

**\_\_\_\_\_68.** Replacing strings is easy. Begin by poking the first string (A string) through the first hole in the bridge and tie a simple overhand knot loosely near the end (fig 68a). Pull the knot until the opening is small, and then thread the short tail partway back into the opening, forming a loop beside the knot (fig 68b). Pull the knot against the hole in the bridge to tighten it up. It should end up looking like the knot in fig 68c. This is a simple way to tie a bulky knot that won't pull through the hole in the bridge.









Thread the other end of the string through the proper tuning pin post at the peghead, as shown in fig 68d. The strings are longer than they need to be, so you can pull most of the slack through the hole in the tuning post before starting to turn the tuning button. Leave enough slack string across the instrument so that there will be 3-4 wraps of string around the post before the string becomes taut (fig 68e).



CAUTION: The correct way to turn the buttons is to make the strings fall to the inside of the peghead, as shown in figure 68d. If you don't turn them properly, the strings will rub against neighboring posts and be difficult to tune.

If you have a piano or keyboard, you can tune the ukulele to the notes shown in figure 68d. It takes a good number of tunings (20 or so) before these nylon strings will stretch and stabilize enough to stay in tune. For more tuning help, find our on-line tuner at:

## www.harpkit.com/freetuner

**69.** Once the strings are installed, you will likely have some detail work yet ahead to make the instrument easy to play. You want the strings to hang approximately the heights shown in figure 69. This is called "setting up" the instrument.

Start by filing the notches in the nut to get the clearance over the first fret at about 1/16". That means you should just be able to slide a credit card between the string and the first fret. Do this for each string individually.

If you file too deeply, the string will buzz against the first fret. In that case, you'll need to loosen the strings, tap the nut off the instrument and re-glue it with CA glue. Generally, the new layer of glue is thick enough to raise the nut and stop the buzz. You could add a shim under the nut, however, if necessary.



Once you have the proper gap at the first fret, work on lowering the height of the saddle in the bridge to lower the strings at the 12th fret. The 12th fret is the midpoint of the vibrating length, so reducing the saddle height by 1/16" will lower the string 1/32" (half as much) at the midpoint. The easiest way to lower the saddle is to remove it from the bridge and sand the bottom. Mark with a pencil first, and then sand down to the line.

Conversely, if all the strings are too low to begin with, the easiest solution is to place a thin shim under the saddle raise it up.

When you are satisfied with the string setup, give the instrument a final tuning to the notes shown on the keyboard drawing, or check our on-line tuner at harpkit.com/freetuner.

**70.** If you'd like to install a strap on the instrument, we have straps and mounting buttons available at Music-makers. The mounting buttons can be positioned as shown in fig 70, with one button on the curved heel of the neck.



CONGRATULATIONS! We hope you have enjoyed building this kit and that you have many years of pleasure from playing it. Please let us know if you have suggestions for improving this project. We often get our best ideas from the customers who build our kits.

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