

MASSIVE[®]

BLADE SERIES AMPLIFIERS

B500·2

B1000·1

B1000·4

B2000·1

B1500·4

B2000·5

B2000·4



[®]

INTRODUCTION

Congratulations!

And thank you for purchasing a "Massive Audio" **BLADE** amplifier for your car audio system. You now own an amplifier of uncompromising design and engineering incorporating the latest advances in technology. This handcrafted amplifier is designed to deliver the demands of serious sound competitors. You will soon discover that "BLADE" amplifiers display a fine balance between high quality, performance and reliability; all proven qualities of "Massive Audio" products.

"Massive Audio" amplifiers are the result of American Craftsmanship using only the highest quality components and quality control standards. In order to provide you with many years of listening pleasure, we recommend you to have your new amplifier installed by an Authorized "Massive Audio Dealer." This will ensure the proper installation of your product, and will also increase the length of your warranty to **ONE YEAR**.

(Please see the warranty section of this manual for more details.)

Please take a moment to thoroughly read this manual to ensure that you get the maximum benefit from this new addition to your car audio system. When installed properly, this unit will provide years of trouble-free performance.

Should your amplifier ever need service or replacement due to theft, please record the following information, which will help protect your investment.

Model #: _____

Dealer's Name: _____

Date of Purchase: _____

Installation Shop and Date: _____

DESIGN FEATURES

- ✓ 1 OHM STABLE DESIGN (MONO AMPS)
- ✓ MIL SPEC PCB WITH SMD PARTS
- ✓ BUILT-IN NOISE REDUCTION CIRCUITRY
- ✓ FULL MOSFET WITH HIGH GRADE SWITCHING DEVICES
- ✓ BUILT-IN AUTO SENSING TURN ON FUNCTION (HI-INPUTS)
- ✓ 12V REMOTE OUTPUT FOR EXTERNAL DEVICES (HI-INPUTS)
- ✓ 0~12DB VARIABLE BASS BOOST
- ✓ NEXT GENERATION ADVANCED 5 WAY PROTECTION CIRCUITRY
- ✓ WORLD WIDE STANDARDS COMPLIANT.
(ROHS,E-MARK,CTA-2006,CE)

BLADE

BRUDE



AMPLIFIER FUNCTIONS

1. SPEAKERS

CONNECT SPEAKERS/SUBWOOFERS TO THESE TERMINALS. BE SURE TO CHECK WIRE FOR PROPER POLARITY. NEVER CONNECT THE SPEAKER CABLES TO CHASSIS GROUND.

2. +12 VOLT POWER

CONNECT THIS TERMINAL THROUGH A FUSE OR CIRCUIT BREAKER TO THE POSITIVE TERMINAL OF THE VEHICLE BATTERY OR THE POSITIVE TERMINAL OF AN ISOLATED AUDIO SYSTEM BATTERY.

3. AUTO SENSING TURN ON FUNCTION / REM OUT(HI-INPUTS)

WHEN USE HI-INPUT, THE AMP CAN DETECT THE DC OFFSET FROM THE HIGH LEVEL INPUT SIGNAL TO AUTO TURN ON/OFF. WHEN THE AMP TURNS ON, THE REM TERMINAL WILL OUTPUT +12V DC TO CONTROL THE OTHER DEVICE TURN ON/OFF.

REM IN: WHEN USE LOW LEVEL INPUT, THE AMP REM IN SHOULD BE CONNECTED TO THE REM OUT OF THE SOURCE UNIT. THE HEAD UNIT CONTROLS THE AMP TURN ON/OFF.

4. GND

CONNECT THIS CABLE DIRECTLY TO THE FRAME OF THE VEHICLE. MAKE SURE THE METAL FRAME HAS BEEN STRIPPED OF ALL PAINT DOWN TO THE BARE METAL. USE THE SHORTEST DISTANCE POSSIBLE. IT IS ALWAYS A GOOD IDEA TO REPLACE THE FACTORY GROUND AT THIS TIME WITH A LARGER CABLE EQUAL TO THE NEW DIRECTLY TO THE VEHICLE BATTERY GROUND TERMINAL OR ANY OTHER FACTORY GROUND POINTS.

5. RCA INPUT / AUTO HI-LOW LINE CONVERTOR

THESE RCA INPUT JACKS CONNECT WITH YOUR SOURCE UNIT RCA LOW LEVEL OUTPUTS OR VIA OPTIONAL ADAPTER WITH YOUR SOURCE UNIT SPEAKER HIGH LEVEL OUTPUTS. THE USE OF HIGH QUALITY TWISTED PAIR CAR AUDIO CABLES IS RECOMMENDED TO MINIMIZE POSSIBILITY OF DISTURBANCE THE AUDIO SIGNAL.

6. REMOTE(MONO BLOCKS)

CONNECT THE REMOTE CONTROLLER TO CONTROL THE SUBWOOFER AMPLIFIER VOLUME FROM THE DRIVER SEAT LOCATION, FOR EASE OF ADJUSTMENT DURING PLAYING.

7. GAIN CONTROL

THE GAIN CONTROL WILL MATCH THE AMPLIFIERS SENSITIVITY TO THE SOURCE UNITS SIGNAL VOLTAGE. THE OPERATING RANGE IS 9V TO 200mV. THIS IS NOT A VOLUME CONTROL!

8. LOW PASS FILTER CONTROL

THIS CONTROL IS USED TO SELECT THE DESIRED LOW PASS X-OVER FREQUENCY.

9. SUBSONIC FILTER CONTROL

THIS CONTROL CAN FILTER OUT UNWANTED LOW FREQUENCY FROM 15Hz TO 55Hz. THIS FUNCTION WILL INCREASE THE POWER HANDLING OF YOUR WOOFERS.

10. BASS BOOST LEVEL KNOB(MONO BLOCK)

THIS CONTROL ADJUSTS THE BOOST LEVEL OF THE BASSBOOST CENTER FREQUENCY. IT CAN BE ADJUSTED FROM 0 TO 12dB. COMBINING WITH BASSBOOST FREQUENCY, YOU CAN ACCURATELY MATCH THE AMPLIFIER PERFORMANCE TO WOOFER RESPONSE.

11. BASS BOOST FREQ KNOB(MONO BLOCK)

THIS CONTROL THE BOOSTED CENTER FREQUENCY. THE FREQUENCY CAN BE ADJUSTED FROM 50Hz TO 750Hz, ACCORDING TO YOUR CAR AUDIO SYSTEM PERFORMANCE. (EG. WHEN YOU ADJUST THIS KNOB TO 50Hz, AMPLIFIER WILL BOOST THE FREQUENCY AROUND 50Hz.) THIS FUNCTION SHOULD BE ADJUSTED COMBINING WITH BASSBOOST LEVEL TUNING.

12. X-OVER MODE(FULL RANGE)

THIS SWITCH WORKS TOGETHER WITH THE FREQ TO ADJUST THE OPERATING FREQUENCY RANGE OF THE AMP. WHEN SWITCH TO LPF OR HPF, THE CORRESPONDING FILTER CAN ADJUST THE OPERATING FREQUENCY RANGE BETWEEN 50Hz TO 3KHz. WHEN PUSHING THE SUBWOOFER, PLEASE SWITCH TO LPF MODE; WHEN PUSHING SMALL CALIBER FULL FREQUENCY SPEAKER, MIDDLE AND HIGH FREQUENCY LOUDSPEAKER, PLEASE SWITCH TO HPF MODE. WHEN

PUSHING LARGE CALIBER FULL FREQUENCY SPEAKER, PLEASE SWITCH TO FULL MODE. WHEN SWITCH TO FULL MODE, THE FILTERS WILL NOT FUNCTION.

WARNING: USE BUTTONS AND HPF KNOB CORRECTLY TO PREVENT LOW FREQUENCY DAMAGE TO TWEETERS.

13. FREQUENCY CONTROL (FULL RANGE)

THIS SWITCH WORKS TOGETHER WITH X-OVER FOR HIGH PASS FREQUENCY CROSSOVER

WARNING: USE BUTTONS AND HPF KNOB CORRECTLY TO PREVENT LOW FREQUENCY DAMAGE TO TWEETERS.

14. EXTERNAL CAPACITOR INPUT

FOR CONNECTING AN OPTIONAL (SOLD SEPARATELY) EXTERNAL HI-VOLTAGE CAPACITOR. THIS WILL HELP STABILIZING THE AMPLIFIERS NEEDED VOLTAGE DURING OPERATION WHILE IMPROVING FIDELITY AND MAXIMIZING HEAD ROOM.

15. POWER INDICATOR

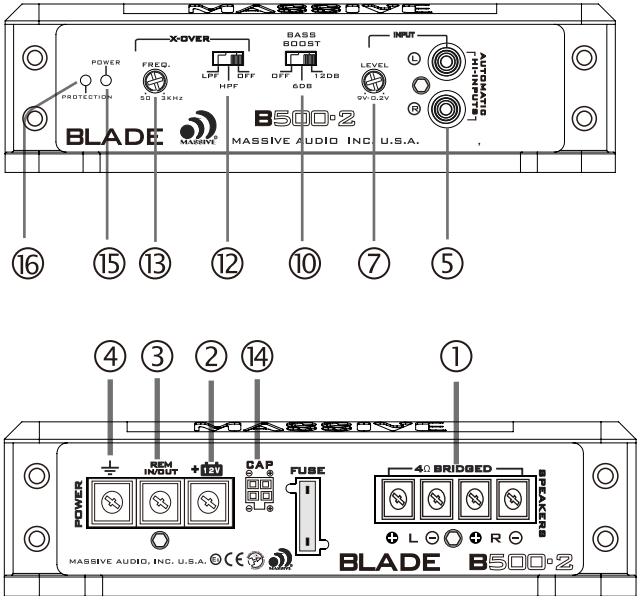
THIS LED WILL LIGHT UP WHEN AMPLIFIER WORKS PROPERLY.

16. PROTECTION INDICATOR

THIS RED LED WILL LIGHT UP AND WILL BE FLASHING IF THERE IS A FAULT PRESENTED TO THE AMPLIFIER. PLEASE DISCONNECT THE AMPLIFIER AND RESOLVE THE FAULT BEFORE RECONNECTING THE AMPLIFIER.

PANEL LAYOUT

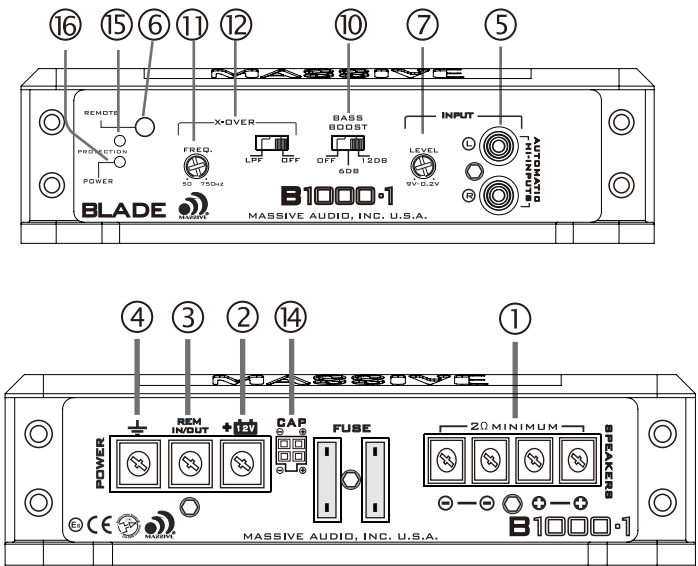
FIG 2. 2-CH AMPLIFIER PANEL LAYOUT



PANEL LAYOUT

FIG 2. MONO AMPLIFIER PANEL LAYOUT

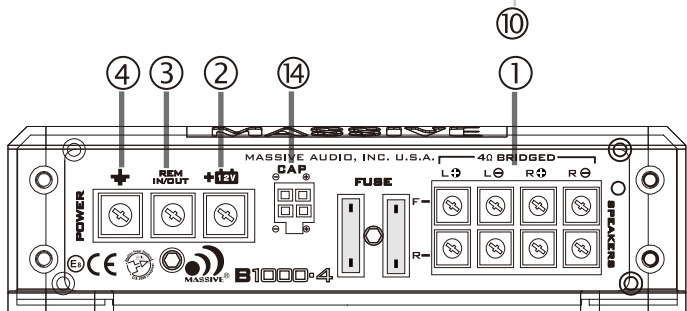
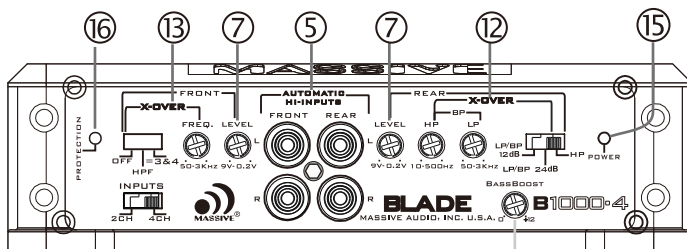
B1000.1/B2000.1



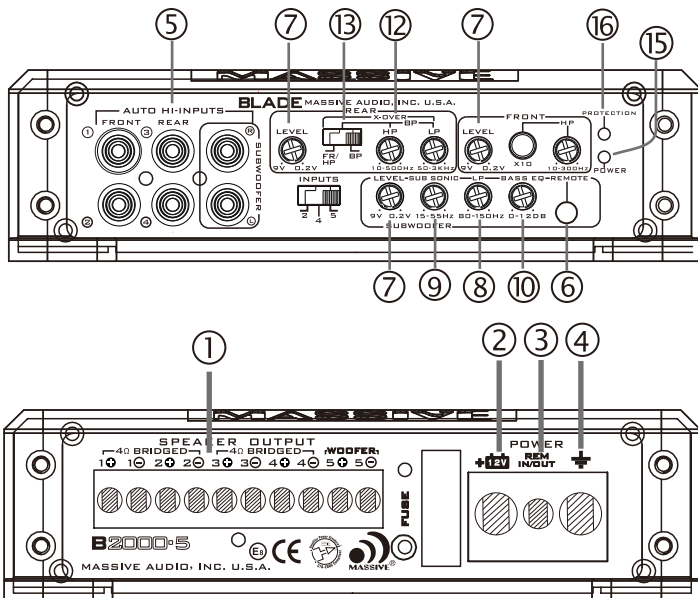
PANEL LAYOUT

FIG 3. 4-CH AMPLIFIER PANEL LAYOUT

B1000.4/B1500.4/B2000.4



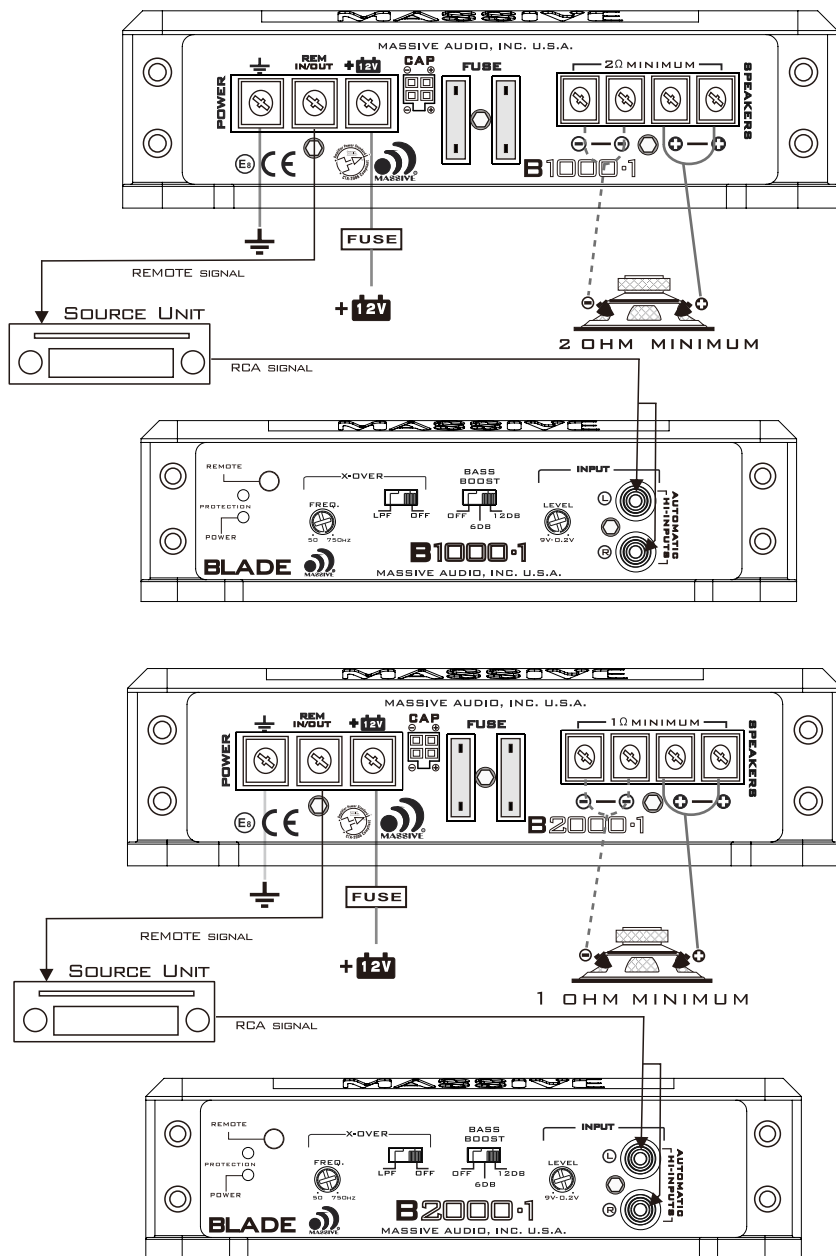
B2000.5



WIRING DIAGRAM

FIG 4. MONO AMPLIFIER WIRING
(SINGLE WOOFER LOAD)

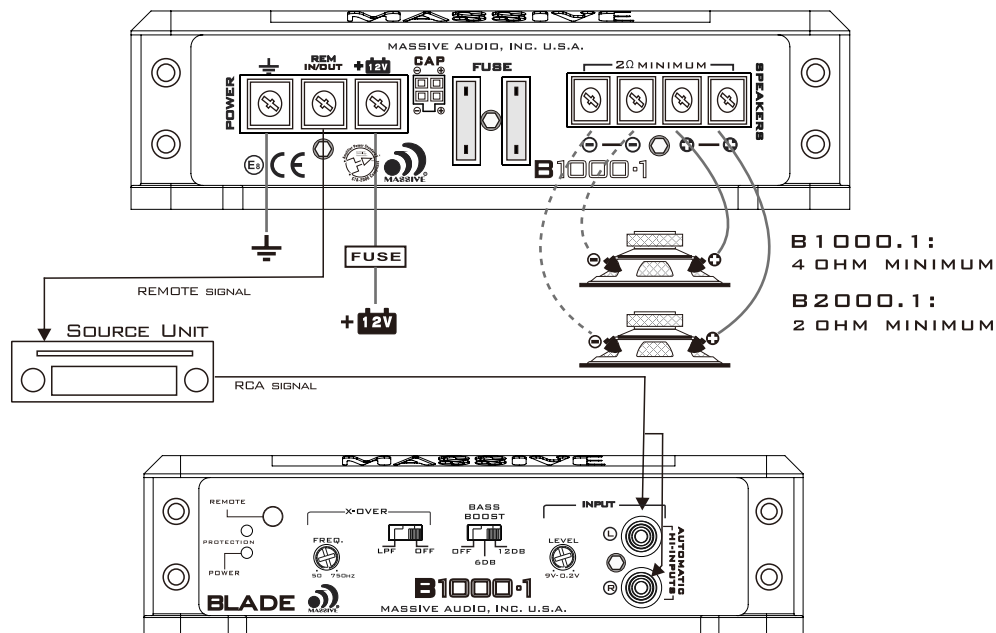
B1000.1/B2000.1



WIRING DIAGRAM

FIG 5. MONO AMPLIFIER WIRING
(MULTI-WOOFER LOAD)

B1000.1/B2000.1



*EQUIVALENT PARALLEL WOOFER LOADS CANNOT BE LESS THAN THE MINIMUM STABLE LOAD RATED IN THIS MANUAL. THE TWO NEGATIVE AND TWO POSITIVE SPEAKER TERMINALS ARE WIRED INTERNALLY INSIDE EACH AMPLIFIER. ONLY ONE NEGATIVE AND ONE POSITIVE ARE NEEDED WHEN WIRING TO THE AMPLIFIER. THESE ARE BLADE AMPLIFIERS AND NOT MULTI-CHANNEL AMPLIFIERS. THE MINIMUM LOAD FOR ALL "BLADE" AMPLIFIERS ARE ONE OHM.

WIRING DIAGRAM

FIG 6. B500.2 AMPLIFIER WIRING
(1-CHANNEL MODE)

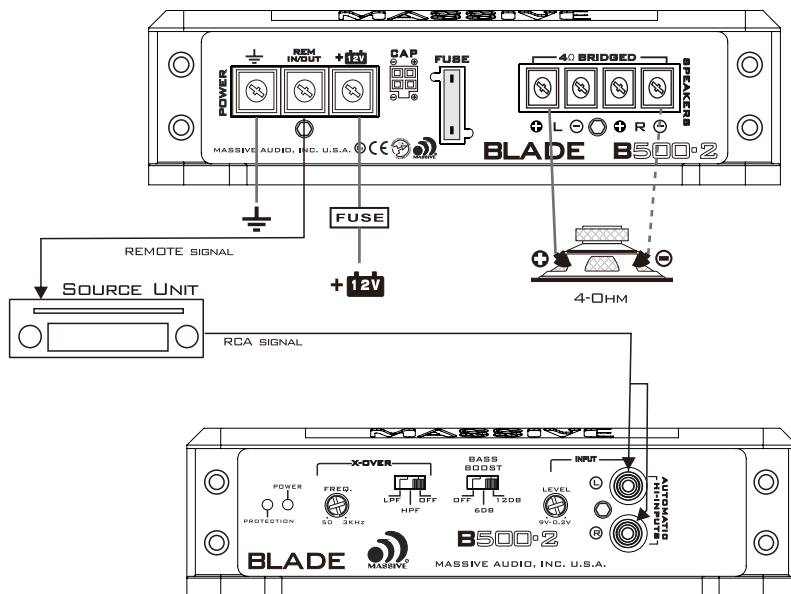
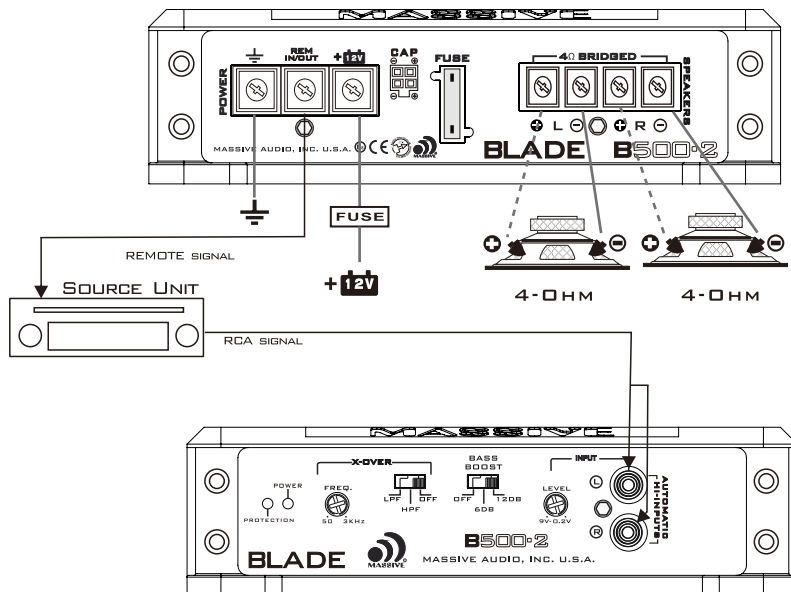
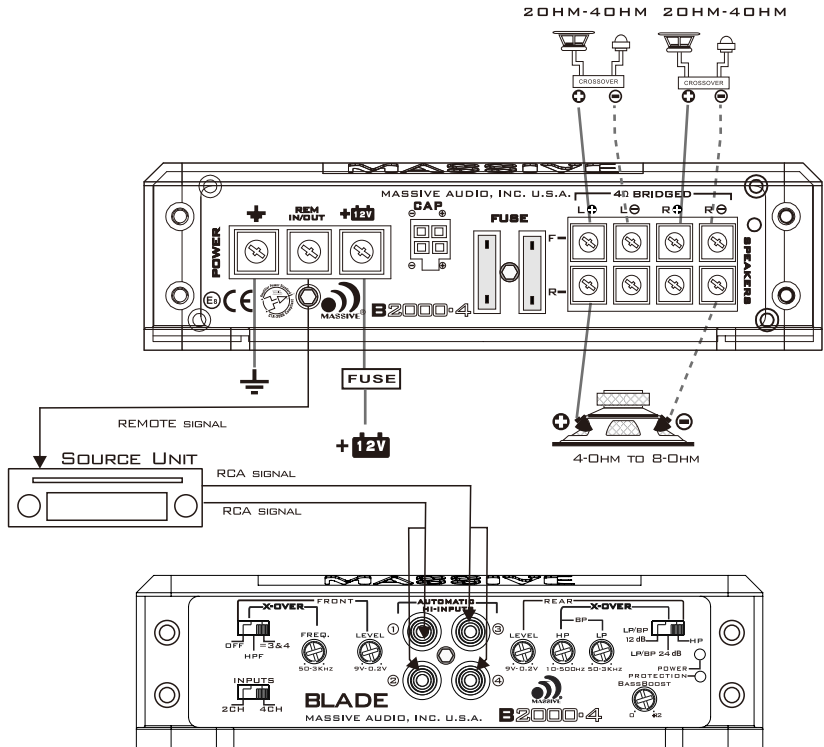


FIG 7. B500.2 AMPLIFIER WIRING
(2-CHANNEL MODE)



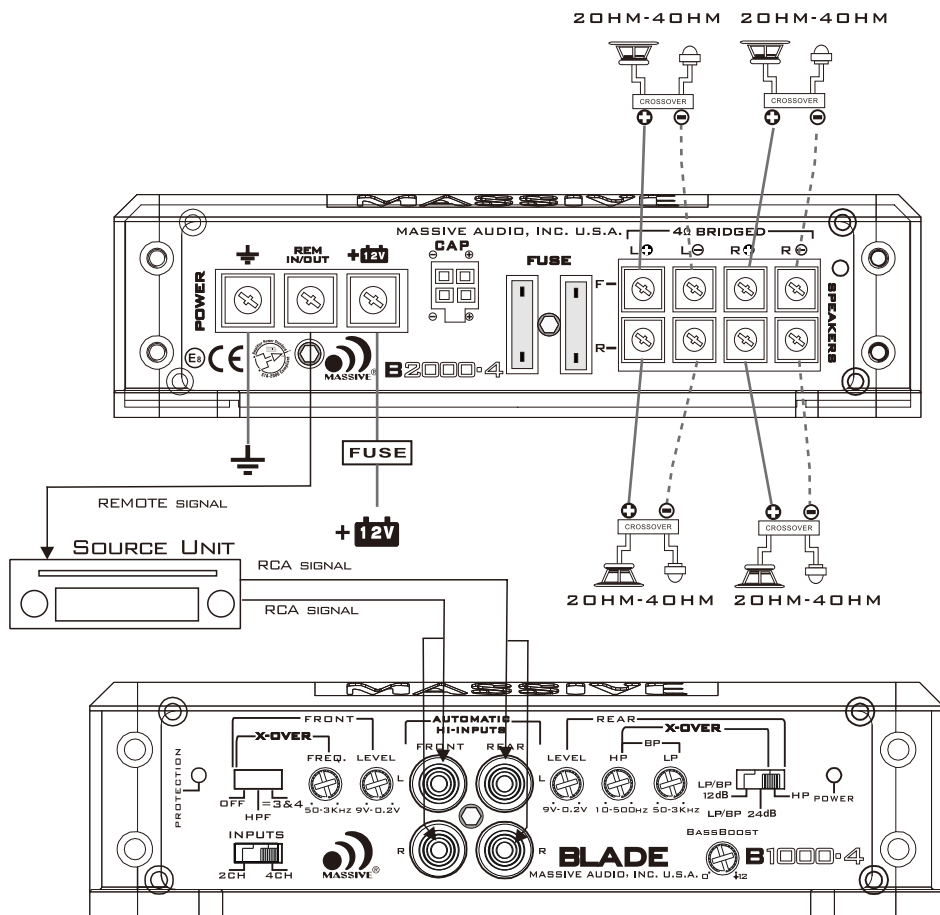
WIRING DIAGRAM

FIG 8.B1000.4/B1500.4/B2000.4 AMPLIFIER WIRING
(3-CHANNEL MODE)



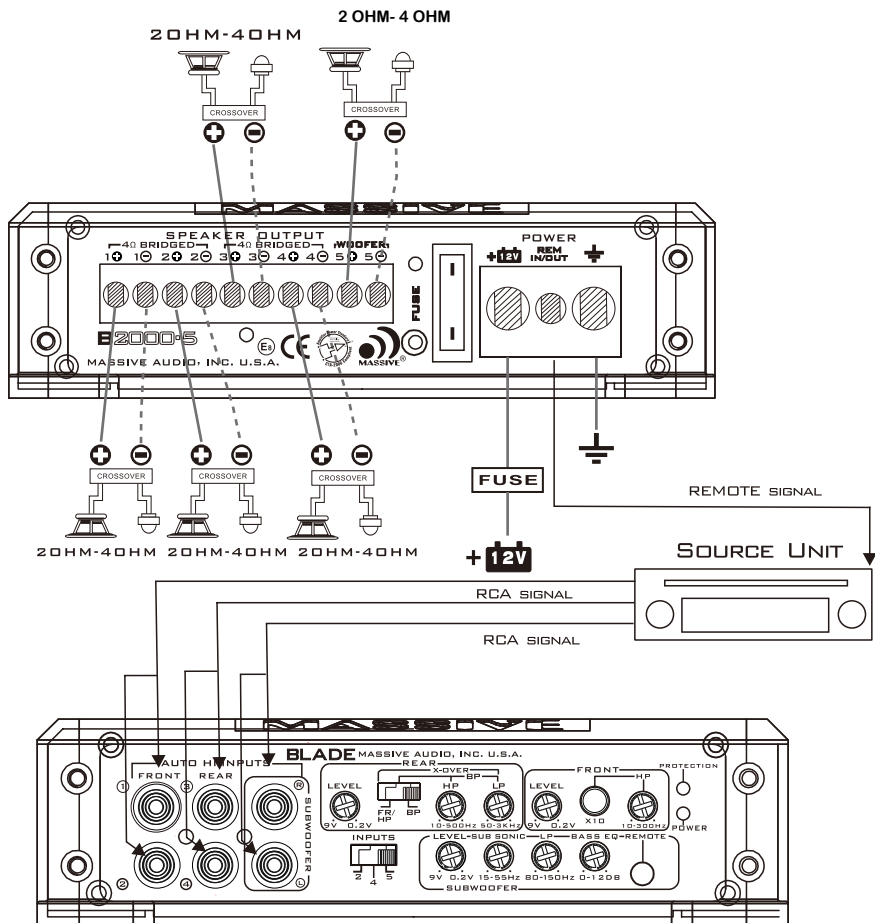
WIRING DIAGRAM

FIG 9. B1000.4/B1500.4/B2000.4 AMPLIFIER WIRING
(4-CHANNEL MODE)



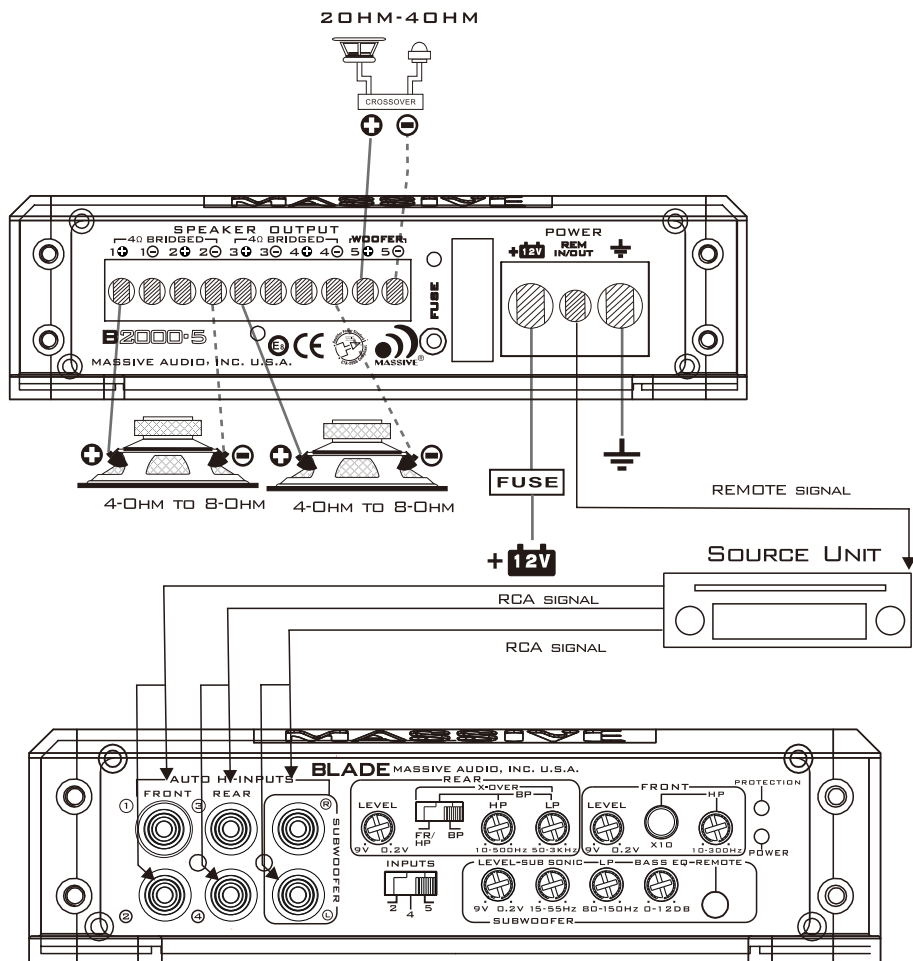
WIRING DIAGRAM

FIG 10. B2000.5 AMPLIFIER WIRING
(4-CHANNEL MODE)



WIRING DIAGRAM

FIG10.B2000.5AMPLIFIER WIRING
(4-CHANNEL MODE)



TROUBLE SHOOTING

Symptom	Possible Remedy
Amplifier will not power up	Check to make sure you have a good ground connection. Check that there is battery power on the (+)terminal . Check all fuses, replace if necessary . Make sure that the Protection LED is not illuminated.
Protection LED Comes on	Check for short circuits on speaker leads. Check that the speaker load is not beyond the minimum load. Remove speaker lead, and reset the amplifier. If the protection LED still comes on, then the amplifier is faulty and needs servicing .
No output	Check that the RCA audio cables are plugged into the proper inputs. Check all speakers wiring. Check the headunit output and the amplifier level setting.
Low output	Reset the level Control. Check the Crossover Control settings.
High hiss in The speakers	Check the RCA cable is not shorted to power ground at amplifier side. Check the amplifier grounding.
Distorted sound	Check that the Input level control is set to match the signal level of the head unit. Always try to set the Input level as low as possible. Check that all crossover frequencies are properly set. Check for short circuits on the speaker leads
Amplifier gets Very hot	Check that the minimum load impedance for the amplifier model is correct. Check that there is good air circulation around the amplifier. In some applications, It may be necessary to add an external cooling fan. Do not mount amplifier upside down.

SPECIFICATIONS

	B500.2	B1000.4	B1500.4	B2000.4	B1000.1	B2000.1	B2000.5
	2	4	4	4	1	1	5
PEAK OUTPUT POWER@14.4V	250Wx2	250Wx4	375Wx4	500Wx4	1000Wx1	2000Wx1	250Wx4+1000Wx1
RMS @ 4 OHMS	80Wx2	80Wx4	120Wx4	150Wx4	250Wx1	250Wx1	80Wx4+300Wx1
RMS @ 2 OHMS	160Wx2	160Wx4	240Wx4	300Wx4	455Wx1	500Wx1	160Wx4+600Wx1
RMS @ 1 OHMS	N/A	N/A	N/A	N/A	N/A	1000Wx1	N/A+N/A
RMS BRIDGED @ 4 OHMS	320Wx1	320Wx2	480Wx2	600Wx2	N/A	N/A	320Wx2+300Wx1
FREQUENCY RESPONSE	15HZ-35KHZ	10HZ-35KHZ	10HZ-35KHZ	10HZ-35KHZ	15HZ-35KHZ	10HZ-250HZ	15-35KHZ/15-150HZ
INPUT SENSITIVITY	0.2~9.0V	0.2~9.0V	0.2~9.0V	0.2~9.0V	0.2~9.0V	0.2~9.0V	0.2~9.0V
SIGNAL TO NOISE RATIO	>90dB	>90dB	>90dB	>90dB	>90dB	>90dB	>90dB
THD&NOISE	<0.1%	<0.05%	<0.05%	<0.05%	<0.1%	<0.1%	<0.1%
LOW PASS CROSS FREQUENCY	50HZ-3KHZ	50HZ-3KHZ	50HZ-3KHZ	50HZ-3KHZ	50HZ-750HZ	80HZ-250HZ	50HZ-3KHZ(CH3&4) 80HZ-150HZ(CH5)
HIGH PASS CROSS FREQUENCY	50HZ-3KHZ	10HZ-500HZ	10HZ-500HZ	10HZ-500HZ	—	—	10HZ-300HZ(CH1&2) 10HZ-500HZ(CH3&4)
SUBSONIC FILTER	—	—	—	—	—	10HZ-50HZ	15HZ~55HZ ONLY AT 5CH
BASS EQ	0-6dB/12dB@45Hz	0-12dB@45Hz	0-12dB@45Hz	0-12dB@45Hz	0-6dB/12dB@45Hz	0-12dB@45Hz	0-12dB@45Hz
MINIMUM IMPEDANCE	20HM STEREO	20HM STEREO	20HM STEREO	20HM STEREO	20HM MONO	10HM MONO	20HM STEREO+20HM MONO
FUSE SIZE	20AX1	20AX2	30AX2	40AX2	20AX2	40AX2	80AX1
DIMENSIONS(LXHXW)MM	272X50X180	327X50X180	387X50X180	427X50X180	327X50X180	277X50X180	527X50X180
DIMENSIONS(LXHXW)INCH	10.7X2.0X7.1	12.9X2.0X7.1	15.2X2.0X7.1	16.8X2.0X7.1	12.9X2.0X7.1	10.9X2.0X7.1	20.7X2.0X7.1

SUBJECT TO TECHNICAL CHANGE

WARRANTY

- Massive Audio, Inc. warrants all manufactured amplifier products to be free from defect in material and workmanship for a period not to exceed **ONE YEAR*** from the date of original purchase when installed by an authorized “Massive Audio” dealer. Units that are not installed by an authorized “Massive Audio” dealer maintain a warranty not to exceed 90 days from the original purchase date by the original purchaser.

Products that display abuse such as power deficiency, over driving the amplifier or clipping the input require purchase of a new PCB for replacement.

“Massive Audio” obligations under this warranty are limited to repairing or replacing, at its own sole option, any such defective products. This warranty does not apply to equipment that has been damaged by accident, negligence, or misapplication or has been altered or modified in anyway. This warranty applies only to the original purchaser who must have properly registered the product within 30 days of purchase.

Except as provided herein, Massive Audio, Inc. makes no warranties or representations, express or implied, including any warranty implied by law, whether for merchantability or fitness for a particular purpose and shall be effective only for the period that this express warranty is effective. SEE THE WARRANTY REGISTRATION CARD TO ADDITIONAL INFORMATION.

*DUE TO CONSTANT IMPROVEMENT PRICES AND SPECS ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTIFICATION.



**Massive Audio Inc.
2261 S. Atlantic Blvd.
City of Commerce, CA 90040 U.S.A.
www.massiveaudio.com**