



## **HARP LIGHTS**

### **Installation Instructions**

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# Harp Lights

## Parts List:

- LED Strip with female connector
- Battery Holder
- Black adhesive Velcro:
- 2 Hook strips (1 for battery and 1 for connectors)
- 6 Loop strips (1 for battery and the rest for securing wires)

## Optional Accessories:

- AC adaptor w/male connector
- Remote Switch and Dimmer



**NOTE: We have a video on our web site showing the installation process.**

**Find it here:**

[www.harpkits.com/harplights](http://www.harpkits.com/harplights)



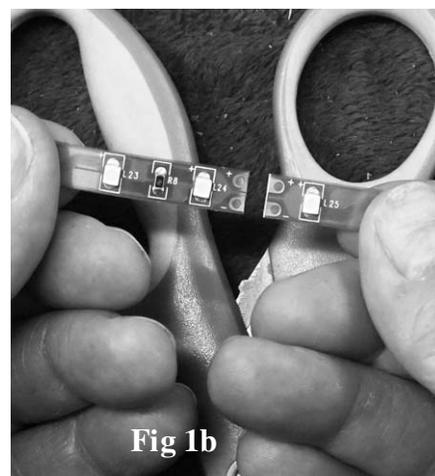
## BASIC GUIDELINES:

1. Apply the LED strip to a finished surface, not one that is bare wood or still requires further sanding and/or finishing.
2. The LED strip has an adhesive backing that should adhere nicely to a varnished or lacquered surface, but it may not adhere well to an oil finish, depending on how well-dried the finish is. Some oil finishes, such as Watco Danish oil, remain moist for a considerable time before fully drying at the surface.
3. You'll need to decide where you want the lights on your instrument, and where you plan to connect them to a power source.
  - a) You may, for example, want to have the connections near the top of the pillar/column and mount a battery at the front of the neck.
  - b) You may, on the other hand, want to have the connections at the back of the harp neck and mount a battery at the top of the sound box.
  - c) The more common choice, however, is to make the connections somewhere inside the harp near one of the access holes in the back. If you use a battery in that case, the battery can be mounted just inside the access hole using the hook/loop tape provided with the battery holder. If you use an AC adaptor to power the lights, then you can simply adhere the lead wire from the LED strip inside the harp where you can easily reach it and plug the adaptor cord into it.
4. To turn the lights on and off, you can either plug/unplug the power cord, or use the tiny on/off switch on the battery pack, or purchase the remote switch and dimmer. The nice feature of this system is that you can choose which power source to use in each situation. A battery will be your only option if you have no access to AC power, but the optional AC adaptor will be more reliable when you have AC power available. You may need to carry a spare battery and/or a standard extension cord with you for any situation.

## INSTRUCTIONS:

\_\_\_\_1. Once you decide how you'd like to orient your light strip, begin by holding the end with the wire leads where you'd like it to be. Stretch the LED strip along the underside of the neck to see how it fits the available space.

**CAUTION:** If you need to trim the strip shorter, you must cut only at certain marked places (every two inches). The LED lights are set up to work in groups of three lights, and there is a nice line showing where each group of three lights connects to the next group. Use a scissors to cut on that line.

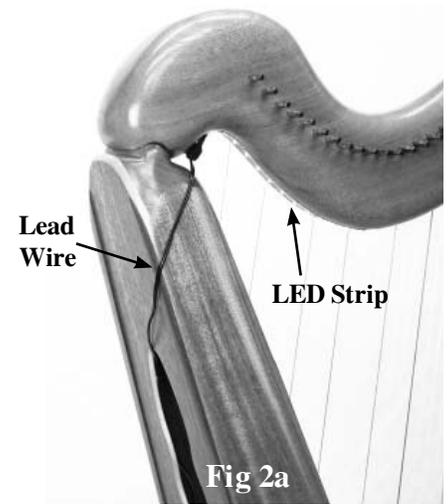


\_\_\_\_2. Plan where the wire will go -- either around the backside of the harp and into the top access hole, or down the side of the harp, etc. Sometimes we like to drill a hole through the front of the harp so we can feed the wires into the inside of the harp body near the end of the light strip. Some Musicmaker harps have access holes at the top of the soundboard already, allowing you to feed the LED strip up from inside the harp to the neck.

Look at the photos on the next page to see what might work best for your instrument.

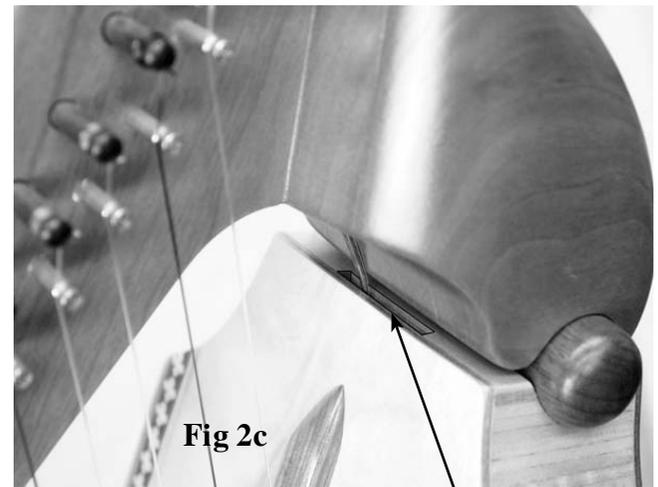
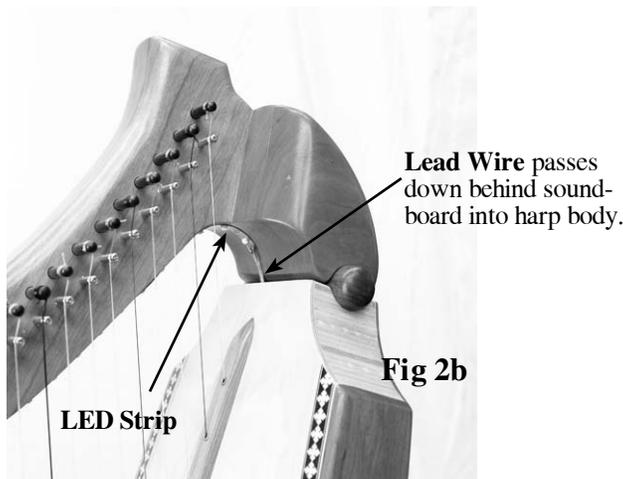
### EASIEST INSTALLATION

The two easiest methods of installing the lights are shown here. Figure 2a shows the lead wire wrapping around the harp and tucking into the top access hole in the back. This is the easiest way to connect to a power source hidden inside the body of the harp.



### INTERMEDIATE METHOD

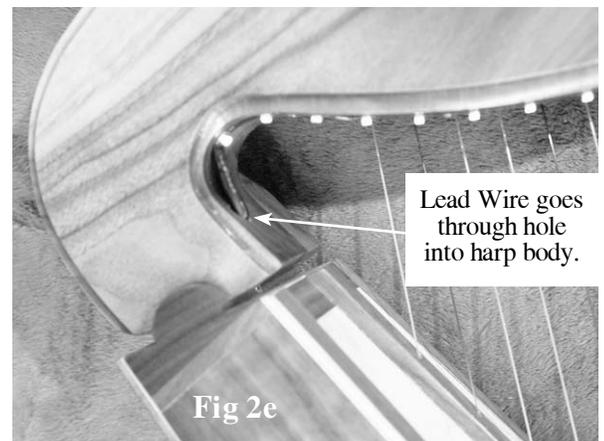
Some harps may have an opening already at the top of the soundchamber, behind the front panel. If large enough, you may be able to feed the LED strip up through that opening from inside the body, or drop the barrel connector down into the harp from the top (Figs 2b and 2c). You may need to make some minor alterations on the harp to accomplish this, but it is a nice option for hiding the wires.



Slot behind front panel is already there on our Gothic harp.

### CHALLENGING INSTALLATION

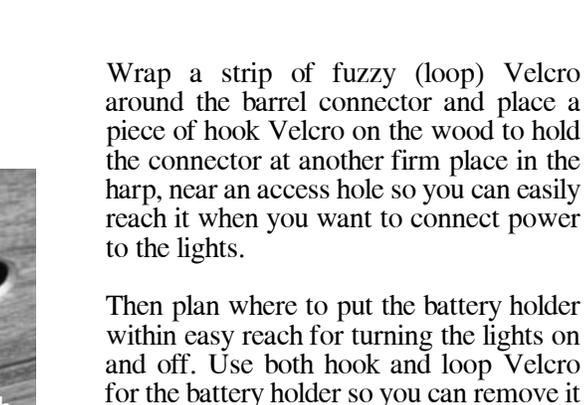
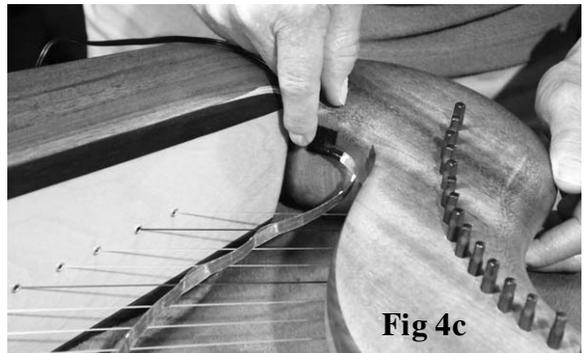
The most difficult installation involves drilling a hole through the top of the soundbox so you can pass the wires into the inside of the body, as shown below in Figs 2d and 2e.



3. If you plan to thread the lead wires through a hole in the harp, do that now, before adhering the light strip to the underside of the neck.

4. You may want to use the hook & loop material provided to hold the lead wire against the harp where it connects to the light strip. If so, cut a piece of loop (fuzzy) material long enough to wrap around the wire, and adhere that to the black wrap at the end of the light strip. Cut a small square of hook (stiff) material and adhere that to the neck where you want to hold the end of the light strip (see Fig 4a).

NOTE: Some folks ask if the adhesive will damage the finish on the harp. We've not seen a problem with that. If you remove the lights after a period of use, however, you may need to use a solvent like "Goo Gone" to remove some of the sticky residue.



Now you can peel off the protective backing from the light strip (fig 4b), and place the end with the lead wire just where you want it to be (fig 4c).

Then carefully press the adhesive-backed light strip against the underside of the harp neck, from the lead-wire end to the open end. Try to avoid creating humps in the strip as you go (fig 4d).

5. Once the strip is installed, wrap the wire around to the back of the harp and feed it into the top access hole in the back of the harp, securing it with a short piece of fuzzy (loop) Velcro tape. Use the sticky side of the Velcro like a bandaid to hold the wire against the wood -- it sticks better than most tape. Don't bother with hook Velcro here.

IMPORTANT: Loose wires inside the harp have the unnerving tendency to vibrate against the inside of the instrument, causing rattles and buzzes when you play. The trick is to secure the wire inside the top access hole and then run it through open space to some lower point that is diagonal from where you started, such as in the middle of one side. Suspending the wire through open space will prevent it from touching loosely against the box. Use another piece of fuzzy Velcro to tape the wire to that lower spot. Then you can plan where to position the battery holder nearby.



Now you can just plug in your power source and turn on the harp lights -- there is a tiny switch on the battery holder. We also offer either an AC adaptor for 9 volt power if you choose not to use a battery. The smartest option would be to have both power sources on hand to give you the most flexibility, as well as a spare battery, just in case!

If you use the AC adaptor, be sure to carry an extension cord with you in case the outlet is located a distance from your harp.

