# D3MIX MANUAL
# (maffez, January 2023)

D3MIX is a triple attenuator/mixer/switch. You have three identical channels with a set of I/O and a knob. As this module is entirely passive, all I/O are bidirectional, which means they can be an input OR an output.

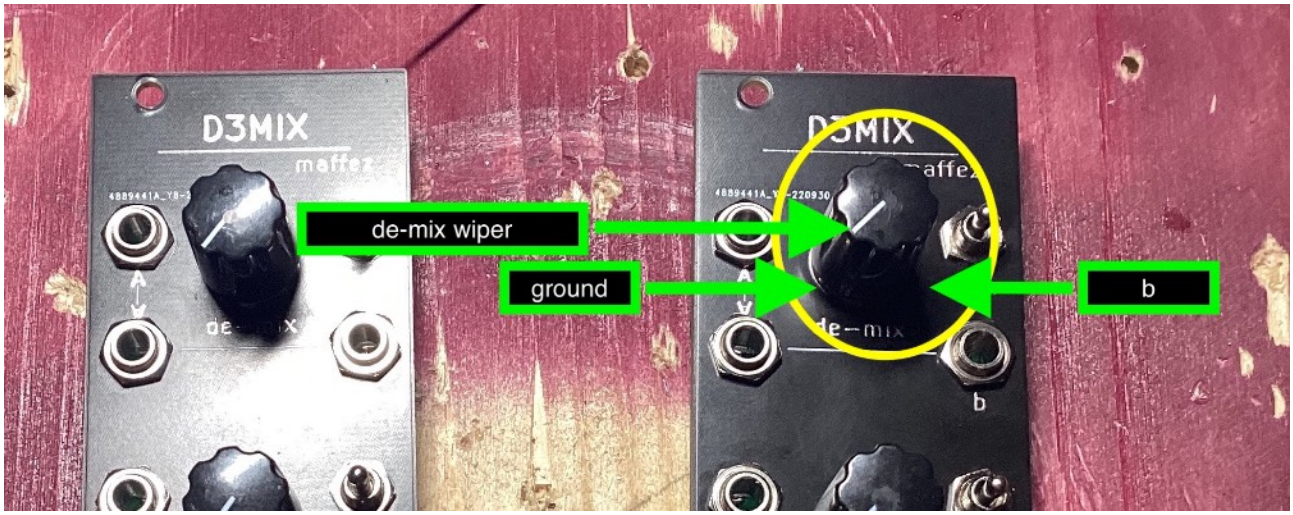
How all the different elements of a channel relate to each other is set by a three-setting switch called “b/n”.


One exception is that sockets A-A are always hardwired, regardless of how “b/n” is switched. Why, we seen a moment when..


…we have a look at the operation modes “b/n” let’s us do…

## OPERATION MODES (SET by “B/N”)

**1)** “**b/n” switch up**: A-A are hardwired. Any signal at A-A is connected to the wiper of the “de-mix” knob. At the leftmost knob position, you drain the A-A signal to ground. At the rightmost knob position, you feed the A-A signal to socket “b”. THE WHAT?!?…

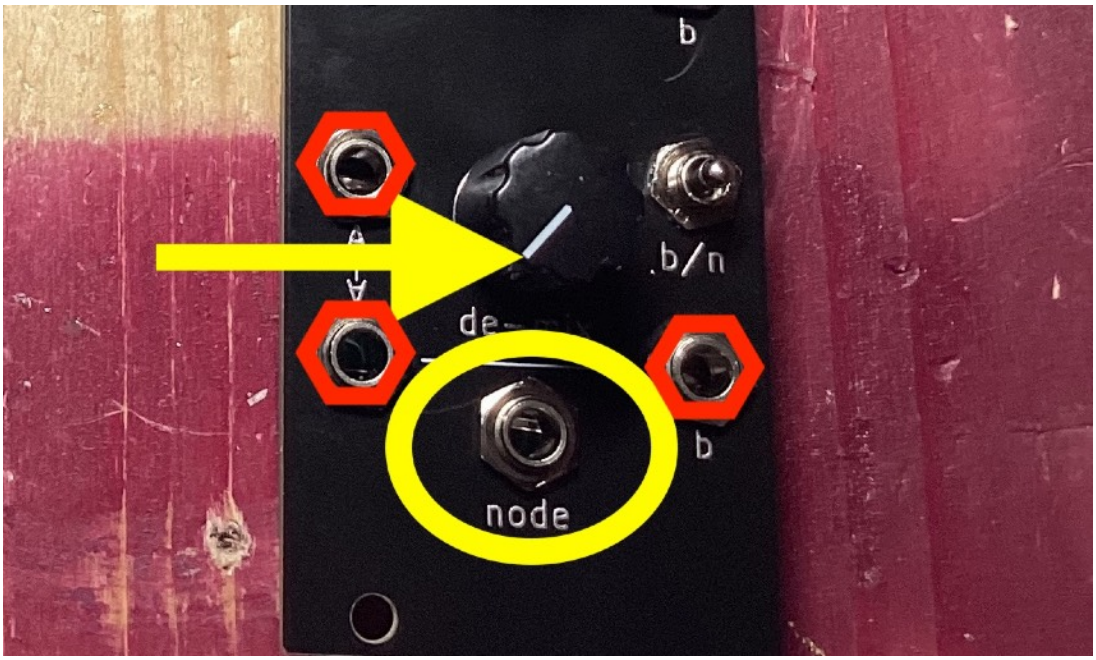



**Example 1**: Let’s **illustrate** this by building an **asymmetrical modulator**. Take an LFO and two filters or VCOs. Patch the LFO output to A and use the **other A** as an output and patch that to the vibrato/cutoff input of your **first** VCO or VCF. Patch b to the vibrato/cutoff input of your **second** VCO or VCF. Now, switch b/n is up and de-mix knob is all the way left = no modulation on both VCOs/VCFs. Slowly pull knob to the right and… the first VCO/VCF will start vibrating and then the second will join in until both are at full swing.

**Example 2**: My signal is too hot? Patch A as input and the other A as output and drain as per taste. More examples later…

**2) b/n switch in middle**: A-A are hardwired and the rest is disconnected. Lame!!! But useful - dial in some asymmetrical modulation or signal draining as described in the example above. Using the switch in middle position, you can then switch this pre-set modulation routing on and off.

**3) b/n switch at bottom:** A-A and b sockets form a multiple. The signal at A-A-b is present at the wiper of the “de-mix” knob. Turning the knob to the LEFT mixes this signal to the “node” socket at the bottom of the module.




**Example 3**: As you have three channels, you can use this mode as a simple 3-1 mixer. Plug a different signal into the b of each of the three channels and pull each de-mix knob as per taste.

**Example 4:** A complex signal splitter can be patched by feeding a signal into the node socket. Set the three knobs to different settings. Now switch on the different channels and hear how you get various modulation amounts at each channel’s A-A-b.

**Quick note on passive patching**: depending on your setting, the individual sockets of the D3MIX are in fact passive multiples. Although the vast majority of Eurorack modules and other audio equipment have output protection, this circumstance needs to be borne in mind especially when patching module outputs together (#nonlinear mixing wizardry). AFAIK some old Buchla Modules can run into trouble here, but generally other modules are safe (#noproblemifit’snotabuchla).

## More application examples:

**Attenuato**r: A = in and b = out. B/n switch up, your knob works as an attenuator.

**Multiple**: easy, just switch b/n down and you have a x3 mult. NB that when you switch more channels in this mode that there is only a maximum resistance of 1M between each channel when the de-mix knob is fully right. I.e. quick an dirty “almost” independent 3x3 multiple.

**On/Off switch**: plug A and b and turn knob fully right. Switch b/n between middle (off) and up (on).

**One knob dual modulation/audio send**. Source signal to A and destination 1 to other A. Second destination to b. Mode switch up. Your knob works as an asymmetrical send/modulator. Signal intensity on A will rise much faster than on b.

**Switched modulation intensity (fun!):** A = signal input, b = modulation output. When b/n in middle = modulation intensity = zero. When b/n = up, modulation intensity = how much you turn the knob towards b. When b/n is down = full modulation intensity. Try this with pitch CV into a VCO, for instance.

**Signal splitter**: switch up, plug input to b, pul knob right, plug outputs to A and A.

**Thee into one mixer**: plus signal into a-a or b of each channel. All b/n switches down. The three de-mix knobs mix your three sources into the node socket.

**Quite more is possible… explore and have fun!**