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## START-UP PROCEDURE

1. Using a new or clean nib, screw the nib into the pen body. (Always use a nib key to tighten.)
2. Remove the ink cartridge and fill it with ink, to the line.
3. With point up, replace the ink cartridge and screw on the clamp ring (if there is one).
4. Hold the pen with the drawing tip pointing down (cap off) and firmly tap the top of the ink cartridge 3-5 times. DO NOT SHAKE THE PEN!
5. Draw several 12-24 inch lines on a piece of scrap media, preferably the same media you will be plotting on. If the pen does not write, repeat steps 4 and 5.
6. With the drawing tip pointing down, tap the side of the pen body with a pen or pencil 1-3 times to dislodge any remaining air bubbles.
7. Again, draw several 12-24 inch lines on scrap media. If the pen does not write or the lines are inconsistent, repeat steps 4-6. Screw the adaptor sleeve over the top of the pen body (where applicable). DO NOT OVERTIGHTEN ADAPTORS! Install the pen in the plotter and begin plotting.
Helpful Hints

- Re-starting - Normally, a pen which has been capped and stored vertically, point up will re-start easily. Remove the cap, and with the point up firmly tap the back of the ink cartridge 3-5 times on a hard flat surface. This will remove any ink residue or media fibers. Repeat steps 4-7 from the start-up procedures. If the pen still doesn't write, submerge the point only in an ultrasonic cleaner for 10 seconds. (See "STORAGE" for more information.) - Do not hold the pen for extended lengths of time. The heat generated by your hand can cause leaking. - DO NOT SHAKE a refillable plotter point to start it. Shaking forces ink into the vent channel causing malfunction, such as leaking, skipping, or clogging.


## CLEANING

Regular and proper cleaning of your Refillable Liquid-Ink pen is essential for the best performance results. Clean the pens before each refill and at the end of every work day. The use of our Pressurized Bulb Syringe is required to insure a thorough cleaning of your pens.

- Remove the nib from pen body, (DO NOT disassemble the nib assembly especially below 00), and submerge in lukewarm running water.
- Remove ink cartridge from pen body (discard used ink). Rinse the pen body and cartridge in lukewarm water until clean. Dry thoroughly.


## Pressure Bulb Syringe Method

- Fill the bulb syringe with Rapido-Eze ${ }^{\circledR}$ pen cleaner (\#3068). Thread the nib assembly into the syringe and flush it in and out with Rapido-Eze ${ }^{\circledR}$ cleaner until you see a stream of clean fluid coming out of the point.
- Finish flush with clean water to remove all cleaner from the pen.
- Dry thoroughly with a paper towel and reassemble. NOTE: If a stream of liquid will not flow from the pen point, this usually means that the pen point is plugged/clogged with dry ink or media fiber. (See ultrasonic cleaning method and note.)


## Ultrasonic Cleaning Method

- Fill the ultrasonic cleaner $2 / 3$ full with a solution of four (4) parts water to one (1) part Rapido-Eze ${ }^{\circledR}$ pen cleaner (\#3068).
- Submerge nib in cleaner (DO NOT disassemble the nib!).
- Turn cleaner on for 30 seconds.
- Flush the nib with clean water using the bulb syringe.
- Dry with a paper towel.

NOTE: Soaking the Nib-Soaking the pen may be necessary if it is severely clogged. Pen points may be soaked in 100\% cleaning solution for approximately 30 minutes. Repeated soaking may be necessary. Depending on the severity, Bulb Syringe/UItrasonic Cleaning may have to be repeated. Disassembling the pen point is not recommended.

## Helpful Hints

- To avoid performance problems, clean the pens at the end of every work day and store them empty and dry. This will give the longest trouble-free life to your pen.
- Always flush the pen components out with warm water before using Rapido-Eze ${ }^{\circledR}$ pen cleaner (\#3068). This will remove most of the major ink pigment and prolong the life of your cleaner.
- Rather than using Rapido-Eze ${ }^{\circledR}$ full strength, a dilution of one (1) part cleaner to four (4) parts water is usually sufficient.
- Never leave a pen in an activated ultrasonic cleaner for more than 30 seconds. The combination of ultrasonic agitation, cleaning fluid and heat could damage components and reduce the life of your pen.
- Always finish flush your pens using a bulb syringe, with clean water. Use the bulb syringe to remove excess water from nib after cleaning.


## STORAGE

Your refillable liquid-ink pen should be taken out of the plotter when not being used. Cap pens with either a short-term or a long-term storage cap. This also includes removing the pens from carousel pen stalls.

- Remove the pen from the plotter and cap.
- Store in a vertical, point-up position in a pen storage container. (Koh-I-Noor's \#641A is recommended.)


No. 3065HRSP-MTY Plotter Pen Storage Carousel

## Helpful Hints

- Clean pens at the end of every work day and store them dry. This will greatly prolong pen life.
- A certain amount of media fiber will collect on the pen point. Though it may not initially effect pen performance, over time it could diminish line quality. Prior to storage, submerge the point only in the ultrasonic cleaner for 10 seconds. Then cap and store as detailed above.
- For dry areas, a humidified storage container is often useful in preventing pen dry out.
- Do not store near heat or in direct sunlight.

