
Voxengo AnSpec User Guide



Version 1.8

<https://www.voxengo.com/product/anspec/>

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Introduction

AnSpec is an analog-style spectrum analyzer plug-in for professional music production applications. It was designed to be a handy visual feedback tool for those who like visual smoothness and easiness of use of analog analyzers. AnSpec also provides peak level indication.

AnSpec features a selectable band count, visual slope, and “red” level threshold. You can also change level meter ballistics and resize plug-in’s window.

Features

- Analog-style spectrum analyzer
- Peak level indication
- Spectrum slope control
- Selectable band count
- User interface window resizing
- Stereo and mono analysis
- All sample rates support
- Zero processing latency

Compatibility

This audio plug-in can be loaded into any audio host application that conforms to the AAX, AudioUnit, VST, or VST3 plug-in specification.

This plug-in is compatible with Windows (32- and 64-bit Windows XP, Vista, 7, 8, 10 and later versions, if not announced otherwise) and macOS (10.11 and later versions, if not announced otherwise, 64-bit Intel and Apple Silicon processor-based) computers (2.5 GHz dual-core or faster processor with at least 4 GB of system RAM required). A separate binary distribution file is available for each target computer platform and audio plug-in specification.

User Interface Elements

Note: All Voxengo plug-ins feature a highly consistent user interface. Most interface elements (buttons, labels) located on the top of the user interface are the same in all Voxengo plug-ins. For an in-depth description of these and other standard features and user interface elements please refer to the “Voxengo Primary User Guide”.

Parameters

Spectrum ballistics can be adjusted via the “Settings” window.

Note that like in all analog spectrum analyzers, the spectrum in AnSpec has a natural upwards (left to right) +3 dB per octave slope at its base. The slope can be adjusted with the “Slope” parameter.

The “Red Level” parameter can be used to specify the threshold level where the level indication turns red.

The “Hide Controls” switch hides all parameter knobs, and maximizes spectrum view.

Also note that white-noise and pink-noise signals will display a loudness drop above 12kHz. This drop is caused by a band-pass filter approaching the Nyquist frequency that technically has no frequency content beyond it. So, an asymmetry in signal’s loudness appears between the left and right lobes of the filter. This is in no way an error in filter design nor loudness estimation. With 96kHz input sample rate and above, the drop becomes less pronounced, because the noise goes far beyond 20kHz and covers a wider range of frequencies. Also, the drop does not manifest on pure sinewaves: this demonstrates that the band-pass filters produce an approximately linear amplitude response.

Credits

DSP algorithms, internal signal routing code, user interface layout by Aleksey Vaneev.

Graphics user interface code by Vladimir Stolytko. Graphics elements by Vladimir Stolytko and Scott Kane.

This plug-in is implemented in multi-platform C++ code form and uses “zlib” compression library (written by Jean-loup Gailly and Mark Adler), filter design equations by Magnus Jonsson, VST plug-in technology by Steinberg, AudioUnit plug-in SDK by Apple, Inc., AAX plug-in SDK by Avid Technology, Inc., Intel IPP and runtime library by Intel Corporation (used under the corresponding licenses granted by these parties).

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