

# DiscoDSP EQ30 v1.0

## Users Guide

# EQ-30 Specifications

## General

EQ30 is based on [Alesis M-EQ 230 dual 1/3 octave precision equalizer](#) specs.

|                      |                                 |
|----------------------|---------------------------------|
| Platform             | VST (Windows)                   |
| Inputs               | 2                               |
| Outputs              | 2                               |
| Precision            | 32-bit floating point           |
| Allowed sample rates | Any supported (host dependency) |

## Equalizer

|                 |                                                                                                                                                                                               |
|-----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Number of bands | 2 complete 30 band 1/3 octave equalizers                                                                                                                                                      |
| Band Boost/Cut  | $\pm 12\text{dB}$                                                                                                                                                                             |
| Controls        | 25 / 31 / 40 / 50 / 62 / 80 / 100 / 125 / 160 / 200 / 250 / 320 / 400 / 500 / 640 / 800 / 1k / 1.3k / 1.6k / 2k / 2.5k / 3.15k / 4k / 5k / 6.2k / 8k / 10k / 13k / 16k / 20kHz level controls |
| Monitor         | Input, Gain, Output and Text display                                                                                                                                                          |

## GUI

|            |                                                           |
|------------|-----------------------------------------------------------|
| Display    | Rack look, with some 3D ray-traced parts.                 |
| Controls   | 60 faders, input and output.                              |
| Indicators | Indicator VU Meters showing Input level and Output level. |

# Key frequencies for instruments

| Instrument         | Key Frequencies                                                                                                                                |
|--------------------|------------------------------------------------------------------------------------------------------------------------------------------------|
| Bass Guitar        | Attack or pluck is increased at 700 or 1KHz; Bottom added at 60 or 80Hz string noise at 2.5KHz                                                 |
| Bass Drum          | Slap at 2.5KHz; Bottom at 60 or 80Hz                                                                                                           |
| Snare              | Fatness at 240Hz; Crispness at 1 to 2.5KHz; Bottom at 60 or 80Hz                                                                               |
| Hi-Hat and Cymbals | Shimmer at 7.5 to 10KHz;<br>Klang or gong sound at about 200Hz                                                                                 |
| Toms               | Attack at 5KHz; Fullness at 240Hz                                                                                                              |
| Floor toms         | Attack at 5KHz; Fullness at 80 or 120Hz                                                                                                        |
| Electric Guitar    | Body at 240Hz; Clarity at 2.5KHz                                                                                                               |
| Acoustic Guitar    | Body at 240Hz; Clarity at 2.5KHz; Bottom at 80 or 120Hz                                                                                        |
| Piano              | Bass at 80 or 120Hz; Presence at 2.5 to 5KHz; Crispness at 10KHz; Honky-tonk sound at 2.5KHz as bandwidth is narrowed; Resonance at 40 to 60Hz |
| Horns              | Fullness at 120 or 240Hz; Shrill at 7.5 or 5KHz                                                                                                |
| Voice              | Fullness at 120Hz; Boominess at 200 to 240Hz; Presence at 5KHz; Sibilance at 7.5KHz; Air at 12 to 15KHz                                        |
| Harmonica          | Fat at 240Hz, bite at 3-5kHz                                                                                                                   |
| Conga              | Resonant ring at 200 to 240Hz; Presence and slap at 5KHz                                                                                       |

Whether used to alter the timbre of an instrument, control feedback, or improve speech intelligibility, it's important to know what effect each portion of the frequency spectrum has on the sound.

# Audio octave ranges

| Frequency range | When used produces this effect                                                                                                             | When used too much<br>Produces this effect                                            |
|-----------------|--------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| 16Hz to 60Hz    | sense of power, felt more than heard                                                                                                       | makes music muddy                                                                     |
| 60Hz to 250Hz   | Fundamentals of rhythm section, EQing can change musical balance making it fat or thin                                                     | makes music boomy                                                                     |
| 250Hz to 2000Hz | Low order harmonics of most musical instruments                                                                                            | telephone quality to music 500 to 1KHz horn-like, 1K to 2KHz tinny, listening fatigue |
| 2KHz to 4KHz    | Speech Recognition                                                                                                                         | 3KHz listening fatigue, lisping quality, "m", "v", "b" indistinguishable              |
| 4KHz to 6KHz    | Clarity and definition of voices and instruments, makes music seem closer to listener, adding 6dB at 5KHz makes entire mix seem 3dB louder | sibilance on vocals                                                                   |
| 6KHz to 16KHz   | Brilliance and clarity of sounds                                                                                                           | sibilance, harshness on vocals                                                        |

# DiscoDSP NightShine v1.1

## Users Guide

# NightShine Specifications

## General

NightShine is based on [Alesis 3630 peak compressor](#) specs.

## Dynamics processor

|                 |                                            |
|-----------------|--------------------------------------------|
| Number of bands | 1                                          |
| Threshold       | -40.0 dB to 0.0dB                          |
| Ratio           | 1.0:1 to 20.0:1                            |
| Attack          | 0.1 ms to 200 ms                           |
| Release         | 50 ms to 3 seconds                         |
| Output          | -20 dB to 20 dB (make up)                  |
| Threshold range | -inf dB. to 0.0dB, exponential curve.      |
| Gain depth      | 0% to 100%                                 |
| Switches        | Auto make-up, soft-clip and limiter        |
| Monitor         | Input, Gain, Output and Text display       |
|                 | + Additional depth control for gain scale. |

## GUI

|            |                                                                                          |
|------------|------------------------------------------------------------------------------------------|
| Display    | Vintage look, with some 3D ray-traced parts.                                             |
| Controls   | Attack, Release, Make-up, Ratio, Threshold, Depth and Auto Make-up, Limit and Soft-Clip. |
| Indicators | Indicator VU Meters showing Input level, Gain level and Output level.                    |

# How NightShine works

## Threshold (-40dB to 0.0dB)

Sets the level above which signals will be compressed or limited.

## Ratio (1.0:1 - 20.0:1 / [limiter mode: infinite:1] )

Sets the compression slope, which determines how the output signal will change in relation to the input signal once the input signal exceeds the threshold. The first digit indicates how many dB of input change will cause a 1 dB output change. The higher the ratio, the greater the compression, and the more "squeezed" the sound.

Examples: With a setting of 2:1, a 2 dB input change for signals above the threshold results in a 1 dB output change. With a setting of 1:1, a 1 dB input change results in a 1dB output change (i.e., there is no change to the signal dynamics).

Turning on limit switcher means ratio of infinite:1, so the output level remains virtually constant regardless of input level changes.

## Attack (0.1 ms to 200 ms)

This control sets how fast the compressor gain envelope reacts to changes in input level. The longer the attack time, the more of a signal's dynamics are "let through" before the limiting action kicks in. With slower attack times, the limiter responds more to average signal level. This produces a smoother sound that tends to retain dynamic character, but the tradeoff is that the compressor cannot react as rapidly to sudden level shifts.

Examples: Setting a longer attack time with guitar allows more of the pick attack to come through. A longer attack time with kick drum lets through more of the beater "thock." For recording, you may want to trade off response time for smoothness. When used to prevent loudspeaker or power amp clipping, a fast attack time is desirable.

## Release (50 ms to 3 seconds)

This control determines how long it takes for the limiter to return to unity gain after going into limiting. With short release times, the limiter tracks every little change in level, producing a potentially uneven or "rippling" effect that decreases dynamics but increases the average output level. Longer release times tend to "squash" the signal more, producing less overall output but retaining more of the signal's dynamics.

Excessive release times can be used as an effect. In the 60s using lots of limiting with long release time on drums was a popular recording technique.

## Output (-20 to +20 dB)

The process of reducing dynamics lowers the signal's overall level. Use this control to compensate by adding output gain.

Example: Limiting a signal by 6 dB will make the signal seem approximately 6 dB softer. Compensate by using this control to increase the level.

The 'Auto' (Make Up) switch when turning on applies the approximately compensation needed.

## Depth (0 – 100%)

It's used to scale the compression calculated gain, with 0% works like common compressor, with 100% every time the signal raises threshold, the compressor will envelope will attempt to mute audio.

## Soft saturation switch

Wave shaper that shapes audio output and results in a more smooth curve rather than hard clipping.

## Monitoring

At the left-bottom side of the User Interface we have 3 vu-meters showing the input level (IN), compressor gain (GA) and output level (OU).

Input level (IN) shows the incoming signal level, it's light blue when signal is under threshold level, turns orange when is above threshold level and red when it clips.

Gain level (GA) shows gain level. This is useful to see measure the compressor 'activity', take careful, the less movement in this bar means that your compressor settings are currently working more as just simple gain than dynamic processing.

Output level (OU) shows the processed audio level, turns into red when clip. The plugin DSP is mainly divided in 3 parts, spectral enhancer, multi-band compressor and the limiter, but you don't have to worry about an endless parameter list, since most all are controlled by the plugin itself.

# DiscoDSP ThrillMe v2.2.0

## Users Guide

# ThrillMe Description

ThrillMe is a powerful VST plugin stereo mastering processor, you can use it to enhance and give warmth to your instruments or your full entire mix.

## ThrillMe Installation

Double click setup program icon and follow the instructions.

**Note:** Demo Version is time limited to 10 minutes of processing per session.

## ThrillMe Interface

The following picture describes the function for each knob:



# How ThrillMe Works

The plugin DSP is mainly divided in 3 parts, spectral enhancer, multi-band compressor and the limiter, but you don't have to worry about an endless parameter list, since most all are controlled by the plugin itself.

You have only to deal with 3 parameters, spectral enhancer amount, compressor threshold and ratio.

The spectral enhancer is a series of shelving filters that works giving presence of harmonic components of the incoming signal, the big knob on the user interface determines amount of this effect, a middle/low value usually does the job.

The second part is the dynamics processor, firstly it splits signal in 3 ways, bass, middle and high bands.

Each band is processed independently (3 parallel compressors), and the plugin provides controls for threshold and ratio of the compressors, but each band have own configuration (attack, release, etc.) set automatically with the plugin depending the band (l/m/h).

The signal is then mixed together again, the mix is limited and wave shaped, and is feed to output.

# ThrillMe Specifications

## General

|              |                                 |
|--------------|---------------------------------|
| Platform     | VST (Windows)                   |
| Inputs       | 2                               |
| Outputs      | 2                               |
| Precision    | 32-bit floating point           |
| Working rate | Any supported (host dependency) |

## Spectral enhancer

|                    |                                                         |
|--------------------|---------------------------------------------------------|
| Number of bands    | 4                                                       |
| Band specification | Bipole shelving IIR filter.                             |
| Types              | (1 x Lowshelf + 2 x Peaking + 1 x Hishelf) x 2 (stereo) |
| Routing            | Serial                                                  |
| Adjustment         | Auto                                                    |

## Dynamics processor

|                  |                                                               |
|------------------|---------------------------------------------------------------|
| Number of bands  | 3                                                             |
| Splitting filter | Single-pole IIR/-6dB oct x 2 (stereo) x 3 (bands)             |
| Band range       | 0-1kHz/1kHz-10kHz/10kHz-Inf (with -6dB/oct crossover rolloff) |
| Algorithm        | VADP - Virtual Analog Dynamics Processing.                    |
| Envelope         | Attack / Release (Self adjusted)                              |
| Ratio            | from 1:1 to 1:128                                             |
| Threshold range  | -inf dB. to 0.0dB, exponential curve.                         |

## Limiter

|      |                           |
|------|---------------------------|
| Type | Mathematical waveshaping. |
|------|---------------------------|

## Gui

|            |                                                   |
|------------|---------------------------------------------------|
| Display    | Vintage look, 3D raytraced gui.                   |
| Controls   | Threshold, ratio and spectral enhancement amount. |
| Indicators | Valve showing compressor activity.                |