CONTRACTOR SERIES

CH4

Architectural & Engineering Specifications

CH4

The amplifier shall be a solid-state two-channel model. Each amplifier channel shall have the ability to operate individually, or paired with the other channel in a bridged configuration to provide increased output voltage over that of an individual channel output. The outputs shall be switchable for either low impedance (standard speaker load) or high impedance (distributed speaker line) operation. When in 70V (high impedance) operation, a 70 Hz high-pass filter shall be employed in the signal chain to prevent step-down transformer saturation.

Front panel controls shall include a rocker switch for selecting power on and off. Rear panel controls shall include a recessed detented rotary control for each channel to adjust input level, a recessed switch to select Stereo or Bridge modes of operation, a recessed switch to select 4/8 ohm or 70V operation, and a reset switch for the AC mains circuit breaker.

Internal controls shall include a jumper block to allow selection of input sensitivity of either 0.775V or 26 dB gain as a service option. Sensitivity shall be factory-set to 1.4V.

Front panel indicators shall include a green LED to indicate that the amplifier is turned on and power is applied; a red LED for each channel which shall blink to indicate any of the following 5 conditions: 1) When the amplifier is first powered up, until the unit is ready for operation. 2) If the heatsinks reach a temperature above normal working limits. 3) If the transformer thermal protection circuit is activated. 4) If the amplifier wires develop a short circuit, and 5) should the amplifier output stage become non-operational; a red LED for each channel which shall turn on to indicate when distortion of any type becomes audible in the amplifier output; and a green LED for each channel which shall flash dimly to indicate when a low-level signal (> -40 dBm) is present at the input of the amplifier.

Rear-panel connectors shall include a combination XLR and ¼-in (6.35 cm) phone connector in parallel with a three-terminal barrier block for each channel for balanced input connection (on the standard input module); a four-terminal touch-proof barrier block for each channel for output connection (on the standard output module); and an RJ11 jack for connection to an external circuit for the purpose of remotely monitoring fault conditions.

The amplifier power requirements shall be 100-240 VAC, at 50/60 Hz. AC line current requirement shell be 8.5 A at 100 VAC; 7.1 A at 120 VAC; and 3.7 A at 230-240 VAC. A detatchable IEC 15A to NEMA 5-15P AC line cord shall be provided for AC connection. Typical quiescent power draw shall be 140 watts.

The amplifier chassis shall be constructed of steel with a durable black finish. The amplifier shall employ a cooling system consisting of internal heat exchangers, along with a variable-speed cooling fan which shall operate according to internal thermal demand. Airflow through the chassis shall be from front to rear.

The dimensions of the amplifier shall allow for 19 inch (48.3 cm) EIA Standard (RS-310-B) rack mounting. The amplifier shall be 5.25 inches (13.34 cm) tall and 16.25-inches (36.56-cm) deep behind the rack-mounting surface. The amplifier shall weigh 33.3 pounds (15.1 kg).

The amplifier shall be protected against shorted, open or mismatched loads; overloaded power supplies; excessive temperature; chain destruction phenomena; input overload damage; and high-frequency blowups. The amplifier shall protect loudspeakers from input/output DC, large or dangerous DC offsets and turn-on/turn-off transients.

Input Impedance of the amplifier shall be nominally 20 k ohms, balanced; nominally 10 k ohms, unbalanced.

The power amplifier shall meet or exceed the following performance criteria (amplifier in stereo mode with 8 ohm loads and an input sensitivity of 26 dB gain, 1 kHz at rated power unless otherwise specified): Load impedance (safe with all types of loads): 2, 4 and 8 ohm Stereo; 4 ohm at 70V Stereo; 4, 8 and 16 ohm Bridge; 8 ohm at 140V Bridge. Voltage gain, 1 kHz, 1.4V sensitivity: 34 dB at 4/8 ohm and 70V. Output Power at 1 kHz at rated THD; in Stereo mode at 8 ohms: 600 watts per channel; in Stereo mode at 4 ohms: 1,200 watts per channel; in Stereo mode at 2 ohms: 1,400 watts per channel; in Stereo mode, 70V operation: 1,200 watts per channel; in Bridge mode at 8 ohms: 2,400 watts; in Bridge mode at 4 ohms: 2,800 watts; in Bridge mode, 140V operation: 2,400 watts. Frequency Response, 20 Hz to 20 kHz at 1 watt: ±0.25 dB. Phase Response: ±15 degrees deviation from linear phase from 20 Hz to 20 kHz at 1 watt. Signal to Noise Ratio, A-Weighted: Better than 102 dB below rated 1-kHz power. Total Harmonic Distortion (THD), 1 kHz at rated power: 0.5% or less true THD from 20 Hz to 20 kHz. Intermodulation Distortion (60 Hz and 7 kHz at 4:1): Less than 0.5% at rated power to 30 dB below rated power at 8 ohms. Damping Factor (8 ohm): Better than 700 from 10 Hz to 400 Hz. Crosstalk, 20 Hz to 20 kHz: Better than 50 dB below rated power. Common Mode Rejection (CMR): Better than 40 dB from 20 Hz to 1 kHz. DC Output Offset (Shorted Input): ±10 mV.

The amplifier shall be designated the Crown CH4.

A Harman International Company

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