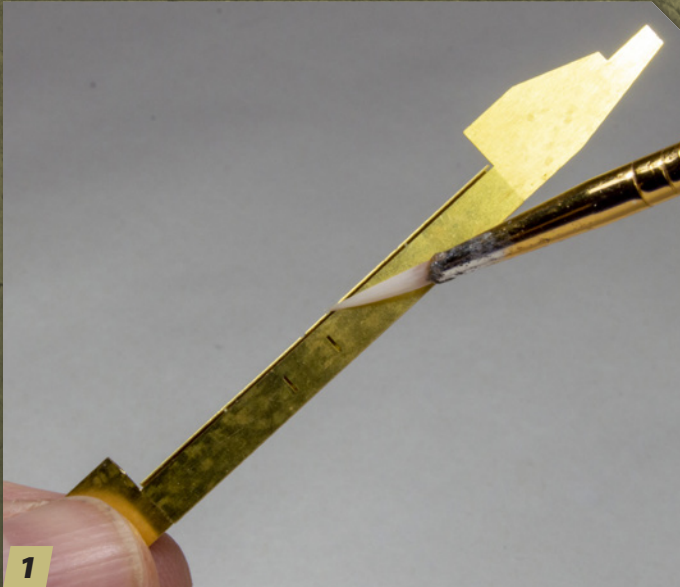


SNAPSHOT

HOW TO SOLDER PHOTO-ETCHED METAL PARTS

PHOTO-ETCHED METAL (PE) parts can add incredible detail to your model. Simple PE sets may only require bending a few parts and gluing to the model. More complex sets that require multipart assembly or joins with strong bonds need a different approach — soldering.

By Robert Raver



1

For a hedgerow cutter on the front of a tank, the seam where the pieces join needs to be strong for handling during the rest of assembly and attachment to the model. First, brush liquid flux along the seam where the solder needs to flow.



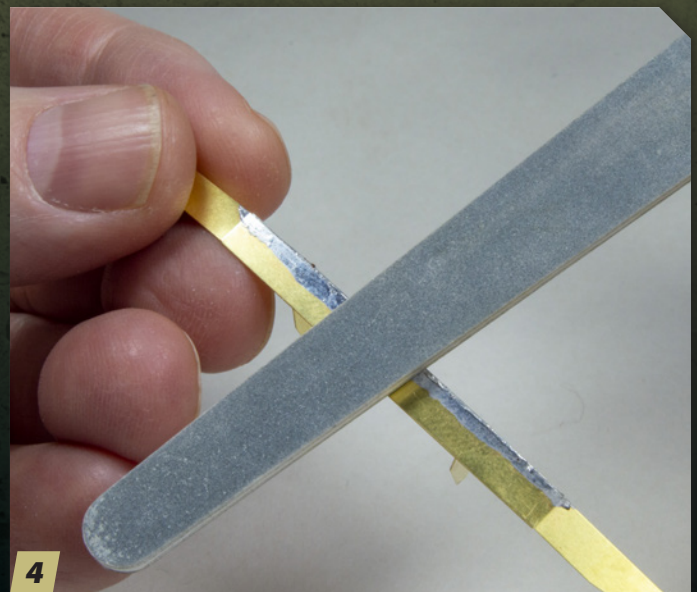
2

Melt small amounts of solder into several tiny beads on a hard, temperature resistant work surface. Melt these solder beads onto the tip of the iron. This method gives you greater control over the amount of solder you use rather than loading the iron tip direct from the solder spool.



3

Move the iron across the join allowing the solder to flow off of the tip and onto the part. The solder will flow onto the part where the flux was applied. The initial pass maybe slightly rough, but the goal here is to get the solder to flow into the right spot to hold the piece together.

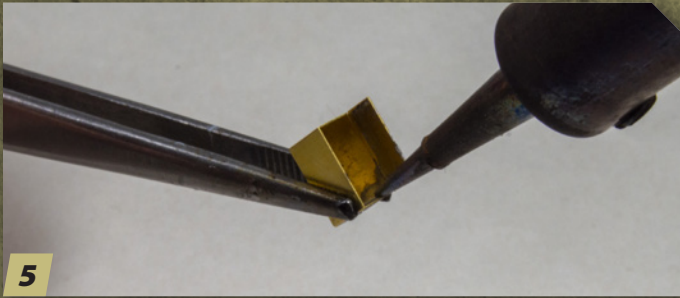


4

Another quick pass over the join with the edge of the tip helps to smooth out the solder. Don't linger, because if the solder melts completely the join will open up. Once the solder cools, clean up the join with a sanding stick or file if you need to make it smoother.

SNAPSHOT

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5

When soldering an interior join, apply flux to the seams where the sides connect. With a small amount of solder on the tip, touch the iron to the seam; the solder will flow down the join for a strong bond. This box would have likely come apart if assembled with superglue.

Tools and supplies

Soldering iron; a variable temperature iron is a good investment but not necessary

Finely pointed soldering tip; may come with the iron or may have to be purchased separately

Tin-lead solder (22AWG) and liquid flux

Inexpensive paintbrush for the flux

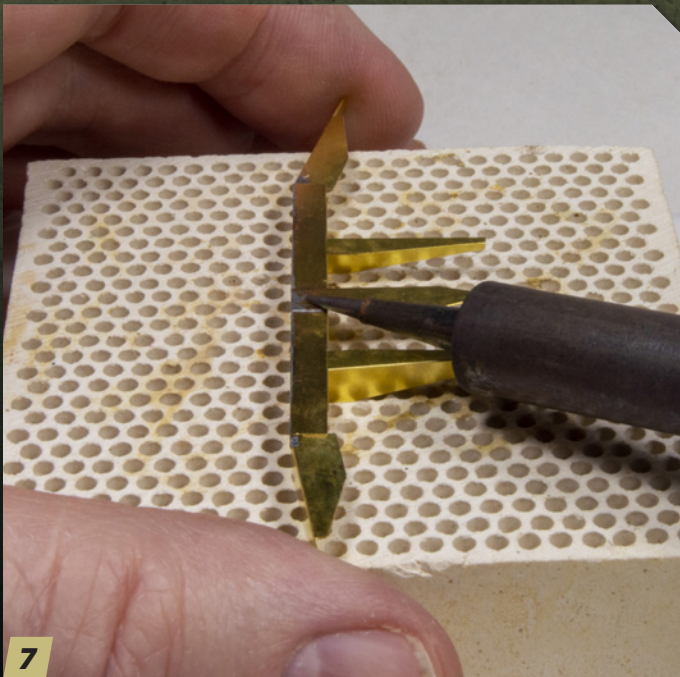
Tweezers or fine-nosed pliers with wooden or rubber grips

Hard surface to work on like a smooth, square tile



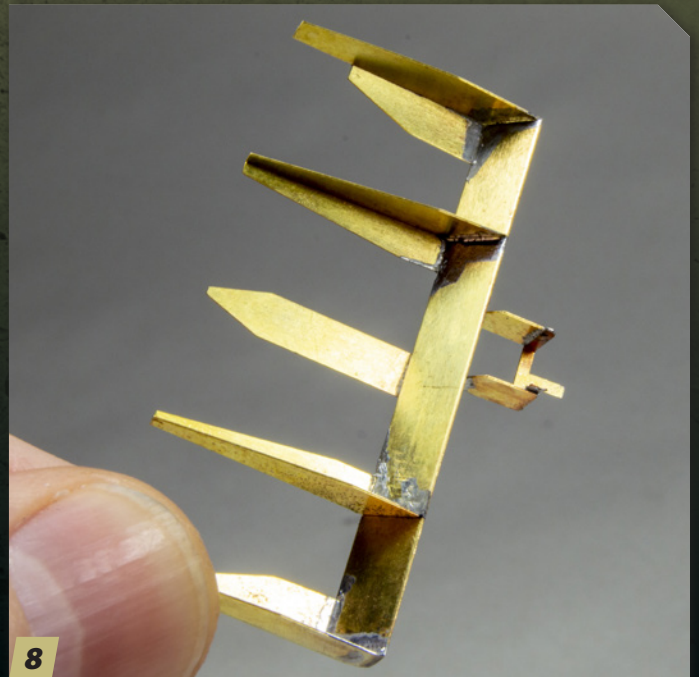
6

For single parts to be joined into a larger whole, you need to “tin” the parts, which means applying solder to where they will join. As before, brush flux onto both parts where the join will be and then melt a small amount of solder onto them.



7

Then hold the parts together and use the iron to heat the metal to melt the solder. A variable temperature iron is useful for this: Turn up the heat to make sure the solder melts. A larger solder tip will work, too. When the solder liquefies, remove the iron.



8

Here is the finished hedgehog cutter. While it could have been built using superglue, it likely would have come apart causing rework and unnecessary frustration. Instead, solder created nearly indestructible joints and allowed for a detailed, complex PE subassembly. **FSM**