X32 MIDI Implementation (06 May 2014)

MIDI RX > SCENES

Whenever program change messages in the range 1-100 are received on MIDI CH01, the corresponding scene of the X32 internal show memory will be loaded.

This requires the following preconditions:

- Setup / remote
  - MIDI In/Out check marks must be set according to the connection on which MIDI input will be accepted (via physical MIDI connectors on X32 or S16, or via XUF Card)
  - MIDI In/Out check mark must be set for "Enable MIDI Scene Recall"
- Setup / global
  - when tick mark "Confirm Pop-Ups" / "Scene Load" is active, also MIDI scene recalls will only become active after manual confirmation
  - if you prefer activating scenes via MIDI program changes immediately, un-check the "Confirm Pop-Ups" / "Scene Load" tick mark
- Scenes View / home
  - valid scenes must be stored in the internal X32 show file. It is not possible to recall empty scenes.
  - the scope of changes applied by a MIDI scene recall depends on the Scene Safes, Parameter Safes and Channel Safes settings, same as with recalling the scene locally.

MIDI TX > SCENES

- Every scene can be assigned one specific MIDI command/event. Each time the scene is loaded the MIDI command will be sent out once. Possible choices for MIDI commands/events to be found on Scenes View/MIDI page:
  - Off > no message will be sent upon scene load
  - Program Change > select the MIDI Channel and the Program Number (using knobs 4/5 at the main display)
  - Control Change > select the MIDI Channel, Controller number and value (using knobs 4-6 at the main display)
  - Note > select the MIDI Channel, Note number and velocity (using knobs 4-6 at the main display)
- will send out a Note On command directly followed by the same Note Off command

PERMANENT MIDI ASSIGNMENTS OVERVIEW (REMOTE OFF)

MIDI RX	Midi Ch	Controller	Value	Comment
Scenes	1	Program Change	1-100	
Snippet	2	Program Change	1-100	
Cue	3-6	Program Change	0-127	Ch3 -> Cue 1-127, Ch4 -> Cue 128-255, etc.
Mute Groups	2	CC80-85	on (127) / off (0), toggle latching	
Faders	1	CC0-79	0-127	Value 95 = 0dB
Mute	2	CC0-79	on (127) / off (0), toggle latching	
Pan	3	CC0-79	1-127	Value 64 = Pan Mid

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MIDI RX > ASSIGN

Whenever assignable controls are set up for transmitting MIDI commands, reception of that same command (status or continuous) will be reflected on the respective assignable control element (button light, encoder LED collar).

MIDI TX > ASSIGN

We restricted the user assignable MIDI commands to some generic elements, in order to keep things simple enough:

- Encoders 1-4 > can be assigned to sending control changes, program changes or notes
  - parameters are currently 'Channel' and 'Value'
  - for CC and Note commands 'Value' = controller number/note number, and the encoder rotation determines the controller value/note-on velocity
  - for Program Changes only the channel is specified, and the encoder rotation determines the program number
- Buttons 5-12 > can be operated in two modes, 'MIDI Push' (non-latching) for momentary commands, or 'MIDI Toggle' (latching) for static commands

MIDI Push:

- can be assigned to sending control changes, program changes or notes
- parameters are currently 'Channel' and 'Value'
- for CC and Note commands 'Value' 0...127 = controller number/note number, and the button momentarily toggles the controller value/note-on velocity
- to 127 (depressed/released]
- for Program Changes 'Value' 0...127 = program/preset number, that will be sent upon pressing the button

MIDI Toggle:

- can be assigned to sending control changes or notes
- parameters are currently 'Channel' and 'Value'
- for CC and Note commands 'Value' 0...127 = controller number/note number, and the button toggles the controller value/note-on velocity
- between value/velocity 127 and 0 with every operation

Please Note:

- The ASSIGN section also reflects/displays reception of the same MIDI commands that are selected for transmission
- The MIDI commands assigned to the ASSIGN controls can be transferred to and from stage via AES50 using the S16 stage box MIDI I/O

MIDI RX/TX > REMOTE

Enables a specific form of bi-directional MIDI communication for remote controlling a computer DAW application using control elements of the X32 console. REMOTE can be used in 3 modes, Mackie Control, HUI and raw MIDI CC (raw) controllers (see Setup/remote)

- MIDI CC (raw) selected and Remote is enabled+active, the group section controls will transmit/ receive the following messages:

MIDI TX	Midi Ch	Controller	Comment
Group 1-8 SELECT	1	Note 64-71	on (127) / off (0), push non-latching
Group 1-8 SOLO	1	CC 32-39	on (127) / off (0), toggle latching
Group 1-8 MUTE	1	CC 40-47	on (127) / off (0), toggle latching
Sends On Fader	1	CC 48	on (127) / off (0), toggle latching
Group DCA 1-8	1	Note 72	on (127) / off (0), push non-latching

BUS 1-8	1	Note 73	on (127) / off (0), push non-latching
BUS 9-16	1	Note 74	on (127) / off (0), push non-latching
MTX 1-6	1	Note 75	on (127) / off (0), push non-latching
GROUP Faders	1	CC0-7	0-127

HUI selected and Remote is enabled+active, then the group fader section and buttons will emulate the HUI control surface protocol, i.e. for ProTools.

- SELECT/SOLO 1-8 buttons will select or solo the corresponding track in the DAW, in banks of 8 tracks

- Sends On Fader = enables touch-writing a fader automation on selected track, track automation mode in DAW must be 'touch', (latching)

- use the layer buttons to determine the function assigned to the MUTE 1-8 buttons, the LED displays indicate that function

  - Group DCA 1-8 = allows to move the bank selection of tracks in a DAW, (push non-latching)

  - BUS 1-8 = allows to set DAW tracks to 'Record Ready', (push non-latching)

  - BUS 9-16 = enables using the MUTE buttons for track mute in the DAW, (latching)

  - MTX 1-6 = enables using the MUTE buttons for transport controls in the DAW, (latching)

MACKIE CTRL selected and Remote is enabled+active, then the group fader section and buttons will emulate the Mackie Control Universal protocol

- SELECT/SOLO 1-8 buttons will select or solo the corresponding track in the DAW, in banks of 8 tracks

- Sends On Fader = enables touch-writing a fader automation on selected track, track automation mode in DAW must be 'touch' or 'latch', (latching)

- use the layer buttons to determine the function assigned to the MUTE 1-8 buttons, the LED displays indicate that function

  - Group DCA 1-8 = allows to move the bank selection of tracks in a DAW, (push non-latching)

  - BUS 1-8 = allows to set DAW tracks to 'Record Ready', (push non-latching)

  - BUS 9-16 = enables using the MUTE buttons for track mute in the DAW, (latching)

  - MTX 1-6 = enables using the MUTE buttons for transport controls in the DAW, (latching)