



High Fidelity Equipment Reports

Citation Twelve Basic Power Amplifier

"The amplifier has no tone controls, nor
muti-amping, but it is a 'straight wire' with it."

"A Straight Wire with Gain"

harman kardon

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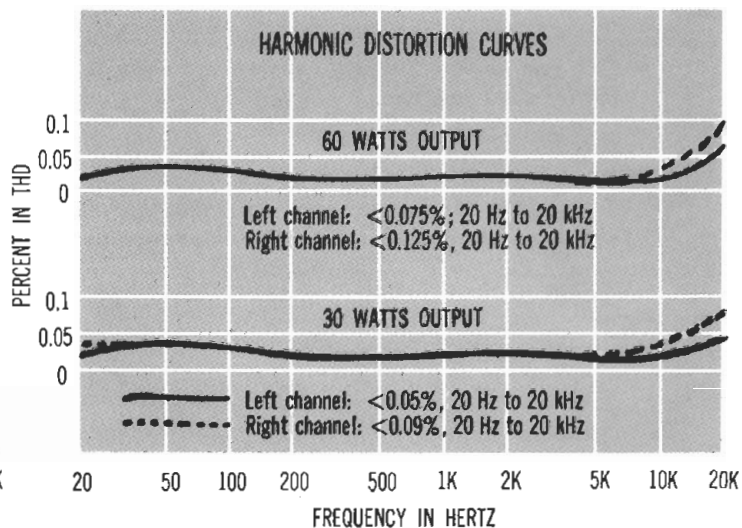
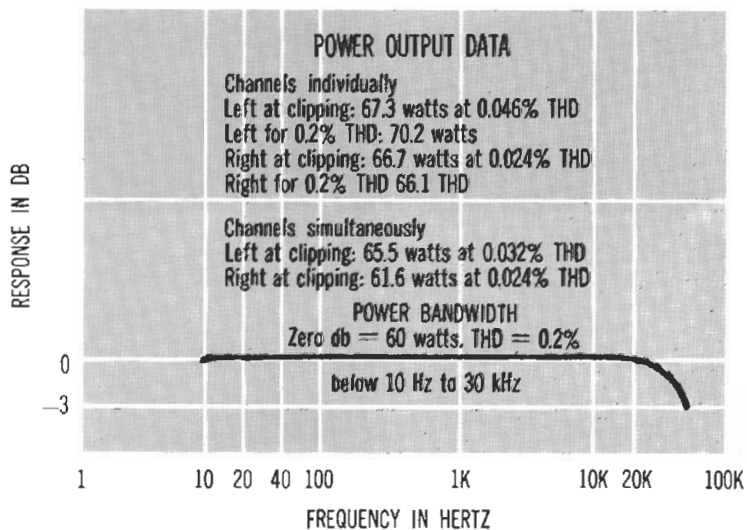
A Citation from (and for) Harman-Kardon

Harman-Kardon's Citation line, of which the first tubed models appeared about ten years ago, denoted excellence of performance and represented H-K's bid for a perfectionist-oriented market with separate components that were offered either in kit or factory-built form. The reintroduction of the Citation has a similar aim, but in solid-state rather than tubed equipment. The first of the Citation series is a power or basic amplifier; it will be followed with a preamp-control unit, a tuner, and speaker systems, all under active development as we go to press.

The Citation 12 we tested was built from the kit, following the instructions furnished. No snags were encountered, and the unit performed as shown in the accompanying CBS Lab data—which is to say, as good as or better than H-K claims.

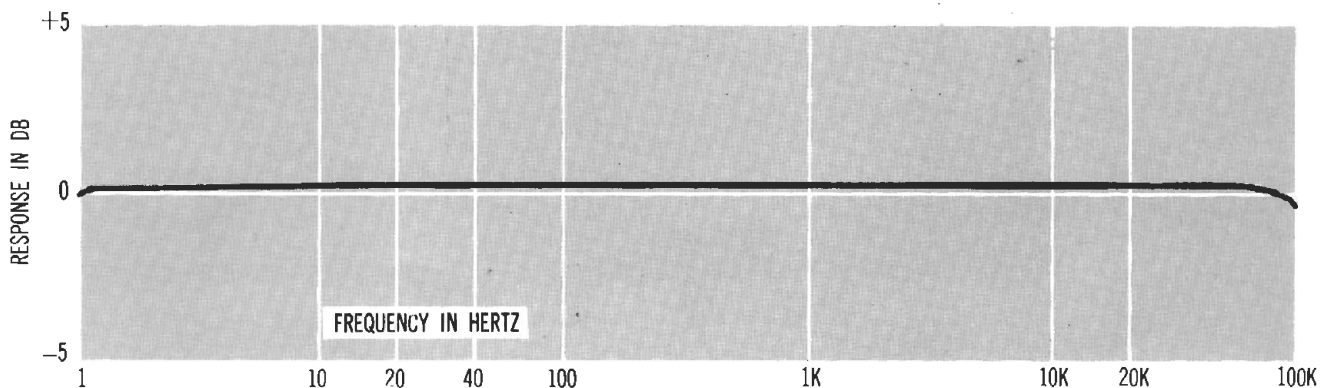


It thus stands as the best kit amplifier we've yet tested (including the old Citation 2), and certainly among the best of any type. With both channels driven simultaneously, it furnished better than 60 very clean watts per channel.



Distortion—both THD and IM—was so low that to show any amounts (which, by the way, would be just about nonmeasurable on any but the most sophisticated of test gear) we had to expand the vertical gradations on our graphs. From a practical standpoint, the Model 12 can be regarded as a virtually distortionless device that calls to mind the “straight wire with gain” phrase that was originally applied to the old Citation amplifiers.

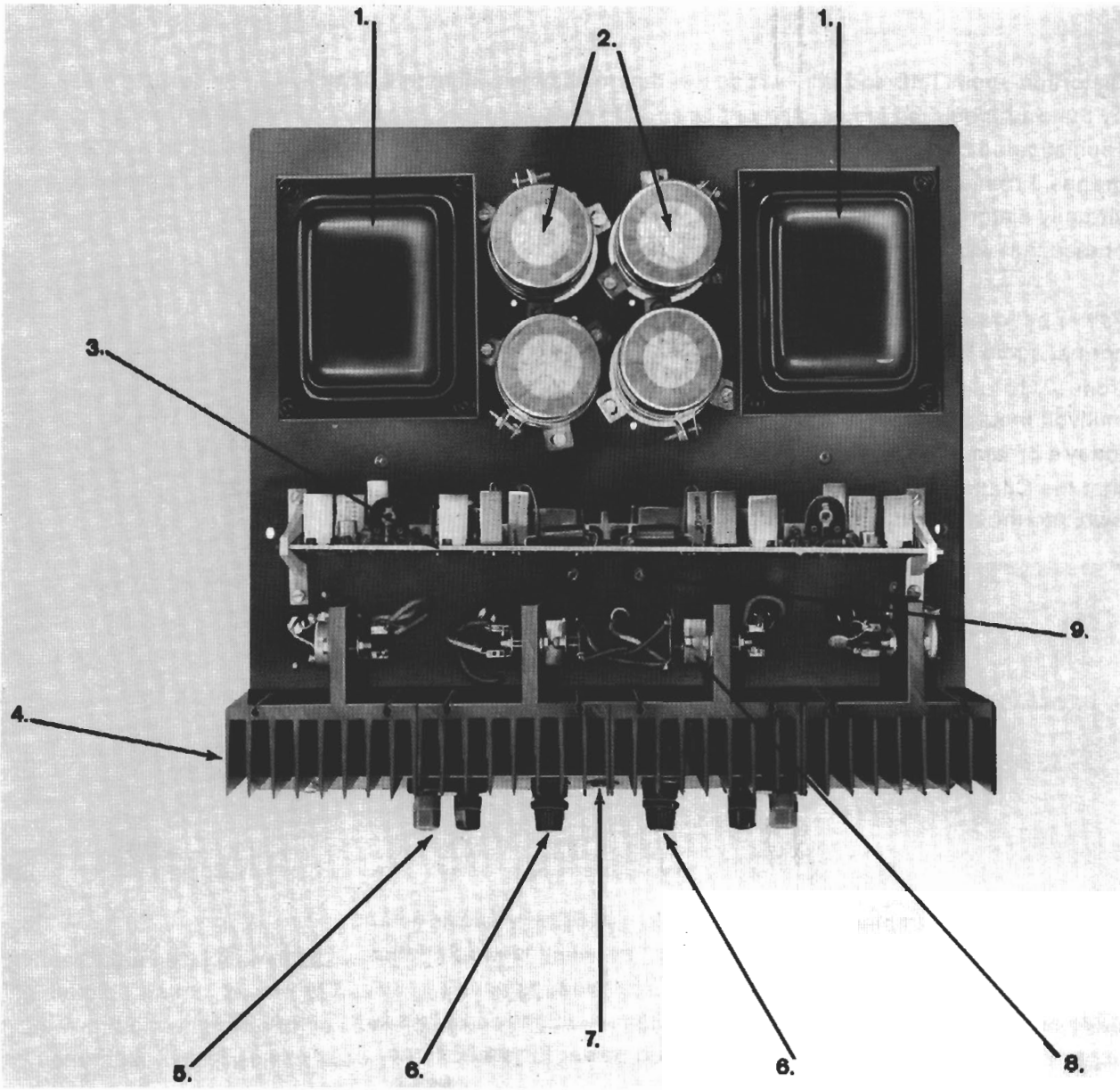
Power bandwidth, for a very low 0.2% THD, extends below and above the normal audio band; frequency response is literally a ruler-straight line from 10 Hz to 40 kHz, and is down by only 0.75 dB at 100 kHz. The 1.28 millivolt input sensitivity matches the signal output typically supplied by today’s preamps, and the better-than-100 dB signal-to-noise ratio indicates that the Citation 12 is a very quiet amplifier introducing no noise of its own into the reproduction. Square-wave response, at both low and high



frequencies, is exemplary: near-perfect and signifying very wide-band, stable response with full bass and excellent transient characteristics. The amplifier, with its built-in “fail-safe” circuit with automatic reset, can drive any type or efficiency of speaker system. It actually employs two separate power supplies to ensure full-rated power for each stereo amplification channel.

The high undistorted power reserves enable the Citation 12 to drive speakers to louder acceptable levels than you may have been accustomed to. But they also lend the amplifier an ability to handle normal listening levels in a “coasting” state of operation, imparting to the music a sense of utter ease, clarity, transparency and openness—which in sum makes you feel as if you are listening *through* the amplifier back to the program source. Subtle nuances of definition, of attack, of inner musical fabric are more clearly presented—and suddenly you want to stay up all night rediscovering all the old records that you thought you had heard enough of.

It is true, of course, that the major portion of today’s stereo market belongs to integrated units, especially receivers. We have a feeling that as word of the Citation 12 gets around, and as more and more dedicated listeners have a chance to hear it, we may see somewhat of a shift in the audio state of affairs.



1. Dual power supply for absolute stability, and high power handling capacity
2. Heavy duty electrolytics for high reserve power capability
3. Major components mounted on plug-in board for easy accessibility
4. Heavy duty heat sinks keep amplifier cool even under stress performance conditions
5. Professional speaker binding posts
6. A.C. line fuses
7. ON/OFF indicator light
8. Thermal protectors for output stage
9. Mechanical protectors for output stage

PROFESSIONAL FEATURES

- Hermetically sealed silicon output devices capable of handling sustained high power without breakup or overload are used in output stage.
- Exceedingly broad frequency response at full power with low harmonic and intermodulation distortion results in clean and totally transparent sound.
- Phenomenal square wave response throughout the audio spectrum. Phase shift at 20 hertz is less than 5 degrees. Rise time at 20K hertz is better than 2 microseconds.
- Two individual power supplies deliver superb regulation for absolute stability and extended low frequency response. Handling of transients is effortless at any power level.
- Fail-safe operation with all types of speakers including electrostatics. Amplifier can handle high power transients, short circuits, inductive and capacitive loads or unloaded condition without damage to the output stage.
- Computer grade components guarantee long, trouble-free life.
- Instrument type speaker binding posts assure positive connections reducing possibility of short circuits.
- Heavy duty heat sinks keep amplifier cool even under stress operating conditions.
- Two thermal cutouts, one per channel, remove power from the output stage when heat build-up exceeds 80 degrees C. Two series-type limiting relays protect amplifier from short circuits. Reset automatically once short is removed.
- High degree of feedback reduces distortion without sacrificing stability.
- 120 volt 50-60 hertz or 220 volt operation.
- Two year service warranty on parts and labor for factory wired amplifier.

TECHNICAL SPECIFICATIONS

Continuous Power Output:	60 watts per channel, RMS, @ less than 0.2% THD, at any frequency between 20-20,000 hertz, both channels driven simultaneously into 8 ohms.
Peak Power Output:	120 watts per channel.
Power Bandwidth:	5-35,000 hertz @ 0.2% THD.
Total Harmonic Distortion:	Unmeasurable at normal listening level. Less than 0.2% at rated output, 20-20,000 hertz.
Intermodulation Distortion:	Less than 0.15% at all power levels, 60 and 6,000 hertz.
Hum and Noise:	Better than 100 dB below 60 watts.
Damping Factor:	40:1
Input Impedance:	30K ohms
Input Sensitivity:	1.5 volts for 60 watts.
Frequency Response:	1-70 kHz, ± 0.5 dB @ normal power level. Less than $\frac{1}{2}$ Hz -100 kHz, ± 1 dB @ normal power level.
Phase Shift:	Less than 5 degrees at 20 hertz.
Rise Time:	Better than 2 microseconds @ 20K hertz.
Inputs:	One RCA type input terminal per channel.
Outputs:	Instrument type binding posts. Accepts speakers from 4 to 16 ohms.
Front Panel:	Two 3 amp. A.C. fuses, two color-coded speaker output terminals, two inputs, neon on/off indicator light.
Construction:	Close point to point wiring with bussbar ground. Printed circuit board. Highest grade components held to tight tolerances.
Power Consumption:	200 watts, both channels driven simultaneously, 30 watts at zero signal.
Dimensions:	5-7/16" H x 12-5/16" W x 12-5/8" D (complete with metal cage).
Weight:	30 pounds.

All Features and Specifications Subject to Change Without Notice.

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