



Studio B (Production Suite) User Guide

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Getting Started:

1. Turn on **Furman Power Convertor** (Top of Rack)



2. Turn on **Mackie HS-824 Studio Monitors** (Front Switch)



3. Open DAW of choice and make sure your audio output and input is set to MOTU 828x.
 - If using your own laptop or computer, make sure you have the drivers downloaded for our MOTU 828x, driver link and install instructions below:
<https://motu.com/en-us/download/#category=1&product=303>

To Run Analog Gear into your DAW:

Computer

To start, log in to “TMC Studio”. The password is “TMCSstudio”

The Raven MTi is a touch screen display. It takes a second to fire up. The TV is connected as a second monitor, and defaults to HDMI 1 (where you want it). Just hit the power button on the remote.

The main computer is equipped with Ableton 11 Suite, FL Studio Producer Edition, and Logic Pro. It’s loaded with some cool instruments and FX plugins too. Check those out and have fun.

Monitors

This studio uses Mackie HR824 monitors. We like them a lot, so please have fun with them but don’t blow them up.

Volume is controlled using the small silver/white knob on the desk.



These monitors have a “sleep mode”; if no signal is received, they put themselves to sleep, and when a signal is detected, they turn back on. They take a few seconds to wake up, so if sound doesn’t come out right away, give it a second.

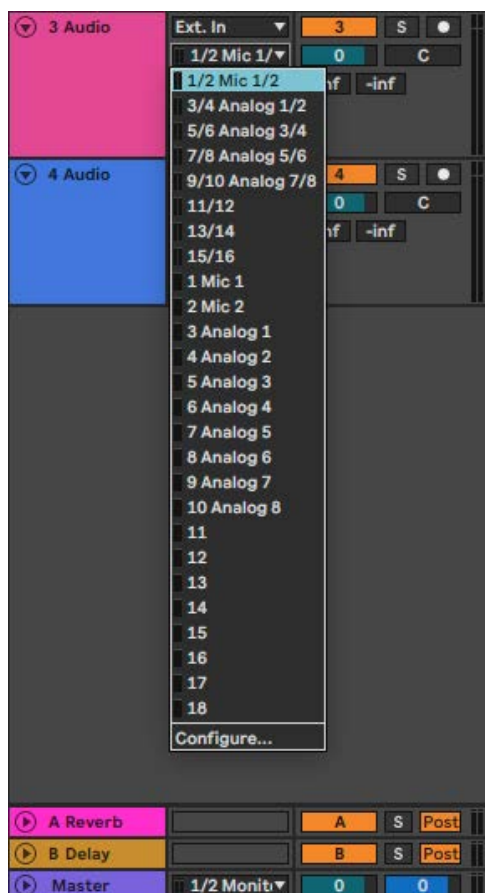
Interface

This studio uses a **MOTU 828x**. It’s on the rack between the 2600 and the patch bay.



This interface has 2 mic/instrument inputs in the back, standard stereo outputs for the monitors, and 8 additional analog inputs and outputs. All of these inputs and outputs are accessible from within your DAW, and are connected to the patch bay as labeled.

Note: Most DAWs interpret the mic inputs as inputs 1 & 2, and the monitor outputs as outputs 1 & 2. This means that Analog Input 1 would show as “Input 3” in your DAW, and so forth. We’ve renamed these in some DAWs for clarity, but it will still show as “3



(Analog 1)”.

Mixer

The mixer connects inputs from several of the synthesizers to Analog Inputs 1&2 of the interface. To use any input source connected to the mixer, select Analog Inputs 1&2 in your DAW and turn up the proper channel on the mixer.



Synths

All of the synths are controlled via MIDI by the **Akai MPK** controller to the left of the desk.



You don't need to do anything else to activate this connection, simply power on your synth, make sure you're getting audio and play it on the controller.

- **Moog Little Phatty Toxic Edition**



- On the keyboard stand.
- Connected to the mixer (analog inputs 1&2), (3&4) in DAW.
- Awesome for bass synth sounds

- **Roland JX-3P**



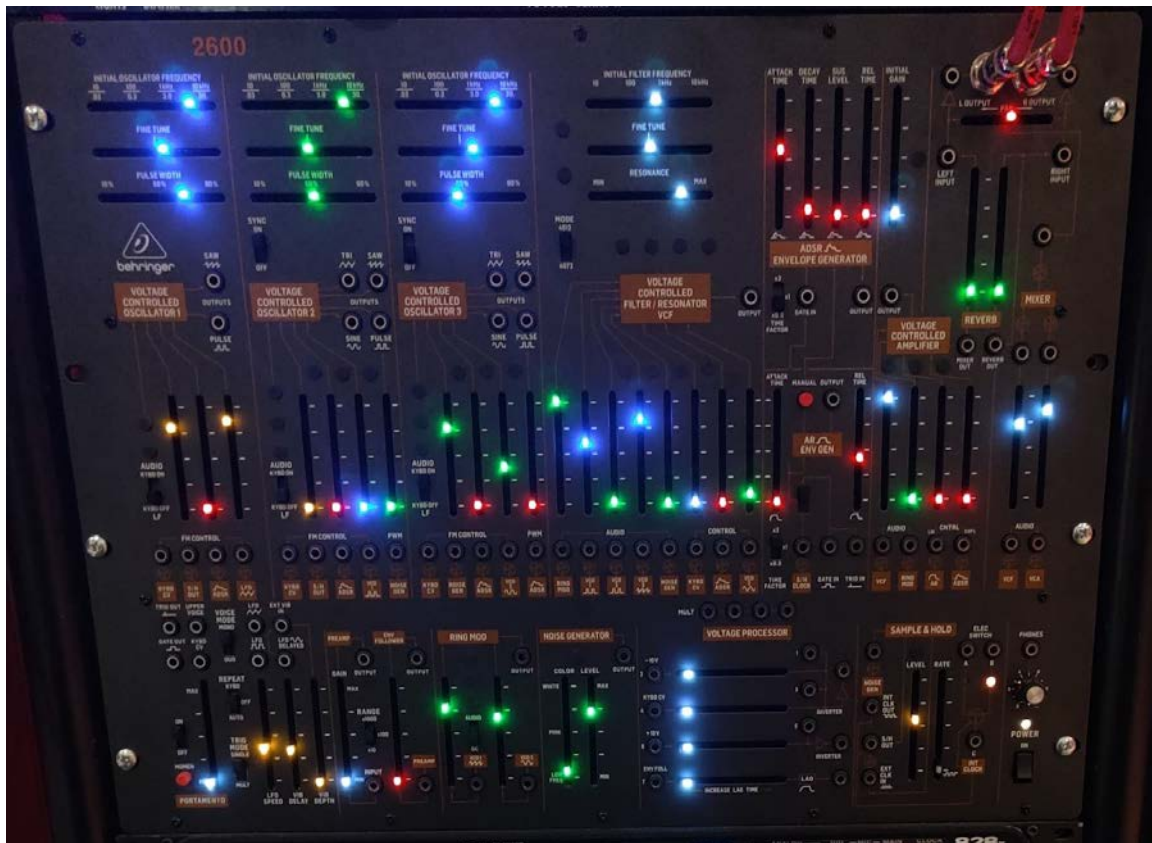
- On the keyboard stand.
- Connected to the mixer (analog inputs 1&2).
- The PG-200 sequencer does NOT work when MIDI control is active. To use the PG-200, flip the “Memory Protect” switch on the back of the JX-3P all the way to the left to “Programmer” mode. Play the synth using its built-in keys. Please be sure to put this switch back to “MIDI Bus” mode when you’re done.
- Super classic synth from 1983. Pink Floyd was known to use this one.

- **Oberheim OB-8**



- On the keyboard stand.
- Connected to the mixer (analog inputs 1&2).
- Also originally made in 1983. Van Halen and Eurythmics both used this machine.
- This synth is quite old and delicate, please be gentle!
- You’ll notice some of the voices are off/glitchy. Yes, we know, this is OK. Enjoy the sound design possibilities.

- Behringer 2600



- On the rack, connected to the mixer (analog inputs 1&2)
- Don't be scared. We know all the lights and buttons and cables are a lot.
- This is a semi-modular synth. That means nearly any connections or signal flows can be overridden and rerouted elsewhere.
- Semi-modular also means that things can be controlled with "Control Voltage". This means that electrical signals can be used to control just about any parameters you can control with knobs. Think LFOs on anything, and all the FM you can dream of.
- In the 2600, there are:
 - 3 voltage controlled oscillators (VCOs). A switch puts these in audio range or in LFO range.
 - 1 noise generator oscillator. You can control the tone and volume of noise.
 - 1 voltage controlled filter (VCF). In addition to the standard cutoff and resonance controls, this filter has a mixer section allowing you to control how much signal, if any, it receives from the various input sources.
 - 2 envelope generators (one ADSR, one AR).

- 1 voltage controlled amplifier (VCA). This controls the level of the filter and ring modulation outputs, and can be controlled by the envelopes.
 - A final mixer section. This determines how much signal from the VCF and from the VCA is sent to the output. You can also add reverb, and pan the output.
 - To initialize a basic keyboard-controlled synth preset on the 2600:
 - On the bottom left, set “Repeat” to Off.
 - On the filter:
 - Push Frequency all the way to the right.
 - Push Resonance all the way to the left.
 - Raise the levels of the oscillators you’d like to hear.
 - On the AR envelope, flip the switch to the top position.
 - On the VCA, raise “VCF” and “AR” all the way up. Lower “Ring Mod” and “ADSR” all the way down.
 - On the mixer, turn VCF all the way down and VCA all the way up.

- **Korg Wavestation**



- On the rack, 3rd from the bottom.
- This is essentially a sample bank. It’s controlled by the MPK controller, so just make sure you’ve connected it properly and play.
- This synth does NOT have a default patch bay routing. To use it, connect outputs 9 & 10 on the top row of the patch bay to inputs 41 and 42, and select Input 3&4 (Analog 1&2) as your DAW input source.



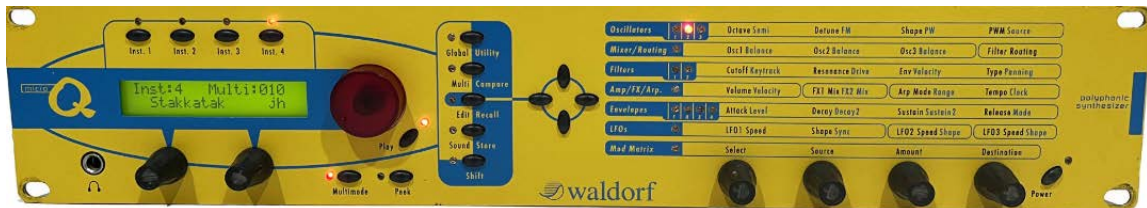
- **Proteus/1 Pop/Rock**



- On the rack, 2nd from the bottom.
- Another sound bank. It works exactly the same as the Wavestation.
- This synth does NOT have a default patch bay routing. To use it, connect outputs 11 & 12 on the top row of the patch bay to inputs 41 and 42, and select Input 3&4 (Analog 1&2) as your DAW input source.



- **Waldorf microQ**



- On the rack, on the bottom.
- Connected to the mixer (Analog inputs 1&2)
- A full-featured synthesizer with 3 oscillators, filters, envelopes, LFOs, and a few effects.
- This synth is controlled by the MPK controller.

Effects

- **Electrix Filter Factory**



- A fairly standard resonant filter with LFO control
- Input (default): Analog 5/6
- Output (default): Analog 5/6
- The resonance gets LOUD on this unit. If you're messing with high resonance, I HIGHLY recommend patching your signal through the compressor/gate as a limiter. Please don't blow out our monitors :)

- **DBX Expander/Gate/Compressor**



- A limiter and compressor
- Input (default): Analog 7/8
- Output (default): Analog 7/8
- When "Stereo Couple" is selected, the left side controls the entire signal. When deselected, the two sides control the stereo channels independently.

- **Kurzweil Mangler**



- A multi-effects box with many possibilities.
- Input (default): Analog 3/4
- Output (default): Analog 3/4
- Select the desired effect on the "Bank" knob, and try out the 16 available presets.

All of these can be used to run audio from our 3 Analog Synth Keyboard station next to On the left is our 49 Key AKAI MPK Midi Controlled Keyboard. We have it setup to control all 6 synths located on the rack and A-Frame setup via midi to run straight into your DAW of choice. It can also be used as a midi keyboard with soft synths as well. On the left hand side is our **Novation Launchpad** which can be used to control your ableton sessions.



PatchBay Basics

Patch bays move inputs and outputs from the back of a rack to the front. ALL ¼" TS and TRS connections in the production suite should be made from the patch bay.

If you're plugging in a ¼" cable, it goes in the patch bay.

All **OUTPUTS** are on the TOP row.



All **INPUTS** are on the BOTTOM row.



All connections must go from the **TOP** row to the **BOTTOM** row. If you're connecting two points on the top row, or two points on the bottom row, **something's not right**.



Avoid touching the switches on the patch bay if you don't know what they do. You shouldn't need to change these settings. If you'd like to learn more, our staff will be happy to explain.

By default, signal flows directly down from the top row to the bottom row. Without plugging in any wires, the mixer is connected to Analog In 1 & 2, the Kurzweil is connected to Analog In 3 & 4, etc.

To change the signal flow, simply plug a cable from the output you want to the input you want.

Patch Bay Normal Routing (defaults)

- Outputs 3 and 4 send signal to the Kurzweil Mangler.
- Outputs 5 and 6 send signal to the Filter Factory.
- Outputs 7 and 8 send signal to the DBX compressor.
- The Moog, the JX-3P, the OB-8, the Waldorf microQ, and the 2600 all send signal to the mixer.
- The mixer sends signal to inputs 1 and 2.
- The Kurzweil Mangler sends signal to inputs 3 and 4.
- The Filter Factory sends signal to inputs 5 and 6.
- The DBX compressor sends signal to inputs 7 and 8.
- Outputs 1 and 2, and the outputs for the Korg Wavestation and the Proteus Pop/Rock, have no default routings. You'll need to connect them to an input channel on the patch bay to use these.

Use Cases:

I want to use a microphone.

- A. Connect your mic to one of the mic/instrument inputs on the front of the MOTU interface.
- B. Select the appropriate mic channel in your DAW (Mic 1 or 2).
- C. IF your mic requires 48v phantom power:
 - a. Select the 48V button on the correct channel of the interface.
- D. IF it does not require 48V power:
 - a. DO NOT enable 48V power! (**very important**)
- E. Make sure you're monitoring through your headphones, not through the monitors. (see "[I want to monitor through headphones](#)").
- F. Record as you normally would.

I want to record a guitar (direct input).

- A. Plug your guitar into one of the mic/instrument inputs on the front of the MOTU interface.
- B. Select the appropriate channel in your DAW (Mic 1 or 2)
- C. If you'd like to use pedals:
 - a. Easy way: connect them as you normally would, between your guitar and the interface.
 - b. Fun way:
 - i. See "[I want to use the analog FX in the rack](#)".
- D. Ensure that input monitoring is enabled and rock on.

I want to record one of the synthesizers.

- A. Select Ext. Input 3/4 (Analog 1/2) in your DAW.
- B. If you're using the:
 - a. Moog Little Phatty
 - b. Roland JX-3P
 - c. Waldorf MicroQ
 - d. Oberheim OB-8
 - e. Behringer 2600... turn up the corresponding channel on the mixer.
- C. If you're using the:
 - a. Korg Wavestation
 - b. Proteus 1 Pop/Rock... connect BOTH output channels for the desired interface to BOTH Interface Input 1 & 2 on the patch bay.
- D. Ensure that input monitoring is enabled.

I want to use the analog FX in the rack.

- A. The simple way. This only works with the synthesizers in the room. You'll send your signal directly through your FX in series, just like a pedalboard.
 - a. Connect your synth's OUTPUT (top row) to your effect's INPUT (bottom row) of the patchbay.
 - b. In your DAW, select the Interface input corresponding to the EFFECT.
 - c. Ensure that input monitoring is enabled and play.
- B. The fun way. Works with analog synths, guitars, mics, and digital signals (softsynths, samples, etc.)
 - a. Connect your input to the DAW directly, as described above and like you would with no effects.
 - b. On the channel you'd like to send through the effect, either:
 - i. Set the OUTPUT to the OUTPUT channel that corresponds to the desired effect on the patch bay, OR
 - ii. Create a SEND to the OUTPUT channel that corresponds to the desired effect in the patch bay.
 - c. Create a new audio channel, and set its INPUT to the INPUT channel corresponding to the effect on the patchbay.
 - d. If using Logic Pro, ensure that recording is enabled on BOTH tracks.
 - e. Ensure that input monitoring is enabled.

I want to monitor my mix with headphones.

- A. Plug in your $\frac{1}{4}$ inch jack headphones to the Headphone port located on the MOTU 828x
 - a. If you need a headphone -> $\frac{1}{4}$ inch jack adapter, feel free to ask any studio tech on site and we'll gladly let you borrow one for the day.