

1999 USA-50HC, USA-150 and XTERMINATOR[®] 150x Technical Information



Manufacturer: U.S. Amps Inc.

Product Type: Bridgable two-channel audio amplifier with variable 24db low pass electronic crossover, subsonic filter, and remote bass gain.

Physical Specifications: Size: 2.1" H X 9" W X 12.75" L (including terminals)

Weight: 12 lbs.

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 premium Analog Devices AD-714 high-speed op amp to allow for convenient bridging or stereo / mixed-mono operation.

Crossover: The full Butterworth 24db variable low pass crossover can be adjusted to "roll off" from 50Hz to 500Hz. The crossover can be defeated to allow full range operation.

Subsonic Filter: Provides a 24db low frequency roll-off beginning at 36Hz to maximize amplifier power.

Remote Bass Gain: Provides a separate gain control that can be used to adjust the amplifier volume independent of the overall system volume from the passenger compartment of the vehicle.

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: All Models: 12,000mfd

Power Rails: USA-50HC: 15 Volts

USA-150: 28 Volts

150x: 38 Volts

Drivers: Matched triple darlington configuration.

Output Components: Twelve 125 watt 3MHz bipolar transistors. (1500 watts)

Rated Amplifier Output @ 4 Ohms per Channel:

USA-50HC: 100 Watts

USA-150: 150 Watts

150x: 300 Watts

Amplifier Overage Factor: USA-50HC: 15:1

USA-150: 10:1

150x: 5:1

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: 8,000mfd low ESR capacitors.

Transformer: Hand-wound 2.5" ferrite with solid copper 12 gauge primary and 14 gauge secondary windings.

Oscillation Frequency: 37KHz

Pulse Components: Eight 75 amp Ultrafets. (600 amps)

Power Supply Output Current:

USA-50HC: +/-15 Volts @ 35 Amps.

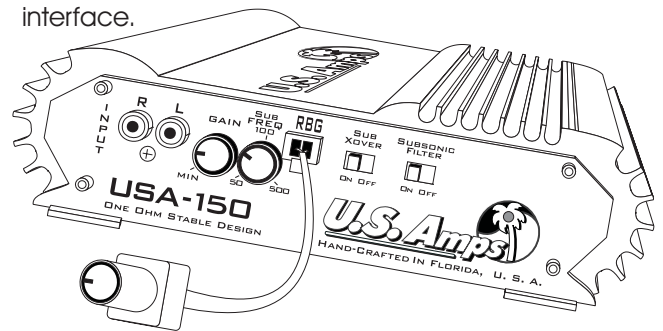
USA-150: +/-28 volts @ 30 Amps.

150x: +/-38 volts @ 20 amps.

Overage Ratio: USA-50HC: 13.7:1

USA-150: 8.6:1 150x: 9.5:1

Protection: Both models incorporate SAT, (U.S. Amps' exclusive **Smart Amp Technology**) that precisely monitors and tracks vital amplifier information including the type and frequency of fault conditions, battery voltage, and amplifier temperature. A built-in computer protects the amplifier and stores data that can be read by the dealer with a U.S. Amps data port interface.



SPECIFICATIONS:

	USA-50HC	USA-150 (pictured)	150x
<u>Watts per Channel</u>			
4 ohms:	25 Watts	75 Watts	150 Watts
2 ohms:	50 Watts	150 Watts	250 Watts
1 ohm:	100 Watts	225 Watts	N/A
½ ohm:	188 Watts	N/A	N/A
<u>Bridged Output:</u>	375 Watts @ 1 Ohm	450 Watts @ 2 Ohms	500 Watts @ 4 Ohms
<u>THD:</u>	<.006%	<.006%	<.006%
<u>S/N Ratio:</u>	>100db	>100db	>100db
<u>Frequency Response:</u>	5Hz-50KHz	5Hz-50KHz	5Hz-50KHz
<u>Fuse:</u>	75 Amps	75 Amps	75 Amps

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