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### JaK'D Modular Drum System

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# JaK'D Modular Drum System

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## Background

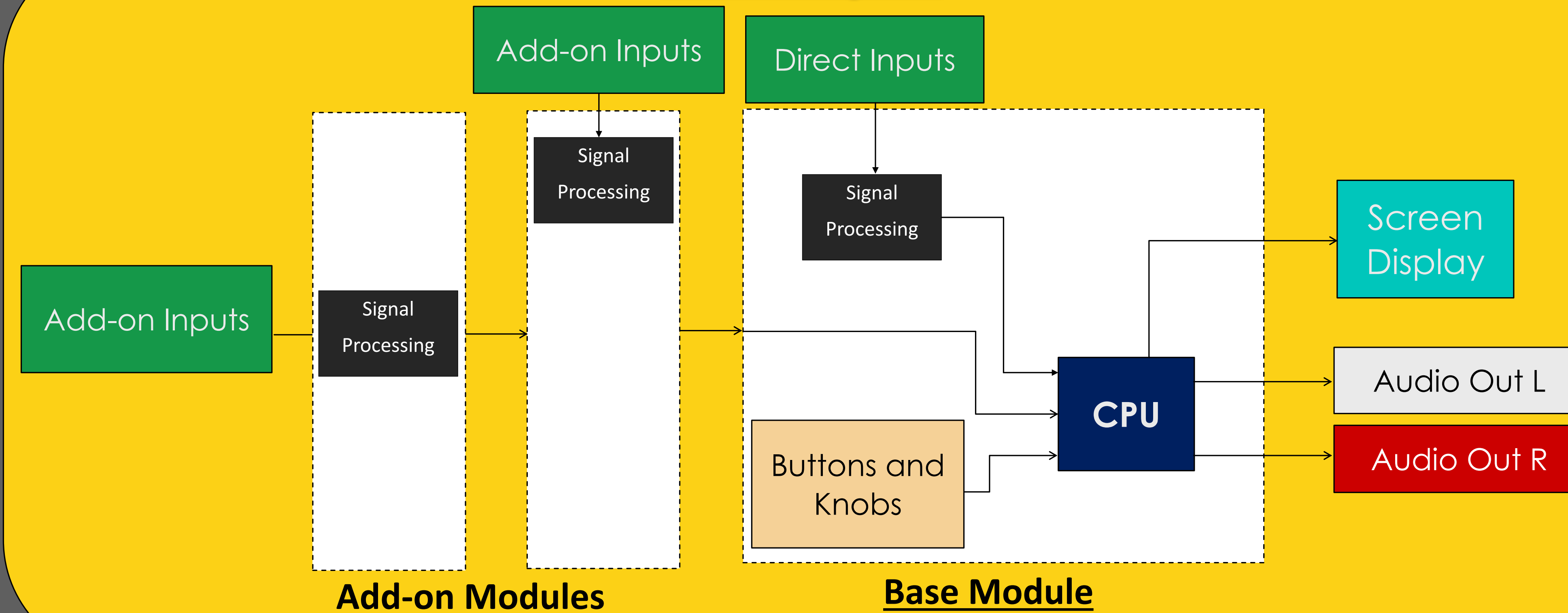
In the electronic drumming world running out of input jacks to plug in drum triggers is a major issue. If a drummer wishes to add a drum trigger to an existing set, there must be an open input jack to plug it into. If the drummer is already using all of the inputs on the drum module, the drummer must either purchase a new module with more inputs, or use another existing module in tandem to operate the additional inputs. Neither of these solutions are ideal. A new electronic drum module can cost as much as \$2500 and has a maximum of fourteen input jacks which means that anything beyond fourteen inputs is impossible on a single module. Running two modules in tandem works, however, unless the modules are exactly the same, the sound profiles and user interface would be different. Also, if mixer inputs are limited, it may be difficult for the drummer to be justified in using two or more of them for the drum set.

## Abstract

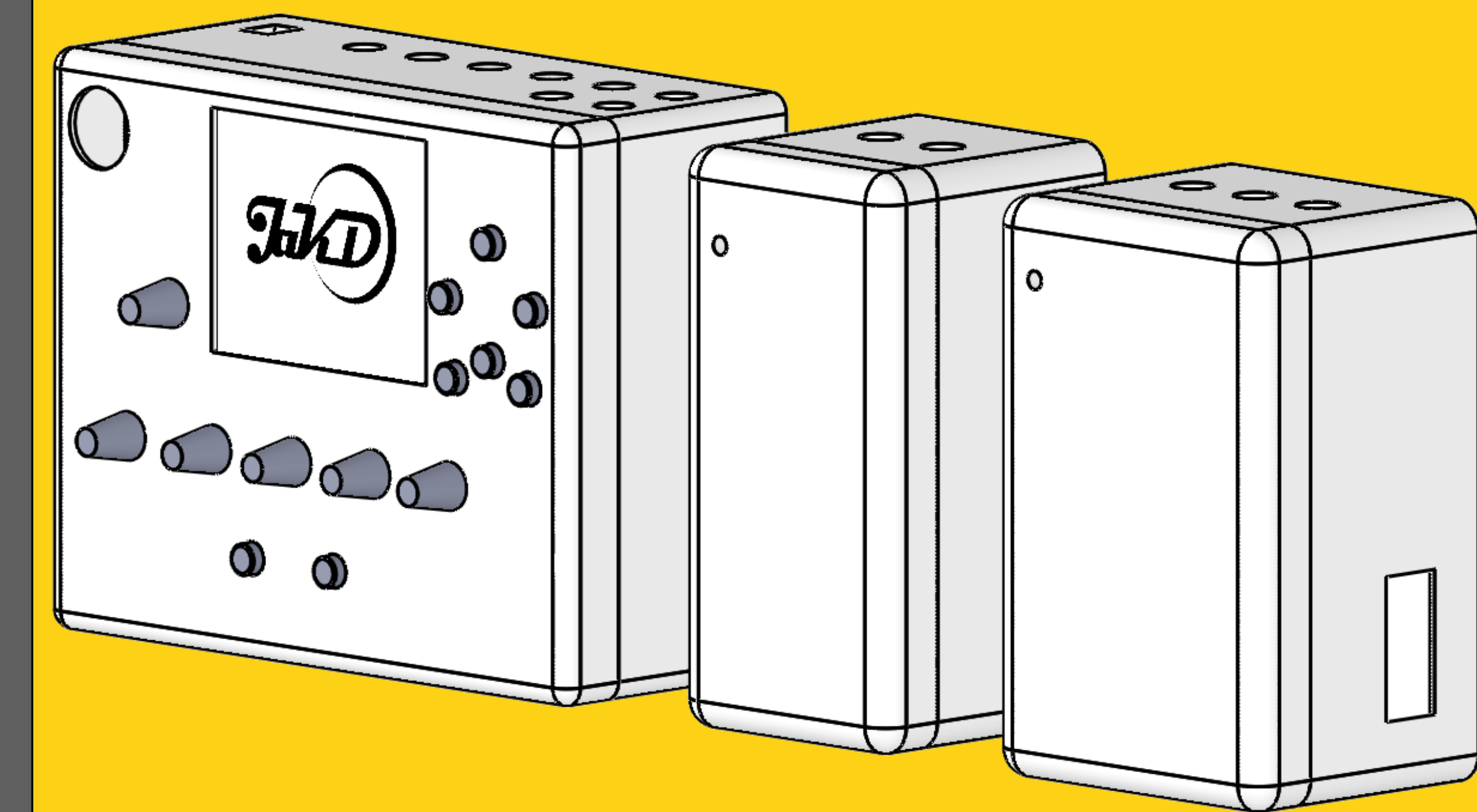
The JaK'D Modular Drum System (MDS) is a drum module that allows the customer to purchase a base module with a certain amount of ports and allows the option to purchase add-on modules to give more input ports as needed. The JaK'D MDS negates the drum module input limitations by introducing expandability to the drum module market.

The front of the main module has an LCD screen with directional buttons to navigate, as well as an enter button, back button, power button, and six rotary knobs for volume control. Two additional buttons are used to determine which inputs are being controlled with the volume knobs allowing the user to have control over all inputs without cluttering the face with numerous knobs. The screen and navigation buttons are used to assign sound effects to each of the inputs, as well as monitor the sound levels of the inputs. The back of the module has the input and output ports. The add-on modules have no buttons on their top and, like the base module, the inputs are along the back of the add-on modules with the hardware connection being on the side of all modules.

## Block Diagram



## Enclosure



## JaK'D MDS Features

- LCD display for graphical user interface
- Five base module drum trigger inputs
- Hi-Hat control input
- Five digital volume control knobs for trigger inputs
- One digital master volume control knob
- Drum set customization
- Two input add-on module
- Three input add-on module

## Potential Future Features

- Base module with ten input jacks
- Ability to use two triggers per input jack
- Five input and ten input add-on modules
- Better quality/more options for sound samples
- USB interface for software updates and ability to add custom sound profiles

