

#### INTRODUCTION

Stringing a harp is something that most people have never attempted. This quick guide is meant to help you through stringing your harp until you get more comfortable with the process. Stringing harps is something we've taught many people to do, over the years. It's much simpler than you might think. Be patient and follow the steps. If you're having a tough time, don't hestitate to give us a call!

#### STRING COMPOSITION

We use several types of harp strings, depending on the size of the harp and the range:

# Monofilament Strings for the mid-range and high notes:

#### Nylon

These are tempered nylon strings, much stiffer than fishing line. They are slippery by nature, and they stretch at first, but they stabilize over time, giving a bright clear sound.

#### Gut

These are natural strings made from sheep intestines. They are more subject to humidity changes than nylon, but they give a warm and mellow tone, especially in the baritone range of a harp (A2 through E3)

# Steel

Used on wire strung harps. Wire-strung harps are more unusual than nylon or gut strung instruments. They give a very bright "tinkly" sound with long sustain. We use ball-end steel guitar strings of various thicknesses for this purpose because they are reliable and readily available, giving long life and clear tone.

# Wound Strings for the Bass Notes:

# Steel Core with Bronze Wrap (SFB)

Steel core with fiber bedding and a bronze wrap. The wrap extends all the way to the end of the string. You may clip these strings without worrying that the wrapping will come loose.

# Steel Core with Nylon Wrap (SFN)

Steel core with fiber bedding and a nylon wrap. The nylon wrap must be tied off below the tuning pin, so the steel core extends a few inches beyond the wrapping. These strings may only be clipped on the extended core material. If you cut into the wrap, it will unravel and the string will be useless.

# Fiber Core with Bronze Wrap (FB)

These strings have no solid core – just a bundle of fine fibers. You may clip the length as necessary without worrying about unraveling.

# Nylon Core with Nylon Wrap (NN)

The nylon wrap is tied off below the tuning pin. If you cut the wrap, it will unravel and the string will be useless.

Wound harp strings are custom made for each model of harp. Some people break the first one they install by over-tightening. They don't expect it to come up to pitch so quickly. Take care to avoid that costly mistake. It is very helpful to pluck the string as you tighten it, so you can hear the pitch go up as you increase the tension.

- \_\_\_1. Start at the bass (lowest) end of the harp. Push the string through the lowest hole inside the soundboard from back to front. Pull it all the way until the knotted end contacts the back side of the soundboard.
- \_\_\_\_2. Thread the other end of the string through the corresponding tuning pin, pulling it through the pin, but leaving enough slack below the pin to allow 2-3 windings before coming taut.
- \_\_\_\_3. Use the tuning wrench to turn the pin clockwise (from the viewpoint of the back of the tuning pin) and guide the windings neatly around the tuning pin. (fig l)
- \_\_\_\_4. As the string begins to tighten, place it in the groove of the bridge pin. When you are satisfied with installation of this string, use a wire cutter to clip off the excess tail, close to the tuning pin.
- \_\_\_5. Thread the remaining wound strings in the same way, taking care to keep them in the correct order.



NYLON WOUND STRINGS

1. Pull the string straight through the hole, not at an angle, to avoid scratching the nylon wrap against the brass eyelet.

2. Do NOT clip the string below the nylon wrap. The nylon is tightly wound around the core and will unravel if cut. (fig. 2)



Nice Windings!

FIG.



FIG.2 Nylon wraps: Do not cut below the wrap.

#### MONOFILAMENT STRINGS

\_\_\_\_6. The next strings (.060", .055", and .050" thickness) are plain (monofilament) nylon that have no knots tied in them yet. We find it easier to insert these strings from the front of the harp and then reach inside the back to find the end.

Tie a simple overhand knot at the end, as shown. (fig. 3) Leave enough tail at the end of the string to push back into the overhand knot's loop. (fig. 4)This knot is sufficient to prevent the string from pulling throught the soundhole. You can tighten the knot by pulling it firmly against the back of the soundboard.



- \_\_\_\_7. For the remaining nylon strings (.045" to .025") you will need to bulk up the knot with a small wooden dowel. Begin by threading the strings through the soundboard.
  - A. Tie an overhand knot near the end of the string and pull it tight. Then lay the string on top of the dowel forming a 'T' (fig. 5)
  - B. Next you'll form two half hitch knots and loop them over the dowel one at a time. (figs. 6-12)
  - C. Once both loops are over the dowel (fig 12), pull the log part of the string tight against the dowel. The overhand knot will snug up to the dowel and prevent the string from pulling through the two half hitch knots. The dowel prevents the strings from pulling through the soundboard.



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#### **CROSS THE WINDINGS**

When attaching the nylon strings to the tuning pins, follow the same procedure as you did for the bass strings. However, with nylon, it is necessary to also anchor the tops of the strings securely to the tuning pins, as follows:

Guide one or two windings of string on the tuning pin away from the neck, then guide the next winding back over the others (toward the neck) so the string helps "pinch" itself tightly to the pin as you tune it up to pitch. (fig. 12) If you don't do this, you will surely experience string slippage and breakage, especially in the upper half of the instrument.



Cross your windings.

Do not accumulate a lot of windings of string around the tuning pins, especially with the thick bass (low) strings. They become bulky and cumbersome. If you have that problem, turn the tuning pin backward to unwind the string, then pull more of the string through the hole and tighten again.

#### TUNING

When all the strings are installed, you can begin tuning the strings up to pitch. *Expect it to take around 50 tunings before the harp will fully stabilize*. We recommend tuning it two or three times a day. Persevere, and be patient! It should get better each day.

The strings should all be tuned to the natural C major scale (white keys on the piano). All the red strings will be C notes and the blue strings will be F notes.

Many people are not certain if they are tuning their harp strings to the correct octave. Tuning the strings an octave too low will result in flabby harp strings that don't provide much volume. Tuning the strings too high will cause strings to break. To make sure you are tuning your harp strings to the correct octave, you can double-check the pitch on our website with our "online tuner" at <u>www.harpkit.com/freetuner</u>.

You can also check your string chart. You'll see notes listed with a number after them, i.e. C4 or D5. This is a standard numbering system used to identify the octave of any given note. Middle C on the piano is C4. The number changes at every C. (fig. 13)

