Rated Output Power

HIGH IMPEDANCE SETTING
minimum continuous sine-wave power, from 20Hz-20KHz with no more than:

0.3% THD (FTC) @ rated line voltage > 220 Watts into 8 Ohms (41 Watts Class A operation).

0.3% THD (FTC) @ rated line voltage > 440 Watts into 4 Ohms (20.5 Watts Class A operation).

0.5% THD (FTC) @ rated line voltage > 700 Watts into 2 Ohms (10.25 Watts Class A operation).

1% THD (FTC) @ rated line voltage > 900 Watts into 1 Ohm (5.125 Watts Class A operation).

LOW IMPEDANCE SETTING
minimum continuous sine-wave power, from 20Hz-20KHz with no more than:

0.3% THD (FTC) @ rated line voltage: 220 Watts into 4 Ohms (41 Watts Class A operation).

0.5% THD (FTC) @ rated line voltage: 440 Watts into 2 Ohms (20.5 Watts Class A operation).

1% THD (FTC) @ rated line voltage: 600 Watts into 1 Ohm (10.25 Watts Class A operation).

Rated Output Power

HIGH IMPEDANCE SETTING
With continuous sine waves from 20Hz-20KHz @ rated line voltage:

59.33 Volts peak into 8 Ohms, corresponding to 440 Watts peak.

59.33 Volts peak into 8 Ohms, corresponding to 440 Watts peak.

52.92 Volts peak into 2 Ohms, corresponding to 1,400 Watts peak.

42.43 Volts peak into 1 Ohm, corresponding to 1,800 Watts peak.

LOW IMPEDANCE SETTING
with continuous sine waves from 20Hz-20KHz @ rated line voltage:

41.96 Volts peak into 4 Ohms, corresponding to 440 Watts peak.

41.96 Volts peak into 2 Ohms, corresponding to 880 Watts peak.

40 Volts peak into 1 Ohm, corresponding to 1,600 Watts peak.

Rated Output Power

HIGH IMPEDANCE SETTING
with continuous sine waves from 20Hz-20KHz @ rated line voltage:

7.42 Amps peak into 8 Ohms, corresponding to 440 Watts peak.

14.84 Amps peak into 4 Ohms, corresponding to 880 Watts peak.

26.46 Amps peak into 2 Ohms, corresponding to 1,400 Watts peak.

42.43 Amps peak into 1 Ohm, corresponding to 1,800 Watts peak.

LOW IMPEDANCE SETTING
with continuous sine waves from 20Hz-20KHz @ rated line voltage:

10.49 Amps peak into 4 Ohms, corresponding to 440 Watts peak.

20.98 Amps peak into 2 Ohms, corresponding to 880 Watts peak.

40 Amps peak into 1 Ohm, corresponding to 1,200 Watts peak.

Maximum (clipping) Output Power

HIGH IMPEDANCE SETTING
Continuous 1 KHz sine-wave power with no more than:

1% THD (FTC) @ rated line voltage: 280 Watts into 8 Ohms.

1% THD (FTC) @ rated line voltage: 480 Watts into 4 Ohms.

1% THD (FTC) @ rated line voltage: 780 Watts into 2 Ohms.

1% THD (FTC) @ rated line voltage: 1,000 Watts into 1 Ohm.

LOW IMPEDANCE SETTING
Continuous 1 KHz sine-wave power with no more than:

1% THD (FTC) @ rated line voltage: 300 Watts into 4 Ohms.

1% THD (FTC) @ rated line voltage: 500 Watts into 2 Ohms.

1% THD (FTC) @ rated line voltage: 780 Watts into 1 Ohm.

Maximum (clipping) Output Voltage

HIGH IMPEDANCE SETTING
With continuous 1 KHz sine wave @ rated line voltage:

66.93 Volts peak into 8 Ohms, corresponding to 560 Watts

61.97 Volts peak into 4 Ohms, corresponding to 960 Watts peak.

55.86 Volts peak into 2 Ohms, corresponding to 1,560 Watts peak.

44.72 Volts peak into 1 Ohm, corresponding to 2,000 Watts peak.

LOW IMPEDANCE SETTING
With continuous 1 KHz sine wave @ rated line voltage:

49 Volts peak into 4 Ohms, corresponding to 600 Watts peak.

44.72 Volts peak into 2 Ohms, corresponding to 1,000 Watts peak.

39.5 Volts peak into 1 Ohm, corresponding to 1,560 Watts peak.

Maximum (clipping) Output Current

HIGH IMPEDANCE SETTING
With continuous 1 KHz sine wave @ rated line voltage:

8.37 Amps peak into 8 Ohms, corresponding to 560 Watts peak.

15.5 Amps peak into 4 Ohms, corresponding to 960 Watts peak.

27.93 Amps peak into 2 Ohms, corresponding to 1,560 Watts peak.

44.72 Amps peak into 1 Ohm, corresponding to 2,000 Watts peak.

LOW IMPEDANCE SETTING
With continuous 1 KHz sine wave @ rated line voltage:

12.25 Amps peak into 4 Ohms, corresponding to 600 Watts peak.

22.36 Amps peak into 2 Ohms, corresponding to 1,000 Watts peak.

39.5 Amps peak into 1 Ohm, corresponding to 1,560 Watts peak.

Small Signal Frequency Response

HIGH IMPEDANCE SETTING

At 1 Watt into 8 Ohms @ rated line voltage: (+0; -3dB) 4 Hz - 155 KHz.

LOW IMPEDANCE SETTING
With continuous 1 KHz sine wave @ rated line voltage:

at 1 Watt into 4 Ohms @ rated line voltage: (+0; -3dB) 4 Hz - 155 KHz.

Frequency Response

HIGH IMPEDANCE SETTING

At 220 Watt into 8 Ohms @ rated line voltage: (+0; -3dB) 4 Hz - 155 KHz.

LOW IMPEDANCE SETTING
With continuous 1 KHz sine wave @ rated line voltage:

at 220 Watt into 4 Ohms @ rated line voltage: (+0; -3dB) 4 Hz - 155 KHz.

Slew Rate

Vout = 118.66 Volts peak-to-peak of square-wave signal into 8 Ohms F=10KHz @ rated line voltage: 42 Volts per microsecond

Rise Time

Vout = 118.66 Volts peak-to-peak of square-wave signal into 8 Ohms F=10KHz @ rated line voltage: 2.2 microseconds

Noise

Signal/Noise ratio ref. 2.83 Volts RMS into 8 Ohms (1 W): 22 Hz - 22 KHz: typically 72.5 dB | A weighted: typically 78.2 dB

Signal/Noise ratio ref. 41.95 Volts RMS into 8 Ohms (110 W): 22 Hz - 22 KHz: typically 96 dB | A weighted: typically 101.5 dB

IM Distortion

HIGH IMPEDANCE SETTING
(60Hz:7KHz 4:1) SMPTE:

from 0.1-220 Watts into 8 Ohms @ rated line voltage: no more than 1%

from 0.1-440 Watts into 4 Ohms @ rated line voltage: no more than 1%

from 0.1-700 Watts into 2 Ohms @ rated line voltage: no more than 1%

from 0.1-900 Watts into 1 Ohm @ rated line voltage: no more than 1%

LOW IMPEDANCE SETTING
(60Hz:7KHz 4:1) SMPTE:

from 0.1-220 Watts into 4 Ohms @ rated line voltage: no more than 1%

from 0.1-440 Watts into 2 Ohms @ rated line voltage: no more than 1%

from 0.1-600 Watts into 1 Ohm @ rated line voltage: no more than 1%

Voltage Gain

Voltage Gain: 39 ± 2% or 31.8 ± 0.2dB.

Inputs

BALANCED 3-pin gold-plated XLR connector. Pin assignment:

pin 1 = signal ground;

pin 2 = non-inverting input (+);

pin 3 = inverting input (-).

NON-INVERTING:

brass gold plated single-ended RCA connector (connected in parallel with pin 2 of XLR connector).

INVERTING:

brass gold plated single-ended RCA connector (connected in parallel with pin 3 of XLR connector).

Input Sensitivity

HIGH IMPEDANCE SETTING

1.076 Volts RMS ± 2% for 220 Watts into 8 Ohms.

LOW IMPEDANCE SETTING

0.761 Volts RMS ± 2% for 220 Watts into 4 Ohms.

0.761 Volts RMS ± 2% for 220 Watts into 2 Ohms.

0.628 Volts RMS ± 2% for 600 Watts into 1 Ohm.

Input Impedance

41 KOhms shunted by 470pF.

Outputs

Two sets of brass gold plated binding posts.

Output Impedance

At 1 KHz: typically 0.098 Ohm. From 20 Hz - 20 KHz: typically 0.098 ± 0.007 Ohm.

Damping Factor

at 1 KHz: typically 82 re: 8 Ohm. From 20 Hz - 20 KHz: typically 82 ± 8 re: 8 Ohm.

Operating Temperature

Operating Temperature: -4 to +104 degrees Fahrenheit (-20 to +40 degrees Celsius) ambient.

Grounding

Grounding: Separated ground and earth. Floating chassis connected to mains earthing.

Power Supply

Nominal line voltage: 100-240 Volts 50/60Hz. Input voltage range: ±10%.

Two power transformers two filter chokes eight separate power supplies.

AC voltage intensively filtered by special RFI power line filter.

Power Supply Energy Storage

Power Supply Energy Storage: Approximately 250 joules.

Front Panel Controls

Front Panel Controls:

LED control.

Rear Panel Connectors and Controls

Rear Panel Connectors and Controls:

POWER SWITCH.

LOAD SWITCH.

AC POWER INLET.

AC MAINS FUSE along with the corresponding fuse holder.

One input XLR connector gold-plated.

Two input RCA connectors gold-plated.

Two sets of gold-plated SPEAKER BINDING POSTS.

Two DC power jacks (central pin 2mm dia.) for connecting remote link cables.

EARTHING (GROUNDING) post gold-plated.

Features

AC voltage selector: 100/120/220/230/240 Volts internally switchable.

Transformer hum reducer: Special circuit reduces power transformer core saturation and residual mechanical hum.

Ultra low-noise power transformer: Custom-made toroidal power transformer has no mechanical contact with either the transformer cover or the chassis as transformer is suspended in a special encapsulant that almost completely absorbs even the residual mechanical vibrations. This plays a significant role in assuring the absolutely unique clarity and micro-resolution during sound reproduction.

Bias setting (load) switch: Switch-selectable biasing circuit maintains pure Class A operation of the output stage for all load conditions between 4-16 Ohms.

Remote control: Power on/off. Available remote link cable coordinates the remote functions of two or more amplifiers.

Safety/Protection: "Soft-start" circuit protects power supply components from large in-rush currents when the amplifier is turned on.

Protection against possible damages from high voltage transients on AC power line.

Thermal resetting fuse connected in series with AC mains fuse controls heat-sink temperature.

Threshold: 176 degrees Fahrenheit (80 degrees Celsius).

Thermal resetting fuse controls internal temperature of the power transformer.

Threshold: 248 degrees Fahrenheit (120 degrees Celsius).

Unique electronic protection circuit guards against accidental abuse (e.g. overload shorts across the output excessive DC at the input or output etc.).

AC voltage fuses:

8 Amps slo-blo for 100/120 Volts (4 Amps slo-blo for 220/230/240 Volts);

0.125 Amps slo-blo for 100/120/220/230/240 Volts internally mounted.

General

POWER CONSUMPTION

Nominal: Typically 280 Watts @ rated output @ 8(4) Ohms (class A operation) and at idle.

Maximum: Typically 1000 Watts @ rated output @ 1 Ohm (low impedance setting).

Burn-in Time at Factory: Minimum 72 hours.

Recommended Burn-In Time in End-user's System: Minimum 200 hours.

Warm-up time: Minimum 35 minutes.

DIMENSIONS

8.25"(21cm) H x 17"(43.2cm) W x 19.5"(49.5cm) D

[add 2.8125"(7.14cm) of depth for front and rear handles].

Unit weight: 71 Lbs (32.2 Kg).

Shipping weight: 97.4 Lbs (44.2 Kg).

Tube Complement: V101 - 6922 (second amplification stage)