

**X1000.5**

**X600.5**

**X350.5**

**X250.5**

**X150.5**

**X.5 amplifiers**

The Pass Labs X series amplifiers continue to reign as the biggest, most powerful and popular amplifiers that we have created. They were initially designed as proof-of-concept of the SuperSymmetric amplifier topology, achieving phenomenal power and precision with only two gain stages and very little feedback. Seven years ago we began shipping the 1000 watt model X1000, followed by the progressively smaller X600, X350, X250, and X150.

Patented 10 years ago by Nelson Pass, this new topology takes advantage of highly

matched components in a completely symmetric circuit that intrinsically nulls most distortion and noise across the speaker, and then applies a small amount of feedback to perfect this symmetric behavior. The X series amplifiers have received critical acclaim throughout the world for their sonic performance, sleek industrial design, high reliability and rugged construction.

Pass Labs is now very pleased to introduce the next generation of X series amplifiers: the Pass X.5

series. Select refinements from the balanced single-ended Class A circuits of the XA series amplifiers have been incorporated into several new X.5 series models, significantly improving their subjective performance while keeping the high power and reliability.

Changes to these models include improvements to power transformers, paralleled high speed / soft recovery rectifiers, improved AC EMI filters, more paralleled power supply capacitors, increased supply RC filtering, refinements to the front-



# X1000.5

- Mono block design
- 1000 watts
- Gain: 30dB
- +/- 145V Max
- +/- 30A Max
- 19W x 11.5H x 28D
- 200LBS

# X600.5

- Mono block design
- 600 watts
- Gain: 30dB
- +/- 105V Max
- +/- 25A Max
- 19W x 11.5H x 22D
- 150LBS

# X350.5

Stereo design

350 watts

Gain: 30dB

+/- 80V Max

+/- 20A Max

19W x 11.5H x 22D

150LBS



end input circuits, and the addition of single-ended Class A bias circuits for balanced single-ended Class A at low power levels. All of these changes bring the X.5 series closer to the sonic signature of the XA series amplifiers.

Four models of X series amplifiers have been designated for X.5 refinement - the X150.5, X250.5 and X350.5 stereo power amplifiers, and the X600.5 monoblock power amplifier. These amplifiers feature the distinctive front panel meters

# X250.5

Stereo design

250 watts

Gain: 30dB

+/- 55V Max

+/- 20A Max

19W x 9.5H x 22D

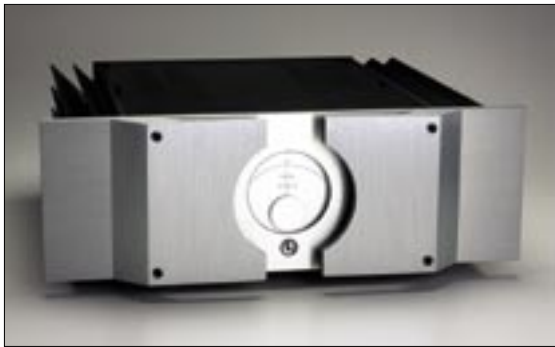
100LBS



indicating the level of current running through the output stages that have long been the visual signature of X amplifiers.

These are inherently low distortion circuits, but their performance is improved through careful component matching and operation in a balanced output mode. The nearly identical distortion and noise of both halves of a matched balanced circuit disappears across the speaker terminals, and Supersymmetry takes this effect a

step further by using a small amount of feedback to further perfect the match. Any distortion and noise not already identical to the two halves is made more identical, and the result is improved performance out of proportion to the small amount of feedback. Supersymmetry's goal is not to eliminate distortion within each half of the balanced circuit as such, rather it seeks to null it through improving the match between the two halves.



# X150.5

Stereo design

150 watts

Gain: 30dB

+/- 50V Max

+/- 20A Max

19W x 7H x 20D

70LBS

The result is very simple and elegant, and as is often the case in such circuits, it sounds far superior to complex many-stage amplifiers using lots of feedback.

Previously these kinds of simple circuits have been popular for their sound quality in low power amplifiers, but have not been practical in high power amplifiers for performance reasons. Supersymmetry breaks this barrier, delivering the sweetness, staging, and detail of very simple circuitry to kilowatt power levels.

The X.5 series amplifiers have the tremendous dynamic range to do justice to the 24 bit recordings of the 21<sup>st</sup> Century and the elegance to retrieve the micro dynamics offered by the most sensitive loudspeakers. This simplicity and power moves easily from total silence to explosive transients with ease and without information loss. This performance is consistent across the audio spectrum, and the amplifiers are unconditionally stable into any speaker load.

If you need high power for difficult loads and want to retain the qualities of the finest low power Class A amplifiers, the X.5 Series is a logical choice. Only the XA amplifiers exceed this quality, of course with much lower efficiency and output power.