

## NAME

Aletheia - command-line media player that allows for easy, real-time adjustment of pitch and tempo for a personalized listening experience

## SYNOPSIS

**aletheia** [ --file | --directory <FILE/DIRECTORY> [<KEYWORD> ...] ] [ --music [<KEYWORD> ...] ] [ --sound [<KEYWORD> ...] ] [ --video [<KEYWORD> ...] ] [<KEYWORD> ...]

## DESCRIPTION

Aletheia is a command-line media player with a wide range of features designed to make it easy to adjust pitch and tempo in real-time using customizable intervals, allowing precise control over the playback speed and tonality of media files. It supports loop creation with customizable start and end points for seamless looping. Aletheia has optional voice feedback and the ability to play videos, import downloads, and export playlists and loops. In addition, it offers various scaling features to smoothly transition between separate intervals.

## OPTIONS

The following options are available:

**--music** [KEYWORD ...]

Generate random playlist from music found in ~/Music/ that match the optional [KEYWORD].

**--sound** [KEYWORD ...]

Generate sorted playlist from soundscapes found in ~/Sounds/ that match the optional [KEYWORD].

**--video** [KEYWORD ...]

Generate sorted playlist from videos found in ~/Videos/ that match the optional [KEYWORD].

**--file** FILE

Generate a playlist with just one file.

**--directory** DIRECTORY [KEYWORD ...]

Generate sorted playlist from media found in specified directory.

**--playlist** FILE

Use a playlist file instead of generating one from available media. FILE should be a simple text file with the full paths of each file.

**--mplayer-path** PATH

Specifies a location to search for the mplayer binary. Useful for debugging the latest mplayer development code.

**--server** (EXPERIMENTAL)

Allows for remote control of Aletheia using a yet-to-be-released aletheiactl script and web interface using NodeJS. Not in working condition at the moment.

**--version**

Display the version and exit.

**--help**

Display a brief synopsis of available command-line options.

## CONTROLS

### MENU

The main menu is presented initially when loading Aletheia without any options. Use 'j' and 'k' (or arrow keys) to move the selection down or up, and enter to select. The first three options (Music, Sound, Video) scan ~/Music/, ~/Sounds/, or ~/Videos/ by default and generate a playlist based on available media. Music has a submenu accessible by 'l' and 'h' keys (or arrow keys), to open and close it respectively. "Loops" queues all available loops in ~/Music/ and runs the loop editor. "Locks" queues all files that have interval adjustments locked by the 'x' key ('X' to unlock).

Back to the main menu, "Start" starts a new playlist with a search keyword. The next option, Queue, presents the user with available playlists in ~/.aletheia/playlists/, which are just regular text files of the relative or full paths of media files, separated by newline.

The Setup screen has an caching ('c') option to cache and utilize metadata tags, and toggle on and off the display of tags for the main screen with the 'T' key. Help is available from the menu and at any time via the '?' key, and offers several pages of commands for quick reference.

If you need voice feedback, press 'd' while in a help screen to read the page aloud, and "d" in the menu or on the main screen to enable voice feedback. The '#' key allows you to save voice feedback and tag display. Optional gTTS feedback is also available, but is disabled by default for those who prefer privacy. VOICE\_ENABLED=true and ESPEAK\_DIGITAL\_VOICE=false in ~/.aletheia/config for those who want to enable it. gTTS requires an Internet connection.

**i** Toggle main menu. Use 'l' and 'h' keys to open and close submenus.

### VOICE FEEDBACK

Voice feedback is disabled by default, but can be toggled via the 'd' key. To save your selection for next time, use the '#' key. The 'T' key is also available to only speak the artist and track title, rather than general voice feedback.

**d** Toggle voice feedback. Disabled by default. Also used to read aloud the help screens using a digital voice.

**T** Toggle voice feedback verbosity, allowing for voice feedback of artist/titles without general feedback. Disabled by default.

**^K** Read aloud the current interval adjustment.

**^S** Read locked file information for intervals and loops.

**#** Saves all settings, including voice feedback's pitch adjustment, voice feedback volume, whether or not dark mode is enabled, voice feedback verbosity level, whether colors are enabled or not, and finally whether or not the panel is enabled. Asks for confirmation before saving (y/n).

**,** Speak the current artist and title of the media or base filename if filename is not delineated by ' - '. If the filename follows the format of 'artist - \* - track title', the program will extract and speak the artist and track title. However, if the filename does not adhere to

this format, the program will speak the entire filename (excluding the extension).

## MAIN SCREEN

The middle of the screen displays the current playlist and selection, as well as an indicator on the left side that signifies whether a file has a locked interval (\$), one or more loops saved (&), or both (#).

- z** Redraw Screen. Useful as Aletheia does not currently support automatically adjusting dimensions in all areas if the screen is resized.
- ?** Help screen that shows available key controls. Page down and up via 'j' and 'k' or the arrow keys, and 'd' to read the page aloud.
- q, <esc>** Used to escape a mode, prompt, or to quit the program if used on the main screen. Quit ('q') asks for confirmation before exiting (y/n).

In each corner of the screen there are a group of three (3) numbers that represent a different function:

### Upper Left

PCM (software) and left/right channels of the Master volume. PCM is set to 50 (half) by default.

- 1, !** Lower PCM (software) volume by 5% or 1%.
- 2, @** Raise PCM (software) volume by 5% or 1%.
- 8, \*** Lower Master (hardware) volume by 3% or 1%.
- 9, (** Raise Master (hardware) volume by 3% or 1%.
- [, ]** Lower left or right master volume channel by 1%.
- {, }** Raise left or right master volume channel by 1%.
- 0** Steadily adjusts the lower of the two channels until the two channels are equal in volume.
- 3** Slowly increase or decrease PCM volume. Input should be direction. Specify 'j' to fade down, and 'k' to fade up.

### Upper Right

Equalizer settings for bass, mid, and treble. Supported range is currently -9 to 9 for each.

- a** Set the equalizer settings. Input will be bass first, then mid, and treble. You can use 'j' or 'k' to increase or decrease setting, or input a number from -9 to 9.

### Lower Left

Information relating to pitch and playback speed with music intervals. The first number is the

change in music interval (negative numbers slow playback speed and lower pitch; positive numbers speed up playback speed and increase pitch, and 0 indicates no change at all.)

The second number is the current EDO, or Equal Division of the Octave. This is the number of steps to the next octave. Finally, the last number is an indicator for whether or not to adjust pitch and speed together (0: default), speed/tempo alone (1), or pitch alone (2). Use 12-EDO (set via ' key) for semitones, 24-EDO for quartertones, etc. The default is 60-EDO. This allows for a wide range of adjustment, including in semitones and quartertones (-5/60 would be -1/12 or one semitone down from the original recording. You can easily double or halve the EDO to allow for finer adjustments. For example, (-5/60 could be doubled to 120-EDO using the 'o' key, bringing you to -10/120 (identical in pitch, but the interval is divisible by two, which allows to reach a quartertone adjustment at -5/120).

**k, j, <up\_arrow>, <down\_arrow>**

Transpose up or down by one interval.

**x, X** Adds a lock for the current interval change. Creates a small text file that matches the current filename, but with a '.locked' extension. In the future this will be cached in a file in ~/.aletheia/. 'X' to unlock, starting with the last locked first.

**f, F** Switches between locks.

**K, J** Increase or decrease the EDO by one.

**v** Adjust pitch and tempo together (default), tempo alone with pitch locked at original, or pitch alone with tempo locked at original. In the lower left of the screen, the third number is an indicator of this setting with the following options: '0' pitch and tempo together (default), '1' for tempo alone, and '2' for pitch alone.

## Lower Right

Information relating to the current queue. First, the current position in the queue, next the total number of media in the queue, and finally a toggle for various playlist functions. '0' indicates no playlist functions, '1' indicates to loop the current file, '2' indicates to loop the current artist, '3' indicates random selection, and '4' indicates to play only files that have had an interval change locked.

**n, b** Skip to the next track or go back. Having selected "Loops" in the menu or entering loop mode via '^E', 'n' and 'b' cycle through available loops before skipping.

**e, E** Toggles between looping a single song or an artist.

## PLAYLIST CONTROLS

**;** Enter playlist mode. Input a position to jump, or hit 's' to search. Use 'j' and 'k' keys to page down or up, and 'h' and 'l' keys to move the selection down or up respectively. Hit enter to jump to the selection.

Use '>' and '<' to move a playlist entry up or down, and 'x' to remove an entry from the playlist.

- s** Search and jump to the first file that matches the input keywords in the current queue.
- S** Start a new playlist with only files that match the input keywords.
- `^I, <tab>`** Add files matching input keywords to the end of the current playlist.
- Z** Export current playlist to a playlist file in `~/aletheia/playlists/` with the input name and can be loaded via the "Queue" option in the menu.
- r** Rename current file with the given input. Do not add extension (such as `.mp3`) as it's computed automatically. Be mindful that Aletheia currently hides album and track number in the format "artist - album - track number - title". When renaming, be sure to include the full name in that format, if desired, and exclude the extension. **WARNING:** Playlist entries on the main page separated by a `'~'` delimiter use tags and renaming will not affect the display, but the physical filename. It will eventually support tags.
- D** Asks for a confirmation (y/n) before moving the current file to `~/aletheia/deleted`, but may offer the option to permanently delete files in the future.
- A** Sort the current queue by file path/name while continuing to play the current file.
- R** Shuffle the current queue while continuing to play the current file in position 1 of the queue.
- O** Opens a menu that gives the choice between editing `.locked` ("Lock") files, `.repeats` ("Loop") files, the current playlist ("Queue"), and the config ("Config"). Uses VIM for editing.  
  
`*.locked` files contain saved interval adjustments, separated by newline in the format "interval\_adjustment/EDO/pitch\_lock" where `pitch_lock` is 0, 1, or 2 (no lock, lock pitch, lock tempo). Named identical to the original media, but with a `.locked` extension.  
  
`*.repeats` files contain saved loop points, separated by newline in the format of "start\_pos\_seconds/end\_pos\_seconds/gap"  
  
 Playlists are simply relative or absolute paths separate by newline.  
  
 For those unaccustomed to vim, to move the cursor between lines, you would use the `'j'` and `'k'` keys to move down and up, `'dd'` to remove the current line, and `':wq'` to save and return to Aletheia. There's also `'yy'` to copy a line and `'p'` to paste. You can also paste lines deleted using `'dd'`. The playlist will be adjusted automatically on save with `':wq'` or discarded with `':q!'`. These same things can be accomplished in playlist mode (`;`) easier, but it's available as an option.
- `' , "`** Jump to the first or last file of the current artist (the first field of a filename delineated by `" - "`).
- N, B** Jump to the next or previous artist in a sorted playlist under certain conditions. If the filename follows the format of `'artist - * - track title'`, the program will extract the artist field and skip to the next artist. However, if the filename does not adhere to this format, the program will skip to the next file that is not identically named. As such, this option doesn't work on shuffled playlists. In the future will work with tags as well.

- ^U** Toggles the playback of saved interval adjustments. When this is turned off, all files will begin playback at their original speed, pitch, and tempo, regardless of whether a file has a locked adjustment.
- e** Toggles between the two looping modes: looping a single song, looping an entire artist (for files in the format of 'artist - \* - track title'), or turning off looping entirely.
- An indicator is shown on the lower left of the screen showing whether looping a single file is enabled (1), looping an entire artist (2), and normal chronological playback (0). Looping an artist currently requires that the filename follow the format of 'artist - \* - track title'. However, if the filename does not adhere to this format, the program will skip back to the last file that is not identically named. As such, this option doesn't work on shuffled playlists.
- E** Loop current file.
- V** Loop current artist (the first field of a filename delineated by " - ").
- ^R** Selects random playback mode. The third field in the lower right indicator displays whether this is enabled (3) or disabled (0).
- \$** Saves the current position. Jump back at any time during playback of the current song using ^H.

## MEDIA CONTROL

**h, l, <left\_arrow>, <right\_arrow>**

Move backward, or forward in playback.

**p, <space>**

Pause playback.

**\** Restart playback from beginning of current file.

**^H** Jump to custom position set by the '5' key. This position is also currently used as the starting position for the looping function that's accessible via the '6' key and *LOOP EDITOR MODE* (^E).

**c** Mute playback.

**6, ^E** '6' enters the loop editor for the current media file, whereas ^E enters *LOOP EDITOR MODE*, keeping the editor open until disabled with the 'q' key. See *LOOP EDITOR MODE* for more information. Also available via the Music submenu "Loops."

## **^L (EXPERIMENTAL)**

Enters loop mode if loop markers have been already been set and a loop exported using the 'Z' key in the loop editor ('6') or *LOOP EDITOR MODE* (^E). Once the loop markers are set and the loop is seamless, export using 'Z' and enter the times to loop, wait, and hit ^L to enter loop mode. Tends to be a little more seamless than using loop editor mode, but is currently limited by requiring a finite number of seamless loops.

**P** Displays a progress bar at the bottom of the screen. Currently supports only a subset of secondary functions, like pause, interval controls ('j' and 'k'), and seek controls ('h' and 'l') and can not be

enabled by default. Displays the adjusted time in the lower right of the screen based on the current interval adjustment.

## INTERVAL/SPEED CONTROL

Aletheia includes support for adjusting by music intervals rather than the conventional way of altering pitch and playback speed. The first two numbers on the lower left of the screen are the shift in interval and EDO (equal division of the octave). The default EDO is 60 (60 steps to the next octave). -60:60 would be an entire octave down from the original and half the speed, for example. 15:60 would be one fourth of an octave up from the original.

To increase precision use the 'o' key to double the EDO and adjust interval accordingly, and 'm' to halve the EDO (loses precision). This is useful for stepping between the steps that are available in any given EDO. You can continue to increase precision until you no longer hear any noticeable audible difference in steps.

- o, m**     Increase or decrease precision in interval steps (double or halve interval/EDO).
  
- H, L**     Swap between normal precision (60-EDO, by default), or full precision (1966080-EDO, by default).
  
- .**         Set a custom interval. Input should be a number between -156 and 126 (in default 60-EDO). Upper limit is 2.1x the EDO. Lower limit is 2.6x the EDO.
  
- /**         Set a custom EDO, and adjust interval accordingly. Input should be a number above 0. Possible options include 12 for semitones, 24 for quartertones, and so on. Can lose precision if the selected EDO is smaller.
  
- w**         Reset the interval change and EDO to the first entry in the media's .locked file.
  
- y**         Reset to 60-EDO, and adjust interval accordingly.
  
- , =**     Jump to exactly one octave down, or one up, or to the limit. For example, at 0:45, '-' would jump to -45:45, and '-' again would jump to -90:45, etc.
  
- M**         Invert the interval change from positive to negative and vice versa. For example, -10:45 would become 10:45.
  
- Y**         Jump to interval 0 or return to the previous interval.

## SCALE CONTROLS

These key controls allow for a steady increase or decrease in interval.

- u**         Scale interval either down or up. Input should be an interval or either 'j' or 'k'. 'o' and 'm' are still available to speed or slow down the scale. Help menu is available via '?'.
  
- U**         Scale EDO either down or up. Input should be an EDO or either 'j' or 'k'. Automatically adjusts interval.

- t**        Scale to interval 0, or scale back to previous interval.
- g**        Scale to the invert of current interval.
- \_, +**     Scale to one octave down, or one up, or to the limit. For example, at 0:45, ' \_ ' would scale to -45:45, and ' \_ ' again would then scale to -90:45, etc.
- G**        Oscillate between the current interval and another at current scaling speed (set/reset via the 'C' key), or the current interval's inverse, if enter is pushed at the prompt. Input should be an interval otherwise.
- C**        Set or reset the scaling speed. Default is 0.2 seconds. Input should be a number above 0.

## LOOP EDITOR MODE

This mode allows for editing loop markers to create seamless loops over a section of a song. Instead of the normal queue information in the lower right of the screen, a set of three numbers are displayed that indicate the starting position (in seconds), the ending position (in seconds), and the pause/gap between loop iterations (in 1/20th of a second).

To enable, wait until the desired section begins to play and press '5' to select to the start position, and then '7' to set the end position. '6' enters the editor for the current song, while '^E' enables the LOOP EDITOR MODE until exit with the 'q' key. Only works if there is a set loop (using both '5' and '7' keys) or a saved loop. Otherwise, loop mode will skip over tracks that do not have anything saved.

Once the loop markers have been set and the loop is seamless, export using 'Z', and load the finished loop with ^L to enable seamless playback while scaling and adjusting intervals.

- s, S**     Move start position backward by 0.05 or 0.01.
- g, G**     Move start position forward by 0.05 or 0.01.
- h, H**     Move end position backward by 0.05 or 0.01.
- i, L**     Move end position forward by 0.05 or 0.01.
- 6**        Enter loop editor or switch to the next saved loop.
- Z**        Export the current loop to its own file. Use ^L to toggle playback of an exported loop. Exported loops are named identical to the original file, but with the .repeat. tag before the file extension.
- &**        Save the current loop in a file with the same name as media with a .repeats extension.
- ^X**       Update the current loop with the new parameters.
- >, <**     Increase or decrease the silence by 1/20th of a second between each loop iteration. Useful for creating seamless transition when a small pause is required.



## VIDEO CONTROL

- < Enable the video stream of the current media file. Automatically restarts playback.
- > Enable fullscreen video. Disabled by default.

## MANAGE DOWNLOADS

- W Add new files (to ~/Music/, for example) to the end of the current playlist.
- ^W Jump to the first new file.
- ^N Combines the above two actions to add and jump to new files.

## SETUP SCREEN

This area consolidates settings related to voice feedback (specifically voice pitch and volume), changing themes, toggling the panel, toggling light or dark mode, and toggling use of metadata tags.

- ^T Toggle use of metadata tags versus filename. Requires that media files are cached with the 'c' key control. (Default: off)
- c Uses GNU Parallel to create an SQLite3 database with the metadata of the available media in ~/Music/. Please be patient as this may take a while with large collections.

## SLEEP MODE

The '~' key enables sleep mode (fade volume & optionally suspend) for the current file. It first asks the time to wait until sleeping, and then asks if you'd like to suspend as well (y/n), or simply fade volume and exit Aletheia. Once sleep mode is enabled, pressing any key will cancel sleep and bring you back to the main screen.

## CONFIGURATION

Located in ~/.aletheia/config and includes several options. Several controls are also available for customizing the appearance and voice feedback.

- ^P Toggles the display of panels on the top and bottom of screen, as well as a panel behind the current file on the main screen.
- ^O Swaps the two primary colors.
- ^Y Toggles the use of color. Panels are needed when color is disabled to see the playlist selection on the main screen.
- ^A Randomizes colors with the option to save. Use 'n' or 'b' to go next or back in the theme selection, or 'v' to invert the two primary text colors. '#' to save, and 'q' to exit theme selection and return to the previous theme. To generate light or dark varieties, use ^D to change to light or dark mode, and then activate this mode to generate colors suitable for light or dark backgrounds.
- ^D Toggle between light mode, dark mode, and a custom color specified directly in ~/.aletheia/config or via ^A random color selection.

- # Saves all settings, including voice, panels, color, and white invert settings. Asks for confirmation before saving (y/n).

## FILES

### **~/.aletheia/config**

The Aletheia configuration file.

### **~/.aletheia/music.db**

The SQLite3 database for metadata tags and time, if media has been cached on the Setup screen.

### **~/.aletheia/playlists/**

The Aletheia playlists directory.

### **~/.aletheia/voices/**

The cache directory for optional auto-generated gTTS voice files.

### **~/.aletheia/deleted/**

The directory where files removed with the 'D' key are sent.

### **~/.aletheia/themes/**

Optional directory for themes.

## AVAILABLE CONFIGURATION OPTIONS

Format of ~/.aletheia/config is KEY=VALUE separated by newline. Comments are not currently supported, but will be in the future. Do not add quotes around VALUE. Case is insensitive. '#' not required for hex color codes.

### **VOICE\_ENABLED=**

Status of voice feedback. If ESPEAK\_DIGITAL\_VOICE is not set to true, Aletheia will use gTTS which sends filenames to the Internet to generate voice clips as they appear. (Default: false).

### **DARK\_BACKGROUND=**

Specifies whether to use dark (true) or light (false) mode if DEFAULT\_THEME is true.

### **DEFAULT\_EQUALIZER=**

10 numbers from -12 to 12 separated by a colon (':'). For example, DEFAULT\_EQUALIZER=5:5:5:2:2:2:2:2:2:2 Bass are the left three numbers, followed by mid, which are the center four numbers, and finally treble with the last three numbers. Currently Aletheia does not support fine-grain control of the equalizer from within the program, but this option is available in the meantime. (Default: 0:0:0:0:0:0:0:0:0:0).

### **VOICE\_PITCH=**

Transpose voice feedback by this value in 60-EDO. Input -156 to 120, but should be within reason. Caches all voice feedback clips in the specified interval in ~/.aletheia/voices/. (Default: 0).

### **DEFAULT\_VOLUME=**

Default software volume level. Input: 0 to 100 (Default: 50).

**ONLY\_VOICE\_TITLES=**

In lieu of full voice feedback, speak only track title. Input: true or false (Default: false).

**COLORS\_ENABLED=**

Whether to use color or simply white, or black text depending on BLACK\_BACKGROUND= setting. Input: true or false. (Default: true).

**PANELS\_ENABLED=**

Status of panels for the top and bottom of the screen, as well as for the current selection. Input: true or false. (Default: true).

**VOICE\_VOLUME=**

Volume of voice compared to system. Input: 0.0 to 1.0. (Default: 0.3).

**COLOR\_HIGHLIGHT=**

Hex color code for the primary color. Only used when THEME\_FILE is not specified. (Default: )

**COLOR\_SELECTED=**

Hex color code for selected items. Only used when THEME\_FILE is not specified. (Default: )

**COLOR\_UNSELECTED=**

Hex color code for the secondary color. Only used when THEME\_FILE is not specified. (Default: )

**COLOR\_PANEL=**

Hex color code for the panel color. Only used when THEME\_FILE is not specified. (Default: )

**DEFAULT\_THEME=**

Whether to use the saved or default theme, or to use the above values instead. Only used when THEME\_FILE is not specified. (Default: true).

**THEME\_FILE=**

If specified, selects the file with that name in either ~/.aletheia/themes/ or the system theme directory. (default: Forest)

**NO\_HELP=**

If true, disables non-essential (not related to voice feedback) help screens to speed up loading time and screen refreshes (when terminal is resized or 'z' is pushed).

**AUDIO\_FORMATS=**

A comma-separated list of audio formats to enable, provided they are supported by mplayer.

**VIDEO\_FORMATS=**

A comma-separated list of audio formats to enable, provided they are supported by mplayer.

**TERMINAL=**

Override automatic terminal selection when using aletheia\_desktop\_launcher. Currently supports one of the following: gnome-terminal, xfce4-terminal, konsole, xterm, urxvt, kitty, alacritty, and mate-terminal.

## AVAILABLE ENVIRONMENT VARIABLES

These can precede the `./aletheia` command to adjust things on load and bypass current config settings in `'~/aletheia/config'`.

### **MAIN\_REFRESH\_TIME=**

How often (in seconds) to check for new terminal dimensions to refresh the main screen and to check for whether or not mplayer is still running to know to go to the next file. (Default: 0.2)

### **ESPEAK\_DIGITAL\_VOICE=**

If true, uses the faster espeak-ng natural voice engine for all voice feedback instead of having to fetch and process audio from online with gtts-cli.

### **MPLAYER\_PATH=**

Specifies the location in which to find the mplayer binary to use.

### **NO\_HELP= (deprecated as help screens have been optimized now)**

If true, disables non-essential help screens to help speed up loading and refresh time.

## SEE ALSO

**mplayer(1) ffmpeg(1) ffprobe(1) pactl(1) calc(1) bc(1) sox(1) espeak-ng(1) iconv(1) parallel(1) sqlite3(1) isnum(1)**

## AUTHOR

Brad Hermanson.

## BUGS

Report bugs to [apeitheo@gmail.com](mailto:apeitheo@gmail.com) or on GitHub