APPENDIX
TUNING YOUR HARP

Learning to tune your harp is an important part of learning to play, and it is essential that you keep your harp in tune by tuning it daily. New harps go out of tune quickly, because all of the strings are new and still stretching. Changes in temperature and humidity will also cause the strings to go out of tune. So, you should tune your harp every day before you sit down to play.

You should have received a tuning key, also called a tuning wrench, with your harp. Here's a photo of a variety of keys used by different harpmakers. Be sure to use the correct size key that fits your harp's tuning pins.

You can tune your harp to the notes on a piano or a pitch pipe. However, the easiest way to tune is with the help of a chromatic electronic tuner, which you can purchase from a harp store or other music store. When using an electronic tuner, you don't have to have a good "ear"; the tuner will tell you when a string is at the correct pitch. Follow the instructions that come with your electronic tuner. If you need more help, you'll find some tuner demonstrations at www.harpcenter.com.

Don't be surprised if you get frustrated when you're first learning to tune. It takes time to get a feel for which tuning pin is which, and how far you need to turn the tuning key. But, fortunately, the more you tune your harp, the faster you'll get! Just like learning to play your harp, learning to tune takes practice. Every time you tune you'll be a little bit quicker and more efficient, and soon you'll be tuning like a pro!

TUNING BASICS

Hold your tuning key in your right hand, and place it on the square end of the tuning pin for the string you are going to tune. Be sure the tuning key is on the correct pin, or you will tend to break strings by tightening them too much.

Pluck the string with your left hand. While it is still sounding, turn the tuning key until the electronic tuner indicates that the string is in tune. Or, if you are tuning to a piano, turn the tuning key until the pitch of the string matches the same pitch on the piano.

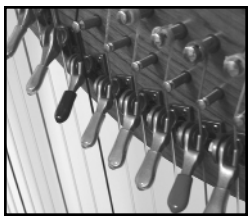
Some harps have zither pins, which are tuning pins that do not go through both sides of the neck of the harp, but are screwed into the neck on the side where the strings are attached. If your harp has zither pins, you might find it easiest to tune with the harp turned around backwards, with the front pillar towards you. Then you can hold the tuning key in your right hand and pluck the string with your left hand, as you would with harps with other types of tuning pins.

TUNING A NEW HARP

When tuning a new harp, or one that is not tuned up to pitch, always tune the lowest string first and then tune the strings consecutively all the way to the top. This allows the soundboard to adjust to the tension of the strings. After you have tuned all of the strings, start again at the bottom and repeat the whole process. This will need to be done quite a few times on a new harp before the strings stretch and adjust to their pitches.

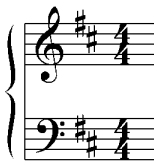
SHARPS, FLATS, AND KEY SIGNATURES

Although there are no sharps (♯) or flats (♭) in any of the pieces in this book, you need to know what they are, and how to play them on your harp.



Most harps are equipped with sharping levers right below the bridge pins. When a lever is engaged (usually by flipping it up), it shortens the sounding length of the string, thereby raising the pitch by one half-step (also called a semitone).

In music, a sharp sign (♯) raises the pitch of a note by a half-step, such as from a white key on the piano up to the adjacent higher black key. For example, pluck an F string on your harp. This is called an F-natural (F♮). Now engage the sharping lever on that string, and pluck it again. You'll hear that the note is now higher in pitch. The sharping lever has shortened the sounding length of the string and raised the pitch by a half-step, making an F-sharp (F♯). A flat sign (♭) lowers the pitch of a note by a half-step, such as from a white key on the piano down to the adjacent lower black key. In written music, the sharp or natural signs are written in front of the note, as shown here on the right.



A key signature is the group of sharps or flats written at the beginning of a piece after the clef sign, and before the time signature. The key signature tells you what notes will be sharp or flat throughout the piece. In the example on the left, you would engage all of your F and C levers (making F♯s and C♯s) before you begin to play. You haven't noticed key signatures in the music in this book because the pieces have no sharps or flats, and therefore, the key signature area is left blank. (You can find more information on keys and key signatures in my Music Theory and Arranging Techniques for Folk Harps book.)

HARP TUNING METHODS

If your harp has a full set of sharping levers, you have a variety of ways you can tune your harp.

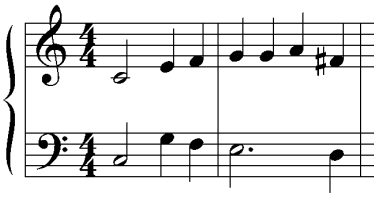
If all of your sharping levers are down (disengaged) and you tune every string to natural, like the white notes on the piano, you are tuned to the key of C. If you pluck a C string and play a scale up to the next C, you should hear a do-re-mi scale. When your harp is tuned like this, you can use your sharping levers and play pieces that have sharps in the key signature or within the piece.

However, if you want to play pieces that have flats in them, you need to tune some of your strings to flats. Start with all of your sharping levers down (disengaged). Then lower the pitch of the strings you want flat by one half-step by loosening the string with your tuning key. For example, tune all of your B strings to B♭ (on many electronic tuners, this will register as A♯). Then, when you use a sharping lever on a B string, the lever will raise the pitch up to a B♮. The most common flat tuning is to tune to 3 flats (also called the key of E♭) by tuning all of your B, E, and A strings to flats: (B♭, E♭ and A♭). In this tuning, with a full set of sharping levers, you can play in any key from 3 flats up to 4 sharps. For more information on tuning, see the tuning video at www.harpcenter.com/stringing.

If your harp has no sharping levers, you will need to re-tune your harp every time you change key signatures.

ACCIDENTALS AND LEVER CHANGES

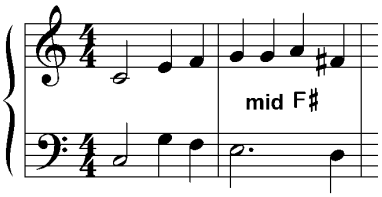
An accidental is a sharp, flat, or natural within the piece that is not in the key signature. When this occurs you usually will need to either engage or disengage the sharping lever on that string. There are no accidentals or lever changes in this book, but you will find them in other harp books.



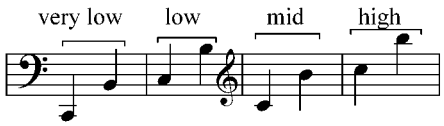
Because F♯ is not in the key signature in the example on the right, the F♯ in the second measure is an accidental. You will need to engage the sharping lever on this F string sometime after you play the F♮ in the first measure and before you play the F♯. Because you will move the lever with your left hand, you need to have a beat or two free in the bass clef to give you enough time to flip the lever. Sometimes the easiest time to flip the lever may be several measures before it is needed in the music.

There are several ways that lever changes are notated in harp music. All of the examples below on the left tell you to engage the lever on the F string above middle C during the second measure, after you play the low E with your left hand on beat 1, and before you play the F♯ with your right hand.

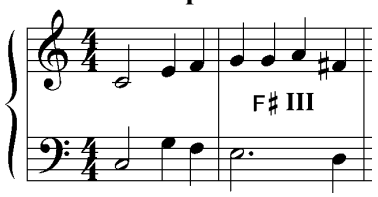
The "High" and "Low" Octave Method



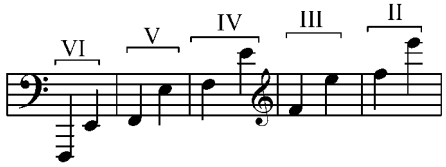
This is the method that I use in most of my books. "Middle" or "mid" means the notes from middle C up to the next B, and "high" is the next higher octave, etc, as shown on the right.



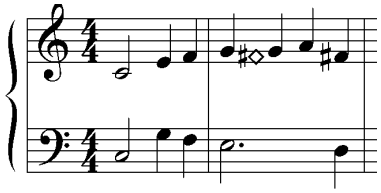
The Pedal Harp Octave Method



This method numbers the octaves the way they do on pedal harps. The octaves go from an F on the bottom up to an E on top, as shown here.

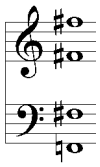


The Diamond Note Method



A diamond note is placed on the staff indicating which lever needs to be moved. You do NOT play the diamond note.

Before you play a piece, be sure to set your sharping levers to match the key signature, and follow any other lever instructions written at the beginning of the piece. Sometimes a lever chart will be printed at the top of the page, particularly if the lever settings are unusual.



Harp music will often indicate pedal changes for pedal harpists as well as the lever changes for lever harp players. When this happens, pedal changes are generally written below the bass staff, while lever changes are written between the treble and bass staves.

TAKING CARE OF YOUR HARP

If you take proper care of your harp, it should give you decades of pleasure.

First, you need to decide where to keep the harp in your house. Never put your harp near a window where it will receive direct sunlight, and try to keep it away from heating and air conditioning vents. The more stable the environment (temperature and humidity), the happier your harp will be. An inside wall of the house is best, because the temperature tends to be more constant there than against an outside wall. Animals and small children (and even adults!) can easily knock over your harp if it is in an area with a lot of traffic. Whenever you finish playing, place your harp with its back resting lightly against your harp bench or chair, or the wall. That way, your harp is less likely to fall over.

Never leave your harp in a parked car, even for a short period of time. On a hot day the heat that builds up in a parked car can literally melt the glue that holds your harp together. Even if this damage may not be immediately evident to you, it can cause major problems for your harp at a later time. Cold can be just as bad for your harp. Freezing temperatures can crack some types of harp finish. So, to be safe, never leave your harp in a parked car!

Harps are happiest in an environment of about 40 - 50% relative humidity. If you live in a location where the humidity is very low, check with your harpmaker for recommendations to keep your harp safe.

Always wash your hands before you sit down to play your harp. Remove any jewelry that might scratch the harp. This can include watches, bracelets, necklaces, pins, and dangling earrings. Rhinestones and sequins on your blouse or t-shirt can also cause scratches. We've even seen harps that were damaged by belt buckles from people standing close to their harp while tuning. So, be careful when wearing anything that has any potential of damaging your beautiful instrument. When in doubt, take it off and keep it away from your harp.

Always cover your harp, or put it in its case, before putting it on a dolly or into your car. Be careful when moving your harp: it is easy to bash it into doorways and other obstacles if you are not paying close attention. Never leave your harp unattended while it is on a dolly or cart.

Keep your harp clean and dust-free with a plain, soft dust cloth. Never use any type of polish or wax on your harp unless it is recommended by your harpmaker. Harpmakers use a variety of lacquers and other finishes on their instruments. You do not want to put anything on your harp that will damage the finish, or make your harp greasy, or gummy. You can use a soft, clean paint brush or dust brush to clean the "hard-to-reach-places" around the pins, levers, and disks.

Always keep your harp tuned, and replace broken strings promptly with the correct type and gauge of string. Never tune your harp to a higher pitch than recommended by the harpmaker.

REPLACING STRINGS

It is not unusual for harp strings to break, so you need to learn to replace broken strings. Harpmakers use a variety of types and gauges of strings, and it is extremely important that you use the correct strings for your harp. You should have received a string chart or string list with your harp, showing the correct strings for your harp model. If not, contact your harpmaker or a harp store that specializes in strings, and get a correct string gauge chart for your harp model. It is a good idea to keep an extra set of strings with your harp, so you can replace the strings when they break. BE SURE TO REPLACE A BROKEN STRING WITH THE CORRECT GAUGE AND TYPE OF STRING.

STEP 1 - Remove the old string from the back of the soundbox, and from around the tuning pin. If the string is wire or metal, use pliers to remove the string, so you don't cut your fingers.

STEP 2 - Prepare the tuning pin. The next step depends on which of three types of tuning pins are on your harp. Most harps have **tapered pins**, which are fatter on the end where you put your tuning key, and taper down to a smaller diameter on the end where the string attaches. Before you put on your new string, make sure the tapered pin is securely seated in its hole. Use your tuning key to twist back and forth slightly as you push firmly in toward the neck of the harp.

Dusty Strings has been using **threaded tuning pins** on their harps since 1998. On the outside, they look similar to tapered pins, but they have threads in the middle, inside the neck of the harp. Both the tapered pins and the Dusty Strings threaded pins are types of "through pins," because the pins go all the way through the neck. Some harps by other makers have **zither pins**, which don't go all the way through the neck of the harp: they only stick out on one side of the neck.

If your harp has either Dusty Strings **threaded pins** or **zither pins**, use your tuning key to unscrew the pin 3 or 4 turns before attaching the new string. If you skip this step, the pin will be too far into the neck once you bring the new string up to pitch.

STEP 3 - Knot and insert the string. Wound strings and bass wire strings come with an anchor on one end. When replacing any other type of string, you will need to tie a knot in one end. See page 78 for instructions on how to tie this knot. Once you've tied the knot (or if the string has an anchor), insert the free end of the string from the inside of the soundbox up through the hole in the soundboard. Pull the string through until stopped by the knot or the anchor.

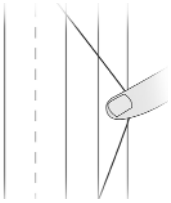
Another option is to thread the string through the hole BEFORE you tie the knot. To do this, insert the string through the hole from the TOP of the soundboard and then pull it through partway out the back of the soundbox and tie the knot. Pull the other end of the string back up through the soundboard until stopped by the knot.

STEP 4 - Thread the string through the tuning pin hole. Draw the string up to the tuning pin passing it through the sharping lever, if necessary, thread it through the hole in the tuning pin, and pull it taut. Be sure that the string is on the correct side of the bridge pin.

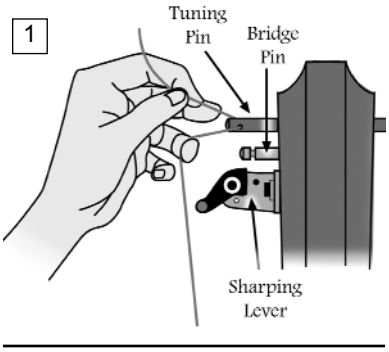
STEP 5 - Create slack in the string if necessary. Depending on what type of string you are replacing, you may need to leave some slack before you start to wind the string. You want to end up with the string

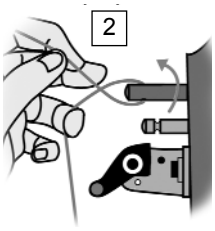
wrapping about 3 or 4 times around the tuning pin once the string is staying up to pitch. If you have either too few or too many wraps, your string is much more likely to break.

The highest thin nylon or gut strings need the most slack of about 2", with the slack decreasing as the strings get thicker. Bass wires and other strings with a wire core need up to 2" to 3" of slack. You do not need to leave any slack for nylon or gut strings over a gauge of about .036 or in the 4th and 5th octaves, or for nylon wrapped strings with a nylon core. To create slack, pull the string to the side about 3 string spaces, or pull the string back down through the hole in the tuning pin the proper number of inches.

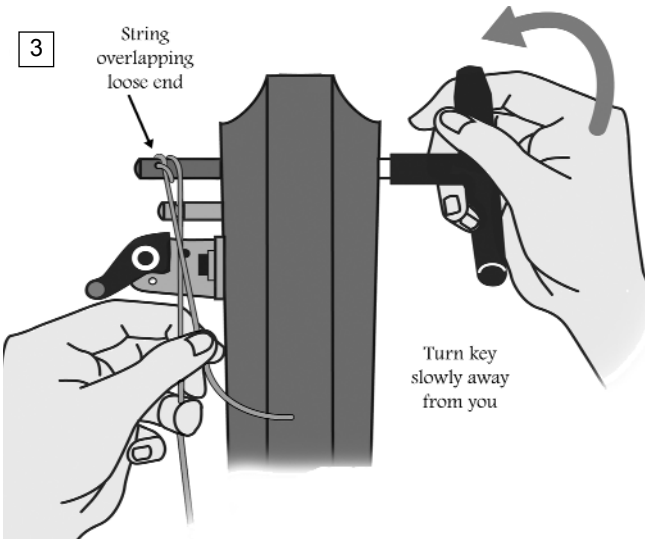


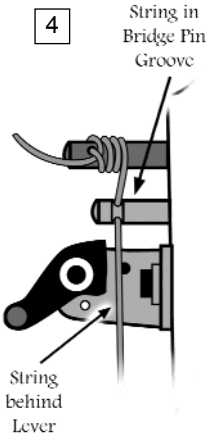
STEP 6 - Use your tuning key to wind the string on the tuning pin.
Hold the loose end of string out with your left hand as shown in Fig. 1. With your right hand, place your tuning key on the correct tuning pin and turn it by pushing your thumb away from you, until the string crosses over itself as shown in Fig. 2.





Bring this twist back toward the harp and continue turning the pin, so that the string winds over the loose end, securing it (Fig. 3).





Wind until the string has some tension and check to make sure the string is on the correct side of the bridge pin and tucked into the groove as shown in Fig. 4. Be sure the string looks like all of the other strings around it. Continue to slowly turn the pin with your tuning key until the string is up to the proper pitch. (If your harp has tapered pins, be sure to push the tuning key in towards the neck of the harp as you turn, to keep the tuning pin tight.)

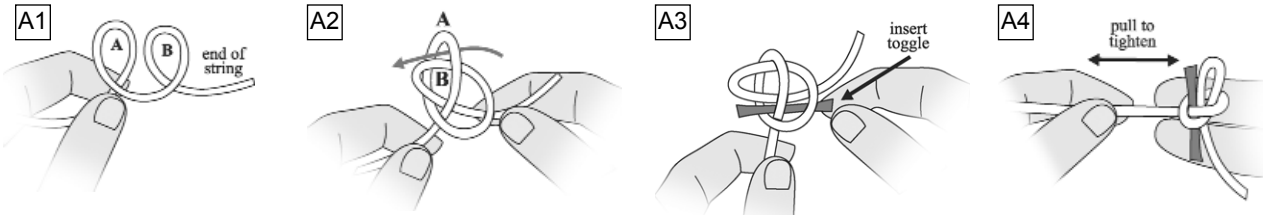
STEP 7 - Cut off the excess string.
New strings, particularly nylon strings, need a lot of tuning before they will stay up to pitch. Once you're sure that the string is on your harp correctly, you should cut off the excess string above the tuning pin. On the highest strings, the excess will often be long enough to use later as another replacement string.

BASS WIRE STRINGS
Because harpmakers use a variety of types of wound bass wire strings, the instructions for replacing these strings varies greatly. Bass wire strings are particularly tricky to replace, and should be brought up to pitch slowly. Be very careful when replacing these strings, because if you make a mistake you usually will not be able to unwind the string and start over. Check with your harpmaker, your maker's website, or www.harpcenter.com to find additional instructions for the type of bass strings on your harp.

TYING THE HARP STRING KNOT

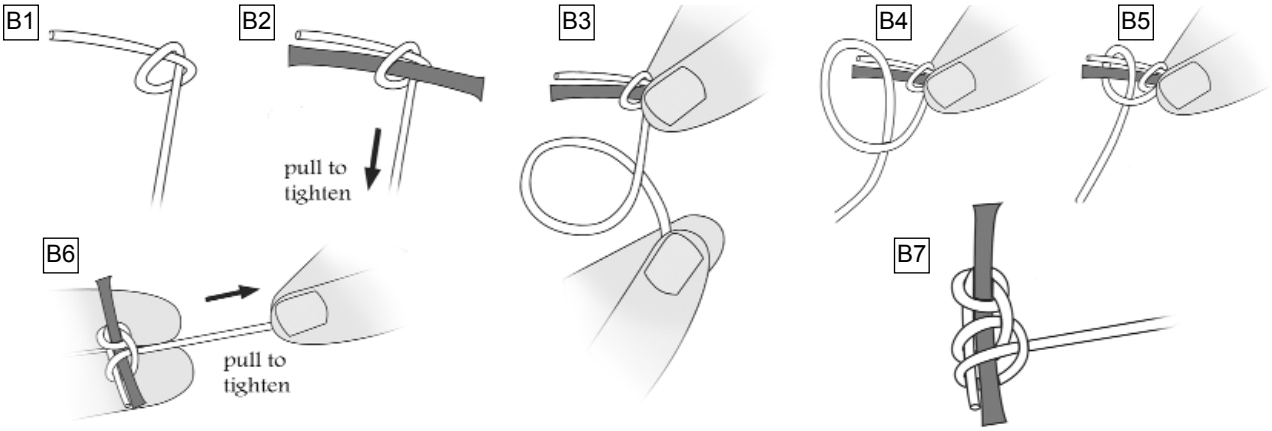
When replacing a gut or monofilament nylon string you need to tie a knot in one end, to secure the string against the soundboard. Here are two different ways to tie the knot; you can use either method you like. To reinforce the knot in the thin, high strings, you will need a short piece of a thick string, about 1" in length, which is called a toggle or a spline. This toggle is the dark piece in these illustrations. You can see videos and more information about knots and replacing strings at www.harpcenter.com/stringing.

THE TRADITIONAL HARP KNOT



A1. Make two loops (A and B) near the end of the string.
A2. Insert loop B through loop A from back to front.
A3. For extra strength, and to be sure the knot won't pull up through the hole in the soundboard, insert a toggle through loop A.
A4. Pull loop A tight around loop B.

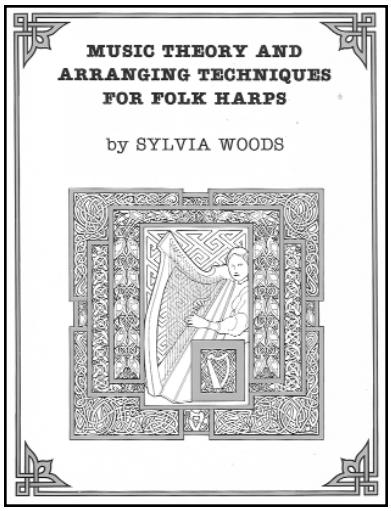
ALTERNATIVE HARP KNOT



B1. Tie a loose standard knot, leaving about ½" to ¾" of string sticking out beyond the knot.
B2. Slide the toggle into the knot, lining it up parallel with the string end. Pull the long end of the string to tighten it around the toggle.
B3. Hold the knot and toggle with one hand and make a loop below the knot.
B4 and B5. Bring the loop up and tuck the string end and toggle through the loop.
B6. Pull the string to tighten.
B7. For higher (thinner) strings, repeat steps B3 through B6 to add a second loop knot. You'll end up with something that looks like figure B7: a knot that won't slip!

WHAT'S NEXT?

Once you have learned the pieces in this book, you have the basic skills you need to play the harp. I have written more than 20 books of music arranged specifically for folk harp, and there are hundreds more by other harpists and arrangers. You might want to wait a while before trying any books described as "advanced," but other than that, you should be able to choose any type of music you'd like: traditional, classical, religious, original, or popular music. You will need to learn to use your sharping levers, because many pieces have lever changes within the music. See pages 73 and 74 for more information.



My Music Theory and Arranging Techniques for Folk Harps book is the next book in this series. It teaches you the basic music theory and techniques you need to make your own arrangements. Subjects include chords, keys, inversions, transposing, accompaniment patterns, and much more. You can purchase this book from the store where you bought this book. Or, order it directly from www.harpcenter.com.