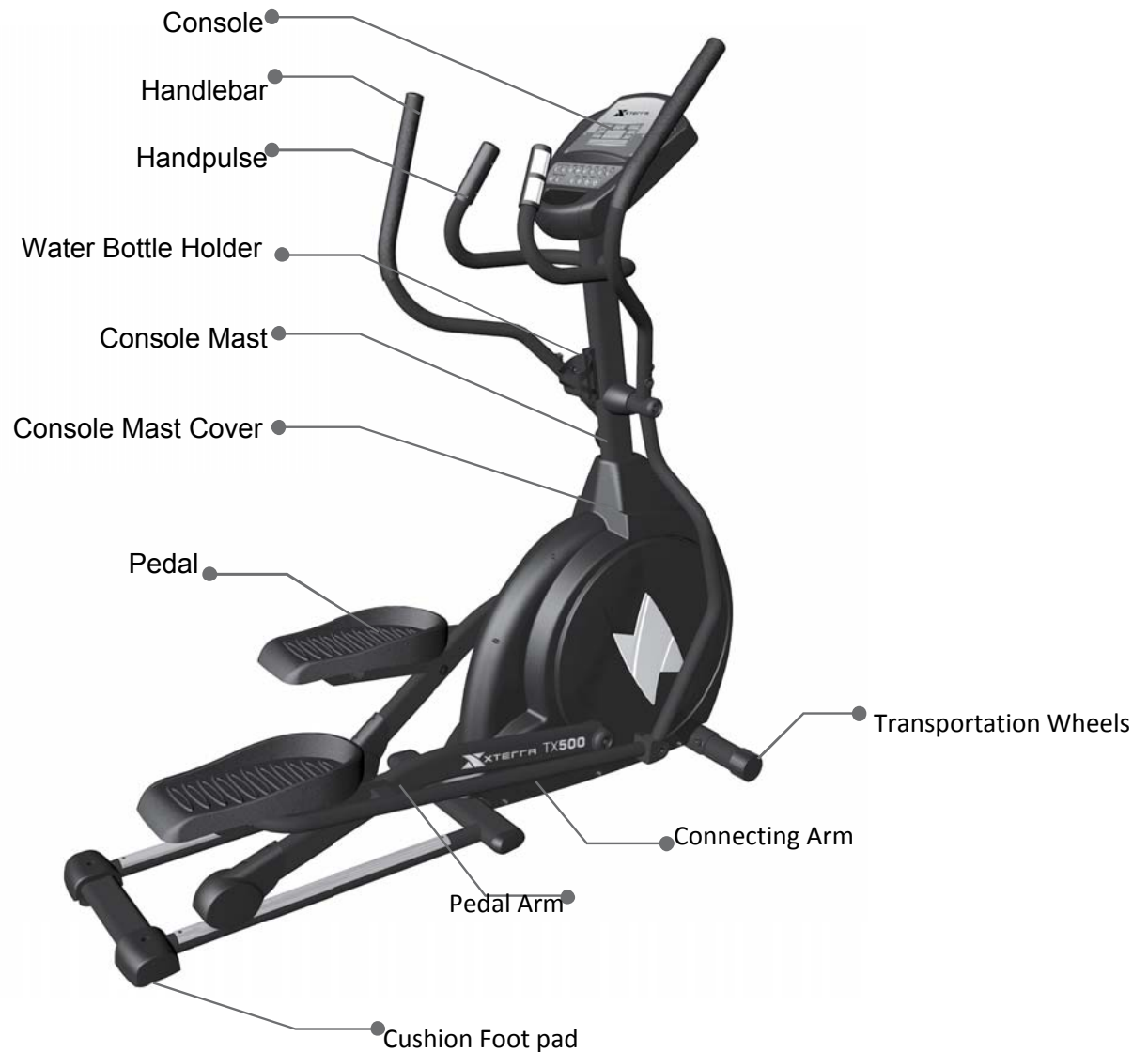


POWER CONNECTOR – FRONT, LEFT SIDE OF UNIT

HOW THE ELLIPTICAL WORKS

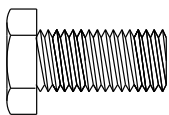
The elliptical allows your feet to move in a natural elliptical path, minimizing the impact on your knees and ankles.

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

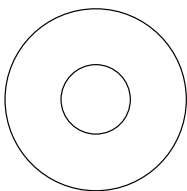


Assembly Pack Checklist

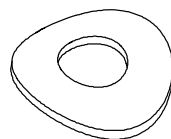
Hardware Step 1 (not shown at actual size)



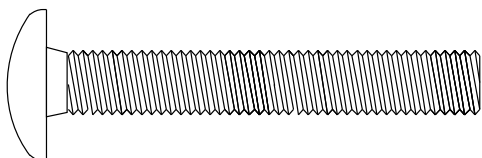
#70. 5/16" × UNC18 ×
15L_Hex Head Bolt
(6 pcs)



#97. Ø8 × Ø23 × 1.5T_
_Flat Washer (4 pcs)



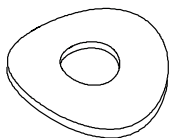
#102. Ø8 × Ø23 ×
2T_Curved Washer
(2 pcs)



#148. 3/8" × UNC16 × 3"
Carriage Bolt (2 pcs)

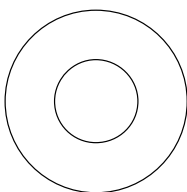


#149. 3/8" × UNC16 × 12.5T_
Cap Nut (2 pcs)

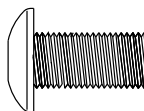


#150. Ø10 × Ø23 × 1.5T_
Curved Washer (2 pcs)

Hardware Step 2

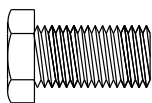


#147. Ø8.5 × Ø26 × 2.0T_
Flat Washer (2 pcs)

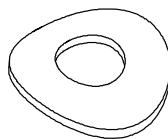


#151. 5/16" × UNC18 ×
15L_Button Head Socket Bolt
(2 pcs)

Hardware Step 3

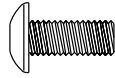


#70. 5/16" × UNC18 ×
15L_Hex Head Bolt
(6 pcs)

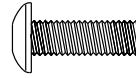


##102. Ø8 × Ø23 ×
2T_Curved Washer
(6 pcs)

Hardware Step 4

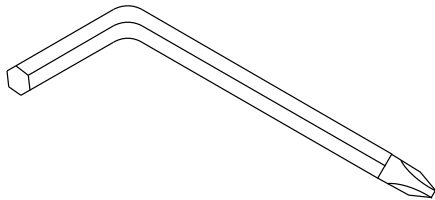


#78. M5 × P0.8 × 10L_
Phillips Head Screw
(4 pcs)

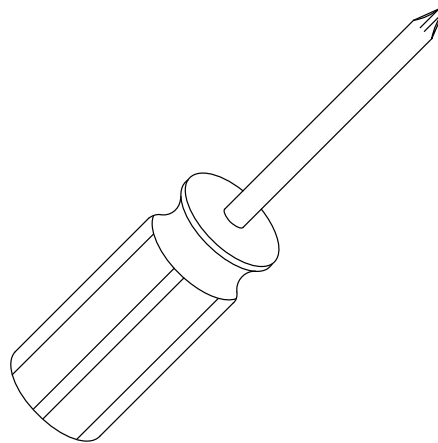


#79. M5 × P0.8 × 15L_
Phillips Head Screw
(6 pcs)

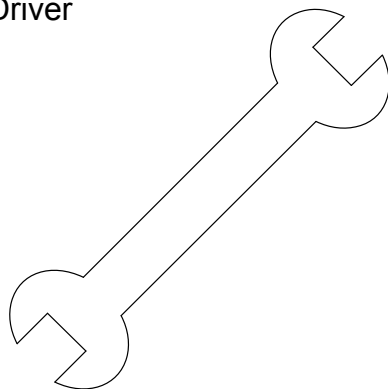
Assembly Tools



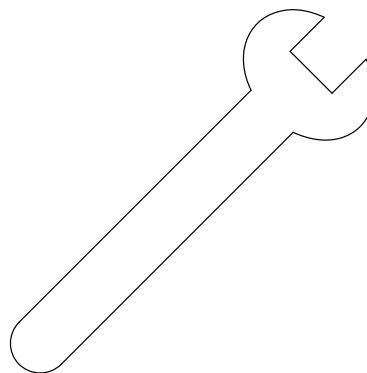
#108. Combination M5 Allen
Wrench & Phillips Head Screw
Driver



#110. Phillips Head Screw
Driver



#111. 12.14m/m_Wrench

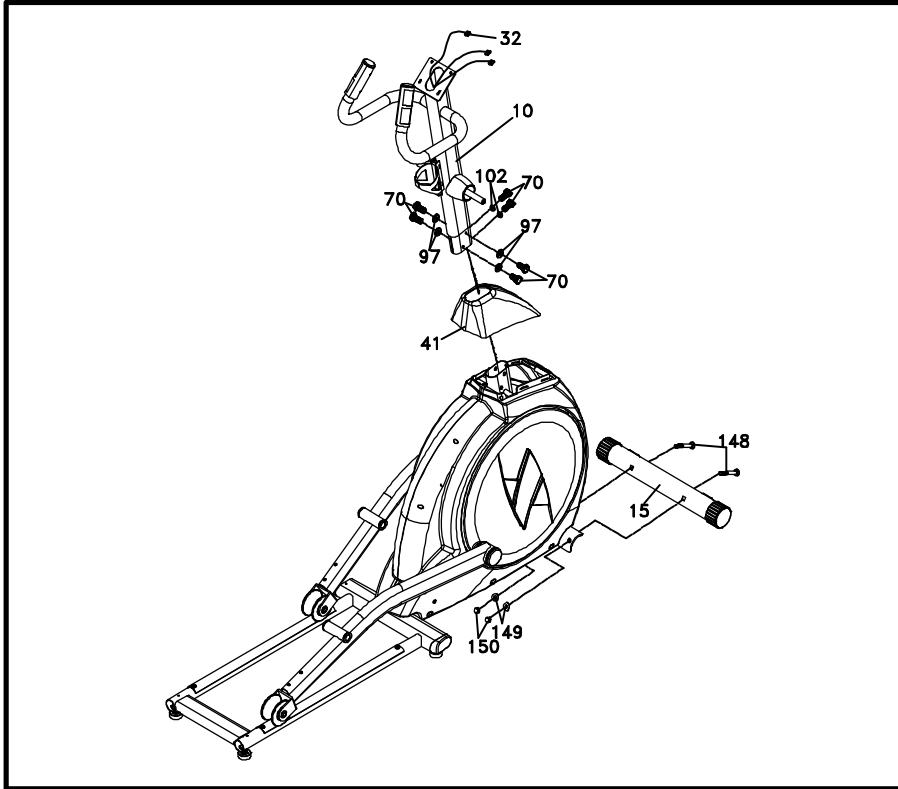


#113. 12m/m_Wrench

Assembly Instructions

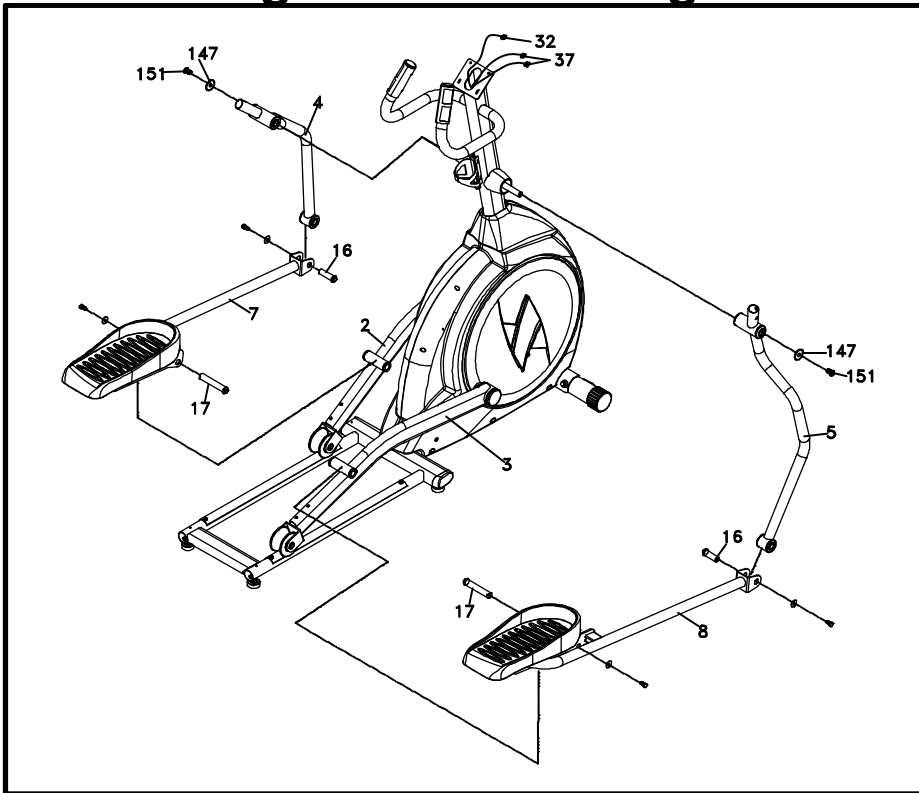
1

Rear Rail, Console Mast & Console



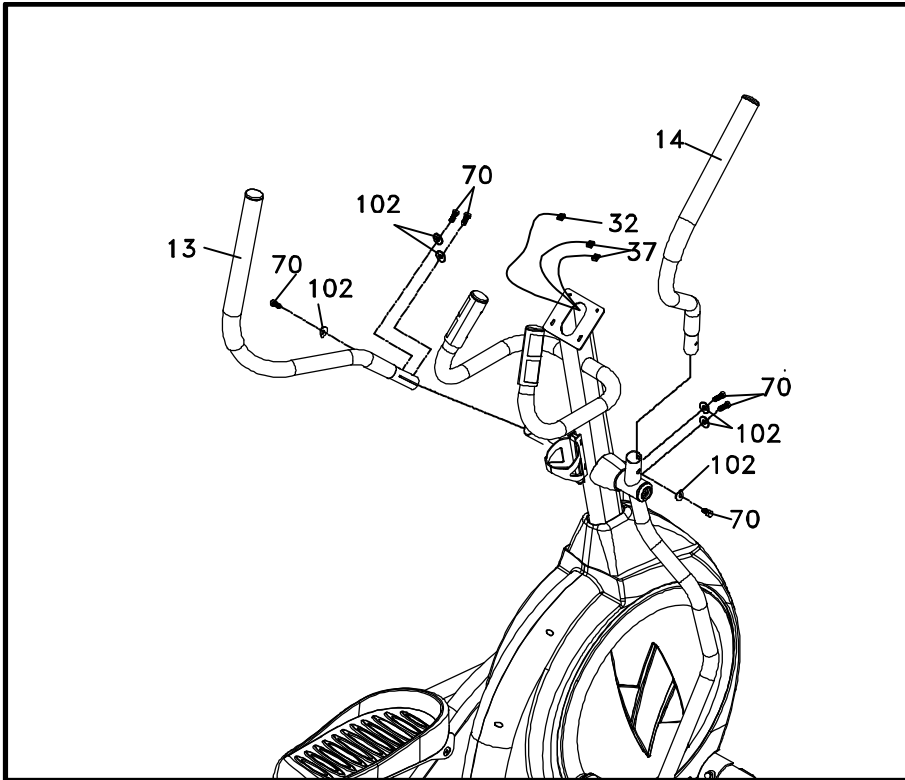
1. Locate the Console Mast (10) and Console Mast Cover (41) and slide the Cover onto the Mast as far as it will go. Make sure the Console Mast Cover (41) is facing the correct way.
2. At the top opening of the Main Frame (1) of the elliptical is a Computer Cable (32). Unravel and straighten out the Computer Cable (32) and feed it into the bottom of the Console Mast tube (10) and out of the top opening.
3. Install the Console Mast (10) into the receiving bracket in the top of the Main Frame (1). Put the 4pcs of $\varnothing 8 \times \varnothing 23 \times 1.5T$ Flat Washers (97) onto the 4pcs of $5/16" \times UNC18 \times 15L$ Hex Head Bolts (70) and the 2pcs of $\varnothing 8 \times \varnothing 23 \times 2T$ Curved Washers (102) onto the 2pcs of $5/16" \times UNC18 \times 15L$ Hex Head Bolts (70). Tighten by using the 12m/m Wrench (113).
NOTE: There is a electrical wire running through the Console Mast Tube (10). Be careful not to damage or pinch this Computer Cable (32) during this procedure.
4. Install the Front Stabilizer(15) on the front stabilizer holding plate at the bottom of the main frame with the transportation wheels facing forward and secure them with 2pcs of $3/8" \times UNC16 \times 3"$ Carriage Bolts(148), 2pcs of $\varnothing 10 \times \varnothing 23 \times 1.5T$ Curved Washers(150) and 2pcs of $3/8" \times UNC16 \times 12.5T$ Cap Nuts(149) by using 12.14m/m Wrench(111).

2 Connecting & Lower Swing Arms



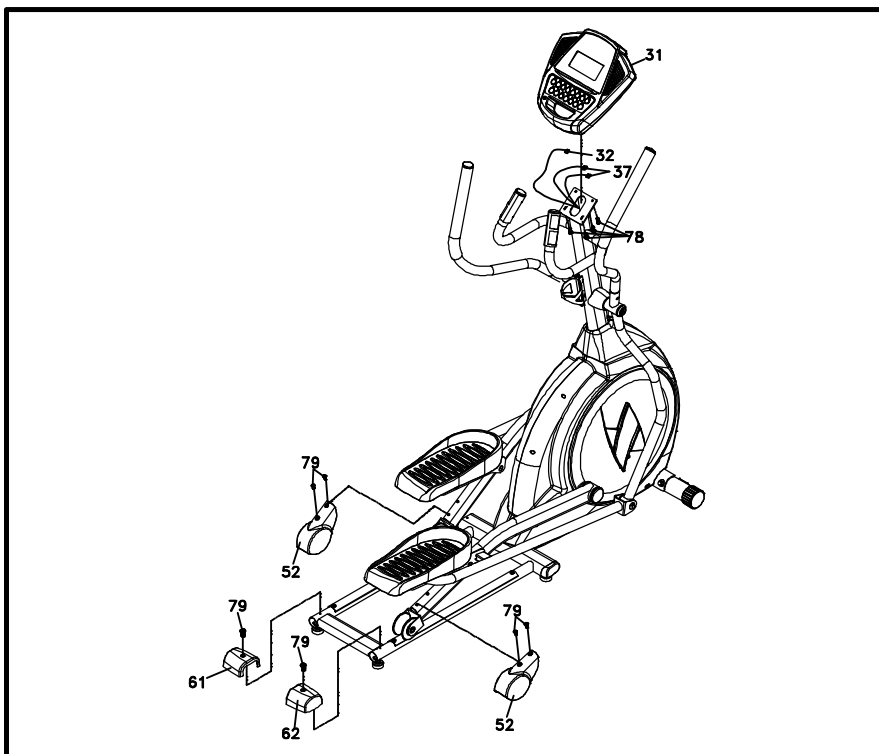
1. Put Lower Handle Bars (L) and (R), (4) and (5), at each side of Console Mast shaft and secure with 2pcs of 5/16" × UNC18 × 15L_Button Head Socket Bolts (151) and 2pcs of Ø8.5 × Ø26 × 2.0T_Flat Washers (147) by using Combination M5 Allen Wrench & Phillips Head Screw Driver (108).
2. Release and take apart Pedal Axle (17) on left Pedal Arm (2) and install left Connecting Arm (7) onto left Pedal Arm. Tighten the screw together with the previously released Pedal Axle with 12/14mm wrench (111). Repeat the same procedure again for the right Connecting Arm (8) and Pedal Arm (3).
3. Release rod end shafts (16) which are on left and right connecting arms(7.8). Connect the left and right connecting arm(7.8) with left and right lower handle bar(4.5) and secure with rod end shafts (16) and the screw by using 12/14mm_Wrench (111).

3 Upper Swing Arms



1. Install the Left and Right Swing Arms (13 & 14) into the Lower Left and Right Lower Handle Bars (4 & 5) with 6pcs of 5/16" × UNC18 × 15L_Hex Head Bolts(70) and 6pcs of Ø8 × Ø23 × 2T_Curved Washer(102) by using the 12.14m/m_Wrench (111).

4 Plastic Covers



1. Locate the Console Assembly (31) and the 4pcs of M5 × P0.8 × 10L Phillips Head Screws (78) by using the Phillips Head Screw Driver (110).
2. There will be two electrical wire connectors at the top opening of the Console Mast (10), two Handpulse W/Cable Assemblies (37), one Computer Cable (32). Connect these to the mating connectors on the back of the Console Assembly (31). The connectors are keyed so you cannot plug them in the wrong way so do not force them.
3. Storing the excess wire back into the Console Mast (10), carefully install the Console Assembly (31) onto the mounting plate of Console Mast (10) and secure using the 4pcs of M5 × P0.8 × 10L Phillips Head Screws (78)
4. Install the 2pcs of Slide Wheel Covers (52) and the 4pcs of M5 × P0.8 × 15L Phillips Head Screws (79) by using the Phillips Head Screw Driver (110).
5. Use one M5 × P0.8 × 15L_Phillips Head Screw (79) to secure Rear Stabilizer Cover (L) (61) on the Rail Tube with Phillips Head Screw Driver (110). Repeat the procedure for Rear Stabilizer Cover (R) (62) for the other side.

Your unit is now fully assembled. Ensure all nuts and bolts are firmly tightened prior to use.

Operation of Your Console

Console



Power Up

Power the elliptical on by plugging it into an appropriate wall outlet.

When turned on, the display will emit 3 beep sound as all LCD displays light up.

The text window will display "WELCOME" by scrolling.

Note: When there is no signal or data input for 4 minutes, the machine will enter sleep mode. Pedaling the machine or key selection will wake-up the computer.

NEVER operate this elliptical without reading and completely understanding the results of any operational change you request from the computer.

Understand that changes in resistance do not occur immediately. Set your desired level on the computer console and release the adjustment key. The computer will obey the command gradually.

Console Operation

Key Function:

Mode: To input desired value or workout mode. May advance flashing prompt to next parameter or mode for selection.

Start/Stop: Pauses & Resume workouts. Back up to the previous prompt during data entry. Operates only when in pause mode.

Holding key for 3 seconds will reset computer to power-up condition.

▼ : Decrease value of selected workout parameter: TIME, DISTANCE, etc. During the workout, it will decrease the resistance load

▲ : Increases value of selected workout parameter. During the workout, it will increase the resistance load.

QUICK PROGRAM KEY (9) : Selection of workout mode: Quick Start, Manual, User Program, Interval Program, Watt program, HRC Program, Test Program, BMI-BMR-FATT Program, Climbing Program.

RECOVERY: After workout or during workout press Recovery and Recovery Measurement will start. Recovery is Fitness Level 1-6 after 1 minute.

Workout Selection

After power-up, use one of the 9 program keys to enter the desired mode. Then the text window will display the desired program by scrolling for 3 seconds.

There are 9 basic workout modes:

Quick Start, Manual, User Program, Interval Program, Watt Program, HRC Program, Test Program, BMI-BMR-FATT Program, Climbing Program.

After that the text window will display start pedaling or press mode to set data by scrolling, it may vary depending on different programs.

Setting Workout Parameters

After selecting the desired workout mode: Quick Start, Manual, User Program, Interval Program, Watt Program, HRC Program, Test Program, BMI-BMR-FATT Program, Climbing Program may pre-set several workout parameters for desired results.

WORKOUT PARAMETERS: TIME / DISTANCE / WATTS / CALORIES /PULSE

Note: Some parameters are not adjustable in certain programs.

Once a program has been selected by pressing MODE ,

The text window will display “ Select Time” for 3 seconds then display “PRESS MODE TO ACCEPT” . At the same time “ 0:00” of time parameter will flash.

Using ▲ ▼ key to select the desired time value. Press Mode to input value. Flashing prompt will move to the next parameter. Continue by using ▲ ▼ key to select the desired value then press Mode to input value.

After completion of setting workout parameters, the text window will display “START PEDALING” by scrolling. User can start the workout by starting pedaling.

More About Workout Parameters

Field	Display Range	Default Value	Increment/Decrement	Description
Time	0:00~ 99:00	00:00	± 1:00	1.When display is 0:00, Time will count up. 2.When time is 10:00-99:00, It will count down to 0.
Distance	0.00~99.90	0.00	±0.10	1.When display is 0:00, Distance will count up. 2.When Distance is 0.1~99.0, it will count down to 0.
CALORIES	0~9995	0.0	±5	1.When display is 0.0, CALORIES will count up. 2.When CALORIES is 5~9995, it will count down to 0.
WATT	20~400	20/100	±5	WATT value can be set only in Watt/Test program
Pulse	40~220	90	±1	When Heart Rate exceeds set range, user will be alerted.

Program Operation

1. Quick Start Program

After power-up, press Quick Start Program key to enter Quick Start Program, start pedaling to begin workout at this time. Using ▲ ▼ key to adjust resistance load during workout.

2. Manual Program

Selecting “**Manual**” by using the Manual program key and then pressing Mode.

Setting Parameters for Manual.

1st parameter “Time” will flash so value can be adjusted using ▲ ▼ key .

Press the Mode key to save the value & move to the next parameter to be adjusted.

Continue through all desired parameters, start pedaling to start workout.

Start Pedaling to start Workout, ▲ ▼ key adjusts resistance load during workout.

3. User Program

User program allows user to create their own program that can be used immediately and on subsequent workouts.

Create User Profile

Selecting the user mode with the User program key and press Mode to select “User” mode. The text window will display” Select Profile” for 4 seconds , meanwhile Segment 1 will flash. Adjust with ▲ ▼ to set the desired resistance load. Press Mode to move to the next segment and continue for all 10 segments.

Setting Parameters for User Program

After that 1st parameter “Time” will flash so value can be adjusted using ▲ ▼ .

Press Mode to save the value & move to the next parameter to be adjusted. Continue through all desired parameters, start pedaling to begin workout.

Note: The final 10 segments profile will be saved for future workouts.

Start Pedaling to start Workout. The resistance can't be adjusted by pressing ▲ ▼ during workout.

4. Interval Program

Selecting "**Interval**" by pressing the Interval program and then pressing Mode.

The text window will display "SELECT LEVEL" for 3 seconds.

There are 3 levels (L1,L2,L3) to select, using + - then pressing mode to confirm.

Setting Parameters for Interval

After that 1st parameter "Time" will flash so value can be adjusted using + -. Press mode to save value & move to next parameter to be adjusted. Continue through all desired parameters, start pedaling to start workout.

The resistance can't be adjusted by pressing ▲ ▼ during workout.

5. WATT Program

Selecting "**WATT**" by pressing the WATT PROGRAM and then pressing Mode. The text window will display "SELECT WATT" for 3 seconds, Meanwhile "20" will flash. Selecting WATT value from 20 W using ▲ ▼ key and then pressing mode to confirm.

Setting Parameters for WATT

After that 1st parameter "Time" will flash so value can be adjusted using ▲ ▼.

Press mode to save value & move to the next parameter to be adjusted. Continue through all desired parameters, start pedaling to begin workout.

Noted: The profile will show the desired Watt value.

Start Pedaling to start Workout, ▲ ▼ adjusts WATT value during workout.

6. HRC PROGRAM

Setting Parameters for Heart Rate Control

Selecting "**HRC**" by pressing the HRC PROGRAM key and then pressing mode. 1st parameter "Time" will flash so value can be adjusted using ▲ ▼.

Press mode to save value & move to the next parameter to be adjusted. Continue through all desired parameters, start pedaling to start workout.

Note: the profile will shows the actual resistance load.

7. TEST Program

Selecting "**TEST**" by pressing the TEST Program key and then pressing Mode.

The display will show out average speed, total Distance, total CALORIES and average Pulse of last workout for 4 seconds.

After that the text window will display "SELECT WATT" 3 seconds, Meanwhile "100" will flash.

Selecting WATT value from 100 W, using ▲ ▼ then pressing mode to confirm.

Time display will show 10:00, it can't be changed.

After 10 minutes, will display Average Speed, Total Distance, Total CALORIES and Average Pulse.

8. BMI BMR FATT PROGRAM

Setting Data for BMI BMR FATT

Selecting "**BMI BMR FATT**" by pressing the BMI BMR FATT Program key and then pressing mode.

The text window will display "SELECT AGE" for 3 seconds, meanwhile "30" will flash so Age can be adjusted using ▲ ▼, press mode to save value & move to next data.

The text window will display "SELECT GENDER" for 3 seconds, meanwhile "♂" of Gender will flash so Gender can be adjusted using ▲ ▼, press mode to save gender & move to next data.

The text window will display "SELECT WEIGHT" for 3 seconds, meanwhile "70" of Weight will flash so weight can be adjusted to use ▲ ▼, press mode to save value & move to next data.

The text window will display "SELECT HEIGHT" for 3 seconds, meanwhile "175" of Height will flash so Height can be adjusted to use ▲ ▼, press mode to save value

Press mode to start measurement, please also grasp hand pulse grips.

After the measurement the display will show out Body Fat %, BMI and BMR.

(Body Fat % and BMI will alternate on the display every 4 seconds)

9. CLIMBING Program

Selecting "Climbing" by pressing the Climbing Program Key and then pressing mode.

The text window will display "SELECT LEVEL" for 3 seconds.

There are 3 levels (L1,L2,L3) to select, using ▲ ▼ then pressing mode to confirm.

Setting Parameters for Climbing

After that 1st parameter "Time" will flash so value can be adjusted using + - .

Press mode to save value & move to the next parameter to be adjusted. Continue through all the desired parameters, start pedaling to begin workout.

Start Pedaling to start Workout. The resistance can't be adjusted by + - during workout.

Heart Rate

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.

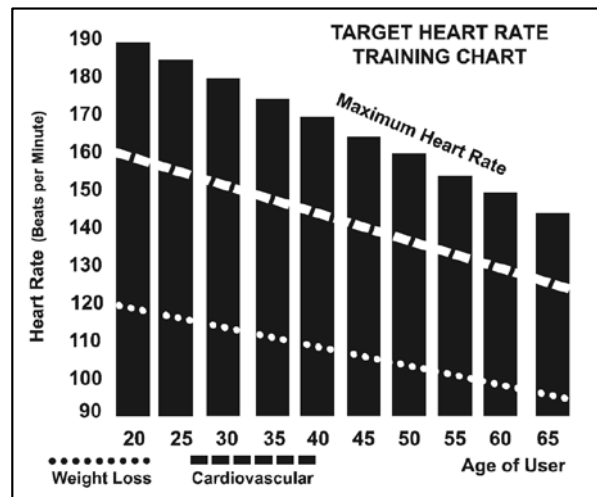
To determine the benefit range in which you wish to train, you must first determine your predicted Maximum Heart Rate. This can be accomplished by using the following formula: 220 minus your age. This will give you the predicted Maximum Heart Rate (MHR) for someone of your age. To determine the effective heart rate range for specific goals you simply calculate a percentage of 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 cardio vascular system. This 60% to 80% is the zone to stay in for maximum benefit.

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

$$\begin{aligned} 220 - 40 &= 180 \text{ (maximum heart rate)} \\ 180 \times .6 &= 108 \text{ beats per minute} \\ &\text{(60\% of maximum)} \\ 180 \times .8 &= 144 \text{ beats per minute} \\ &\text{(80\% of maximum)} \end{aligned}$$

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. After calculating your MHR 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 MHR 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 MHR on a schedule approved by your physician. Consult your physician before participating in any exercise program.

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 on the factors discussed earlier. If your body is strong and rested, you will feel strong and your pace will feel comfortable. 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 difficult. Again, this will show up in your RPE and you will train at the proper level for that day.

General Maintenance and Troubleshooting

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:
 - i. 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. The majority of calls to the service department for noise issues can be traced to loose hardware or the rear rails being dirty.
 - ii. Dirt build-up on the rear rails and polyurethane wheels are also a source of noise. Noise from build-up on the rails can cause a thumping sound that you would swear is coming from inside the main body of the machine because noise travels and is amplified in the tubing of the frame. Clean the rails and wheels with a lint free cloth and rubbing alcohol. Stubborn build-up can be removed with your thumbnail or a non-metallic scraper, like the back edge of a plastic knife. After cleaning, apply a small amount of lubricant on the rails with your fingers or a lint free cloth. You only need a thin coat of lubrication, wipe off any excess.
3. If squeaks or other noises persist, check that the unit is properly leveled before calling the service department.

Elliptical Noises

Your new elliptical is engineered and manufactured to the strictest industry standards and tolerances. All elliptical trainers, no matter who the manufacturer, have a multitude of moving linkages and parts. Be aware that even with the tightest mechanical tolerances there still could be a slight amount of play between some parts. This inherent play can result in slight noises during use such as clicks and small thumps. Please expect that the elliptical will not be completely silent.

Engineering Mode

The console has built in maintenance/diagnostic software. The software will allow you to make changes to the console settings such as changing units from English to Metric or turning off the console beeps (if they are waking your family during your early morning workouts). To enter the Maintenance Menu (may be called Engineering Mode, depending on version) press and hold down the **Start**, **Stop** and **Enter** keys. Keep holding the keys down for about five seconds and the message window will display "Engineering Mode". Press the **Enter** key to access the menu below. Press the **Level** **▲/▼** keys to navigate the menu.

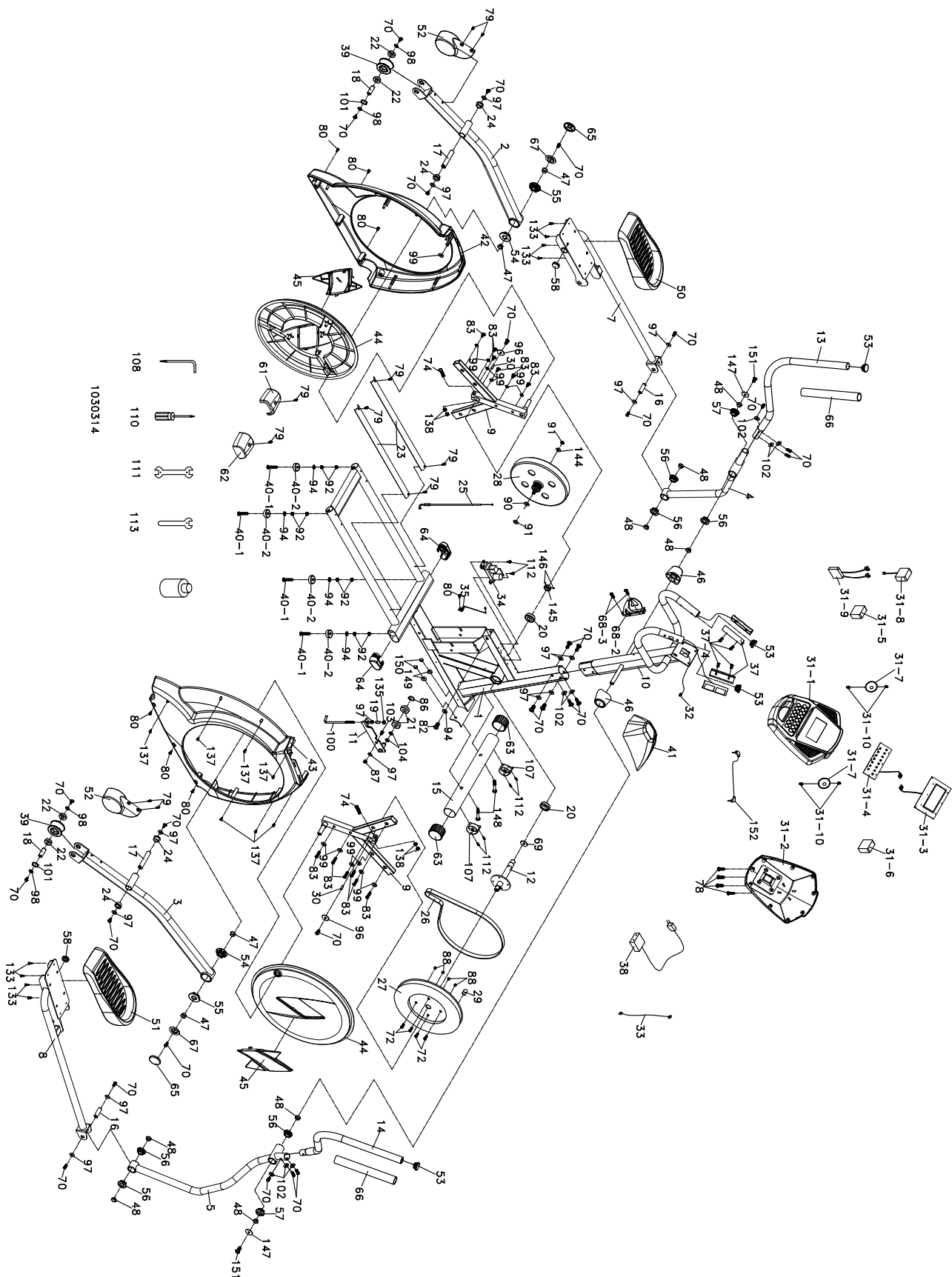
- a. Key Test - Allows you to test all the keys to make sure they are functioning
- b. LCD Test - Tests all the display functions.
- c. Functions - Press Enter to access settings, use Level **▲/▼** keys to navigate.
 - i. Sleep Mode - On; when turned on the console will darken after 30 minutes of no use. When turned off the console will remain lit as long as the power is on
 - ii. Motor Test - Continually runs the tensioning gear motor
 - iii. Manual - Allows stepping of the gear motor
 - iv. Key Tone - Turns off the speaker so no beeping sound is heard
 - v. Units - Set to English or Metric display readings
 - vi. Odometer Reset - Reset the odometer
 - vii. Pause mode – On; when turned off, pressing Stop once ends the program; when turned on, the console retains data for five minutes before switching to the startup screen
 - viii. Safety – Off; when turned on the machine automatically goes to Level 20 of Resistance to prevent unauthorized use by a child
- d. Security - Allows you to lock the keypad so no unauthorized use is allowed. When the child lock is enabled, the console will not allow the keypad to operate unless you press and hold the Start and Enter keys for three seconds to unlock the console.
- e. Factory Set
- f. Exit - Select to exit engineering mode.

■ Elliptical Lubrication

1. Pour 2c.c of the lubricant under the middle of the rail. You must be lubricate the rails every three months.
2. If you feel the exercise is not smooth or you hear noise during your exercise, lubricate the middle rail with 2 c.c.of the lubricant.



Exploded View Diagram



KEY NO.	PART NO.	Description	Q'TY
1	17450001	Main Frame	1
2	17450002	Pedal Arm (L)	1
3	17450003	Pedal Arm (R)	1
4	17450004	Lower Handle Bar (L)	1
5	17450005	Lower Handle Bar (R)	1
7	17450007	Connecting Arm (L)	1
8	17450008	Connecting Arm (R)	1
9	17450009	Cross Bar	2
10	17450010	Console Mast	1
11	17450011	Idler Wheel Assembly	1
12	17450012	Crank Axle	1
13	17450013	Swing Arm (L)	1
14	17450014	Swing Arm (R)	1
15	17450015	Front Stabilizer	1
16	17450016	Rod End Shaft	2
17	17450017	Axle for Pedal	2
18	17450018	Axle for Slide Wheel	2
19	17450019	Rod End Sleeve	1
20	17450020	6005_Bearing	2
21	17450021	6203_Bearing	2
22	17450022	6003_Bearing	4
23	17450023	Aluminum Track	2
24	17450024	Ø31 × Ø25.5 × Ø19 × 16+3T_Bushing	4
25	17450025	360m/m_Steel Cable	1
26	17450026	Drive Belt	1
27	17450027	Ø330_Drive Pulley	1
28	17450028	Flywheel	1
29	17450029	Magnet	1
30	17450030	25 × 7 × 7m/m_Woodruff Key	2
31	17450031	Console Assembly	1
32	17450032	1100m/m_Computer Cable	1
33	17450033	600m/m_DC Power Cable	1
34	17450034	Gear Motor	1
35	17450035	300m/m_Sensor W/Cable	1

KEY NO.	PART NO.	Description	Q'TY
37	17450037	850m/m_Handpulse W/Cable Assembly	2
37~4	17450037-4	Ø3 × 20L_Tapping Screw	4
38	17450038	Power Adaptor	1
39	17450039	Ø82_Slide Wheel , Urethane	2
40~1	17450040-1	3/8" × UNC16 × 2" _Flat Head Socket Bolt	4
40~2	17450040-2	Ø35 × 10m/m_Rubber Foot	4
41	17450041	Console Mast Cover	1
42	17450042	Side Case (L)	1
43	17450043	Side Case (R)	1
44	17450044	Round Disk	2
45	17450045	Round Disk Cover	2
46	17450046	Cover Swing Arm Axle	2
47	17450047	WFM-1719-12_Bushing	4
48	17450048	J4FM-1719-09_Bushing	8
50	17450050	Pedal (L)	1
51	17450051	Pedal (R)	1
52	17450052	Slide Wheel Cover	2
53	17450053	Ø32(1.8T)_Button Head Plug	4
54	17450054	Ø56 × Ø19 × 15L_Bushing	2
55	17450055	Ø56 × Ø19 × 21L_Bushing	2
56	17450056	Ø42 × Ø19 × 15L_Bushing	6
57	17450057	Ø42 × Ø19 × 21L_Bushing	2
58	17450058	32 × 2.5T_Round Cap	2
61	17450061	Rear Stabilizer Cover (L)	1
62	17450062	Rear Stabilizer Cover (R)	1
63	17450063	Ø60_Round End Cap	2
64	17450064	Oval End Cap	2
65	17450065	Bushing Cover	2
66	17450066	Handgrip Foam	2
67	17450067	Ø52 × Ø8.2 × 1.5T_Bushing Washer	2
68~2	17450068-2	Drink Bottle Holder	1
68~3	17450068-3	M5 × P0.8 × 12L_Phillips Head Screw	2
69	17450069	Spacer Bushing	1
70	17450070	5/16" × UNC18 × 15L_Hex Head Bolt	28
72	17450072	1/4" × UNC20 × 3/4" _Hex Head Bolt	4
74	17450074	M8 × P1.25 × 35L_Socket Head Cap Bolt	2
78	17450078	M5 × P0.8 × 10L_Phillips Head Screw	4
79	17450079	M5 × P0.8 × 15L_Phillips Head Screw	10
80	17450080	Ø5 × 16L_Tapping Screw	7
82	17450082	Ø4.8 × 38L_Sheet Metal Screw	1
86	17450086	Ø17_C Ring	1
87	17450087	M8 × P1.25 × 7T_Nyloc Nut	1
88	17450088	1/4" × UNC20 × 8T_Nyloc Nut	4
90	17450090	3/8" × UNF26 × 4T_Nut	1
91	17450091	3/8" × UNF26 × 11T_Nut	2
92	17450092	3/8" × UNC16 × 7T_Nut	8

KEY NO.	PART NO.	Description	Q'TY
94	17450094	Ø10 × Ø19 × 1.5T_Flat Washer	5
96	17450096	Ø8 × Ø35 × 1.5T_Flat Washer	2
97	17450097	Ø8 × Ø23 × 1.5T_Flat Washer	14
98	17450098	Ø8 × Ø20 × 1.5T_Flat Washer	4
99	17450099	Ø6.5 × Ø19 × 1T_Flat Washer	13
100	174500100	M8 × P1.25 × 170L_J Bolt	1
101	174500101	Ø17_Wave Washer	2
102	174500102	Ø8 × Ø23 × 2T_Curved Washer	8
103	174500103	M8 × P1.25 × 20L_Carriage Bolt	1
104	174500104	Ø17 × Ø23.5 × 2T_Flat Washer	2
107	174500107	Transportation Wheel	2
108	174500108	Combination M5 Allen Wrench & Phillips Head	1
110	174500110	Phillips Head Screw Driver	1
111	174500111	12.14m/m_Wrench	1
112	174500112	Ø5 × 19L_Tapping Screw	6
113	174500113	12m/m_Wrench	1
133	174500133	M5 × P0.8 × 10L_Phillips Head Screw	8
135	174500135	M8 × P1.25 × 9T_Nyloc Nut	1
137	174500137	Ø3.5 × 16L_Sheet Metal Screw	7
138	174500138	M8 × P1.25 × 6.3T_Nut	4
144	174500144	3/8" × UNF26 × 6T_Nut	1
145	174500145	Axle Stopper	1
146	174500146	M5 × P0.8 × 5L_Slotted Set Screws	2
147	174500147	Ø8.5 × Ø26 × 2.0T_Flat Washer	2
148	174500148	3/8" × UNC16 × 3"_Carriage Bolt	2
149	174500149	3/8" × UNC16 × 12.5T_Cap Nut	2
150	174500150	Ø10 × Ø23 × 1.5T_Curved Washer	2
151	174500151	5/16" × UNC18 × 15L_Button Head Socket Bolt	2
152	174500152	400m/m_Audio Cable	1

Getting on / off your elliptical

IMPORTANT

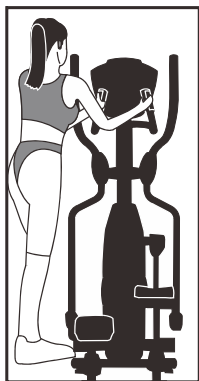
The elliptical comes with two Dual Action Handles and a Stationary Handlebar.

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.

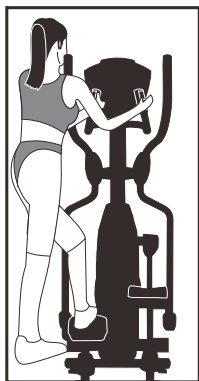
***Caution should always be taken when getting on and off any exercise machine.
Please follow the safety steps below.***



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.



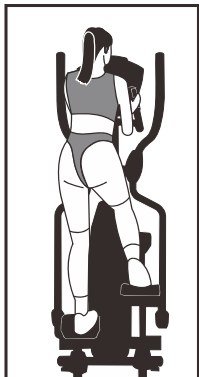
Important

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.



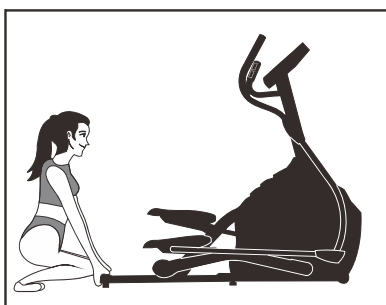
The elliptical can be used in forward or reverse motion.



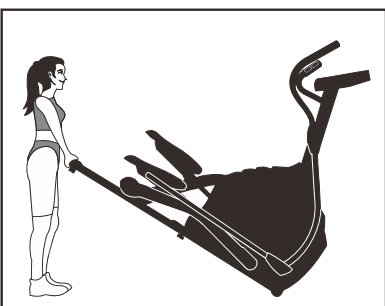
When going in reverse, bend your knees slightly more. More emphasis is on the buttocks and hamstrings in the reverse motion.

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 Disk and other at bottom).



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

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.

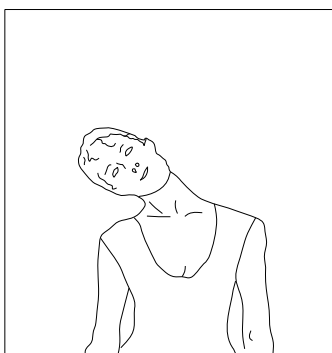
The rest period required between strength training exercises may vary from person to person. This will depend mostly on your level of fitness and the program you have chosen. Rest between exercises by all means, but do not allow this to exceed two minutes. Most people manage with half minute to one minute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

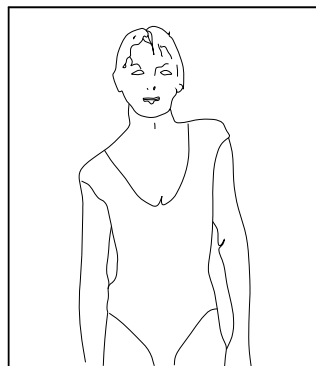
HEAD ROLLS

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.



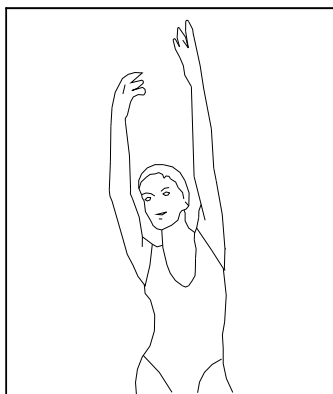
SHOULDER LIFTS

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.



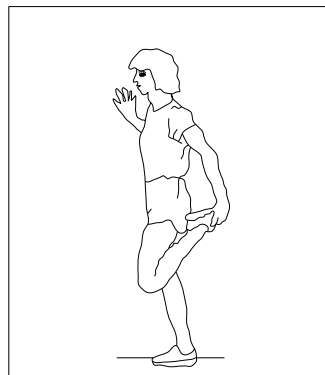
SIDE STRETCHES

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.



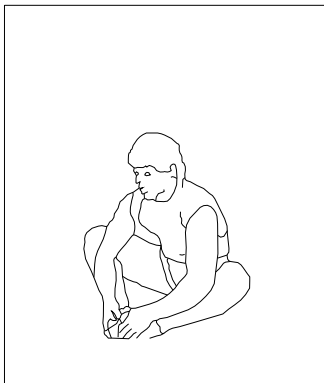
QUADRICEPS STRETCH

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.



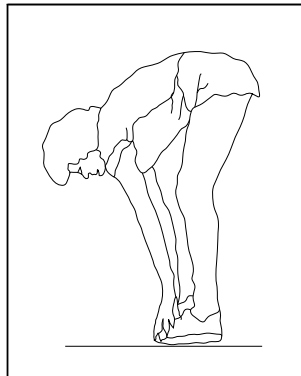
INNER THIGH STRETCH

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.



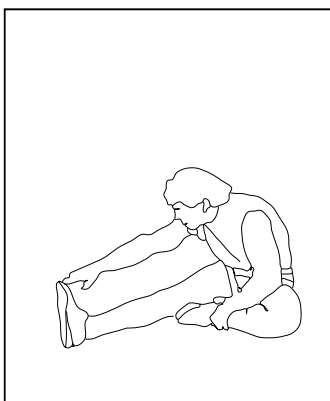
TOUCHES

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 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 toward your toe as far 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.

