Make & Master - Soldering

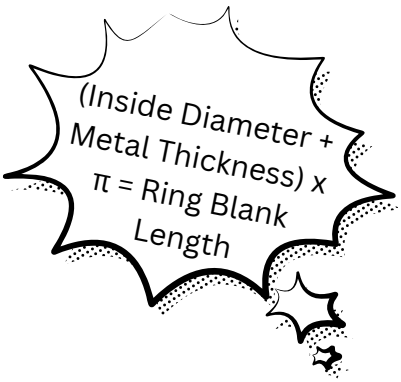
These projects are designed to build core jewellery-making skills in manageable steps. Each one focuses on a key technique—such as soldering, shaping, or texturing—so you can practice in a structured way while still making something finished and worthwhile. Working through them will help you gain confidence, improve precision, and develop ideas you can use in your own jewellery.

Beginner Project: Stacker Halo Rings

Learn the basics of soldering by making a set of three simple silver rings.

What you'll need

- 2mm round or square sterling silver wire (about 6–7 cm per ring, depending on size)
- Ring Gauge, calculator
- Jeweller's saw, scissor shears
- Ring mandrel + rawhide or nylon mallet
- Soldering block, torch, flux, tweezers
- Hard, medium, and easy silver solder (pallions)
- Pickle pot, clean water, brass brush
- Files, emery paper, polishing tools



Method:

Step 1: Measure & Cut

1. Decide the finger size you want (use a ring gauge to find the inside diameter and follow the formula, or refer to a ring gauge chart).
2. Mark and saw three equal lengths of wire, one for each ring.
3. File the ends square if needed, buff away any burr

Tip: Add about 1mm extra to allow for filing the ends flat.

Step 3: Form the Rings

- Anneal the metal to soften, quench and dry
- Gently bend each piece of wire using half round pliers, you are aiming for a pill shape with the solder join along a flat edge.
- Bring the ends together to form a clean line.

Step 2: Prepare the Ends

1. Gently squeeze the ring closed to create tension at the join, then run your saw blade through the seam to produce two perfectly matching, clean edges ready for soldering.
2. Hold the join up to the light—aim for as little light shining through as possible.

Tip: Position the ring on the peg so the join sits over the gap in the wood which ends before the back of the ring, so the blade meets wood instead of cutting into the ring's back if it slips.

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Step 4: Solder the Joints

1. Place each clean ring on your soldering block with the join facing towards you.
2. Use a borax cone, some clean water and create a thin paste in the borax dish or use liquid flux. Apply flux to the join with a thin brush.
3. Use scissor shears to cut the solder strip into long 'spaghetti' strips along it's length, flatten, and cut them into tiny squares for your solder dish.
4. Place a small pallion of hard solder on one join, medium on the second, easy on the third.
    - This introduces you to different solder grades while making sure earlier joins won't reflow if you resolder later.
5. Heat evenly until the solder flows across the seam.

Step 5: Clean & Shape

1. Quench and pickle the rings, then rinse in clean water, dry
2. Place each ring back on the mandrel and tap gently with a mallet, as you rotate them, to make them perfectly round. Make it a habit to slip the ring off the mandrel, flip it, and tap again to ensure even shaping. This is essential on a wider band due to the taper on the mandrel.

Step 6: Finish

1. File off any excess solder and smooth the join.
2. Work through emery papers (coarse to fine)
3. Polish in the tumbler or with a mop and rouge.

Top Tips

- *Roll solder through the mill to thin it, making it easier to cut and control pallion size.*
- *Avoid extra tools during the soldering setup, as they get in the way and draw away heat.*
- *Only hard solder goes in the borax dish, to prevent mistakes. All solder needs a coating of flux.*
- *Label solder strips on arrival using a Sharpie or masking tape.*
- *Save face cream pots to store the solder neatly.*
- *Keep everything super clean, as oxidation, dirt, or grease prevents good joins. Always pickle and rinse pieces.*
- *Heat the piece evenly, not the seam, so solder flows naturally toward the hottest spot.*
- *Use just enough solder, cutting tiny pallions for cleaner joins and easier clean up.*
- *Start with hard solder on early joins, then use medium or easy as the piece builds, so earlier seams stay intact.*
- *Match the method to the job: pallions for simple seams, pick soldering for tight spots, sweat soldering for flat joins, and stick or wire soldering for larger or flowing joins.*

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Intermediate Project: Handmade Chain

Hone your soldering and texturing skills by creating a chain of hammered silver links, combining multiple soldered joins with hammered texture to produce a finished, connected piece.

What you'll need

- Materials
- Sterling silver wire (1.5–2mm recommended)
- Jeweller's saw, lubricant
- Pliers (half round, parallel)
- Ring mandrel or dowel
- Small hammer (planishing, chasing or texturing)
- Steel block
- Solder, flux, tweezers, torch, soldering block
- Pickle pot, files, emery paper, polishing tools

Method:

Measure and cut your silver wire into even lengths for each link.

1. Form the links by bending each piece into a ring around a mandrel, dowel, or with pliers, aiming to make both ends meet well. Pinch and saw through the join to create flush, clean ends.
2. Solder the individual links by applying flux and the appropriate grade of solder to each join. Heat evenly until the solder flows, then quench, pickle, rinse, and dry.
3. Gently hammer each link on a steel block to add texture, doing this after soldering to prevent warping and uneven ends.
4. Assemble the chain by sawing through half the links, twisting them open, and slipping two closed links onto each open one. Solder closed once more, then open and link each ring to the next, closing and filing flush any joins.
5. Make and add a clasp to match - see the Catches and Clasps tutorial
6. Smooth and polish each link as desired for a finished chain.

For a more challenging soldering project that offers multiple joins, tricky spots, and different solder grades and setups, try the Locket, Shadow Box, or Hollow Ring tutorials on the website.