DARK FADER

DJ MIDI CONTROLLER FEATURING TECHNICS SL1200 FADER

TECHNICAL SPECIFICATIONS

CHASSIS

- Full metal chassis
- CNC made panels, brushed black anodized 3mm aluminium, hand polished edges
- Top panel optionally available in clear acryl (also completely CNC manufactured)
- Engraved pitch scale (no painting, no laser cut)
- Dimension: 207 x 65 x 38(48) mm
- Weight: 430 grams

CONTROL ELEMENTS

- Original Technics(R) SL12000 fader (click-less version mk3/4/5), 100mm, A/D voltage conversion in full 14Bit resolution
- 4 stainless steel buttons (12mm anti vandal switch, smooth low pressure versions)
- 2 bicolored LEDs (green/red) indicate current active midi channel and pitch fader status (midi messages and fader zero position)

PRINTED CIRCUIT BOARD

- Dark Board: CAD factory made pcb, dual layer, black glossy surface, immersion gold contacts
- Mounted CPU: Teensy 3.2 (72 MHz 32 bit ARM processor)

IN/OUTPUTS

- USB-B IN: Connects Dark Fader to midi host
- USB-A OUT (optionally): Available if an active hub is mounted on board. Intended use: connect additional midi devices in daisy chain
- DC Power IN (5.5/2.5mm, center pin +5V): Only available if USB A OUT and hub is mounted. DC Power IN is not needed for Dark Fader operation (USB self powered, consumption less 80mA). Intended use: Optional power for USB OUT connected devices and Dark Fader

FIRMWARE

- Midi class compliant, no driver needed

DARK FADER FEATURES

SL1200 FADER

- Original Technics SL1200 fader offers the wonderful smooth and still resistant tactile feeling of real turntables as midi control
- The full metal chassis design is the perfect complement to the haptic experience of the portable SL1200 fader
- Dark Fader firmware converts the bent signal of an analogue fader element into a linear midi 14bit pitchbend protocol
- Inbuilt Low Pass Filter (R/C element) on circuit board and the intelligent noise reduction algorithm in firmware allow highest sensitivity
- Fader behaviour is highly user configurable (see customizing and calibration)

SL1200 FADER MID POSITION LED

- Bicolored LED on the left side of the fader is used for multiple purposes:
- LED RED flash: As soon as any fader movement is detected, the LED flashes red to indicate a sent midi message. This gives an intuitive and immediate feedback on small fader movements
- LED GREEN: indicates that the last sent midi value was in exact mid zero position. Permanently GREEN if pitch reset is active
- LED OFF (despite fader movements): Indicates Midi Soft Takeover is active, fader waits until user catches the earlier fader position in actual midi channel

MIDI CHANNEL BUTTON

- MIDI CHANNEL button (on top) toggles midi channel (1/2) for each control element. Allows the usage of one Dark Fader for several decks
- Bicolored LED above button indicates the current active midi channel (1=green, 2=red)

LEFT / RIGHT BUTTONS

- Free for mapping, typically used for pitch bend, in SHIFT mode e.g. to fader range or Cue/Play

SHIFT LAYER BUTTON

- SHIFT button (on bottom) offers a 2nd layer, modifying the midi notes of the other buttons

PITCH RESET FEATURE

- Dark Fader offers two options to set pitch to zero, combining best of all SL versions: MOVING to green and LOCKING to green
- MOVING the fader into mid position range (similar SL1200mk2) switches mid LED to green and sends exact midi message pitch-bend mid value
- LOCKING via pressing SHIFT and MIDI CHANNEL BUTTON together. This simulates the PITCH RESET knob of the SL1200mk3 (deactivates fader and locks the pitch to zero)
- Pitch Reset switches the bicolored LED at fader mid position to permanently GREEN

MIDI SOFT TAKEOVER FEATURE

- Dark Fader offers an inbuilt hardware Midi Soft Takeover feature on fader movements after deck change (midi channel change)
- This ensures that the pitch tempo will not jump abruptly after deck changes even in DJ application with limited MSTO features

CUSTOMIZING & CALIBRATION

- Holding a BUTTON during power on activates the 'Power-On Setup Mode', allowing customizing Dark Fader to user specific needs. All changes get stored permanently
- FADER MID POSITION: Calibrate exact zero position (green LED)
- FADER MID RANGE: From zero (no green mid size via movements (similar SL1200mk3) to maximum snapping (similar SL1200mk2)
- FADER SENSITIVITY: Customize fader threshold for small movements
- MIDI SOFT TAKEOVER: Enable or disable inbuilt MSTO
- RESET to factory settings

MIDI MESSAGES

CONTROL ELEMENT	NORMAL MODE	SHIFT MODE
MIDI CHANNEL button (on top)	CC 20 (on: 127, off: 0), toggles CH 1 <-> 2	CC 24 (on: 127, off: 0)
LEFT button (below fader)	CC 21 (on: 127, off: 0)	CC 25 (on: 127, off: 0)
RIGHT button (below fader)	CC 22 (on: 127, off: 0)	CC 26 (on: 127, off: 0)
SHIFT button (on bottom)	CC 23 (on: 127, off: 0), changes midi message of other buttons	
SL1200 Fader	14 bit pitchbend (0xE) message + CC 09 (0-127)	
LED midi channel	No midi input, firmware controlled: GREEN: midi channel 1, RED: midi channel 2	
LED fader	No midi input, firmware controlled: RED: Fader movement detected, LED flashes red for each sent midi message GREEN: Indicates mid zero position (last sent midi value was value 8192)	

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