Tuning the Pedal Harp by Ear and with Electronic Help

Elizabeth Volpé Bligh, amended Oct. 18, 2020

I sometimes make the mistake of assuming that everyone knows how to use an electronic tuner, or to tune by ear. There is some misinformation on the Internet, so don't believe everything you see on this subject. I saw one video that said to tune with all the pedals in the natural position (don't do that)! I have articles about this and other subjects on my web site www.elizabethvolpebligh.com. Harp Column magazine's May 2020 issue has articles on tuning and recommendations on tuning apps. Here is a link to the web site: https://harpcolumn.com/blog/top-apps-for-tuning/
Harp Column's top 4 apps were, in this order: 1. Tunable, 2. Tuner and Metronome by Soundcorset, 3. IStrobosoft by Peterson, and 4. Boss tuner – but not all of these pick up the extreme registers well. I own these tuners: Snark, Korg, Turbotuner, and Istrobosoft app, and Tonal Energy Tuner. My favourite is Turbotuner, an analog strobe tuner, but it can be difficult to read without some practice. The Turbotuner picks up the entire range of the pedal harp, with a pickup attached.

Tune your harp every day. The harp will stay in tune better, and your tuning skills will improve. Do not leave your tuning key on the pin unless you have ascertained that it will not fall off and hit your soundboard.

Always tune with the pedals in the flat position and the discs unengaged. On a lever harp, the levers should be unengaged. This means that when you are tuning a C flat, the tuner will read its enharmonic note, "B". The F flat will read as "E". Some tuners read accidental notes only as sharps or flats, so be aware of the enharmonic names of the notes you are tuning, i.e. E flat = D#, A flat = G#.

Most North American harpists tune A natural in the range from 440 Hz to 442 Hz. Check the tuner's calibration every time you use it, in case you have accidentally pressed the calibration button and it has gone higher or lower. Baroque music was tuned at a lower pitch, A 415, and A 435 – 440 had become common by the 1800's.

Make sure that you look at the tuner when you are tuning. I put mine on the music stand, so that one hand is free to pluck the string, and the other one is on the tuning key. If you are in a noisy room, or a musical ensemble, use a pickup plugged into the tuner input port and clipped onto the harp. (Pitch Grabber can be plugged into the earphones port on an older Iphone, with an adapter for the port if you have the new Iphone SE. Other clip-on pickups can be adapted this way.) YOU MAY HAVE TO MOVE THE PICKUP AROUND to get accurate readings. You will have to dampen the other strings frequently, or wind a piece of cloth through the bass strings to get good readings. Don't keep playing the same string over and over if it's not being picked up accurately. Make sure your tuning key fits the pegs tightly. If it does not, you should buy a new one, or possibly get an adjustable tuning key (available from Dusty Strings).

The needle of the tuner should be in the middle when the note is in tune, the note should be the correct one that you are tuning, and the number of the octave should also be showing (i.e. C#3). Each tuner has its own type of display. Use your ear to determine if you are close. Check by playing a C flat major scale and arpeggio, then a D flat major scale, and so on. Or, on a lever harp, check the scale with no levers engaged, then change key and try again.

If the harp has not been regulated in a long time, the semi-tones may not be in perfect tune, so you may have to do some adjustments. If, for example, one of your disc-engaged strings sounds flat when the open string is in tune, you just slightly tune the open string sharper, then check again with the disc or lever engaged. Try to have your harp regulated at least every other year, if possible. (This is probably less necessary for lever harps.) You may have to compromise sometimes. Be sure to tune the most important notes of your pieces the most carefully. Harmonics will always sound a bit flat. And pitch always deteriorates after the initial attack.

This is a good article on tuning!
https://www.franbarsbyharpist.co.uk/how-to-tune-a-harp.html

Tuning the Harp by Ear
Everyone should know how to tune by ear, even though there are some very good electronic tuners and tuning apps. Even if you carry a set of fresh batteries and/or an extension cord, sometimes the tuner itself can have a malfunction that is unfixable. Sometimes tuners get "confused" and we have to be able to recognize when the tuner is leading us astray with wrong readings. It is also very useful when you have a new string that has to be adjusted frequently.

It is important to be able to recognize when the orchestra is playing at a sharper or flatter A than the one to which you have tuned. It is always good to check the pitch of the A with the oboist when you are playing with an unfamiliar orchestra, or with whomever is giving the tuning note. IMPORTANT: we are talking about A NATURAL. Never refer to a note by its string name, but always think the name of the entire note, i.e. A flat, A natural or A sharp. (Note: I always tuned to A441 in the Vancouver Symphony, to stay in tune with the pitched percussion instruments, piano and celeste. I got there early enough to be tuned before rehearsals or concerts started.)

Have a tuning fork in your bag of harp accessories that accompanies you to every gig, in whatever pitch your orchestra tunes in, i.e. A 441. This is for the emergencies when your tuner is not working. Hit one of the tines on your knee, then place the bottom of the fork on your sound board so that the vibrating tines of the fork are loud enough to hear well.

We usually tune in a tempered scale, in which the semitones are all the same size. Rarely, there are pieces in weird tuning systems, and good electronic tuners have these options on the menu. Other instrumentalists flatten or sharpen some notes, depending on where they are in the chord or the scale, but we cannot do that while playing.

When you tune by ear, start by listening to a note played from your tuner, a piano or a tuning fork for your starting note. Then play the octave above it, get those in perfect tune by playing them at the same time and listening for "beats". Once the octave is in tune, tune the fifth above your bottom note of the octave. It should be a tiny bit flat. Then tune its octave and keep going like this. Note: tune the strings in flat position and then check them in natural. If you tune a string with the natural disc engaged, then the pitch will not stay accurate when you release it.

If you're using a tuning fork, play the A natural above middle C. If it does not match the pitch of the fork, tune it by releasing the pedal to flat and adjusting the pitch in the unengaged position. (This is easier if you check your electronic tuner. Alternately, you can buy a C tuning fork and start there.) Tune the E flat above it by playing the A flat and the E flat at the same time, slightly flattening the fifth. You can also play the A flats in broken octaves, then play the E flat

afterwards. This takes practice! Check it with your tuner, which is tempered, so your flattened fifth should match up exactly. Mind you, the tuner may say G sharp instead of A flat. It's the same note for harps. Next, tune the octave E flats, playing them simultaneously, and also broken in upwards and downwards directions. In some cases, the pitch may be slightly different depending on whether you play the note with the thumb or another finger.

Follow the “cycle of fifths”: A flat, E flat, E flat, B flat, B flat, F, F, C, C, G, G, D, D. This should bring you back to A natural. Make sure you complete the entire cycle of fifths, wherever you choose to start. This could also be done as: A, E, E, B. B, then go back to A, then D, D, G, G, C, C, F, F. This should all be done as flats, checking in natural position, since the regulation will affect the tuning.

Check the tuning by playing a scale, a series of cadences such as I, IV, V, then set your pedals into different chord patterns with enharmonic settings and play these glissando patterns as you would play scales, slowly, 4, 3, 2, 1.

The tuning may not have come out right. This could be because your fifths were “perfect” and not flattened enough. If they are perfect, then the result is the “Pythagorean comma”. This simply means that the semitones did not come out exactly the same and you have not achieved a tempered scale. It’s all right; if you practice tuning by ear and checking with your tuner, then this trains your ear to recognize what a tempered fifth sounds like.

This can be a more time-consuming process than using an electronic tuner, so always get to your gig early. An hour is usually enough; this gives you time to unload your harp, tune and warm up. With experience, you get to know your own time-line.

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