AIN Module

AIN means “Analog Input”. Analog is meant as a range; in terms of voltage this range is normally from 0 to 5 V, in terms of programming this is normally a 10bit value from 0 to 1023. It's quite clear if you see this in contrast to the Digital Inputs (via DIN Module), which know just two states: on or off, 1 or 0.

The AIN module is normally used to connect potentiometers to the Midibox, usually these two types:

- circular pots ⇒ Turning knobs
- linear pots ⇒ Faders



Potentiometers (also “Pots”) should have a typical resistance value of 10 kΩ.

Motorfaders have to be connected to a special module called MF Module.

It's also possible to use other 0-5V analog voltage sources. The ACSensorizer is a user project especially developed for AIN sources (like sensors) that do not deliver 0-5V exactly.

The AIN module uses CMOS 4051 multiplexer ICs, each of which provides 8 analog inputs. The most common AIN configuration is sometimes referred to as AINX4, because it has 4 such ICs, for a total of 32 inputs. Two AINX4 boards can be cascaded for a total of 64 inputs. Alternatively, an AIN module could be populated with as few as one 4051, if 8 or fewer inputs are required. In MIDIbox-jargon, this could be called AINX1.

The AIN module(s) connect to J5 on the core module.

See also

- AIN Module [uCApps]
- ain board parts list
- ACSensorizer
- Midibox Extensions page
- sound.westhost.com/pots.htm interesting background informations about pots

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