# Harp String Notes



## For Any String

1. The "vibrating length" of a string is the distance from the point at which it leaves the soundboard to the point upon which it rests on its bridge pin, assuming your harp has them. It is the length that vibrates. The vibrating length, to the nearest 1/4", is important for getting or making strings which fit your harp, especially if those strings are wrapped. When you need to replace a wrapped string, please provide its vibrating length if we do not already have it.

2. A lot of pressure is exerted by the string at its small resting point on its bridge pin. As a string is brought to pitch, it rubs against this point, creates friction, and gets thinner.

As you bring any string to pitch, we recommend that you relieve this pressure by pushing the string away from its bridge pin with your free thumb as the tuning key is turned.

- 3. Although there are varying schools of thought, if you are replacing strings on a harp that is already strung, we suggest that you replace them one at a time. Do not remove them all at once.
- 4. Do not bring the harp or string up to tension all at once. We suggest doing it over several sittings if possible. Also, when a string breaks, it is not unusual for its neighbors to break as well due to having to absorb the change in tension from the loss of the first string. Although unpleasant, we suggest reducing tension on neighboring strings.



#### Monofilaments

- Your replacement monofilaments for the upper notes of your harp usually arrive in 46" strands with no leather washers or other materials attached. Soundboard holes may not be able to be reached from the inside of your harp so the strand may have to enter from the outside of the soundboard far enough so you can reach it inside, make a knot to secure the washer or other material, and pull it snug against the bottom of the soundboard rib. The knots pictured work for us. You may re-use the washer or other material from the broken string or you may use a short piece of bigger monofilament, like .055 or .060, a small nail without the head, a small strip of leather or something similar to prevent the string from being pulled through the hole in the soundboard. For extra assurance, we suggest using a leather washer and an additional piece of material.
- 2. We recommend warming the string as you bring it up to pitch by rubbing its vibrating length with a soft cloth to help stretch it to its proper tuned length. Failing to warm it may result in breakage.
- 3. Seasonal or daily fluctuations in humidity and temperature can cause string breakage. To hear a string break in the middle of the night is not uncommon. To avoid this, we suggest reducing the tension on your strings a bit if you expect a drop in humidity or temperature after playing your harp.

# Wrapped Nylon Strings

Most nylon strung harps have some wrapped strings, a nylon core wrapped with smaller nylon monofilament material. We call those strings nylon wrapped with nylon strings.

- The string core is stretched nearly to its breaking point on a machine before wrapping.
- 2. Nylon wrapped with nylon strings are wrapped just far enough so, when up to pitch, the wrapped portion extends a bit beyond the bridge pin. It is not necessary for the wrapped portion to go around the tuning peg.
- 3. Avoid cutting the wrap as it will unravel with a sickening whir. Also, any burrs on the rim of the eyelets, on the grooves of the bridge pins or on the holes of the tuning pegs may cause a string to break. If this happens, discuss with your harp maker. Steel wool or emery cloth may help remove any sharpness or burrs.

# Wire Strings

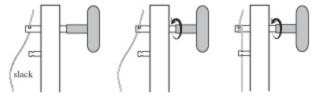
Although your harp may be "nylon strung", to have a few "wires" at the bottom of its range is not uncommon. If those bottom strings were made of nylon, they would likely be fat and clunky. Switching to a more dense material such as metal results in a trimmer, better sounding string. The core of the typical wire string consists of a length of piano wire and several nylon fibers, not unlike thin dental floss, which is then wrapped with copper, which may not be the color of copper but more likely silver, blue, and red. They may also be called "SSS" or "Triple S", which stands for steel, silk, steel, or "SFB", which stands for steel, fiber, bronze, or "SFC", which stands for steel, fiber, copper.

## Phosphor Bronze Strings

Phosphor bronze is a copper alloy which looks like copper. Some nylon strung harps use strings with phosphor bronze cores wrapped with nylon in place of wires as described above. Phosphor bronze strings have a nice tone, but they are very fragile relative to wires. You will want to bring them to pitch slowly and carefully.

# One Method Of Installing Strings

Thread the tail through the hole in the tuning peg, leaving enough slack for three to four turns around the peg. Make the first turn on the outside of the hole, between the end of the peg and the hole, and the rest of the turns on the inside while leaving the string off or behind its bridge pin until you have brought it near pitch. Then slip the string onto the groove of its bridge pin and proceed as described in "For Any String" above and the illustrations.



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Revised May 2008

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