Bazz::Murda
Version 1.8.3 PRO
User Manual

DistoCore Audio Tools
https://distocore.online

April 19, 2026

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Introduction

Welcome and thank you for choosing DistoCore Bazz::Murda PRO.

Bazz::Murda PRO is a full-featured AU/VST and standalone instrument designed specifically for kick drum and bass synthesis.
It has been developed with a focus on hard electronic music genres such as hardcore, gabber, drum & bass, and dubstep.

The plug-in is optimized for creating aggressive, distorted kicks as well as powerful, dynamic bass lines - ranging from tight punchy low-end to heavily modulated wobble textures.
If your productions demand high-impact low-frequency energy and precise distortion control, Bazz::Murda PRO is a dedicated tool built for that purpose.

1.1 System Requirements

 macOS:
OS Version: OS X 10.9 or later
CPU: modern CPU (Sandy Bridge or newer recommended)
Bazz::Murda is provided only as 64-bit AU, VST and VST3 bundle version.

 Windows:
OS Version: Win 7, Win 8, Win 10 (latest Service Pack, 32/64-bit) or Win 11
CPU: modern Intel or AMD CPU
Bazz::Murda is provided as 32-bit and 64-bit VST DLL versions and as 64-bit VST3 version.

Bazz::Murda PRO is not a standalone product, it requires a VST2/VST3 or an AU compatible host application software.
It is compatible with nearly all Digital Audio Workstations (DAWs).

1.2 Installation

Bazz::Murda PRO is delivered as an encrypted ZIP archive.
The extraction password is provided in the corresponding purchase email.
Unzip the archive using the supplied password and follow the included installation instructions for your operating system.
After completing the installation, launch your Digital Audio Workstation (DAW) and perform a plug-in rescan to ensure that Bazz::Murda PRO is properly detected.

1.2.1 macOS

The macOS ZIP package contains 64-bit AU/VST/VST3 bundles ready to use and a PKG installer for installing the AU/VST plug-ins on your Macintosh HD.

macOS PKG Installer:
Right click on the PKG installer and click open, follow the wizard to install the Audio-Unit, VST and VST3 files to the default system folders on your Macintosh HD.

Manuall installation of macOS 64-bit AU/VST/VST3 bundles:
Copy the VST [*.vst] content to:
`/Library/Audio/Plug-Ins/VST` (recommended)
or
`/Library/Audio/Plug-Ins/VST`

Copy the Audio-Unit AU [*.component] content to:
`/Library/Audio/Plug-Ins/Components` (recommended)
or
`/Library/Audio/Plug-Ins/Components`

Copy the VST3 [*.vst3] content to:
`/Library/Audio/Plug-Ins/VST3` (recommended)
or
`/Library/Audio/Plug-Ins/VST3`

1.2.2 Windows

The Windows ZIP package contains 32-bit/64-bit VST and 64-bit VST3 Windows DLLs ready to use and a SETUP executable for installing the audio plug-ins to your DAW/host directory.

Windows Installer:
Execute the windows executable and follow the wizard.

Windows VST DLLs (ready to use):
Simply copy the content to your VSTPlugIns host's directory.
Recommended VSTPlugIns installation directory is:
`C:\Program Files\Common Files\VST3`

1.3 Updates

Your Bazz::Murda PRO license includes free updates up to and including the next minor version.
All eligible updates are provided free of charge. When a new version becomes available, the corresponding download link will be sent to you via email.
Please note that DistoCore does not guarantee that this product will be maintained indefinitely.

Example:
If you purchase Bazz::Murda PRO version 1.8.3, you will receive free updates for all versions up to and including version 1.9.

1.4 FREE version

A FREE version of the plug-in is available for download at the following link:

`https://distocore.online/shop.html`

The FREE version provides a limited set of features compared to the PRO version.

If you have previously installed the FREE version, it is not necessary to uninstall it.
The FREE and PRO editions are installed as independent audio plug-ins and can be used simultaneously.

For example:
One instance of **Bazz::Murda FREE** can be used to synthesize a kick drum on one track in your DAW, while **Bazz::Murda PRO** can be used to synthesize a bass line on another track.

2

User Interface

Figure 2.1: *DistoCore Bazz::Murda 1.8.3 PRO User Interface (GUI)*

The user interface shown in Figure 2.1 is divided into three tabs:

- **Plug-In tab** - contains all controls used to operate and configure the plug-in
- **Scope tab** - visualizes the waveform of the synthesized audio signal
- **About tab** - displays information about the Digital Audio Workstation (DAW), the license, and the plug-in

All synthesis units and their controls are described in Chapter Units.
Waveform visualization in the Scope tab is described in Chapter **??**.
Additional information details are described in Chapter About Tab.

3

Units

3.1 Synthesizer Units

The synthesizer architecture of **Bazz::Murda PRO** is organized into multiple functional units.
Each unit is responsible for a specific stage of the sound generation and shaping process, such as waveform generation, modulation, filtering, or envelope control.

By combining and adjusting these units, a wide range of sounds can be created, from tight and punchy kick drums to complex bass textures and aggressive electronic timbres.
The modular structure of the synthesizer allows each stage of the signal chain to be controlled independently, providing precise control over the final sound.

The following sections describe the individual synthesizer units and their available controls in detail.

3.1.1 Oscillator Unit

Figure 3.1: *Oscillator Unit*

The Oscillator Unit is the primary sound generation stage of the Bazz::Murda synthesizer. An oscillator produces a periodic waveform that serves as the fundamental audio signal used for sound synthesis. By selecting different waveform shapes and adjusting parameters such as pitch, modulation, filtering, and saturation, a wide range of timbres can be created.

In Bazz::Murda, oscillator units are designed to generate powerful low-frequency signals suitable for kick drums, bass sounds, lead sounds, and other aggressive electronic textures. The oscillator signal can be further shaped using LFO modulation, filtering, stereo processing, and distortion stages.

By combining waveform selection, pitch control, and modulation parameters, the oscillator unit provides the core building block for creating the characteristic punchy kicks and heavy bass sounds typical for hardcore, gabber, drum & bass, and dubstep productions.

The Oscillator Unit 1 provides the following controls, as illustrated in Figure 3.1 :

- **Oscillator On/Off Switch**
  Activates or deactivates the oscillator unit.

- **Waveform Display**
  Displays the waveform of the currently selected oscillator signal.

- **Waveform Browse Buttons**
  Used to browse and select the oscillator waveform.

- **LOAD WF Button**
  Opens a file browser and loads a WAVE or RAW (binary) waveform file into the current preset.
  Only the waveform slots *User1* to *User15* support loading custom waveform files.

- **LFO Waveform Type / Mode Switch**
  Selects the LFO signal waveform type. The following modes are available:

  - ⋆ **LFO SINE** – sine wave signal
  - ⋆ **LFO POS** – positive half of the sine wave
  - ⋆ **LFO NEG** – negative half of the sine wave
  - ⋆ **LFO ABS** – absolute value of the sine wave
  - ⋆ **LFO INV.** – inverted sine wave signal

- **LFO SYNC Button**
  Synchronizes the LFO frequencies of all other oscillator units to the LFO frequency of this unit.

- **LFO Frequency (LFO freq.) Knob**
  Controls the frequency of the LFO signal.

- **Sync. Switch**
  Synchronizes the oscillator LFO frequency with the host tempo.

- **Tune Knob**
  Fine-tunes the oscillator frequency by ±1 semitone.

- **Pitch Knob**
  Adjusts the oscillator pitch by ±12 semitones.

- **Waveform Name Display**
  Displays the name of the currently selected waveform.

- **Filter Balance Cross-Fader**
  Crossfades between the Low-Pass filtered signal (left) and the High-Pass filtered signal (right).

- **Pan Knob**
  Controls the stereo panning (left/right balance) of the oscillator signal.

- **Sat Knob**
  Applies saturation to the oscillator signal.

- **Vol Knob**
  Controls the output volume of the oscillator.

- **Filter Knob**
  Controls how strongly the LFO modulates the oscillator filter.

- **Freq. Knob**
  Controls the amount of LFO pitch modulation applied to the oscillator.

- **Ampl. Knob**
  Controls the amount of LFO amplitude (volume / ring) modulation.

- **Resonance Knob**
  Controls the resonance of both oscillator filters (Low-Pass and High-Pass).

- **Cutoff Knob**
  Controls the cutoff frequency of the oscillator filters (LP/HP).
  The normalized display range *0.0–1.0* corresponds to a frequency range of *20 Hz–20 kHz*.

3.1.2 Volume ADSR Unit

Figure 3.2: *Volume ADSR Unit*

The Volume ADSR unit controls the amplitude envelope of the synthesized sound.
ADSR stands for **Attack, Decay, Sustain, and Release**. These four stages define how the volume of a sound evolves over time after a note is triggered and released.
By adjusting the ADSR parameters, it is possible to create sounds with a sharp transient, smooth fades, sustained tones, or long tails. This allows precise shaping of the dynamic behavior of kicks, bass sounds, and other synthesized signals.

The following controls are available in the Volume ADSR unit, as shown in Figure 3.2 :

- **ADSR Envelope Preview Display**
  Displays a graphical preview of the current ADSR volume envelope based on the selected parameter settings.

- **Attack Knob**
  Controls the attack time, which defines how quickly the sound reaches its maximum volume after a note is triggered.

- **Decay Knob**
  Controls the decay time, which defines how quickly the volume decreases from the peak level to the sustain level.

- **Sustain Knob**
  Controls the sustain level, which determines the volume level that is maintained while a note is held.

- **Release Knob**
  Controls the release time, which defines how quickly the sound fades out after the note is released.

- **Duration Knob**
  Controls the overall time scaling of the ADSR envelope phases.

- **Velocity Knob**
  Adjusts how strongly the output amplitude reacts to the velocity of the played note.

- **Amount Knob**
  Controls the overall output level applied by the ADSR envelope to the sound signal.

3.1.3 Filter ADSR Unit

Figure 3.3: *Filter ADSR Unit*

The Filter ADSR unit controls how the oscillator filter evolves over time after a note is triggered.
Similar to the volume envelope, the filter envelope follows the ADSR model, which stands for **Attack, Decay, Sustain, and Release**. Instead of controlling the amplitude of the sound, this envelope modulates the filter cutoff frequency.
By shaping the filter envelope, it is possible to create dynamic timbral changes such as sharp filter sweeps, percussive attacks, or slowly evolving tonal movements. This technique is commonly used to add punch and movement to kick drums, bass sounds, and other synthesized signals.

The controls available in the Filter ADSR unit are shown in Figure 3.3 :

- **ADSR Envelope Preview Display**
  Displays a graphical preview of the current filter ADSR envelope based on the selected parameter settings.

- **Attack Knob**
  Controls the attack time, which defines how quickly the filter cutoff reaches its maximum modulation level after a note is triggered.

- **Decay Knob**
  Controls the decay time, which determines how quickly the filter cutoff moves from the peak level to the sustain level.

- **Sustain Knob**
  Controls the sustain level, which defines the filter cutoff level maintained while a note is held.

- **Release Knob**
  Controls the release time, which defines how quickly the filter modulation returns to its initial state after the note is released.

- **Duration Knob**
  Controls the overall time scaling of the ADSR envelope phases.

- **Velocity Knob**
  Adjusts how strongly the filter envelope responds to the velocity of the played note.

- **Amount Knob**
  Controls the overall modulation depth of the filter ADSR envelope applied to the oscillator filter.

3.1.4 ADSR Settings Controls

Figure 3.4: *ADSR Settings Controls*

The ADSR settings controls provide utility functions for quickly copying envelope parameters between the Volume ADSR and Filter ADSR units.
This allows the user to duplicate envelope shapes without manually adjusting each parameter.
In addition, the ADSR Shape control allows the curvature of the envelope segments to be adjusted. Higher values produce a more linear envelope response, while lower values create a more exponential shape. Exponential envelopes typically result in a more natural and punchy response, which is particularly useful for percussive sounds such as kick drums and bass attacks.

The following controls are available, as shown in Figure 3.4 :

- **Copy Volume → Filter Button**
  Copies the current Volume ADSR parameter settings to the Filter ADSR envelope.

- **Copy Filter → Volume Button**
  Copies the current Filter ADSR parameter settings to the Volume ADSR envelope.

- **ADSR Shape Knob**
  Controls the curvature of the ADSR envelope segments.
  Higher values produce a more linear envelope response, while lower values create a more exponential curve.
  Exponential shapes typically result in a more natural and punchy response, which is particularly useful for percussive sounds such as kick drums and bass attacks.

3.1.5 FM Modulator Unit

Figure 3.5: *FM Modulator Unit*

The FM Modulator unit applies **frequency modulation (FM)** to the oscillator signal.
In FM synthesis, the frequency of a carrier signal is continuously modulated by another signal, called the modulator. This process generates additional harmonics and complex spectra, allowing the creation of richer and more aggressive timbres.
By adjusting the modulation amount and selecting different modulation frequency ratios, a wide range of sounds can be produced, from subtle tonal coloration to highly distorted and metallic textures. FM modulation is particularly useful for creating punchy attacks and complex bass timbres in electronic music production.

The FM Modulator unit provides the following controls, as illustrated in Figure 3.5 :

- **1/4 Fc Knob**
  Controls the amount of the sine-wave modulator operating at 0.25× the carrier frequency.

- **1/2 Fc Knob**
  Controls the amount of the sine-wave modulator operating at 0.5× the carrier frequency.

- **Fc Knob**
  Controls the amount of the sine-wave modulator operating at the carrier frequency.

- **2 Fc Knob**
  Controls the amount of the sine-wave modulator operating at 2× the carrier frequency.

- **4 Fc Knob**
  Controls the amount of the sine-wave modulator operating at 4× the carrier frequency.

- **Osc Knob**
  Controls the amount of the first oscillator used as a frequency modulation source.

- **Fade-In Knob**
  Controls how gradually the FM modulation is applied after a note is triggered. The value specifies the fade-in time in seconds.

3.1.6 Unison Unit

Figure 3.6: *Unison Unit*

The Unison unit duplicates the oscillator signal into multiple slightly detuned voices.
Unison synthesis is commonly used to create a wider, fuller, and more powerful sound by layering several copies of the same signal with small pitch differences.
By increasing the number of voices and applying detuning, the sound becomes thicker and more spatial, which is particularly useful for bass sounds, leads, and aggressive electronic textures.

The Unison unit includes the following controls (see Figure 3.6):

- **Voices Knob**
  Controls the number of unison voices generated for each oscillator.

- **Detune Knob**
  Controls the amount of pitch detuning applied between the unison voices. The detuning range extends up to one semitone.

- **Fade-In Knob**
  Controls how gradually the additional unison voices are introduced after a note is triggered. The value specifies the fade-in time in seconds.
  This parameter can help percussive sounds such as kick drums and plucked instruments retain a clean initial attack while the unison effect develops afterwards.

3.1.7 Sub-Osc Layer Unit

Figure 3.7: *Sub-Osc Unit*

The Sub-Osc Layer unit provides an additional sub-oscillator designed to reinforce the low-frequency content of the synthesized sound.
A sub-oscillator generates a stable low-frequency waveform that can be layered beneath the main oscillators to enhance the perceived weight and depth of the sound.
This technique is commonly used in electronic music production to strengthen kick drums and bass sounds by adding a clean and controlled low-end foundation.

The following controls are available in the Sub-Osc Layer unit, as illustrated in Figure 3.7 :

- **Click Knob**
  Controls the level and character of the click texture applied to the beginning of each note. This can be used to emphasize the transient portion of kick drums or percussive bass sounds.

- **Sub-Osc Knob**
  Controls the output level of the sub-oscillator signal.

- **Sub-Osc Waveform Selector**
  Selects the waveform used by the sub-oscillator. The available waveform types are *Sine*, *Triangle*, *Trapez*, *Pulse*, and *Quad-Pulse*.

- **SOLO Switch**
  When enabled, the main oscillators (Oscillator 1, 2, and 3) are muted and only the sub-oscillator signal is played.

- **FILTER Switch**
  Routes the Bass-Layer signal to the **Disto::FX** filter unit.
  Please note that the remaining processing stages of the Disto::FX unit are not applied

to the Sub-Osc Layer signal.

- **FM Switch**
  Enables frequency modulation for the Sub-Osc Layer sub-oscillator.

3.1.8 Global Transpose and Note Mode

Figure 3.8: *Global Transpose*

The Global Transpose control allows the pitch of the current program to be shifted globally. This parameter transposes the synthesized signal by up to ±12 semitones relative to the incoming MIDI note.
Global transposition can be useful for quickly adapting a preset to a different musical key or tuning without modifying individual oscillator parameters.

In addition to the transpose control, a **Note Mode** can be selected from the corresponding combo box below the Global Transpose knob.
The Note Mode determines how incoming MIDI notes influence the oscillator frequency (key tracking).
Key tracking means that the pitch of the synthesized sound follows the played MIDI note according to a defined mapping.

Figure 3.9 shows the available note modes:

- **Standard MIDI**
  The oscillator pitch follows the incoming MIDI notes using standard key tracking.

- **Octave Down / Octave Up**
  The oscillator pitch follows the played MIDI notes but is shifted by one octave down or up.

- **Fixed Frequency Modes**
  Selecting entries such as *F1 Kick 43.6 Hz* or *Drum Body 65.4 Hz* disables key tracking. In this mode the sound is always synthesized at the selected fixed frequency, independent of the played MIDI note.

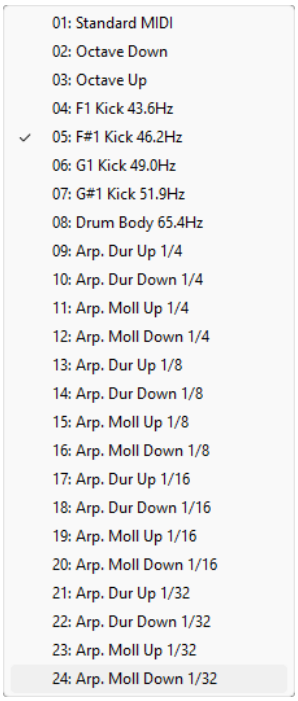

Figure 3.9: *Note/Key Tracking Modes*

This behavior is particularly useful for kick drums and other synthetic drum sounds where a constant fundamental frequency is desired.

- **Arpeggiator Modes**
  Additional modes such as *Arp. Dur Up 1/8* or *Arp. Moll Down 1/16* generate predefined pitch sequences based on the incoming MIDI note.
  These modes can be used to create rhythmic or melodic pitch patterns automatically.

3.1.9 Pitch Envelope Unit

Figure 3.10: *Pitch Envelope Unit*

The Pitch Envelope unit modulates the oscillator pitch over time after a note is triggered. Pitch envelopes are commonly used in sound synthesis to create dynamic pitch transitions, such as the characteristic pitch drop found in electronic kick drums or percussive bass sounds.

By controlling the pitch modulation amount, duration, and envelope shape, the initial transient and tonal character of the sound can be precisely shaped.

Figure 3.10 shows the controls available in the Pitch Envelope unit:

- **Envelope On/Off Switch**
  Activates or deactivates the pitch envelope.

- **Amount Knob**
  Controls the amount of pitch modulation applied at the beginning of the envelope.

- **Duration Knob**
  Controls the time required for the pitch modulation to decay from the initial amount to zero (base frequency).

- **Power Knob**
  Controls the curvature of the envelope. A value of zero produces a linear decay, while higher values produce a more exponential envelope shape.

- **Down Knob**
  Controls the downward pitch modulation amount, which gradually reduces the oscillator frequency over time.

3.2 Effect Units

In the following sections, the effect modules are described.
These modules are essentially integrated instances of the **Disto::FX** processing units.

3.2.1 Filter Unit

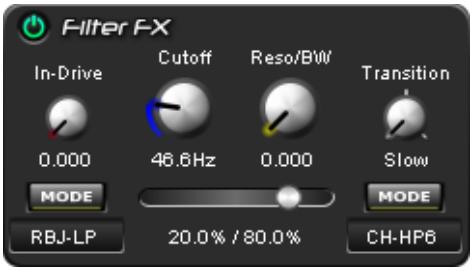

Figure 3.11: *Filter Unit*

The Filter Unit provides pre-distortion tone shaping using two balanced filters.
Filters are commonly used in sound synthesis and audio processing to shape the frequency spectrum of a signal by attenuating or emphasizing specific frequency ranges.
In the effect processing chain, the filter stage can be used to sculpt the tonal character of the signal before it enters the distortion stages, allowing precise control over the resulting harmonic content and overall timbre.

Figure 3.11 shows the controls available in the Filter Unit:

- **Filter On/Off Switch**
  Activates or deactivates the filter unit.

- **In-Drive Knob**
  Applies gain to the incoming signal before it enters the filter stage. This allows the signal to be driven harder into the filter for additional coloration.

- **MODE 1 Selector**
  Selects the filter type for the left filter channel.
  A total of 27 filter modes are available based on the following filter designs:
  RBJ, Bessel, Elliptic, Chebyshev, and Butterworth.
  Each design can operate as one of the following filter types:
  HP (High-Pass), LP (Low-Pass), BP (Band-Pass), or BS (Band-Stop).

- **Filter 1 / 2 Cross-Fader**
  Blends between the outputs of Filter 1 (left) and Filter 2 (right).

- **MODE 2 Selector**
  Selects the filter type for the right filter channel using the same set of 27 filter modes.

- **Transition Control**
  Controls the transition speed of parameter changes for the Cutoff and Resonance controls, allowing smoother or more immediate parameter responses.

- **Resonance Knob**
  Controls the resonance (for LP/HP filters) or Q factor (for BP/BS filters) of both filters.

- **Cutoff Knob**
  Controls the cutoff frequency (LP/HP filters) or center frequency (BP/BS filters) of both filters.

Figure 3.12: *Modulation FX Unit*

3.2.2 Modulation FX Unit

The Modulation FX Unit applies time-varying modulation effects to the processed signal. Modulation effects periodically alter certain signal parameters such as amplitude or phase, producing dynamic movement and additional harmonic content.
In the effect processing chain, this unit combines ring/amplitude modulation and phaser processing to add rhythmic motion, metallic textures, or spatial character to the sound.

Ring modulation multiplies the audio signal with a periodic waveform, generating additional sideband frequencies and creating characteristic metallic or robotic tones.
The phaser effect modulates the phase of the signal using a series of all-pass filters, producing sweeping spectral notches similar to the sound of a rotating speaker cabinet (Leslie effect).

Figure 3.12 provides an overview of the Modulation FX Unit controls:

- **Modulation FX On/Off Switch**
  Activates or deactivates the modulation FX unit.

- **Ring Mod Rate Knob**
  Sets the frequency of the ring/amplitude modulation oscillator in the range of 0–2000 Hz.

- **Ring Mod Amount Knob**
  Controls the amount of ring/amplitude modulation applied to the output signal.

- **Ring Mod Waveform Selector**
  Selects the waveform used for ring modulation. Different waveforms produce different modulation characteristics and harmonic structures.

- **Phaser Rate Knob**
  Sets the modulation frequency of the phaser effect in the range of 0–20 Hz.

- **Phaser Sync Control**
  Synchronizes the phaser modulation rate with the host tempo using selectable tempo divisions.

- **Phaser Feedback Knob**
  Adjusts the feedback amount of the phaser effect, increasing the intensity of the phase sweeps.

- **Phaser Amount Knob**
  Controls the depth of the phaser effect mixed into the output signal.

3.2.3 Distortion and Dynamic Shaper Unit

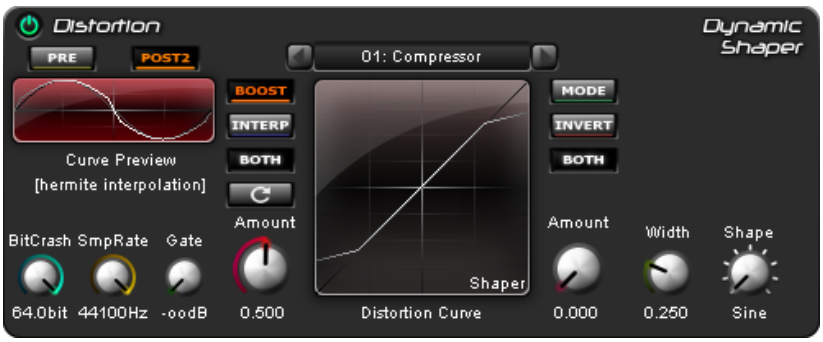

Figure 3.13: *Distortion and Dynamic-Shaper Unit*

The Distortion and Dynamic Shaper unit provides nonlinear signal processing for shaping the harmonic structure and dynamics of the audio signal.
Nonlinear processing modifies the waveform of the signal using transfer functions, generating additional harmonics and altering the tonal character of the sound.
Depending on the selected parameters and shaping algorithms, the unit can produce effects ranging from subtle saturation and harmonic enhancement to aggressive overdrive and extreme digital distortion.

This processing stage combines two main components: a **Distortion Unit** and a **Dynamic Shaper**.
Together they allow precise control over waveform shaping, dynamic response, and overall signal coloration.

3.2.3.1 Distortion Unit

The Distortion Unit applies waveshaping algorithms to the incoming signal in order to generate harmonic distortion and alter the signal dynamics.
By adjusting the distortion amount, shaping curves, and processing modes, a wide variety

of sonic textures can be created ranging from gentle saturation to extreme distortion effects.

Figure 3.13 illustrates the controls associated with the distortion processing stage:

- **Distortion FX On/Off Switch**
  Activates or deactivates the distortion processing unit.

- **PRE Button**
  Activates the pre-distortion signal path. In this mode the audio signal is distorted before entering the filter unit, as illustrated in the signal flow diagram (Figure **??**).

- **POST Button**
  Activates the post-distortion signal path, applying distortion after the filter stage as shown in Figure **??**.

- **Distortion Curve Preview Display**
  Displays the selected distortion or dynamic shaper curve applied to a test sine wave.

- **BitCrash Knob**
  Reduces the amplitude resolution of the signal by lowering the effective bit depth. For example, a high-resolution signal (e.g. 32-bit) can be reduced to a lower resolution such as 4-bit, producing characteristic digital distortion artifacts.

- **SmpFreq Knob**
  Reduces the sampling frequency of the signal, introducing aliasing and lo-fi digital artifacts.

- **Gate Knob**
  Defines the threshold level for the internal noise gate algorithm.

- **Amount Knob**
  Controls the overall amount of distortion applied to the signal.

- **Distortion Curve Display**
  Displays the currently selected distortion or dynamic shaping curve.

- **Distortion Mode Switch**
  Selects one of the available distortion processing modes:

  - ⋆ **SHAPE**
    Standard waveshaper mode that applies the selected distortion curve.

  - ⋆ **BOOST**
    Applies additional signal gain before processing through the selected distortion curve.

  - ⋆ **LOUD**
    Applies a stronger signal boost and produces more extreme distortion using the selected shaping curve.

- **INTERP Switch**
  Selects the interpolation method used for the distortion curve:

  - ⋆ No interpolation (8-bit curve resolution)

  - ⋆ Linear interpolation

  - ⋆ Cosine interpolation

  - ⋆ Cubic interpolation

  - ⋆ Hermite interpolation (highest quality)

- **Polarization Switch**
  Controls which portions of the waveform are affected by the distortion process:

  - ⋆ **BOTH** – effect is applied to the entire signal waveform

  - ⋆ **POS** – effect is applied only to positive signal values

  - ⋆ **NEG** – effect is applied only to negative signal values

- **RESTORE Button**
  Restores the previously stored distortion curve from internal memory.

- **Curve Browser Buttons**
  Used to browse the available built-in distortion curve presets.

- **Curve Name Display**
  Displays the name of the currently selected distortion curve preset.

3.2.3.2 Distortion Curve Editor

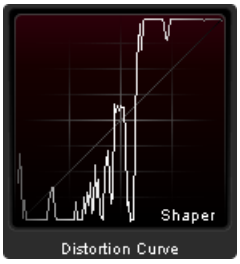

Figure 3.14: *Distortion Curve Display*

The Distortion Curve Editor allows the user to create and modify custom distortion transfer functions.
A distortion curve defines how the input signal amplitude is mapped to the output signal amplitude.
By shaping this curve, the harmonic structure and dynamic behavior of the distortion can be precisely controlled.

The distortion curve can be edited directly using the Left Mouse Button (LMB) on the Distortion Curve Display (Figure 3.14).
All changes are applied in real time and can later be stored by saving the current preset as an `*.FXP` or `*.DC` program file (see the preset browser in Figure **??**).

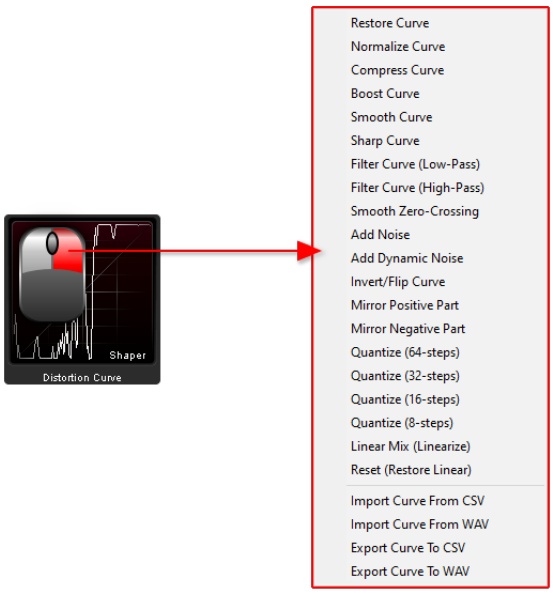

Figure 3.15: *Distortion Curve Display Context Menu*

Additional processing functions are available through a context menu.
The context menu can be opened by clicking the Right Mouse Button (RMB) on the distortion/dynamic shaper curve display (Figure 3.15).

It provides the following curve processing operations:

- **Restore Curve**
  Restores the previously stored distortion curve.

- **Normalize**
  Applies gain scaling so that the peak amplitude reaches the target value of 0.0 dB.

- **Compress**
  Reduces the dynamic range of the distortion curve.

- **Boost**
  Amplifies the distortion curve using a gain factor.

- **Smooth Curve**
  Applies smoothing to the distortion curve to reduce abrupt transitions.

- **Sharp Curve**
  Enhances transitions within the curve to create sharper distortion characteristics.

- **Filter Curve (Low-Pass)**
  Applies a bidirectional low-pass filter to the distortion curve.
  This operation can help reduce aliasing in noisy or hard-edged distortion shapes.

- **Filter Curve (High-Pass)**
  Applies a bidirectional high-pass filter to the distortion curve.

- **Smooth Zero-Crossing**
  Gradually fades the curve around the zero-crossing so that the center of the curve becomes exactly zero.

- **Add Noise**
  Adds white noise to the distortion curve.

- **Add Dynamic Noise**
  Adds dynamic white noise whose amplitude is scaled according to the signal level.

- **Invert / Flip Curve**
  Inverts the values of the distortion curve.

- **Mirror Positive Part**
  Replaces the negative part of the curve with a mirrored version of the positive section.

- **Mirror Negative Part**
  Replaces the positive part of the curve with a mirrored version of the negative section.

- **Quantize (64 / 32 / 16 / 8 Steps)**
  Applies algorithmic quantization by mapping the curve to a discrete number of amplitude steps.

- **Linear Mix**
  Performs a 50 % / 50 % linear mix with the current curve.

- **Reset (Restore Linear)**
  Restores the default linear distortion curve.

A distortion curve can also be imported from external files using the *Import Curve From...* context menu action.
Supported file formats include CSV and WAVE.
Likewise, the current curve can be exported via the *Export Curve To...* function for further processing or external editing.

3.2.3.3 Dynamic Shaper Unit

The Dynamic Shaper Unit extends the distortion processing stage by applying dynamically controllable shaping algorithms.
While the Distortion Unit applies static transfer functions, the Dynamic Shaper modifies the signal in a time-varying manner, allowing additional dynamic coloration and modulation of the waveform.
This makes it possible to create complex distortion textures, dynamic saturation effects, and evolving harmonic structures.

- **Dynamic Shaper On/Off Switch**
  Activates or deactivates the Dynamic Shaper processing stage.

- **Curve Preview Display**
  Displays the effect of the selected distortion or dynamic shaping curve applied to a test sine wave.

- **Curve Display**
  Shows the currently selected distortion or dynamic shaping curve.

- **Amount Knob**
  Controls the overall intensity of the dynamic shaper effect.

- **Width Knob**
  Controls the width of the selected shaping function.

- **Shape Selector**
  Selects the modulation shape used by the dynamic shaper:
  Sine, Triangle, Pulse, Saw, Sine2, Pulse2, Noise1, Noise2, DynNoise.

- **Polarization Switch**
  Determines which parts of the waveform are affected by the shaping process:
  - ⋆ BOTH – effect is applied to the entire signal waveform
  - ⋆ POS – effect is applied only to positive signal values
  - ⋆ NEG – effect is applied only to negative signal values

- **MODE Switch**
  Selects the processing mode of the dynamic shaper:
  - ⋆ Shaper – applies only the shaping function
  - ⋆ SatShaper – applies saturation followed by shaping
  - ⋆ BoostShaper – boosts the input signal before shaping
  - ⋆ BoostSatShaper – boosts the signal, applies saturation, and then applies shaping

3.2.4 Hardcore Bass Unit

The Hardcore Bass Unit is designed to enhance the low-frequency content of the signal by combining clean and distorted bass components.
This unit is particularly useful for creating powerful and aggressive low-end typical for hardcore, gabber, and other electronic music genres.
By blending the original bass with a separately processed and distorted bass layer, the unit allows precise control over punch, weight, and harmonic richness in the low-frequency range.

Figure 3.16: *Hardcore Bass Unit*

Figure 3.16 illustrates the controls available in the Hardcore Bass Unit:

- **HC Bass On/Off Switch**
  Activates or deactivates the Hardcore Bass Unit.

- **Original Bass Amount Knob**
  Controls the level of the original (clean) low-frequency signal.

- **Original Bass Cutoff Frequency Knob**
  Sets the high-pass filter cutoff frequency for the original bass signal in the range of 20–80 Hz.

- **Hardcore Bass Amount Knob**
  Controls the level of the processed (distorted) bass layer added to the output signal.

- **Hardcore Bass Frequency Knob**
  Sets the center frequency of the processed bass layer in the range of 100–200 Hz.

- **Hardcore Bass Drive Knob**
  Applies distortion to the processed bass layer before it is mixed with the output signal.

3.2.5 Equalizer Unit

Figure 3.17: *3-Band Equalizer Unit*

The Equalizer Unit provides frequency-based tone shaping using a simple and efficient three-band EQ.

Equalization allows specific frequency ranges of the signal to be boosted or attenuated, making it possible to refine the tonal balance, enhance clarity, or shape the overall character of the sound.
In the effects processing chain, the EQ can be used to emphasize important frequency regions or remove unwanted frequencies after the distortion and modulation stages.

An overview of the Equalizer Unit interface is presented in Figure 3.17:

- **Equalizer On/Off Switch**
  Activates or deactivates the Equalizer Unit.

- **Bass Knob**
  Controls the gain of the low-frequency band centered around 440 Hz using a low-shelf filter.
  A double-click resets the control to its default (center) position.

- **Mid Knob**
  Controls the gain of the mid-frequency band centered around 2400 Hz.
  A double-click resets the control to its default (center) position.

- **High Knob**
  Controls the gain of the high-frequency band centered around 4400 Hz using a high-shelf filter.
  A double-click resets the control to its default (center) position.

- **Dump/Expand Knob**
  Applies either low-pass or high-pass filtering depending on the knob position:

  ⋆ 0.0–0.5: Low-pass filter with cutoff range from 10–20000 Hz (left to center)

  ⋆ 0.5–1.0: High-pass filter with cutoff range from 10–20000 Hz (center to right)

  A double-click resets the control to the neutral position (0.5), disabling both filters.

- **12 dB / 24 dB Switch**
  Selects the slope of the low-pass/high-pass filter between 12 dB/octave and 24 dB/octave.

4

About Tab

Figure 4.1: *Bazz::Murda About Tab*

The About Tab Scope tab shows the plug-in version, user registration, host and operation system information.
You will find your registred artist name and license number here.
Furthermore a logo of the utilized plug-in technology is displayed in the bottom part of the tab.
Note: The eyes of the DistoCore logo are VU meters.

5

License Agreement

Please read this chapter before installing the software.

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Bazz::Murda utilizes DSP filter components based on the C++ DSP filter library developed by Vinnie Falco:
`https://github.com/vinniefalco/DSPFilters`

5.3 Credits

Bazz::Murda concept and audio processing chain by Igor Wilkoński and Wojtek Przystaś.
The plug-in is designed and developed by Wojtek Przystaś.

Credits go to:
Dj Stinger (CSR), The Reaper (AAR), Koney Industrial, Dj Akira, Dj Waxweazle, Dj R.Shock, Splatter (KTS), Tim SplinterCell, Egodiscordia, Doctor Terror and Smash and of course to all DistoCore audio plug-ins users, who have sent us constructive feedback.

6

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For any kind of issue or improvement suggestion feel free to contact us through our website:
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