

# NuStep® T4 Recumbent Cross Trainer User Manual



Transforming Lives™



# Safety Instructions



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This is the safety alert symbol. It is used to call attention to instructions concerning personal safety. Read and obey all safety messages that follow this symbol to avoid possible injury or death resulting from misuse.



## CAUTION

CAUTION indicates a potentially hazardous situation, which if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.



## CAUTION

Always see your physician before beginning any exercise program.

If you feel faint or dizzy while using this product, stop exercising immediately and seek medical help or advice.

Use this product only as directed by your physician if you have any type of heart disease, hypertension, diabetes, respiratory disease, or any other medical problem, or if you are pregnant.

Make sure the seat position and handlebar position is correctly set up for you. Do not over-extend your step or reach.

Close supervision is required if you have a disability or medical condition.

This product is not designed for use by children.

Do not use this product in the presence of children and/or pets.

The maximum user weight limit for this product is 400 lbs (182 kg).

Always wear shoes and proper clothing when exercising.

Do not operate this product if it appears damaged or inoperable. Examine product regularly.

Read this manual before using this product and save it for future reference.

# Setting Up Your NuStep

Thank you for purchasing the NuStep® T4 Recumbent Cross Trainer, an effective way to improve cardiovascular and overall fitness.

The NuStep sets a new standard for total body exercise. By combining a natural sitting position with a smooth stepping motion, the NuStep works all major muscle groups, giving you an effective cardiovascular workout in a comfortable seated position.

The unique design lets you move your arms and legs in a single, dependent, fluid motion that simulates walking, with the added benefit of resistance training. Working the upper and lower body simultaneously uses more muscles and burns more calories.

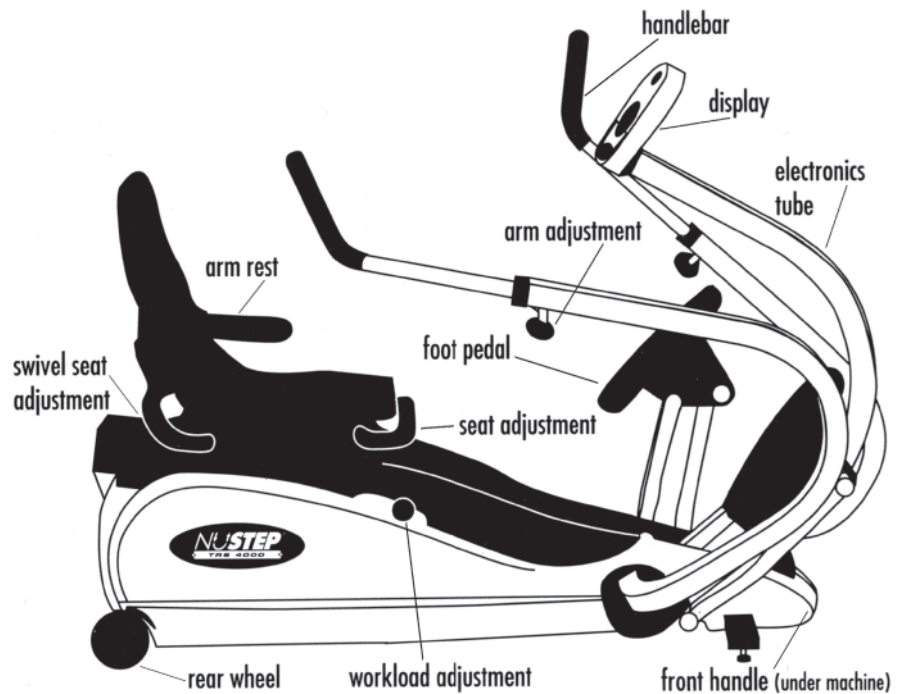
As you use your NuStep regularly, you will strengthen your heart, cardiovascular system, and muscles, making it easier to do the activities you enjoy.

## CAUTION

The T4 is very heavy; it weighs 205 lbs (93 kg).

To avoid injury, or damage to the product, always obtain assistance to move this product.

Use proper lifting technique.



## Unpacking Your NuStep

*In these instructions, directional references to front, back, right, and left assume you are sitting on the NuStep.*

Remove the NuStep from its shipping container. If the container or any part(s) inside the container are damaged due to shipping, please call NuStep, Inc. to file a damage claim.

To ensure that your NuStep arrives in the same quality-tested condition it leaves our factory, we ship the display in its own protective container.

## Installing the Display

Follow these steps to install the display. See also the separate instruction sheet, "How to Install the Display," packaged with the display.

1. Carefully unpack the display

from its separate box.

2. Plug the ribbon cable into the connector in the cutout on the back side of the display. Press the cable and display connectors firmly together (they only fit one way). Then snap the locking legs on the connector to fasten securely.
3. Insert the metal tabs on the display into the neck of the electronics tube. Secure the display with the three supplied screws through the tube and the metal tabs.
4. Place NuStep on a level surface. Adjust front leveler feet as required.

Congratulations! Assembly is complete. If you have any questions about your NuStep, please call Customer Service at 1-800-322-4434. We will be happy to help you!

# Preparing to Exercise



## Seat Adjustment

To change seat position, lift up on the seat release lever located directly under the front and sides of the seat. Place feet on the foot pedals and push one foot pedal all the way forward until you hit the rubber stop. Now slide the seat by lifting the seat release lever (similar to adjusting your car seat). Slide until your extended leg has a slight bend at the knee (avoid locking your knees when you exercise).

This position allows your legs to be slightly bent during operation so you won't hit the rubber stops as you exercise. Try the motion and see if this feels comfortable. If not, slide the seat forward or backward one notch until it feels comfortable. The seat number position is located under the left side of the seat.



## CAUTION

Make sure the seat position and arm position is correctly set up for you.

Do not over-extend your step or reach distance.



## Swivel Seat Adjustment

To swivel the seat, lift up on the swivel release lever directly under the rear and sides of the seat. Swivel the seat left or right 90° until it locks into position. The lever rotates with the seat for easy access. To swivel back to the original position, lift up on the release lever again. The arm rests lift up and down (as shown in photo, above) to allow easier access to the NuStep.



## Arm Adjustment

To change arm position, unscrew the arm adjustment knob and slide handlebar up or down, so that your arm has a slight bend at the elbow when fully extended. Turn knob right to tighten.

**As a starting point, match the seat adjustment number with the arm adjustment setting.**



Your leg and arm should be comfortably bent at full extension as shown above.

# Preparing to Exercise



## Workload Adjustment

The workload adjustment lever is located on the right side of the NuStep. To increase workload, push the lever forward and down. To decrease, pull lever backward and up. The 10 different workload settings appear on the display. The workload is speed dependent, meaning, as you step faster, the workload goes higher.



## CAUTION

This product has arms and pedals that move during operation.

To avoid injury due to contact with these moving parts, use caution while making adjustments during operation.

## Step Height Adjustment

The NuStep allows you to determine your own desired range of motion. The maximum step height is approximately 8.5 inches. For smaller ranges of motion, simply don't extend your feet as far during stepping.



## Foot Position

The NuStep's stepping action works virtually all leg muscles. Instead of pushing with your whole foot, which works your quadriceps and hamstring muscles, push with the balls of your feet to work your calf muscles.

# Using the Display

The NuStep T4 display is easy to use. An *automatic on/off feature* turns on the display as soon as you move the arms or foot pedals, and turns the display off after you stop exercising for four minutes. The LCD screen displays all workout information in large, easy-to-read print.

## TIME

Shows the cumulative workout time up to 100 minutes.

## HEART RATE

The NuStep®/Polar® Upgrade Kit provides wireless heart rate monitoring (Part No. 50813)

## METS

Shows the metabolic equivalent of work performed.

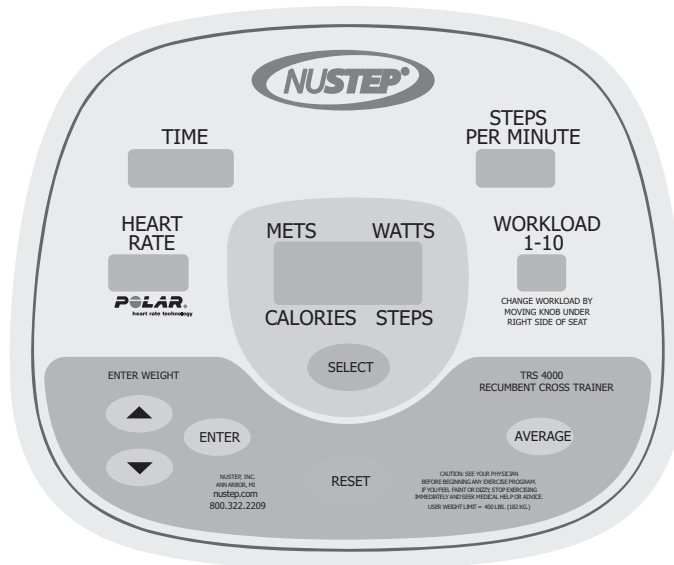
## CALORIES

Readout of total calories burned during the workout.

## ENTER

Push the ENTER key or the ▲ or ▼ arrows to display weight in the center window, which is preset to 150 pounds. Press the ▲ or ▼ arrow to enter your actual weight, then press ENTER to lock in the entry for this workout session. To save your weight from one session to another, press and hold the ENTER button until SAVE appears in the center window.

To enter weight in kilograms, press RESET and the ▼ arrow at the same time to switch from pounds to kilograms.



## SELECT

Cycles through METS, watts, calories and steps.

## RESET

Clears all data from the display and resets to the defaults. Data also clears when the display automatically turns off.

## OTHER FEATURES

### Step Meter

To display cumulative steps for the NuStep, press RESET and the ▲ arrow at the same time. You cannot reset this displayed value. Read all 9 digits across 3 windows. The value is displayed for 5 seconds.

### Software Version

Press RESET and ENTER at the same time to show the software version in the center window. The version is displayed for 5 seconds.

## STEPS PER MINUTE

Shows the step rate up to 250 steps per minute.

## WORKLOAD 1-10

Of the ten workload levels, position 1 is easiest and 10 is most strenuous. Use the lever on the right side of the seat to select the workload. Push the lever forward to increase the resistance. The selected workload flashes for five seconds at startup.

## WATTS

Another measure of energy output that takes into account step length, stepping rate, and workload. No calibration is required.

## STEPS

Cumulative steps in the workout.

## AVERAGE

Press any time during your workout to show your average values of METS, watts, steps per minute, and heart rate. Average values blink for five seconds, then return to current values.

## CAUTION

This product has arms and pedals that move during operation.

To avoid injury due to contact with these moving parts, use caution while making adjustments during operation.

# Exercising With Your NuStep



## CAUTION

Always see your physician before beginning any exercise program.

If you feel faint or dizzy while using this product, stop exercising immediately and seek medical help or advice.

### What benefits will I get from exercising with the NuStep?

The NuStep's closed kinetic chain exercise motion will improve your cardiovascular fitness, which gives you more energy, improves your muscle strength and tone, and helps you to control body weight. Exercise on the NuStep can also reduce stress, help you sleep better, and give you a more positive self-image.

### How often and how long should I use the NuStep?

Set a goal of 3 to 5 exercise sessions per week for 30 to 45 minutes. Don't worry about doing too little at first. It's far better to do some exercise than no exercise at all, and the easiest way to become discouraged is to expect immediate results. Just be sure to set aside time for exercise, and before you know it, you'll start seeing results.

### How hard should I exercise?

You can judge the intensity level that's appropriate for you by how hard you can comfortably exercise for at least 30 minutes without rest periods. Set the workload at a level that allows you to achieve your exercise session goal.

For overall cardiovascular fitness and weight loss, it is better to do longer periods of exercise at a lower intensity than higher intensity for shorter periods.

### What is a typical exercise

### session like?

Each NuStep exercise session should have a warm up phase, an exercise phase, and a cool down phase.

For the warm up, start slowly, with a light workload for 3 to 10 minutes.

For the exercise phase, increase the workload to a comfortable level and continue for 20–30 minutes. For overall conditioning, step faster with less resistance. At first, you may feel some fatigue in your muscles, especially the arms, legs, back, or the shoulders. If this happens, decrease the workload and step more slowly, or stop your workout.

You can also vary your exercise session by alternating shorter periods of higher resistance with longer periods of lower resistance. This type of training, called *interval training*, increases your ability to generate quick bursts of power.

The cool-down phase, like the warm-up phase, should be done at a lower workload level for 3–10 minutes. Exercise more slowly with controlled pushing and pulling. Your heart rate will begin to decrease and your body will begin to return to a pre-exercise state.




# Exercising With Your NuStep

## How can I concentrate on cardiovascular training?

Cardiovascular training, where your heart rate is elevated by continuous rhythmic activity for a sustained period of time, is called “aerobic” conditioning. *Aerobic* means “with oxygen,” or exercise that causes you to breathe deeply, spreading oxygen throughout your cardiovascular system.

Your NuStep exerciser is excellent for aerobic conditioning because it works all of the major muscle groups in both your upper and lower body. The benefit of this total body workout is that your cardiovascular system grows stronger, and your heart,

 **CAUTION**

Always ask your physician what your target heart rate range should be if you are over the age of 65, have heart related health problems (heart attack, heart surgery, angioplasty), or take heart or blood pressure medications.

which is a muscle, also becomes stronger and more conditioned. As a result, you can engage in physical activities without feeling as winded.
















To condition the lungs, heart, and blood vessels of your cardiovascular system, you need to use large muscle groups con-

tinuously for a sustained period of time (approximately 20–30 minutes) so that you elevate your heart rate into your *target heart rate range*.

To estimate your target heart rate, see the perceived exertion chart below. If you want to monitor your actual heart rate during a NuStep workout, order a NuStep®/Polar® Wireless Heart Rate Kit (Part No. 50813).

When you wear the chest strap belt, the NuStep T4 will accurately monitor your heart rate and display it so you can safely challenge yourself as you increase the intensity of your exercise.

## Perceived Exertion

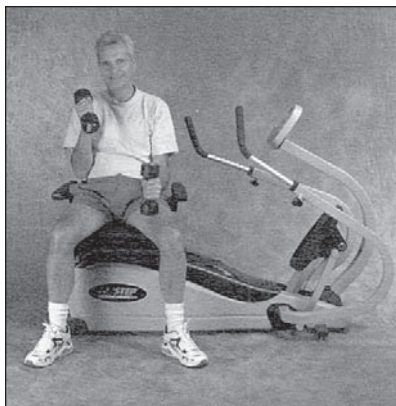
	<b>20</b>	Maximal exertion
	<b>19</b>	Extremely hard
	<b>18</b>	
	<b>17</b>	Very hard
	<b>16</b>	
	<b>15</b>	Hard (heavy)
	<b>14</b>	
	<b>13</b>	Somewhat hard
	<b>12</b>	
	<b>11</b>	Light
	<b>10</b>	
	<b>9</b>	Very light
	<b>8</b>	Extremely light
	<b>7</b>	
	<b>6</b>	No exertion at all

## The Borg Scale of Perceived Exertion Helps You Find Your Target Heart Rate

This simple test relies on how hard exercise feels in terms of heart and lung exertion. “Very Light” corresponds closely to 40 percent of maximum heart rate, while “Extremely Hard” is close to 100 percent.

Strive for a “Somewhat Hard” level and you’ll get close to your target heart rate. You should always be able to carry on a conversation while exercising. If you can’t, reduce your intensity level until you can!

# Exercising With Your NuStep



## How can I concentrate on muscle strengthening?

Toward the end of your regular workout, after your muscles are warmed up, adjust the workload to a higher level and do 8 to 12 steps very slowly. Do a set of 8 to 12 steps two to three times, resting in between.

To build upper body strength, push and pull with your arms only and let your feet rest on the floor. To build leg strength, push with your legs only and let your arms rest on either side of the seat.

After doing these strengthening sets, decrease the workload and finish with continuous movement for a few minutes as you cool down.

For an advanced program, use free weights with your NuStep workout.



## Can the NuStep be used for stretching?

Be sure to stretch before and after your workout.

Start by working out lightly on the NuStep for 3 to 10 minutes. Then get off and use the back of the seat for support (shown above) with one leg forward. Feel the stretch in your back leg.

To stretch the Achilles tendon, bend the knee of your back leg and push your heel to the floor.

As you stretch, don't bounce — just hold the stretch for about 15 seconds. Then stretch the other leg.

Once your major muscles are stretched, resume your NuStep workout.

After your cool-down, repeat the stretching sequence above.

# Obtaining Customer Service and Parts

Your NuStep is made with high-quality components designed for long life and durability. In the event the NuStep needs service, this part of the manual provides information for a mechanically qualified person to service it. Please follow these steps when servicing your NuStep:

## Step 1: **Verify the symptom or problem.**

Speak with the person who discovered the problem to get a good understanding of the problem.

## Step 2: **Record the serial number, cumulative steps, and purchase date.**

The serial number is located at the top end of the electronic tube directly behind the display. To display cumulative steps, press and hold reset and the ▲ arrow simultaneously, then release both buttons. Read cumulative steps across all 3 LCD screens up to 9 digits. The value is displayed for 5 seconds. Repeat if necessary.

Serial Number: _____	Purchase Date: _____
Serial Number: _____	Purchase Date: _____
Serial Number: _____	Purchase Date: _____
Serial Number: _____	Purchase Date: _____
Serial Number: _____	Purchase Date: _____

## Step 3: **Take corrective action.**

Use this manual to identify and service the problem and/or determine what parts are required.

### NOTE:

- This T4 manual covers NuStep units with serial numbers greater than 429800.
- Unless otherwise noted, all directional references – left, right, front, back, side, top, bottom – are from a user’s perspective as if sitting on the NuStep’s seat (even if the NuStep has been placed on its side).
- Please use the Parts List (page 20-21) and Schematic Drawings (page 22-24) to obtain item and part numbers.

## Step 4: **Contact Customer Service at NuStep, Inc.**

Please have the serial number, cumulative steps, complete description of the problem, and part or item number(s) required to service the problem for our product specialists.

*E-mail:* support@nustep.com  
*Phone:* (800) 322-4434 or (734) 769-3939, ext. 5  
*Fax:* (734) 769-8180  
*Address:* NuStep, Inc.  
5111 Venture Dr., Ste. 1  
Ann Arbor, MI 48108-1654

International customers may obtain customer service by contacting their local NuStep distributor.

# Break-In Period and Preventive Maintenance Intervals

## Break-In Period

Most mechanical products “break-in,” after which bearings roll more freely, bushings rotate better, belts stretch, and parts loosen up a little. This is normal. Your T4 is designed to accommodate this “break-in” with no adjustment on your part. The resulting effect is that there is a little less friction and the unit may feel a little easier, but this is normal and the unit needs no calibration.

## Preventive Maintenance Intervals

Your T4 is designed to be maintenance free. We recommend just a few items that will increase the useful life of the NuStep. Please follow the recommended preventive maintenance intervals according to the amount of usage that the NuStep receives. These are estimated intervals and you may need to increase or decrease the time period between preventive maintenance depending on your actual use.

Preventive Maintenance	Usage			Action	Supplies
	Low Less than 10 hours per week (home)	Medium 10–40 hours per week (clinical)	High More than 40 hours per week (commercial)		
<b>Clean covers, arms, seat and display. Wipe off perspiration, dirt and dust.</b>	Monthly	Weekly	Daily	Clean	Non-abrasive spray cleaner like Fantastik® and a soft cloth.
<b>Replace batteries.</b>	Every 12 months	Every 3 months	Every 1 month	Replace	(4) AA alkaline batteries.  Rechargeable batteries are not recommended due to voltage requirements of the display.
<b>Check drive belts for signs of wear.</b>	Every 12 to 24 months	Every 6 to 12 months	Every 3 to 6 months	Gently turn NuStep onto side and check.	None, if no action required. Parts, if action required.

# Troubleshooting Guide

Your NuStep is designed to be durable and maintenance free. This guide can help you “just in case” you need to troubleshoot.

Affected Area	Problem	Potential Cause	Verify Cause	Corrective Action
<b>Arms</b>	The user feels a slight “jerky” feeling in arm movements at higher workloads.	Is there a newer user getting used to the feel of the motion?		This is normal operation and most users will develop a smoother motion over time.
<b>Display</b>	For all display troubleshooting, replace the batteries first.	Low battery.	The low battery indicator may or may not be illuminated on the display.	Replace batteries.
	The display lights up but does not operate.	The ribbon cable connector is not plugged in correctly.	Remove the display to investigate.	Make sure the key of the ribbon cable connector inserts into the slot on the display connector.
	All of the LCDs are equally faint.	Low battery.		Replace batteries.
	The Heart Rate is not showing on the display.	Is the user wearing the Polar transmitter belt correctly?		Make sure the chest and belt contacts are moistened and the belt is properly positioned.
<b>Seat Assembly</b>	The seat “jumps” to the next position.	The seat lock wasn’t fully engaged.		Make sure the seat is fully locked in place.

# Cover: Removal and Installation

1.



Remove seat rail cap.

## Tools Required:

- Phillips screwdriver
- 3/8" wrench
- Scratch awl (use to align holes before screws)

2.



Remove seat rail bumpers.

3.



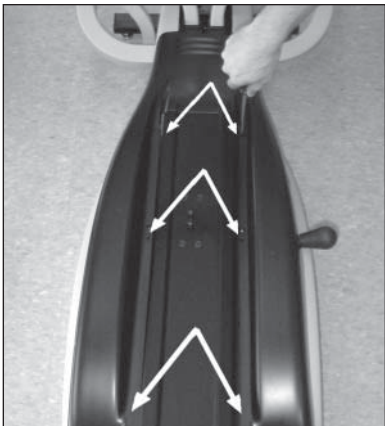
**Roll seat off of seat rail.**

Keep upward pressure on front of seat to prevent scratching end of seat rail.

## CAUTION

The T4 seat assembly is heavy; it weighs 50 lbs (23 kg). To avoid injury, or damage to the product, use caution when removing or installing. Obtain assistance as required. Use proper lifting technique.

4.



**Remove 6 screws from top cover.**

Note: In center of top cover, only 2 screws are used in the forward 2 holes.

# Cover: Removal and Installation

5.



Remove top cover.

---

6.



Remove 2 screws.

---

7.



Remove screw from front.

Slide boot up out of way.

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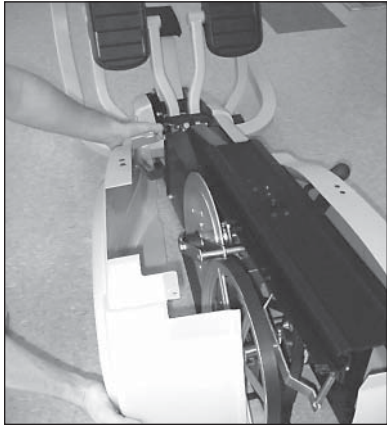
8.



Remove screw from rear.

# Cover: Removal and Installation

9.



**Remove left side cover.**

Pull rear outward, then front end.

10.



**Remove right side cover.**

Pull rear over wheel and workload lever, then front end.

## To Re-Install Cover:

- See next page for cover installation instructions.



# Cover: Removal and Installation

## To Re-Install Cover:

- To install cover, follow cover removal steps in reverse order. Note the following:

1.



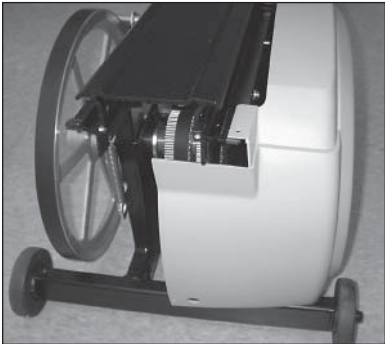
Install front end of side covers first...

2.



...then push rear of covers over wheels.

3.



Hang side covers on bracket directly below seat rail.

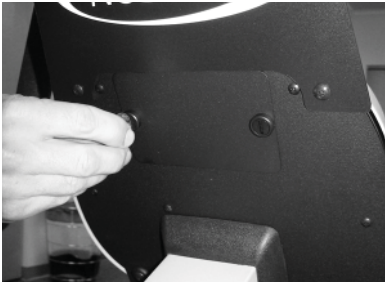
4.



For top cover installation, place scratch awl in third hole from front to align holes, then insert 3 screws. Repeat for opposite side.

# Display: Battery Changing

1.



Use coin to remove battery access panel.

## Tools Required:

- Phillips screwdriver

2.



Replace batteries.

Use 4 AA alkaline batteries. Rechargeable batteries are not recommended due to voltage requirements of the display.

## When Finished:

- To replace battery access panel, vertically align the slots of the quarter turn fasteners before pressing them into square holes of the display.

# Display: Removal and Installation

1.



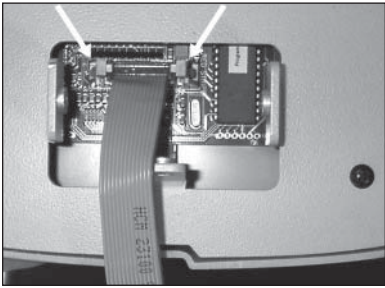
**Remove three screws.  
(Hold onto display so it  
does not fall!)**

Remove 1 screw on each side,  
and 1 screw on bottom.

## Tools Required:

- Phillips screwdriver

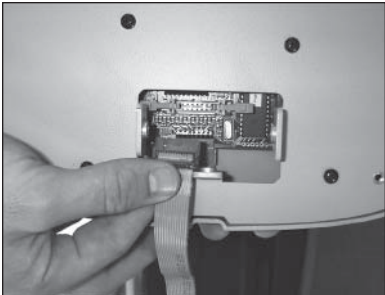
2.



**Release 2 locking  
tabs on each side of  
connector.**

Snap tabs of connector  
outward.

3.



**Pull out cable from  
connector.**

## To Re-Install Display:

- Do above steps in reverse order.
- *Note: Align key of cable connector with slot of display connector, then snap tabs into place.*

# NuStep TRS 4000 Parts List 1.6

Note: Most parts are available individually, but to simplify installation, ASSEMBLIES (in CAPS) only come fully assembled. Items noted as *(not shown)* were replaced with current revision parts and are available as service parts, but are not shown in the Figures.

Item	Qty	PN#	Part Description	Item	Qty	PN#	Part Description
1	1	4085B	ARM-UPPER L S/N >=412392	47	1	4042A	EC MAGNET ASSY S/N >= 412485
<i>(not shown)</i>		na	ARM-UPPER L S/N 411092-412391	<i>(not shown)</i>		na	EC MAG ASSY S/N 411001-412484
<i>(not shown)</i>		na	ARM-UPPER R S/N 411001-411091	<i>(not shown)</i>		na	EC Mag Bracket S/N 411001-412484
2	1	4086B	ARM-UPPER R S/N >=412392	49	1	40424	EC Magnet Slide Bracket
<i>(not shown)</i>		na	ARM-UPPER R S/N 411092-412391	50	1	4043A	EC PLUNGER PLATE ASSY S/N >=421096
<i>(not shown)</i>		na	ARM-UPPER R S/N 411001-411091	<i>(not shown)</i>		4043	EC PLUNGER PLATE ASSY S/N <=421095
3	2	4087	ARM LOCK EXTRUSION	51	1	41050	EC Shoulder Pivot
4	1	4081A	ARM ASSY L S/N >= 412137	52	1	40140	Electronic Tube
<i>(not shown)</i>		4081	ARM ASSY L S/N 411001-412136	53	1	41254	FHPS 1/4"-20x7/8
5	1	4080A	ARM ASSY R S/N >= 412137	54	4	41052	FHPS 1/4"-20x3/4 Black
<i>(not shown)</i>		4080	ARM ASSY R S/N 411001-412136	55	2	41056	Foam Grip - Upper Arm
6	1	40128	Axle	56	1	4083A	FOOTPEDAL - L S/N >=413368
7	3	41002	Bearing - EC Disk, Roller	<i>(not shown)</i>		na	FOOTPEDAL - L S/N 411001-413367
8	8	41004	Bearing - Pivot & Footpedal, Polymer	57	1	4084A	FOOTPEDAL - R S/N >=413368
9	2	41208	Bearing - Pivot Casting, Polymer	<i>(not shown)</i>		na	FOOTPEDAL - R S/N 411001-413367
10	4	41006	Bearing - Shafts, Roller	59	1	41214	HHCS G5 1/4"-20x1
11	9	41008	Bearing - Timing Sprocket, Thrust	60	4	41066	HHCS G5 1/4"-20x3/8
12	1	41462	Belt - Poly-V J6 Flex >=428326	62	2	41210	HHCS G5 3/8"-16x1-3/4 Black
<i>(not shown)</i>		41010	Belt - Poly-V S/N <=428325	63	1	41068	HHCS G5 3/8"-16x2-1/4
13	1	41014	Belt - Timing Left	64	1	41202	HHCS G5 3/8"-16x3-3/4
14	1	41012	Belt - Timing Right	65	6	41234	HHCS G5 5/16"-18x1/2 Black
15	1	40322	Belt Clamp - Left	66	4	41218	HHCS G5 5/16"-18x1-3/4
16	1	40320	Belt Clamp - Right	67	8	41062	HHCS G5 5/16"-18x3/4
19	2	41016	Belt Idler Pulley	68	10	30104	HHCS G5 5/16"-18x5/8
20	10	41018	BHCS G8 1/4"-20x1-1/4	69	1	41256	Insulator board
21	1	40156	Boot - Display	70	2	41549	Knob - Arm Lock (Green) S/N >=432503
22	1	40148	Boot - Electronic Tube	<i>(not shown)</i>		41573B	Knob - Arm Lock (Black) S/N <=432502
23	2	40210	Boot - Pivot Casting	71	1	41551	Knob - Load Lever (Green)
24	2	4091	BRACKET ASSY - ANGLE COVER	<i>(not shown)</i>		na	Knob - Load Lever (Black)
25	2	4093	BRACKET ASSY - SIDE COVER	72	1	41076	Label - Seat Position Indicator
26	1	41024	Bumper - Footpedal Stop	73	2	41180	Label - NuStep Logo
27	2	41028	Bumper - Large	74	2	41078	Leveler Foot
28	4	41030	Bumper - Seat Rail	75	1	4044	LOAD LEVER ASSEMBLY
29	5	41026	Bumper - Small	76	4	41082	Locknut NI G5 #10-24
31	1	41184	Cable - Ribbon	77	1	41260	Locknut NI G5 1/2"-13
32	2	41036	Cap - Frame Crosstube	78	12	41222	Locknut NI G5 1/4"-20 Black
33	2	41038	Cap - Lower Arm	80	2	30157	Locknut NI G5 3/8"-16
34	1	40552	Cap - Seat Rail	81	2	41216	Locknut NI G5 3/8"-16 Black
36	12	30267	Clamp - Ribbon Cable	82	16	30106	Locknut NI G5 5/16"-18
37	1	4076	CONNECTING LINK ASSY-SERVICE KIT	83	10	30109	Lockwasher - Split 5/16"
38	1	4090	COVER ASSY - L	84	6	41220	Lockwasher - Split 5/16" Black
39	1	4092	COVER ASSY - R	85	1	41088	Machine Key 1/4x1/4x1-1/2"
40	1	4094	COVER ASSY - TOP	86	2	40236	Machine Key 3/16x3/16x2-1/2"
41	1	40154A	Battery Access Panel S/N>=421388	88	1	4100A	MAIN FRAME ASSY S/N>=413368
<i>(not shown)</i>		40154	Battery Access Panel S/N<=421387	<i>(not shown)</i>		4100	M FRAME ASSY S/N411001-413367
42	1	40150	Display - Bracket Assembly	89	2	30564	Nut - Serrated Flange G5 5/16"-18
43	1	4800	DISPLAY ASSY REV 2.1	91	2	41477	Clip Bearing - 3/4"
44	1	40132	EC Ball Detent Plate	92	4	41476	Clip Bearing - 3/8"
45	1	41046	EC Ball Plunger	93	5	41474	Clip bearing - 5/16"x3/8"
46	1	4041A	EC DISK ASSY S/N >= 411115	94	1	4108	PCBOARD ASSEMBLY - WORKLOAD
<i>(not shown)</i>		4041	EC DISK ASSY S/N 411001-411114	95	2	30162	PHPS T/S Typ B #8x3/8" Black
				96	2	41246	PHPS Typ F #10-24x3/8 Black
				97	7	41100	PHPS w/ext washer #10-24x3/8 Blk

# NuStep TRS 4000 Parts List 1.6

*Note:* Most parts are available individually, but to simplify installation, ASSEMBLIES (in CAPS) only come fully assembled. Items noted as *(not shown)* were replaced with current revision parts and are available as service parts, but are not shown in the Figures.

Item	Qty	PN#	Part Description	Item	Qty	PN#	Part Description
99	1	4072	PIVOT DISK ASSEMBLY	151	1	41270	Washer - M6.4x12
100	1	41801	Polar Receiver	152	3	30333	Washer - Nylon .75x1"
101	1	41407A	Poly-V Sheave S/N >=428326	153	4	41166	Washer - Seat Wheel Black
<i>(not shown)</i>		41407	Poly-V Sheave S/N 424793-428325	154	4	30613	Washer - Swivel 5/16"
<i>(not shown)</i>		40332	Poly-V Sheave S/N <=424792	155	22	30126	Washer - USS 5/16"
102	8	41182	Poprivet 1/8x3/16"	156	2	41170	Wheel - Rear
103	2	30141	Pushnut 3/8"	157	10	41502	Wheel - Seat
107	1	41114	Retaining Ring - Selflocking 3/4"	158	2	41318	Pivot Cam
108	1	41258	Retaining Ring - Takeup 1/2"	159	6	41480	1/4-20x3/4" NLK BHSCS, Black Zinc
109	2	41416	Roll Pin 1/8x1-1/8"	160	2	41324	Cap - Arm Pivot Cam
110	1	41512	Seat	161	2	4102	FP STABILIZER S/N>=413368
111	2	30624	Seat Armrest	<i>(not shown)</i>	na		FP Support Tube S/N 411001-413367
112	1	30628	Seat Armrest Bracket - Left	<i>(not shown)</i>	41110		Ret Ring -Ext 1" S/N 411001-413367
113	1	30626	Seat Armrest Bracket - Right	162	2	41432	Shoulder Bolt 3/8x7/8"
114	4	30625	Seat Armrest Spacer	163	2	41328	Shoulder Bolt 3/8x1/2"
115	1	4050	SEAT ASSEMBLY	164	4	41338	PHPSw/ext washer #10-24x5/16" Blk
116	1	40510	Seat Channel Weldment	165	2	41116	Retaining Ring - Takeup 1"
117	1	4202	SEAT MOUNTING BRACKET ASSEMBLY	166	3	41340	Shoulder Bolt 5/16x3/8"
118	1	40524	Seat Position Indicator	167	2	41342	Wave Washer 5/16x5/8"
119	1	40550	Seat Rail	168	2	41336	Footpedal Bearing Spacer
120	1	4051	SEAT RELEASE BRACKET ASSY	169	1	41805	AC Adapter & Cable – US & Canada 110V
121	1	4053B	SEAT RELEASE LEVER ASSY (GREEN)	<i>(not shown)</i>	4150		AC Adapter & Cable – Europe 220V
<i>(not shown)</i>		na	SEAT RELEASE LEVER ASSY (BLACK)	170	4	30119	Washer – SAE 3/8"
122	1	na	SEAT RELEASE LEVER BRKT ASSY	171	2	41027	Bumper – Footpedal II Male
123	1	40560	Seat Stop Pin Weldment	172	1	40517	Spacer - Pulley
124	1	4064A	Sensor - Hall Effect	174	4	41433	1/4 - 20 Prevailing Torque Flange Nut
125	1	4062A	Sensor - VR	175	2	41246	10-24x3/8 PHPS Type F Blkzinc
126	4	41122	Set Screw 5/16"-18x1/2	177	1	41464	Spacer - Pivot Disk Belt
127	8	na	Set Screw 1/4"-28x1/4	178	1	4300	Water Bottle Holder
128	4	41403	Set Screw 5/16"-24x1/4	179	1	4305	Reading Rack
129	1	40600	Shaft - Pivot Arm	180	1	4310	123GO! Instruction Panel
130	1	40604	Shaft - Rear	181	1	4315	Display Accessory Kit
131	2	41230	Shoulder Bolt 3/8x1"	182	2	41414	Washer - Shim .375x.563x.030
132	2	41232	Shoulder Bolt 3/8x1-3/4"	183	1	40156	Boot – Display
133	2	41134	Shoulder Bolt 3/8x2-1/2"	184	1	41467	3/8x3/4x.090 Thrust Washer
134	2	41136	Shoulder Bolt 5/16x1/4"	185	1	41469	5/16x3/8x1/4 Flange Bearing
135	1	41140	Spring - Front Seat Lever	186	1	41470	5/16-18 Locknut, Black Zinc
136	1	41138	Spring - Belt Idler	187	2	40368	10-32x5/16 HXMS-Zinc
137	2	41142	Spring - Rear Seat Lever	188	1	40362	Timing Belt Clamp-Top R
138	1	41144	Spring - Seat Release Bracket	189	1	40374	Belt-Flat
140	1	4099	SUPPORT ASSY - STEP THROUGH	190	2	40364	Timing Belt Clamp-Bottom Assy
141	1	41148	Swivel	191	1	40370	Bracket-Flat Belt Pulley Assy
142	1	na	Swivel Rel Lever Brkt Assy (see item 117)	192	1	40376	Pulley-Flat Belt Idler 3.38
143	1	4054B	SWIVEL RELEASE LEVER ASSY (GREEN)	193	1	30153	3/8-16x1-3/4 HHCS G5 Zinc
<i>(not shown)</i>		na	SWIVEL RELEASE LEVER ASSY (BLACK)	194	1	40366	Flat Belt Clamp-L
144	7	41152	THPS #10-24x1/2" Black	195	1	40363	Timing Belt Clamp-Top L
145	16	41154	THPS #10-24x3/4" Black	200	2	41542	Receptacle 1/4 Turn
146	8	41252	THPS #6-32x1/4	201	2	41541	Stud 1/4 turn
147	2	4070	TIMING BELT SPROCKET ASSY	202	2	41561	Mount, Rod End, Front
148	16	41156	Unut #10-24	203	2	41562	Mount, Rod End, Rear
149	1	41158	User Manual	204	4	41566	Circlip
150	10	41168	Washer - 1/4" External Star Black	205	8	41567	Thrust Washer
				206	4	50938	3/8-24 Jam Lock Nut

FIGURE 1F

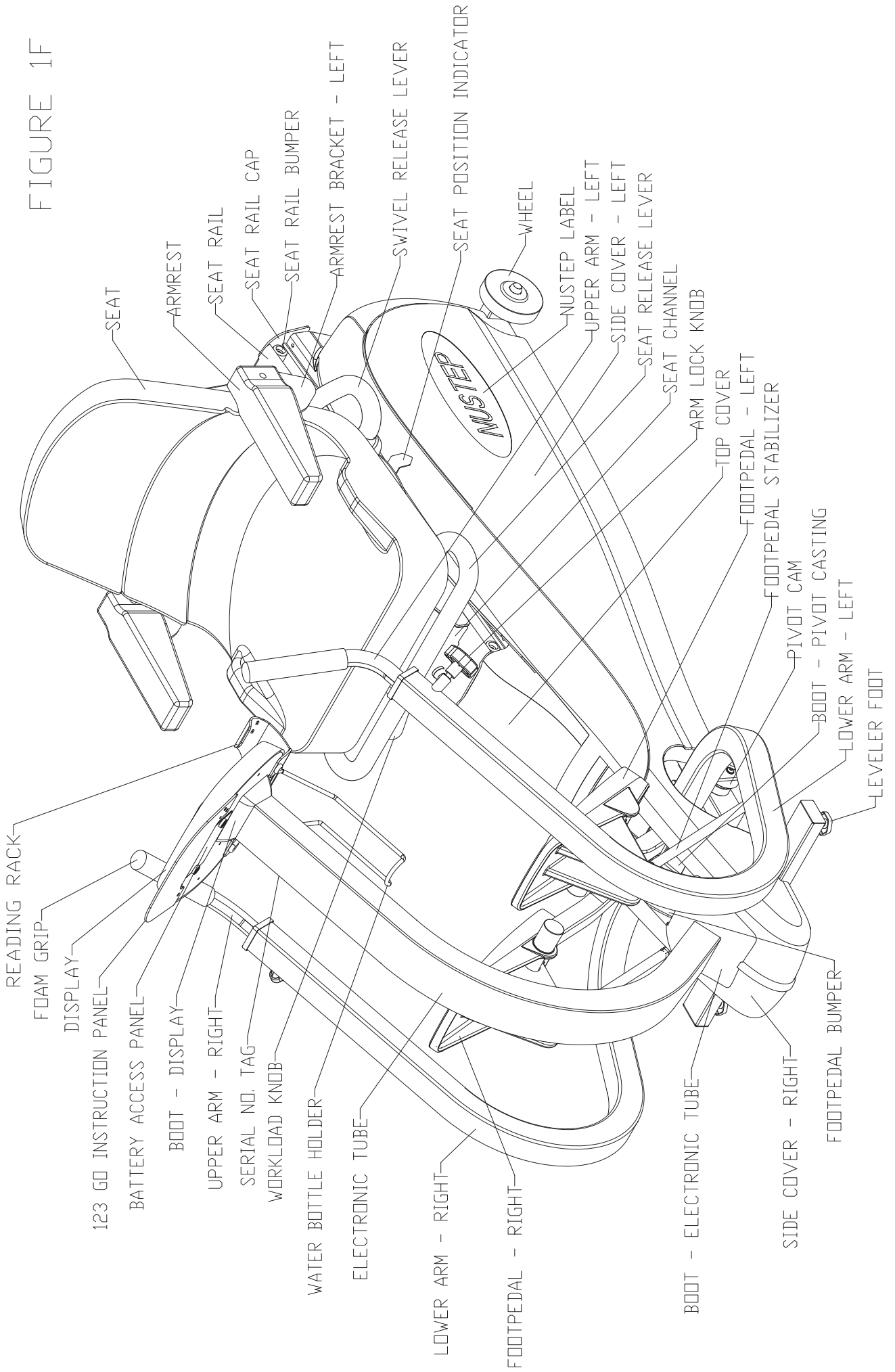
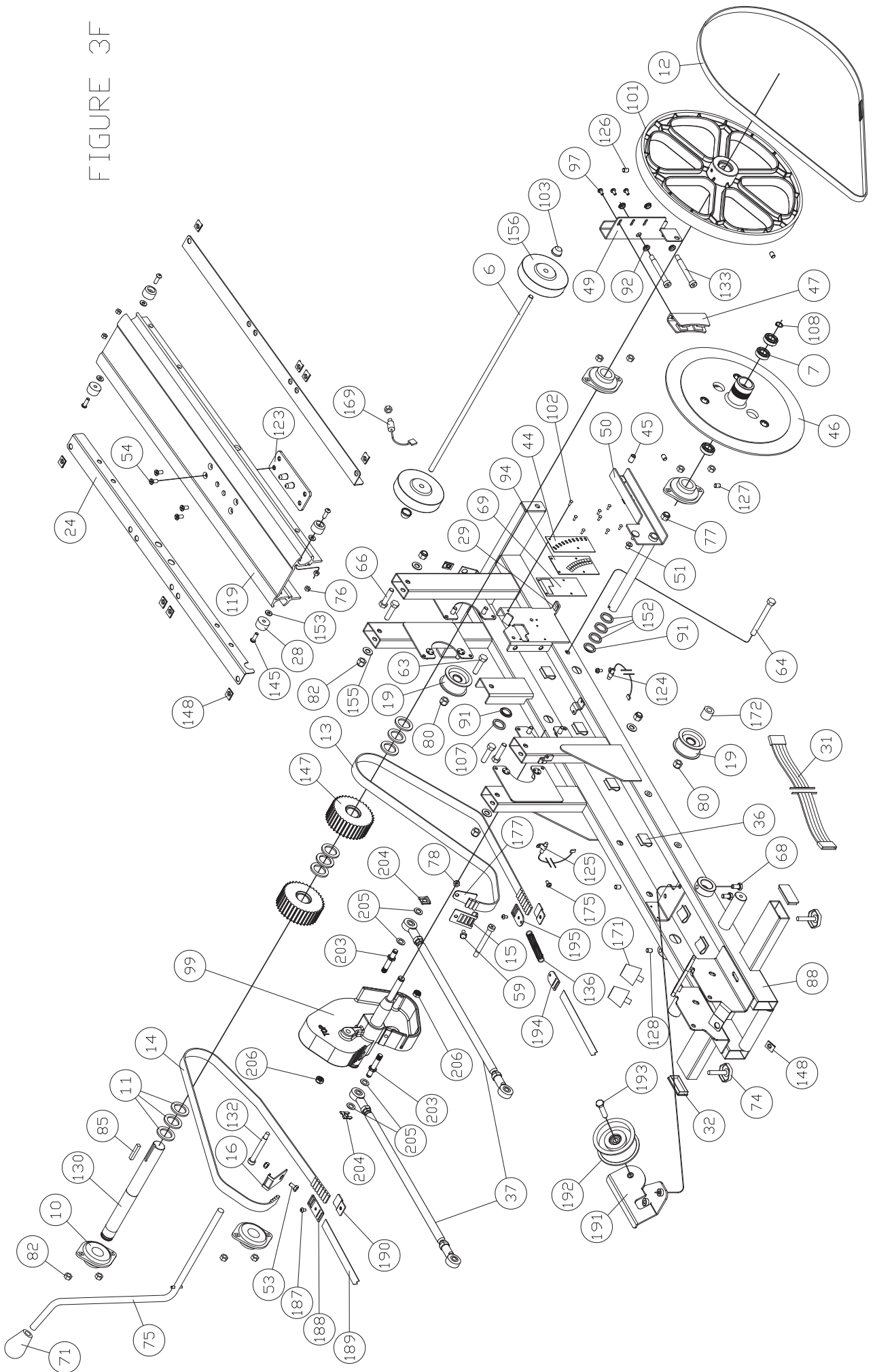




FIGURE 3F





# Specifications

## Dimensions and Weight

- Length: 60" (152 cm)
- Width: 28" (71 cm)
- Height: 43" (109 cm)
- Weight: 205 lbs (93 kg)

## User Height and Weight Limits

- Height: 4'6" to 6'4" (137 cm to 193 cm)
- Weight: 400 lbs (182 kg)



### CAUTION

The maximum user weight limit for this product is 400 lbs (182 kg).

## Overview

- Total body conditioning of the cardiovascular and muscular systems.
- Use arms alone, legs alone, or both.
- Closed-kinetic chain exercise.
- Natural recumbent stepping motion is easy on the hip and knee joints.
- Low 7"–9" step-through height for easy access.
- Biomechanically correct workout position.
- Contralateral movement – arm linked with opposite leg.
- Smooth, fully connected motion between arms and legs.
- User-selected stepping height from 2"–8.5".

## Resistance System

- Quiet, frictionless, permanent magnetic eddy current system with 10 workload levels.
- User power output from 5–800 watts.

- All-belt drive.
- Spring-loaded idlers automatically adjust belt tension.
- Long-life, high-grade bearings.

## Frame

- Durable, heavy-duty 14-gauge welded steel frame.
- Powder-coated frame and zinc-plated components resist rust.
- Four-point contact with the floor and leveling feet increase stability.
- Lift unit with front handle and rear wheels.



### CAUTION

The T4 is very heavy; it weighs 205 lbs (93 kg).

To avoid injury, or damage to the product, always obtain assistance to move this product.

Use proper lifting technique.

- Strong, impact-resistant polystyrene cover is easy to clean.
- Anodized aluminum arms with extra-long, comfortable hand grips.
- Ergonomically correct hand position.
- Long, 15" (38 cm) arm adjustment range.

## Seat and Arm Rests

- Swivel seat rotates and locks 90° to left or right, 180° total.
- Foam-covered seat and swivel release levers work from front, sides or back.
- Seat slides and adjusts smoothly.

- 15" (38 cm) forward/backward travel automatically adjusts seat height 2" (5 cm) up and down.
- Ergonomically designed padded seat has contoured back support.

## Display

- Simple, one-button start and reset, automatic power on/off.

- Easy-to-read display shows:

Steps/min.: 5–210

Watts: 5–800

METS: 2–24

Time: Starts at 0, counts up

Steps: Counts cumulative steps up to 9999

Workload: 10 workload levels

Calories: Up to 999 KCal

- User selects English or metric measurement system.
- Optional Polar® system (Part No. 50813) measures heart rate 40–220 BPM +/- 2
- Cordless design uses 4 AA alkaline batteries. Rechargeable batteries are not recommended due to voltage requirements of the display. Optional AC adapter (Part No. 41805 US/Canada, 41506 Europe).

## Foot Pedals

- Cast Aluminum pedals have durable powder coating.
- Four-bar linkage and nonskid tread keep feet secure.
- Optional foot secure system provides additional support.

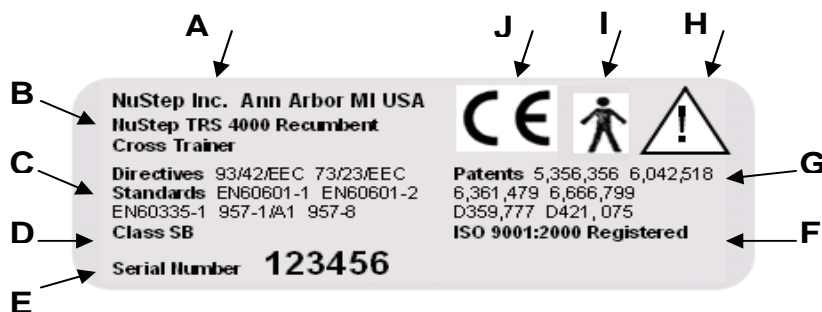
*For information about optional accessories, please visit our web site, [www.nustep.com](http://www.nustep.com).*

# Safety Notifications

Type / Degree of Protection	Classification / Identification / Warnings	Symbol
Type of protection against electric shock	Class II equipment	
The degree of protection against electric shock	Type B applied part	
The degree of protection against the ingress of liquids	Not protected	Na
The degree of safety in the presence of a flammable anesthetic mixture with air or with oxygen or nitrous oxide	Not suitable	Na
The mode of operation	Continuous	Na
Information regarding potential electromagnetic or other interference and advice regarding avoidance	The NuStep® TRS 4000 Recumbent Cross Trainer uses electromagnetic and RF energy only for its internal function. Therefore, its EMC and RF emissions are very low and are not likely to cause any interference in nearby electronic equipment..	Na
EMC warnings and tables required by IEC 60601-1-2	See EMC tables below	Na
ID of specified optional external power supplies or battery chargers necessary to ensure compliance with the requirements of IEC60601	An external power supply is optional due to AA battery operation, but when required, the following power supplies must be used: Europe: DPD090050E-P5-TK Japan: 1J35-090030D-024 US & Canada: DPD090050-P5P-TK	Na
ID of any risks associated with the disposal of waste products, residues, including disposal of the equipment itself at the end of its useful life.	The NuStep® TRS 4000 Recumbent Cross Trainer contains electronic circuit assemblies and alkaline batteries that may require specific local disposal or recycling procedures.	
The specification of the environmental conditions of transport and storage (also marked on the outside of the packaging).	The NuStep® TRS 4000 Recumbent Cross Trainer can be: <b>a) safely transported and stored in these conditions</b> -20° to 54°C; ≤ 85% non-condensing humidity; ≥ 100 Pascals pressure  <b>b) operated in these conditions</b> 5° to 50°C; ≤ 85% non-condensing humidity; ≥ 100 Pascals pressure	Na
A description of the means for the isolation of the equipment from the supply.	The NuStep® TRS 4000 Recumbent Cross Trainer can be isolated by unplugging the power supply from the wall and run on batteries alone. The power supply has an isolation transformer and fuseable link.	Na
Indication that the equipment is energized.	No such indicator provided.	Na
Indication of long term battery storage	If the NuStep® TRS 4000 Recumbent Cross Trainer equipment is not to be used for longer than 3 months, please remove batteries.	Na

# Manufacturer and Equipment Identification

The serial number is label is located at the top of the electronic tube directly behind the display.



<b>A</b>	Manufacturer's name and address	<b>F</b>	Quality management system registered to ISO standard by NSF-ISR
<b>B</b>	Model number and description of product	<b>G</b>	International patent protection for the product
<b>C</b>	Compliance with directives and standards	<b>H</b>	Tells you to consult the User's Manual
<b>D</b>	Equipment classification	<b>I</b>	Type B applied part for electrical safety
<b>E</b>	Serial number and date of manufacture	<b>J</b>	CE mark for Europe

# EMC Tables


## Guidance and manufacturer's declaration – electromagnetic emissions

Guidance and manufacturer's declaration – electromagnetic emission		
The NuStep® TRS 4000 Recumbent Cross Trainer is intended for use in the electromagnetic environment specified below. The customer or the user of the NuStep® TRS 4000 Recumbent Cross Trainer should assure that it is used in such an environment.		
Emissions test	Compliance	Electromagnetic environment – guidance
RF emissions CISPR 11	Group 1	The NuStep® TRS 4000 Recumbent Cross Trainer uses RF energy only for its internal function. Therefore, its RF emissions are very low and are not likely to cause any interference in nearby electronic equipment.
RF emissions CISPR 11	Class B	The NuStep® TRS 4000 Recumbent Cross Trainer is suitable for use in all establishments.
Harmonic emissions IEC 61000-3-2	Not applicable. Rated power is $\leq 75W$ .	
Voltage fluctuations/ flicker emissions IEC 61000-3-3	Not applicable. Rated power is $\leq 75W$ . Equipment is unlikely to produce significant voltage fluctuations.	

## Guidance and manufacturer's declaration – electromagnetic immunity

Guidance and manufacturer's declaration – electromagnetic immunity			
The NuStep® TRS 4000 Recumbent Cross Trainer is intended for use in the electromagnetic environment specified below. The Customer or the user of the NuStep® TRS 4000 Recumbent Cross Trainer should assure that it is used in such an environment.			
Immunity test	IEC 60601 Test level	Compliance level	Electromagnetic environment – guidance
Electrostatic discharge (ESD) IEC 6100-4-2	$\pm 6$ kV contact $\pm 8$ kV air	$\pm 6$ kV contact $\pm 8$ kV air	Floors should be wood, concrete or ceramic tile. If floors are covered with synthetic material, the relative humidity should be at least 30%.
Electrical fast transient/burst IEC 61004-4	$\pm 2kV$ for power supply lines	$\pm 2kV$ for power supply lines	Mains power quality should be that of a typical commercial or hospital environment.
Surge IEC 61000-4-5	$\pm 1$ kV differential mode	$\pm 1$ kV differential mode	Mains power quality should be that of a typical commercial or hospital environment.
Voltage dips, short interruptions and voltage variations on power supply input line IEC 6100-4-11	$<5\% U_T$ ( $>95\%$ dip in $U_T$ ) for 0,5 cycles  $40\% U_T$ (60% dip in $U_T$ ) for 5 cycles  $70\% U_T$ (30% dip in $U_T$ ) for 25 cycles  $<5\% U_T$ ( $>95\%$ dip $U_T$ ) for 5 sec	$<5\% U_T$ ( $>95\%$ dip in $U_T$ ) for 0,5 cycles  $40\% U_T$ (60% dip in $U_T$ ) for 5 cycles  $70\% U_T$ (30% dip in $U_T$ ) for 25 cycles  $<5\% U_T$ ( $>95\%$ dip $U_T$ ) for 5 sec	Mains power quality should be that of a typical commercial or hospital environment. If the user of the NuStep® TRS 4000 Recumbent Cross Trainer requires continued operation during power mains interruptions, the NuStep® TRS 4000 Recumbent Cross Trainer would be powered from its internal batteries.
Power frequency (50/60 Hz) Magnetic field IEC 61000-4-8	30 A/m	30 A/m	Power frequency magnetic fields should be at levels characteristic of a typical location in a typical commercial or hospital environment.
NOTE $U_T$ is the a.c. mains voltage prior to application of the test level.			

**Guidance and manufacturer's declaration – electromagnetic immunity**

<b>Guidance and manufacturer's declaration – electromagnetic immunity</b>			
The NuStep® TRS 4000 Recumbent Cross Trainer is intended for use in the electromagnetic environment specified below. The customer or user of the NuStep® TRS 4000 Recumbent Cross Trainer should assure that it is used in such an environment.			
<b>Immunity test</b>	<b>IEC 60601 test level</b>	<b>Compliance level</b>	<b>Electromagnetic environment – guidance</b>
Conducted RF IEC 61000-4-6	3 Vrms 150 kHz to 80 MHz	3 Vrms	<p>Portable and mobile RF communications equipment should be used no closer to any part of the NuStep® TRS 4000 Recumbent Cross Trainer, including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter.</p> <p><b>Recommended separation distance</b></p> $d = 1,2 \sqrt{P}$
Radiated RF IEC 61000-4-3	3 V/m 80 MHz to 2,5 GHz	3 V/m	$d = 1,2 \sqrt{P} \quad 80 \text{ MHz to } 800 \text{ MHz}$ $d = 2,3 \sqrt{P} \quad 800 \text{ MHz to } 2.5 \text{ GHz}$ <p>where P is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer and d is the recommended separation distance in metres (m).</p> <p>Field strengths from fixed RF transmitters, as determined by an electromagnetic site survey, <sup>a</sup> should be less than the compliance level in each frequency range. <sup>b</sup></p> <p>Interference may occur in the vicinity of equipment marked with the following symbol:</p> 
NOTE 1 At 80MHz and 800 MHz, the higher frequency range applies.			
NOTE 2 These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.			
<sup>A</sup> Field strengths from fixed transmitters, such as base stations for radio (cellular/cordless) telephones and land mobile radios, amateur radio, AM and FM radio broadcast and TV broadcast cannot be predicted theoretically with accuracy. To assess the electromagnetic environment due to fixed RF transmitters, and electromagnetic site survey should be considered. If the measured field strength in the location in which the NuStep® TRS 4000 Recumbent Cross Trainer is used exceeds the applicable RF compliance level above, the NuStep® TRS 4000 Recumbent Cross Trainer should be observed to verify normal operation. If abnormal operation performance is observed, additional measures may be necessary, such as reorienting or relocating the NuStep® TRS 4000 Recumbent Cross Trainer.			
<sup>B</sup> Over the frequency range 150 kHz to 80 MHz, field strengths should be less than [V <sub>1</sub> ] V/m.			

**Recommended separation distances between portable and mobile RF communications equipment and the EQUIPMENT OR SYSTEM**

<b>Recommended separation distance between portable and mobile RF communications equipment and the NuStep® TRS 4000 Recumbent Cross Trainer</b>			
The NuStep® TRS 4000 Recumbent Cross Trainer is intended for use in an electromagnetic environment in which radiated RF disturbances are controlled. The customer or the user of the NuStep® TRS 4000 Recumbent Cross Trainer can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and the NuStep® TRS 4000 Recumbent Cross Trainer as recommended below, according to the maximum output power of the communications equipment.			
Rated maximum output power of transmitter  W	Separation distance according to frequency of transmitter		
	150 kHz to 80 MHz  d = 1,2	80 MHz to 800 MHz  d = 1,2	800 MHz to 2.5 GHz  D = 2,3
0,01	0,12	0,12	0,23
0,1	0,38	0,38	0,73
1	1,2	1,2	2,3
10	3,8	3,8	7,3
100	12	12	23
For transmitters rated at a maximum output power not listed above, the recommended separation distance <i>d</i> in metres (m) can be estimated using the equation applicable to the frequency of the transmitter, where <i>P</i> is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer.			
NOTE 1 At 80 MHz and 800 MHz, the separation distance for the higher frequency range applies.			
NOTE 2 These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.			

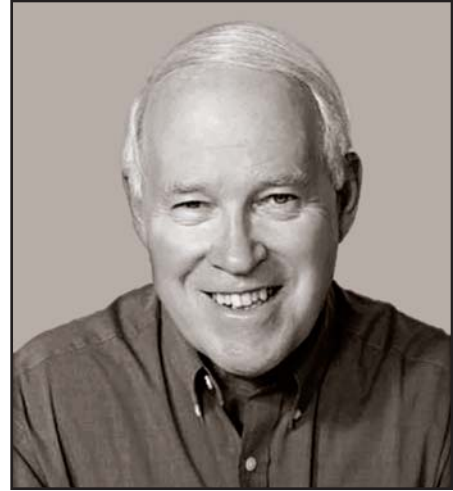




Thank you for choosing the NuStep® T4 Recumbent Cross Trainer. We asked fitness and rehabilitation professionals from around the country for their ideas on what makes a good exerciser — and used their ideas in designing the NuStep. The result, we think, is an exerciser that's safe and effective.

We're always interested in user comments, and invite you to call us with your thoughts and suggestions.

Yours in good health,  
Richard N. Sarns  
President, NuStep, Inc.



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[www.nustep.com](http://www.nustep.com)

NuStep® is a registered trademark of NuStep, Inc.  
US Patent Nos. 5,356,356, 6,042,518, 6,361,479, 6,666,799  
Design Patent Nos, D359,777, D421,075 and other patents pending.  
Made in USA

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