

# X-TOUCH/X-TOUCH EXTENDER MIDI Mode Implementation

## Buttons:

- Note on #0..103 (push: velocity 127, release: velocity 0)

## Button Leds:

- Note on #0..103 (velocity 0..63: off, velocity 64: flash, velocity 65..127: on)

## Fader:

- Control change 70..77(78) (receive and transmit)

## Fader Touch:

- Note on #110..117(118) (touch: velocity 127, release: velocity 0)

## Encoder:

- absolute mode: Control change 80..87 (value 0..127)
- relative mode: Control change 80..87 (increment: value 65, decrement: value 1)

## Encoder Rings:

- Control change 80..87 (value 0..127)

## Jog Wheel:

- Control change 88 (turn CW: value 65, CCW: value 1)

## Meter Leds:

- Control change 90..97 (value 0..127)

## Foot Controller:

- Control change 4 (value 0..127)

## Foot Switch:

- Control change 64 (FS1) and 67 (FS2) (push: velocity 127, release: velocity 0)

## LCDs:

- sysex (hex) F0 00 20 32 dd 4C nn cc c1 .. c14 F7
  - dd: device id (X-Touch: 0x14, X-Touch-Ext: 0x15)
  - nn: LCD number 0..7
  - cc: bits 0-2: backlight color (black, red, green, yellow, blue, magenta, cyan, white)
  - cc: bit 4: invert upper half of LCD
  - cc: bit 5: invert lower half of LCD
  - c1..c14: ascii characters (1..7: upper half, 8..14: lower half)

## Segment Displays:

- sysex (hex) F0 00 20 32 dd 37 s1 .. s12 d1 d2 F7
  - dd: device id (X-Touch: 0x14, X-Touch-Ext: 0x15)
  - s1..s12: segment data (bit 0: segment a, .. bit 6: segment g)
  - d1: dots for displays 1..7 (bit 0: display 1, .. bit 6: display 7)
  - d2: dots for displays 8..12 (bit 0: display 8, .. bit 4: display 12)