Audio Visual Control Solutions For Wholehog 3 Software

The Wholehog 3 software is capable of triggering or being triggered by a wide variety of Audio Visual products through the use of Midi Show Control (MSC). This document provides a rough outline of capabilities with popular AV products. Section 28.2 of the Wholehog 3 User Manual details the exact configuration and use of the Wholehog 3 software.

Contents of this document

For further questions regarding the Wholehog 3 system, please use any of the following:
  High End Systems Forums: http://forums.highend.com
  24/7 Support: 1-800-890-8989
  Email Support: support@flyingpig.com
  Website Support: www.flyingpig.com

Basic Midi Understanding

MIDI Show Control is a technology that allows you to control all the elements of a performance (lighting, sound, video, effects, etc) from a single controller. It uses a variation of the well-established MIDI standard to send cue information between the show controller and the controllers specific to each performance element. You can configure the Wholehog 3 to receive commands from a show controller. Alternately, you can configure the Wholehog 3 to send commands to other devices.

General MIDI Show Control information is available from the following resources:
http://www.midi.org/
http://en.wikipedia.org/wiki/MIDI_Show_Control

The Wholehog 3 can send or receive the same types of MSC commands. The basic structure of MIDI Show Control messages is:
F0 7F *device_id* 02 *command_format command* [data] F7

The *device_id* is one byte and is set to the ID of the controller that should receive and process the message.
The *command_format* is one byte with a decimal value of 0 through 127. The lighting industry most commonly uses value 01, which is General Lighting.
The *command* is one byte with a decimal value of 0 through 127.
Some commands require an amount of data to follow the command.
F7 completes the command.

Examples of MSC Messages

Pressing Go for List 1, Cue 1, sends this message:
F0 7F 01 02 01 01 31 00 31 00 F7
Command 01 is **GO**, which runs using the assigned cue time.

Pressing **Skip Forward >>|** to bump to List 1, Cue 2, sends this message:
F0 7F 01 02 01 04 00 00 00 00 00 32 00 31 00 F7
Command 04 is a TIMED_GO with data to tell the controller to run the cue in a time 0.

Pressing **Skip Back |<<** to bump to List 1, Cue 1, sends this message:
F0 7F 01 02 01 04 00 00 00 00 00 31 00 31 00 F7
which is also a TIMED_GO.

Pressing **Skip Forward >>|** when the cuelist is released and in cue 1 (to advance to List 1, Cue 2 without playing the list), sends this message:
F0 7F 01 02 01 11 32 00 31 00 F7
Command 11 is STANDBY_+, which tells the controller to standby for the next cue without playing it.

Pressing **Skip Back >>|** when the cuelist is released and in cue 2 (to step back to List 1, Cue 1 without playing the list), sends this message:
F0 7F 01 02 01 12 31 00 31 00 F7
Command 11 is STANDBY_-, which tells the controller to standby for the previous cue without playing it.

The Wholehog 3 send and responds to the following MSC commands:

Wholehog 3 Command	MSC Command	MSC Data
Go	0x1 GO	Cue number, cuelist number
Halt	0x2 STOP	Cuelist number
Resume	0x3 Resume	Cuelist number
Skip Forward	0x4 TIMED_GO	Time=0, cue number, cuelist number
Skip Back	0x4 TIMED_GO	Time=0, cue number, cuelist number
Release	0xb GO_OFF	Cuelist number
Change Page	0x1d OPEN_CUE_PATH	Page number

Formatting Macros to Transmit MIDI Strings

Wholehog 3 macros can be used to send MIDI strings when a show is launched, a page changed, or a cue/scene is played. In the macro field the syntax *MS [node type and number]/[MIDI message]* The node type should be formatted as "h" for console output or "I" for a MIDI/Timecode processor (IOP). The node number should be the net number associated with the defined device. The MIDI message should be entered in HEX.

Examples of Macro Syntax
> MSh1/F07F0102010131003100F7
>> Sends MSC command Go for List 1, Cue 1 through the console MIDI OUT
> MSh1/90473F
>> Sends custom MIDI string through the console MIDI OUT
> MSh2/F000005022011400F7
>> Sends MIDI System Exclusive string through the second console MIDI OUT

Working with AMX products
AMX based systems can use the AMX AXB-MIDI interface to transmit and/or receive MSC commands with a Wholehog 3 system.

Triggering AMX products from the Wholehog 3
- ➢ Connect a MIDI cable to the MIDI OUT of the Wholehog 3 product and the MIDI IN of the AXB-MIDI interface.
- ➢ Configure the Wholehog 3 to transmit MSC output (refer to the Wholehog 3 User Manual section 28.2).
- ➢ Refer to the *MIDI Programming* section of the AXB-MIDI manual for details about the MSC commands accepted by the AMX system.
- ➢ Use the *MIDI String Macro* method described on page 3 of this document to compose and send MSC triggers to the AMX system.

Triggering the Wholehog 3 from AMX products
- ➢ Connect a MIDI cable to the MIDI IN of the Wholehog 3 product and the MIDI OUT of the AXB-MIDI interface.
- ➢ Configure the Wholehog 3 to receive MSC input (refer to the Wholehog 3 User Manual section 28.2).
- ➢ Refer to the *system exclusive* section of the AXB-MIDI manual for details to compose MSC commands to the Wholehog 3.
- ➢ Page 3 of this document describes the types of MSC messages the Wholehog 3 can receive.

Working with Crestron products

Crestron based systems can use the [Crestron CNXMIDI](#) interface to transmit and/or receive MSC commands with a Wholehog 3 system.

Triggering Crestron products from the Wholehog 3

- ➢ Connect a MIDI cable to the MIDI OUT of the Wholehog 3 product and the MIDI IN of the CNXMIDI interface.
- ➢ Configure the Wholehog 3 to transmit MSC output (refer to the Wholehog 3 User Manual section 28.2).
- ➢ Open the *Program System View* of the Crestron SIMPL Windows application and configure the system to receive MIDI strings.
- ➢ Use the *MIDI String Macro* method described on page 3 of this document to compose and send MSC triggers to the Crestron system.

Triggering the Wholehog 3 from Crestron products

- ➢ Connect a MIDI cable to the MIDI IN of the Wholehog 3 product and the MIDI OUT of the CNXMIDI interface.
- ➢ Configure the Wholehog 3 to receive MSC input (refer to the Wholehog 3 User Manual section 28.2).
- ➢ Open the *Program System View* of the Crestron SIMPL Windows application and configure the system to transmit MIDI strings.
- ➢ Page 3 of this document describes the types of MSC messages the Wholehog 3 can receive.