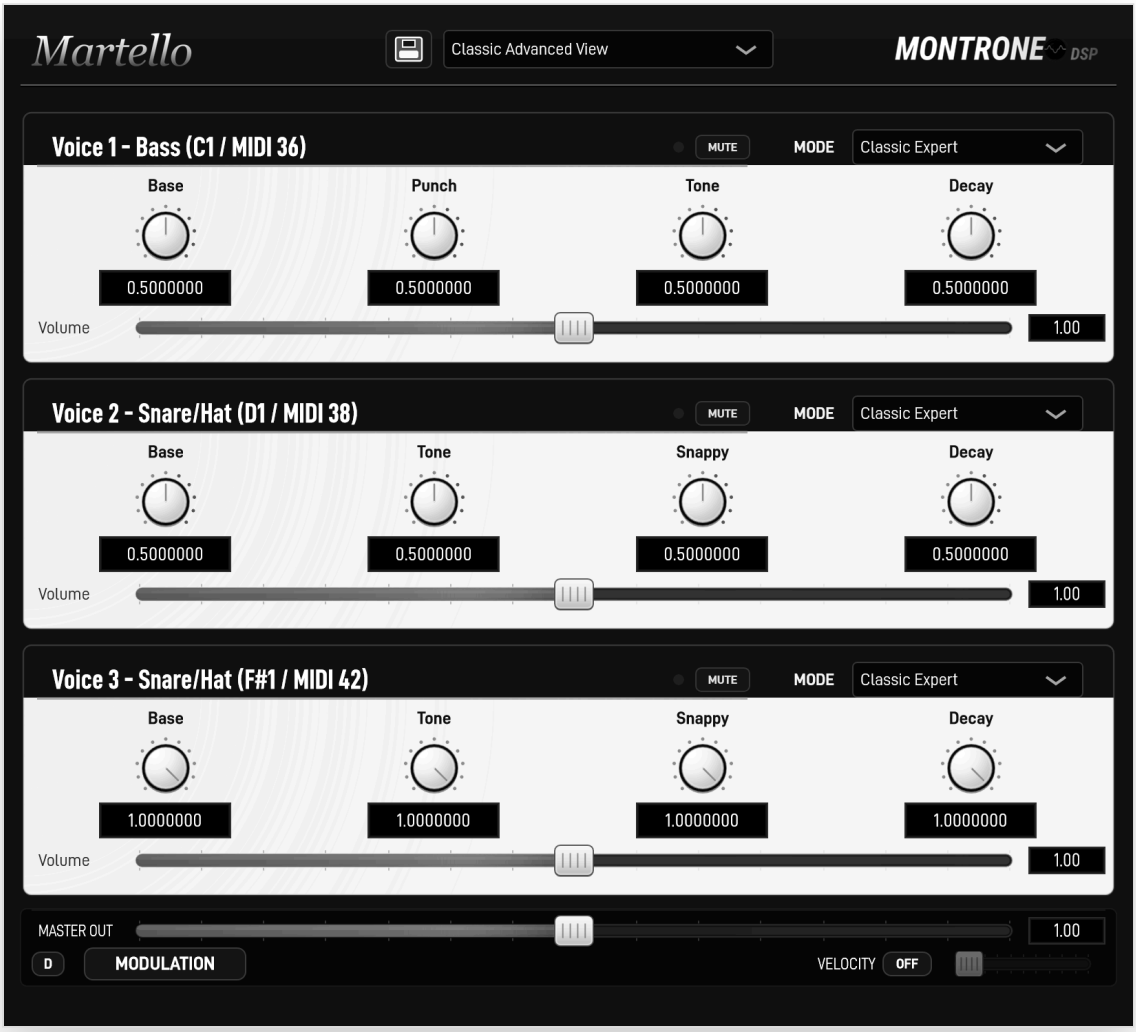
# *Martello*

DRUM SYNTHESIZER




# User Manual

Version 1.1.2

MONTRONE DSP

# Precautions

### Monitoring level

Martello can produce fast transients, strong low-frequency material, and bright synthetic percussion. Begin with your monitor volume low, then raise the level gradually after confirming that the output is stable.

Use particular care with headphones, subwoofers, resonant room systems, and heavy limiting or saturation after the plugin.

### Speaker and subwoofer safety

Drum synthesis can create energy outside the range that is obvious by ear. When designing long kicks, noisy snares, metallic percussion, or extreme resonant settings, watch your meters and use normal studio gain staging.

For live or high-power systems, test new presets at low level first.

### Plugin loading and scanning

Install the correct plugin format for your operating system and DAW. After copying or installing the plugin, rescan your plugins from the host if Martello does not appear immediately.

If a DAW has cached an older version, remove the old plugin from the scan path and perform a full rescan.

### Host projects and data handling

Presets, parameter values, and routing states are normally saved inside your DAW project. Before replacing a plugin version in an active project, save a backup copy of the session.

MontroneDSP cannot be responsible for lost DAW sessions, overwritten presets, or host-side project corruption caused by incorrect file handling.

### Activation

Martello uses license activation. Keep your license key in a safe place and do not share it publicly. Activation requires a valid license and an internet connection at the time of authorization.

Each license permits activation on the number of machines stated at purchase.

### Operating environment

Use Martello on a supported 64-bit system and a compatible 64-bit DAW. Performance can vary depending on buffer size, sample rate, CPU load, plugin bridging, and the host's multi-output implementation.

### Care with extreme settings

Some model and modulation combinations can produce sharp, aggressive, or unstable textures by design. If you are exploring experimental settings, lower the output level before changing models, presets, or routing.

### Trademarks

Company names, product names, plugin formats, and DAW names are trademarks or registered trademarks of their respective owners. They are used only for compatibility and descriptive purposes.

> **Tip:** when testing a new preset, start with the plugin output low and bring the level back up only after checking the transient and low-end response.

**Thank you for choosing MontroneDSP Martello.**
To get the best results from the instrument, read the first pages before using the plugin in an important session. Martello is direct and fast, but its model selection, voice layout, and routing options become much more powerful once the basic structure is clear.

# About this manual

## How this manual is organized

| | |
|---|---|
| **Operation** | Explains the basic workflow: loading the plugin, triggering voices, selecting models, editing sounds, using presets, and routing outputs. |
| **Drum voices** | Describes the three-voice Martello layout and the six-voice MartelloX2 layout. |
| **Drum models** | Explains the model families, including Classic, Digital, Analog, Wood, Clap, Ride, Cymbal, and other synthesized percussion models. |
| **Controls** | Describes the main voice controls such as Tune, Punch, Tone, Snappy, Decay, Level, modulation, and routing controls. |
| **MartelloX2** | Covers the dual-module interface, six playable voices, multi-output routing, and summed main output behavior. |
| **Appendices** | Provides installation notes, activation information, MIDI reference, troubleshooting, and version-specific notes. |

## Printing conventions

**Controls [ ]**

Controls, buttons, or visible interface elements are shown in square brackets, for example [MODEL], [DECAY], or [SEND ALL TO MAIN].

**Parameter names “ ”**

Parameter names shown by the host or stored in automation may appear in quotation marks, for example “Voice 1 Level”.

**Bold type**

Important panel areas, product names, model names, and procedures are printed in **bold type**.

**Steps 1, 2, 3...**

Numbered steps are used when an operation must be performed in order.

**Notes and advice**

Short notes explain practical issues such as host scanning, gain staging, preset recall, or multi-output routing.

## Host display differences

Some DAWs label MIDI octaves differently. A note described as C1 in this manual may appear as C2 or C3 in another host. The MIDI note number is the reliable reference.

# Introduction

## Overview

Martello is a synthesized drum instrument designed for fast, physical electronic percussion. Every sound is generated in real time. Every sound is generated by drum synthesis models that respond directly to MIDI, voice parameters, model selection, and preset recall.

Martello is built for producers who want immediate drum-machine energy with enough control to shape kicks, snares, hats, toms, wooden strikes, metallic percussion, claps, and experimental synthetic hits.

Martello includes three playable drum voices.

MartelloX2 expands the same concept into two linked Martello modules, giving you six playable drum voices, a larger interface, and multi-output routing for more detailed mixing inside your DAW.

## 1. Product Versions

### Martello

Martello is the focused three-voice version.

It is designed for:

- Kicks
- Snares
- Hats
- Toms
- Percussion
- Tuned strikes
- Synthetic drum-machine sounds
- Fast custom drum kit creation

### MartelloX2

MartelloX2 contains two Martello-style drum modules in one plugin.

It provides:

- Six playable voices
- Two independent drum modules
- Extended kit design
- Layered percussion
- Multi-output routing
- Optional summed main output

This version is ideal when you want to build a fuller drum kit inside one plugin instance.

## 2. Drum Voices

### Martello Voice Layout

Martello has three drum voices:

- Voice 1: kick / low drum voice
- Voice 2: snare / hat / mid percussion voice
- Voice 3: hat / percussion / extra drum voice

The exact sound depends on the selected drum model.

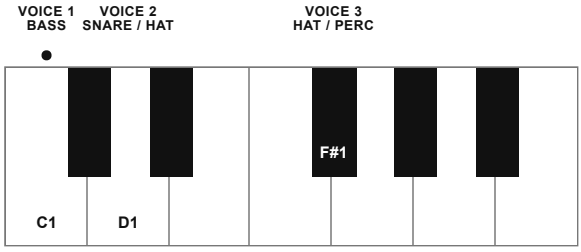
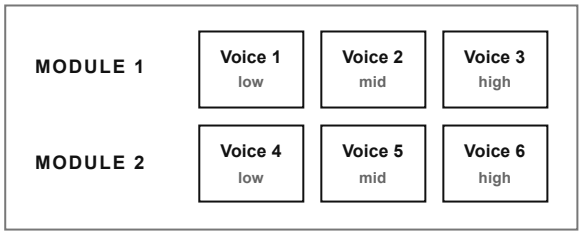



FIG. 1 - MARTELLO DEFAULT MIDI NOTE MAPPING

### MartelloX2 Voice Layout

MartelloX2 has six drum voices split across two modules.




Each voice can be shaped independently, and MartelloX2 can route voices to separate outputs in supported DAWs.

### MartelloX2 MIDI Note Mapping

MartelloX2 uses the Martello three-voice mapping for Module 1, plus three additional notes for Module 2.

| VOICE | NOTE | ROLE |
|---|---|---|
| **Voice 1** | **C1** | Bass / low drum |
| **Voice 2** | **D1** | Snare / hat |
| **Voice 3** | **F#1** | Hat / percussion |
| **Voice 4** | **B0** | Bass / low drum |
| **Voice 5** | **D#1** | Snare / hat |
| **Voice 6** | **A#1** | Snare / hat |

Use MIDI note numbers as the final reference if your DAW displays octave names differently.

# Operation

## Basic Workflow

Martello is designed to be played immediately. Load the plugin, send it MIDI notes, and it responds immediately with fully synthesized drum sound.

1. Insert Martello or MartelloX2 as an instrument on a MIDI or instrument track.
2. Trigger the default voices from your keyboard, controller, or piano roll.
3. Select a drum model for each voice from its [MODE] menu.
4. Shape the sound with the voice controls.
5. Save the result as a preset, or move on and route your outputs.

### Loading the plugin

Martello opens directly to its default kit. Module 1 (or the single module in Martello) is active immediately, with all voices set to a neutral starting sound so you can begin playing before making any changes.

### Triggering voices

Each voice answers to its own default MIDI note, shown in the voice header, for example **Voice 1 – Bass (C1 / MIDI 36)**. Play or program notes on the host track to trigger each voice independently. See **Drum Voices** for the full note map.

### Selecting a drum model

Every voice has its own **[MODE]** selector, at the top right of the voice panel. Click the field to open the model list for that voice, then choose a model to change the synthesis engine it uses.

Switching models changes which controls are active and how they respond, since each engine maps its parameters differently. The full list of available models is covered in **Drum Models**.

### Editing a sound

Drag a knob to change its value, or double-click its value field to type an exact number. The **Volume** slider sets the level of the voice within the kit.

### Using presets

The disk icon at the top left of the interface opens the preset menu, where kits can be saved and recalled. A preset stores voice parameters, model selection, and routing state together.

### Routing outputs

The **MASTER OUT** fader sets the overall plugin level. MartelloX2 can additionally route individual voices to separate outputs in DAWs that support multi-output instruments.


FIG. 2 — VOICE 1 MODE SELECTOR OPEN, SHOWING THE MODEL LIST

# Drum Models

## 3. Drum Models

Martello is organized around drum models. A model changes the synthesis behavior of the selected voice.

Some models are direct and classic. Some are digital and FM-based. Some are physical, wooden, metallic, or experimental.

The goal is not to imitate one fixed drum machine. The goal is to give you a compact set of playable synthesized drum engines that can move between familiar electronic percussion and more personal sound design.

Each model has its own response and control behavior. The same knob may feel different depending on the selected model, because the control is mapped musically to the synthesis engine currently in use.

## 4. Classic Models

The Classic model family is the legacy core of Martello.

These models are designed for immediate electronic drum synthesis: punchy bass drums, snare and hat material, sharp transients, and classic machine-style percussion.

They are simple to control, but very responsive. Small changes in tuning, tone, punch, snappy amount, or decay can strongly change the final drum character.

Martello includes two Classic model types:

- **Classic 808** — a direct, rounded drum-machine voice for fast, punchy kicks, snares, and hats.
- **Classic Expert** — the same engine with an extended control range, for sharper transients and wider tuning and decay reach.

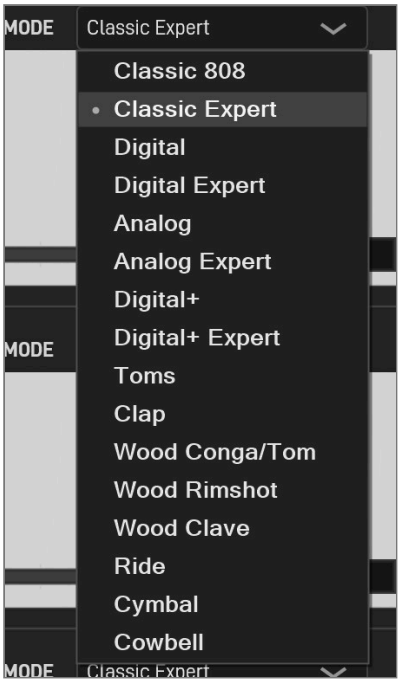



FIG. 3 — MODE MENU DETAIL, FULL MODEL LIST

### Model list

Every voice's [MODE] menu opens the same list, shown below in menu order.

| MODEL | FAMILY |
|---|---|
| **Classic 808** | Classic |
| **Classic Expert** | Classic |
| **Digital** | Digital |
| **Digital Expert** | Digital |
| **Analog** | Analog |
| **Analog Expert** | Analog |
| **Digital+** | Digital+ |
| **Digital+ Expert** | Digital+ |

| MODEL | FAMILY |
|---|---|
| **Toms** | Percussion |
| **Clap** | Percussion |
| **Wood Conga/Tom** | Wood |
| **Wood Rimshot** | Wood |
| **Wood Clave** | Wood |
| **Ride** | Cymbal |
| **Cymbal** | Cymbal |
| **Cowbell** | Percussion |

The active model for a voice is marked with a dot in the list and shown in its [MODE] field.

## 5. Classic Control Behavior

The exact meaning of the controls changes depending on whether you are using Classic or Classic Expert, and depending on the selected voice.

The Classic family is designed around compact drum-machine behavior. The low voice is normally used for bass drum material, while the snare/hat voices can move between snare-like and hat-like percussion depending on the tone and noise settings.

### Classic

Classic uses a reduced two-knob control layout.

The controls are mapped to the most important musical movements of the selected voice. This means you can quickly shape the drum without needing to think technically.

For bass drum behavior, the controls usually focus on body, tone, punch, or decay-like movement. For snare and hat behavior, the controls usually focus on tone, snappy/noise amount, brightness, or variation.

Classic is the best choice when you want speed and strong defaults.

### Getting Hi-Hat Sounds in Classic

In the Classic family, hi-hat behavior is reached from the snare/hat voices.

To get a hi-hat-style sound, use Voice 2 or Voice 3 in a Classic snare/hat mode and push both:

- Tone to maximum
- Snappy to maximum

With Tone and Snappy both at maximum, the voice locks into a fixed hat-style character. Reducing Tone, Snappy, or both brings the voice back toward a snare-style sound.

Decay still shapes how long the hit rings, but it does not change whether the sound reads as a hat or a snare — that comes from Tone and Snappy alone.

### Classic Expert

Classic Expert exposes more of the synthesis behavior.

Typical Classic Expert controls include:

- **Frequency / Tune**
- **Punch / FM Amount**
- **Tone / High-Frequency Content**
- **Snappy / Noise Character**
- **Decay**

**Frequency / Tune.** Controls the base pitch of the drum voice. For bass drums, this sets the fundamental body of the kick. For snare and percussion sounds, it changes the perceived drum size and tension. Lower settings create deeper, heavier sounds; higher settings create tighter, smaller, sharper percussion.

**Punch / FM Amount.** Controls the pitch movement or frequency modulation at the beginning of the hit. On kick-style sounds, this behaves like punch or transient impact. On snare-style sounds, it can change the body tone and attack energy. Higher values create more aggressive movement and a stronger hit.

**Tone / High-Frequency Content.** Controls brightness and upper harmonics. For kick sounds, Tone can make the attack more present or more rounded. For snare and hat sounds, it can increase brightness, bite, and noise detail.

**Snappy / Noise Character.** Controls the noise component of snare and hat-style sounds. Higher values create a brighter, noisier, more wire-like character. Lower values create a more tonal, drum-body focused sound.

**Decay.** Controls how long the drum rings or sustains. Short decay values create tight, dry hits. Longer values create more body, tail, and resonance.

## 6. Digital Models

The Digital model family is the FM/percussive side of Martello.

These models are designed for sharper synthetic percussion, preset-morphed digital drum tones, metallic attacks, and more angular electronic hits.

Martello includes two Digital model types:

- **Digital**
- **Digital Expert**

### Digital

Digital is the fast two-knob version of the digital percussion engine, designed for quick results using a compact morph-and-variation control style. Instead of exposing the full synthesis structure, Digital lets you move through tuned drum characters and variations quickly.

For kick-style voices, the two controls move through bass drum shapes and their variations. For snare-style voices, they move through snare drum shapes and their variations. This makes Digital useful when you want fast FM-style percussion without deep editing.

Typical use: digital kicks, synthetic snares, FM-style percussion, metallic short hits, electro accents, sharper techno percussion, quick digital kit building.

### Digital Expert

Digital Expert opens the digital percussion engine with a wider control range: frequency, FM intensity, envelope decay, and color. Use it when you want more control over pitch, modulation, attack, tail, and the balance between clean tone, noise, and distortion.

Typical use: complex FM hits, sharper digital drums, hard transient percussion, metallic synthetic tones, aggressive accents, distorted kick-style sounds, noisy snare-style sounds, experimental percussion.

## 7. Digital Control Behavior

The exact control behavior depends on the selected voice and whether you are using Digital or Digital Expert.

### Digital

Digital uses a reduced two-knob layout. The controls are:

- **Morph**
- **Variation**

**Morph.** Moves through the main digital drum shape. On kick-style voices, Morph moves through bass drum characters; on snare-style voices, through snare drum characters. Use it to find the basic identity of the sound before fine-tuning.

**Variation.** Changes the selected digital drum shape — attack, body, brightness, FM character, noise balance, or decay behavior, depending on the voice. Use it to move from a clean version of the sound to a sharper, rougher, brighter, or more unstable version.

### Digital Expert

Digital Expert exposes more of the engine. The controls are:

- **Frequency / Tune**
- **FM Intensity**
- **Decay**
- **Color**

**Frequency / Tune.** Controls the perceived pitch or body of the digital percussion. Lower values create heavier or larger hits; higher values create tighter, smaller, brighter percussion.

**FM Intensity.** Controls the strength of frequency modulation. Lower values create cleaner, more tonal sounds; higher values create more complex, metallic, aggressive, or unstable attacks.

**Decay.** Controls the combined decay behavior of the hit, affecting both the tonal movement and the amplitude tail. Short values create tight, percussive hits; longer values create more sustained, metallic, or animated digital percussion.

**Color.** Changes the final character of the digital oscillator path. Near the center, the sound is more neutral. One direction pushes toward more noise, useful for snare-like and rough percussive material; the other pushes toward more distortion, useful for harder kick-style sounds and aggressive machine tones. Use Color as the final character control after setting the pitch, FM intensity, and decay.

## 8. Analog Models

The Analog model family is the warmer, rounder side of Martello.

These models are designed for punchy drum-machine body, softer synthetic movement, snappy snares, and organic-feeling hats. Compared with the Digital family, Analog is less sharp and more rounded. Compared with Classic, it gives a more modern control layout while keeping an immediate electronic drum character.

Martello includes two Analog model types:

- **Analog**
- **Analog Expert**

### Analog

Analog is a focused four-control model. It is not the same kind of two-knob layout as Classic or Digital — instead, each voice gives a compact set of controls for shaping analog-style bass, snare, or hat behavior quickly.

Use Analog when you want warmth and body without opening the full expert panel.

Typical use: rounded kicks, snappy snares, organic electronic hats, warm tom-like percussion, classic electronic drum grooves, drum-machine sounds with more body than Digital.

### Analog Expert

Analog Expert opens the Analog engine with a deeper control range, adding extra shaping for attack, drive, snare character, snap shape, hat spread, and more aggressive tone design.

Use Analog Expert when you want the same warm family, but with more sculpting range and more extreme sound design.

Typical use: driven kicks, detailed snare design, wide analog-style hats, saturated percussion, unstable drum-machine tones, deeper analog-style editing.

## 9. Analog Control Behavior

The exact control behavior depends on the selected voice. Analog is designed around three voice roles: bass/low drum, snare/mid drum, hat/high percussion.

### Analog Bass Voice

The bass voice is designed for warm kick and low drum material. Typical controls include:

- **Pitch**
- **Punch**
- **Tone**
- **Decay**

**Pitch.** Controls the tuning and body size of the bass drum. Lower settings create deeper and heavier drums; higher settings create tighter, smaller, more percussive bass hits.

**Punch.** Controls the attack weight of the drum. Higher values create more impact at the beginning of the sound. Use Punch to make the kick speak more clearly without simply raising the level.

**Tone.** Controls the brightness and body color. Lower values create a darker and softer sound; higher values create a more present attack and stronger upper character.

**Decay.** Controls the length of the drum. Short values create tight kicks; longer values create more body, boom, and sustain. Use long decay carefully when the sound is close to the sub range.

### Analog Snare Voice

The snare voice is designed for analog-style snare and mid percussion. Typical controls include:

- **Body**
- **Tone**
- **Snappy**
- **Decay**

**Body.** Controls the weight and thickness of the snare. Lower values create a thinner, lighter snare; higher values add more drum body and midrange weight.

**Tone.** Controls the brightness and color of the snare. Use lower values for darker snares and higher values for more cut.

**Snappy.** Controls the noisy, crackling component of the snare. Higher values create more snap and noise; lower values create a more tonal, body-focused snare.

**Decay.** Controls the length of the snare tail. Short values create tight electronic snares; longer values create more ring, body, and sustain.

### Analog Hat Voice

The hat voice is designed for high percussion and organic electronic hats. Typical controls include:

- **Metal**
- **Tone**
- **Noise**
- **Decay**

**Metal.** Controls metallic brightness and high-frequency body. Higher values create a more metallic hat character; lower values create a softer and less bright high percussion sound.

**Tone.** Controls the overall brightness. Use Tone to place the hat behind the groove or bring it forward in the mix.

**Noise.** Controls the noisy texture of the hat. Higher values create more open, airy, or noisy percussion; lower values create a tighter and more controlled sound.

**Decay.** Controls the hat length. Short decay creates closed-hat behavior; longer decay creates more open or sustained high percussion.

### Analog Expert Extra Controls

Analog Expert adds deeper controls depending on the voice. These may include Attack, Drive, Modes, Snap Shape, Spread, Metal, and Noise.

**Attack.** Changes how quickly the drum speaks at the beginning of the hit. Shorter settings create a tighter, more immediate response; longer settings can soften the transient or make the hit bloom more gradually.

**Drive.** Adds weight, edge, and saturation. Use moderate Drive to make a kick or hat feel more pushed. High Drive can become aggressive and should be balanced with voice level.

**Modes.** Changes the internal snare character. Use Modes before reaching for EQ, since each mode can give the snare a different starting personality.

**Snap Shape.** Fine-tunes the snare snap envelope — use it to adjust how the noisy attack behaves at the start of the sound.

**Spread.** Controls width and diffusion on hat-style material. Higher Spread can make high percussion feel wider.

## 10. Digital+ Models

Digital+ is the stronger and more modern digital percussion family in Martello.

Compared with Digital, Digital+ is heavier, more forward, and more intense. It is designed for strong transients, club-weight drums, sharper percussion, and sounds that need to sit clearly at the front of a mix.

Martello includes two Digital+ model types:

- **Digital+**
- **Digital+ Expert**

### Digital+

Digital+ is a focused four-control model — more detailed than the simple two-knob Digital model, but still faster than the Expert version.

Use Digital+ when you want a modern electronic drum sound with more power, more attack, and more presence.

Typical use: hard digital kicks, bright synthetic snares, sharp hats, FM-style percussion, modern techno drums, electro and IDM accents, forward club percussion.

### Digital+ Expert

Digital+ Expert opens the most aggressive digital family with a deeper control range, adding controls for click, feedback, snap, resonance, spread, grit, and more extreme digital shaping.

Use Digital+ Expert when you want strong transients, metallic movement, unstable digital tones, or aggressive synthetic percussion.

Typical use: complex FM-style hits, hard transient kicks, sharper snares, metallic percussion, gritty hats, experimental digital drums, high-impact club sounds.

## 11. Digital+ Control Behavior

Digital+ uses different control behavior depending on the voice role. The family is powerful and can dominate a mix quickly — match levels when comparing it with Classic, Analog, or regular Digital models.

### Digital+ Bass Voice

The bass voice is designed for strong digital kicks and low percussion. Typical controls include:

- **Pitch**
- **FM**
- **Color**
- **Decay**

**Pitch.** Controls the tuning and body of the kick. Lower values create heavier, deeper drums; higher values create tighter, smaller, more percussive hits.

**FM.** Controls the amount of digital frequency movement or modulation. Lower values create cleaner and more tonal bass drums; higher values create more synthetic, metallic, or aggressive movement.

**Color.** Controls the harmonic edge and final character of the sound. Use it to move the kick from cleaner digital body to a more colored, sharper, or rougher tone.

**Decay.** Controls the length of the bass drum. Short values create tight, controlled hits; longer values create more body, sustain, and low-frequency weight.

### Digital+ Snare Voice

The snare voice is designed for weighted digital snares and sharp mid percussion. Typical controls include:

- **Body**
- **Noise**
- **Filter**
- **Decay**

**Body.** Controls the tonal weight of the snare. Higher values add more drum body and thickness; lower values create a lighter, more transient-focused sound.

**Noise.** Controls the noisy part of the snare. Higher values create more crack, air, and roughness; lower values create a cleaner, more tonal snare.

**Filter.** Controls the brightness and filtering of the snare. Lower values can darken or muffle the sound; higher values can make the snare brighter and more open.

**Decay.** Controls the snare tail length. Short values create tight, dry snares; longer values create more ring and sustained digital body.

### Digital+ Hat Voice

The hat voice is designed for bright digital high percussion. Typical controls include:

- **Metal**
- **Dust**
- **Filter**
- **Decay**

**Metal.** Controls the metallic character of the high voice. Higher values create brighter and more metallic percussion; lower values create softer or less aggressive high material.

**Dust.** Controls noisy texture and digital roughness. Higher values create more grain, air, and high-frequency density; lower values create a cleaner hat or percussion tone.

**Filter.** Controls the brightness and openness of the high percussion. Use it to darken a hat, sharpen it, or place it more clearly in the top end.

**Decay.** Controls the hat length. Short values create tight closed-hat behavior; longer values create more open, sustained, or noisy high percussion.

### Digital+ Expert Extra Controls

Digital+ Expert adds more aggressive shaping controls depending on the voice. These may include Click, Feedback, Snap, Resonance, Spread, and Grit.

**Click.** Adds extra attack to the bass voice. Use Click when the kick needs to be heard clearly on small speakers or through a dense mix.

**Feedback.** Adds ringing or resonant tail character. Use it carefully with Decay — high Feedback and long Decay can quickly create a large, dominant sound.

**Snap.** Adds snare attack definition. Use Snap to make the beginning of the snare more visible in the groove.

**Resonance.** Controls additional snare body and ring. Higher values can make the snare more animated and more tonal.

# 12. Toms and Wood Percussion Models

The Toms and Wood models add tuned movement and dry acoustic-style texture to Martello. They are useful when you want more than kick, snare, and hat — rolls, fills, syncopated patterns, wooden accents, and more physical percussion grooves.

Models in this group include:

- Toms
- Wood Conga/Tom
- Wood Rimshot
- Wood Clave

### Toms

Toms provide tuned body percussion across the three voices, useful for low, mid, and high tom lines, tribal patterns, fills, and melodic rhythmic movement.

Typical controls include:

- **Tune**
- **Sweep / Attack / Bend**
- **Tone**
- **Decay**

**Tune.** Controls the pitch of the tom. Use different Tune values across voices to create tom lines and fills.

**Sweep / Attack / Bend.** Changes the movement at the beginning of the hit. Depending on the voice, this may act like a pitch sweep, a sharper attack, or a bend in the percussion tone.

**Tone.** Controls brightness and body color. Lower values create darker toms; higher values create more attack and presence.

**Decay.** Controls how long the tom rings. Short values create tight body hits; longer values create more resonance and sustain.

### Wood Conga/Tom

A hollow, woody percussion model that sits between electronic toms and hand percussion — useful for organic accents, minimal grooves, syncopation, and dry rhythmic texture.

Typical controls include Tune, Bend, Tone, Decay, Drive.

**Tune.** Controls the pitch of the wooden body.

**Bend.** Controls the pitch movement at the attack. Subtle Bend can make the sound feel more physical; higher Bend creates a more exaggerated bounce.

**Tone.** Controls the wood color. Lower values create darker wooden hits; higher values create brighter, more present percussion.

**Decay.** Controls the body length. Short decay creates dry ticks; longer decay creates more hollow body and ring.

**Drive.** Adds weight and edge. Use moderate Drive for presence — high Drive can make the low-mid range heavier.

### Wood Rimshot

A short, sharp woody strike designed for accents, backbeat ticks, minimal percussion, and dry rhythmic details.

Typical controls include Tune, Body, Snap, Decay, Bite.

**Tune.** Controls the pitch of the strike.

**Body.** Controls the wood resonance and thickness. Higher values create more body; lower values keep the hit thinner and more click-like.

**Snap.** Controls the attack sharpness. Higher values create a harder and more immediate strike.

**Decay.** Controls how long the strike rings. Keep Decay short for a tight rimshot feel.

**Bite.** Controls the edge and aggressiveness of the hit. Use Bite to make the rimshot cut through a mix.

### Wood Clave

A focused wooden strike with clear pitch, useful for repeating ostinatos, syncopated rhythms, Latin-style patterns, and cutting accents inside electronic grooves.

Typical controls include Tune, Wood, Hit, Decay, Drive.

**Tune.** Controls the pitch of the clave. Use different Tune values across voices for call-and-response patterns.

**Wood.** Controls the timbre and color of the wooden body.

**Hit.** Controls strike hardness and attack emphasis. Higher values create a harder stick-like attack.

**Decay.** Controls the resonance length. Short values create dry clave hits; longer values create a more ringing wooden tone.

**Drive.** Adds weight and presence. Use it carefully in fast repeating patterns.

## 13. Metallic and Accent Models

The Metallic and Accent models provide high-frequency movement, backbeats, and pitched percussion.

Models in this group include:

- Cymbal
- Ride
- Clap
- Cowbell

### Clap

A synthetic clap and noise-burst model, useful for backbeats, layered snares, dry claps, wide crowd-style hits, and breakdown accents.

Typical controls include Tune, Crowd, Tone, Decay, Drive, Room.

**Tune.** Controls the pitch color and body of the clap.

**Crowd.** Controls the thickness of the clap layers. Lower values create a tighter single-clap feel; higher values create a wider, multi-hand crowd character.

**Tone.** Controls brightness and body — use it to make the clap darker, sharper, or more present.

**Decay.** Controls the clap tail. Short values create tight electronic claps; longer values create more room-like sustain.

**Drive.** Adds punch, density, and saturation. Use Drive carefully with Crowd and Room.

**Room.** Controls the sense of space and reflection. Higher values create a wider, more ambient clap.

### Cymbal

A bright, noisy metallic model for crash-like textures, transitions, and explosive accents — designed for high-frequency bursts rather than steady pulsing patterns.

Typical controls include Tune, Shape, Tone, Decay, Metal, Air.

**Tune.** Controls the overall pitch center of the cymbal texture.

**Shape.** Controls the envelope and development of the hit — use it to change how the cymbal opens and moves.

**Tone.** Controls brightness and filtering. Lower values create darker cymbal textures; higher values create brighter and more cutting cymbals.

**Decay.** Controls crash length. Short values create tight, choke-like hits; longer values create wash and sustained shimmer.

**Metal.** Controls metallic harmonic content. Higher values create stronger metallic density.

**Air.** Controls high-frequency shimmer and breath. Higher values add more top-end openness.

### Ride

A sustained metallic high-percussion model. Compared with Cymbal, Ride is less explosive and more rhythmic — useful for steady top loops, hypnotic patterns, and pulsing metallic movement.

The controls (Tune, Shape, Tone, Decay, Metal, Air) behave similarly to Cymbal, but the model is voiced for a steadier ride character.

Use Ride for 8th-note or 16th-note ride patterns, hypnotic metallic loops, techno top percussion, and pulsing high-frequency rhythm. Keep Decay and Air under control in busy mixes.

# 14. Choosing a Model

Use this guide when starting a sound.

**For fast classic drum-machine behavior:** use Classic. **For deeper classic kick, snare, and hat shaping:** use Classic Expert.

**For fast digital percussion:** use Digital. **For deeper FM-style digital shaping:** use Digital Expert.

**For warm, rounded, analog-style drums:** use Analog. **For detailed analog-style sound design:** use Analog Expert.

**For strong modern digital impact:** use Digital+. **For the most aggressive digital control:** use Digital+ Expert.

**For tom lines and fills:** use Toms. **For organic percussion:** use Wood Conga/Tom. **For short wooden accents:** use Wood Rimshot. **For repeating wooden patterns:** use Wood Clave.

**For crash-like accents:** use Cymbal. **For steady metallic top loops:** use Ride. **For backbeats and layered snare accents:** use Clap. **For pitched metallic hooks:** use Cowbell.

# 15. Modulation

Martello Plus and MartelloX2 Plus include per-voice modulation for adding movement to drum sounds.

Modulation lets a voice change over time after it is triggered. It can be used subtly, to make a drum feel more alive, or more aggressively, to create unstable, animated, and experimental percussion.

Each voice has its own modulation settings, so the kick, snare, hat, tom, clap, ride, or percussion voices can all move differently.

### Opening the Modulation Controls

Use the [MODULATION] button to open the modulation controls. When modulation view is active, the voice panel changes from normal sound controls to modulation controls. Press [MODULATION] again to return to normal voice editing.

The modulation controls are an overlay — they do not replace the selected drum model, they add movement to the currently selected sound.

### Modulation Type

Each voice can use a modulation source: **LFO** or **Envelope**. The selected source determines how the target parameter moves.

### Cowbell

A pitched metallic bell model, useful for off-beat accents, dance percussion, melodic hooks, and bright rhythmic details.

Typical controls include Tune, Shape, Tone, Decay, Drive, Shell.

**Tune.** Controls the bell pitch — use it to place the cowbell rhythmically and musically in the track.

**Shape.** Controls the envelope contour of the hit.

**Tone.** Controls brightness. Higher values make the bell more cutting.

**Decay.** Controls the ring length. Short values create tight metallic ticks; longer values create more sustained bell lines.

**Drive.** Adds weight and edge. Use it carefully, since cowbell can cut through a mix strongly.

**Shell.** Changes the body resonance and bell quality. Use Shell before reaching for external EQ.

### LFO

The LFO is a repeating modulation source. Use it when you want continuous movement, pulse, wobble, cyclic pitch movement, or repeating tone changes.

Typical uses: slight pitch drift, moving metallic percussion, animated hats, pulsing toms, unstable digital percussion, repeating tone movement.

Small LFO amounts can make a static drum feel more alive. Large LFO amounts can create obvious rhythmic or experimental movement.

### Envelope

The envelope is a one-shot modulation source. It starts when the voice is triggered and then follows its own attack and decay shape. Use it when you want the modulation to happen as part of the drum hit.

Typical uses: stronger pitch drop on a kick, sharper snare attack, opening or closing tone movement, short transient emphasis, percussive decay movement, animated FM or digital hits.

The envelope is useful when modulation should follow the hit instead of repeating continuously.

### Amount

Amount controls how strongly the modulation affects the selected destination. Low values produce subtle movement; high values produce more obvious movement.

On some controls, modulation can be bipolar, meaning it can move the destination in a positive or negative direction depending on the amount setting.

Use small amounts first. Drum sounds are short and transient, so even a small amount of modulation can strongly change the feel of the hit.

### LFO Rate

When the modulation type is LFO, Rate controls the speed of the repeating movement. Lower rates create slower movement; higher rates create faster movement.

For natural drum variation, use slower or moderate rates with low amount. For experimental or machine-like sounds, use faster rates or stronger amounts.

### Envelope Attack

When the modulation type is Envelope, Attack controls how quickly the modulation reaches its peak after the voice is triggered. Short attack values create immediate movement at the start of the hit; longer attack values make the modulation rise more slowly.

For punchy drum sounds, use short attack. For swelling or delayed movement, use longer attack.

### Envelope Decay

When the modulation type is Envelope, Decay controls how long the modulation takes to fade away. Short decay values create fast transient movement; longer decay values create movement that continues through the tail of the drum.

Typical use: short decay for kick punch, medium decay for snare body movement, longer decay for toms, rides, metallic hits, and experimental percussion.

Long decay values can make the drum feel more animated, but they can also make the sound less tight.

### Destination

The destination decides what the modulation controls. Depending on the voice and model, modulation may be routed to parameters such as pitch/tune, tone, decay, level, or model-dependent character controls.

Not every destination is equally useful on every model. Some models respond strongly to pitch movement, while others respond better to tone, decay, or level movement.

If you do not want modulation on a voice, set the destination to [OFF] where available.

### Practical Modulation Examples

**Kick pitch drop:** use Envelope modulation, choose pitch or tune as the destination, and start with a small-to-medium amount.

**Moving hat:** use LFO modulation, choose tone or brightness as the destination, and keep the amount low.

**Animated tom:** use Envelope or LFO modulation on pitch, tone, or decay.

**Digital instability:** use LFO or Envelope modulation on Digital, Digital Expert, Digital+, or Digital+ Expert. Try pitch, tone, or model-character destinations.

**Clap or snare variation:** use Envelope modulation with short attack and short decay on tone, level, or character.

### Modulation in MartelloX2

In MartelloX2 Plus, each of the six voices can have its own modulation settings. Module 1 and Module 2 are independent, so the main kick and snare can stay stable while movement is added only to extra percussion voices.

A useful workflow: keep Voice 1 stable for the main kick, keep Voice 2 stable for the main snare, add subtle modulation to Voice 3 for hats or percussion, use Voices 4–6 for animated toms, claps, rides, cymbals, or secondary percussion, and route moving voices to separate outputs if you want to process them differently in the DAW.

### Modulation Advice

Use modulation as a musical layer, not as a requirement. For tight drum-machine sounds, keep modulation subtle or off. For live, physical, unstable, or experimental percussion, use modulation more freely.

Recommended starting points: Kick, subtle envelope to pitch. Snare, subtle envelope to tone or pitch. Hat, subtle LFO to tone. Tom, envelope to pitch or tone. Clap, short envelope to tone or level. Ride/Cymbal, LFO to tone or character. Digital percussion, envelope or LFO to pitch, tone, or character.

If the drum loses impact, reduce the amount. If the sound becomes too unstable, lower the rate, shorten the decay, or set the destination to [OFF].

## 16. MartelloX2 in Practice

MartelloX2 contains two independent Martello-style modules in one plugin. Module 1 contains Voices 1–3. Module 2 contains Voices 4–6.

The same model list is available on every voice in both modules, with the same model behavior as in Martello. Use MartelloX2 when you want a fuller kit, layered percussion, or deeper routing.

Typical uses: Module 1 for the main groove, Module 2 for accents and fills, one module for warm drums and one for sharper drums, separate wood, clap, ride, or cymbal voices, six-tom fills, layered snare and clap combinations, and separate processing for each drum in the DAW.

### Per-Voice Outputs

MartelloX2 can use a main stereo output plus individual stereo outputs for each voice, letting you process or mix each drum separately inside your DAW — for example, sending the kick to its own channel, compressing the snare separately, or adding reverb only to clap or ride.

The exact routing setup depends on the DAW. Some hosts require you to manually activate plugin outputs before they appear in the mixer.

### SEND ALL TO MAIN

[SEND ALL TO MAIN] controls whether voices are also mixed to the main stereo output. When enabled, you can hear the whole kit from the main output — useful for preset browsing, fast sound design, and checking the full kit together.

When using separate DAW channels for detailed mixing, you may disable the summed main output for cleaner multi-output routing.

### Modulation and Presets

Modulation settings are saved with presets and DAW projects. A preset may store modulation type, destination, amount, LFO rate, envelope attack, envelope decay, and per-voice modulation state.

When loading a preset, listen before raising the output level — some presets may use modulation to create stronger transients, longer tails, or more aggressive movement.

## 17. Quick Selection Guide

Use this table as a starting point.

| I WANT... | START WITH |
|---|---|
| **A fast classic groove** | Classic |
| **Full classic tuning** | Classic Expert |
| **Quick FM-style percussion** | Digital |
| **Deeper digital shaping** | Digital Expert |
| **Warm round drums** | Analog |
| **Detailed analog design** | Analog Expert |
| **Heavy club impact** | Digital+ |
| **Maximum digital aggression** | Digital+ Expert |
| **Tom rolls and fills** | Toms |
| **Dry organic groove** | Wood Conga/Tom, Rimshot, Clave |
| **Crash and transition hits** | Cymbal |
| **Steady metallic top loops** | Ride |
| **Backbeat claps** | Clap |
| **Off-beat metallic accents** | Cowbell |
| **A larger kit in one plugin** | MartelloX2 |

# Final User Tips

**Match levels when comparing models.** Digital+, Analog Expert, and some percussion models can sound more powerful at similar knob positions.

**Assign roles per voice.** Voice 1 is usually best for low drums, Voice 2 for mid drums, and Voice 3 for hats or percussion. MartelloX2 repeats this idea in the second module.

**Use percussion models to support the groove.** Wood, clap, ride, cymbal, and cowbell models are often most effective as accents rather than constant full-level hits.

**Start curated, then go Expert.** If Classic or Digital feels too limited, use the Expert version instead of forcing every control to maximum.

**Use velocity when you want movement.** When velocity response is enabled, small velocity changes can make repeated patterns feel more alive.

**Use modulation carefully.** Subtle modulation can add life; heavy modulation can turn a drum into an experimental texture.

**In MartelloX2, treat each module as half a kit.** Keep one module stable for the main groove and use the other for accents, alternate timbres, or layered percussion.

**Save important sounds as presets**, and always check DAW project recall before replacing plugin versions in an active session.