CADENCE

SEAQUA

MARINE AUDIO

SQA Series Ultra Compact Full Range D-Class Amplifiers

// Owners Manual

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INTRODUCTION

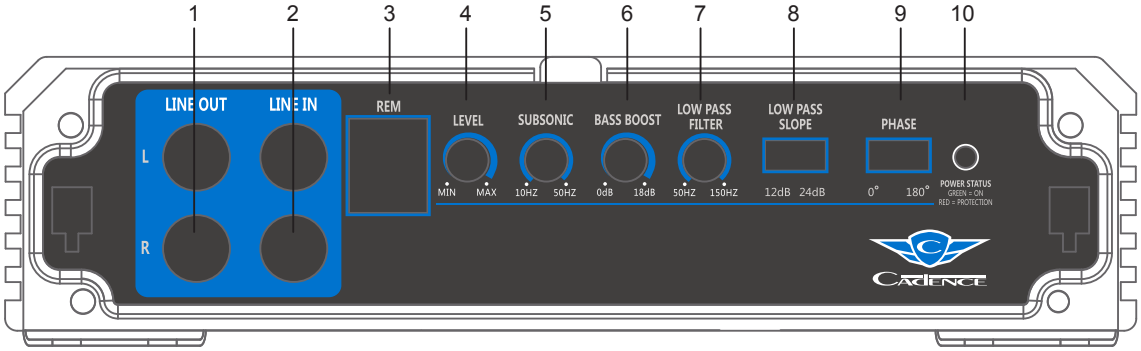
Thank you for purchasing this Cadence SQA Series amplifier. Over the years, the technology used to create audio amplifiers has grown by leaps and bounds. We consider it our mission to use our expertise in developing the latest technologies and to bring you the absolute best sounding, most powerful amplifiers on the market and of course at a reasonable price.You will be amazed at the quality and power that these new amps offer.

Please read this installation guide carefully for proper use of your Cadence power amplifier. Should you need technical assistance during or after your installation please call our technical-line between 9:30 am and 5:00 PM PST at (626) 465-3383. Read this entire guide fully before attempting your installation.

When installing the amplifier, secure it tightly. An unmounted amplifier in your car can cause serious injury to passengers and damage to your vehicle if it is set in motion by an abrupt driving maneuver or short stop.

AMPLIFIER FEATURE DESCRIPTIONS

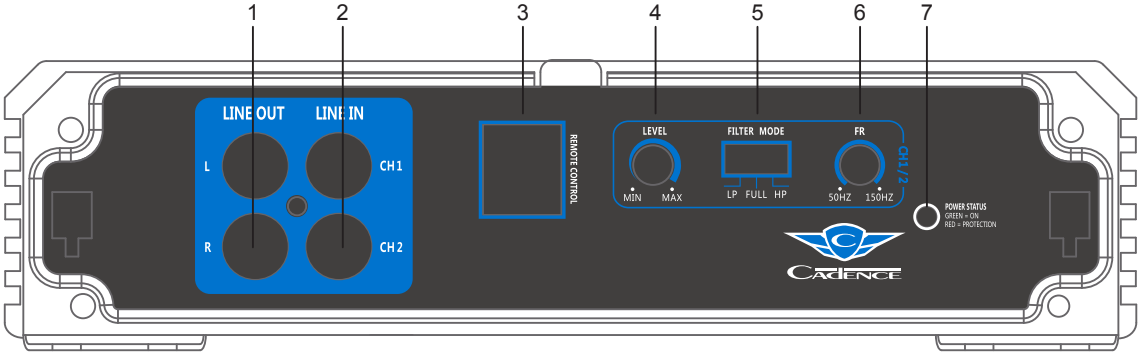
SQA 600.1/SQA 1200.1 *MONOBLOCK-D*



1. Line Out: To audio Inputs of satellite amplifier(if present).
2. Line Input: These inputs are for signal cables.
3. Remote Bass Control: Remote controls the Volume level.
4. Input Level Control: Enables the matching of input levels to the output levels from the source.
5. Subsonic: This setting acts as a low frequency cut off for your subwoofer. the subwoofer will not play frequencies below the subsonic setting.
6. Bass Boost: Variable 0dB to 18dB.
7. Low Pass Filter: Variable 50Hz to 150Hz.
8. Low Pass Slope: Switch 12dB or 24dB.
9. Phase: Switch 0^{o} or 180^{o}.
10. Power & Protection Indicators: The bi-color LED glows green when power is on and no problems are present. if one of the protection circuits comes on, it will change to red.

AMPLIFIER FEATURE DESCRIPTIONS

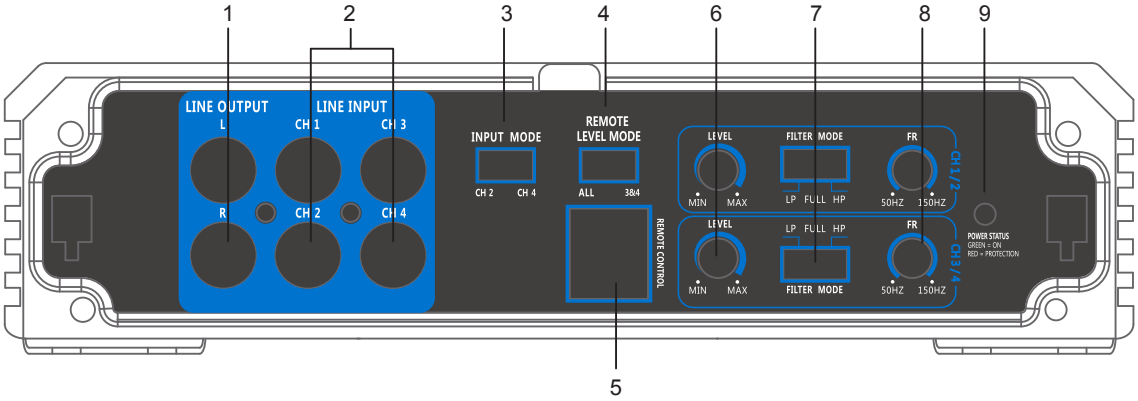
SQA 250.2 *2 CHANNEL*



1. Line Out: To audio Inputs of satellite amplifier(if present).
2. Line Input: These inputs are for signal cables.
3. Remote Control: Remote controls the Volume level.
4. Input Level Control: Enables the matching of input levels to the output levels from the source.
5. Filter Mode: Switch low pass, full range or high pass.
6. FR: Variable 50Hz to 150Hz.
7. Power & Protection Indicators: The bi-color LED glows green when power is on and no problems are present. if one of the protection circuits comes on, it will change to red.

AMPLIFIER FEATURE DESCRIPTIONS

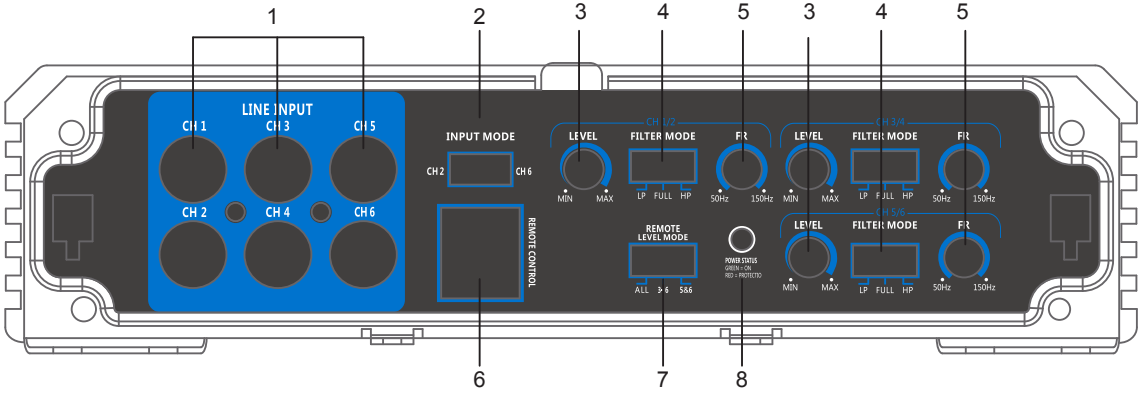
SQA 500.4 *4 CHANNEL*



1. Line Out: To audio Inputs of satellite amplifier(if present).
2. Line Input: These inputs are for signal cables.
3. Input Mode: Switch 2 channel or 4 channel.
4. Remote Level Mode: Switch all or 3 & 4.
5. Remote Control: Remote controls the Volume level.
6. Inut Level Control: Enables the matching of input levels to the output levels from the source.
7. Filter Mode: Switch low pass, full range or high pass.
8. FR: Variable 50Hz to 150Hz.
9. Power & Protection Indicators: The bi-color LED glows green when power is on and no problems are present. if one of the protection circuits comes on, it will change to red.

AMPLIFIER FEATURE DESCRIPTIONS

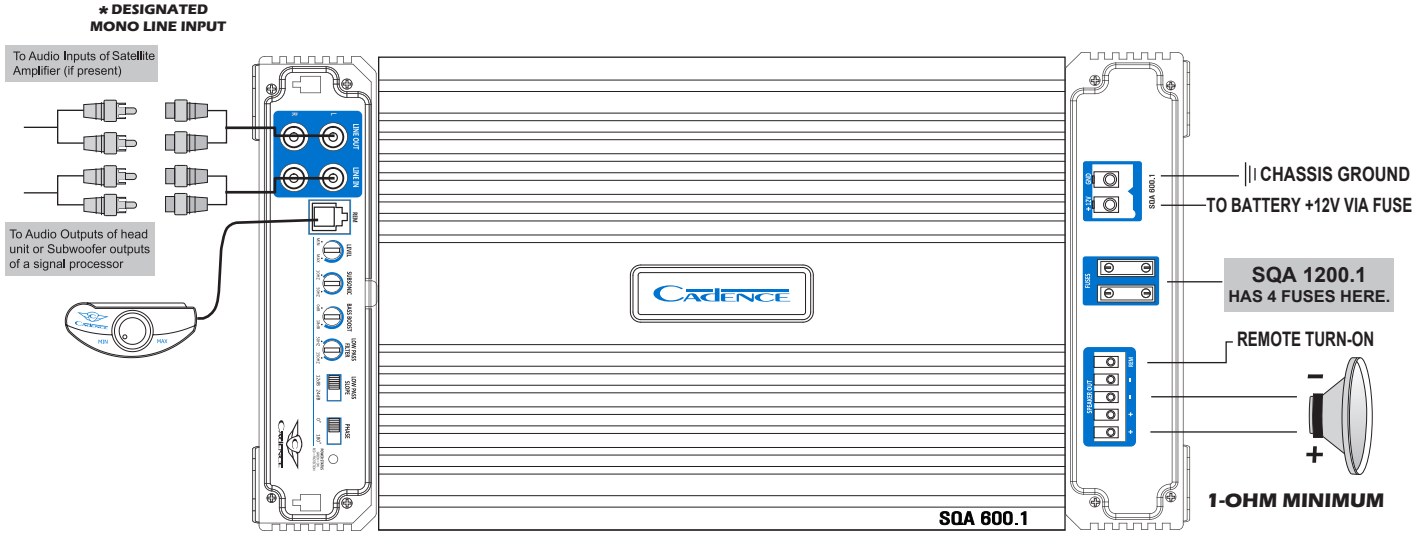
SQA 750.6 *6 CHANNEL*



1. Line Input: These inputs are for signal cables.
2. Line Mode: Switch 2 channel or 6 channel.
3. Inut Level Control: Enables the matching of input levels to the output levels from the source.
4. Filter Mode: Switch low pass, full range or high pass.
5. FR: Variable 50Hz to 150Hz.
6. Remote Control: Remote controls the Volume level.
7. Remote Level Mode: Switch all or 3 & 4 or 5 & 6.
8. Power & Protection Indicators: The bi-color LED glows green when power is on and no problems are present. if one of the protection circuits comes on, it will change to red.

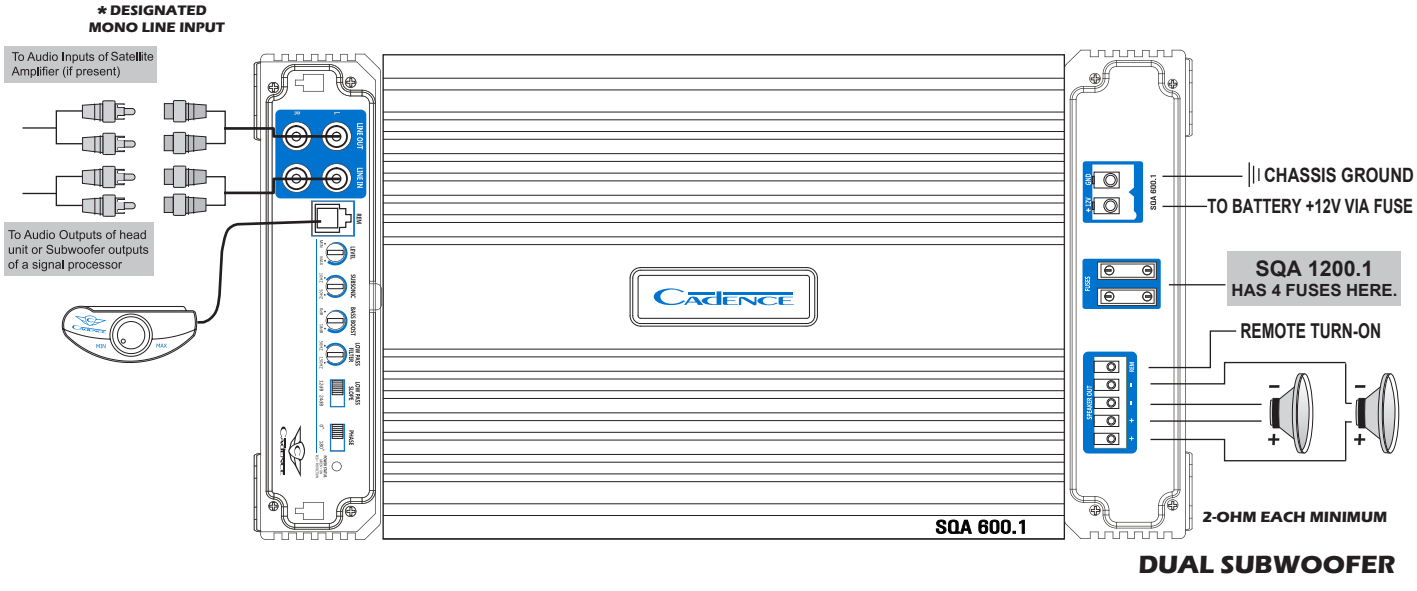
SQA 600.1/SQA 1200.1 MONO BLOCK AMPLIFIER APPLICATIONS

MONO SUBWOOFER



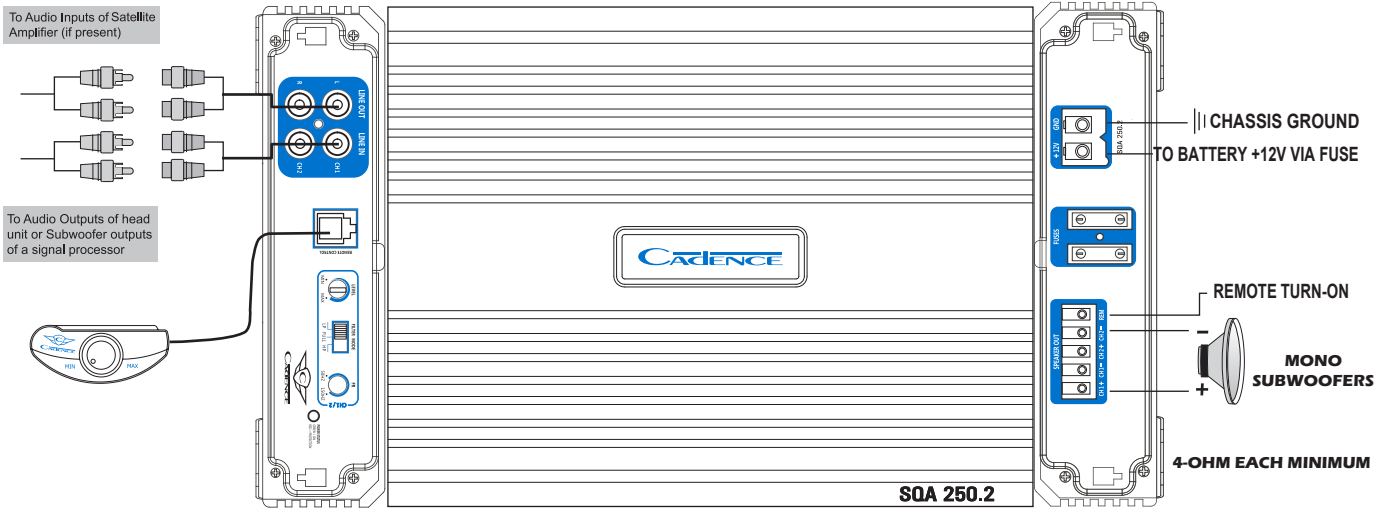
SQA 600.1/SQA 1200.1 MONO BLOCK AMPLIFIER APPLICATIONS

PARALLEL MONO SUBWOOFERS



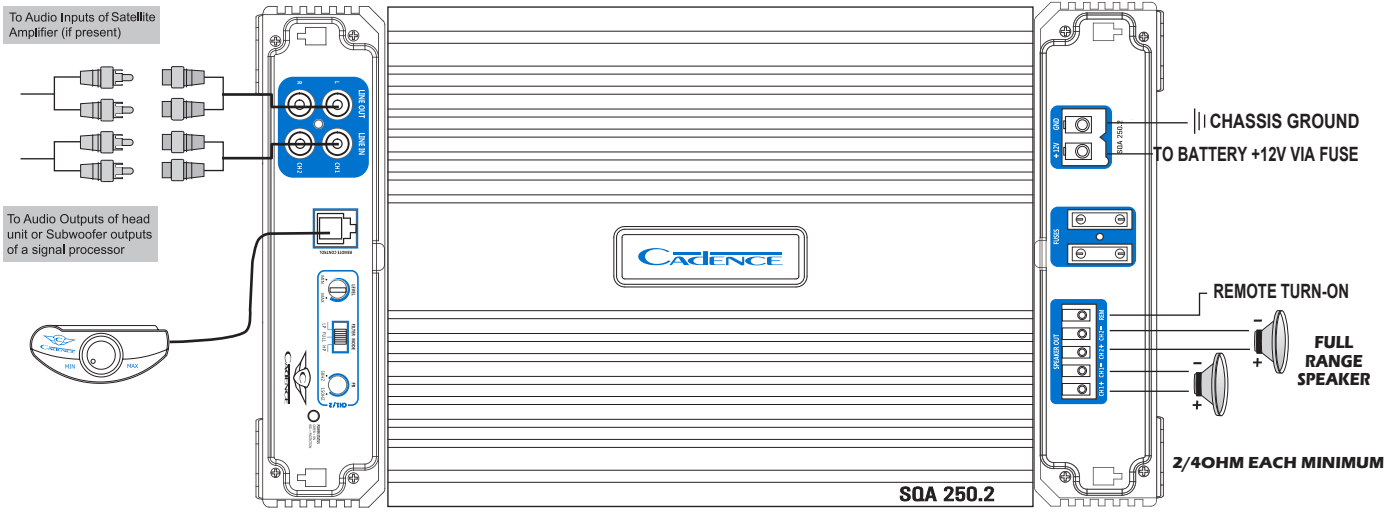
SQA 250.2 2 CHANNEL AMPLIFIER APPLICATIONS

BRIDGED MODE



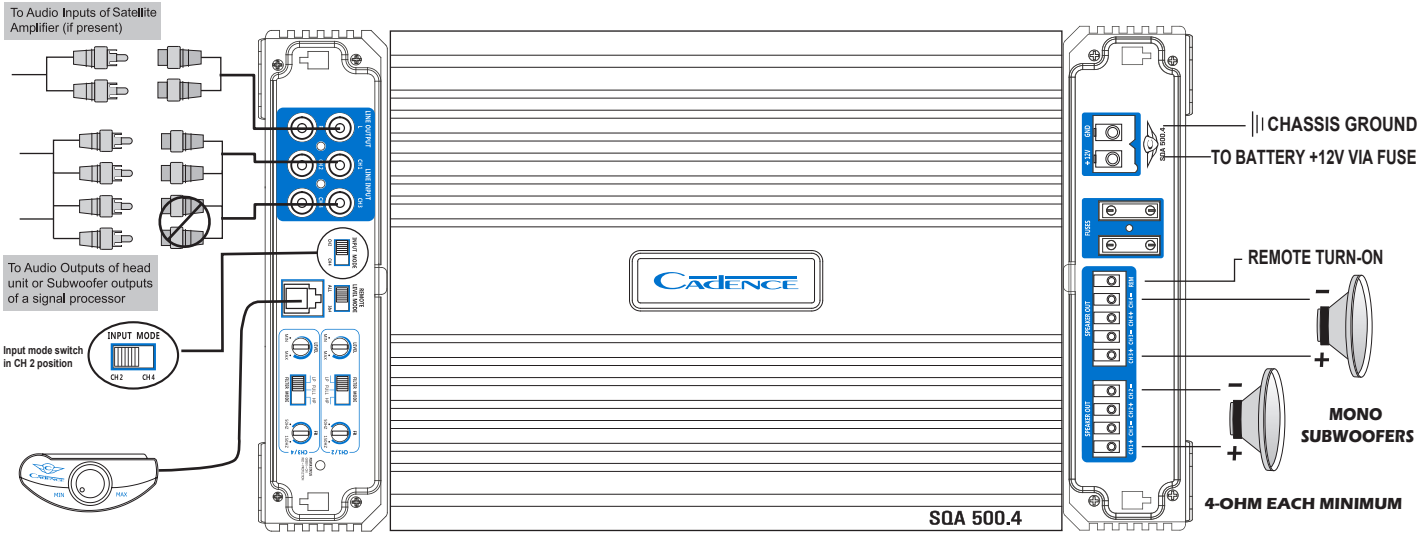
SQA 250.2 2 CHANNEL AMPLIFIER APPLICATIONS

2 CHANNEL MODE



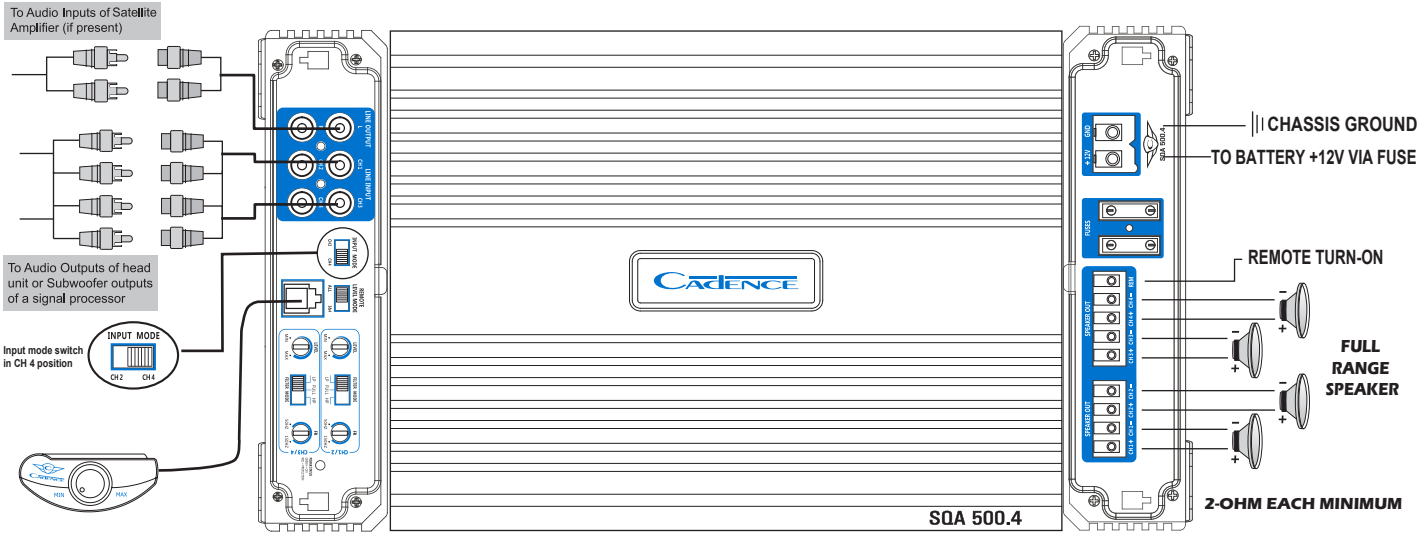
SQA 500.4 4 CHANNEL AMPLIFIER APPLICATIONS

BRIDGED MODE



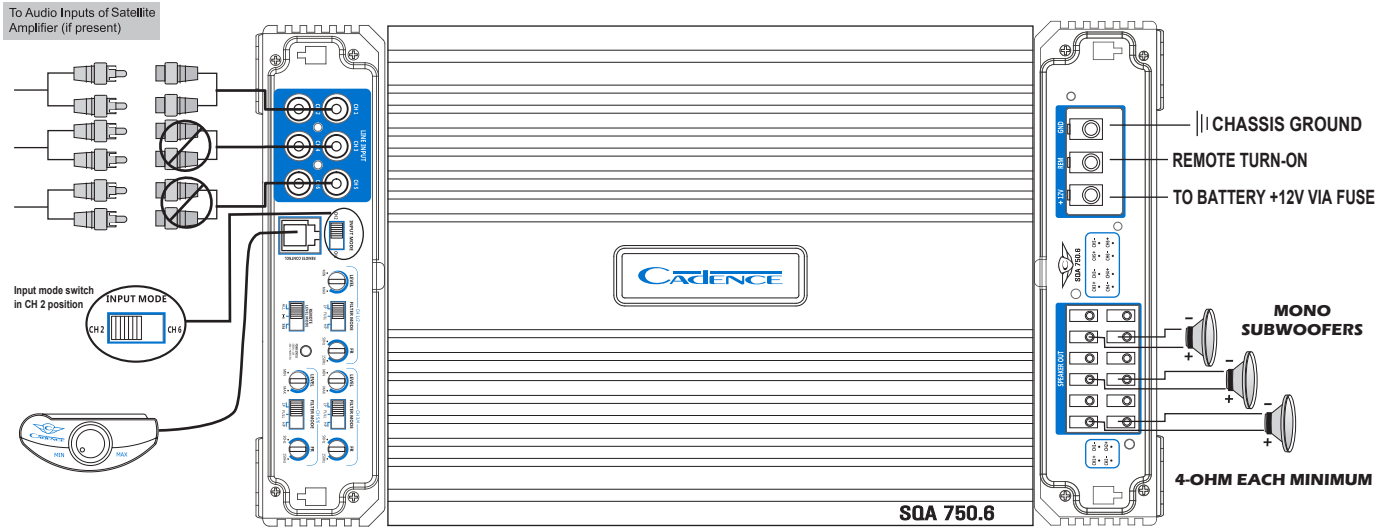
SQA 500.4 4 CHANNEL AMPLIFIER APPLICATIONS

4 CHANNEL MODE



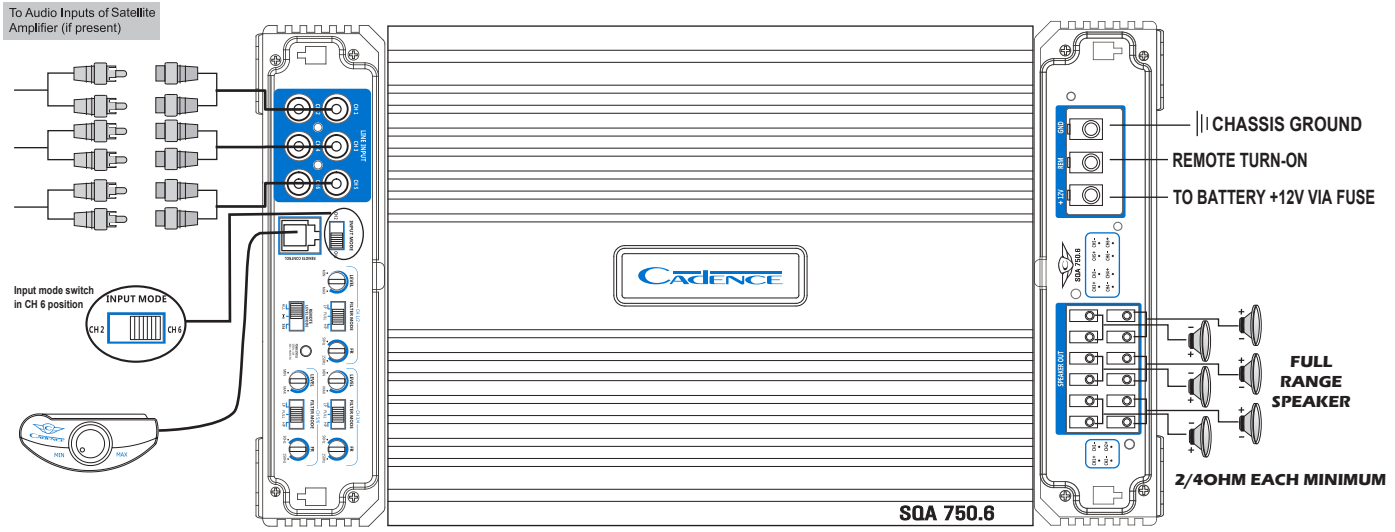
SQA 750.6 6 CHANNEL AMPLIFIER APPLICATIONS

BRIDGED MODE



SQA 750.6 6 CHANNEL AMPLIFIER APPLICATIONS

6 CHANNEL MODE



SQA SERIES AMIPLIFIER FEATURES

MODEL	SQA 600.1	SQA 1200.1	SQA 250.2	SQA 500.4	SQA 750.6
Output Power Rating					
RMS @ 4 OHM	240W x 1	450W x 1	80W x 2	80W x 4	80W x 6
RMS @ 2 OHM	420W x 1	800W x 1	120W x 2	125W x 4	125W x 6
RMS @ 1 OHM	600W x 1	1200W x 1	N/A	N/A	N/A
RMS @ 4 OHM Bridged	N/A	N/A	250W x 1	250W x 2	250W x 3
RCA Low Level Input	Yes	Yes	Yes	Yes	Yes
High Level Input	N/A	N/A	N/A	N/A	N/A
Green & Red Power Status Indicators	Yes	Yes	Yes	Yes	Yes
Phase Switch	0 or 180°	0 or 180°	N/A	N/A	N/A
Adjustable Input Sensitivity	Yes	Yes	Yes	Yes	Yes
Variable Bass Boost	0 to +18dB@45Hz	0 to +18dB@45Hz	N/A	N/A	N/A
Crossover Mode	Low Pass	Low Pass	Low Pass / Full / High Pass	Low Pass / Full / High Pass	Low Pass / Full / High Pass
Low Pass Filter	50-150Hz	50-150Hz	50-150Hz	50-150Hz	50-150Hz
Low Pass Slope	12 or 24 dB	12 or 24 dB	N/A	N/A	N/A
Subsonic Filter	10-50Hz	10-50Hz	N/A	N/A	N/A
High Pass Filter	N/A	N/A	50-150Hz	50-150Hz	50-150Hz
Subwoofer Gain Remote Control	Yes	Yes	Yes	Yes	Yes
Hi-Level Signal Auto Turn-on /off	N/A	N/A	N/A	N/A	N/A
Thermal, Short and Overload Protection Circuits	Yes	Yes	Yes	Yes	Yes
Soft Delay Remote Turn-On	Yes	Yes	Yes	Yes	Yes
RCA Output	Yes	Yes	Yes	Yes	N/A
Signal to NOise	>96dB	>96dB	>96dB	>96dB	>96dB
Fuse Rating	2×40A	4×30A	2×20A	2×30A	2×40A
Dimensions(LxWxH)	9.0"x 7.3" x1.9"	10.6" x 7.3" x1.9"	7.87" x 7.3" x1.9"	8.25" x 7.3" x1.9"	11" x 7.3" x1.9"

SQA 600.1/ SQA 1200.1/SQA250.2/SQA500.4/SQA750.6 AMPLIFIER APPLICATIONS

General:
At this point you are ready to get more specific on the settings for your amplifier.

Subsonic:
This setting acts as a low frequency cut off for your system bass reproduction. The point that you set it at cuts off any frequencies from reproduction beyond this point. The 12 o'clock position is a great starting point. EXAMPLE: If you adjust the Subsonic to 25Hz, the amplifier will not play frequencies below 25Hz but will play frequencies from 25Hz to the chosen Low Pass frequency.

Bass EQ:
This setting is a fixed bass boost at 45Hz that is variable from 0-18dB. This feature provides impact to your bass, but if not adjusted correctly, it can be over used and cause damage to your subwoofers and amplifiers. It is best to slowly turn this setting clockwise until the desired punch is felt, it is not recommended to exceed the 12 o'clock position unless listening at a low volume or a low recording quality as this can result in high distortion and possibly clipping.

Low Pass:
The Low pass control acts as a ceiling and doesn't allow frequencies to the right of the desired setting to be reproduced. The 12 o'clock position is a great starting point. EXAMPLE: If you adjust the Low Pass to 80Hz, the amplifier will not play frequencies above 80Hz but will play frequencies from 80Hz to the chosen Subsonic frequency.

Phase:
The phase switch allows you to change the phase of your subwoofer so that it best blends with your component speakers. While listening to a song with strong bass material set the switch to the position that gives the best blending of the subwoofers and component speakers.

High Pass:
When in Hi Pass operation this setting acts as a low frequency cut off your system reproduction. The point that you set it at cuts off any frequencies from reproduction beyond this point.The 12 o'clock position is a great starting point. EXAMPLE: If you adjust the High Pass to 100Hz ,the amplifier will not play frequencies below 100Hz but will play frequencies from 100Hz to the chosen Low Pass frequency.

Level (GAIN) Control Setup:
Ensure that the level is turned completely to the left prior to turning the system on. Next you should insert a CD or cassette that you are familiar with to use as a reference, and turn the head unit volume control to about 80% of its full setting. The system sound level will of course be very low, and the following procedures will help you to match the amplifier input sensitivities properly to the head unit output signal level. It is important to match the amplifier LEVEL input sensitivity to the Radio/CD output sensitivity. This can be located in the Radio/CD manual. If the Radio/CD output sensitivity is 2 volts, then adjust the amplifier LEVEL input to 2 volts.

If you are not sure what the Radio output sensitivity is, follow these general guide lines:
Turn the level control up slowly, till you hear distortion, then back off a few degrees on the control, If at any point your amplifier goes into protection. you will need to turn the Level to the left a bit and then try again. If you reach a point where the output does not increase, stop turning the Level control to the right as the amplifier/subwoofer combo has reached its max output on this application.

TROUBLESHOOTING

Before removing your amplifier, refer to the list below and follow the suggested procedures. Always test the speakers and their wires first.

AMPLIFIER WILL NOT POWER UP.

Check for good ground connection.

Check that remote DC terminal has at least 13.8v DC.

Check that there is battery power on the + terminal.

Check all fuses.

Check that protection LED is not lit,If it is lit,shut off amplifier briefly and then repower it.

HIGH HISS OR ENGINE NOISE (ALTERNATOR WHINE) IN SPEAKERS.

Disconnect all RCA inputs to the amplifier(s)-if hiss/noise disappears, then plug in the component driving the amplifier and unplug its inputs. If hiss/noise disappears, go on until the faulty/noisy component is found.

It is best to set the amplifier`s input level as insensitive as possible. The best subjective S/N ratio is obtainable this way. Try to drive as high a signal level from the head unit as possible.

PROTECTION LED COMES ON WHEN THE AMPLIFIER IS POWERED UP.

Check for shorts on speaker leads.

Check that the volume control on the head unit is turned down low.

Remove speaker leads, and reset the amplifier. If the Protection LED still comes on ,then the amplifier is faulty.

AMPLIFIER(S) GETS VERY HOT:

Check that the minimum speaker impedance for that model is correct.

Check for speaker shorts.

Check that there is good airflow around the amplifier. In some applications, an external cooling fan may be required.

DISTORTED SOUND

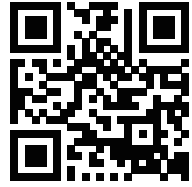
Check that the Level control(S) is set to match the signal level of the head unit.

Check that all crossover frequencies have been properly set.

Check for shorts on the speaker leads.

HIGH SQUEAL NOISE FROM SPEAKERS.

This is always caused by a poorly-grounded RCA patch cord.



// Features and specifications subject to change and or improvement without notice.
Though we tried our best to ensure that this manual is free and clear of errors please don't hold us responsible for printing errors. //

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