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LAWRENCE KANSAS

LA GRANGE TEXAS



The **CA-286** is our modular handmade tube mic, line, and booster amplifier. The circuit is a modern combination of our favorite tube gain stages from the 40s, 50s and 60s and the result of years of audio engineering and critical listening. Relentless R&D, transformer design, and component research have yielded an amplifier capable of imparting a classic, rich, and three-dimensional sound to any mic or line level signal.

With electrons running Class A at just south of 300VDC, the 2-stage **CA-286** amplifier provides 42-60db of gain. Utilizing a unique NF/Tone shaping circuit, the sound goes from smooth,

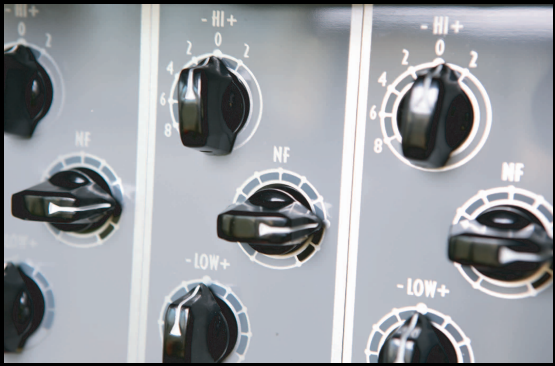
dark, and distant to in-your-face vintage fidelity. Each module features our own custom-made swappable transformers, NOS 'Paper and Oil' capacitors, mil-spec carbon comp resistors, and a pair of NOS EF86/6267 vacuum tubes. Combining a classic design approach with high-quality custom and NOS ingredients, we have created a timeless and flexible amplifier that will reinvent your entire microphone collection.

THE CONTROLS

The bright red (**INPUT**) section is the first place signal arrives. Next to the phase reverse switch, you'll find a 5-position network of 'Balanced H-pads' made from mil-spec carbon comp resistors. This tailors any **microphone or line level** signal for direct delivery into the input transformer. The first four 150/250 ohm positions allow you to maintain the signal level integrity - as well as control the saturation and tonal characteristics of any microphone.

In the **Line (LN)** position, your tape machine, DAW, pre-amp, or other line level signal can be passed through the amplifier. This provides rich tube and transformer saturation, as well as tone-shaping capabilities. You can achieve more harmonic saturation by switching from the (**LN**) setting back through the H-pads, transitioning from wooly saturation to sheets of creamy harmonic distortion. Chaining two units together creates a multi-stage, high gain recording path like that of a vintage tube console. The CA-286 can easily work overtime as both a second-stage tube booster/buss amp and a mixer/summing output amp for any supplied program material. Such input flexibility makes the CA-286 not only a classic tube microphone pre-amp but also a powerful mixing companion.





Instead of a standard EQ, you will find a customized, tone-shaping circuit. The **negative feedback (NF)** control is the key to unlocking several sonic signatures of the CA-286. Turning the **NF** knob to the left reduces the amount of feedback in the circuit. This brightens and moves the sound forward while heightening harmonics and sensitivity. It also raises overall gain. Alternately, turning it to the right increases the amount of negative feedback. This produces a dark and buttery tone with a smooth harmonic structure.

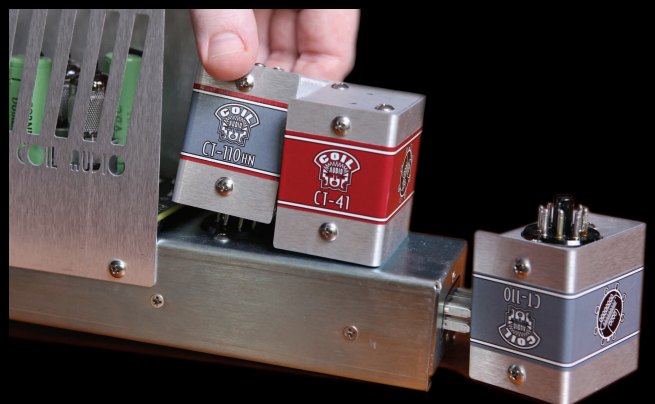
You can tailor the sound even further by adjusting the **HI** and **LO** tilt controls. These interact directly with the position of the **(NF)** knob. The **HI tilt** control switch is used to adjust the high frequency response of your source material. Depending upon its position, you can move from a gentle filter of upper frequencies to the natural open sound of the EF86s. Conversely, the **LOW tilt** control Pot boosts and cuts lower frequencies in relation to the position of the **NF** knob, allowing you to dimensionally move the low end response from front to back across the soundstage.



The **OUTPUT** control trims the gain between the first and second tube stages. This allows you to get your final level set without any tone degradation. It also offers further tone shaping through manipulation of the two-stage EF86 gain structure. With up to 60db of gain available, the CA-286 Amplifier has enough power to boost almost any signal to proper recording levels.

THE TRANSFORMERS

We think transformers are the foundation of a tube circuit's overall sound and feel. After sampling piles of vintage transformers, we arrived at our current designs. We then found the best transformer winders in the country to faithfully recreate them. Implementing a classic design technique, we mounted them to octal plugs and re-enclosed them in an easy to handle package. This re-packaging allows the transformers to be removed and replaced easily for a complete shift of the amplifier's overall sonic voice and signature. This also enables the amplifier to compliment a wide-range of musical styles and genres with very little effort. It's like having several different tube amplifier flavors at your disposal in a single, all-encompassing unit. For input, each amplifier comes with either our 50/50 nickel & iron **CT-110**, or our 80% Super Mu **CT-110HN** (or both). For output, we include our **CT-41** Line Transformer. Additional or optional transformers are available separately. We can also retrofit suitable vintage or current transformers to our octal socket standard.



The CA-286 Amplifier is available in two different chassis configurations:



The **PS6** version of the CA-286 is a fully removable module that terminates to a rugged 10-Pin Cinch Connector for use in our **PS6 Rack Tray**. Each module is easily removable via two thumb screws for service or transformer replacement. The Rack and PSU can accommodate from one to six of our modules, so you can start out with a single channel and add to it as your studio grows.

NOTE: The PS6 version of the CA-286 amplifier requires the PS6 Rack Tray and PSU to fully operate.



The **PS2** version of the CA-286 comes in our **PS2 Rack and PSU**. This combines the power supply and modules into a single 3U case creating a compact 2-channel modular solution. The power supply and module are otherwise identical to our larger PS6 versions. The PS2 can be ordered with one or two amplifiers factory installed; a blank face plate covers the unused slot on single-channel versions. A second module can be purchased and installed by Coil Audio later when you're ready to expand.

FACE PANEL LAYOUT AND KNOB DESCRIPTIONS (Top to Bottom)

-HI+

High Frequency 'Tilt' adjusts the High Frequency response of the negative feedback present in the circuit. Stock Position is straight up (12:00) filtering only a slight bit of air with the -2 through -8 positions adding additional filtering. The +2 position removes all filtering for a wide and open sound.

NF

Negative Feedback Control adjusts the amount of negative feedback utilized in the circuit, allowing you to voice the circuit from smooth and dark, to bright and forward. Stock Position is 3:00 and is very smooth and natural. Turning the knob counter-clockwise removes negative feedback, brightening the sound, and increasing harmonics and sensitivity as well as overall gain. Fully clockwise produces an additional bit of smooth character and dryness. Both the -HI+ and -LOW+ controls interact directly with the NF knob position.

-LOW+

Low Frequency 'Tilt' adjusts the Low Frequency response of the Negative Feedback present in the circuit. Stock Position is straight up (12:00) and gives a flat and natural Low Frequency response. Turning the knob to the right adds or moves Low Frequency content forward in the mix and turning it left decreases it.

INPUT section

Features a Phase Reversal Switch and 5-Position Switch for LINE, -19 pad, -12 pad, -6 pad, and '0' or no pad/wide open.

OUTPUT

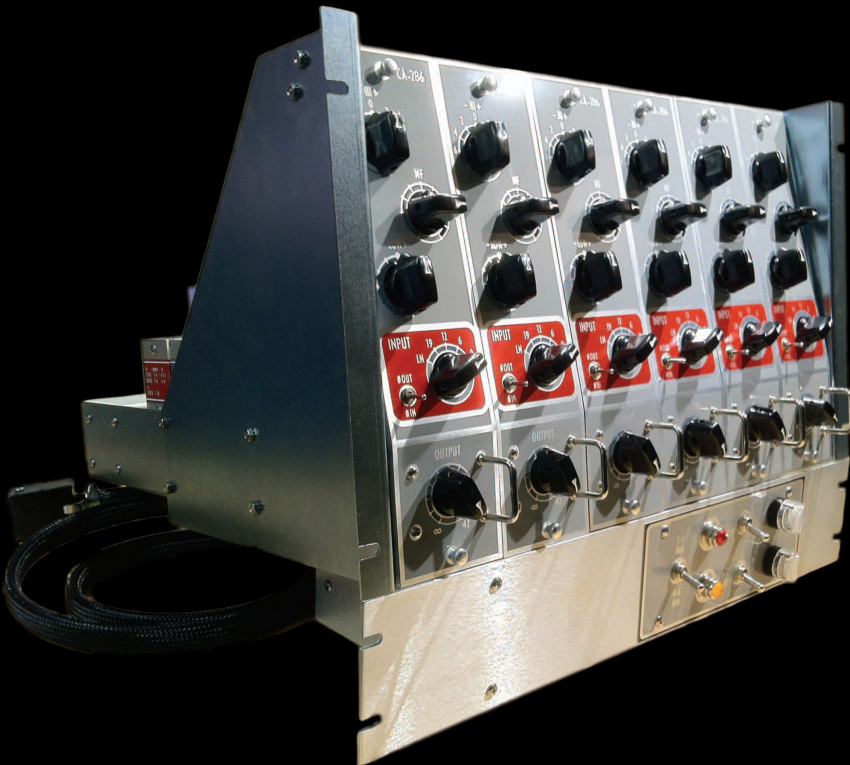
Controls the amount of overall gain between the first and second EF86/6267 tube stage.

CA-286 Amplifier (PS6 Version) FEATURES:

- 42db-60db of available gain via 2-stage EF86/6267 pentode vacuum tube-based circuit
- Transformer balanced. 150 Ohm input, 600 Ohm Output,
- CT-110/CT110HN and CT-41 Transformer options Included
- NOS Caps and resistors by Cornell Dubilier and Allen Bradley
- PEC 2W carbon potentiometers
- Mogami/Canare audio harnesses and Belden hi voltage wiring
- 10-Pin Cinch Jones Military Grade Plug termination
- Up to SIX CA-286 Amplifiers mount into our PS6 Rack Tray and PSU
- Durable US-made steel module body
- .125 brushed aluminum faceplate with polished aluminum overlay
- Hand built and Tested in the USA

CA-286 Amplifier (PS2 Version) FEATURES:

- 42db-60db of available gain via 2-stage EF86/6267 pentode vacuum tube-based circuit
- Transformer balanced. 150 Ohm input, 600 Ohm Output,
- CT-110/CT110HN and CT-41 Transformer options Included
- NOS Caps and resistors by Cornell Dubilier and Allen Bradley
- PEC 2W carbon potentiometers
- Mogami/Canare audio harnesses and Belden hi voltage wiring
- ONE or TWO CA-286 Amplifiers can be factory installed in our PS2 Rack and PSU
- Durable US made steel chassis with aluminum faceplate
- Hand built and Tested in the USA



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