

Harp String Changing for the Technically-Challenged: 12 Easy Steps

By Mary DeMocker

(appeared in *The Folk Harp Journal*, winter 2007)

It's Saturday, 4 pm, only one hour before your very first gig -- your daughter's 5th birthday party. You walk into the harp room to pack up only to discover, to your horror, that middle C, the most important string for "Happy Birthday" --which you promised to play-- is draped across the soundboard, having finally snapped under all that stress. You can relate quite well: the tension just got higher for you, now that you must perform your first quick string change. You've had a month's worth of lessons, but hadn't gotten to the string changing tutorial yet. Your teacher is now at a harp workshop thousands of miles away and you're alone with a seemingly impossible task.

Relax. With a little help, even the technically challenged can follow these twelve steps with success. Grab a pair of scissors, your tuning key, the bag of colorful strings that came with your harp (we hope), and you are ready to restore your harp to its former, high-strung glory.

Step 1: Out with the old. Pull the broken string through the back of your harp, careful not to scratch any wood or dislodge the metal grommet by yanking through quickly. Unwind the remnant attached to the tuning pin.

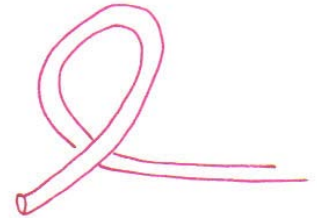
Step 2: In with the new. You must now find the new C string inside one of those little envelopes with the mysterious numbers on them. For the number of your broken string, start at the top of your harp. The shortest string is number one. Count down to the missing string and voila! you have the number you need. On my 36 -string harp, middle C is the twenty-second string from the top; its envelope says, "#22 red", the red referring to the color of all C strings.

Step 3: And now, your anchor. It's time to attach your new C string to the soundboard. The anchor will remain there until you change the string again, which we hope is years from now. What to use? I keep an old, thick string with my new ones, snipping off an inch when I need an anchor. In a pinch, I've used squares of fabric, even tissue paper rolled tightly. Just don't use hard plastic, metal or anything stiff that might vibrate and make it sound as if a kazoo player's lurking inside your harp.

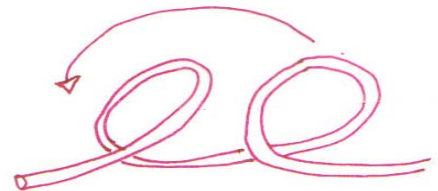
Step 4: Front first. Push the string through the *front* of the harp. Then make the anchor (on the end you just pushed through) once it's set into the harp. If you've ever tried to push thin strings through tiny holes in the back where, on some harps, you can neither see nor reach, you'll sing "Hallelujah" at the ease of this simple technique.

Step 5: Knot a problem. Tying the knot is often the hardest part of stringing for the technically challenged, but stay with it. You will get it. Here's the knot that has worked for me since I learned it from my first harp teacher.

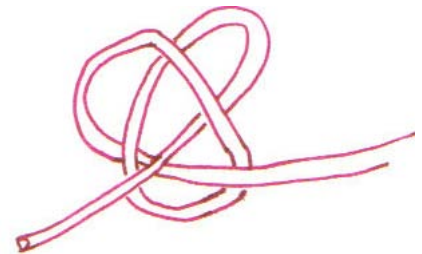
First make a loop with the short tail going to the left.



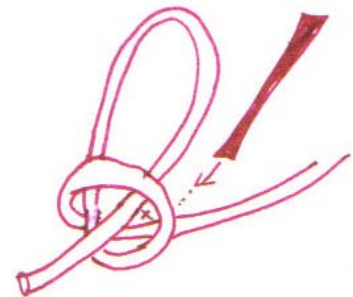
Mirror it with another loop. You now have a "butterfly".



Folding both "wings" toward you, lasso the left wing with the right.



Tighten it partway. Insert your anchor, then tighten the knot again as much as you can. Make that knot really grab the anchor, so it stays put when you let go.



Step 6: Testing, testing. After you've gotten it through the back of the harp, pull up hard on the string to see if you have a good knot that's holding the anchor. If you hear a little "clink" inside the sound box., your anchor has escaped. You're not alone; the bases of all my harps are small graveyards of anchors that refused to stay put. Just wiggle another anchor into the existing knot and you're back on your way.

Step 7: String 'em up. Now you get to actually attach your string. Follow the pathway the other strings take, snaking under any levers (or blades), settling into the little groove on your bridge pin, and finally up to the tuning pin. You're almost ready for that birthday party.

Step 8: A little slack, please. Pass the string through the tuning pin hole, pulling up on the string with one hand until it is taut. With the other hand, pull the middle of the string sideways, until it touches the string two spaces below (in our case, the A below middle C). This gives you the right amount of slack. You'll be able to wind the string on the pin about three times, which is ideal.

Step 9: Lock it up. With nylon strings, lock the loose end so the string is held there by its own tension and won't slip off the pin. As you start to turn the pin, tuck the loose end back under the string from the inside (close to the wooden neck). You should capture it on the first wind.

Step 10: Fine tuning. With monofilament ("single thread") strings, you may bring it up to pitch within a minute or two. Go slowly with a wrapped string, however, since the core and the wrap stretch at different rates, and can burst with all the excitement. Tune the string to a step below, and give it an hour to stretch. When you bring it to pitch, it should behave.

Step 11: Be excessive for a change. Don't trim the excess on your string until you're certain it will hold when brought up to pitch. That way, if it snaps at the grommet or your knot pulls through, you'll have enough string left to try again. (This won't work on a wrapped string; once broken, it's useless.) When a string has held at pitch for several minutes, I snip off most of the excess, leaving an inch to remind me which is the new string since it will need extra tuning. When it's done stretching after a couple of weeks, I trim it to match the rest.

Step 12: Celebrate. Enjoy that birthday party, or throw yourself a fiesta for passing a major milestone in your harp career. You've given your harp the loving care it needs and you will be rewarded with strings that stay put and perform well. Bravo!

QUESTIONS ON THE FINE DETAILS

What do I do differently if I'm changing wrapped nylon or metal strings?

These come with anchors attached, often a handy leather washer. You push the string through the back. If you can't see or reach the hole, due to braces inside the sound box, or the opening on the back of the harp doesn't line up with the string hole, bend the string to the angle you need. Straighten it out again as you pull it through the box.

Metal strings need more slack than nylon when you wind them onto the tuning pin, since metal doesn't stretch as much. Laurie Hill of Markwood Heavenly Strings recommends allowing enough slack for the string to reach down three places (see Step 8). Without enough slack, it may only wrap once around, putting too much pressure on a tiny bit of fragile metal. The first time I changed a bronze string, I wrapped it just once. It broke within a few hours right at the point where the string passed out of the hole-- too much pressure on that edge.

Metal strings don't need to be locked onto the tuning pin. You will, however, want to tighten these strings slowly, allowing an hour for them to stretch before bringing them fully up to pitch. Laurie Hill cautions, "Tune bronze strings carefully, since they break easily. Don't go back and forth a lot in your fine-tuning, since this weakens the string. The extra care involved is worth it, though, since bronze has such a beautiful tone."

Anything different about the really thin nylon strings?

For thin top strings, some harp makers tie a simple square knot, slip in the anchor, then tie another square knot.

What if I have no strings?

In the case above, unless you live in a town with a harp shop, you'd better learn to play "Happy Birthday" in another key that doesn't use middle C. After the cake and ice cream, order yourself a complete set of strings. (See below) If you have some strings, but not middle C, substitute with a neighboring string and color it with a permanent marker. You'll have red fingers, but this will work until you get another C.

How do I avoid getting caught without strings? Keep a full set of strings made for your harp to avoid the scramble --and shipping costs --associated with buying them one at a time. Most new harps come with a full set. If yours does not, it's best to buy a full set up front and consider it part of the cost of getting a harp. You'll save money and hassle later. Sellers of used harps often throw strings into the sale, or sell them at a discount. Go through them and order any missing strings to give yourself a complete set. If the harp comes with a missing string, order two of that string so you'll have a complete set once it's fixed. Renting? Ask for a set and offer to replace broken ones. You'll return a full set at the end of the rental period. If a full set is not possible, ask if you can at least get any wrapped nylon or wire strings, since those are custom-made for your harp model and not as easy to acquire.

Can I bulk up? For those with several harps, it pays to buy coils (25 ft.) of monofilament string. The wrapped nylon and wrapped wire strings can't be bought in bulk. In the case of our missing middle C, I look at my string chart and see that for #22 C I need a red piece that is .050" thick. I grab the bag of .050" string coils, choose the red and snip off a length. The cost is a fraction of what I'd pay to order a single string.

What if I never got a chart? Go online. If yours is not there, ask your harp maker for it. You can also buy dial calipers from a hardware store and simply measure all your strings, making your own chart. Laurie Hill strongly advises requesting a chart whenever you get a harp. "The charts tell us what strings are best for your harp. I've designed many string sets for all kinds of harps over the years, but it's much easier with the chart from the original maker."

How long can I store strings? It depends what they're made of. I keep nylon coils for years. If they take five hundred years to decompose in a landfill, they'll be fine to use even after a decade of storage, assuming they're stored without heat or light. However, Laurie Hill cautions against using nylon strings with yellowed ends. "This means they are very old and likely to be brittle, which would affect the tonal quality." Metal strings tarnish if stored too long. Gut strings, more sensitive in general, become brittle with long storage.

What if I have zither pins or threaded tuning pins? Most harps have tapered pins, meaning they rotate smoothly in their hole, and get bigger on the end where you put your tuning key. You string on the left side of the neck and tune on the right. Many harps, however, now have the less expensive zither pins. On these you string AND tune on the left. Since the pins don't pass through the neck, they are threaded and must be backed out *before* you restring. Otherwise, you'll keep rotating the pin in the same direction, and over time the pin will become deeply embedded in the neck.

Sue Mooers of Dusty Strings informs me that they have changed to tuning pins with threads. "If you have a harp made (not bought) after we changed over in 1999, you'll need to back your tuning pin out a little before restringing. If you're not sure which kind of pin you have, check the paperwork you got with the harp, or contact us."

What does "gauge" refer to? The gauge simply tells us how fat a string is. Folk harp strings range in size from .060 of an inch thick on the thick bass strings to .020" on those thin little top-of-the-harp strings.

What are all those numbers on the packages of my bass strings? Wrapped strings have a "core" -- nylon or metal-- and a "wrap" of nylon that coils around the core. You'll see three numbers on the string package. Those refer to 1) the gauge of the core, 2) the gauge of the wrap and, 3) the vibrating length. Vibrating length is the distance between the grommet and the tuning pin for that particular string on that particular harp. The string maker tries to make the wrap end about ½" below the bridge pin, so only the core goes over the bridge pin and through the tuning pin. That's because there's a tiny lump where the wrap is knotted and fused to the core, and this spot is vulnerable. When you tune your harp, you want that knot safely below the bridge pin, not grinding back and forth over it, possibly breaking the wrap and, therefore, the string. If the vibrating length is even an inch too long, you'll need another string, because the knotted part of the string is (usually) too thick to pass through the hole in the tuning pin.

Who sells strings? Most harp makers, and harp supply businesses. I get my strings directly from string makers:

Markwood Heavenly Strings:
PO Box 1137
Phoenix, Oregon 97535 USA
541 535-7700 Fax: 541 535-5657 mwstrings@markwoodstrings.com

ROBINSON'S HARP SHOP
P.O. Box 161
Mt. Laguna, CA 91948-0161
(619) 473-8556 Phone (619) 473-8212 Fax e-mail: robinsonharp@sciti.com

VERMONT STRINGS
68 Shaw Heights
Waterbury Center, VT 05677-8215
(802) 244-8564 Phone & Fax e-mail: vtstrings@vtusa.net

Thanks to Sharon and Dave Thormahlen, Sue Mooers, and Laurie Hill for generously sharing their expertise for this article.

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