



# OWNER'S MANUAL

## *Jr. Series*

*2 Ohm Stable,  
MOSFET 2/1 Channel Power Amplifier*

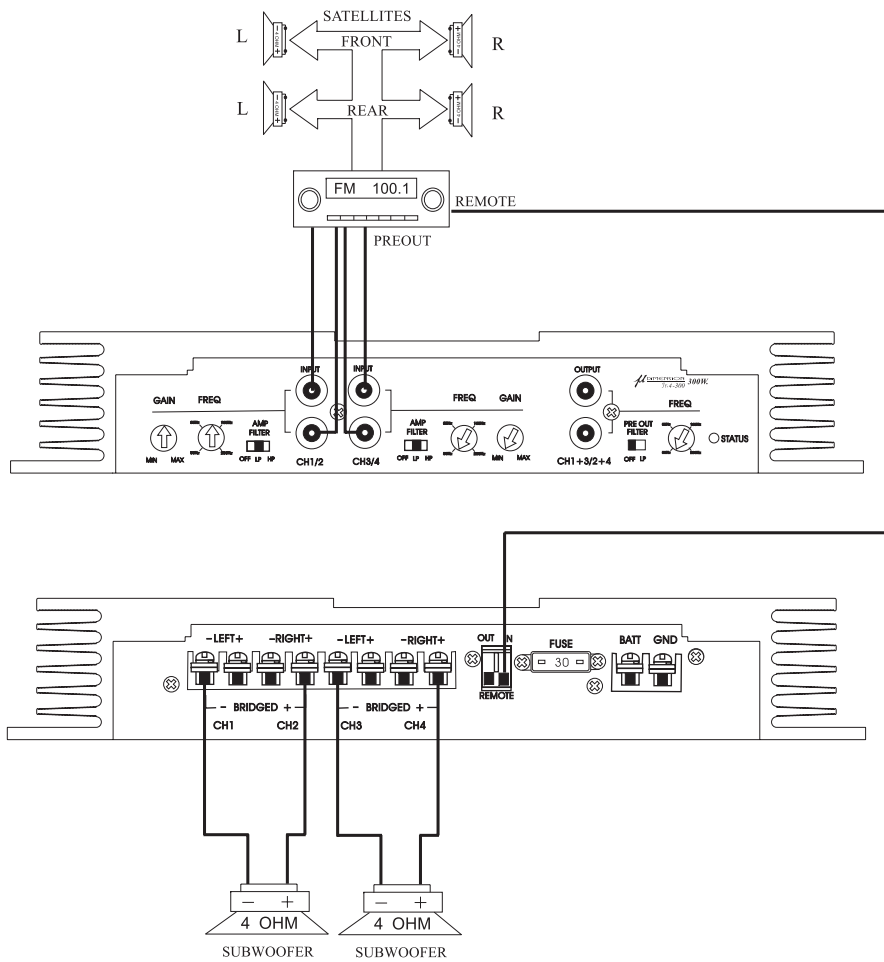
*Model Jr.2-150*

*Model Jr.2-370*

*2 Ohm Stable,  
MOSFET 4/3/2 Channel Power Amplifier*

*Model Jr.4-300*

# SAMPLE SYSTEM CONNECTIONS



2 CHANNEL (SUBWOOFER)

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# FEATURES

## Circuitry

100%POWER MOSFETs driven high efficiency switching power supply. And SEPP output stage constructed by real Darlington transistors.

## Pulse Width Modulated Power Supply

The PWM power supplies inside these amplifiers are both high efficiency and low noise. Since high performance power MOSFETs and PHOTO ISOLATED technology are used. Output signal is very clean as a result of very low noise interference and lower distortion from the power supply

## Audio Stage Design

Excellent power supply noise rejection ability for voltage amplification stage due to the use of constant current driven differential amplifier. Low negative feedback circuitry reduces overall distortion and greatly lessens harmful high order harmonics.

## Protection Circuitry

Every piece of amplifier incorporates a 4-Way Protection Circuitry.If driven below 1ohm; shorted the speaker outputs, DC voltage appears on the speaker outputs , over-voltage connected from battery input or overheated the amplifier , the protection circuit will shut off the amplifier to prevent damage. When the LED indicator of front panel changes color from green to RED , the protection circuit is activated the amplifier auto reset after it cools down under overheating condition or manually reset by simply switching the power off and on.

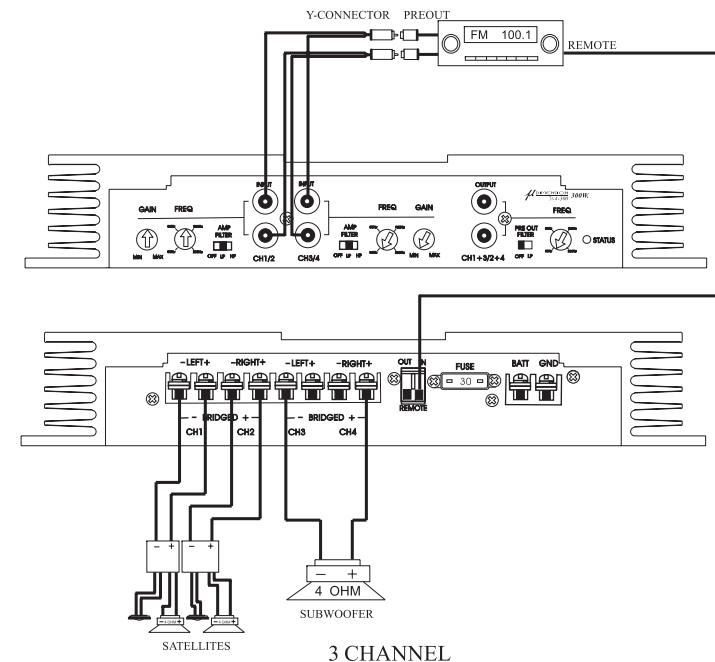
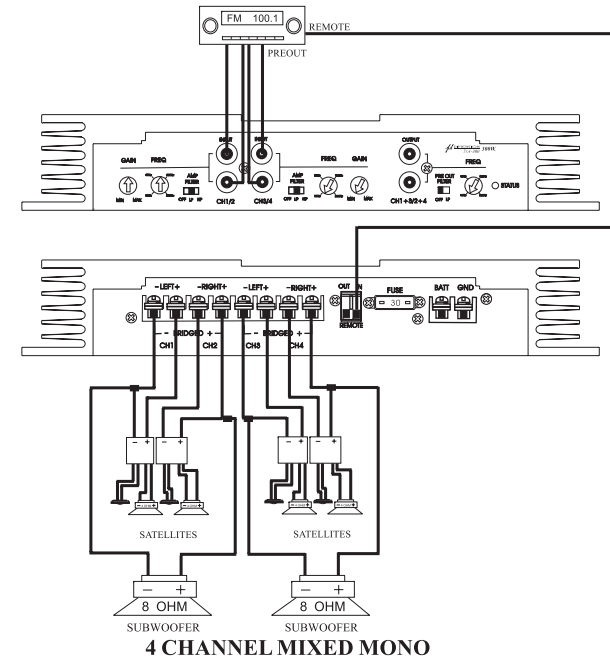
## MIL Spec P.C.Board

The components are all assembled by hand onto FR4 fiberglass P.C.Board.This assures that all high current carrying traces are of uniformly controlled Dimension. The P.C.boards are double sided to utilize space efficiently.

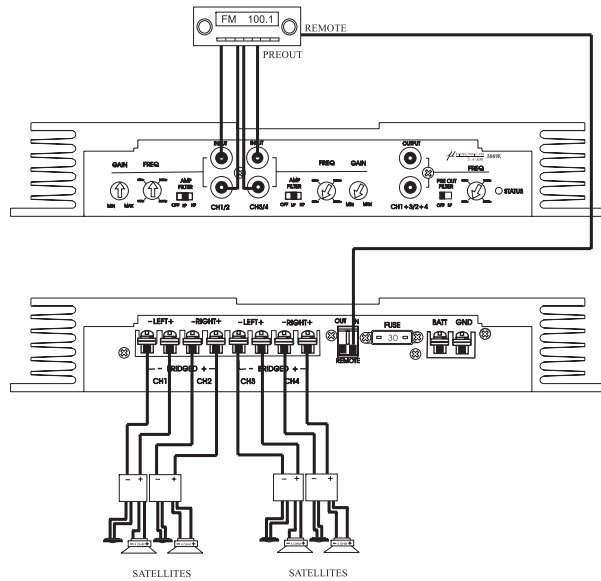
## Built In Crossovers & Tone Controls

For the purpose of saving your money to buy an extra crossover,each U-dimension amplifier builds in a 12dB/oct slope,50Hz to 200Hz continuously adjustable Two Way electronic crossover.There are both High Pass and Low Pass crossover output RCA jacks on the front panel.There is an INT XOVER (internal crossover) selector switch for you to select High Pass , Low Pass or Bypass (OFF) signal for internal power amplification . There are also tone controls that can be Adjusted at bass 45Hz±18dB and treble 11.5KHz ± 12dB range.

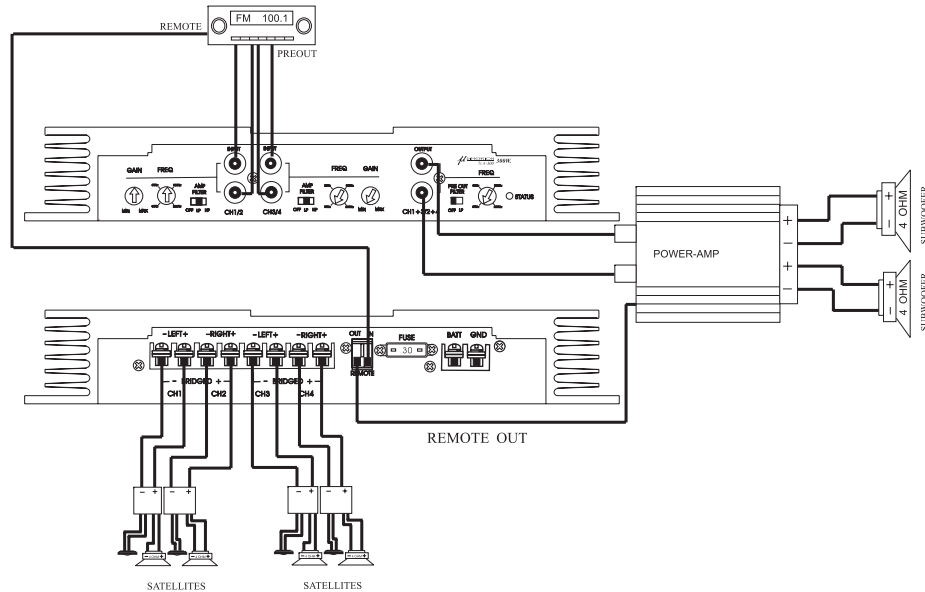
# SAMPLE SYSTEM CONNECTIONS



# SAMPLE SYSTEM CONNECTIONS



4 CHANNEL SATELLITES

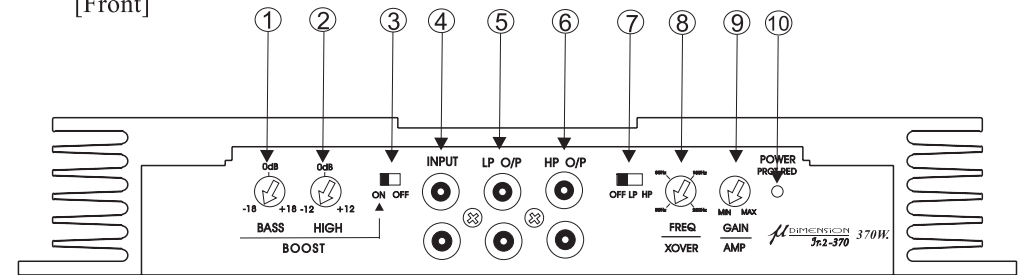


4 CHANNEL SATELLITES/SUBWOOFER LINE OUTPUTS

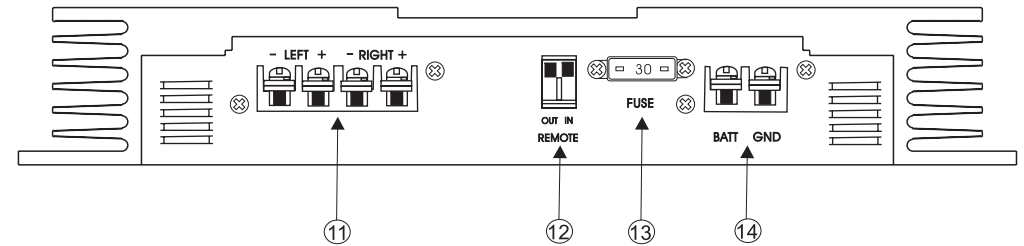
# CONTROLS AND CONNECTIONS

Jr.2-150 / Jr.2-370

[Front]



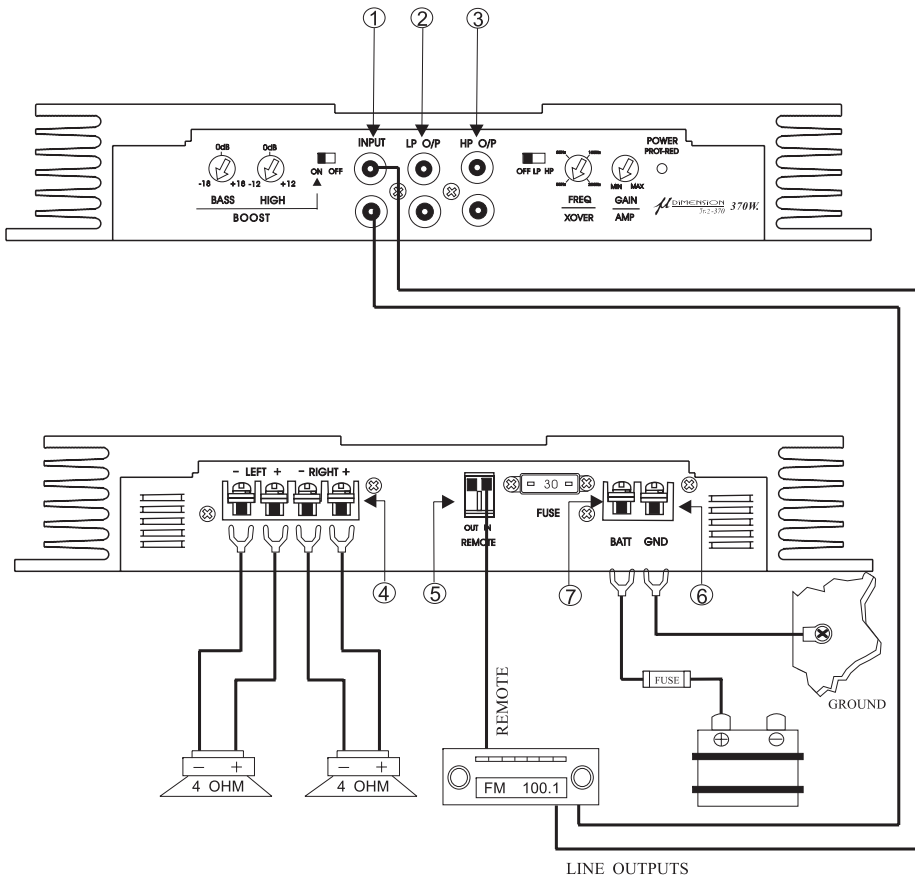
[Rear]



- ① High Boost
- ② Bass Boost
- ③ Boost ON/OFF Switch
- ④ RCA Input Jacks
- ⑤ RCA Electronic Crossover Low Pass Preout(LP)
- ⑥ RCA Electronic Crossover high Pass Preout(HP)
- ⑦ Internal Crossover Selector Switch
- ⑧ Crossover Frequency Adjustment
- ⑨ Amplifier Gain Control
- ⑩ Power On(Green)/Protection mode (Red) LED Indicator
- ⑪ Speaker Output Terminals
- ⑫ Remote Input/Output Connectors
- ⑬ Fuse
- ⑭ Power Supply Terminals

# CONTROLS AND CONNECTIONS

Please refer to the connection descriptions of Page 5



# INSTALLING INSTRUCTIONS

Please read the following installation instructions carefully. This will ensure your U-dimension equipment to function optimally for many years.

1. Make sure that the unit has sufficient ventilation. Do not mount the amp near hot engine compartment or electronic devices.
2. Run the black ground wire to the nearest good chassis ground point.
  - Be sure to remove paint and rust to make a high quality connection to the Chassis.
  - The lug which you attach to the black wire must be crimped well and Soldered.
3. The red wire must be extended with an appropriate gauge wire and run to the positive battery terminal via the supplied fuse.
  - The fuse must be located near the battery for absolute protection.
  - DO NOT use any over-rated fuse value.
4. Connect the REMOTE IN connector lead to the remote output wire from the head unit.
5. Make sure that the amplifier is securely mounted. Run the RCA inputs to the outputs of the preceding piece of equipment by using only quality patch cords. Be sure to observe the proper channel destination.
  - Connect OUTPUT jacks to correct amplifier inputs if they are used for driving other amplifiers.
  - Select proper switch position. LP means low pass, OFF means bypass for PREOUT FILTER.
  - Tune the preout crossover frequency (XOVER FREQ) to the selected frequency point.
  - Select the Amp filters (CH1/2,3/4) to proper position. HP means High pass, LP means low pass and OFF means bypass for amplifier filter.
  - Set the amp gain (sensitivity from 0.2V to 4V) to the level which matches that of the head unit (and other amplifiers).
6. Connect the speaker systems to the terminal block. Observe the polarity carefully so as to keep the speakers in phase.
  - Connecting the amplifiers for subwoofer operation with satellite speakers i.e. Tri-mode, please see warning.
  - Any U-dimension 2/4 channel amplifier may be used in this mode. The crossover frequency for the subwoofer is determined by the values of the coils, Capacitors and speaker impedance.

## WARNING

1. The impedance which each channel "sees" is the impedance of the satellite speaker in parallel with 50% of the woofers impedance in a Tri-mode Connection.
2. To keep the total impedance on each channel above 2 ohms the subwoofer must be 8 ohms and the satellites not less than 4 ohms.
3. It is highly recommended that correct passive crossovers are simultaneously used in the operation involving one pair of stereo satellites and one bridged Subwoofer.

## **CONNECTIONS DESCRIPTION**

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### **① RCA Input Jacks(CH1/2/3/4)**

The Line-Out leads of your head unit are connected here using RCA extension patch cords.Be sure to observe proper channel designation-Left to Left, Right to Right,Front to CH1/2,and Rear to CH3/4.

### **② RCA pre-amplifier Output Jacks(CH1+3/2+4)**

RCA preout Jacks provide summed outputs which can deliver either Full Range or Low pass Signal by switching the PREOUT FILTER switch to OFF or LP.The crossover frequency is decided by tuning the PREOUT FILTER FREQ knob.Connect OUTPUT Jacks to the amplifier which drives Satellites or Subwoofers.

### **③ Speaker Output Terminals**

Make sure to observe correct speaker connections,maintaining the Right polarity of the speakers.Positive(+)and Negative(-)terminals.

### **④ Remote Input/Output Leads**

Connect remote input to the remote turn-on lead of your head unit and in turn connect remote output lead to turn on the other amplifier(s)which use crossover output signals and thus eliminating noise caused by asynchronous turn on timing.

### **⑤ Ground Lead(Black)**

Secure the connection of this lead to a clean bare metal spot on the vehicle's chassis.Verify this point to be a true ground by checking for continuity between the point and the negative terminal of the vehicle's battery.

### **⑥ Battery Lead Connect(Red)**

For the power terminal connection,an appropriate gauge wire is run to the positive battery terminal via a fuse of adequate amperes.The Fuse must be placed close to the vehicle battery.and plugged in after all connections have been made to ensure maximum protection.

## **CONNECTION DESCRIPTIONS**

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### **① RCA Input Jacks**

The Line-Out leads of your head unit are connected here using RCA extension patch cords.Be sure to observe proper channel designation-Left to Left and Right to Right.

### **② RCA Low Pass Pre-amplifier Output Jacks**

Connect Low Pass output to the amplifier which drives the woofer or the subwoofer. By tuning the XOVER FREQ knob,crossover frequency point can be easily changed from 50Hz to 200Hz.

### **③ RCA High Pass Pre-amplifier Output Jacks**

Connect High Pass output to the amplifier which drives the midrange or the tweeter. The crossover frequency point is always tracking the same frequency point as that of Low Pass crossover.

### **④ Speaker Output Terminals**

Make sure to observe correct speaker connections,maintaining the polarity of the speakers. Positive(+)and Negative(-)terminals.

### **⑤ Remote Input/Output Leads**

Connect remote input to the remote turn-on lead of your head unit and in turn connect remote output lead to turn on the other amplifier(s)which use crossover output signals and thus eliminating noise caused by asynchronous turn on timing.

### **⑥ Ground Lead(Black)**

Secure the connection of this lead to a clean bare metal spot on the vehicle's chassis. Verify this point to be a true ground by checking for continuity between the point and the negative terminal of the vehicle's battery.

### **⑦ Battery lead Connect(Red)**

For the power terminal connection,an appropriate gauge wire is run to the positive battery terminal via a fuse of adequate amperes.The Fuse must be placed close to the vehicle battery.And plugged in after all connections have been made to ensure maximum protection.

# INSTALLING INSTRUCTIONS

Please read the following installation instructions carefully. This will ensure your U-dimension equipment to function optimally for many years.

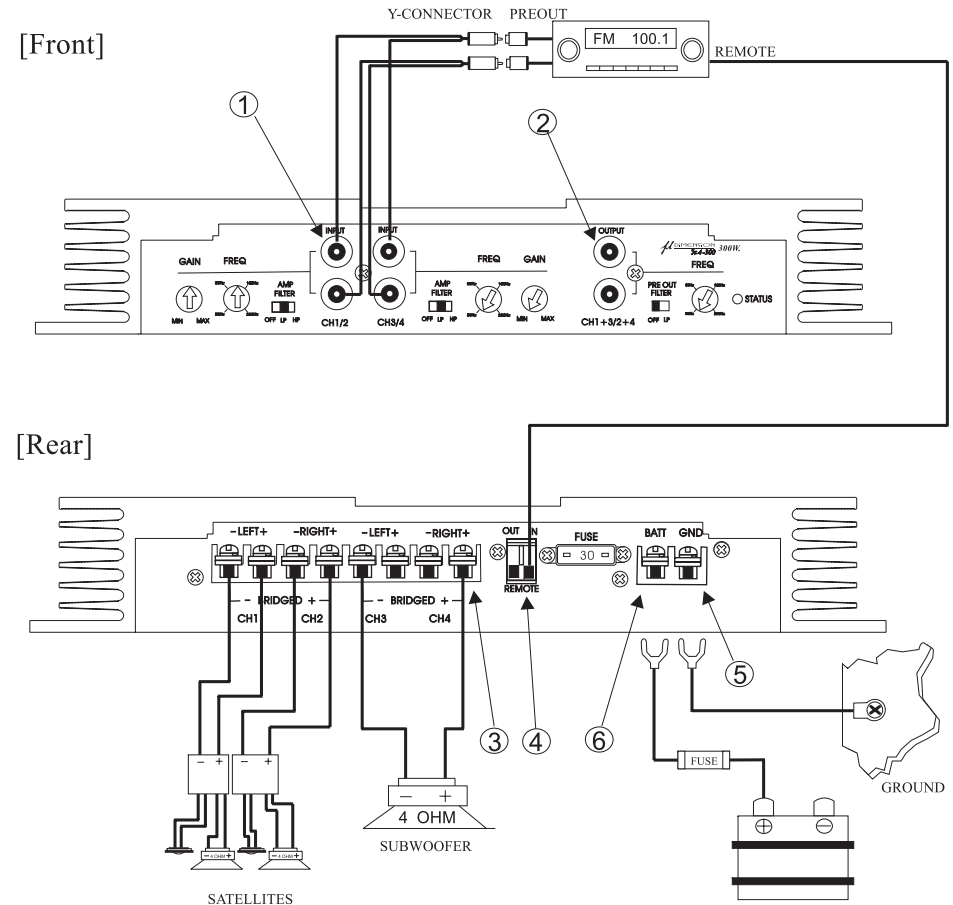
1. Make sure that the unit has sufficient ventilation. Do not mount the amp near hot engine compartment or electronic devices.
2. Run the black ground wire to the nearest good chassis ground point.
  - Be sure to remove paint and rust to make a high quality connection to the Chassis.
  - The lug which you attach to the black wire must be crimped well and Soldered.
3. The red wire must be extended with the appropriate gauge wire and run to the positive battery terminal via the supplied fuse.
4. Connect the REMOTE IN connector lead to the remote output wire from the head unit.
5. Make sure that the amplifier is securely mounted. Run the RCA inputs to the outputs of the preceding piece of equipment by using only quality patch cords. Be sure to observe the proper channel destination.
  - Connect LP and ( or )HP outputs to correct amplifier inputs if they are used for driving other amplifiers.
  - Select proper switch position. HP means high pass; LP means low pass, and OFF means by pass for internal crossover (INT XOVER) of amplifier.
  - Tune the crossover frequency ( XOVER FREQ ) to the selected frequency point.
  - Set the amp gain (sensitivity from 0.2v to 4v) to the level which matches that of the head unit (and other amplifiers).
  - Adjust the bass/treble controls to suit your listening preference.
6. Connect the speaker systems to the terminal block. Observe the polarity carefully so as to keep the speakers in phase.
  - Connecting the amplifiers for subwoofer operation with satellite speakers i.e. Trimode, please see warning.
  - Any U-dimension 2 channel amplifier may be used in this mode. The crossover Frequency for the subwoofer is determined by the values of the coils, Capacitors and speaker impedance.

## WARNING

1. The impedance which each channel "sees" is the impedance of the satellite speaker in parallel with 50% of the woofers impedance in a Tri-mode Connection.
2. To keep the total impedance on each channel above 2 ohms the subwoofer must be 8 ohms and the satellites not less than 4 ohms.
3. It is highly recommended that correct passive crossovers are simultaneously used in the operation involving one pair of stereo satellites and one bridged Subwoofer.

# CONNECTIONS

Please refer to the connection descriptions of page 12.

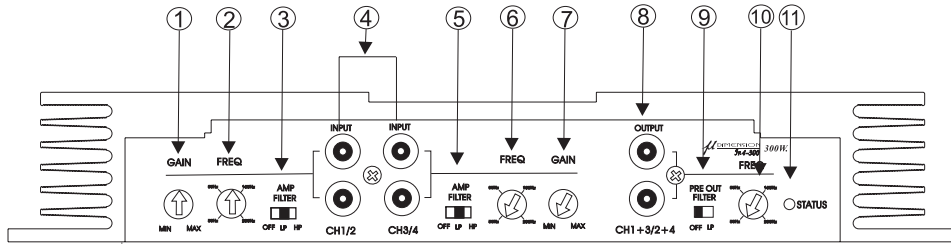




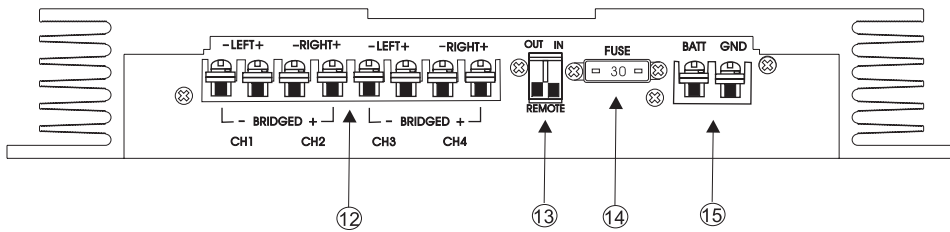
# CONTROLS AND CONNECTIONS

Jr.4-300

[Front]

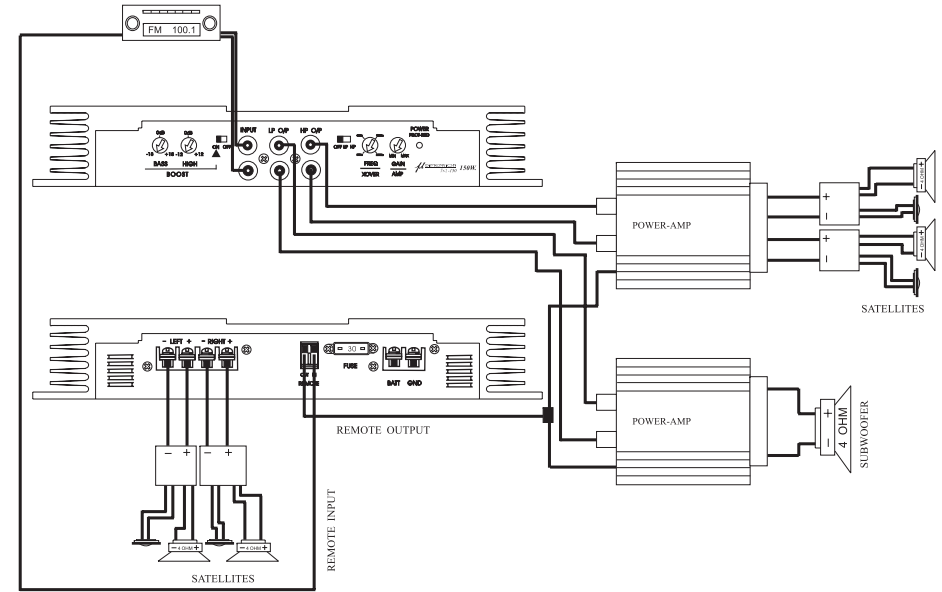


[Rear]

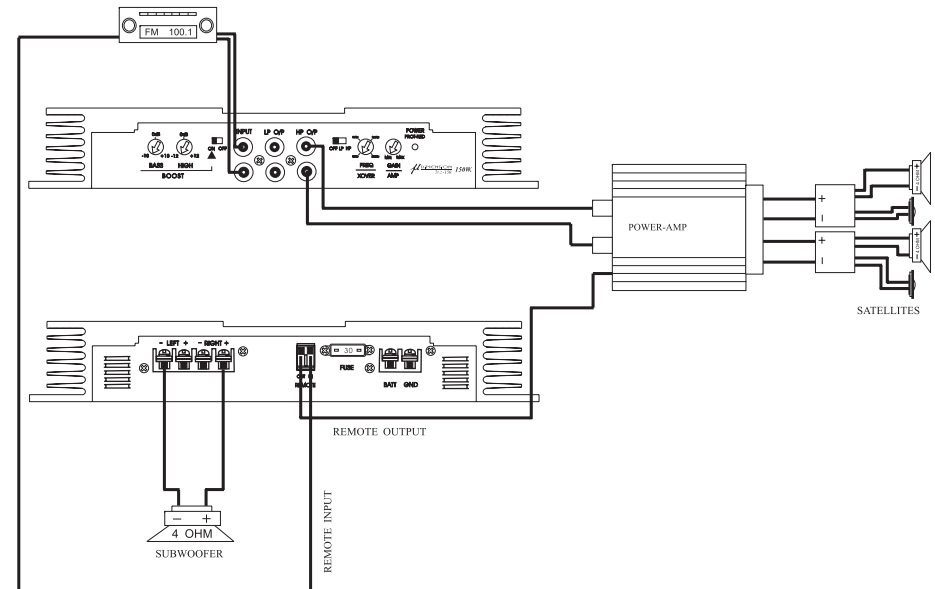


- ① CH1/2 Amplifier Gain control
- ② CH1/2 Crossover Frequency Adjustment
- ③ CH1/2 Internal Crossover Selector
- ④ CH1/2/3/4 RCA Input Jacks
- ⑤ CH3/4 Internal Crossover Selector
- ⑥ CH3/4 Crossover Frequency Adjustment
- ⑦ CH3/4 Amplifier Gain control
- ⑧ CH1+3/2+4 RCA Preout Jacks
- ⑨ CH1+3/2+4 Preout Crossover Switch
- ⑩ CH1+3/2+4 Preout crossover Frequency Adjustment
- ⑪ Power on(Green)/Protection Status(Red) LED Indicator
- ⑫ Speaker Output Terminals
- ⑬ Remote Input/Output connectors
- ⑭ Fuse
- ⑮ Power Supply Terminals

# SAMPLE SYSTEM CONNECTIONS



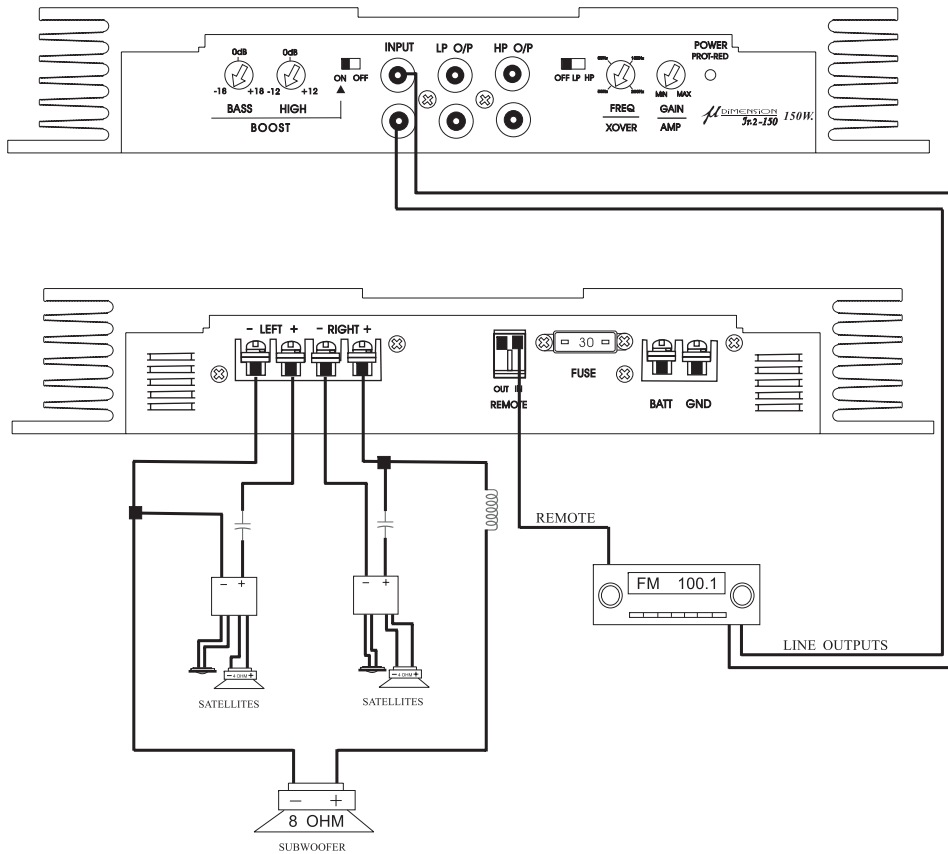
2 Channel Stereo System with High /Low Pass Line Outputs



Mono Subwoofer System with High Pass Line Outputs



# SAMPLE SYSTEM CONNECTIONS



**Mixed Mono System**

# SPECIFICATIONS

	<i>Jr.2-150</i>	<i>Jr.2-370</i>
Power Output @ 4 Ohm	50W X 2	125W X 2
Power Output @ 2 Ohm	75W X 2	185W X 2
Bridged Output @ 8 Ohm	100W X 1	250W X 1
Bridged Output @ 4 Ohm	150W X 1	370W X 1
Frequency Response	10 Hz-50KHz(-1dB)	10 Hz-50KHz(-1dB)
THD (80KLPF)	0.05%	0.05%
S/N Ratio(IHF-A)	100dB	100dB
Channel Separation	60dB	60dB
Damping Factor	>200	>200
Input Sensitivity	200mV-4V	200mV-4V
Input Impedance	20KOhm	20KOhm
Idle Current	550mA	750mA
Remote Voltage	7-14V	7-14V
Remote Current	<1mA	<1mA
Crossover	High-Pass50-200Hz/12dB oct	50-200Hz/12dB oct
	High-Pass50-200Hz/12dB oct	50-200Hz/12dB oct
Crossover Gain	0dB	0dB
High Boost (12KHz)	-12 - +12dB	-12 - +12dB
Bass Boost (45Hz)	-18 - +18dB	-18 - +18dB
Dimensions(W X H X D)	208 x 46 x292mm	310 x 46 x292mm
Weight	2.5kg	3.6kg

# **SPECIFICATIONS**

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## *Jr.4-300*

Power Output @ 4 Ohm	50W X 4
Power Output @ 2 Ohm	75W X 4
Bridged Output @ 8 Ohm	80W X 2
Bridged Output @ 4 Ohm	150W X 2
THD (80KLPF)	0.05%
Frequency Response	10Hz-50KHz(-1dB)
S/N Ratio(IHF-A)	90dB
Stereo Separation	55dB
Input Sensitivity	200mV~4V
Damping Factor	>200
Input Impedance	20K Ohm
Idle Current	1A
Remote Voltage	7-14V
Remote Current	<1mA
Crossover	High-Pass 50-200Hz/12dB oct Low-Pass 50-200Hz/12dB oct
Crossover Gain	0dB
Dimensions(W X H X D)	260 x 46 x 292mm
Weight	3kg