fiedler audio

gravitas MDS

Manual

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1. What is gravitas MDS?

Gravitas MDS is a highend mix bus and mastering dynamics plug-in which excels on anything, from single sources, groups, buses to complete mixes. It is the only multi-channel dynamics plug-in capable of giving your Dolby Atmos mix the same glue and shine you know from countless stereo records. Treat it gently to sound marvellously transparent almost as if not existing but miraculously shaping the dynamic range. Or compress your drums to give them a punch never heard before. And everything in between.

Gravitas MDS works on anything, from mono and stereo up to 128 channels. In stereo mode it offers optional Mid/Side processing and using it as a multi-channel dynamics plug-in you can adjust the LFE channels separately. Gravitas MDS also offers a multi-channel sidechain input for maximum flexibility.

Apart from being a plug-in it is also integrated into the Dolby Atmos Composer and the Mastering Console. As such gravitas MDS is the only multi-channel mastering dynamics effect capable of processing your entire Dolby Atmos mix, be it a mixing session or an imported ADM/BWF file. In the Dolby Atmos Composer gravitas MDS offers a multi-channel sidechain input.

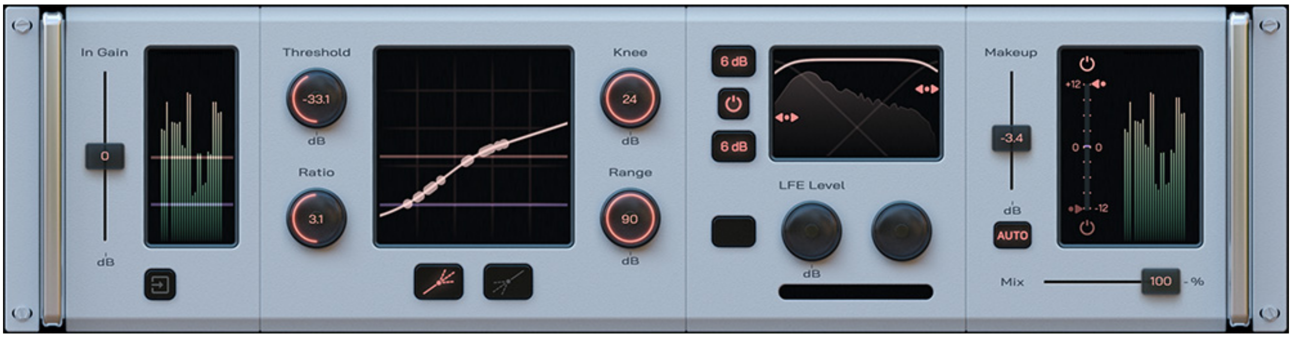
2. Overview

The editor of gravitas MDS is split into 3 modules. In the top module you can handle your presets, undo/redo, switch/copy between A and B states and open the Parameter Linking Editor using the button with the chain icon.

The center module is all about the processing itself. Here you can adjust all the details of what gravitas MDS should do with your signal, from compression and expansion, below and above the threshold, filtering, M/S and LFE treatment to automatic makeup gain and more.

The bottom module is all about detection. Here you can adjust all the parameters which influence how gravitas MDS reacts to the incoming signal which then determines what happens in the center module – e.g. how much the signal is compressed and/or expanded.

3. Center Module



The center module is split into four sections.

Input Section

The left one is the input section with the “In Gain” slider adjusting the gain of the signal going into the plug-in, both processing part and detection part. This parameter also adjusts the gain of the signal coming in from the external sidechain, if used.

Right to “In Gain” is the input metering showing all the channels which are going into the processing. (The metering for detection is right below that in the bottom module.) By right-clicking (or Ctrl-click) on the meters you can expand them to show the abbreviated name of each input channel which really comes in handy when you’re working with multi-channel formats. You can then scroll from left to right to see each channel. Right-clicking again reverts to the overview of all channels. The two lines are the two threshold settings described in the next section.

Below the input metering you find the button which opens the Input Configuration dialog where you can choose which of the incoming channels will actually be processed. Please have a look at the chapter about the Input Configuration dialog.

Curve Section

The next section shows the amplification curve visualizing how the signal dynamics are changed and the four parameters shaping that curve. Well, actually there are two sets of these parameters, one for processing above the threshold and one for processing below the threshold. You can switch between these parameter sets by using the buttons below the curve display.

“Threshold” sets, as the name implies, the threshold above/below which dynamics processing kicks in. “Ratio” determines how strong the change of amplification is. With “Knee” you set the range in which the amplification change gradually kicks in and with “Range” you can reduce the dB-Range within which the amplification change is applied.

Filter Section

The third section contains filter which consist of a high pass and a low pass. They act like the crossover filters in a multiband compressor and let you define the frequency range within which the processing shall take place. The remaining signal below the high pass and above the low pass is passed through unchanged.

You can switch this filter section on or off and with the buttons showing a dB value you can set the slopes for each filter. Use the small handles to adjust their frequencies.

In case gravitas MDS sits on a stereo track, Mid/Side controls become visible. The "M/S" button switches gravitas MDS to Mid/Side processing.

"S Det. Gain" allows you to change the gain with which the side channel enters the detector of gravitas MDS. This comes in handy since in most cases the side channel has a significantly lower volume than the mid channel.

"S Level" allows you to change the level of the side channel after the processing so you can compensate for level changes originating from the processing.

Below these two controls you find a correlation meter.

If gravitas MDS sits on a track with a multichannel format containing at least one LFE channel, gravitas shows you controls for those LFE channels.

With them you can adjust the levels of those LFE channels after processing since dynamics processing of a multichannel signal which includes LFEs usually changes the balance between the normal channels and the LFEs.

Below these controls there is a meter showing the level of the LFE channels.

Output Section

In the last section you find the slider for makeup gain letting you compensate for the average level change caused by the processing.

Below that is the switch for automatic makeup gain. By default it is turned on and then gravitas MDS tries to set a makeup level internally based on all the settings.

If automatic makeup is on you still can use the "Makeup" slider for further manual finetuning.

Right next to the "Makeup" slider is the display containing the gain increase/gain reduction meter, a novel limiting function for gain increase and gain reduction and of course the output meters.

The gain increase/gain reduction meter is a combined meter showing you whether there is a gain reduction or a gain increase as a result of processing. That includes the volume change applied via "Makeup". The meter ranges from -12dB to +12dB and ideally it moves around it's 0dB center.

Attached to this meter is the novel limiting function for gain increase and gain reduction. By default gain increase limitation is turned on which you can see in the image as the power button of this function on the top of the meter is on. The small slider on the right side can be used to adjust the top limit of gain increase between 0dB and +12dB. Be careful when switching off this function because some settings in gravitas MDS can cause a strong gain increase. Below this meter is the power button (switched off in the image) for the gain reduction limiting function. It works similarly to the gain increase limiting function setting a lower limit value as to how much gain reduction can occur. The range here is between -12dB and 0dB.

The output meters can also be switched to show each channel with it's abbreviated channel name so you can check the level of each channel one by one. To switch between the two ways of viewing right click or Ctrl-click onto the meter.

On the bottom you find the "Mix" slider allowing your to blend the processed signal with the original, for example for achieving the famous parallel compression effect.

4. Bottom Module

The bottom module is split into five sections.

Detector Input Section

The left most section is the detector input section. Turning on the button with the headphones icon lets you monitor your detector input, be it the signal coming in through the main input of the plug-in or be it the external sidechain input.

The button below that switches the external sidechain input on or off.

Right to it is the detector input meter. Right click or Ctrl-click shows you the detailed channel meters with abbreviated channel names. Here also the two lines represent the two threshold values from the curve section in the center module.

Filter Section

Next comes the filter section containing a high pass and a low pass filter for defining the frequency range of the signal going into the detector. Similarly to the filter in the center module you can also switch the filter section on or off, set the slopes and the cutoff frequencies.

Below the frequency display on the right side you find a button with a chain symbol. When it is switched on, both the processing filter and the detector filter are linked.

Timing Section

The third section contains the usual values for the detector timing, such as attack time and release time.

It also contains a third timing parameter which is hold time. This one adds new ways of designing how the detector reacts to the incoming audio.

In the second row of knobs you first see “RMS Time”. If this parameter is at 0 ms the detector is a pure peak detector. When the value is greater than 0 ms the detector processes the average of energy in the signal over the time span set here. In short, the higher the value, the slower the detector’s overall reaction to signal energy.

The next parameter is “Look Ahead”. This parameter delays the signal in the processing part by the time set here and adds therefore latency which is reported to the DAW. Due to this delay the detector can react “ahead” of the signal, do it’s work before the cause for the work actually hits the processing. That way you can catch for example any transient even when having longer attack times or RMS times.

The little button with the chain icon in between both of these parameters links them.

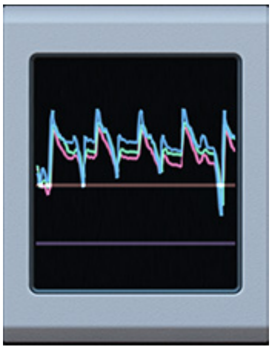
And finally there is “Det. Gain”. This parameter is only available when “3DET” is switched on and basically adds (or subtracts) a gain to the signal going into the detector.

When “3DET” is off you just have one detector working with the parameters described above. When “3DET” is on, you have three of them which you can configure differently. You can select one of them with the numbered buttons below the “3DET” button and that will show you the set of 6 parameters on the right belonging to the selected detector. They are color-coded for better distinction.

The idea behind this is the same idea which went into the famous AMEK mastering compressor which also employs 3 detectors with different settings, basically letting them “compete” which each other. The “winner”, meaning the one detecting the highest value above (or below) the threshold determines the degree of processing applied to the signal. The three lights to the right of the numbered buttons show the “winner”.

So you can set them to react differently, one may react quickly with short attack and release times, another slowly with some RMS time and longer attack and release and the third one somewhere in between. Then use “Det. Gain” to season to taste and you have a highly sophisticated and complex reaction pattern to different types of signals with transients and slow moving parts.

Running Curve Display



The running curve is a convenient display showing the detected signal running through the only one detector when "3DET" is off or all three detectors when "3DET" is on.

In the image you can see the same color coding as the three parameter sets have in the timing section. Also, you can see two lines representing the threshold values set by the two threshold parameters in the center module as a reference for the running curves.

Linking Section

In this last section you can see two parameters. The first is a knob for "Link". In most compressors you have just a button to make the compressor react to the sum of all channels for determining the degree of compression instead of treating each channel separately like a multi-mono compressor. In gravitas MDS you can set the degree of linking gradually with a value between 0% and 100%.

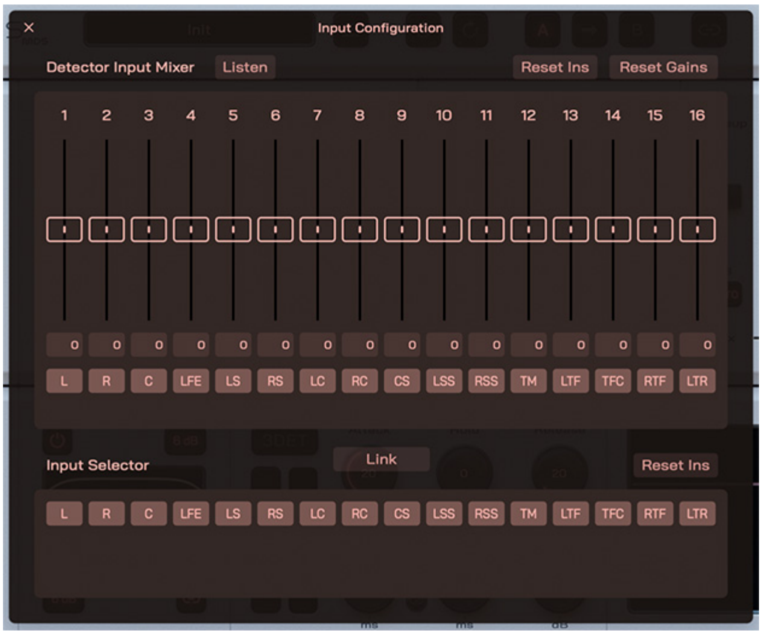
Linking is of course not available when running gravitas MDS on a mono channel and it is fixed at 100% when the amount of channels of the detector is different to the amount of channels in the actual processing because no meaningful way of unlinked processing is possible in that case.

"Peak Mode" determines how channels are linked for detection. The classic linking works like 100% "Peak Mode", which means that from all the detected channels the highest value is chosen to determine the degree of processing.

0% means that the average of all detected channel levels is taken as the value for determining the degree of processing and -100% means that the lowest level value is taken instead. With the "Peak Mode" knob you can adjust that gradually as well.

If "Link" is at 0% "Peak Mode" obviously has no effect as it just determines the kind of linking to be performed and it comes more into effect as much as "Link" is turned up.

5. Input Configuration dialog



Clicking the button below the input meters opens the Input configuration dialog. This dialog is divided into two sections. The upper section is the Detector Input Mixer. Here you can select and set the level of the input channels going into the level detection section of gravitas MDS.

The "Listen" button in the top row lets you monitor the detector input signal – the same function as the button with the headphones icon in the lower module of gravitas MDS. With the "Reset Ins" button you can reset all selector buttons while "Reset Gains" resets all gain faders.

With the gain faders you can change the gain of each channel going to the detector. These gains are not applied to the signal going into the processing. This way you can finetune to which of your channels gravitas MDS will be more sensitive and to which less. That comes in handy for example when you have a multichannel signal with a lot of prominent transients in the front but you don't want those to duck the ambience of everything else so much. The channels shown in that section might be different from those in the lower section in case you have external sidechain input turned on.

With the buttons below the faders you can choose which channel is going into the detector and which not. This is very different to just pulling the fader down as a channel not being part of the detector signal is not used for calculating the linked level while a channel with very low volume still will be, depending on the value of "Peak Mode".

In the lower section you can select which of the input channels should be processed and the ones switched off are passed through unchanged. The "Link" button between both sections links both the detector channel selector buttons and the processing channel selector buttons. And again, "Reset Ins" resets the channel selectors.

6. Parameter Linking

You can open the Parameter Linking Editor by clicking the button with the chain icon in the top module. With this editor you can link parameters from different instances of gravitas MDS in your session.

At the top right, you can change the name of the instance that you are currently working in. By default, each instance is named after the track where the plug-in is located, but you can change that here.

Below that, you see the Link Group Editor where you can assign a link group to an instance and edit the link groups. A link group is a group of instances sharing a selection of linked parameters.

By default, there are no link groups and the "Instance" drop down shows the instance you are currently working with. However, you can select any other instance by using the "Instance" drop down, without having to search through your session.

The "Add", "Rename" and "Delete" buttons let you manage the available link groups and the "Link Group" drop down lets you select an existing link group for the selected instance. Once a link group is selected, the member instances of that link group appear in the Link Group Member List to the left and the parameters are shown in the Linked Parameter List to the right.

Each button in the Linked Parameter List represents a linkable parameter and you can select any combination of them for the link group. Note that linked parameters can be automated, giving you lots of creative flexibility.

7. Mix Processing: Dolby Atmos Composer / Mastering Console

Gravitas MDS can be loaded as a module on the Master Channel of the Dolby Atmos Composer plug-in and the Mastering Console application. This feature allows you to process an entire Dolby Atmos mix with the ease of a plug-in sitting on the master track of a mixing session.

The details on how to operate the Master Channel are described in the tutorials and manuals of the Dolby Atmos Composer and the Mastering Console.

When gravitas MDS sits on the Master Channel in a Dolby Atmos mixing session in the Dolby Atmos Composer, the Input Configuration dialog slightly changes.

There are new buttons for both the upper and the lower section allowing you to exclude dynamic objects or the Composite channels from processing and from detection with just one click. That is helpful since Dolby Atmos mixes usually have a lot of channels.

The channel selector buttons in both sections are more descriptive showing to which type of channel they belong. If it is a Composite channel it shows "Composite" and the channel type below and if it is a dynamic object it shows the name of the Beam or Spacelab connection and the channel name, set in Beam or Spacelab below. That makes identification of these channels a piece of cake.

Parameter Linking also works but only among different Master Channel modules, not between modules and plug-in instances.

The external sidechain input also works for mixing sessions receiving it's input from the sidechain input of the Dolby Atmos Composer.

When working with an imported ADM/BWF file and loading gravitas MDS as a module in the Master Channel of either the Dolby Atmos Composer or the Mastering Console the first change you notice is in the processing filter section.

Below the filters you can see that at the position of the second knob is now a display located, showing an index counter and "+" and "–" buttons. Since both the Dolby Atmos Composer and the Mastering Console can load any legit Dolby Atmos ADM/BWF file, they can load such files containing an arbitrary number of beds. Each bed can contain an LFE channel and with the buttons you can step through the LFE channels in those beds to adjust their level using the "LFE Level" knob next to the display.

In the Input Configuration dialog you can see now that instead of Composite channels there are bed channels. The rest is pretty much the same. Hovering over a channel reveals the full channel name.

Note that the external sidechain input is not working with ADM/BWF file since it is basically a closed process. With the Input Configuration dialog however you have a lot of creative freedom to decide what should influence the processing in what way.

8. Additional information

System Requirements

Plug-in Formats:	VST3, AU, AAX
Supported Operating Systems:	macOS 10.14 through 14 / Windows 10, 11
CPU:	Intel min. 2 GHz, x64 with at least SSE3 support, or Apple Silicon M1 or higher
Display/Graphics:	min. 1440 x 900 px, OpenGL 3.3 or newer
Memory:	min. 4 GB RAM

9. Video Tutorials

Check out our video tutorials on our YouTube channel.

Channel: youtube.com/@fiedler-audio

gravitas MDS tutorial playlist: gravitas MDS tutorial playlist

10. Trial & Purchasing

After downloading the installer and installing the plug-in you have a 14 day trial period. The plug-in is fully functional during the trial period. To start the trial period you need to click "Try" on the about screen of the plug-in which opens after first instantiation or opening the editor. On the about screen you can also see the remaining days of your trial. The about screen can be opened manually by clicking on the product logo or on the fiedler audio logo.

The above mentioned way to start your trial requires an active internet connection. If for some reason you do not have an internet connection on the computer you are using for your trial you will instead be prompted with a way to start your trial offline. The dialog windows which open will guide you through this process which is basically a challenge & response type activation. You will first have to save a file called "comp-id.xml" which contains a digital fingerprint of your computer. This file you have to upload to our website to get the response file with which you can then start the trial offline by loading it into the plug-in in step 2 of the whole process.

Once the trial period ends the plug-in stops working and you need to activate it with a serial number. To purchase a license please visit our website and click on the "Buy Now" button of the desired product. A popup will open and you will be able to make your purchase. The payment options offered depend on the country and the purchase is processed through Fastspring (www.fastspring.com).

After successful payment the serial number will be sent to you automatically via email. If you are planning to buy several different products please check out our bundles to get discounts.

Note: If the trial period has expired but you didn't have the chance to properly evaluate the plug-in, you can request an additional trial period by contacting us through the contact form on our homepage. You will then get a trial extension serial number which you have to copy into the serial number field on the about page and hit "Try" (not Activate!).

11. Activating & Moving your licenses

After purchasing the plug-in you will receive a serial number via email. To activate the plug-in just copy the serial number, paste it into the license number field on the about screen and hit "Activate". The window will close automatically and the plug-in is activated. A regular license allows simultaneous activation on two computers.

For that process to work you need an active internet connection. If for some reason you do not have an internet connection on the computer you want to activate you will instead be prompted with a way to start your offline activation. The dialog windows which open will guide you through this process which is basically a challenge & response type activation. You will first have to save a file called "comp-id.xml" which contains a digital fingerprint of your computer. This file you have to upload to our website to get the response file with which you can then activate offline by loading it into the plug-in in step 2 of the whole process.

If you need to move your license to another computer you can deactivate the plug-in to free one of the seats of your license on the old machine and then activate it on the new computer. To do so please open the about screen of the plug-in on the old machine by clicking on the product logo or the fiedler audio logo and then click onto the "Deactivate" button. Again, this works out of the box with an active internet connection but if you do not have an active internet connection on this system you will have to go through the same process with challenge and response as you would have with activation. There is no limit regarding the amount of deactivations so you can move freely between machines.

IMPORTANT: Uninstalling the plug-in does NOT deactivate it. If you have not deactivated the license as described above, the license is still active on that machine.

12. DAW-specific settings & recommendations

Looking at the available parameters for automation in some DAWs you can see a parameter called "DO NOT USE". Please do as it says and do not touch it. This parameter is used for notifying the DAW that something in the plug-in has changed and forcing the DAW to mark the session as "dirty". This will require the user to be asked for saving the session upon closing it. If you recorded automation on it by accident please delete the recorded automation data to make it work correctly.

13. Modifier keys

Knobs and sliders can be dragged in a fine tuned way using Shift Key and/or Cmd/Ctrl Key. Both Shift and Cmd/Ctrl can be combined for an even finer control.

Double click on a Slider or Knob resets it to it's default value.

Edit the value of a slider or knob by right-clicking on it.

Hovering with the mouse over knobs, buttons, sliders etc. reveal quick hints about their functions.

14. Support

If you need help with operating our software please check out our video tutorials, the knowledge base on our homepage and don't hesitate to contact us through the contact form on our homepage.

If you think that you have encountered a bug in our software please first make sure that you have the latest version installed. You can check the version of the software on the about screen. The about screen can be opened by either clicking on the product logo or on the fiedler audio logo in the editor. If you are on the latest version and the bug is still present please contact us through the contact form on our homepage. Please provide information about the software you are using, the operating system, the main hardware specs of your computer and a detailed description of how to reproduce the bug if possible. Thanks in advance!

15. Installation & deinstallation

When installing the plug-ins, the installation program will copy the plug-in into the appropriate plug-ins folders, and in most cases your host will recognize them automatically.

If you want to uninstall our plug-ins you can do so on Windows using the Control Panel.

On macOS, plug-ins are installed in the standard plug-in folders in the Library folder.
Audio Units: * /Library/Audio/Plug-Ins/Components*
VST3: * /Library/Audio/Plug-Ins/VST3*
AAX: * /Library/Application Support/Avid/Audio/Plug-Ins*

To uninstall the plug-ins on macOS you have to manually delete them from these folders. To also delete the presets and other settings you have to go to the folders
/Library/Application Support/Fiedler Audio and
~/Library/Application Support/Fiedler Audio
and delete the appropriate folder(s) inside.

Note: Since OS X 10.7 (Lion), the system and user Library folders are marked as hidden by default. To make them visible again in Finder, open Terminal (found in /Applications/Utilities) and enter the following commands:

chflags nohidden /Library
chflags nohidden ~/Library

16. Acknowledgements

A huge thanks to all our beta testers for their relentless testing of the different beta versions! Special thanks go to Thomas Wendt for making our plug-ins visible to the world.

Furthermore we would like to thank all our users for their support and loyalty over the years. You have made all this possible.

17. About fiedler audio

Fiedler Audio was founded 2013, with the goal of delivering the highest quality products for musicians, audio engineers and sound designers. We are dedicated to the creation of professional music and audio software that expands the horizons of musicians, DJ's, audio engineers and producers. Our greatest desire is to enable amateurs and professionals alike to realize their dreams and ideas at the highest level, wherever they may be – whether in the studio, at a gig, in the comfort of their living room or in the park, our software offers new and innovative ways to evolve.