

algoriddim 

NEURALMIX™ PRO

User Manual (macOS)

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Introduction

1 Introduction

Thank you for using **Neural Mix™ Pro**, the **macOS** app that brings **Neural Mix™** audio separation to the desktop. Designed for DJs, musicians, and producers alike, **Neural Mix Pro** lets you batch-export audio component tracks in a variety of ways to suit your needs.

The free version of **Neural Mix Pro** includes the following:

- Isolate beats, instruments, and vocals in real-time with the sophisticated AI music player
- View multi-track, frequency colored waveforms side by side
- Mute vocal or instrumental components individually
- Change the tempo of a song without affecting its pitch (up to +-75%) with high-quality time-stretching capability
- Transpose a song into a different key (up to +-1 octave) with pitch-shifting functionality
- Detect BPM and key automatically
- Allow for beat-quantized looping
- Use the Loop Editor for the following actions:
 - » Extract beat-matched vocal, percussive or harmonic loops individually
 - » Trim loops precisely to an audio region or sample
 - » Set auto-quantized or manual loop in and out points
- Sort and search music integrated into the app via your Mac's Music and Finder libraries

With the in-app purchase, unlock access to the following advanced features:

- Offline export options including:
 - » Variety of output options: Instrumental, Acappella, Drums, Harmonic, Harmonic+Vocals, Drums+Vocals, Neural Mix Edit
 - » Optional target BPM and key transformation for exported files
 - » Multi-track export
 - » WAV and AAC output file formats

- Export loops created with the Loop Editor into different file formats using adjustable target BPM and key
- Export of instrumentals and/or acapellas of multi-track playlist and/or folder directly from the Music Browser

1.1 Requirements

Neural Mix Pro requires an **Apple Mac** running **macOS 10.14 Mojave** or later. The app installation takes up 100MB of disk space, plus storage for your music files.

TIP: Neural Mix Pro is a lightweight app, but relies heavily on your CPU. The faster your processor, the smoother your Neural Mix track separation and export will be.

Glossary of terms

2 Glossary of terms

Deck

Like its physical counterpart, this is where your tracks are played and controlled. You can change the tempo, view track progress and overall waveforms.

Playlist

A saved list of tracks within your library.

Channel

An individual input route for audio on the mixer.

Cue point

Marker that can be set along the timeline of the track and jumped to instantly.

Force touch

An addition to touch technology that allows for detecting different pressures of touch.

Library

The section of **Neural Mix Pro** where you can quickly browse, search and prepare your music and videos to mix with.

Loop

A segment of a track that's repeated. The size and location of the loop can be determined by the user.

Multi-touch

Technology such as the MacBook Pro's trackpad that allows for more than one touch point and multiple point gestures.

Transport

The buttons used to control a track. These include play/stop, cue start.

Quick Start

3 Quick start

3.1 Installing Neural Mix Pro

A free download of **Neural Mix Pro** is available exclusively on the Mac App Store, and can be installed on any device running **macOS 10.14** or later. This free version allows you to fully explore the app apart from exporting your separated components.

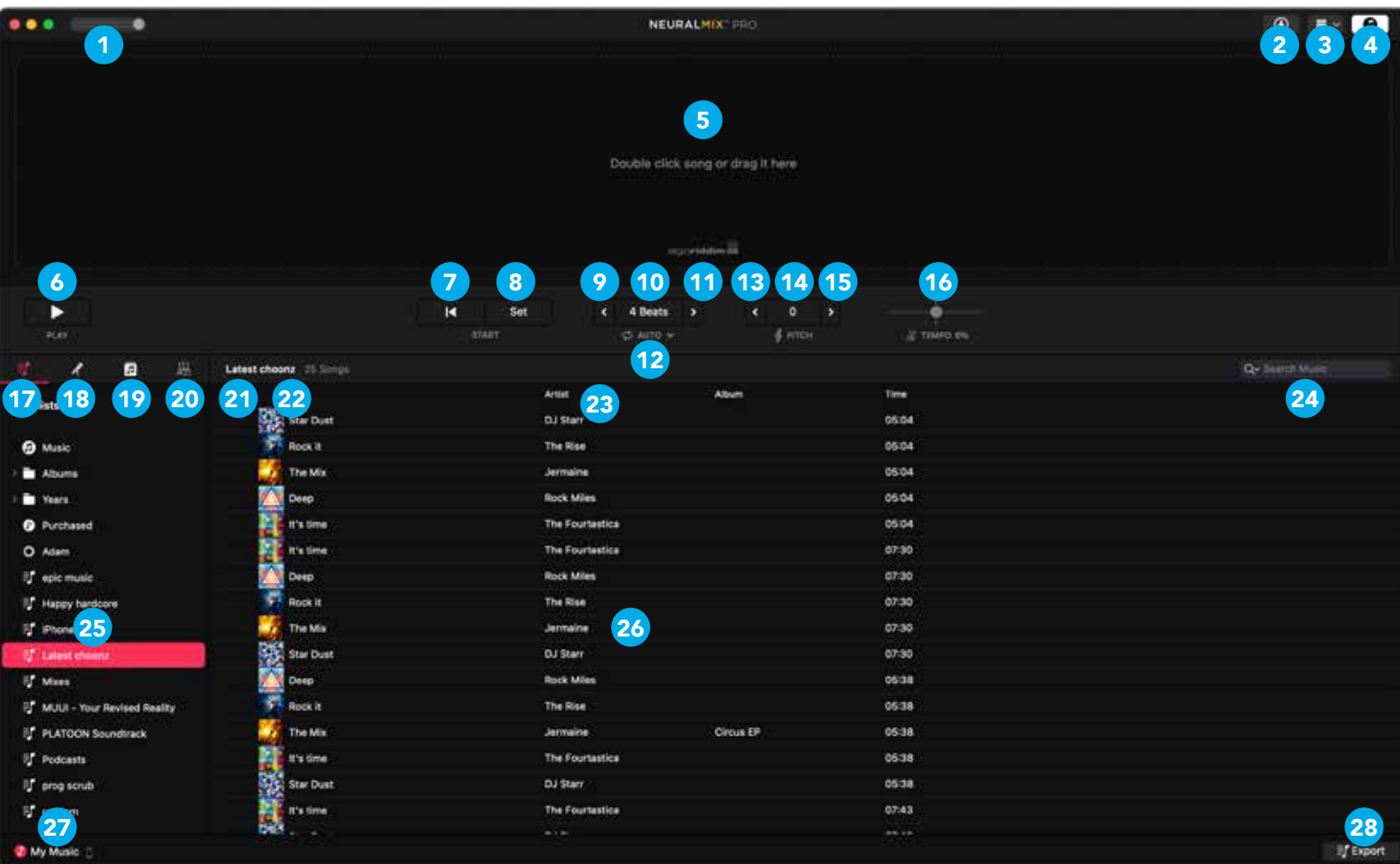
3.2 In-app purchase

When you first download **Neural Mix Pro**, you'll have access to most of the software features other than the export of separated tracks from your music, for both single files and batch processing.

You can unlock the export features via an in-app-purchase button at the top right of the window. The unlock is a one-time payment through the **App Store**. Should you need to reinstall the app, you can restore your previous purchase via the **Neural Mix Pro > Restore Purchases** menu item.

3.3 Interface tour

This overview explains all the controls you will find when you first launch **Neural Mix Pro**. For more information on specific features and customization, see **section 4 Advanced features**.



Deck area

1. Master volume level meter and fader
2. Export task manager
3. View manager
4. Library toggle
5. Track deck
6. Play button
7. Jump to CUE
8. Set CUE

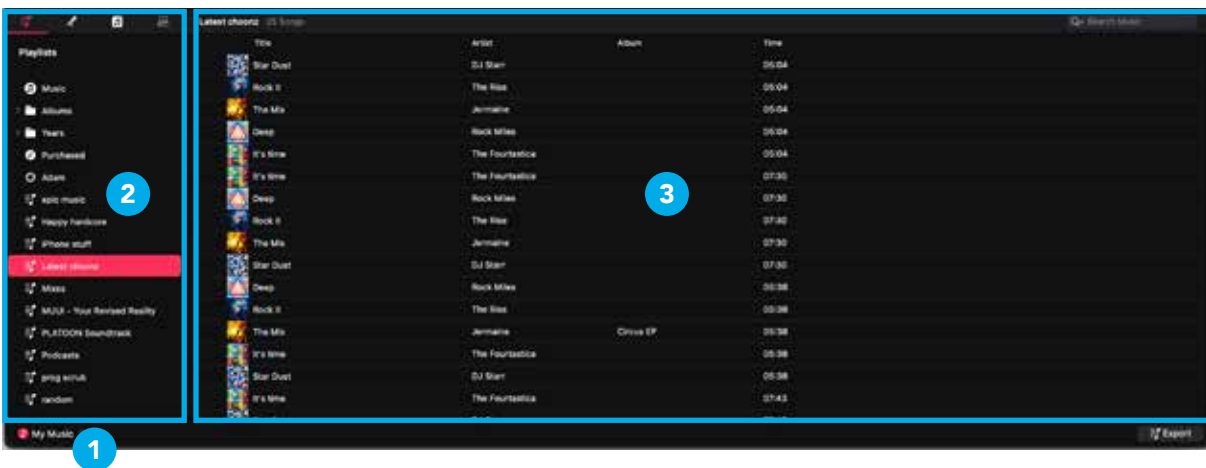
9. Loop half
10. Loop set
11. Loop double
12. Auto/manual toggle
13. Pitch down
14. Pitch set
15. Pitch up
16. Tempo adjust

Library

17. Playlists tab
18. Artists tab
19. Albums tab
20. Genres tab
21. Current playlist
22. Playlist track count
23. Playlist sort columns
24. Library search box
25. Playlist tree
26. Track list
27. Music library source selector
28. Playlist batch export

3.4 Finding your music

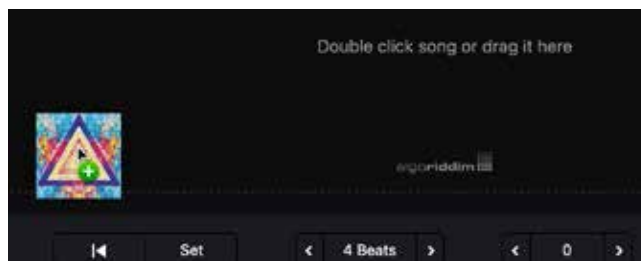
The lower section of the app window is the music library browser. This browser displays your music collections, broken down into two sources: the **My Music (Music/iTunes)** library and the **My Files** folder browser. Switch between the sources using the drop-down menu at the bottom left of the window **(1)**.



Each source has a **collection tree view (2)** and a **playlist window (3)**. The collection tree displays all your playlists or folders, and the playlist window shows the tracks in the currently selected **playlist/folder**.

3.5 Loading a music file

To load your music into the player, you can double-click the track in your playlist, go to **File > Open...** menu, or drag the file onto the player from a Finder window or the library browser.



TIP: You can quickly open a file in **Neural Mix Pro** by dragging and dropping the file onto the app icon from Finder or your desktop!

3.6 Understanding the waveforms

With the default view, a track will be split into three separate scrolling waveforms that represent the different components of the track (**vocals, harmonic, drums**), along with a full track waveform across the top of the deck area. The scrolling waveforms are zoomed in and follow the progression of the read-head as the music plays on.



Throughout the track, the waveform frequencies are color coded, with blue for high, green for mid, and red for bass. Some components might not have any sound, so these will have no visible waveform.

3.7 Controlling the music

The layout of **Neural Mix Pro** is similar to the **Algoriddim** djay family of products. If you have experience with DJ apps, you'll see a lot of the familiar controls such as **auto-loop** and **CUE SET**, as well as a similar music browser.



You can jump to any point in the track by clicking on it in the full track waveform, or drag the scrolling waveform to accurately move the deck playhead where you need it. Clicking the **PLAY button** at the bottom left of the deck, or hitting **SPACEBAR** will start/stop the music playing.

You also have **hot cue (1)**, **loop (2)**, **pitch (3)**, and **tempo (4)** controls across the bottom of the deck area. See **section 4.5 Loops** and **section 4.6 Pitch and Tempo** for more information.



3.8 Exporting track components

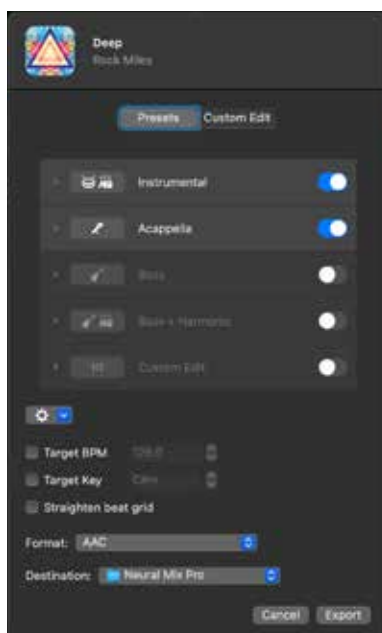
There are two ways to export your track components: individually from the currently playing track, or by batch-processing a playlist. Both methods offer the same options for controlling the output.

3.8.1 Export a playing track

1. First, load a music file into the deck. You will then see a button at the top right of the player, titled **Export**.



2. The pop-up that appears will be set to the **Presets** tab, and default exporting the **Instrumental** and/or **Acappella** components of the track.

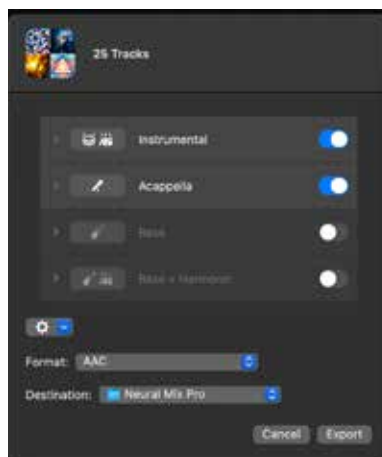


3. Choose an audio file **Format** to export as.
4. Select a save **Destination** and click **Export**.

TIP: You can also export an individual track via the browser context menu. Simply right-click the chosen track and choose Export from the menu.

3.8.2 Export playlist

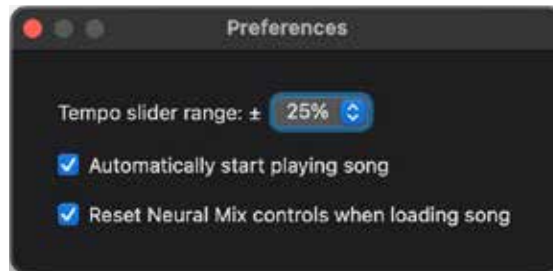
For playlist export, the export pop-up is the same as single tracks: you can batch-export an entire playlist via the playlist export button at the bottom right of your **Neural Mix Pro** window. Like track export, this will add your tracks to the **export task manager**, which can be found at the top right of your window.



NOTE: While it is possible to export your entire library in one go, this will take a very long time. It's advised to run smaller batches.

3.9 Preferences

To open your preferences, either go to **Neural Mix Pro** menu > **Preferences...** or use shortcut **CMD (⌘) + ,**.



Tempo slider range

Changes the +/- range of the tempo slider between **6%, 8%, 10%, 16%, 25%, 50%**, and **75%** of the original track BPM.

Automatically start playing song

When ticked, tracks will start playing as soon as they are loaded into the deck. If disabled, tracks loaded into the deck will analyze as normal but audio must be started with the play button.

Reset Neural Mix controls when loading a song

When active, all volume controls will reset to default: mute/solo will be disabled, and volume faders will return to maximum.

3.10 Uninstalling

Since **Neural Mix Pro** is a Mac App Store app, you can follow the [Apple Support knowledge base article](#) to easily uninstall the app.

To reset your installation of **Neural Mix Pro** to defaults launch **terminal.app** and use the following command:

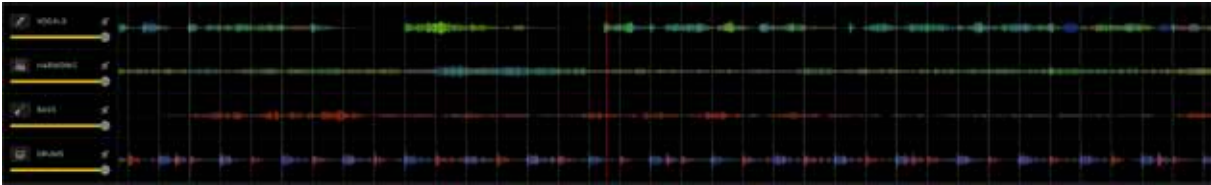
```
defaults delete com.algoriddim.neuralmix
```

Advanced features

4 Advanced features

Now that you've got the basics, you can dive into some of the more advanced features and interface controls. There are also tips on how to get the most out of your track separation, using your library, and creating Neural Mix components like a pro.

4.1 Understanding track separation



Neural Mix Pro uses Algoriddim's Neural Mix™ audio separation technology, a machine learning artificial intelligence that has been taught to recognize individual components of a music track and how to split these into their own audio stream.

When a track is made, part of the process will remove parts of the individual audio components (either by changing the volume, or by filtering out certain frequencies with an effect, a filter or an EQ) so that it fits in with the rest of the track.

This means that the final product may not have the raw sample of a vocal or instrument.

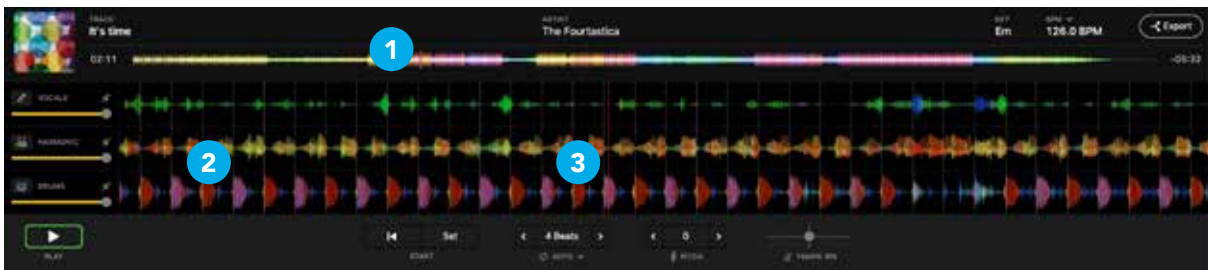
Neural Mix Pro will endeavor to split the audio, but it cannot rebuild any missing frequencies. As such, artifacts and changes in volume and clarity are to be expected when listening and exporting components.

4.1.1 Tips for using the separated components created by Neural Mix Pro

- While the audio you're extracting might not sound perfect in isolation, once you play it alongside other music, it will likely sit with the audio a lot more comfortably.
- Try playing with the volume levels rather than just completely removing certain components. Don't forget to use solo/mute to quickly A/B test your efforts.
- If you're hoping to do a mashup or remix, try extracting more than one component so they fit better together.

4.2 User interface

When a track is loaded into the deck, it is analyzed by the software and a waveform is created and displayed, along with **1 track**, **2 track**, **3 tracks**, or **4 tracks** of scrolling component waveforms.



4.2.1 Track waveform

This is the visual representation of the audio currently loaded into the deck. The red-line **playhead (1)** shows where the track is playing.

4.2.2 Scrolling waveforms

To the right of the volume controls are the **scrolling waveforms (2)**. The red-line **playhead (3)** on this section will remain in the middle, with the audio scrolling past as it plays.

Neural Mix Pro can switch between displaying the waveforms and volume controls for:

- 1 track,



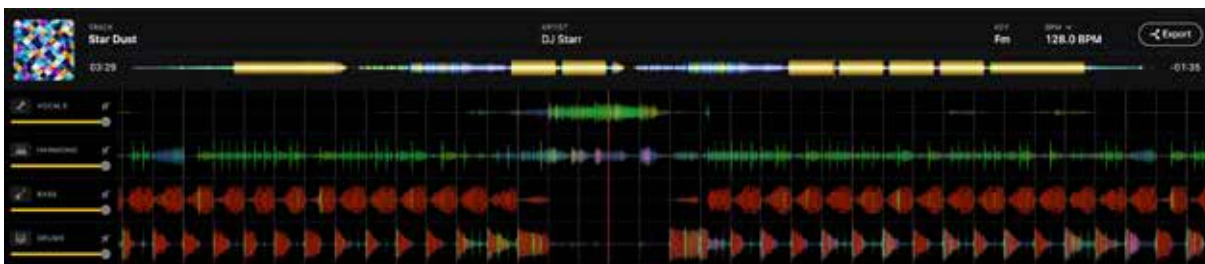
- 2 tracks,



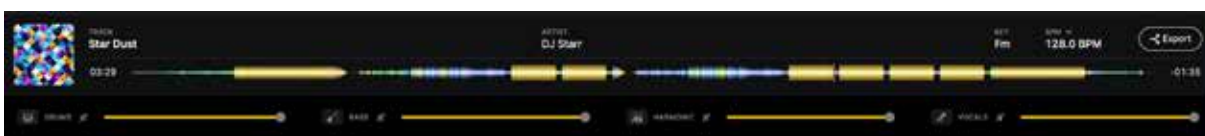
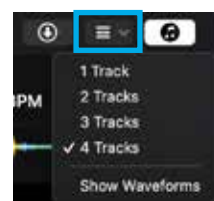
- 3 tracks, and



- 4 tracks.



You can also choose whether to display just the volume controls or add the waveforms with the **Show waveforms** toggle.

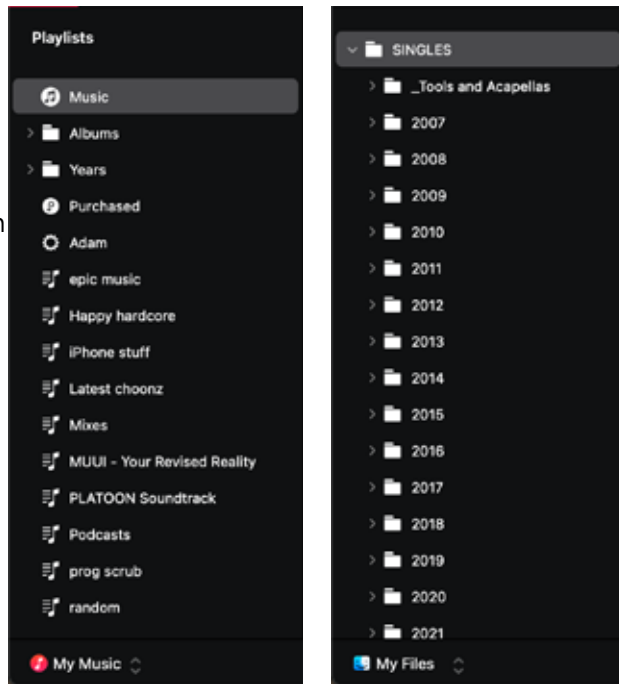


4.3 Navigating your music library

The music library is split into two main sections, the **browser tree** and **playlist view**. If you are familiar with apps such as djay or **iTunes/Music**, this will behave similarly.

Browser tree

The browser tree lets you navigate around your collection, with your music added to folders and/or playlists. For more information see **section 4.3.1 Switching sources**.



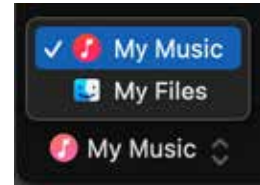
Playlist view

Any selected playlist or folder will display the tracks stored within it. The playlist view is broken down into metadata columns, which will show any information saved about the music. See **section 4.3.2 Metadata and sorting**.

Title	Artist	Album	Time
Star Dust	DJ Starr		05:04
Rock it	The Rise		06:04
The Mix	Jemaine		05:04
Deep	Rock Miles		06:04
It's time	The Fourlastica		06:04
It's time	The Fourlastica		07:30
Deep	Rock Miles		07:30
Rock it	The Rise		07:30
The Mix	Jemaine		07:30
Star Dust	DJ Starr		07:30
Deep	Rock Miles		09:38
Rock it	The Rise		06:38
The Mix	Jemaine	Circus EP	06:38
It's time	The Fourlastica		05:38
Star Dust	DJ Starr		06:38
It's time	The Fourlastica		07:43
Star Dust	DJ Starr		07:43
Deep	Rock Miles		07:43
The Mix	Jemaine		07:43
Rock it	The Rise		07:43

4.3.1 Switching sources

The **Neural Mix Pro** library browser can display tracks from either your **My Music (iTunes/Music)** collection, or **My Files (folders)** directly. The drop-down menu for toggling which to display is at the bottom left of the **Neural Mix Pro** window.



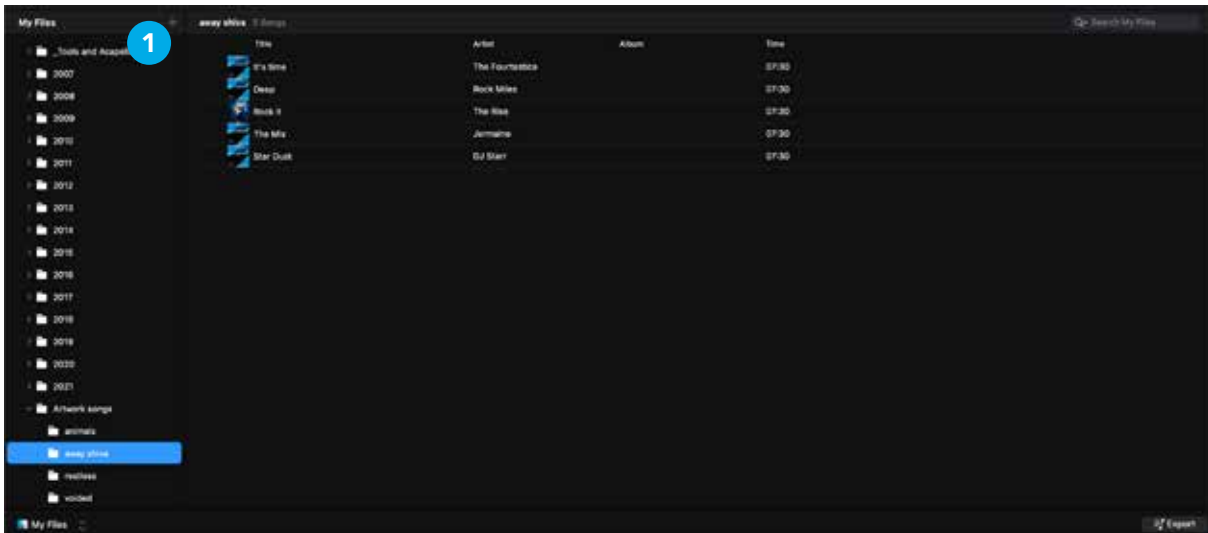
My Music

While the **iTunes/Music** library is displayed, your tracks will be in **playlists (1)** and **smart playlists (2)**, or **folders (3)** you've already created in the Music app. You can also access all your tracks via the **iTunes/Music playlist (4)** at the top.

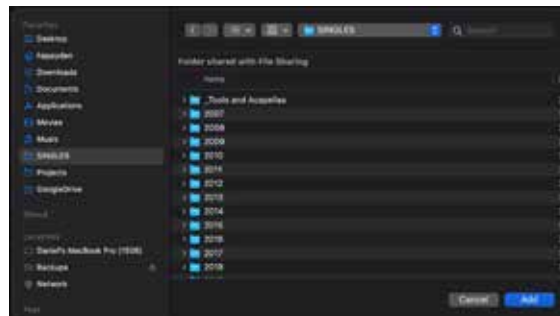


My Files

When you first switch to the **My Files** tab of the **Neural Mix Pro** browser, it will be empty. You can add any folders you'd like to browse by clicking the **+ button (1)** at the top right of the browser tree section.



Neural Mix Pro will display a **Finder** pop-up. Navigate to the folder you want to add, then click **Add**.

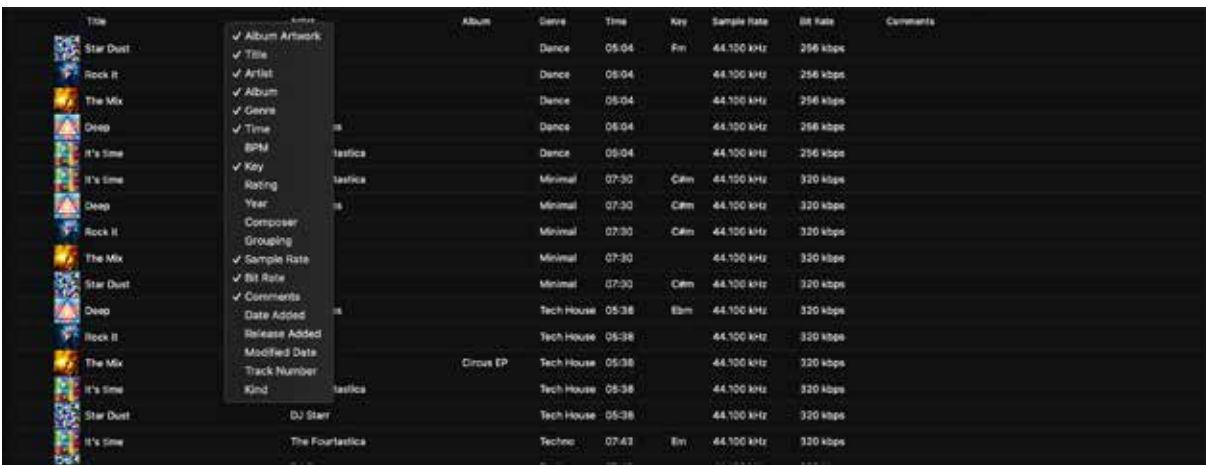


TIP: You can select multiple folders using **SHIFT** or **CMD** and click the ones you want to add.

4.3.2 Metadata and sorting

Although **Neural Mix Pro** doesn't let you directly edit your music collection, you can change how it displays the sort order of the currently selected playlist.

NOTE: You will need to organize your music in the source app (**iTunes/Music** or **Finder**) as **Neural Mix Pro** doesn't have access to edit these.



Along the top of the playlist section are your metadata column headers. You can customize these by right-clicking the header and selecting the metadata you want to appear as a column. Already selected columns will have a tick next to them.

You can choose from the following:

- Album artwork
- Title
- Artist
- Album
- Genre
- Time
- BPM
- Key
- Rating
- Year
- Composer
- Grouping
- Comments
- Date added
- Release added
- Modified date
- Track number
- Kind
- Bit rate
- Sample rate

Once the relevant columns are displayed, then clicking on a column header will sort the list by ascending or descending order, or reset the column to default.

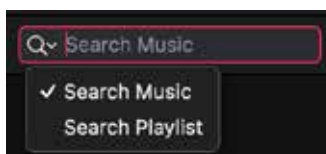
4.3.3 Searching

You can search both the **iTunes/Music** and **My Files** collections using the text box at the top right of the library section. To search a collection, first switch to it (see **section 4.3.1 Switching sources**).



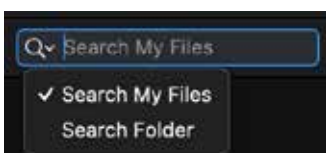
My Music

Switch between **Search Music** and **Search Playlist** using the drop-down arrow in the box. You can search your full collection or just the currently selected playlist.



My Files

Switch between **Search My Files** and **Search Folder** using the drop-down arrow in the box. You can search your full collection or just the currently selected playlist.



4.4 Transport controls

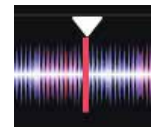
The **transport controls** are used to playback and quickly navigate the track.



Play (1). Starts the track from where the playhead (see **section 4.2 User interface**) is.

Jump to CUE (2). Moves the playhead to the last set location of the hot cue. If none is set, the playhead will go to the beginning of the track.

CUE set (3). Adds the hot cue at the location of the playhead.



4.5 Loops

The loop feature lets you set the size of a section of the track to repeat indefinitely. There are two modes: auto and manual.

Auto. Set the quantized loop size between **1/32 of a beat** and **128 beats (32 bars)** with the loop size **decrease (1)** and **increase (3)**, and **activate (2)** the loop to start it.



Manual. Set the **start (4)** and **end (5)** of the loop by ear/eye. Once you've set the end point, the loop is active. You can then stop the loop with the **loop active (6)** button. Since the loop-in acts as a cue point, re-engaging the button will jump you back into the loop again.



NOTE: This method is not quantized, so the start and end points may not match up with the beats of the music.

4.6 Pitch and tempo

Both the **pitch (1)** and **tempo (2)** of the track can be altered for playback and export. Both of these can be found next to the transport controls, below the waveforms.



NOTE: While traditionally pitch has been associated with the speed of the track (for example on a turntable), within **Neural Mix Pro**, the pitch has no effect on the tempo and changes the key of the music.

4.6.1 Pitch

Pitch can be changed in semitone increments, up and down to **+/-12**. To activate pitch change:



1. Use the **left/right arrows (1)** to adjust the pitch amount.
2. Turn on the **pitch adjustment (2)** by clicking the central button.

NOTE: The button will have a blue edge while active.

4.6.2 Tempo

The tempo slider will change the beats-per-minute speed the track plays within a range of **+/-25%**. As the tempo is adjusted, the component waveforms will zoom in and out, to reflect the increased or decreased speed of the music.



4.7 Volume controls

There are two ways to alter the volume within **Neural Mix Pro**: the master volume and the track volume next to the waveform.

NOTE: Only the **Neural Mix Edit** export option will be affected by volume controls.

4.7.1 Master volume

At the top left of the window you can find the master volume slider. This is laid over the master output level meter, represented by LED-style colored dots.

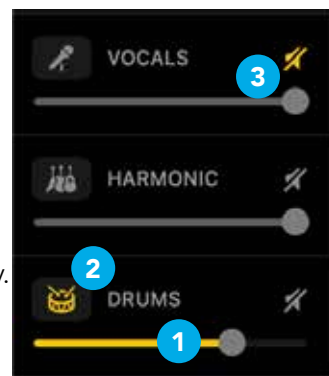


4.7.2 Track volume

Track volume is broken down into three different control types: **fader**, **solo**, and **mute**.

These are all accessed from the deck area, and each displayed track component has these controls.

- The **fader (1)** can control the amount of volume each component of a track plays out from the app.
- **Solo (2)** will mute all other components of the music and only play the one you solo.
- The **mute (3)** button disables audio for that component only.



4.8 Beatgrids

When you first load a track, the software will analyze the audio for a rhythm (via transients in the audio, ie sudden moments of increased volume) and the tempo of the rhythm. Once this is done, a grid will be overlaid on the waveform to show where the software thinks the beats are.

4.8.1 Editing the beatgrid

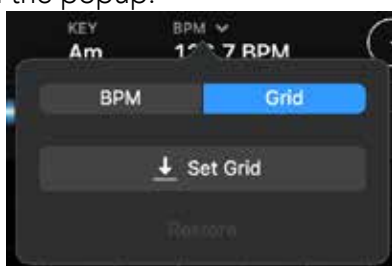
Sometimes, the grid will be incorrectly set on the music. This might be that the grid is slightly offset from each beat, and/or that the downbeat is not on the start of a bar. These grids can be set manually and saved in the database.

The beatgrid editing controls can be accessed from the deck header, by clicking on the BPM information title with the menu arrow, and using the popup.

1. Move the deck playhead to the location on the waveform you want your downbeat.

TIP: Use the track waveform to quickly jump to a location where the beat starts to play (for example after a breakdown), then adjust the playhead by dragging the scrolling waveform where you need it.

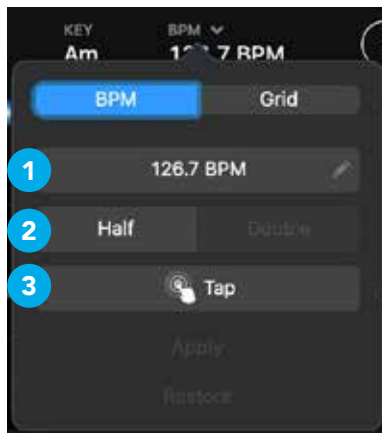
2. Click the BPM info header to open the popup.
3. Switch to the Grid tab in the popup.



4. Click Set Grid to move the beatgrid to the playhead location.

4.8.2 Editing the BPM

Within **Neural Mix Pro**, the **BPM** is the speed at which the music is played. This is determined during the track analysis, as a factor in creating the beatgrid. This differs from the tempo, which will speed up and slow down the BPM for playback and export.



You can change the BPM three different ways:

1. Manually **edit** the tempo.
2. Use the **Half/Double** buttons.
3. Use the **Tap** button to work out the BPM as the music is playing.

NOTE: Editing the **BPM** should only be done if **Neural Mix Pro** doesn't correctly detect the original tempo of the track.

TIP: The half/double BPM buttons are useful for music such as dubstep or drum and bass, which can be classified as either 70-90 bpm or 140-180 bpm.

TIP: If you are struggling to work out what **BPM** the track should be, use the **Tap** tempo for a rough estimate and manually round up/down to the nearest BPM and see if the beatgrid lines up. Most modern electronic music BPM will be a whole number.

4.9 Advanced Export

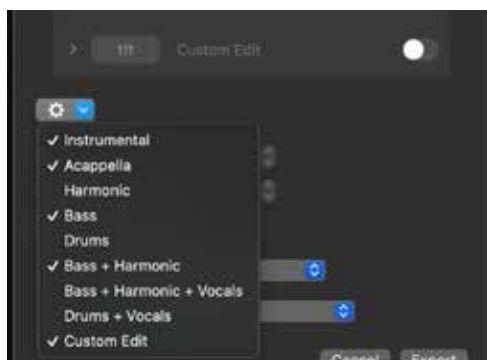
Within the export pop-up, you can tab between **Presets** and **Custom Edit** export options. While the Presets tab offers simple access to all possible Neural Mix components, **Custom Edit** allows you to set the volume levels of components for extraction.

4.9.1 Changing what gets extracted

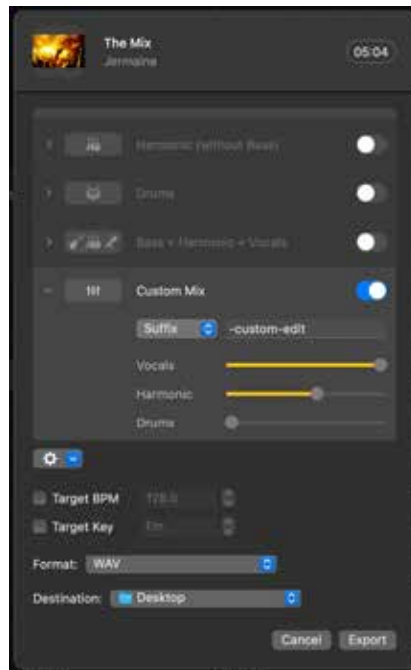
In the **Presets** tab, you can toggle the following to extract as components:

- Instrumental
- Acappella
- Harmonic
- Bass
- Drums
- Bass + Harmonic
- Bass + Harmonic + Vocals
- Drums + Vocals
- Custom edit

All of these can be added/removed from the toggle list via the **settings cog** dropdown below the list.



The **Custom edit** tab displays volume sliders for the number of Neural Mix components currently selected in the user interface. These can be adjusted to change the export output.



TIP: Custom Edit will extract your track as one file, but with the volume parameters set how you left them before export.

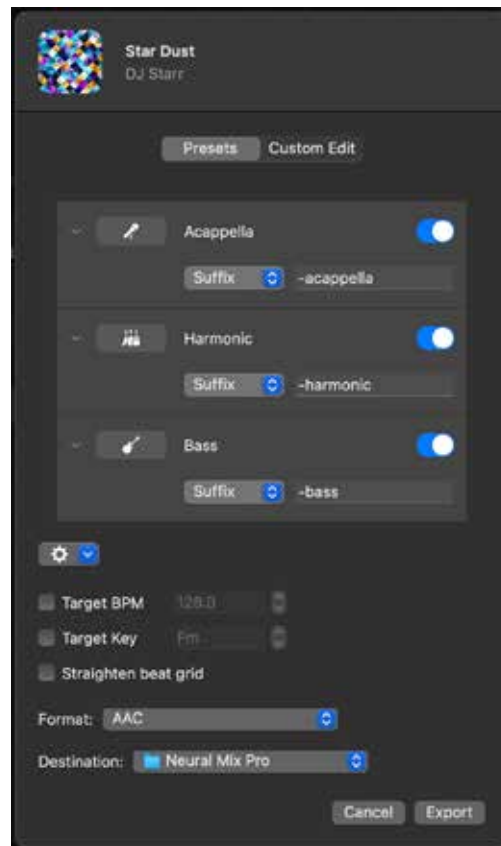
As well as choosing which components to export, you can set a change in **Target BPM** and **Target Key**.

Target BPM. Changes to the tempo of the exported audio to the displayed amount. Tick to activate, then change the field to your desired tempo.

Target Key. Changes the root key of the audio. Tick to activate, then change the dropdown to your desired key.

4.9.2 File naming

While setting up your components for export, you can choose how each component will be identified by adding custom text to the file name. This text can be at the start or end of the file name, by choosing Prefix (before) or Suffix (after) from the drop-down.



You can then edit the custom text to suit. Each component defaults to naming itself with a hyphen, for example:

- artist - track (remix)-acappella.wav
- artist - track (remix)-harmonic.wav
- artist - track (remix)-drums.wav

4.10 Accessibility

4.10.1 VoiceOver

Neural Mix Pro offers extensive integration with macOS' VoiceOver feature. Just launch VoiceOver and use it as normal!

4.10.2 Neural Mix Pro menus and shortcuts

The menus and keyboard shortcuts help you quickly access many of the core controls needed in **Neural Mix Pro**. Below is a list of what's available.

Open
Export Track...
Export Playlist...
Refresh Library

File

⌘+O
⌘+E
⇧+⌘+E
⌘+R

Undo
Redo
Cut
Copy
Paste
Paste and Match Style
Delete
Select All
Emoji & Symbols

Edit

⌘+Z
⇧+⌘+Z
⌘+X
⌘+C
⌘+V

⌘+A
⇧+⌘+SPACE

Show Library
 Show Waveform
 1 track
 2 tracks
 3 tracks
 4 tracks
 Enter full screen

View

⌘+L
 ⌘+K
 ⌘+1
 ⌘+2
 ⌘+3
 ⌘+4
 ⌘+⌘+F

Play/pause
 Repeat
 Start

- » Jump to start
- » Set start
- » Clear start

 Looping

- » Auto Loop
- » Loop Half
- » Loop Double
- » Loop In
- » Loop Out
- » Reloop

 Beat grid

- » Set grid start
- » BPM half
- » BPM double
- » Restore analyzed

 Reset

Player

SPACEBAR

 ⌘+ENTER
 ⌘+⌘+ENTER

 A
 ⌘+S
 ⌘+D
 S
 D
 ⌘+A

 ^+⌘+⌘+ENTER

Drums solo

Harmonic solo

Vocals solo

Mute drums

Mute harmonic

Mute vocals

Track

1

2

3

⌘+1

⌘+2

⌘+3

Tips and support

5 Tips and support

5.1 FAQ and support

If you need further help or want to get in touch about anything not covered in this manual, check out the [Algoriddim FAQs](#), visit the [Forums](#), or contact [Algoriddim via email](#) to raise a support ticket.