

## Using Logic – a MIDI sequencer & more<sup>1</sup>

for MIDI sequencing, digital audio, notation, and high-level MIDI Processing

Since moving the teaching & work stations to the Library basement (B182) and Deering Listening Center, the keyboards remain connected to the computers at all times. As you have seen during our class, there are times that the computer audio and/or the MIDI keyboard input does not function properly. However, the problems have decreased exponentially since moving from our previous facility or having to set up the keyboards for each and every class. In most cases, the keyboard connection and sound should work each time you enter the lab. However, since your files are stored on a Flash Drive and remotely on the Depot server, you can access them from any computer in the lab. Therefore, should you sit down at a computer and keyboard that do not function properly or are not communicating with one another, simply report the problem to the lab assistant and move to another computer. *Reporting the problem is an important step* to ensure that the problem is fixed, so that the next user will not experience the same difficulty.

### Useful Commands

- ⌘+click: intuitive way to enter data in various windows
- telescope icon – vertical & horizontal adjustment
  - located in upper right area of Arrange window
- pressing “0” (zero) will return you to the beginning of your file
- Turning “Loop” on for a given track allows you to create a very brief MIDI/audio file that repeats as long as playback occurs

### The Basics – important stuff!!

- windows vs. screensets (saved desktop configurations consisting of multiple windows)
  - the windows are all accessible from the “Windows” menu or by using the shortcut key combinations shown below:
    - ⌘+1: Arrange Window (where you will accomplish most of your work)
    - ⌘+m: Track Mixer
    - ⌘+2: Event Edit (editable list of MIDI data)
    - ⌘+3: Score (traditional notation)
    - ⌘+4: Transform (templates to modify MIDI data)
    - ⌘+5: Hyper Edit (for advanced users; don’t need to worry about this now)
    - ⌘+6: Matrix (piano-roll grid for viewing/editing MIDI data)
    - ⌘+7: Transport (controls for playback/recording)
      - it is helpful as you are becoming familiar with this program to add a “legend” to the Transport window

---

<sup>1</sup> This instructions sheet was compiled using a significant amount of information from documents created by and conversations/demonstrations with Dr. Virgil Moorefield.

- click on the triangle in the lower right corner of the window and select “Legend”
- note that, using this menu, you can significantly change the appearance and content of the Transport window
  - ⌘+8: Environment (once again, for advanced users only)
  - ⌘+9: Audio Window (list of digital sound files accessible to your current project)
  - ⌘+0: Sample Editing Window (editing & some processing)
- screensets are accessed by pressing a number only (without ⌘)
  - opening another window into a screenset, automatically adds that window to the selected screenset
- primary program menu vs. context-specific menus available in upper left area of each window
- types of tracks in the Arrange Window
  - audio tracks (digital sound files: SDII, AIFF, WAV)
  - MIDI tracks
  - audio instruments (soft synthesizers)
- working with MIDI
  - create or select an existing MIDI track in the Arrange Window using one of the following methods:
    - ⌘+click
    - from the Arrange Window menu, select Functions→Track→Create
  - set the track’s MIDI channel and program (using the properties area of the Arrange Window)
  - for real-time recording:
    - create a MIDI metronome click
      - Logic’s default file provides a MIDI metronome click track as the very last track if you scroll down the list of instruments available ... no need to create another, if one already exists!
      - if you want to see how Logic’s Environment window works, do the following:
        - delete the metronome track if it exists by selecting the track and choosing the following menu items: Functions→Track→Delete
        - open the Environment window (⌘+8)
        - New→MIDI Metronome Click
        - name the new item “Metronome”
        - return to Arrange Window (⌘+1)
        - double-click on an empty track to create a new track
        - once created, click and hold on the new track until a pop-up window appears
        - select “Metronome”
    - set appropriate sounds for bar and beat

- in the Transport window, click on the Metronome button, so it is highlighted
  - click and hold on the Record button in the Transport window, then select “Recording options ...” from the pop-up menu
    - make sure that *both* “Click while recording (e)” and “Click while playing (p)” are checked
    - set the length of “count-in” by selecting an appropriate number of bars from the drop-down menu at the bottom of the dialog window
  - click the record button and, after the 2-bar count-in has finished, begin playing the part you wish to record on the keyboard
  - if you would like to quantize your recorded MIDI data, use the Matrix window (⌘+6)
    - select the notes you wish to quantize (Select All allows you to modify all notes of the current track)
    - click & hold on the “Q” in the properties area to select the level of quantization
    - moving individual notes or groups of notes manually
      - click in the middle of a block representing a note and drag to move by increments of the current quantization level
      - if you Control+click and drag, you can place the note(s) freely without being constrained by the current quantization setting
      - Control+Shift+click allows even finer gradations
  - to record additional tracks:
    - create a new or select an existing MIDI track
    - set the MIDI channel & program
      - the MIDI channel must be different from that used for your previously recorded track in order to assign a different instrument sound (program); all tracks set to the same MIDI channel will share the same instrument timbre
  - for non-realtime recording (step entry), you can:
    - “draw” notes using ⌘+click in:
      - the Matrix window (⌘+6)
      - the Score window (⌘+3)
    - create new entry in the Event Editor (⌘+2) using ⌘+click
      - note value is determined by the icon over which the mouse pointer is hovering
- working with audio
  - recording an audio track
    - click “R” on the track(s) you wish to record
    - begin to record using the navigation controls in the Transport Window (⌘+7)
  - working with audio files in the Audio Window (⌘+9)

- click & drag to select region to modify
- typical types of modification
  - normalize
  - fine-tune position
  - strip silence
- others means of modifying audio files (fewer capabilities)
  - Arrange Window (⌘+1)
  - Sample Editing Window (⌘+0)
- MIDI and/or audio files that were created and/or modified in another sound editing or sequencing program can be imported into Logic:
  - create or select a track
  - File→Import→MIDI (or Audio)
- working with Audio Instruments (soft synthesizers)
  - accessed from the Track Mixer window (⌘+m)
  - assign instrument in the Track Strip (mixer channel) from the box labeled “Insert”
    - to use the EXS24 soft synth,
      - Inserts→Stereo→Logic→EXS24
      - select the specific instrument sound you wish to use

### Advanced Capabilities to Explore

- Environment window (⌘+8)
  - fully configurable graphic interface providing access to every instrument track of your current project
- automation
  - use Hyper Draw window (⌘+5)
  - add series of MIDI controller commands
- Troubleshoot MIDI input (Options→Settings→MIDI Interface Connections)
  - Korg keyboard output should be set to “serial” *not* MIDI
  - don’t use OMS unless using soft synths