

# Creating and Using Instruments

## Introduction

Anthem supports the concept of an "instrument" file. We will use the capitalized word "Instrument" to mean a file of this type. Immediately below is the icon for this file.

Like all Anthem documents, double clicking on this icon will launch Anthem and open the document.

An Instrument is a way to store routing information for MIDI data in a file. You can call this file by name and even combine multiple files to build up and store different ways of using your MIDI equipment. Names of Instruments can be added to an Opus using the "Add Instrument" menu item. This causes the instrument name to be added to popup menus.

An Instrument can be used to route MIDI thru data, route your MIDI data to your equipment and direct the transcription of MIDI data into score data.

## Creating an Instrument

Use the "New Instrument" menu item under the library menu as shown in the figure to the right. This will bring up a new instrument with a list of instrument components. A component consists of a range, a function, an offset and either a Device name or a channel number. Each component's function is applicable over the note range shown. For example if the "thru" function is selected and the "MIDI Thru" option is selected, MIDI input data will be re-transmitted to the Device or channel specified if and only if the data is a channel voice message that contains a note number and the note number is within the range specified.

The figure immediately above shows a one component instrument. Any number of components can be created using the  $\hat{\mathcal{E}} \sim n$  key stroke. An Instrument component is specified using the  $\hat{\mathcal{E}} \sim i$  key stroke as shown immediately below.

In the "range" box above you can specify the range by using the popup menus to select the note and octave for their respective beginning and ending. The Device popup will show all Devices you have added to the Opus plus all channels for the selected port. The offset should only be non-zero if you wish to specify an offset to the base channel of a device. This allows you to route information relative to a value that you can change later.

Four functions are available in the "Function" popup as shown below.

Thru" should be used in conjunction with the "Use Instrument Thru" menu item. MIDI note information in the range specified will be directed to the Device or channel specified.

The "Play" function will direct MIDI information in the range specified to the Device or channel specified while in the "play" mode. Multiple components may have overlapping ranging permitting "layering" of the sound to different MIDI instruments.

The "Voice" functions specify which voice of a score to direct the sequence in the range specified during score transcription.

## Summary

To automate routing of MIDI data, create a multiple component Instrument.

An Instrument component is a single row of an instrument list that specifies a single range.

If you want to route information to a Device by name, use the "Add Device" menu item to add the Device to the Opus.

To refer to an instrument you have created, use the "Add Instrument" menu item. Any number of instruments can be added for combination effects.

Use an instrument when you want to:

(1) Provide for keyboard splits and layering.

(2) Provide for splits and layering during playback.

(3) Automate the transcription of sequence data to a score.