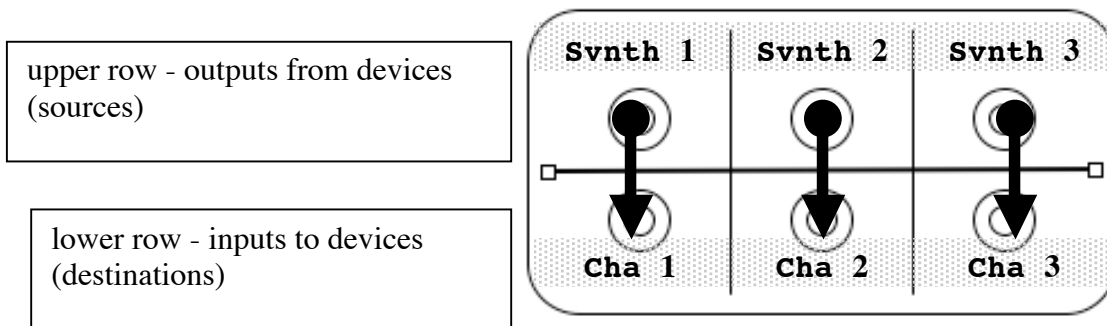


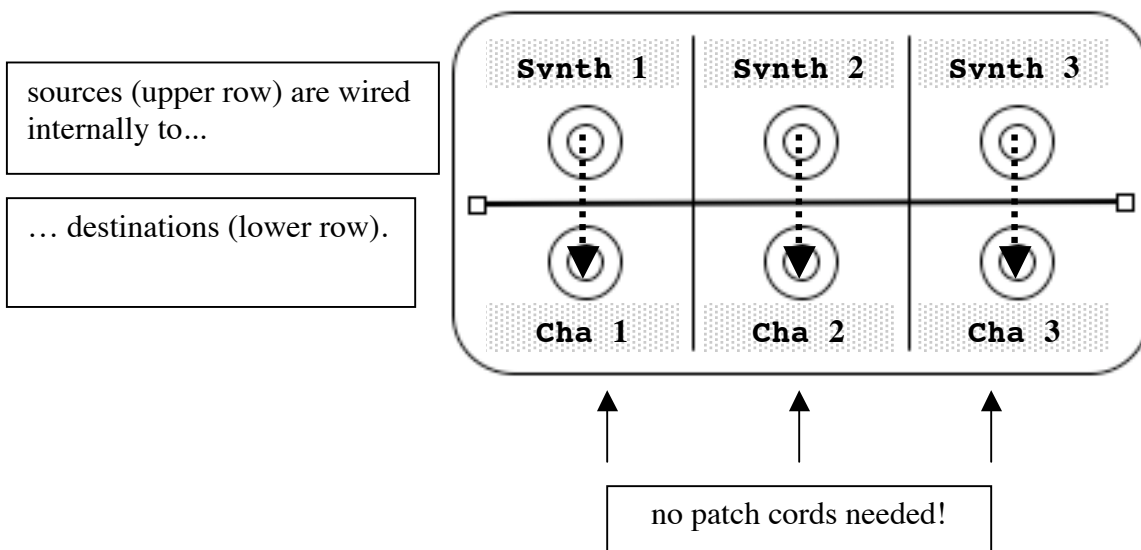
Audio Patchbays

In a recording studio, you connect your gear in a way that's most useful, most of the time. But sometimes you need to change the setup. It's nice to be able to do so without rewiring the whole studio. You can do this with a *patchbay*. A patchbay has two rows of jacks on the front and matching connectors on the back. The outputs and inputs of the equipment are wired into the back of the patchbay using long cables. Then you use *patch cords* on the front to reconfigure your setup. You can route any *source* (output, usually the upper row) to any *destination* (input, usually in the bottom row).



In the patchbay above, the outputs of the synth appear at the upper jacks (also called *patch points*), and the inputs to the mixer channel are available at the lower jacks. If you connect a patch cable between Synth 1 and Cha 1, your synth will feed channel 1 of the mixer. This might end up looking like spaghetti, if you have to patch everything just to get sound happening. So there's a solution. The vertical pairs can be wired together internally. This internal wiring is called *normaling*.

In a *normalled* patchbay, each vertical pair is connected internally, often by soldering. Then, even if no patch cords are inserted on the front, the signal will flow from the top to the bottom, through the internal connection.

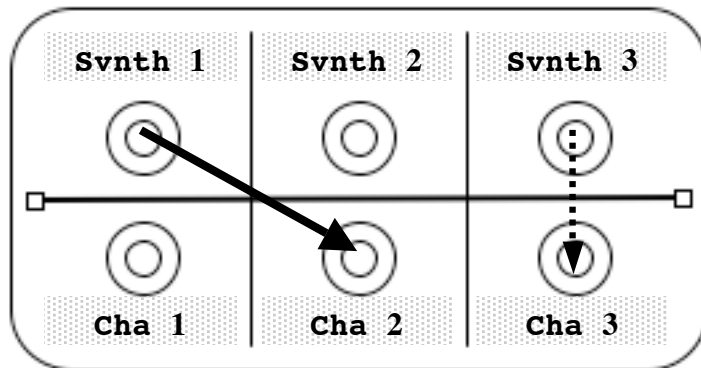


The beauty of normalling is that you use far fewer patch cords. You only need a patch cord when you want to change the default setup. When you do use a patch cord, the patchbay will respond in different ways, depending on the normalling. There's full-normal, half-normal, and non-normal.

Full-Normalled

If you insert a patch cable into the Synth 1 jack, you break the internal connection between Synth 1 and Cha 1.

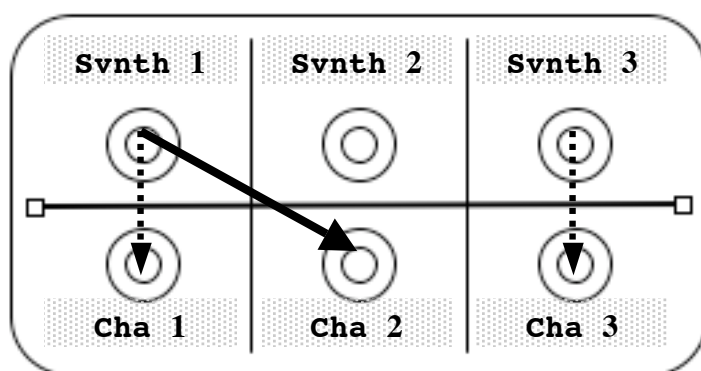
Synth 1 is now feeding the input of Cha 2
the normal connection between Synth 1 and Cha 1 is broken
Cha 1 has nothing coming in, and Synth 2 goes nowhere!



Half-Normalled

If you insert a patch cable into the Synth 1 jack, you retain the internal connection between Synth 1 and Cha 1. This is a kind of 'Y' connection.

the normal connection between Synth 1 and Cha 1 is still good.
Synth 1 now feeds the inputs of both Cha 1 AND Cha 2. Synth 2 still goes nowhere!



Non-Normalled

The upper and lower patch points are not connected internally. So you MUST use patch cords to create connections between the patchpoints.

