

Black Box Analog Design HG-2

Plugin Manual



BLACK BOX
ANALOG DESIGN

BRAINWORX



Developed by Brainworx Audio in partnership with Black Box Analog Design.
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Black Box HG-2 | Faithful model of the “Mix Buss” Best Friend”

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INTRODUCTION | Black Box HG-2

INTRODUCTION:

There's good reason why celebrated mix engineers like Dave Pensado, Bob Horn, and Jack Douglas use the high-end Black Box Analog Design HG-2 tube processor on their mixes. The boutique stereo processor's multiple, diverse tube circuits not only make tracks sound richer and fuller, they also make them sound louder, bigger and punchier at the same peak level. Much more than a mere distortion box, the HG-2 can impart subtle harmonic coloration and sparkle without compromising fidelity, or add brilliant saturation that totally changes the character of a sound.

Now you can have that lush and vibrant sound in the Black Box HG-2 plugin. Brainworx collaborated with Black Box to model the HG-2's sweet tubes and creamy-sounding transformers, and then added a host of powerful digital mods to greatly expand the processor's tonal palette and range of saturation-based compression.

Whether mixing, mastering, or designing sounds, the HG-2 excels at imparting beautiful character and charisma onto your tracks while increasing perceived loudness and massaging dynamics. Use the parallel Saturation circuit to send instruments and vocals into overdrive for a modern vibe; find the right balance between the Pentode and Triode tube stages to perfect your RMS level, leaving your stems full and bold without using a compressor; deliver that final touch of magic dust and airy texture, while adding warmth and gentle tube saturation to your masters.

PAINT TRACKS WITH DIFFERENT COLORS

A smorgasbord of assorted tube flavors, HG-2 emulates four different vacuum tube stages combined in series and parallel circuits to color your mix and individual tracks with a wide range of rich and varied harmonics. Separate gain controls for emulated 6U8A pentode and triode tubes are placed in series between buttery virtual transformers warming the plugin's input and output. Dial in the perfect blend of pentode and triode tube sweetness, then adjust the Density control to drive both tubes harder without changing their relative balance or the plugin's output level, adding more girth and mass. The Calibration menu emulates the effect of an internal trim adjustment in the original hardware unit, instantly modifying the HG-2's high-frequency response to produce Dark, Normal or Bright coloration. An added Air knob lets you control how much high-frequency fairy dust you sprinkle on vocal tracks, string instruments, piano and full mixes. Turning down the Mix control adds back dry signal at the plugin's output, combining HG-2's beautiful tube softness and luster with your mix's perfectly preserved detail and punch.

IT GETS NASTY, TOO!

Two virtual 12AX7 tubes—each voiced differently—can be alternately driven in a parallel Saturation circuit to add tube sheen or blistering overdrive distortion to just low or high frequencies or across the entire frequency spectrum—great for shaping individual tracks, creative sound design and adding energy to full mixes. The Saturation circuit's output feeds the pentode and triode tubes, giving you a massive combined effect that transforms thin, digital tracks into fat analog beasts. Drench just the bass and low-midrange frequencies in the Saturation circuit to grow a beard on a sterile bass track or add massive body and weight to a kick drum. Crank the pentode gain and dial in some crunchy AX7 tube saturation to make rock guitars sound bigger, louder, richer and in-your-face. Broaden a thin-sounding singer's low-midrange band with extra pentode gain, and push the triode tube and Air boost to make their track sparkle and shimmer.

Every type of tube colors sound differently. Every track and mix needs different coloration. HG-2 lets you create the perfect blend of tubes for the best-sounding mixes and individual tracks.

INCLUDED PRESETS

Presets 1 - 28 were contributed by Eric Racy, co-owner of Black Box Analog Design. A platinum selling Recording and Mix Engineer, he lives and works in LA in a wide range of genres and with clients ranging from indie bands to Grammy winning pop artists.

His clients and credits have included Katy Perry, Nicki Minaj, Pharrell, Tyga, Jonathan Davis, 2NE1, Troye Sivan, Alessia Cara, Kelly Clarkson, Divinity Roxx, Kelly Rowland, J. Cole, Janelle Monáe, Mario, Missy Elliott, Zendaya, Lil Wayne, Big Sean, Busta Rhymes, Phonte and many more.

Presets 29 - 38 were contributed by Trevor Case, an industry veteran of twenty years. He got his start composing, remixing and producing music for artists and corporate clients. His focus over the last decade has been mastering.

Trevor has had the pleasure of working with indie artists such as Friends of Foes, Embracing Abomination, Divinity Roxx, Flatland Sound Studio and Jesse Brown as well as mastering projects featuring Missy Elliott, Troye Sivan, Kelly Clarkson, Mario and more.

KEY FEATURES | Black Box HG-2

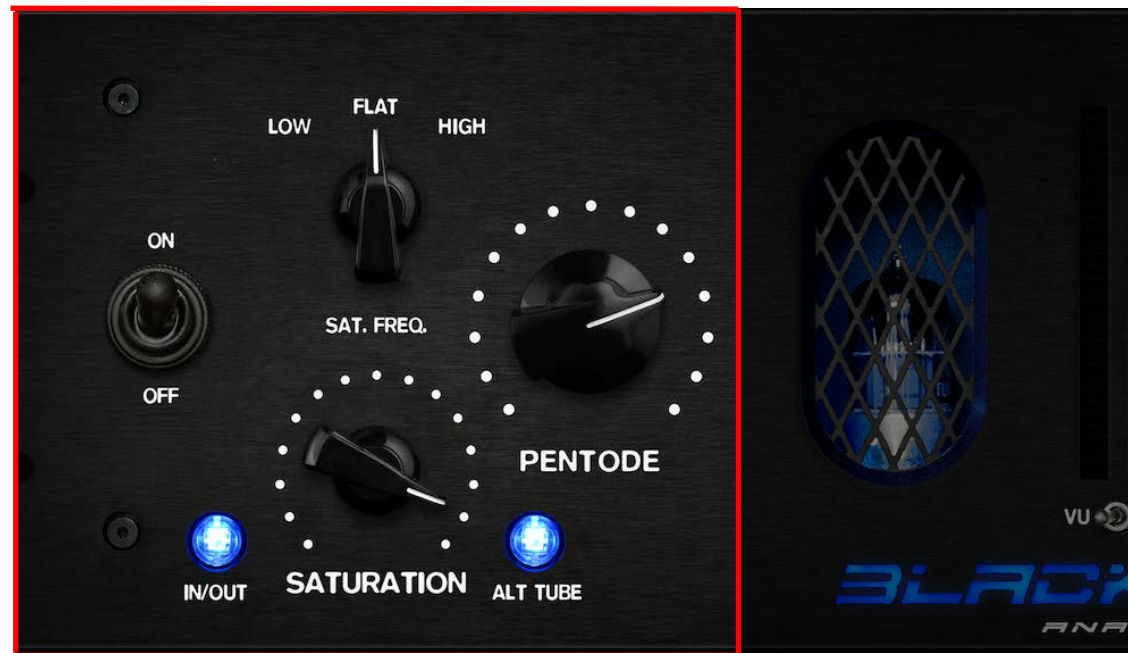
KEY FEATURES:

- Faithful emulation of the high-end Black Box Analog Design HG-2 tube processor, with additional digital controls—Input Gain, Density, Calibration, Air and Mix—providing a greatly expanded palette of tube flavors and saturation
- Modeled transformers and separate gain controls for virtual 6U8A pentode and triode tubes add warmth, body and tube sweetness to thin mixes and sterile mono and stereo tracks
- Parallel Saturation circuit selects one of two modeled 12AX7 tubes—one voiced more aggressively than the other—for adding tube radiance to scorching overdrive distortion on instrument and vocal tracks
- Saturation Frequency selector adds generated 12AX7 harmonics to only low or high frequencies or across the entire audio spectrum
- Calibration menu mimics an internal trim adjustment in the HG-2 hardware to give high frequencies Dark, Normal or Bright coloration
- New, continuously variable Density control boosts gain equally for virtual pentode and triode tubes while making a compensatory adjustment to output gain
- New, continuously variable Air control adds silvery sparkle and sweetness above 10 kHz
- New, continuously variable Input Gain control simultaneously trims gain for all active virtual tube circuits: Saturation, pentode and triode
- New, continuously variable Mix control adjusts wet/dry balance, preserving detail and punch



PARAMETERS | Black Box HG-2

PENTODE SECTION:



POWER:

2-stepped switch. Switches the processing on.

Note: This switch is linked with the toolbar power button. It's also inverse-linked to the Bypass button in the right corner.

PENTODE:

Continuous knob, 0 - 10. This control drives the Pentode tube model, generating "even order" harmonics -- a more pleasing type of saturation that can be found in many tube-based guitar amps.

Note: As pentode and triode are in series, the pentode drive also pushes the triode harder.

SATURATION IN/OUT:

2-stepped button. Brings the parallel saturation circuit in or out.

SATURATION:

Continuous knob. 0 - 10. This knob adjusts how much of the parallel saturation signal is fed into the main signal path.

SATURATION FREQUENCY:

3-stepped switch, Low / Flat / High. The "Sat. Freq." selector is a simple yet powerful feature that allows the user to choose what frequencies are present in the parallel saturation circuit.

In the "Flat" position, full bandwidth is fed into the circuit, allowing for saturation of all frequencies.

In the "Low" position, only the low mid and bass frequencies are fed into the circuit. This allows the user to add body and weight to recordings.

In the "High" position, only high mid and high frequencies are fed into the circuit, allowing the user to add sizzle, presence and top end.

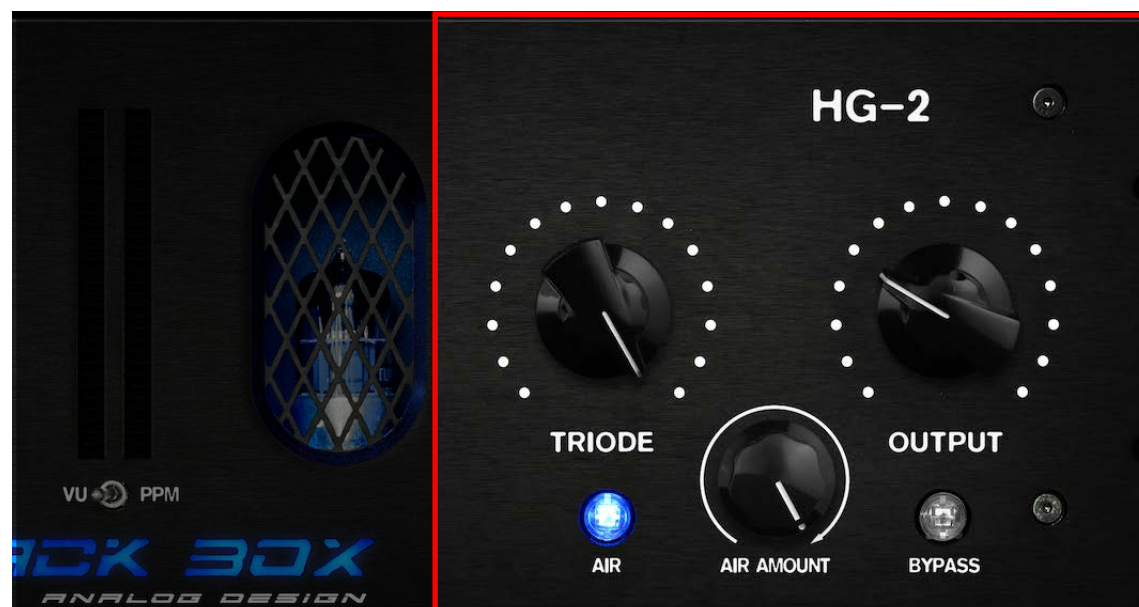
ALT TUBE:

2-stepped button, On / Off. This button switches between two sets of 12AX7 tubes in the parallel saturation circuit. The "alt" tube is voiced slightly more aggressively, giving the user a wider range of tones and saturation types.

Note: Does not switch the pentode or triode, only the saturation tube.

PARAMETERS | Black Box HG-2

TRIODE SECTION:



TRIODE:

Continuous knob, 0 - 10. This control drives the Triode tube model, generating “third order” harmonics -- a grittier type of saturation that can be found in overdriven audio tape.

OUTPUT:

Continuous knob, 0 - 10 Passive output attenuation. Use this to adjust the final output level after passing your signal through the tube stages of the HG-2.

AIR IN:

2-stepped button, On / Off. Engages or disengages high frequency “air” lift.

AIR AMOUNT:

Continuous knob, 0 - 10. Use this knob to bring up post-saturation frequencies around 10 kHz.

Note: The hardware version’s Air Lift is a 2-stepped button only, which increases the 10 kHz frequency range by a preset amount.

BYPASS:

2-stepped switch. Toggles the plugin bypass.

Note: This switch is inverse-linked with the toolbar power button and the On/Off switch.

PARAMETERS | Black Box HG-2

UPPER TOOLBAR:



Plugin Settings Toolbar

BYPASS:

Bypasses processing done by the HG-2

UNDO/REDO (ARROWS):

Up to 32 steps of parameter history

SETTINGS A / B / C / D:

Select banks of parameter settings; use the A/B/C/D settings to copy a complex channel setting and alter it slightly for different parts of your song, for example. These settings can be automated by your DAW system, so you can jump from setting A in the verse to setting B in the chorus, for example.

COPY / PASTE / RESET:

Copy and Paste between setting banks, reset parameters of selected bank.

CAL:

3-stepped dropdown menu, Dark / Norm / Bright. The hardware is calibrated internally to a specific frequency response regarding the top end, i.e., the amount of high frequencies is adjustable to some extent. The Cal. parameter reflects this behavior in three steps.

Note: This parameter is located in the toolbar.

DENSITY:

Continuous toolbar knob, -100% to 100%. Density adjusts the input gain and compensates by making a comparable adjustment to the output gain, achieving a denser signal while preserving loudness.

Note: This parameter is located in the toolbar.

INPUT GAIN:

Continuous toolbar knob, -12 dB – 12 dB. Input gain can be used to trim the saturation strength or equally adjust pentode and triode distortion.

Note: This parameter is located in the toolbar.

MIX:

Continuous toolbar knob, 0 - 100%. This parameter adjusts the proportional levels of unprocessed and saturated signals.

Note: The dry signal is not affected by input gain. This parameter is located in the toolbar.