

## Patch Bay Normalling

The word 'Normalling' describes the way a patchbay has been wired. There are two common variations of normalling - 'Half Normal' and 'Full Normal'.

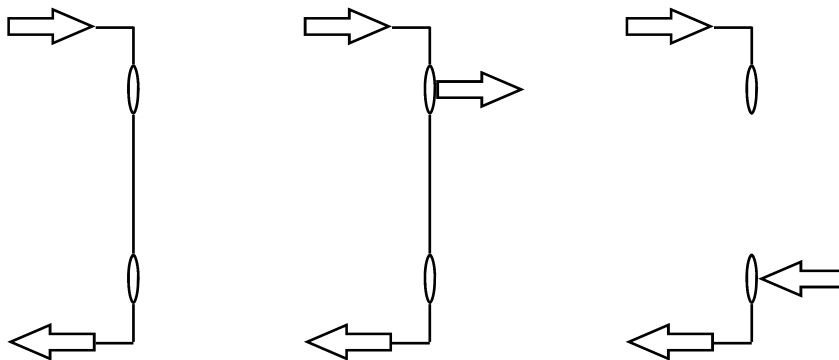
Here are the differences and how they are used.

Imagine a patch bay with a row of outputs on the top and a row of inputs along the bottom. With no normalling, to connect an output (top) to an input (bottom) you need to use a patch cable plugged into the appropriate holes. With normalling, each of the top row of holes is already connected to the hole directly beneath so no cable is required. Using this idea, you can design the patch so that each output (top) is placed above the input (bottom) that it would normally need to be connected to - hence the name. The problem with this arrangement is that if you need the output (top) to go to somewhere other than the input (bottom) directly below it, then you need to somehow disconnect (or break) the normalised connection described above. This is where half and full normalling comes in.

A patch bay is constructed using switched connectors. When you insert a jack plug the switch is activated and can be wired to break the normal connection.

## Half Normalling

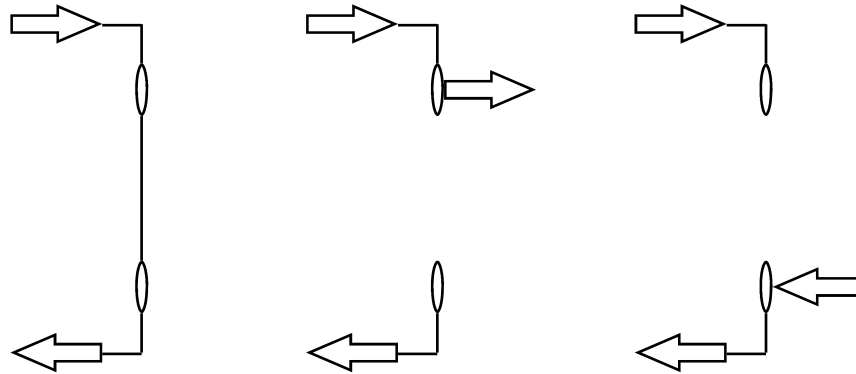
- A jack into the top row will **not** break the normalling, a jack into the bottom row **will**.



A jack inserted into the top row will effectively 'split' the signal so you can send it to an additional second input such as another effects chain. A jack into the bottom row will, however, break the connection. It is sometimes useful or necessary to do this deliberately to disconnect a cable - this is known as dead-patching.

## Full Normalling

- A jack into either row will break the normalling to the other.



When you insert a jack into the top row, you route the signal elsewhere without it also going to the normal input. That normal input is now free to be used by something else at the same time.

## No Normalling

There are some patch bays where you don't want the top and bottom rows to ever be connected together - such as an FX rack patch. In this situation the normalling is not used at all and all connections must be patched with a patch chord.

There's no doubt that understanding the signal path can help you to get the best out of your equipment so I hope that this article has explained some of the ways to use your normalised patch bay.