

EX N' FLEX

EF-250

Instructions for Use



Model EF-250
Leg Exerciser

Introduction

EX N' FLEX Model EF-250 has been designed for people who have a wide range of walking problems from the result of illness or accident. It provides a sustained, predictable Range of Motion to Muscles, Joints and Tendons for individuals who face a future with little or no movement. The movement provided is both physically and psychologically beneficial and may be used as an adjunct to regular physiotherapy or where physiotherapy is not available.

Understanding and Deploying the Locking Mechanism

Base Handle Position #1a & #1b

Position #1a; the Base Handle (Locking Mechanism) stands up in a vertical position away from the top of the base and the wheels are touching the floor. The machine can be freely moved or transported.

Position #1b; the Base Handle has been pushed forward up onto the base by gripping the lower part of the Base Handle closest to the floor. Once in place it should lay flat on the top of the base. This lowers the rubber tipped legs and the wheels are now suspended off the floor under the base cover.

Adjustment to the user's wheelchair or the machine may be necessary to attain the best positioning. See P.4 (#1-5) for positioning.

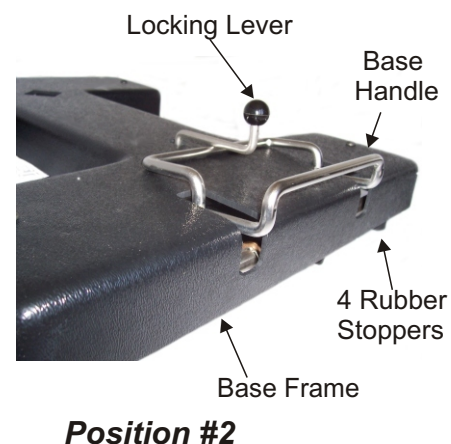
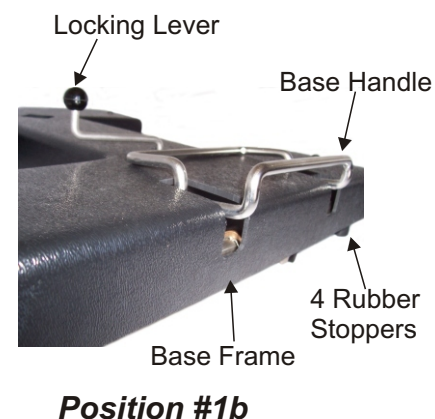
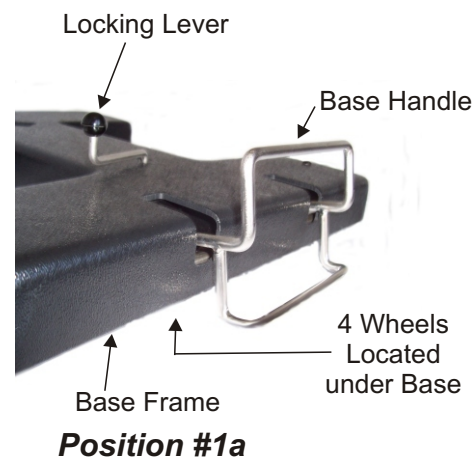
***** Try placing yourself in the machine initially. ***** This experiment will permit you to judge a more accurate placement for each individual. There should be some bend in the knee when the Foot Rests reach the furthest point of extension.

Base Handle Position #2

Once the Base Handle is in position on top of the Base Cover, swing the Locking Lever over the top of the Base Handle. The machine is now locked into position.

Unlock Mechanism:

To return the base to its wheels; grip the black locking lever knob and swing the lever off and away from the Base Handle. The Base Handle (locking mechanism), can now be pulled down towards the floor raising the legs and allowing the wheels to touch the floor.



Understanding the Control Unit

The Control Unit contains all of the electronics, switches and displays necessary to control the operation of the EX N' FLEX EF-250 Leg Exerciser. It is secured to the Exerciser by means of two screws and plugs into a connector. It can be easily removed for servicing or replacement..

*** Plug the Power Cord into a 110/220 V.A.C. Wall outlet. PLEASE NOTE: Before attaching yourself or anyone to the machine, it is recommended that you read these instructions thoroughly and operate the Control Unit to familiarize yourself with the switching.***

The Main Power Switch:

The Main Power Switch is the black switch located on the right hand edge of the Control Box. When the switch is turned on the Control Unit will light up. The Power Light comes on, zeros appear in the large LED Display window and lights appear in the side windows by the Mode Switch, Speed Switch and the F/Off/Rswitch. (Forward, Off, Reverse).

The Pressure Switches:

There are six different Pressure Switches on the Control Unit: On/Off, a direction switch(F/Off/R), Mode Switch, Speed Switch and two Timer adjustment arrows.

When the side mounted Main Power Switch is on, you can start the machine by selecting forward or reverse. You can stop the machine by pressing the F/Off/R switch once to move the switch to the centre/Off position or you can also turn it off by pressing the On/Off switch on the bottom left of the face of the Control Unit, near the Power Light. If you turn it off here you will resume movement in the same direction the machine was turning when it was stopped.

Try this now: Turn on the Main Power Switch located on the right hand edge of Control Box. Press the F/Off/R Switch. The Foot Rests should begin to turn in Forward or Reverse depending on your selection. Leave the machine running then try the Speed Switch.

The Speed Switch:

The Speed Switch contains three indicator lights: Hi, Med and Lo. To choose a speed, press the switch to change between Lo, Med and Hi.

Now turn the machine off by pressing the On/Off switch on the face of the Control Unit.

Understanding the Mode Switch:

The Mode switch has four positions; **Timer**, **Biof** or Biofeedback, **Trip** and **Total**. A red indicator light shows the mode being used.

When the machine is first turned on the Mode Switch default position is **Biof**. The function of the Biofeedback display is explained further on.

The Timer Switch

Press the Mode Switch once and it will change to "Time" mode. When in "Time" mode you can adjust/set the timer by pressing the up and down arrows. These switches are located just below the LED digital readout window. Increase the amount of time in 5 minute increments each time you press the "up" arrow. Decrease the amount of time by 1 minute, each time you press the "down" arrow. You can view the amount of time selected in the LED display window located above the arrows. When the machine is turned on the timer will begin counting down in seconds and once it reaches zero the machine will automatically shut off and the F/Off/R switch will have moved to the centre Off position.

Note: Once the timer is set you can switch between modes and the timer will still continue to count down.

Odometer “Total” Switch:

While still in Time mode, press the Mode Switch 3 times and you will change the mode (the red indicator light will move) to “Total” “Total” display acts as an odometer and logs the distance travelled. The total cannot be reset and continually accumulates (mileage/kilometers for leg units).

Odometer “Trip” Switch:

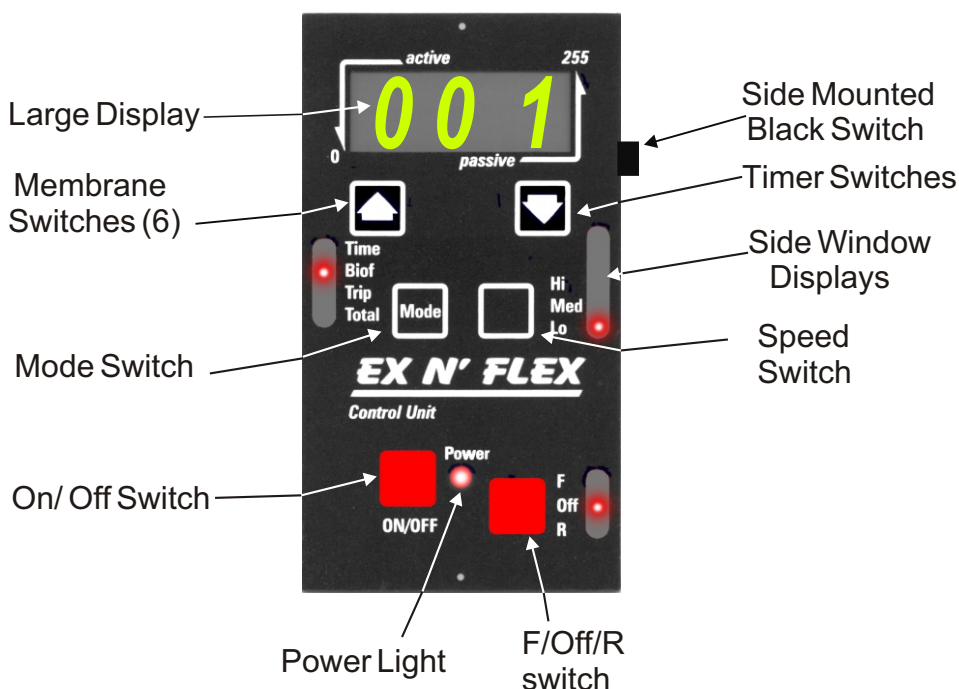
Press the Mode Switch again and the red light will change the mode to “Trip”. “Trip” mode logs in meters or yards in the U.S.A. the distance travelled for each session. Every Trip count, equals 1 meter. Every 1000 meters logged is equivalent to 1KM. For U.S. Users, every Trip count equals 1.76 yards. **To save and add the accumulated revolutions from a session to the “Total” turn the machine off using the On/Off Switch on the face of the Control Unit** before turning off the main power switch on the side.

Biofeedback Switch:

Press the Mode Switch again, or if the machine is turned off, turn it on and the red light will be in default Biof position. “Biof “ or Biofeedback mode displays numbers on the digital display which fluctuate between 0 and 235. These numbers indicate the effort require to move passive legs.

The Biofeedback mode is used to measure the User’s resistance and/or assistance. **For example:** if a user has tone, stiffness, or spasticity in their legs, this would cause resistance and require the motor to work harder to turn their limbs. As the user becomes more relaxed and flexible the “Biof” numbers will decrease. This display enables someone with little or no feeling or voluntary movement in their limb(s) to see the movement is making a difference.

If the user is using the machine actively or applying some of their own strength and assisting/overriding the motor then the LED display will show a decrease in the “Biof” numbers. This shows the User/Caregiver that the User is assisting the machine and building strength. Refer to P.3 for instructions on using the machine actively.



Control Unit

1. Sit in a wheelchair, lounge Chair or kitchen chair. Foot Rests on wheelchair must be swung away or removed to access the machine. Either wheel the machine into the chair or position the chair a short distance in front of the machine, ie:4"-5".

2. Grip the Positioning Handle on the front of the machine and pull the machine into the approximate position for use. Make sure that the User is centred on the machine and that the base of the machine is parallel to the frame of the wheelchair/chair.

3. Place Feet in Foot Rests. Proper shoes are recommended. It may be necessary to adjust the height of the machine if the foot does properly fit on the Foot Rest (ie: the legs are too short or the wheel chair cushion is too high).

Height adjustment is obtained by rotating the Height Adjustment knob on the back of machine. Turn counter clockwise to loosen the clamp, raise to desired height, turn clockwise to tighten. The upper unit can be raised 12" above the base (seeP.5, Fig.5, Detail"A")

4. Neoprene Straps with velcro attachment secure the feet in the foot rests. The short strap goes over the instep of the foot and fastens on velcro on side of the Foot Rest. The long strap goes over the ankle and down the back of the Foot Rest where it fastens on the velcro strip. (See Fig. 2)

5. Self Insertion - Place one foot in the foot rest when it is at the bottom of its rotation cycle. Using the Controller, slowly bring this loaded Foot Rest to the top of the cycle and fasten Foot Strap. At this point place the other foot in the empty Foot Rest. Bring slowly to top and fasten Foot Straps..

6. Neoprene Leg Restraining Straps may be used at ths time if necessary. If both legs fall outward, the Strap is placed under the thighs and fastened over the top of the legs (Fig. 3a). If leg /legs fall inward, place strap under the leg, through the outside wheel of the wheelchair and fasten both ends together over the leg (fig.3b)

7. Set Speed Switch on the Control Unit to desire speed (Lo, Med or Hi). It is recommended to initially start in Lo or med speed.

8. Set the Mode Switch to Biof, press the F/Off/R Switch (lower right hand corner of the Controller) to start the Unit. The Foot Rests will start to rotate and numbers will appear on the Large Display. Refer to P.3 , the section on Biofeedback for information on the meaning of the numbers. Pages 2 and3 contain all the information regarding the various switches on the controller. Read these pages thoroughly before starting the machine. The odometer is running continuously when the machine is turned on and registering the distance travelled. If you wish to have a Trip reading at anytime during your exercise period, Select the Trip setting on Mode Switch and numbers will register on the Large Display. Set Timer if desired, see P.2



Fig. 1



Fig.2



Fig. 3a



Fig 3b

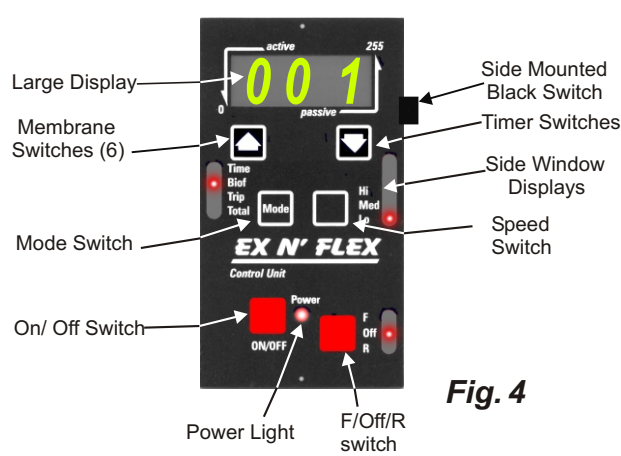


Fig. 4

Control Unit

9. While the machine is still in Position Fig. See Fig. 1b Page 1, (not yet locked in position). Turn Power on and allow pedal to rotate one revolution to ensure the unit is positioned correctly. If the machine is too far away it will automatically be pulled towards you. At this point, after one revolution the machine will be in the optimum position. Turn machine off and lift Base Clamp Handle to top of Base to deploy rubber stoppers Fig.1b, Page 1 and swing Locking Lever over Base Clamp Handle. This will lock Base firmly into position for use. You are now ready to proceed with your exercise program.

10. Press F/Off/R switch to commence your exercise program.

11. Relax, sit back and let the machine do the work. If higher speed is required, press mode switch. If some active exercise is desired refer to the section on Biofeedback display, Page 3.

12. For best results, time should be equally divided between Forward and Reverse motion. Reverse motion is achieved by use of the F/Off/R switch.

13. **To Turn Off**, switch to Off on the F/Off/R switch then Red On/Off Switch. This will turn off all displays and store the data from Trip to Total on the touch pad. **It is necessary to turn off power Switch before turning off Side Mounted switch or the Trip Data from the current session will not be stored.**

14. Remove Foot Straps, swing Locking Lever free of Locking Mechanism and push machine away. If you wish to leave the machine in position for easy access from your wheelchair, unlock the wheelchair and push away from the machine.

NB. The Crank Arm is provided with an Inner Hole to allow for a reduced amplitude. This is useful for people with short legs or extreme tone/spasm. This permits a smaller range of movement before working up to full amplitude/range of motion.



Fig. 5

How Long Should I Stay on the EX N' FLEX ?

As with any exercise program, the best results are achieved with a gradual approach. (Resist the temptation to spend more than **five minutes** on the machine to start with). Slow speed is a good way to start. **In extreme cases**, only one or two revolutions may be achieved because of muscle/joint resistance or spasm. Sometimes by switching between Forward and Reverse and the speed switch set to High, it is possible to achieve several partial revolutions. With repeated sessions this should result in increased flexibility in the muscles and tendons to a point where full revolutions should be achieved. Any excessive resistance will show on the Biofeedback display as high numbers. As flexibility improves, the numbers shown on the Biofeedback will decrease. Once flexibility is regained and no discomfort is experienced the following day, the amount of time on the machine may be increased one minute per session to a maximum of 30 minutes per session. The time should be equally divided between Forward and Reverse. The EX N' FLEX may be used for more than one session per day. If discomfort is experienced as a result of unaccustomed exercise, discontinue use of the machine until discomfort subsides, then resume program.

**** To assure that the legs are not over extended, make sure that the machine is close enough that the User has a partial bend in the legs at all times during use.

Note:

When excessive resistance occurs the machine will stall and stop moving after 8 seconds. To restart the machine press the F/Off/R Switch.

EF-250 Parts List

<i>Part#</i>	<i>Item</i>
2500L	Axel/Main Bearing Assembly
2501L	Base Complete
2502L	Base Clamp Handle (Locking Mechanism)
2503L	Base Cover (h-Panel)
2504L	Cable Harness
2505L	Casters
2506L	Control Unit
2507L	Crank Arm
2508 L	Decal, EX N' FLEX
2509L	Decal, Leg Exerciser
2510L	Foot Plate
2511L	Foot Plate/Hanger Bracket Ass'y
2512L	Foot Straps(pair)
2513L	Foot Straps-XL (pair)
2514L	Foot Strap Mounting Post

<i>Part #</i>	<i>Item</i>
2515L	Handles
2516L	Hanger Bracket
2517 L	Height Adjustment Knob
2518L	Height Adjustment Stalk
2519L	Leg Strap 40"
2520L	Leg Strap 48"
2521L	Locking Lever (Base)
2522L	Locking Lever Knob (Base)
2523L	Motor
2524L	Panel, Centre Front (C Panel)
2525L	Panel, Centre Back (L Panel)
2526L	Panel, Side Cover
2527L	Power Cord
2528L	Power Supply
2529L	Rubber Stoppers (ea.)
2530L	Shoulder Bolt (Foot Plate)

One year limited Warranty

This product is warranted to be free from defects in material and workmanship for a period of 1 year from the date of purchase or lease.

Important: This warranty does not cover damage resulting from an accident, misuse or abuse, lack of reasonable care, the affixing of unauthorized attachments, loss of parts or subjecting the device to other than specified voltage. (Read directions and instructions carefully).

If malfunction occurs, do not use the unit.

To ensure prompt service contact EX N' FLEX by phone or email. We will repair, replace the machine or send replacement parts (our option) at no charge to you.

If the warranty has expired or other terms are not met there will be a charge for any repairs, parts or shipment required.

Contact:

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Ph: (613)733-2988 Fax: (613)733-4250
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website: www.exnflex.com
 Save this warranty for your records