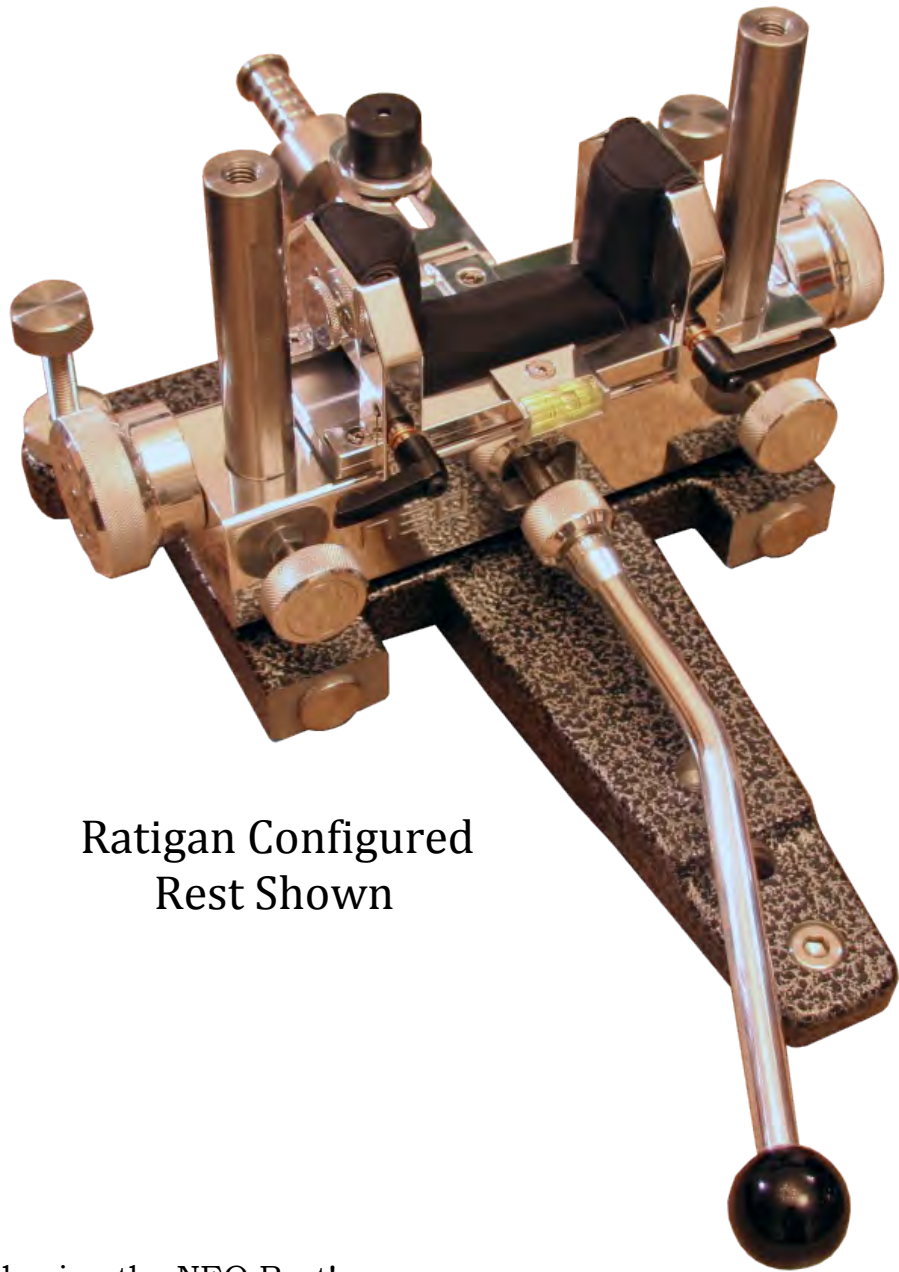


The Seb NEO Rest

English Version
Jan 2014 MPR



Ratigan Configured Rest Shown

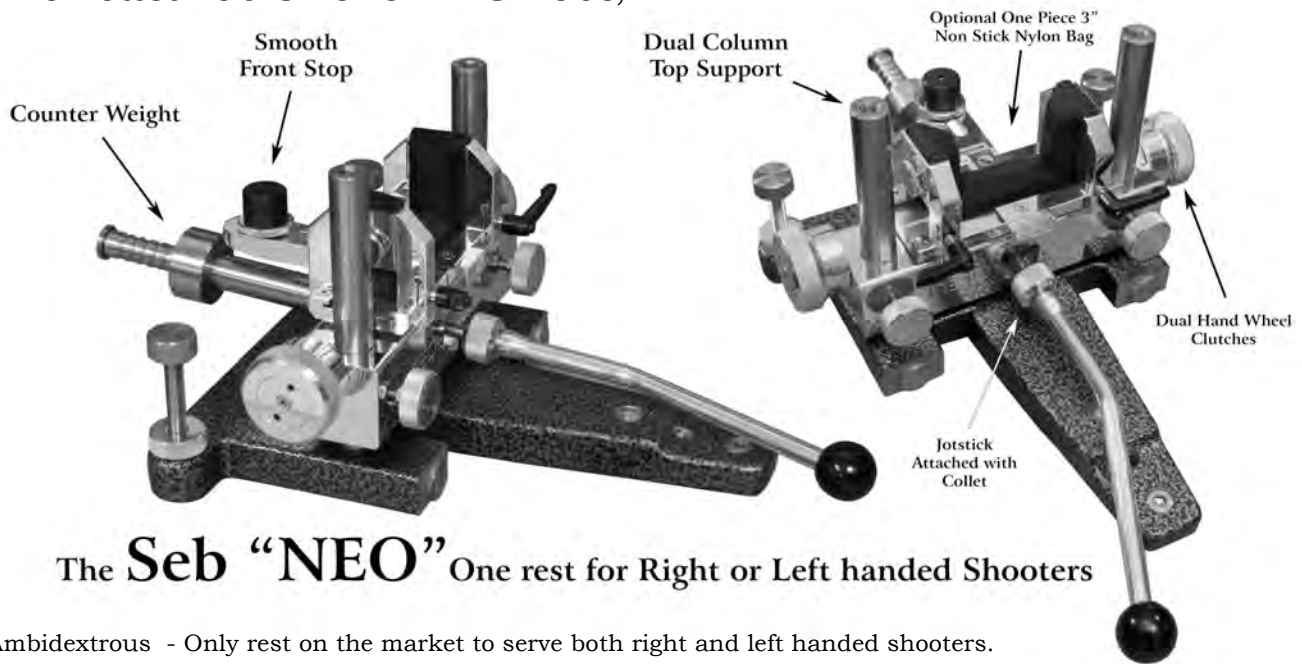
Thank You for purchasing the NEO Rest!

Your new NEO rest is the best engineered & smoothest coaxial rest in the world.

The NEO rest design is based on experience gained over the last few years and with the help of some of the best shooters on earth.

Your Seb NEO rest can be used with any type of benchrest shooting, although many of the design features were designed for the competitive and demanding sport of benchrest shooting those same design features will serve you well for any type of shooting from competitive centerfire benchrest, F-class, 600 and 1000 yard benchrest, Varmint for score, Hunter class, rim fire, air gun and varmint shooting. (sorry if I omitted your discipline, it was not intentional)

Some features of the NEO rest;



The Seb "NEO" One rest for Right or Left handed Shooters

1. Ambidextrous - Only rest on the market to serve both right and left handed shooters.
2. Dual support columns with Rack & Pinion system, with a huge and rapid adjustment range.
3. Spring loaded top mechanism to help hold up the weight of the rifle - standard.
Optional - Static Counter Weights available (dependent on rifle weight).
4. Lightest and smoothest joystick movement available. This is accomplished by the counter force loading, either by the standard spring loading or the optional static counter weight. The rest design enables the tensioners to be adjusted for the desired feel by the user. Other coaxial rests require enough clamping force to hold the weight of the rifle, without that clamping force, the rest top and rifle will move down by themselves.
5. Seb NEO has more joystick travel than any other coaxial rest on the market.
About 43 MOA in the vertical, 48 MOA in the horizontal with joystick movement alone.
6. Ability to adjust the force required to rotate the center shaft. The bent joystick and ability to rotate it will aid in keeping the palm of hand firmly grounded to the bench at all times while holding the joystick.
7. Reversible base configuration. The Base can be setup conventionally with the long leg in the rear (Shown above) or can be set up with the long leg in the front. As with many things there are trade offs. While using the long leg to the front gives more room under the rifle, it also moves the rifle and rest about 5 inches farther back on the bench.
(It is common to have the rest front feet at the front edge of the bench.)
8. Weight - Standard rest 22.5 pounds (10.2kg), Ratigan optioned rest comes in at about 24 pounds (11kg).
9. New adjustable rest top design with 3 independent bags. For rifle widths of about 0-4inches.
Optional - Single piece bags available in 2.5, 3 and 4 inch widths.
10. Independent moveable side plates with Fine tension adjustment.
11. Bubble Level is standard with every rest.
12. Only production rest that can be used in reverse acting mode. Up on joystick = down on rest, down=up
13. Collet type joystick attachment that is very stable.
14. Fore end stop is foldable and adjustable, Standard with O-rings.
Ratigan - Option comes with a smooth plastic cover.
15. Designed to minimize the number of tools required to use the rest, the goal was zero.
16. Rest packs up very compactly, easily dismantled for transport - a big "plus" when traveling.

Optional Equipment

Ammo Holder



Timer Holder



One Piece Bags
2.5, 3 and 4 inch

Plastic front Stop cover

Long feet for F-class

Foot pads for F-class



Optional Static counter weight

“Competitors take note;

With the Seb NEO, equipped with the optional static counter weight, and a little knowledge the shooter can calibrate the counter weight to the rifle weight. The counter weight is used to hold up the rifle. Clamping pressure of the sliding plates is NOT used to hold up the rifle like other coaxial rests on the market today. This feature differentiates this rest from the others. Other coaxial rests apply enough clamping force to the rest top mechanism sliding plates to resist the downward movement of the top when the rifle weight sets on the rest.

This one feature of the Seb NEO almost completely eliminates bullets falling out of the bottom of your groups because the rest moved (or falls) down when you fired the rifle. Sorry for being windy here, this function is very important.”

Mike Ratigan



Ratigan Optioned Rest;

- Static Counter Weight – for rifle fore end weights between 7.5-11.5 pounds (LV-HV) (1" thick moving element)
- One Piece 3" wide 1000 denier Nylon bag
- Smooth front stop cover
- Adjustable Levers for side plate adjustment (for that time you borrow a rifle wider than yours)
- Foot points of tough A2 steel
- Short foot for long leg (so joystick will clear)
- More detailed counter balance instructions used by the Extreme Rifle Accuracy shooters (New for 2014).

Assembly of the Ratigan – Optioned Rest;

When you receive your rest, it is assembled in “transportation mode”. Depending on the options of your rest it will come with a front bag of your choice (or bag set), hex wrenches, and an alignment cord.

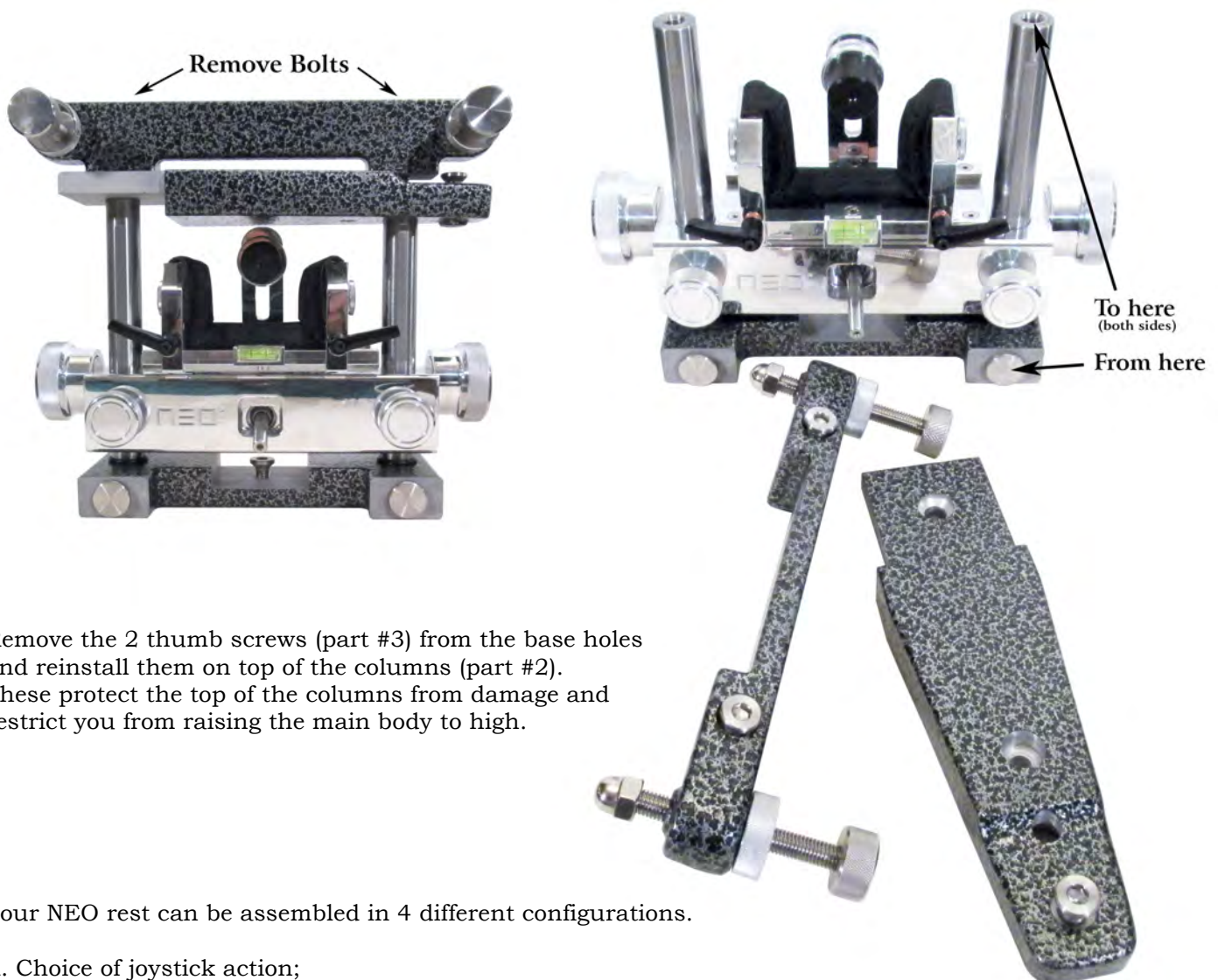
Also included is an “Exploded Drawing” and parts list.

The NEO rest can be rapidly assembled & disassembled.

First

Preassembly note: When using the static counterweight the long leg must be toward the shooter. The weight will interfere with the leg and front foot if assembled with the long leg forward.

Remove the leg sections from top of the columns using the supplied allen wrench. They are bolted on with two large screws (#7). These two screws (#7) are used to bolt on “leg 2” part #5 into position later in the assembly.



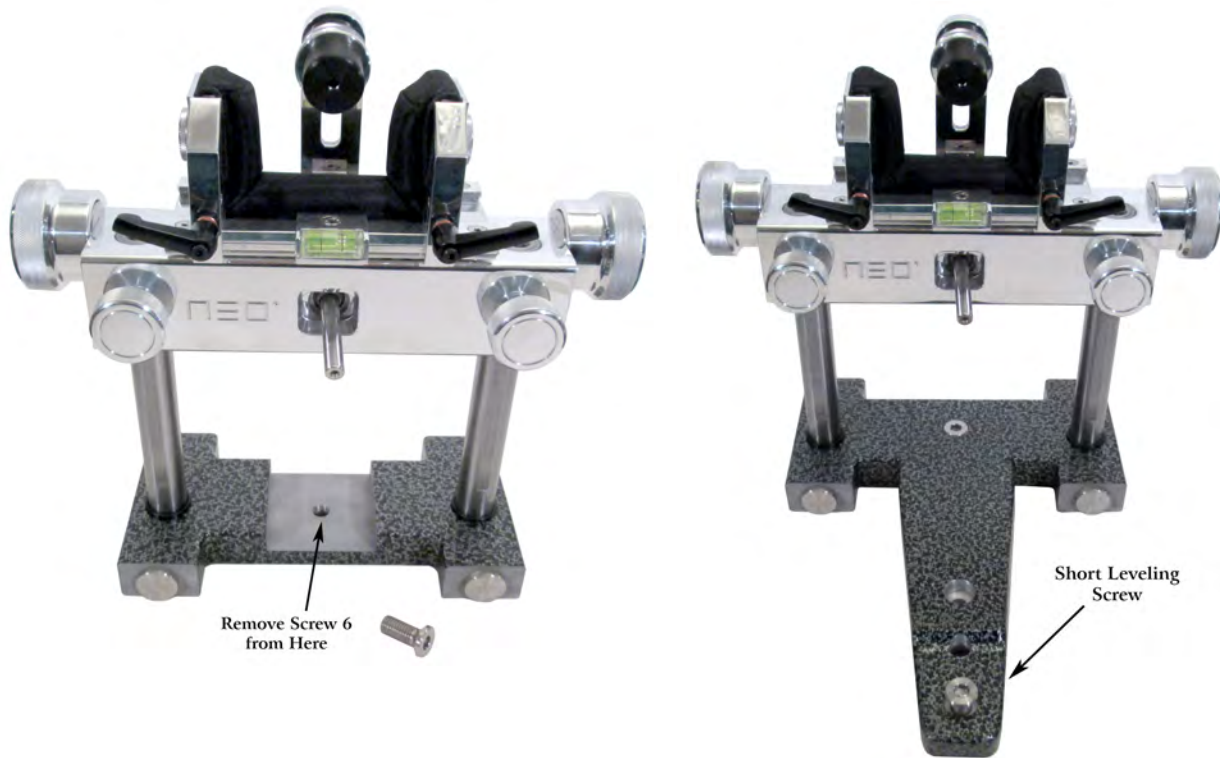
Remove the 2 thumb screws (part #3) from the base holes and reinstall them on top of the columns (part #2). These protect the top of the columns from damage and restrict you from raising the main body to high.

Your NEO rest can be assembled in 4 different configurations.

- A. Choice of joystick action;
 - 1. Up on joystick, rifle goes up. (up for up)
 - 2. Up on joystick, rifle goes down. (up for down)
- B. Choice of leg configuration (where to put the “long leg (Leg 1))”.
 - 1. Long leg toward the shooter.
 - 2. Long leg away from the shooter. (note: this choice moves your position on the bench back about 5 inches.)

Assembly of the Ratigan – Optioned Rest continued;

The following example will walk you through assembly in the most popular configuration, this configuration must be used with the Ratigan optioned rest using the static counterweight. Assembling the Ratigan optioned rest with the long leg forward will cause weight interference. The weight will hit the leg when the top is down severely limiting the joystick travel, also the front of the weight can interfere with a regular length foot when used in the long leg forward.



Raise the rest up and remove screw #6 assemble long leg #1 so it is on the same side as the shooter and joystick. A short leveling screw (#10) is provided to be used when the long leg is toward the shooter. This is used so the joystick will not hit the rear foot.



Assemble leg #2 onto the opposite side (away from NEO logo) using the 2 bolts (#7) that were used to hold it on during shipping. The short leg #2 must go on the front or away from the shooter when using the static counterweight.

Install joystick on main shaft on the side with the “NEO” Logo milled into the top. Counterweight attaches to the center shaft on the side with the tensioners, as pictured on the front page.

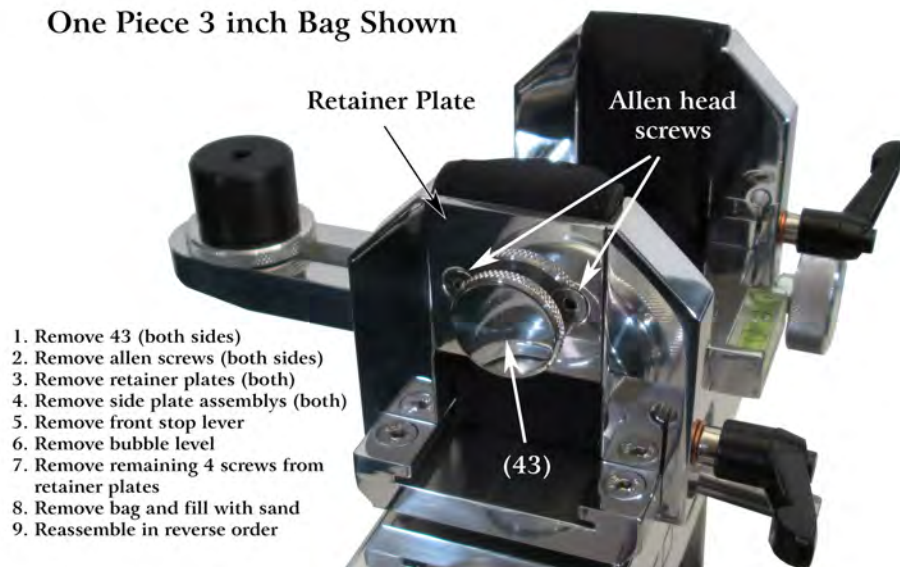
Front Bag(s):

The bag(s) are half round shaped and conform to WBSF / NBRSA / IBS rules. The bags are shipped empty and need to be filled with sand (*no bearings or balls for you competitive shooters*). To fill the bag(s); raise the coaxial unit (#11) all the way up by loosening the locks (#12) and turning either hand wheel. Prepare some sand (*any type of sand you feel will work*).

"Give some coarse sand blasting sand a try with the small stuff screened out, this will help reduce compaction from daily use." Mike Ratigan

To fill the bags you will need to disassemble the top as follows;

One Piece 3 inch Bag Shown



One Piece Bags;

1. Remove side tension fine adjustment knobs (#43).
2. Remove side retainer plates from both sides by removing 2 screws on each side.
3. Move the top flaps of the single piece bags out of the way, remove side plates.
4. Remove front stop lever and bubble level.
5. Remove front and back top retainer plates (#38), This will allow removal of the bag. Fill bag to your personal liking and reinstall in reverse order, centering the bag onto the top plate before tightening the screws for the front and back top retainer plates (#38). Tighten retainer plate screws.
6. Reinstall front stop lever and bubble level.
7. Reinstall side plates onto top plate. Slide the side plates up to each side of the bag. Leave side plates loose on top plate until final assembly is complete.
8. Pull flaps of side bag over the side plate and reinstall side retainer plate (#42) using the 2 small screws.
9. Reinstall the Side Tension Fine Adjustments Screws (#43).

3 piece Bags;

1. Remove adjustable side plates (#40) by loosening adjustable lever screw (#41) then part #40 will slide off each side.
2. Remove side tension adjustment knobs (#43).
3. Remove side retainer plates from both sides by removing 2 screws on each side.
4. Fill side bags, to your liking, through the hole at the top.
5. Reassemble side plates. (do not reinstall yet)
6. To remove bottom bag, remove front stop lever and level.
7. Remove front and back top retainer plates (#38), this will allow removal of bottom bag, fill bottom bag and reinstall in reverse order.
8. Reinstall side plates onto top plate, the reattach adjustable side plates.

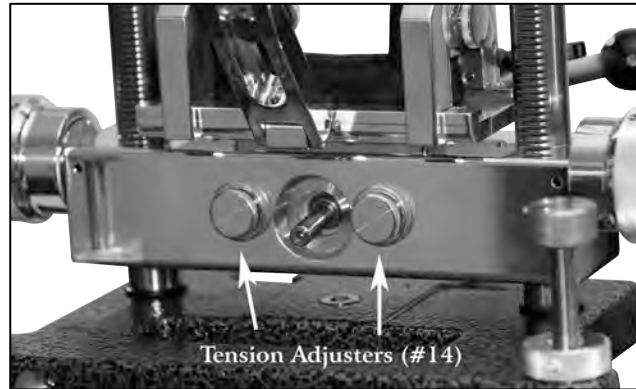
Joystick:

The joystick (#36) is secured with a simple and neat knurled collet fixture. Tighten with adequate pressure so when you turn the joystick it rotates the center shaft without the collet slipping.

The thread is right hand threaded. From the shooter's side, turn the knurled nut counter clockwise to tighten. Turn clockwise to loosen.

Tension Adjustment / Sensitivity:

There are 2 tension adjustment screws (#14) which are locked by counter nut (#15). The screws are knurled, no tools are needed, or should be used, to lock and unlock. The tension screws are fine metric thread M12 with a pitch of 1.00.



If you want to change the tension setting, it is recommended to mark or take note of the starting setting of the tension adjustment screws before starting. Some of the newer rests have a dot stamped onto the face of the tension adjusters.

If you set the tension screws too loose the rest will have some noticeable play. You should NOT be able to move the rest top mechanism front-to-back or side-to-side with your fingers.

If your rest top has play, or is loose (flopping), the tensioners are set too loose.

While moving the joystick around in a circle turn in one of the tensioners until the play is removed, note the position of that tensioner. Back off that tensioner and repeat with the other.

After you find the place where the tensioners start to touch the Teflon sheet (#31), start with both tensioners just at the touch point.

Then advance both tensioners a very small amount each until you reach the desired operating friction.

Center Shaft Rotation:

This section addresses how to adjust the resistance of the center shaft to rotation.

Some shooters rotate the handle (which turns the center shaft (#13)) as part of the normal use of the rest.

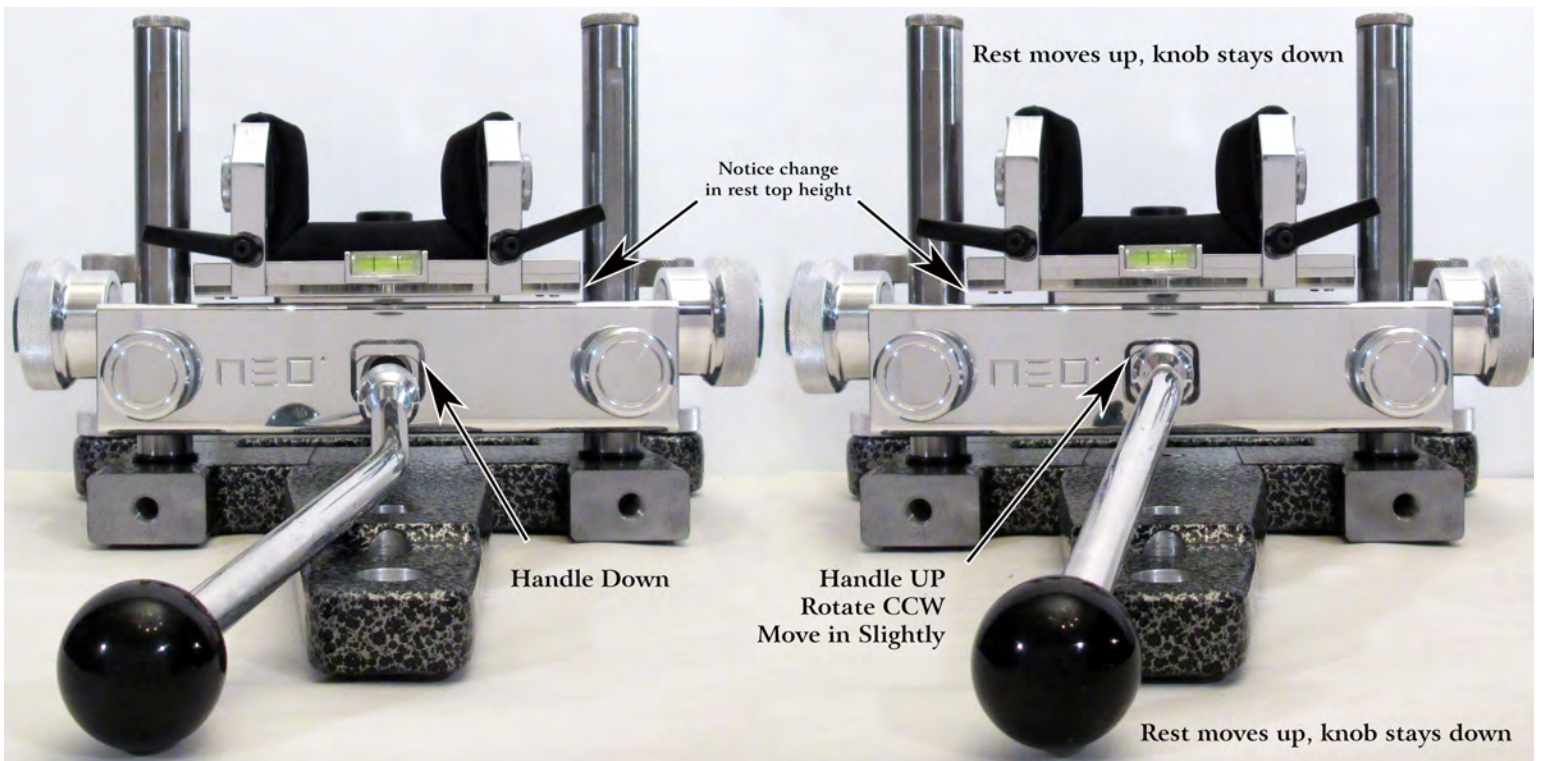
There are 2 small set screws (#17) that are accessed through the bottom of the rest. These screws apply tension on the bearings (#34 & #35). The center shaft (#13) is epoxy glued into one of the bearings and designed to slip through the other as the geometry of the mechanism is changed by moving the joystick.

If the center shaft were glued into both bearings the top would not move freely, if at all.

One or both of the set screws (#17) can be tightened and loosened slightly to change the rotational force needed to rotate the handle.

"I try to keep the palm of my hand grounded to the bench at all times. To do this at the closer distances, the handle will be laying flat (bend to the side) while shooting on the bottom of the target. To move to the top up (right handed shooters) I rotate the handle counter clockwise, which will lift the top up while maintaining my palm grounded to the bench."

Mike Ratigan



Hand Wheel / Clutch Brake System;

A unique clutch brake system is incorporated into your new NEO rest to hold the gun weight until the coaxial unit is locked in place with the locking bolts (#12).

Both clutches are mechanically the same, but installed on different sides. This allows one clutch to be set to resist the up motion, the other to resist the down motion.

From the factory it should be harder to lower the rest (turn down) than to raise it. This is so when you loosen the lock screws (#12) the rest does not fall down.

Do Not change the setting or try to remove the mechanism if you don't have the proper mechanical skills or know how it works?

Doing so may void the Warranty.

Warranty:

Your rest is covered with a 30 day Money Back Guarantee and one full year warranty against any defect in materials and workmanship from the date of purchase.

Within the thirty days, you can return the rest with the original packaging and must be sent in "Like New" condition, with no damage. Contact your dealer or Seb if you want to return the rest.

Maintenance & Storage:

Your NEO rest is built from the finest materials (with good corrosive resistance) and will give a lifetime of use if properly cared for. No special treatment or maintenance is required, however common sense applies here: Do not expose to rain, dust and extreme temperatures. Store your rest in a strong case with the joystick removed. Apply light lube on the rack gear posts & pinions.

Please feel free to contact us if you have any problems with your NEO rest!

Good Shooting,

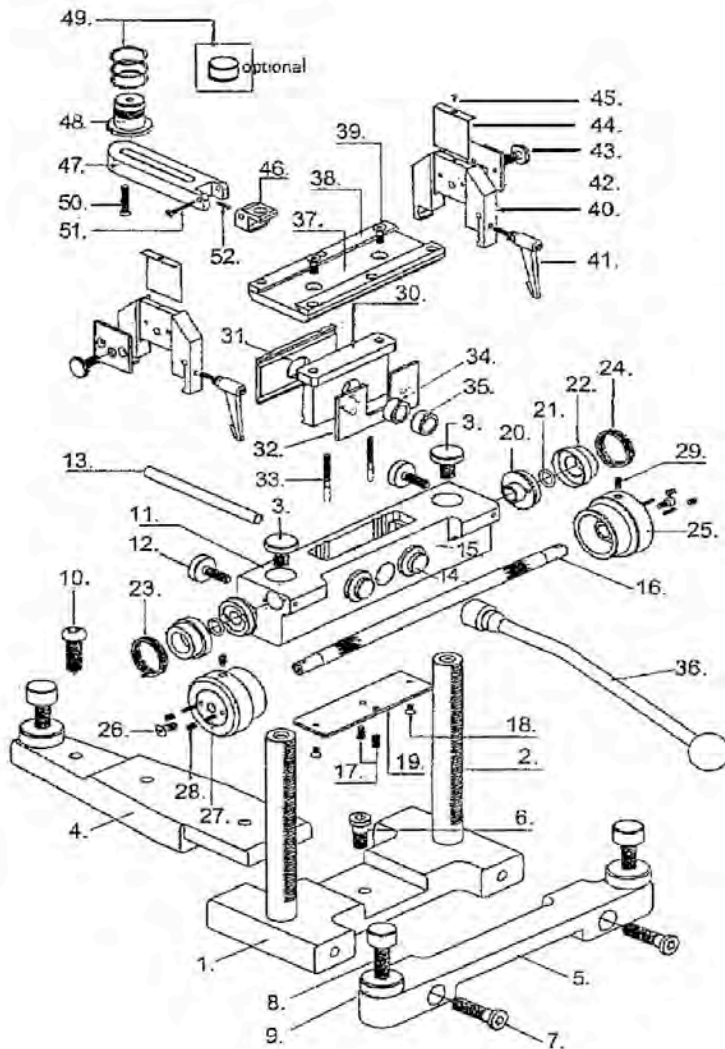


Sebastian Lambang,

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NEO REST

EXPLODED DRAWING



PARTS LIST

1	Main Base
2	Rack Gear Post
3	Top Post Screw M12 x 1.75
4	Leg 1 (Long Leg)
5	Leg 2 (W/ Carrying Handle)
6	Countersink Screw M12 x 30
7	Counter sink Screw M12 x 60
8	Leveling Screw M12 x 1.75
9	Counter Nut
10	Extra short spike (spare)
11	Coaxial Body (Carriage)
12	Locking Bolt M8 x 1.25
13	Center Shaft
14	Tension Adjustment Screw M12 x 1.0
15	Locking Nut M12 x 1.0 (Fine Thread)
16	Pinion Shaft
17	Set Screw M6 x 15
18	Countersink screw M5 x 8
19	S/S Bottom Plate
20	S/S Disc
21	O-Ring F12.5 JIS
22	Brake Drum
23	Coupling Spring (Clock Wise)
24	Coupling Spring (Counter Clock Wise)
25	Hand Wheel
26	Countersink Screw M5 x 15
27	Compression Spring $\varnothing 4 \times 15$
28	Set Screw M5 x 10
29	Set Srew M5 x 10
30	Sliding Plate "X"
31	Sliding Plate "Y"
32	Teflon Sheet
33	Coil Spring + Polimer Tip
34	Spherical Plain Bearing
35	Spherical Plain Bearing
36	Joystick w/Collet Type Head
37	Top Plate
38	Top Retainer Plate
39	Countersink Screw M5 x 15
40	Side Plate (Adjustable width)
41	Adjustable Lever Screw M6 x 1.0
42	Side Retainer Plate
43	Side Tension Adjusment M8 x 1.25
44	S/S "L" Plate
45	Screw M4 x 1.0
46	Pivotal Joint
47	Stopper Leverage
48	Foreend Stopper
49	Rubber O- Ring / Polimer Cap
50	Screw M10 x1.5
51	Screw M5 x 0.8
52	Set Screw M5 x 8 (For Up & Down)