PHOENIX GOLD

ZX series

FULL CLASS-D TECHNOLOGY MINI AMPLIFIERS

Models: ZXM500.1i - ZXM500.4i - ZXM600.3i - ZXM700.5i

SPECIFICATIONS

- Full Class-D technology offers efficiency & performance
- Short circuit/thermal and high/low voltage protection
- Excellent signal to noise ratio and FM noise rejection
- Remote gain controller included (except ZXM500.4i)
- Built in protection LED light status indicator
- Surface mount component technology
- Ultra small size for easy installation
- Autostart on high-level input
- Full adjustable HP & LP filter
- OIS - OEM Impedance Simulation

All specifications subject to change without notice.

	ZXM500.1i	ZXM500.4i	ZXM600.3i	ZXM700.5i
Class:	Class D	Class D	Class D	Class D
Channels:	1	4	3	5
Frequency Response:	10Hz – 280Hz	10Hz – 30kHz	L/R: 20Hz – 25kHz Sub: 10Hz – 250Hz	F/R: 20Hz – 25kHz Sub: 10Hz – 260Hz
Max Power Rating:	1000W	1000W	1200W	1500W
RMS Power Rating (1Ω):	1 x 500W	N/A	N/A	N/A
RMS Power Rating (2Ω):	1 x 360W	4 x 125W	2 x 130W + 1 x 350W	4 x 100W + 1 x 350W
RMS Power Rating (4Ω):	1 x 230W	4 x 80W 2 x 250W Bridged	2 x 75W + 1 x 230W	4 x 60W + 1 x 230W
Signal to Noise Ratio (SNR) (Full Power):	-82dB	-90dB	L/R: - 86dB Sub: -91dB	F/R: -84dB Sub: -89dB
Total Harmonic Distortion (THD):	<1%	<1%	<1%	<1%
Low Pass Filter (LPF):	50Hz – 250Hz (12dB/Oct)	40Hz – 400Hz (12dB/ Oct)	L/R: 40Hz – 400Hz (12dB/Oct) Sub: 50Hz – 250Hz (24dB/Oct)	F/R: 40Hz – 400Hz (12dB/Oct) Sub: 50Hz – 250Hz (24dB/Oct)
High Pass Filter (HPF):	N/A	40Hz – 400Hz (12dB/Oct)	40Hz – 400Hz (12dB/Oct)	40Hz – 400Hz (12dB/Oct)
Subsonic:	10Hz – 50Hz (12dB/Oct)	N/A	N/A	N/A
Bass Boost @ 45Hz:	0 – +18dB	N/A	Sub: 0 – +18dB	Sub: 0 – +18dB
Crosstalk:	N/A	-45dB	-48dB	-50dB
Input Sensitivity:	0.45V – 20V	0.45V – 20V	0.45V – 20V	0.45V – 20V
Remote:	Yes (Included)	N/A	Yes (Included)	Yes (Included)
High-level Input:	Yes	Yes	Yes	Yes
Auto Turn-on:	Yes	Yes	Yes	Yes
Input Mode:	N/A	2CH / 4CH	2CH / 3CH	4CH / 5CH
OIS - OEM Impedance Simulation:	Yes	Yes	Yes	Yes
Operating Voltage:	7V – 16.5V	7V – 16.5V	8.5V – 16.8V	8.6V – 16.6V
Idle Current:	0.51A	0.70A	0.88A	1.24A
Current Draw (Max):	49A	48A	56A	70A
Total Efficiency (4Ω):	92%	90%	88%	85%
Power Terminal:	10mm²	10mm²	10mm²	10mm²
Speaker Terminal:	10mm²	1mm²	1mm²	1mm²
Dimensions (LxWxH) (Excluding Feet):	149 x 83.1 x 34.8mm	149 x 83.1 x 34.8mm	149 x 83.1 x 34.8mm	186 x 83.1 x 37.3mm
Dimensions (LxWxH) (Including Feet):	165 x 83.1 x 34.8mm	165 x 83.1 x 34.8mm	165 x 83.1 x 34.8mm	202 x 83.1 x 37.3mm

CONTENTS

Connection - Wire Size Chart

Ensure the audio system is turned off before making any connections to the amplifier, speakers, or source unit. Failure to do so could result in permanent damage to the audio system. Ensure the correct gauge cable is used for all connections; consult the cable calculator diagram below for the correct gauge cable for your installation

	CABLE LENGTH															
	0-1 Meter / 0-4 Feet		1-2 Meter / 4- 7 Feet		2-3 Meter / 7-10 Feet		3-4 Meter / 10-13 Feet		4-5 Meter / 13-16 Feet		5-6 Meter / 16-19 Feet		6-7 Meter / 19-22 Feet		7-9 Meter / 22-28 Feet	
TOTAL AMPS	MM2	AWG	MM2	AWG	MM2	AWG	MM2	AWG	MM2	AWG	MM2	AWG	MM2	AWG	MM2	WG
0-20A	4	12	4	12	4	12	4	12	6	10	6	10	6	10	10	8
20-35A	4	12	6	10	6	10	6	10	6	10	10	8	10	8	20	4
35-50A	6	10	6	10	6	10	10	8	10	8	10	8	20	4	20	4
50-65A	10	8	10	8	10	8	10	8	20	4	20	4	20	4	20	4
65-85A	10	8	10	8	10	8	20	4	20	4	20	4	20	4	35	2
85-105A	10	8	20	4	20	4	20	4	20	4	20	4	20	4	35	2
105-125A	20	4	20	4	20	4	20	4	20	4	20	4	35	2	35	2
125-150A	20	4	20	4	20	4	20	4	35	2	35	2	35	2	50	0
150-200A	20	4	20	4	20	4	35	2	35	2	50	0	50	0	50	0
200-250A	35	2	35	2	35	2	50	0	50	0	50	0	50	0	70	2/0
250-300A	50	0	50	0	50	0	50	0	50	0	50	0	70	2/0	70	2/0

If aluminium wire is used, it is recommended to increase the size of the gauges to compensate. The calculation of cable gauge size considers the resistance of terminal connections.

Installation

Important Safety Tips:

- Make sure the amplifier is securely mounted in your vehicle.
- Before drilling or cutting, check carefully to avoid fuel tanks, fuel lines, hydraulic lines, and electrical wiring.
- Choose a spot with good airflow to keep the amp cool.
- Use the provided screws to attach the amplifier securely.
- Avoid placing the amp where wires could get pinched or damaged.

Step-by-Step Instructions:

1. **Disconnect the battery**
   Unplug the negative cable from your car's battery and keep it away during the installation.
2. **Run power wire**
   Use high-quality wire sized correctly for the amplifier and cable length (see chart).
3. **Ground the amplifier**
   Find a clean, bare metal surface near the amp for grounding. Sand or scrape off any paint or coating, then screw the ground wire firmly in place. (Use an ohm meter to test if you want.)
4. **Mount the amp**
   Choose the best location, then connect speaker wires to your speakers. Make sure you match the positive (+) and negative (–) correctly.
5. **Connect the power and ground wires** first to the amplifier and then the power wire.
6. **Add a fuse near the battery**
   Install a fuse on the power wire close to the battery. Use a fuse rated for the total current your amp(s) will use.
7. **Hook up the remote wire**
   Connect the remote turn-on wire from the source unit to the amp.
   Note: If using high-level input, a remote wire is not required.
8. **Plug in the RCA cables** from your head unit to the amplifier.
9. **Power on carefully**
   Turn the system on with the amplifier's gain (volume control) set down. Start with your stereo volume low and slowly increase it.
10. **Tune the amplifier**
    Adjust one setting at a time until everything sounds right. It might take a bit of time to get it perfect—go slow.

Final Tip:
While tuning, your amp will use battery power. Keep an eye on the battery voltage and recharge if it gets low.

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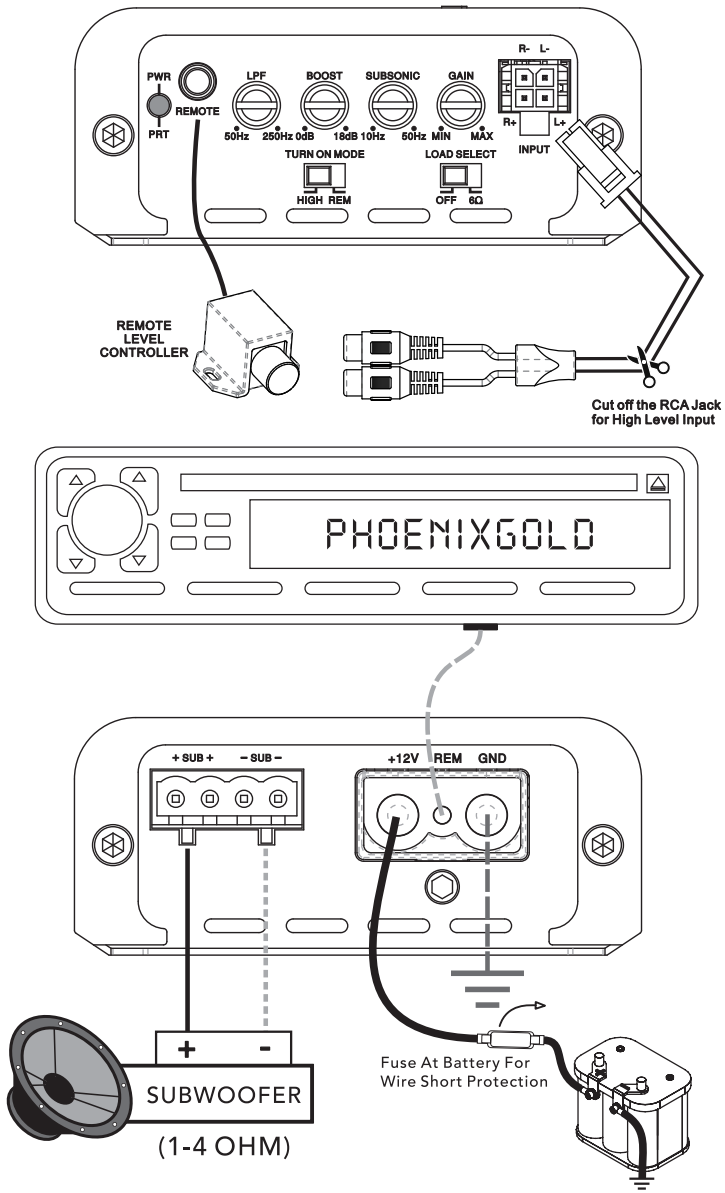
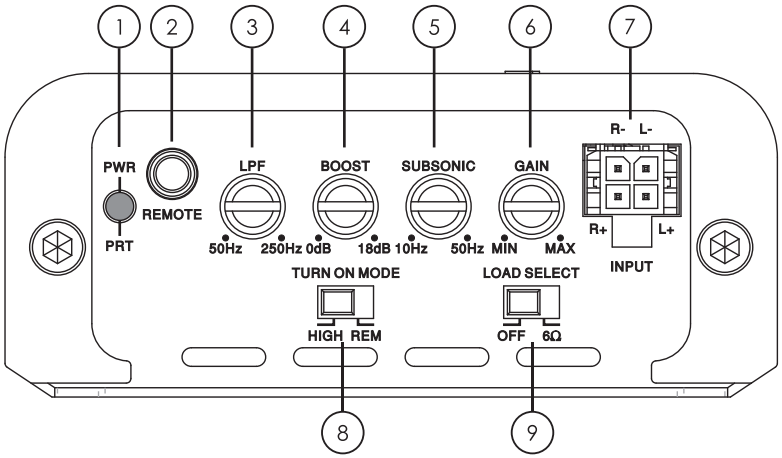
ZXM500.1i - Installation Diagrams



ZXM500.1i - Connectors



1. POWER INDICATOR - Light shows if the amplifier is powered on.

2. REMOTE - Bass remote input.

3. LPF (Low-Pass Filter) - Allows only frequencies below the selected crossover point to pass through.

4. BASS BOOST CONTROL - Boosts 45Hz from 0 to +18dB.

5. SUBSONIC - Allows only frequencies above the selected crossover point to pass through.

6. GAIN - This control matches the amplifier's input sensitivity to your high- or low-level input signal.

7. INPUT SIGNAL - Low- and High- level

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8. TURN ON SWITCH - This switch controls how the amplifier turns on:

HIGH: The amplifier will automatically turn on when it detects a signal from the high-level input.
Note: Use this if you're connecting the amplifier to factory speaker wires without a remote wire.

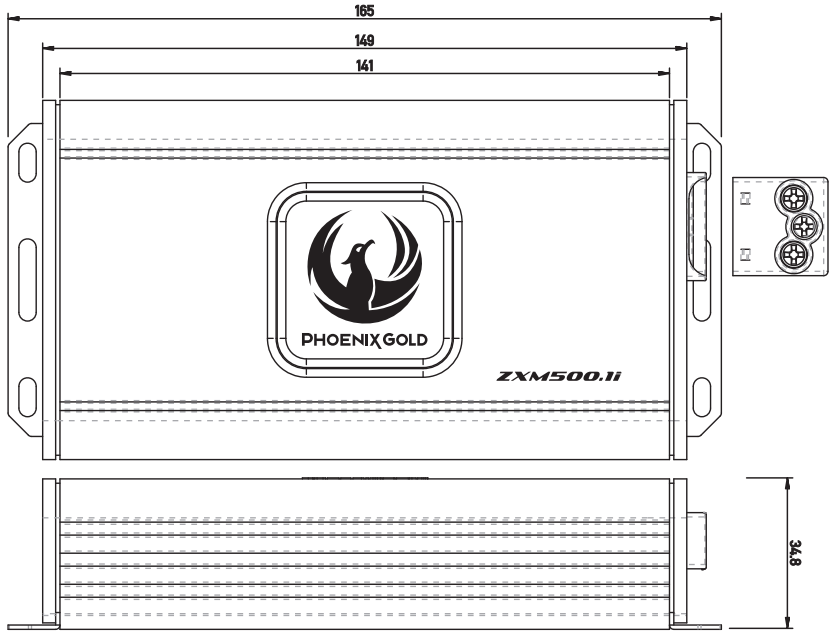
REM: The amplifier will turn on when it receives a 12V signal through the remote turn-on wire.
Note: Use this if your head unit or processor has a dedicated remote output.

9. LOAD SELECT SWITCH - This switch simulates a speaker load on the high-level input, which is sometimes required for factory head units to work correctly.

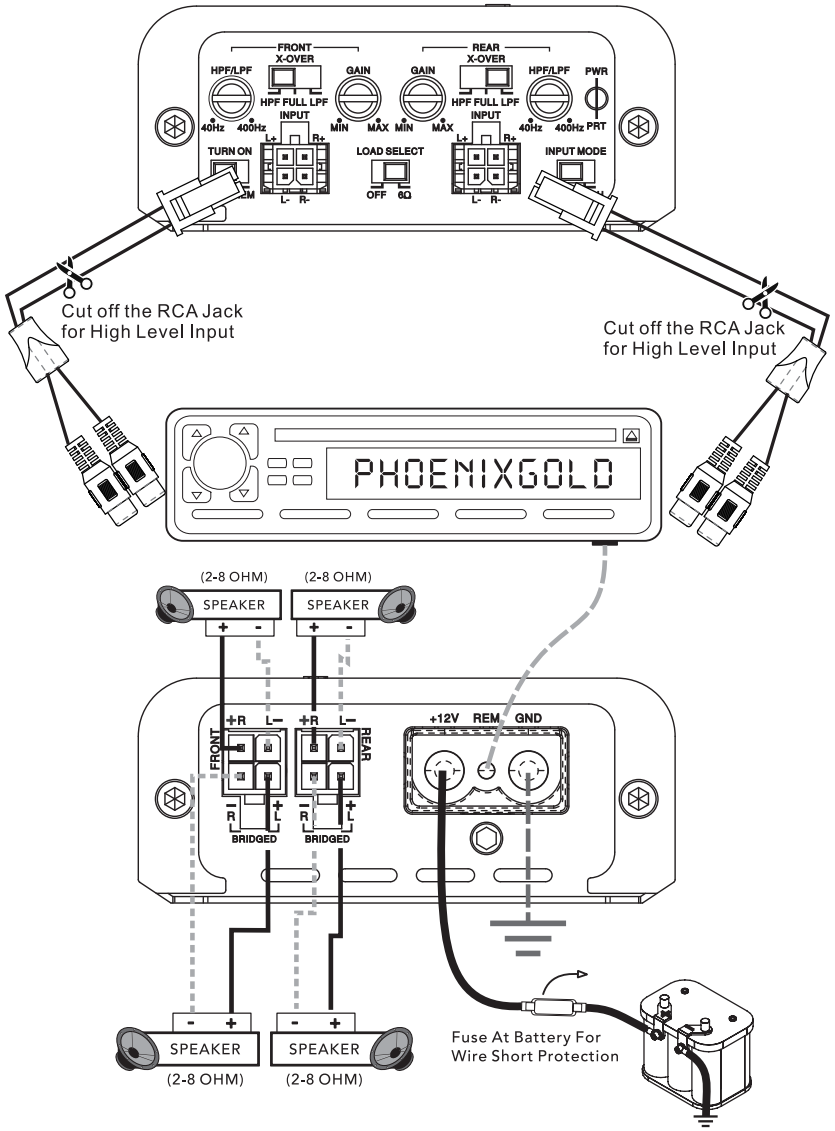
OFF: Use this setting if the factory head unit still has speakers connected.
Note: Do NOT use the 6Ω setting in this case, or the head unit may be damaged.

6Ω: Use this setting if the factory head unit no longer has speakers connected.

ZXM500.1i - Dimensions



ZXM500.4i - Installation Diagram



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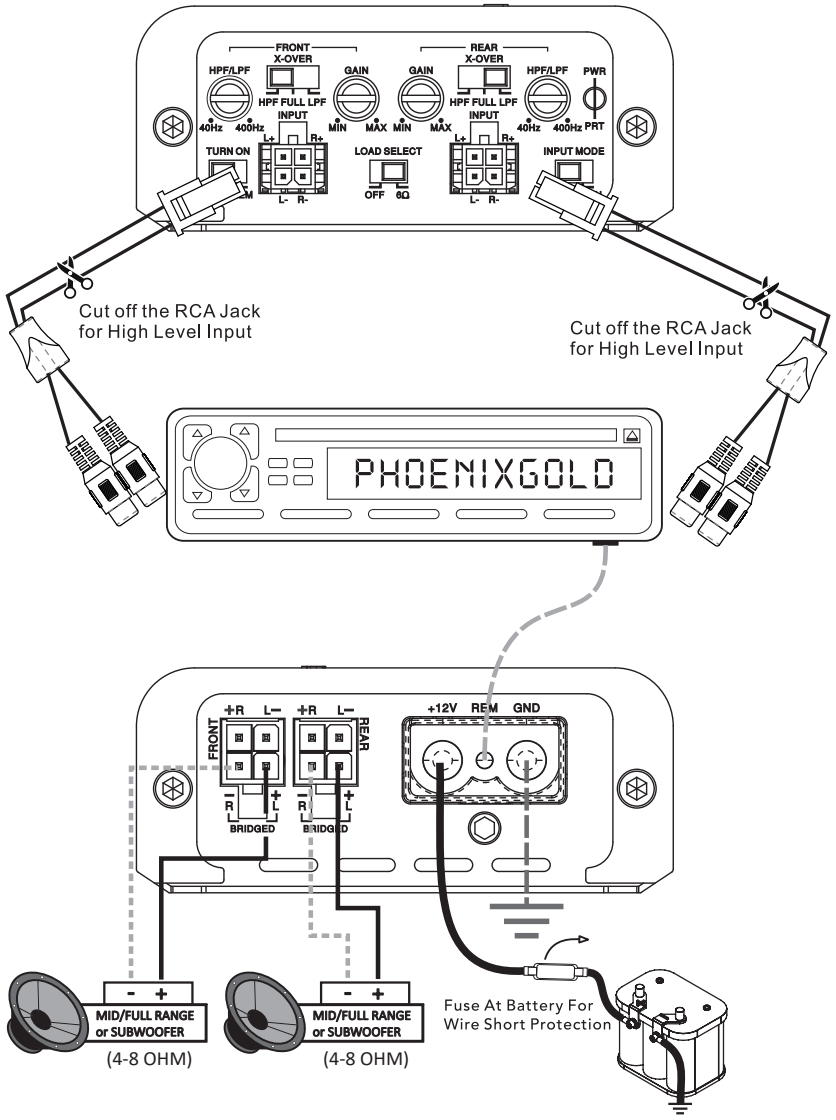
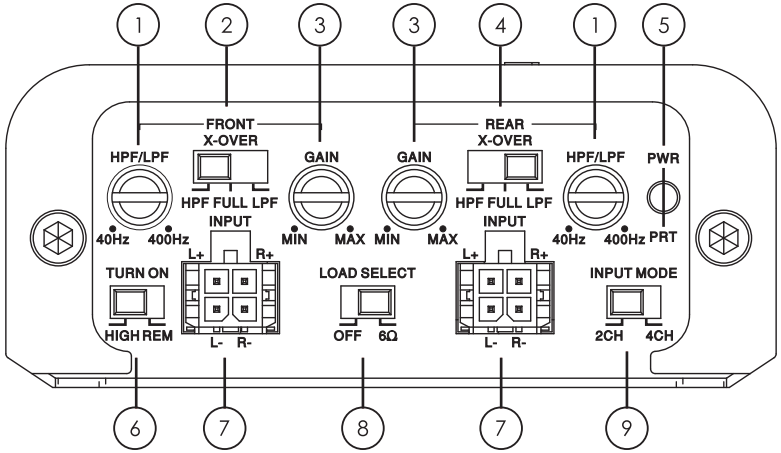
ZXM500.4i - Installation Diagram (Bridged)



ZXM500.4i - Connectors



1. LPF/HPF - Set the crossover frequency using this knob. LPF or HPF is selected by the X-OVER switch.

2. FRONT X-OVER - This switch controls the crossover setting for channels 1 and 2.

HPF (High-Pass Filter): Allows only frequencies above the selected crossover point to pass through.

FULL: Send the full frequency range to the speakers.

LPF (Low-Pass Filter): Allows only frequencies below the selected crossover point to pass through.

3. GAIN - This control matches the amplifier's input sensitivity to your high- or low-level input signal.

4. REAR X-OVER - This switch controls the crossover setting for channels 3 and 4.

HPF (High-Pass Filter): Allows only frequencies above the selected crossover point to pass through.

FULL: Send the full frequency range to the speakers.

LPF (Low-Pass Filter): Allows only frequencies below the selected crossover point to pass through.

5. POWER INDICATOR - Light shows if the amplifier is powered on.

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6. TURN ON SWITCH - This switch controls how the amplifier turns on:

HIGH: The amplifier will automatically turn on when it detects a signal from the high-level input.
Note: Use this if you're connecting the amplifier to factory speaker wires without a remote wire.

REM: The amplifier will turn on when it receives a 12V signal through the remote turn-on wire.
Note: Use this if your head unit or processor has a dedicated remote output.

7. INPUT SIGNAL - Low- and High- level

8. LOAD SELECT Switch - This switch simulates a speaker load on the high-level input, which is sometimes required for factory head units to work correctly.

OFF: Use this setting if the factory head unit still has speakers connected.
Note: Do NOT use the 6Ω setting in this case, or the head unit may be damaged.

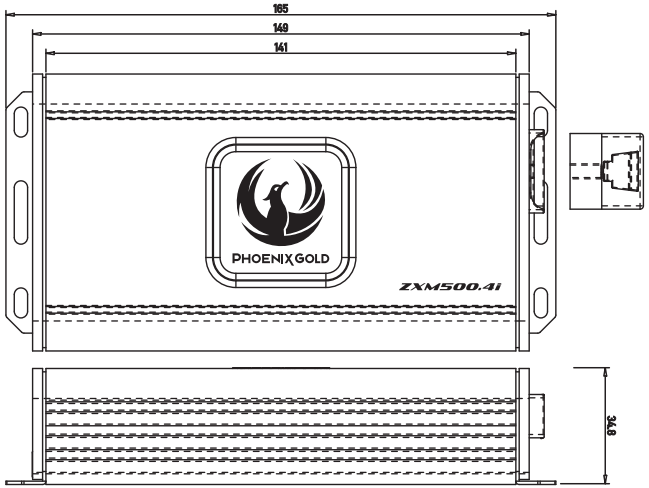
6Ω: Use this setting if the factory head unit no longer has speakers connected.

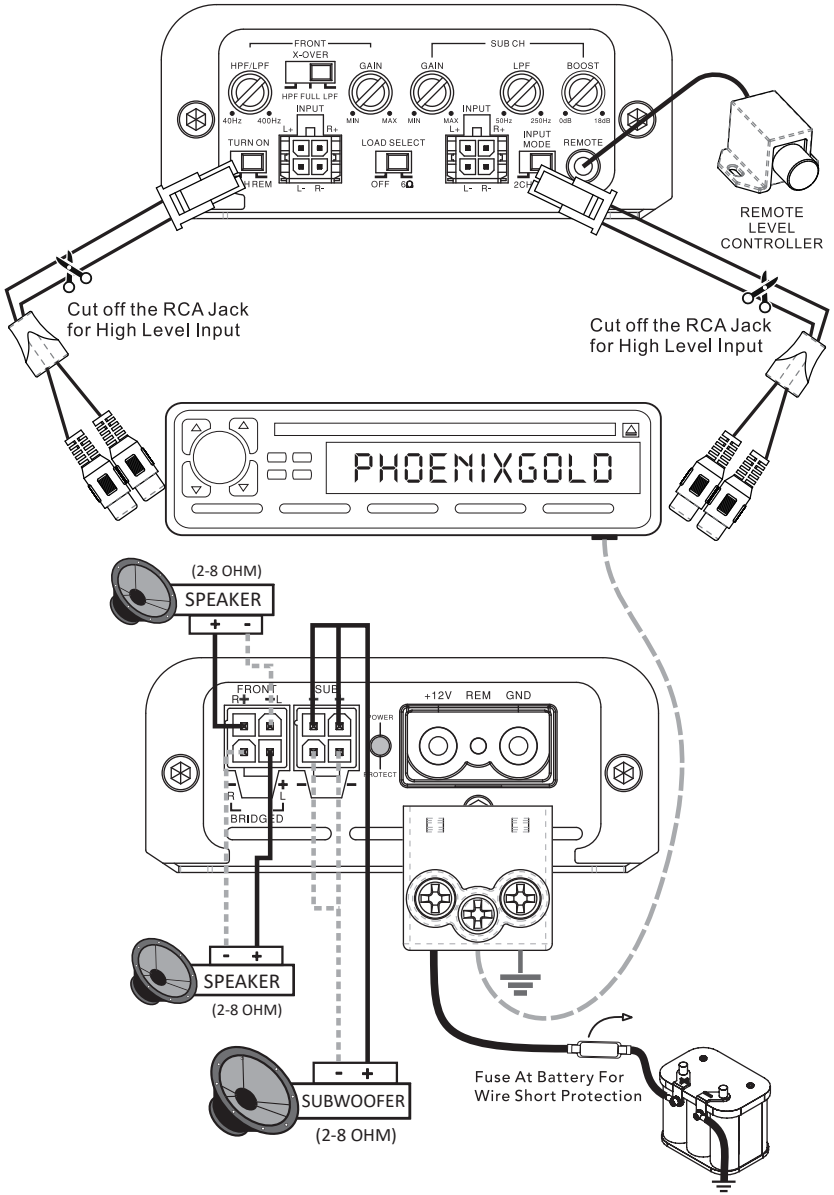
9. INPUT MODE Switch - This switch determines how many input channels feed the outputs of the amplifier.

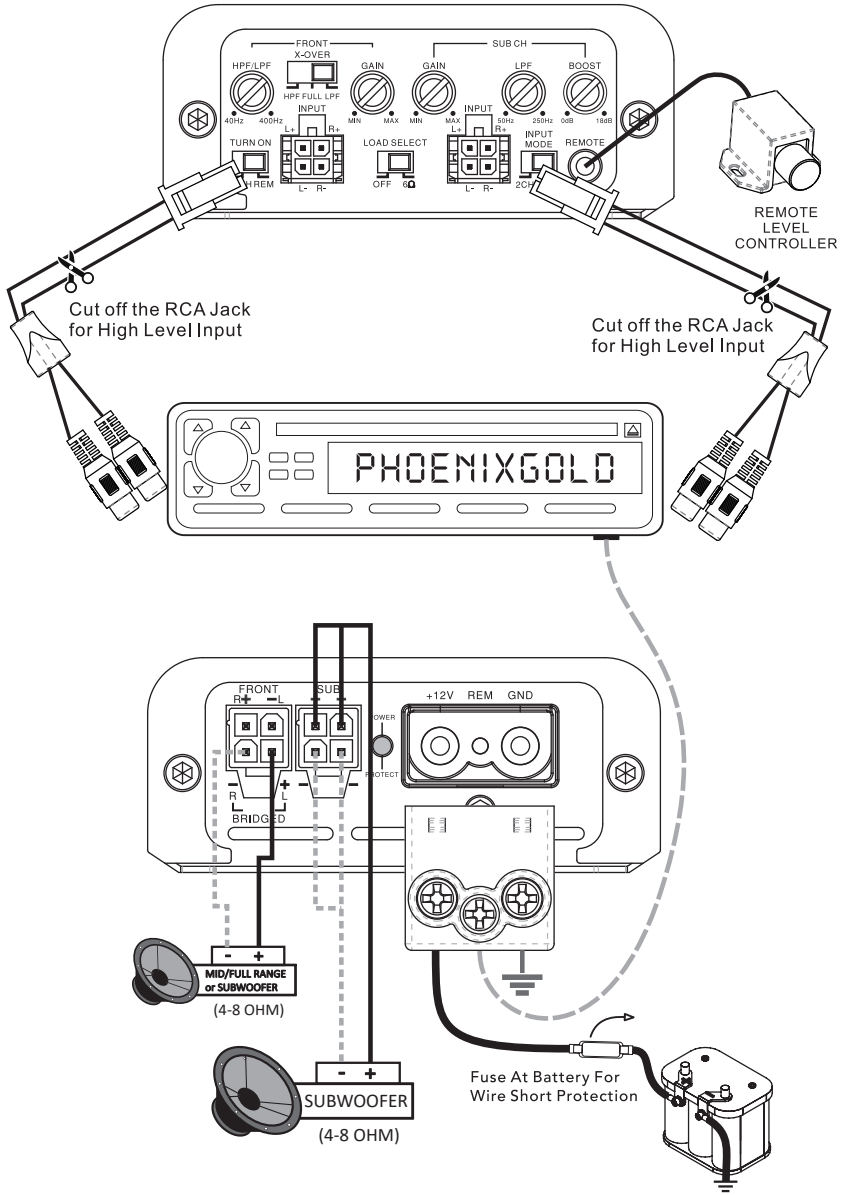
2CH: Use this if you only have 2 RCA or high-level inputs. The amplifier will internally split the signal to all 4 output channels.

4CH: Use this if you have 4 RCA or high-level inputs.

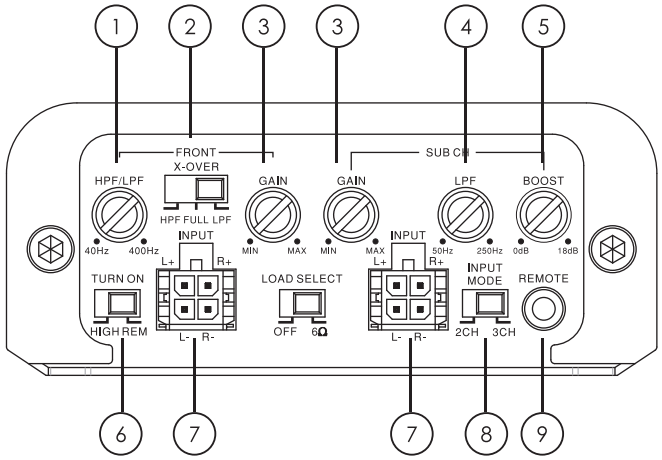
ZXM500.4i - Dimensions







ZXM600.3i - Connectors



1. HPF/LPF - Set the crossover frequency using this knob. HPF or LPF is selected by the X-OVER switch.

2. FRONT X-OVER - This switch controls the crossover setting for channels 1 and 2.

HPF (High-Pass Filter): Allows only frequencies above the selected crossover point to pass through.

FULL: Send the full frequency range to the speakers.

LPF (Low-Pass Filter): Allows only frequencies below the selected crossover point to pass through.

3. GAIN - This control matches the amplifier's input sensitivity to your high- or low-level input signal.

4. LPF (Low-Pass Filter): Allows only frequencies below the selected crossover point to pass through.

5. Bass Boost control - Boosts 45Hz from 0 to +18dB.

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6. TURN ON Switch - This switch controls how the amplifier turns on:

High: The amplifier will automatically turn on when it detects a signal from the high-level input.
Note: Use this if you're connecting the amplifier to factory speaker wires without a remote wire.

REM: The amplifier will turn on when it receives a 12V signal through the remote turn-on wire.
Note: Use this if your head unit or processor has a dedicated remote output.

7. INPUT SIGNAL - Low- and High- level

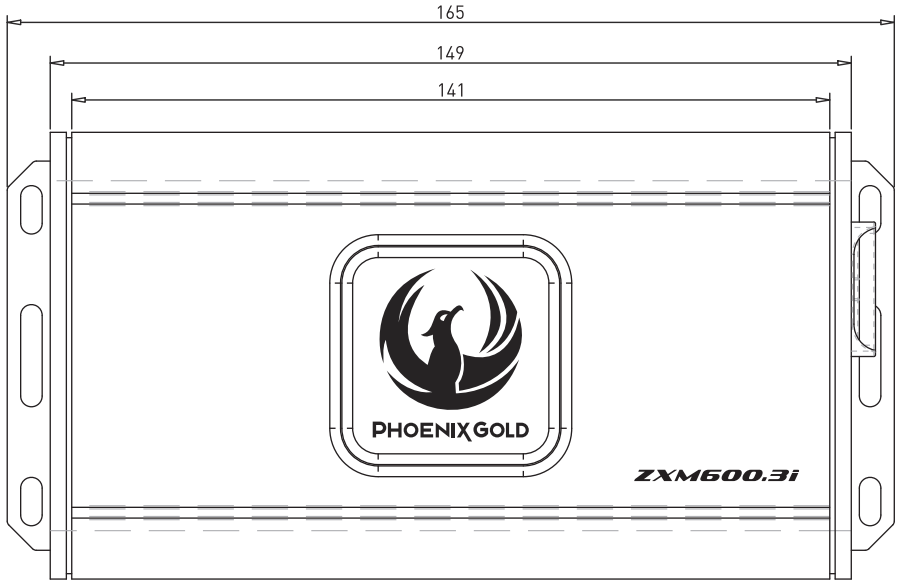
8. INPUT MODE SWITCH - This switch determines how many input channels feed the outputs of the amplifier.

2CH: Use this if you only have 2 RCA or high-level inputs. The amplifier will internally split the signal to all 3 output channels.

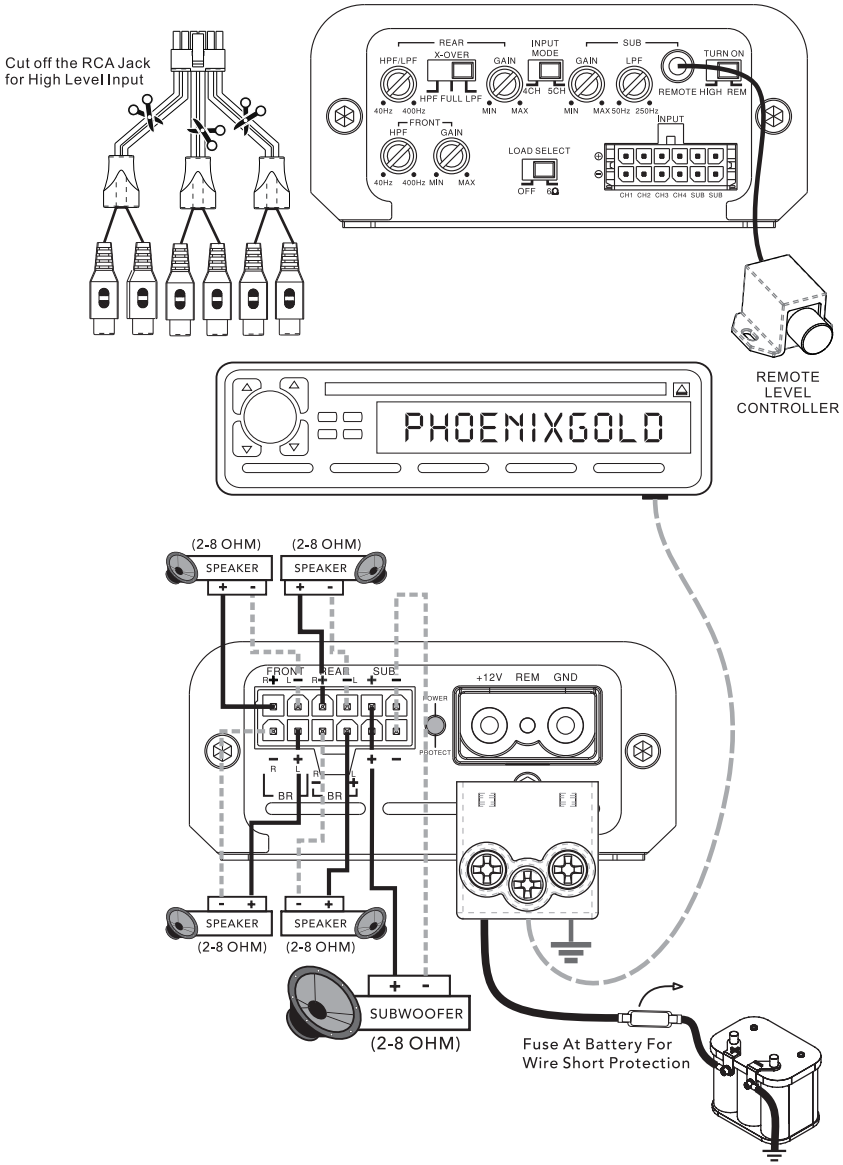
3CH: Use this if you have 3/4 RCA or high-level inputs.

9. REMOTE - Bass remote input.

ZXM600.3i - Dimensions



ZXM700.5i - Installation Diagram



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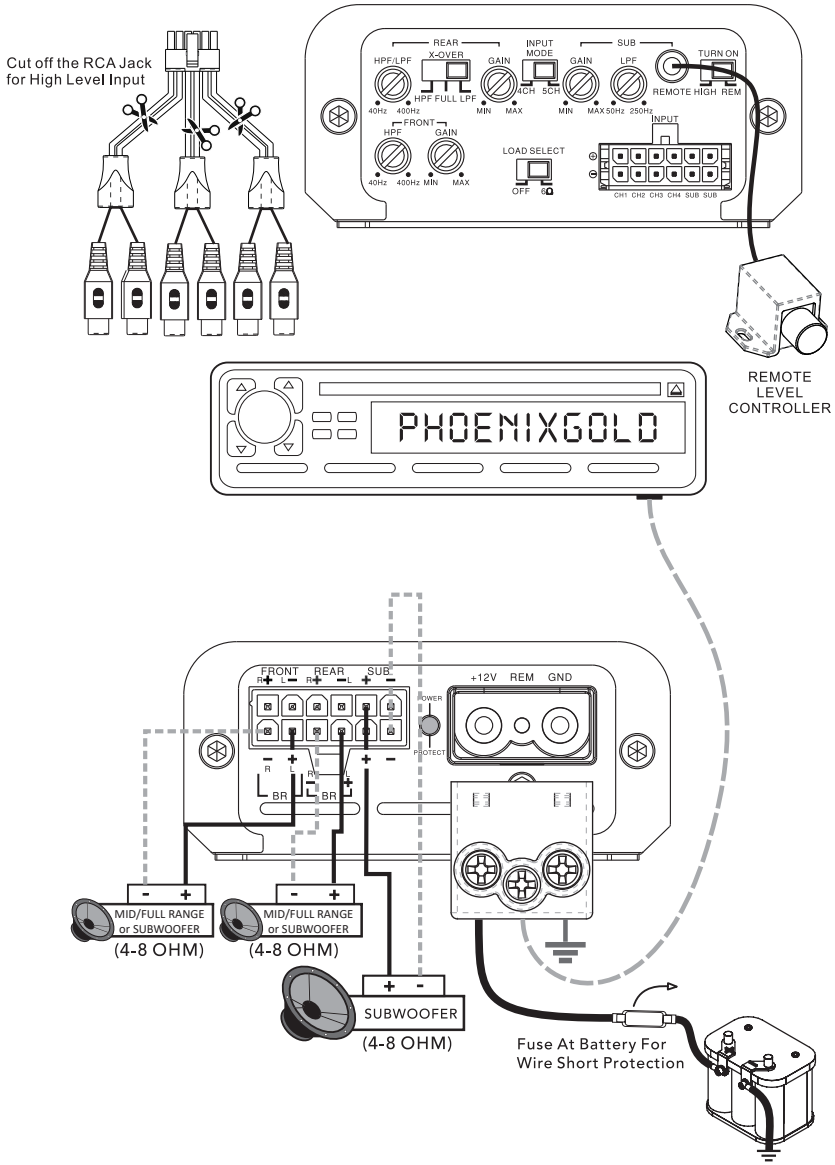
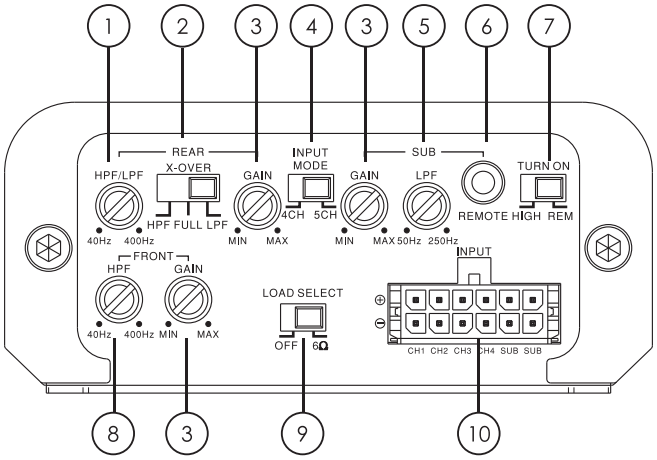
ZXM700.5i - Installation Diagram (Bridged)



ZXM700.5i - Connectors



1. HPF/LPF - Set the crossover frequency using this knob. HPF or LPF is selected by the X-OVER switch.

2. REAR X-OVER - This switch controls the crossover setting for channels 3 and 4.

HPF (High-Pass Filter): Allows only frequencies above the selected crossover point to pass through.

FULL: Send the full frequency range to the speakers.

LPF (Low-Pass Filter): Allows only frequencies below the selected crossover point to pass through.

3. GAIN - This control matches the amplifier's input sensitivity to your high- or low-level input signal.

4. INPUT MODE Switch - This switch determines how many input channels feed the outputs of the amplifier.

4CH: Use this if you only have 4 RCA or high-level inputs. The amplifier will internally split the signal to all 5 output channels.

5CH: Use this if you have 5 RCA or high-level inputs.

5. LPF (Low-Pass Filter) - Allows only frequencies below the selected crossover point to pass through on the Subwoofer channel.

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6. REMOTE - Bass remote input.

7. TURN ON Switch - This switch controls how the amplifier turns on:

High: The amplifier will automatically turn on when it detects a signal from the high-level input.
Note: Use this if you're connecting the amplifier to factory speaker wires without a remote wire.

REM: The amplifier will turn on when it receives a 12V signal through the remote turn-on wire.
Note: Use this if your head unit or processor has a dedicated remote output.

8. FRONT HPF (High-Pass Filter): Allows only frequencies above the selected crossover point to pass through.

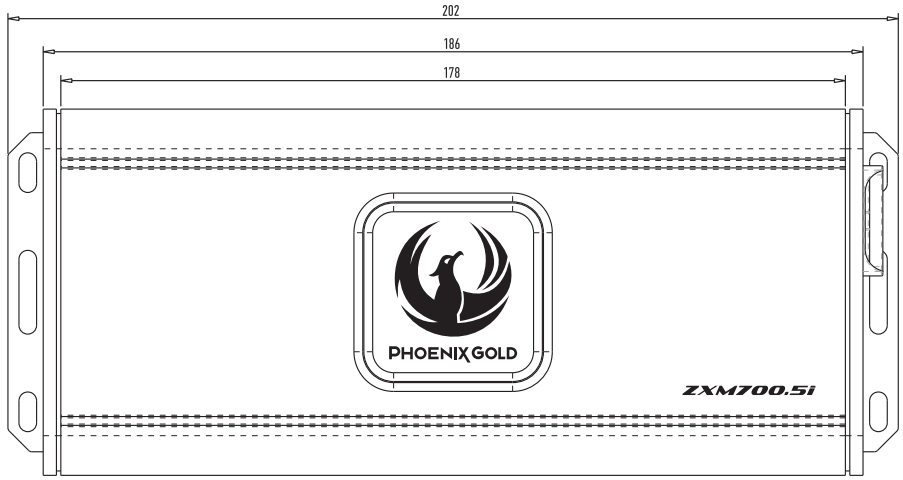
9. LOAD SELECT SWITCH - This switch simulates a speaker load on the high-level input, which is sometimes required for factory head units to work correctly.

OFF: Use this setting if the factory head unit still has speakers connected.
Note: Do NOT use the 6Ω setting in this case, or the head unit may be damaged.

6Ω: Use this setting if the factory head unit no longer has speakers connected.

10. INPUT SIGNAL - Low- and High- level

ZXM700.5i - Dimensions



Disclaimer

All PHOENIX GOLD products are designed for in-vehicle audio applications and should be installed and operated with care.

Professional installation by a qualified or authorised installer is strongly recommended. Incorrect installation, misuse, or failure to follow the instructions provided in this manual may result in damage to the product, damage to the vehicle, or personal injury.

It is the responsibility of the installer and user to ensure that all components are securely mounted, correctly wired, and that all safety guidelines are followed. Extra care must be taken to avoid contact with critical vehicle systems, including but not limited to electrical wiring, fuel lines, brake lines, and structural components.

PHOENIX GOLD accepts no liability for any damage, loss, or injury arising from improper installation, incorrect use, modification, or failure to observe the guidelines outlined in this manual.

Phoenix Gold Product Warranty

Phoenix Gold warrants this product to be free of defects in materials and workmanship for a period of one (1) years from the original date of purchase. This warranty is not transferable and applies only to the original purchaser from an authorized Phoenix Gold dealer. Should service be necessary under this warranty for any reason due to manufacturing defect or malfunction, Phoenix Gold or it's Country distributor / reseller will (at its discretion) repair or replace the defective product with new or re-manufactured product at no charge. Damage caused by the following is not covered under warranty: accident, misuse, abuse, product modification or neglect, failure to follow installation instructions, unauthorized repair attempts, misrepresentations by the seller. This warranty does not cover incidental or consequential damages and does not cover the cost of removing or reinstalling the unit(s). Cosmetic damage due to accident or normal wear and tear is not covered under warranty.