

VTL Amplifiers, Inc.
4774 Murietta Street, Suite 10
Chino, California 91710
USA



Tel (909) 627-5944
Fax (909) 627-6988
e-mail mail@vtl.com
http://www.vtl.com/

MB-185 Series III Balanced Signature Amplifier



Following the footsteps of the MB-450 Series III, the MB-185 Series III Signature monoblock has gone through the same technological improvements as its bigger brother. The upgrade to the Series III platform is extensive with a complete rework of the signal path and new features added while retaining all the user friendliness of the previous model such as automatic tube biasing and comprehensive fault sensing.

Upgrades include a fully balanced differential input stage driving a differential phase splitter and a lower impedance push-pull output stage. Also a shorter, faster and fully balanced negative feedback loop, with zero global negative feedback. The negative feedback loop completely eliminates ringing and requires no capacitor compensation to maintain critical phase integrity and information. The result is an amplifier that remains stable even under the most demanding loads.

Another significant change to the MB-185 is the switch to EL-34 tubes. Long admired for their rich, natural and open sound, the EL-34s bring a distinctive new sonic signature to the amplifier that emphasizes the integration and inner details of music. The output transformer has been completely redesigned and carefully matched to complement the midrange purity and quick, taut bass of EL34s.

There is also an user adjustable Damping Factor Feedback control that allows the user to adjust the amplifier's output impedance by varying the amount of negative feedback. Impedance can now be precisely set to suit the listener's taste, and to improve control of the loudspeaker loads to deliver best performance. The 4 possible settings are:

1. LOW -- Lowest damping factor, good loudspeaker control, most natural sound.
2. MED -- Better loudspeaker control, with some impact on sound quality

3. HI -- Best loudspeaker control, with a little more impact on sound quality, but on speakers that need the control the sonic improvement is clear
4. MAX -- Maximum damping factor, but sonic impact is noticeable

Feature List:

1. Fully balanced differential circuit – even single-ended signal produces balanced signal at output
2. Re-designed fully balanced differential input and driver stages for increased signal swing, bandwidth and stability
3. Zero global Negative Feedback
4. Shorter, faster feedback loop for greater tonal control without phase shift.
5. Improved handling of loudspeaker loads for greater signal stability.
6. The amplifier is unconditionally stable, without the need for capacitor compensation.
7. Tube like JFET-type current source for lower sonic impact in single-ended mode
8. Lower impedance output stage for improved loudspeaker control
9. Dramatically increased interleaving and coupling in the balanced VTL proprietary Signature output transformer, for wider bandwidth and zero ringing
10. Variable user-adjustable DF feedback control to vary output impedance and damping factor for optimal matching to speaker load
11. Software microprocessor controlled
 - Tetrode/Triode Switchable
 - Auto Bias, Fault Sensing
 - Current in-rush limiting
 - Standby Mute function; with reduced tube current for increased tube life
12. 225 watts per channel in tetrode; 140 watts per channel in triode
13. Uses eight EL34 or 6CA7 tubes per monoblock
14. Adjustable regulated screen supply for stable operating point; discrete regulated input and driver supply for greater signal resolution and tonality
15. Adjustable precision-regulated bias supply for greater signal resolution and noise rejection and improved isolation from mains supply variations; output operating point does not change with AC power fluctuations
16. Improved Autobias and fault sensing system to operate in fully balanced differential mode; amplifier is fully protected against output tube failure; no need for precision matching of output tubes
17. All premium Mundorf silver oil caps in signal path
18. Film bypass of power supply caps for greater HF resolution
19. Extruded aluminum front panel with luxurious, modern look – black and silver options available
20. Rack mountable
21. Rigid construction and improved ventilation for lower operating temperature
22. Factory upgradeable from Series II

Specifications

MB-185 Series III Signature Monoblock Data Specification

Vacuum Tube Complement	8 x EL34 or 6CA7, 1 x 12AT7, 1 x 12BH7
Output Power	Tetrode = 225 watts Triode = 140 Watts
20 Hz – 20 kHz <3% THD	Into 5 ohms
Input Sensitivity	Variable between 1-2V, depending upon DF setting
Input Impedance	45K Ohms
Load setting	5 ohms
Optimum Load Range	4 - 8 ohms
S/N Ratio @ 200 W Tetrode	-90dB, 120 Hz
S/N Ratio @ 140 W Triode	
Power Consumption	Idle = 270 W Full Power = 550 W
Primary Mains Fuse Rating	100/120V = 12A Ceramic Slo Blo 220/ 240V = 6A Ceramic Slo Blo
Input Fuse	100/120V = 1A Ceramic Slo Blo 220/240V = 1A Ceramic Slo Blo
Logic Fuse	100/120V = 1A Ceramic Slo Blo 220/240V = 1A Ceramic Slo Blo
B+ Fuse Rating	Plate Fuse -- 1.5A fast acting 600V Screen Fuse – 0.75A fast acting 600V
Dimensions	W = 18.5 inches (47cm), D = 18 inches (45.7cm), H =9 inches (23 cm)
Weight	85 lbs (38.5Kg) per monoblock unpacked 100 lbs (45.4 Kg) packed