



CROSSGRIDDER 1.3

Windows VSTs on macOS and Linux as VST2/3/AU/AAX

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December, 25th 2021

“CrossGridder stands to AudioGridder
as IronMan stands to Tony Stark.”

Tony Stark is awesome, right?
He has a vast knowledge, but physical limits due to his human
nature, which he surpasses by wearing the armor.

The same happens to AudioGridder when wearing its own:
CrossGridder.

CrossGridder isn't just copying AudioGridder, it's a tool that
expands its functionalities.

Getting to a universally compatible version required few weeks of
trials and improvements.

Now...
Would you like to learn how laser beams work
when the enemy attacks?

READ THE GUIDE :)

DISCLAIMER

. This file is provided as it is. I would not answer for any damage caused by its use.

. **CrossGridder** was tested on different machines and operative systems; version 1.3 is a universal bottle, which solves previous compatibility and installation issues.

. Its predefined settings are intended for Local Setups: a DAW and CrossGridder coexist on the same machine.

. Additional settings, detailed in this guide, are necessary to connect it to the AudioGridder plugin.

. CrossGridder is virus-free and built with free and open-source software.

. CrossGridder is free and will always be.

. CrossGridder and its PDF guide are found at [Github](#).

. Version 1.3 adds, updates and corrections. Reading the guide is suggested, even if you have already used CrossGridder.

CONTENTS

01. What is CrossGridder?

02. What CrossGridder can do for you!

03. Requirements and Limitations

04. CrossGridder: First Run

05. Multiple Servers Setup

06. AudioGridder General Settings

07. CrossGridder's Content

08. Export bottle: Compatibility

09. Problems Resolution

10. CrossGridder on the Web

11. Suggestions, Ideas, Reporting Issues

12. Credits

01. What is CrossGridder?

. **CROSSGRIDDER** is a bottle for CrossOver 20 and 21. It basically contains AudioGridderServer.exe, a Windows VSTs server which connects to the AudioGridder plugin through an IP address.

. It was thought to use those Windows-only VSTs also on Mac and Linux.

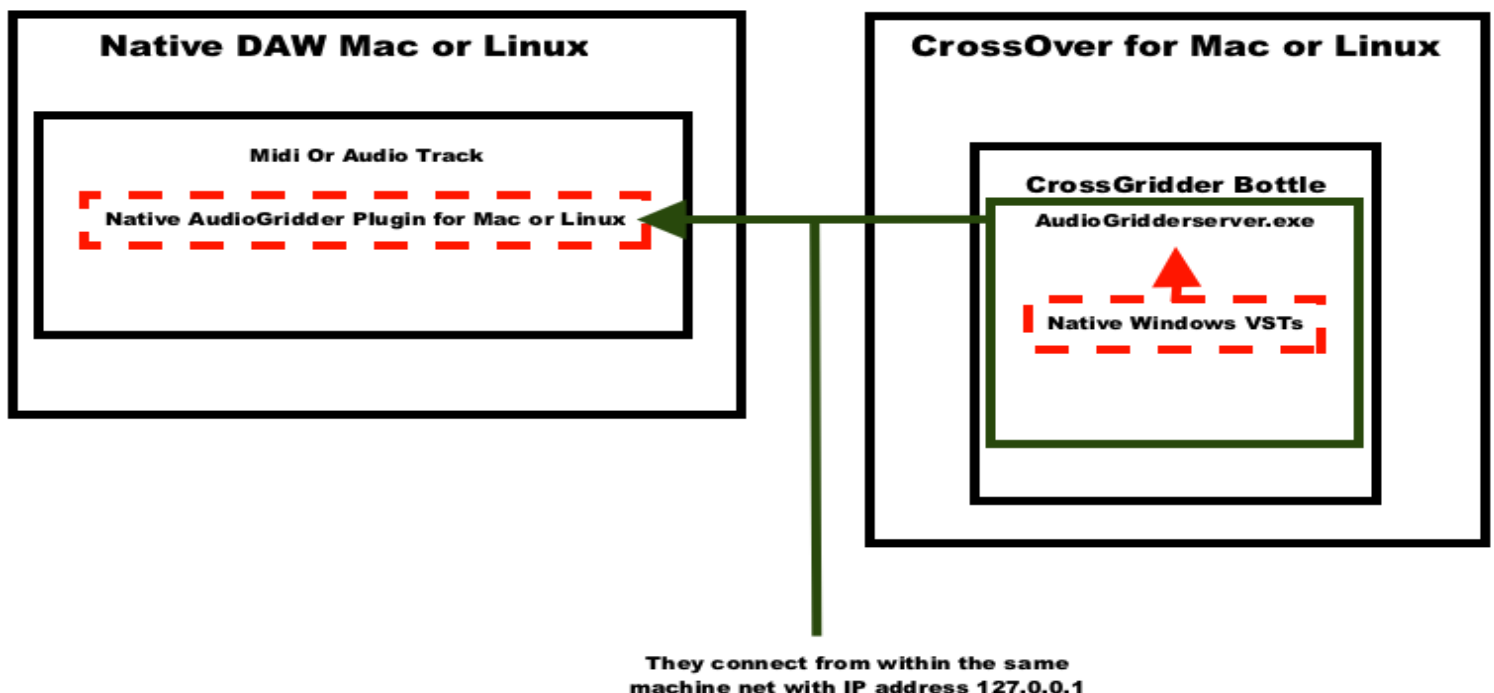
. It works from Mojave to Monterey and Ubuntu Studio 21.

. A “bottle” is a Windows system reduced to the minimum, with less functionalities (which we don't need in this context), but that requires less CPU, RAM and disk space compared to a virtual machine and is highly customized to run the best way possible any Windows app we will install into it.

. As of now, CrossGridder is possibly the best compromise on macOS and best solution on Linux in its field. Other methods (VEP, virtual machines) can coexist in the same environment, when necessary.

. No particular skills are required, only the time and patience to follow this guide. It's all written here.

LOCAL SETUP: One Mac or Linux system contains



02. What CrossGridder can do for you!

.. Run Windows VSTs on macOS and Linux

- . Run Windows VSTs through CrossGridder, connecting it to the AudioGridder plugin.
- . Automate parameters activating them from the AudioGridder plugin and learn them as you would for any other native plugin.

.. Create as many Servers as your system can handle

- . Overcome AG server limitation of 1 GUI per server.

.. Be a sandboxed environment for VST trial

- . Evaluate plugins from inside CrossGridder.
- . Leave your system clean, delete the bottle when you decide.

.. Or a great alternative to virtual machines

- . Requires less CPU, RAM and Disk Space.
- . Generates less audio latency.
- . Stop dealing with 2 desktops on 1 screen.

.. Can be used along its past and future versions

- . Don't delete previous bottles unless necessary.
- . This is also the concept behind CrossGridder's multiple servers setup.

.. And you can carry your plugins anywhere

- . Just export the bottle and import it on a different system.
- . iLok License Manager works as a native app, the Soundtoys 5 bundle was used to transfer and activate the licenses.

03. Requirements and Limitations

. Shared

- . Use a light desktop theme to prevent “camouflage” of the AG server icon in the Menu bar
- . Don't change settings or buffer size while composing.

. MacOS

- . Works from Mojave to Monterey, HS and prior weren't tested.
- . Prefer CrossOver 20 on Mojave
- . Plugins requiring OpenGL 3.1 compat will not be validated, it is a Mac limit and it is out of my control. (e.g. Softube, SSL).

. Ubuntu Studio 21

- . Plugins requiring OpenGL compat 3.1 and above DO work, granted your GPU supports it.
- . CrossGridder was tested on Ubuntu Studio and Ardour.

. Bottle settings (right click bottle in the Sidebar)

. High Resolution Mode (CO Sidebar > bottle > Settings)

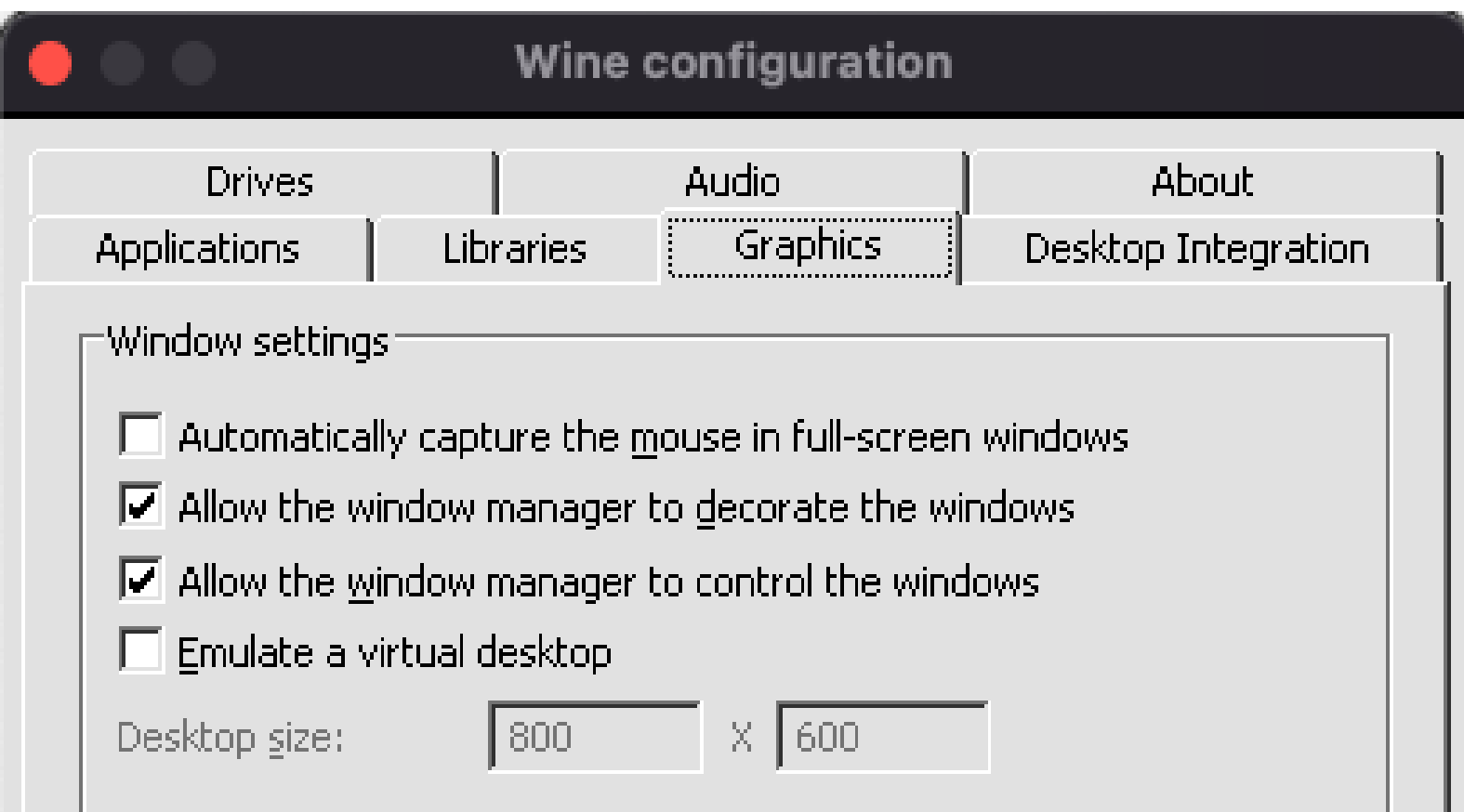
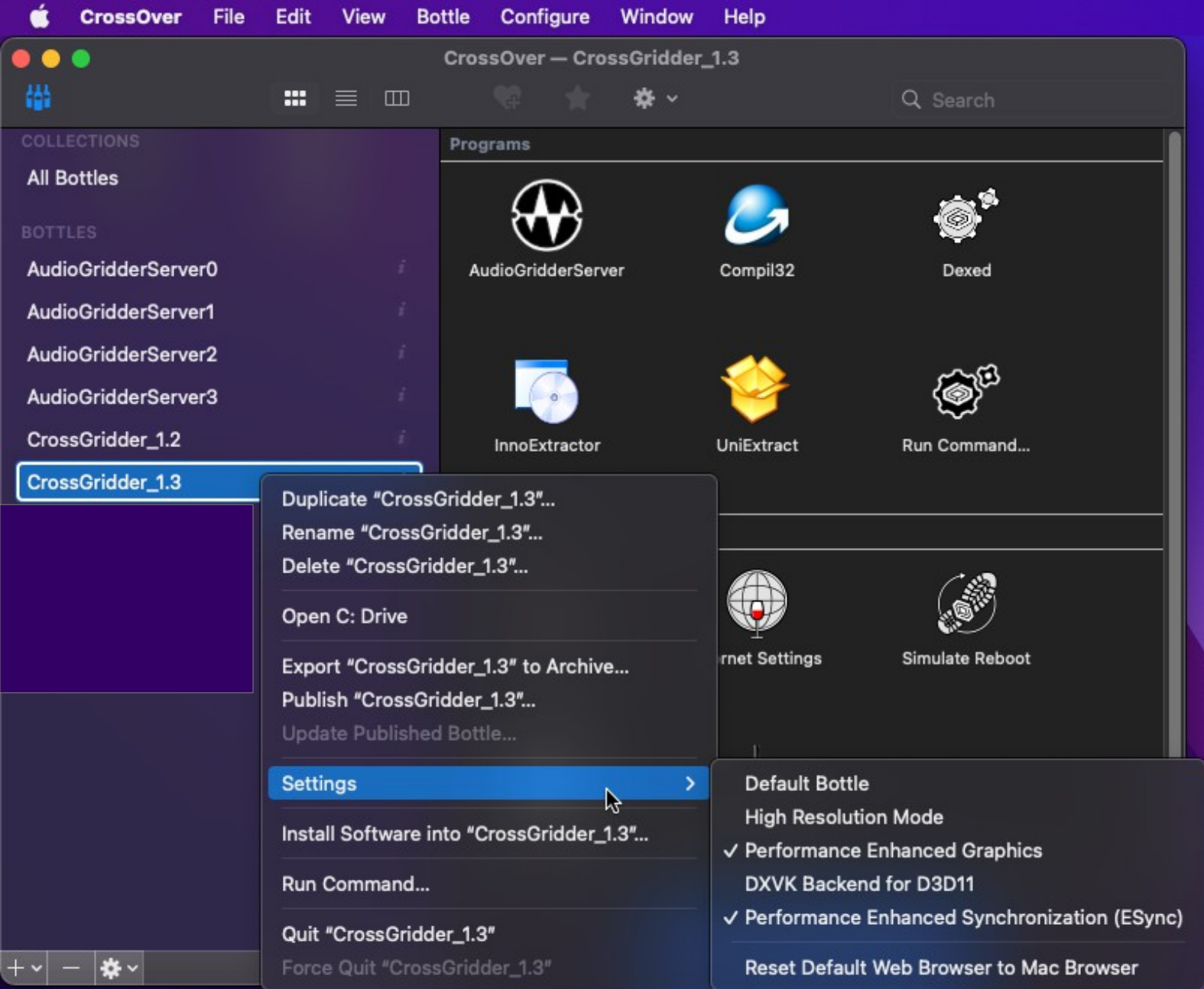
- . Default: **Off**
- . Keep it off to maximize plugins compatibility.
- . If a plugin crashes, check if it's on.

. DXVK Backend for D3D11 (CO Sidebar > bottle > Settings)

- . Default: **Off**
- . Keep it off to maximize plugins compatibility and prevent crashes.

. Wine Configuration > Graphics > Emulate a virtual desktop

- . Default: **Off**
- . Keep it off to prevent server freezing and CPU spikes.



04. CrossGridder: First Run

. This chapter is intended for Local Setups: an AudioGridder plugin coexists on the same system as CrossGridder.

. Server Setup

. Install CrossOver 20 or 21

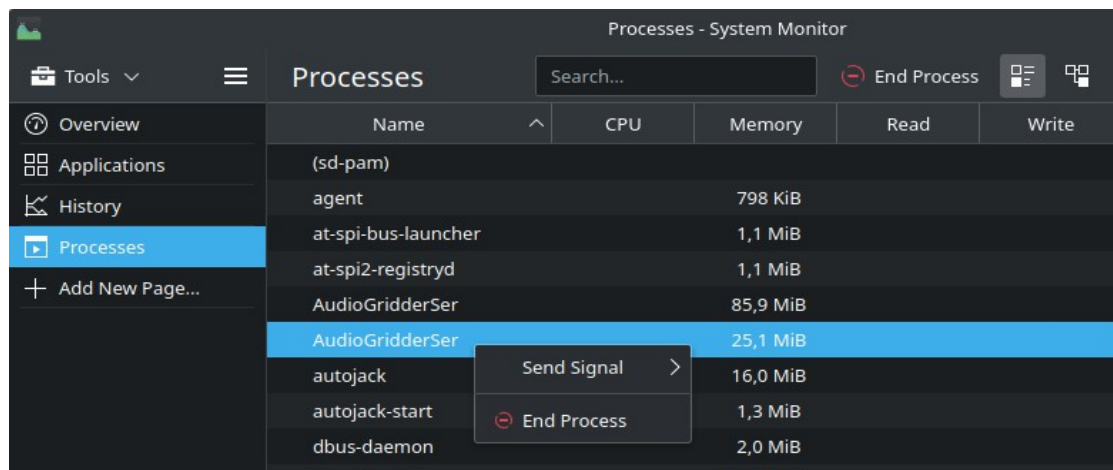
- . Extract CrossGridder with [The Unarchiver](#) o [Keka](#).
- . Mojave: install **Crossover 20**
- . Catalina > Monterey / Ubuntu Studio 21: install **Crossover 21**
- . Get the 14 days trial from their [website](#)
- . Open **Crossover**: Menu>Bottle>Import>CrossGridder_1.3.cxarchive

. MacOS

- . Select **CrossGridder** from Crossover SideBar
- . Drag **AudioGridderServer** from Program List to Dock
- . Launch **AudioGridderServer**, wait for **wine64-preloader**
- . Quit **AudioGridderServer**; wine64-preloader remains active.

. Ubuntu Studio/Linux setup

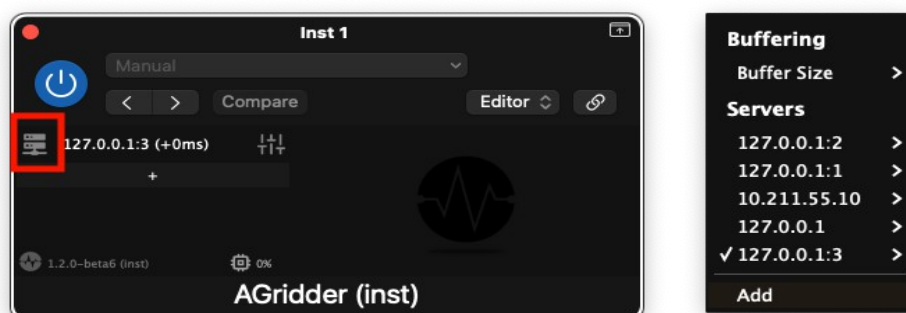
- . Select **CrossGridder** from Crossover SideBar
- . Pin AudioGridderServer and System Monitor to Menu Bar
- . Open both, the server splash screen will be transparent.
- . Kill the AudioGridderServer process with ± 25 RAM in use .



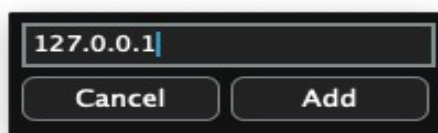
	Name	CPU	Memory	Read	Write
	(sd-pam)				
	agent		798 KiB		
	at-spi-bus-launcher		1,1 MiB		
	at-spi2-registryd		1,1 MiB		
	AudioGridderSer		85,9 MiB		
	AudioGridderSer		25,1 MiB		
	autojack		16,0 MiB		
	autojack-start		1,3 MiB		
	dbus-daemon		2,0 MiB		

. Plugin setup

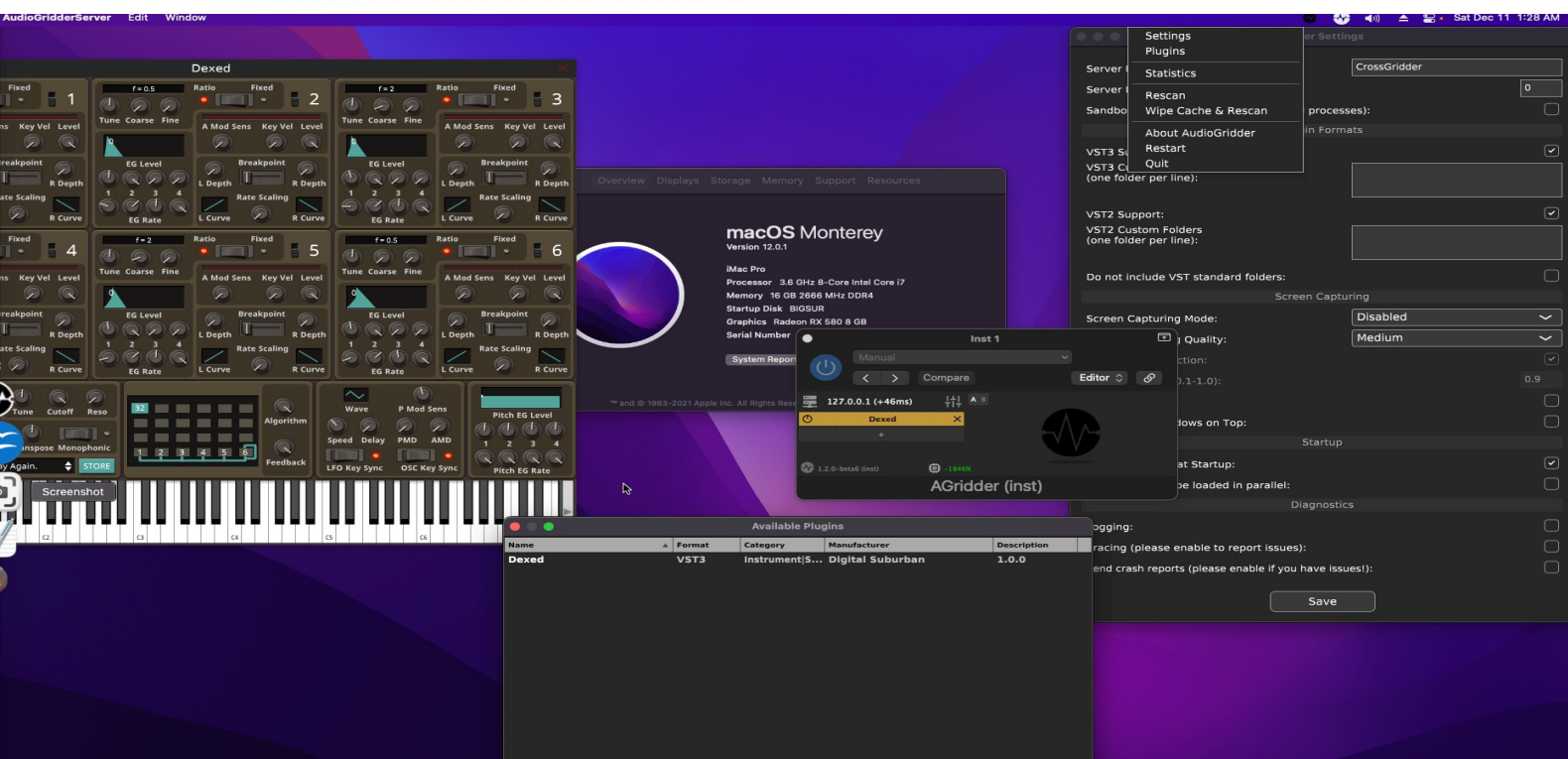
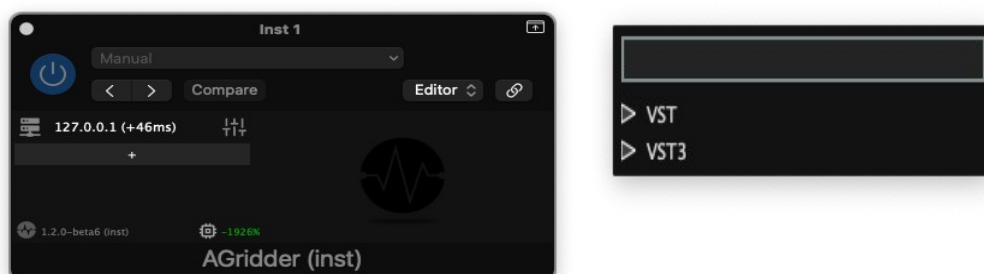
- . Open your DAW, create an empty project.
- . Create a midi track, insert an AudioGridder plugin.
- . Click the Net icon to reveal “Buffering” “Servers” and “Add”.



- . Change Buffer Size to 2 or more blocks
- . Click “Add”, type 127.0.0.1 and “Add” once more.



- . Click “+” to insert Windows VSTs.



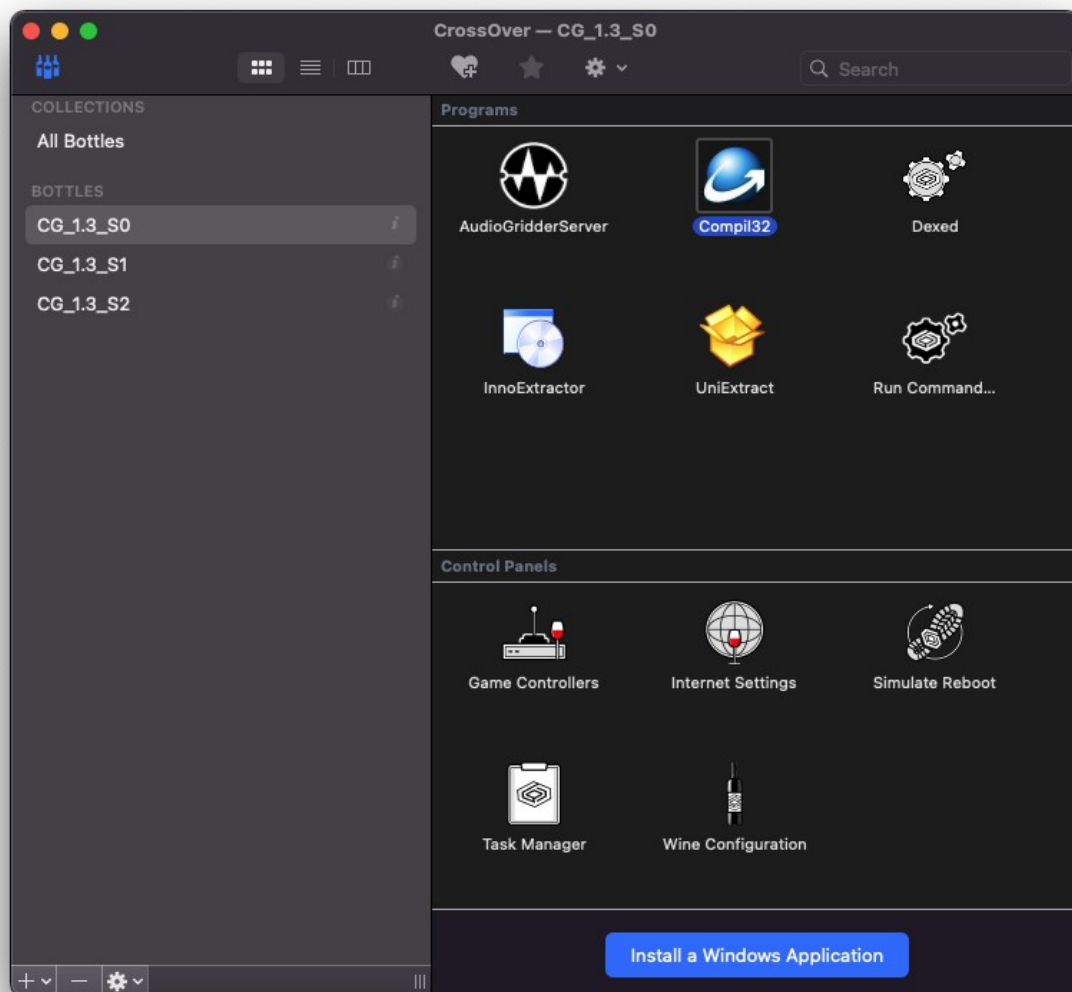
05. Multiple Servers Setup

- . There are at least two valid reasons to adopt this configuration:
 - . If one server freezes, only plugins from that server will freeze.
 - . Have as many GUIs as you like.

* **Tip:** Read it as 1 GUI x server, as many servers your system can support.
** **Tip:** 4 Servers is a good starting point, more than 6 would mostly be not necessary.

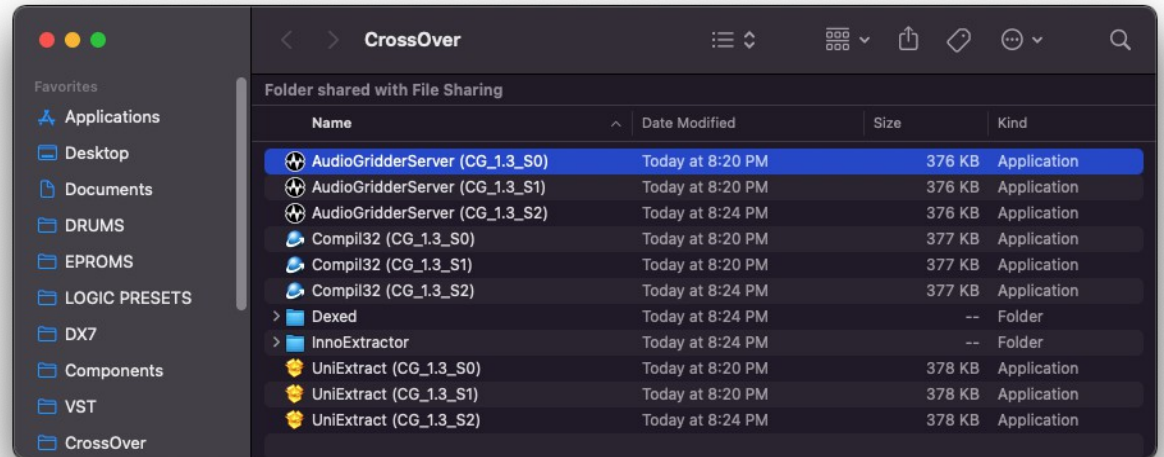
. Shared setup: first part

1. Open Crossover
2. Create 2 CrossGridder copies (right click bottle > Duplicate).
 - . Rename all bottles as you wish + ID (i.e CG_1.3_S0,CG_1.3_S1...)

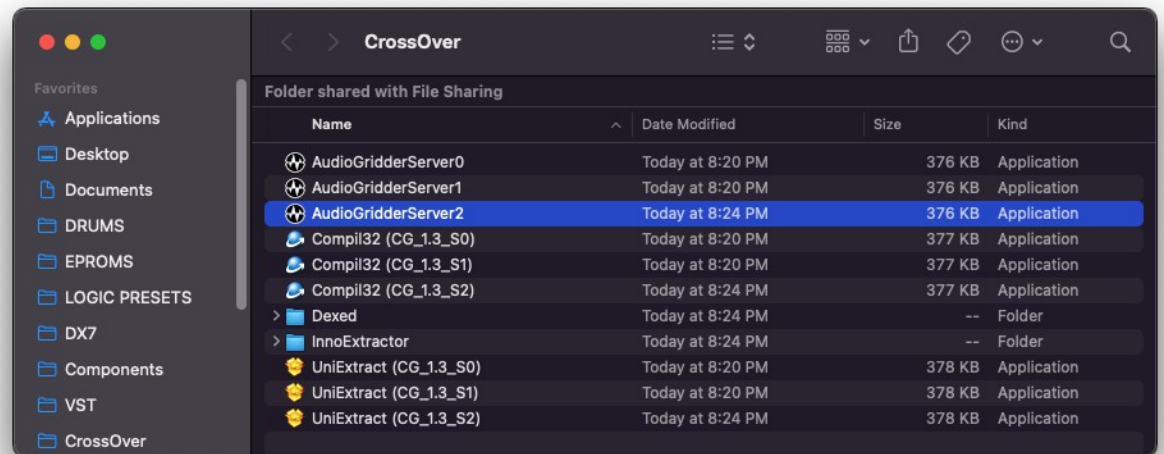


* **Tip:** Don't run AG servers at same time before each one has its ID,
** **Tip:** Advanced users can change server ID via AG server configs, it's faster. See [Chapter 6](#).

1. Right click an app in Program List > Show in Finder.



2. Rename all AudioGriddedServer apps adding their ID:
AudioGriddedServer0, AudioGriddedServer1, etc..



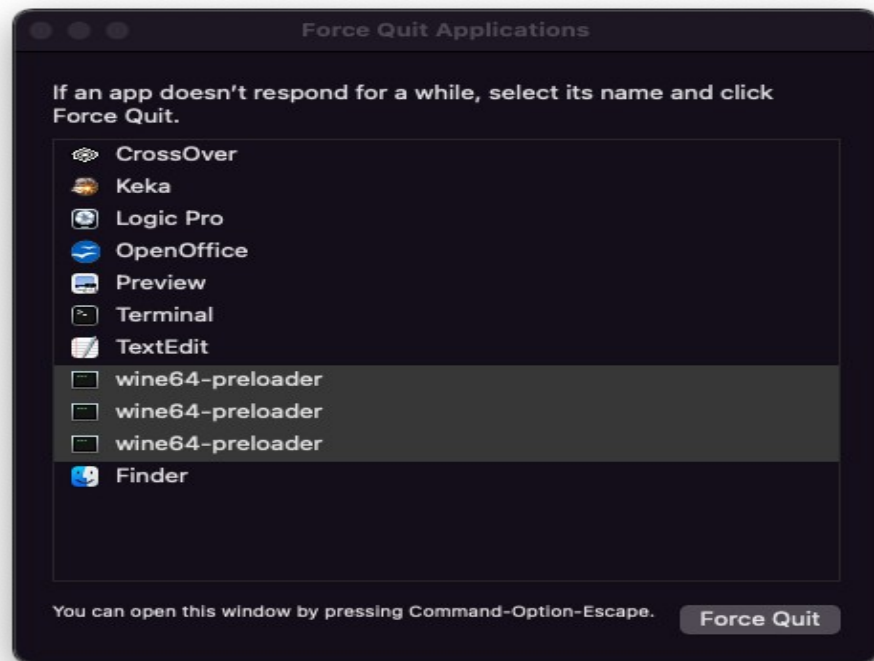
3. Drag them into the Dock



4. Launch the first server from the Dock

- . Wait for the server splash screen
- . Check that wine64-preloader is active in the Dock
- . Quit **AudioGriddedServer(n)** from the Dock
- . Repeat the same steps for the remaining servers

* **Tip:** Only multiple wine64-preloader must run.
Any running AudioGridderServer leads to freezes.



. Ubuntu Studio 21 setup

1. Pin each AudioGridderServer from its CG bottle to the Menu bar, from left to right, from first to last, to identify them.
2. Repeat these steps for each AudioGridderServer in the Menu bar:
 - . Launch the server
 - . Wait for the server splash screen, It will be transparent.
 - . Open System Monitor > Processes
 - . End the AudioGridderServer process using less RAM, ± 25 MB.
 - . The server splash screen is released and the server is ready.
 - . If not done, certain plugins will freeze when loading them.

. Shared setup: final part

- . Open the **DAW**
- . Load the first AudioGridder plugin.
- . Server 0 is ready as **127.0.0.1** after the First Run.
- . Connect the plugin to the server if they aren't.
- . Load a Windows VST into the AudioGridder plugin.
- . Load the second AudioGridder plugin.
- . Click on “Add” , type **127.0.0.1:1** then “Add” again.
- . Load a Windows VST into the AudioGridder plugin.

*Tip: Repeat this for any additional server, adding 1 to the last used ID.

** Tip: Each number used as ID is added to the number used for port binding: ID 0 = 55056, ID 1 = 55057 and so on.

06. AudioGridder General Settings

. Screens with max res = 1366x768 cut the bottom of the AudioGridder server settings.

. In this case, the following solutions can be adopted:

- connect to a second monitor with a min res of 1600x900
- manually modify settings while the AudioGridderServer is off:

```
c: drive/users/crossover/ApplicationData/AudioGridder/AudioGridderserver.cfg
```

```
"CrashReporting": false,  
"ExcludePlugins": [],  
"ID": 0,  
"Logger": false,  
"NAME": "CrossGridder",  
"ParallelPluginLoad": false,  
"PluginWindowsOnTop": false,  
"SandboxLogAutoclean": true,  
"Sandboxing": false,  
"ScanForPlugins": true,  
"ScreenCapturingFFmpeg": false,  
"ScreenCapturingFFmpegEncoder": "webp",  
"ScreenCapturingFFmpegQual": 1,  
"ScreenCapturingOff": true,  
"ScreenDiffDetection": false,  
"ScreenLocalMode": true,  
"ScreenQuality": 1.0,  
"Tracer": false,  
"VST": true,  
"VST2": true,  
"VST2Folders": [],  
"VST3Folders": [],  
"VSTNoStandardFolders": false
```

Default server settings *** Don't change them unless stated otherwise ***

. Server name

- . Default: **Crossgridder**
- . It can be changed to any other preferred name.

. Server ID

- . Default ID: **0**
- . Use it as described at [chapter 4](#) and [5](#)

. Sandboxing

- . Default: **Off**
- . Leave it off on a Local Setup to prevent a plugin chain reaction.

. Screen Capturing

. Disabled

- . Leave it disabled for the CrossGridder Local Setup to work.

. Local Mode

- . Default: **On**
- . **On**: GUI sent by server moves while moving its AG plugin.
- . **Off**: You can move the 2 windows independently.

. Keep Plugin Windows on Top

- . Default: **Off**
- . Can be turned **On** or **Off**. Self-explanatory.

. Allow Plugins to be loaded in parallel

- . Default: **Off**
- . Shouldn't be necessary for a Local Setup.

. Diagnostic settings

- . Default: **Off**
- . Keep them off and turn them on only for reproducible issues.

. AudioGridder Plugin settings

- . They are documented on its website and Github pages, I'll add just a few brief notes:

. Buffer size

- . Never leave it at 0 blocks, set it at least to 2 on recent CPUs. CPU usage drops and doesn't badly affect the latency due to the nature of CrossGridder running on a Local Setup.

. Plugin AppTray

- . Plugin app tray disabled > Show Monitor > Any DAW crashes

* Tip: Use it to provoke an immediate DAW quit if necessary. BEWARE!!!

- . Need help to install the AudioGridder plugin on Linux?
Take a peek at [chapter 09.3](#).

07. CrossGridder's Content

. AudioGridderServer.Exe 1.2.0 beta 6

. Visual C++ 2005>2022 and Vs6sp6 (Visual C++ 6.0)

. InnoExtractor 5.4.0.201

. Used to extract exe. Newly added VC++ fixes an issue with some installers, I kept it just in case.

- . Open the installer with InnoExtractor
- . Extract the .exe/.msi in a <custom folder>
- . Open Inno Setup Compiler

. Inno Setup Compiler 6.2.0 (Compil32)

See [chapter 09.4](#)

. Windows VSTs:

- . CrossGridder contains one VST to get you started: **Dexed**.
- . Install more Windows VSTs through CrossOver.

08. Export bottle: Compatibility

- . For best compatibility, it is suggested to use Mojave as the starting point to export CrossGridder over other machines.

09. Problems Resolution

01. Server's freeze

. Abusing server restarts while composing could freeze it.

Solution: force quit its wine64-preload, simulate windows reboot from within the bottle containing the frozen server to restart it.

. The server icon doesn't go away after force quit wine-64 preloader

Solution: Kill any **wine*** process.

In any case, it's difficult to reproduce the issue unless stressing the servers with frequent restarts while connected to the AudioGridder plugin.

02. Windows installer can't create a folder and fails

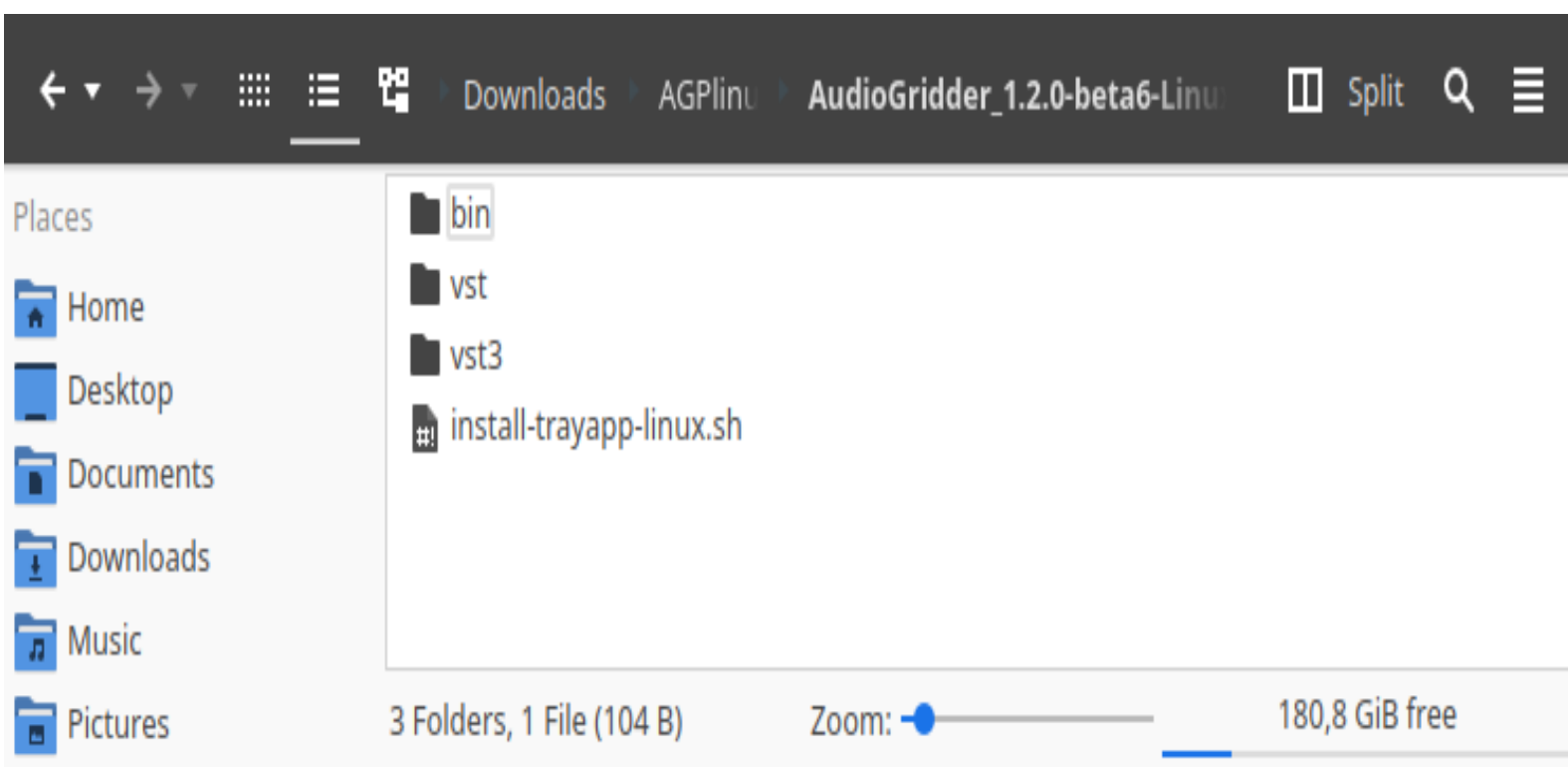
. No aliases must be found inside c: Drive users/crossover/

Solution: Delete them right after importing CrossGridder.

03. AudioGridderPlugin – Linux Installation

. Download AG plugin for Linux and extract it. Be sure that the plugin and server versions are matching.

. In this example we create the folder AGPLinux into Ubuntu Downloads, where we move the extracted folder, which contains:



.Let's install the tray app first:

*** Tip:** Following instructions are based on the previously created folders.

. Open Konsole (Ubuntu terminal)

. Copy and paste (change **<user>**):

```
cd /home/<user>/Downloads/AGPlinux/AudioGridder_1.2.0-beta6-Linux
```

. Press Enter

. Copy and paste (change **<user>**):

```
sudo /home/<user>/Downloads/AGPlinux/AudioGridder_1.2.0-beta6-Linux/install-trayapp-linux.sh
```

. Press Enter, type system password, press Enter. Done!

. Now install the AudioGridder plugin:

1) Choose A or B:

A) Move the AudioGridder VST2 and VST3 into VST system folders.

B) Add the path to the extracted folder into your DAW.

2) Open your DAW, create a track, insert an AudioGridder plugin. Done!

. How to remove the tray-app, if required.

. Open Konsole

. Repeat the following for each sudo command below :

. Copy and paste into Konsole

. Press Enter

. Type the system password

. Press Enter

```
sudo rm /usr/local/bin/crashpad_handler
```

```
sudo rm /usr/local/bin/AudioGridderPluginTray
```

04. Modify, Execute and Recompile a setup.exe with the .iss file

. Modify the .iss with Find/Replace before running or building.

FIND

DestDir: "{code:GetDir|VST2x64}

REPLACE

DestDir: "C:\Program Files\Steinberg\VSTPlugins

FIND

DestDir: "{code:GetDir|AAXx64}

REPLACE

DestDir: "C:\Program Files\Common Files\Avid\Plug-ins

FIND

DestDir: "{code:GetDir|VST3x64}

REPLACE

DestDir: "C:\Program Files\Common Files\VST3

FIND

Flags: skipifsourcedoesntexist

REPLACE

Flags:

. **OPEN .iss**

Menu > File > Open > (find .iss) > Open

. **RUN .iss**

. Menu > Run > Run:
. Select the .iss file from the extracted folder.
. If run is successful, installation starts
. Recompiled .exe is found at /<extracted folder>/Output

. **BUILD .iss**

Menu > Build > Compile:
. Select the .iss file from the extracted folder
. Recompiled .exe is found at /<extracted folder>/Output

10. CrossGridder on the Web

*** Subscribe to get notified. I am constantly working to make CrossGridder better and to add contents.**

- . [Github](#) (BAT donations via Brave browser are welcome)
- . [Youtube](#) (BAT donations via Brave browser are welcome)
- . [Facebook](#)

*** Earn BATs by using Brave. Boost earnings clicking adds notifications.**

11. Suggestions, Ideas, Reporting Issues

- . **Start a discussion on my [Github](#) page including:**
 - . System's details
 - . CrossGridder build in use
 - . The part of the guide requiring clarification or a description of the issue when not discussed here directly.
- . **Send detailed reports and constructive feedbacks:**
 - . They will have a higher priority.

12. Credits

- . [AudioGridder](#) by Andreas Pohl
 - . [Codeweavers](#) for Crossover 21. It's necessary to run CrossGridder
 - . [Dexed](#) developers for emulating the legendary DX7. It also works as librarian and it's able to write and recall presets from a real DX7.
 - . [Inno Setup](#) by Jordan Russell
 - . [Inno Extractor](#) by Havy Alegria 2020
 - . [Uniextract](#) by Bioruebe
 - . Microsoft for Visual C++ redistributable.
 - . [Me](#), for the countless spent testing it.
 - . You, for trying CrossGridder...
- ... Consider buying their products or sending a donation when they are free.
- They're amazing developers, providing us with great stuff.**

