

DrMS

spatial processor plugin
Focus on your stereo field.



DrMS manual

This manual will help you to learn about all the features and functionality of the DrMS spatial processor plugin. It has the following contents:

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Features overview

DrMS presents a new way to approach the manipulation of stereo audio. It is based on MS (Mid-Side) processing, although DrMS splits the stereo signal into four sections rather than the normal two, giving you new levels of control: Zoom in, add Depth, change Width or any combination and more.

DrMS has a wide range of applications for mixing, mastering and post production, going from simple MS encoding/decoding, over stereo field and depth enhancement, to fixing mono compatibility issues and more.

At first sight, DrMS can be a bit overwhelming because of the many possibilities. However, the hardware-like interface and clear organisation per section will help you become comfortable with DrMS very fast.

There are 4 main processing sections:

- MID
- SIDE
- FOCUS
- FIELD

Each featuring a similar set of 3 processing tools:

- a High Pass Filter (HPF)
- a Low Pass Filter (LPF)
- a Delay

Besides those, there are 4 utility sections:

- INPUT
- OUTPUT
- OPTION
- FEEDBACK

The level and combination of the different sections, and the used processing tools in them, will result in various changes of the stereo field.

The following overview of each section & tool will guide you through DrMS's functionality.

Finally there's the DrMS *IN* button next to the DrMS *logo*, outside any of the sections, and the Preset *toolbar* at the bottom of the plugin window.

The DrMS IN button

The DrMS *IN* button next to the DrMS *logo*, outside any of the sections, allows you to activate or bypass DrMS as a whole, except for the INPUT *Gain*, which always remains active to allow easy level-matched A/B comparison of processed and unprocessed signal.

DrMS is active when the DrMS *IN* button is lighted up.

Shift-clicking the DrMS *logo* next to the DrMS *IN* button will turn DrMS in *version 3 mode* and is shown by a blue DrMS *IN* button. *Shift-clicking* the DrMS *logo* again will return DrMS to *version 4 mode*, indicated by the standard green DrMS *IN* button.

The only audible difference between version 4 mode and version 3 mode is a slightly higher delay in the Feedback circuit in version 4. Do note that version 3 mode has much higher CPU use then version 4 however. To allow 100% compatibility with settings using Feedback made with version 3, this compatibility mode was added.

version 4 Mode
: Green color



version 3 Mode
: Blue color



The Utility Sections



INPUT

The INPUT section features a *Gain* control and a *Format* selector. The green LED shows signal presence on input, the red LED indicates clipping.

The INPUT *Gain* allows to adjust the volume of the incoming signal if needed, for example to avoid digital overs later on in the processing. This control is always active, even when DrMS is bypassed using the DrMS *IN* button, to allow level-matched A/B comparison. Use *Alt-click* to set the *Gain* to 0.0dB.

The INPUT *Format* switch selects the stereo format DrMS expects to receive at its inputs. Since DrMS internally works in MS mode, the switch will decide if an MS-encoder is active (in case of *LR* input) or not (in case of *MS* input).



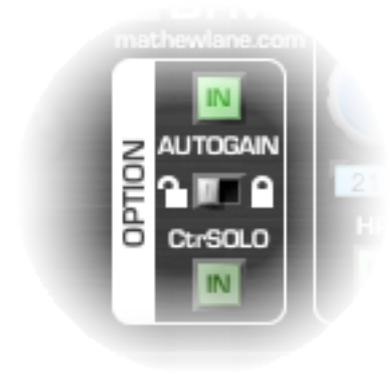
OUTPUT

The OUTPUT section features a *Gain* control and a *Format* selector. The green LED shows signal presence on output, the red LED indicates clipping.

The OUTPUT *Gain* allows to adjust the volume of the outgoing signal if needed, for level matching when AUTOGAIN (see further) isn't being used. This control will be bypassed when DrMS is bypassed using the DrMS *IN* button, to allow level-matched A/B comparison. Use *Alt-click* to set the *Gain* to 0.0dB.

The OUTPUT *Format* switch selects the stereo format DrMS will output. Since DrMS internally works in MS mode, the switch will decide if an MS-decoder is active (in case of *LR* output) or not (in case of *MS* output).

OPTION



The OPTION section sets AUTOGAIN settings and CtrSOLO (CenterSOLO) behavior.

AUTOGAIN can be activated with its *IN* button, standard it is on.

AUTOGAIN will automatically adjust the output gain of DrMS to ensure the processed signal is level-matched as good as possible to the original unprocessed signal. This makes A/B comparison a breeze as changing certain parameters won't result in a volume jump that can happen without using AUTOGAIN.

AUTOGAIN is only being updated whenever actual DrMS parameters are adjusted, it stays constant when you're done.

The 2nd AUTOGAIN control is there to *lock* the current gain value. In normal mode, this AUTOGAIN *Lock* switch is in *unlocked* mode, meaning the AUTOGAIN circuit will continue to update its value whenever you adjust a DrMS parameter.

When the AUTOGAIN *Lock* is in *locked* position, the AUTOGAIN output gain value will not be updated anymore, but will be kept at the value it had on the moment of switching *locked* mode in. This way you can easily keep the then set AUTOGAIN gainsetting and continue tweaking from there without the gain level being further adjusted.

Note: while it is technically possible, it's strongly recommended NOT to automate the AUTOGAIN value parameter (AGNval) in any case, as this can result in unexpected gain behaviour and has no useful applications.

When the CtrSOLO *IN* button is active, the signal of the soloed main processing section(s) will be presented as a monophonic stereo-centered signal (CenterSOLO). For the MID and FIELD sections this will make no difference. For SIDE and FOCUS, the otherwise stereospreaded signal will now be heard as a mono signal. This can be an aid in setting the processing tool parameters of a soloed processor section.

FEEDBACK



When the FEEDBACK *IN* button is active, audio will be fed back from FOCUS into FIELD and vice versa at the chosen *FEEDBACK* %. This section is useful to create additional space and reverb-like effects.

Note that using this section only makes sense when both FOCUS and FIELD are active.

Watch out for your speakers as too high values can result in a loud feedback loop! Higher FEEDBACK % (goes up to 200%) can be appropriate when volume settings in FOCUS and FIELD are conservative.



The Processing Sections

DrMS has 4 processing sections. Each of the sections has a different purpose in the stereo field, but all share a similar set of processing tools on blue rotaries. We'll first give an overview of the processing sections, after which the common processing tools will be discussed.

The 4 processing sections of DrMS are:

- MID
- SIDE
- FOCUS
- FIELD

An incoming signal is split up into these 4 individual signals that can be processed differently and then are recombined at the output into a stereo stream. Each of the 4 sections has its own function in the resulting stereo signal, with the section level and the used processing defining the impact.

Each of the processing sections has similar master controls:

- a *SOLO* button (use *Shift-click* to solo more than one section at once)
- a phase (\emptyset) switch
- a green 'level' rotary (use *Shift-drag* to finetune, and *Alt-click* for 100% value)
- a main *IN* button under the green rotary

We'll now give an overview of what each section exactly is, and what you can do with it:

MID

- The MID section contains the sum of Left and Right of a stereo signal. This is the center-information of the stereo signal.
- The MID's *IN* button under the *LEVEL* rotary serves as a bypass button for the whole section. When it is off, no processing will happen in this section, and the section level will be 100%. When you switch it in, the *LEVEL* control and all the switched in processing tools become active.
- The *LEVEL* control allows you to lower the volume of the MID signal if needed. In general, you don't need this often as the MID signal is the core of your audio, but it can be helpful if you're after a particular effect.
- The MID's different processing tools can be activated with their *IN* buttons.

SIDE

- The **SIDE** section contains the difference between the Left and Right of a stereo signal. This is the true stereo information of the stereo signal.
- The **SIDE**'s *IN* button under the *WIDTH* rotary serves as a bypass button for the whole section. When it is off, no processing will happen in this section, and the section level will be 100%. When you switch it in, the *WIDTH* control and all the switched in processing tools become active.
- The level of the **SIDE** section will influence the signal's width, therefore the level rotary is called *WIDTH* in this section. Turning it above 100% will widen the stereo-image, turning it lower will narrow the stereo-image.
- The **SIDE**'s different processing tools can be activated with their *IN* buttons.

FOCUS

- The **FOCUS** section feeds original unprocessed mid-information to the side-signal of the final stereo output.
- The **FOCUS**'s *IN* button under the *ZOOM* rotary serves as a bypass button for the whole section. When it is off, no processing will happen in this section, and the section level will be 0%. When you switch it in, the *ZOOM* control and all the switched in processing tools become active.
- Raising the level of the **FOCUS** section will give the impression of zooming in, therefore the level rotary is called *ZOOM* in this section. It allows you to zoom in on the mid-information by making it louder and more stereo.
- The **FOCUS**'s different processing tools can be activated with their *IN* buttons.

FIELD

- The FIELD section feeds original unprocessed side-information to the mid-signal of the final stereo output.
- The FIELD's *IN* button under the *DEPTH* rotary serves as a bypass button for the whole section. When it is off, no processing will happen in this section, and the section level will be 0%. When you switch it in, the *DEPTH* control and all the switched in processing tools become active.
- Raising the level of the FIELD section will give the impression of adding depth, therefore the level rotary is called *DEPTH* in this section. It allows you to make the stereo field deeper and more 3D. You can also use this section effectively to save stereo-information that otherwise would get lost on mono-summation, making a certain stereo signal more mono-compatible.
- The FIELD's different processing tools can be activated with their *IN* buttons.



The Processing Tools

Each of the processor sections mentioned above has 3 processing tools:

- a High Pass Filter (HPF)
- a Low Pass Filter (LPF)
- a Delay

HPF

- The HPF can be activated with its *IN* button. It will pass the higher frequencies and will filter out the lower frequencies gradually.
- You can switch the HPF from a non-resonant *6dB/octave* slope to a steeper resonant *12dB/octave* filter.
- There are 2 rotary controls:
 - *Frequency* to set the filter cutoff frequency
 - *Resonance* to amplify the audio around the cutoff frequency, with 0.7 being no resonance and 3 maximum resonance.
Note that the Resonance parameter only is active when the filter is set to 12db/octave slope.

The HPF often is good to use on SIDE and FOCUS if you want to keep the low frequencies tight and mono centered.

LPF

- The LPF can be activated with its *IN* button. It will pass the lower frequencies and will filter out the higher frequencies gradually.
- You can switch the HPF from a non-resonant *6dB/octave* slope to a steeper resonant *12dB/octave* filter.
- There are 2 rotary controls:
 - *Frequency* to set the filter cutoff frequency
 - *Resonance* to amplify the audio around the cutoff frequency, with 0.7 being no resonance and 3 maximum resonance.
Note that the Resonance parameter only is active when the filter is set to 12db/octave slope.

The LPF often is useful to avoid a too large high frequency build up in the combination of the different sections.

Delay

The Delay can be activated with it's *IN* button. It will shift a full processing section by a certain value. It gives a section a set latency rather than acting as a typical delay(echo) effect. The one rotary for the Delay controls the Delay *time* from 0,00 to 30,0 milliseconds.

The Delay is often interesting to use on the FOCUS and/or FIELD section to create additional depth and space.

Presets

As you will notice during use, the true power of DrMS lies in the combination of the different processing sections and their processing tools. It's best to get accustomed to all the different parameters by experimenting a lot on different material and by checking out the presets that were made by Dylan '3D' Dresdow (Black Eyed Peas, Michael Jackson, Usher) and Emre Ramazanoglu (Shakira, Duffy, Alexander McQueen).

Location

DrMS v4 preset files are stored in the following folders, and are accessed via the preset bar on the bottom of the DrMS v4 GUI.

- Mac OSX:
Macintosh HD/Library/Application Support/Mathew Lane/DrMS
 - Windows XP:
C:/Documents and Settings/All Users/Application Data/Mathew Lane/DrMS
 - Windows 7:
C:/ProgramData//Mathew Lane/DrMS
- Note: this is a hidden folder, select to view hidden folders in Windows Explorer if you want to access this folder.*

Presets can be exchanged between different hosts and platforms, all you need to do is place the .drms preset files in the correct folders shown above.

Factory presets overview

- 000 INIT: a neutral setting to start from
- 001 BEP Fizz Synth: a synth preset used in a song of a popular band
- 002 Hi Strings Stretch: nice to open up and widen strings/pads/...
- 003 hUsher Synth: a synth preset used in a song of a popular artist
- 004 Juno Synth Width: for that very wide and full sound
- 005 Beat This!: run loops through this
- 006 Solar Space: very big out-of-this-world space
- 007 Vocal Focal: focus on the vocal
- 008 Vocalokeeish Stereo: get rid of lead vocal, for stereo playback only
- 009 Vocalokeeish Mono: get rid of lead vocal, for mono playback
- 010 AnaMix: put this on your mixbus in your DAW and mix into it
- 011 Gentle Mix Widen: does what it says
- 012 Honey In The Middle: does something nice in the middle of the stereo field
- 013 Inside Out: flips mid and side around!
- 014 Ring Stinger: ringing effect
- 015 Wide and Airy: another obvious one
- 016 High Freq Enhancer: opens up the top end of your mix
- 017 Aux Bus Small Room: use this on a bus as a short reverb
- 018 Aux Bus Reflective Room: use this on a bus as a more live reverb
- 019 MS Encoder: simple mid side encoder
- 020 MS Decoder: simple mid side decoder
- 021 Mid Split: use this one on the first of a doubled track while using Side Split on the other and apply different processing to both tracks.
- 022 Side Split: the companion to Mid Split
- 023 Mono to Stereo: upmix a mono source to stereo, while staying 100% mono-compatible
- 024 Sides To The Centre: side info heard in the center and sides
- 025 No Loss Mono Fold Down: downmix stereo to mono without losing important side channel information