



# THE REFERENCE PLUGIN

**Magic AB User Guide**  
release version 1.1 (Aug 2013)  
by Sample Magic

support, updates and videos [www.samplemagic.com/magicab](http://www.samplemagic.com/magicab)

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## Magic AB / Disclaimer

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Special thanks to the Beta Test Team, who were invaluable not just in tracking down bugs, but in making this a better product.



## Magic AB / System requirements

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### System requirements

#### Windows

- An SSE2-enabled processor (Pentium 4 or later).
- 4GB RAM.
- Microsoft Windows XP, Vista, Windows 7 or 8.
- Any VST / RTAS / AAX-compatible host software (32 or 64-bit).

#### Mac OS X

- Intel processor Mac.
- 4GB RAM.
- Mac OS X Mountain Lion (10.8), Lion (10.7), Snow Leopard (10.6), or Leopard (10.5).
- Any VST / Audio Unit (32/64-bit) / RTAS / AAX-compatible host software.

#### Audio files supported

- Mac: AIFF/WAV up to 24-bit / 96kHz, mp3, AAC
- Windows: AIFF/WAV up to 24-bit / 96kHz, mp3



## Magic AB / Updates and installation info

### Updates

#### V1.1 - Aug 2013

- Added - Pro Tools 11 support with 64-bit AAX plugin.
- Added - Logic X support with 64-bit AU plugin.
- Added - A-B stream selector buttons now work as a toggle button. Just click either A or B button to toggle between A and B streams.
- Fixed - Sample rate conversion optimised to work at all sample rates up to 96kHz between audio files and DAW session sample rate.

### Installation

#### Mac

Note: Magic A/B requires Mac OS X 10.5 (Leopard) and above to run properly. It won't run on OSX 10.4 (Tiger).

**VST** – Drag and drop the vst file to the 'VST Plugins Folder' alias, or copy manually to the /Library/Audio/Plug-Ins/VST folder manually so that your host application can find the plugin. If you do not have admin rights, you can alternatively copy the file to your user plugins directory: ~/Library/Audio/Plug-Ins/VST

**Audio Unit** – Drag and drop the AU component to the 'Components' alias, or copy it manually to the /Library/Audio/Plug-Ins/Components folder manually so that your host application can find the plugin. If you do not have admin rights, you can alternatively copy the files to your user plugins directory: ~/Library/Audio/Plug-Ins/Components.

**AAX** – Drag and drop the plugin file (.aax plugin file) to the 'AAX Plugins Folder' alias or copy it manually to the /Library/Application Support/Avid/Audio/Plug-Ins/ folder manually so that Pro Tools can find the plugin.

**RTAS** – Drag and drop the plugin file (.dpm files) to the 'RTAS Plugins Folder' alias, or copy it manually to the /Library/Application Support/Digidesign/Plug-Ins/ folder manually so that Pro Tools can find the plugin.

#### Windows

**VST** – Double-click the Magic AB-VST Setup.exe file as found in the Magic AB zip file. If prompted, opt to run the application rather than extracting it, letting the computer know that the installer is fine to run. Follow the installer instructions accepting the licence agreement. The destination of the installer should be C:\Program Files (x86)\VstPlugins, as this is where your DAW will be looking to locate your VST.

**VST64** – Follow the same instructions as with the 32-bit version of the Magic AB VST, clicking on the VST-x64 .exe installer file.

**RTAS** – Double-click the Magic AB-RTASSetup.exe file as found in the Magic AB zip file. If prompted, opt to run the application rather than extracting it, letting the computer know that the installer is fine to run.



## Magic AB / Authorisation

Follow the installer instructions accepting the licence agreement. The destination of the installer should be C:\Program Files (x86)\Common Files\Digidesign\DAE\ Plug-Ins, as this is where your DAW will be looking to locate your RTAS plugin.

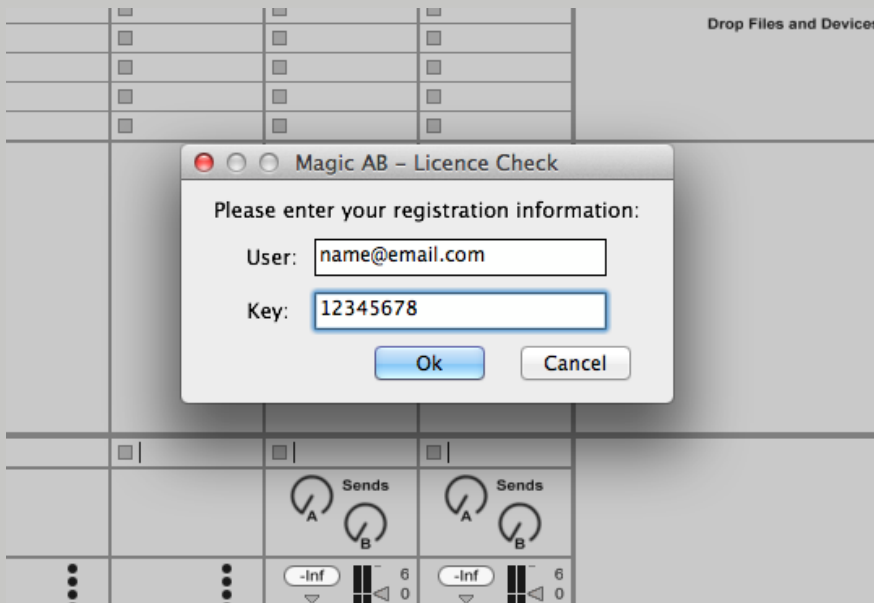
**AAX** – Double-click the Magic AB-AAXSetup.exe file as found in the Magic AB zip file. If prompted, opt to run the application rather than extracting it, letting the computer know that the installer is fine to run. Follow the installer instructions accepting the licence agreement. The destination of the installer should be

**AAX 64** – Follow the same instructions as with the 32-bit version of the Magic AB AAX, clicking on the Magic AB-AAX-x64Setup.exe installer file.

### Authorising the plugin

The plugin needs to be authorised the first time it is launched.

You will be asked for the email address associated with your Sample Magic account and the unique eight digit serial number generated in your 'My Plugins' download area. Enter these details into the pop up window that comes up during loading of your DAW.



Note: If you cannot copy/paste the serial number into the box; then please type it in manually.



### Welcome to Magic AB, Sample Magic's first plug-in.

The concept behind Magic AB is simplicity itself – an easy-to-use but powerful utility that allows you to compare the track you are working on with a reference track in an instant.

Magic AB is both an indispensable mixing tool and a serious workflow improver that allows the producer to:

- 1** Perform instant AB references: to compare the track you are working on in your DAW with a commercially produced reference track. Like the production values of Daft Punk? Or Pink Floyd? Or Nirvana? No problems – import your chosen reference tracks into Magic AB and then flick between them and your own in-progress track using a single mouse click.
- 2** Hone in on the details: play/cue the reference track from the part you want to hear and loop the section you want to focus on – there's no need for tiresome rewinding and endless internal waveform navigation.
- 3** Compare multiple mixes quickly and simply: create and save your own 'go-to' playlists to radically speed up mixing and mastering.
- 4** Balance the relative volume of mixes: so that you're always comparing like with like. This is a particularly function for mastering sessions.
- 5** Give your ears a chance to recalibrate: with manually changeable crossfade times. Flip in an instant, or allow a transition of up to 2000ms.

Of course, AB referencing is nothing new. Producers have been doing it for decades. In the home studio this referencing is invaluable, allowing your ears to 'recalibrate' to a well-produced commercial master recording to help you sculpt your own mix to get an ever higher quality sound. This is especially useful when your own monitoring environment or speakers are less than perfect.

But pro mixers and mastering engineers are no strangers to ABing either – regularly checking that their own mixes (or masters) stack up against other commercially produced tracks or tracks that clients have provided as benchmarks.

Every producer has their own way of ABing. Magic AB's beauty is its simplicity: in one plug-



## Magic AB / Updates and installation info

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no more setting up complex bus routings, needless channel muting, or flicking between outputs; it's all there in one stripped-back interface that does one thing in as efficient a way as possible – without draining more than a fraction of your CPU resources.

But ABing full mixes is just one feature of Magic AB. It can be just as useful when moved from the master bus onto individual channels when working on a new track, to help you emulate a beat you admire, or a kick drum, or a guitar sound. Placed on a single channel, you can AB between the source material and the part you're working on, regularly switching between the two as you hone the tone you want.

It has mastering applications too, allowing mastering engineers to compare in an instant the track they are working on not just to other commercial masters, but also to the other tracks on the album. Of course, you can do that already, by having every track loaded into the same DAW. But you'll never do the same job as quickly or effortlessly as with Magic AB. And in mastering houses time is money.

Magic AB won't give you a stunning new synth sound, or a great new kick, or a sexy reverb. But it will do two things it's hard to put a value on: improve your mixes and streamline your workflow immeasurably. Our users, like us – can no longer imagine studio life without it.

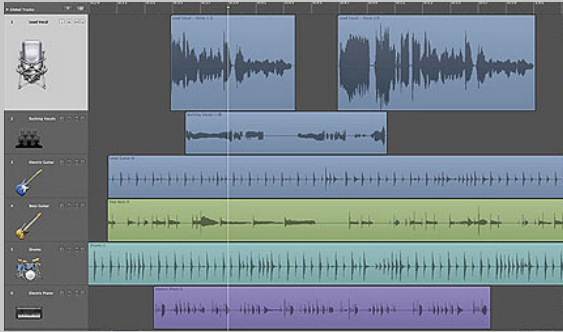
Enjoy – and, as ever, let us know how you're getting on with it.

**The Sample Magic Team**



# Magic AB / Signal flow

## Signal flow



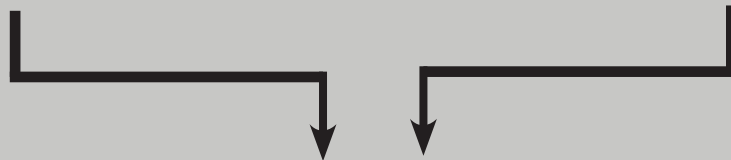
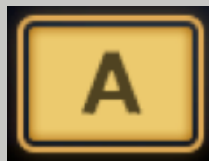
DAW stream



Magic AB stream – reference tracks (1 to 9)



Master bus effects (where applicable)



Crossfade



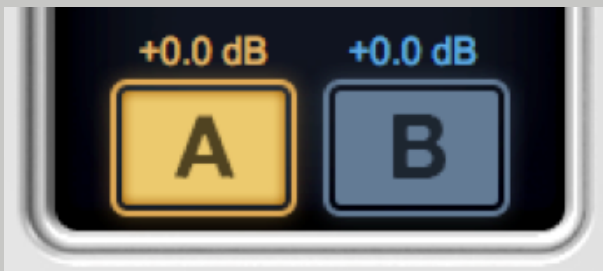
Stereo out





## Using AB - As easy as... AB

Magic AB is usually inserted into the end of the signal path on the stereo output bus. Once inserted, you can flick between the DAW stream by clicking 'A' and your pre-loaded reference track/s by clicking 'B'. Easy. The A-B button has a toggle action so you can click either button to toggle back and forth between the A and B streams.



Magic AB loads with the 'A' DAW stream selected by default. This means there is no interruption to the audio you are working on.

## Loading a reference file

To load a reference audio file into Magic AB, click on the **text box** alongside one of the 9 **players**.



Doing so opens a window that allows you to choose an audio file from your hard drive.

Magic AB supports AIFF, Wav and mp3 formats (although see **Audio files supported**, page 2).



When the track is loaded into a player, the **power button** on the left glows blue and the **display button** alongside lights up. Information about the track is then displayed in the **main audio window** above.

*Note:* Use a player's **display button** to display the track you wish to edit in the main window. You can also use the **display button** when you want to select a track to edit in the main window, but don't want to trigger its playback.

*Note:* **Logic does not allow Audio Units to emit any sound until it receives audio at the plugin's inputs.** To ensure that it performs correctly, simply play some audio through the plugin before loading/playing back one of the Magic AB reference tracks.

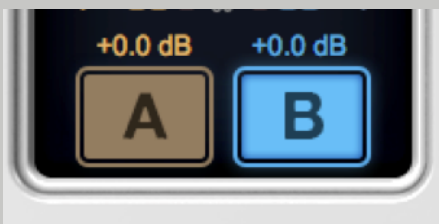


## Magic AB / Operation

When the **display button** is clicked, the audio file's waveform is displayed in the main edit window above.



When a track is active, you can click the 'B' button to hear the 'B' reference stream. The 'B' button will illuminate to show it is active.



Click the power button alongside the player to trigger playback. It will illuminate.



Click the power button again to pause the 'B' stream track. Use the power button to toggle between play and pause.



## Magic AB / Operation

The **play/pause button** in the main display window plays or pauses the reference 'B' stream.  
*Note:* You will only hear it working when the 'B' button is pressed, and a player is selected.



To trigger the audio file from the start point or the loop point, use the **play from start/loop point button** in the main display.



While the track is playing, click anywhere on the large waveform to jump the playback point to a new point in the track. *Note:* this only works when the track is already playing.

To change the volume of the selected reference track, drag the track's **volume fader**. To type in a value for the volume fader, double click on the fader handle and enter the value into the text box. Press enter / return to finalise. When mutiple reference tracks are loaded, the volume faders allow you to balance the relative volumes of the audio files in the different players.



*Tip:* During mastering sessions, keep all volumes at the same level so that you can quickly hear how the different tracks in a project relate to each other dynamically.

To select a different playback track for the 'B' stream, click the power button on the track you wish to play.





## The main audio window

Use the **zoom** function to help you set the loop points in the selected reference track accurately.



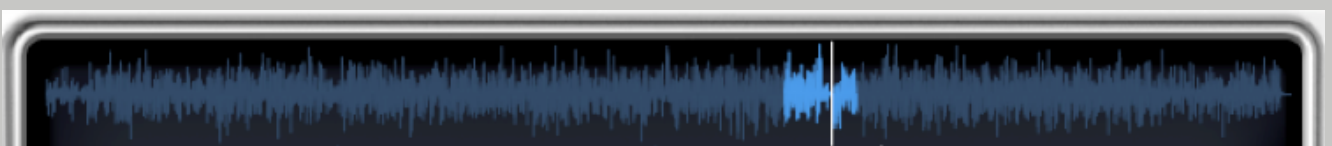
Click and drag up/down on the + and - buttons to increase/decrease the scale of the zoom. Press **zoom** to toggle between zoom and normal view.



When zoom is selected, the zoomed area is highlighted in the waveform viewer.



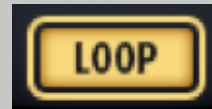
When zoom is in operation, you can navigate through the zoomed audio by using the **waveform overview** at the top of the main window. Drag this left or right to reposition the zoomed area in the viewer below.





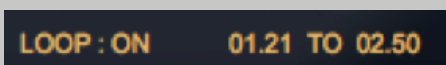
## Looping

Use the **loop tools** to select the part of the reference audio file you want to loop or the start/cue point for playback. This can be useful when you want to play from a specific point in the track.



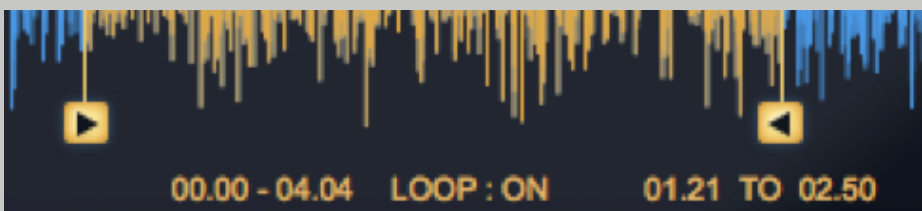
Click the **loop button** to switch the loop function on and off.

When **loop mode** is on, the text above will indicate 'LOOP : ON' and display the times of the loop start and end points.

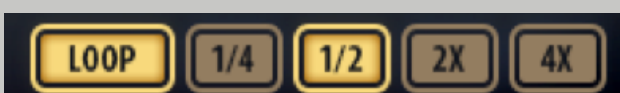


Drag the left and right **loop handles** to set the loop start and loop end points.

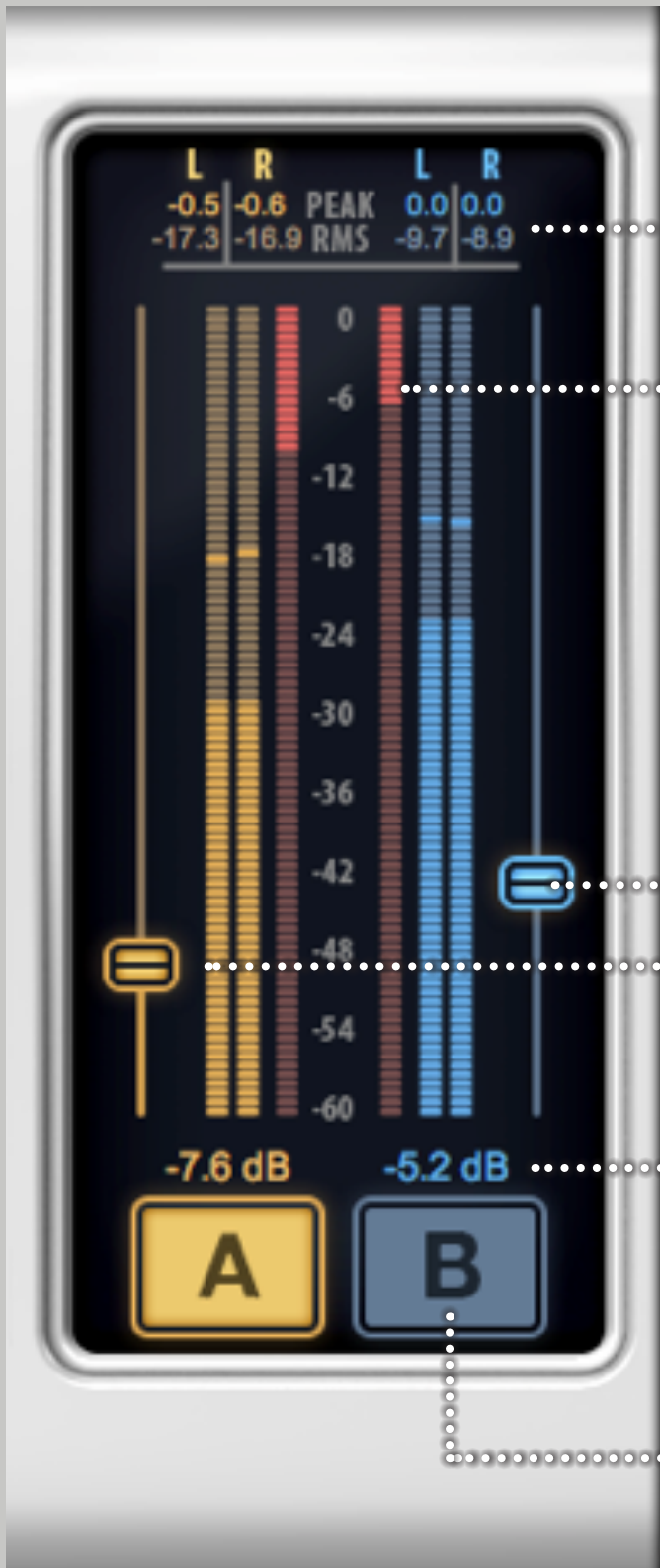
*Tip:* Use the zoom function to get in close for accurate looping.



Use the **loop resize buttons** to quickly and accurately change the length of the loop.



## The output meter



**Peak and RMS displays** (shown in dB).  
Click to reset the values.

**Crest value** (dB) shown in red.  
The 'crest factor' or peak-to-average ratio (PAR) is a measurement of a waveform, calculated from the peak amplitude of the waveform divided by the RMS value of the waveform.

**Volume faders** – drag to adjust the output volume of each stream.

**Volume gain** is displayed above each stream.  
To type in a value for the volume fader, double-click on the volume fader handle and enter the value into the text box.  
Press enter / return to finish.

**AB buttons** – select between 'A' (DAW) stream and 'B' (reference) stream.



## Big button mode

The furthest right button, **A-B mode**, activates the Magic AB **big button mode**. This can be useful when you want an ultra-clear visual indicator of which stream is playing.



Pressing it toggles between waveform zoom view and big button mode.



Use the big A-B buttons to select the stream in the same way as you would using the regular A-B buttons.



## Preferences

There are a few important additional features that can be accessed via the preferences panel. To open this panel, click on the **prefs button**.



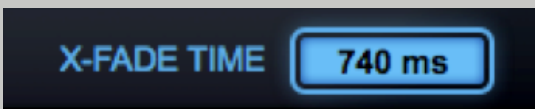
## Crossfade time

By default the switch between the A and B streams is instant. But you can adjust the time it takes to crossfade between the two streams in the **prefs panel**. This will change the time it takes for the volume to fade out of the first stream and fade back in on the other.



To edit the crossfade time, click and drag the mouse up/down to increase/decrease the value (displayed in ms).

*Tip:* You can edit the crossfade time between 0–2000ms



When you are happy with the crossfade time, click **done**.







## Saving and loading presets

Click on the **presets button** to save or load a preset.

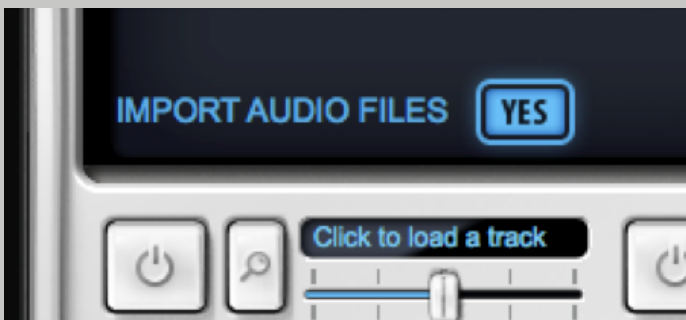


A preset saves a playlist of all reference tracks loaded into Magic AB folder, alongside all associated parameters (volume etc). This means you can store a favourite 'go-to' selection of third party reference tracks, as well as different styles of references (e.g. 'Techno', 'Metal', 'Mastering').

## Import Audio: Yes/No

Clicking Yes to this will copy a version of your reference audio file/s to the following location: User/My Documents/Sample Magic/ Magic AB/Audio.

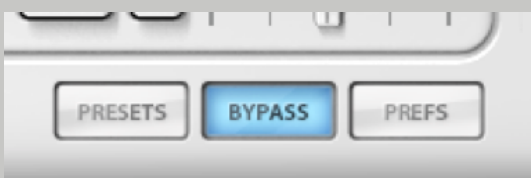
This makes it easier to find audio files when exporting or transferring presets.



*Note:* It's a good idea to use this function when playing tracks directly from a CD.

## Bypass

You can bypass Magic AB at any time by clicking the **bypass button**.





## Using Magic AB as a standalone plugin

To use Magic AB as a standalone plugin we recommend using a VST/AU host.

There are many free hosts that can be downloaded for free. Our recommendations are listed below. Check out [kvraudio.com](http://kvraudio.com) for a more comprehensive list.

If you are successfully using a VST/AU host with Magic AB and its isn't listed below, please contact use and lets us know about it so we can add it to the list.

[www.tobybear.de/p\\_minihost.html](http://www.tobybear.de/p_minihost.html)

[www.hermannseib.com/english/savihost.htm](http://www.hermannseib.com/english/savihost.htm)

[www.niallmoody.com/apps/pedalboard2](http://www.niallmoody.com/apps/pedalboard2)

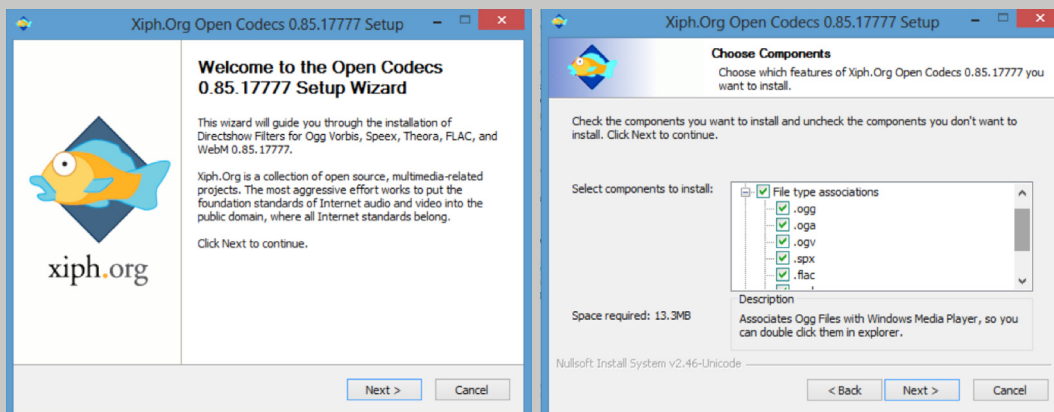


## Importing FLAC files on PC

Go to <http://xiph.org/dshow/downloads/>

Download and install the Windows 32/64-bit Installer: `opencodecs_0.85.17777.exe` 2,53MB

This is a direct show filter for playing (decoding) FLAC, Ogg Vorbis, Speex, Theora and WebM files in Windows Media player. Installing this will allow FLAC files to be played in Magic AB.



Follow the installation instructions.

There is no need to change any of the default options. The FLAC codec will be installed into the correct directory. It will also install codecs for Ogg Vorbis, Speex, Theora and WebM files. If you don't wish to install these then uncheck the boxes in the drop-down menu for 'File Type Associations'.

Continue following the prompts to finish the installation.

Then you will be able to play FLAC files in MAGIC AB.

## Note to Mac users



Unfortunately we are unable to support FLAC files in OSX at this time.