PEDALS, PITCHES, AND PIXELS
an introduction to harp notation

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Harp history overview:

Most “standard repertoire” was not written for the modern pedal harp.
THE HARP

How a pedal harp works

The mechanics:
- The Hands
- Motions of Playing
- Blocks and Directional Placing
How a pedal harp works

The mechanics:
- Interval Spans

Dukas, Sorcerer’s Apprentice, reh 52
THE HARP

How a pedal harp works

Registers of the harp:
- Resonance
- Timbre
- Balance
THE HARP

How a pedal harp works

Registers of the harp:

Faure, Impromptu, Op. 86
THE HARP

How a pedal harp works

Pedals/Chromaticism
THE HARP

How a pedal harp works

Pedals/Chromaticism

Tchaikovsky, Romeo et Juliet (Bullen edition)
How a pedal harp works

Reading Music:
- Distance from music stand
- "Triangulation"
- Extra markings necessary
HARPS IN LARGE ENSEMBLES

Texture filler

R. Strauss, Don Juan
HARPS IN LARGE ENSEMBLES

Solo/color

Debussy, Prelude to the Afternoon of a Faun
HARPS IN LARGE ENSEMBLES

Doubling other instruments

Dukas, Sorcerer’s Apprentice
COMMON CHALLENGES

Unpublished rewrites

Example: Wagner’s Magic Fire Music

Original

Handwritten rewrite

Engraved rewrite from harpist Elizabeth Jaxon
COMMON CHALLENGES

(Un)published rewrites
Sarah Bullen’s Orchestral Books
COMMON CHALLENGES

Handwritten parts
often from film scores or musical theater

Gounod, A Moi Les Plaisers
COMMON CHALLENGES

New, original scores or arrangements with pianistic or unplayable writing

Especially common for pops or holiday concerts

Danny Elfman, The Nightmare Before Christmas
SUMMARY

THE HARP

- Mechanics of playing
- Differences between registers
- Chromatic capabilities
- Readability
HARP NOTATION GUIDELINES: MARGINS

Leave white space on the page

Harpists may need room for extra markings, ex. pedal charts, enharmonics, fingerings, etc.

Tchaikovsky, Romeo et Juliet (original)

Tchaikovsky, Romeo et Juliet (Bullen edition)
HARP NOTATION GUIDELINES: MARGINS

Too Crowded

Good
HARP NOTATION GUIDELINES: PAGE TURNS

Page turns done by left hand (or foot pedal)

Turn space can be created by either rests in the left (or both) hands, or with long notes in the left hand.

Because some harpists exclusively use digital scores, minimize left hand notes AND (left) pedals during page turns.
HARP NOTATION GUIDELINES: MISC

8va/8vb: for more than 4 ledger lines

Harmonics: played pitch

Rolled/flat chords:

And include a note to clarify - like this:

Mackey, Frozen Cathedral
HARP NOTATION GUIDELINES: MISC

Courtesy accidentals: across bar lines AND registers

Enharmonics: same pitch, different string

 Spell the played pitch, not the “theoretical” pitch

Uses:
- Simplifying pedals
- Reducing awkward interval spans
- Repeated notes
- ...and more!
Pedal Chart Format:
1. Can go between or above system
2. Be consistent with the placement
3. Maintain clear relationship between chart and system

Pedal Change Format:
1. Be consistent with the placement
2. As late as possible (or on strong beat)
3. Right pedal over left pedal
HP Diagram

A font to create harp pedal diagrams that can be used in any software* — including word processors!

This font allows the composer/orchestrator or engraver to easily enter the desired harp tuning in any order they wish without having to follow the pedal diagram order. It also allows them to easily correct the tuning at any point without having to relaunch a plug-in. The main font also supports solfège note names (Do, Ré..etc).

The output will always be in the standard setup [D C B | E F G A] no matter what the order of the entry was.

A second font called “HP Diagram German” comes with the set and is intended for German note names.

Both fonts come with comprehensive documentation. $5 at Notation Central.

*OpenType support required. Contextual alternates and ligatures must be enabled.
Three words:
Plug-ins
Plug-ins
Plug-ins
SIBELIUS

SHIPPING PLUG-INS

Add Harp Pedaling
- Generates harp pedal diagrams from the notes in the selection
- Can make diagram or boxed text

Check Harp Pedaling
- Writes warnings in the score if any notes in the selected passage are unplayable on a harp with the pedal configuration specified in the dialog
Alternate Harp Pedaling allows you to type in some pitch names, and will generate a list of all the harp pedal settings that include those pitches.

Change Text Accidental Size changes the size of an accidental within a piece of text, such as C#.

Color Harp Strings colors all harp F/F#/Fb notes blue and C/C#/Cb notes red. All harps color their “C” strings red and the “F” strings blue or black, so coloring the written notes is sometimes used for introductory harp music.

Filter Harp Pedal Diagrams filters any selected pedal diagrams.

Harp Gliss Pitches generates pitches to set the pedals of a harp for glissandos given the root and type of a scale or chord. This can be especially useful for jazz scores where only a chord name is specified. (Very cool!)
SIBELIUS

Harp Gliss Pitches dialog

This plugin generates the pitches for setting harp pedals starting from a scale or chord.

Choose a chord type from the list or type a valid Sibelius chord type. Typed names will have fewer missing-pitch options.

The Help button can provide a lot of useful information!

Input

Scale or chord
Scale root:
C
Chord root
Eb

Scale type:
Major (Ionian)
minor13

Add or Edit Scale...

Calculate Tuning

Pitch order options
- Tuning pitches start with:
- Tuning pitches start with root
- Tuning pitches in pedal order (DCBEFGA)

Output — scale pitches: C Major (Ionian)

Tuning text and diagrams (may have choices)

DCBEFGA

Copy
Write to Score...

Suggested tuning with X replaced (if possible)

Copy
Write to Score...

by Bob Zawalich  Version 01.93.00
Traces... Help... Close
DOWNLOADABLE PLUG-INS (continued)

Harp Diagram From Tuning produces a harp pedaling diagram from a list of 7 pitches that you type in.

Harp Gliss and Octave Notes will create a gliss line, preceded by an octave of cue-sized notes, based on the harp tuning, between 2 selected notes.

Label Harp Diagrams can add a hidden text label consisting of the pitches in the pedal diagram next to any selected diagrams. It can also add a hidden harp diagram next to any “tuning text”, and can trace the location of selected harp diagrams and tuning text.
Norfolk Harp Std: A font for harp notation
Included in the Norfolk font suite, along with a transfer document for easy access

Notating Music for Harp in Sibelius
A guide by Bob Zawalich, expert Sibelius user and plug-in developer

Notation in Sibelius for The Composer’s Guide to Writing Well for The Modern Harp
Example scores by Bob Zawalich
SIBELIUS

S-shaped slurs

Sometimes in keyboard music you need to write an S-shaped slur with two arcs, flowing above and below the notes.

To create an S-shaped slur, simply input a normal slur, then drag the left-hand or right-hand curve handle above or below the curvature of the slur, as appropriate.

Slurs on cross-staff notes

Magnetic slurs do not attach to cross-staff notes. The slur will naturally go to where the note would be on the original staff, but you can drag the slur’s end to the note’s actual position. You may find it helpful to disable Magnetic Layout for slurs on cross-staff notes.

Chords split between staves

It is common in keyboard music to split the notes of some chords between the two staves:

To achieve this, write each note of the split chord onto the staff it appears on, using a suitable voice; for example, in the case illustrated, put the treble notes of the split chords into voice 2 on the upper staff, and the bass notes in voice 1 on the lower staff. Then use Home > Edit > Flip (shortcut X) to point the stems of the notes on the lower staff downward. Finally, drag the end of each stem in the right hand downwards so that it meets the stem of the left-hand note.

In the case of chords using notes shorter than a quarter note (crotchet), hide the flags or beams by selecting them and typing Control+Shift+H or Command+Shift+H, then extend their stems, flipping them if necessary using Home > Edit > Flip, to meet the rest of the chord.
Cross-staff beams

Music for keyboard instruments often contains beamed notes flowing between the hands, like this:

To obtain this result:

1. Input all of the music onto the staff that uses most of the music that crosses between the hands—in this case, the top staff:

2. Select the notes that should cross over to the bottom staff (preferably as a multiple selection)—in this case, the Gs with ledger lines.
3. Cross them to the staff below by choosing Note Input > Cross-Staff Notes > Below (shortcut Control+Shift+Down Arrow or Command+Shift+Down Arrow).

Unsurprisingly, Note Input > Cross-Staff Notes > Above (shortcut Control+Shift+Up Arrow or Command+Shift+Up Arrow) crosses notes to the staff above.

If you get into a muddle, you can also use Note Input > Cross-Staff Notes > Reset.

4. You can put beams above both staves (as in the first beamed group in the first picture above) or between the staves (as in the last beamed group) simply by flipping the directions of the stems as appropriate by choosing Home > Edit > Flip (shortcut X).

Don’t do this by dragging the stems to the other side of the notes—this won’t have the effect you intended!

5. In the first picture above, the stems of the last three low notes in the left hand were also flipped to avoid colliding with the notes crossing from the right hand.
Creating harp diagrams in Finale

1. Set up a new category for harp diagrams. Create a new expression category in Document > Category Designer… . Choose Expressive Text from the left-hand menu and click Duplicate…

2. Name your category Harp or something similar.

3. Click OK to return to the Category Designer. Click Music Font and choose Engraver Text T. (Engraver Text H and Engraver Text NCS also work for this purpose.) Set the point size to be around 12 points, and click OK.
4. Create your diagram by switching to the Expression Tool and double-clicking where you want it to appear. Choose the Harp category and click Create Harp…

5. Here’s where it gets a little tricky: You have to know which keystrokes refer to which character:

- O = pedal up
- Shift+O = pedal centered
- P = pedal down
- Shift+P = separator

So, to type the diagram D C# Bb | E F# G A, you would type: OpoPOpOO. Don’t question it, just accept it!
6. Click OK, then Assign to place the expression into your score:

The good news is, to create additional diagrams, you can select your existing diagram and duplicate it, changing only the pedals necessary, which will go a lot quicker.
Finale Lua plug-ins for harp

Harp gliss
Transforms 7-tuplets to harp gliss notation

Harp pedal wizard
Creates Harp Diagrams and Pedal Changes
FINALE

Cross-staff notes:

Use the TG Tools plug-in, bundled with Finale! (Plug-ins > TG Tools > Cross-Staff...)

Hold down SHIFT+OPTION and press the DOWN ARROW key to move notes down a staff, or the UP ARROW key to move the notes up a staff, or use the dialog for finer control.
FINALE

Cross-staff slurs:

Drag one of the arc/inset handles through to the “other side” to create a bowtie
Harp Pedaling
Dorico is currently the only notation software which can natively calculate harp tuning and lets you know when notes are outside the current tuning.

Pedals can be represented as note names or pedal diagrams and represented partially or fully.

Notes unavailable in the current pedal arrangement are colored red. It even accounts for the lowest C and D strings!
Calculate Harp Pedals
Select a note, chord, or position in your score, then in the "Write" menu select "Calculate Harp Pedals"

This will put the pedals in the tuning which works allows for the written pitches as far forward as possible.

Notes still in red will require additional pedal changes
Entering Harp Pedals Manually

Using the “Playing Techniques Popover” (Shift+P), you can manually type the harp pedal settings as a diagram or as individual note names.

Note names can be entered in any order but must not have spaces.
Cross-Staff Notes
Move notes to the staff above with “N” and staff below with “M”

Harmonics
In the Harmonics section of the Properties panel, turn the “Type” toggle on and set to “Natural”

* N.B. Dorico will not playback harp harmonics in the appropriate octave as of Dorico 4.3 *
**Cross-Staff Slurs**
Select the first and last notes and add a slur with “S”.

Most cross-staff slurs will need manual adjustment to look pleasant and avoid collisions.

Dorico allows for single-direction slurs and multi-directional slurs. You can change each slur in the **Properties** panel.
Glissandi
Select the first and last notes and add a glissando in the Ornaments Popover (Shift+O) and type “gliss” for a straight gliss. or “glisswavy” for a wavy gliss.

Glissandi attach to their respective notes and can move with them between staves.
Indicating the first octave

**Option 1:** Create a tuplet for the appropriate amount of notes, hide the tuplet, hide the stems, and make the notes cue size

**Option 2:** Add the notes as grace notes and hide the stems.

(While more straightforward, Option 2 limits your ability to adjust note spacing and may not work in every scenario)
- Markings in harp parts
- When are 2 harps necessary?
- Condensing 2 parts into 1
- What if it isn’t playable?
- Early access to parts when possible
- Pops/holiday parts might not be easy...
HARP NOTATION Q&A
CODA

Handout

Resources

Acknowledgements