

1999 USA-50 and XTERMINATOR 50x Technical Information by



Manufacturer: U.S. Amps Inc.

Product Type: Bridgable two-channel audio amplifier with built-in 2-way electronic crossover and preamplifier output.

Physical Specifications: Size: 2.1" H X 7.5" W X 7.75" L (including terminals)

Weight: 7lbs.

Material: Heat Sink: Bead-blasted anodized 60/63 aircraft aluminum alloy, T-6 temper. Laser-etched U.S. Amps logo.

End plates: .062" painted steel.

Bottom Plate: .125" clear Plexiglas.

Amplifier Circuit Topology:

Number of Channels: 2

Circuit Board: Mil-spec FR-4 double-sided plated through 2 ounce SMOBC. (so *there!*)

Input: Ground-reinforced dual gold-plated RCA jacks. Input-isolated to effectively eliminate ground loops and subsequent system noise. A built-in voltage dividing network will accept high and low level signal from nearly any source, including most OEM and high-powered BTL units.

Potentiometers: Sealed custom-built 7mm linear taper. Water and dust-proof.

Phase Inversion: The left channel is inverted using a low-noise high-speed op amp to allow for convenient bridging or stereo / mixed-mono operation.

Crossover: The full Butterworth 2-way fixed frequency crossover can output either high or low pass signals to a second amplifier at 100z with an 18 db per octave slope in high-pass stereo, or a 24 db per octave slope in low pass mixed mono. The crossover can be defeated to allow full range input and output.

Signal Path Components: All polypropylene capacitors and 1% tolerance resistors.

Operation: Class A-B utilizing isolated triple darlington dual-differential pairs with complementary-symmetry outputs.

Amplifier Filtering: 4,000mfd

Power Rails:

USA-50: 15 Volts

50x: 24 Volts

Drivers: Matched triple darlington configuration.

Output Components: Four 125 watt 3MHz bipolar transistors. (500 watts)

Rated Amplifier Output @ 4 Ohms per Channel:

USA-50: 50 Watts

50x: 100 Watts

Amplifier Overage Factor: USA-50: 10:1 50x: 5:1

Output Signal Delivery: All high level signals run parallel to the circuit board ground plane for maximum RF rejection. There are no above-board speaker connections.

External Speaker Connections: Via heavy duty gold-plated 10mm barrier terminal, circuit board mounted and end plate reinforced.

Power Supply: Non-regulated Ultrafet.

Power Requirements: 10-15 volts DC. Over and under voltage protected.

Input Filtering: 3,000mfd low ESR capacitors.

Transformer: Hand-wound 1.25" ferrite with solid copper 14 gauge primary and 16 gauge secondary windings.

Oscillation Frequency: 37KHz

Pulse Components: Four 75 amp 60 volt Ultrafets. (300 amps)

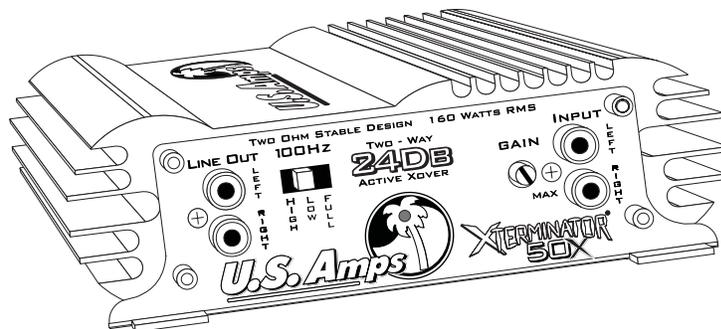
Power Supply Output Current:

USA-50: +/- 15 Volts @16 Amps

50x: +/- 24 Volts @ 12 Amps

Overage Ratio: USA-50: 15:1 50x: 12.5:1

Protection: Both models incorporate a non-computerized version of SAT, (U.S. Amps' exclusive Smart Amp Technology) that precisely monitors each amplifier channel, the battery voltage and amplifier temperature. In the event of a fault condition, SAT will activate to protect the amplifier from damage.



<u>SPECIFICATIONS:</u>	USA-50	50X (pictured)
<u>Watts per Channel</u>		
4 ohms:	25 Watts	50 Watts
2 ohms:	50 Watts	80 Watts
1 ohm:	80 Watts	N/A
<u>Bridged Output:</u>	160 Watts @ 2 Ohms	160 Watts @ 4 Ohms
<u>THD:</u>	<.006%	<.006%
<u>S/N Ratio:</u>	> 100db	> 100db
<u>Frequency Response:</u>	5Hz-50KHz	5Hz-50KHz
<u>Fuse:</u>	25 Amps	25 Amps