



Counterpoint MIDI



Project's goals

- Create First and Second Species Counterpoint sequences, given a Cantus Firmus acquired via MIDI transmission
- Visualize the original transmitted notes and the generated ones



Creating Counterpoint notes

- Notes are generated following First and Second Species Counterpoint rules:

One Note Against One Note
First Species

Only Harmonic Intervals Allowed Are:
1, 3, 5, 6, or 8 (*consonances*)

Interval must be 1, 5, or 8
(*Pitches must be Tonic or Dominant*)

cpt. { interval: 5 6 6 3 3 6

C.F. { Unisons, 5ths, 8vas OK



Creating Counterpoint notes

- Notes are generated following First and Second Species Counterpoint rules:

Two Notes Against One Note
Second Species

1st note MUST be consonant (1,3,5,6,8)
2nd note is allowed to be dissonant ☐, but only if it is
a properly-used Non-Harmonic Tone (best = Passing Tone).
Watch out for Disguised Parallel Fifths, Unisons, or Octaves

cpt.

C.F.

1 6 3 1 3 4 3 1 3 4 3 1



Clausola Vera

- Counterpoint lines end with a modal cadence built following the rules of the clausola vera:

First species

C.F.

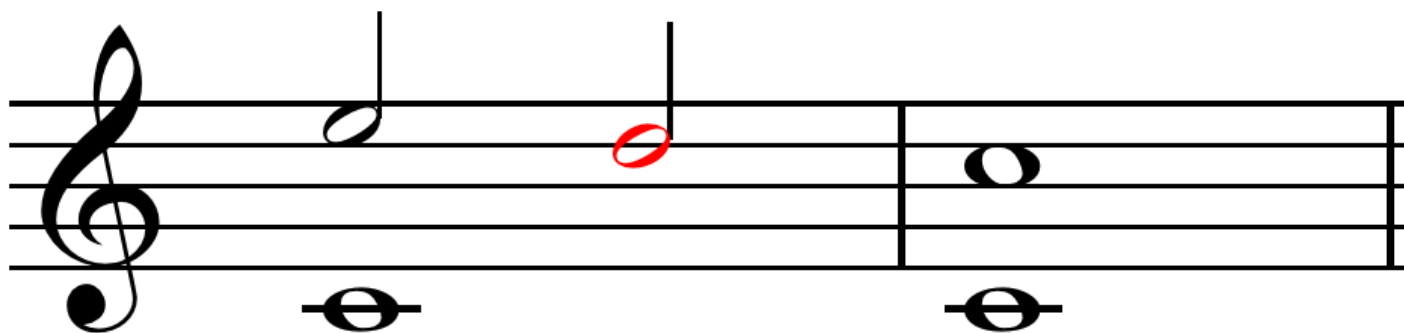
First species

C.F.



Passing notes

- Dissonant notes generated for the Second Species Counterpoint lines can only be passing tones filling the interval of a third:





Neighbour notes

- Dissonant notes generated for the Second Species
Counterpoint lines can also be neighbour tones, moving away from the consonance by a step, and then resolving back to the consonance by a step in the opposite direction;

6a.

3 4 3 6 3

6b.

6 7 6 5 6



Requirements

- To use the application the user needs to connect a MIDI Keyboard using a serial or virtual port.



Main page

CounterpointMIDI

C maj

D maj

E maj

F maj

G maj

A maj

B maj

Start/stop acquiring data:

Start

Play the melody:

Play

Volume: 0.5

Listen to the harmonized chords:

1st counterpoint version

1Ctp volume: 0.5

2nd counterpoint version

2Ctp volume: 0.5

B	
C	
D	
E	
F	
G	
A	
B	
C	
D	
E	
F	
G	
A	



Results

First Species Counterpoint:



Second Species Counterpoint:

