

Baervaag

FM Synthesizer



Welcome!

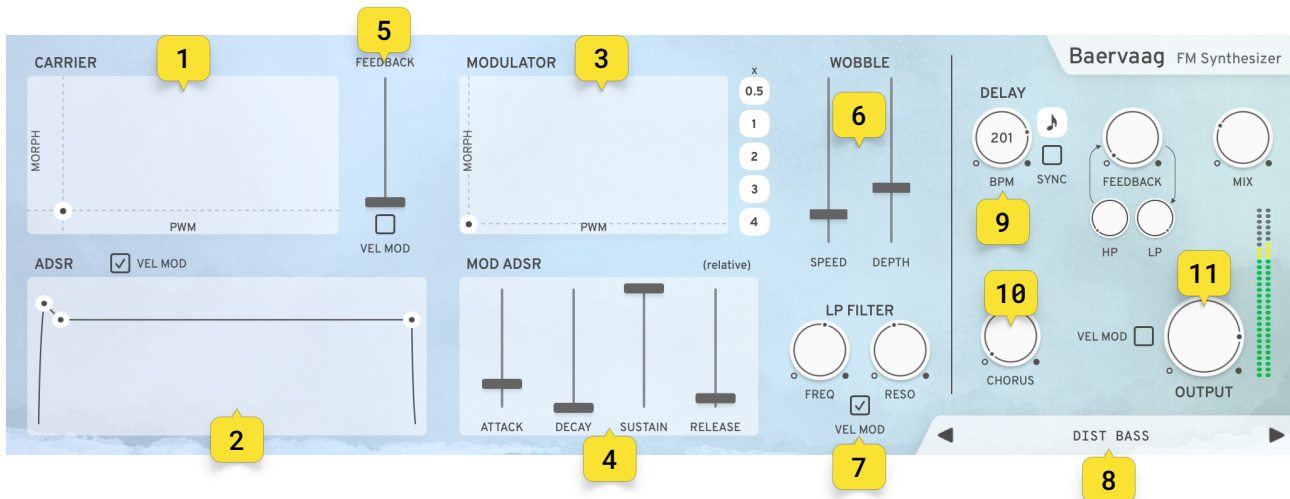
This is the user manual for **Baervaag**, an FM Synthesizer instrument plug-in available for iPad (AUv3 / Standalone) and Mac & Windows (AU/VST/AAX). It has been designed and developed by Klevgrand, a small studio in Stockholm, Sweden. Baervaag (Bärvåg = Carrier in Swedish) is a fairly simple FM synthesizer with one carrier and one modulator. The oscillator waveforms can be modified seamlessly between sine wave to pure square wave with PWM (pulse width modification).

LICENSING (DESKTOP ONLY)

Until unlocked, the plug-in will output 1 second of silence now and then. To unlock the full version, click the Demo label (top left corner) and type/paste your license key.

IPHONE VERSION

For screen size reasons, the iPhone version is slightly different than the desktop and iPad version. The controls are distributed over several views, which is switched between using the tab bar menu.



User interface

1. CARRIER OSCILLATOR

This XY pad controls pulse width modulation on the X axis and the wave shape on the Y axis (sine wave at the bottom and square wave at the top).

2. CARRIER ADSR

Controls the carrier oscillator envelope. If the "VEL MOD" checkbox is enabled, the attack time will be relative to MIDI velocity (high velocity makes the attack time shorter).

3. MODULATOR OSCILLATOR

The XY pad works exactly as the Carrier oscillators. The buttons to the right multiplies the frequency value. If a 440 Hz A is played and the button is set to "2 x" the Modulator oscillators output frequency will be 880 Hz.

4. MODULATOR RELATIVE ADSR

These sliders control the envelope of the Modulator oscillator and are relative to the Carrier ADSR. If all values of the sliders are in the middle, the Modulator envelope will be the same as the Carriers. Lower slider values make the ADSR values lower and higher values make them higher.

5. FEEDBACK

Controls how much the Carrier should be modulated by the Modulator. If "VEL MOD" is enabled, modulation is based on MIDI velocity and spans between 0 and the slider value.

6. WBL SPEED / WBL DEPTH

Adds a (pretty subtle) wobble effect on each note (alters pitch and amplitude). Wbl Speed controls the frequency and Wbl Depth controls how much "wobble" is going to be added.

7. FILTER (FREQ / RESO)

A LP-filter with resonance (frequency is based on the Carrier frequency). If "VEL MOD" is enabled, the frequency will be based on MIDI velocity.

8. DELAY

BPM knob + division* (the note button) sets the timing of the delay. Feedback defines how fast the delay will "loop back" into itself, after being run through the HP/LP filter (high pass/low pass). Mix sets the balance between the dry & wet signal.

*scrolls through 1/2, 1/4 dotted, 1/4, 1/8 dotted, 1/8, 1/16)

9. CHORUS

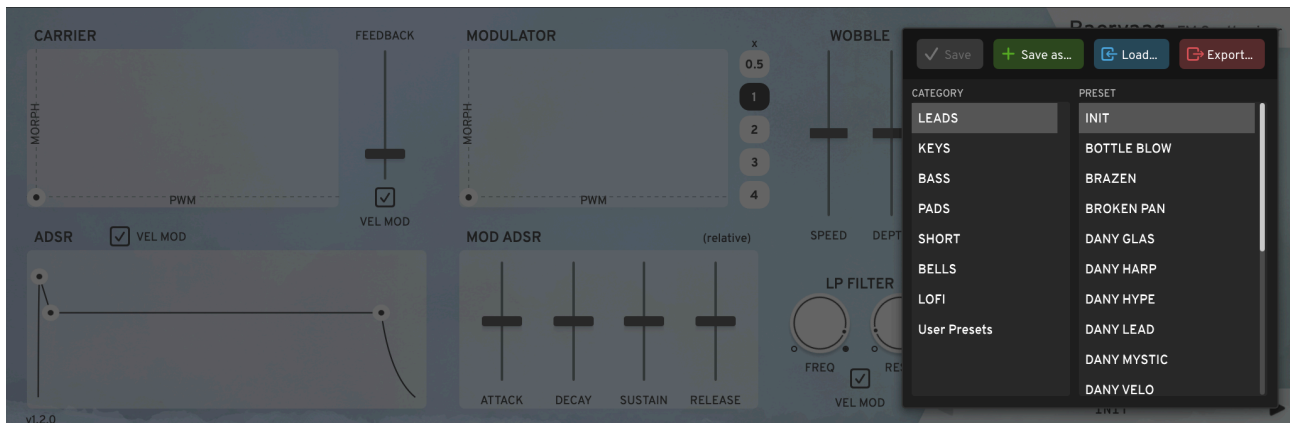
A minimalistic chorus

10. VOLUME

Main volume. If "VEL MOD" is enabled, the output volume will be based on MIDI velocity, spanning from 0 to the knob value.

11. PRESETS

Click the preset name to open the Preset Manager, which allows for storing and reading user created presets, as well as loading factory presets.



MIDI map

All parameters can be altered via MIDI messages:

CC #	Parameter	CC #	Parameter
07	Main Volume	30	Modulator PWM
19	ADSR Attack Velocity mod (on/off)	31	Modulator ADSR relative Attack
20	Filter Highcut Velocity mod (on/off)	32	Modulator ADSR relative Decay
21	Main Volume Velocity mod (on/off)	33	Modulator ADSR relative Sustain
22	Feedback Velocity mod (on/off)	34	Modulator ADSR relative Release
23	Carrier ADSR Attack	35	Feedback (Modulator vs Carrier)
24	Carrier ADSR Decay	36	Modulator Frequency multiplier
25	Carrier ADSR Sustain	37	Wobble speed
26	Carrier ADSR Release	38	Wobble depth
27	Carrier "Morph" (waveshape)	39	Highcut Frequency
28	Carrier PWM	40	Highcut Resonance
29	Modulator "Morph" (waveshape)	41	Chorus level

Specifications / System requirements

Mac	Windows	iOS
64 bit AU/VST/AAX plug-in macOS 10.10+ OpenGL	64 bit VST/AAX plug-in Windows 7+ SP1 or higher	AUv3 plug-in / Standalone iPad Air 2 or better iOS 9.3+

KLEVGR.