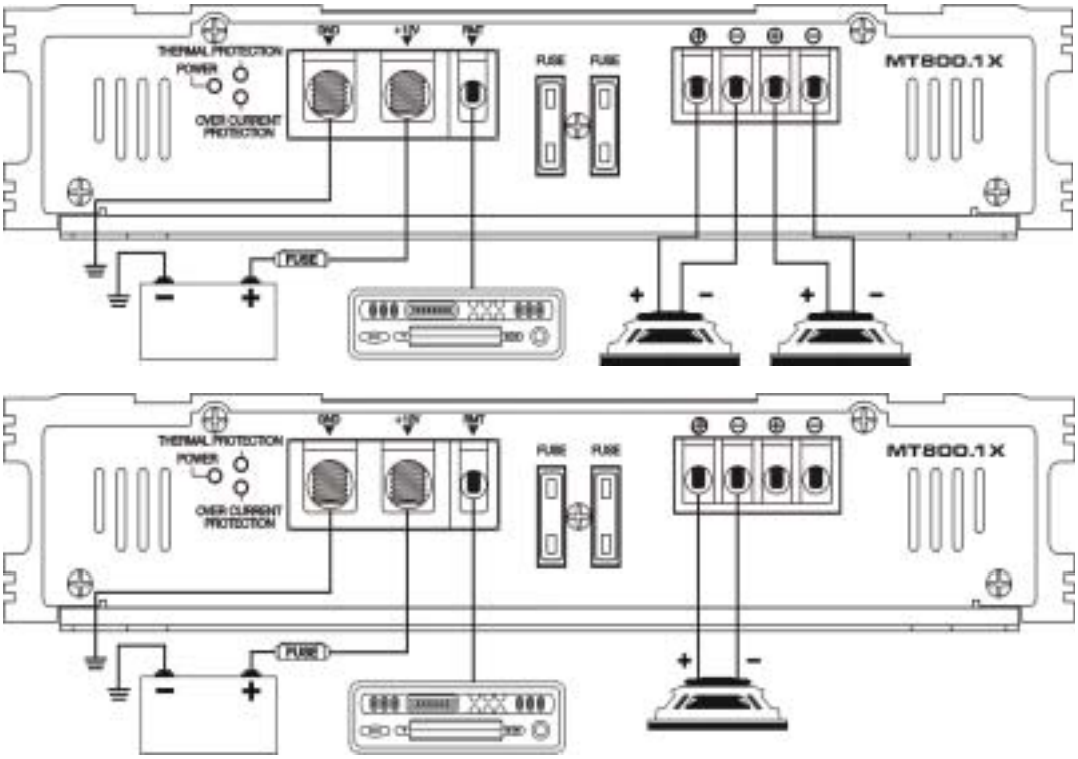
MUTANT X

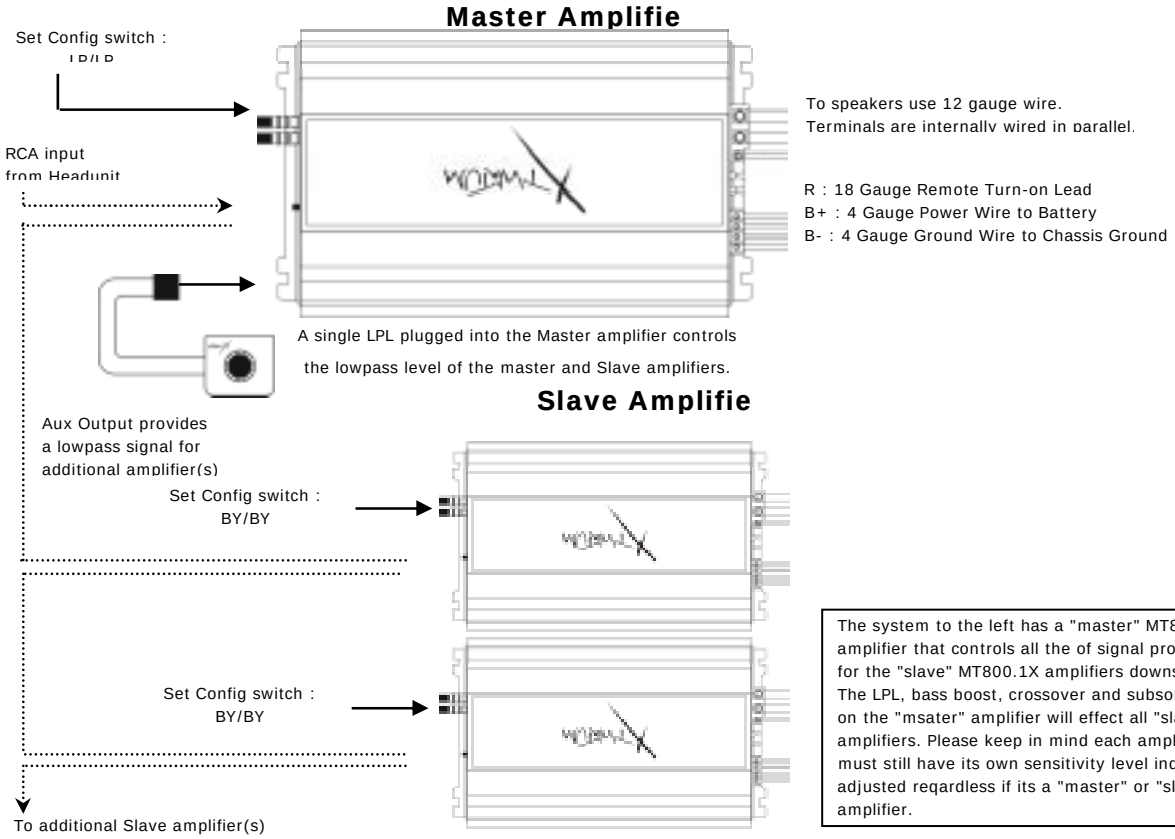
Instruction Manual

- MT800.1X
- MT100.2X
- MT300.4X

System Example



SPL System Example



The system to the left has a "master" MT800.1X amplifier that controls all the of signal processing for the "slave" MT800.1X amplifiers downstream. The LPL, bass boost, crossover and subsonic filter on the "msater" amplifier will effect all "slave" amplifiers. Please keep in mind each amplifier must still have its own sensitivity level individually adjusted reqardless if its a "master" or "slave" amplifier.

Operational Details

MUTANT X
MT800.1X 1 Channel

- 1 Ohm Stable D Class Amplifier Design
- Accurate Stated Amplifier Ratings
- Variable Bass Boost 0 - +15dB
- Varable Subsonic Filter from 20Hz - 55Hz
- Silver Plated 4 Gauge Power and Ground Connections
- Silver Plated Audio Input and Output Connections
- Bass Remote Controller Included
- Silver Plated RCA Output for multi-amp Installations
- Silver Plated Dual 8 Gauge Speaker Output Connections

①LPL REMOTE PORT
This port allows connection to the bass control which is included. To allow bass level control of the amplifier, mount the bass control in a convenient location in the passenger compartment.

③RCA INPUT
Connect these RCA connectors to a head unit with a LOW LEVEl output connection.

RCA OUTPUT
Use these RCA output connectors to connect to a secondary amplifier. This output is a selectable by the Crossover Selector switch

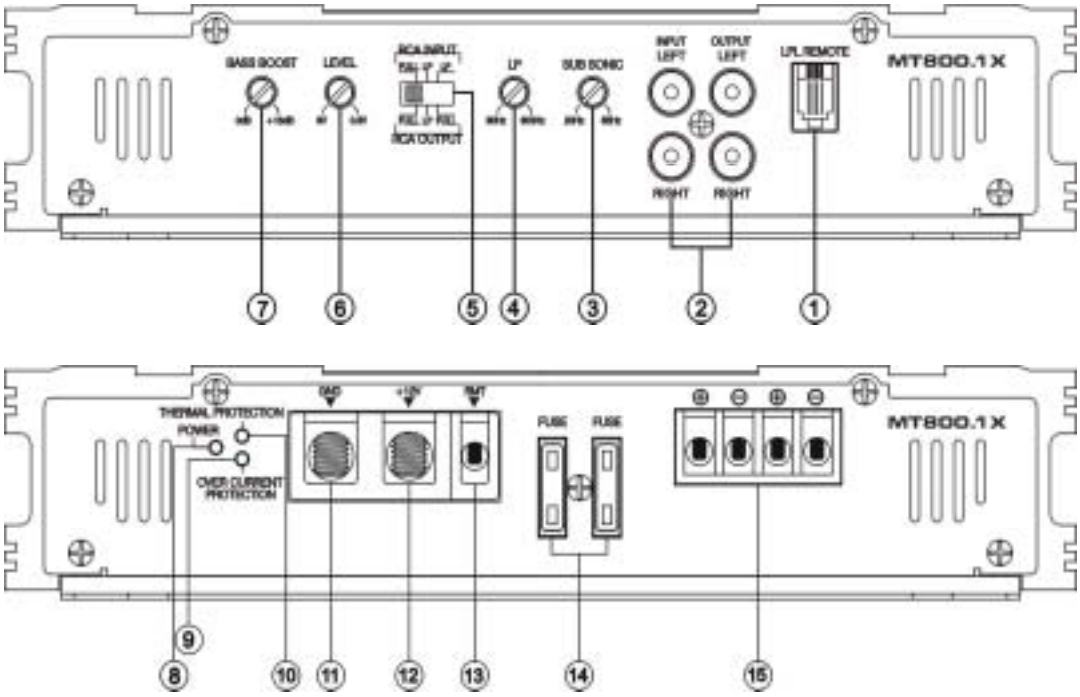
③SUBSONIC FILTER
This is a variable control that filters out all Sub Bass Frequencies point at 18dB/octave.

④LOW PASS
Set the crossover switch to LP when a subwoofer is connected. Ensure the crossover frequency is set at 100Hz or below.
NOTE : Failure to do so could result in speaker damage.

⑤CROSSOVER SELECTOR
Set the apprpriate mode of operation, this switch affects the speaker output as well as the RCA output. The top selection options are fed to the speaker output and the bottom selection options are fed to the RCA output connection. When FULL is selected th Crossover, Subsonic Filter and Bass functions are by-passed.

⑥LEVEL
This allows level adjustment of the input signal. Use this control to correctly match the head unit to the amplifier. To set this control correctly, turn the amplifier leve to MIN and the head unit to 3/4 volume, with the BASS and TREBLE on zero, then slowly turn up this amplifier level control towards the MAX end of the control.
NOTE : If the sound becomes distorted, turn this control down.

⑦BASS BOOST
This a variable control to increase the bass boost at 45Hz from 0 - +15dB of gain, adjust to suit.



⑧⑨⑩POWER, STATUS AND THERMAL LED's
This shows if the amplifier has been correctly powered up, if any faults are present and if the amplifier has overheated

⑪GROUND INPUT
Connect directly to the vehicle's chassis via a 4 gauge power cable.
NOTE : This is to be the first wire to connect when wiring up a amplifiers damage could result if this not done.

⑫+12V INPUT
This must be connected to the vehicle battery positive(+) terminal via a 4 gauge power cable and with an inline fuse or circuit breaker at the battery end.
NOTE : This is to be last wire to connect up during installation as damage could result.

⑬REMOTE INPUT
This terminal is for turning the amplifier on and off. This requires a switched postive (+)12V to power 'ON' the amplifier, this can be found on the rear of the head unit in the form of a electric antenna output, or a remote on output. If not available you can wire to the ACC position on the key.

⑭FUSES
Please ensure correct type of fuse is fitted.

⑮SPEAKER OUTPUT
See 1 channel installation diagram in this manual for correct speaker connection. PLEASE NOTE : The two (-) terminals are internally wired in parallel inside the amplifier as well as the two (+) terminals.

Operational Details

MUTANT X
MT100.2X 2 Channel

- 2 Ohm Stable MOSFET Amplifier Design
- Accurate Stated Amplifier Ratings
- Variable Bass Boost 0 - +18dB
- Varable LP and HP Electronic X-OVER @ 12dB/octave
- Regulted Amplifier Technology
- Intercooled Semi-conductor Technology
- Silver Plated 4 Gauge Powwer and Ground Connections
- Silver Plated Audio Input and Output Connections
- Silver Plated RCA Output for multi-amp Installations

①RCA OUTPUT
Use these RCA output connectors to connect to a secondary amplifier. This output PASS-THRU connection derived from the RCA input connector so the signal level and frequency response is the same as the original input signal.

RCA INPUT
Connect these RCA connectors to a head unit with a LOW LEVEL Output connection.

②LEVEL
This allows level adjustment of the input signal. Use this control to correctly match the amplifier. To set this control correctly, turn the amplifier level to MIN and the head unit to 3/4 volume, with the BASS and TREBLE on zero, then slowly turn up this amplifier level control towards towards the MAX end of the control. NOTE : If the sound becomes distorted, turn this control down.

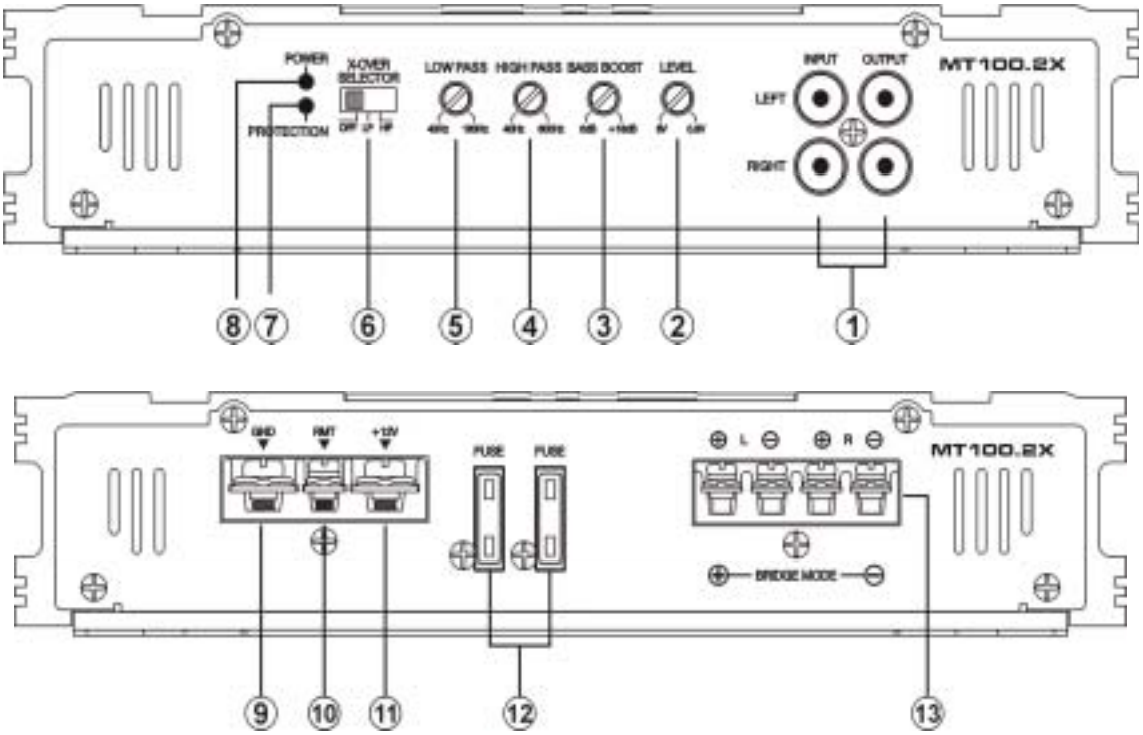
③BASS BOOST
This a variable control to increase the bass boost at 45Hz from 0 - +15dB of gain, adjust to suit.

④HIGH PASS
Set the crossover switch to HP and turn this control to 65Hz or above when using speaker's smaller than 6 x 9", this feature is designed to filter out all low bass frequencies that only SUBWOOFERS should produce. NOTE : Failure to do so could result in speaker damage.

⑤LOW PASS
Set the crossover switch to LP when a subwoofer is connected. Ensure the crossover frequency is set at 100Hz or below, this feature is designed to filter out all mid to high frequencies that only FULL RANGE speakers should produce. NOTE : Failure to do so could result in speaker damage.

⑥CROSSOVER SELECTOR
Set the apprpriate mode of operation. The 3 positions available are OFF, LP and HP.

⑦⑧POWER, STATUS AND THERMAL LED's
This shows if the amplifier has been correctly powered up and if any faults are present.



⑨GROUND INPUT
Connect directly to the vehicle's chassis via a 4 gauge power cable. NOTE : This is to be the first wire to connect when wiring up a amplifiers damage could result if this not done.

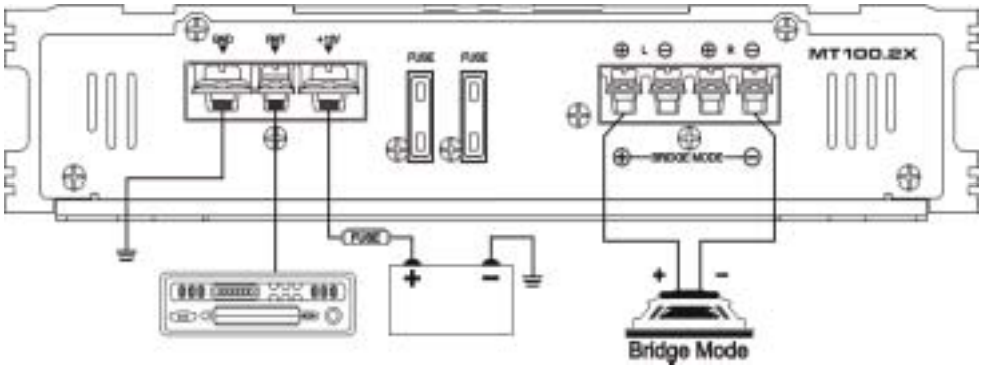
⑩REMOTE INPUT
This terminal is for turning the amplifier on and off. This requires a switc postive (+)12V to power 'ON' the amplifier, this can be found on the rea of the head unit in the form of a electric antenna output, or a remote on output. If not available you can wire to the ACC position on the key.

⑪+12V INPUT
This must be connected to the vehicle battery positive(+) terminal via a 4 gauge power cable and with an inline fuse or circuit breaker at the battery end. NOTE : This is to be last wire to connect up during installation as damage could result.

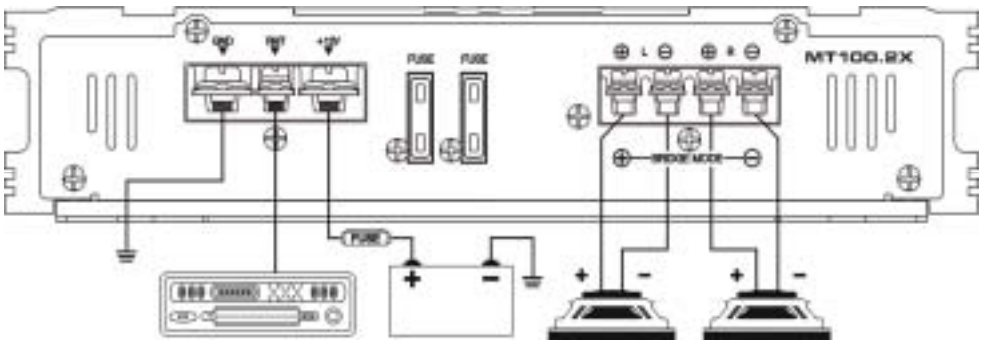
⑫FUSES
Please ensure correct type of fuse is fitted.

⑬SPEAKER OUTPUT
See 2/1 channel installation diagrams in this manual for correct speaker connection.

System Example (Bridged Mode)



System Example (Stereo Mode)



Troubleshooting

Symptoms	Check	Cure
Amplifier turns off at low volume levels.	● Check speakers for damage or short circuit.	● Have your dealer inspect the speakers
No sound.	● Is the power LED I lluminated?	● Is the power LED I lluminated? ● Be sure 12V remote lead is connected. ● Check signal leads. ● Check gain control. ● Check tuner/deck volume level. ● Clean contacts on fuse holders.
	● Check for speaker short circuit or amplifiers overheating.	● Have your dealer inspect the speakers.
No sound in one channel.	● Check speaker leads.	● Inspect for short circuit or an open connection.
	● Check audio leads.	● Reverse left and right RCA Inputs to determine if problem is occurring before the amplifier
Amplifier turning off at medium or high volume levels.	● Check speaker load impedance.	● Be sure speaker load impedance recommendations are observed. (If you use an ohmmeter to check speaker resis-tance, please remember that DC resistance and AC impedance may not be the same.)

Operational Details

MUTANT X
MT300.4X 4 Channel

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- 2 Ohm Stable MOSFET Amplifier Design
- Accurate Stated Amplifier Ratings
- Variable Bass Boost 0 - +18dB
- Varable LP and HP Electronic X-OVER @ 18dB/octave
- Intercooled Semi-conductor Technology
- Silver Plated 4 Gauge Powwer and Ground Connections
- Silver Plated Audio Input and Output Connections
- Efficient Heat Sink Transfer Technology
- Silver Plated RCA Output for multi-amp Installations

①RCA OUTPUT

Use these RCA output connectors to connect to a secondary amplifier. This output SUMMED OUTPUT connection derived from the front RCA input and the rear RCA input connectors

REAR RCA INPUT

Connect these RCA connectors to the rear LOW LEVEL output connection from the headunit.

FRONT RCA INPUT

Connect these RCA connectors to the front LOW LEVEL output connection from the headunit.

②INPUT SELECTOR SWITCH

For four channel operations with two channel input signals, you must select the '2Ch' input signals, you must select the '2Ch input switch position. For audio systems with four channel RCA output, you should select the '4Ch' position.

③OUTPUT SELECTOR SWITCH

You can choose which pair of inputs you wish to use by switching the 'output select' switch to the appropriate position.

④LEVEL

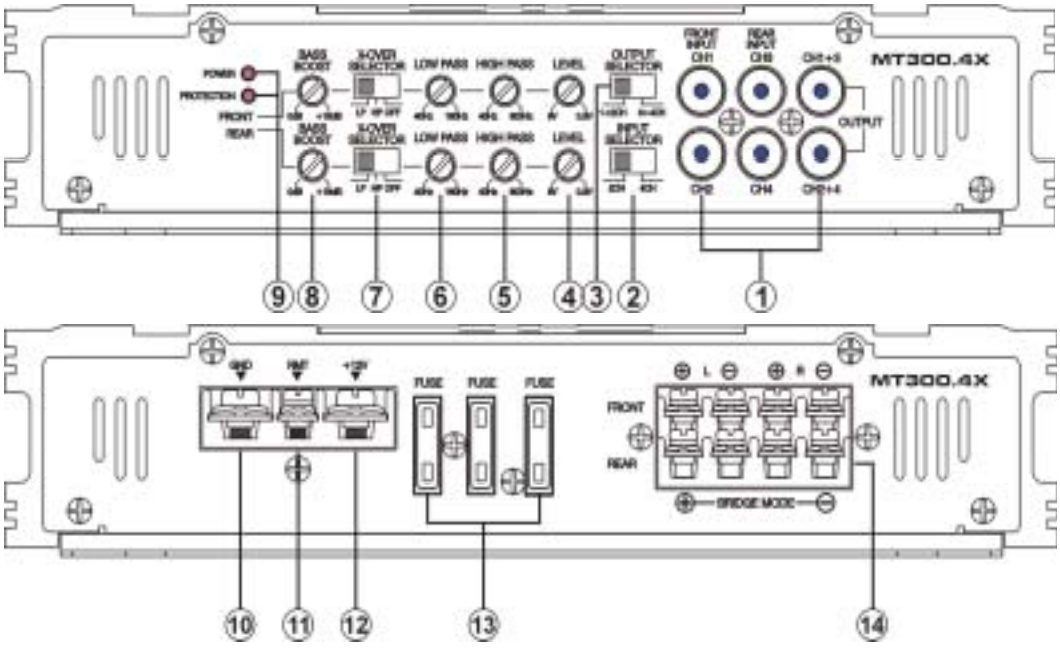
This allows level adjustment of the input signal. Use this control to correctly match the amplifier. To set this control correctly, turn the amplifier level to MIN and the head unit to 3/4 volume, with the BASS and TREBLE on zero, then slowly turn up this amplifier level control towards towards the MAX end of the control. NOTE : If the sound becomes distorted, turn this control down.

⑤HIGH PASS

Set the crossover switch to HP and turn this control to 65Hz or above when using speaker's smaller than 6 x 9", this feature is designed to filter out all low bass frequencies that only SUBWOOFERS should produce. NOTE : Failure to do so could result in speaker damage.

⑥LOW PASS

Set the crossover switch to LP when a subwoofer is connected. Ensure the crossover frequency is set at 100Hz o below, this feature is designed to filter out all mid to high frequencies that only FULL RANGE speakers should produce. NOTE : Failure to do so could result in speaker damage.



⑦CROSSOVER SELECTOR

Set the apprpriate mode of operation. The 3 positions available are OFF, LP and HP.

⑧BASS BOOST

This a variable control to increase the bass boost at 45Hz from 0 - +18dB of gain, adjust to suit.

⑨POWER, STATUS AND THERMAL LED's

This shows if the amplifier has been correctly powered up, if any faults are present.

⑩GROUND INPUT

Connect directly to the vehicle's chassis via a 4 gauge power cable. NOTE : This is to be the first wire to connect when wiring up a amplifiers damage could result if this not done.

⑪REMOTE INPUT

This terminal is for turning the amplifier on and off. This requires a switched postive (+)12V to power 'ON' the amplifier, this can be found on the rear of the head unit in the form of a electric antenna output, or a remote on output. If not available you can wire to the ACC position on the key.

⑫+12V INPUT

This must be connected to the vehicle battery positive(+) terminal via a 4 gauge power cable and with an inline fuse or circuit breaker at the battery end. NOTE : This is to be last wire to connect up during installation as damage could result.

⑬FUSES

Please ensure correct type of fuse is fitted.

⑭SPEAKER OUTPUT

See 4/3/2 channel installation diagrams in this manual for correct speaker connection.

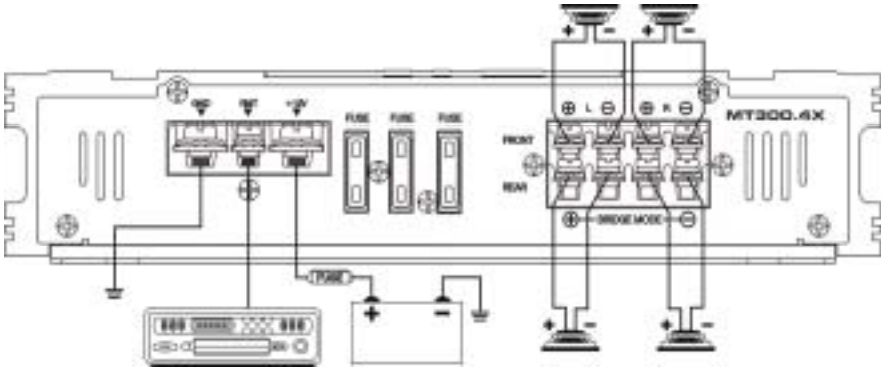
POWER CABLE CALCULATOR

MUTANT X
MT300.4X 4 Channel

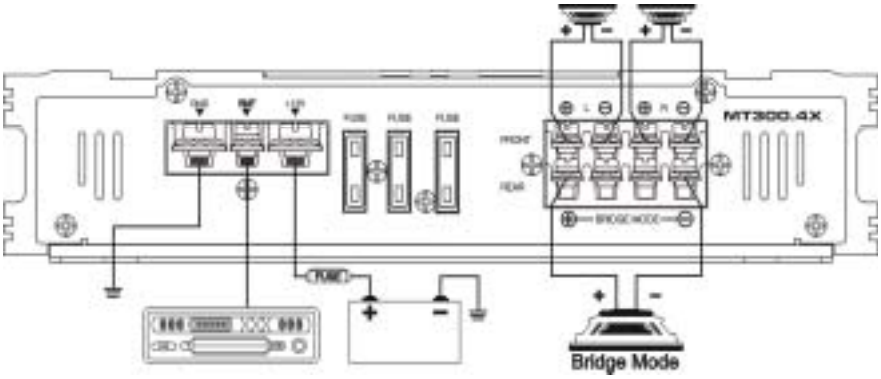
Total Amperage	0-4ft	4-7ft	7-10ft	10-13ft	13-16ft	16-19ft	19-22ft	22-28ft
0-20	14	12	12	10	10	8	8	8
20-35	12	10	8	8	6	6	6	4
35-50	10	8	8	6	4	4	4	4
50-65	8	8	6	4	4	4	4	2
65-85	6	6	4	4	2	2	2	0
85-105	6	6	4	2	2	2	2	0
105-125	4	4	4	2	0	0	0	0
125-150	2	2	2	0	0	0	0	0

The above chart shows cable gauges to be used, if no less than a 0.5 volt drop is acceptable. If aluminum wire or tinned wire is used, the gauges sould be of an even larger size to compensate. Cable gauge size calculation takes into account terminal connection resistance. 1 Metre = 3.28 Feet

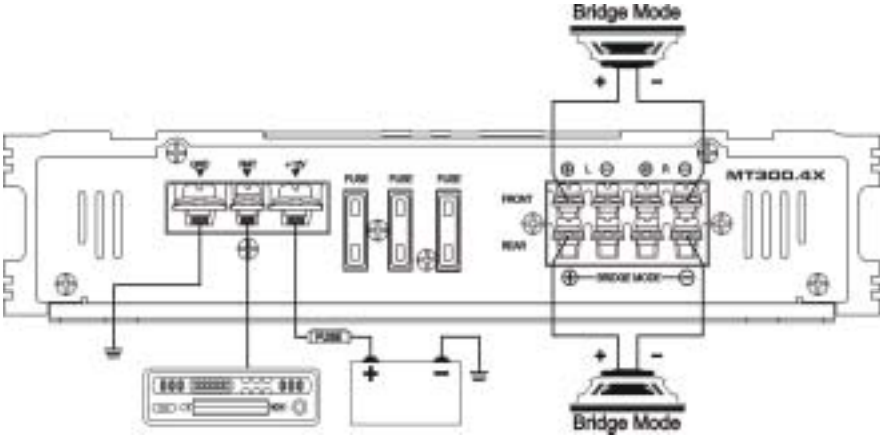
4 Channel Installation



3 Channel Installation



2 Channel Installation



Specifications

	MT800.1X	MT100.2X	MT300.4X
into 4 Ohms at 14.4V	300W x 1Ch	50W x 2Ch	75W x 4Ch
into 2 Ohms at 14.4V	575W x 1Ch	75W x 2Ch	120W x 4Ch
into 1 Ohms at 14.4V	800W x 1Ch	No	No
Bridged 4 Ohms 14.4V	No	150W x 1Ch	225W x 2Ch
Frequency Response	20Hz ~ 330KHz	20Hz ~ 22KHz	20Hz ~ 22KHz
S/N Ratio	> 90dB	> 95dB	> 90dB
T.H.D	< 0.05 %	< 0.03 %	< 0.05 %
Recommended Fuse size	40A x 2	25A x 1	25A x 3
Input Sense	300mV - 8V		
Separation	< 60 dB		
LP Variable X-Over	30Hz ~ 300Hz @ 18dB/Octave	40Hz ~ 450Hz @ 12dB/Octave	
HP Variable X-Over	No	65Hz ~ 450Hz @ 12dB/Octave	
Variable Bass Boost	0~+18dB at 45Hz	0~+12dB at 45Hz	
Input Inpedance	20kΩ		
Damping Factor	> 200		

dB level	**example**
30	Quiet library, soft whispers
40	Living room, refrigerator, away from traffic
50	Light traffic, normal conversation, quiet office
60	Air conditioner at 20 feet, sewing machine
70	Vacuum cleaner, hair dryer, noisy restaurant
80	Average city traffic, garbage disposals, alarm clock at 2 feet

The following noises can be dangerous under constant exposure

90	Subway, motorcycle, truck traffic, lawn mower
100	Garbage truck, chain saw, pneumatic drill
120	Rock band concert in front of speakers, thunderclap
140	Gunshot blast, jet plane
180	Rocket launching pad

Information courtesy of the deafness Research Foundation.