X32 MIDI Implementation FW 1.09, 2012-10-04

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

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)à0 (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
- n.b.1) The ASSIGN section also reflects/displays reception of the same MIDI commands that are selected for transmission
- n.b.2) 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 buttons
  > will emit the following messages on Channel 01:
  Group 1-8 SELECT = Note 64-71, on(127)/off(0), push non-latching
  Group 1-8 SOLO = CC 32-39, on(127)/off(0), toggle latching
  Group 1-8 MUTE = CC 40-47, on(127)/off(0), toggle latching
  Sends On Fader = CC 48, on(127)/off(0), toggle latching
  Group DCA 1-8 = Note 72, on(127)/off(0), push non-latching
  BUS 1-8 = Note 73, on(127)/off(0), push non-latching
  BUS 9-16 = Note 74, on(127)/off(0), push non-latching
  MTX 1-6 = Note 75, on(127)/off(0), push non-latching
  MIDI CC (raw)   selected and Remote is enabled+active, then group section faders 1-8
  > will emit CC #0-7, value 0…127 messages on Channel 01

- **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)