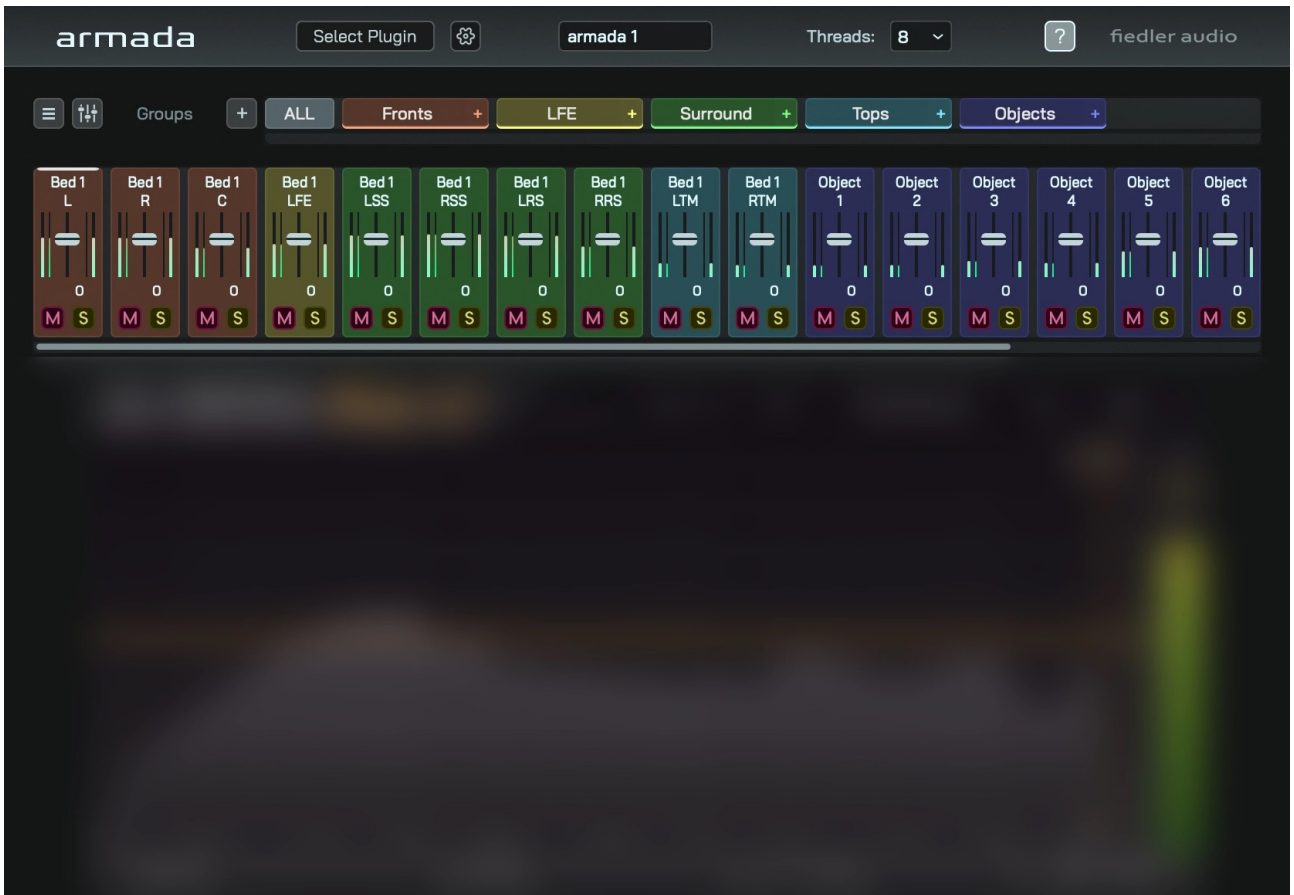


fiedler audio

# armada

## Manual



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# 1. What is armada?

armada is a sophisticated plug-in wrapper specialized in bringing your full VST3 effect plug-in arsenal to the immersive audio domain. It does so by loading one mono instance of the selected VST3 plug-in for each channel of the track where armada sits. In it's OBAM version armada is capable of handling up to the 128 channels of an entire Dolby Atmos mix inside our Dolby Atmos Composer and the Mastering Console.

That means you can use armada on any channel layout, from mono up to 9.1.6, NHK 22.2 and everything else. You can use it for your immersive audio production independent of the actual format, be it Dolby Atmos, Auro 3D, MPEG-H, Eclipsa, Sony 360RA or Higher Order Ambisonics.

Using an intuitively understandable yet very powerful group system many instances of armada can be connected throughout your session to process different tracks together as if they were one. That is possible by using an internal sidechain system.

Offering a multi threaded audio engine armada enables you to process high channel counts with demanding effect plug-ins without overloading your CPU.

The grouping preset system lets you rapidly set up your session and store those settings for future projects.

## 2. General Workflow



Start using armada by loading the plug-in of your choice. armada will then load one mono instance of your selected plug-in per channel, make the editor of the plug-in on the first channel visible and show mixer and groups. The white bar at the top of one channel indicates that the editor of the plug-in on that channel is currently shown. You can switch the editor by clicking on another channel.



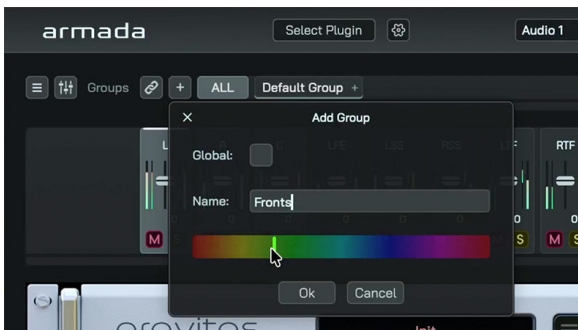
The mixer contains meters, a volume fader and mute and solo buttons for each channel. From left to right the meters show: Main Input volume, volume at the sidechain input of the hosted plug-in, gain increase/reduction and output volume. By hovering over the channel name abbreviation the full channel name is displayed.

In the mixer you can select multiple channels to change their volume together while maintaining the volume differences between the selected channels. This also works for muting and soloing.

If you don't want all channels to get processed and would prefer to leave some channels untouched, deactivate them by selecting them and right-clicking on one of the selected channels to open the deactivation options. Deactivated channels simply pass their signal through unchanged.

In armada channels are organized in groups. When you load a plug-in, all channels are placed in the default group. The plug-ins on all channels within a group share the same settings. If you change a parameter in one plug-in, all other plug-ins in the group are also changed in the same way. That way all channels get exactly the same treatment.

If you would like to have different plug-in settings for some of your channels, create a separate group for those channels. To create a new group select the channels you want to go into the new group and click the + button to the left of the ALL button.



A dialog opens where you can set the name, the colour and, if armada is not loaded as an OBAM plug-in, the group type.

Click OK or hit the enter key to create the group containing your selected channels.

If you want to move channels to an existing group, just select them and click the small + button on the group tab. Note that a group must have at least one channel. If you move channels around and a group becomes empty, it will automatically be deleted.

If armada is loaded as a VST3, AU or AAX plug-in in a DAW, there are two group types. A local group is just a group to be used within one instance of armada and is independent of all other instances of armada in your session. A global group is accessible throughout all instances of armada in your session where the same VST3 plug-in is loaded. By using global groups, you can group channels of different instances of armada for processing together.



To see the global group of one instance of armada somewhere else you can now make this group visible in other instances using the option "Show Unused Global Groups" in the group options dropdown menu.

Visually the group type can be distinguished by the bright line in the group item. Local groups have the bright line at the bottom and global groups have it at the top.

By selecting a group you can focus on the channels of that group and all other channels are hidden. When you click ALL, then all channels of all groups are shown.

If you want to delete a group manually you can do so by right clicking on the group and selecting "Delete". All channels in that group will be relocated to other groups or, if necessary, a new group will be created. Alternatively you can select groups and use the option "Delete Selected Groups" in the dropdown that opens when clicking the group options button to the left.

In the group options you can also reset channel grouping to the default group.



To make life easier when grouping channels, we have created a preset system. For different formats you'll find various helpful presets that divide the channels of the layout of armada into meaningful groups, either as local or as global groups.

You can of course create your own presets and reuse them wherever you need. Note that the OBAM version of armada uses a different type of preset since OBAM allows communication of metadata and moving objects between armada and OBAM hosts.

If armada is used as a VST3, Audio Unit or AAX plug-in you can quickly join the channels of this instance to the global groups existing in another instance of armada by using the link button (chain symbol) right next to the "Groups" label. When clicked, you'll see a list of existing instances of armada with the same plug-in loaded.

After selecting an instance, the channels of the current instance of armada then join the global groups of the selected armada instance by distributing the channels into those global groups in the same way.

Each instance of armada is identified by its name which can be set on the top of armada's editor. By default, armada uses the same name as the track on which it is placed, but you can change this to whatever you like.

### 3. Sidechaining

Many compressor and effect plug-ins have a sidechain input that lets you use an external signal to trigger the processing. armada has sophisticated options for feeding different signals into the external sidechain input of the loaded plug-ins for a variety of use cases.

If you enable the external sidechain input in the hosted plug-in, armada by default feeds the same signal into both the sidechain input and the main input of the hosted plug-in. In that default setting, the hosted plug-in will behave the same way as if its external sidechain input would be deactivated.

Each group in armada has its own sidechain mixer which lets you customize what goes into the sidechain input of the hosted plug-ins. The sidechain mixer lets you create a mono mix of all the channels in the group. Note that the sidechain mixer is only accessible if the hosted plug-in has an external sidechain input. Clicking the mixer button opens the sidechain mixer of your selected group or the first group if "ALL" was selected.



You can quickly jump between sidechain mixers of the different groups by clicking on the available groups.

On the left side there is a Listen button that lets you listen to the signal going into the external sidechain of a selected group.

Below that you find the mix parameter for determining what goes into the sidechain input of the hosted plug-ins in that group. By default it is set to 0%, which means that only the individual input signal of each channel is fed into both the main input and the sidechain input of the hosted plug-in. This means that changes in the sidechain mixer on the right do not have any effect. As you increase the mix parameter on the left, more of that sidechain mix is fed into the sidechain input of the hosted plug-in and less of the individual signal.

A setting of 100% means the sidechain input of all the plug-ins in that group are receiving the same signal, which lets this group act like a linked multichannel plug-in.

To put this another way, this parameter works very similarly to the link parameter in a compressor. At 0% the group works like a group of independent mono plug-ins and at 100% it works like one linked multichannel plug-in.

armada itself also provides an external sidechain input. If present and active these channels also appear in the sidechain mixer.



If the number of channels in armada's sidechain input is equal to the number of channels at its main input, a new blending control appears. This lets you blend between armada's main input and its sidechain input for the individual feed of each hosted plug-in.

Note that if the mix control is set to 100%, this blend control has no effect as it only affects the individual feed.

Also note that the sidechain mixer always optimizes the volume of the mixed signal. This means that only active sidechain mixer channels are taken into account for calculating the optimal volume of the mix. A sidechain mixer channel becomes inactive when its volume is pulled down to -72 dB, and this is indicated visually by a darker channel background colour.

In the sidechain mixer you can also select various channels to change their volume together, maintaining the volume differences between the selected channels.



A sidechain mixer of a global group contains all channels of all instances which use this global group. First we see the channels of the current instance of armada and then those of all other instances. Below the channels you can see some fields indicating the input type, meaning main input and sidechain input of the respective armada instance, and the name of that instance.

Using global groups and their sidechain mixer you can feed the same signal into the loaded plug-ins across various instances of armada. This makes it possible to include an almost unlimited amount of channels in one processing array.

The signals going into the sidechain mixer of a global group are synchronized across all instances once you start playback in your DAW. This synchronization produces a latency in armada that is determined by the latency of the hosted plug-in as well as latencies of other plug-ins in your session which produce an offset between the various instances of armada connected via the global group. The latency is 4096 samples plus whatever is required additionally for synchronization.

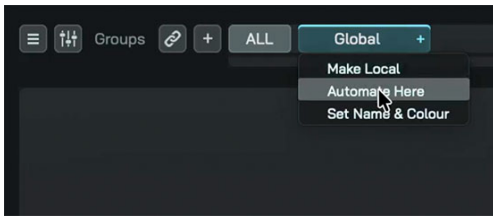


There is one thing you need to take into account when using the sidechain mixer of global groups across multiple instances of armada. All instances that share at least one global group do have to be parallel, meaning, if you route the output of one of these armada instances into the input of another instance of armada with the same global group, synchronizing the sidechain signal of both these instances becomes impossible.

This is because time travel hasn't been invented yet. As such, serial routing counts direct output routing as well as routing through a send.

Note that some DAWs might freeze if you attempt to connect serially routed armada instances via global groups. As of the release of this manual, we have seen that Steinberg's Nuendo and Cubase as well as Studio One do have this issue.

## 4. Automation



The hosted plug-ins can of course be automated per group. If you want to automate the plug-ins in a group right-click the group and select “Automate Here”.

The parameters of the loaded plug-in are then mirrored to the DAW together with the name of the group and you can automate the parameters like you do with any other plug-in and all plug-ins in that group are updated accordingly when automation is read during playback. This works for both local and global groups and for groups in the OBAM version of armada when hosted in the Dolby Atmos Composer.

Through the same option in the dropdown menu you can also deactivate automation for a group. Be careful when activating or deactivating automation because the order of parameters for the entire armada instance will be changed when you do this. This means that if you have previously recorded automation, that automation may end up landing on a group that you didn’t intend to automate. If in doubt, avoid deactivating armada’s automation and have the DAW ignore the automation for that track instead.

## 5. Multi Threading

If your armada instance has a lot of channels and the hosted plug-in is very CPU intensive you may discover that one CPU core is not enough for processing the entire armada instance. This may result in dropouts during playback. If this happens, you can add audio processing threads to this armada instance using the dropdown menu at the top of armada’s editor.

If you experience performance issues, increase the number of threads step by step until the problem is gone. Note that there cannot be more threads than channels in armada.

## 6. Plug-in Handling



When you open Armada for the first time or after installing new VST3 plug-ins, click the wheel icon at the top of Armada's editor to open the plug-in scanning dialog.

The Scan button lets you scan your system for new or updated plug-ins so that you can use them in Armada. If there have been no changes to your plug-ins and you click the Scan button, nothing will happen. Here, you can also set the folders where you want Armada to look for plug-ins. You can either add new folders or remove folders with the plus and minus buttons at the left.

Below that you find the list of the scanned plug-ins. Clicking "Clear List" empties the entire list and you will have to rescan all plug-ins again. If you hold down the Command/Control key while clicking "Clear List" the plug-in list for blacklisting is also cleared.

You can also select specific plug-ins within the list and remove them by clicking "Delete Selection". Clicking "Show Containing Folder" opens the folders where the selected plug-ins are located. If you have removed plug-ins from the system and you want to clean up the list, just click "Remove Nonexisting Files".

Note that armada is designed to work with mono-compatible effect plug-ins only. Effect plug-ins which have no mono version as well as synthesizer and instrument plug-ins are automatically blacklisted and hidden from this list as they are incompatible with armada. Plug-ins that are compatible but either crash or have other problems upon loading are marked in red.

## 7. Additional information

### System Requirements

Plug-in Formats:	VST3, AU, AAX, OBAM
Supported Operating Systems:	macOS 12.x through 26.x / 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

## 8. Video Tutorials

Check out our video tutorials on our YouTube channel.

Channel: [youtube.com/@fiedler-audio](https://youtube.com/@fiedler-audio)

armada tutorial: [armada tutorial](#)

## 9. Trial & Purchasing

After downloading the installer and installing the plug-in you have a 45 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](http://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!).

## 10. 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.

## 11. 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 clicking on it.

Hovering with the mouse over knobs, buttons, sliders etc. reveal quick hints about their functions if the help function is enabled in the top right corner of the editor.

## 12. 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!

## 13. 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*

OBAM: */Library/Audio/Plug-Ins/OBAM*

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
```

## 14. 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.

## 15. 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.