# *Lifestep* ®
## 9500
## OPERATION MANUAL
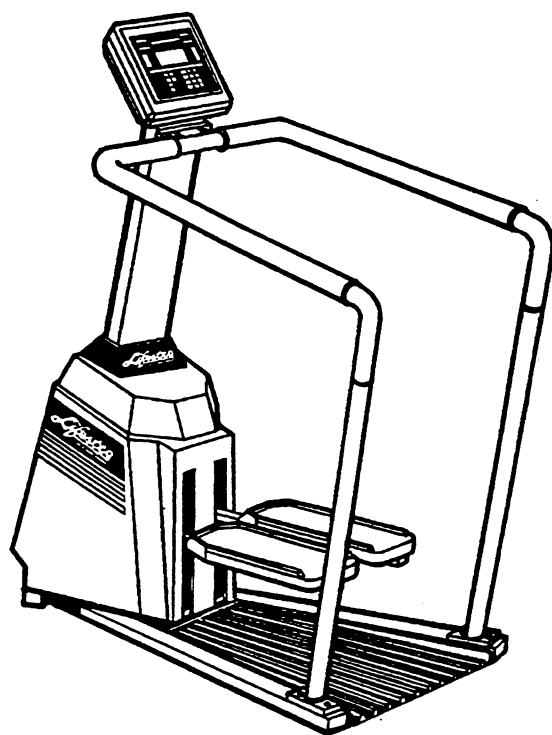
## FCC WARNING - POSSIBLE RADIO/TELEVISION INTERFERENCE

NOTE: This equipment has been tested and found to comply with the limits for a Class A digital Device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

"The user is cautioned that any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment."

If necessary, we encourage you to seek advice from the Product Support Center of Life Fitness, Inc. (800) 351-3737 toll free or (708) 451-0036.

*Life Fitness*

## Sales, Product Information, and Customer Service:

Life Fitness, Inc.
Corporate Headquarters
9601 Jeronimo Road
Irvine, California 92718
(800) 735-3867 Toll Free
(714) 859-1011
Fax: (714) 458-5711

## Assistance on Installation, Operation, Warranty, Parts, and Repairs:

Life Fitness, Inc.
Product Support
10601 West Belmont Avenue
Franklin Park, Illinois 60131
(800) 351-3737
(708) 451-0036
Telex: 721596
Fax: (708) 451-4137

## Europe:

Life Fitness Europe GmbH
Siemensstrasse 3
8044 Unterschleissheim
Munich, West Germany
Telephone: 0 89/3 10 13 49
Fax: 089/3101369
Telex: 5215918 LSG
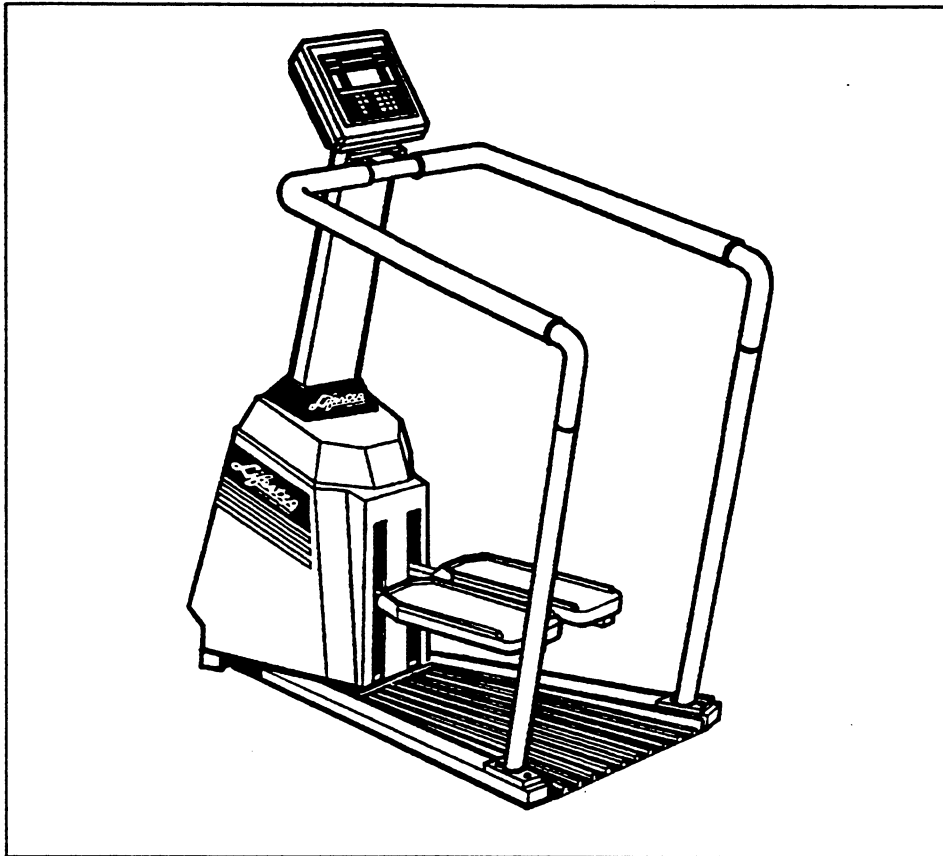
Congratulations and welcome to the world of Life Fitness, Inc. and the Lifestep aerobic trainer. The Life Fitness reputation for quality exercise products that are motivating and reliable is unmatched in the fitness industry. The Lifestep stair climber is the third aerobic conditioning product from Life Fitness, joining the Lifecycle® aerobic trainer and Liferower® total body conditioner, both health club favorites.

Like other Life Fitness products, the Lifestep trainer is designed for commercial use to provide users with an effective workout that is both motivating and time-efficient — without the stress and strain on legs and joints caused by other types of exercises like running or jogging. A user-friendly console provides users a host of visual feedback in addition to acting as a "coach" with easy-to-follow prompt instructions and helpful message displays throughout the workout.

Consistent workouts on the Lifestep trainer, as part of a regular exercise program, can help diffuse the effects of everyday stress and strain. In addition, aerobic conditioning has been proven to be an effective way to improve cardiovascular health. Competitive athletes train aerobically to increase their heart strength, lung capacity and muscular endurance.

# TABLE OF CONTENTS

# IMPORTANT SAFETY INSTRUCTIONS

## PLEASE READ THIS MANUAL NOW.

It is essential that you read this entire manual. It explains the design philosophy of the Lifestep trainer, how to operate it and ways to tailor aerobic workout plans to meet your members' personal fitness objectives.

If you have further questions regarding your Lifestep aerobic trainer, please call Life Fitness Product Support at (800) 351-3737 toll free or (708) 451-0036.

> *DANGER: To reduce the risk of electrical shock, always unplug the Lifestep unit from the electrical outlet or the electrical power supply cord before cleaning or attempting any maintenance activity.*
>
> *WARNING: To reduce the risk of burns, fire, electrical shock, or personal injury, it is imperative that you CONNECT EACH LIFESTEP UNIT TO A PROPERLY GROUNDED OUTLET. (See Grounding Instructions Page 6)*

## SAFETY FIRST

1. The Lifestep aerobic training unit should always be left "on." When initiating any maintenance or service activities, first turn the power switch to the "off" position and then unplug the unit.

2. The equipment is for use only by adults. Close supervision and appropriate measures should be taken to prevent spectators or pets from interfering in any way with the user while an exercise routine is in progress.

3. Always follow the console diagrams for proper lifting techniques and motions.

4. Each Lifestep aerobic trainer is intended to be used in a manner described in this manual.

5. Never operate a Lifestep unit if it has a damaged cord or electrical plug, if it has been dropped or damaged, or immersed in water, even partially. Contact Life Fitness Product Support for examination and repairs.

6. Keep the electrical cord from heated surfaces.

7. Do not carry the Lifestep unit by the supply cord or use cord as a handle.

8. Never operate a Lifestep unit with the air openings blocked. Keep air openings free of lint, hair or any obstructing material.

9. Never drop or insert any object into any opening in a Lifestep unit.

10. Never place liquids of any type on a Lifestep unit.

11. Do not use the Lifestep aerobic trainer outdoors.

12. Do not use the units in areas where aerosol spray products are being used or where oxygen is being administered. Such substances increase the danger of combustion or explosion.

13. To disconnect, move the power switch to the "OFF" position, then remove the plug from the electrical outlet by gripping the plug firmly and pulling it out of the outlet. Do not disengage the plug from the electrical outlet by pulling on the cord.

*SAVE THESE INSTRUCTIONS FOR FUTURE REFERENCE.*

# GROUNDING INSTRUCTIONS

The Lifestep aerobic trainer must be properly grounded. If the unit malfunctions or breaks down, proper grounding provides a path of least resistance for electrical current which reduces the risk of electrical shock to someone touching or using the unit. Each unit is equipped with an electrical cord which includes an equipment grounding conductor and a grounding plug. The plug must be plugged into an appropriate outlet (Figure 1) that is properly installed and grounded in accordance with all local codes and ordinances.

## Figure 1: Proper grounding

Illustration A                                    Illustration B
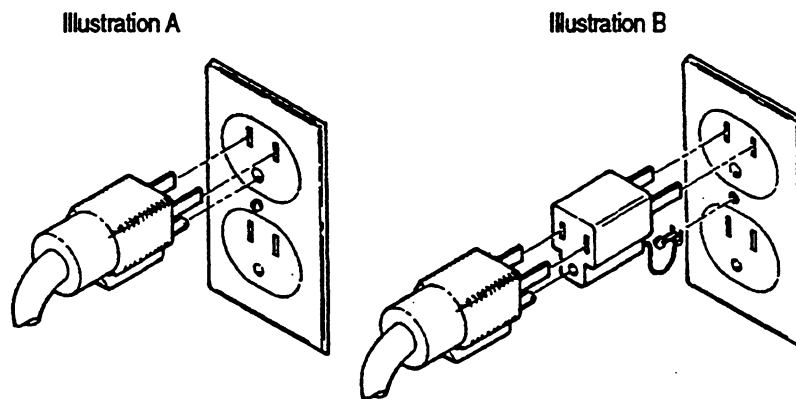
This product is for use on a normal 120-volt electrical circuit, and has a grounding plug that looks like the plug depicted in Figure 1 in illustration A. A temporary adapter, similar to the adapter in illustration B, may be used to connect this plug to a 2-pole receptacle if a properly grounded outlet is not available. THE TEMPORARY ADAPTER SHOULD BE USED ONLY UNTIL A PROPERLY GROUNDED OUTLET (FIGURE 1A) CAN BE INSTALLED BY A QUALIFIED ELECTRICIAN. THE GREEN EAR OR LUG MUST BE CONNECTED TO A PERMANENT GROUND SUCH AS A PROPERLY GROUNDED BOX COVER. IT MUST BE HELD IN PLACE SECURELY BY A METAL SCREW.

> *DANGER: A risk of electrical shock may result from improper connection of the equipment-grounding conductor. Check with a qualified electrician or serviceman if you are in doubt as to proper grounding technique. Do not modify the plug provided with the product. If it will not fit your electrical outlet, have a proper outlet installed by a qualified electrician.*

## SAVE THESE INSTRUCTIONS FOR FUTURE REFERENCE.

6

**Figure 2: Display Console**
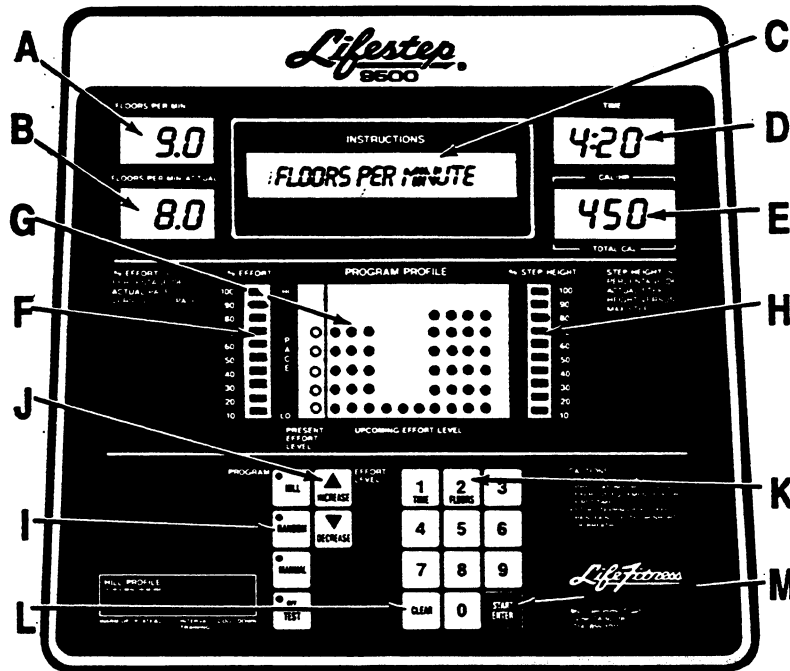


A. **FLOORS PER MINUTE-GOAL:** This display shows users the floors per minute rate at which they should be stepping, based on the program selection, effort level and time duration they have selected. If user is stepping above or below the floors per minute goal, this window will begin to flash. Also, the user will hear "beeps" if he drops below his floors per minute goal.

B. **FLOORS PER MINUTE-ACTUAL:** Shows the actual floors per minute pace at which the user is stepping, with 1 floor equal to 10.2 ft. User should attempt to keep this figure as close to the floors per minute goal display as possible to make sure he receives the optimal aerobic benefits from his workout.

C. **INSTRUCTIONS (Message Center):** Provides simple, step-by-step instructions and motivational information including total floors climbed and distance traveled. At the end of each workout, a summary of total feet and total floors climbed, workout duration and total caloric burn is displayed.

D. **TIME:** A continual display of elapsed time during each workout.

E. **CALORIES PER HOUR/TOTAL CALORIES:** Display of calories burned per hour alternates every two seconds with total caloric burn display. LED lights next to CAL/HR or TOTAL CAL will illuminate, indicating what information is being displayed. Also, the user may select a display

7

of watts, instead of calories per hour, by pressing START, "0" and the ENTER key prior to initializing a program.

F. **% EFFORT:** Depicts in a percentage the user's actual stepping pace as compared to the goal pace for the program, level and duration he has selected. The closer the LED light column is to 100%, the more closely the user's pace matches his floors per minute goal. The user should try to maintain 100% effort.

G. **PROGRAM PROFILE:** Displays present intensity level in addition to upcoming intensity levels. The higher the LED light column, the higher the floors per minute goal and consequently, greater effort is required.

H. **STEP HEIGHT %:** Allows users to see the actual percentage of step height they are achieving as compared to the unit's maximum possible step height.

I. **PROGRAM:** Provides users with a choice of HILL, RANDOM, MANUAL or FIT TEST exercise programs.

J. **INCREASE/DECREASE:** Pressing the INCREASE or DECREASE keys allows the user to increase or decrease his level of program difficulty. Selecting a higher effort level will result in a faster pace and a greater floors per minute goal. Selecting a lower effort level will result in a slower pace and a lower floors per minute goal.

K. **NUMERICAL KEYPAD:** Used to enter workout duration and effort level information into the computer programming system. During a workout, the user may vary his program difficulty by entering the new level values through the keypad.

L. **CLEAR:** Pressing this key two times in succession resets the unit and allows the user to begin the programming sequence again.

M. **START/ENTER:** Press this key to begin a workout or as part of the information entering process at the start of a workout.
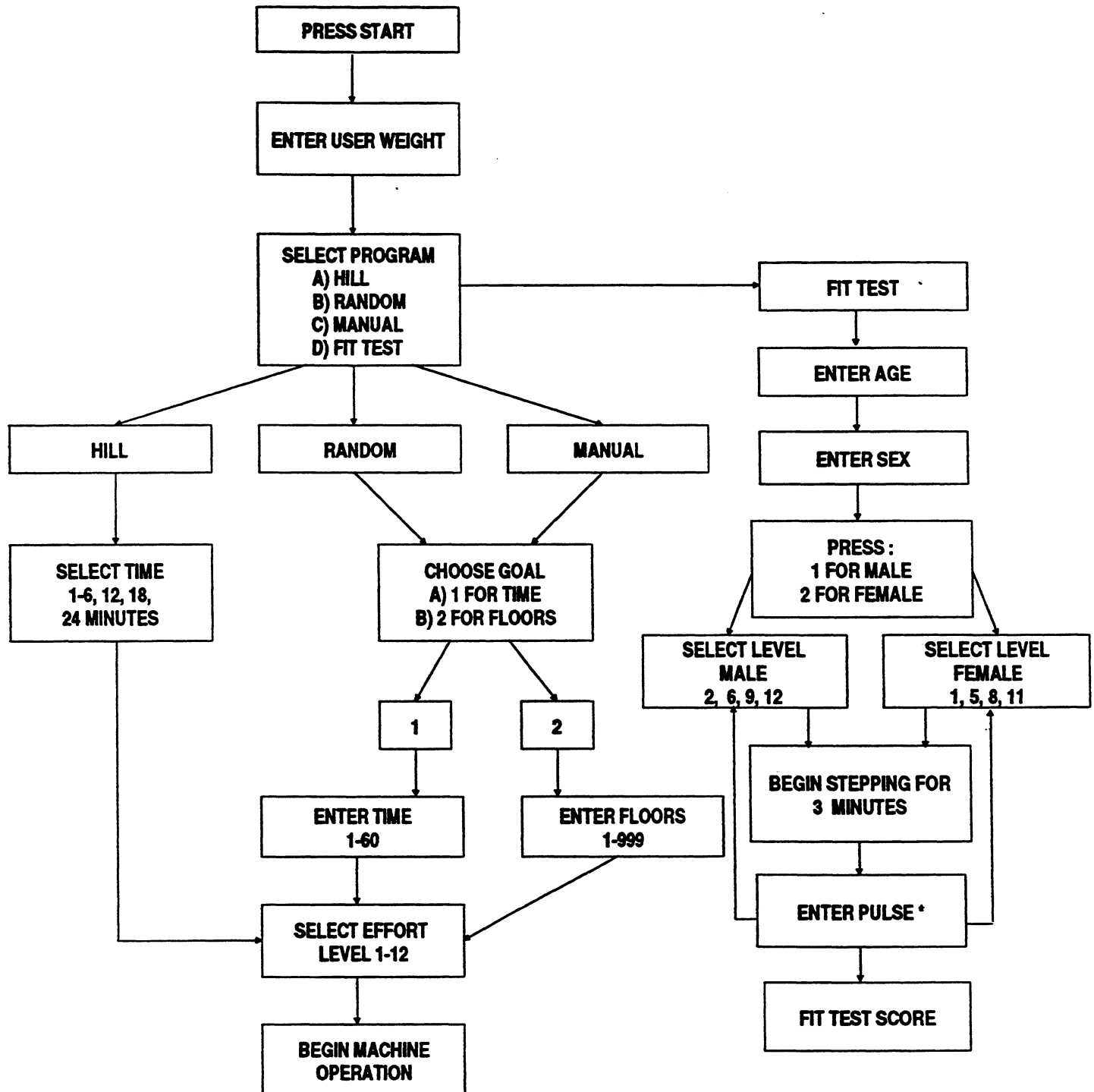
# OPERATING INSTRUCTIONS SUMMARIZED

Selecting a Lifestep workout program is simple. Step-by-step instructions appear in the Message Screen to help "walk" your members through the process. Once they become familiar with programming their workout, the process can be completed in as little as 30 seconds.

■ To begin, simply press the START-ENTER key.

■ The message *ENTER YOUR WEIGHT* appears on the message screen. Enter current weight using the numerical keypad on the console and press ENTER. (Weight data is necessary to properly calibrate your caloric burn information.)

■ The message screen will then read, *ENTER YOUR PROGRAM.* Press one of the four flashing program keys marked HILL, RANDOM , MANUAL or FIT TEST. The HILL key will start a Hill Profile workout which provides progressively increasing effort levels mixed with periods of less effort. The RANDOM key starts a program of different effort levels, which vary randomly with each exercise session. The MANUAL key allows users to select a program of a constant effort level without variation. The FIT TEST key enables the user to monitor their relative fitness. Also, the user may view a display of WATTS, (a unit of energy expended by the user while exercising) by press START-ENTER, "0" and then the START-ENTER key prior to selecting a program. The watts display is approximately 1/4 of the calories-per-hour readout.

■ If the user selects HILL, for the Hill Profile workout, the prompt screen will then direct him to enter his desired workout time, either 1- 6, 12, 18 or 24 minutes.

■ After selecting a workout duration and pressing START-ENTER, the prompt will then request the user to *SELECT EFFORT LEVEL.* Beginners should start with a low level and work toward higher levels. Level 1 is the lowest effort level and 12, the highest. (Remember, the user can change his effort level anytime during the workout simply by using the INCREASE/DECREASE keys on the console or entering a new numeric value from 1 to 12.) The lower the effort level the lower the step rate. The higher the effort level is, the higher the step rate.

■ The user should begin stepping at a comfortable pace by taking full steps and keeping his back straight. The Lifestep aerobic trainer allows the user to select a step height ranging from 14" to 18". Users can vary their step height by simply changing their foot position on the anatomically-designed pedals. The closer the user's feet are to the front of the pedal, the shorter the step height. Conversely, by placing the feet at the back of the pedal, a deeper step height results. Also, the Lifestep is equipped with springs which allow for a cushioning effect. This feature encourages the user to take full steps thus maximizing their workout benefits.

■ If the Hill program was not selected, the Lifestep console will allow members to "customize" their program to either a specific amount of time or a specified number of floors. Simply press either the RANDOM or MANUAL keys. (The programming steps for both are identical after this step.)

■ For a workout based on "time", press "1". Then, enter the workout duration, between 1 and 60 minutes. Press the ENTER key. The console prompt will then ask the user to enter an effort level. Using the keypad, enter a level from 1 to 12 and press the ENTER key. Begin stepping at a comfortable pace.

■ For a workout based on a specific number of "floors", press "2". Then enter a number of floors, between 1 and 999. Press the ENTER key. Following this entry, select effort level from 1 to 12 and press ENTER. Begin stepping at a comfortable pace.

■ At the conclusion of your workout, the message screen will scroll final summary information including total floors climbed, total distance and calories burned.

■ If the user is unable to maintain the floor/min goal, the Lifestep will "beep" and the floor /min goal window will flash. The user may change the exercise level by pressing 1 (slow, easy pace) to 12 (fast, difficult pace).

■ To acclimate their body to the Lifestep, the user should begin a gradual exercise regimen. At first, the user may feel some soreness in the knees and legs. This soreness should subside. However, if the soreness continues and/ or the user feels pain, faint or shortness of breath, they should stop stepping and consult a physician.

## Figure 3: Lifestep Trainer Operation Flow Chart

```
                          ┌──────────────────┐
                          │   PRESS START    │
                          └──────────────────┘
                                   │
                                   ▼
                          ┌──────────────────┐
                          │ ENTER USER WEIGHT│
                          └──────────────────┘
                                   │
                                   ▼
                  ┌──────────────────┐
                  │ SELECT PROGRAM   │────────────────────────▶ ┌──────────────┐
                  │ A) HILL          │                          │   FIT TEST   │
                  │ B) RANDOM        │                          └──────────────┘
                  │ C) MANUAL        │                                 │
                  │ D) FIT TEST      │                                 ▼
                  └──────────────────┘                          ┌──────────────┐
                     │      │      │                            │  ENTER AGE   │
                     │      │      │                            └──────────────┘
                     ▼      ▼      ▼                                 │
  ┌──────┐    ┌────────┐   ┌────────┐                               ▼
  │ HILL │    │ RANDOM │   │ MANUAL │                          ┌──────────────┐
  └──────┘    └────────┘   └────────┘                          │  ENTER SEX   │
                                                               └──────────────┘
```

SELECT TIME
1-6, 12, 18,
24 MINUTES

CHOOSE GOAL
A) 1 FOR TIME
B) 2 FOR FLOORS

PRESS:
1 FOR MALE
2 FOR FEMALE

1   2

SELECT LEVEL
MALE
2, 6, 9, 12

SELECT LEVEL
FEMALE
1, 5, 8, 11

ENTER TIME
1-60

ENTER FLOORS
1-999

BEGIN STEPPING FOR
3 MINUTES

SELECT EFFORT
LEVEL 1-12

ENTER PULSE *

BEGIN MACHINE
OPERATION

FIT TEST SCORE

* IF HEART RATE IS TOO LOW, USER SHOULD
INCREASE FIT TEST LEVEL.

11

# MESSAGE CENTER PROMPTS

The Lifestep aerobic trainer constantly monitors the user's performance during the exercise program, giving prompts to inform and advise him of his performance. The following script is what a user may see during the workout.

| Displayed Messages | Comments |
|---|---|
| ■ Press "Start" to begin | Begin exercise program |
| ■ Enter weight _____ lbs | User must enter accurate weight |
| ■ Select your program | User to select an exercise program:Hill, Random or Manual |
| ■ Select program time: 1-6,12,18 or 24 min. | In Hill program, user to select duration of workout 1-6, 12, 18 or 24 minutes |
| ■ Enter time _____ minutes | User to select desired duration of workout in minutes |
| ■ Select level 1-12 | User to select effort level: 1-12; (1 is the easiest, 12 is the most challenging) |
| ■ Choose program goal : Time or Floors by pressing 1 for Time or 2 for Floors | Select workout duration (in minutes) or number of floors to be climbed |
| ■ Enter floors | User to select desired number of floors to be climbed |
| ■ You are stepping too hard. Slow your pace or increase your level | User to slow pace or increase exercise level |
| ■ To change levels use arrow keys | User to select greater or lesser intensity level |
| ■ Level changed to _____ | The unit automatically lowers resistancelevel for 1 minute if user goes slower than floors per minute goal |
| ■ Increase your pace | User's pace has decreased . |
| ■ Floors Climbed | Display of the actual floors per minute to compare against the floors per minute goal. |
| ■ Feet climbed | Total feet climbed |
| ■ User has changed levels | The unit acknowledges level change |
| ■ Minutes to Go | The unit notifies user of time left in program. |
| ■ Total calories | Total calories burned |
| ■ Enter your sex. Press 1 for male, press 2 for female. | In The Fit Test program, user must indicate their sex. |

■ Enter your age:

In Fit Test program user must enter their age.

■ Select Effort Level:
female 1, 5, 8, 11
male 2, 6, 9, 12

The user may select effort level based on the following scale: Beginner/Intermediate/Advanced/Expert.

■ Begin 3 minute Fit Test now.

User to start 3 minute Fit Test Program. User should maintain a 100% effort level and step height.

■ Take Your Pulse for
15 seconds, but start at
the beep.

User to take his pulse for 15 seconds using the beep to start and stop counting and then enter count.

■ Fit Test Score is:

User relative Fit Test Score is displayed. User should compare their score with others of their sex and age in Figure 5 on page 20.

■ Your heart rate is not high
enough; Redo Test level _____

User's Heart Rate is too low. His heart range is below 50 beats per minute. User is instructed to do Fit Test at the same level while maintaining the floors per minute goal or redoing the Fit Test at a higher level.

■ Pulse seems too high
Consult Instructor

User's 15 second pulse count is too high (above 200 beats per minute). User should consult instructor and turn to page 21 to be sure the user is using the proper procedure for taking his pulse and staying within his proper heart rate training zone.

# HOW TO CHOOSE A COMPUTERIZED WORKOUT PROGRAM

Four computerized aerobic workout programs are available on your Lifestep model 9500:

1. The Hill Profile Program

2. The Random Program

3. The Manual Program

4. The Fit Test Program

## THE HILL PROFILE PROGRAM

The Lifestep aerobic trainer's patented Hill Profile program offers the ideal configuration for interval training, that is, periods of high-effort aerobic activity separated by regular intervals of low-intensity exercise. The Hill Profile program is available in various time durations from 1 to 24 minutes. You can select 1, 2, 3, 4, 5, 6, 12, 18 or 24 minute programs. Each program is comprised of four stages: (1) Warm-up, (2) Plateau, (3) Interval Training, and (4) Cool Down.

The Lifestep trainer is unique in the fitness industry. Its patented, computerized interval training program has been scientifically demonstrated to yield more statistically significant cardiorespiratory improvement than steady-pace training.* The Hill Profile program offers "interval training;" not only does it offer the challenge of alternating periods of high and low intensity, but the levels of intensity become progressively more difficult during the course of the program.

**WARM-UP PERIOD:** Gradually brings heart rate into the lower portion of user's Training Heart Rate Range (THRR) (see page 21 to calculate your THRR) and increases respiration. Blood flow to working muscles also increases.

**PLATEAU PERIOD:** Increases heart rate so that it is within user's THRR. The user takes his pulse (HR check) at the end of the plateau period to ensure he enters his THRR.

**INTERVAL TRAINING PERIOD:** Comprised of periods of higher and lower intensity levels. During this period, the user is confronted with four progressively higher pace levels. Each is separated from the next by a recovery period. The user takes his pulse at the end of the interval training period to ensure that he has stayed within his THRR.

**COOL-DOWN PERIOD:** Reduced effort levels gradually reduce heart rate to the lower end of the user's THRR. This period allows the body to begin removing accumulated end products of exercise, such as lactic acid, which tend to build up in muscles during the workout and contribute to muscle soreness.
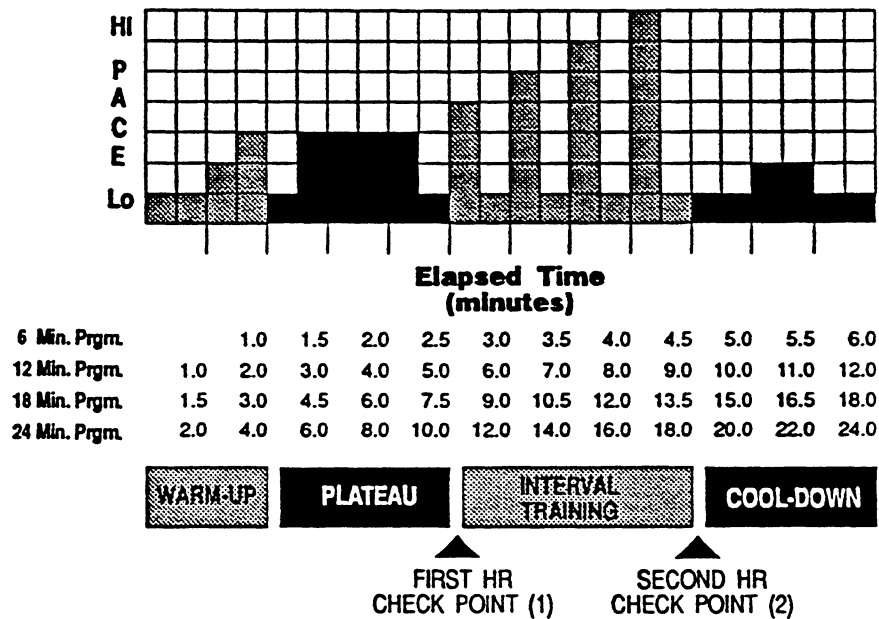
> *Heart Rate Check Points: Your club members should check their heart rate near the end of the Plateau period and at the end of the interval training period. They should always take their pulse at the times indicated to make sure they are staying within their personal THRR.*

The Hill Profile program (Figure 4) shows the effort level and recovery periods encountered during a Lifestep workout. Effort and recovery periods are simulated on the display console by columns of red and yellow lights in the LED matrix window. The columns move from right to left during the workout. The higher the column, the faster the floors per minute pace. Consequently, the user must increase his effort.

* Allen D., McDougal, K.G., and Picken, D.W., A Physiological Comparison of Interval Training versus Steady State Training (Abstract), Medicine and Science in Sports and Exercise. 19:S62, 1987.

# HILL PROFILE



**Elapsed Time
(minutes)**

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 6 Min. Prgm. | | 1.0 | 1.5 | 2.0 | 2.5 | 3.0 | 3.5 | 4.0 | 4.5 | 5.0 | 5.5 | 6.0 |
| 12 Min. Prgm. | 1.0 | 2.0 | 3.0 | 4.0 | 5.0 | 6.0 | 7.0 | 8.0 | 9.0 | 10.0 | 11.0 | 12.0 |
| 18 Min. Prgm. | 1.5 | 3.0 | 4.5 | 6.0 | 7.5 | 9.0 | 10.5 | 12.0 | 13.5 | 15.0 | 16.5 | 18.0 |
| 24 Min. Prgm. | 2.0 | 4.0 | 6.0 | 8.0 | 10.0 | 12.0 | 14.0 | 16.0 | 18.0 | 20.0 | 22.0 | 24.0 |

| WARM-UP | PLATEAU | INTERVAL TRAINING | COOL-DOWN |
|---|---|---|---|

▲
FIRST HR
CHECK POINT (1)

▲
SECOND HR
CHECK POINT (2)

## FOR CARDIORESPIRATORY TRAINING:

(1) First Heart Rate Check Point — At the first heart rate check point (during the plateau stage), the user's pulse should be between 75%-80% of the theoretical maximum (see Training Zone Chart on page 22) for user's age category for cardiorespiratory training.

(2) Second Heart Rate Check Point — At the second heart rate check point (at the end of the interval training period), the user's pulse should be between 85%-90% of the theoretical maximum heart rate for his age category for cardiorespiratory training.

## FOR FAT LOSS TRAINING:

(1) First Heart Rate Check Point — At the first heart rate check point (during the plateau stage), the user's pulse should be between 65%-70% of the theoretical maximum heart rate for his age category for fat loss training.

(2) Second Heart Rate Check Point — At the second heart rate check point (at the end of the interval training period), the user's pulse should be between 70%-75% of the theoretical maximum for his age category for fat loss training.

**15**

## THE RANDOM PROGRAM

In the Random program, the computer randomly selects hill-and-valley terrain which varies with each and every exercise program. Over one million combinations are offered in an interval training format. Because the goal pace is faster, it is more difficult than the Hill Profile program, and as a result it is recommended that your club members set the Random program one or two levels lower than they would normally select on the Hill Profile program.

> *Heart Rate Check Points: Users should check their heart rate after the first 5 minutes of exercise on the Random program and every 5 to 10 minutes thereafter. This provides the low and high heart rate extremes to ensure that they are exercising within their THRR.*

## THE MANUAL PROGRAM

This program provides steady-pace exercise with a step rate equal to that of the highest hill encountered on the Hill Profile program at the same level of intensity. Because of the greater effort levels of this program, it is recommended that your club members set the Manual program about three to four levels lower than the level of intensity that they would normally select on the Hill Program.

> *Heart Rate Check Points: Users should check their heart rate after the first 5 minutes of exercise and every 5 to 10 minutes thereafter when using the Manual program. This provides the low and high heart rate extremes to ensure that they are exercising within their THRR.*

Your club members can also design their own interval training program using the Manual mode by varying the level of intensity during the course of their workout. To do so, the user selects a high level of intensity until he reaches his maximum heart rate, then steps at a lower level of intensity until his heart rate drops to the bottom of his particular THRR. Then, the user should increase the level of intensity until he reaches his maximum heart rate again. By repeating this process, he will be simulating his own hills and valleys.

## THE FIT TEST PROGRAM

This program provides your members with a measurement of their relative fitness. For both male and female members, there are four distinct Fit Test levels. These levels are designed for the beginner, intermediate, advanced and experienced stepper. See page 18 for operating procedures.

# LIFESTEP 9500 CALORIC EXPENDITURE

Physical activity provides the greatest demand for energy. On stepping, for example, the energy output from working muscles may be as much as 50 times higher than at rest. The caloric expenditure is a measure that is used to express the energy value of physical activity.

The energy required for stepping is effected by two factors: overcoming the unit's mechanical resistance and the user lifting his own weight. The Lifestep 9500 measures this energy requirement in calories per hour and total calories burned.

The human body at work uses approximately five kilocalories (kcal) for every liter of oxygen consumed. From a power standpoint, this means that five kilocalories per minute equals approximately 1 $VO_2$ (liter/min). $VO_2$ being the maximum oxygen uptake, in liters per minute, to produce energy during aerobic exercises. This relationship may be stated as follows: 5 kcal/min = 1 $VO_2$ (liter/min)

The Lifestep 9500 also enables the user to measure the watts output, the power generated from the Lifestep. This equation is written as follows: 1 Kcal/hour = 0.86 watts

The user can receive a display of watts by pressing START-ENTER, "0" and the START-ENTER key again *prior* to initiating an exercise program.

The Lifestep 9500 is the first and only stairclimber that has the caloric expenditure based upon "performance tests" on a Lifestep 9500 rather than assuming the same caloric expenditure as if you are walking up stairs. Studies performed at the University of Massachusetts Medical School showed that the oxygen consumption and caloric expenditure differed when measured with a person on a stairclimber than walking stairs. In fact, the caloric expenditure was approximately one-third lower than the caloric value burned in walking up stairs.

## Caloric Expenditure For Manual Level

| Manual Level | Caloric Expenditure Per Hour on Lifestep | Watts Per Hour | *Mets Per Hour |
|---|---|---|---|
| 1 | 279 | 69 | 4 |
| 2 | 393 | 98 | 5 |
| 3 | 425 | 106 | 6 |
| 4 | 457 | 114 | 6 |
| 5 | 490 | 122 | 7 |
| 6 | 526 | 131 | 7 |
| 7 | 579 | 144 | 8 |
| 8 | 632 | 158 | 8 |
| 9 | 697 | 174 | 9 |
| 10 | 770 | 192 | 10 |
| 11 | 838 | 209 | 11 |
| 12 | 940 | 235 | 13 |

Based on a 154 (70kg) individual
*Mets refers to metabolic equivilents.

# THE FIT TEST PROGRAM

The Lifestep model 9500 aerobic trainer FIT TEST program is another exclusive feature of this versatile aerobic product. It will enable your members to chart their "Relative Fitness Score" and monitor improvements in their endurance every 4 to 6 weeks. Your members' FIT TEST score will be a number which will allow them to compare their fitness level to others of their sex and age. (See figure 5 on page 20.) It is also an estimate of their VO2 max.

VO2 max is a combination of how well the heart supplies oxygenated blood to the exercising muscles and how efficiently these muscles are able to get the oxygen from the blood. It is the measurement regarded by physicians and exercise physiologists as the standard for aerobic capacity.

*Note: To receive a proper FIT TEST score, the user must be working within his training heart rate range of 65% of his theoretical maximum heart rate. The Lifestep will automatically determine if the user is working within his range. If not, the Lifestep will prompt him to redo the FIT TEST at the next highest level.*

## HOW THE FIT TEST WORKS

1. Press START-ENTER key.

2. Using the numeric keys, the user must enter in their current weight and press START-ENTER.

3. The PROGRAM keys will flash. The user now presses FIT TEST then START-ENTER.

4. Using the numeric keys, the user enters their age then presses START-ENTER.

5. After entering their weight the user will be instructed to enter their sex. Press "1" for Male or "2" for Female then press START-ENTER. This is necessary for accurate computation of the FIT TEST score.

6. Using numeric keys, enter the FIT TEST level.
   For males the levels are:

   | Beginner | Intermediate | Advanced | Expert |
   | --- | --- | --- | --- |
   | 2 | 6 | 9 | 12 |

   For females the levels are:

   | Beginner | Intermediate | Advanced | Expert |
   | --- | --- | --- | --- |
   | 1 | 5 | 8 | 11 |

7. User then begins stepping for the 3 minute FIT TEST . The user must maintain the floors per minute goal indicated in the Floors Per Minute Goal window. Also, they must maintain a 100% effort and step height for an accurate score.

8. After the FIT TEST is completed, the user will be instructed to take their pulse for 15 seconds at the sound of the first "beep". The second "beep" indicates when the user should stop taking their pulse.

9. Using the numeric keys, the user should enter in their pulse. The Lifestep will indicate their Beats Per Minute (BPM) and Fit Test Score. Upon receiving this score, your member can now chart his relative fitness level on the Fit Test scoring table located on page 20.

10. If the user's heart rate is too low, they will be instructed by the message center to redo the Fit Test at the next higher level.

11. If the user's pulse is too high, they should consult an instructor and review the proper pulse taking procedure on page 21.

## FIT TEST TIPS

■ The computer does not accept . . .
- heart rates less than 50 or greater than 200 beats per minute;
- body weights less than 50 or greater than 350 pounds;
- ages below 16 and above 99;
- data input that exceeds human potential.

■ If members make an error when entering any FIT TEST information, they can correct it by pressing 'Clear' twice and re-entering the accurate data.

■ Heart rate is dependent on many factors. It is important to have members take their FIT TEST under similar circumstances each time.
- amount of sleep the previous night (7 or more hours is recommended);
- time of day of the test;
- time they last ate (2 to 4 hours after your last meal is recommended);
- time since you last drank a liquid containing caffeine or alcohol, or smoked a cigarette (4 or more hours is recommended); and
- time since they last exercised (at least 6 hours is recommended).

For the most accurate FIT TEST results, member's should perform the FIT TEST on three consecutive days and average the three scores.

## YOUR RESTING HEART RATE IS IMPORTANT

Another excellent indicator of cardiorespiratory health is a person's resting pulse. An average resting pulse is approximately 72 beats per minute. A lower pulse indicates a stronger, healthier heart. Monitoring a person's resting pulse is an easy way to measure the effectiveness of their exercise program. They should take their pulse each day at the same time preferably upon awakening and before they get out of bed. As their Personal Exercise Plan (PEP) continues, they will notice a decrease in their resting heart rate. Be patient. This improvement takes at least 8-10 weeks of training.

| MEN | AGE | | | | |
|---|---|---|---|---|---|
| **RATING** | **20-29** | **30-39** | **40-49** | **50-59** | **60-69** |
| Elite | 55+ | 52+ | 50+ | 48+ | 45+ |
| Excellent | 50-54 | 47-51 | 45-49 | 43-47 | 40-44 |
| Good | 45-49 | 42-46 | 40-44 | 38-42 | 35-38 |
| Above Average | 40-44 | 37-41 | 35-39 | 33-37 | 30-34 |
| Average | 36-39 | 33-36 | 31-34 | 29-32 | 26-29 |
| Below Average | 31-35 | 28-32 | 26-30 | 24-28 | 21-25 |
| Poor | 26-30 | 23-27 | 20-25 | 18-23 | 16-20 |
| Very Poor | <20 | <23 | <20 | <18 | <16 |

| WOMEN | AGE | | | | |
|---|---|---|---|---|---|
| **RATING** | **20-29** | **30-39** | **40-49** | **50-59** | **60-69** |
| Elite | 49+ | 46+ | 44+ | 42+ | 40+ |
| Excellent | 44-48 | 41-45 | 39-43 | 37-41 | 35-39 |
| Good | 39-43 | 36-40 | 34-38 | 32-36 | 30-34 |
| Above Average | 34-38 | 31-35 | 29-33 | 27-31 | 25-29 |
| Average | 30-33 | 27-30 | 25-28 | 23-26 | 20-24 |
| Below Average | 25-29 | 22-26 | 20-24 | 18-22 | 16-20 |
| Poor | 20-24 | 17-21 | 15-19 | 13-17 | 11-15 |
| Very Poor | <20 | <17 | <15 | <13 | <11 |

*NOTE: To receive a proper Fit Test score, the user must be working within his training heart rate range of 65-80% of his theoretical maximum heart rate range*

**20**

# HOW TO EXERCISE EFFICIENTLY

## TRAINING HEART RATE RANGE (THRR) CALCULATION

As a club owner, you know that exercising too hard is as ineffective as not working hard enough. In fact, it can be harmful. For an effective workout, your members must determine their optimal workout frequency, duration and intensity—and stick to it! To approximate their Training Heart Rate Range (THRR), they must first calculate their theoretical maximum heart rate. Subtract their age from 220. (This formula is recognized by the American College of Sports Medicine as a method for determining your maximum heart rate*). For example, if a member is 35 years old, his theoretical maximum heart rate is 185. Established his THRR by multiplying this number (185) first by 65% to establish the lower limit and then by 90% to establish the upper limit.

EXAMPLE: age 35

**Cardiorespiratory Training Range:**

Lower Limit: (220 less 35 = 185) x .65 = 120 beats/minute

Upper Limit: (220 less 35 = 185) x .90 = 166 beats/minute

**Fat Loss Training Range for age 35:**

Lower Limit: (220 less 35 = 185) X .65 = 120 beats/min.

Upper limit: (220 less 35 = 185) X .75 = 139 beats/min.

> NOTE: *A stress test, administered by a doctor is the most accurate method of determining members' maximum heart rate and overall cardiorespiratory condition. We strongly recommend that they see their doctor before beginning any exercise program, especially if they have a history of high blood pressure, heart problems or if they are over the age of 45. You, your member and his doctor can decide whether a maximum stress test is advisable.*

By making sure your members' heart rate stays within this range during their workouts, they will achieve optimal training benefits with minimal stress to their cardiorespiratory system. As their fitness program progresses, their aerobic capacity will build and their body will begin to show the benefits of what is referred to by fitness experts as "the training effect."

Figure 6 on page 22 or Table 1 on page 23 can be used to determine members' theoretical maximum heart rate and THRR for their age category.

## CHECKING THE PULSE

For best results, the user should stay within his THRR during exercise. To do this, he should check his pulse periodically during his workout. (See Figure 4 on page 15 for the times to check the heart rate during the Hill Profile program.) You may wish to use an electronic pulse meter, but the members' own two fingers will suffice. A pulse can be conveniently monitored in two locations: (1) halfway between the ear and wind pipe on the neck or (2) on the thumb side of the inside of the wrist. To monitor the pulse, hold the index and middle fingers together against either site. (The neck site is easiest during exercise.)

> CAUTION: Do not press too hard, especially when taking a neck pulse. Excessive pressure can reduce blood flow, and cause the heart to slow down.

A 15-second count is recommended. The heart rate per minute is 4 times the 15-second count.

*American College of Sports Medicine, Guidelines for Exercise Testing and Prescription (Lea & Febiger; Philadelphia, 1986), p.32

Figure 6 : Training Heart Rate Range (THRR) Chart



**TRAINING ZONE CHART**
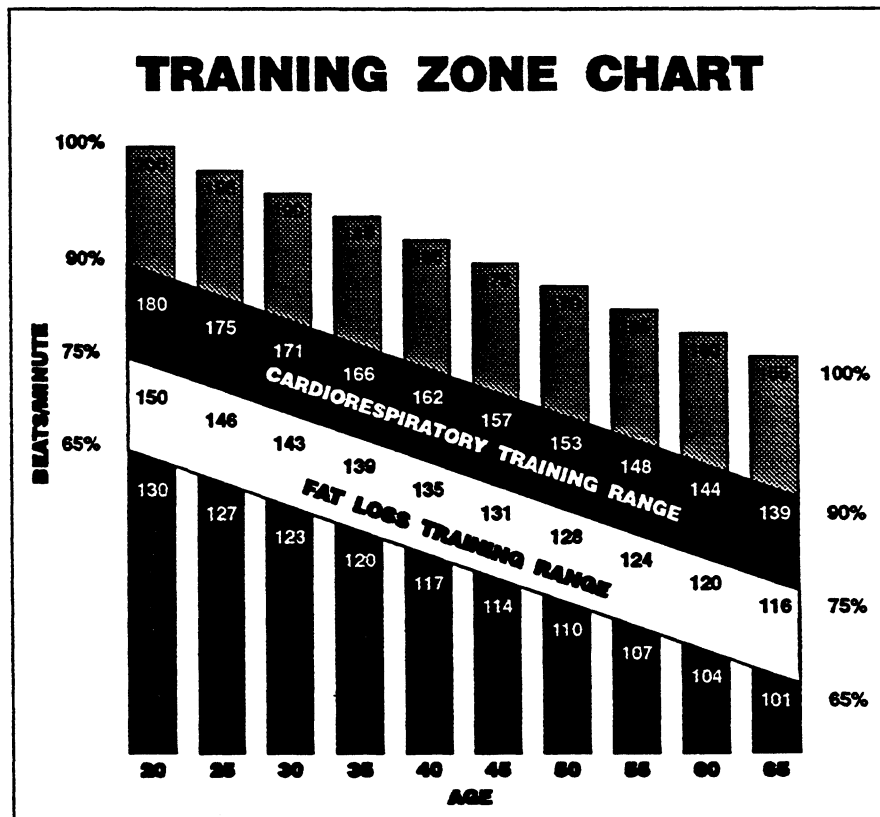
It is not recommended to train above 90% of your theoretical maximum heart rate.

CARDIORESPIRATORY TRAINING RANGE – between 75% and 90% of your theoretical maximum heart rate.

FAT LOSS TRAINING RANGE – between 65% and 75% of your theoretical maximum heart rate.

For most people, training benefits are difficult to achieve below 65% of your theoretical maximum heart rate.

## Table 1 : Training Heart Rate Range (THRR) for Cardiorespiratory Improvement (numerical)

| Age | Max HR | 65% HR | 75% HR | 90% HR | Optimal Training HR** |
|-----|--------|--------|--------|--------|------------------------|
| 20 | 200 | 130 | 150 | 180 | 160 |
| 21 | 199 | 129 | 149 | 179 | 159 |
| 22 | 198 | 129 | 148 | 178 | 158 |
| 23 | 197 | 128 | 148 | 177 | 158 |
| 24 | 196 | 127 | 147 | 176 | 157 |
| 25 | 195 | 127 | 146 | 176 | 156 |
| 26 | 194 | 126 | 145 | 174 | 155 |
| 27 | 193 | 125 | 145 | 174 | 154 |
| 28 | 192 · | 125 | 144 | 173 | 154 |
| 29 | 191 | 124 | 143 | 172 | 153 |
| 30 | 190 | 124 | 142 . | 171 | 152 |
| 31 | 189 | 123 | 142 | 170 | 151 |
| 32 | 188 | 122 | 141 | 169 | 150 |
| 33 | 187 | 122 | 140 | 168 | 150 |
| 34 | 186 | 121 | 139 | 167 | 149 |
| 35 | 185 | 120 | 139 | 167 | 148 |
| 36 | 184 | 120 | 138 | 166 | 147 |
| 37 | 183 | 119 | 137 | 165 | 146 |
| 38 | 182 | 118 | 136 | 164 | 146 |
| 39 | 181 | 117 | 136 | 163 | 145 |
| 40 | 180 | 117 | 135 | 162 | 144 |
| 41 | 179 | 116 | 134 | 161 | 143 |
| 42 | 178 | 116 | 133 | 160 | 142 |
| 43 | 177 | 116 | 133 | 159 | 142 |
| 44 | 176 | 115 | 132 | 158 | 141 |
| 45 | 175 | 114 | 131 | 158 | 140 |
| 46 | 174 | 113 | 130 | 157 | 139 |
| 47 | 173 | 112 | 130 | 156 | 138 |
| 48 | 172 | 112 | 129 | 155 | 138 |
| 49 | 171 | 111 | 128 | 154 | 137 |
| 50 | 170 | 111 | 127 | 153 | 136 |
| 51 | 169 | 110 | 127 | 152 | 135 |
| 52 | 168 | 109 | 126 | 151 | 134 |
| 53 | 167 | 109 | 125 | 150 | 134 |
| 54 | 166 | 108 | 124 | 149 | 133 |
| 55 | 165 | 107 | 124 | 149 | 132 |
| 56 | 164 | 107 | 123 | 148 | 131 |
| 57 | 163 | 106 | 122 | 147 | 130 |
| 58 | 162 | 105 | 121 | 146 | 130 |
| 59 | 161 | 105 | 121 | 145 | 129 |
| 60 | 160 | 104 | 120 | 144 | 128 |
| 61 | 159 | 103 | 119 | 143 | 127 |
| 62 | 158 | 103 | 118 | 142 | 126 |
| 63 | 157 | 102 | 118 | 141 | 126 |
| 64 | 156 | 101 | 117 | 140 | 125 |
| 65 | 155 | 101 | 116 | 140 | 124 |
| 66 | 154 | 100 | 115 | 139 | 123 |
| 67 | 153 | 99 | 115 | 138 | 122 |
| 68 | 152 | 99 | 114 | 137 | 122 |
| 69 | 151 | 98 | 113 | 136 | 121 |
| 70 | 150 | 98 | 112 | 135 | 120 |

* Theoretical maximum heart rate is recognized by the American College of Sports Medicine.

** Optimal training heart rate is hypothetical, based on an average person in the population; however, exercising at a specific heart rate is a precise determination that can only be made by qualified medical personnel.

A greater percentage of calories are burned when you average between 65% and 75% of your theoretical maximum heart rate. Fat is burned best when there is plenty of oxygen available in the blood. Working out at a lower heart rate for a longer period of time tends to optimize the amont of fat burned. Lower intensity exercise allows you to work out longer thus allowing you to burn more total calories.

*American College of Sports Medicine, Guidelines for Exercise Testing and Prescription (Lea & Febiger; Philadelphia, 1986), p.32

# PREVENTATIVE MAINTENANCE TIPS

■ Clean console daily.

■ Empty the drip pan and rinse with water.

■ Clean outer housing daily.

■ Clean pedals and grips daily.

■ Inspect for wear and tear on exterior parts monthly, especially the handle grips.

■ Inspect oil level in oil container. Fill as needed. See page 26 for step by step instructions.

> NOTE: *When cleaning the exterior of the unit, a non-abrasive cleanser and soft cotton cloth are strongly recommended. At no time should cleanser be applied directly to any part of the equipment. Instead, place the non-abrasive cleaning solution on a soft cloth and wipe down the unit.*

*Figure 7: Preventative Maintenance Illustrations*
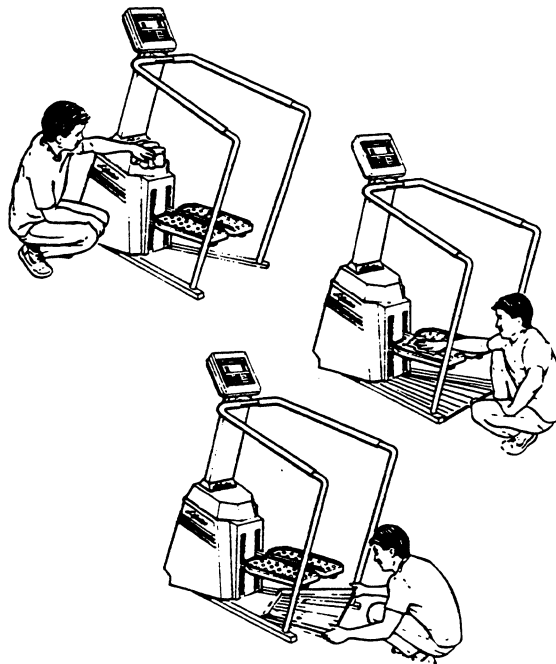
# ELECTRONIC OILER SYSTEM

The Lifestep aerobic trainer 9500 is equipped with an electronic oiling system to increase the longevity of the mechanical drive components by dispersing approximately .04 milliliters of 30 weight non-detergent oil on the chain (per side) every 1,000 floors. The oil resevoir contains 8 ounces (236.8 ml) of non-detergent 30 weight oil which should enable the chain to last for 1.5 to 2 years depending on use.

Every 180 days examine the oil level. If the oil level is below the indicated mark on the oil container, immediately fill the bottle to the proper level using Life Fitness oil No. 0017-00008-0146 or a quality 30 weight non-detergent oil.

> *NOTE: You must use Life Fitness approved oil No. 0017-00008-0146 or a quality 30 weight non-detergent oil. Other types and grades of oil will void your Lifestep warranty. Never, under any circumstances, use a detergent oil.*

## Steps for Changing Oil

**STEP 1:** Turn the power off. Disconnect the power cord from the outlet.

**STEP 2:** With a phillips screwdriver, loosen and remove the four screws which attach the Housing to the splash tray at the user side of the machine. Use a 5/32" allen head wrench to loosen and remove the four screws which attach the Housing to the Frame.

**STEP 3:** With your hands, slide the Housing up the column until the top of the Boot contacts the lower portion of the Handle.

**Step 4:** Secure the Housing, by lifting the Housing up and onto the two Bolts extending from the Frame.

**STEP 5:** Locate the oil container. Turn the Cap of the oil container counterclockwise and remove.

**STEP 6:** Use a funnel to fill the oil container to the designated level.

**Note:** You must use Life Fitness approved oil No. 0017-00008-0146 or a 30 weight non-detergent oil. Other types and grades of oil will void your Lifestep warranty. Never under any circumstances, use a detergent oil.

**STEP 7:** Reverse steps 1 through 5 to return all parts to their proper positions.

HOUSING

BOOT

CHASSIS BOLTS (2)

HOUSING SCREWS (4)
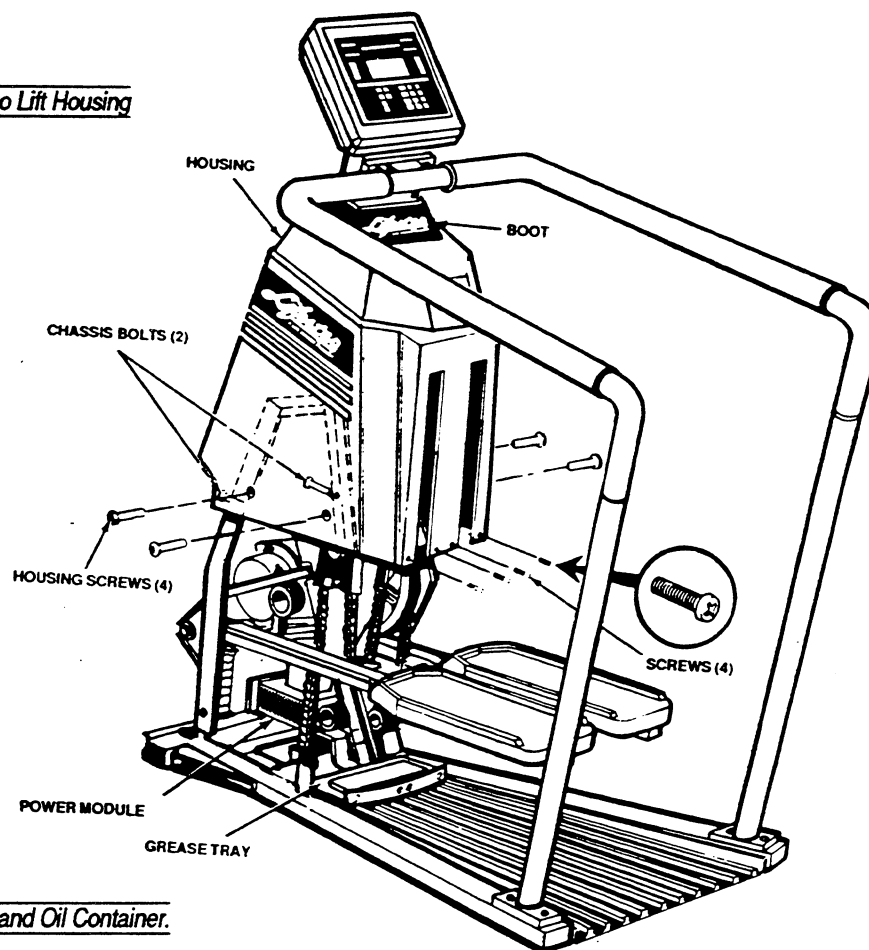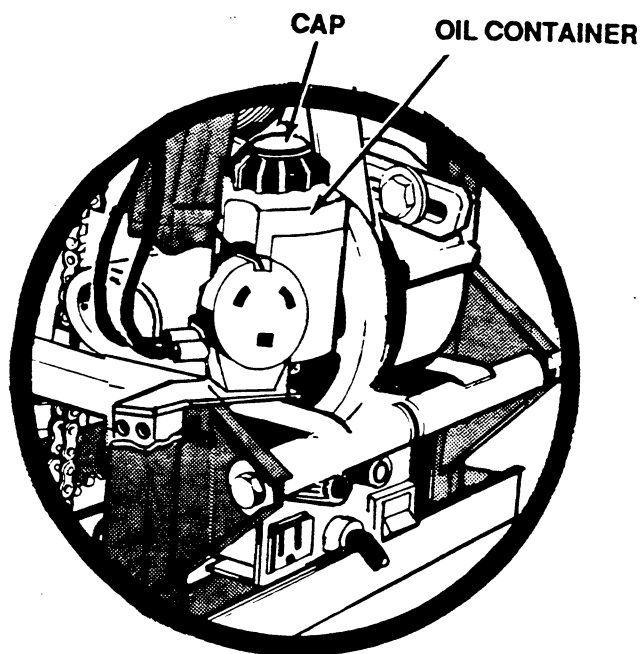
SCREWS (4)

POWER MODULE

GREASE TRAY

CAP          OIL CONTAINER

# HOW TO SOLVE MINOR
# OPERATING PROBLEMS

**Symptom**

**Solution**

No power

1. Check connection at wall outlet.

2. Check connection at Lifestep outlet if using "daisy-chain" power supply method.

3. Check position of on-off switch.

4. Check Lifestep unit's circuit breaker.

5. Massage the keyboard.

6. Disconnect the display connector and reconnect.

Erratic display

1. Check connection at wall.

2. Disconnect the display connector and reconnect.

Keys will not respond

1. Check connection at wall outlet.

2. Massage the keypad.

3. Disconnect the display connector and reconnect.

## HOW TO OBTAIN SERVICE
## FOR YOUR PRODUCT

If you have a problem . . .

---

## STEP 1:

■ If possible, verify the symptom.

Speak with the person who encountered the problem. Sometimes, the problem turns out to be unfamiliarity with a product's features.

---

## STEP 2:

■ Locate and document the serial number of the unit.

The serial number of your Lifestep aerobic trainer is located on the frame just below the left vertical handle and is hidden from view by the drip pan.

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## STEP 3:

■ Contact Life Fitness Product Support.

Toll Free: 800-351-3737 (United States and Canada). Illinois: 708- 451-0036.
FAX: 708-451-4137.
Or write:
Life Fitness Product Support, 10601 W. Belmont Avenue, Franklin Park, IL 60131

Please have the serial number of the product and the symptom ready for the Product Support Specialist who will be assisting you. This information is necessary for us to be able to help solve any problems you may be encountering.

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Figure 10: Serial Number Location



29
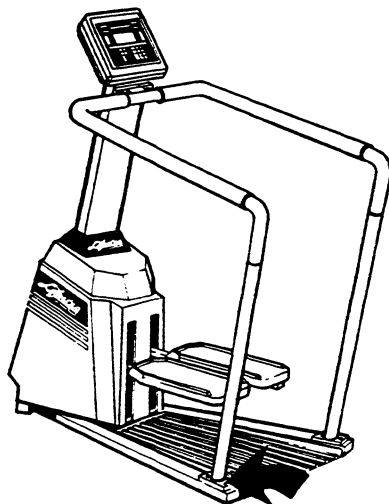
All specifications are for a fully-assembled Lifestep Model 9500 aerobic trainer.

Physical:

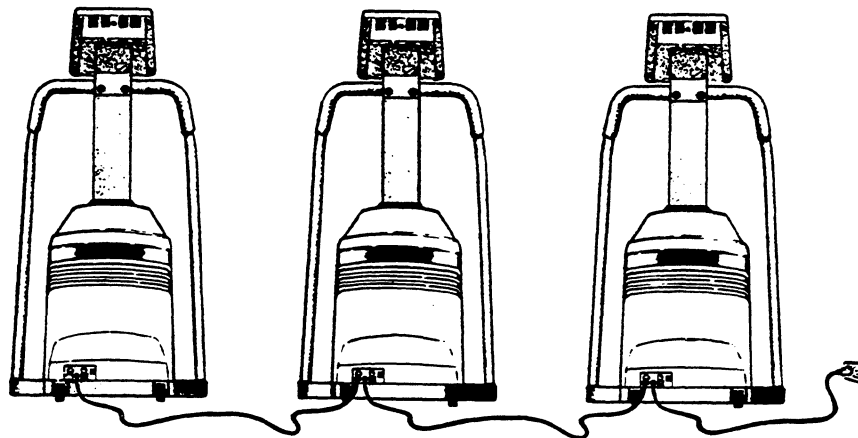| | |
|---|---|
| Length | . 41 inches |
| Width | . 33.5 inches |
| Height | . 63.5 inches |
| Weight | . 224 pounds |
| Shipping Weight | . 274 pounds |
| Color | .Warm grey with black and red accents |

Electrical:

| | |
|---|---|
| Reservoir Oil Volume | 8 oz/236.8 ml |
| Required Power Source* | 115 volts, 60 Hz, 20 Amp circuit |

Shipping dimensions: . 45 9/16" Long, 35" Wide, 39"High, 274 lbs.

*Up to six Lifestep units can be powered from one circuit via the "daisy-chain" method.

*Figure 11: "Daisy-Chain" Method*

*Life Fitness*