# Cybex Arc Trainer 610A
# Owner's Manual

Cardiovascular Systems

Part Number 5610A-4

www.cybexinternational.com

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Part Number 5610A-4



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www.cybexinternational.com • techhelp@cybexintl.com • techpubs@cybexintl.com • 5610A-4 Rev A • September 2006

## About This Manual

An Owner's Manual is shipped with each unit. To purchase additional copies of this manual or any other Cybex manual, please do one of the following:

- order online at www.cybexinternational.com
- fax your order to 508-533-5183
- contact Cybex Customer Service at 800-766-3211
- or contact Cybex Customer Service at 508-533-4300

To contact Cybex with comments about this manual you may send email to techpubs@cybexintl.com.

## FCC Compliance Information

**! WARNING:** ***Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.***

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception (which can be determined by turning the equipment off and on) the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio TV technician for help.

## DECLARATION OF CONFORMITY

**August 24, 2006**

This Declaration of Conformity is suitable to the European Standard EN 45014, "General criteria for supplier's declaration of conformity."

We,

**Manufacturer:** Cybex International, Inc
10 Trotter Drive
Medway, MA 02053
USA

(508) 533-4300

**EU Representative:** Cybex Int. UK Ltd
Oak Tree House
Atherstone Rd
Measham
Swadlincote, Derbyshire DE12 7EL
United Kingdom
+44 (0)845 6060 228

declare under our sole responsibility that the product(s):

**Cybex 610A ArcTrainer Stationary Exercise Machine**
**Cybex 619A Arc Trainer Stationary Exercise Machine**

to which this declaration relates is in conformity with the EEC directives listed herein below (including any and all relevant modifications):

**73/23/EEC** **Low Voltage Directive**

**89/336/EEC** **Electromagnetic Compatibility**

**Art Hicks**
**Chief Operating Officer**
**Cybex International, Inc.**
**10 Trotter Drive**
**Medway, MA 02053**

As a result of test reports and their evaluation by accredited laboratories, we are in possession of the following certificates for products which carry this marking:

| | | |
|---|---|---|
| Canada, USA | | CAN/CSA-C22.2 No.335.1, UL Std. No 1647, EN55022 Class A, FCC Part 15 Class A, EN 60335-1 |
| European Union | CE | 73/23/EEC, 89/336/EEC |
| | | |

References of harmonized standards on which this declaration of conformity is based:

**EN 50082-1:1997** Electromagnetic Compatibility (EMC) Generic Immunity Standard Part 1: Residential, Commercial and Light Industry

**EN 61000-4-2** Electromagnetic compatibility (EMC) - Part 4-2: Testing and measurement techniques - Electrostatic discharge immunity test

**EN 61000-4-3** Electromagnetic compatibility (EMC) - Part 4-3: Testing and measurement techniques - Radiated, radio frequency, and electromagnetic field immunity test

**EN 61000-4-4** Electromagnetic compatibility (EMC) - Part 4: Testing and measurement techniques - Section 4: Electrical fast transient/burst immunity test

**EN 61000-4-5** Electromagnetic compatibility (EMC)- Part 4-5: Testing and measurement techniques - Surge immunity test

**EN 61000-4-6** Electromagnetic compatibility (EMC) - Part 4-6: Testing and measurement techniques - Immunity to conducted disturbances, induced by radio-frequency fields

**EN 61000-4-8** Electromagnetic compatibility (EMC) - Part 4-8: Testing and measurement techniques - Power frequency magnetic field immunity test

CYBEX

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151 24th Avenue NW + Owatonna MN 55060 USA + *t* 507 455 0217 + *f* 507 455 3446

**EN 61000-4-11** Electromagnetic compatibility (EMC) - Part 4-11: Testing and measurement techniques - Voltage dips, short interruptions and voltage variations immunity tests

**EN 61000-3-2** Electromagnetic compatibility (EMC) - Part 3-2: Limits - Limits for harmonic current emissions (equipment input current <= 16A per phase)

**EN 61000-3-3** Electromagnetic compatibility (EMC) - Part 3-3: Limits - Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems, for equipment with rated current <= 16 A per phase and not subject to conditional connection

**EN 60335-1**: 1994 +A11: 1995 +A12: 1996 +A1: 1996 +A13: 1998 +A2: 1999 "Safety of Household and Similar Electrical Appliances"

**EN 55022: 1998 (CISPR 22:1997), Class A** Limits and Methods of Measurement of Radio Interference Characteristics of Information Technology Equipment.

**ASTM F 2276 -** General Fitness Equipment Safety Requirements

**EN 957-9: Stationary Training Equipment.** Elliptical Trainers, additional specific safety requirements and test methods

**FCC Part 15, Subpart B - Class A** Radiated and Conducted Emissions

**CAN/CSA-C22.2 No. 335.1** Safety of Household and similar electrical appliances, General Instruction (Norm CEI 335-1 (1991))

**ANSI / UL-1647** 3rd Edition, March 28, 1997 Rev. May 9, 2006 Motor Operated Massage and Exercise Machines.

# Table of Contents

# 1 - Safety

***IMPORTANT:*** *Read all instructions and warnings before using the unit.*

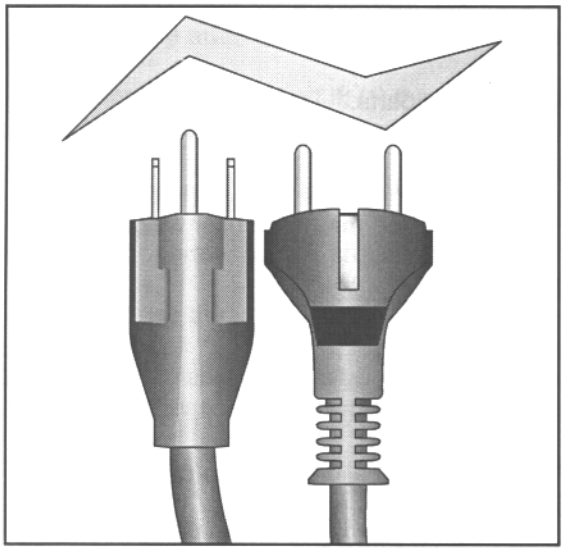
## *Important Voltage Information*

Before plugging the power cord into an electrical outlet, verify that the voltage requirements for your area match the voltage of the unit that you have received. The power requirements for the unit include a grounded circuit, rated for one of the following: 115 VAC ±5%, 50/60 Hz and 15 amps; or 230 VAC ±10%, 50/60 HZ and 10 amps. See the voltage requirement decal for the exact voltage requirements of your unit.

***! WARNING: Do not attempt to use this unit with a voltage adapter. Do not attempt to use this unit with an extension cord.***

## *Grounding Instructions*

This unit must be grounded. If it should malfunction or break down, 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.



115V NEMA 5-15 Euro Plug CEE 7/7

***! DANGER: Improper connection of the equipment grounding conductor can result in a risk of electric shock. Check with a qualified electrician or service provider if you are in doubt as to whether the unit is properly grounded. Seek a qualified electrician to perform any modifications to the cord or plug. Cybex is not responsible for injuries or damages as a result of cord or plug modification.***

This unit is for use on a nominal 115 VAC ±5%, 50/60 Hz and 15 amps; or 230 VAC ±10%, 50/60 Hz and 10 amps and a grounded circuit. Make sure that the unit is connected to an outlet having the same configuration as the plug. Do not use a ground plug adapter to adapt the power cord to a non-grounded outlet.

## *Important Safety Instructions*

(Save These Instructions)

***! DANGER: To reduce the risk of electric shock, always unplug this unit from the electrical outlet immediately after using it and before cleaning it.***

***! WARNING: Serious injury could occur if these precautions are not observed. To reduce the risk of burns, fires, electric shock, or injury:***

**User Safety Precautions**

- Keep children away. Teenagers and disabled must be supervised.Tenez les enfants éloignés. Les adolescents et les handicapés doivent être surveilles.
- Obtain instruction before using. Lisez les instructions avant l'utilisation.
- Wait until foot plates come to a complete stop before dismounting. Attendre l'arret complet des reposes pieds avant de descendre.
- Obtain a medical exam before beginning any exercise program.
- Stop exercising if you feel faint, dizzy, or experience pain.
- Read and understand the Owner's Manual and all warnings posted on the unit before using.
- DO NOT wear loose or dangling clothing while using.
- Keep all body parts, towels, and the like free and clear of moving parts.
- Use the handrails for support and to maintain balance.
- DO NOT use the unit if you exceed 400 lbs. (180 kg). This is the rated maximum user weight.
- Replace any warning labels if damaged, worn or illegible.
- Report any malfunctions, damage or repairs to the facility.
- Wait until foot plates come to a complete stop before dismounting.
- All maintenance activities shall be performed by qualified personnel. Failure to do so could result in serious injury.
- DISCONNECT POWER BEFORE SERVICING.
- Moving parts. Keep hands away when in use.

**Facility Safety Precautions**

- Make sure all user and safety precautions are observed.
- Read and understand the Owner's Manual completely before using the unit.
- Make sure all users are properly trained on how to use the equipment.
- Make sure that each machine is setup and operated on a solid level surface. Do not install equipment on an uneven surface.
- Perform regular maintenance checks on the equipment. Also pay close attention to all areas most susceptible to wear, including (but not limited to) cables, pulleys, belts and grips.
- Immediately replace worn or damaged components. If unable to immediately replace worn or damaged components then remove from service until the repair is made.
- Do not attempt repairs, electrical or mechanical. Seek qualified repair personnel when servicing. If you live in the USA, contact Cybex Customer Service at 800-766-3211. If you live outside the USA, contact Cybex Customer Service at 508-533-4300.
- Disconnect all power before servicing the unit.
- Keep a repair log of all maintenance activities.
- Use only Cybex supplied components to maintain/repair the equipment.
- Do not use attachments unless recommended for the unit by Cybex.
- Do not operate the unit if: (1) the cord is damaged; (2) the unit is not working properly or (3) if the unit has been dropped or damaged. Seek service from a qualified technician.
- Do not operate electrically powered units in damp or wet locations.
- Do not operate the unit around or where aerosol (spray) or where oxygen products are being used.
- Do not use the unit outdoors.

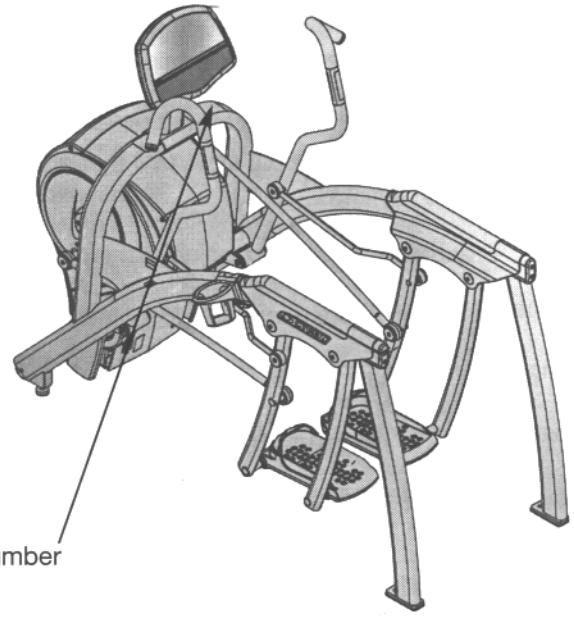
***NOTE:*** *It is the sole responsibility of the user/owner or facility operator to ensure that regular maintenance is performed.*

## Warning Decals

Carefully read and understand the following before using the unit:

***NOTE:*** *To replace any worn or damaged decals do one of the following: Visit www.cybexinternational.com to shop for parts online, fax your order to 508-533-5183 or contact Cybex Customer Service at 800-766-3211. If you live outside of the USA, call 508-533-4300.*

Warning decals indicate a potentially hazardous situation, which, if not avoided, could result in death or serious injury. The warning decals are shown below.



Warning decal part number
610A-349-4

**⚠ WARNING**

**SERIOUS INJURY COULD OCCUR IF THESE PRECAUTIONS ARE NOT OBSERVED**

Keep children away. Teenagers and disabled must be supervised. *Tenez les enfants éloignés. Les adolescents et les handicapés doivent être surveilles.*

Obtain instruction before using. *Lisez les instructions avant l'utilisation.*

Wait until foot plates come to a complete stop before dismounting. *Attendre l'arret complet des reposes pieds avant de descendre.*

Obtain a medical exam before beginning any exercise program.

Stop exercising if you feel faint, dizzy, or experience pain.

Read and understand the Owner's Manual and all warnings posted on the unit before using.

DO NOT wear loose or dangling clothing while using.

Keep all body parts, towels, and the like free and clear of moving parts.

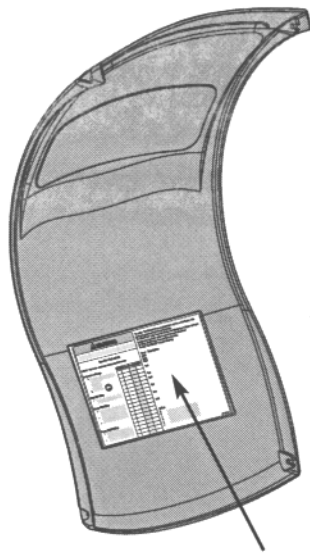
Use the handrails for support and to maintain balance.

DO NOT use the unit if you exceed 400 lbs. (180 kg). This is the rated maximum user weight.

Replace any warning labels if damaged, worn or illegible.

Report any malfunctions, damage or repairs to the facility.

610A-349-4

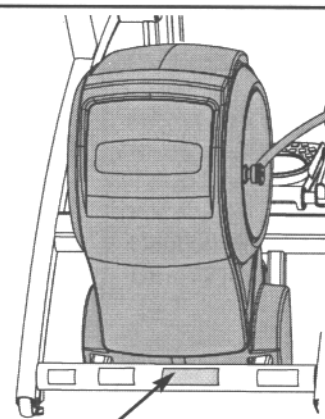


Underneath
Access Cover

**⚠ WARNING**

***All maintenance activities shall be performed by qualified □ personnel. Failure to do so could result in serious injury.***

Warning decal part number - DE-17322-4

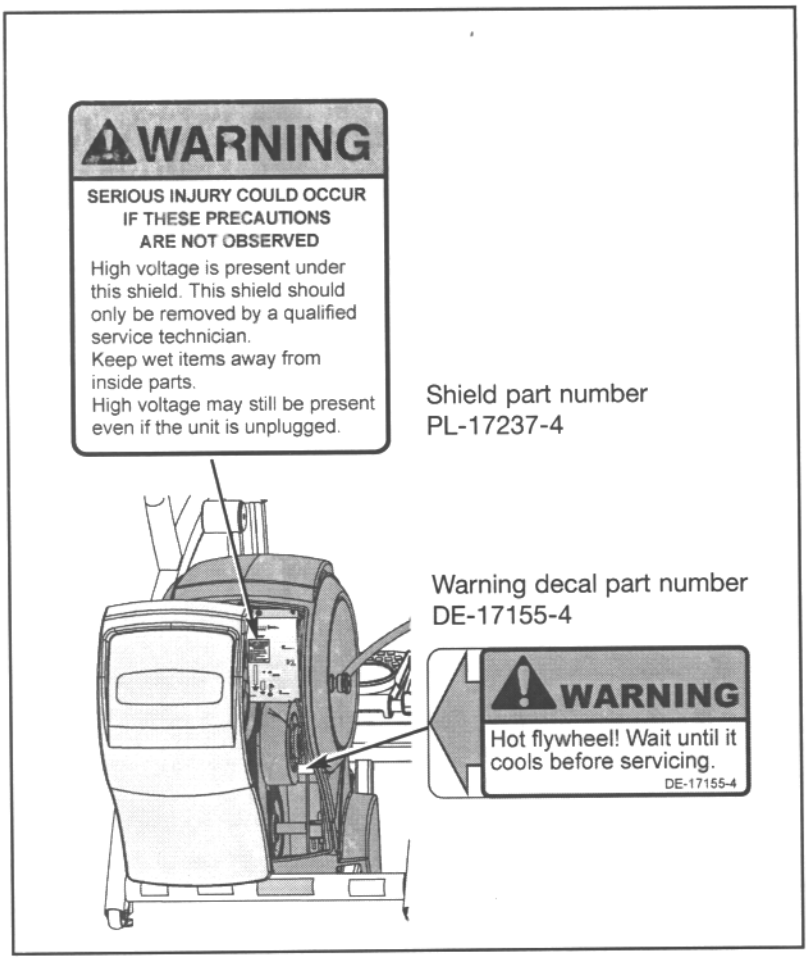


Warning decal part number
CM000240

**⚠ WARNING WARNUNG 警告**
**AVERTISSEMENT ADVERTENCIA VARNING**

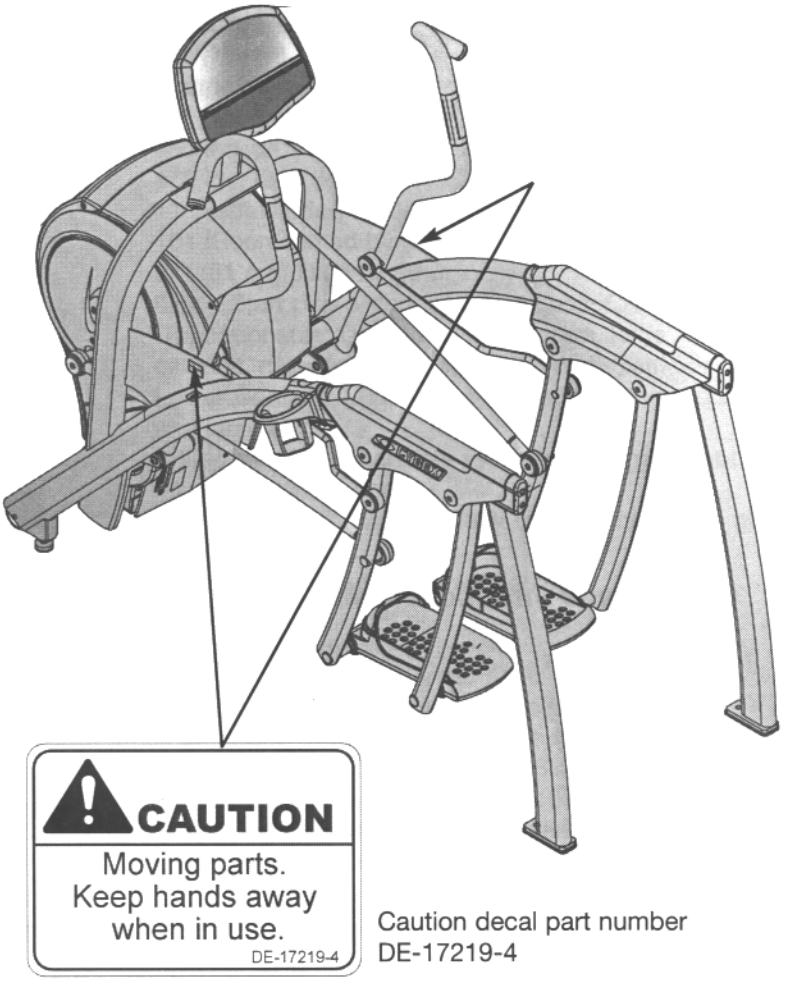
| | | | | | |
|---|---|---|---|---|---|
| DISCONNECT POWER BEFORE SERVICING. | DÉBRANCHEZ L'ALIMENTATION AVANT DE FAIRE L'ENTRETIEN | VOR SERVICEAR-BEITEN NETZSTECKER ZIEHEN. | CORTE LA ENERGIA ELECTRICA ANTES DE REPARAR. | 修理点検の前に 電源を 切って下さい。 | KOPPLA IFRÅN STRÖMMEN INNAN SERVICE UTFÖRS. |

CM000240


WARNING
SERIOUS INJURY COULD OCCUR IF THESE PRECAUTIONS ARE NOT OBSERVED
High voltage is present under this shield. This shield should only be removed by a qualified service technician.
Keep wet items away from inside parts.
High voltage may still be present even if the unit is unplugged.
Shield part number PL-17237-4
Warning decal part number DE-17155-4
WARNING
Hot flywheel! Wait until it cools before servicing.
DE-17155-4

## Caution Decals

Caution decals indicate a potentially hazardous situation, which, if not avoided, may result in minor or moderate injury. The caution decals are shown below.




Caution decal part number
DE-17219-4

***NOTE:*** *This decal is located on both sides of the unit in a total of two locations.*

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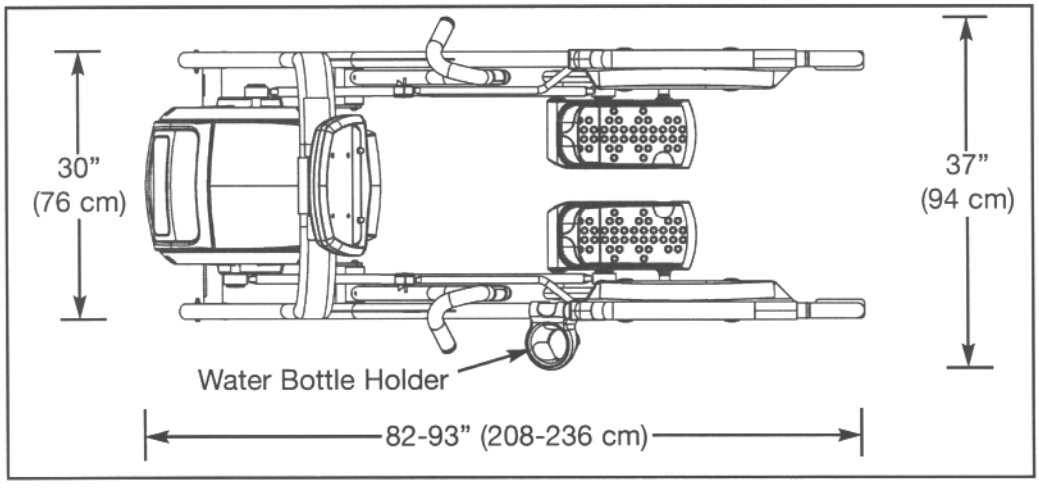
# 2 - Technical Specifications

## *Specifications*

| | |
|---|---|
| Length: | 82" (208 cm) ***NOTE:*** *When highest incline is in use the length increases to 93" (236 cm).* |
| Width: | 30" (76 cm) ***NOTE:*** *Measurement is without the water bottle holder. Width with water bottle holder and arms attached is 37" (94cm).* |
| Height: | 59" (150cm). |
| Weight of Product: | 450 lbs. (204 kg). |
| Shipping Weight: | 475 lbs. (215 kg). |
| Incline Levels: | 11 (Represented by 0-10% in increments of 1). |
| Resistance Levels: | 101 (Represented by 0-100% in increments of 1). |
| Stride Length: | 24" (61 cm) fixed length. |
| Programs: | Quick Start plus Manual, Weight Loss, Cardio, Interval, Hill and Strength. |
| Console Features: | Upper console: Dot Matrix of program, large 1" LED display of distance, calories, calories per hour, METS, Watts, strides per minute and heart rate. Lower Console: LED display of resistance and dual function display of time and incline. |
| Heart Rate Features: | Built-in wireless heart rate receiver (transmitter not included) and contact heart rate monitoring. |
| Frame Colors: | Standard: White texture, black texture, monotone gold , black chrome, platinum sparkle. Custom: Unlimited colors available. |
| Resistance Range: | 0-900 watt |
| Maximum User Weight: | 400 lbs. (181 kg) |
| Power Rating: | 115v 50/60 Hz 2A (230v 50/60 Hz 1 amp) |
| Outlet Rating: | 4 amps (or 5 amps outside of the United States) |
| Power Requirement: | A grounded circuit and one of the following:<br>• 115 VAC ±5%, 50/60 Hz and 15 amps,<br>• 230 VAC ±10%, 50/60 Hz and 10 amps |
| Other: | Water bottle holder and Daisy chain power cord. |
| Options: | Channel and volume controls on lower switch membrane for embedded A/V. |



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# 3 - Operation

Read and understand all instructions and warnings prior to using the Unit. See all of the safety related information located in chapter 1.

## *Terms and Symbols Used*

This section lists some of the common terms and symbols used in this chapter. Other terms and symbols are listed in this chapter as appropriate.

**Dormant Mode -** This occurs when the unit is plugged in, turned to the on (I) position and not in use. The control panel will display a beating heart when the unit is in *Dormant Mode.*

**Program Setup Mode -** This begins after pressing any program key. Upon entering a program the LEDs flash, prompting the user to adjust the appropriate settings.

**Active Mode -** This begins immediately after pressing the **Quick Start** key *(Manual Mode),* or after the *Program Setup Mode.* The beginning of *Active Mode* is marked by the 3 second countdown. *Active Mode* continues until you reach the end of a program or press the **Pause/end** key.

**Quick Start -** This begins by pressing the **Quick Start** key. **Quick Start** skips the *Program Setup Mode* and begins immediately in *Manual Mode.*

**Manual Mode -** This begins immediately after pressing the **Quick Start** key or after pressing the **Manual** program key. In *Manual Mode* you can customize your workout **Resistance** and **Time** and enter your **Weight** by pressing those keys. ***NOTE:*** *Manual Mode features differ from the Manual Program. See the Manual section in this chapter.*

**Workout Review -** This begins after pressing the **Pause/end** key once, at the end of a program or when you stop striding for 25 seconds. The workout statistics accumulated during the previous workout session will display for 20 seconds (default setting) or until **Pause/end** is pressed again. ***NOTE:*** *You can change the 20 second default. See Setting Operation Options in chapter 5.*

**Pause Mode -** This begins when the you stop striding for 25 seconds or when you press **Pause/end** once. While in *Workout Review* you can press the **Quick Start** key to resume your workout in *Manual Mode.* The time, calories burned and other accumulated data is remembered and added to.

▲▼ - These keys adjust **Time, Level** or **Weight** up or down.

⬆⬇ - These keys adjust **Incline** higher or lower..

**+ -** - These keys adjust **Resistance** up (**+**) or down (**-**).

**channel + -** (optional) - These keys adjust **Channel** up (**+**) or down (**-**).

**volume + -** (optional) - These keys adjust **Volume** up (**+**) or down (**-**).

## Quick Operation Guide

***Note:*** *Maximum user weight is 400 lbs. (181 kg).*

The following is a quick overview of the operation of the unit. For more information read *Detailed Operation Guide* in this chapter. ***NOTE:*** *Times specified in this chapter reflect the unit's defaults. To change the defaults see Setting Operation Options in chapter 5.*

1. Hold the handrails to steady yourself while you step into the foot plates.

2. Press any program key or press **Quick Start** to skip the settings and begin *Manual Mode* immediately.

3. If you pressed a program key to select a program, you will now be prompted for workout **Time, Weight,** and **Level** as appropriate. Adjust these settings with the ▲▼ arrows and press **Enter** to proceed. ***IMPORTANT: Enter your actual weight.*** *The* **Resistance + -** *keys calculate the proper resistance for your weight. Your workout may feel too easy or too difficult if you do not enter your actual weight.*

4. The unit begins a countdown, "3...2...1" then the resistance increases to correspond to the program that you selected.

5. Begin striding.

6. Press the **Resistance + -** keys to change the load at any time. The right display will show the current resistance setting.

7. Press the **Incline** ⬆ ⬇ keys to change the incline at any time. The left display will show the current incline setting.

8. Press the **Pause/End** key at any time.

***! WARNING: Wait until all moving parts come to a complete stop before dismounting.***

9. Wait until foot plates come to a complete stop before dismounting the unit. Hold the handrails to steady yourself while you step off the unit.

## Detailed Operation Guide

***Note:*** *Maximum user weight is 400 lbs. (181 kg).*

1. Plug the power cord into a power outlet on a grounded circuit, rated for one of the following: 115 VAC ± 5%, 50/60 Hz and 15 amps; or 230 VAC ± 10%, 50/60 Hz and 10 amps.

2. Locate the on/off (I/O) power switch (near the power cord inlet). Toggle it to the one (I) position to supply power to the internal components and illuminate the control panel.

3. Hold the handrails to steady yourself while you step into the foot plates.

4. You now have the option to select a program or to select **Quick Start**, skip *Program Setup Mode,* and enter *Manual Mode.*

   To select a program, press a program key and follow the prompts. Upon entering a program the LEDs flash, prompting you to adjust the appropriate settings. This is referred to as *Program Setup Mode*. If the **Quick Start** key is pressed now, all defaults for that program will be accepted. After 10 seconds, if no key has been pressed, the first default will be accepted. After another 10 seconds the second default will be accepted and so on until the last default. The program will not enter *Active Mode* until you press the **Enter** or **Quick Start** key. If no key has been pressed for 20 seconds after displaying the last default, then the unit will return to the *Dormant Mode.*

   If you press the **Quick Start** key instead of choosing a program, you will enter *Manual Mode.* ***NOTE:*** *No prompts will occur in Manual Mode.* While in *Manual Mode,* customize your workout **Resistance** and **Incline** and enter your **Weight** by pressing those keys.

   ***IMPORTANT:*** *Enter your actual weight. The* **Resistance + -** *keys calculate the proper resistance for your weight. Your workout may feel to easy or too difficult if you do not enter your actual weight. For the most accurate calorie count, you must set your correct weight before beginning your workout (including clothing).*

***NOTE:*** *Press* ***Enter*** *after each adjustment.*

   When you enter *Program Setup Mode* or *Manual Mode* the unit will rock slightly. This ensures free movement of the unit.

5. The unit begins a countdown, "3...2...1" and sounds a tone for each count. When it reaches one (1) it gives a longer tone. Depending on which program and level you selected, the resistance may begin to increase and the incline may rise or fall.

6. Observe the four displays (See Figure 1):

   The lower left display flashes the actual incline until the desired incline is reached and then reverts to time. During your workout the time will show in the format of minutes:seconds. If your workout exceeds sixty minutes the time format will change to minutes only.

   The lower right display shows the user's current resistance.

   The top center display begins showing your program profile at the left side.

   The center display shows statistics or adjustable settings. This scans (every three seconds) through **Distance**, **Calories, Calories per Hour, Mets, Watts** and **Strides Per Minute**. Press the **Scan** key to toggle this feature on or off.

***NOTE:*** *Heart Rate is scanned only when you are holding the contact heart rate grips or using Polar compatible heart rate transmitter. See Figure 1.*

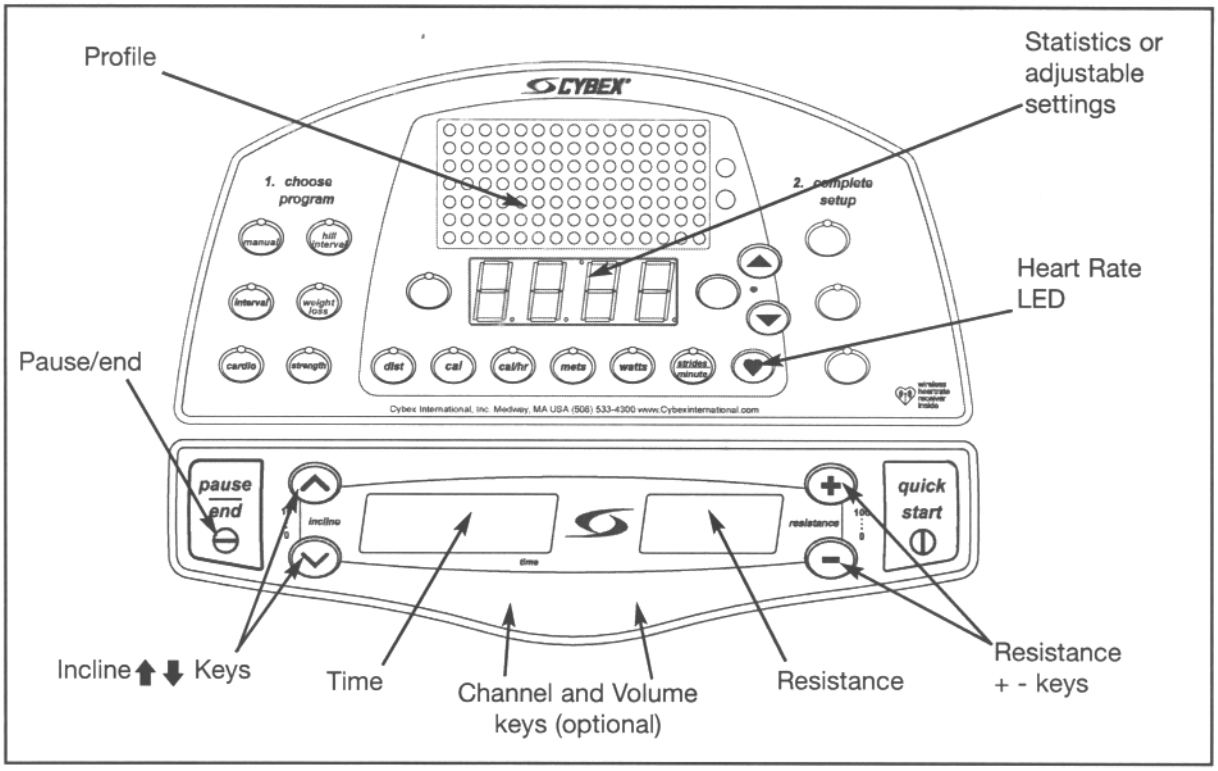



Figure 1

7. Press the **Resistance + -** keys to change the load at any time. Pressing the **+** key will make your workout harder. Pressing the **-** key will make your workout easier. The right display will show the current level in increments of 1 from 0 to 100.

8. Press the Incline ⬆ ⬇ keys to change the incline at any time. The left display will show the current incline (only while it is adjusting), in increments of 1 from 0 to 10.

9. Press the **Pause/end** key at any time to stop your workout. Press **Pause/end** once to end your workout and begin your *Workout Review*. As you press **Pause/end** once, the unit will return to level 3 incline (starting position). Press **Pause/end** twice to clear the *Workout Review* and return to *Dormant Mode.*

10. When you complete a program the unit begins a countdown, "3...2...1" and sounds a tone for each count. Workout Review displays for 20 seconds (default setting) or until you press the **Pause/end** key.

***NOTE:*** *Speeding up and slowing down is dependent on the user speeding up and slowing down.*

***! WARNING: Wait until foot plates come to a complete stop before dismounting.***

11. Wait until foot plates come to a complete stop before dismounting the unit. Hold the handrails to steady yourself while you step off the unit.

12. The unit returns to *Dormant Mode.*

## *Stopping the Arc Trainer 610A*

Press **Pause/End** once to pause your workout for 20 seconds (default setting) and to enter the *Workout Review.* As you stop striding the foot plates will stop and the elevation will return to the level 3 incline (starting position), but all workout settings and data will remain in memory for the pre-selected time. Press the **Quick Start** key within the default setting to continue your workout. If the **Quick Start** key has not been pressed during the 20 seconds pause, workout data will be cleared and the display will change to *Dormant Mode.*

Press **Pause/end** a second time to interrupt workout data from cycling and to change the display to *Dormant Mode.*

***NOTE:*** *Speeding up and slowing down is dependent on the user speeding up and slowing down.*

***! WARNING: Wait until foot plates come to a complete stop before dismounting.***

**Emergency Dismount:** Follow the steps listed below if you experience pain, feel faint or need to stop your unit in an emergency situation:

1. Grip handrails for support.
2. Stop striding.
3. Wait until the foot plates come to a complete stop.
4. Continue holding the handrails while you step off the unit.

## *Control During Operation*

Control keys on the display are usable during operation and may be pressed at any time to make adjustments in level, incline or data readouts.

**Changing Level -** You can change the level during a programmed workout. Press the **Level** key to display the current program and level status. Then press ▲▼ keys to change the level. The level will change immediately and will continue to accumulate performance data without interruption. ***NOTE:*** *If you change the level during the Manual Mode the level and resistance will change at once.*

**Changing Resistance -** Press the **Resistance + -** keys to change the load in increments of 1. Minimum to maximum resistance is from 0-100. ***NOTE:*** *During a Manual Mode or* ***Quick Start*** *workout the ▲▼ keys temporarily revert to resistance keys.*

**Changing Incline -** Press the **Incline** ⬆ ⬇ keys to change the elevation in increments of 1 from 0-10. The elevation rises in the shape of an arc ranging from 12 to 34.5 degrees. See *Range of Motion* in this chapter.

**channel + -** (optional) **-** These keys adjust **Channel** up (**+**) or down (**-**).

**volume + -** (optional) **-** These keys adjust **Volume** up (**+**) or down (**-**).

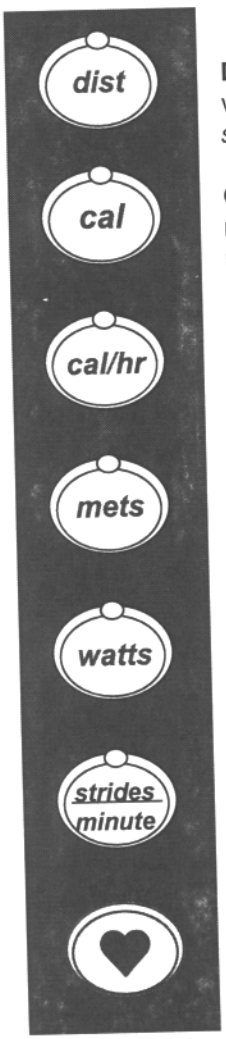
**Changing Programs -** When changing programs, your data from the previous program will transfer only when changing from one program to manual mode. You cannot transfer data when changing from one program to another program or from *Manual Mode* to a program.

**Changing Workout Time -** Press **Time** to alter the amount of time you plan to workout. You can change **Time** before or during a workout. ***NOTE:*** *The* ***Max*** *default time may limit your time. See Setting Operation Options in chapter 5.*

**Changing Data Readouts -** Press **Scan** once to continue to display a set of data. Press **Scan** again and it will continually review each set of data. ***NOTE:*** *The automatic scan is a feature that can be toggled and/or turned on or off. See Setting Operation Options in chapter 5. If* ***Scan*** *is off, your heart rate will still appear when a heart beat is detected.*

## Data Readouts

As you exercise, the Arc Trainer 610A keeps track of the following data:




**Distance -** The total accumulated distance, in miles or kilometers, during your workout. ***NOTE:*** *Depending on the defaults you've chosen this measurement will show in English or Metric.*

**Calories -** The total accumulated calories burned during your workout. Your weight must be correctly set before beginning your workout for this measurement to be most accurate.

**Calories Per Hour -** Calculation of present workloads energy exertion in Calories per Hour. Your weight must be correctly set before beginning your workout for this measurement to be most accurate.

**Metabolic Equivalent -** Relates to the user's energy expenditure. A MET is a basic unit of measurement that is used to compare relative work between individuals and activities. One MET is the amount of oxygen an individual consumes at rest. For example two mets would be twice that amount. If an individual were working at four METs he/she would be consuming oxygen at a rate equal to four times their resting consumption. METs can be used to compare walking on a grade with running or even to cycling and other activities. See *The Workout Profile* in this chapter for more information.

**Watts -** Present workload energy exertion in Watts.

**Strides Per Minute -** Your average number of strides per minute at your current speed.

**Heart Rate -** Your current heart rate. Heart rate will appear when a signal is introduced. Use either the handgrips for Contact Heart Rate or a Polar compatible heart rate transmitter. See *Heart Rate LED* for a description of colors.

**To review accumulated data after a program:** The display automatically cycles through your accumulated workout data during the *Workout Review* for 20 seconds (default setting). ***NOTE:*** *Heart rate is not displayed during a Workout Review.*

## *Displaying Heart Rate*

In order to display your heart rate, you must either use a Polar compatible heart rate transmitter belt (not included) or hold the handgrips to use Contact Heart Rate.

**Contact Heart Rate -** Hold the handgrips on the handrails until a heart rate is displayed, typically less than thirty seconds. For best results, hold the handgrips lightly and ensure that your hands contact both the front and back sensors of each grip. ***NOTE:*** *Hold your hands as steady as possible as movement can cause interference on the contacts.*

**Factors that can interfere with the heart rate signal include:**
- excessive movement
- body composition
- hydration
- too loose grip
- too tight grip
- excessive dirt, powder or oil
- resting or leaning on the grips

Contaminants, such as hand lotions, oils or body powder, may come off on the contact heart rate grips. These can reduce sensitivity and interfere with the heart rate signal. Therefore, ensure you have clean hands when using the contact heart rate.

**Polar Compatible Reception -** To use this feature, a Polar compatible heart rate transmitter belt must be worn. To view heart rate continuously, press the **Scan** key when the Heart LED is lit or press the **Heart** key.

## *Heart Rate LED*

When the handgrips are held the center display switches to show the heart rate in beats per minute (BPM) if you are not scanning. For several seconds the display will show "---". Once the actual heart rate is determined the center window displays the BPM and the Heart LED lights up. See Figure 2. The color of the light represents a scale of low to high target heart rate.

Blue = 0-69 beats per minute
Green = 70-93 beats per minute
Yellow = 94-120 beats per minute (FAT BURN ZONE)
Red = 121-170 beats per minute (CARDIO ZONE)
Purple = 171 & up beats per minute

***NOTE:*** *A label is on the unit to remind you what the color represents while you are working out. See Figure 2.*

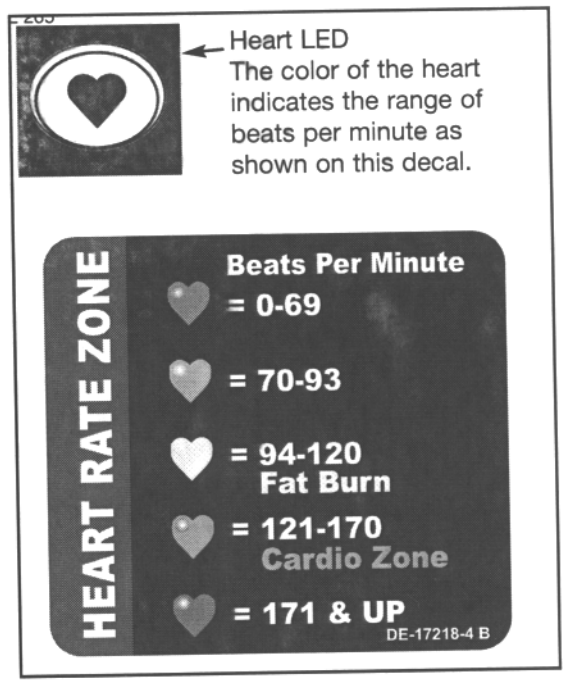


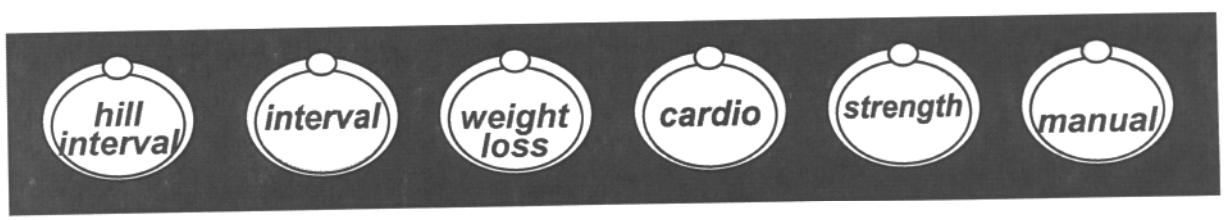

Figure 2

## Use of Programs

***! WARNING: Obtain a medical exam before beginning any exercise program. Begin comfortably with a lower level and progress with higher levels as you become acclimated.***

With the Arc Trainer 610A, you may choose from six different programs. Five of the programs provide ten levels of difficulty for a choice of fifty different preprogrammed options. You may also use *Manual Mode*. With this unique combination of programs, you can tailor your workout to achieve exactly the fitness goals you desire, including: weight loss, conditioning, endurance or maintenance of overall health. Speed is never predetermined for you; you can change your speed simply by changing your stride. The program choices are summarized as follows:

| | | |
|---|---|---|
| **Quick Start** | No levels | Skip setup and control speed, incline, and time as you go. |
| **Hill Interval** | 10 levels | Control speed and time. Level dictates incline and level. |
| **Interval** | 10 levels | Enter time desired. Level dictates incline and level. |
| **Weight Loss** | 10 levels | Enter time desired. Level dictates incline and level. |
| **Cardio** | 10 levels | Enter time desired. Level dictates incline and level. |
| **Strength** | 10 levels | Enter time desired. Level dictates incline and level. |
| **Manual** | No levels | Enter time desired. Control incline and level as you go. |



## Manual Mode

*Manual Mode* is not a preprogrammed workout. Instead, it allows you to choose setting as you workout. You may choose your settings according to how you feel or your endurance level. Since you remain in control, *Manual Mode* may be the best choice for beginners or for those who have not worked out in a long time.

Press the **Quick Start** key to workout in *Manual Mode*. To increase or decrease the resistance while in *Manual Mode* use the **Resistance + -** keys. To increase or decrease the incline while in Manual Mode use the ⬆⬇ arrows.

When you workout in *Manual Mode*, be sure to include a three-to-five minute warm-up and cool-down period. You can warm-up by setting a low resistance at zero incline and then gradually increase the incline and resistance to the target for your workout. Reverse this process for your cool-down period, lowering the resistance gradually and returning the incline to zero.

## The Workout Profile

The Workout Profile matrix in the center of the display uses columns of lights to show the progress of your workout. The height of the column represents METS, specifically the highest METS you reached in that period. Each column represents 1 minute of your total workout time when in *Manual Mode* and 15 seconds in every other program.

***NOTE:*** *It is conceivable to have two segments of different speed and elevation combinations in the same met range.*

## Range of Motion

Press the **Incline** ⬆⬇ keys to change the elevation in increments of 10%. The elevation rises or lowers in the shape of an arc ranging from 12 to 34.5 degrees (with the chord of an arc). Depending upon the incline you choose the primary and secondary muscles trained will vary. See Figure 3.

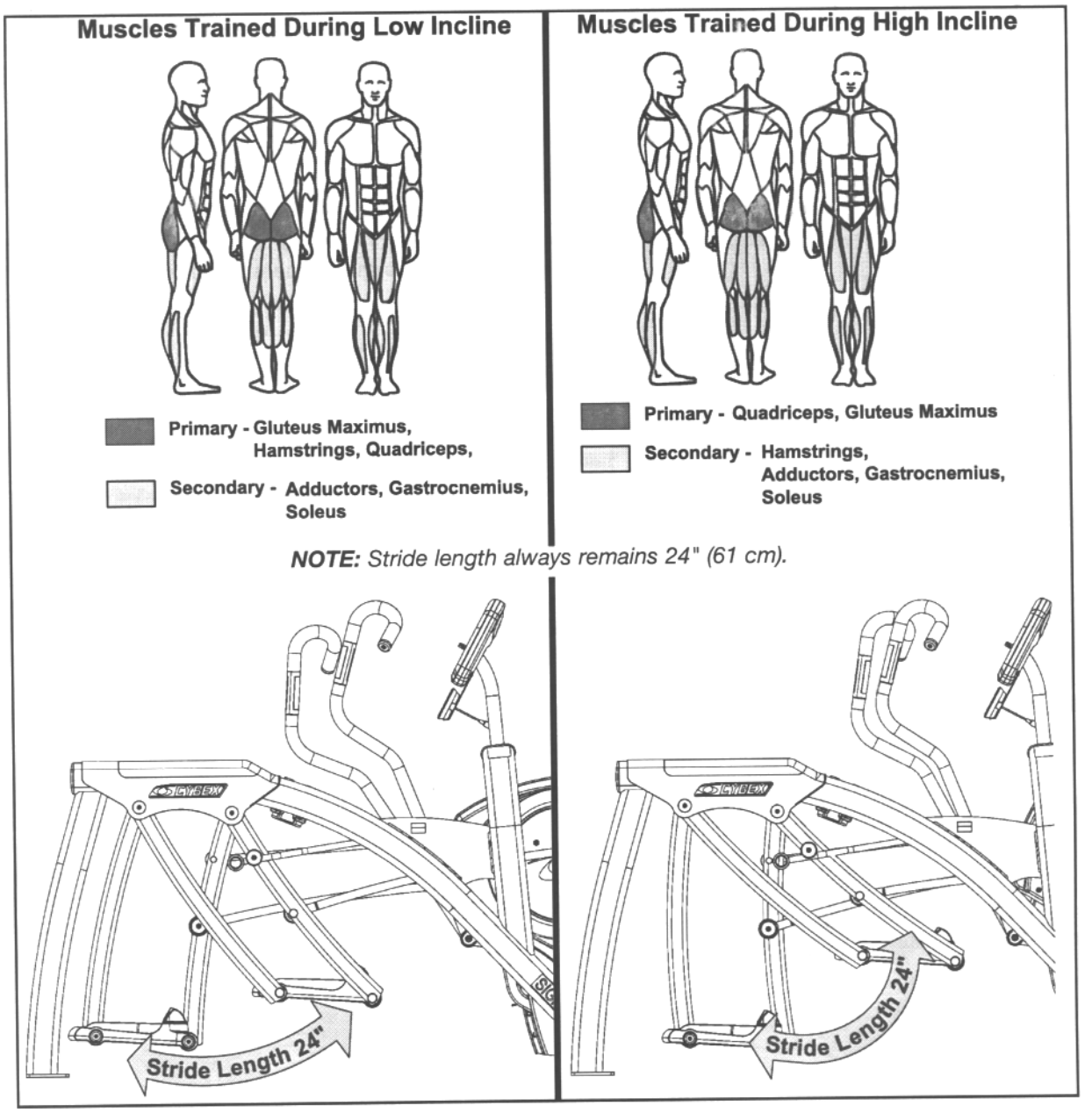



Figure 3

## *Hill Interval*

**Program Overview**

The Hills program is designed to give the user the experience of hiking in a hilly terrain. This program uses intervals of moderate resistance and incline to simulate relatively flat areas and intervals of substantially greater incline and resistance to simulate steeper grades. Likewise the two-minute work segments are intended to tax the users capabilities, while the two-minute rest allows for recuperation and allows for repeated work segments. See table on the next page and Figure 4.

## Hills

| Time Segments | :30 | :30 | :30 | :30 | 2:00 | 2:00 | 2:00 | 2:00 | :30 | :30 | :30 | :30 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Warm Up | | | | Program Segments | | | | Cool Down | | | |
| **Resistance** | 1 | 2 | 3 | 4 | 1 | 2 | 1 | 2 | 1 | 2 | 3 | 4 |
| Program Level 10 | 20 | 25 | 30 | 35 | 40 | 60 | 40 | 60 | 35 | 30 | 25 | 20 |
| 9 | 20 | 25 | 30 | 35 | 40 | 50 | 40 | 50 | 35 | 30 | 25 | 20 |
| 8 | 15 | 20 | 25 | 30 | 35 | 45 | 35 | 45 | 30 | 25 | 20 | 15 |
| 7 | 15 | 20 | 25 | 30 | 35 | 40 | 30 | 40 | 30 | 25 | 20 | 15 |
| 6 | 15 | 15 | 20 | 25 | 30 | 35 | 25 | 40 | 25 | 20 | 15 | 15 |
| 5 | 15 | 15 | 20 | 25 | 30 | 25 | 35 | 35 | 25 | 20 | 15 | 15 |
| 4 | 10 | 10 | 15 | 20 | 25 | 30 | 30 | 30 | 20 | 15 | 10 | 10 |
| 3 | 10 | 10 | 15 | 20 | 25 | 25 | 25 | 30 | 20 | 15 | 10 | 10 |
| 2 | 10 | 10 | 10 | 15 | 20 | 20 | 20 | 25 | 15 | 10 | 10 | 10 |
| 1 | 10 | 10 | 10 | 10 | 15 | 15 | 15 | 20 | 10 | 10 | 10 | 10 |

| | Warm Up | | | | Program Segments | | | | Cool Down | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Incline** | 1 | 2 | 3 | 4 | 1 | 2 | 1 | 2 | 1 | 2 | 3 | 4 |
| Program Level 10 | 3 | 4 | 5 | 6 | 6 | 10 | 6 | 10 | 6 | 5 | 4 | 3 |
| 9 | 3 | 3 | 4 | 5 | 5 | 10 | 5 | 10 | 5 | 4 | 3 | 3 |
| 8 | 3 | 3 | 4 | 5 | 5 | 9 | 5 | 9 | 5 | 4 | 3 | 3 |
| 7 | 3 | 3 | 3 | 4 | 4 | 9 | 4 | 9 | 4 | 3 | 3 | 3 |
| 6 | 3 | 3 | 3 | 4 | 4 | 8 | 4 | 8 | 4 | 3 | 3 | 3 |
| 5 | 3 | 3 | 3 | 3 | 3 | 8 | 3 | 8 | 3 | 3 | 3 | 3 |
| 4 | 3 | 3 | 3 | 3 | 3 | 7 | 3 | 7 | 3 | 3 | 3 | 3 |
| 3 | 2 | 2 | 3 | 3 | 3 | 7 | 3 | 7 | 3 | 3 | 2 | 2 |
| 2 | 2 | 2 | 3 | 3 | 3 | 6 | 3 | 6 | 3 | 3 | 2 | 2 |
| 1 | 2 | 2 | 3 | 3 | 3 | 6 | 3 | 6 | 3 | 3 | 2 | 2 |

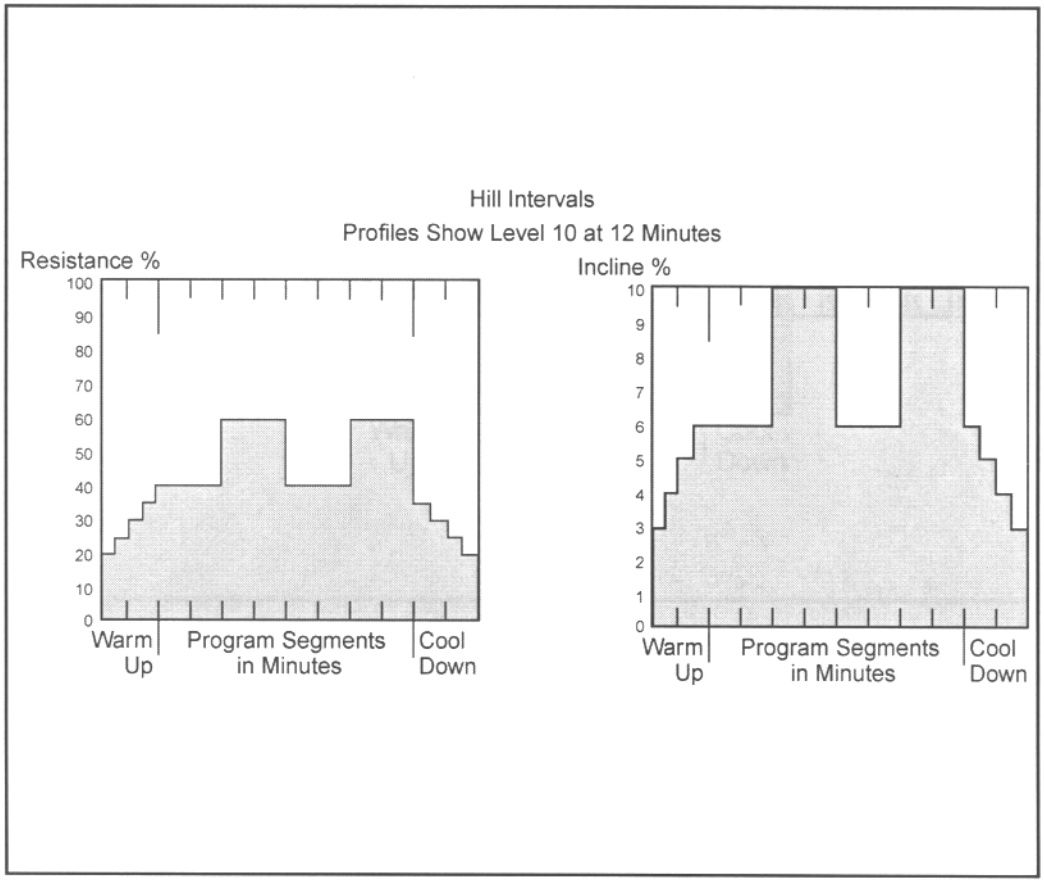



Figure 4

## *Interval*

### Program Overview

The Interval program utilizes a 1:2 (work:rest) ratio with the work period lasting for 30 seconds. This allows for moderate and balanced taxation of both the aerobic and anaerobic energy systems. As such this program is useful to those who desire improving both their aerobic and anaerobic capabilities. This program maintains a steady incline throughout. The use of low to moderate incline ensure that the gluteus maximus will be the prime mover. See table below and Figure 5.

### Interval

| **Time Segments** | :30 | :30 | :30 | :30 | :30 | :30 | :30 | :30 | :30 | :30 | :30 | :30 | :30 | :30 | :30 | :30 | :30 | :30 | :30 | :30 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Warm Up | | | | Program Segments | | | | | | | | | | | | Cool Down | | | |
| **Resistance** | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 1 | 2 | 3 | 1 | 2 | 3 | 1 | 2 | 3 | 1 | 2 | 3 | 4 |
| Program Level 10 | 35 | 45 | 55 | 65 | 70 | 45 | 45 | 70 | 45 | 45 | 70 | 45 | 45 | 70 | 45 | 45 | 40 | 35 | 30 | 20 |
| 9 | 35 | 40 | 50 | 60 | 65 | 40 | 40 | 65 | 40 | 40 | 65 | 40 | 40 | 65 | 40 | 40 | 35 | 30 | 25 | 15 |
| 8 | 30 | 40 | 50 | 55 | 60 | 35 | 35 | 60 | 35 | 35 | 60 | 35 | 35 | 60 | 35 | 35 | 30 | 25 | 20 | 15 |
| 7 | 30 | 35 | 45 | 50 | 55 | 30 | 30 | 55 | 30 | 30 | 55 | 30 | 30 | 55 | 30 | 30 | 30 | 25 | 20 | 10 |
| 6 | 25 | 35 | 40 | 45 | 50 | 30 | 30 | 50 | 30 | 30 | 50 | 30 | 30 | 50 | 30 | 30 | 30 | 25 | 20 | 10 |
| 5 | 25 | 30 | 35 | 40 | 45 | 25 | 25 | 45 | 25 | 25 | 45 | 25 | 25 | 45 | 25 | 25 | 25 | 20 | 15 | 10 |
| 4 | 20 | 25 | 30 | 35 | 40 | 25 | 25 | 40 | 25 | 25 | 40 | 25 | 25 | 40 | 25 | 25 | 25 | 20 | 15 | 10 |
| 3 | 20 | 25 | 30 | 30 | 35 | 20 | 20 | 35 | 20 | 20 | 35 | 20 | 20 | 35 | 20 | 20 | 20 | 15 | 10 | 10 |
| 2 | 15 | 20 | 25 | 30 | 30 | 20 | 20 | 30 | 20 | 20 | 30 | 20 | 20 | 30 | 20 | 20 | 20 | 15 | 10 | 5 |
| 1 | 10 | 15 | 20 | 20 | 25 | 15 | 15 | 25 | 15 | 15 | 25 | 15 | 15 | 25 | 15 | 15 | 15 | 15 | 10 | 5 |

| | Warm Up | | | | Program Segments | | | | | | | | | | | | Cool Down | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Incline** | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 5 | 6 | 1 | 2 | 3 | 4 | 5 | 6 | 1 | 2 | 3 | 4 |
| Program Level 10 | 2 | 2 | 3 | 4 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 4 | 3 | 2 | 2 |
| 9 | 2 | 2 | 3 | 4 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 4 | 3 | 2 | 2 |
| 8 | 2 | 2 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 3 | 3 | 2 | 2 |
| 7 | 2 | 2 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 3 | 3 | 2 | 2 |
| 6 | 2 | 2 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 3 | 3 | 2 | 2 |
| 5 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 2 | 2 | 2 |
| 4 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 2 | 2 | 2 | 2 |
| 3 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 2 | 2 | 2 | 2 |
| 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |

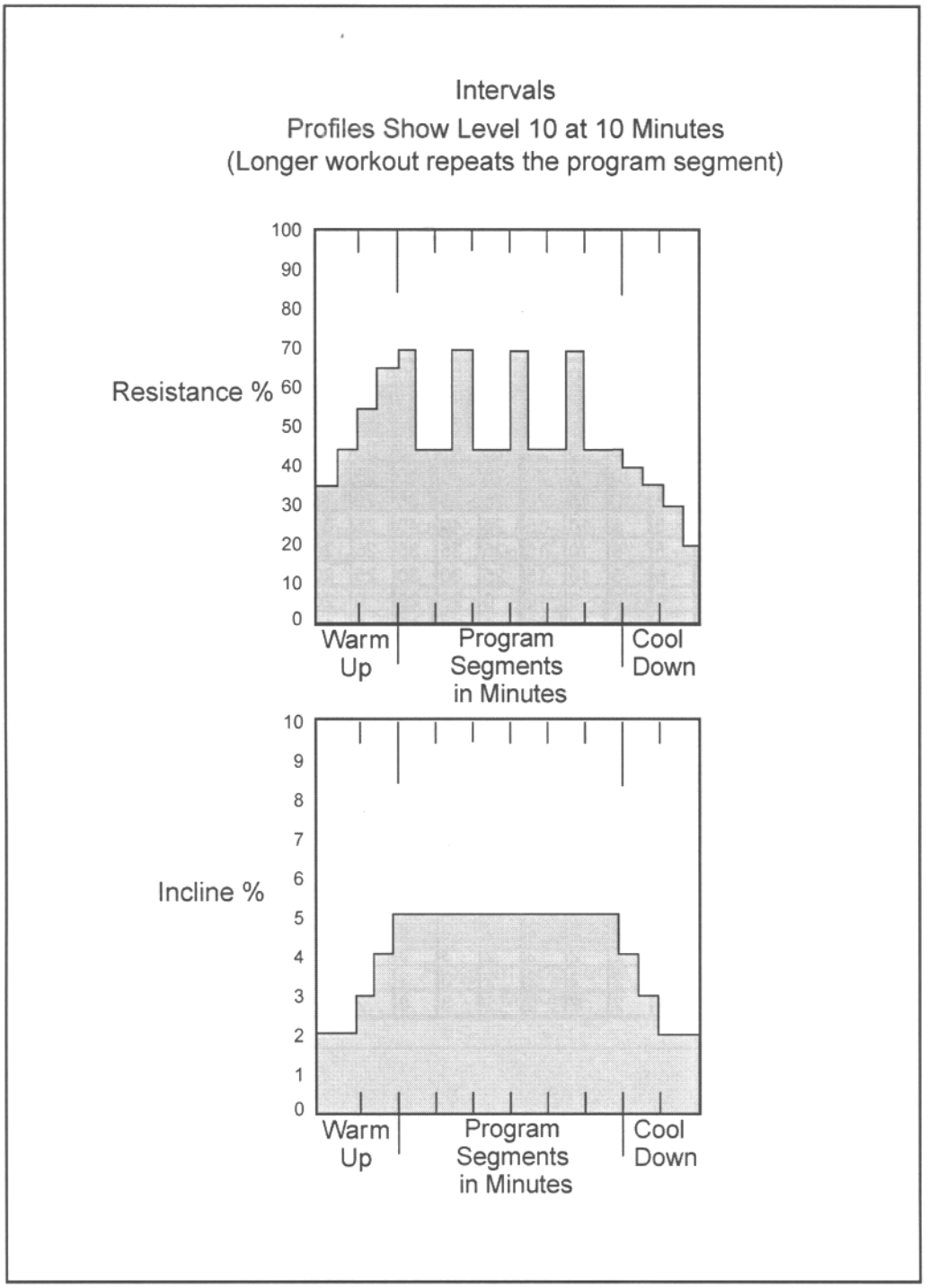

Intervals
Profiles Show Level 10 at 10 Minutes
(Longer workout repeats the program segment)
Resistance %
100
90
80
70
60
50
40
30
20
10
0
Warm Up
Program Segments in Minutes
Cool Down
Incline %
10
9
8
7
6
5
4
3
2
1
0
Warm Up
Program Segments in Minutes
Cool Down

Figure 5

## *Weight Loss*

**Program Overview**

The Weight Loss program is designed for low to medium intensity training that the user can sustain for an extended period of time. It builds from a low intensity baseline to include segments of higher incline and resistance as well as segments that use higher resistance with the baseline incline. The constant variety provides for periods of higher expenditure and training effect without the introduction of undue fatigue allowing the user to perform for longer periods of time. See table below and Figure 6.

### Weight Loss

| Time Segments | :30 | :30 | :30 | :30 | 1:00 | 1:00 | 1:00 | 1:00 | 1:00 | 1:00 | :30 | :30 | :30 | :30 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Warm Up | | | | Program Segments | | | | | | Cool Down | | | |
| **Resistance** | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 5 | 1 | 1 | 2 | 3 | 4 |
| Program Level 10 | 5 | 10 | 15 | 20 | 25 | 45 | 45 | 25 | 40 | 25 | 20 | 15 | 10 | 5 |
| 9 | 5 | 10 | 15 | 20 | 25 | 40 | 40 | 25 | 40 | 25 | 20 | 15 | 10 | 5 |
| 8 | 5 | 10 | 15 | 20 | 25 | 35 | 35 | 25 | 35 | 25 | 20 | 15 | 10 | 5 |
| 7 | 5 | 5 | 10 | 15 | 25 | 40 | 40 | 25 | 30 | 25 | 15 | 10 | 5 | 5 |
| 6 | 5 | 5 | 10 | 15 | 25 | 35 | 35 | 25 | 20 | 25 | 15 | 10 | 5 | 5 |
| 5 | 5 | 5 | 10 | 15 | 25 | 30 | 30 | 25 | 20 | 25 | 15 | 10 | 5 | 5 |
| 4 | 0 | 0 | 5 | 10 | 0 | 25 | 25 | 0 | 20 | 0 | 10 | 5 | 0 | 0 |
| 3 | 0 | 0 | 5 | 10 | 0 | 20 | 20 | 0 | 10 | 0 | 10 | 5 | 0 | 0 |
| 2 | 0 | 0 | 0 | 5 | 0 | 10 | 10 | 0 | 0 | 0 | 5 | 0 | 0 | 0 |
| 1 | 0 | 0 | 0 | 0 | 0 | 10 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| | Warm Up | | | | Program Segments | | | | | | Cool Down | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Incline** | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 5 | 1 | 1 | 2 | 3 | 4 |
| Program Level 10 | 4 | 4 | 4 | 4 | 4 | 6 | 6 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 9 | 4 | 4 | 4 | 4 | 4 | 6 | 6 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 8 | 3 | 3 | 3 | 3 | 3 | 6 | 6 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| 7 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| 6 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| 5 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| 4 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 3 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 2 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 1 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |

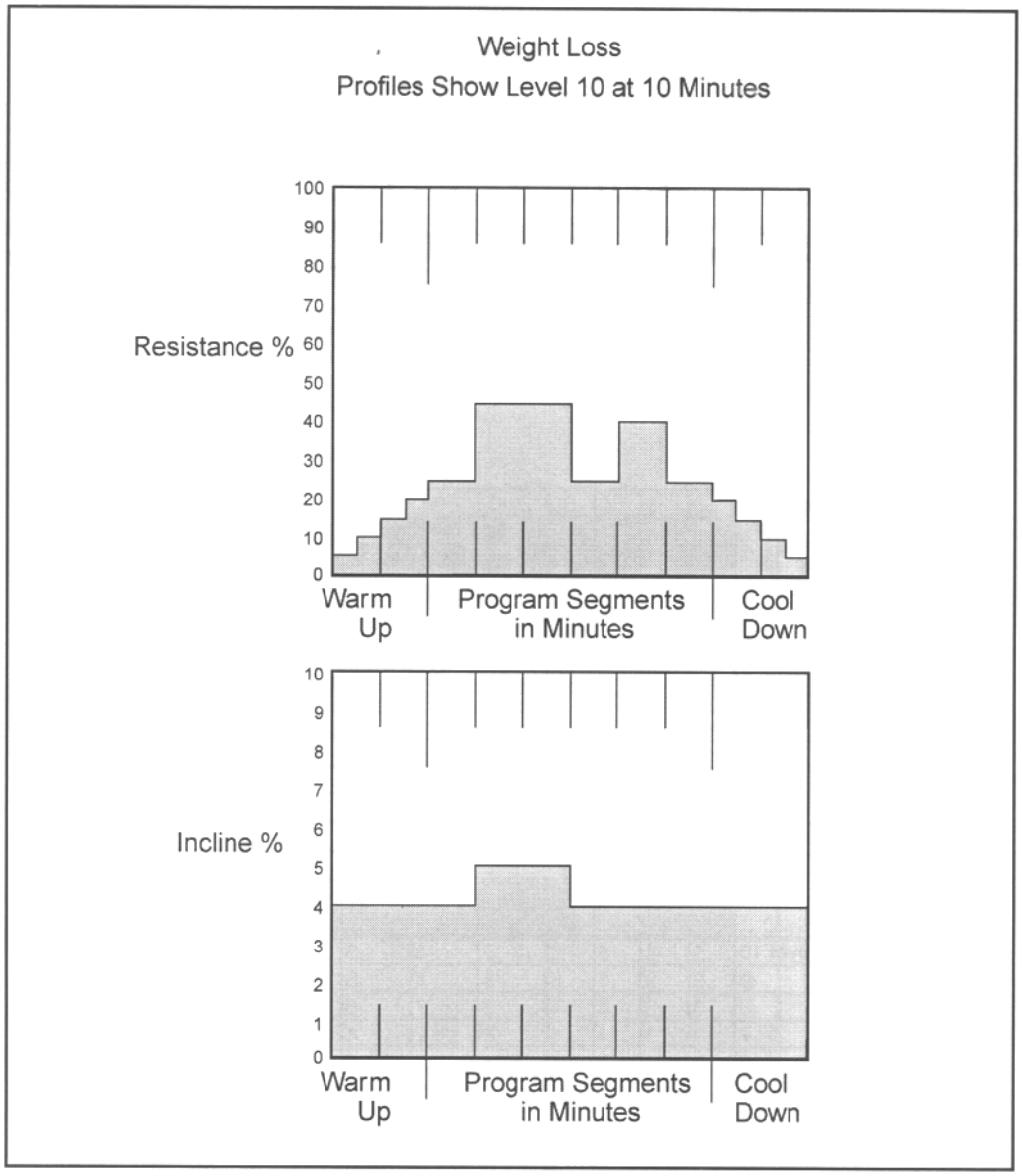

Weight Loss
Profiles Show Level 10 at 10 Minutes
Resistance %
100
90
80
70
60
50
40
30
20
10
0
Warm Up
Program Segments in Minutes
Cool Down
Incline %
10
9
8
7
6
5
4
3
2
1
0
Warm Up
Program Segments in Minutes
Cool Down

Figure 6

## Cardio

**Program Overview**

The Cardio program is designed for experienced users that desire a high intensity cardiovascular training experience. The two-minute work interval with high resistance ensures that the aerobic energy system is completely taxes, while the subsequent two-minute rest interval allows for recovery enabling a repeat at the higher work rate. Additionally, a higher incline level is used during the recovery interval to discourage blood pooling, ensuring more complete recovery. See table below and Figure 7.

### Cardio

| **Time Segments** | :30 | :30 | :30 | :30 | 2:00 | 2:00 | 2:00 | :30 | :30 | :30 | :30 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Warm Up | | | | Program Segments | | | Cool Down | | | |
| **Resistance** | 1 | 2 | 3 | 4 | 1 | 2 | 1 | 1 | 2 | 3 | 4 |
| Program Level 10 | 30 | 35 | 45 | 55 | 80 | 60 | 80 | 55 | 45 | 35 | 30 |
| 9 | 25 | 35 | 45 | 55 | 75 | 55 | 75 | 55 | 45 | 35 | 25 |
| 8 | 25 | 30 | 40 | 45 | 70 | 50 | 70 | 45 | 40 | 30 | 25 |
| 7 | 20 | 25 | 35 | 40 | 65 | 45 | 65 | 40 | 35 | 25 | 20 |
| 6 | 15 | 20 | 30 | 35 | 60 | 40 | 60 | 35 | 30 | 20 | 15 |
| 5 | 15 | 20 | 25 | 30 | 55 | 35 | 55 | 30 | 25 | 20 | 15 |
| 4 | 10 | 15 | 20 | 25 | 50 | 30 | 50 | 25 | 20 | 15 | 10 |
| 3 | 5 | 10 | 15 | 20 | 45 | 30 | 45 | 20 | 15 | 10 | 5 |
| 2 | 0 | 5 | 10 | 15 | 40 | 25 | 40 | 15 | 10 | 5 | 0 |
| 1 | 0 | 0 | 5 | 10 | 35 | 20 | 35 | 10 | 5 | 0 | 0 |

| | Warm Up | | | | Program Segments | | | Cool Down | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Incline** | 1 | 2 | 3 | 4 | 1 | 2 | 1 | 1 | 2 | 3 | 4 |
| Program Level 10 | 3 | 4 | 5 | 6 | 5 | 8 | 5 | 6 | 5 | 4 | 3 |
| 9 | 3 | 3 | 4 | 5 | 5 | 8 | 5 | 5 | 4 | 3 | 3 |
| 8 | 3 | 3 | 4 | 4 | 5 | 7 | 5 | 4 | 4 | 3 | 3 |
| 7 | 3 | 3 | 4 | 4 | 4 | 7 | 4 | 4 | 4 | 3 | 3 |
| 6 | 3 | 3 | 3 | 4 | 4 | 6 | 4 | 4 | 3 | 3 | 3 |
| 5 | 3 | 3 | 3 | 3 | 4 | 6 | 4 | 3 | 3 | 3 | 3 |
| 4 | 2 | 2 | 2 | 3 | 3 | 5 | 3 | 3 | 2 | 2 | 2 |
| 3 | 2 | 2 | 2 | 3 | 3 | 5 | 3 | 3 | 2 | 2 | 2 |
| 2 | 2 | 2 | 2 | 2 | 2 | 4 | 2 | 2 | 2 | 2 | 2 |
| 1 | 2 | 2 | 2 | 2 | 2 | 4 | 2 | 2 | 2 | 2 | 2 |

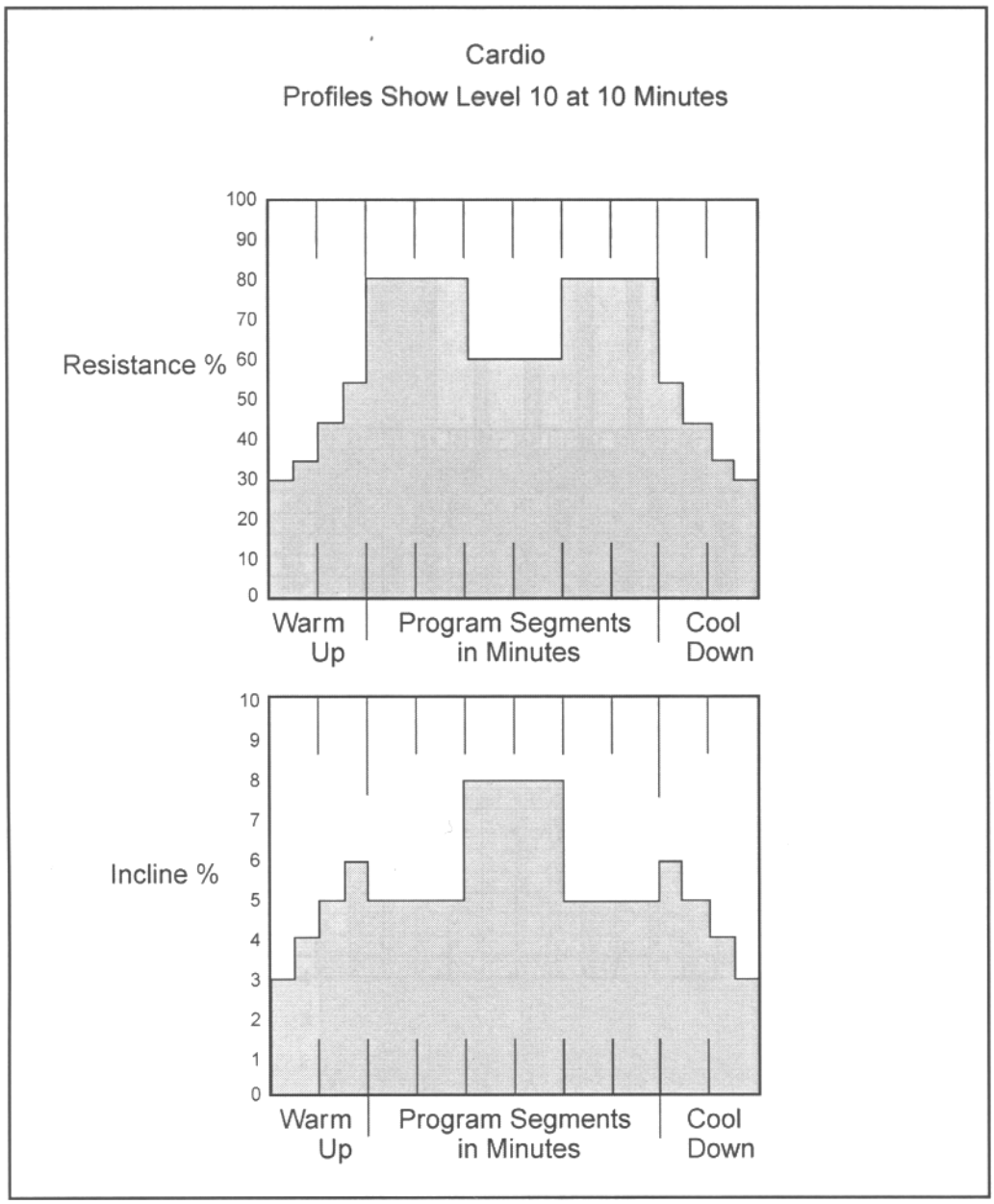

Cardio
Profiles Show Level 10 at 10 Minutes
Resistance %
100
90
80
70
60
50
40
30
20
10
0
Warm Up
Program Segments in Minutes
Cool Down
Incline %
10
9
8
7
6
5
4
3
2
1
0
Warm Up
Program Segments in Minutes
Cool Down

Figure 7

## Strength

### Program Overview

The program is designed with the specific goal of taxing the anaerobic energy system and encouraging maximal power development. This program uses a 1?3 (work:rest) ratio having 15-second work periods. The work periods use high resistance settings to maximally tax their anaerobic energy system and rest periods with very low resistance to encourage recuperation. Additionally, this program uses high incline settings to encourage contribution for the whole leg for maximal power production. See table below and Figure 8.

**Strength**

| Time Segments | :30 | :30 | :30 | :30 | :15 | :15 | :15 | :15 | :15 | :15 | :15 | :15 | :15 | :15 | :15 | :15 | :15 | :15 | :15 | :15 | :15 | :15 | :15 | :15 | :15 | :15 | :30 | :30 | :30 | :30 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Warm Up | | | | Program Segments | | | | | | | | | | | | | | | | | | | | | | | | Cool Down | | | |
| Resistance | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 |
| Program Level 10 | 50 | 65 | 80 | 90 | 100 | 35 | 35 | 35 | 100 | 35 | 35 | 35 | 100 | 35 | 35 | 35 | 100 | 35 | 35 | 35 | 100 | 35 | 35 | 35 | 100 | 35 | 35 | 35 | 30 | 25 | 20 | 15 |
| 9 | 50 | 60 | 75 | 85 | 95 | 35 | 35 | 35 | 95 | 35 | 35 | 35 | 95 | 35 | 35 | 35 | 95 | 35 | 35 | 35 | 95 | 35 | 35 | 35 | 95 | 35 | 35 | 35 | 30 | 25 | 20 | 15 |
| 8 | 45 | 60 | 70 | 80 | 90 | 35 | 35 | 35 | 90 | 35 | 35 | 35 | 90 | 35 | 35 | 35 | 90 | 35 | 35 | 35 | 90 | 35 | 35 | 35 | 90 | 35 | 35 | 35 | 30 | 25 | 20 | 15 |
| 7 | 45 | 55 | 70 | 75 | 85 | 30 | 30 | 30 | 85 | 30 | 30 | 30 | 85 | 30 | 30 | 30 | 85 | 30 | 30 | 30 | 85 | 30 | 30 | 30 | 85 | 30 | 30 | 30 | 25 | 20 | 20 | 15 |
| 6 | 40 | 50 | 65 | 70 | 80 | 30 | 30 | 30 | 80 | 30 | 30 | 30 | 80 | 30 | 30 | 30 | 80 | 30 | 30 | 30 | 80 | 30 | 30 | 30 | 80 | 30 | 30 | 30 | 25 | 20 | 20 | 15 |
| 5 | 35 | 50 | 60 | 65 | 75 | 30 | 30 | 30 | 75 | 30 | 30 | 30 | 75 | 30 | 30 | 30 | 75 | 30 | 30 | 30 | 75 | 30 | 30 | 30 | 75 | 30 | 30 | 30 | 25 | 20 | 15 | 10 |
| 4 | 35 | 45 | 55 | 65 | 70 | 25 | 25 | 25 | 70 | 25 | 25 | 25 | 70 | 25 | 25 | 25 | 70 | 25 | 25 | 25 | 70 | 25 | 25 | 25 | 70 | 25 | 25 | 25 | 20 | 20 | 0 | 0 |
| 3 | 35 | 40 | 50 | 60 | 65 | 25 | 25 | 25 | 65 | 25 | 25 | 25 | 65 | 25 | 25 | 25 | 65 | 25 | 25 | 25 | 65 | 25 | 25 | 25 | 65 | 25 | 25 | 25 | 20 | 20 | 0 | 0 |
| 2 | 30 | 40 | 50 | 55 | 60 | 20 | 20 | 20 | 60 | 20 | 20 | 20 | 60 | 20 | 20 | 20 | 60 | 20 | 20 | 20 | 60 | 20 | 20 | 20 | 60 | 20 | 20 | 20 | 15 | 0 | 10 | 5 |
| 1 | 30 | 35 | 45 | 50 | 55 | 20 | 20 | 20 | 55 | 20 | 20 | 20 | 55 | 20 | 20 | 20 | 55 | 20 | 20 | 20 | 55 | 20 | 20 | 20 | 55 | 20 | 20 | 20 | 15 | 0 | 10 | 5 |

| | Warm Up | | | | Program Segments | | | | | | | | | | | | | | | | | | | | | | | | Cool Down | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Incline | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 |
| Program Level 10 | 5 | 6 | 8 | 9 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 9 | 8 | 6 | 5 |
| 9 | 5 | 6 | 8 | 9 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 9 | 8 | 6 | 5 |
| 8 | 5 | 6 | 7 | 8 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 8 | 7 | 6 | 5 |
| 7 | 5 | 6 | 7 | 8 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 8 | 7 | 6 | 5 |
| 6 | 5 | 6 | 7 | 8 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 8 | 7 | 6 | 5 |
| 5 | 4 | 5 | 6 | 7 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 7 | 6 | 5 | 4 |
| 4 | 4 | 5 | 6 | 7 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 7 | 6 | 5 | 4 |
| 3 | 4 | 5 | 6 | 7 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 7 | 6 | 5 | 4 |
| 2 | 3 | 4 | 5 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 6 | 5 | 4 | 3 |
| 1 | 3 | 4 | 5 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 6 | 5 | 4 | 3 |

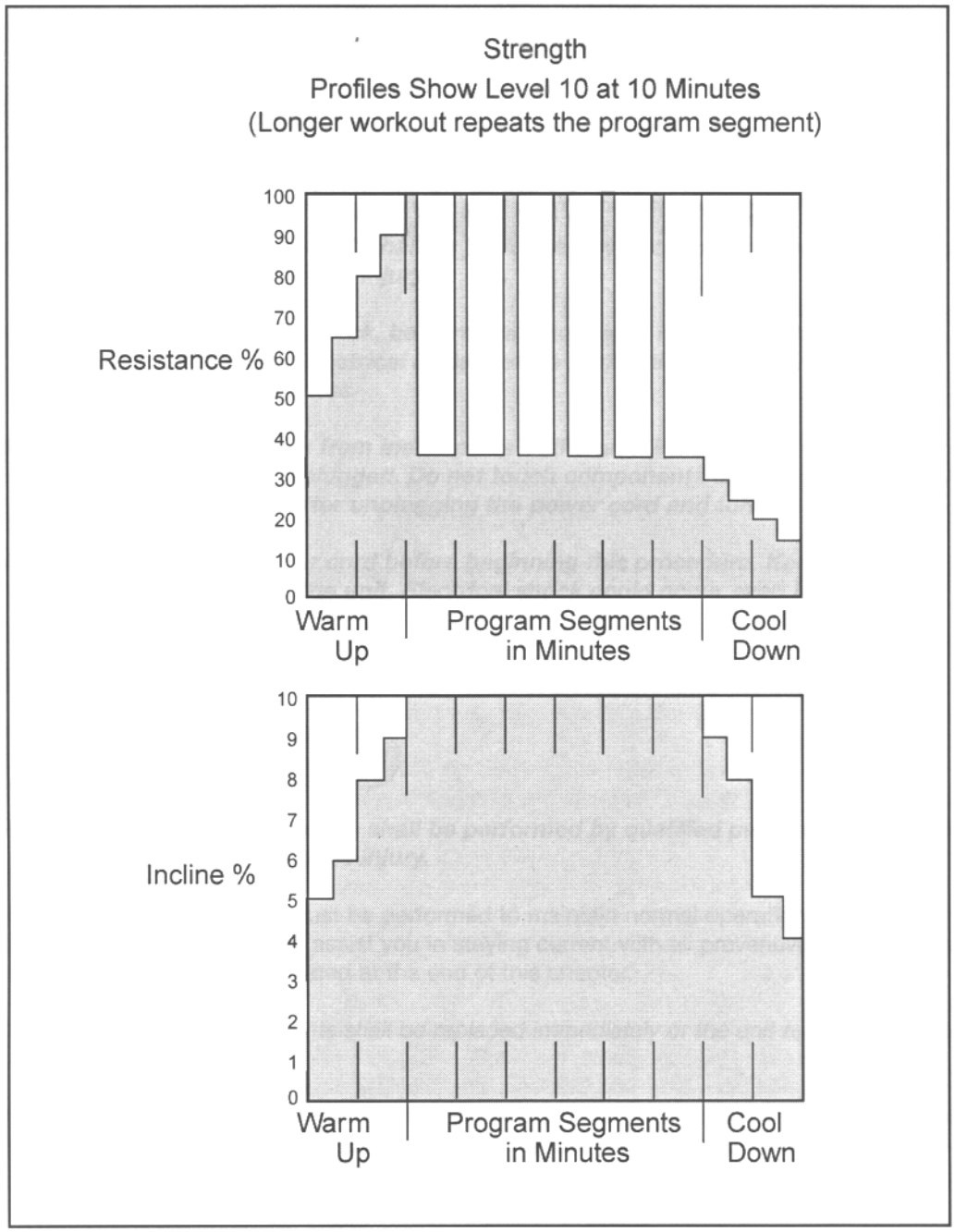

Strength
Profiles Show Level 10 at 10 Minutes
(Longer workout repeats the program segment)
Resistance %
100
90
80
70
60
50
40
30
20
10
0
Warm Up
Program Segments in Minutes
Cool Down
Incline %
10
9
8
7
6
5
4
3
2
1
0
Warm Up
Program Segments in Minutes
Cool Down

Figure 8

## Manual

**Program Overview**
Manual Mode is available both through **Quick Start** and through the **Manual** program where it includes the program time and user weight adjustment. ***NOTE:*** *There is no diagram because resistance and incline are user-controlled.*

# 4 - Preventive Maintenance

## Warnings

All warnings and cautions listed in this chapter are as follows:

***! WARNING: All maintenance activities shall be performed by qualified personnel. Failure to do so could result in serious injury.***

***! WARNING: To prevent electrical shock, be sure that the power is shut off and the unit is unplugged from the electrical outlet before performing any cleaning or maintenance procedures.***

***! WARNING: Keep wet items away from inside parts of the unit. Electrical shock could occur even if the unit is unplugged. Do not touch components on the lower board. A charge can remain after unplugging the power cord and turning off the unit.***

***! WARNING: Disconnect the power cord before beginning this procedure. Keep wet items away from inside parts of the unit. Electrical shock could occur even if the unit is unplugged.***

***! WARNING: The flywheel may be hot. Wait until it cools before servicing.***

## Regular Maintenance Activities

***! WARNING: All maintenance activities shall be performed by qualified personnel. Failure to do so could result in serious injury.***

Preventive maintenance activities must be performed to maintain normal operation of your unit. keeping a log of all maintenance actions will assist you in staying current with all preventive maintenance activities. See Service Schedule located at the end of this chapter.

***NOTE:*** *Worn or damaged components shall be replaced immediately or the unit removed from service until the repair is made.*

***NOTE:*** *Cybex is not responsible for performing regular inspection and maintenance actions for your unit. Instruct all personnel in equipment inspection and maintenance actions and also in accident reporting/recording.*

## Cleaning Your Arc Trainer 610A

***! WARNING: To prevent electrical shock, be sure that power is shut off and the unit is unplugged from the electrical outlet before performing any cleaning or maintenance procedures.***

When cleaning your unit spray a mild cleaning agent, such as a water and dish soap solution, on a clean cloth first and then wipe the unit with the damp cloth.

***NOTE:*** *Do not spray cleaning solution directly on the unit. Direct spraying could cause damage to the electronics and may void the warranty.*

**After Each Use -** Wipe up any liquid spills immediately. After each workout, use a cloth to wipe up any remaining perspiration from the handrails and painted surfaces.

Be careful not to spill or get excessive moisture on the console and display overlays, as this might create an electrical hazard or cause failure of the electronics.

**As Needed -** Vacuum any dust or dirt that might accumulate under or around the unit. Cleaning this area should be done as often as indicated in the *Service Schedule.*

***! WARNING: Keep wet items away from inside parts of the unit. Electrical shock could occur even if the unit is unplugged. Do not touch components on the lower board. A charge can remain after unplugging the power cord and turning off the unit.***

To clean inside the unit, remove the four Phillips head screws securing the access cover in place. Use a vacuum attachment or hand vacuum to clean the exposed elevation assembly and remove dirt and debris off of internal components.

Use a *dry* cloth to wipe all exposed areas. Replace the access cover and secure it with the screws when finished.

Lift the rear of the unit and roll it back from its present position so as to vacuum the floor area underneath the unit. When finished, return the unit to its normal position.

**Contact Heart Rate Grips -** Contaminants, such as hand lotions, oils or body powder, may come off on the contact heart rate grips. These can reduce sensitivity and interfere with the heart rate signal. It is recommended that the user have clean hands when using the contact heart rate. Clean the grips using a cloth dampened with a cleaning solution containing alcohol. The grips are the only part of the unit you should use a cleaning solution containing alcohol.

## Drive Belt Maintenance

There are two drive belts that may become loose, worn or cracked. See Figure 1.

**Primary Belt -** This is the wider of the two belts. It has grooves that keep it aligned on the large upper pulley. Unless the unit has been serviced and not put back together properly, it is *unlikely* that the primary belt will need to be re-tensioned.

**Secondary Belt -** This is the narrower of the two belts. It has grooves that keep it aligned on the flywheel's drive pulley. It is *unlikely* that the secondary belt will become loose because it is a stretch-fit belt. Unless the unit has been worked on and not put back together properly, it is *unlikely* the tension will change.

Follow this *Drive Belt Maintenance* procedure to ensure that the belts are tensioned properly and in good condition. See the *Service Schedule* in this chapter for a minimum schedule for checking the belt tension and condition. ***NOTE:*** *If a belt has cracks or appears worn, it must be replaced immediately by a qualified service technician.*

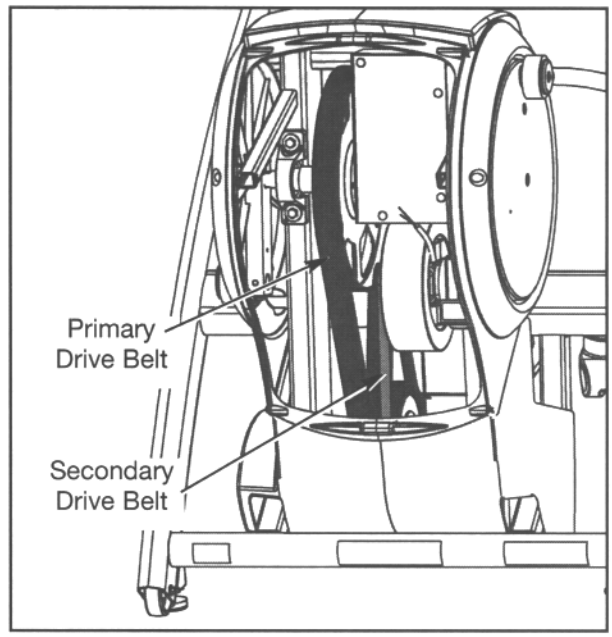



Figure 1

**Tools Required**

- Phillips head screwdriver

***! WARNING: Disconnect the power cord before beginning this procedure. Keep wet items away from inside parts of the unit. Electrical shock could occur even if the unit is unplugged.***

1. **Read and understand this *Drive Belt Maintenance* section thoroughly before proceeding to step 2.**

2. **Disconnect the external power source.**

   **A.** Turn the main power switch above the power inlet to the off (O) position.

   **B.** Unplug the power cord from the power outlet.

3. **Remove the access cover.**

   **A.** Using a Phillips screwdriver, remove the two lower screws securing the access cover.

   **B.** Remove the two upper screws securing the access cover. See Figure 2.

   **C.** Remove the access cover.

***! WARNING: The flywheel may be hot. Wait until it cools before servicing.***

4. **Check the condition of each belt.**

   **A.** Roll each belt by pulling down on it. Examine the condition of each belt. If a belt has cracks or appears worn, it must be replaced immediately by a qualified service technician.

5. **Attach the access cover.**

   **A.** Using a Phillips head screwdriver, tighten the two upper screws first (removed in step 3B). ***NOTE:*** *Do not over tighten screws.*

   **B.** Tighten the two lower screws, removed in step 3A. ***NOTE:*** *Do not over tighten screws.* See Figure 2.

6. **Test unit for proper operation.**

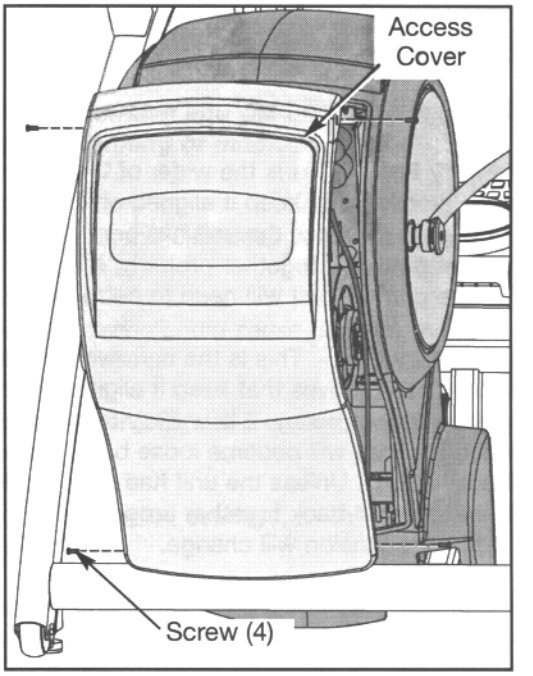



Figure 2

## Lubrication

The Arc Trainer 610A is designed with no-maintenance parts. Although there are grease fittings on the pillow blocks, re-lubrication of the bearings is not required.

**Elevation Motor Lubrication -** In time the elevation motor pivot points may develop a squeak. If a squeak is present, the unit will need to be serviced by a qualified service technician.

## Environment

**Static Electricity -** Depending upon where you live, you may experience dry air, causing a common experience of static electricity. This may be especially true in the winter time. You may notice a static build-up just by walking across a carpet and then touching a metal object. The same can hold true while working out on your unit. You may experience a shock due to the build-up of static electricity on your body and the discharge path of the unit. If you experience this type of situation, you may want to increase the humidity to a comfortable level through the use of a humidifier.

**Humidity -** The unit is designed to function normally in an environment with a relative humidity range of 30% to 75%.

***NOTE:*** *Do not install or use the unit in an area of high humidity, such as in the vicinity of a steam room, sauna, indoor pool or outdoors. Exposure to extensive water vapor, chlorine and/or bromine could adversely affect the electronics as well as other parts of the machine.*

**Temperature** - The unit is designed to function normally in an environment with an ambient temperature range of 50°F (10°C) to 104°F (40°C) degrees.

## Storage

**Humidity -** The unit can be shipped and stored in an environment with a relative humidity range of 10% to 90%.

***NOTE:*** *Do not store the unit in an area of high humidity, such as in the vicinity of a steam room, sauna, indoor pool or outdoors. Exposure to extensive water vapor, chlorine and/or bromine could adversely affect the electronics as well as other parts of the machine.*

**Temperature** - The unit can be shipped and stored in an environment with an ambient temperature range of 32°F (0°C) and 140°F (60°C) degrees.

## Service Schedule

**⚠ WARNING**

***All maintenance activities shall be performed by qualified personnel. Failure to do so could result in serious injury.***

### Service Schedule

*NOTE: This is the minimum recommended service.*

**Determine mileage.**

1. Enter *Test Mode* by holding down any key while turning the unit to the on (I) position.
2. Then press dist

**First 500 Miles**

*A* Check drive belts for tension & wear.

**Every 5000 Miles**

*A* Check drive belts for tension & wear.
*B* Move unit and vacuum underneath.
*C* Remove access cover to clean inside - use dry cloth & vacuum.

**Every 20,000 Miles**

*D* Check elevation assembly & replace worn parts.
*E* Lubricate elevation bushings.

| Date | Mileage | Service | Initials |
|---|---|---|---|
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# 5 - Setup and Assembly

## *Warnings/Cautions*

All warnings and cautions listed in this chapter are as follows:

***! WARNING: Use extreme caution when assembling the unit. Failure to do so could result in injury.***

***! WARNING: A minimum of two people are required to lift, move and assemble this unit. Always use proper lifting methods when moving heavy items.***

***! WARNING: Be sure that all electrical requirements are met as indicated in the specifications at the front of the manual and at the beginning of this chapter prior to proceeding.***

***! WARNING: Wait until all moving parts come to a complete stop before dismounting.***

***! CAUTION: A minimum of two people are required to assemble this unit.***

## *Choosing and Preparing a Site*

Before assembling the unit you must select a suitable site and have the proper electrical outlet power available for optimum operation and safety. See the *Electrical Power Requirements* section (located on the next page) for direction in locating your voltage requirements.

The area you select for the unit should be well lit and well ventilated. Locate the unit on a structurally sound and level surface. Allow enough clearance for safe access and passage during use of the unit. Allow a minimum of 5" (13 cm) behind the unit for the elevation to rise. If the unit is to be located above the first floor, place it near or above major support beams. To protect the carpeting, place a 3/4" (1.9 cm) thick wood base under the unit. Be sure to use the rubber foot covers shown on page 5-9.

**Humidity -** The unit is designed to function normally in an environment with a relative humidity range of 30% to 75%.

***NOTE:*** *Do not install or use the unit in an area of high humidity, such as in the vicinity of a steam room, sauna, indoor pool or outdoors. Exposure to extensive water vapor, chlorine and/or bromine could adversely affect the electronics as well as other parts of the machine.*

**Temperature** - The unit is designed to function normally in an environment with an ambient temperature range of 50°F (10°C) to 104°F (40°C) degrees.

See Chapter 4 for information regarding storage of the unit.

## Electrical Power Requirements

The power requirements for the unit are a grounded circuit rated for one of the following: 115 VAC ±5%, 50/60 Hz and 15 amps; or 230 VAC ±10%, 50/60 Hz. Contact your electrician to ensure the power supply complies with local building codes. ***NOTE:*** *Do not use a ground plug adapter to adapt the 3-prong power cord plug to a non-grounded electrical outlet.*

Up to three units can be daisy-chained together for single outlet use. Use daisy chain power supply cord supplied with unit (Part# EW600006). The daisy-chain outlet is rated 115v 50/60Hz 4A (or 230v 50/60Hz 5A outside of the United States).

## Assembling the Arc Trainer 610A

***! WARNING: Use extreme caution when assembling the unit. Failure to do so could result in injury.***

***! CAUTION: A minimum of two people are required to assemble this unit.***

**Tools Required**

- Phillips head screwdriver
- Torque wrench
- 5/32" Allen wrench (supplied)
- 3/16" Allen wrench (supplied) (2)
- 9/16" Open-end wrench

***NOTE:*** *The words "left" and "right" denote the user's orientation.*

1. **Read and understand all instructions thoroughly before assembling the unit.**

***NOTE:*** *Each step number in the assembly instructions tells you what you will be doing. The lettered steps following each step number describe the procedure required. Do not continue with step 2 until you have carefully read all of the assembly instructions.*

2. **Verify you have received the correct package.**

   **A.** Read the sticker on the outside of the box and verify that the model number and voltage are what you ordered.

3. **Unpack and verify the contents of the boxes.**

   **A.** Lift up and remove the cardboard sleeve that surrounds the unit.

   **B.** Verify that you have the color that you ordered by looking at the paint.

   **C.** Verify that you have the correct voltage by reading the voltage sticker near the power inlet.

**D.** Check to be sure that the following items are present. Check off (☑) each item as you find it. See Figure 1. If any of the parts are missing contact Cybex Customer Service.

| | Item | Qty | Part Number | Description |
|---|---|---|---|---|
| ☐ | 1 | 1 | Varies | Base with covers attached |
| ☐ | 2 | 1 | Varies | Console assembly (in box) |
| ☐ | 3 | 1 | PL-17209 | Water bottle holder (in box) |
| ☐ | 4 | 2 | 11090-405 | Foot pad (in box) |
| ☐ | 5 | 1 | EW600000 | Power cord 115VAC (in box) or |
| ☐ | 5 | 1 | EW600005 | Power cord 230VAC (in box) |
| ☐ | 6 | 1 | EW600006 | Power Supply Cord, Daisy Chain |
| ☐ | 7 | 1 | NA | Hardware pack (in box) |
| ☐ | 8 | 1 | 5610A-4 | Owner's Manual (in box) |
| ☐ | 9 | 1 | 610A-352 | Assembly poster |
| ☐ | 10 | 1 | 600A-301 | Warranty sheet |
| ☐ | NA | 1 | 610A-373 | Instruction, 610A Assembly Note |

*NA means Not Applicable*

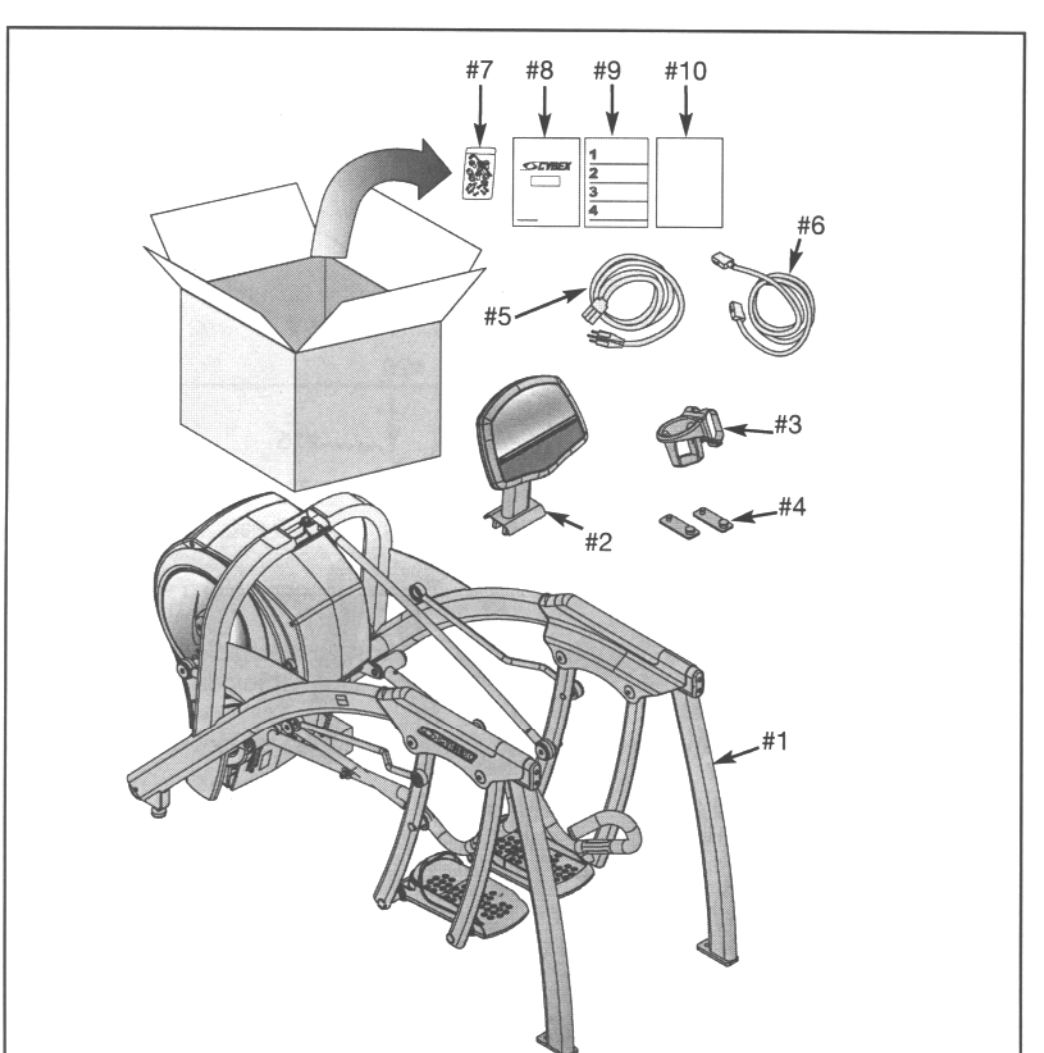



Figure 1

**E.** Check off (☑) each item in the hardware pack as you find it. See Figure 2.

| | Item | Qty | Part Number | Description |
|---|---|---|---|---|
| ☐ | 11 | 1 | YA000201 | Threadlocker |
| ☐ | 12 | 2 | 600A-311 | Flange Spacer |
| ☐ | 13 | 4 | JC700422 | BHSCS .375-16 x 1.50 |
| ☐ | 14 | 2 | HT552515 | Pan HD Phil HD Self Tapping 8-16 x .75 Type WB Black |
| ☐ | 15 | 2 | HX622815 | SHCSC .250-20 x .75 |
| ☐ | 16 | 4 | JS347400 | Internal Tooth Lockwasher |
| ☐ | 17 | 2 | PL-16535 | Linkage Rod Cap |
| ☐ | 18 | 2 | BK030204 | 7/32" Allen wrench |
| ☐ | 19 | 1 | BK030201 | 3/16" Allen wrench |
| ☐ | 20 | 2 | HS307601 | Washer .281 x .50 |

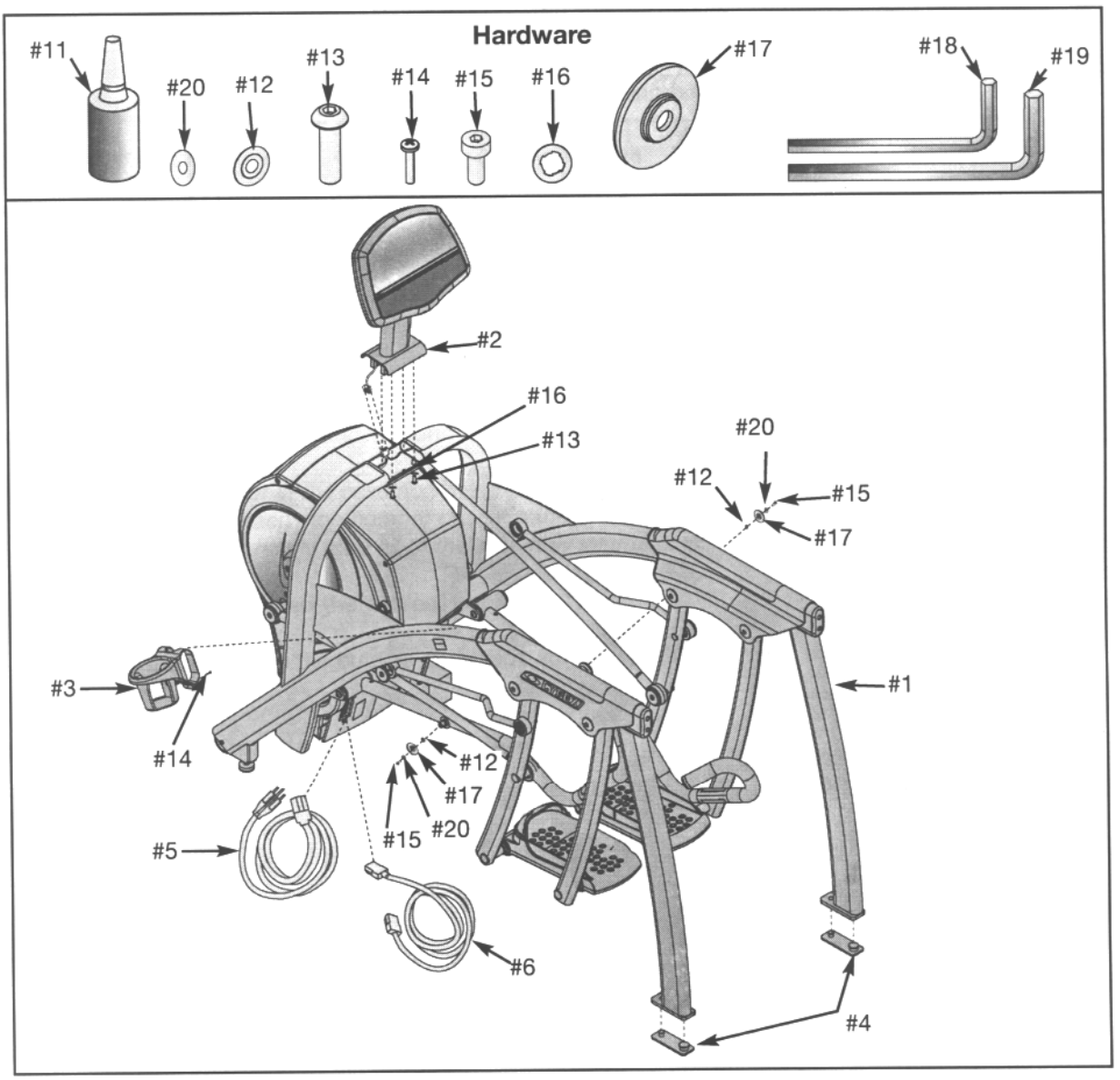



Figure 2

***! CAUTION: A minimum of two people are required to lift, move and assemble the unit. Always use proper lifting methods when moving heavy items.***

**4. Lift and move the unit**

**A.** Carefully remove lag bolts and shipping supports. ***NOTE:*** *Keep package material on linkage arms at this time (this will protect the paint from scratching during assembly).*

**B.** At least two people should lift and move or roll the unit to the location where you intend to leave it. Use proper lifting methods.

**5. Attach the Console Assembly.**

**A.** Locate the console assembly (#2), four screws .375-16 x 1.50 (#13) and four washers (#16). See Figure 3.

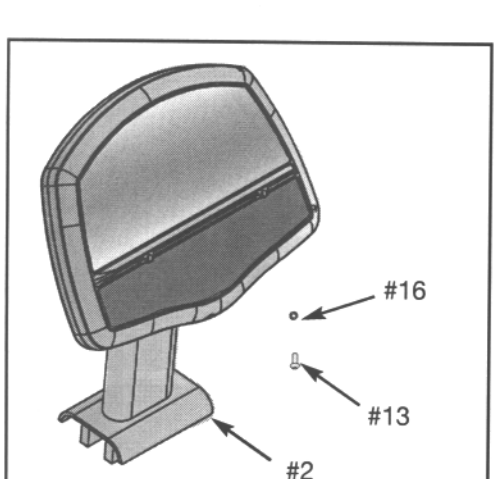



Figure 3

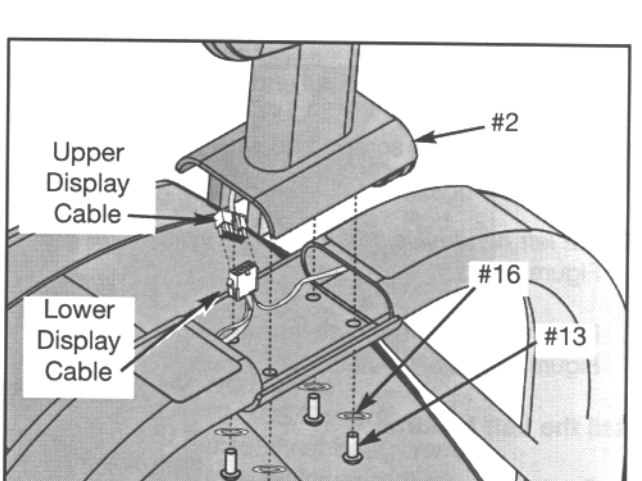



Figure 4

**B.** Locate the upper display cable and plug it into the lower display cable in the main frame assembly. See Figure 4.

***NOTE:*** *Ensure cable connectors are securely fastened.*

**C.** Place the console assembly (#2) in the correct position on the main frame assembly and hand thread each of the four screws .375-16 x 1.50 (#13) and four washers (#16). See Figure 4.

***NOTE:*** *Confirm that no cables are pinched lowering the console.*

**D.** Securely fasten the screws .375-16 x 1.50 (#13) with the Allen wrench (#19) provided.

**6. Remove the Left and Right handrails.**

***NOTE:*** *The Left and Right handrails are shipped in the reverse positions. The handrails must be removed and swapped for proper setup and assembly.* See Figure 5.

**A.** Locate the two screws and washers that secure each handrail to the main frame. See Figure 6.

**B.** Using a 7/32" Allen wrench (#18) remove the two screws and washers from the right handrail. See Figure 6.

***NOTE:*** *The right handrail is mounted on the left side.* See Figure 5.

**C.** Remove the right handrail and set aside.

**D.** Remove the two screws and washers from the left handrail.

***NOTE:*** *The left handrail is mounted on the right side* See Figure 5.

**E.** Remove the left handrail from the right side. See Figure 5.

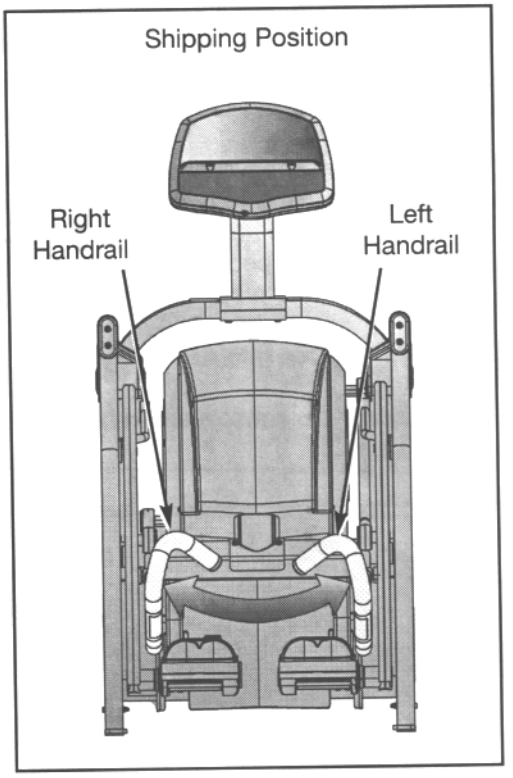



Figure 5

**7. Install the Left handrail.**

**A.** Position the left handrail in the correct position on the left side where the right handrail was removed in step 6C.

**B.** Apply Threadlocker (#11) to threads inside the arm and screws removed in step 6B.

**C.** Secure the left handrail with the two screws and washers removed in step 6B. ***NOTE:*** *When tightened properly, frame tabs are pulled tight to the bearing.*

**D.** Locate left linkage rod, left handrail, linkage rod cap (#17), flange spacer (#12), screw .250-20 x .75 (#15) and washer .281 x .50 (#20). See Figure 7.

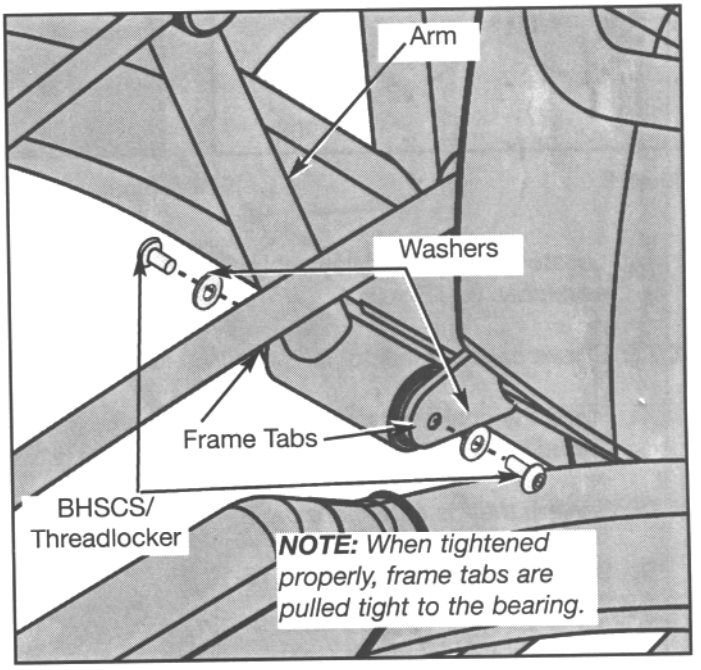



Figure 6

**E.** Place a drop of threadlocker on each BHSCS and another drop inside the shaft (where each BHSCS will be tightened into). Then secure linkage rod to handrail with linkage rod cap (#17), flange spacer (#12), BHSCS/Threadlocker .250-20 x .75 (#15) and washer .281 x .50 (#20) as shown in Figures 7 and 9. ***NOTE:*** *The* BHSCS .250-20 x .75 *(#15) must be tightened to a minimum of 90 inch-pounds.*

**8. Install the Right handrail.**

**A.** Position the right handrail in the correct position on the right side where the left handrail was removed in step 6C.

**B.** Apply Threadlocker (#11) to threads inside the arm and screws removed in step 6D.

**C.** Secure the right handrail with the two screws and washers removed in step 6D. ***NOTE:*** *When tightened properly, frame tabs are pulled tight to the bearing.*

**D.** Locate right linkage rod, right handrail, linkage rod cap (#17), flange spacer (#12), screw .250-20 x .75 (#15) and washer .281 x .50 (#20). See Figure 8.

**E.** Secure linkage rod to handrail with linkage rod cap (#17), flange spacer (#12), BHSCS .250-20 x .75 (#15) and washer .281 x .50 (#20) as shown in Figure 8 and 9. ***NOTE:*** *The screw (#15) m ust be tightened to a minimum of 90 inch-pounds.*

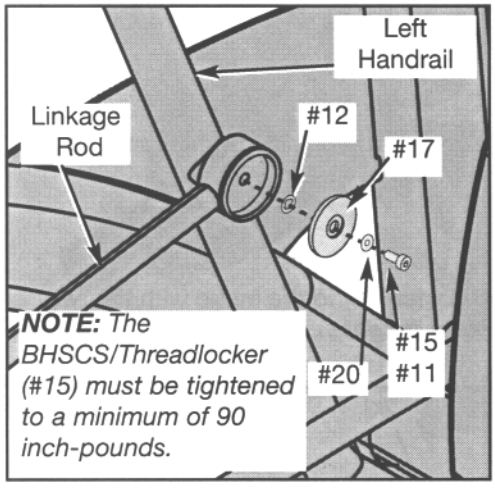



Figure 7

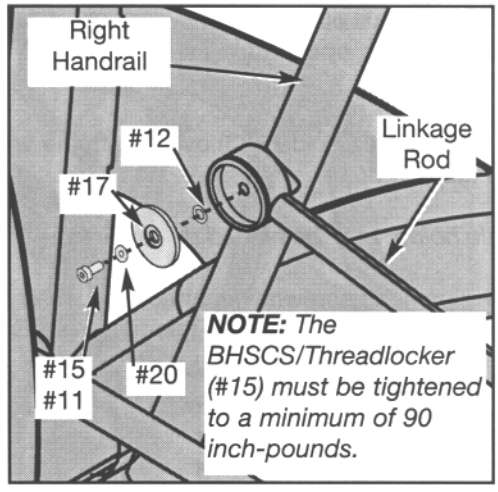



Figure 8

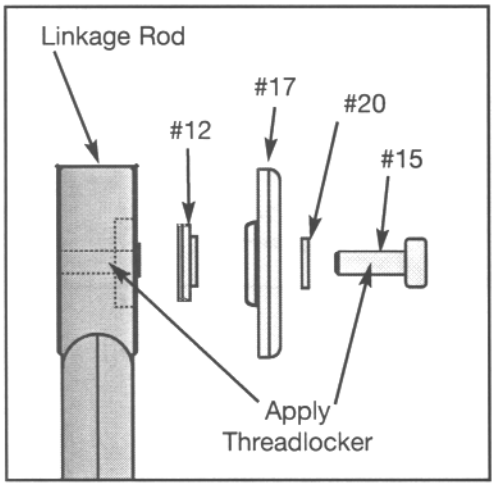



Figure 9

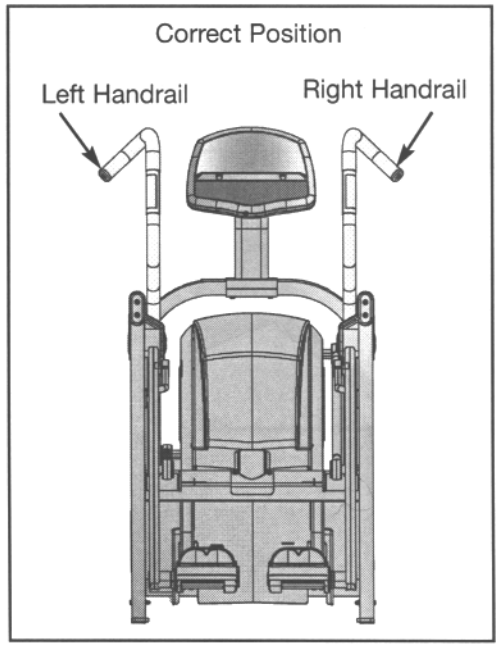



Figure 10

**F.** Verify that handrails are now installed in the correct position as shown in Figure 10.

**9. Connect Contact Heart Rate Cables.**

**A.** Locate contact heart rate wire exiting from the right handrail. See Figure 11.

**B.** Plug heart rate cable into socket in main frame.

**C.** Locate contact heart rate wire exiting from the left handrail.

**D.** Plug heart rate cable into socket in main frame.

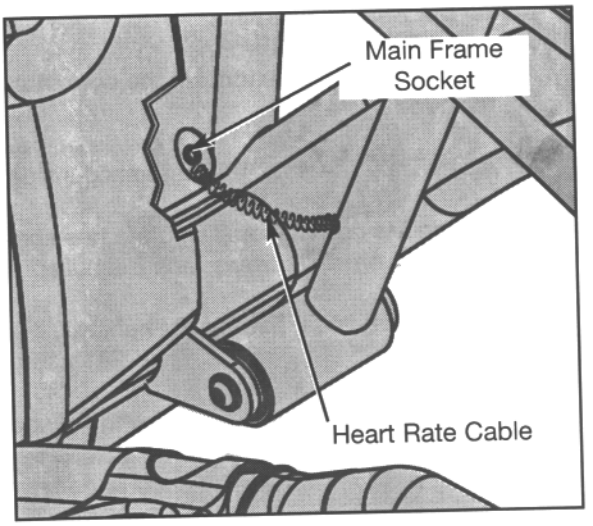



Figure 11

**10. Attach the water bottle holder.**

**A.** Hold the water bottle holder (#3) with two hands and gently pull outward and continue to pull (hold open) during step 10B. See Figure 12.

**B.** Place the water bottle holder (#3) over the frame with the larger side outside of the frame as shown in Figure 12.

***NOTE:*** *Water bottle holder may be placed on either side.*

**C.** Using a Phillips head screwdriver, attach the water bottle holder (#3) to the frame with the two 8-16-18 x 0.75 screws (#14). See Figure 13. ***NOTE:*** *Do not overtighten.*

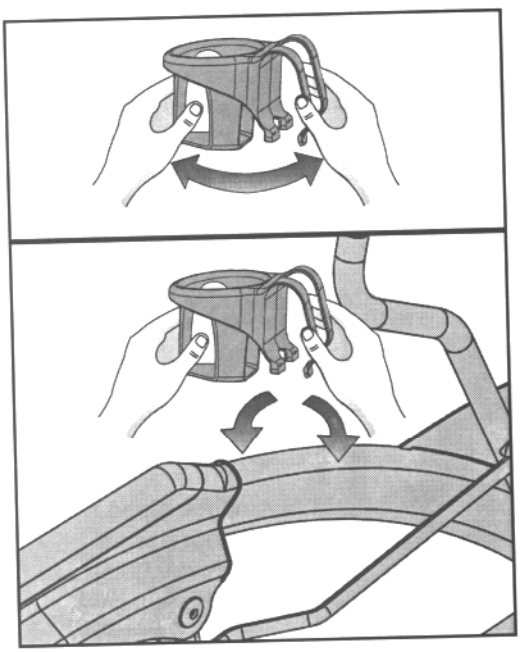


Figure 12

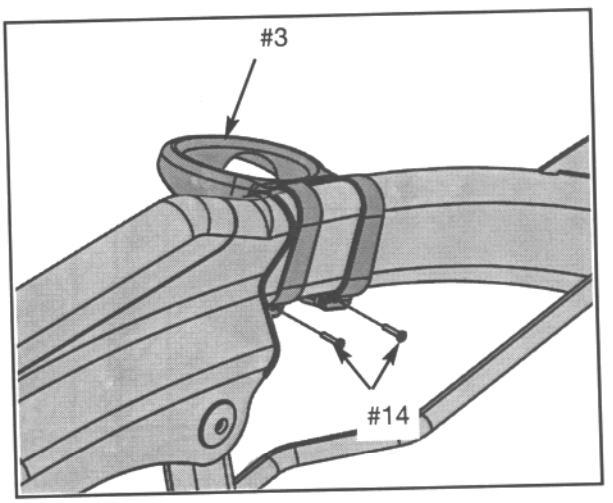



Figure 13

**11. Attach the foot covers.**

**A.** Have one person lift the unit while a second person places a foot cover (#4) under each of the two back feet. See Figure 14.

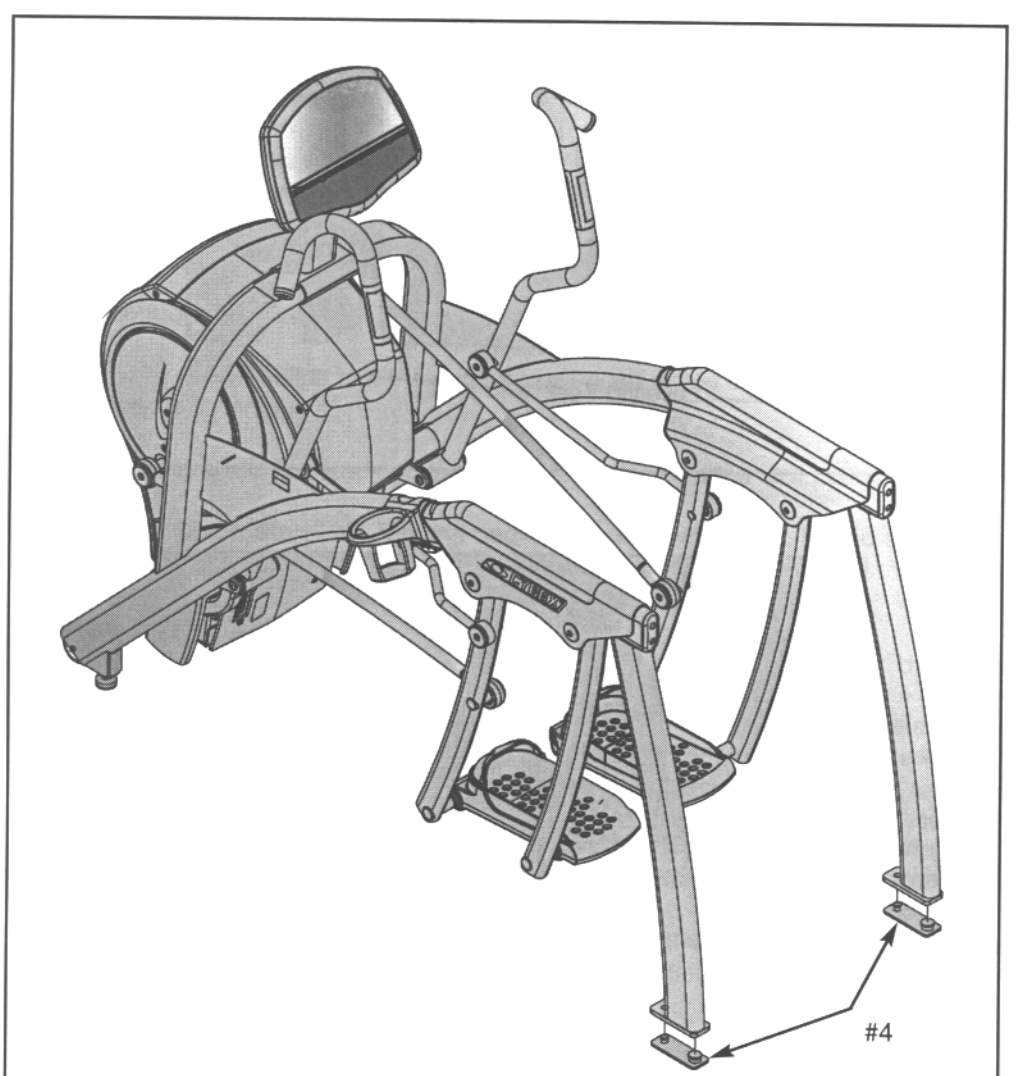



Figure 14

**12. Level the unit.**

**A.** Confirm that the unit is on a level surface. If it is not, use a 9/16" open-end wrench to adjust the leveling feet up or down. See Figure 15.

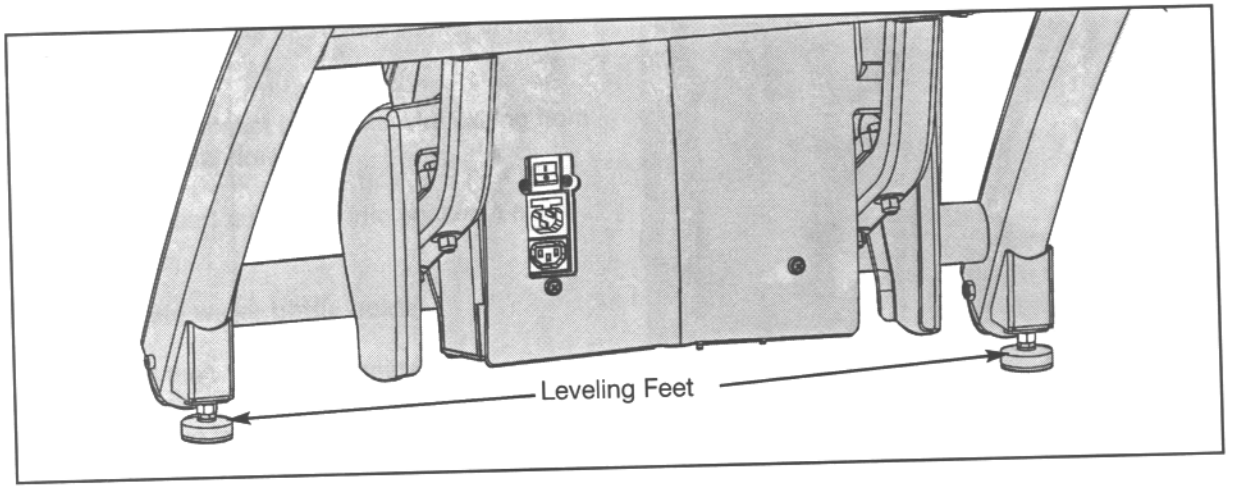



Figure 15

**13. Connect the power cord.**

**A.** Plug the power cord (#5) into the inlet near the on/off switch. ***NOTE:*** *Do not plug the power cord into an outlet at this time.* See Figure 16.

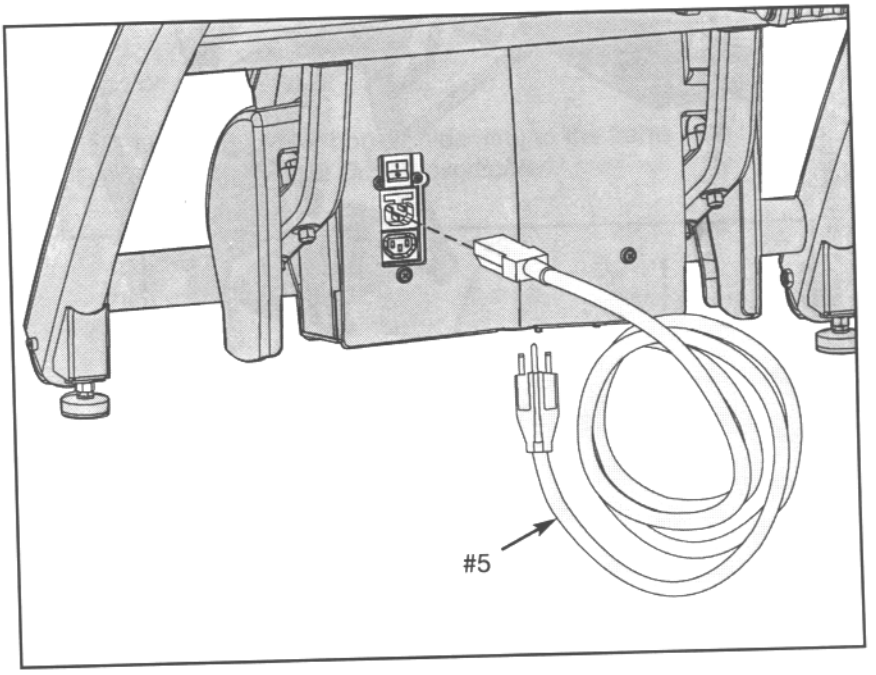



Figure 16

**14. Visually inspect the unit.**

**A.** Carefully remove any package material from arms and rest of unit.

**B.** Carefully examine the unit to ensure that the assembly is correct and complete.

***! WARNING: Be sure that all electrical requirements are met as indicated in the specifications at the front of the manual and at the beginning of this chapter prior to proceeding.***

## Testing the Operation

Use the following instructions to test the full resistance and incline range of the unit.

1. Plug the power cord into a power outlet from a grounded circuit as described under *Electrical Requirements* in this chapter. ***NOTE:*** *Coil up the remainder of the power cord and place it out of the way, under the front of the unit.*

2. Locate the on/off (I/O) power switch near the power cord inlet. Toggle it to the on position (I).

3. The control panel will light up and be in the *Dormant Mode.*

***NOTE:*** *Cybex recommends that the unit be unplugged or the on/off (I/O) power switch turned off (O) when it is not in use.*

4. Hold the handrails to steady yourself while you step into the foot plates.

5. Press the **Quick Start** key. The unit begins a countdown "3...2...1" and sounds a tone for each count. After it reaches one (1), the unit gives a longer tone.

6. Begin striding.

7. Run the unit through its full resistance range. First press the **Resistance +** key until the unit reaches its highest load (the display will show "100"). Then press the **Resistance -** key until the unit reaches its lowest load; the display will show "0". As you stride, you will feel the resistance change.

***NOTE:*** *When the unit reaches the set incline and resistance, the displays will stop flashing and remain steadily illuminated to indicate that the desired settings have been reached.*

8. Run the unit through its full incline range. First press the **Incline** ⬆ key until the unit reaches its highest incline (the display will show "10"). Then press the **Incline** ⬇ key until the unit reaches its lowest incline (the display will show "0").

***! WARNING: Wait until all moving parts come to a complete stop before dismounting.***

9. Press **Pause/end** twice to bring the incline back to its start position, end the workout review, and return the display to *Dormant Mode*.

10. Wait until foot plates come to a complete stop before dismounting the unit. Hold the handrails to steady yourself while you step off the unit.

## Setting Operation Options

1. Enter *Test Mode* by holding down any key while turning on (I) power. The display will read "Arc".

***NOTE:*** *After changing any value, you must press* **Enter** *to save that value. When you press enter the display will read "updt" (updated) to confirm your selection.*

2. Press the **Weight** key to set options, change values with ▲ and ▼ keys and press **Enter** to save your selection. Each time you press **Weight** the next set of data is displayed in the following order.

***Unit*** - Choices are "Eng" (English) or "Euro" (metric) measurements. English is the default.

***Line:*** - This is the frequency of the power line that supplies power to your unit. The default setting is 50 Hz for metric consoles and 60 Hz for English consoles. ***NOTE:*** *If you have an English console and a 50 Hz power line frequency, then you must change the default setting from 60 Hz to 50 Hz for the proper elevation frequency.*

***Scan*** - This turns on or off the data readout scan (unless a specific data key is pressed during a workout). Default is on.

***Def*** - This is the default time for time based programs if a user doesn't re-set **Time**. For example, if you press **Time** you can decrease or increase the set workout time up to the amount that the **Max** time is set. Choices (in minutes) include: 20, 30, 40, 50 and 60. Default is 20.

***Max*** - This is the maximum amount of time the unit can run per use. You can limit the users time or choose "none" for unlimited time. Choices (in minutes) include: 20, 30, 40, 50, 60, 90, 120 and "none" for no time limit. Default is 60.

***Idle (or Workout Review):*** - This is how long the unit retains and displays your current workout data during a pause in the workout or after a workout. Choices include: 20 seconds; 30 seconds; 40 seconds; 1 minute and 5 minutes; default is 20 seconds.

***Remember: You must press* Enter *after changing a value for that value to be stored.***

3. To exit *Test Mode* press the **Pause/end** key once.

Your unit is now ready for use. Follow the instructions in the *Operation* chapter to learn how to operate the unit.

# 6 - Customer Service

## *Contacting Service*

Hours of phone service are Monday through Friday from 8:30 a.m. to 6:00 p.m. Eastern Standard Time.

For Cybex customers living in the USA, contact Cybex Customer Service at **800-766-3211.**

For Cybex customers living outside the USA, contact Cybex Customer Service at **508-533-4300** or fax **508-533-5183.**

Order parts and find information on the web at www.cybexinternational.com or by e-mail at techhelp@cybexintl.com.

## *Serial Number and Voltage*

Your serial number and voltage can be found on the front of the unit. See Figure 1.
For your convenience record your serial number and voltage below so that you will have it ready if you call Cybex Customer Service.

Serial Number_____Voltage_____

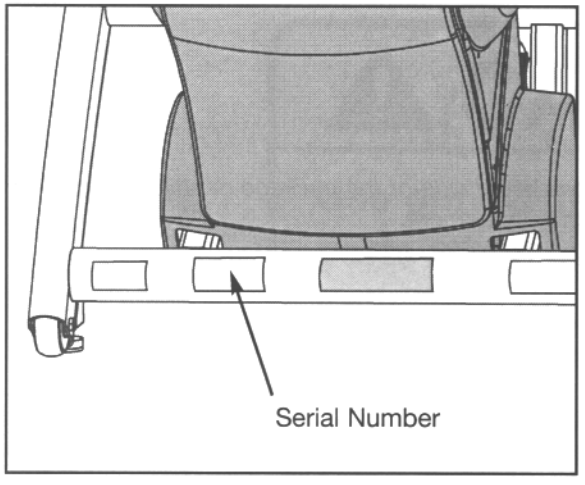



Figure 1

## *Return Material Authorization (RMA)*

The Return Material Authorization (RMA) system outlines the procedures to follow when returning material for replacement, repair, or credit. The system assures that returned materials are properly handled and analyzed. Follow the following procedures carefully.

Contact your authorized Cybex dealer on all warranty-related matters. Your local Cybex dealer will request an RMA from Cybex, if applicable. Under no circumstances will defective parts or equipment be accepted by Cybex without proper RMA and an Automated Return Service (ARS) label.

1. Call the Customer Service hotline listed on Page 6-1 for the return of any item that is defective.

2. Provide the technician with a detailed description of the problem you are having or the defect in the item you wish to return.

3. Provide the model and serial number. *The serial number is located on the front of the unit as shown in Figure 1.* The serial number begins with a letter, for example: R09-101331100.

4. At Cybex's discretion, the technician may request that you return the problem part(s) to Cybex for evaluation and repair or replacement. The technician will assign you an RMA number and will send you an ARS label. The ARS label and RMA number must be clearly displayed on the outside of the package that contains the item(s) to be returned. Include a description of the problem, the serial number of the unit and the name and address of the owner in the package along with the part(s).

5. Forward the package through UPS to Cybex.
   Attn: Customer Service Department
   Cybex International, Inc.
   10 Trotter Drive
   Medway, MA 02053

***NOTE:*** *Merchandise returned without an RMA number on the outside of the package or shipments sent C.O.D. will not be accepted by the Cybex receiving department.*

## Damaged Parts

Materials damaged in shipment should not be returned for credit. Shipping damages are the responsibility of the carrier (UPS, Federal Express, trucking companies, etc.).

**Apparent Damage -** Upon receipt of your shipment, check all boxes carefully. Any damage seen with a visual check must be noted on the freight bill and signed by the carrier's agent. Failure to do so will result in the carrier's refusal to honor your damage claim. The carrier will provide you with the required forms for filing such claims.

**Concealed Damage -** Damage not seen with a visual check upon receipt of a shipment but noticed later must be reported to the carrier as soon as possible. Upon discovery of the damage, a written or phone request to the carrier asking them to perform an inspection of the materials must be made within ten days of the date of delivery. Keep all shipping containers and packing materials: they will be needed as part of the inspection process. The carrier will provide you with an inspection report and the necessary forms for filing a concealed damage claim. Concealed damage is the carrier's responsibility.

## Ordering Parts

Visit www.cybexinternational.com to shop for parts online or fax your order to **508-533-5183.** To speak with a customer service representative, call **800-766-3211** (for customers living within the USA) or **508-533-4300** (for customers outside the USA).

**⚠ CAUTION**

**Use only Cybex replacement parts when servicing. Failure to do so could result in personal injury.**

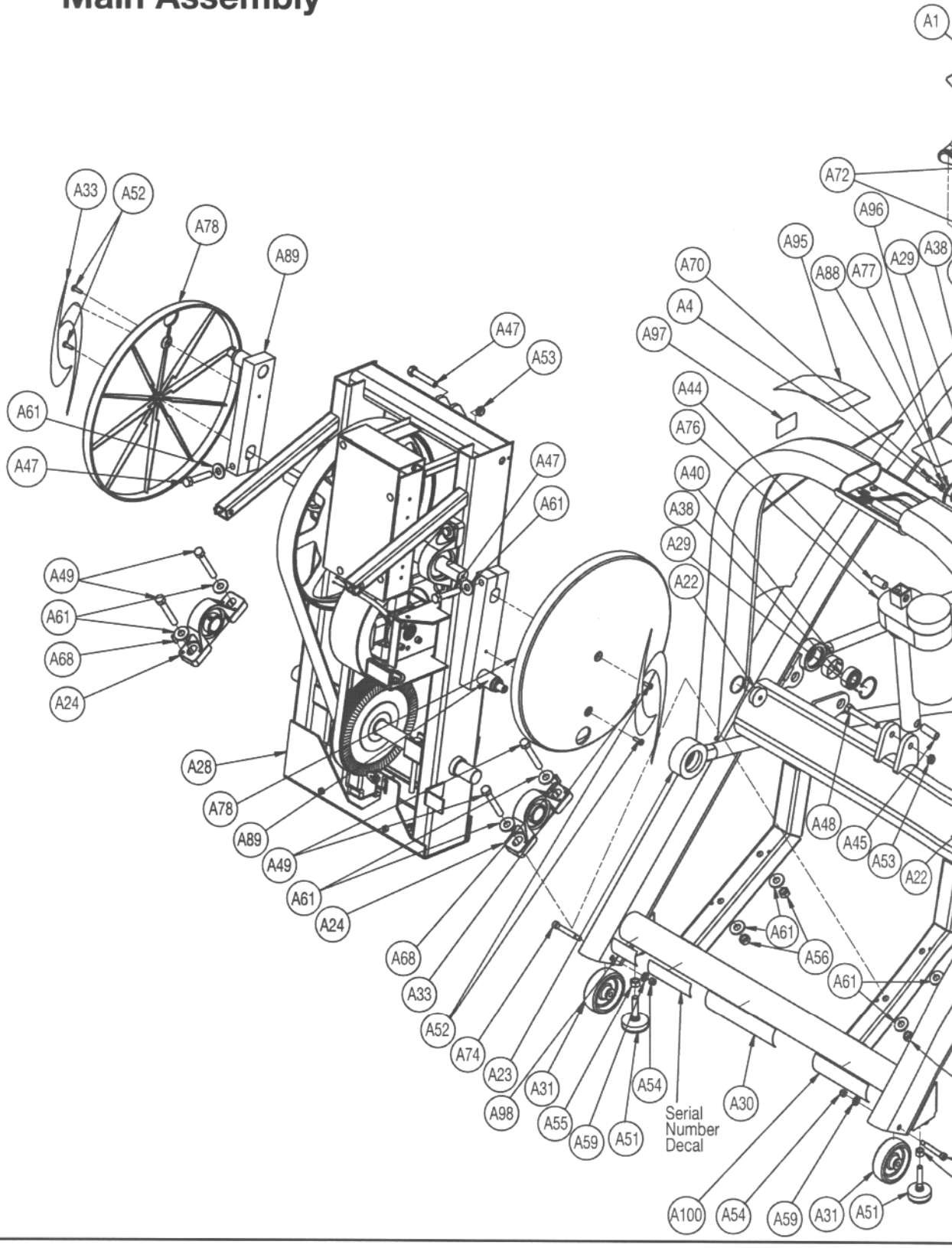
**Cybex will void warranty if non-Cybex replacement parts are used.**

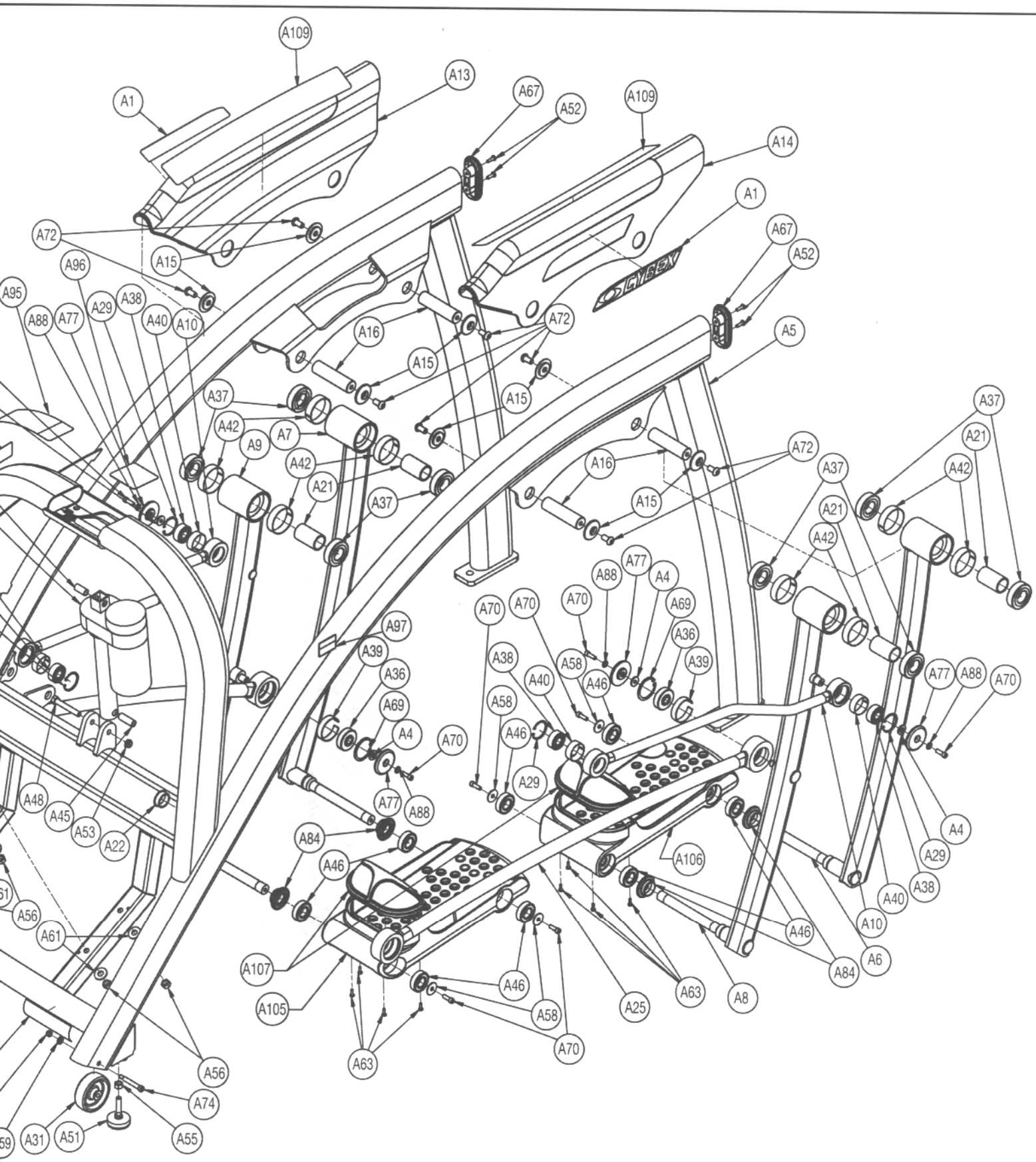
## Main Assembly

| ITEM | QTY | PART NO. | DESCRIPTION |
|---|---|---|---|
| A1 | 2 | 11090-404 | Cybex Decal |
| A2 | 2 | 11090-405 | Foot Pad |
| A3 | 1 | 600A-301 | Arc Warranty Sheet (not shown) |
| A4 | 8 | 600A-311 | Flange Spacer |
| A5 | 1 | 610A-200 | Main Frame |
| A6 | 1 | 610A-201 | Foot Plate Arm Left Rear |
| A7 | 1 | 610A-202 | Foot Plate Arm Right Rear |
| A8 | 1 | 610A-203 | Foot Plate Arm Left Front |
| A9 | 1 | 610A-204 | Foot Plate Arm Right Front |
| A10 | 1 | 610A-205 | Handle Link |
| A11 | 1 | 610A-208 | Arm Right Hand |
| A12 | 1 | 610A-209 | Arm Left Hand |
| A13 | 1 | 610A-303 | Pivot Cover Right Hand |
| A14 | 1 | 610A-304 | Pivot Cover Left Hand |
| A15 | 8 | 610A-311 | Pivot Shaft Retainer |
| A16 | 4 | 610A-342 | Pivot Pin |
| A17 | 2 | 610A-350 | End Cap |
| A18 | 2 | 610A-351 | Pivot Pin |
| A19 | 1 | 610A-352 | Installation Poster (not shown) |
| A20 | 2 | 610A-356 | Spacer Tube |
| A21 | 4 | 610A-357 | Spacer Tube |
| A22 | 2 | 610A-358 | Insert, Plastic 1.88 OD X .281 ID |
| A23 | 1 | 600A-200 | Linkage Rod Right |
| A24 | 2 | AF-16694 | Pillow Block Bearing 1 Inch |
| A25 | 1 | 600A-201 | Linkage Rod Left |
| A26 | 1 | AW-18285 | Harness, 610A, Frame |
| A27 | 2 | AW-18286 | Cable, 610A CHR Grip |
| A28 | 1 | 600A-101 | Drive Frame Assembly |
| A29 | 4 | BR030225 | Retaining Ring 1.438 Internal |
| A30 | 1 | CM000240 | Warning Decal |
| A31 | 2 | CW-17231 | Wheel, Tensioner |
| A32 | 1 | DE-17317 | Arc Trainer Logo Decal |
| A33 | 2 | DE-17339 | Cybex Vortex Decal |
| A34 | 1 | EW600006 | Daisy Chain Jumper Cord (not shown) |
| A35 | 4 | FB030232 | Bearing, Radial 17MM Extended Race |
| A36 | 4 | FB030244 | Bearing, Radial Ball .50 ID X 1.688 OD |
| A37 | 8 | FB030247 | Bearing, Radial 25MM Extended Race |
| A38 | 4 | FB030248 | Bearing, Spherical 15MM |
| A39 | 4 | FC030004 | Tolerance Ring 42 (1.653) ID |
| A40 | 4 | FC030005 | Tolerance Ring 1.378 ID |
| A41 | 4 | FC030006 | Tolerance Ring 1.575 ID |
| A42 | 8 | FC030007 | Tolerence Ring 2.047 ID |
| A43 | 2 | F0100009 | O-Ring, #124 (1-1/4 ID X 3/32) |
| A44 | 1 | FT-17242 | Sleeve, Elevation Mounting, Top |
| A45 | 1 | FT-17243 | Sleeve, Elevation Mounting, Bottom |
| A46 | 8 | HB-17036 | Bearing, Ball .750 Diameter |
| A47 | 3 | HC701226 | Bolt, HHCS .375-16 X 2.0 |
| A48 | 1 | HC701230 | Screw, HHCS .375-16 X 2.50 |
| A49 | 4 | HC701232 | Screw, HHCS .375-16 X 2.75 |
| A50 | 2 | HF449064 | Insert, 1.12 X 2.50-20 UNC |
| A51 | 2 | HG700022 | Leveling Glide, .375-16 |
| A52 | 8 | HM582514 | Screw, Pan Head Phillips 10-32X .62 |
| A53 | 2 | HN704902 | Locknut, .375-16 Nylon |
| A54 | 2 | HN624901 | Locknut, .250-20 Nylon BLK ZN |
| A55 | 2 | HN704000 | Hex Nut .375-16 |
| A56 | 4 | HN706300 | Nut, K Lock .375-16 UNC |
| A57 | 6 | HS100000 | Nylon Finishing Washer No.10 |

| ITEM | QTY | PART NO. | DESCRIPTION |
|---|---|---|---|
| A58 | 4 | HS307602 | Washer, Flat .281ID X 1.000OD X.063 |
| A59 | 2 | HS328300 | Lockwasher Split .312 |
| A60 | 4 | HS347600 | Washer, SAE .375 |
| A61 | 10 | HS347700 | Washer, USS .375 |
| A62 | 2 | HT552516 | PN Head Phil SC # 8 X .875 BLK |
| A63 | 8 | HT552512 | Pan HD Phil HD Self Tapping Screw |
| A64 | 16 | HT552515 | Pan HD Phil HD Self Tapping Screw |
| A65 | 8 | HT572512 | Pan HD Phil HD Self Tapping Screw |
| A66 | 26 | HT591122 | Pan HD Phil HD Self Tapping Screw |
| A67 | 2 | HX-16751 | Cap, Frame Tube |
| A68 | 2 | HX-17023 | Spring Pin |
| A69 | 4 | HX-17143 | Internal Retaining Ring |
| A70 | 12 | HX622815 | SHCS .250-20 UNC-3A SS |
| A71 | 2 | HX620420 | BHSCS .250-20 X 1.250 SS |
| A72 | 12 | HX700415 | BHSCS .375-16 .75 SS |
| A73 | 4 | JC700422 | BHSCS .375-16 X 1.50 |
| A74 | 2 | JD623324 | Shoulder Bolt |
| A75 | 4 | JS347400 | Lockwasher, Int Tooth .375 |
| A76 | 1 | MR-16518 | Motor, Elevation. 115 V |
| A77 | 8 | PL-16535 | Cap, Linkage Rod, 2.00 OD |
| A78 | 2 | 600A-331 | Cover, Crank |
| A79 | 1 | 600A-332 | Cover, Elevation Motor |
| A80 | 1 | 600A-333 | Cover, Right |
| A81 | 1 | 600A-334 | Cover, Left |
| A82 | 1 | 600A-335 | Cover, Front Access |
| A83 | 1 | PL-17209 | Water Bottle Holder |
| A84 | 4 | PL-17279 | Spacer, Shaft, Foot Plate |
| A85 | 2 | PR400205 | Grip 1.62 OD x 1.20 ID |
| A86 | 2 | YD000026 | Tape, Double Coated 1.5 Wide |
| A87 | 1 | 610A-373 | Instr., 610A Assembly Note |
| A88 | 8 | HS307601 | Washer, Flat |
| A89 | 2 | 610A-395 | Arm Crank Assembly |
| A90 | 5 | 600A-336 | Insert |
| A91 | 4 | HF540200 | Grommet, Nylon |
| A92 | 2 | HT512517 | Pan HD Phil HD Self Tapping Screw |
| A93 | 1 | EW600000 | Power Cord (Not Shown) |
| A94 | 1 | 5610A-4 | Owner's Manual (Not Shown) |
| A95 | 1 | 610-349-4 | Warning Decal |
| A96 | 1 | DE-17218-4 | Heart Rate Zone Decal |
| A97 | 2 | DE-17219-4 | Caution Decal |
| A98 | 1 | DE-17315 | ETL Label |
| A99 | 1 | DE-17322 | Service Schedule and Error Decal |
| A100 | 1 | CM000241 | UL Decal |
| A101 | 1 | DE-17266 | UL Domestic Decal |
| A102 | 1 | EW600005 | Power Cord (220V Option Only) |
| A103 | 1 | CM000242 | CE Decal (220V Option Only) |
| A104 | 1 | DE-17267 | International Power Rating Decal (220V Option Only) |
| A105 | 1 | 610A-300 | Right Foot Plate (Black) |
| A105 | 1 | 610A-390 | Right Foot Plate (Yellow) |
| A106 | 1 | 610A-301 | Left Foot Plate (Black) |
| A106 | 1 | 610A-391 | Left Foot Plate (Yellow) |
| A107 | 2 | 610A-302 | Toe Cap (Black) |
| A107 | 2 | 610A-392 | Toe Cap (Yellow) |
| A108 | 2 | 610A-100 | Contact Grip Assy (Black) |
| A108 | 2 | 610A-123 | Contact Grip Assy (Yellow) |
| A109 | 2 | 610A-397 | Caution Decal (IFE Option Only) |

# Main Assembly

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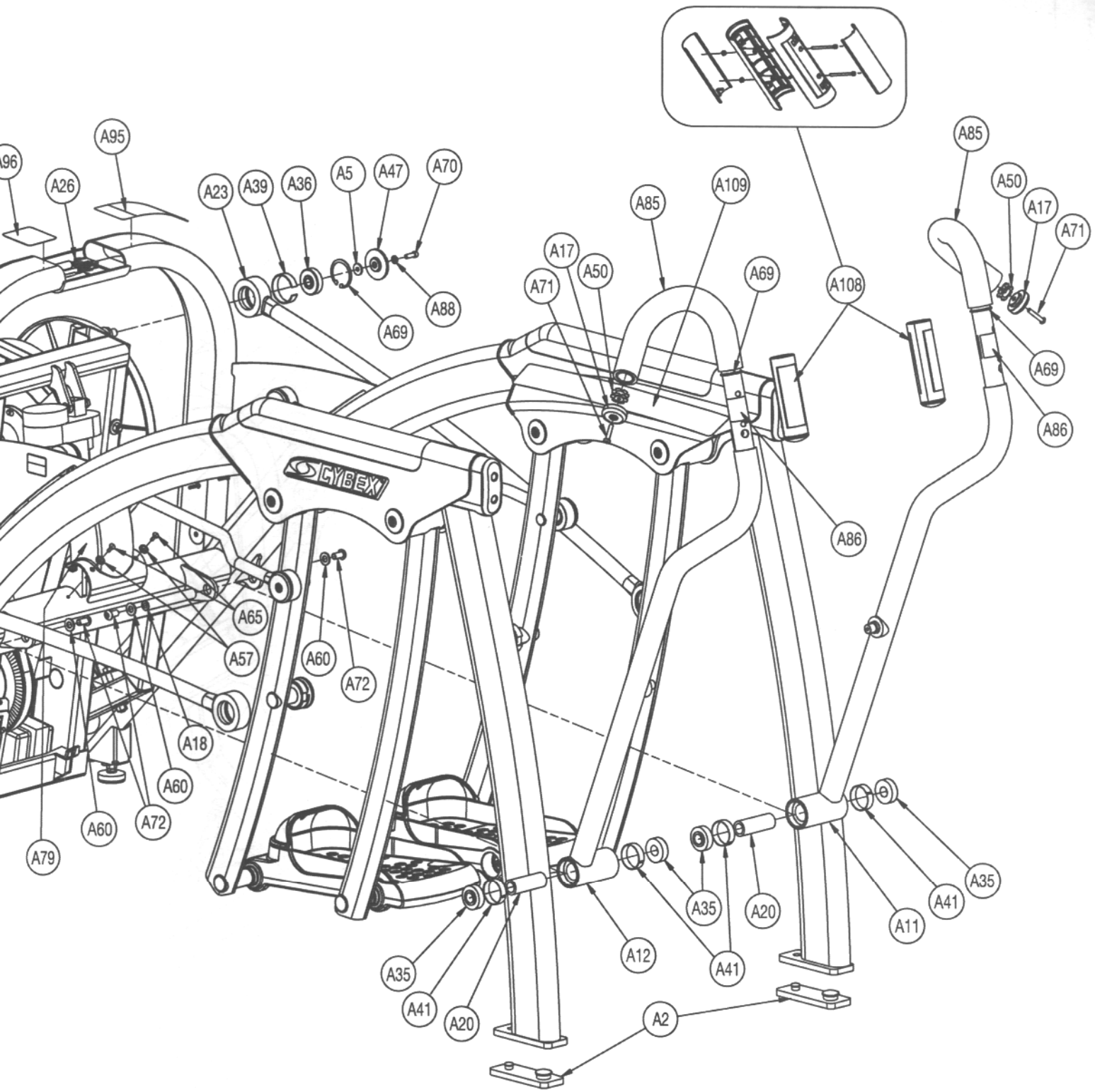
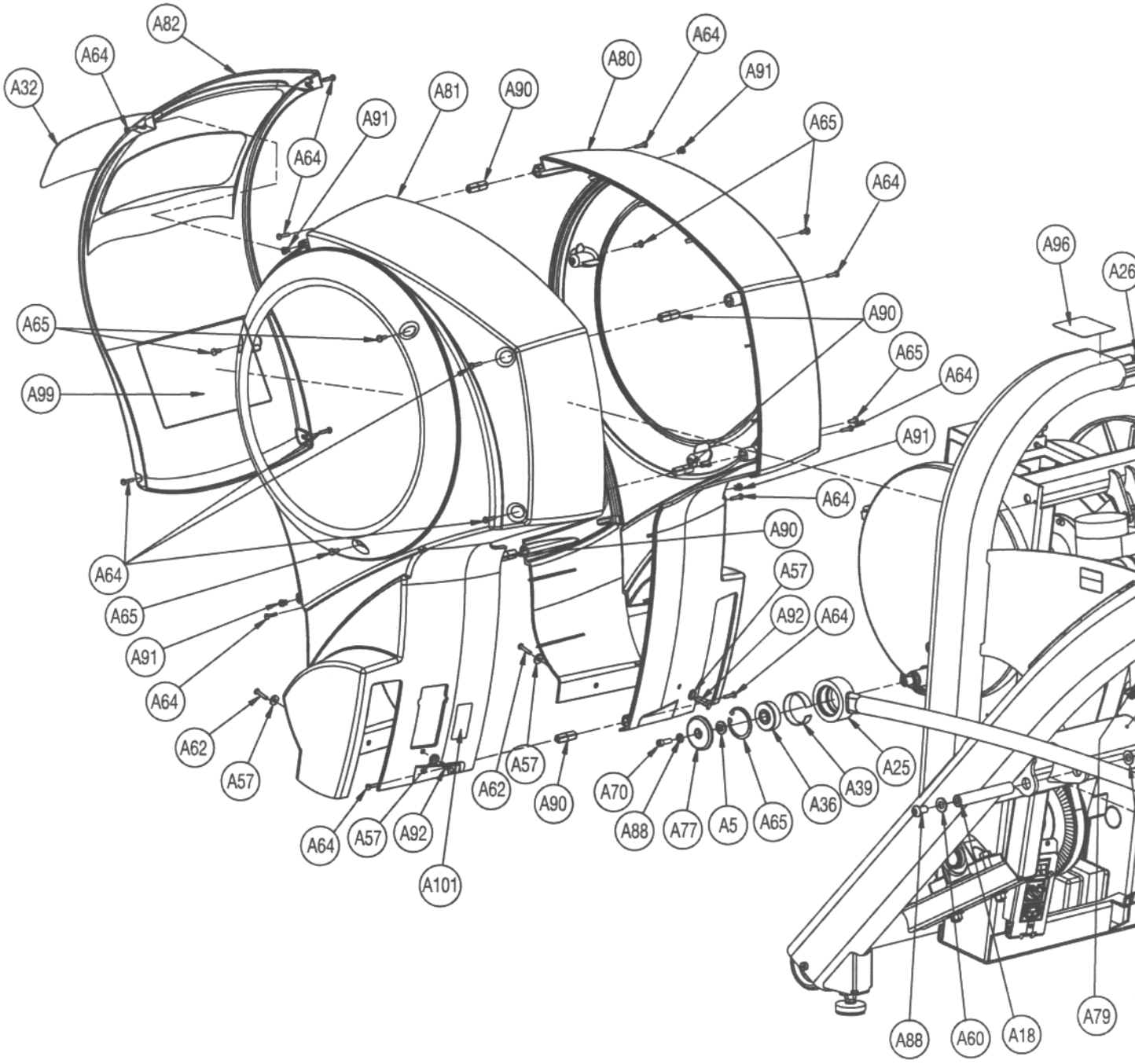
# Main Assembly

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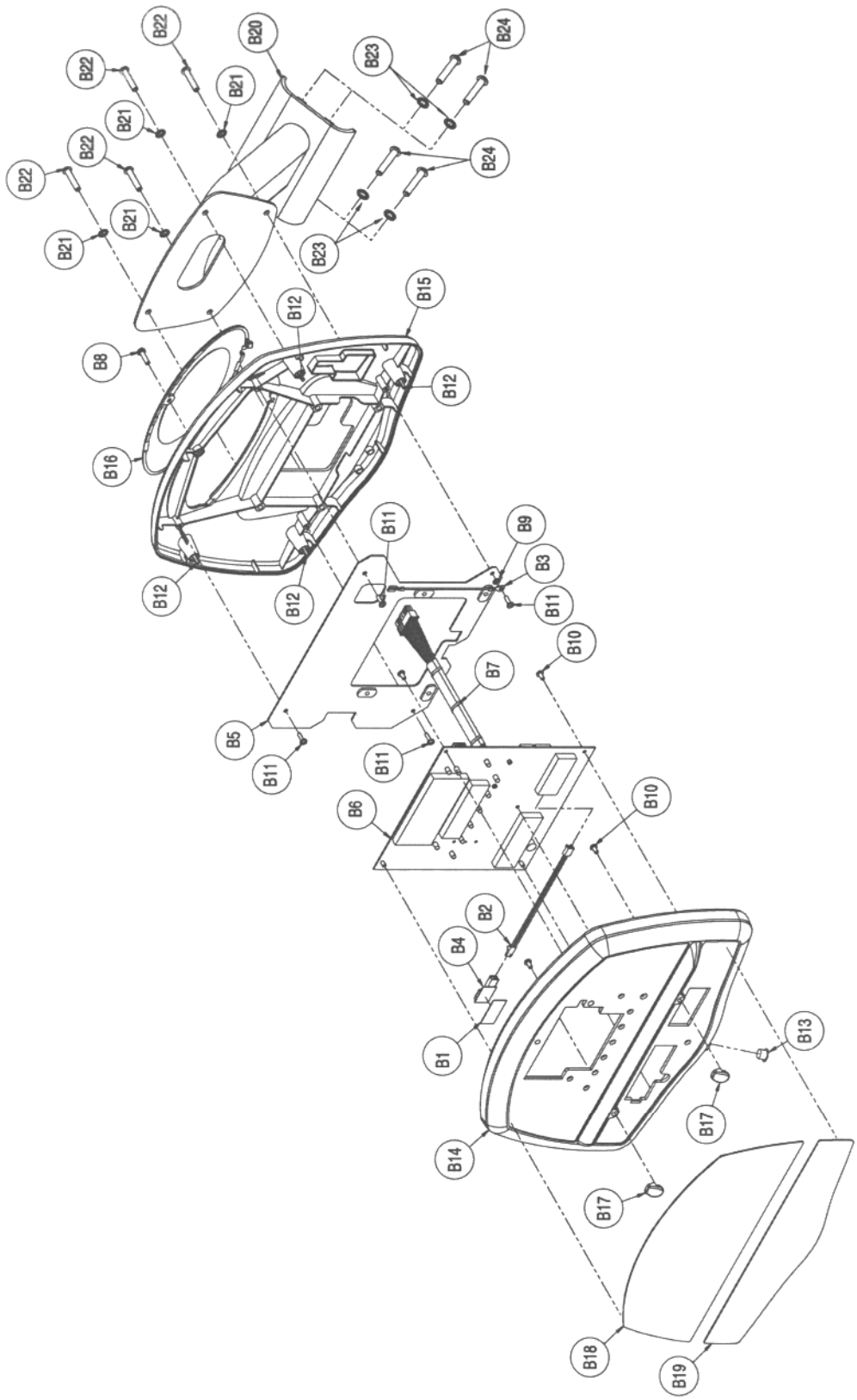
***NOTE:*** *Parts lists and exploded views of the console and handrail assembly are on the pages that follow.*

## Console Assembly

| ITEM | QTY | PART NO. | DESCRIPTION |
|---|---|---|---|
| B1 | 1 | 01250 | Tape, Double Coated .75 |
| B2 | 1 | 610A-103 | Cable, Embedded Polar Jumper |
| B3 | 1 | 610A-104 | Cable, Chr Chassis Ground |
| B4 | 1 | 610A-105 | Sensor, Polor Wireless Remote Mount |
| B5 | 1 | 610A-396 | Plare, Console Mounting |
| B6 | 1 | AD-18856 | PCA, 610A Main Display |
| B7 | 1 | AW-18284 | Harness, 610A Console |
| B8 | 1 | HJ582515 | Screws, Sems, 10-32 x .72 Phil Pan, BLK Zinc |
| B9 | 1 | HS087300 | Lockwasher Ext Tooth No. 8 Zinc |
| B10 | 7 | HT552509 | Screw, Tap 8-16 x .31 Plastite |
| B11 | 4 | HT552512 | Pan HD Phil HD Self Tap, 8-16 x .50, Type WB |
| B12 | 4 | HT55215 | Pan HD Phil HD Self Tap, 8-16 x .75, Type WB BLK |
| B13 | 1 | PP080207 | Insert, Plastic .437 Dia 11 Gauge |
| B14 | 1 | PP620003 | Console, Front Plastic |
| B15 | 1 | PP620004 | Console, Rear Plastic |
| B16 | 1 | PP620005 | Cover, Console Battery Door |
| B17 | 2 | PP620006 | Tab, Book Holder |
| B18 | 1 | SW-18276-X | Membrane, 610A Top, Univ |
| B19 | 1 | SW-18275-X | Membrane, 610A Bottom W/O AV, U |
| B20 | 1 | 610A-206 | W Console Mount |
| B21 | 4 | HS307400 | Lockwasher Int Tooth .250 SS |
| B22 | 4 | HX620420 | BHSCS .250-20 X 1.250 SS |
| B23 | 4 | JS347400 | Lockwasher In Tooth .375 |
| B24 | 4 | JC700422 | BHSCS .375-16 X 1.50 |

# Console Assembly

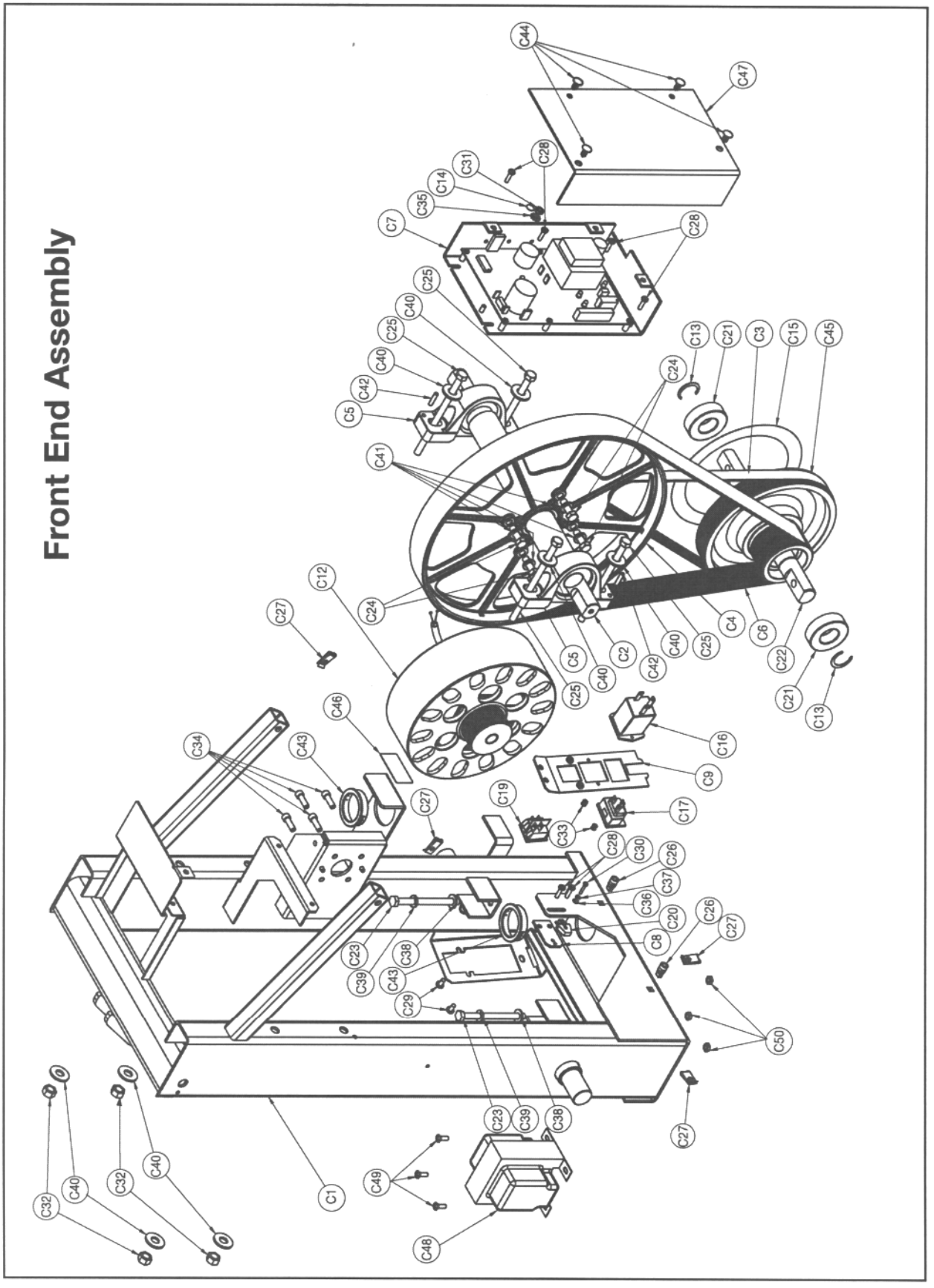


## Front End Assembly

| ITEM | QTY | PART NO. | DESCRIPTION |
|---|---|---|---|
| C1 | 1 | 600A-203 | Frame, Front |
| C2 | 1 | 600A-313 | Shaft |
| C3 | 1 | 600A-322 | Belt, Secondary Drive, 7 Rib |
| C4 | 1 | 600A-337 | Pully, Poly-V Die Cast, 16 Grooves |
| C5 | 2 | 600A-340 | Bearing, 1.00 Inch Pillow Block |
| C6 | 1 | 600A-343 | Belt, Primary Drive 16 Rib |
| C7 | 1 | AD-16982 | PCA, Control Board, Eddy Current |
| C8 | 1 | AF-17141 | Bracket, Speed Sensor |
| C9 | 1 | AF-17216 | Plate, Switch, Power |
| C10 | 1 | AW-17098 | Jumper, Power Inlet, Brown (Not Shown) |
| C11 | 1 | AW-17099 | Jumper, Power Inlet, Blue (Not shown) |
| C12 | 1 | AX-17208 | Assembly, ECB |
| C13 | 2 | BR030221 | Ring Retaining, Exterior Cresent |
| C14 | 1 | CM000237 | Decal, Safety Ground |
| C15 | 1 | DE-17019 | Disc, Speed Sensor |
| C16 | 1 | EC-17096 | Module, Filtered IEC-320 Power in |
| C17 | 1 | EC-17097 | Module, IEC Auxiliary Ac Outlet |
| C18 | 2 | EF000000 | Fuse 6 ASKI-BLO 5 X 20 MM 250 V (Not Shown) |
| C19 | 1 | ES000000 | Switch On-Off |
| C20 | 1 | EW600003 | Cable Opto Sensor Armored |
| C21 | 2 | FB030243 | Bearing, 25 MM ID X 52 MM OD 6205 |
| C22 | 1 | FM-16859 | Shaft, Lower |
| C23 | 2 | HC661240 | Screw, Hex Head Cap .312-18 x 3.75 |
| C24 | 4 | HC661217 | HX HD Cap Screw .312-18 x 1.00 |
| C25 | 4 | HC701252 | HX HD Cap Screw .375-16 x 5.25 |
| C26 | 2 | HF540201 | Nut, Grommet, Spacer |

| ITEM | QTY | PART NO. | DESCRIPTION |
|---|---|---|---|
| C27 | 4 | HF579000 | Nut, U type 10-24 Panel |
| C28 | 6 | HJ542514 | Pan Head Phillips, 8-32 x .62 External Sems Screw |
| C29 | 2 | HJ582510 | Pan Head Phillips, 10-32 X .38 External Sems Screw |
| C30 | 1 | HM522514 | Pan Head Phillips Screw, 4-40 UNC x .62 |
| C31 | 1 | HN586300 | Nut, K- Lock 10-32 Zinc plated |
| C32 | 4 | HN706300 | Nut, K- Lock .375-16 UNC |
| C33 | 2 | HR269600 | Rivet, Dome Head .125 Dia x .188/.250 Alum/Stl Mandrel |
| C34 | 4 | HS-17055 | HHCS .375 x .625 |
| C35 | 1 | HS047300 | Lockwasher, External No. 10 |
| C36 | 1 | HS047600 | Washer, Flat SAE, .112 No. 4 |
| C37 | 1 | HS048300 | Lockwasher Split, .112 No 4 |
| C38 | 2 | HS327600 | Washer, SAE .312 |
| C39 | 2 | HS328300 | Lockwasher Split .312 |
| C40 | 8 | HS347700 | Washer, USS .375 |
| C41 | 4 | HS760100 | Spring Retaining Washer |
| C42 | 2 | HX-17023 | Pin, Spring .1875 x .75 LG Type 420 |
| C43 | 2 | HX-17050 | Bushing, 1.275 ID x 1.87 OD, Nylon |
| C44 | 4 | PP660010 | Finned Fastener .25 DIA x .51 Long |
| C45 | 1 | PW-16521 | Pully, Drive |
| C46 | 1 | DE-17155-4 | Warning Decal |
| C47 | 1 | PL-17237-4 | Controller Cover |
| C48 | 1 | AX-17259 | Transformer 200KVA (200V option only) |
| C49 | 3 | HJ582512 | Tap SC No. 10-24 x .50 PN HD Phil (220V option only) |
| C50 | 3 | HN586300 | Keps 10-32-stl (220V option only) |

# Front End Assembly



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