

**ADCOM**  
11 Elkins Road  
East Brunswick, N.J.  
08816 U.S.A.  
201/390-1130  
Telex 844430

## PRELIMINARY PRODUCT INFORMATION

### ADCOM GFA-555 Pro Stereo Power Amplifier

The GFA-555 Pro has been designed primarily for use in highly critical studio monitoring and/or demanding listening evaluations where the quality of the material being auditioned is of paramount importance. Nothing was spared in making the GFA-555 Pro as flexible, as reliable and as uncompromising as the state of the art permits.

The GFA-555 Pro is identical in all performance parameters to the now-legendary GFA-555.

Unlike the great majority of power amplifiers, the GFA-555 Pro will actually deliver its rated power, within its specified parameters into the most reactive loudspeaker loads even at impedances of 2 ohms. This is such a low and difficult impedance for an amplifier to drive, particularly if it is also a reactive load, that nearly all amplifiers will either shut themselves down or their protective circuitry will severely curtail their power output. Its low-source-impedance power supply and enormous current-storage capability along with its toroidal power transformer contribute a great deal to the ability of the GFA-555 Pro to deliver the necessary power from the output stages at very high levels into very low impedances without compression of musical dynamics or reduction of the natural peak-to-average ratio in the source material.

The performance of the GFA-555 Pro was conceived to be second to none in its price category and on a par with amplifiers costing more than four times its modest price. Each channel is capable of delivering more than 20 amperes into low-impedance loads insuring not only unlimited transient capabilities but simply awesome low-bass capability - even for extended musical periods. Its stability insures full power into any load without ultrasonic or infrasonic oscillation, spurious ultra-high-frequency bursts caused by reactive loads, or response anomalies due to widely varying impedance characteristics of the load. A unique circuit in the output stage (not in series with the outgoing signal) is incorporated to "sink" the back-EMF generated by the speaker load so that such current will not interfere with the normal operation of the output stages or reduce their power output capabilities.

The balanced input stages are full-Class-A, very-low-distortion differential amplifiers with more than ample head room, and clipping characteristics sufficient to handle the high-output levels encountered with some mixers. The output of the balanced circuits are adjusted by two level controls to permit matching the sensitivity of the GFA-555 Pro to the output of an individual mixer or board; thereby achieving desired volume levels at the required indications of the VU meters, or positions of the master sliders. The unbalanced inputs are also adjustable via the level controls.

The voltage amplification circuitry following the two pairs of inputs uses two discrete transistors per channel in a differential-amplifier configuration, followed by a single transistor acting as a voltage amplifier. Both of these active elements are biased for pure-Class-A operation and are energized from a doubly regulated, active-current-source power supply, insuring low noise, extremely low distortion and low DC-offset voltages.

The power supply features an air-core, toroidal transformer capable of far greater current than the usual iron-core transformers of similar size. The secondary windings feed two separate rectifier bridges and filter/storage capacitors having a total capacitance of 60,000 mFd, providing enormous reserve for both the most demanding peak-transients and low-distortion, peak-bass requirements. Additionally, the extreme ruggedness and stability of the power supply insures that the amplifier's performance remains unaffected by instantaneous variations in the AC line voltage.

The GFA-555 Pro's design is free from current-limiting or power-reducing circuitry for protection from overloads - short-term or long-term. To preserve signal integrity, only resettable circuit breakers are designed into the B+ and B- rails to protect the output stage from direct shorts. Thermostats designed to shut the amplifier down when the heat-sink temperature reaches 85 degrees Celsius, protect the amplifier from long-term overloads into abnormally low impedances. When the heat-sink temperature drops to normal level, operation is resumed.

The GFA-555 Pro is direct coupled, uses no capacitors to couple the signal from one stage to the next and can actually amplify DC; therefore, no signal degradation attributable to capacitors is caused by this design. Further, the instant that any form of non-linear distortion - sonic, infrasonic or ultrasonic - exceeds 1%, such as when the amplifier approaches overload, a highly accurate and unique sensing circuit in each channel will indicate this condition by triggering its individual-channel LED.

The truly professional user will appreciate the incomparable, and thus far unavailable, performance of this amplifier, as well as its ease of use and reliability.

GFA-555 Pro SPECIFICATIONS

Power output, watts/channel, continuous,  
both channels driven, 20Hz - 20kHz, at < 0.09% THD,  
through either balanced or unbalanced inputs:

- 8 ohms.....200 min.
- 4 ohms.....325 min.
- Bridged, mono mode, 8 ohms, 20Hz - 20kHz,  
at less than 0.25% THD.....600 min.
- Bridged, mono mode, 4 ohms, 20Hz - 20kHz,  
< 0.25% THD.....850 min.

Intermodulation distortion (SMPTE, 4:1 ratio),  
stereo mode, at any level up to 200 watts continuous  
through either balanced or unbalanced inputs:.....< 0.09%

Intermodulation distortion (SMPTE, 4:1 ratio),  
bridged, mono mode at any level up to 600 watts, min.  
(8 ohms), or 850 watts min. (4 ohms), through either  
balanced or unbalanced inputs:.....< 0.25%

Signal-to-Noise Ratio, A-weighted, referred to  
200 watts output:.....> 110dB

Input Impedance:

- Balanced input.....600 ohms
- Unbalanced input (depends on position  
of level controls).....22 kohms min.

Input Sensitivity for 200 Watts Output:

- Individual level control is provided for each  
channel. Sensitivity below is for level  
controls at max., full clockwise position.
- Balanced Input.....0dBm
- Unbalanced Input.....1.8V

*Bridged or Stereo*

Balanced Input Overload:.....+20dBm

Damping Factor:.....> 130

Dynamic Headroom:.....2.3dB

Protection:

- Incoming, AC power line, Fuse.....12 Amperes, AGB
- B+ and B- rails, resettable circuit  
breakers, two per channel..... 7 Amperes

Power Requirements:

(on special order 240VAC/60Hz version can  
be supplied).....117VAC/60Hz

Shipping Weight:.....34 lbs. (15.5kgs)

Dimensions:

- Height.....7 5/16" (185mm)
- Width.....19" (483mm)
- Depth.....12 1/4" (311mm)