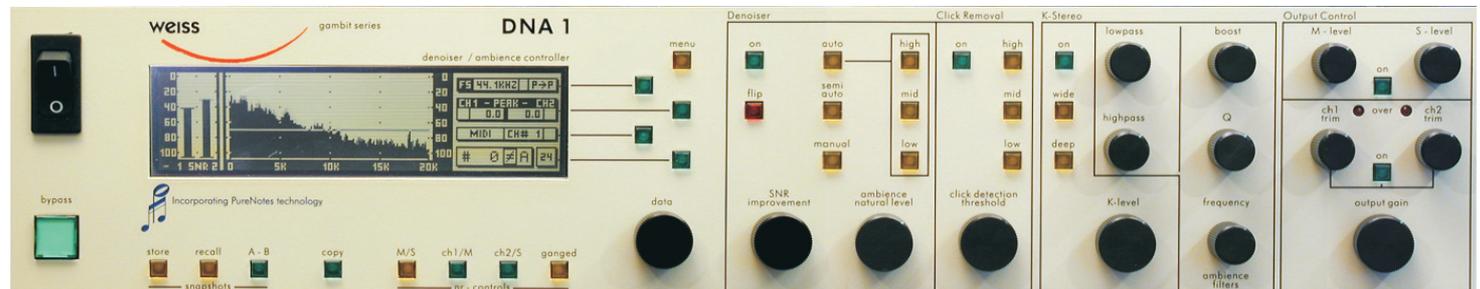


gambit series DNA1

Dual Denoiser / Declicker / Ambience Enhancement Processor, 24Bit / 96kHz



The Weiss Gambit Series DNA1

In cooperation with companies PureNotes and Digital Domain (Bob Katz), Weiss has developed a State of the Art audio restoration and enhancement processor that includes (all in one box):

Click Removal with three independent sub-systems to detect and remove a broad range of impulsive noises, for example scratches and clicks from vinyl recordings,

Denoiser to reduce a all types of wideband and non-stationary noises like tape hiss or aircondition hum using a novel adaptive approach to noise reduction (no spectral noise footprint required),

K-Stereo to recover lost or amplify hidden ambience, space, and imaging; or to generate stereo from mono signals without adding artificial reverberation,

Output Control to regulate stereo balance and stereo width, as well as the overall signal level,

POW-r, the acclaimed technique for transparent and smooth word-length reduction to 24bit, 20bit or 16bit.

Add to this

- an ergonomic user interface built around touch-sensitive rotary knobs and backlit push buttons,
- high-resolution CFL-LCD displaying real-time analyzer, denoiser and declicker metering as well as channel status information,
- AES/EBU digital I/O at 44.1kHz up to 96kHz and 24bits,
- full dynamic and snapshot automation via MIDI.

This makes the Weiss DNA1 at once one of the most versatile and powerful audio restoration and enhancement processor available.

“I absolutely love this box. The noise reduction is the noise reduction I have been looking for for years. It works without being destructive”.

Bernie Becker
Bernie Becker Recording

“Sorry I haven’t gotten a chance to tell you sooner how much I like the DNA1. Like all your equipment it’s a pleasure to use and gets results.”

Rob Fraboni

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DNAI

The DNAI processing chain entails a noise removal section followed by an ambience recovering and a gain control section. The noise removal section has two basic functional parts: Click Removal and Denoiser.

Click Removal

The Click Removal Section is divided into three independently working sub-systems: DeCrackle, DeClick and Smooth.

DeCrackle

To remove fine impulsive noises like static on vinyl recordings (called crackle) or similar. Easy to use one-parameter operation.

DeClick

To remove a broad range of analogue or digital impulsive noises with duration of up to 500 samples. Setup using either three preset parameters (easy operation) or fine tune by taking advantage of the full parameter set (expert operation).

Smooth

Use for waveform smoothing to remove single sample ticks and high frequency noise. Simple on/off control (no parameters).

Denoiser

The Denoiser is based on a new technique for noise reduction that adaptively estimates the spectral noise characteristics and thus does not require a spectral footprint. This new technique is very flexible and simple to use. It functions in three basic modes:

Auto Mode

This is the easiest choice for removing noise and can provide very good results for many types of noisy signal. Once this mode is selected, the algorithm works autonomously and cannot be tuned by the user.

Three auto settings are available:

Low: Use this setting when there is low level noise / hiss on the track, for example when transferring a high quality analogue tape master to digital format.

Mid: This is useful for more noisy analogue tape recordings, where there is significant hiss or other noise artefacts present.

High: The auto high setting is needed when dealing with noisy material containing significant wideband noise.

Manual Mode

In this mode the user has complete control over all the system parameters. This mode is very robust and can be used to denoise material with high amounts of non-stationary wideband noise. By being able to manually set the signal-to-noise ratio (SNR) of the input signal, the user has full control to exactly specify which part of the input is noise. A separate “ambience” parameter allows to control the amount of ambience that is returned to the signal after denoising.

Semi-auto Mode

In semi-auto mode, the same parameters for fine-tuning are available as in manual mode, except for the “SNR”, which is replaced by “Intensity”. “Intensity” controls the psycho acoustic intensity of the detected noise, in contrast to the manual mode’s “SNR” that specifies the technical SNR of the input signal. Thus the semi-auto mode uses the same adaptive noise detection as the auto-mode, but with adjustable parameters.

K-Stereo Ambience Enhancement Processor

K-Stereo extracts and processes a signal’s ambience content (surround, depth and width information). There are a large number of applications for K-Stereo, for instance:

Stereoization: Reshape the original mixed recording by controlling the depth and width of the soundstage, or perform natural mono-to-stereo conversion by spreading the ambience contained in the mono source across the stereo soundscape.

Ambience Recovery: Extract and process the original ambience information from a track. Adjust the colour, tail length and spread of the existing reverberation without adding new or artificial reverb effects - all in post-production after the final mix! This is especially useful after denoising, which can leave a track in a dry environment.

Compensate bit-rate reduction: Low bit-rate codecs (MP3, WMA, RealAudio), word-length or sampling rate changes can squash surround and depth information. This can be restored with K-Stereo by enhancing the remaining existing ambience field.