

1508-5

Mark Nelson demonstrates how to solder a gold-filled bead bar.

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Please continue to page 2 for project instructions.

Guest:



Mark Nelson

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Soldered Gold-Filled Earrings

There are two critical areas of concern when soldering on gold-filled material:

1. **Scratches**—Particular attention must be given to handling the material carefully to avoid scratching the surface. Any scratch is difficult to remove as it is very easy to polish through the surface layer of gold.
2. **Firescale**—Like scratches, firescale must be polished out, so great care must be taken to avoid it.

Technique Notes

- Gold-filled material is a thick layer of gold bonded to a base metal as opposed to plating which is a microscopic layer of gold deposited on the base metal piece.
- Gold solder is recommended as it provides a great color match.
- Gold-filled is available from Rio in yellow and rose (pink).

Steps:

1. Prepare the jump rings for soldering by closing them fully and coating them with a barrier flux such as a 50/50 boric acid/denatured alcohol mixture. Apply a flow flux such as My-T-Flux and solder the joints closed. We recommend using 14KY easy sheet solder for the best color match. Quench in water, pickle (for about 5–10 minutes) and rinse.
2. Being careful to avoid scratches, prepare the washer for soldering. Remove any burs using a file or rubber polishing wheel. Prepare with the barrier flux as you did the jump rings in step 1, above.
3. Use a template to arrange the jump rings along the outer edge of the washer. Turn the ring so the solder joint of the jump ring is against the washer. The goal is to flow the solder from the jump ring joint to the washer and solder the ring to the washer.
4. When the rings are in position, apply the My-T-Flux and solder the rings to the washer. If the solder doesn't flow right away, it's better to stop, repeat the quench/pickle/rinse cycle, and start again. Trying to push the solder to flow by overheating it will introduce firescale into the gold-filled material and cause problems when finishing.
5. When all the rings are soldered on, repeat the quench/pickle/rinse cycle.
6. Dry the washer and ring component, taking care to avoid scratches. Polish the component with radial bristle discs or polishing compounds or both. When polished, clean the piece and then attach the decorative elements. Finish the piece by using a Sunshine® cloth to bring out a high luster and remove fingerprints.



See next page for supply list.

⚠ **CAUTION!** Always wear eye protection when performing these processes.

Supply list for Soldered Gold-Filled Earrings.

Supplies:

Order #	Description	Order #	Description
504-025	Pump dispenser with flux	111-249	Fumasi shears
504-006	My-T-Flux, 1 pint	692-883	Gold-filled ear wires
115-146	Natural brush sticks	629-515	Gold-filled washer, 25.7mm
503-019	Titanium solder pick	633-065	Gold-filled jump rings, 22 ga., 2.4mm
502-004	Silquar high heat block, 6" x 12" x ½"	637-490	1½ ₂₀ gold-filled head pins, 25 ga., 1½"L
502-025	Long Life hard charcoal block	075-765/77	Swarovski Elements faceted round beads, Sapphire, 8mm
503-048	Torch ignitor	600-806	14K yellow gold sheet solder, easy
500-018	Little Torch™ magnetic torch holder	117-534	Freedom® SR30 flex shaft
502-066	Third Hand	117-598	Freedom® 20D QC handpiece
115-051	Cross-lock tweezers with fibergrip	117-291	SwingAway arm
501-017	Copper tongs	332-597	Radial bristle disc kit, ¾"
501-023/3	Rio pickle, 3 lbs.	331-000	Picasso blue polishing compound bar
501-012	Little Dipper™ pickle pot	330-707	Muslin buff, 1" x 16 ply
704-096	Boric acid (flux), 5 lb. box	333-105	Screw mandrel
500-090	Little Torch™ set for disposable tanks	111-026	Swanstrom pliers and cutter set
115-146	Flux brush, burn away; pkg/6	337-039	Sunshine® Cloth, 7½" x 5"
500-091/2	Disposable propane tank	201-054	Citation safety glasses
500-092/2	Disposable oxygen tank	—	Pyrex® dish
114-765	Needle file set, #3	—	Denatured alcohol
113-208	Optivisor with #5 lens		