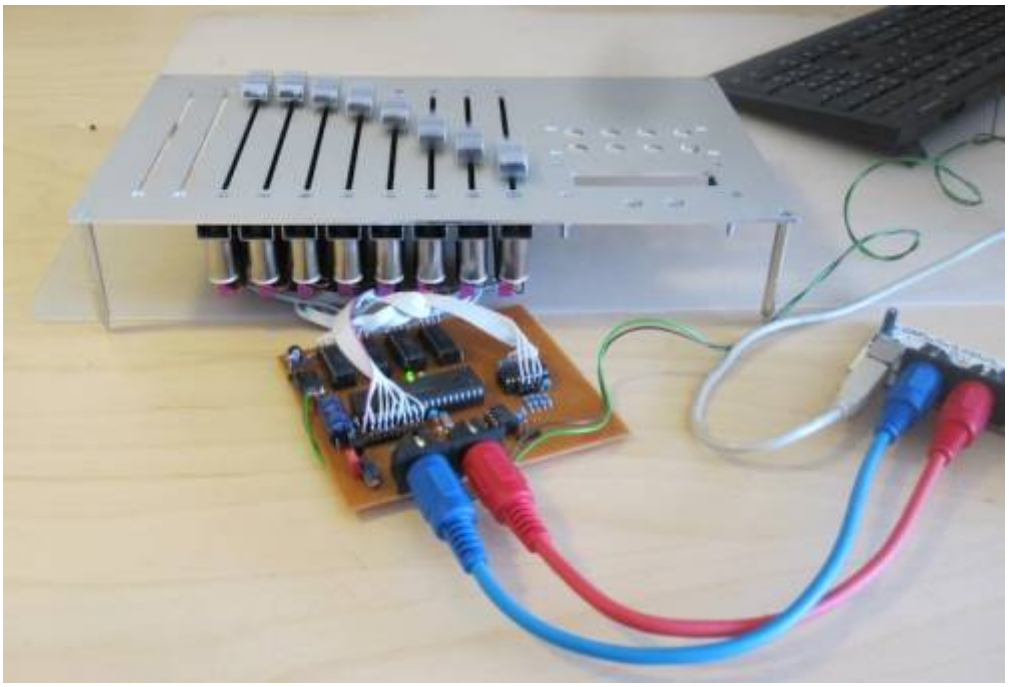
MotorFader NG



Introduction

Official UcApps Page

the Motorfader NG module was designed with following rules :

- High-quality faders (Alps K faders with “coreless” motors) Handling
- Deliver stable enough ADC conversion results due to the reduced 3.3V voltage range
- Handle touch sensors properly without heavy CPU load (without an additional external device or microcontroller)
- PIC based projects Compatible for best usability
- DIY friendly and not requiring additional gear for something which isn't part of the MBHP yet
- Easy Testing and troubleshooting

Result

- Dedicated PIC controller controls the motorfaders directly.
- Firmware can be updated via MIDI!
- Motorfaders are accessed via MIDI - this allows standalone usage, cascading (to chain multiple modules), and the re-use of existing infrastructure such as MIOS, MIOS Studio and MIOS Bootloader
- Can either be connected to a PC directly, or controlled from a second PIC or STM32 or LPC17
- native support of various protocols (e.g. PitchBender, CCs, even Logic Control and Mackie Control Emulation)
- support for 8 touch sensors
- instead of TC4427 I'm using L293D now - not at least because of the integrated diodes.

- due to the direct motor control connections, the PIC is now able to generate PWM with 50 uS steps for improved motor speed control while a motor is moved
- Dedicated Firmware for this task, Enough memory free to integrate advanced features, such as runtime-calibration and motor position tracing

Compatible Motorfaders

- **ALPS RASON11M9** - Interconnection Diagram