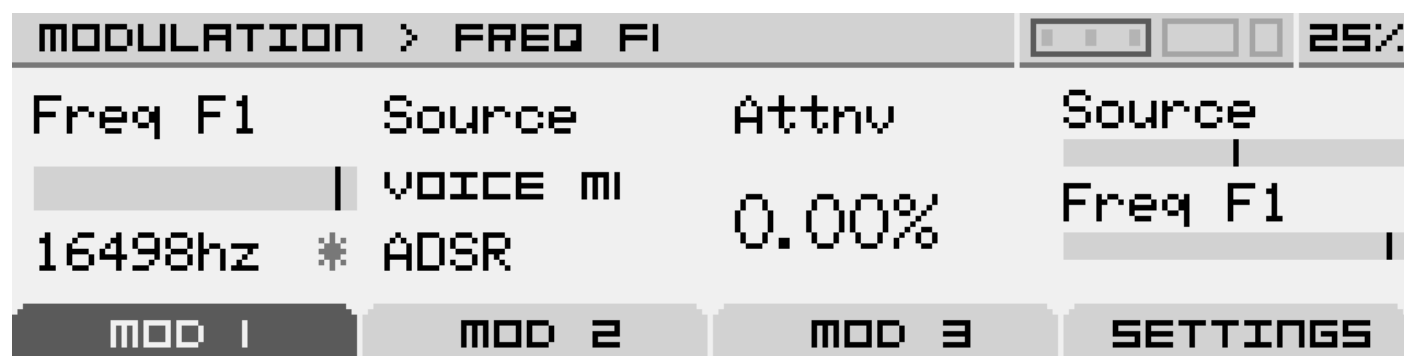


# Assign modulations

In the previous chapter, "[How modulations work](#)", we saw how to assign a new modulation to a parameter. As a reminder, simply press and hold button 1-4 located below the parameter you want to modulate. This opens the modulation assignment screen and parameter options.

## Modulation Assignment Screen



The modulation screen allows you to assign up to three internal or external modulations to a specific parameter on the module.

### Screen Structure

The screen is divided into four tabs:

- The first three tabs MOD 1 to MOD 3: each one lets you assign a modulation to the selected parameter.
- "Settings" tab: gives access to advanced settings specific to the selected parameter.

## Modulation Operation

A modulation is composed of a modulation source (Source) and an adjustable amount via a virtual attenuator (Attnv). The three modulations assigned to a parameter are summed together. Start by choosing a source from the list below:

### Available Modulation Sources:

SOURCE	Description
VOICE M1 to M4 <NAME>	Modulator loaded in slots 1 to 4 of the instrument <NAME> is the name of the modulator (ADSR, LFOWT, ...)

SOURCE	Description
VELOCITY (MIDI only)	Note velocity
KEYFOLLOW	Keyboard tracking based on the played note
MIDI AT (MIDI only)	MIDI Aftertouch control
MIDI MW (MIDI only)	MIDI Mod Wheel control
GLOBAL M1 to M4 <NAME>	Modulator loaded in global modulator slots 1 to 4 <NAME> is the name of the modulator (ADSR, LFOWT, ...)
EXTERNAL CV A to L	Uses module inputs (A-F) or expander inputs (G-L) as modulation sources
INTERNAL NOISE	Uses internal white noise generator as modulation source
MACRO 1...16	Project macros 1 to 16
VOICE 1...6 OUTPUT	Uses the voice audio output as modulation source
V1 to V6 M1...M4 <NAME>	Modulator loaded in slots 1 to 4 of a specific voice (1 to 6) <NAME> is the modulator name (ADSR, LFOWT, ...)  Allows cross-voice modulation

Then adjust the modulation amount using the Attnv parameter, which ranges from -200% to +200%.

### Advanced Parameters ("Settings" tab):

- **Smooth:** Smooths modulation to reduce clicks or noise caused by fast value changes.
- **Stepped** (available for certain parameters like ratios): Enables/disables value quantization, especially useful for FM operators.
- **MIDI Assignment:** Assign a MIDI Control Change (CC) to the parameter. Multiple parameters can be assigned to the same CC.

## Shortcuts

Shortcuts to internal modulators and their slot management are available directly from this screen, to avoid deep navigation into menus.

## Quick Access

While on a MOD 1 to MOD 3 tab, if the selected source is an internal modulator, click the encoder to instantly open the corresponding modulator. To return to the modulation screen, press the "Exit" button.

## Selecting a New Modulator

If the selected modulation slot is empty (EMPTY), click the encoder to select and assign a modulator to that slot.

## Replacing a Modulator

If you want to replace an internal modulator in an occupied slot, press and hold the encoder to swap it with another one.

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