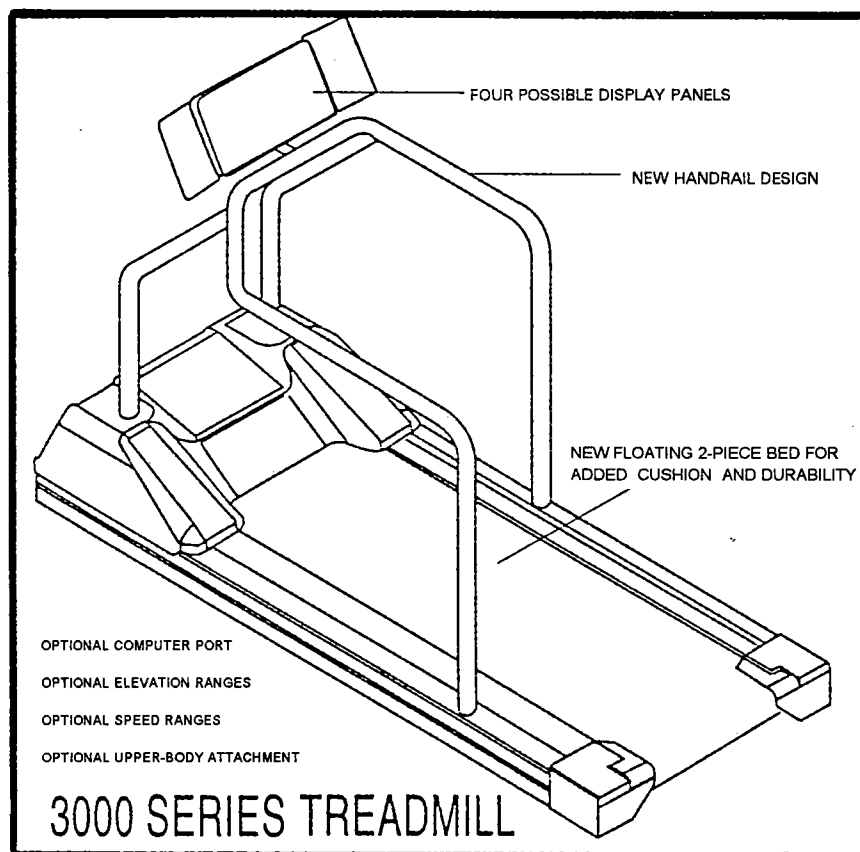


THE
STAR TRAC
3000 SERIES
TREADMILLS



OWNER'S MANUAL

March, 1993

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INTRODUCTION

WELCOME ... to the world of Star Trac. In your hands is the manual that will help you get started. This manual has been prepared to acquaint you with the assembly, operation and maintenance of your Star Trac treadmill so that you may begin reaching for your fitness goals.

Unisen, the manufacturer of Star Trac treadmills, highly recommends that you read this manual prior to installing the treadmill. On the following pages, you will find a wide variety of important information so that you can begin easily, quickly and safely.

You're welcome to call the Star Trac Service Hotline 800-535-4634 and we'll address your needs immediately.

Let's get started with simple safety information:

SAFETY NOTES

PLEASE ... consult your doctor prior to engaging in a strenuous exercise regimen.

DOs

- If you feel faint or dizzy at any time during your workout, stop operating the treadmill.
- Warm up and cool down before and after each workout.
- Know your limitations.
- Set goals. (see Getting Started)
- Take care of your treadmill (see Preventive Maintenance)
- Complement your walking/jogging/running with a nutritious diet.
- Wait until running belt has stopped before getting off the machine.
- Try charting your progress using the feedback the treadmill gives you.
- Try using the incline feature to burn more calories and strengthen your lower-body muscles.
- If the display shows an error code, contact Star Trac's Service Hotline immediately (800) 228-6635.

DO NOTs

- Do not let unsupervised children operate treadmill.
- Do not store treadmill outdoors.
- Do not jump on or off the treadmill while it is running.
- Do not rest water bottles or cups on the treadmill.
- Do not stand or position your feet under the unit.
- Do not allow running in bare or stocking feet.
- Do not over tighten the running belt.

TREADMILL

TRAINING INFORMATION

- Contents -

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STRETCHING

- Don't Begin Without It -

Before engaging in any type of exercise, you must prepare your muscles for the activities. Stretching and practicing simple flexibility rules will prevent injuries. Below are a few tips for stretching before and after your treadmill workout. NOTE: These stretches are not practiced on the treadmill.

1. Remember to move slowly into a stretch to where you feel resistance, but not pain. Hold the position and breathe deeply and slowly for 5-10 seconds.

2. Breathe correctly. Learn to breathe from your diaphragm, so that your stomach, rather than your rib cage and shoulders, rises and falls with each breath. Abdominal breathing encourages relaxation, lessens muscular tension and helps lower blood pressure.

3. Don't push it. Stretch to the point that you feel resistance and some slight discomfort. Never use muscular strength to increase a stretch.

4. Pre- and Post Workout Stretches - Always stretch to loosen tissues in preparation for exertion. Since muscles tighten up after exertion, stretch afterwards to promote circulation and minimize stiffness from lactic acid build up.

5. Remember to stretch both sides of your body.

HEART RATE HELP

- Calculating Your Way Fitness -

Star Trac treadmills allow the user to find his/her pulse after pausing operation. Using this function, the user can train at his/her optimum training range. Here's how it works:

FINDING YOUR PULSE

1. Pause operation. While you are standing still, find your pulse either on your neck or wrist.
2. On the first pulse beat you feel, press the HEART-shaped key.
3. Count nine pulse beats (not seconds). On the tenth pulse beat, press the HEART-shaped key again.

Your heart rate will be displayed.

POLAR* Option For Graphical Display:

1. Pressing the heart-shaped key will display your heart rate if the treadmill receives signal from chest strap. If not, use the "FINDING YOUR PULSE" method.
2. Press the heart-shaped key to return to previous menu.

NOW WHAT?

With this heart-rate information, you can determine if your existing treadmill workout is challenging, too challenging or not challenging enough. The goal is to keep your heart rate at 65 - 90% of your theoretical maximum heart rate.

Use this chart to find your ideal training range.

AGE	BEATS/MINUTE		
	65%	75%	90%
20	130-150	150-180	180-200
25	127-146	146-175	175-195
30	123-143	143-171	171-190
35	120-139	139-166	166-185
40	117-135	135-162	162-180
45	114-131	131-157	157-175
50	110-128	128-153	153-170
55	107-124	124-148	148-165
60	104-120	120-144	144-160
65	101-116	116-139	139-155

65% - 75% = FAT LOSS TRAINING RANGE

75% - 90% = Cardiorespiratory Training Range

* Polar is a registered trademark of Polar USA

Choosing YOUR (MEMBERS') Training Zone

Fitness Programming for Members

Everybody can benefit from using treadmills because walking/jogging/running provide results. Star Trac treadmills provide infinite workout possibilities. In this section, we want to share specific fitness programs that all member types could use.

Let's begin by grouping the variety of member types into three fitness levels: LOW, MEDIUM and HIGH.

LOW

Deconditioned, overweight, senior citizens, heart patients or newcomers to fitness make up the largest potential market in America today. Research shows that despite the recent fitness trend, close to 90% of our population prefer maintaining their existing fitness levels.

This market will generally benefit most from a simple walking program. This group may have a tendency to be equipment shy, so rule out advanced programming.

Star Trac recommends starting members in this low fitness category with Basic Operation. Simply step on the belt and press START.

Star Trac's start-up operation is so slow (.1 mph) that they will have time to adjust to the new motion. Remind them to walk normally - there is no need to alter their walking posture. Then, adjust speed or elevation according to their individual needs. This is the easiest way to begin a treadmill program.

Display readouts most important for this group are time, distance, pace, calories burned and heart rate. These items will help low fitness members watch their immediate progress every workout.

MEDIUM

Many of today's health club members would fall into this fitness-level category. They may not be where they'd like to be in terms of their fitness, but not for lack of trying - that's why they joined the club.

This market is generally a younger group (18-35 years old) who want to tone up, get back into shape, or to achieve higher fitness goals. They are aware of the different types of equipment and generally are familiar with electronic equipment.

Many times, this market must squeeze a workout into their hectic schedule so they may prefer using one of the eight preset programs for their workout. (Available on programmable and graphical display models only) Program No.1 is the easiest and No.8 is the most difficult. After choosing one of the program options, the treadmill will take them through a complete workout including a warm-up and cool down period. During their workout, the member can watch TV, read the latest news, listen to music or concentrate on the feedback the treadmill provides.

Star Trac's motivational features are designed to keep member types in all fitness levels coming back to the gym. For medium fitness level members, encourage them to follow their progress around the progressive digital 1/4 mile (400 m) track.

As this member continues to improve, suggest they try a more difficult program or for a longer duration.

HIGH

Every club has a certain percentage of competitive athletes or high fitness level members. Generally, member who are very familiar with their own capacity for fitness will know what it takes to receive a good workout.

Using program No.9, this member type can create their own personal, interval training program. (Available on programmable and graphical display models only). For example, if your member wants to walk a lap, jog a lap, then run a lap at 5% elevation - all can be designed very easily on the Star Trac.

On the other hand, some athletes prefer using Star Trac in Basic Operation. Long distance runners know their pace and want the treadmill to keep the same pace precisely over a long duration. Simply press START, enter the speed (or pace) and press START again and they're running.

GETTING STARTED

- And Sticking With It -

For fitness newcomers or veterans, STAR TRAC offers the following walking and running programs. Follow these suggestions to get on the road to fitness.

WALKING - Begin slowly. Goal 1: Walk one mile at a comfortable pace, keeping track of your time. Your aim is to achieve a 4 mph pace (15-minute mile). Goal 2: Walk 2 miles at a comfortable pace, until you can finish in 30 minutes. Goal 3: Walk 3 miles until you can walk it in 45 minutes. Ultimate Goal: Maintain this pace, walking 45 to 60 minutes, four times a week.

You can start walking today. There's no technique to learn and no special clothing required, except a pair of comfortable walking shoes. You're unlikely to get injured. Walking on a treadmill is safer and gentler on the joints and muscles than exercising outdoors where your feet pound pavement. That's especially good news if you're overweight. You're also more likely to stick with walking. It's easy, cheap and accessible.

Stay Motivated:

1. Schedule daily walks on a calendar and you will be more likely to take them seriously.
2. Watch your progress on the display track. It helps pass time and cuts down on boredom.
3. Set goals and reward yourself. Each time you reach your goal, reward yourself with a new pair of walking shoes or tickets to a sporting event, for example.
4. Plan a walking vacation. If you know you're going on a walking tour of Paris or a mountain hiking trip next summer, you'll look forward to getting in shape for it.

RUNNING - Goal 1: Before you begin running, you should be able to walk briskly for at least 30 minutes. If you're just starting to exercise, that 30 minutes may be devoted to entirely walking. When the 30 minutes no longer challenges you, gradually intersperse the walking with brief periods of running. Goal 2: Work up to running more than walking, until you can run the entire time. Ultimate Goal: To run 2 to 3 miles in 30 minutes, three to five days a week. Comments: You should always be able to talk while you exercise. To avoid injuries, don't run more than 15 miles per week.

Running is one of the most effective form of aerobic exercises. You can get a great workout quickly. The Star Trac offers a lot of feedback to follow your progress. Also, running on a treadmill simulates outdoor training precisely while reducing risk of injury. This is a great training tool for races to compare your progress with others your age.

Whether you're on a Star Trac or not, running is tough on knees, legs and feet. Don't try to do too much too soon. Beginners need patience. Be sure to check with your physician before starting any rigorous exercise program.

Stay Motivated:

1. Work at avoiding injuries. Phase into the sport gradually. Try running late in the day when your muscles are well warmed and less vulnerable to injury. Invest in a good pair of running shoes; look for shock absorption and support in the heel area.
2. Get some group support, especially when you're beginning. Join a runner's club or run with a partner. It takes a few months to get hooked on running - you may need advice and support to get through the rough times.
3. Train for and enter a short race. It's a great goal to work toward and the excitement of competition will keep you going. Try a 5K (3.1 mile) or 10K (6.2 mile) race.

ASSEMBLY INSTRUCTIONS

- STAR TRAC 3000 SERIES -

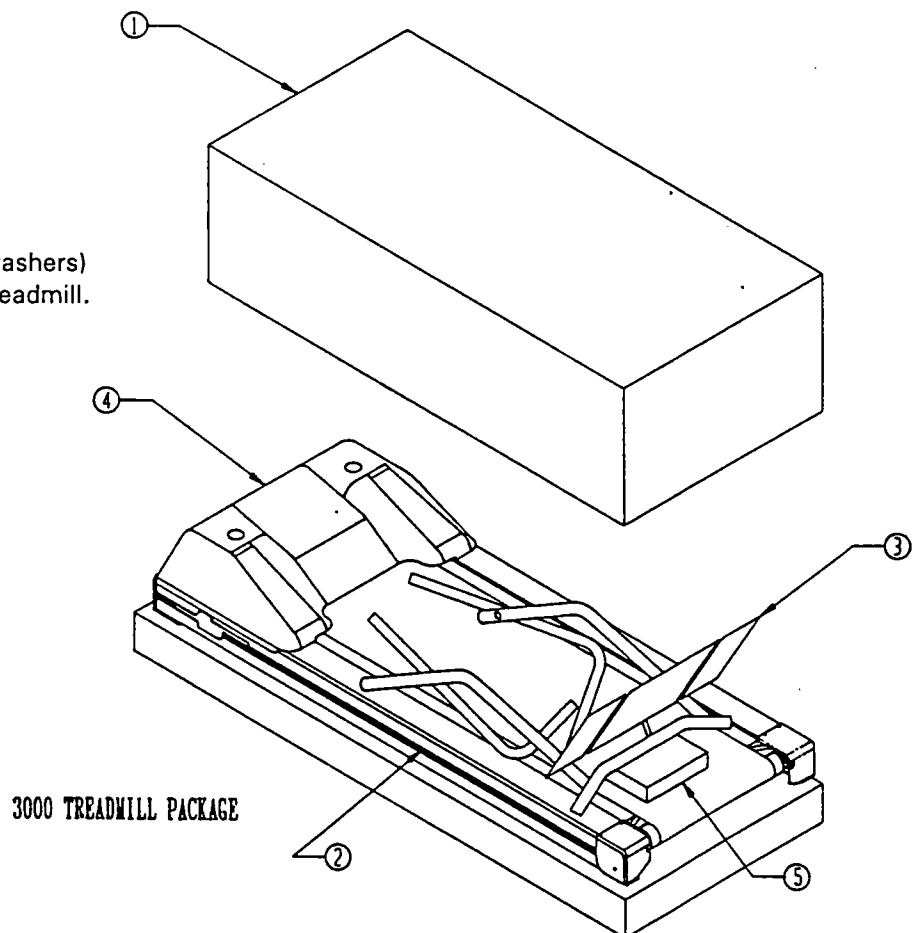
A. You are looking at the Star Trac minutes away from being ready to operate. Before beginning to assemble the treadmill, check for these parts included in the package.

PARTS LIST

1. Packaging box
2. Star Trac chassis
3. Three handrail parts with control panel mounted
4. Motor shroud (attached to treadmill)
5. Tool kit
 - Registration card
 - 28" Bungee Cord
 - #2 Phillips Screwdriver
 - 9/16" Wrench
 - 1/4" Allen Key
 - 1/8" T Handle Allen Key
 - Small Screwdriver
 - 5/64" Allen Key
 - 5/32" Allen Key
 - Tie Mount
 - 3 1/2 Tie Strap

NOTE: Other hardware (nuts, bolts, washers) will be attached to the handrails on treadmill.

exhibit #1



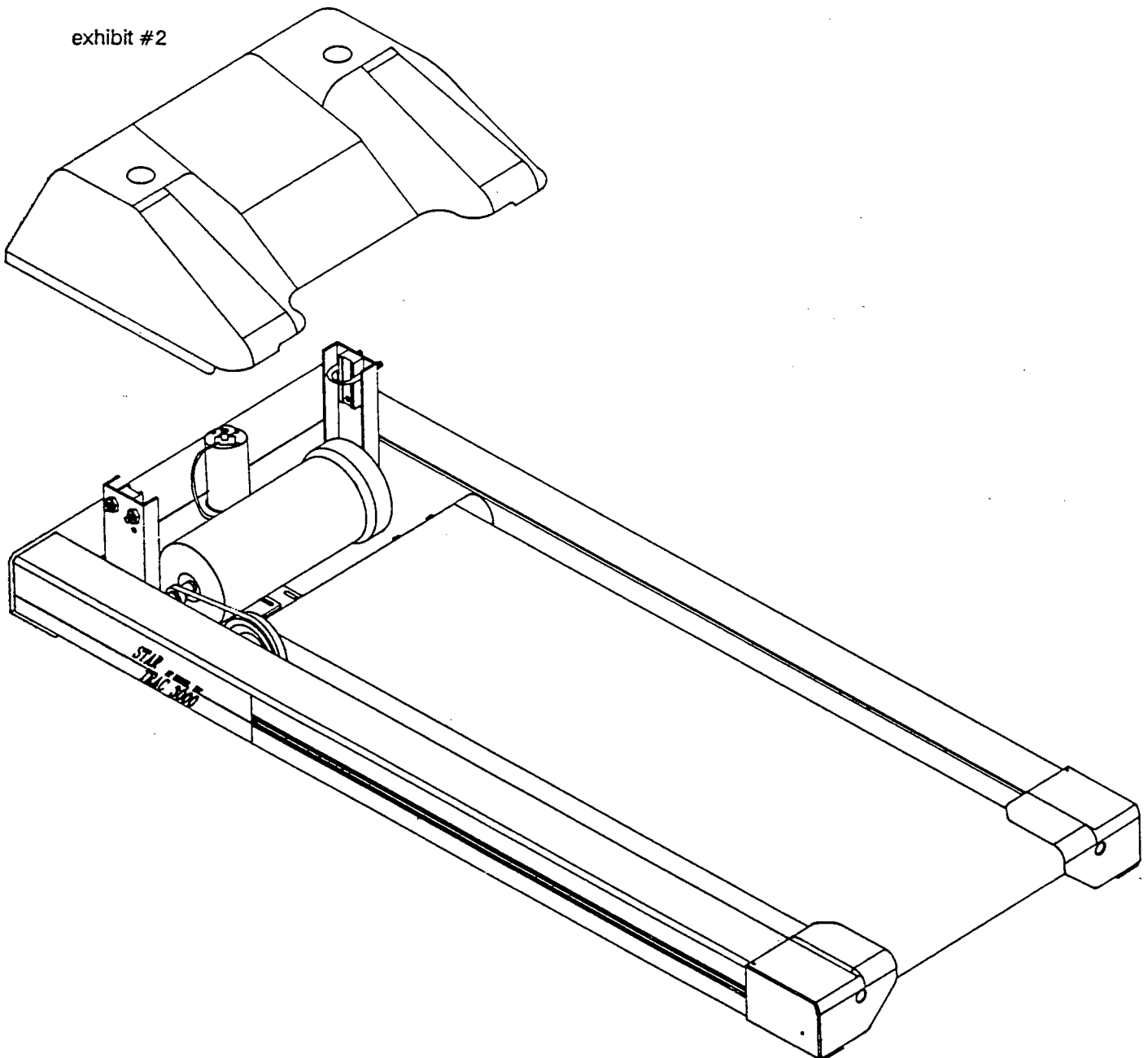
ASSEMBLY INSTRUCTIONS

- Continued -

B. Remove packaging material (protective plastics and boxes).

C. Remove screw from the rear of the motor shroud, shown in exhibit #1. After removing the motor shroud, your treadmill should look like exhibit #2.

exhibit #2



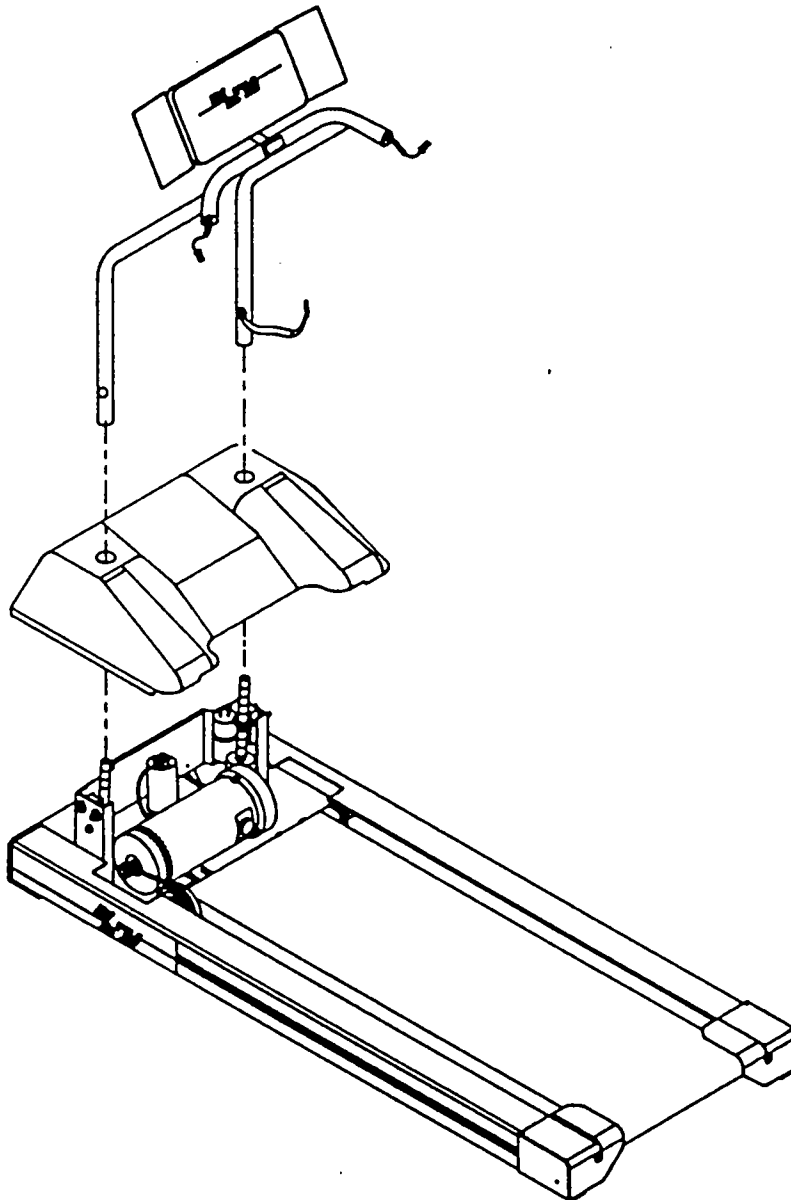
ASSEMBLY INSTRUCTIONS

- Continued -

D. Install the rear handrails through the shroud and into the back of the frame as shown in exhibit #3. (The rail with the cable should be on the right.)

E. Tighten the bolts so the rails are not tight but can be positioned correctly.

exhibit #3



3 PIECE HANDRAIL, FRONT HANDRAIL ASSY.

ASSEMBLY INSTRUCTIONS

- Continued -

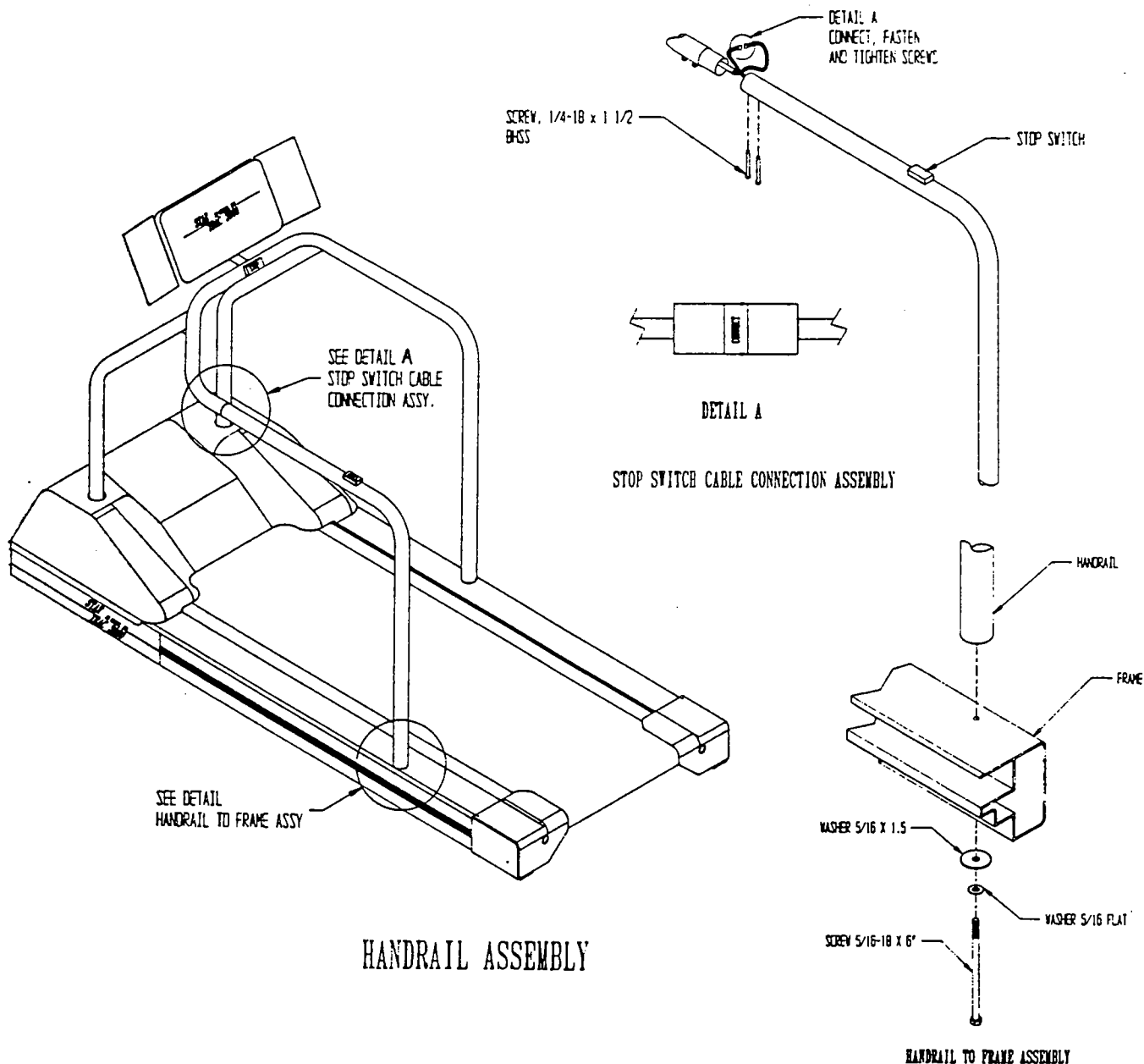
I. Remove the four screws (two per side) from the side rail stubs and remove the two bolts (one per side) from the underside of the rails.

J. Connect the remote stop switch cable to the cable from the display rail and slide the side rail over the stubs.

K. Re-install the four screws in the side rails.

L. Install the long bolts through the frame and into the side rails.

M. Go back over all the nuts, screws and bolts you installed and tighten them down.



ASSEMBLY INSTRUCTIONS

- Continued -

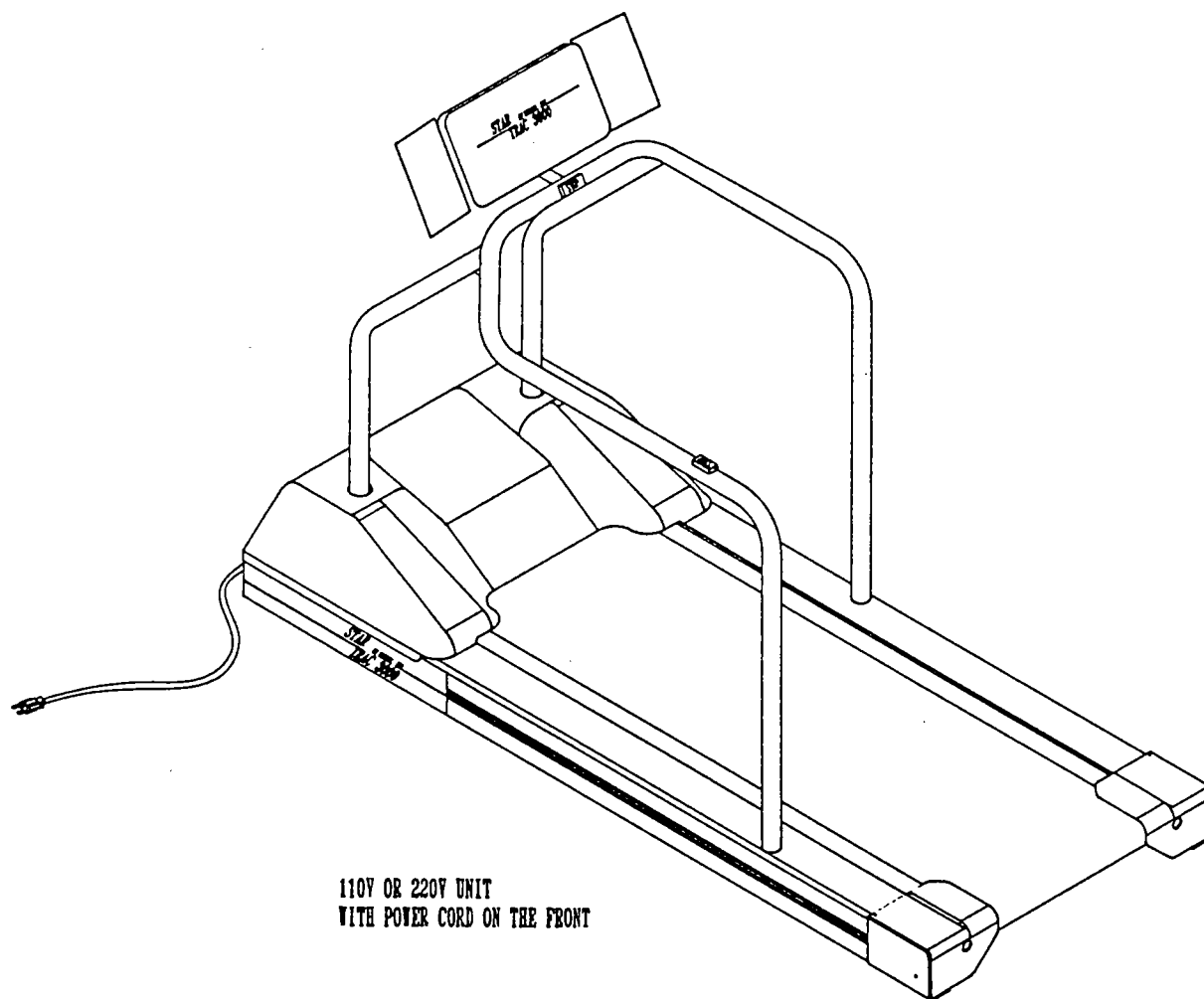
N. Your treadmill should now be assembled. See exhibit #6.

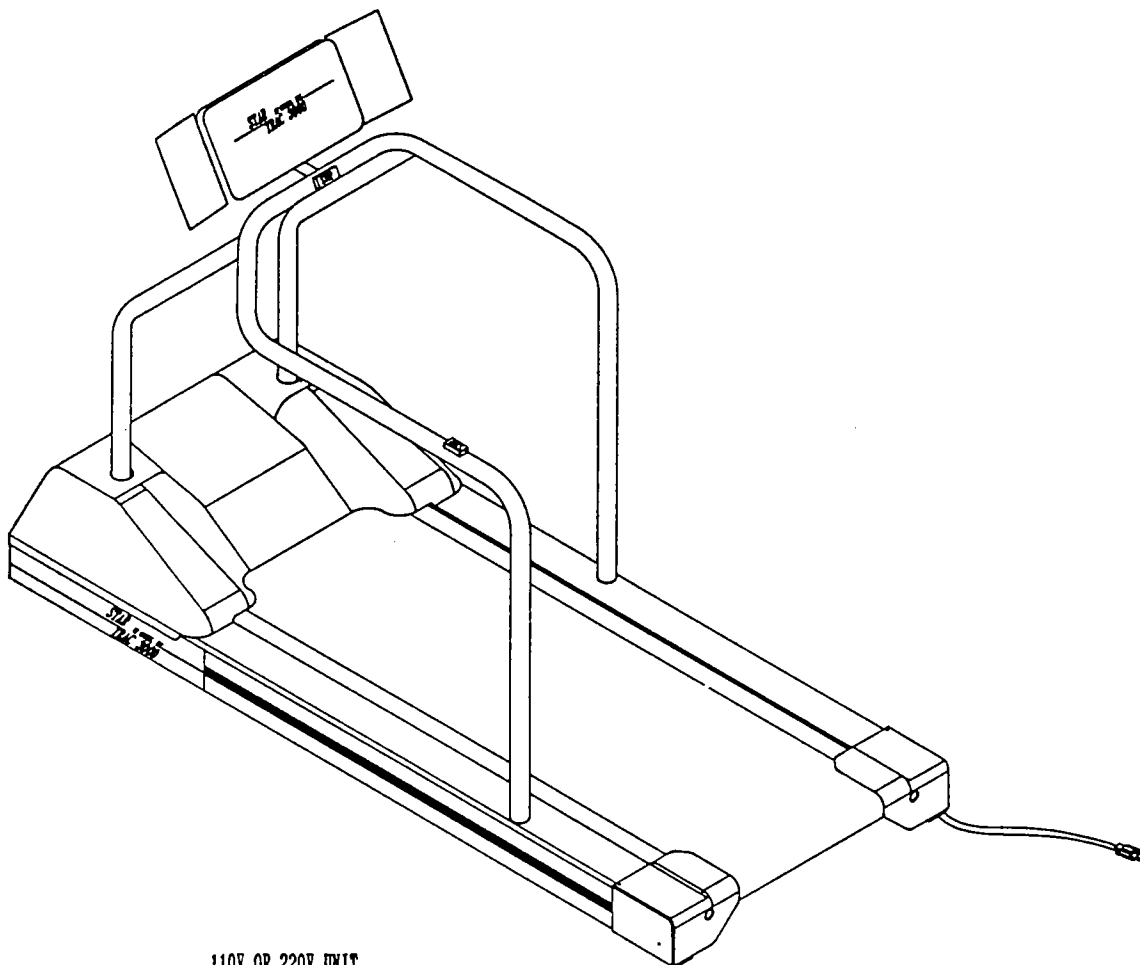
O. Position your treadmill in the area you wish to workout - also near an outlet. Plug in unit.

NOTE: Do not keep your treadmill outdoors. The power switch/circuit breaker is located near where the power cord exits the treadmill.

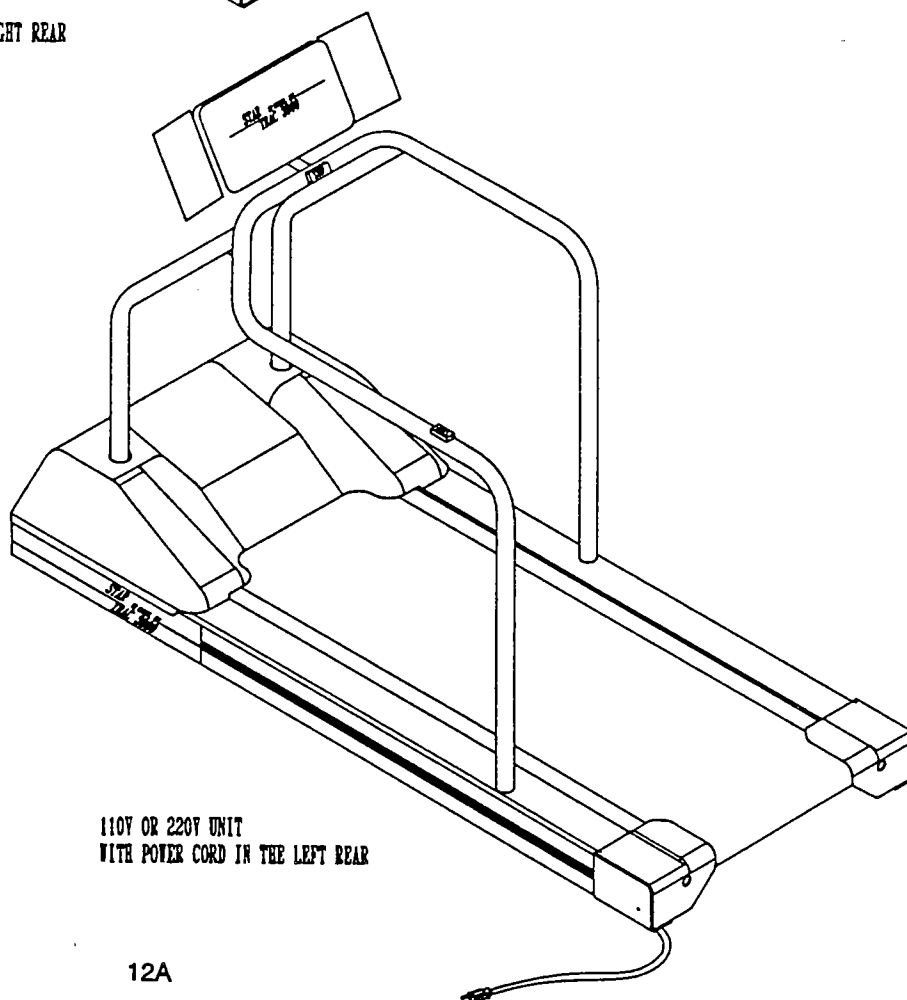
P. You may run the power cord through the right or left side of the treadmill, just pass it through either of the holes in the back. You may need to remove the tailroller cover to pass the plug out of the treadmill.

exhibit 6





110V OR 220V UNIT
WITH POWER CORD IN THE RIGHT REAR



110V OR 220V UNIT
WITH POWER CORD IN THE LEFT REAR

STAR TRAC 3000 - PROGRAMMABLE

- Operating Instructions -

Display	14
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Interval (Custom) Training	16

STAR TRAC 3000 - PROGRAMMABLE

- Display -

1. ELAPSED TIME
2. DISTANCE
3. SPEED
4. TOTAL CALORIES
5. LAPS
6. PACE
7. 1/4 MILE TRACK DISPLAY
8. ELEVATION DISPLAY
9. SHIFT KEY
10. NUMBER/PROGRAM SELECT KEYS
11. SPEED CONTROL KEYS
12. ELEVATION CONTROL KEYS
13. HEART-RATE TIMER
14. START KEY
15. STOP KEY
16. PRESET PROGRAMS
17. CUSTOM PROGRAM KEY
18. INSTRUCTIONS



BASIC OPERATION

- Press **START**
- Press **+** or **-** to change speed
- Press **▲** or **▼** to change elevation
- Press **STOP** to end operation

ADVANCED OPERATION

- Enter your choice **0 - 8**
- Respond to duration, weight and speed commands by entering information with number keys
- Press **START** after each entry

INTERVAL PROGRAM

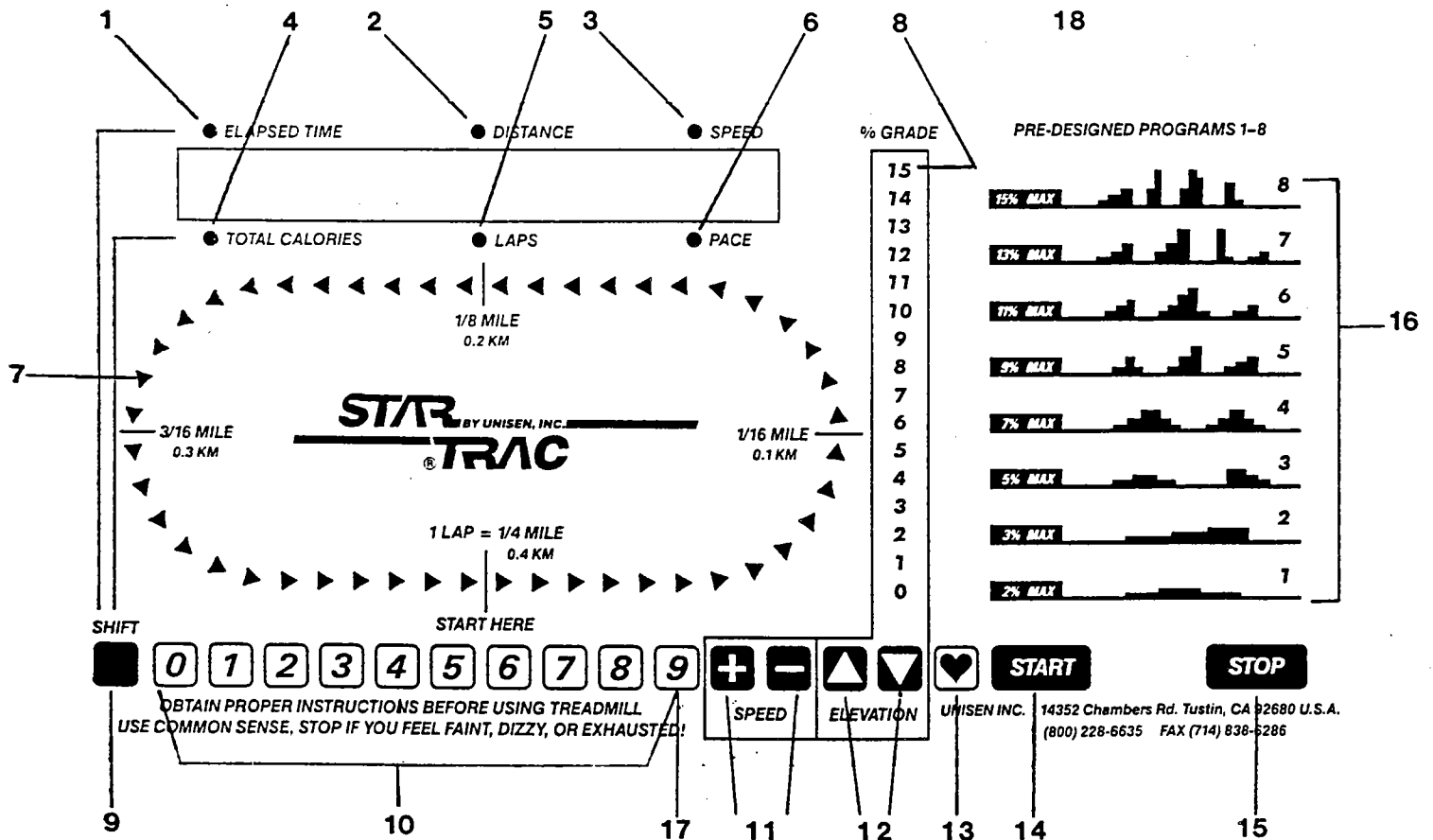
- Press **9**
- Respond to duration, weight, speed, angle and laps commands up to five intervals by entering information with number keys
- Press **START** after each entry
- Press **START** two times after any laps command for less than five intervals

For Heart Rate

- Press **▼** on the first pulse, then
- Press **▼** again on the tenth pulse

For additional information on STARTRAC institutional or home treadmills, call UNISEN INC. 14352 Chambers Road, Tustin, CA 92680 U.S.A. (800) 228-6635

(programmable display, instructional ears)



FEATURE DESCRIPTIONS

The Star Trac treadmill is equipped to provide you unlimited exercise opportunities. Experiment with these features to find the right combination for you.

ELAPSED TIME - Displays duration of your workout in minutes and seconds.

DISTANCE - Displays your workout length in miles (kilometers).

SPEED - Displays speed in miles per hour (kilometers/hour). A slow walk is 2-3 mph (3.2-4.8 km/h). A faster walk is 4-5 mph (6.4-8 km/h). Jogging speeds begin at 5 mph (8 km/h).

SHIFT KEY - To access Total Calories, Laps and Pace displays, press the SHIFT key once. To return to Time, Distance and Speed, press the SHIFT key again.

TOTAL CALORIES - The treadmill automatically calculates your caloric expenditure based on your weight (in advanced or programmed modes). If you are operating in Basic Mode or do not enter your weight, caloric expenditure is figured assuming you weigh 154 lbs. (70kg).

LAPS - Displays your progress around the 1/4 mile (400 meter) track. Each time you pass the start line, the treadmill will add a lap to your workout.

PACE - Displays your workout speed in terms of the time required to complete one mile (minutes/mile or minutes/kilometer).

DISPLAY TRACK - The oval-shaped LED display shows your progress around a 1/4 mile (400 m) track, starting from the bottom center and moving counter-clockwise. When one lap has been completed, the entire track will be lit.

ELEVATION (Incline) - Raise or lower the front of the treadmill using the UP/DOWN keys. Elevation is adjustable from 1 - 15% in 1% increments. A flashing LED will display the elevation you desire. Hint - using elevation will burn more calories and strengthen your lower-body muscles.

PRESET PROGRAMS - Choose from 8 programs (1 is the easiest, 8 is the most difficult). To begin a program, press the number key that corresponds to the program your desire. Then respond accordingly using the number and START keys.

NUMBER KEYS - Number keys correspond to the preset programs on the programmable unit. Use the numbers keys to respond to duration, weight, speed in program modes. Numbers keys also can be used to enter speed desired. For example, when operating any model, press "3" then START and the treadmill will go 3 mph (3 km/h).

HEART-RATE TIMER - To check your heart rate, pause treadmill and find the pulse on your neck. On the first pulse beat you feel, press the heart-shaped key. Count nine pulse beats and on the tenth beat, press the heart-shaped key again. Your heart rate will be displayed.

START KEY - To get started easily, step on the belt and press START. The belt starts very slowly, taking ten seconds to reach minimum start speed.

STOP KEY - Press the STOP key twice to end operation. The belt will come to a gradual stop. Do not attempt to jump off treadmill after pressing STOP. Rather, slow your pace along with the belt. By pressing the STOP key once, the treadmill pauses operation. During this period, the user has 20 seconds to catch a breather, towel off, get a drink, or check his/her heart rate. After pausing, user may press START to resume workout (treadmill will reset to minimum speed).

SPEED CONTROL KEYS - Adjust speed in .1 mph (km/h) increments using the PLUS or MINUS speed keys. NOTE: From a stopped position, pressing either of the speed keys will start the machine at minimum starting speed.

CUSTOM PROGRAMMING - Press "9" to design a personalized workout. Then, respond accordingly using the number and START keys.

FINISH - Five beeps signal the end of a timed program and the numerical display cycles through -- FINISH -- the user's total elapsed time, distance covered, average speed, total calories, laps completed and average pace.

BEEP SOUNDS - During operation, every speed, incline or program adjustment you will hear a beep sound. This serves to warn the user that something is being changed.

STAR TRAC 3000 - PROGRAMMABLE

- Operating Instructions -

After switching the power on, the Star Trac treadmill will display "UNISEN" and "BASIC OR CHOOSE 0 TO 9" until a key is pressed. At this time, the user may choose to operate the treadmill under **BASIC OPERATION** or **ADVANCED OPERATION**. In both these modes, the treadmill is entirely under the user's control. Speed and elevation can be changed upon command.

BASIC OPERATION -

In BASIC OPERATION, the users calorie expenditures is computed assuming the user's weight is 154 lbs.

1. Stand on treadmill's belt and press START. The running belt will slowly accelerate to its minimum speed of 1 mph.
2. To adjust speed, use the speed keys. To key precise speed, press the number keys for the speed you desire then press START. For example, if you want to walk 3 mph (3 km/h), press the key numbered "3" then press START. The treadmill will automatically increase speed until 3 mph (3 km/h) is reached.
3. To adjust elevation in press the UP or DOWN elevation keys.
4. To end operation, press the STOP key, twice.

NOTE: To pause operation, press the STOP key, once. You can resume operation at minimum speed by pressing the START key within 20 seconds of pausing operation. This allows the user time to catch a breather, towel off, get a drink, or check his/her heart rate. After 20 seconds, the treadmill will automatically reset to the opening display.

ADVANCED OPERATION -

In ADVANCED OPERATION, the users calorie expenditure is precisely computed based on the information keyed in by the user.

1. Press "0". Respond to duration, weight, time and speed using the number keys. Remember to press START after each entry.

PRESET PROGRAMS -

While using programs, users calorie expenditure is precisely computed based on the information keyed in by the user.

1. Choose the desired program, and press the corresponding number "1-8". Respond to duration, weight, time and speed using the number keys. Remember to press START after each entry.
2. Note the program profiles (1-8) on the following pages 16A-16H.

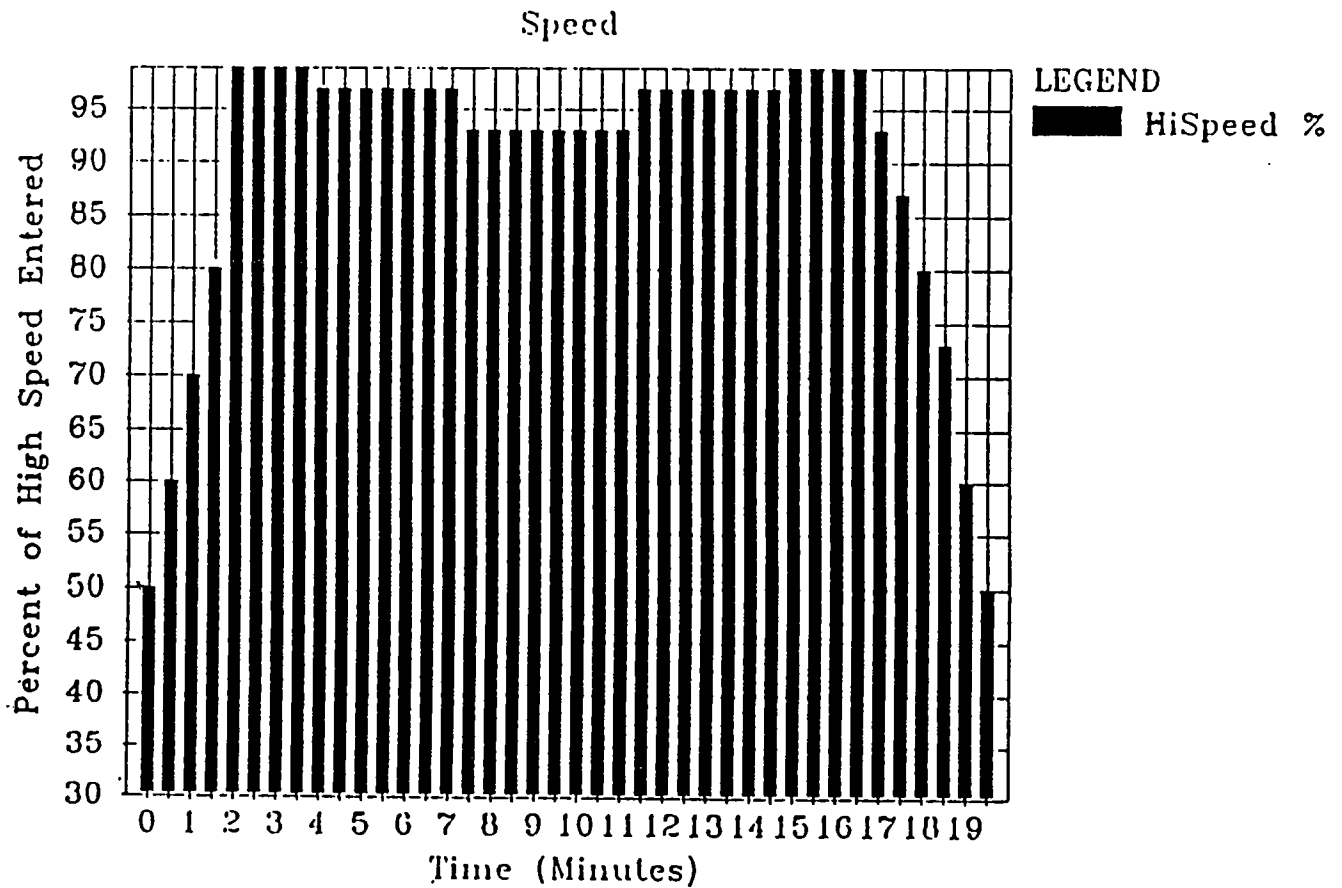
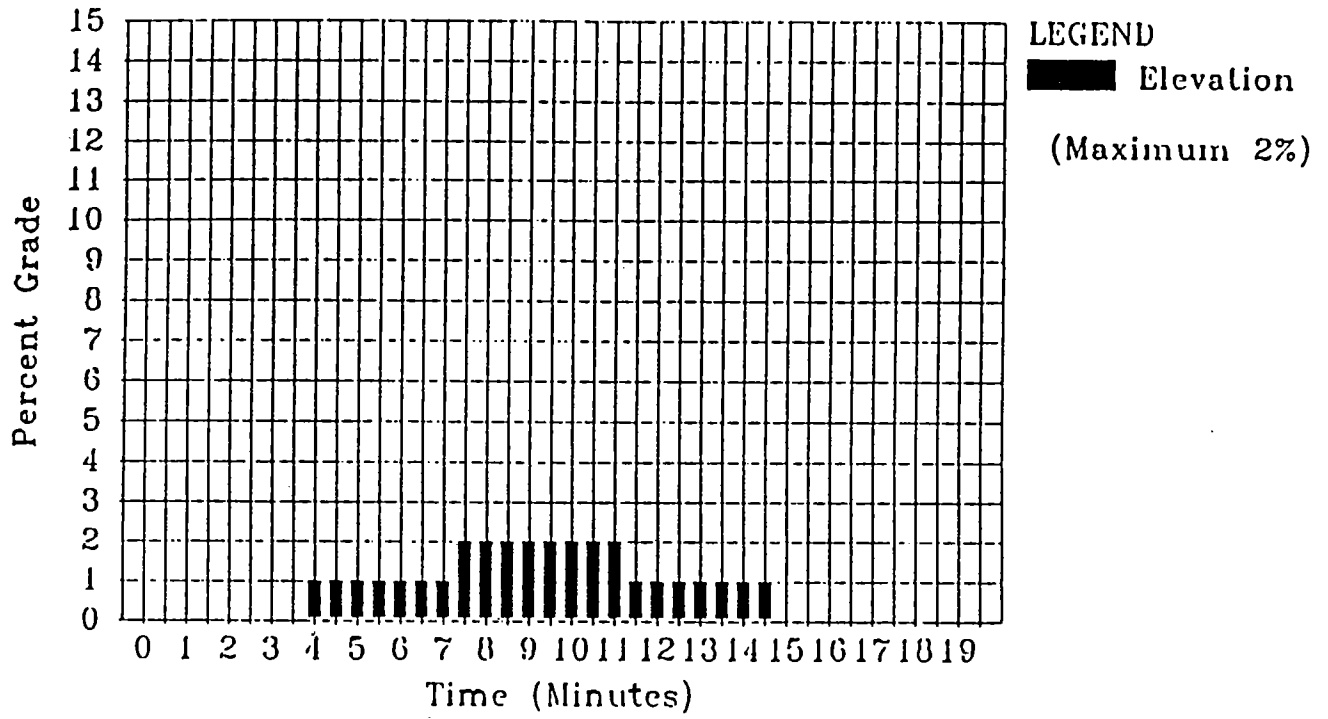
INTERVAL (CUSTOM) PROGRAMMING

To design your own interval training program, press "9". Use number keys to choose your desired duration, speed, elevation and the number of laps for each interval. Press START after each numerical entry. You have up to five intervals to design. However, if you want to begin with less than five intervals, press START twice after last desired laps entry.

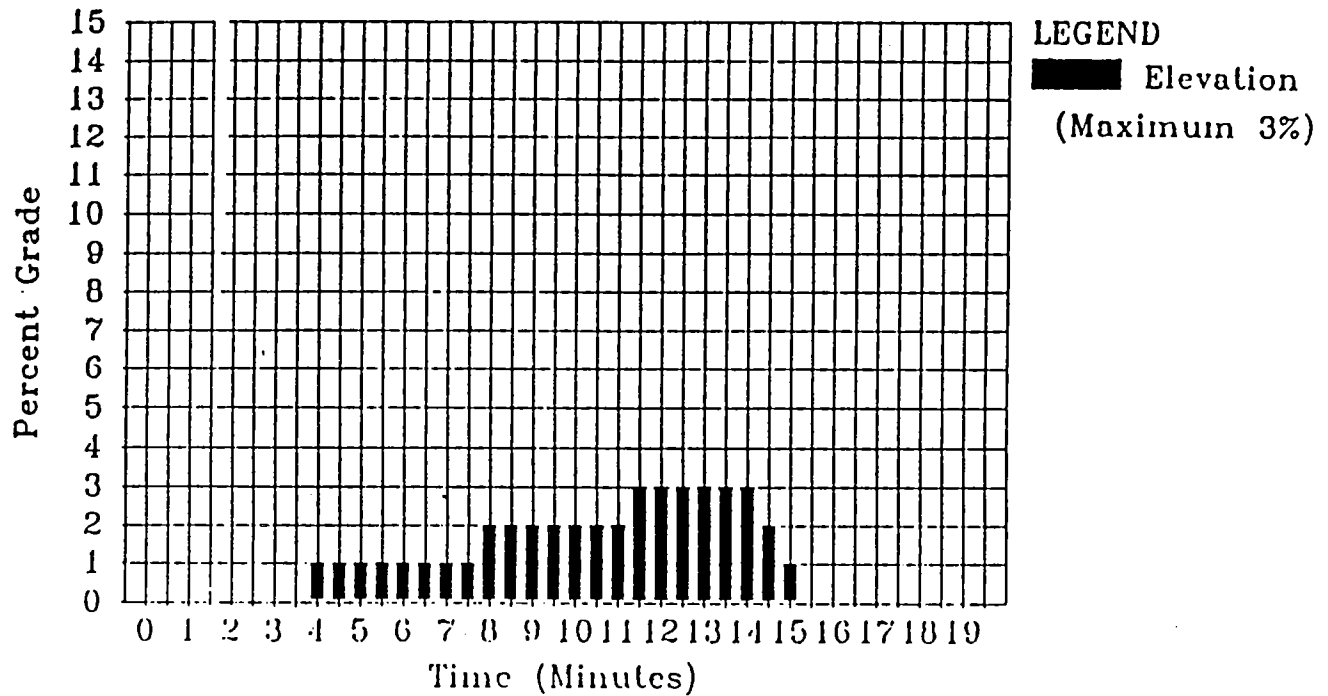
To end operation, press the STOP key twice.

NOTE: To pause operation, press the STOP key once. You can resume operation at minimum speed by pressing the START key within 20 seconds of pausing operation. This allows the user time to catch a breather, towel off, get a drink, or check his/her heart rate. After 20 seconds, the treadmill will automatically reset to the opening display.

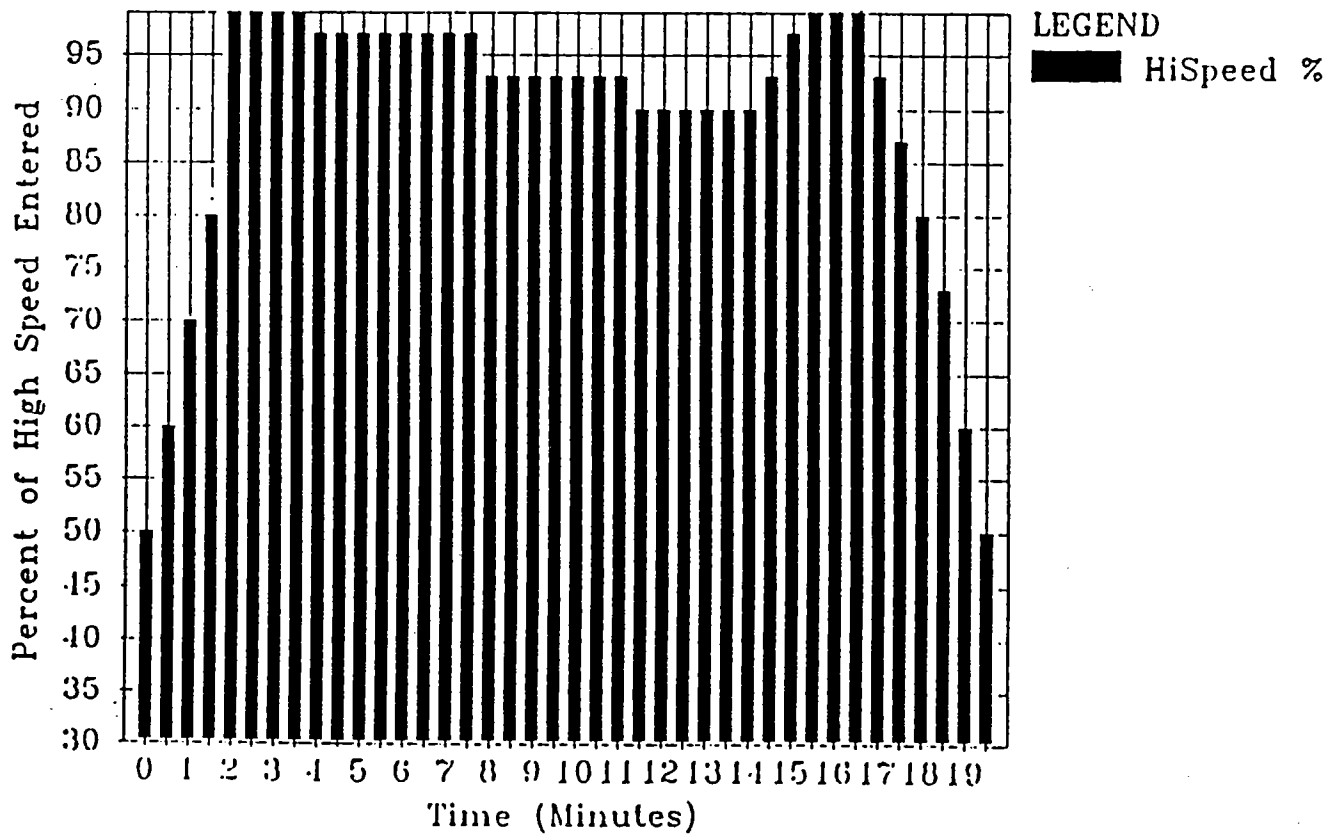
Startrac Terrain Profile
Program #1
Elevation



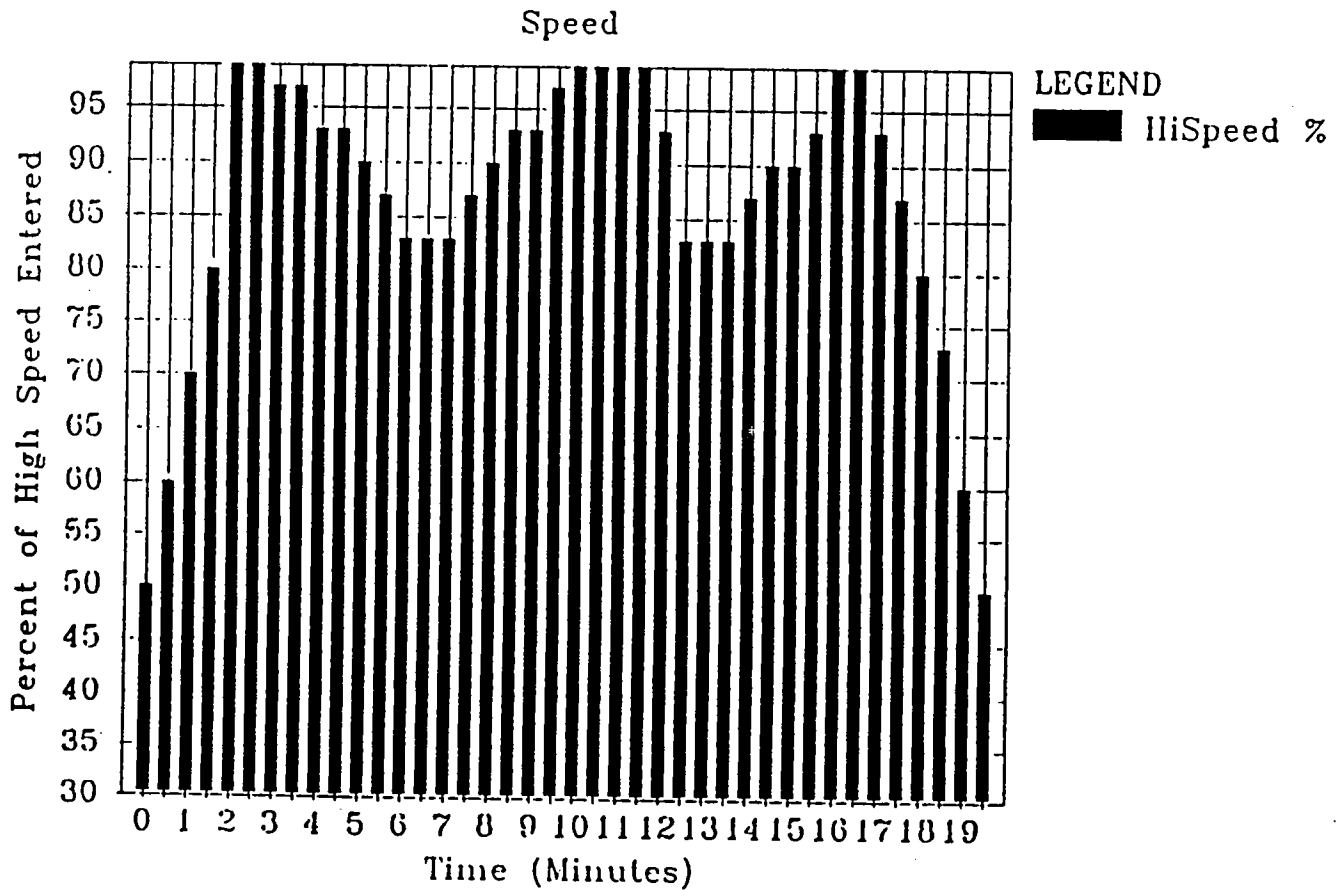
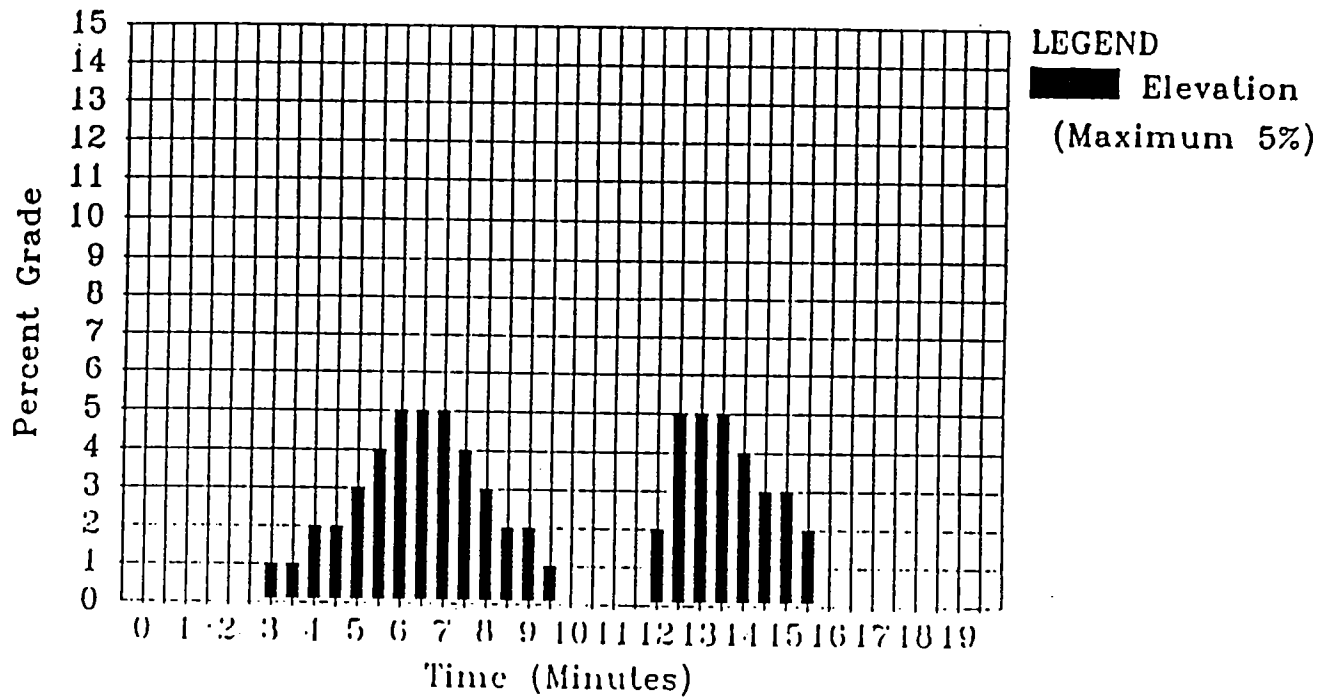
Startrac Terrain Profile
 Program #2
 Elevation



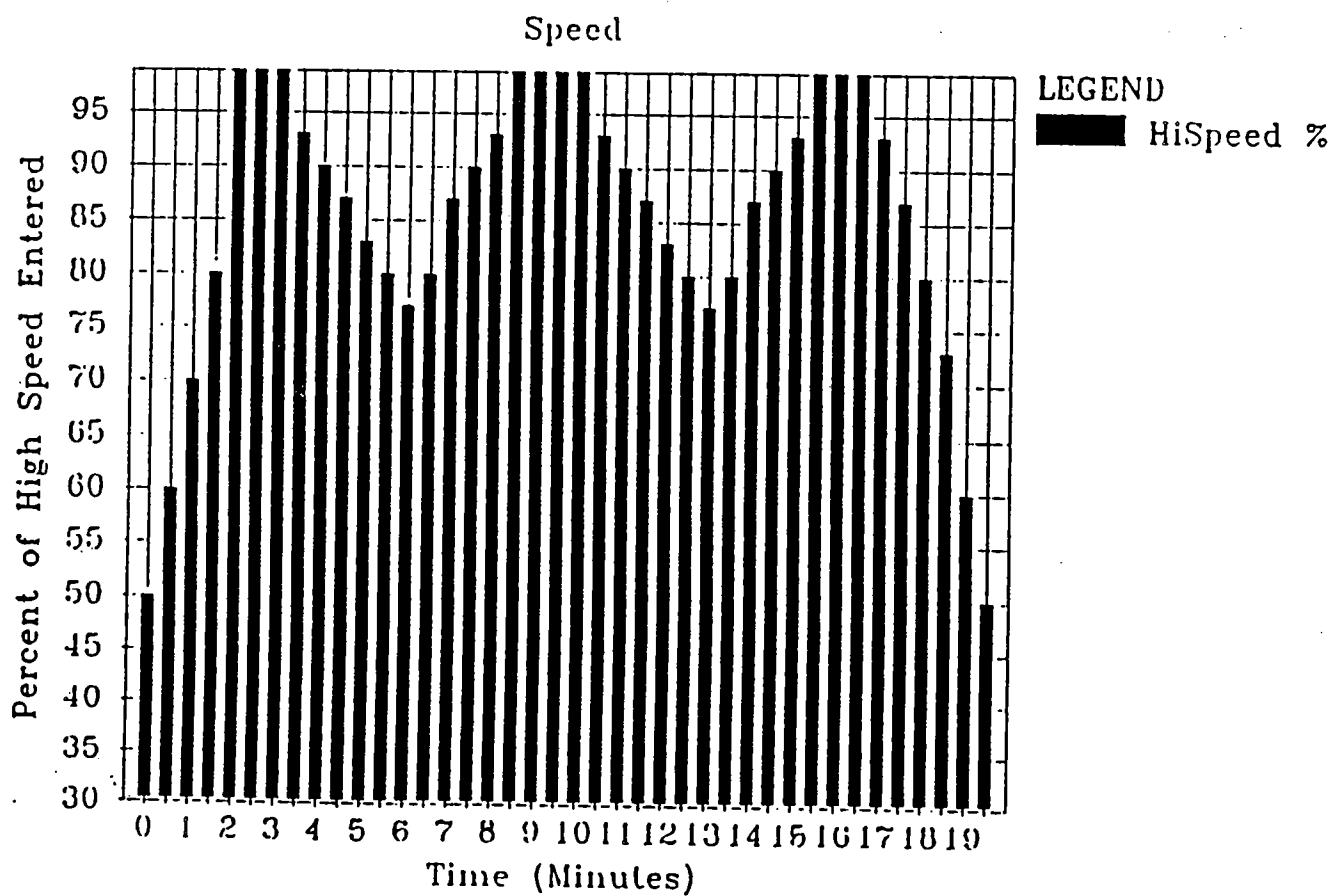
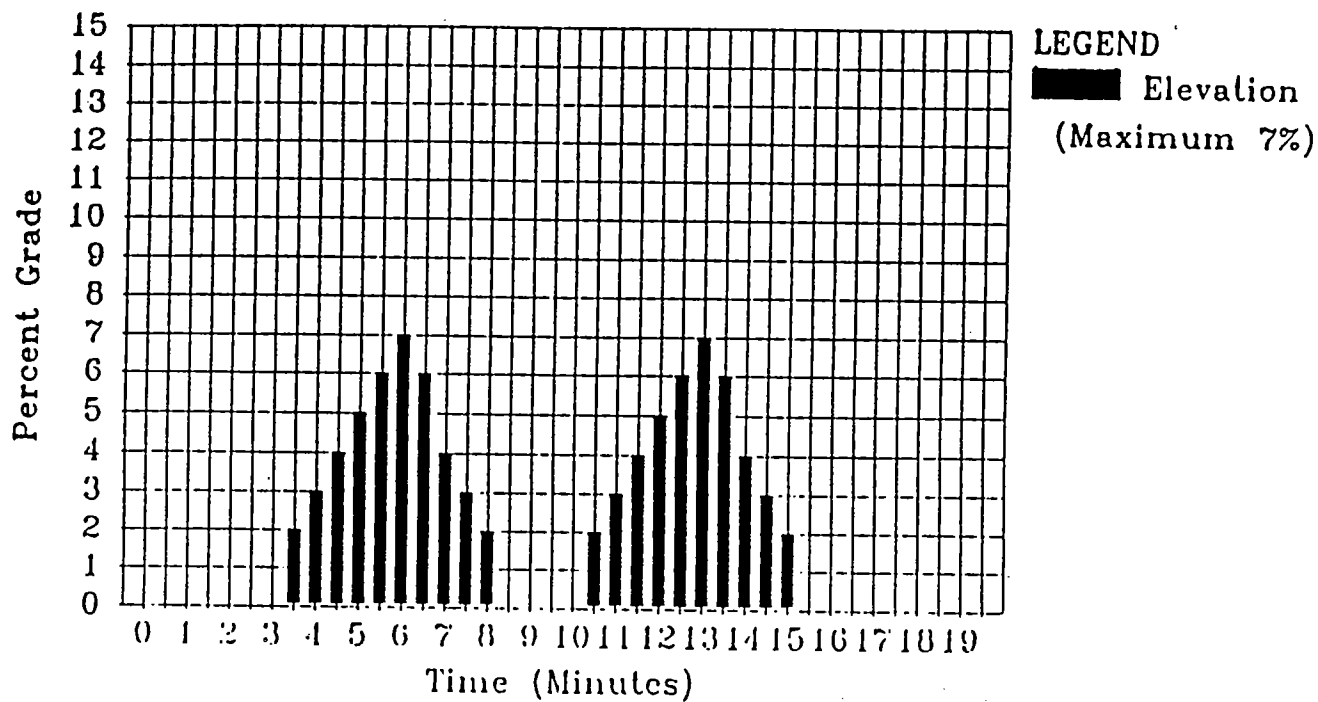
Speed



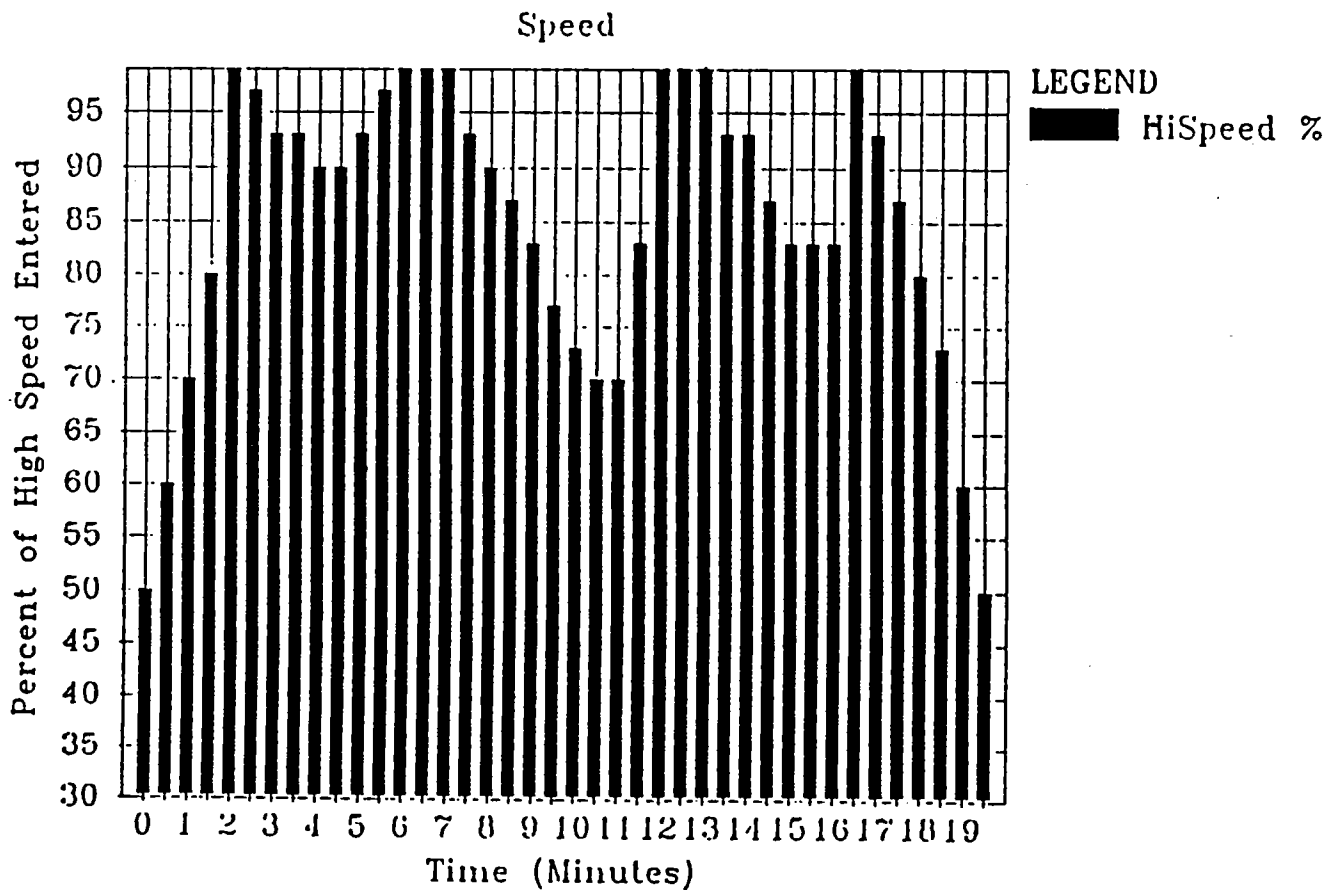
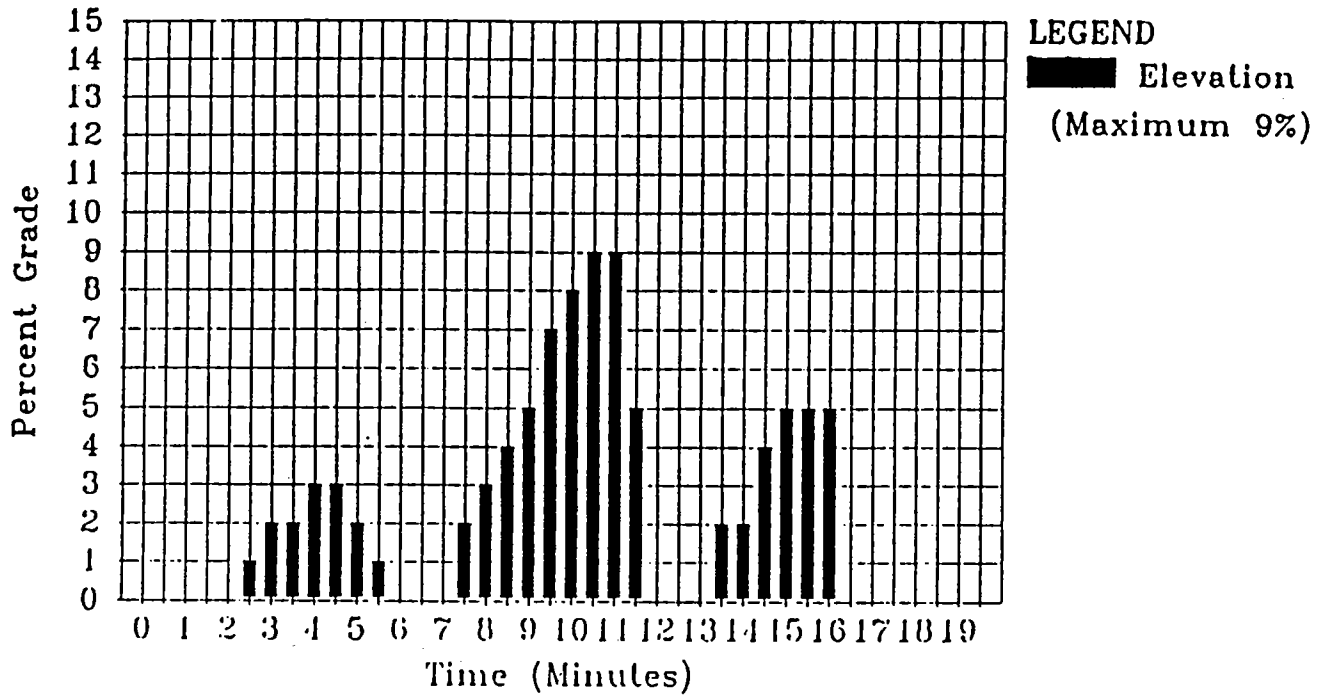
Startrac Terrain Profile
Program #3
Elevation



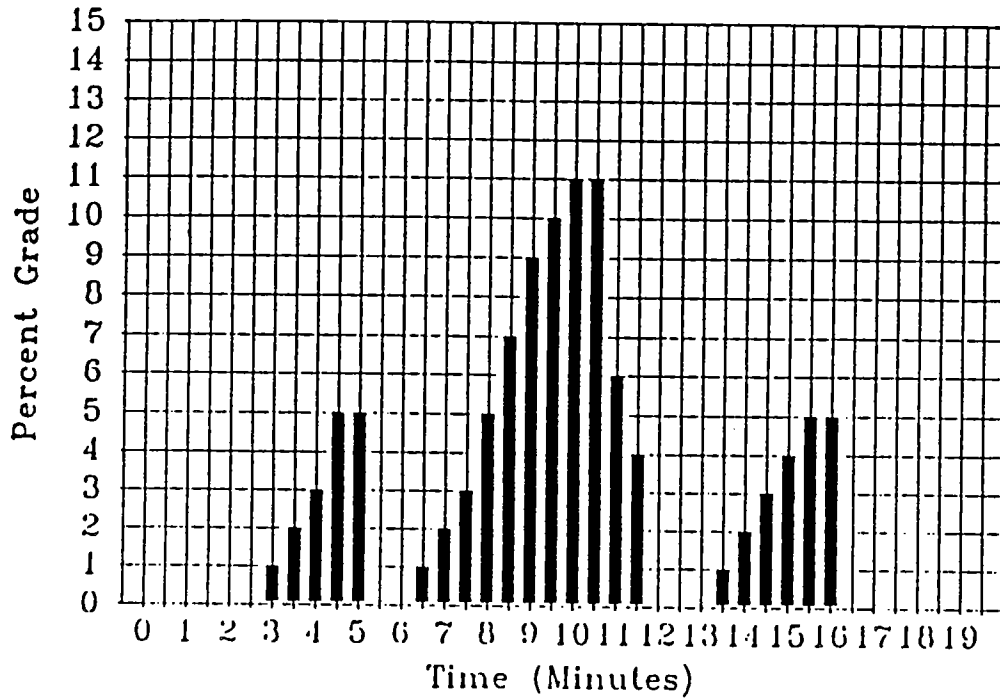
Startrac Terrain Profile
 Program #4
 Elevation



Startrac Terrain Profile
Program #5
Elevation

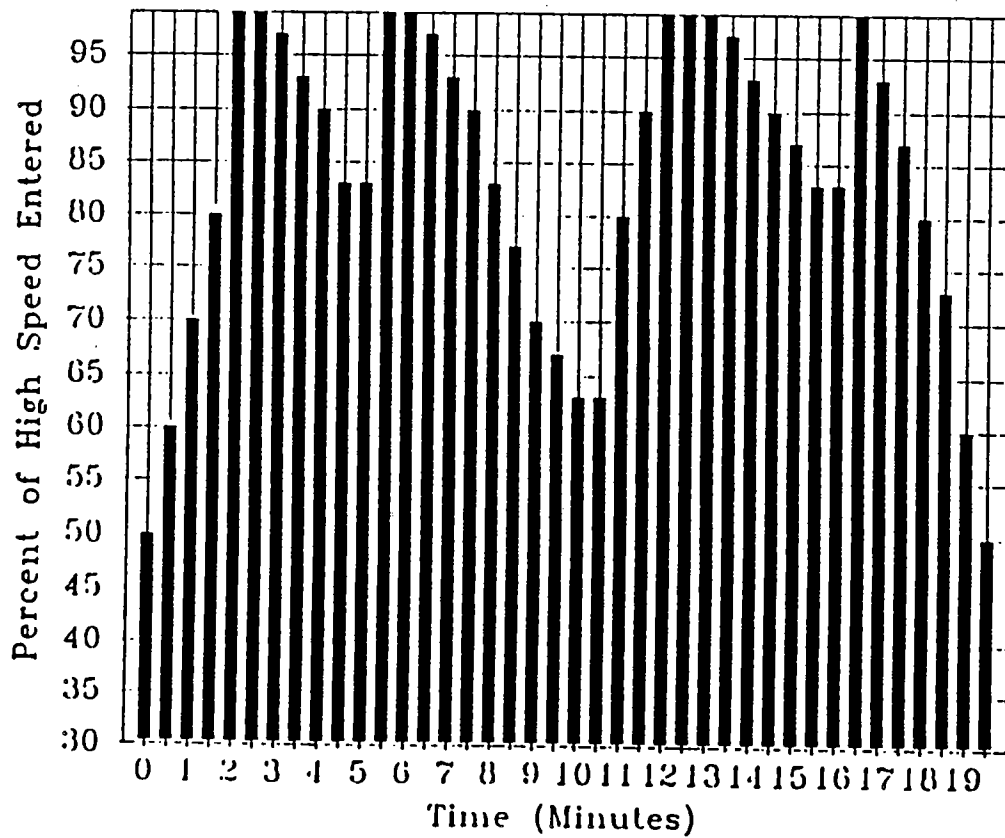


Startrac Terrain Profile
Program #6
Elevation



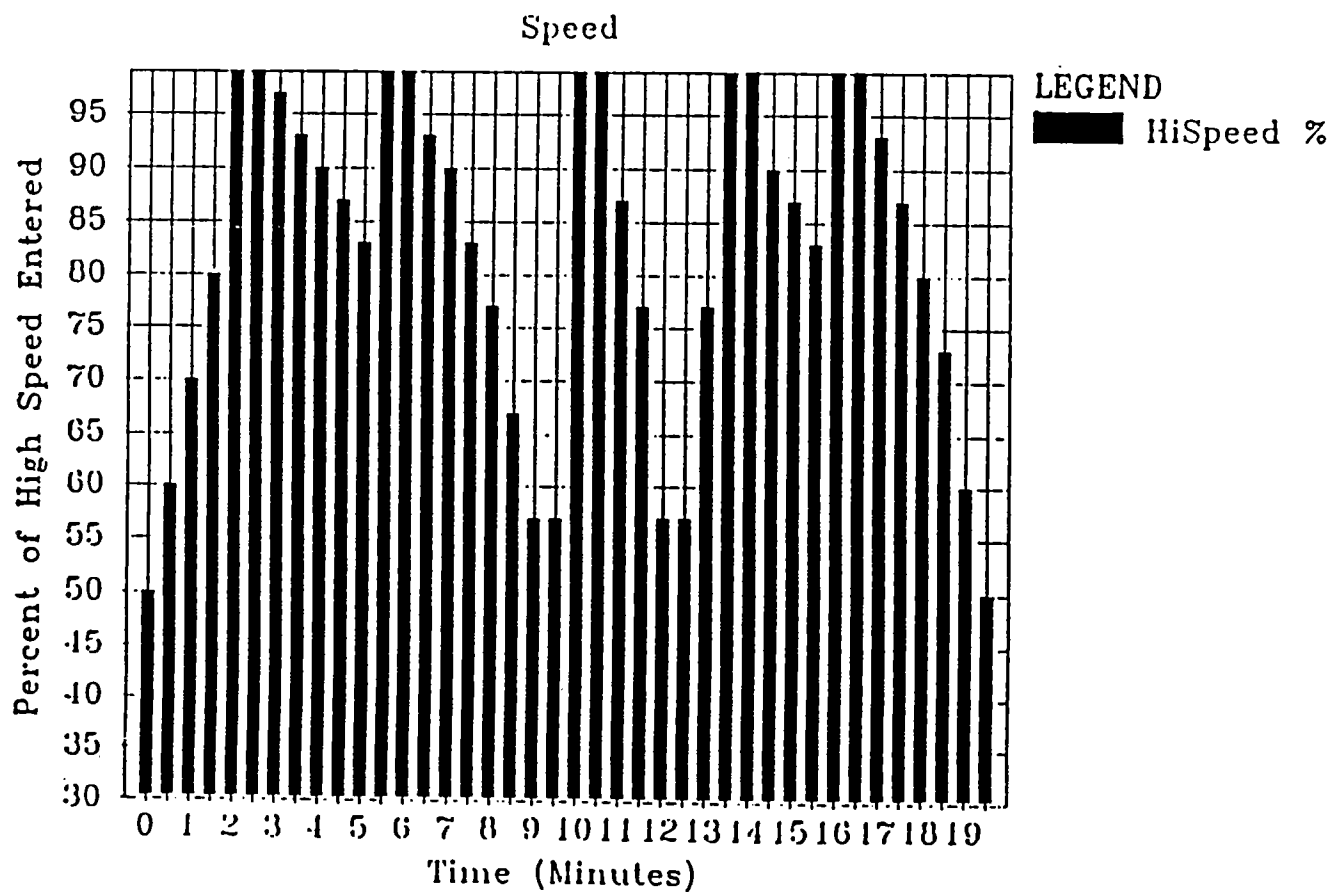
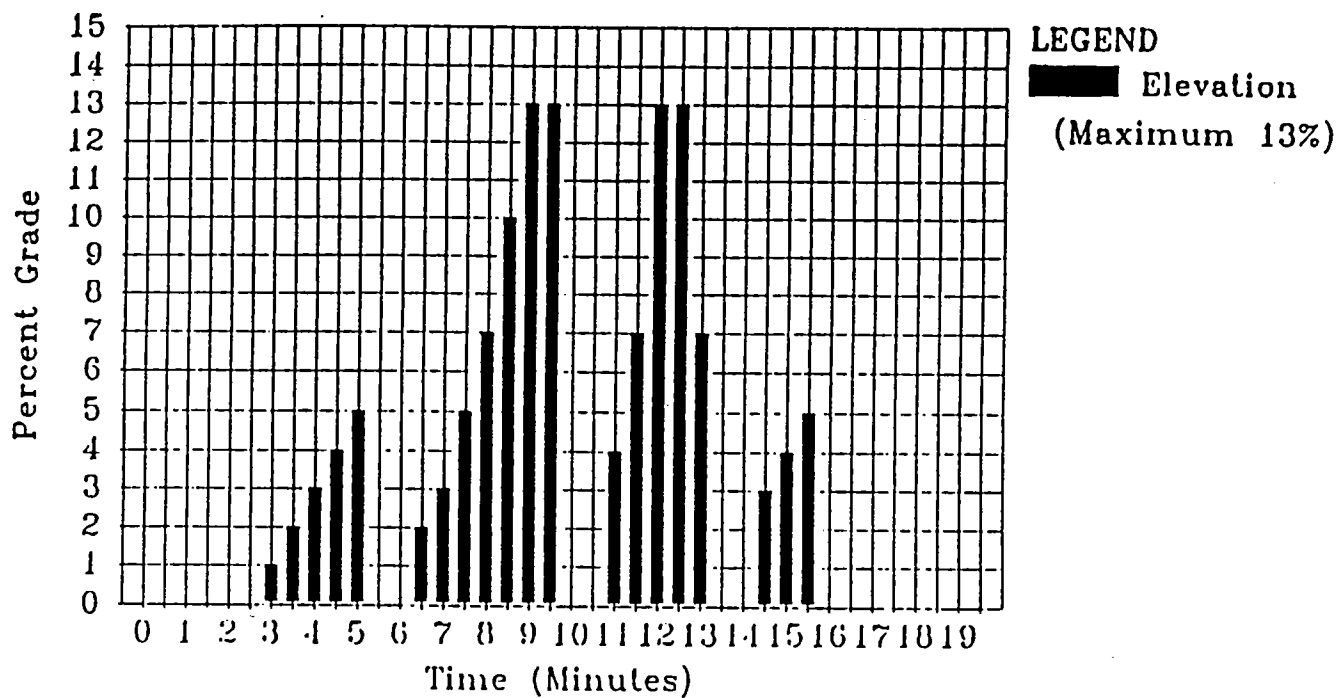
LEGEND
 Elevation
 (Maximum 11%)

Speed

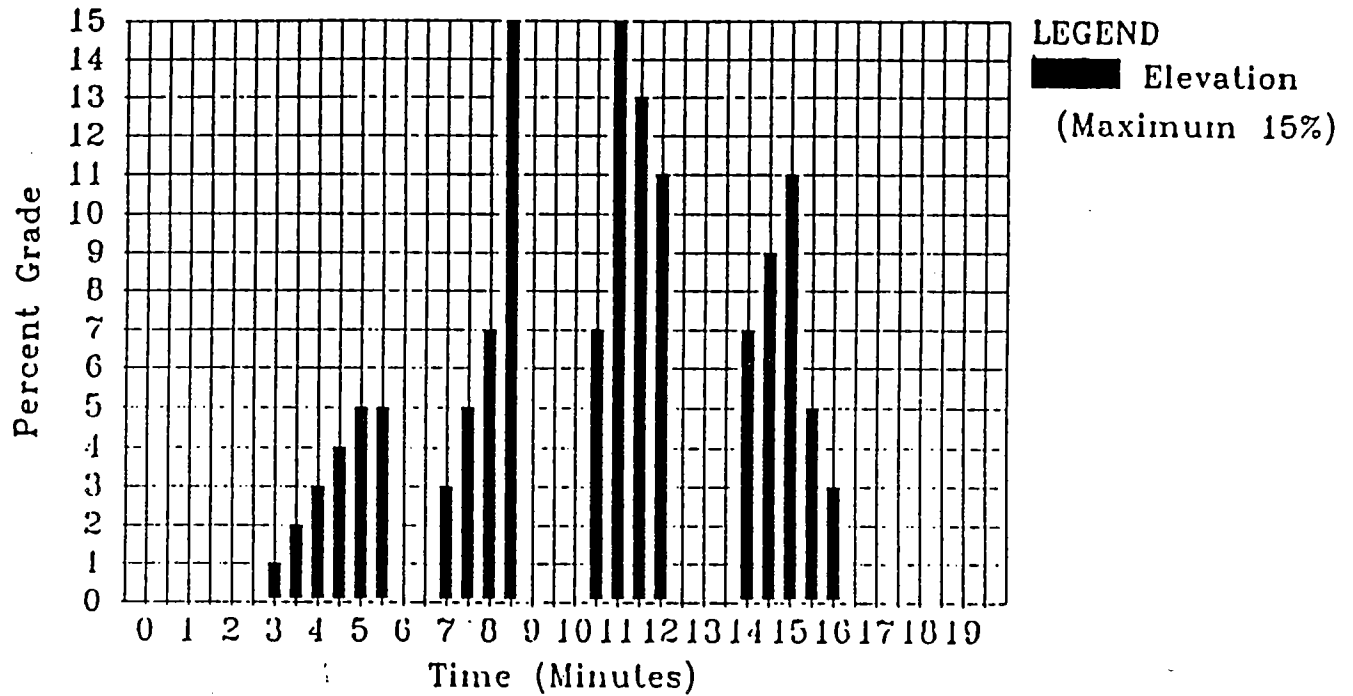


LEGEND
 HiSpeed %

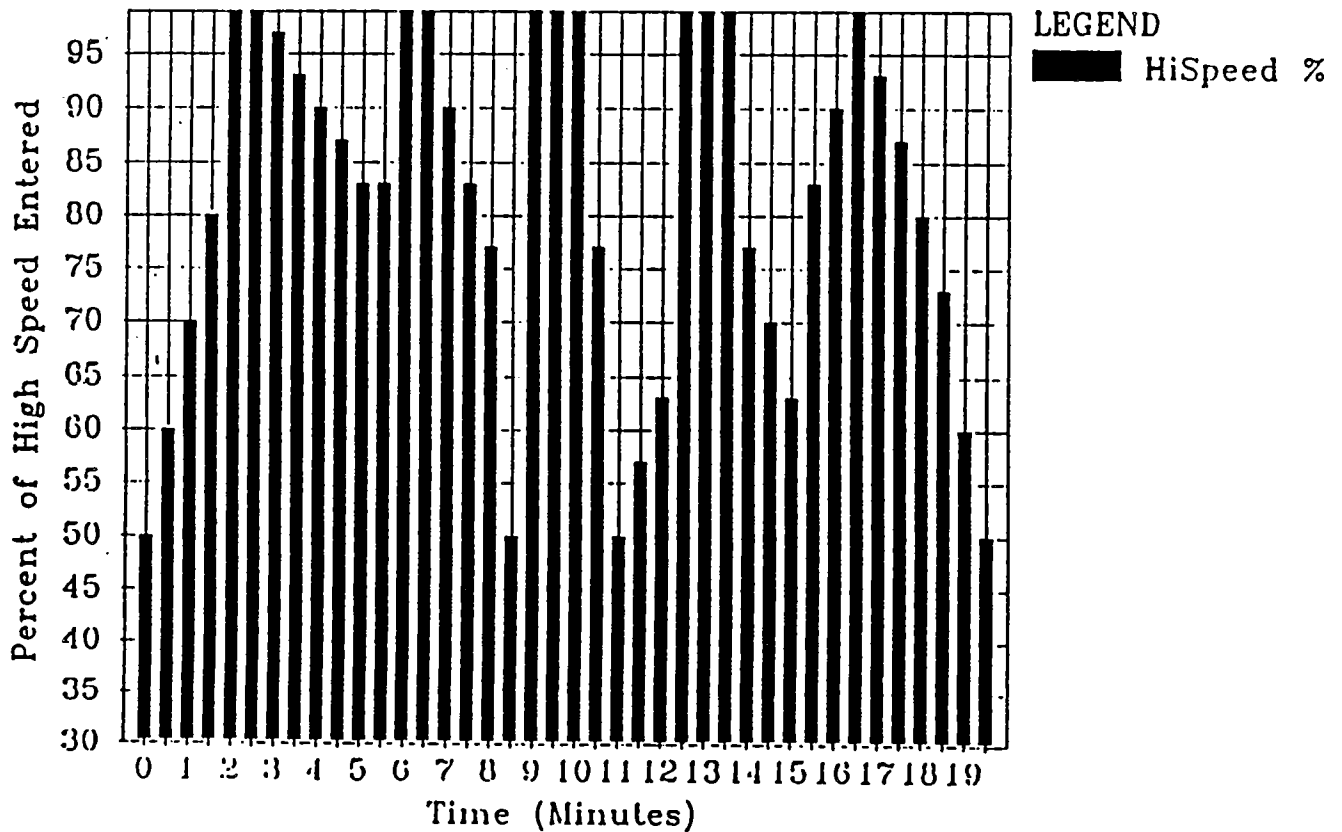
Startrac Terrain Profile
Program #7
Elevation



Startrac Terrain Profile
 Program #0
 Elevation



Speed



STAR TRAC 3000 - SIMPLE

- Operating Instructions -

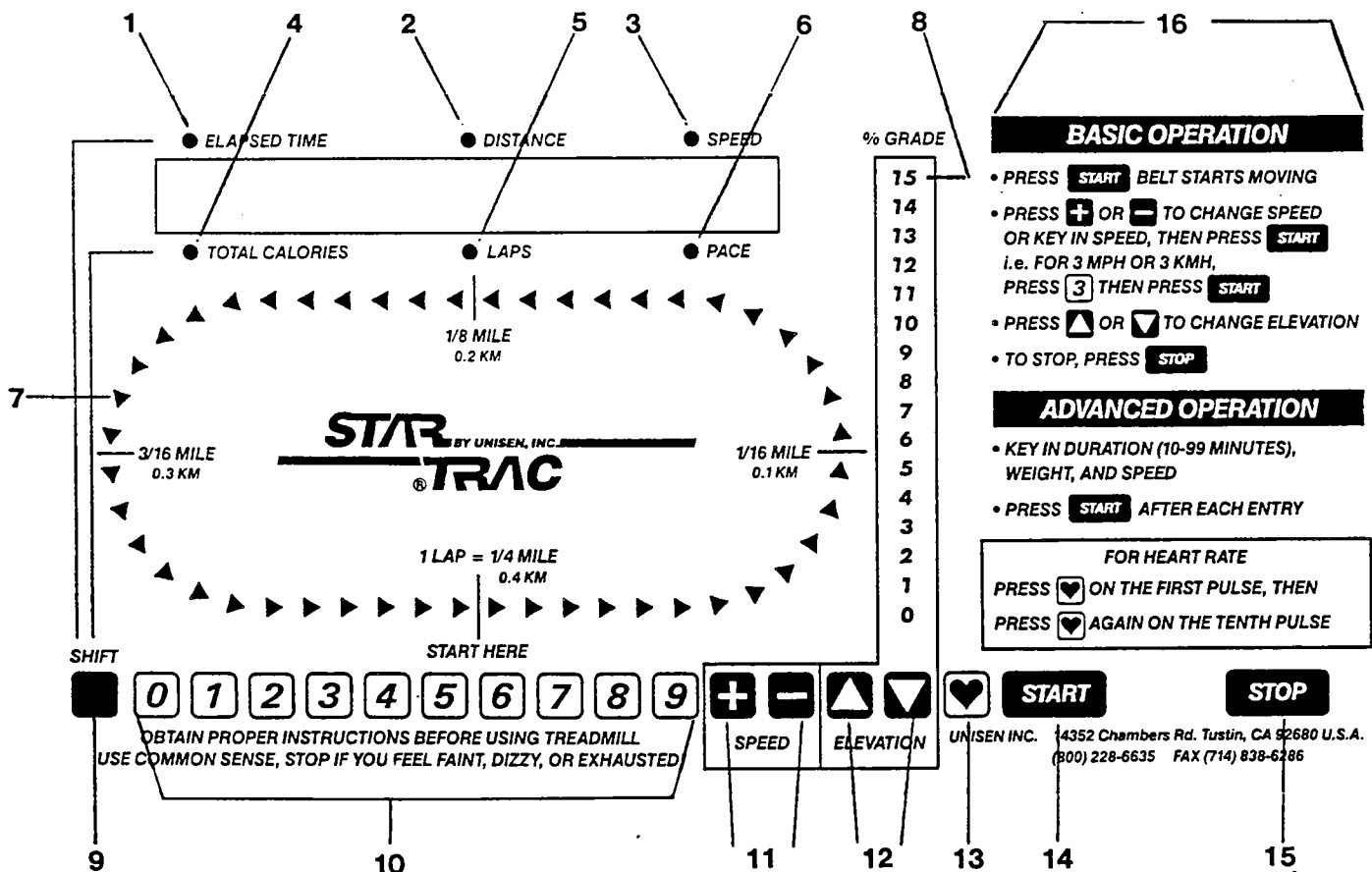
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STAR TRAC 3000 - SIMPLE with numbers

- Display -

1. ELAPSED TIME
2. DISTANCE
3. SPEED
4. TOTAL CALORIES
5. LAPS
6. PACE
7. 1/4 MILE TRACK DISPLAY
8. ELEVATION DISPLAY
9. SHIFT KEY
10. NUMBER KEYS
11. SPEED CONTROL KEYS
12. ELEVATION CONTROL KEYS
13. HEART-RATE TIMER
14. START KEY
15. STOP KEY
16. INSTRUCTIONS

(SIMPLE display with numbers)

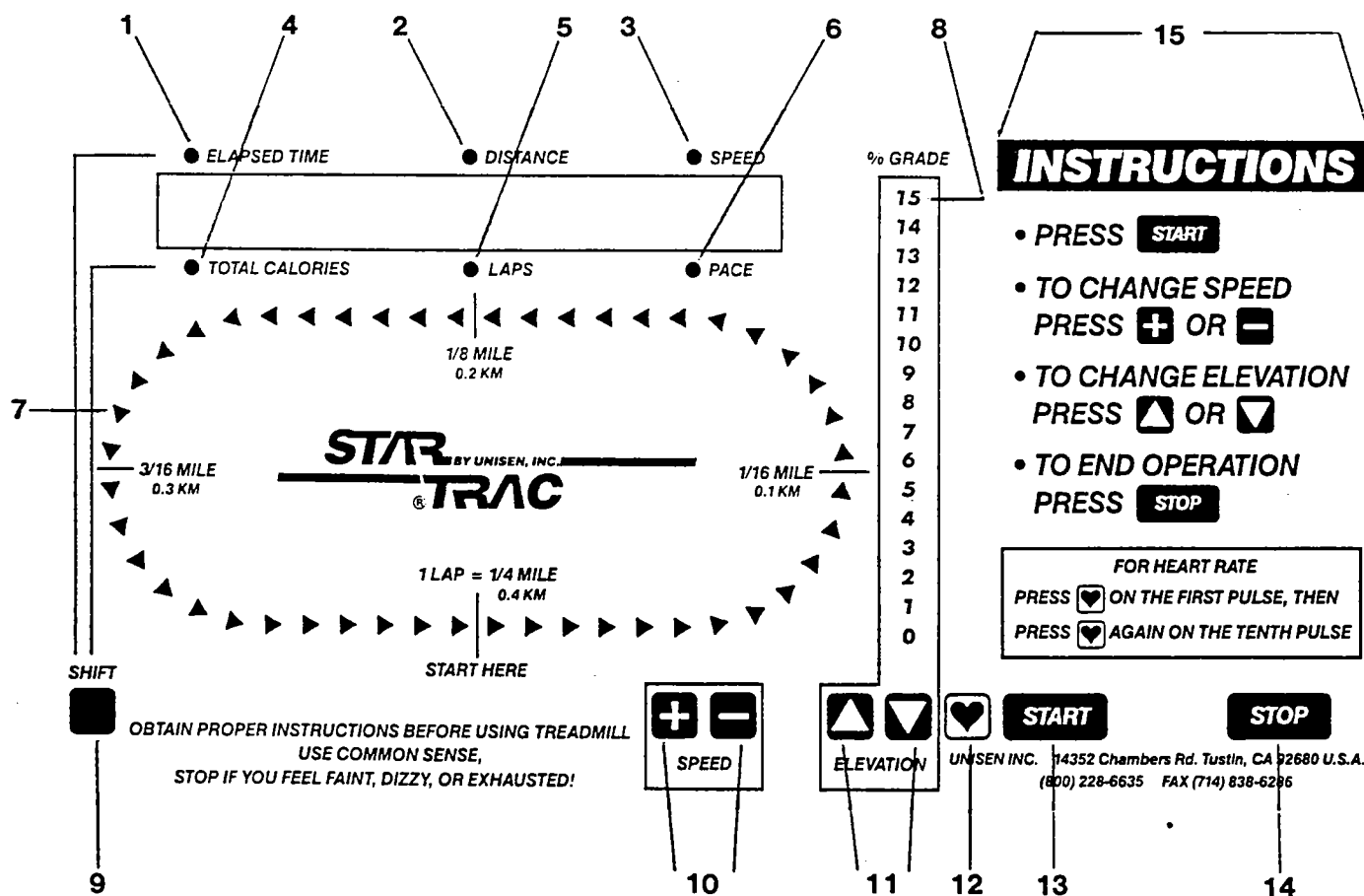


STAR TRAC 3000 - SIMPLE without numbers

- Display -

1. ELAPSED TIME
2. DISTANCE
3. SPEED
4. TOTAL CALORIES
5. LAPS
6. PACE
7. 1/4 MILE TRACK DISPLAY
8. ELEVATION DISPLAY
9. SHIFT KEY
10. SPEED CONTROL KEYS
11. ELEVATION CONTROL KEYS
12. HEART-RATE TIMER
13. START KEY
14. STOP KEY
15. INSTRUCTIONS

(SIMPLE display without numbers)



FEATURE DESCRIPTIONS

The Star Trac treadmill is equipped to provide you unlimited exercise opportunities. Experiment with these features to find the right combination for you.

ELAPSED TIME - Displays duration of your workout in minutes and seconds.

DISTANCE - Displays your workout length in miles (kilometers).

SPEED - Displays speed in miles per hour (kilometers/hour). A slow walk is 2-3 mph (3.2-4.8 km/h). A faster walk is 4-5 mph (6.4-8 km/h). Jogging speeds begin at 5 mph (8 km/h).

SHIFT KEY - To access Total Calories, Laps and Pace displays, press the SHIFT key once. To return to Time, Distance and Speed, press the SHIFT key again.

TOTAL CALORIES - The treadmill automatically calculates your caloric expenditure based on your weight (in advanced or programmed modes). In BASIC OPERATION user does not enter weight. Caloric expenditure is figured assuming you weigh 154 lbs. (70kg).

LAPS - Displays your progress around the 1/4 mile (400 meter) track. Each time you pass the start line, the treadmill will add a lap to your workout.

PACE - Displays your workout speed in terms of the time required to complete one mile (minutes/mile or minutes/kilometer).

DISPLAY TRACK - The oval-shaped LED display shows your progress around a 1/4 mile (400 m) track, starting from the bottom center and moving counter-clockwise. When one lap has been completed, the entire track will be lit.

ELEVATION (Incline) - Raise or lower the front of the treadmill using the UP/DOWN keys. Elevation is adjustable from 1 - 15% in 1% increments. A flashing LED will display the elevation you desire. Hint - using elevation will burn more calories and strengthen your lower-body muscles.

NUMBER KEYS (optional on Simple displays) - Number keys correspond to the preset programs on the programmable unit. Use the numbers keys to respond to duration, weight, speed in program modes. Numbers keys also can be used to enter speed desired. For example, when operating any model, press "3" then START and the treadmill will go 3 mph (3 km/h).

HEART-RATE TIMER - To check your heart rate, pause treadmill and find the pulse on your neck. On the first pulse beat you feel, press the heart-shaped key. Count nine pulse beats and on the tenth beat, press the heart-shaped key again. Your heart rate will be displayed.

START KEY - To get started easily, step on the belt and press START. The belt starts very slowly, taking ten seconds to reach minimum start speed.

STOP KEY - Press the STOP key twice to end operation. The belt will come to a gradual stop. Do not attempt to jump off treadmill after pressing STOP. Rather, slow your pace along with the belt. By pressing the STOP key once, the treadmill pauses operation. During this period, the user has 20 seconds to catch a breather, towel off, get a drink, or check his/her heart rate. After pausing, user may press START to resume workout (treadmill will reset to minimum speed).

SPEED CONTROL KEYS - Adjust speed in .1 mph (kmh) increments using the PLUS or MINUS speed keys. NOTE: From a stopped condition pressing the speed keys will start the machine at minimum starting speed.

FINISH - Five beeps signal the end of a timed program and the numerical display cycles through -- FINISH -- the user's total elapsed time, distance covered, average speed, total calories, laps completed and average pace.

BEEP SOUNDS - During operation, every speed, incline or program adjustment you will hear a beep sound. This serves to warn the user that something is being changed.

STAR TRAC 3000 - SIMPLE

- Operating Instructions -

After switching the power on, the Star Trac treadmill will display "UNISEN" and "BASIC OR CHOOSE 0 TO 9" until a key is pressed. At this time, the user may choose to operate the treadmill under **BASIC OPERATION** or **ADVANCED OPERATION**. In both these modes, the treadmill is entirely under the user's control. Speed and elevation can be changed upon command.

BASIC OPERATION -

In BASIC OPERATION, the users calorie expenditures is computed assuming the user's weight is 154 lbs.

1. Stand on treadmill's belt and press START. The running belt will slowly accelerate to its minimum speed (1 mph).
2. To adjust speed, use the speed ("+" or "-") keys.

You may also enter your desired speed using the number keys. Simply enter the speed you desire and press START. For example, if you want to walk 3 mph (3 km/h), press the key numbered "3" then press START. The treadmill will automatically increase speed until 3 mph (3 km/h) is reached. (This procedure is not possible with Simple displays without numbers.)

3. To adjust elevation (or incline) use the "UP" or "DOWN" arrow keys. Elevation can be adjusted in 1% increments to 15%.

4. To end operation, press the STOP key, twice.

ADVANCED OPERATION -

In ADVANCED OPERATION, the users calorie expenditure is precisely computed based on the information keyed in by the user.

1. Press "0". Respond to duration, weight, time and speed using the number keys. Remember to press START after each entry. This programming option allows the user to determine a workout length and speed.

(This option is not available on Simple displays without numbers.)

NOTE: To pause operation, press the STOP key once. You can resume operation at minimum speed by pressing the START key within 20 seconds of pausing operation. This allows the user time to catch a breather, towel off, get a drink, or check his/her heart rate. After 20 seconds, the treadmill will automatically reset to the opening display.

STAR JOGGER 3000

- Operating Instructions -

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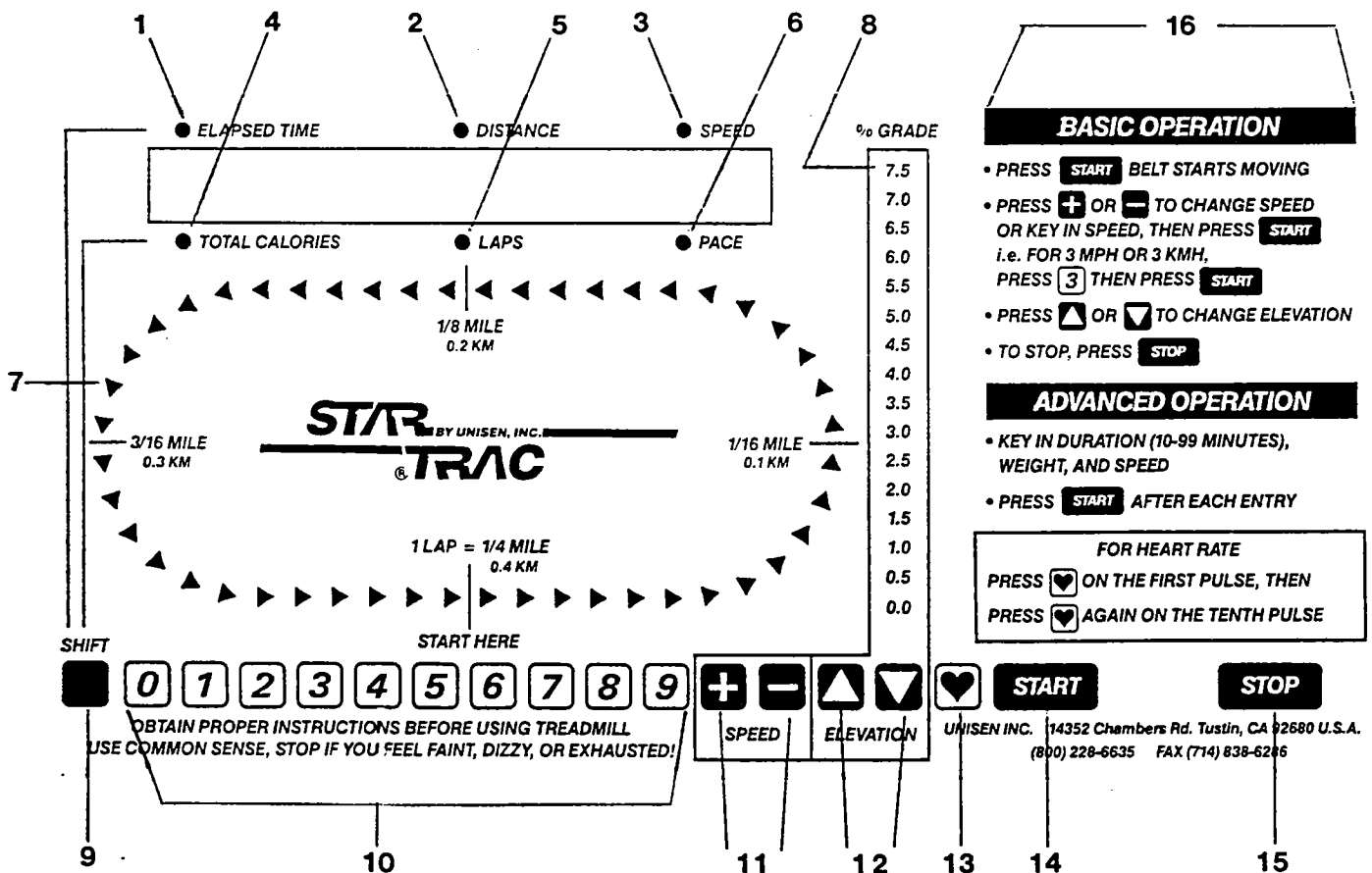
Advanced 25

STAR JOGGER 3000

- Display -

1. ELAPSED TIME
2. DISTANCE
3. SPEED
4. TOTAL CALORIES
5. LAPS
6. PACE
7. 1/4 MILE TRACK DISPLAY
8. ELEVATION DISPLAY
9. SHIFT KEY
10. NUMBER KEYS
11. SPEED CONTROL KEYS
12. ELEVATION CONTROL KEYS
13. HEART-RATE TIMER
14. START KEY
15. STOP KEY
16. INSTRUCTIONS

(jogger display)



FEATURE DESCRIPTIONS

The Star Trac treadmill is equipped to provide you unlimited exercise opportunities. Experiment with these features to find the right combination for you.

ELAPSED TIME - Displays duration of your workout in minutes and seconds.

DISTANCE - Displays your workout length in miles (kilometers).

SPEED - Displays speed in miles per hour (kilometers/hour). A slow walk is 2-3 mph (3.2-4.8 km/h). A faster walk is 4-5 mph (6.4-8 km/h). Jogging speeds begin at 5 mph (8 km/h).

SHIFT KEY - To access Total Calories, Laps and Pace displays, press the SHIFT key once. To return to Time, Distance and Speed, press the SHIFT key again.

TOTAL CALORIES - The treadmill automatically calculates your caloric expenditure based on your weight (in advanced or programmed modes). In BASIC OPERATION, user does not enter weight. Caloric expenditure is figured assuming you weigh 154 lbs. (70kg.).

LAPS - Displays your progress around the 1/4 mile (400 meter) track. Each time you pass the start line, the treadmill will add a lap to your workout.

PACE - Displays your workout speed in terms of the time required to complete one mile (minutes/mile or minutes/kilometer).

DISPLAY TRACK - The oval-shaped LED display shows your progress around a 1/4 mile (400 m) track, starting from the bottom center and moving counter-clockwise. When one lap has been completed, the entire track will be lit.

ELEVATION (Incline) - Raise or lower the front of the treadmill using the UP/DOWN keys. Elevation is adjustable from .5 - 7.5% in .5% increments. A flashing LED will display the elevation you desire. Hint - using elevation will burn more calories and strengthen your lower-body muscles.

NUMBER KEYS (optional on Simple displays) - Number keys correspond to the preset programs on the programmable unit. Use the numbers keys to respond to duration, weight, speed in program modes. Numbers keys also can be used to enter speed desired. For example, when operating any model, press "3" then START and the treadmill will go 3 mph (3 km/h).

HEART-RATE TIMER - To check your heart rate, pause treadmill and find the pulse on your neck. On the first pulse beat you feel, press the heart-shaped key. Count nine pulse beats and on the tenth beat, press the heart-shaped key again. Your heart rate will be displayed.

START KEY - To get started easily, step on the belt and press START. The belt starts very slowly, taking ten seconds to reach minimum start speed.

STOP KEY - Press the STOP key twice to end operation. The belt will come to a gradual stop. Do not attempt to jump off treadmill after pressing STOP. Rather, slow your pace along with the belt. By pressing the STOP key once, the treadmill pauses operation. During this period, the user has 20 seconds to catch a breather, towel off, get a drink, or check his/her heart rate. After pausing, user may press START to resume workout (treadmill will reset to minimum speed).

SPEED CONTROL KEYS - Adjust speed in .1 mph (km/h) increments using the PLUS or MINUS speed keys. NOTE: Pressing either of the speed keys will start the machine at minimum starting speed.

FINISH - Five beeps signal the end of a timed program and the numerical display cycles through -- FINISH -- the user's total elapsed time, distance covered, average speed, total calories, laps completed and average pace.

BEEP SOUNDS - During operation, every speed, incline or program adjustment you will hear a beep sound. This serves to warn the user that something is being changed.

STAR JOGGER 3000

- Operating Instructions -

After switching the power on, the Star Trac treadmill will display "UNISEN" and "BASIC OR CHOOSE 0 TO 9" until a key is pressed. At this time, the user may choose to operate the treadmill under **BASIC OPERATION** or **ADVANCED OPERATION**. In both these modes, the treadmill is entirely under the user's control. Speed and elevation can be changed upon command.

BASIC OPERATION -

In BASIC OPERATION, the users calorie expenditures is computed assuming the user's weight is 154 lbs.

1. Stand on treadmill's belt and press START. The running belt will slowly accelerate to its minimum speed of .5 mph (.8 km/h).

2. To adjust speed, use the speed ("+" or "-") keys.

You may also enter your desired speed using the number keys. Simply enter the speed you desire and press START. For example, if you want to walk 3 mph (3 km/h), press the key numbered "3" then press START. The treadmill will automatically increase speed until 3 mph (3 km/h) is reached.

3. To adjust elevation (or incline) use the "UP" or "DOWN" arrow keys. Elevation will adjust in .5% increments to 7.5%.

4. To end operation, press the STOP key, twice.

ADVANCED OPERATION -

In ADVANCED OPERATION, the users calorie expenditure is precisely computed based on the information keyed in by the user.

1. Press "0". Respond to duration, weight, time and speed using the number keys. Remember to press START after each entry. This programming option allows the user to determine a workout length and speed.

NOTE: To pause operation, press the STOP key once. You can resume operation at minimum speed by pressing the START key within 20 seconds of pausing operation. This allows the user time to catch a breather, towel off, get a drink, or check his/her heart rate. After 20 seconds, the treadmill will automatically reset to the opening display.

STAR WALKER 3000

- Operating Instructions -

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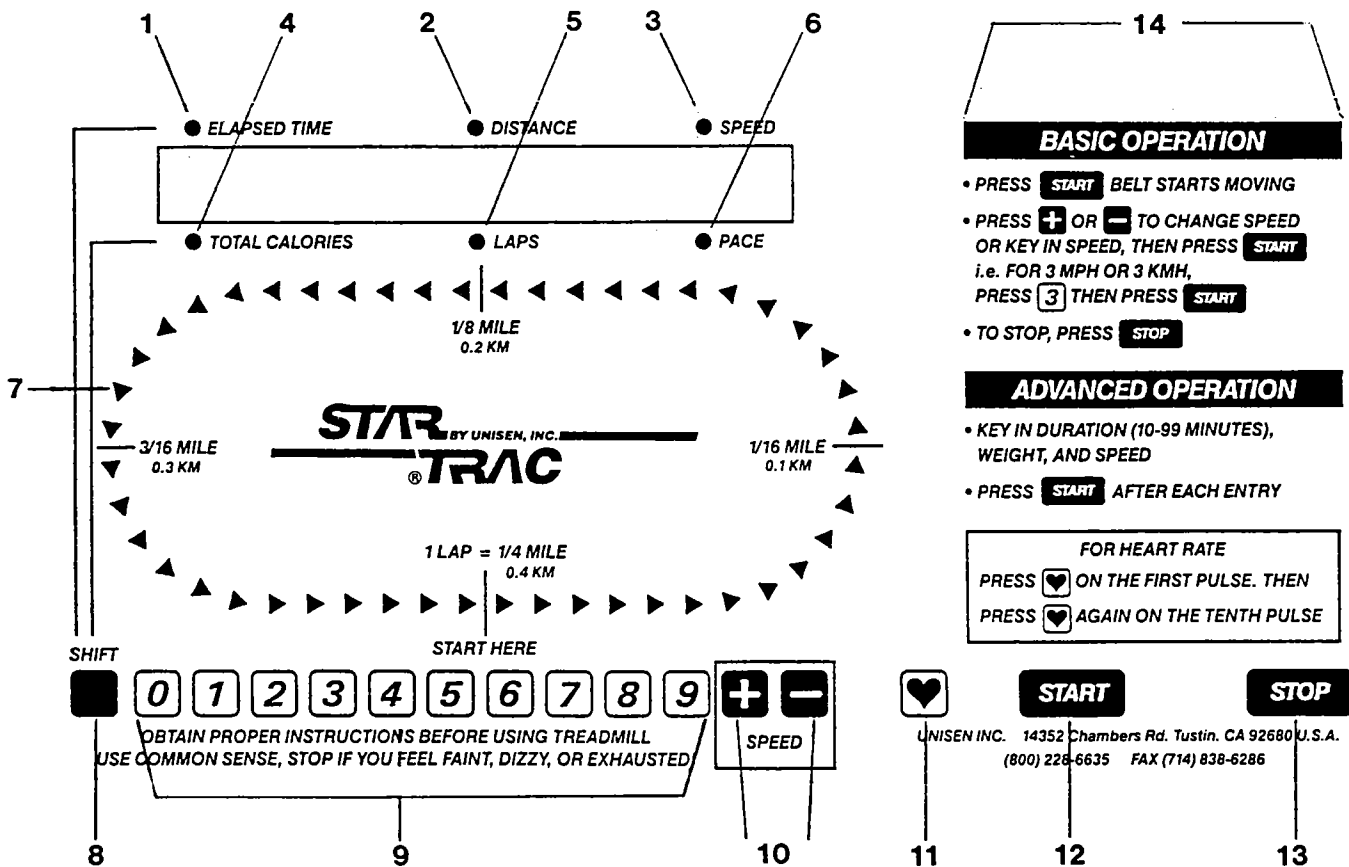
Advanced 29

STAR WALKER 3000

- Display -

1. ELAPSED TIME
2. DISTANCE
3. SPEED
4. TOTAL CALORIES
5. LAPS
6. PACE
7. 1/4 MILE TRACK DISPLAY
8. SHIFT KEY
9. NUMBER KEYS
10. SPEED CONTROL KEYS
11. HEART-RATE TIMER
12. START KEY
13. STOP KEY
14. INSTRUCTIONS

(walker display)



FEATURE DESCRIPTIONS

The Star Trac treadmill is equipped to provide you unlimited exercise opportunities. Experiment with these features to find the right combination for you.

ELAPSED TIME - Displays duration of your workout in minutes and seconds.

DISTANCE - Displays your workout length in miles (kilometers).

SPEED - Displays speed in miles per hour (kilometers/hour). A slow walk is 2-3 mph (3.2-4.8 km/h). A faster walk is 4-5 mph (6.4-8 km/h). Jogging speeds begin at 5 mph (8 km/h).

SHIFT KEY - To access Total Calories, Laps and Pace displays, press the SHIFT key once. To return to Time, Distance and Speed, press the SHIFT key again.

TOTAL CALORIES - The treadmill automatically calculates your caloric expenditure based on your weight (in advanced or programmed modes). In BASIC OPERATION, user does not enter weight so caloric expenditure is figured assuming user weighs 154 lbs. (70kg).

LAPS - Displays your progress around the 1/4 mile (400 meter) track. Each time you pass the start line, the treadmill will add a lap to your workout.

PACE - Displays your workout speed in terms of the time required to complete one mile (minutes/mile or minutes/kilometer).

DISPLAY TRACK - The oval-shaped LED display shows your progress around a 1/4 mile (400 m) track, starting from the bottom center and moving counter-clockwise. When one lap has been completed, the entire track will be lit.

NUMBER KEYS (optional on Simple displays) - Number keys correspond to the preset programs on the programmable unit. Use the numbers keys to respond to duration, weight, speed in program modes. Numbers keys also can be used to enter speed desired. For example, when operating any model, press "3" then START and the treadmill will go 3 mph (3 km/h).

HEART-RATE TIMER - To check your heart rate, pause treadmill and find the pulse on your neck. On the first pulse beat you feel, press the heart-shaped key. Count nine pulse beats and on the tenth beat, press the heart-shaped key again. Your heart rate will be displayed.

START KEY - To get started easily, step on the belt and press START. The belt starts very slowly, taking ten seconds to reach minimum start speed.

STOP KEY - Press the STOP key twice to end operation. The belt will come to a gradual stop. Do not attempt to jump off treadmill after pressing STOP. Rather, slow your pace along with the belt. By pressing the STOP key once, the treadmill pauses operation. During this period, the user has 20 seconds to catch a breather, towel off, get a drink, or check his/her heart rate. After pausing, user may press START to resume workout (treadmill will reset to minimum speed).

SPEED CONTROL KEYS - Adjust speed in .1 mph (km/h) increments using the PLUS or MINUS speed keys. NOTE: From a stopped condition, pressing either of the speed keys will start the machine at its minimum starting speed (.1 mph).

FINISH - Five beeps signal the end of a timed program and the numerical display cycles through -- FINISH -- the user's total elapsed time, distance covered, average speed, total calories, laps completed and average pace.

BEEP SOUNDS - During operation, every speed, incline or program adjustment you will hear a beep sound. This serves to warn the user that something is being changed.

STAR WALKER 3000

- Operating Instructions -

After switching the power on, the Star Trac treadmill will display "UNISEN" and "BASIC OR CHOOSE 0 TO 9" until a key is pressed. At this time, the user may choose to operate the treadmill under **BASIC OPERATION** or **ADVANCED OPERATION**. In both these modes, the treadmill is entirely under the user's control. Speed and elevation can be changed upon command.

BASIC OPERATION -

In BASIC OPERATION, the users calorie expenditures is computed assuming the user's weight is 154 lbs.

1. Stand on treadmill's belt and press START. The running belt will slowly accelerate to .1 mph (1 km/h).

2. To adjust speed, use the speed ("+" or "-") keys.

You may also enter your desired speed using the number keys. Simply enter the speed you desire and press START. For example, if you want to walk 3 mph (3 km/h), press the key numbered "3" then press START. The treadmill will automatically increase speed until 3 mph (3 km/h) is reached.

3. To end operation, press the STOP key, twice.

ADVANCED OPERATION -

In ADVANCED OPERATION, the users calorie expenditure is precisely computed based on the information keyed in by the user.

1. Press "0". Respond to duration, weight, time and speed using the number keys. Remember to press START after each entry. This programming option will allow the user to determine a workout length and speed.

NOTE: To pause operation, press the STOP key, once. You can resume operation at minimum speed by pressing the START key within 20 seconds of pausing operation. This allows the user time to catch a breather, towel off, get a drink, or check his/her heart rate. After 20 seconds, the treadmill will automatically reset to the opening display.

PREVENTIVE MAINTENANCE

- STAR TRAC 3000 SERIES -

Performing regular preventive maintenance is important to the life of Star Trac treadmill. If these simple procedures are not performed, normal wear and tear may cause cumulative effects. Some parts may come out of alignment or be worn causing other parts to do likewise. This may result in a severe breakdown. For this reason, we highly recommend the following preventive maintenance schedule be followed consistently. Also, any unusual symptoms[†] (i.e. error readings, blowing circuit breakers) should be recorded and reported by calling the *Star Trac Service Hotline 800-535-4634*.

PREVENTIVE MAINTENANCE SCHEDULE

Daily:

1. Remove excessive accumulations of dust, dirt or other substances from the Star Trac with a cloth and diluted all-purpose cleaner (409, Fantastic). Avoid using cleaner under running belt.
2. Clean between the belt and the running board with a soft, dry cloth. This is vital to the longevity of the running belt.
3. Inspect running belt for alignment and tension. (This does not mean tighten the belt every day, just make sure it is running straight and smooth.) If the running belt slips, check tension of drive belt first.
4. Inspect power cord. Make sure it is not damaged and does not run underneath the treadmill.
5. Wipe the display panel, console, handrails and motor cover with a soft, clean cloth and diluted, all-purpose cleaner.

Weekly:

1. Vacuum the floor under and around the treadmill. Either elevate the treadmill to its maximum or carefully wheel the unit to another spot and then vacuum.
2. Inspect the deck/belt contact surfaces for unusual wear. A worn belt will have a melted or glazed appearance on its underside. A worn deck will have areas where the underlying fiber board is visible. If the deck is worn, it needs to be flipped or replaced. (Do not install a new belt if only the deck needs to be replaced.) If the belt is worn, replace it.
3. Check handrails for loosening of assembly screws.

Twice-a-Month:

1. Elevate motor shroud and vacuum around the motor, the ventilation holes in the motor and motor shroud. Avoid bumping or damaging parts located under the motor shroud.

Monthly:

NOTE: On a monthly basis, Star Trac's electronic calibrations should be checked for complete accuracy. The following procedures should occur while the treadmill is in "Test Mode." Enter test mode by switch power "ON" simultaneously with the "8" key.

1. Verify calibrations on VR2. See "Voltage Compensation Adjustments" in the owner's manual.

2. Clean RPM sensor and disc before proceeding. Verify RPM sensor calibration while in test mode after VR2 adjustment. Run the treadmill at 3.5 mph (5.6 km/h). The elevation percent grade display (0-15) should have 0-7 LED's lit with #8 LED blinking. If this is not the case, adjust the potentiometer (identical to VR2) on the RPM sensor. Make sure RPM sensor is clean.

3. Wipe with a dry cloth and lubricate elevation screws with silicon lubricant. Verify VR3 calibration (EI Speed Adjustment) in test mode push "up" arrow key and monitor time elapsed column for indicated speed. It should read between 55-60 while elevating. If not turn VR3 clockwise to increase - counterclockwise to decrease.

MAINTENANCE

- STAR TRAC 3000 SERIES -

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- Running belt
- Motor belt
- Elevation belt

MOTOR TEST MODE

3000 Programmable

MOTOR TEST MODE

DO NOT RUN ON TREADMILL WHILE IN MOTOR TEST MODE. Reference "diagram #1", page 33.

The Star Trac 3000 treadmill is self-diagnostic which means should your treadmill experience a problem, it's sensors can determine the precise reason for the error. When this happens, call Star Trac's Service Hotline at 800-228-6635 and have the displayed error code handy. The technician will most likely ask you to put the machine into a diagnostic test mode to determine the problem. Use the following directions:

I. Entering Motor Test Mode

- A. Turn the power switch on while pressing the No.8 key simultaneously on the display.
- B. The display will read: 0 3 0.0.
See diagram #1, page 33.

II. Elevation Speed Adjustment

- A. The elevation system is controlled directly by the elevation arrow keys. The treadmill should elevate up or down while pressing the appropriate key.
 - 1. Elevation motor speed (1) should read between 55 - 60 revolutions per second, going up with no load. Downward speed will be slightly faster.
- B. If elevation speed is not within these parameters:
 - 1. Check elevation screws for proper lubrication.
 - 2. Adjust VR3 on motor control board. See diagram #2, pg. 32A (If your machine does not have this, call 800-228-6635.)
 - a. Increase speed with clockwise rotation.
 - b. Decrease speed with counter-clockwise rotation.

C. Verifying elevation sensor output.

- 1. Preset program LEDs 3 and 7 should toggle on and off when elevation motor is running.

D. Verifying 0% grade switch

- 1. At 0% grade check program LEDs:
 - a. LED 4 will be on and LED 8 will be off.
- 2. Above 0% grade
 - a. LED 8 will be on and LED 4 will be off

NOTE: Treadmill will not display actual elevation during motor test mode.

III. Running belt threshold adjustment

- A. Reading (2) at 3 running belt should not move.
- B. Press the "+" or "FAST" key. Get (2) to read 18. The running belt should move at least 1 inch per second.
- C. If not:
 - 1. Adjust VR2 on motor control board. See diagram #2, pg 32A
 - 2. Check drive motor brushes for wear. Brushes shorter than .8" need to be replaced.

IV. RPM - Sensor duty cycle adjustment.

- A. Press the "+" or "FAST" key. Get (C) to read 3.5 mph
 - 1. Check elevation LEDs. 0-7 should be lit and 8 will be blinking.
- B. Verify RPM sensor output.
 - 1. Preset program LEDs, 1,2 and 5, 6 will toggle on and off when belt is in motion.
 - 2. If not:
 - a. Check the alignment of the RPM disc.
 - b. Check for excessive dust on the RPM sensor and disc.
 - c. Adjust RPM sensor pot to attain 50% lit elevation display. See diagram #3, pg. 32A.

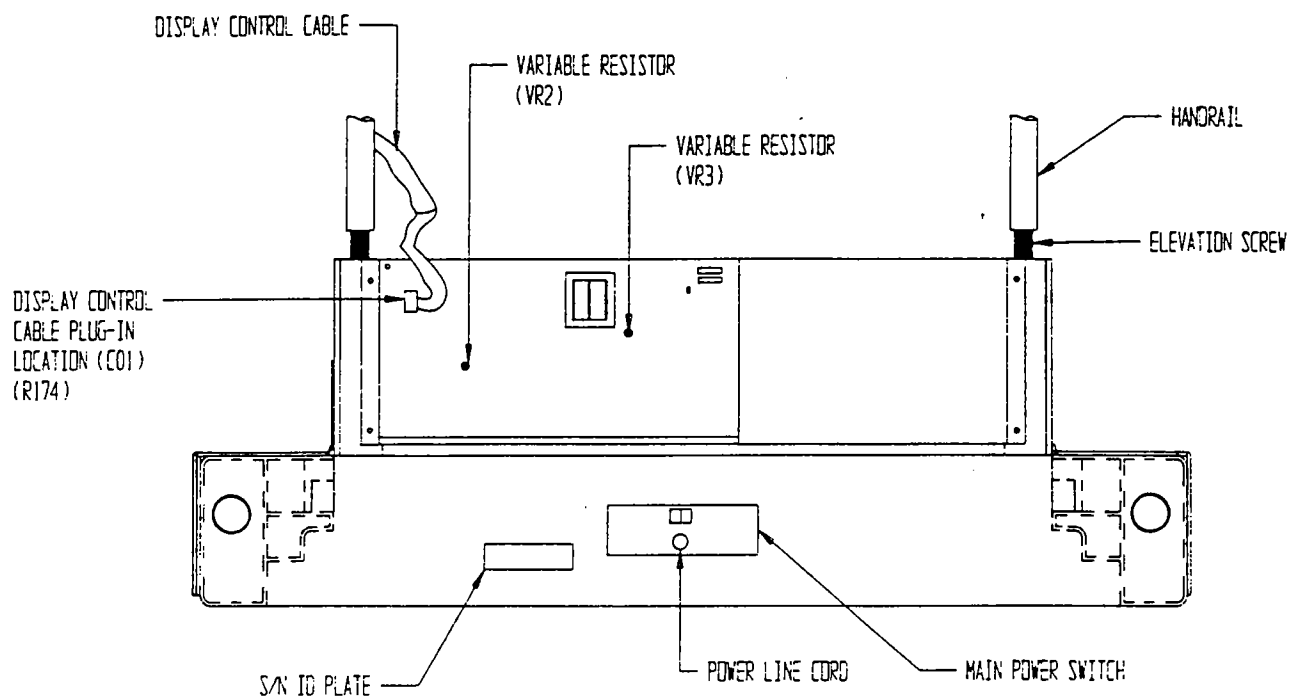
V. To end Motor Test Mode

- A. Press "STOP" or turn off treadmill, wait four seconds, turn back on.

VI. Disabling Elevation Motor

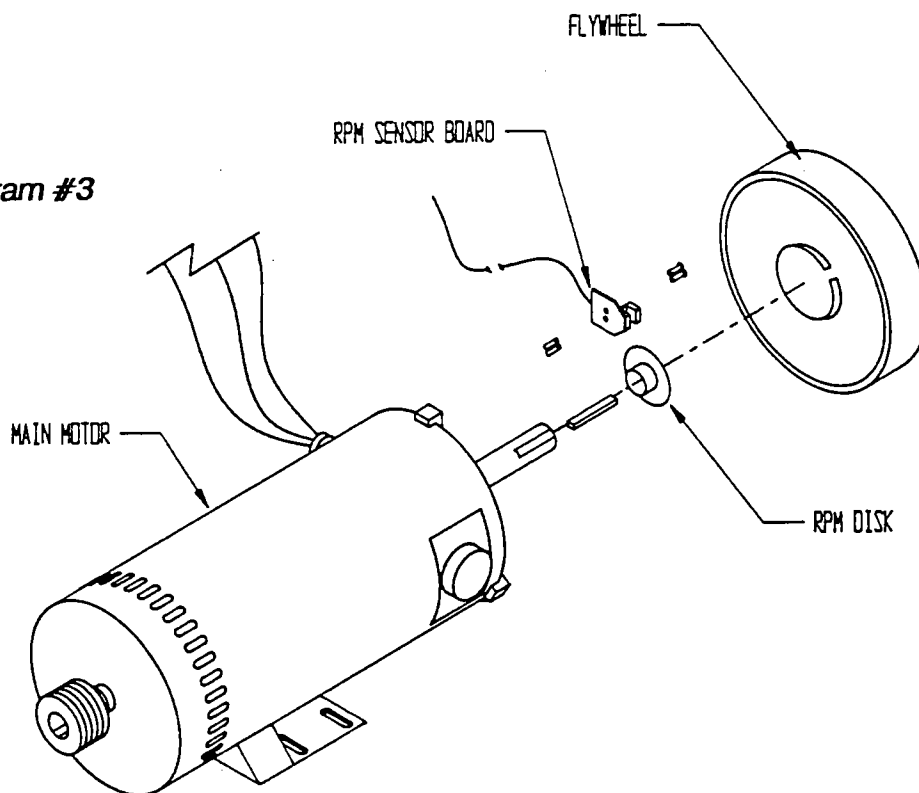
- A. Turn power switch on while pressing "0" key simultaneously.
- Note: Elevation motor will be disabled until power is turned off.

Diagram #2



DISPLAY CONTROL CABLE CONNECTION ASSEMBLY

Diagram #3



FLYWHEEL AND MOTOR ASSEMBLY

STAR TRAC 3000 - PROGRAMMABLE

- Diagram #1 -

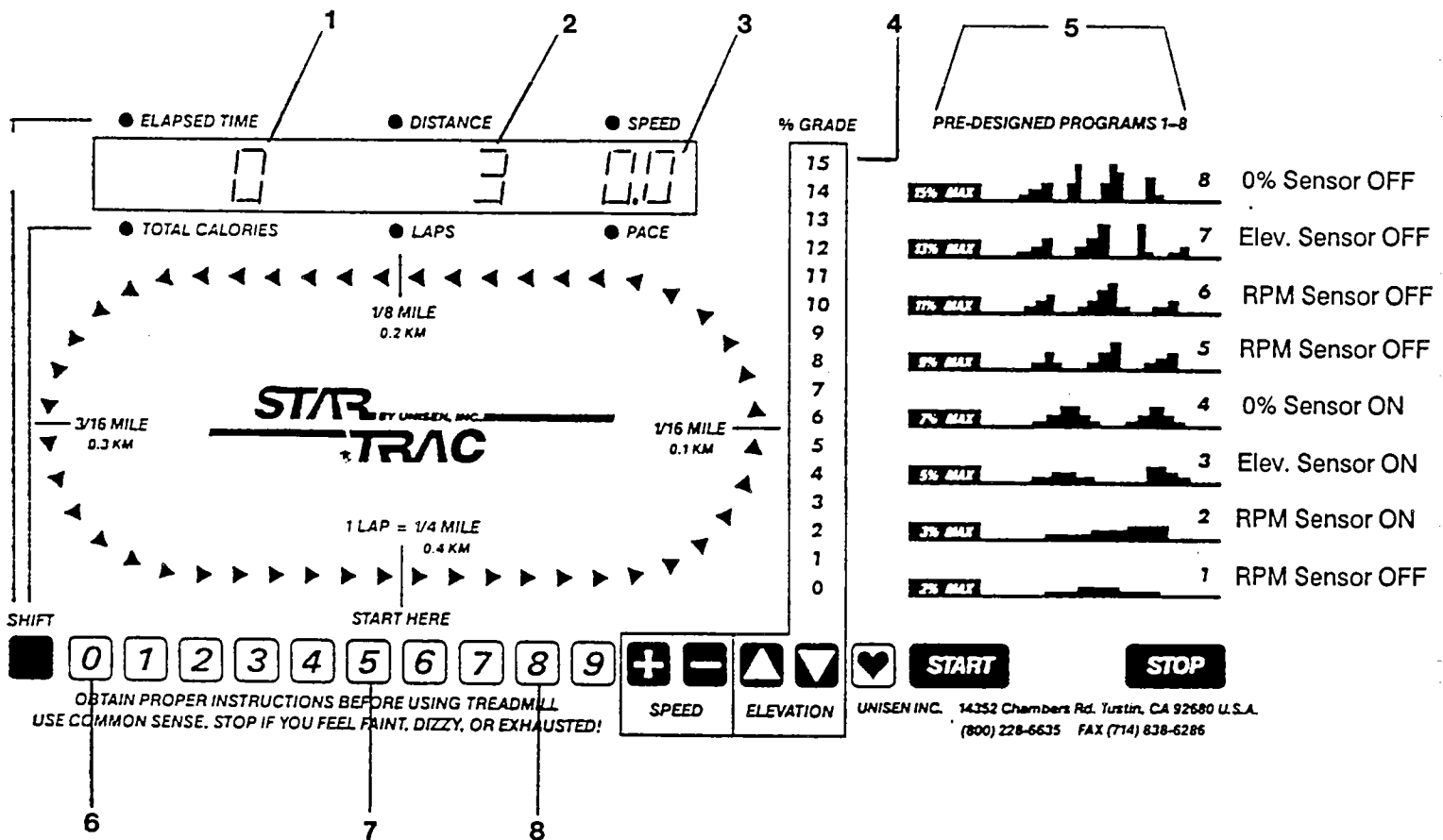
MOTOR TEST MODE DISPLAY FUNCTIONS

1. Elevation speed adjustment reading
2. Running belt threshold adjustment reading
3. RPM speed reading
4. RPM sensor duty cycle display
5. Preset program LEDs

START UP SENSITIVE KEYS

If any of the following keys are pressed while switching power on, the treadmill will respond accordingly to the listed function, i.e. "8" pressed while switching power on, will put the treadmill into Motor Test Mode.

6. Elevation off
7. Display Test Mode
8. Motor Test Mode



DISPLAY TEST MODE

3000 PROGRAMMABLE

Display Test Mode

The Star Trac 3000 treadmill is self-diagnostic which means should your treadmill experience a problem, it's sensors can determine the precise reason for the error. When this happens, call Star Trac's Service Hotline at 800-228-6635 and have the displayed error code handy. The technician will most likely ask you to put the machine into a diagnostic test mode to determine the problem. Use the following directions:

I. Entering display test mode

- A. Turn the power switch on while holding down No.5 key simultaneously on the display.
- B. All the display LEDs should be lit.

NOTE: If you cannot get into display test mode, you may need to replace the display. Call 800-228-6635 for help.

II. Checking E-PROM version

- A. Press any key, except STOP, on display
 - 1. E-PROM number will be displayed.

III. Checking key pad response

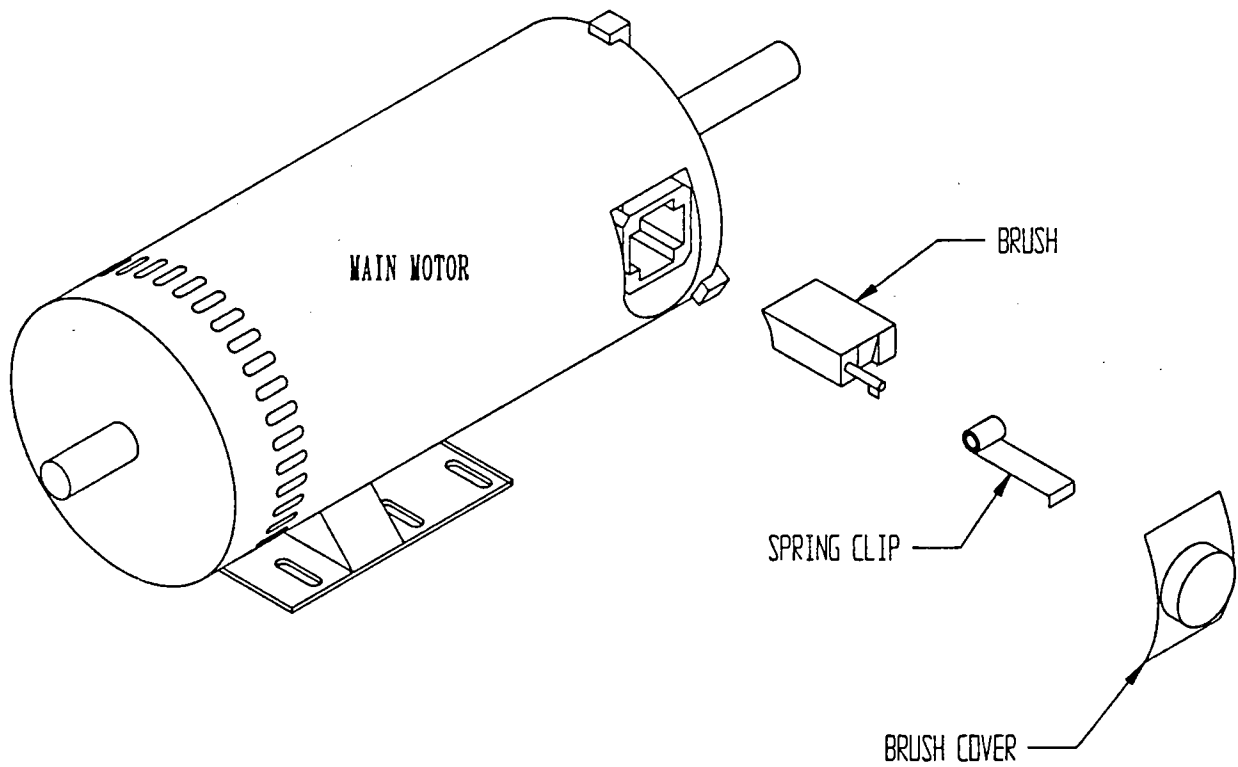
- A. Press each key on display, except for "STOP" key.
 - 1. Each key should give an audible signal and different display patterns.
 - 2. If not, you may need to replace keypad.
- B. Press "STOP" key to end display board test.

DIAGRAMS

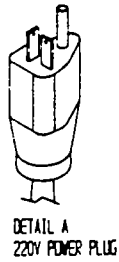
3000 PROGRAMMABLE

- Drive Motor Brushes
- Power Cord
- Wiring

METHOD OF ASSEMBLY MIRRORED BOTH SIDES



2.0 HP MOTOR BRUSH ASSEMBLY

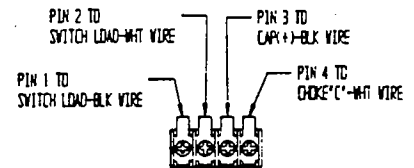
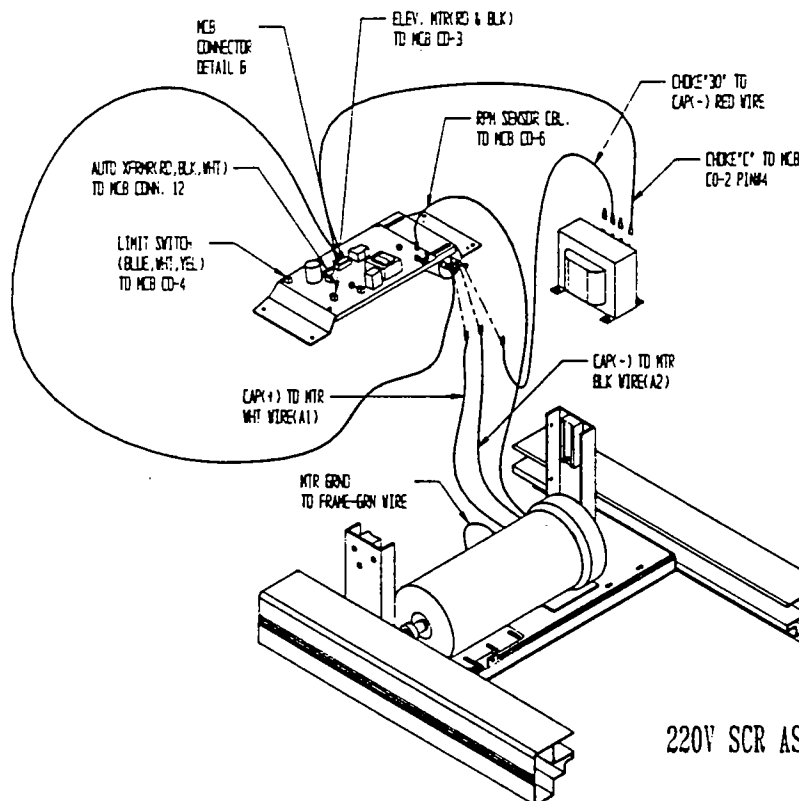


NOTES:

- ① BLACK WIRE
- ② WHITE WIRE
- ③ GREEN TO GROUND (FRAME)
- ④ #1 WIRE, TO PIN #1 OF CO-2 OF MCB
- ⑤ #2 WIRE, TO PIN #2 OF CO-2 OF MCB

SEE DETAIL A

220V FRONT SHROUD ASSY.



MOTOR TEST MODE

3000 Simple

MOTOR TEST MODE

DO NOT RUN ON TREADMILL WHILE IN MOTOR TEST MODE. Reference "diagram #4", page 37.

The Star Trac 3000 treadmill is self-diagnostic which means should your treadmill experience a problem, it's sensors can determine the precise reason for the error. When this happens, call Star Trac's Service Hotline at 800-228-6635 and have the displayed error code handy. The technician will most likely ask you to put the machine into a diagnostic test mode to determine the problem. Use the following directions:

I. Entering Motor Test Mode

- A. Turn the power switch on while pressing the "-" ("8" with numbers display) key simultaneously on the display.
- B. The display will read: 0 3 0.0
See diagram #5, page 38 (#4 with numbers, page 37)

II. Elevation Speed Adjustment

- A. The elevation system is controlled directly by the elevation arrow keys. The treadmill should elevate up or down while pressing the appropriate key.
 - 1. Elevation motor speed (1) should read between 55 - 60 revolutions per second, going up with no load. Downward speed will be slightly faster.
- B. If elevation speed is not within these parameters:
 - 1. Check elevation screws for proper lubrication.
 - 2. Adjust VR3 on motor control board. See diagram #2, pg. 32A
 - a. Increase speed with clockwise rotation.
 - b. Decrease speed with counter-clockwise rotation.

NOTE: If you cannot find the VR3, call 800-228-6635 for help.

- C. Verifying elevation sensor output.
 - 1. Total calories and laps LEDs will toggle on and off when elevation motor is running.
- D. Verifying 0% switch
 - 1. At 0% check "% grade" LEDs
 - a. LED 15 will be on.
 - 2. Above 0%
 - a. LED 15 should be off.

III. Running belt threshold adjustment

- A. Reading (2) at 3 running belt should not move.
- B. Press the "+" or "FAST" key. Get (2) to read 18. The running belt should move at least 1 inch per second.
- C. If not:
 - 1. Adjust VR2 on motor control board. See diagram #2, pg. 32A
 - 2. Check drive motor brushes for wear. Brushes shorter than .8" need to be replaced.

IV. RPM - Sensor duty cycle adjustment.

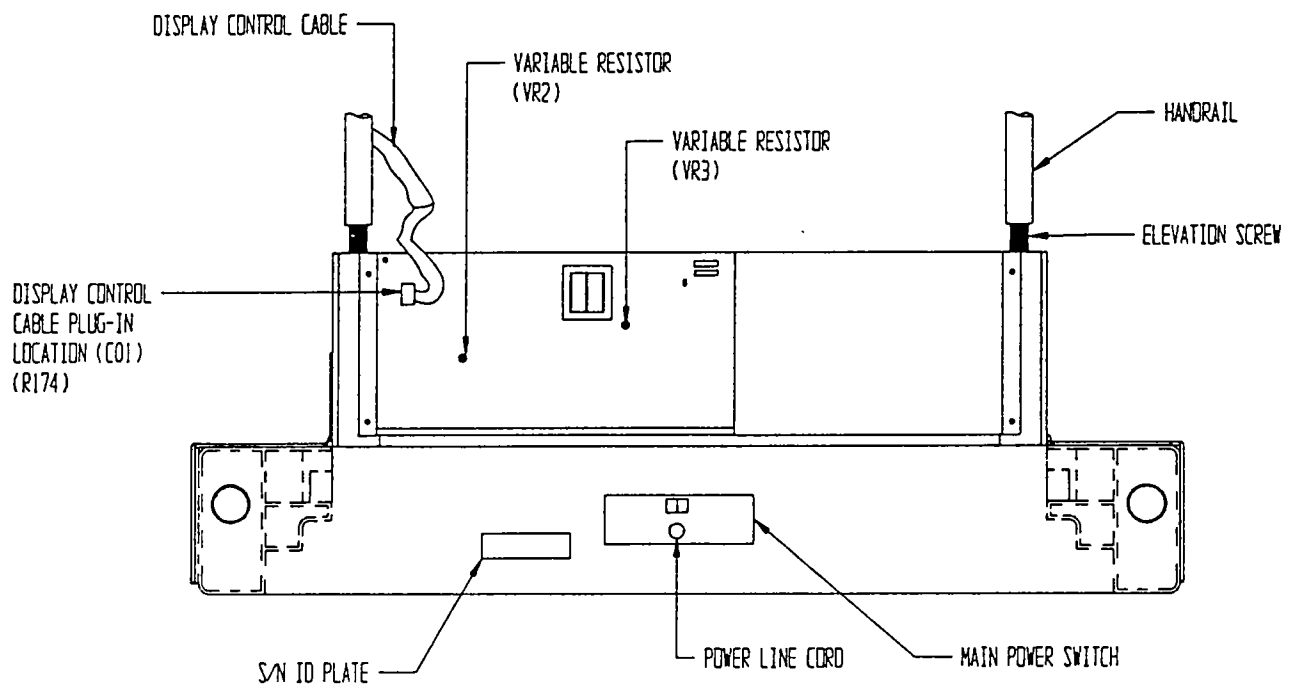
- A. Press the "+" or "FAST" key. On diagram #4,5, increase speed to 3.5 mph.
 - 1. Check elevation LEDs. 0-7 should be lit and 8 will be blinking.
- B. Verify RPM sensor output.
 - 1. Elapsed time and distance LEDs, will toggle on and off when belt is in motion.
 - 2. If not:
 - a. Check the alignment of the RPM disc.
 - b. Check for excessive dust on the RPM sensor and disc.
 - c. Adjust RPM sensor pot to attain 50% lit elevation display. See diagram #3 pg. 32A.

V. To end Motor Test Mode

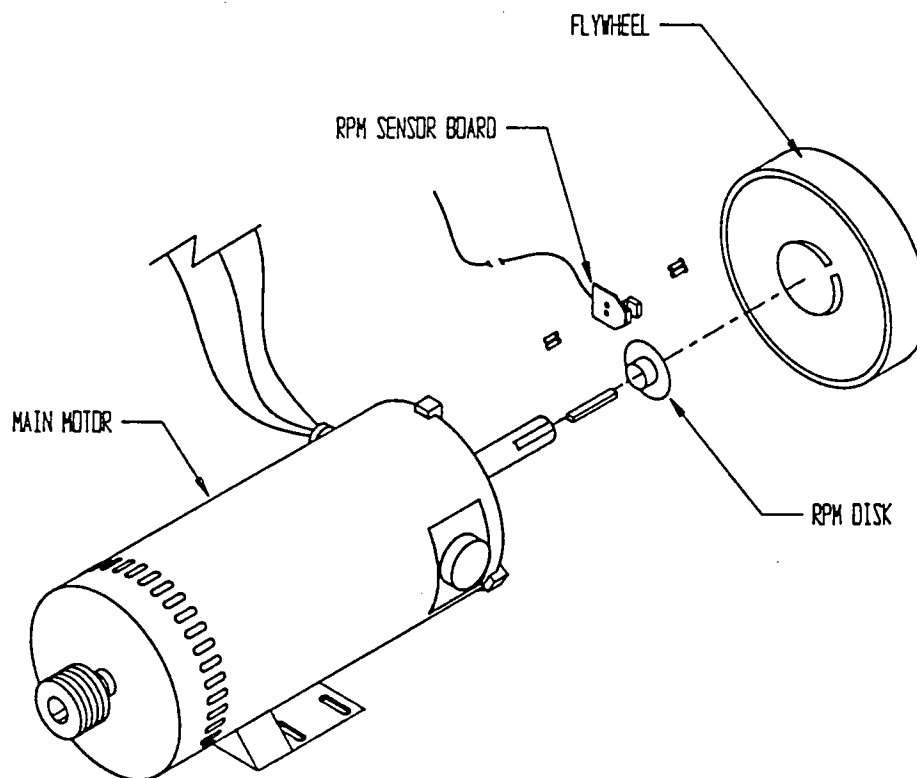
- A. Press "STOP" or turn off treadmill, wait four seconds, turn back on.

VI. Disabling Elevation Motor

- A. Turn power switch on while pressing "UP" ("0" with numbers display) key simultaneously.
Note: Elevation motor be disabled until power is turned off.



DISPLAY CONTROL CABLE CONNECTION ASSEMBLY



FLYWHEEL AND MOTOR ASSEMBLY

STAR TRAC 3000 - SIMPLE with numbers

- Diagram #4 -

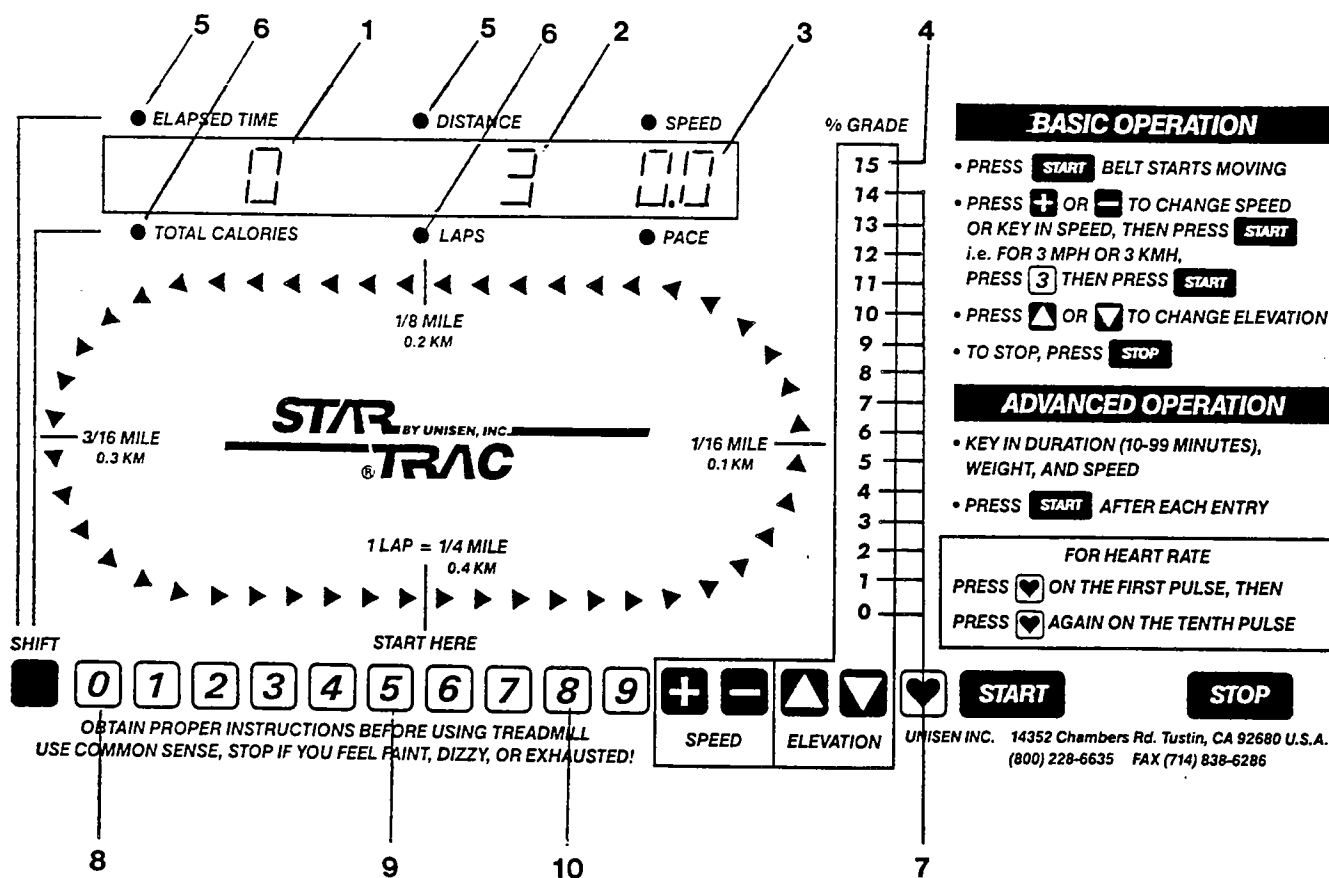
MOTOR TEST MODE DISPLAY FUNCTIONS

1. Elevation speed adjustment reading
2. Running belt threshold adjustment reading
3. RPM speed reading
4. 0% grade indicator
5. RPM Sensor Output Indicators
6. Elevation Sensor output indicators
7. RPM sensor duty cycle display

START UP SENSITIVE KEYS

If any of the following keys are pressed while switching power on, the treadmill will respond accordingly to the listed function, i.e. "8" pressed while switching power on, will put the treadmill into Motor Test Mode.

8. Elevation OFF
9. Display test mode
10. Motor test mode



STAR TRAC 3000 - SIMPLE without numbers

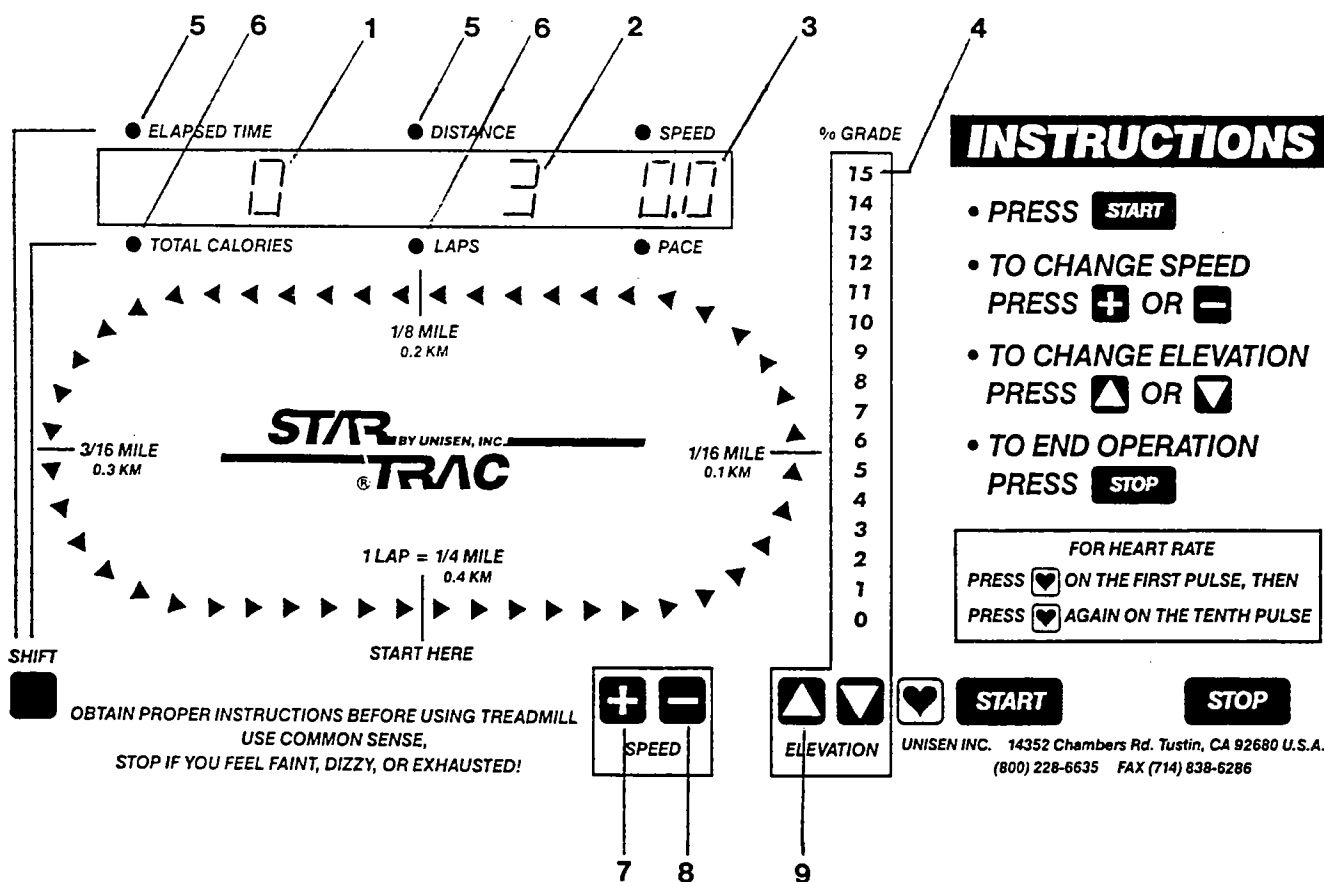
- Diagram #5 -

1. Elevation speed adjustment reading
2. Running belt threshold adjustment reading
3. Speed reading (mph, kmh)
4. 0% grade LED
5. RPM Sensor Output Indicators
6. Elevation Sensor output indicators

START UP SENSITIVE KEYS

If any of the following keys are pressed while switching power on , the treadmill will respond accordingly to the listed function, i.e. "8" pressed while switching power on, will put the treadmill into Motor Test Mode.

7. Display test
8. Motor test mode
9. Elevation off



DISPLAY TEST MODE

3000 SIMPLE

Display Test Mode

The Star Trac 3000 treadmill is self-diagnostic which means should your treadmill experience a problem, it's sensors can determine the precise reason for the error. When this happens, call Star Trac's Service Hotline at 800-228-6635 and have the displayed error code handy. The technician will most likely ask you to put the machine into a diagnostic test mode to determine the problem. Use the following directions:

I. Entering display test mode

- A. Turn the power switch on while holding down the "+" ("5" with numbers display) simultaneously on the display.
- B. All the display LEDs should be lit.

II. Checking E-PROM

- A. Press any key, except stop, on display
 - 1. E-PROM number will be displayed.

III. Checking key pad response

- A. Press each key on display, except for "STOP" key.
 - 1. Each key should give an audible signal and different display pattern.
 - 2. If not, you may need to replace keypad.
- B. Press "STOP" key to end display board test.

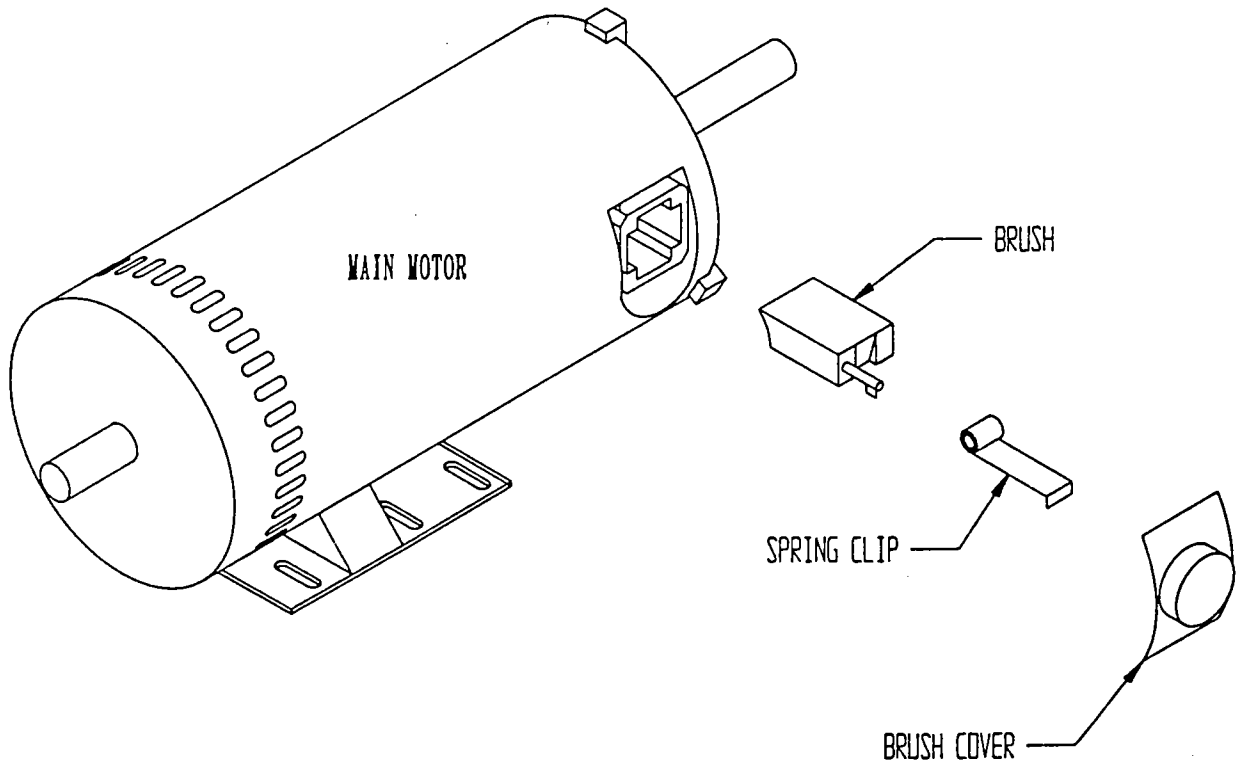
NOTE: If you cannot get into display test mode, you may need to replace key pad.

DIAGRAMS

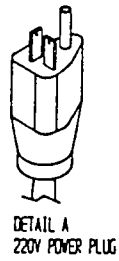
3000 SIMPLE

- Drive Motor Brushes
- Power Cord
- Wiring

METHOD OF ASSEMBLY MIRRORED BOTH SIDES



2.0 HP MOTOR BRUSH ASSEMBLY

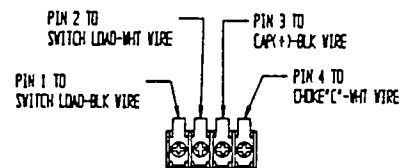
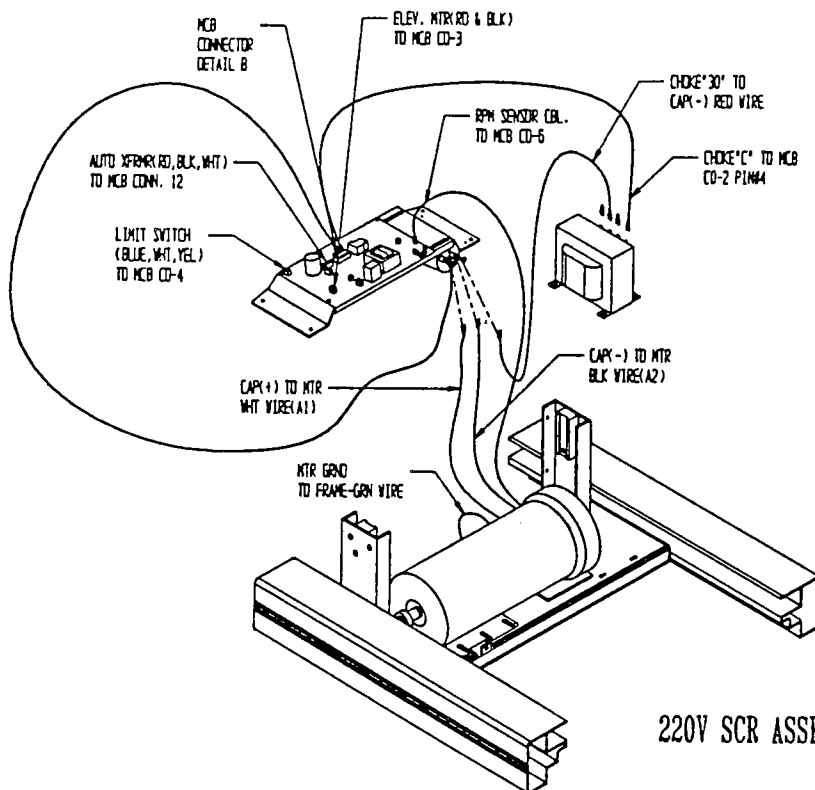


NOTES:

- ① BLACK WIRE
- ② WHITE WIRE
- ③ GREEN TO GROUND (FRAME)
- ④ #1 WIRE, TO PIN #1 OF CO-2 OF MCB
- ⑤ #2 WIRE, TO PIN #2 OF CO-2 OF MCB

SEE DETAIL A

220V FRONT SHROUD ASSY.



MOTOR TEST MODE

3000 JOGGER

MOTOR TEST MODE

DO NOT RUN ON TREADMILL WHILE IN MOTOR TEST MODE. Reference "diagram #6", page 42.

The Star Jogger 3000 treadmill is self-diagnostic which means should your treadmill experience a problem, it's sensors can determine the precise reason for the error. When this happens, call Star Trac's Service Hotline at 800-228-6635 and have the displayed error code handy. The technician will most likely ask you to put the machine into a diagnostic test mode to determine the problem. Use the following directions:

I. Entering Motor Test Mode

- A. Turn the power switch on while pressing the No.8 key simultaneously on the display.
- B. The display will read: 0 3 0.0.
See diagram #6, page 42.

II. Elevation Speed Adjustment

- A. The elevation system is controlled directly by the elevation arrow keys. The treadmill should elevate up or down while pressing the appropriate key.
 - 1. Elevation motor speed (1) should read between 55 - 60 revolutions per second, going up with no load. Downward speed will be slightly faster.

- B. If elevation speed is not within these parameters:

- 1. Check elevation screws for proper lubrication.
- 2. Adjust VR3 on motor control board. See diagram #2, pg. 32A (If your machine does not have this, call 800-228-6635.)
 - a. Increase speed with clockwise rotation.
 - b. Decrease speed with counter-clockwise rotation.

- C. Verifying elevation sensor output.

- 1. Preset program LEDs, lights 3 and 7 should toggle on and off when elevation motor is running.

- D. Verifying 0% grade switch

- 1. At 0% grade check program LEDs:
 - a. LED 4 will be on and LED 8 will be off.
- 2. Above 0% grade
 - a. LED 8 will be on and LED 4 will be off

NOTE: Treadmill will not display actual elevation during motor test mode.

III. Running belt threshold adjustment

- A. Reading (2) at 3 running belt should not move.
- B. Press the "+" or "FAST" key. Get (2) to read 18. The running belt should move at least 1 inch per second.
- C. If not:

- 1. Adjust VR2 on motor control board. See diagram #2, pg. 32A
- 2. Check drive motor brushes for wear. Brushes shorter than .8" need to be replaced.

IV. RPM - Sensor duty cycle adjustment.

- A. Press the "+" or "FAST" key. Get (C) to read 3.5 mph

- 1. Check elevation LEDs. 0-7 should be lit and 8 will be blinking.

- B. Verify RPM sensor output.

- 1. Preset program LEDs, 1,2 and 5, 6 will toggle on and off when belt is in motion.
- 2. If not:

- a. Check the alignment of the RPM disc.
- b. Check for excessive dust on the RPM sensor and disc.
- c. Adjust RPM sensor pot to attain 50% lit elevation display. See diagram #3 pg. 32A

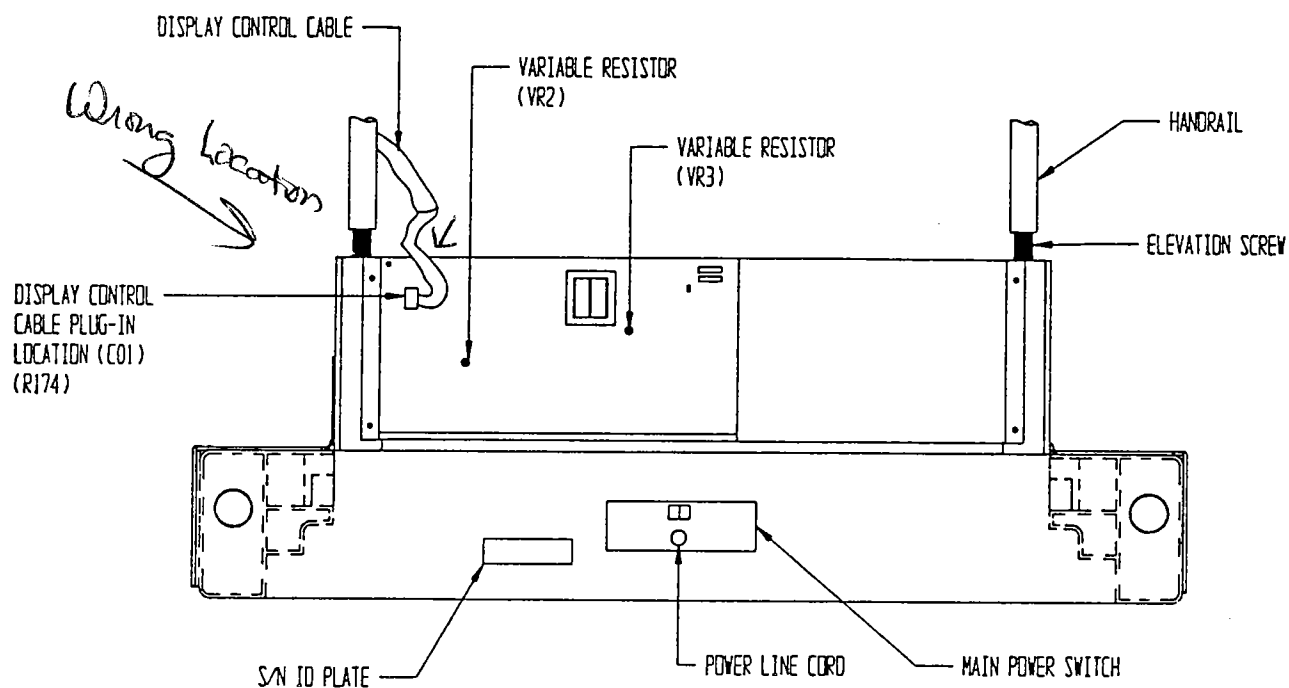
V. To end Motor Test Mode

- A. Press "STOP" or turn off treadmill, wait four seconds, turn back on.

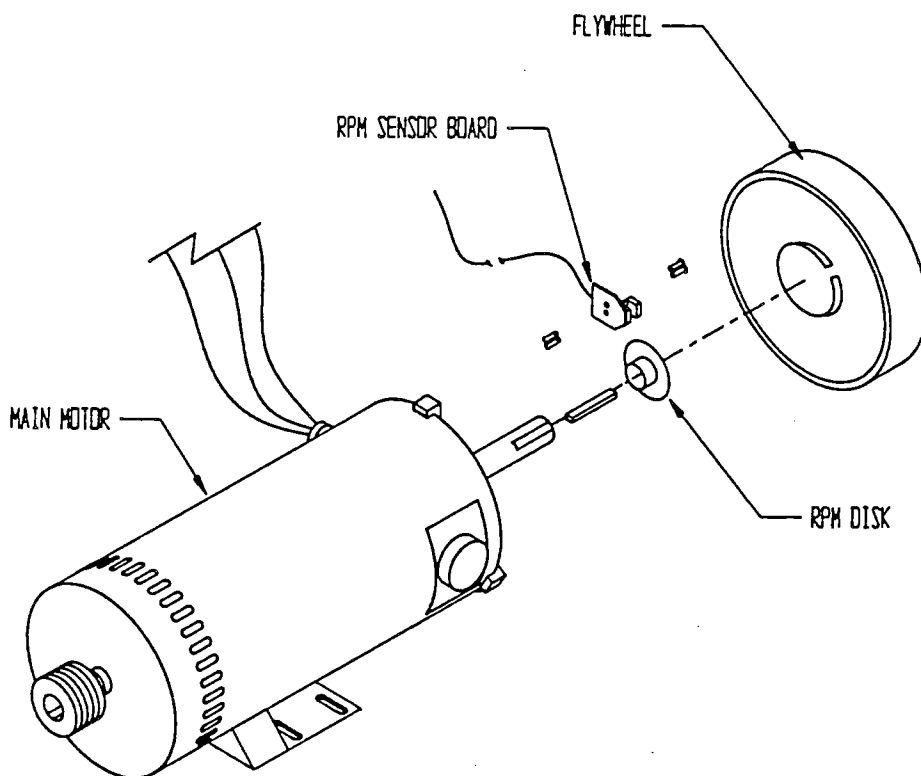
VI. Disabling Elevation Motor

- A. Turn power switch on while pressing "0" key simultaneously.

Note: Elevation motor will be disabled until power is turned off.



DISPLAY CONTROL CABLE CONNECTION ASSEMBLY



FLYWHEEL AND MOTOR ASSEMBLY

STAR JOGGER 3000

- Diagram #6 -

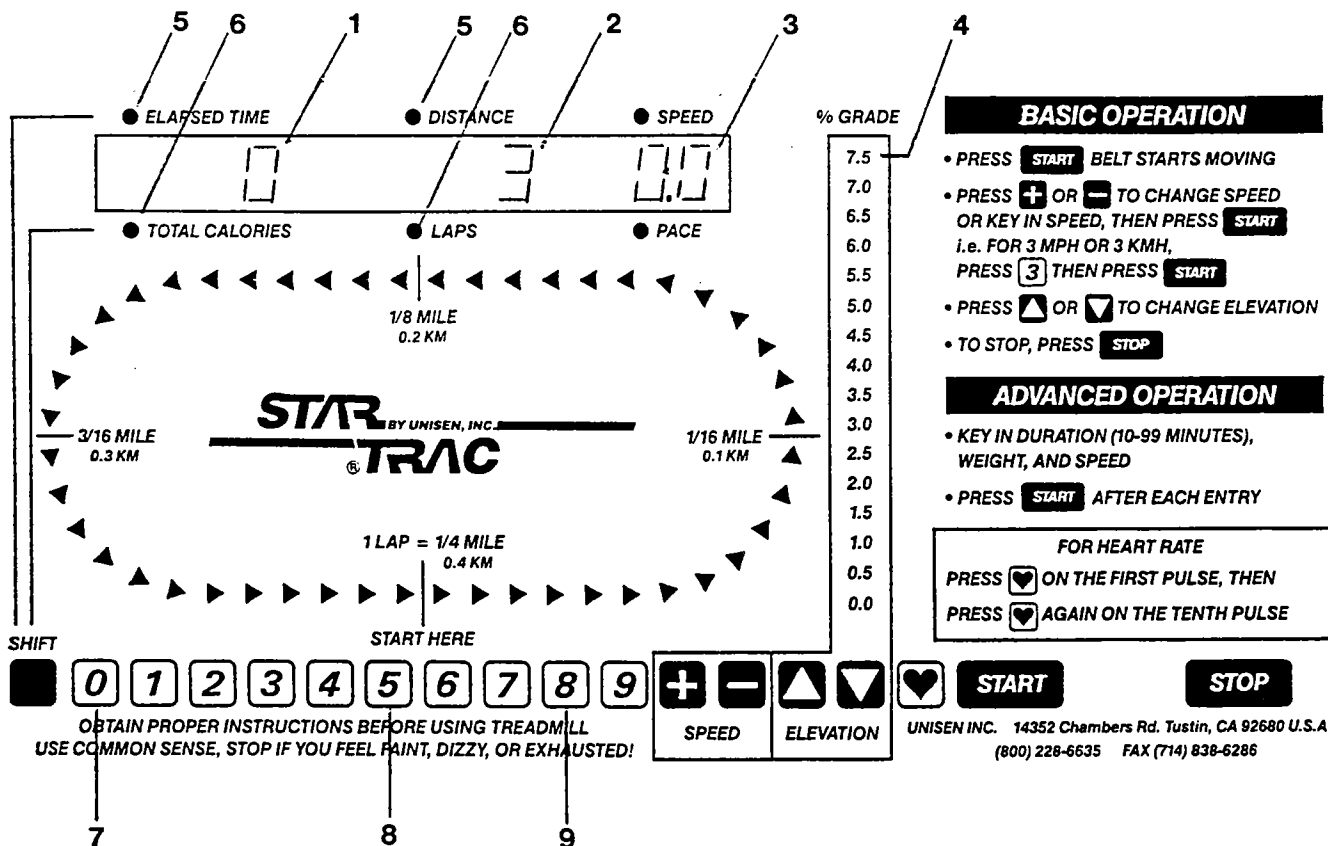
MOTOR TEST MODE DISPLAY FUNCTIONS

1. Elevation speed adjustment reading
2. Running belt threshold adjustment reading
3. RPM speed reading
4. 0% grade indicator
5. RPM Sensor Output Indicators
6. Elevation Sensor output indicators
7. RPM sensor duty cycle display

START UP SENSITIVE KEYS

If any of the following keys are pressed while switching power on, the treadmill will respond accordingly to the listed function, i.e. "8" pressed while switching power on, will put the treadmill into Motor Test Mode.

8. Elevation OFF
9. Display test mode
10. Motor test mode



DISPLAY TEST MODE

3000 JOGGER

Display Test Mode

The Star Jogger 3000 treadmill is self-diagnostic which means should your treadmill experience a problem, it's sensors can determine the precise reason for the error. When this happens, call Star Trac's Service Hotline at 800-228-6635 and have the displayed error code handy. The technician will most likely ask you to put the machine into a diagnostic test mode to determine the problem. Use the following directions:

I. Entering display test mode

- A. Turn the power switch on while holding down the "+" ("5" with numbers display) simultaneously on the display.
- B. All the display LEDs should be lit.

II. Checking E-PROM

- A. Press any key, except stop, on display
 - 1. E-PROM number will be displayed.

III. Checking key pad response

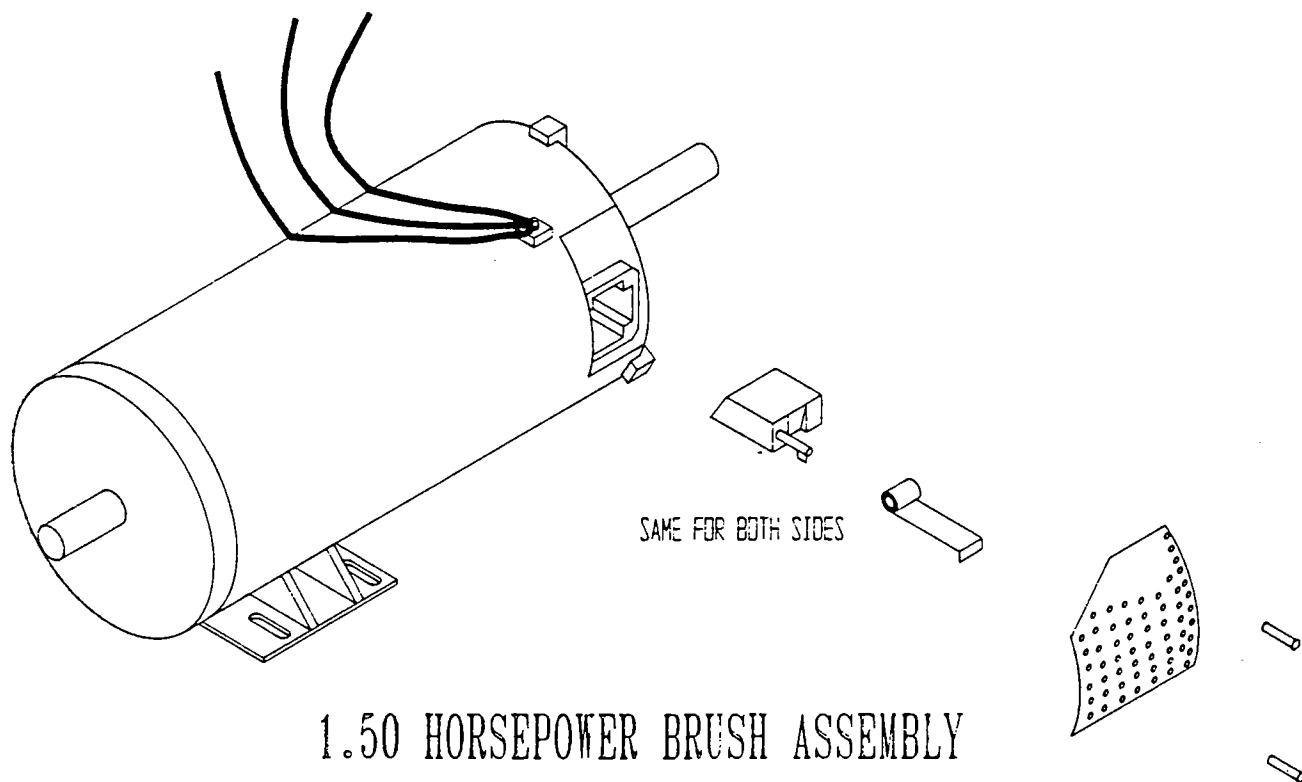
- A. Press each key on display, except for "STOP" key.
 - 1. Each key should give an audible signal and different display pattern.
 - 2. If not, you may need to replace keypad.
- B. Press "STOP" key to end display board test.

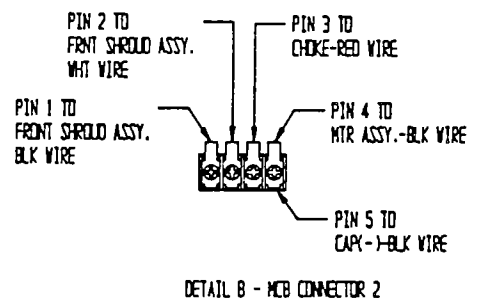
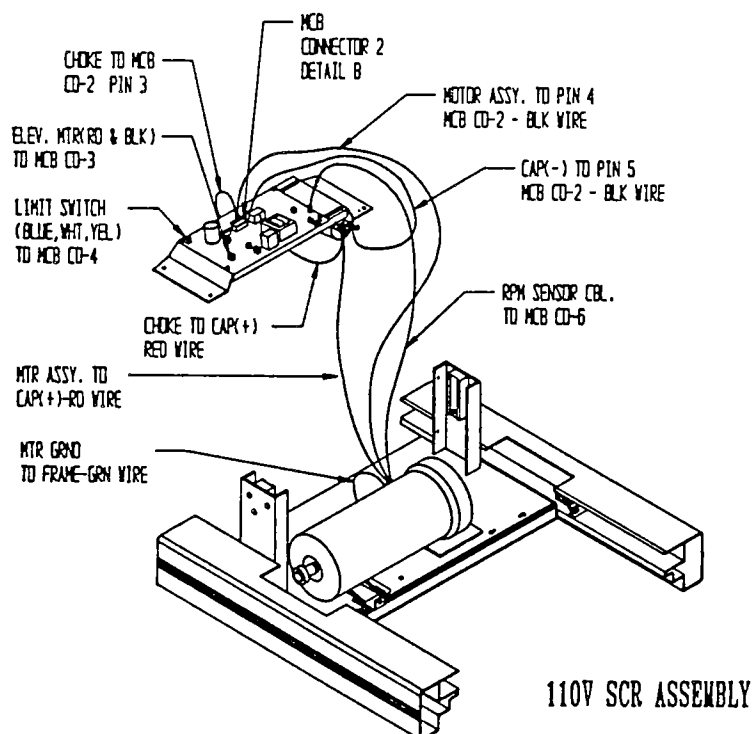
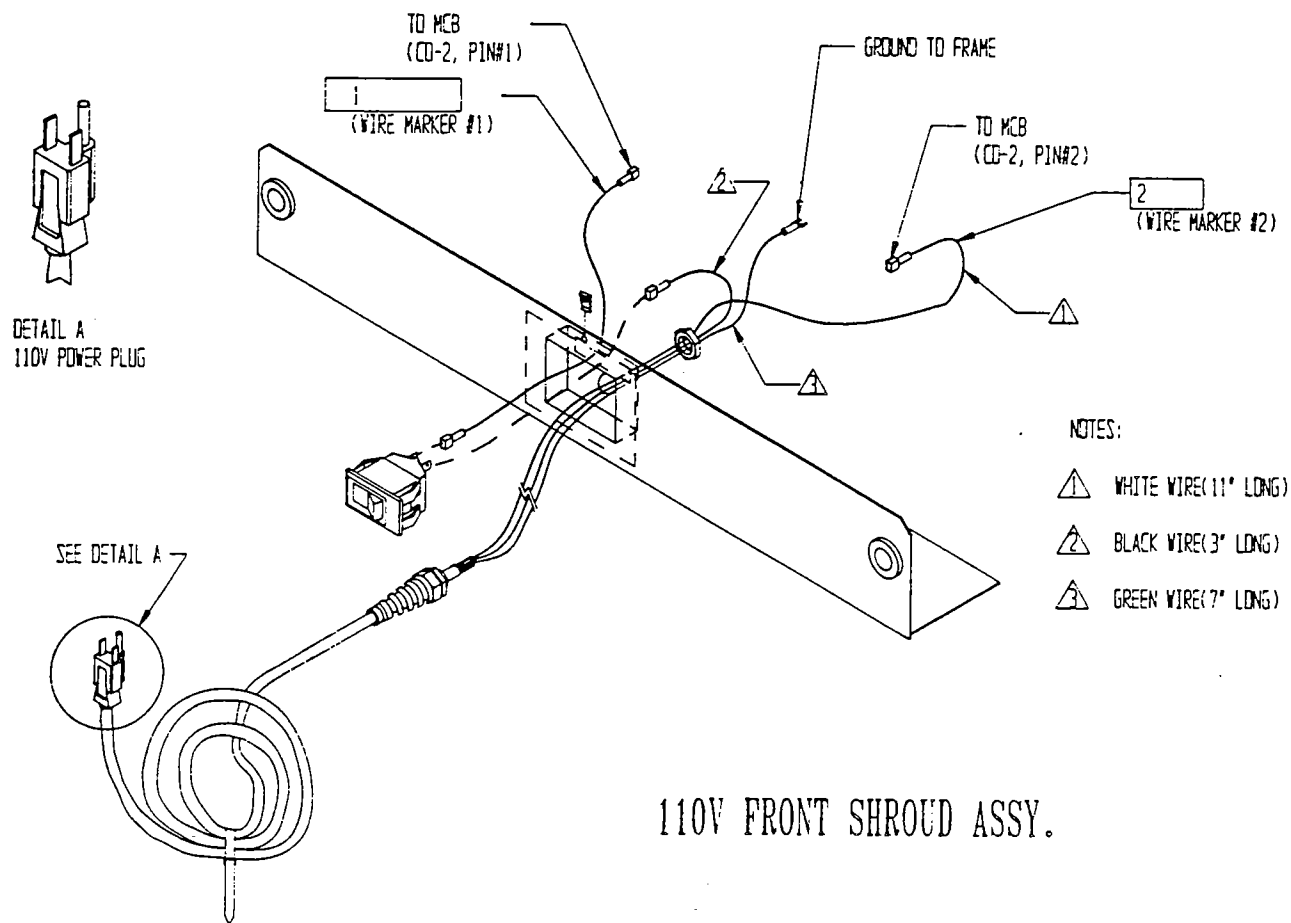
NOTE: If you cannot get into display test mode, you may need to replace key pad.

DIAGRAMS

3000 JOGGER

- Drive Motor Brushes
- Power Cord
- Wiring





MOTOR TEST MODE

3000 WALKER

MOTOR TEST MODE

DO NOT RUN ON TREADMILL WHILE IN TEST MODE. Reference "diagram #7", page 46.

The Star Walker 3000 treadmill is self-diagnostic which means should your treadmill experience a problem, it's sensors can determine the precise reason for the error. When this happens, call Star Trac's Service Hotline at 800-228-6635 and have the displayed error code handy. The technician will most likely ask you to put the machine into a diagnostic test mode to determine the problem. Use the following directions:

I. Entering Motor Test Mode

- A. Turn the power switch on while pressing the "8" key simultaneously on the display.
- B. The display will read: 0 3 0.0.
See diagram #7, page 46.

II. Running belt threshold adjustment

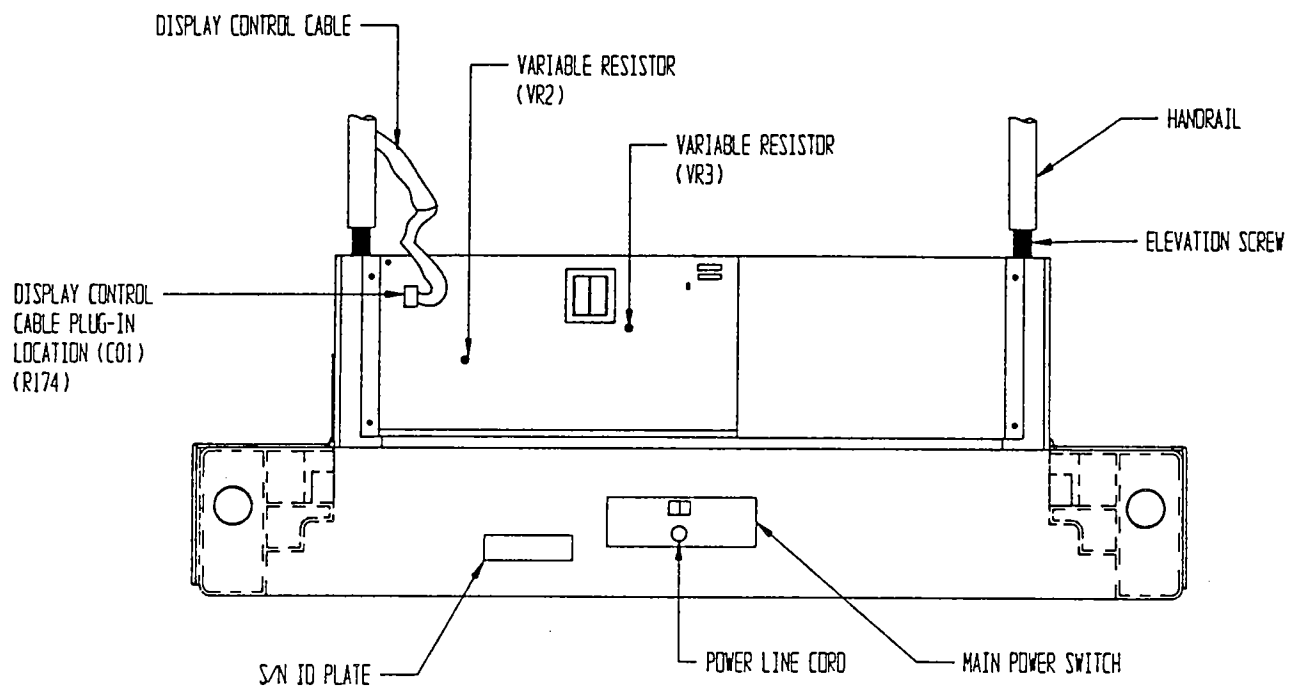
- A. Reading (B) at 3 running belt should not move.
- B. Press the "+" or "FAST" key. Get (2) to read 18. The running belt should move at least 1 inch per second.
- C. If not:
 - 1. Adjust VR2 on motor control board. See diagram #2, pg. 32A
 - 2. Check drive motor brushes for wear. Brushes shorter than .8" need to be replaced.

III. RPM - Sensor duty cycle adjustment.

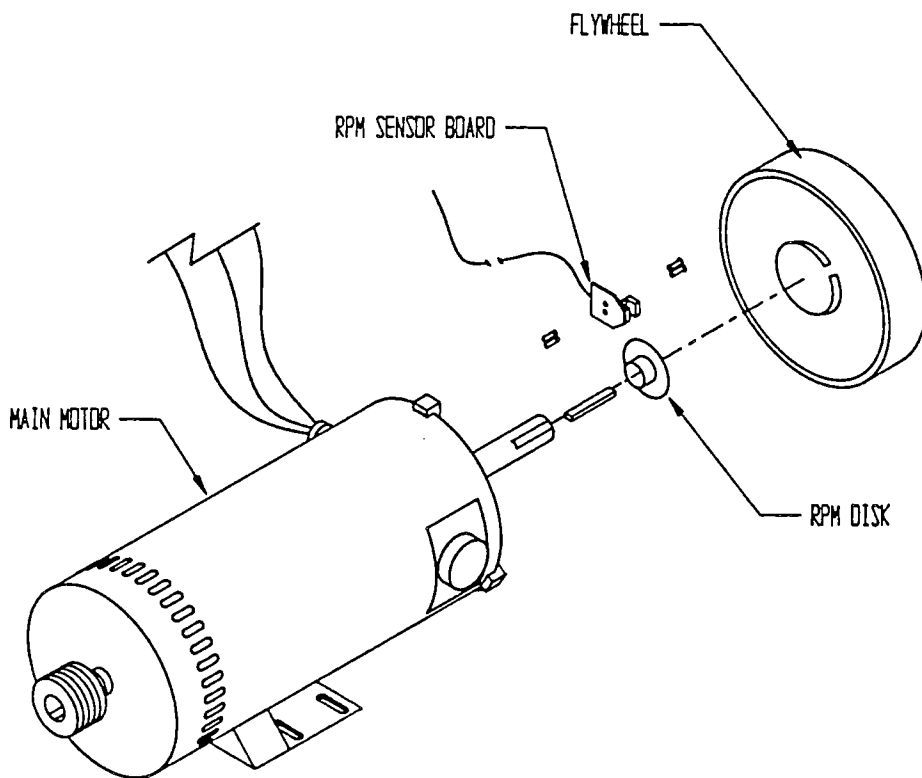
- A. Press the "+" or "FAST" key. Use diagram #7, increase speed to 3.5 mph
 - 1. Reading (1) will flash 7,8 back and forth.
- B. Verify RPM sensor output.
 - 1. Elapsed time and distance LEDs, (reading 4) will toggle on and off when belt is in motion.
 - 2. If not:
 - a. Check the alignment of the RPM disc.
 - b. Check for excessive dust on the RPM sensor and disc.
 - c. Adjust RPM sensor pot to attain 50% lit elevation display. See diagram #3 pg. 32A.

IV. To end Motor Test Mode

- A. Turn off treadmill, wait four seconds, turn back on.



DISPLAY CONTROL CABLE CONNECTION ASSEMBLY



FLYWHEEL AND MOTOR ASSEMBLY

STAR WALKER 3000

- Diagram #7 -

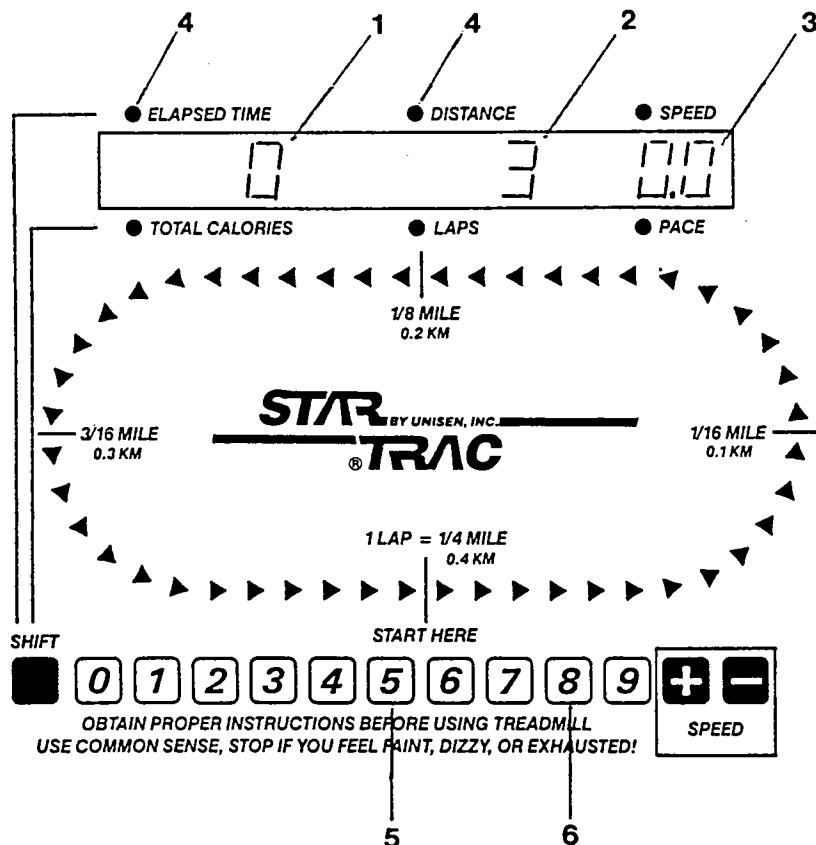
MOTOR TEST MODE DISPLAY FUNCTION KEYS

1. Elevation speed adjustment reading
2. Running belt threshold adjustment reading
3. RPM speed reading
4. RPM Sensor Output Indicators

START UP SENSITIVE KEYS

If any of the following keys are pressed while switching power on, the treadmill will respond accordingly to the list function, i.e. "8" pressed while switching power on, will put the unit into Motor Test Mode.

5. Display test
6. Motor test mode



BASIC OPERATION

- PRESS **START** BELT STARTS MOVING
- PRESS **+** OR **-** TO CHANGE SPEED OR KEY IN SPEED, THEN PRESS **START**
I.e. FOR 3 MPH OR 3 KMH, PRESS **3** THEN PRESS **START**
- TO STOP, PRESS **STOP**

ADVANCED OPERATION

- KEY IN DURATION (10-99 MINUTES), WEIGHT, AND SPEED
- PRESS **START** AFTER EACH ENTRY

FOR HEART RATE

- PRESS ON THE FIRST PULSE, THEN PRESS AGAIN ON THE TENTH PULSE



START

STOP

UNISEN INC. 14352 Chambers Rd. Tustin, CA 92680 U.S.A.
(800) 228-6635 FAX (714) 838-6286

DISPLAY TEST MODE

3000 WALKER

Display Test Mode

The Star Walker 3000 treadmill is self-diagnostic which means should your treadmill experience a problem, it's sensors can determine the precise reason for the error. When this happens, call Star Trac's Service Hotline at 800-228-6635 and have the displayed error code handy. The technician will most likely ask you to put the machine into a diagnostic test mode to determine the problem. Use the following directions:

I. Entering display test mode

- A. Turn the power switch on while holding down No.5 key simultaneously on the display.
- B. All the display LEDs should be lit.

II. Checking E-PROM

- A. Press any key except STOP on display
 - 1. E-PROM number will be displayed.

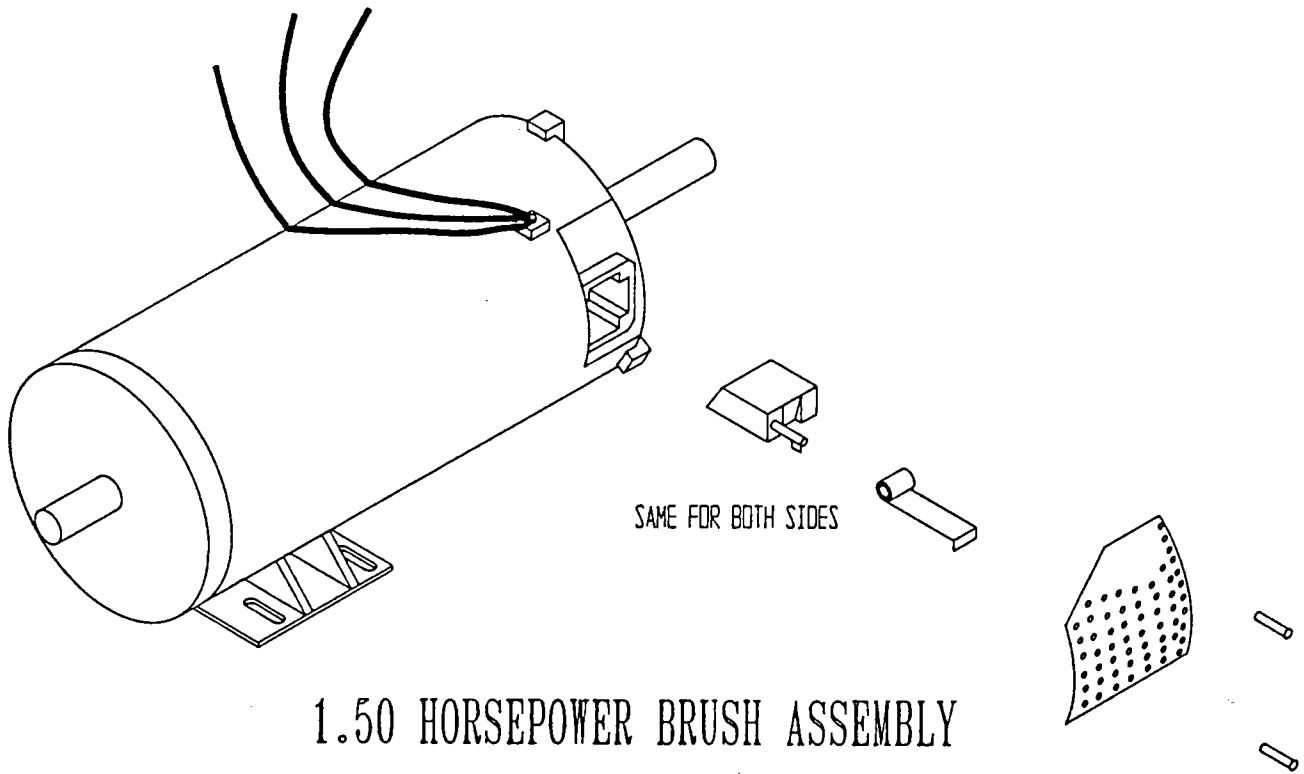
III. Checking key pad response

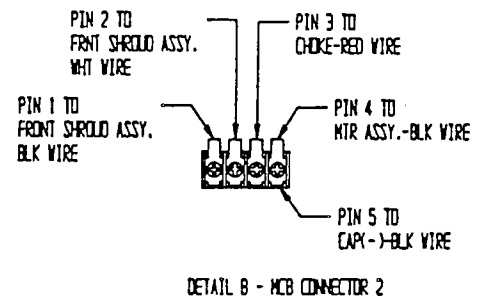
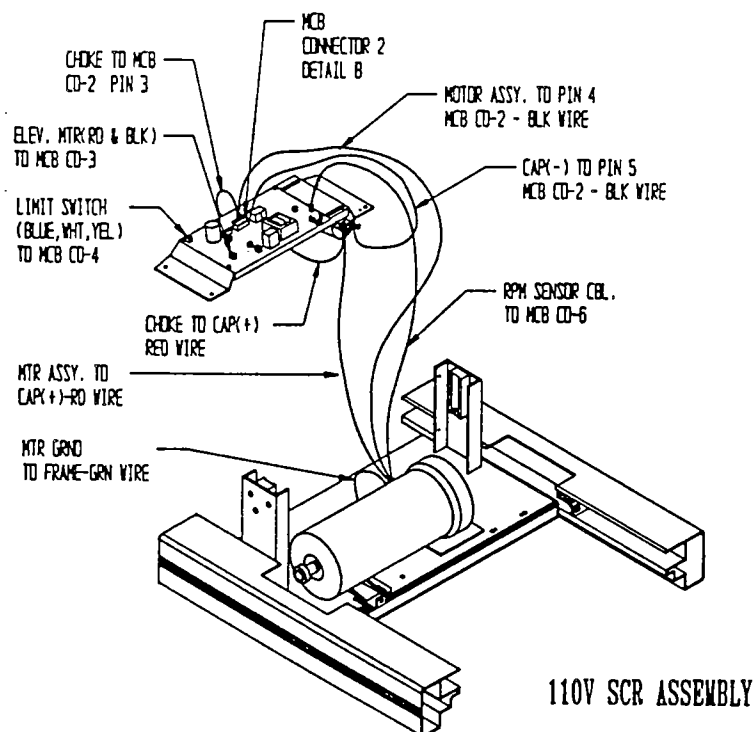
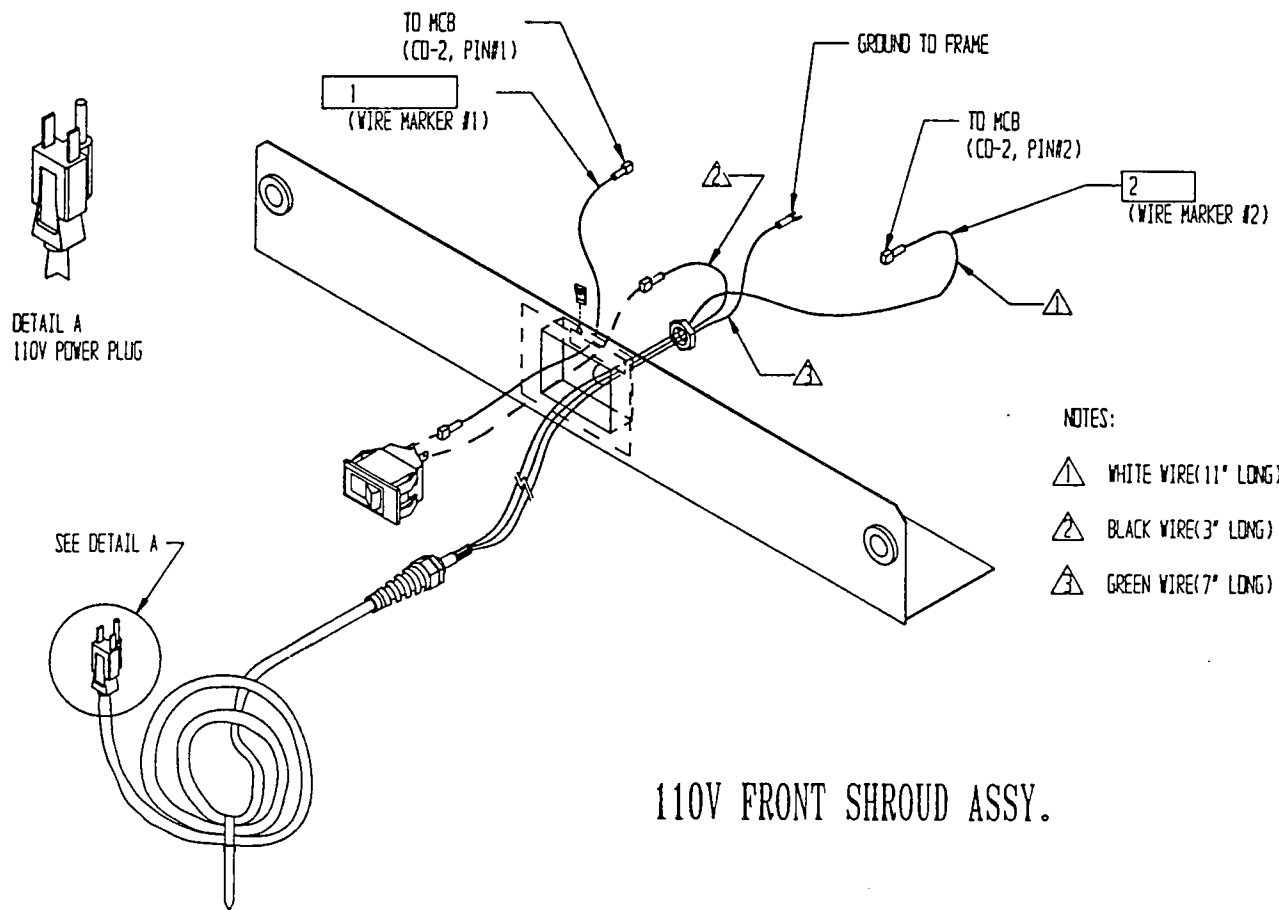
- A. Press each key on display, except for "STOP" key.
 - 1. Each key should give an audible signal and different display patterns.
 - 2. If not, you may need to replace keypad.
- B. Press "STOP" key to end display board test.

DIAGRAMS

3000 WALKER

- Drive Motor Brushes
- Power Cord
- Wiring





TROUBLESHOOTING

- STAR TRAC 3000 Series -

ERROR MESSAGE	PROBABLE CAUSES	SOLUTION
"FS ERROR 0" Fail-Safe Tripped	Power switch "OFF/ON" cycled too fast.	Shut power switch "OFF" wait two seconds, then turn "ON."
	Faulty motor control board	Contact Unisen or replace M.C.B.
	Faulty display cable	Contact Unisen or replace display cable
	Attempting to run after executing watchdog trip in motor test mode.	Shut power "OFF" wait two seconds then turn "ON"
"FS ERROR 1" Stuck keys on power up	Illegal key activated at power up.	Shut power switch "OFF" wait two seconds, then turn "ON." Check display panel for shorts.
"FS ERROR 2"	Remote stop switch	Check connection on remote stops
"SPD ERROR 0" Loss of feedback while running	Disconnected speed sensor	Check speed sensor cable connection
	Flywheel abrading speed sensor cable	Repair or replace sensor cable
	Misaligned speed sensor (relative to RPM sensor)	Reposition sensor to read RPM disc
	Faulty speed sensor	Replace speed sensor cable assembly
"SPD ERROR 1" Sudden change in speed greater than 2 mph	Misadjusted or faulty motor control board	Contact Unisen or replace M.C.B.

ERROR MESSAGE	PROBABLE CAUSES	SOLUTION
"SPD ERROR 2" Initial feedback loss	If motion before error, feedback loss	See "SPD ERROR 0"
	Misadjusted or faulty motor control board	Contact Unisen or replace M.C.B.
	Power switch "OFF/ON" cycled too fast	Shut power "OFF" wait two seconds then turn "ON"
"CPU ERROR 0" Wandering program counter	Power switch "OFF/ON" cycled too fast	Shut power switch "OFF" wait two seconds then turn "ON"
"CPU ERROR 1" 100 ms flag missed	Low voltage at CPU	Check voltage (5V + /-5%) consult Unisen
	Intermittent connection display cable at display board or motor control board	Power down disconnect then reconnect both ends of display cable
"CPU ERROR 2" Snooper routine violation	Faulty digital logic on display board	Replace display board
"EL ERROR 0" 0% grade sensed above .5% grade	Elevation belt broken or disconnected from pulley	Replace elevation belt and re-align
	Elevation motor drive pulley slipping on the motor shaft	Tighten elevation motor pulley set screws
	0% switch defective	Replace 0% switch
"EL ERROR 1" Stalled elevation	Elevation screws binding	Lubricate with lite oil
	Elevation screws dirty	Clean and lubricate elevation screws
	Open circuit in elevation motor	Check elevation motor brushes and connector

ERROR MESSAGE	PROBABLE CAUSES	SOLUTION
"EL ERROR 2" Elevation runaway	Shorted SCR in elevation circuit	Replace MCB
	Excessive coasting after running elevation	Reduce elevation speed/VR3 setting on MCB
"EL ERROR 3" Initial stall while seeking 0% elevation	Disconnected elevation motor	Check elevation motor connector
	Misadjusted elevation count sensor	Readjust elevation count sensor
	0% switch defective	Replace 0% switch

VOLTAGE COMPENSATION

The **Star Trac 3000** is pre-adjusted at the factory to cover a wide range of line voltages. However, there are cases where the incoming power to a facility are out of the voltage compensation range of the **Star Trac 3000**. If the incoming voltage is too low, a "SPD ERROR 2" will be displayed. If the voltage is too high, the **Star Trac 3000** will run faster than 1 mph (km/h) when commanded to minimum speed.

For optimal performance of the **Star Trac 3000**, check the voltage compensation after initial assembly and whenever the symptoms listed above occur. The procedure is as follows:

1. Switch off main power
2. Enter motor test mode by holding down the "8" key while switching on power to the treadmill "ON."

NOTE: With the exception of speed, the displays in motor test mode indicate functions differing from those labeled on the panel.

DO NOT STAND ON THE BELT WHEN PERFORMING THE STEPS BELOW:

3. The center numerical display reflects a speed command value. Initially, this value should be the number 3 (minimum command). The running belt should be at a stop. If not, VR2 on the motor control board must be adjusted (see location diagram). With a small screwdriver, slowly adjust VR2 counter-clockwise just until the belt stops.
4. Set the command to 18 using the SPEED keys. Verify the running belt moves at least 1" (25.4 mm) per second. If not, adjust VR2 in the clockwise direction until it does.
5. Return the command to 3 using the SPEED keys. If the belt is not at a stop, repeat steps 3 through 5.
6. To end motor test mode, turn off treadmill, wait four seconds, turn back on.

BELT ADJUSTMENTS

Star Trac 3000 Series

RUNNING BELT –

ADJUSTING TRACKING - To center running belt, use adjustment bolts located on both sides of the frame (tail end) that attach to the tailroller. A 1/4" Hex key Driver is required. See diagram below.

Turning the right-hand bolt clockwise will move the belt to the left. Turning the left-hand bolt clockwise will move the belt to the right. ***Adjust one bolt only half a turn at a time.***

Run the belt slowly at 2-3 mph (3.2-4.8 km/h) while adjusting. Then increase to a higher speed for at least 30 seconds to check the tracking. Repeat directions above as necessary.

NOTE: Running belt should be centered on the running deck.

BELT SLIPPING - If running belt slips during operation, it could be due to the slipping of either the running belt or drive belt.

To determine the cause, lift motor shroud. Increase belt speed to 1-2 mph (2-3 km/h), walk on treadmill and gently try to slow the belt speed by applying pressure with your feet.

1. If running belt momentarily hesitates while the headroller continues to turn, the running belt needs to be tightened. Using tailroller adjustment bolts (shown in diagram), turn each side clockwise 1/2 turn. If needed, repeat this process.

NOTE: It is important to adjust both sides an equal number of turns.

2. If running belt and drive belt momentarily hesitate, drive belt needs to be tightened. Follow directions below, under DRIVE MOTOR BELT.

DRIVE MOTOR BELT –

Adjust the drive motor belt tension to eliminate slippage. To adjust drive motor belt to correct tension:

Unplug the unit and lift off the motor shroud. Using a 1/2 inch socket wrench, loosen the four motor bolts. Turn the tension bolt located in the middle of the motor bracket 1/4 turn clockwise. You will be able to see the drive motor belt stretch. Re-tighten the four motor bolts. Re-install the motor shroud and plug the unit in. Test for slippage. Repeat steps if necessary.

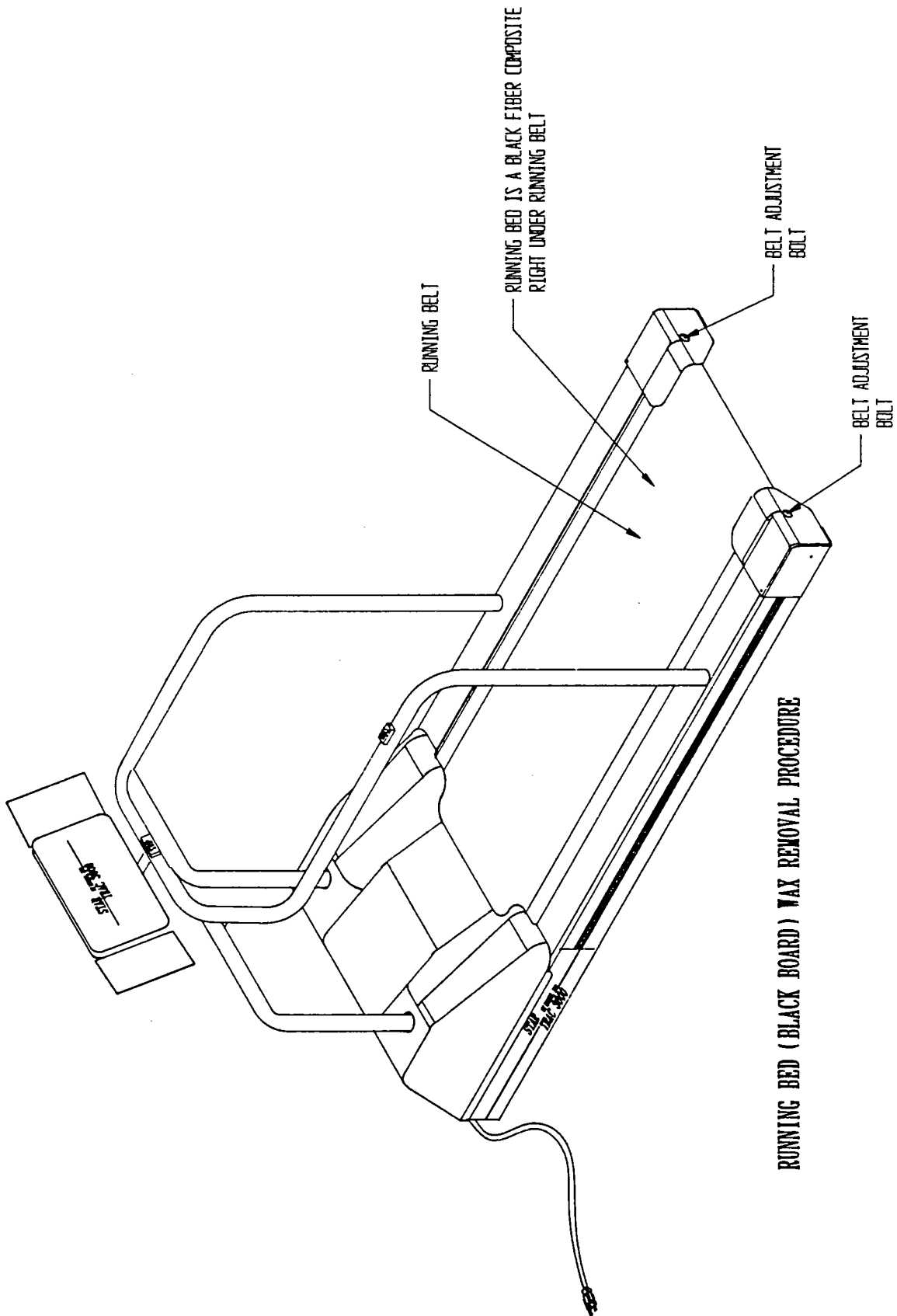
RUNNING BED –

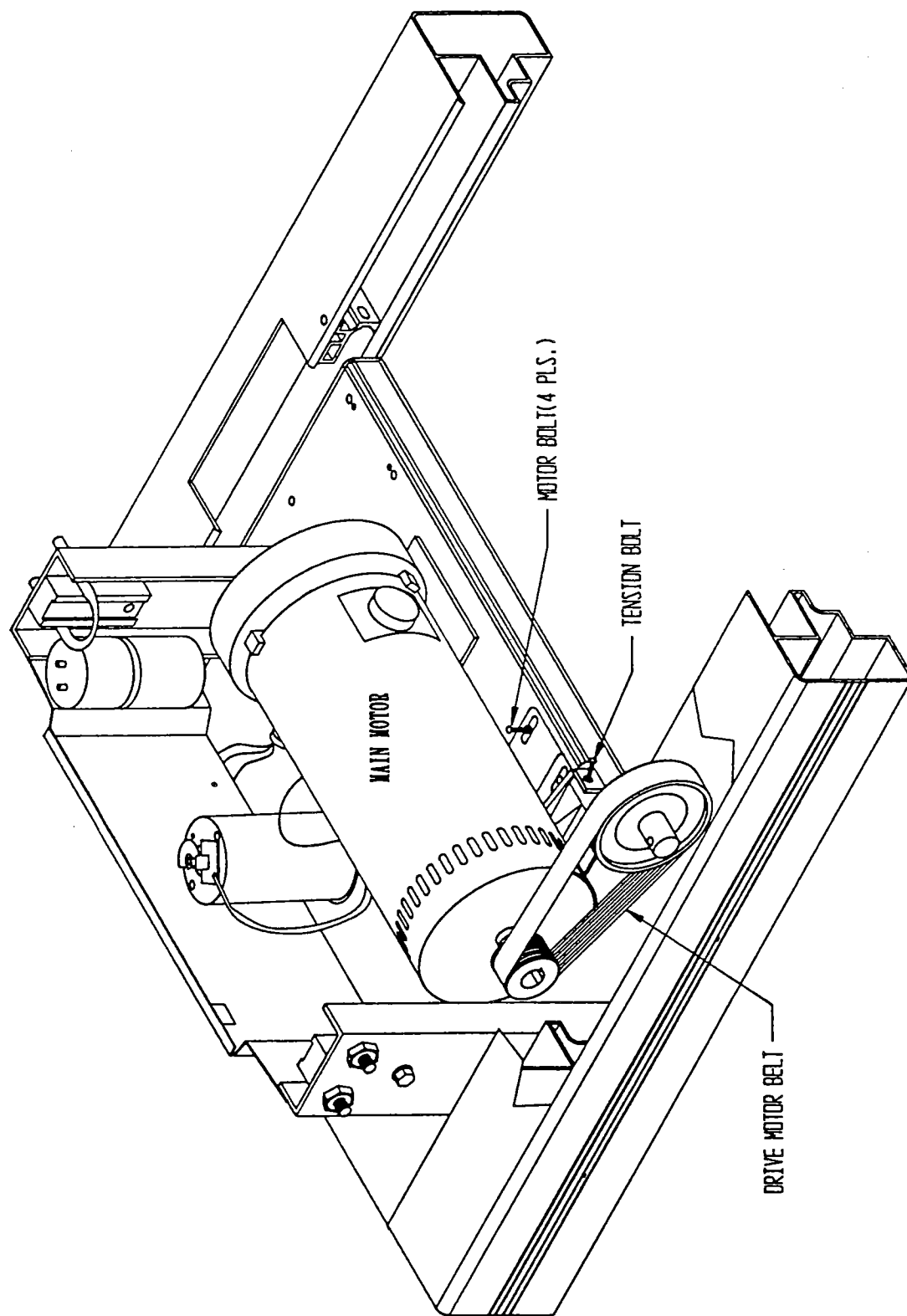
The running bed surface is coated with a special wax. During the break-in period (20-30 hours of operation), some of the wax may migrate to the tailroller and cause a "thumping" noise. If the thumping noise persists after a prolonged period of time, you should remove some of the accumulated wax. The procedure to remove the wax is as follows:

1. Turn the belt adjustment bolts counter-clockwise with a 1/4" Hex Key Drive far enough to loosen the running belt.

2. Remove the largest accumulations of wax material. Flexible plastic, such as a credit card or putty knife, works well. DO NOT remove all the substance, as it is needed to lubricate the running bed and belt.

3. Turn the belt adjustment bolts clockwise and adjust the belt to ride in the center of the running surface and motor shroud. DO NOT over tighten, as this will distort the shape of the running belt.





DRIVE MOTOR BELT TENSION ADJUSTMENT

SPECIFICATIONS

STAR TRAC 3000 SERIES

	PROGRAM	SIMPLE	JOGGER	WALKER
DIMENSIONS	33"x81" (205.74 cm x 84.46 cm)	33"x81" (205.74 cm x 84.46 cm)	33"x81" (205.74 cm x 84.46 cm)	33"x81" (205.74 cm x 84.46 cm)
RUNNING SURFACE	20"x60" (50.8 cm x 152.4 cm)	20"x60" (50.8 cm x 152.4 cm)	20"x60" (50.8 cm x 152.4 cm)	20"x60" (50.8 cm x 152.4 cm)
HEIGHT OF RUNNING SURFACE	8" 20.32 cm	8" 20.32 cm	8" 20.32 cm	8" 20.32 cm
WEIGHT	350 lbs. 157.5 kg	350 lbs. 157.5 kg	315 lbs. 141.75 kg	315 lbs. 141.75 kg
CHASSIS	4 1/2" x 4 3/4" heli-arc welded uniframe, aircraft-quality custom (11.4 cm x 12.1 cm) aluminum extrusion			
DRIVE MOTOR	2 hp DC	2 hp DC	1.5 hp DC	1.5 hp DC
ROLLERS	3" (7.62 cm) crowned headroller and tailroller with permanently sealed bearing.			
ELECTRICAL	220 volt	220 volt	110 volt (220 volt available)	110 volt
	Requires 20 amp dedicated circuit. Automatic breaker in power switch. Standard with a 15-foot (4.5 m) power cord and NEMA 6-20 or 6-15 non-locking plug.			
INCLINE RANGE	0-15% (in 1% increments)	0-15%	0-7.5% (in .5% increments)	no incline
2-PIECE DECK (Floating deck)	Reversible 3/8" phenolic laminate wear deck treated with low friction wax sits on top of a one inch, high density, composite fiber board subdeck. The sub deck is suspended along both sides with 9/16" thick foam rubber.			
MUTUAL FEATURES	Manual operation, elapsed time, distance, total calories burned, pace (minutes per mile), 1/4 mile (400 m) track display, emergency stop, safety handrails, speed adjusts in .1 mph (km/h) increments, heart rate, floating deck, finger guards.			
SPEED	1-10 mph (1.6-16 km/h)	1-10 mph 1.6-16 km/h	.5-7 mph .8-11.2 km/h	.1-6 mph .16-9.6 km/h)
PROGRAMS	8 preset/ custom	Basic	Basic	Basic

OPTIONAL FEATURES: Computer interface port, 25% incline, 1-12 mph (1.6-19.2 km/h), handrails PLUS, isolation transformer, overhead railing



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Startrac 3000 - Handrail Assembly Hint

620-3021 X:3KASMHNT

Attach the side handrail mounting bolt to the hex (allen) wrench by placing a piece of paper (newspaper works well) over the ball end of the wrench and then insert into the head of handrail bolt. This will retain the bolt on the end of wrench while installing side handrails.

