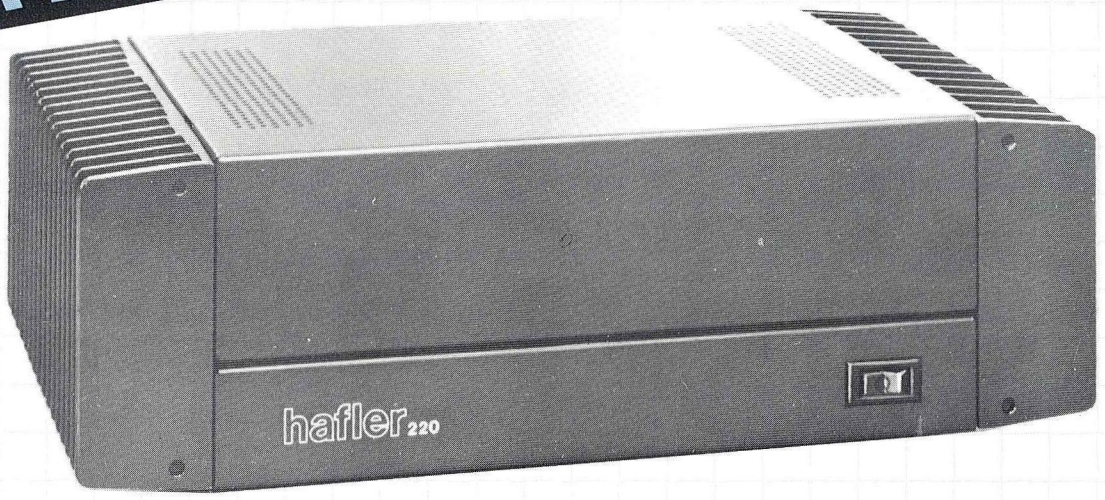
THE HAFLER 220 POWER AMPLIFIER



A STATE OF THE ART POWER AMPLIFIER AT AN AFFORDABLE PRICE

- **15% More Power Than DH-200**
- **Polypropylene capacitors in signal path**
- **New Hi-Tech Styling**

The DH-220 follows in the path of the widely acclaimed DH-200 amplifier which has had highly laudatory reviews and widespread consumer acceptance. Like the DH-200 amplifier, this 115 watt per channel amplifier is available either in easy-to-assemble kit form or factory assembled. Either way it is a highly reliable piece of equipment which can satisfy the most hyper-critical listener, including the audiophile with the most difficult loudspeaker load. And, in kit form the DH-220 provides a significant cost saving for a pleasant few hours of assembly time, using factory pre-assembled and tested audio modules.

The DH-220 utilizes all polypropylene capacitors in the circuit path. All electrolytics are bypassed by polypropylene capacitors. This results in a clarity of sound unusual in an amplifier of this size.

Two completely assembled and fully tested amplifier modules comprise all of the kit's active circuitry, leaving just a handful of parts for the builder to complete the mechanical assembly and power supply wiring. This makes your job simpler and faster, and assures that your finished kit will easily meet all of its specs, and provide the ultimate in listening pleasure.

The DH-220 employs a unique circuit configuration using all discrete transistors, operating the very latest output devices, power MOSFETs, in a conservative array. The result is that the benefits of Class A output stages are obtained—such as high speed, minimal crossover distortion, and decreasing distortion at lower signal levels—without the disadvantages of high cost, high heat, low efficiency and thermal instability that are a part of conventional Class A operation. Like other Hafler products, this new power amplifier has a completely symmetrical, mirror-image complementary push-pull circuit from input to output.

Exceptionally low distortion is apparent on reading the specifications, but such figures cannot detail the unit's true capabilities. The significance of achieving orders of magnitude reduction in total harmonic distortion and intermodulation distortion lies in the correlative elimination of other distortion products. Presently recognized test standards are seemingly unable to quantify what are perceptible differences in listening quality to many listeners. The DH-220's characteristics of vanishing distortion at lower signal levels, and minimal indication of any forms of transient distortion, such as slew induced distortion, as observed at all power levels of square waves, tone bursts and pulse tests, will, we are confident, maintain its superiority as new standards and tests become applicable.

THD and IM distortion (both SMPTE and CCIR measurements) are below the threshold of the finest test equipment—from one-tenth of a watt (where it is noise limited) to beyond 70 watts. Measured with the Sound Technology® Model 1701A analyzer, typical midband distortion at full power into 8 ohms averages 0.0015%.

Another limiting factor in correlating sound quality to measured performance is that conventional amplifiers may measure well on the standard resistive test loads, but exhibit distortion when confronted by the complex reactive loads of the loudspeaker and its crossover network. The Hafler DH-220 has the power reserves to handle mismatched loads (it can deliver 175 watts into 4 ohms), but more importantly, it can handle the back—EMF from the loudspeaker cone without generating interfacing distortion components.

With no need for special protective circuits which may compromise sonic performance, the self-protective design of the DH-220 output stage prevents the thermal runaway which is a threat to other designs.

For applications requiring extraordinary power, the DH-220 may also be bridged to convert it to a 350 watt (at 8 ohms) monophonic amplifier. As a modestly priced, versatile "no frills" design, operating premium quality components conservatively for extended life, this new Hafler amplifier is the audio perfectionist's answer to state of the art performance at affordable prices.

SPECIFICATIONS

Power Rating: Less than 0.02% total harmonic distortion at any power level up to 115 watts continuous average power per channel into 8 ohms at any frequency between 20 Hz and 20 kHz with both channels driven.

IM Distortion (SMPTE):
Less than 0.005% from 1 watt to 115 watts into 8 ohms

Typical THD at 115 watts into 8 ohms:
1 kHz—0.0015%
10 kHz—0.005%
20 kHz—0.012%

Frequency Response into 8 ohms:
−3 dB, 2 Hz to 160 kHz at 1 watt
−0.5 dB, 6 Hz to 60 kHz at 115 watts

Typical Channel Separation:
20 Hz: 75 dB
1 kHz: 85 dB
20 kHz: 65 dB

Signal to Noise Ratio, unweighted:
Better than 100 dB at 115 watts into 8 ohms.

Input Impedance: 47,000 ohms

Input Sensitivity: 1.55 volts rms for 115 watts into 8 ohms.

Damping Factor: 300 to 1 kHz into 8 ohms
60 to 10 kHz into 8 ohms

Rise Time: 10 kHz, 60 volts peak to peak square wave, 10% to 90%: 2.5 µs.

Slew Rate: 10 kHz, 60 volts peak to peak square wave: 30 V/µs.

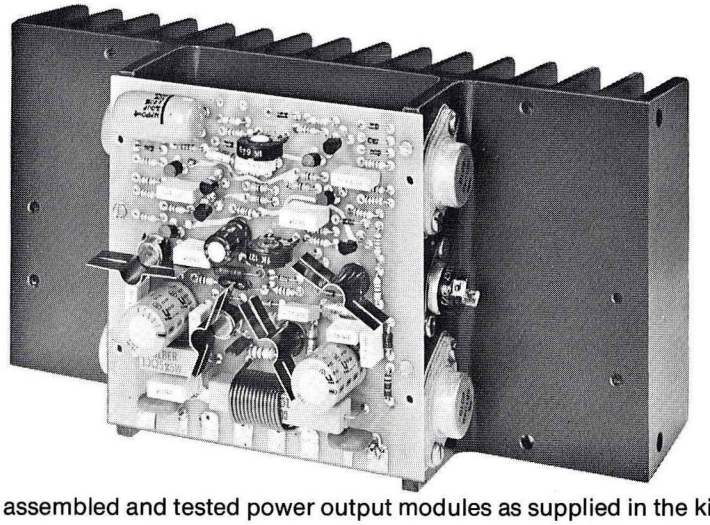
Semiconductor Complement:
26 transistors, 8 power Mosfets, 29 diodes, 4 zener diodes, 1 diode bridge

Power Consumption: Quiescent: 125 VA;
115 watts into 8 ohms: 580 VA

Size: 5⅛" high, 16" wide, 10½" deep.

Net Weight: 26 lbs. **Shipping Weight:** 30 lbs.

Accessories: DH-221 rack mounting assembly
DH-222 input bridging kit for monophonic operation
Multi-voltage export version



One of the two assembled and tested power output modules as supplied in the kit.

THE david hafler COMPANY

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