UMT-2D/UMT-2Di v2.0 **USB MIDI TRIGGER**

Overview

The Nemesis UMT-2D/UMT-2Di range of trigger boxes are USB MIDI class compliant devices designed to easily interface external GPI and MIDI signals to any Windows or Macintosh Operating System environments.

The devices are pre-programmed to generate MIDI messages on receipt of closed contact events at the GPI connectors.

The UMT-2D/UMT-2Di range can also be used as a USB-MIDI interface providing physical MIDI IN/OUT to the host computer via a compatible breakout connector, or provide access to the button generated MIDI events when in Standalone Mode.

The UMT-2Di is fitted with additional GO and STOP buttons as well as a rotary encoder to eliminate the need for an external control button box.

Connections

GO, STOP XLR: 3 Pin Female XLR connections, designed to interface a remote button connected via a long cable run, such as a multicore. Switch contact is made by connecting pin 2 to GND (pin 3). Pin 1 is also connected to GND. These inputs are internally reverse voltage protected to try and avoid accidents with cross connected patches common with multicore cables, communications lines, etc.

9-PIN GPI: 9-PIN Female D-SUB connector, for connecting 8 GPI signals, primarily local 'button boxes', such as GO, STOP, PREV, NEXT boxes for operator controls. Switch contact is made by connecting pins 1-8 (GPI 1-8) to GND (pin 9). Note that these inputs do not have the same input protection circuitry as the XLR sockets.

MIDI: 9-PIN Female MINI-DIN connector, for physical MIDI IN/OUT via breakout cable. Functions as a physical route for MIDI between the host OS and the outside world. Note that the GPI messages generated by the buttons are merged with the MIDI IN signal to the host. The breakout connector and cable is capable of supplying 2 independently driven MIDI Out streams, though only 1 input stream is supported by the device (IN 1, OUT 1+2).

USB: USB Type B Connector for connecting the Windows/Macintosh Host. The device uses class compliant drivers so shouldn't need any specific drivers to install. See installation guide later in this manual.

ACT: Activity Monitor. Illuminates Green during normal device operation. Flashes briefly Red to indicate MIDI/GPI activity, and during power up cycle.

PWR: Power Monitor. Illuminates Green when the device is powered and enumerated by the host operating system. If running the unit in standalone mode, this indicator will remain Red.

GO and STOP buttons (UMT-2Di only): 2 in-built buttons for use as GO/STOP when the unit is not connected to a suitable button box. Can also be used as additional buttons with a button box connected.

Rotary Encoder (UMT-2Di only): A multi-turn encoder to rapidly generate MIDI Messages. Each clockwise turn will generate one message, anti-clockwise clicks will generate a different message (see MIDI Table for exact messages generated).

Standalone Operation

The UMT-2D/UMT-2Di are capable of running in a 'standalone' mode, without the need for a host operating system.
In this mode, power is provided to the device via a suitable USB power adaptor, and the power monitor will remain Red to indicate the system is powered, but no enumerated host connected.

Any GPI MIDI events will then be present at the physical MIDI I/O connector (Outputs 1+2 on the breakout cable). MIDI IN in this mode is not supported.

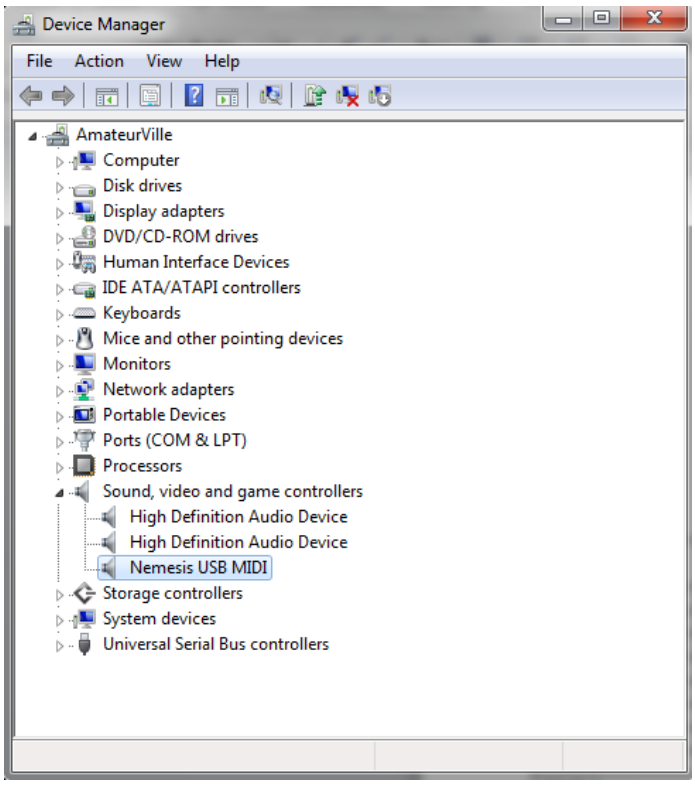
Connection to Host Operating Systems

Connect the UMT-2D/UMT-2Di to the host systems USB port using a standard USB A-B cable.

After the devices power cycle, ACT should remain Green and the PWR monitor should illuminate Green once the host has enumerated the device. At this stage the host should begin driver installation.

Connect a Nemesis REM1, REM89 or custom remotes as required.

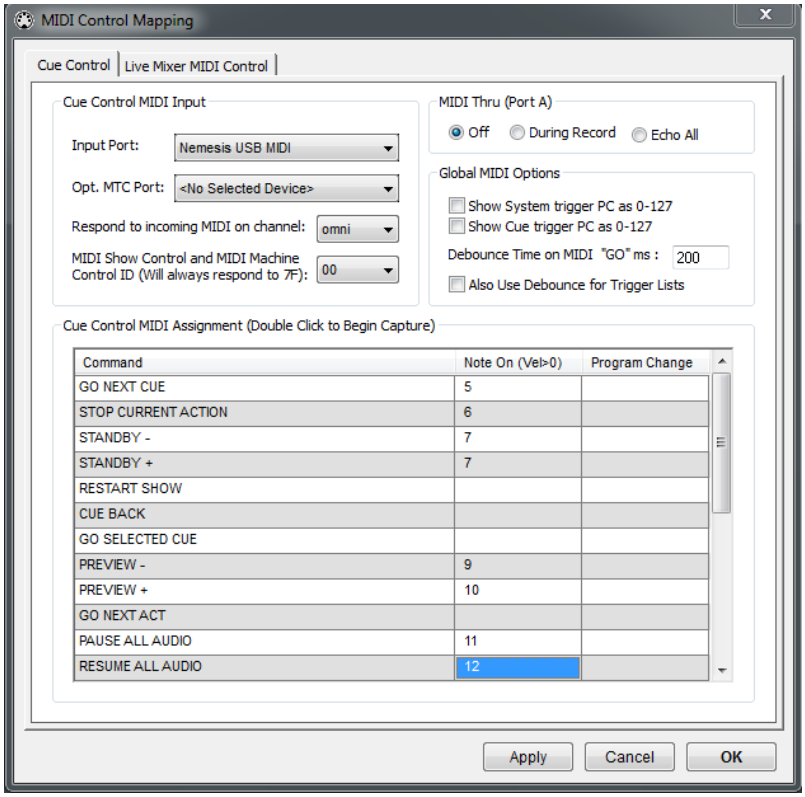
Connection to Microsoft Windows 7/8/10



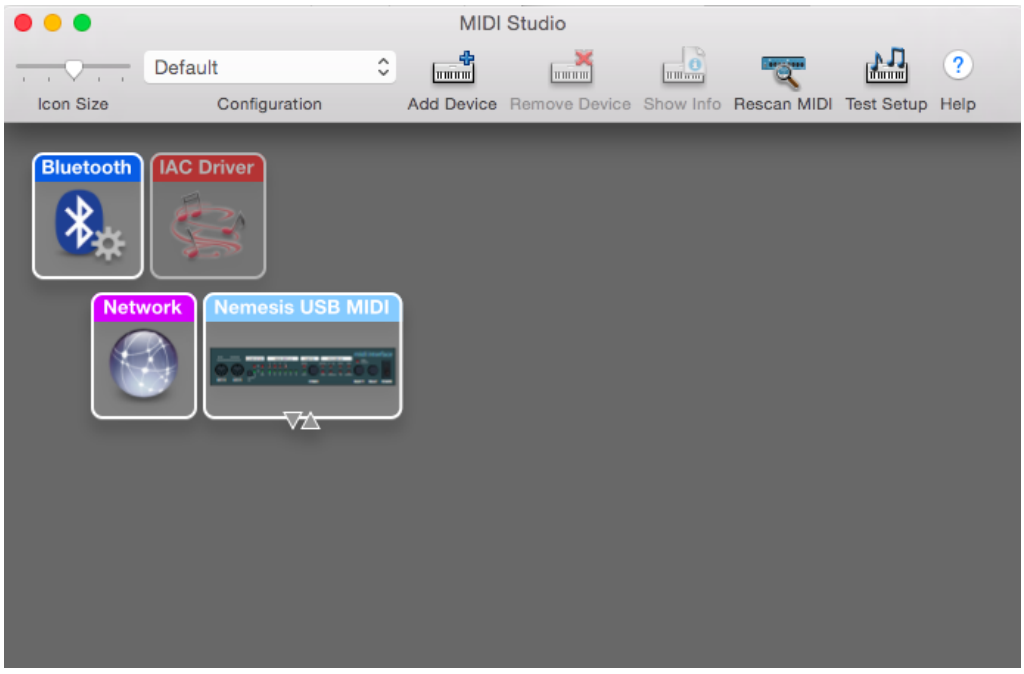
Windows 7/8/10 will detect the device and attempt to install it a standard USB MIDI device. It may connect to the internet to determine whether there is a driver to use other than the standard MIDI driver, but will be satisfied to use the standard class compliant driver.
Windows Device Manager will display the device as “Nemesis USB MIDI”.

Setup in a Program like CTR Electronics “CSC Show Control”

The UMT-2D/UMT-2Di will appear as a standard MIDI device in any software capable of reading and writing to available MIDI ports.
In both inputs and outputs the device “Nemesis USB MIDI” should be present.

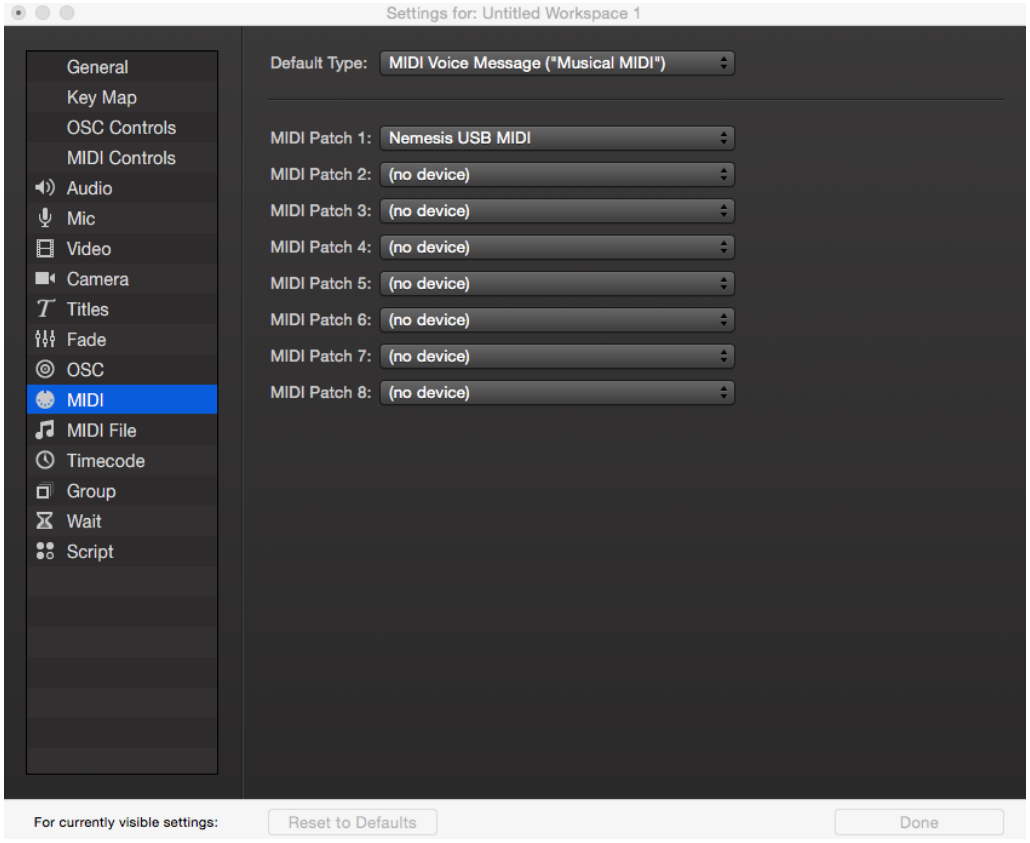


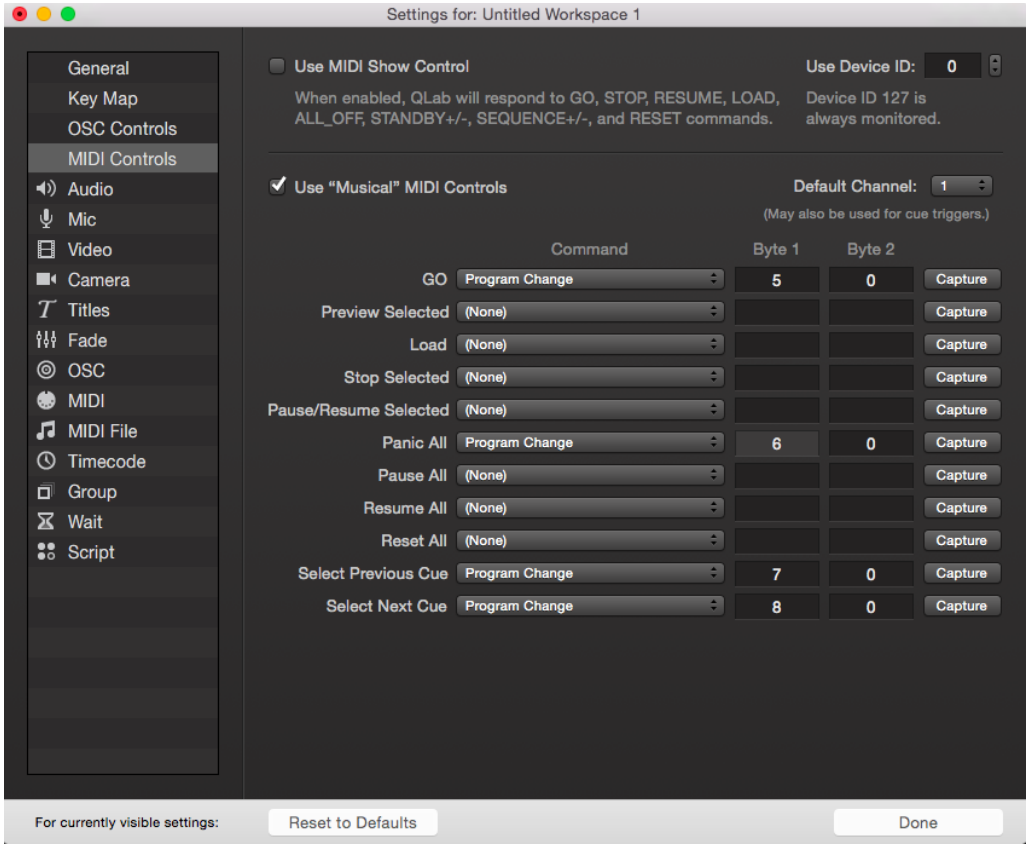
Connection to Apple OS X



Once the device has been enumerated, OSX should install the device as a standard class compliant MIDI device. To check this has been successful, the device will be seen in the MIDI Studio (Window -> Show MIDI Window) part of Audio MIDI Setup found in Applications->Utilities.

Setup in a program like Figure 53 “Q-Lab”





Technical Specifications

MIDI Data Format

GPI connections are pre-programmed to generate either Program Change (default) or Note On Messages. This mode of operation is selectable via internal jumper J1 (see below).

Input	Function Program Change (Default) Channel 1	Function Note On Velocity 100 Channel 1
GO XLR	1	1
STOP XLR/Red Button	2	2
Rotary Encoder Anti-Clockwise (UMT-2Di)	3	3
Rotary Encoder Clockwise (UMT-2Di)	4	4
DSUB 1	5	5
DSUB 2	6	6
DSUB 3	7	7
DSUB 4	8	8
DSUB 5	9	9
DSUB 6	10	10
DSUB 7	11	11
DSUB 8	12	12
Green Button (UMT-2Di)	13	13
Red Button (UMT-2Di)	14	14

Internal Jumpers

Label	On	Off
J1	Note on Mode	Program Change Mode (default)
J2	Reserved	

Connector Pinout

GO/STOP XLR: 3-Pin Female XLR

Connection	Pin Number
Common (GND)	1,3
Switch	2

GPI Connector: 9-PIN Female D-Sub

Connection	Pin Number
GPI DSUB 1	1
GPI DSUB 2	2
GPI DSUB 3	3
GPI DSUB 4	4
GPI DSUB 5	5
GPI DSUB 6	6
GPI DSUB 7	7

GPI DSUB 8	8
Common (GND)	9

MIDI I/O: 9-PIN Mini-Din (e.g. Schurter 4850 range)

Connection	**Pin Number**
MIDI IN '4'	1
MIDI IN '5'	3
MIDI OUT '4'	4
MIDI OUT '5'	7

Notes:

*The single channel MIDI I/O breakout cable is also available as an RME compatible breakout cable, RME Part No. BOHDSP9652MIDI) http://www.rme-audio.de/en_products_cables.php#6

**This manual is based on UMT-2D/UMT-2Di firmware V2.0.0

Revision 2.0 04/05/16 RC.

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