

## NeoTat Linear Series Tattoo Machine operation guide

### **The NeoTat Machine**

**Is designed to operate for many trouble free hours with minimal maintenance. The NeoTat should be kept clean and sanitary at all times.**

**Regular maintenance means disassembling of the machine at least every 200 hours of use and thoroughly cleaning and relubricating the glide mechanism with a synthetic USDA approved HI grade or better PTFE (grease or oil) lubricant such as Super Lube.**

**The NeoTat is designed to be run on DC current ONLY, and at a voltage range of between 6 and 15 volts DC. Running the machine on AC current or on a power supply of poor regulation will damage the machine and void its warranty. The NeoTat normally runs at no more than 250 Milliamps of current. If the machine is drawing more current than 250 Ma, or seems to slow down, get hot, or start making excessive noise, then it must be disassembled, cleaned, and relubricated.**

**The Maintenance Manual will show how easy it is to maintain your new machine, so you may enjoy the NeoTat for years to come.**

**This product is to be used by qualified tattoo or permanent cosmetic professionals only. By purchasing this machine, it is assumed that the operator has had the necessary training in his or her field and has sufficient time and experience in their craft. This machine works differently than a coil type machine, and the user will learn to work with the new tool and get the feel of how it operates. Most of the tricks and techniques that are used with a traditional coil machine will apply to the operation of the NeoTat, but some will be different.**



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One major difference from that of a coil machine is the noise. Professionals who are used to tuning and running their coil machines by sound will find the NeoTat is very quiet. The user must learn to position the machine in order to get its responsive feel and not depend on the sound for operation. Where this is natural for some, it may take time for others to get used to.

This machine is offered in two different stroke lengths where the needles have a fixed depth of movement of either 1.8mm or 2.5mm

The NeoTat produces a more precise needle movement than other tattoo machines, because the needles are reciprocated perfectly up and down. This motion will allow the user more precision in their work, but may give different results than they are used to.

#### Example:

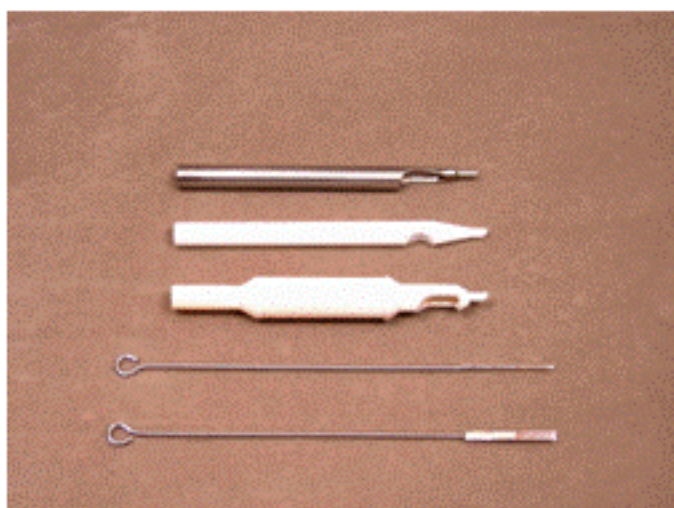
In shading applications using flat or magnum needle groupings, shading will produce more defined lines running within the shade than the same needles run with a coil machine. With practice, this “lined” effect can be used to an advantage.

The new user should approach the machine with an open mind and patiently spend the time practicing with the machine until they have mastered its operation. Once mastered, the operator may find that the NeoTat is their machine of choice.

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Here are some of the tips for using your new NeoTat Machine.

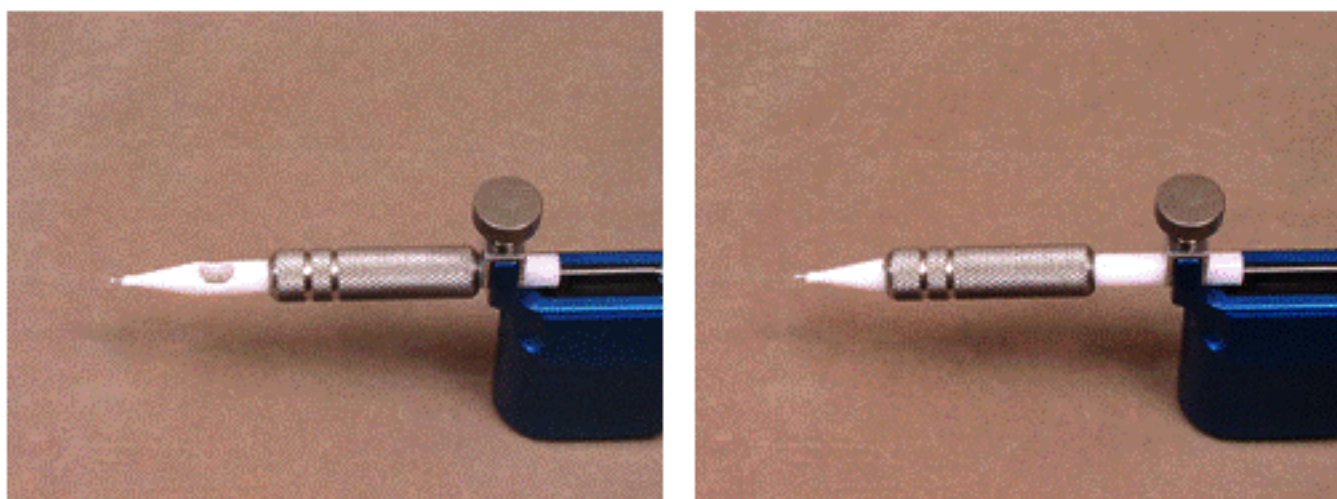
The machine does not require special supplies in order to operate, it will accept various types of standard tubes and needles. In the past, the tubes were stainless steel and had to be cleaned and sterilized between uses. Currently there are a number of disposable tubes on the market. Some have a plastic or rubber grip "barrel" molded onto the tube, while others use a separate metal grip attached to the tube. The tubes with separate grips allow the user more options for size and position of the grip. The one piece disposable tubes are used once and then properly disposed.



On the left are shown some various types of tubes and needles. On the right are shown a stainless and a disposable tube and various sizes of stainless grips. The metal grips also help balance the machine with the added weight, plus this additional weight and size can actually make the machine more comfortable to use. It is much easier on the hand to grip a larger diameter grip than grasp onto a small diameter. The operator can give the machine more driving force with the addition of weight so that when shading with larger needle grouping the added weight will allow the operator to use less hand effort. This is less tiring and stressful on the hand. Also by using the separate tube and grip setup the user can move the grip up or down the tube to position the grip where it is the most comfortable to use. The metal grips must be sterilized between uses.



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Shown above are two examples of grip placement on the tube. The grip can be positioned where the operator likes it best.

The nature of the NeoTat machine is to produce very tight lines that are smaller than those of a coil machine, so by bumping up to the next size in configuration the operator will produce a similarly sized line.

With Round groupings we suggest moving to the next grouping size up from what the operator is used to running on a coil. In other words, if a 3 Round is normally used then a 5 Round could be used, and if a 5 Round is normally used then a 7 Round could be used.

A Round or Diamond tip tube should be used with round grouping lining or shading needles. The Diamond tip tends to provide more guidance of the needles, especially while making circular pattern motions with the machine.

Installing the needle and tube onto the NeoTat is very easy and does not require the use of rubber bands like most tattoo machines.

When installing make sure that the *Grommet* or *Nipple* is in place or a clattering will occur in use, and be sure to push the needle bar into the glide clip in order to stabilize the needle.

When it comes to needle setup, there are different methods that people use. Attention to this detail will make a big difference in the way any machine performs.

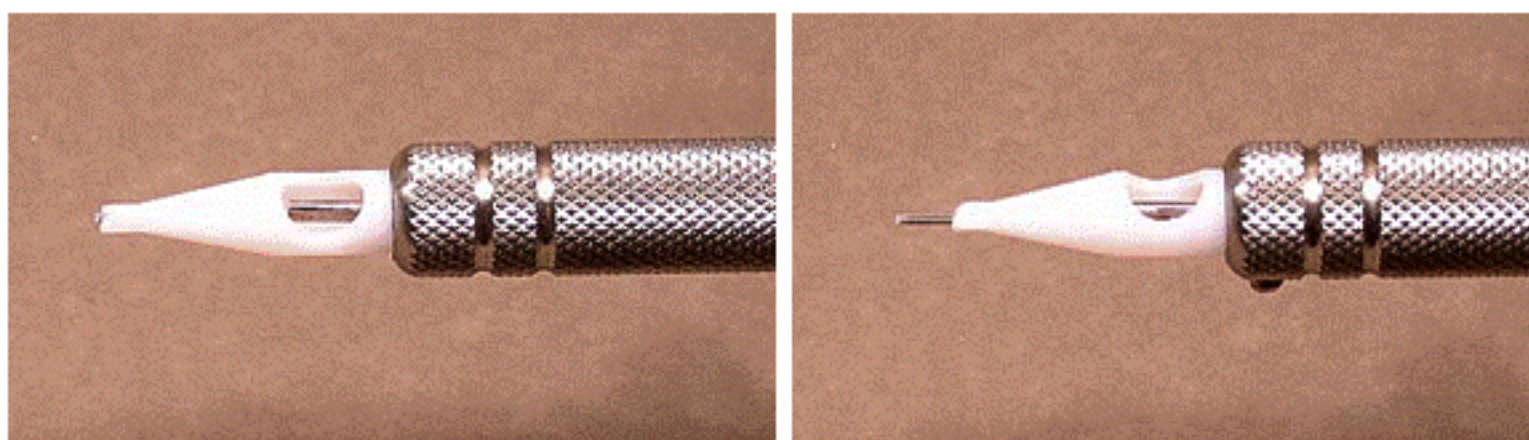
“A poorly set up needle can ruin your day”

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There are generally two ways an operator will setup the machine's needle projection.

One is phrased *Off the tip*, and the other is *Off the point* or *Off the needle*. With *Off the tip*, the needle is set up so that the needle is inside the tube tip in the retracted position and sticks out while the machine is running. This method does not generally allow for fine work because the operator cannot see exactly where the needle is running. This method is generally good for shading with large groupings for two reasons. First is the needles are closer to the pigment that is in the tube allowing for heavier implantation, and second the tip helps strip the skin from the needles when they travel up and out so that less stretch of the skin is needed to keep from snagging or dragging the needles in the skin.

The other method, *Off the point*, allows the operator full view of the needles and is good for precise work. This method requires more trips back and forth to the ink cup because not as much pigment will be available at the tip. The farther the needles are stuck out the more difficult it is to implant the pigment. So there is a point where too far out does not work efficiently.



Picture on the left shows a short *Tip off* distance and the right shows a long *Tip off* distance. A long *Tip off* will allow the user to see more of the needle while running, but will not draw as much pigment from the tube as a short *Tip off*.

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Prepare your area following proper sanitary procedures prior to loading your machine. When ready, break open the tube and needle packages and inspect them for quality. Place the needle into the tube before inserting the tube into the machine. After the tube and needle is inserted, push a fresh grommet into the needle bar eye, then move the grommet and needle bar over the pin and push on. After the grommet and bar are pushed into place, then push the bar into the glide clip with a click.

After the needle and tube are installed, double check your setup and make sure the needle is running straight and true where you want it, set your tip off distance. Once you have it set up correctly, you are ready to go.

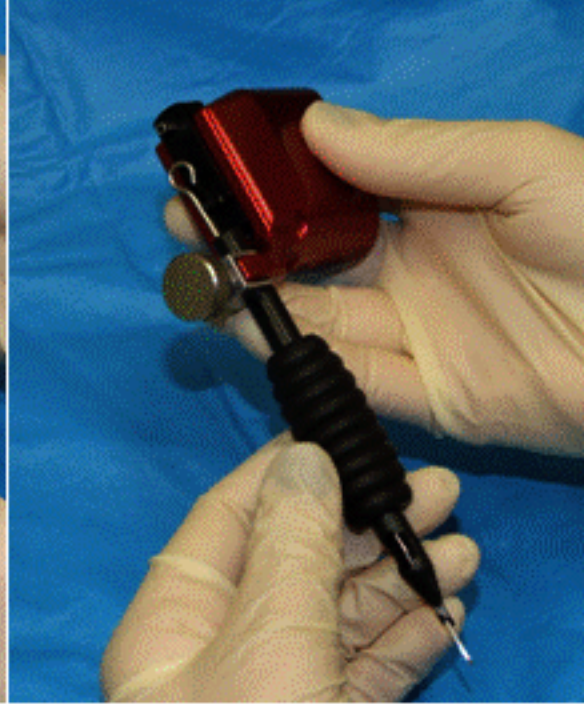
A good practice is to always barrier wrap your machine and cord.



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Needle placed in tube.



Tube inserted in machine.



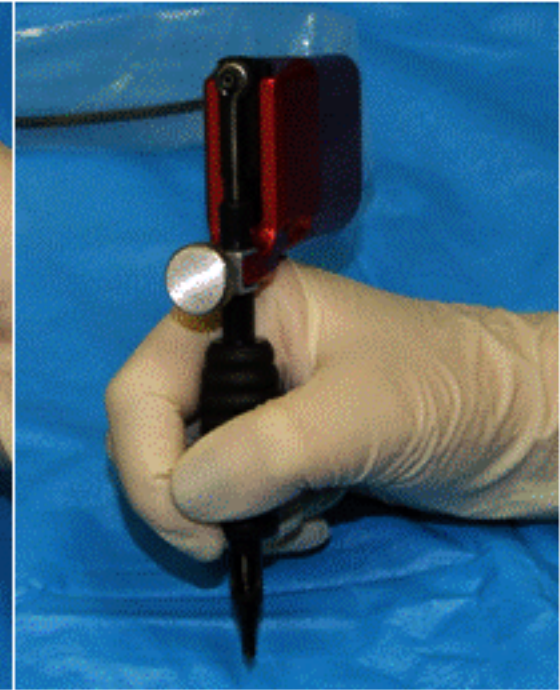
Fresh grommet in bar.



Grommet and bar in place.



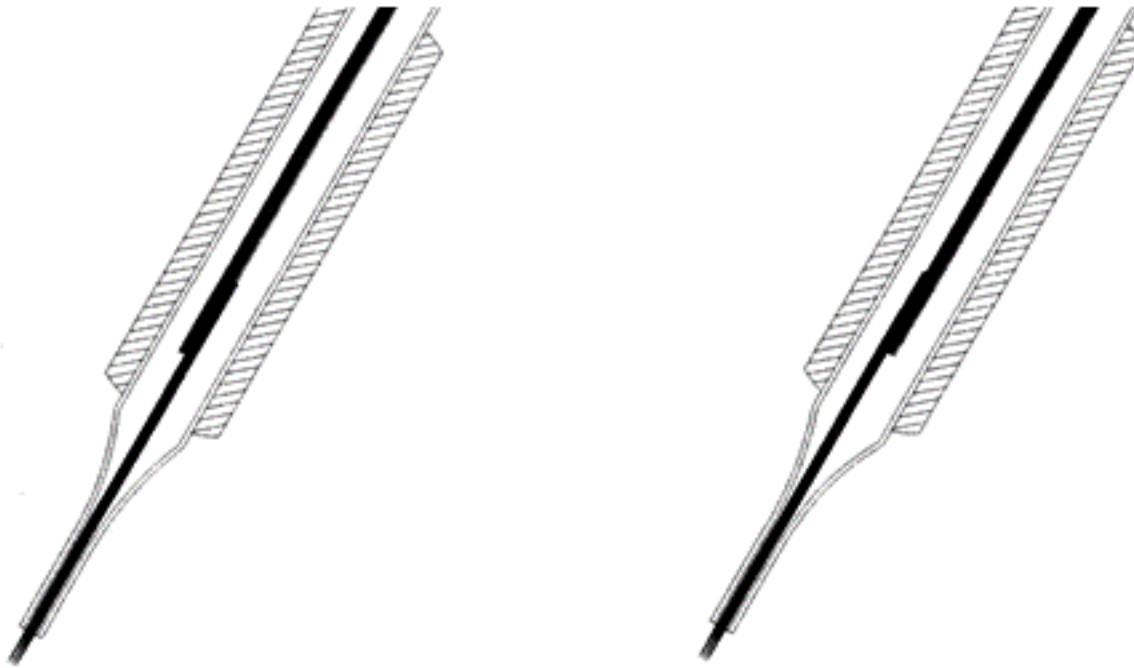
Bar clicked into place.



Setup check, ready to go.

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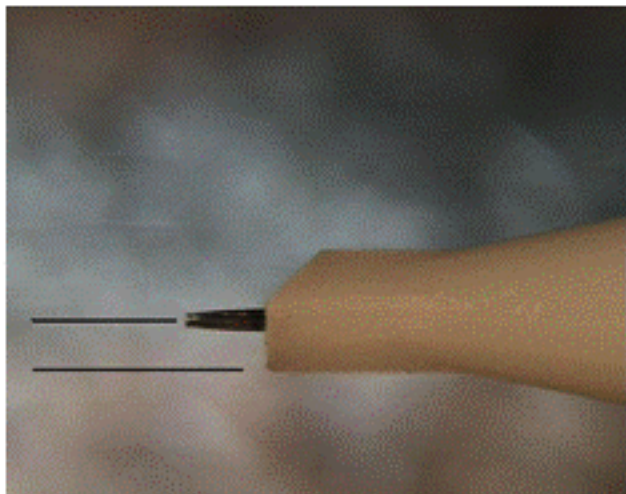
**Needle and tube setup** cannot be stressed enough. We suggest that needles be set up so that they actually ride or rub on the inside of the tube tip on the rear side of the tube in the machine. This will support the needles while pushing pigment. Make sure the needles are not pushed too hard into the tube causing them to exit the tube in a curved path. If the tube tip is off center, then you may have to flip the needle bar over to avoid this.



The above left image shows a tube with a centered tip and the needle bar inserted in the normal fashion. Notice the needles are on the bottom side of the bar.

The image on the right shows a tube having an “off center” tube tip and with the needle bar flipped over. Notice the needles on the top side of the bar.

Remember to take advantage of the offset of the needle bar when setting up the needle in your tube of choice.

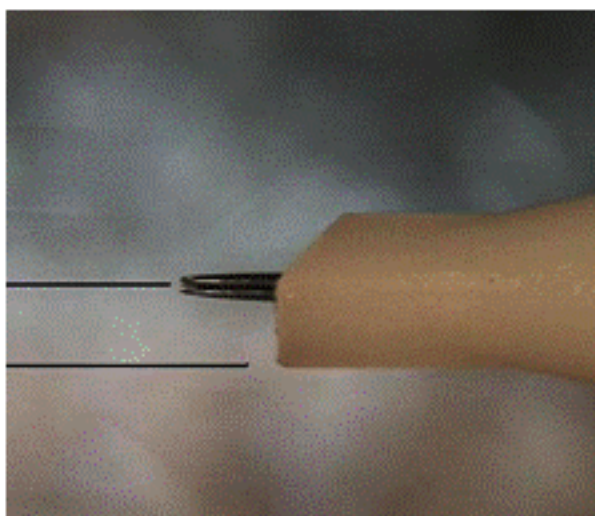


This picture shows the correct needle setup where the needles are firmly placed against the back side of the tube. The needles will move in a straight line with good stability.

The lines represent the relationship of the needles with respect to the tube tip.

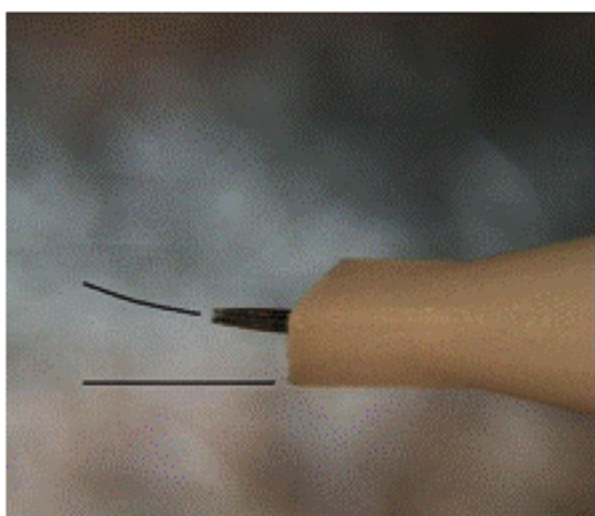


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This picture shows an incorrect needle setup where the needles are floating in the middle of the tube. In this case, the needles will lack stability and have a tendency to wobble around inside the tube tip.

Typical problems that exist with an incorrect setup may include snagging, poor color implantation, jagged or inconsistent lines, noisy operation and material migration.



This picture shows an incorrect needle setup where the needles are being forced into the back side of the tube causing the needles to move in a curved path. The needle bar most likely needs to be flipped over due to the “off center” tube tip.

The lines represent the curved path with respect to the tube tip.

In both of the above, check to see if the needle bar is inserted correctly or if the bar is bent or requires a bend to change the needle position.

A simple trick to fine tune the setup is to move the position of the needle bar grommet on the pin, pivoting the needle bar at the point of the glide clip.

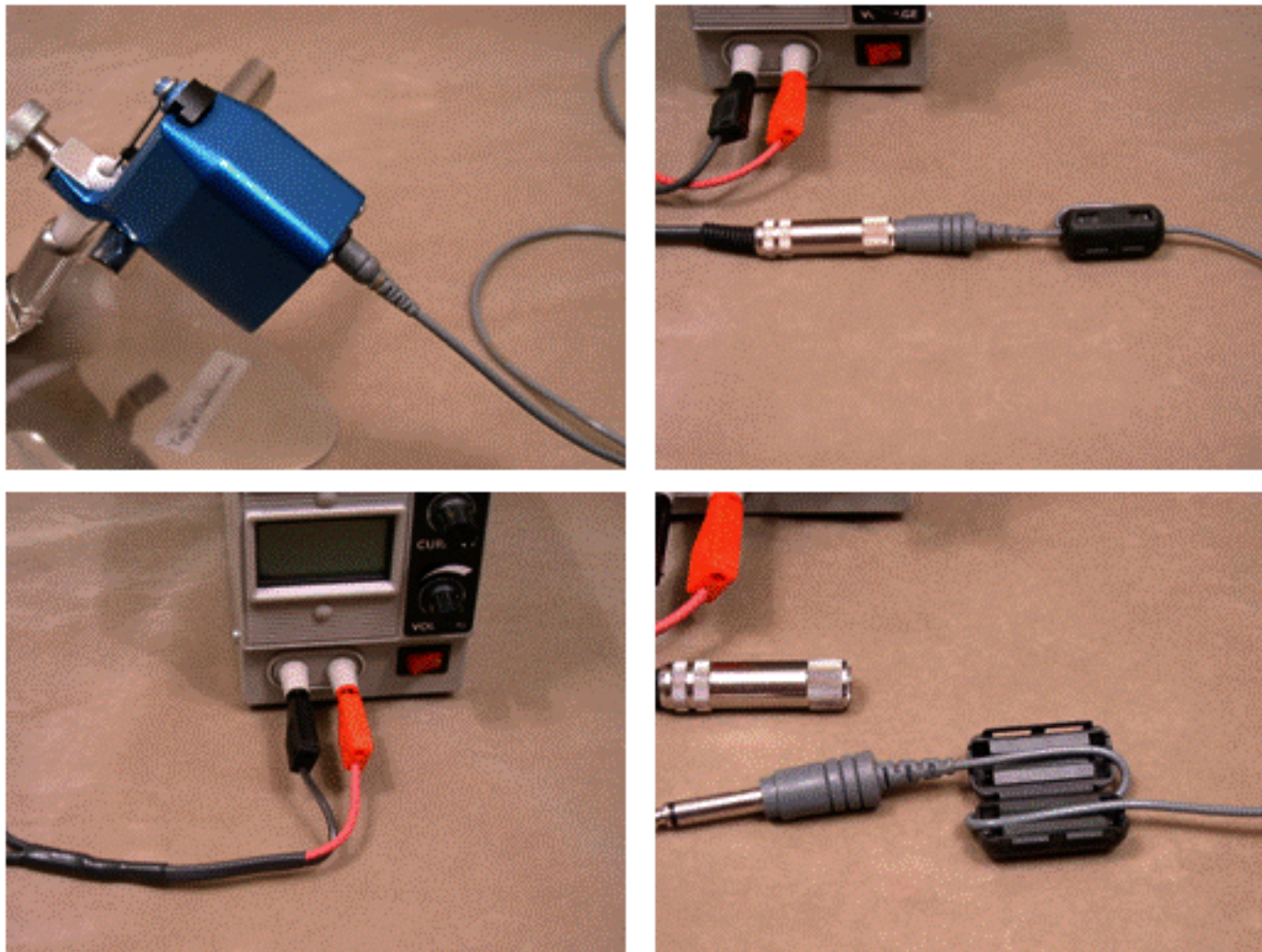
Assuming the needle and tube are installed in the machine, the grommet is pushed completely into the needle bar eye, the grommet is pushed down onto the pin and the bar is pressed into the clip.

Observe the needle at the tip while pulling the grommet ever so slightly up the pin away from the glide, you will see the needle points moving toward the back and you will observe the opposite motion when you push the grommet back in.

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The NeoTat is easy to hook up for use. The power cord supplied with the machine is plugged into the 1/8 inch jack at the rear of the machine. The other end of the power cord has a 1/4 inch plug that mates with the footswitch assembly. The footswitch assembly has two banana plugs that plug into the front of the (NPS-15) power supply with the red plug to the red post and the black plug to the black post. The NeoTat can be used with power supplies of different manufacture of which some are equipped with a 1/4 inch jack that will accept the power cord and others have pin tip jacks or banana jacks that attach the machine. Check our catalog or website for available adapters.

TapTatDaddio.com



The picture on the lower right shows the installation of the ferrite filter. The ferrite removes any electrical noise generated by the machine, and the FCC requires that manufactures supply such filters to reduce the emissions that cause radio interference. We supply this filter with the purchase of each NPS-15 power supply.

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In operating the machine using the (NPS-18) power supply, set the current control to the middle position and leave it there. The voltage control will vary the operating speed of the machine and speed depends mostly on the operator and how he or she uses the machine. The machine is designed to efficiently run from 6 to 15 volts. Some operators like to run the machine slow for most procedures at 8 to 10 volts, where others like the machine to run fast at 13 to 15 volts. Through practice the operator will get the feel of the machine and determine what speed works best for them and with the procedures they do.

The NeoTat machine running speed directly corresponds to the voltage, where the machine at 12 volts will run at 120 hit per second (HPS.) At 10 volts it runs at 100 HPS, at 14 volts it runs at 140 HPS, at 8 volts it runs at 80 HPS. The speed compared to voltage is within 5% so you get a good indication of speed from the voltage reading on the power supply.

**Thank you for purchasing the NeoTat Tattoo Machine!**

Check out our website for supplies and other products.

We also supply a small traveling power supply called the "Black Box" and a wireless foot switch version as well.

<http://www.tapTatDaddio.com>

**Important note:**

All the pictures shown are only depictions of the usage and that in actual use the machine and cord should be barrier wrapped. Needles and disposables NEVER are to touch a non sterilized surface, nor should the operator handle the needles, tubes, or setup the machine without protective gloves. It is extremely important to keep your tools and working environment as clean and sanitized as possible.