# How I go about using the C.A. program

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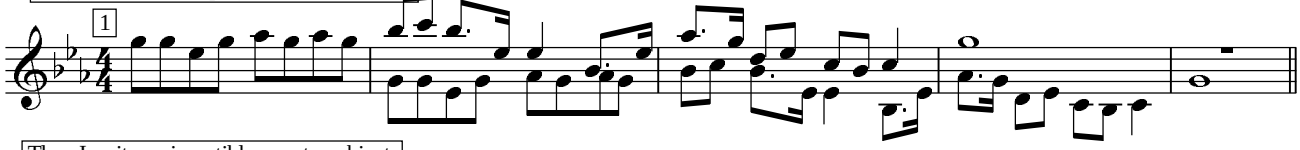
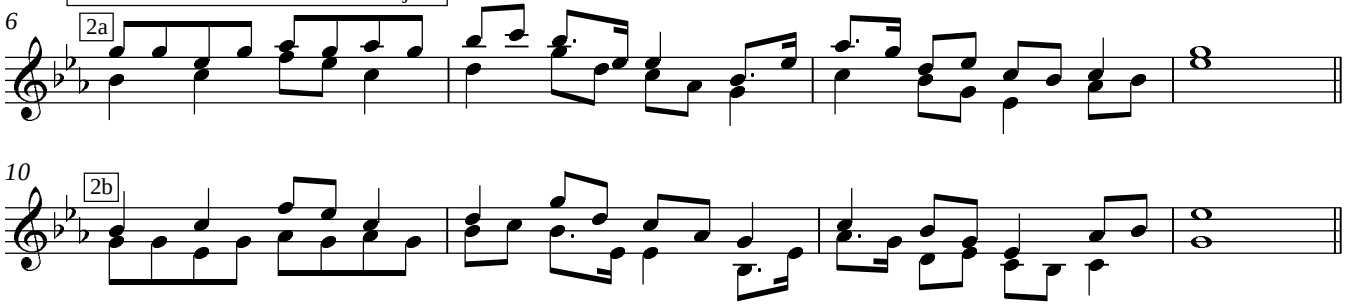
I want to write a fugue. So first I write a subject that can be played in canon:




Then I write an invertible countersubject:




Before I go any further, I input the subject and the countersubject into the C.A. program, notating semiquavers as quavers, as

[10,10,6,10,11,10,11,10,13,15,13,6,6,6,1,6,11,10,5,6,3,1,3,3,10,10,10,10]

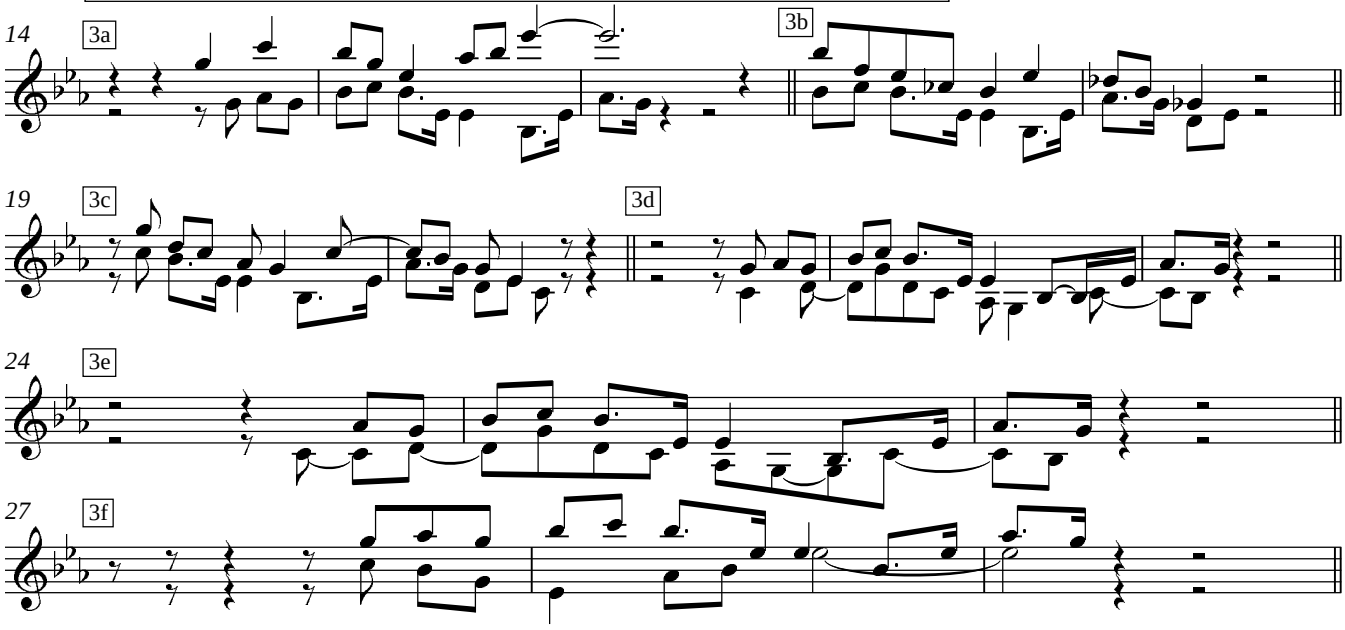
and

[1,1,3,3,8,6,3,3,5,5,10,5,3,-1,-2,-2,3,3,1,-2,-6,-6,-1,1,6,6,6,6]

respectively. Setting a length of 12, I get the following 6 results, with no 3-part sections:

(0,1,5,15,13,13), (0,1,8,10,13,12),(0,1,9,10,8,12),(1,0,6,5,8,13),(1,0,7,6,9,12),(1,0,16,5,8,12)

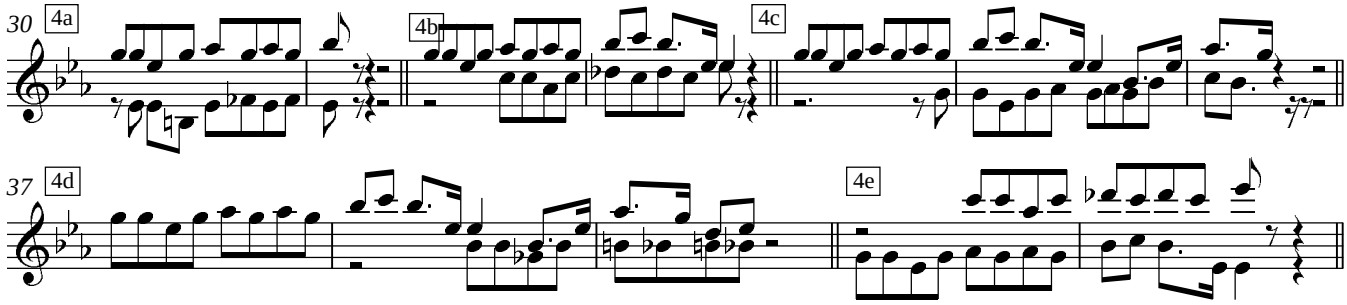
These can be notated (keeping the subject at it's usual rhythmic position) as:



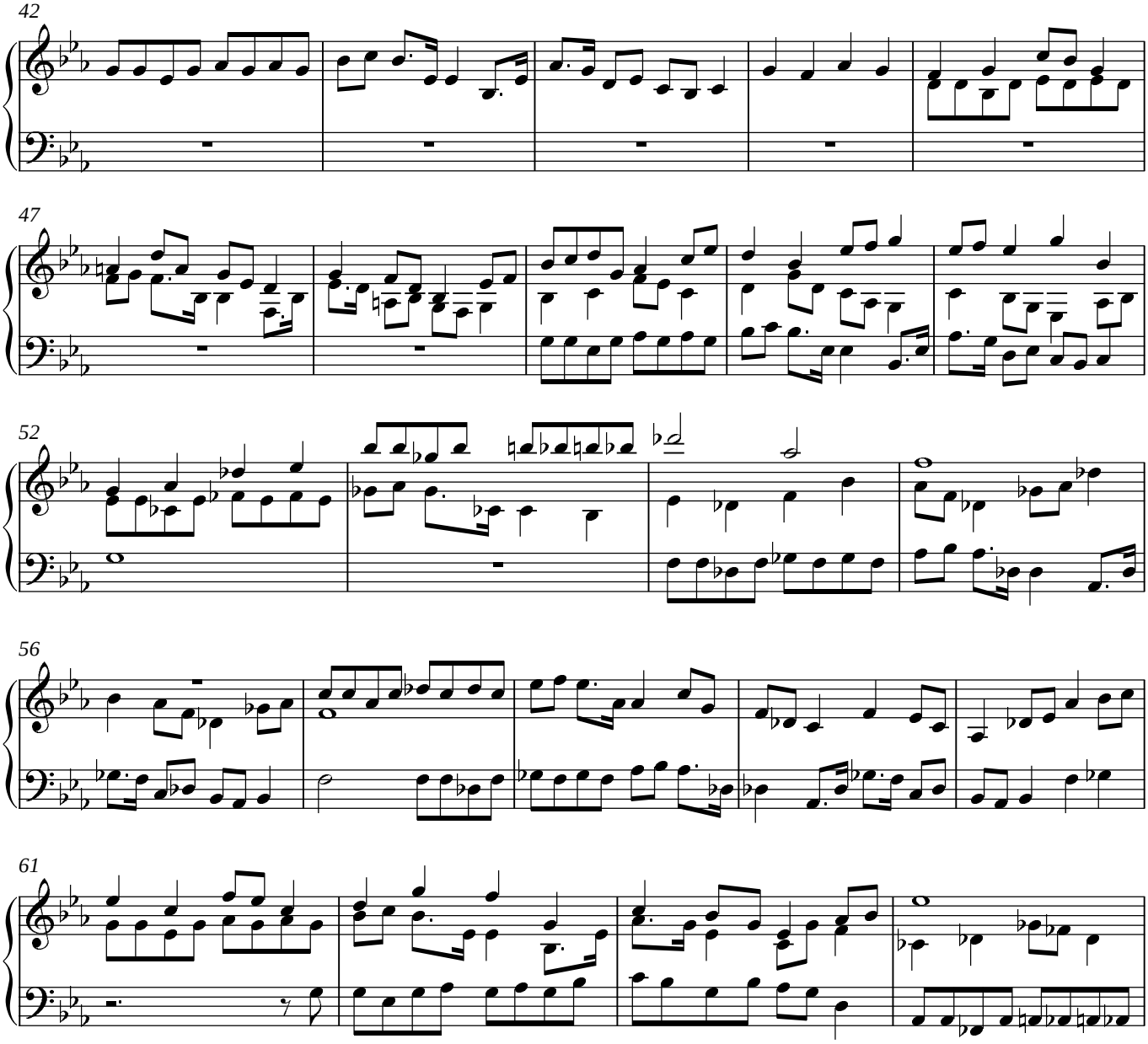
There are no results above that look like (0,0,0,x, whatever) or (0,0,x,0) whatever, so no extra stretti have been produced. However, the above may come in useful during free parts. Just to be sure, I will input the subject again by itself, with a minimum length of 8. And this, pleasantly enough, produces some results, the relevent ones of which are:

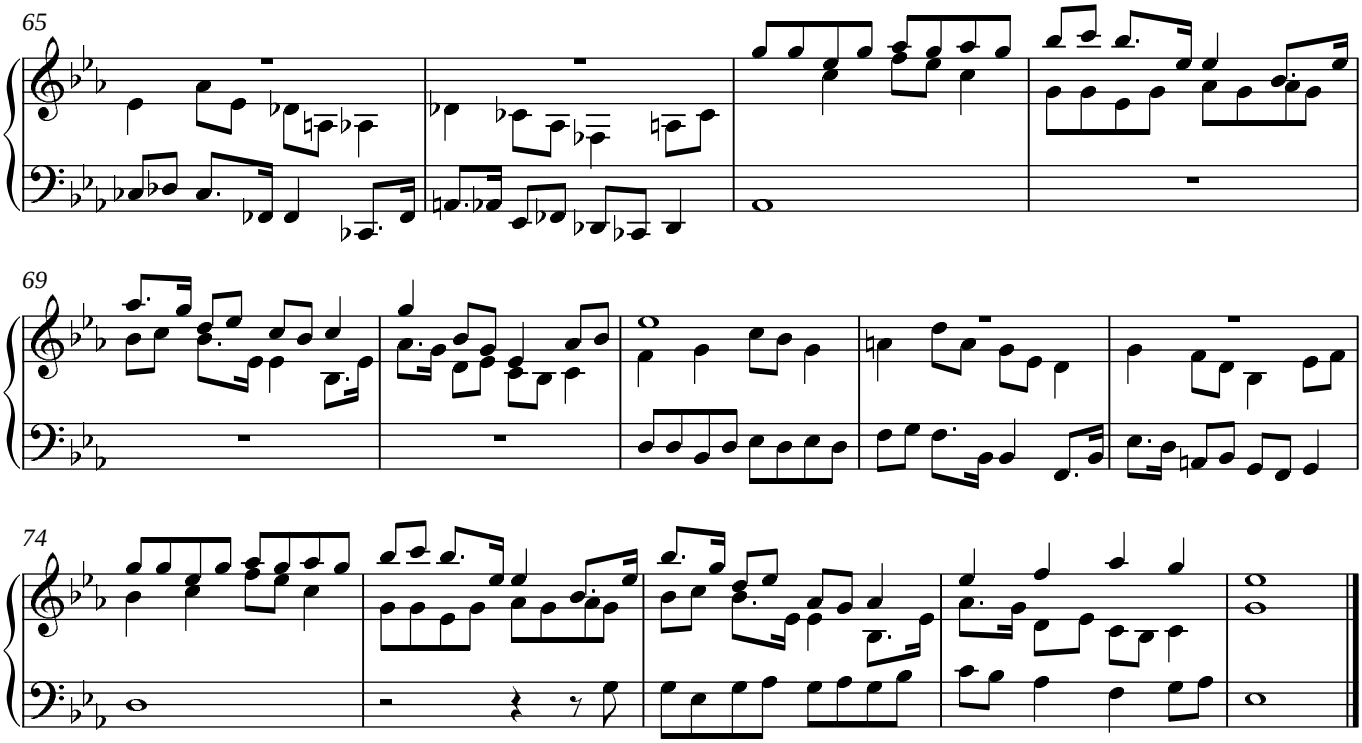
(0,0,0,1,5,8), (0,0,0,4,9,9), (0,0,0,7,1,8), (0,0,0,7,13,11), (0,0,0,12,6,8), (0,0,4,0,5,9), (0,0,7,0,1,8), (0,0,7,0,13,8),

or, notated (transposing by an octave to avoid unisons (thus we ignore the third and seventh ones)):




Some of these are actually quite interesting; I may incorporate several of them into later sections of the final fugue. If the countersubject was more interesting, I would have looked for shorter stretti with it also. But it wasn't, so I didn't. Final (short, quite poor, mainly 2-voice) fugue follows.




65
69
74