

INSTRUCTIONS FOR LOADING & RUNNING NEW BATON SOFTWARE

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This version new baton program has been tested on a Mac PowerBook G4 running OS X 10.39

To load the programs, make a folder on the hard disk of the computer. Copy all files from batondistribution-g4 folder on this CR-ROM on to the folder you have just created on the hard disk. The hard disk folder will contain executable programs compile and cond to conduct & play music files, source code files compile.c and cond.c, a makefile to make the executable programs, necessary include files, a portmidi.a library and a script file "baton". In order to compile the executables, Apple xcode must have been added to your operating system.

Connect a midi box to the computer. The Roland EDIROL works well. Load the drivers for the box and check in the system application "Audio MIDI Setup" utility to see that the midi box has been activated.

Connect the midi jack on the radio-baton to the IN on the midi box and connect OUT on the midi box to your synthesizer.

The cd contains a number of example score files--bach, beethov5, handel, chopin. These are written in my Conductor language which is described in file AC-CONDUCTORMANUAL120807.PDF. The example scores are voiced for a general midi synthesizer. Except for beethov5, all scores are in my Conductor language. beethoven5 contains a header file written in the Conductor language and the score as a midi file.

STARTING THE CONDUCTOR PROGRAM

The conductor program is started and run by executing the script in the file "baton". The script has only the following four lines:

```
rm score.p
./compile $1
cp $1.p score.p
./cond
```

To execute the script, open a terminal window on your computer and change directories in the terminal window to the folder containing the baton files.

Depending on how the PATH in your computer is setup type either:

```
baton scorefilename RETURN
or
./baton scorefilename RETURN
```

If the score is not in the folder containing the script, "scorefilename" must contain the full path to the score.

The script will:

1. Erase a temporary file score.p
2. Execute the program "compile" which will compile the "scorefilename" into an executable file "scorefilename.p"
3. copy "scorefilename.p" into a standardly named file "score.p"
4. start the program "cond" which will start playing the music score.p.

RUNNING CONDUCTOR PROGRAM

When the "cond" program starts, it will first ask you to select the specific midi devices you use to connect the baton to the computer and the computer to the synthesizer.

The cond program is controlled by five buttons on the lower left corner of the baton box. The program will display the commands that can be executed by pushing the buttons. These commands currently are:

BUTTON	COMMANDS
1-----	load & play score.p
2-----	toggle nobat mode
1 & 2-----	exit from program
3-----	set start measure
4-----	raise trigger level
5-----	lower trigger level
4 & 5-----	SILENCE SYNTHESIZER
2 & 3-----	toggle xyz test mode
2 & 3 & 5-----	toggle 8-AD test mode

A command is executed when the last button calling the command is released.

There are two radio batons, the #1 baton which is black and operates at 38khz and the #2 baton which is grey and operates at 50khz. The #1 baton is usually used to beat time and control tempo, the #2 baton is usually used to control dynamics. Each baton generates three signals in the cond program. These are x1,y1,&z1 and x2,y2,&z2. These can be observed tested by activating the "toggle xyz test mode". Midi signals from the radio-baton directly encode outputs of 8 AD converters in the radio-baton electronics. The outputs can be observed and tested by activating the "toggle 8-AD test mode". The radio-baton also can accept inputs from up to seven on-off foot switches. These connect to a 9 pin D connector on the radio-baton.

To start playing the score, hold both batons with one hand at the center of the radio-baton box and press button #1. This will calibrate the strengths of the batons radio signals and will start the score at measure #1.

MORE INFORMATION

The new radio-baton is actually a very simple device--a simple midi controller. What it does is described briefly but completely in a word document, newbaton.doc, on the cd.

The programs supplied on this cd makes music on a general midi synthesizer using programs compile.c and cond.c which I wrote. The information on newbaton.doc is sufficient so a user can write his own performance programs, for example programs that make music with max-msp.

The program, `compile.c--cond.c`, evolved over the last 20 years and is complex. It uses an ascii based language for writing musical scores. `Compile` can also process scores which are written as midi files which have been slightly augmented by a header file and by a midi track which encodes the trigger points in the score.

How to write scores for `compile.c--cond.c` is described in an old and lengthy document, `condm021604.PDF`, which is also on the cd.

The cd also contains the source code for the `compile` and `cond` programs and a makefile to recompile the programs so a sufficiently computer-smart user can modify the programs for his own purposes.