

MASSIVE[®]

GT/GTR SUBWOOFER & FULL RANGE AMPLIFIER

GT 1

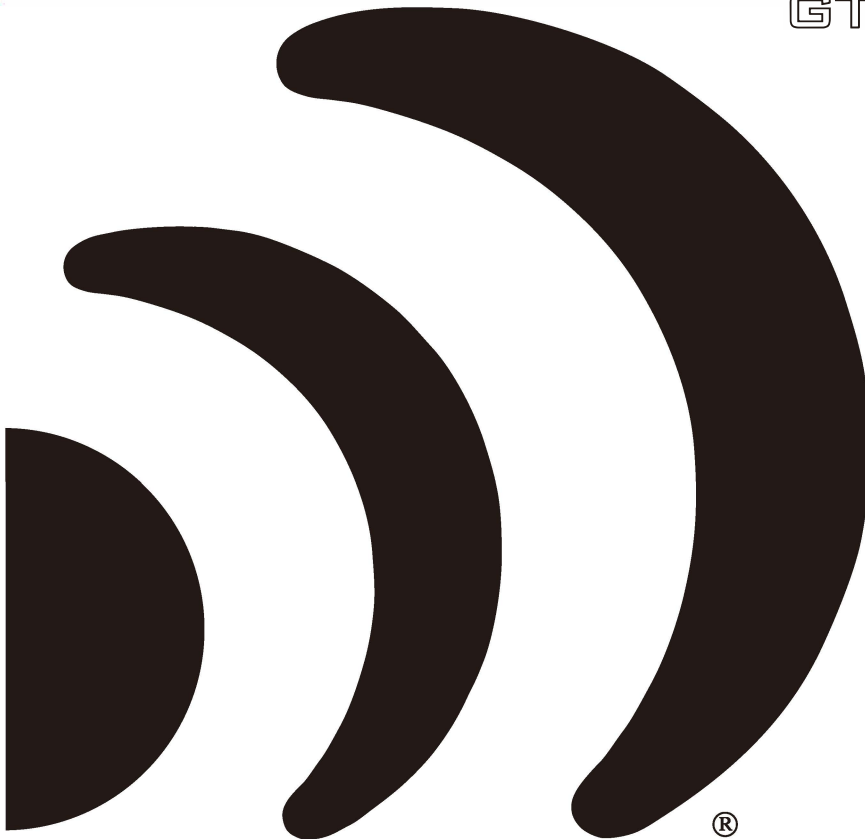
GT 4X

GT 5X

GTR 1A

GTR 2A

GTR 4X



®

INTRODUCTION

Congratulations!

And thank you for purchasing a Massive Audio® **GT/GTR** 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 "**GT/GTR**" 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®. 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 HIGH SPEED SWITCHING (CLASS D MONO BLOCK AMP-GTR1A,GTR2A, GT1)
- ✓ MIL SPEC ,MULTI LAYERPCB WITH SMD PARTS
- ✓ BUILT-IN NOISE REDUCTION CIRCUITRY
- ✓ FULL MOSFET WITH HIGH GRADE HIGH SPEED 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)

GT/GTR
CL/CLB



AMPLIFIER FUNCTIONS

1. +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.

2. GND(GTR1A,GTR2A,GTR4X,GT1,GT4X,GT5X)

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.

3. RCA INPUT

THESE RCA INPUT JACKS CONNECT WITH YOUR SOURCE UNIT RCA LOW LEVEL OUTPUTS OR VIA OPTIONAL HI-LO ADAPTOR. THE USE OF HIGH QUALITY TWISTED PAIR CAR AUDIO CABLES IS RECOMMENDED TO PREVENT POSSIBLE DISTURBANCE OF THE AUDIO SIGNAL.

4. REMOTE(MONO BLOCKS)

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

5. LOW PASS FILTER CONTROL

THIS CONTROL IS USED TO SELECT THE DESIRED LOW PASS X-OVER FREQUENCY. THE FREQUENCY CAN BE ADJUSTED FROM 90HZ TO 20KHZ FOR ALL NON FULL RANGE AMPLIFIERS.

6. HPF FILTER CONTROL

THIS CONTROL CAN FILTER OUT UNWANTED LOW FREQUENCIES FROM 10HZ - 2KHZ. THIS FUNCTION WILL INCREASE THE POWER HANDLING OF YOUR WOOFERS.

7. BASS BOOST LEVEL KNOB

NOTE: INCREASING DB ALSO INCREASES CURRENT DEMANDS AND AMPLIFIES POWER OUTPUT AND CAN CAUSE DAMAGE WHEN NOT DONE CORRECTLY AND WITH ENOUGH RESERVE CURRENT.

8. BASS BOOST FREQ KNOB

THIS CONTROLS THE BOOSTED CENTER FREQUENCY. THE FREQUENCY CAN BE ADJUSTED FROM 30HZ TO 70HZ ACCORDING TO THE CAR AUDIO SYSTEMS PERFORMANCE. (WHEN YOU ADJUST THIS KNOB TO 50HZ THE AMPLIFIER WILL BOOST THAT FREQUENCY) THIS FUNCTION SHOULD BE ADJUSTED IN COMBINATION WITH THE BASSBOOST CONTROL.

9. SPEAKERS

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

10. 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.

11. 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.

PANEL LAYOUT

FIG 1. MONO AMPLIFIER PANEL LAYOUT
GT 1

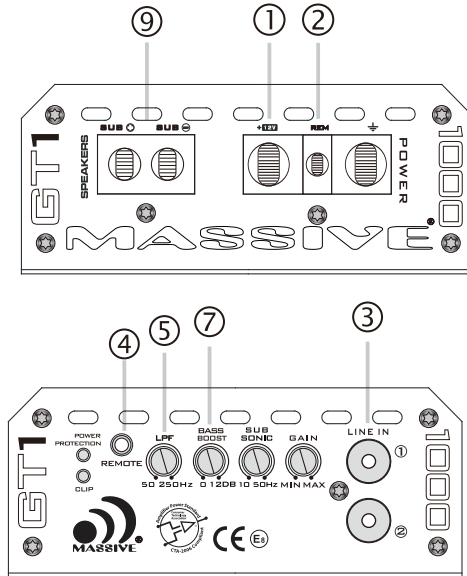
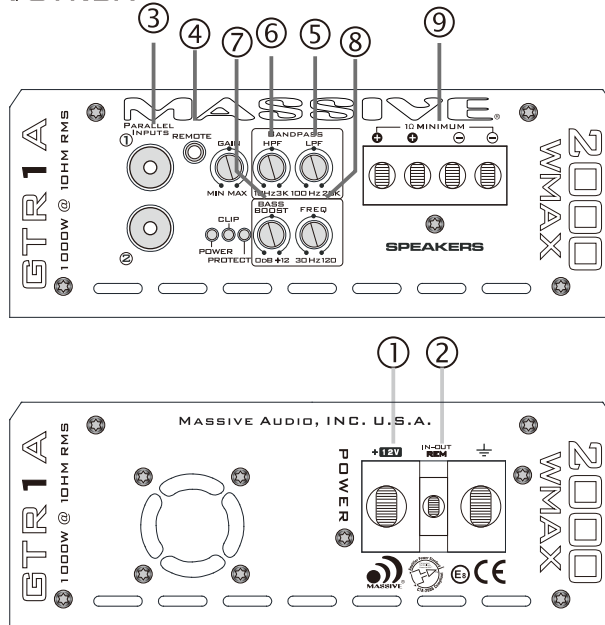


FIG 1. MONO AMPLIFIER PANEL LAYOUT
GTR 1 A/GTR2A



PANEL LAYOUT

FIG 2. 4-CH AMPLIFIER PANEL LAYOUT
GT4X

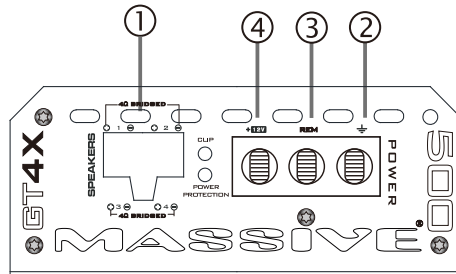
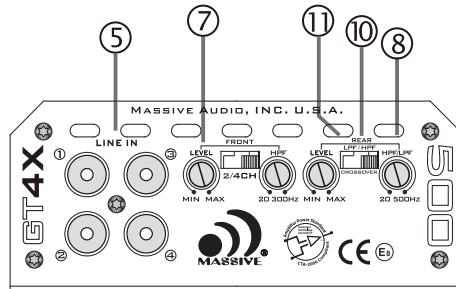
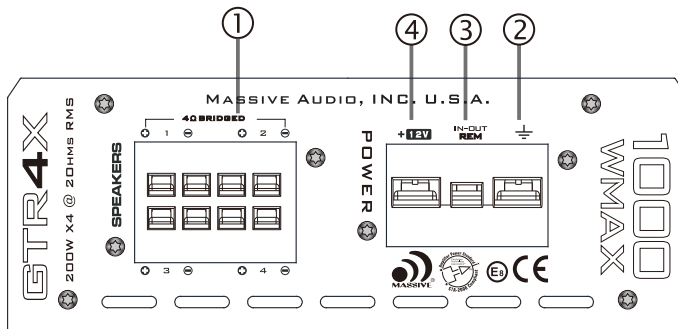
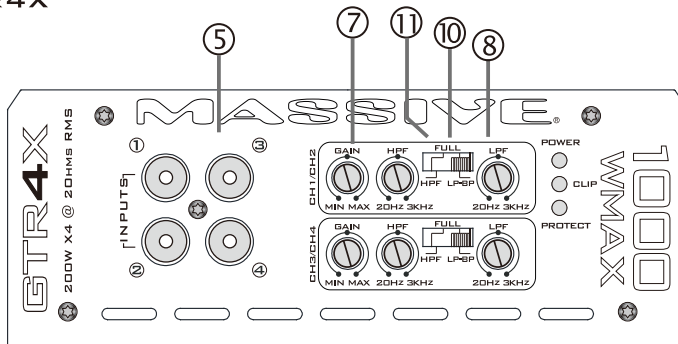


FIG 2. 4-CH AMPLIFIER PANEL LAYOUT
GTR4X



WIRING DIAGRAM

FIG 3. 5-CH AMPLIFIER PANEL LAYOUT
GT5X

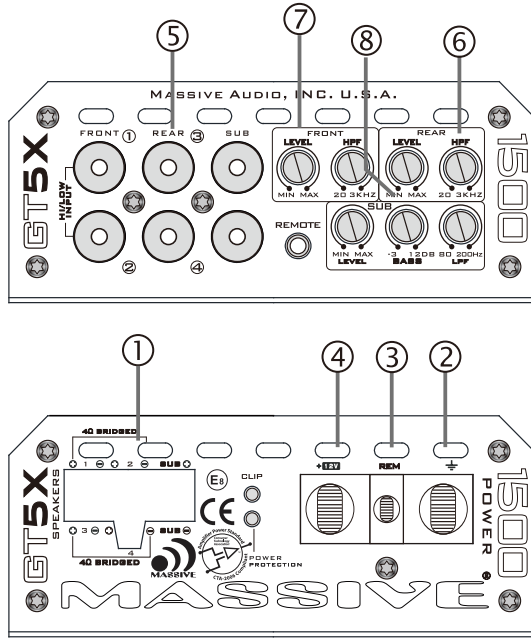
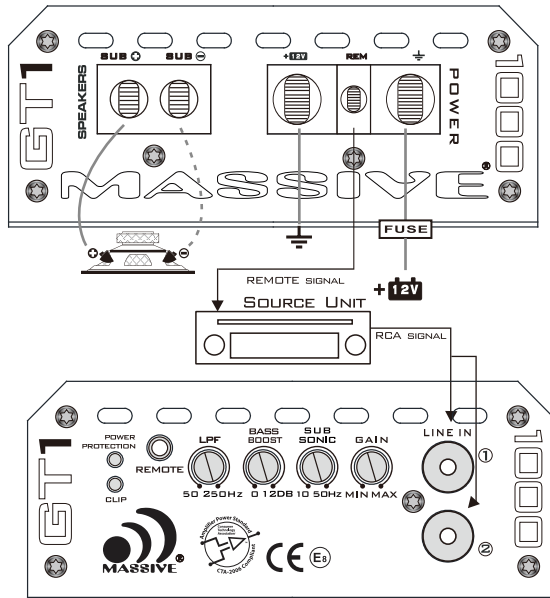
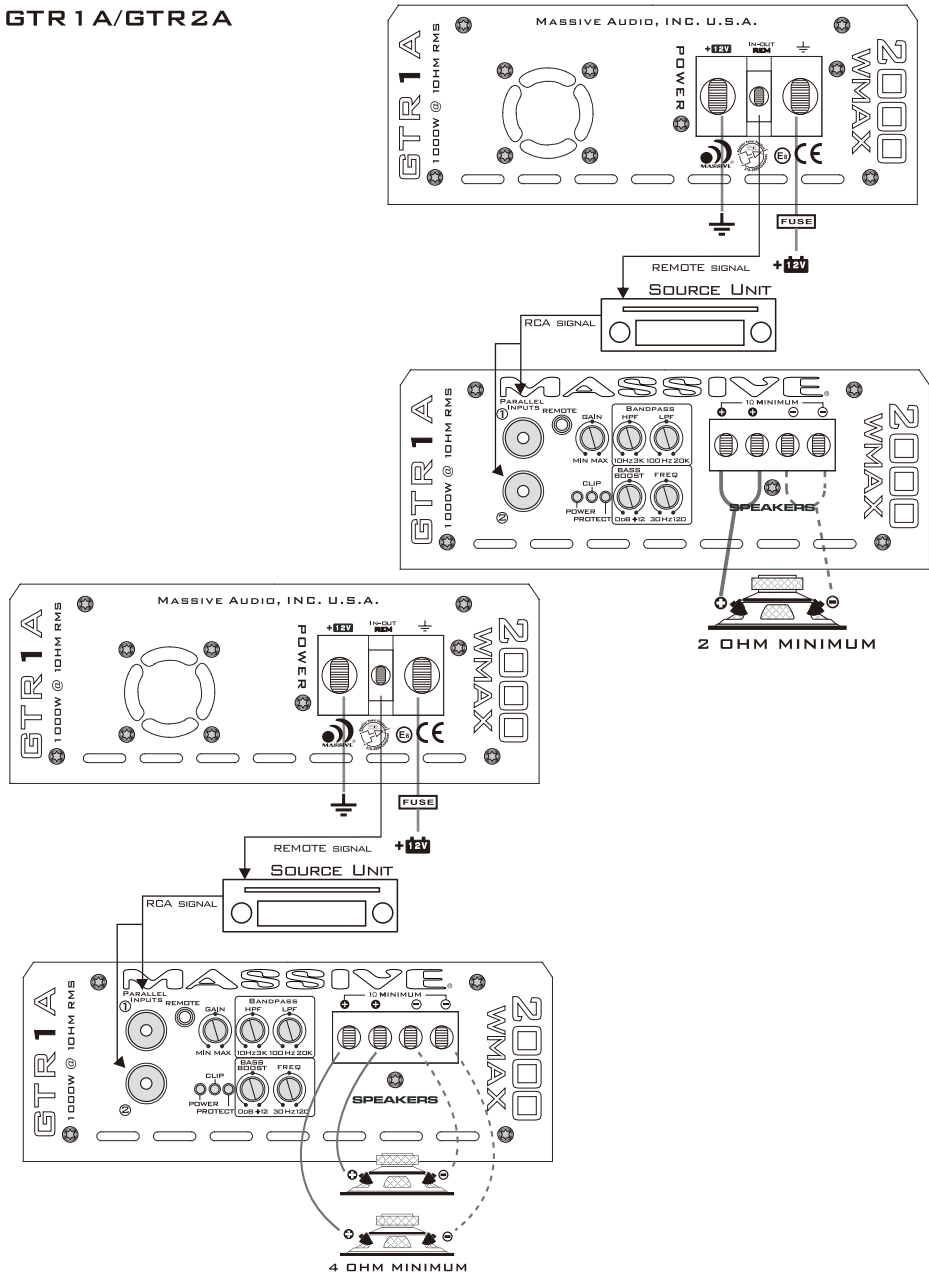


FIG 4. MONO AMPLIFIER WIRING
GT 1



WIRING DIAGRAM

FIG 4. MONO AMPLIFIER WIRING
GTR 1 A/GTR2A



*SUBWOOFER LOADS CANNOT BE LESS THAN THE MINIMUM STABLE IMPEDANCE RATED IN THIS MANUAL. THE TWO NEGATIVE AND POSITIVE SPEAKER TERMINALS ARE WIRED INTERNALLY. ONLY ONE NEGATIVE AND ONE POSITIVE TERMINALS REQUIRED WHEN WIRING TO BP MONO AMPLIFIERS.

WIRING DIAGRAM

FIG 5. GT4X AMPLIFIER WIRING
(3-CHANNEL MODE)

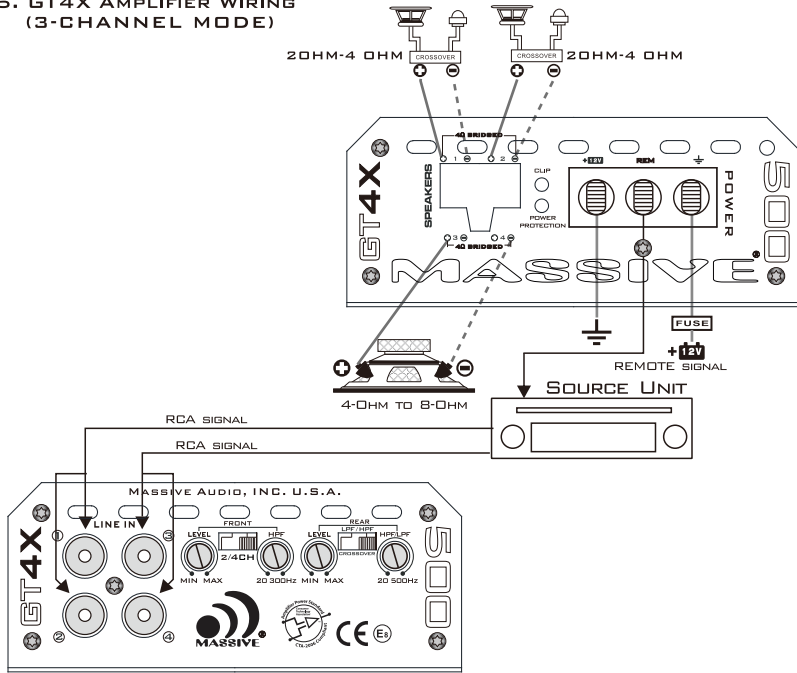
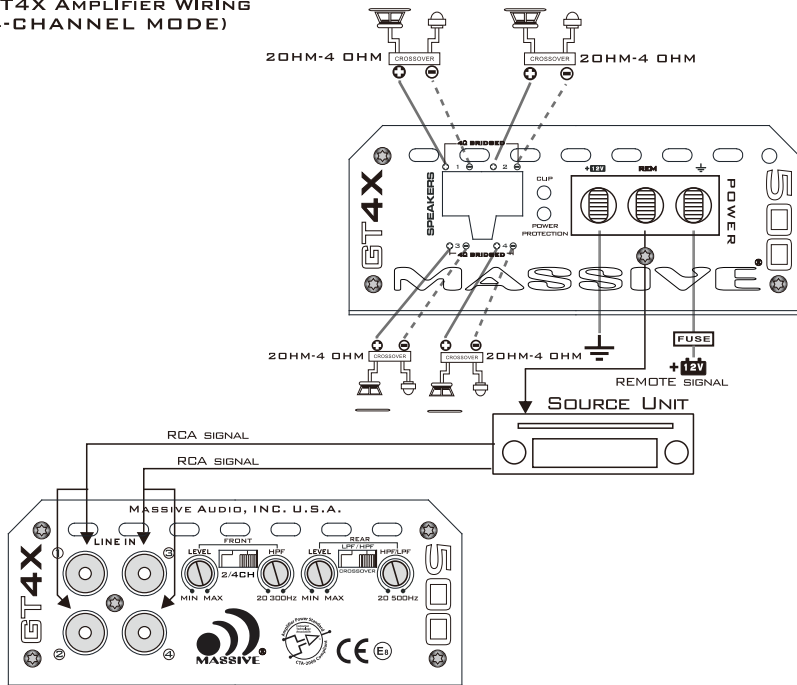


FIG 5. GT4X AMPLIFIER WIRING
(4-CHANNEL MODE)



WIRING DIAGRAM

FIG 6. GTR4X AMPLIFIER WIRING
(3-CHANNEL MODE)

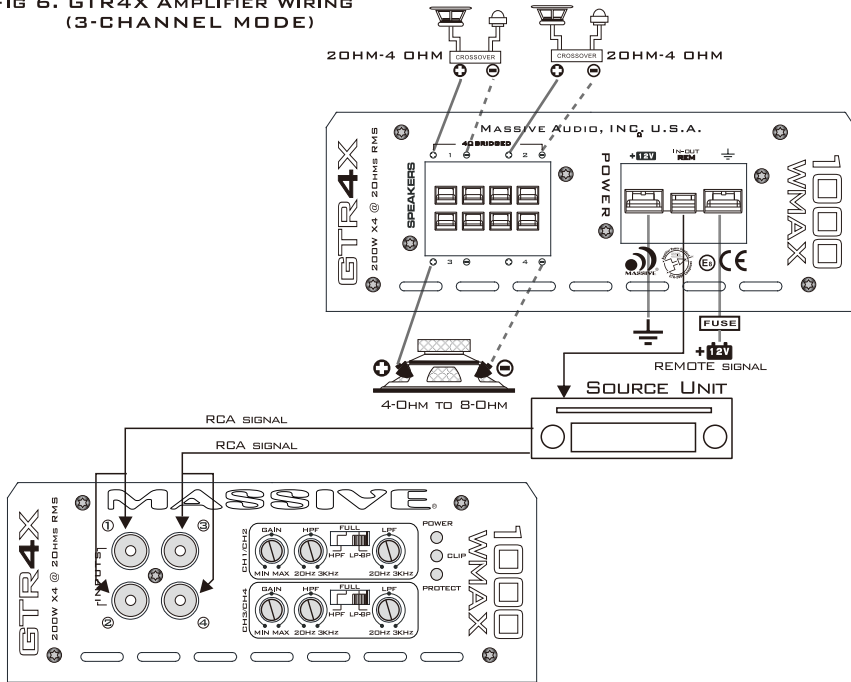
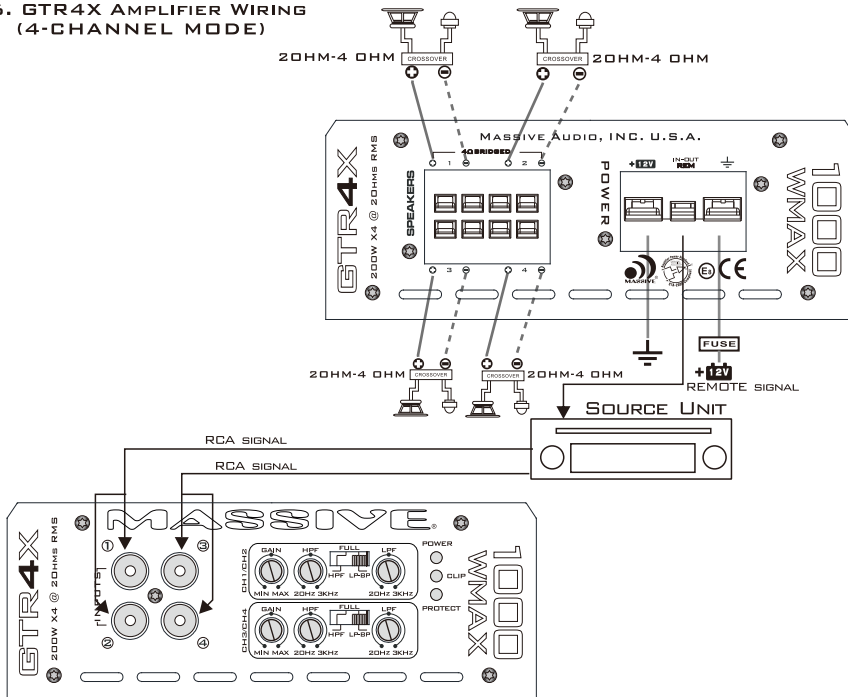


FIG 6. GTR4X AMPLIFIER WIRING
(4-CHANNEL MODE)



WIRING DIAGRAM

FIG 6. GTR5X AMPLIFIER WIRING
(3-CHANNEL MODE)

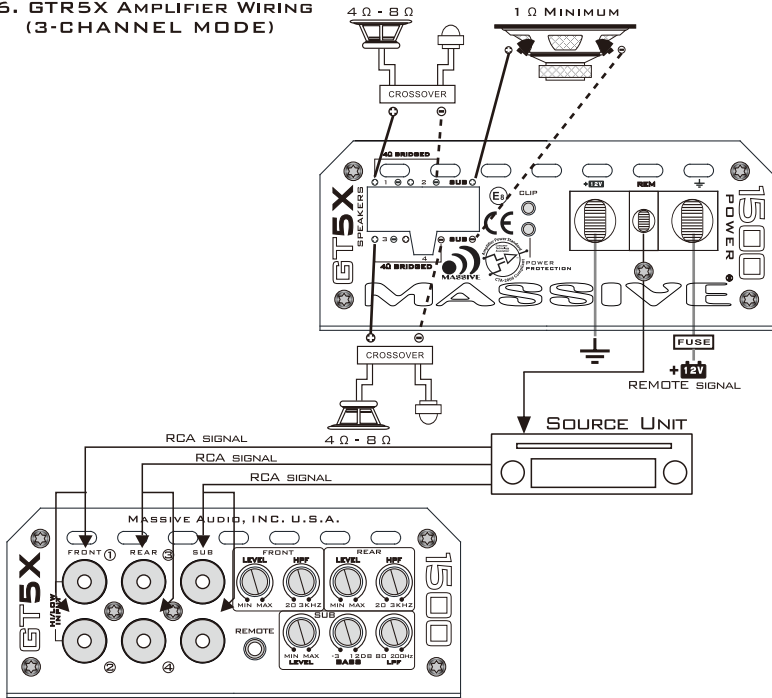
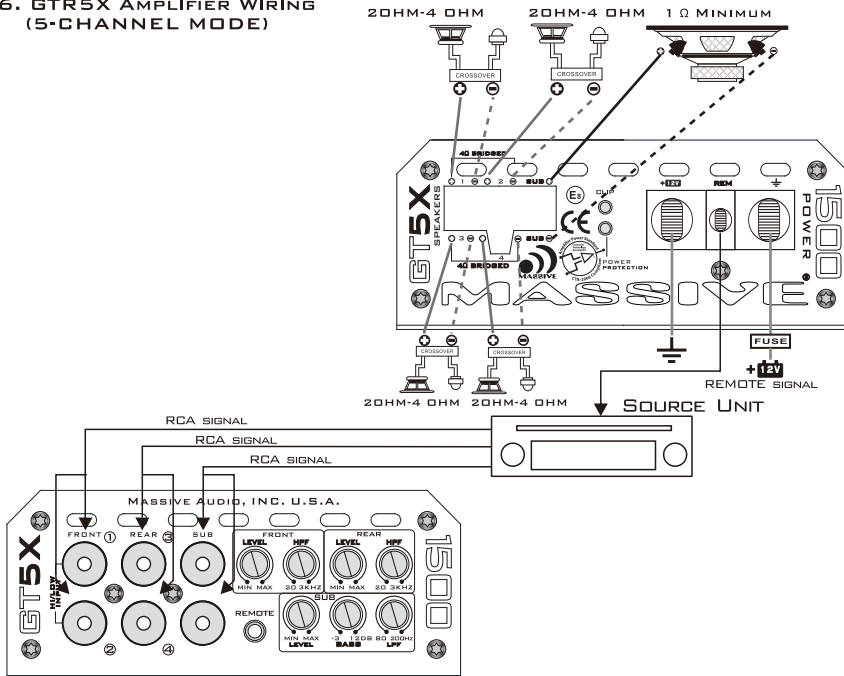


FIG 6. GTR5X AMPLIFIER WIRING
(5-CHANNEL MODE)



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

BRAND	MODEL NUMBER					
MASSIVE	GT1	GT4X	GT5X	GTR1A	GTR2A	GTR4X
POWER						
TOTAL WATTS (PEAK)						
RMS POWER @ 4 OHM	210WX1	75WX4	75WX4+190WX1	430WX1	810WX1	120WX4
RMS POWER @ 2 OHM	370WX1	120WX4	115W+300W	710WX1	1300WX1	200WX4
RMS POWER @ 1 OHM	520WX1	/	SUB 510W	1060WX1	2030WX1	/
RMS POWER @ 4 OHM BRIDGE	/	250WX2	230WX2	/	/	430WX2
Audio						
FREQUENCY RESPONSE	10HZ-250HZ	10HZ-40KHZ	SUB10HZ-200HZ 10HZ-40KHZ	10HZ-21KHZ	10HZ-21KHZ	10HZ-31KHZ
SIGNAL TO NOISE RATIO	95DB	94DB	91DB	92DB	93DB	91DB
EFFICIENCY @ 4OHM	90%	90%	90%	90%	90%	90%
DAMPING FACTOR	150	/	150	150	150	150
INPUT IMPEDANCE	20K	20K	20K	20K	20K	20K
CHANNEL SEPARATION	/	58DB	55DB	/	/	55DB
TOTAL HARMONIC DISTORTION (THD)	0.07%	0.06%	0.08%	0.10%	0.07%	0.08%
LOW LEVEL INPUT RANGE	300mv-7V	310mv-7V	320mv-6.7V	320mv-8V	310mv-8V	310mv-7.7V
SELECTABLE X-OVER	YES	YES	YES	YES	YES	YES
LOW PASS CROSSEVER(FUNCTION)-3DB	50HZ-250HZ	20HZ-500HZ	80HZ-200HZ	100HZ-20KHZ	100HZ-20KHZ	20HZ-3KHZ
SUB SONIC(LIMIT(HZ))-3DB	10HZ-50HZ	/	/	10HZ-3KHZ	10HZ-3KHZ	20HZ-3KHZ
BASS BOOST RANGE	0-12DB	/	(-3)-12DB	0-12DB	0-12DB	/
BASS BOOST FREQUENCY	/	/	/	30HZ-120HZ	30HZ-120HZ	/
FEATURES						
AMPLIFIER CLASS	CLASS D	CLASS D	CLASS D	CLASS D	CLASS D	CLASS D
NUMBER OF CHANNELS	1 CHANNEL	4 CHANNEL	5 CHANNEL	1 CHANNEL	1 CHANNEL	4 CHANNEL
MINIMUM IMPEDANCE	1Ω	2Ω	1Ω	1Ω	1Ω	2Ω
LED INDICATOR	YES	YES	YES	YES	YES	YES
POWER INPUT TERMINAL SIZE	4 AWG	4 AWG	4 AWG	4 AWG	4 AWG	4 AWG
REMOTE LEVEL CONTROL	YES	/	YES	YES	/	/
THERMAL PROTECTION	YES	YES	YES	YES	YES	YES
OVER-LOAD PROTECTION	YES	YES	YES	YES	YES	YES
DC OUTPUT PROTECTION	/	/	/	YES	YES	/
SHORT CIRCUIT OUTPUT PROTECTION	YES	YES	YES	YES	YES	YES
VOLTAGE INPUT PROTECTION	8-17V	8-17V	8-17V	8-17V	8-17V	8-17V
CLIPPING PROTECTION LED	YES	YES	YES	YES	YES	YES
DIMENSIONS						
OVERALL WIDTH(MM)	180	180	180	150	150	180
OVERALL HEIGHT(MM)	42	42	42	55	55	55
HEATSINK LENGTH(MM)	176	176	201	161	178	178
OVERALL WIDTH(INCHES)	7	7	7	5.9	5.9	5.9
OVERALL HEIGHT(INCHES)	1.65	1.65	1.65	2.16	2.16	2.16
HEATSINK LENGTH(INCHES)	6.9	6.9	7.9	6.33	7	7

SUBJECT TO TECHNICAL CHANGE

WARRANTY

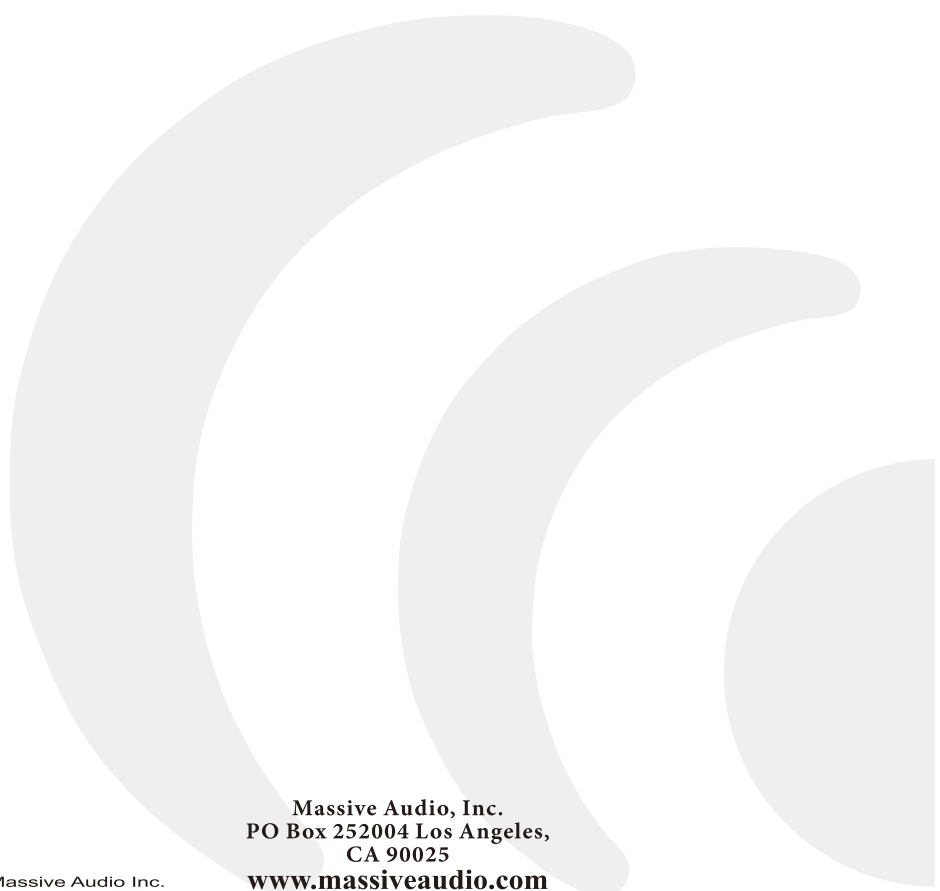
- Massive Audio, Inc. warrants all manufactured amplifier products to be free from defect in material and workmanship for a period not to exceed **ONE YEAR*** from the date of original purchase when installed by an authorized Massive Audio® dealer. Units that are not installed by an authorized Massive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



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