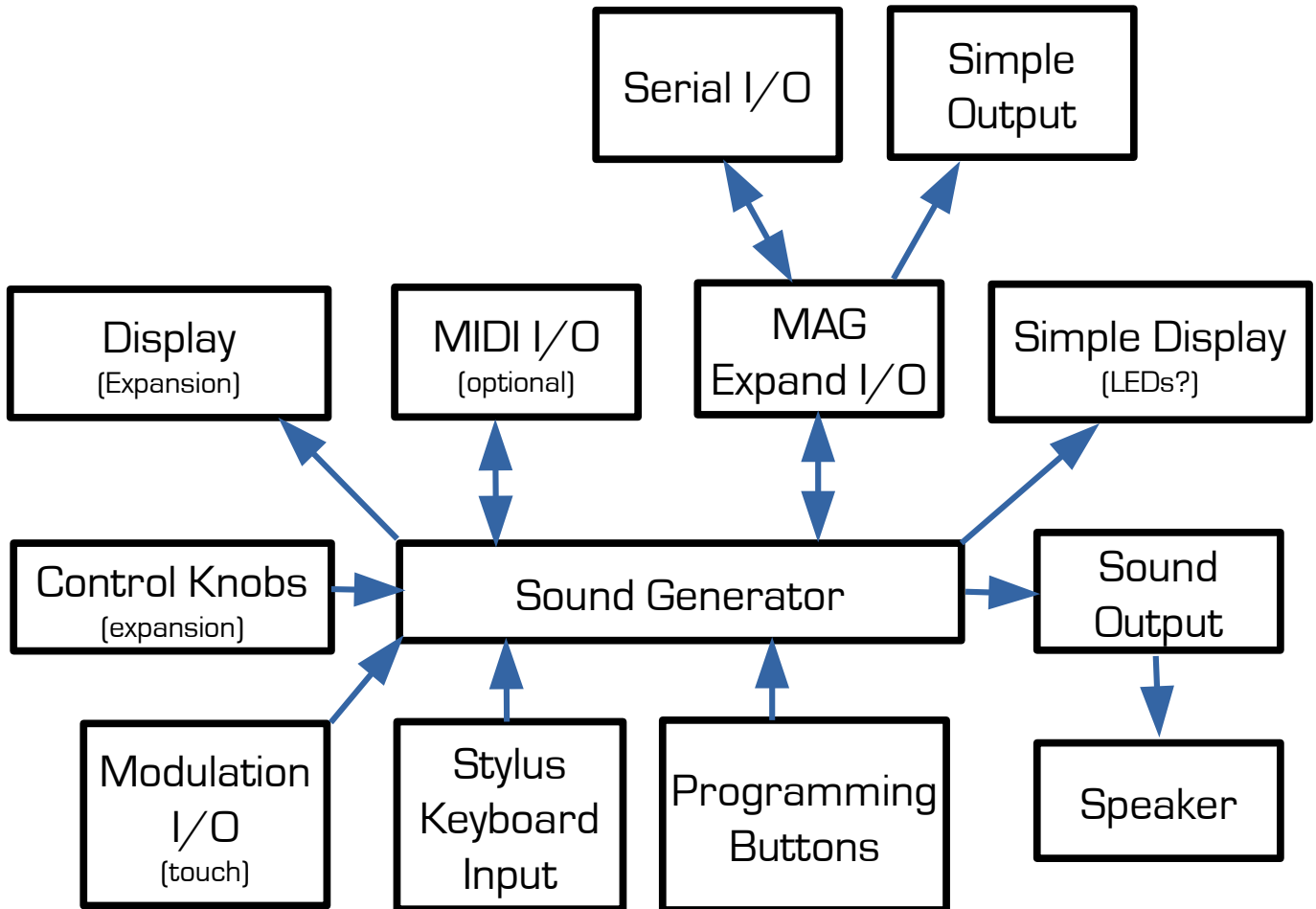


MAG Synth Block Diagram

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The Basics:

The Sound Generator is the key microcontroller that makes all the sounds and processes all I/O.

Sound Output is analog sound out. Could be a D/A or simply PWM output. Provides a headphone jack.

Speaker includes a speaker and maybe an (optional?) amplifier for sound output. Not a fucking buzzer.

Stylus Keyboard Input is the Stylophone style PCB contact keyboard. It might have holes for a ribbon cable for external keyboard mechanism, and maybe holes to solder buttons on instead of using the stylus.

Programming buttons are buttons not on the keyboard that allow for parameter programming and patch change through the keyboard.

Modulation I/O uses touch or analog lines to allow for pitch bend and modulation wheel effects.

Simple display are a minimal set of LEDs shipped with the machine by default that give us some status info.

Slightly optional:

MAG Expand I/O is for synchronization, note and light triggering between all future MAG devices.

Simple Output are digital pins for LEDs etc. Controls very simple devices with no microprocessor. Addressable by the device they are attached to.

Definitely optional sold as separate kits:

MIDI I/O includes 5 pin DIN connections, opto-isolator, resistors, and diode necessary to implement real MIDI. Attaches to serial I/O on sound generator. This is an add-on kit for the synth we give away. Probably need to make it thru-hole for that. PCB has holes for the parts, user populates it.

Display (expansion) is a slightly more elaborate display shipped as an add-on-kit.