

DIY Jump Rings

Sooner or later, you'll find yourself in need of a jump ring. These are the little rings that hold clasps and components firmly to your jewelry. Jump rings are also used to create sparkling, flexible Chain Maille jewelry.

But what can you do if you are out of jump rings and live miles from the nearest store? Why, make your own, of course! Follow these simple steps, and you'll never run out of jump rings again.

What you'll need:

- Wire (copper is easy to find and inexpensive – great for learning!)
- Round objects (pens, knitting needles, dowels, etc) to form wire around;
- Tin snips or wire cutters
- Small file or sandpaper

To start, decide on how large you want your jump rings to be. Rings that are small in diameter can be made with fine wire, whereas large-diameter rings need thicker wire for strength. Jump rings are usually made of 16, 18, 20, or even 22 gauge wire. For beginners, I recommend 18 or 20 gauge wire – it's thin enough to be easily worked, yet thick enough to make a strong ring. Having said that, whatever you have around is great for practice!

Designers Note – If you happen to live with a “do-it-yourself” kind of person – you might be lucky enough to find some spare electrical wire in the garage or workshop. Check the label. Keep in mind - you're looking for “solid” not “strand.” Once you strip the covering off, you'll have a nice piece of copper wire for practice! Fencing wire, even mechanic's wire – they're all great for practice, and they offer a unique look, too!

Now that you've selected your wire, it's time to choose a “mandrel” – a fancy name for something to wrap your wire around. Wooden dowels, like those found in craft and hardware stores, are alright for beginners, but they will not give a consistent diameter over time. Pens are OK in a pinch, but the range of sizes is limited and they're hard to hold. My favorite mandrels are knitting needles. They take a lot of abuse, are cheap and easy to find (try garage sales and second-hand stores!), and are available in many sizes so I can have whatever I want.

Jump rings are commonly measured by their diameter. You may see them sold with cryptic descriptions like “18 ga 5/16 in ID”. In this example, we are talking about a jump ring made with 18 gauge wire. The inner diameter (or ID, for short) is 5/16 of an inch. Rings can also be measured according to their outer diameter, or OD. The outer diameter becomes very important when making Chain Maille designs.

Designers Note – While the inner diameter of jump rings is often given in fractions of an inch, knitting needles are measured differently. Not a problem! Get a clear plastic ruler (like kids use at school). Put the plastic ruler over each knitting needle until you get the right size. Using this trick, I figured out that my 3/16 inch ID ring could be made on 5mm knitting needles!

When you start making jump rings, it's tough to get the right combination of wire gauge and mandrel diameter. The key is to find a balance between the gauge of the wire and the size of your mandrel. Thin wire is not strong enough to make large jump rings – they'll deform and won't hold much weight. Similarly, it is hard to make tiny loops with heavier-gauge wire. This handy chart of suggested size combinations will help you to get started – then you can let your imagination soar!

Wire Gauge	Jump Ring Inner Diameter (ID), in inches	Knitting needle size, in millimeters
14	1/4", 5/16"	6.5mm (US size 10 1/2)
16	1/4"	6.5mm (US size 10 1/2)
18	3/16"	5 mm (US size 8)
20	3/32"	2.5 mm (US size 1-2)

Ready? Then let's get started!

Step 1 – Form the Loops

Start with an 18" piece of wire. This length is easy to control and will reduce the risk of getting a kink in the wire. Find the middle of the wire and bend it over the mandrel. Begin to wrap one end of the wire smoothly around your mandrel, making sure that each successive wrap is snugged close to the one before it. You don't want them overlapping, but they do need to be snug. When you've reached the end of the wire, flip the mandrel around and begin wrapping the other end in the other direction.

Designers Note – In this example, I am using 20 gauge wire around a 4 mm (US size 6) knitting needle. These jump rings have a large diameter relative to their gauge, so they wouldn't be very effective to hold heavy components, and I wouldn't use them in critical areas where strength is important. However, they are fine for light-weight components. Copper wire, shown here, is very inexpensive. This is a great way to get lots of rings for a low price – perfect for that great Chain Maille design you're dying to try for the first time!

In the photo below, the rings on the left are neatly wrapped. On the right, you can see how NOT to wrap your wire!



Don't let your wire get a kink in it! Once it does, it's weakened in that spot and the wire may break.

Step 2 – Cut the Jump Rings

Now that you have a coil, it is time to cut the rings off. Cut off one ring at a time from your coil.



There are a few tools to choose from when cutting jump rings. **Tin snips** make a nice clean cut, flush with the wire. That's important ... a flush edge lets your jump rings close tightly, lending strength to your design. However, they are heavy-duty tools, tiring to the hands when used for long periods of time.

Wire cutters don't cut as cleanly. The ends of the jump rings become pointed rather than flush. Without a snug fit, your jump rings don't close properly. These cutters will make lots of rings quickly; however, it will be necessary to file or sand the edges until they are smooth.

A **jeweler's saw** is the best way. This small saw is designed to make flush cuts through metal. Sawing each jump ring takes longer than simply snipping them; however, you don't need to spend much time cleaning up the ends, as you would if you used wire cutters.

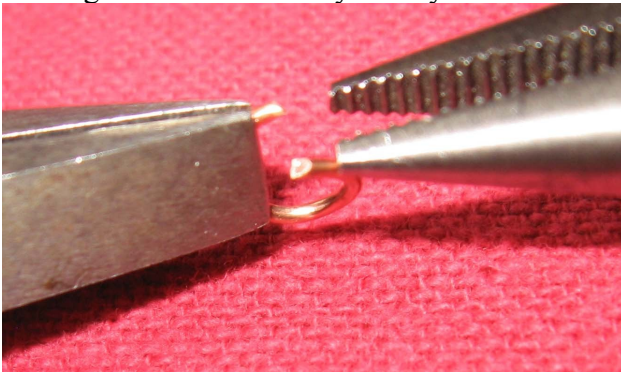
Look at the two rings in the following picture. The one on the left isn't cut flush, so the ends don't line up properly. The ring on the right is better -- although it still has a tiny nick, the edges line up closely for a strong link.



Step 3 – Clean up the Ends

Use a metal file or sandpaper to file off any imperfections. This will let your rings close properly.

First, open your jump rings. Don't stretch out the beautiful curve you've created! To open them properly, hold each jump ring with the split section facing up. Grasp it with one set of pliers on each side. Twist your wrist, bringing one (wire) end towards you while moving the other end away from you.



Once the rings are open, you can clean up the wire ends if needed. Use a metal file or sandpaper to file off imperfections for flush-cut ends. Do this, and your rings will close properly and stay strong.

*Designers Note – I use a tiny 1-inch belt sander to clean up my wire ends. Be careful – the sander works at very high speeds, and can make large rings **much** smaller in the blink of an eye. It only takes a split-second to ruin a piece, so use this with extreme*

caution! Use pliers to grasp the ring firmly, and always keep your fingers away from moving parts.

Step 4 – Tumble (Optional)

It's not absolutely necessary to put your rings in a rock **tumbler**. You can get by without it. Still, if you want durability and a beautiful gleam, a tumbler is a great investment.

In a tumbler, the constant bumping and jostling actually hardens the metal, strengthening your jewelry. Tumbling can also get rid of rough edges, blemishes, even shallow tool marks. Best of all, your rings come out of the tumbler with a shine, reducing your polishing time.

An Easier Option

Learning to make your own jump rings is a valuable skill, one that you would do well to learn. The methods I've outlined in this article will help you to create as many jump rings as you'll need.

As you learn to make jewelry, your interests may take you in different directions. Some jewelry forms, like chain maille, require access to a large number of jump rings. You may find that the methods outlined in this article produce too few jump rings, or cause pain in your hands. There is one more option, for the serious jeweler in all of us.

[The Pepe Jump Ring Maker](http://www.ottofrei.com/store/product.php?productid=10076), available at www.ottofrei.com/store/product.php?productid=10076, ensures you will never run out of jump rings again. This jump ring maker promises to provide you with an almost unending source of jump rings, quickly and easily. It comes with 20 different mandrels, measuring from 2.5 to 12.5 mm in diameter. It's available online for \$145, and is a great buy for anyone who needs a lot of jump rings fast.

Enjoy!

Jump rings are an essential part of many jewelry designs. By learning to make your own, you can create a never-ending supply ready for those "Aha!" moments when inspiration strikes.