

# PURRING LOOK, ROARING SOUND

## JCA Circuits Golden Ratio 1.6

People who listen to a lot of guitars, amps, and similar gear are often jaded and prone to drawing conclusions with a mere glance. But every so often a product comes along that reminds them that not all things are as they appear...

- Pennsylvania-based JCA Circuits specializes in custom amplifier design and construction, and also does amp upgrades and repairs. Jason Arthur began building amps in 1995 and runs the shop with the help of his wife, who handles bookkeeping.

Last January, Arthur became a full-time builder, and today he produces an average of two amps each week. He recently invited us to test his Golden Ratio 1.6.

Fairly utilitarian and conservative in appearance, the GR 1.6 conveys a bit of vintage aesthetic with its tan-colored Cocoa Levant tolex, small-weave cane grill (Arthur also offers a black tolex with salt-and-pepper grille), chrome hardware, brown leather handle, dark-brown faceplate with cream chickenhead knobs, block lettering, and an anodized aluminum trim piece over the grille. It's an attractive amp, with a subtlety not always found on new boutique amps.

Arthur contracts with Armadillo Amp Works to build the cabinets for his amps, which are solid pine with fingerjointed corners and covered with high-quality tolex applied using cake glue, which the builders say makes for a more resonant cabinet.

Our test GR 1.6 was equipped with a 12" Celestion Blue alnico-magnet speaker (other options include a 2x10" configuration or a single 12" ceramic-magnet Tone Tubby speaker). Its chassis is massive 1/4" milled-aluminum that Arthur says is one of the thickest in the industry, and components are all top-shelf, including custom transformers by David Allen and Heyboar, 1/8" Garolite circuitboards, Switchcraft jacks, two-watt carbon-composition potentiometers by PEC, and filter capacitors by Sprague and Cornell Dubilier.

The GR 1.6's tube layout consists of a Sylvania 5AR4 rectifier, a pair of Electro-Harmonix 6V6GT power tubes (producing 20 watts RMS), and three E-H 12AX7 preamp/phase-inverters. The front-mounted control panel has a single 1/4" input jack, control for

Volume, switches labeled Hi Tilt/Lo Tilt switch (bright/mid), Lean/Plush (mid-shift/boost), Bass and Treble, a High-Cut (presence) and the Power/Standby switches. The back panel has three speaker-out jacks (4-, 8-, and 16-ohm), two fuse holders, and a 12' IEC detachable power cord.

We tested the GR 1.6 using a Custom Classic Stratocaster from the Fender Custom Shop with '53 single-coil pickups, and a Hamer Studio with Seymour Duncan '59 humbuckers. Starting with the Hamer and the GR1.6 switches set to Lo (which Arthur says "emphasizes the fat and tight lower midrange response... [with] less bristling harmonics [that] make the 6V6s appear more sheer and elegant."), Lean (which "...changes the frequency response and drive levels for a lean, biting, and dynamic push..."), and with the Volume and Tone controls at 12 o'clock, we were pleasantly surprised with the amp's aggressive, crunchy overdrive. Given its laid-back appearance, we were expecting the amp to purr like kitten, but what we got was a roar! The 6V6s didn't produce that sedate, scooped Fender-like clean tone; rather it more closely resembled a blackface or tweed on steroids, with an abundance of natural overtones and overdrive and very present upper midrange.

When we switched the Tilt to the Hi

position, the tone became brighter, with snappier high-mids and there was a noticeable increase in the gain. Switching from Lean to Plush added meat to the mids and lows. The intensity of the Tilt and Lean/Plush switches can be adjusted using the Trim control.

And the GR 1.6 *did* produce a classic Fender-like clean tone; with the Strat's volume control at about 7, the amp produced a lively, ringing tone. The two tone switches are voiced nicely for guitar – subtle but effective – so the only real tone adjustments we needed to make when switching from humbuckers to single-coils was to turn the Cut to 9 o'clock and set the Hi/Lo to Lo. The only time we needed to adjust the Bass or Treble controls was at higher volumes (between 1 o'clock and 3 o'clock), when we rolled the Bass back to 9 o'clock to prevent overdriving low-end response.

For a 20-watt/1x12" combo, the GR 1.6 is plenty loud for gigs and rehearsals. In fact, the absence of a master volume or built-in attenuator may make it a bit *too* loud for smaller gigs that'll require some overdriven tone.

So don't be fooled by its laid-back vintage vibe. The JCA Circuits GR 1.6 is a straightforward, no-frills, "plug-and-play" amp that roars loudly when provoked or purrs softly if you lay off.

– Phil Feser 



**JCA Circuits Golden Ratio 1.6**

**Price: \$2,395.**

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