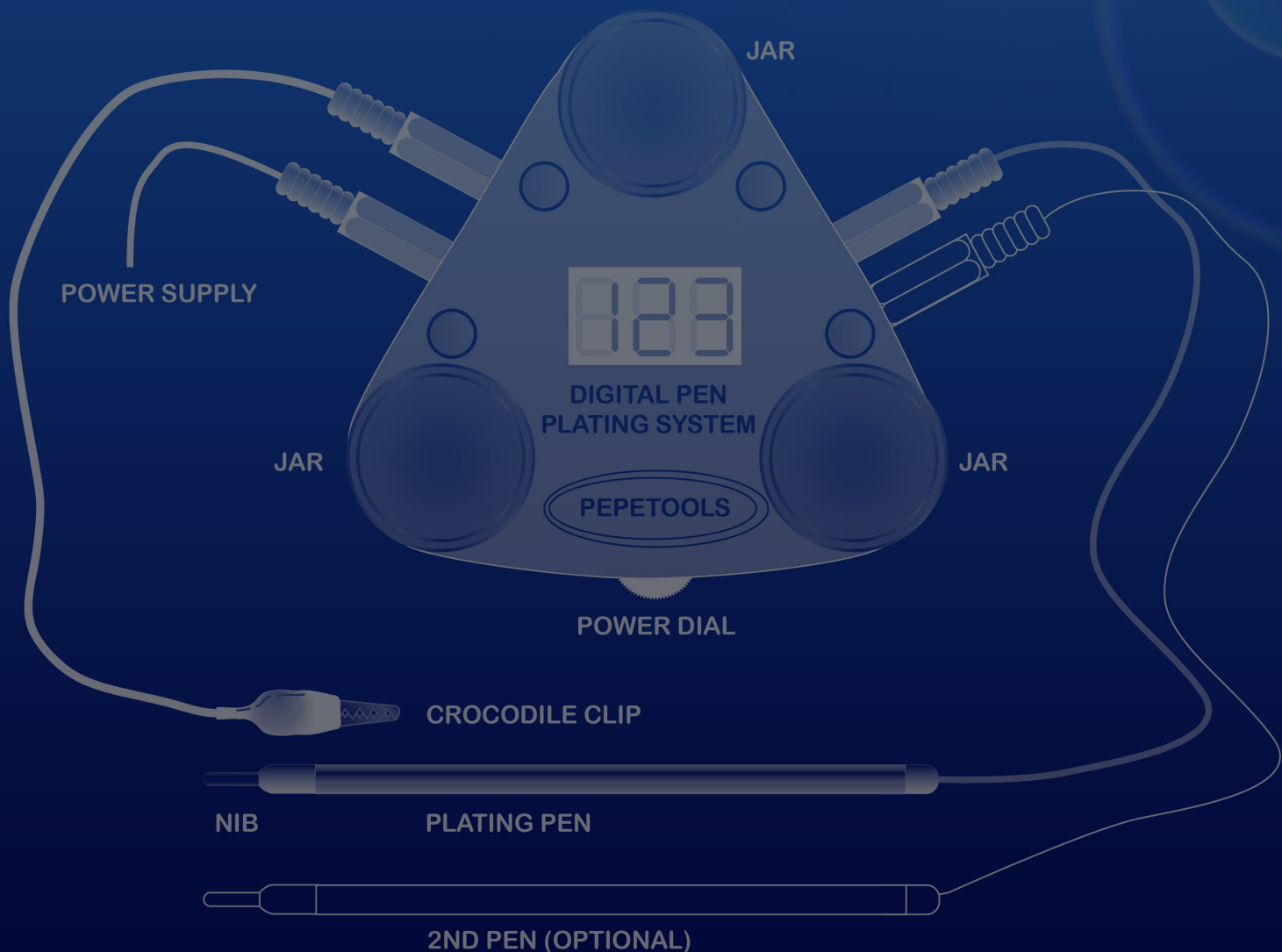




Digital Pen Plating System





Pepetools Digital Pen plating system.

Thank you for purchasing the Pepetools Digital Pen Plating System. Please read the following tips and advice before first use to ensure the best results. Always work safely and observe the usual precautions when working with chemicals.

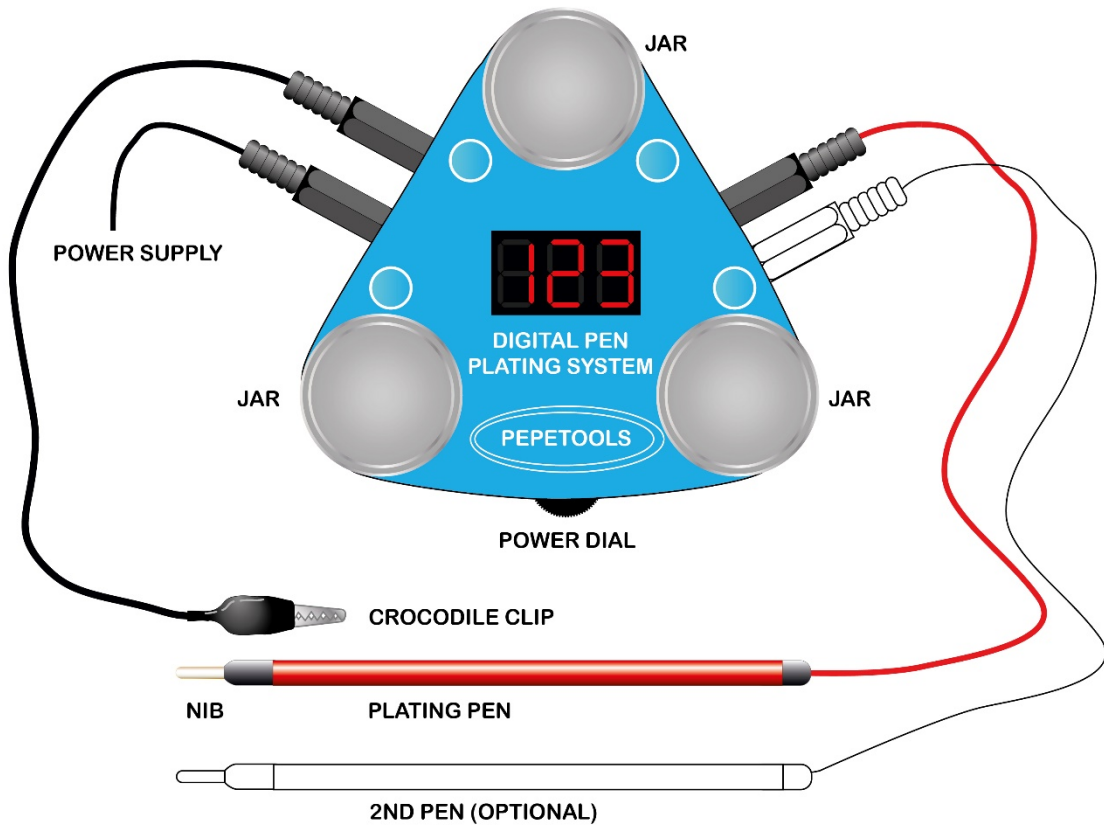


Illustration showing connections.

Connect as shown; On the left, power supply, and crocodile clip. Note the power supply has a larger plug. On the right, are two sockets for plating pens. You can use either. One pen is supplied with the unit and additional pens are available separately.

Tip: - if you regularly plate with different solutions such as gold and rhodium, it's a great idea to keep separate pens for separate solutions. This avoids potential contamination.

Importantly, the pens must only be connected on the right, and the clip only on the left. This ensures the correct polarity when in use.



Pepetools Digital Pen plating system.

Your system will come with a small power adapter suitable for your country. Once connected to a live outlet, it will instantly turn the unit on. The unit will be illuminated, and the led display is lit. Remain unplugged until you are set up and ready to start plating. It comes with three small jars that you can use for plating solutions and spare nibs.

Tip: Use a sharpie or other permanent pen to label the tops of the jar lids.

Introduction.

The Pepetools digital plating system is custom designed and engineered tool for small scale precision plating of gold, rhodium, and other metals on small objects such as jewelry, watches, or other small metal components. Its main feature is that it allows you to plate only the areas you wish too. It is possible to highlight certain areas such as the prongs of a ring, without the need to mask or plate the entire object. This makes the tool perfect for small repairs and opens a world of creative possibilities allowing you to add a touch of gold to highlight and enhance an item. Such techniques would previously require extensive and time-consuming masking with traditional plating systems.



Sterling silver pendant by Dave Wilson of Celtic Dreams.
Note the selective gold highlighting to the ribbon.



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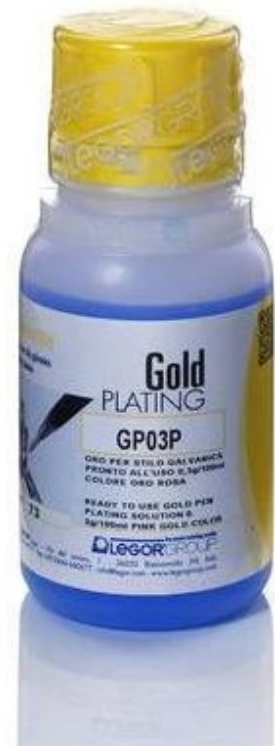
Plating solutions

It is important to purchase the correct solutions for the unit. Be aware that there are large planting units in which the item is fully immersed in a bath of the plating solution. These use different strength chemicals. The Digital Plating Pen System requires specific “pen plating” solutions, which are much stronger and designed for this application. See Pepetools.com for their current range. Or if purchasing from your usual supplier, ensure they are suitable for ‘pen plating’.

Tip. If purchasing solutions in large bottles, transfer just a small amount into one of the smaller jars. This helps to prevent contaminating the large bottle. If possible, designate one solution to each jar, and do not mix or reuse different jars. Always keep solutions separate.

A range of solutions are available, but typically yellow gold and rhodium are the most popular with jewelers. Yellow gold can be used to add extra sparkle to a gold item, or typically is can be used for adding a gold highlight to silver pieces. For example, adding a gold highlight to a silver piece.

See Pepetools.com for additional products and solutions





Pepetools Digital Pen plating system.



Adding gold highlights to a sterling silver flower.
Effects like this are easy to achieve with the pen.
Note the attachment of the crocodile clip.

Rhodium is also especially useful to the jeweler. It can be used to touch up a white gold ring that is worn or to add extra sparkle to gem set rings by plating the crowns and claws around a stone. The ability of the digital pen plater to precisely plate small areas makes it great for small touch-ups like this. There is no need to cover the rest of the ring. A repaired claw can be re-plated in seconds. Quickly and simply.

Cleanliness

Good results depend on good preparation. The first and foremost thing is cleanliness. The piece to be plated must be clean and grease-free. Any grease will act as a barrier and repel the plating solution. Ultrasonic cleaning is recommended, along with cleaning the area to be plated with alcohol such as Methylated spirits. Use a cotton bud or paper towel. It is also advisable to wear clean latex gloves, as even the grease and oils from your fingers can have a negative effect.



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Insert nib.

Select the appropriate pen and nib for the solution you are using. And insert the nib into the end of the plating pen. Do not use the same nib in different solutions. Always keep solutions separate and avoid cross contamination. If in doubt, or if the nib is heavily soiled, then replace it with a new nib. As you insert and handle the nib its best to do so with gloves on to keep it clean. Ensure the nib is fully inserted as far as it will go.

Switch on

Once connected to power the unit will be on. You will note the unit is illuminated, and also the led display on the front will be illuminated. The power can be adjusted by turning the black dial at the front of the unit. The power is displayed on the led display. Some manufacturers state the voltage required, for best results with their plating solution. But if this information is not available, then simply start low, and if you don't get the effect you want, slowly increase the power.

Tip: It may seem tempting to simply set the unit to maximum power. But this is not the case. High power can cause the plating solution to fizz and bubble at the end of the nib which will waste more solution and may not achieve the best result. Start lower and increase steadily. If in doubt, try a few tests. modern steel coins or copper coins are great for practicing.

Get connected.

Attach the crocodile clip to the piece. There must be an electrical circuit between the clip, through the piece, and into the nib. So ensure that the clip is attached to a conductive metal part, don't attach to a stone, strap, or cord. Try to attach close to the section you intend to be plating.

Dip the nib.

The nib needs to create a circuit between the pen and the surface of the item. When dipping the nib, especially for the first time, ensure that it is well soaked in the solution.



Pepetools Digital Pen plating system.

Off you go!

With the unit switched on and the crocodile clip attached, simply begin “painting” with the wet nib, just as if you were coloring a drawing on paper. As you do so, you should instantly start to see a color change, as the gold, or rhodium is deposited out of the solution and bonded onto the piece. Increase the power if needed, until the desired effect is achieved. As you work, continue to plate over the same area and you will see the color build up. Rhodium especially may look grey on the first coat, as you continue to plate you will see the bright shine appear as the rhodium builds up.

Important. Electroplating works by using an electric circuit to transfer the gold or other metal, out of the solution, and bond it onto the piece. Each drop of the solution will contain a finite amount of gold. Once the gold has been depleted, the nib and piece and may still be wet with the depleted solution, but no more gold is being deposited. As you work, keep recharging the nib, by dipping it into the solution. Excess solution on the piece can be removed by touching with a small piece of paper kitchen towel.

Pre plating

The unit is ideally suited to jewelers making small touch-ups after a repair, refreshing a worn item, or for creative highlighting. In such cases, it is simply a matter of using your chosen solution and applying it to the piece as described. Gold especially has excellent adhesion and in most cases can be applied directly to the piece. For larger items, or when a more robust finish is required. Some people prefer to pre-plate. Often nickel is used, to act as an ‘undercoat’ to seal the underlying metal and to provide a key for the final layer. This is a particularly good idea when working with alloys containing high copper content such as low karat gold. Without this barrier layer, the copper can eventually leech through the plating leading to premature oxidization and possible tarnish. For example, a sterling silver wedding ring. The gold can be applied directly to the silver. But by first plating with nickel, the result will be brighter smoother and longer lasting.



Sterling silver ring. Nickel plated, then gold plated.



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In such cases, the nickel pre-plate can be applied in the same way. Remember to use a separate nib (ideally a sperate pen). And after the nickel, rinse the piece in clean water (ideally, distilled water). As always, ensure the piece is clean and free from contaminants before applying the final plating.

IMPORTANT! Clean-up & storage.

Plating solutions are usually highly corrosive, as the precious metals are dissolved in acids. When you've finished your plating; it is vital that you clean up your equipment - especially the pens. Remove the nib and store it in a clearly labeled jar. If a nib is soiled or worn then dispose of it (keep a good supply) Detach the pen from the unit and rinse the end under running water (or dip in a clean jar of water). Ensure that you wash off all traces of the plating solution which may be inside the end of the pen. Dry with a paper towel before storing. Simply leaving the nib in the end of the pen with a solution on it, could cause the corrosive solution to damage the end of the pen whilst in storage. Hence get into a habit of removing the nib and washing the pen tip after each use. Doing so will ensure optimal results and long-lasting use.

Safety Advice.

The solutions used are usually strongly acidic or Alkaline and so sensible precautions should be observed. Gloves should always be worn, and the process carried out in a safe, well-ventilated area. All chemicals should be kept away from pets and children. In all cases, it is vital to follow manufacturers' instructions for both the plating units and the chemicals used.



Check out the Pepetools plating blog for more great tips and advice. Use your smartphone and scan the QR code.





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**Visit Pepetools.com
for instructional videos, manuals, and lots more resources.
also additional plating supplies.**



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JAR



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