Welcome to my User Page

I searched long for a system I can build upon my musical and artistic artwork - and I am thankful that Thorsten opened this wonderful project and community to us ;)

My real name is Michael Markert and I live in Nuremberg, Germany. I studied Communications-Design focused on Multimedia and am currently doing a postgraduated diploma at the College of Fine Arts in Nuremberg (Public Arts, Intermedia). The focus of my work and research is the development of intuitive interactive interfaces for harmonized sensory music. While I'm using these interfaces with my Band to make music, I'm also using it for sonic installations. The focus there is not that the artpiece is the electronics itself, but rather the people using it. I like to force users to behave in some way to generate music, which feeds back to their bodylanguage. It's fascinating to see (and hear) how different each individual is behaving when it comes to audible senses...

Visit my Blog audiocommander.de to find out about projects I realized with midibox hardware - or my Band-Webpage zeichensprecher.de for more informations. If you're interested you may also visit the institute I'm working atm: Urban-Research-Institute.org

While the only MBHP project I've built so far is an Midibox FM (OPL module) – which is unfortunately doing nothing atm except getting too hot :(– I am using self-developed MIOS-based applications for new Midiboxes most of the time; like the Sensorizer or the SpeakJet MIDI Application Interface...

The ACSensorizer is the project I wrote about 5 years, first in Lingo on Macromedia Director (slow & expensive), then in Objective-C using the Cocoa framework (fast but overfeatured, plug & pray) and finally I spent 2 years developing the software I'm most proud of: The ACSensorizer for the MBHP platform (fast, relyable, plug & play). The sensorizer is working very stable since then and has a bunch of absolutely cool features like bpm synching, harmonisation and quanisation - of course it's main purpose is reading sensor data that cannot deliver values exactly from 0 to 5 V.

I will use this page to document what I've done with MIOS and MBHP so far. By releasing my sourcecodes and documenting stuff, I hope I'm able to give back a bit of what I got from midibox.org:

Complete Projects

Complete projects, with Hardware Interfaces, custom developed applications and full documentation:

ACSensorizer v0.2



- **depreciated version!** See ACSensorizer v0.4+ if you want to build this!
- sensorizes 4 sensors and interpolates its AIN-readings.
- The main target of this application are sensory devices delivering not exactly 0 - 5 V, like pressure-, distance-, resistor-based sensors or softPots.
- Uses 8 Encoders, 4 Buttons, 1 Switch, 40×2 LCD
- v0.2 has a quite complicated HUI ⇒ a much improved and easier to handle is the ACSensorizer v0.4!

ACSensorizer v0.4



- Updated Version of Sensorizer Stage
- ACSensorizer rewritten for up to 8 sensors
- Improved HUI
- Much smaller case
- uses only 4 Encoders and 4 Buttons, one 16×2 LCD

ACHarmonizer

- Development completed; no stand-alone-version yet.
- ACSensorizer and kII (SpeakJet Application) contain a fully equipped harmonizer module!
- A stand-alone version will definitely be created with a dedicated harmonizer control interface.

ACSyncronizer

- Development completed; no stand-alone-version yet.
- ACSensorizer and kII (SpeakJet Application) contain a fully equipped syncronizer module!
- A stand-alone version might probably be created somewhen...

kII Speakjet Application Interface

- An application interface that can receive MIDI-signals to enable full MIDI-control of the SpeakJet.
- Featuring Jaw-/Tongue-Controls, Pitched OSC's, Subtractive Synthesis, Basic Harmonizer, and a lot of other cool control stuff...
- The upcoming version 0.2.x features a handtracking sensor matrix!
- Also see:
    - SpeakJet Forum discussion

    - Breadboard Construction Tutorial
    - SpeakJet Control Overview
    - SpeakJet Definition List

SoundGin Application Interface

- Planned
- An application interface that can receive MIDI-signals to enable full MIDI-control of the SoundGin SpeechChip
- Also see:
    - SpeakJet Forum discussion

Dev Tools

ACSim

- Simulator
- Debugger
- for C Application Development

Tipps & Tricks

- Buy MBHP PCBs from Smash TV: http://www.avishowtech.com/mbhp/info.html – Smash's boards are of extraordinarily quality, both sided (no need for soldering bridges), printed (no more guess what this pin is) and finally: they look like eye-candy (mjam). So, go ahead and spare some bucks for additional shipping if you're not located in the US and support Smash! You won't regret it!
- Bookmark this page: http://www.midibox.org/dokuwiki/doku.php?id=application_development

Wiki-Sources

I've done some documentation stuff, here are the sources, if they ever need to be edited:



http://www.audiocommander.de/downloads/midibox/MIOS_Overview.ai.tgz

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