Charles Ives – Symphony No. 4

Synthesizer setup and performance guidelines

November, 2013

G. Schirmer's performance edition of Charles Ives' 4th Symphony was created to make the score and all the complexities and difficulties that arise in presenting it more approachable, clearer and overall less problematic.
In keeping with this philosophy, two of the elements in the score can be performed by a synthesizer, rather than by acoustic means. These are the piano tuned in quarter tones and the part for high and low bells.

In the past, both these parts had to be produced by acoustic instruments, and were notorious for causing difficulties in executing Ives' directions: The scordatura of the piano ranges throughout the keyboard and is in places quite extreme (up to 3 semitones); the bells are problematic as they encompass a total range of 7 octaves, and thus had to be cobbled together or combined from a number of sources.

The synthesizer presents a fairly easy solution to these issues and by following this simple list of instructions, the two parts can be triggered from samples which are preprogrammed to address all concerns.

The performance parts for the synth /keyboard player have been programmed in the easy-to-use performance software **Mainstage 3**, which is made and sold by **Apple**. Basic computer and music technology skills are required of the performer (and / or installer), but prior experience with Mainstage is not needed. Any user with basic Mac skills can learn the ins and outs of the software in an afternoon.

The following list of five items is required to successfully perform the keyboard part:

1) Apple computer (tower or laptop) running OS X version **10.6 or later**. The processor and memory requirements are quite minimal; but keep in mind that the faster and more powerful your computer is, the better it will perform. While it needn't be a brand new computer, we recommend it have plenty of free hard disk space (>20GB) and not run any other programs while on duty (internet, email, calendar, word processor apps will all take away from the processing power).

2)   The **Mainstage** software application. You will need to purchase and install **Mainstage** before you can play the part. Mainstage is available from the App store for a fee of $30 or via this link: http://www.apple.com/mainstage/
After you download the software, be sure to install all the additional content (In Mainstage, go to >Mainstage>Download additional content)

3)   MIDI keyboard controller. The controller is connected to the computer and triggers the sounds which the software produces. The make, model and year are irrelevant; it's best if you have experience with a model that you know and like. The keyboard should also have a sustain pedal.

4)	The Mainstage performance file (**Ives 4th Piano & Bells**), which is included with the rental materials. Copy the file to your computer and run it on a local (not external) disk.

5)	Sound reinforcement: In performance, equipment must be present to amplify the sound which your computer generates. Depending on the venue and circumstance, a house speaker system or keyboard amplifier can be used. Ideally we recommend using an external audio interface that connects to the house system. While it's possible to run Mainstage via built-in audio on your Mac, this too will reduce the processing available to the software itself.

A few basic notes on Mainstage:

When launching Maintage for the first time, go to *Preferences* and setup the following parameters (modified parameters will stay once the setup is done):

Under GENERAL:
- ❿	Use Tuning slider to tune Mainstage to orchestra if applicable
- ❿	Startup >> Open most recent in **perform mode**
- ❿	On Patch change >> Keep current value
- ❿	Respond to Hardware >> Jump
- ❿	AutoSave >> Never

Under AUDIO
- ❿	Audio Output >> Select your audio hardware (the audio interface mentioned earlier)

Last but not least, we feel that it is easiest to have two separate computer setups to perform the two parts. Theoretically, 2 keyboards can both trigger one computer (1 playing piano, one bells), but this requires a little technical savvy on the part of the installer (ie MIDI channel assignments). Besides, the 2 players might not be seated near each other, and we recommend being at arm's length of the computer at all times.
So, whether you chose to have one or both parts played electronically, and whether you have one or two setups of Mainstage, we hope that you will find it easy to use the software and performance files and that your production may be a rousing success!

If you experience any problems, technical, acoustic or operational, help and troubleshooting advice is available.

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