



SOUNDSTREAM

OWNER'S MANUAL

MA340.2 / 700.2 / 680.4

TABLE OF CONTENTS

INTRODUCTION	2
FEATURES & SPECIFICATIONS	3
CONTROLS & FUNCTIONS	4 ~ 9
PLANNING & MOUNTING YOUR SYSTEM	10
WIRING DIAGRAM	11 ~ 12
2 Channel Wiring Diagram	11
4 Channel Wiring Diagram	12
ADJUSTING & TUNING	13
TROUBLE SHOOTING	14



INTRODUCTION

All SOUNDSTREAM Marine Amplifiers go thru a rigorous 50-hour Saltwater and UV testing to withstand the rigors of the hostile marine environment. An added extra feature is adding a conformal-coated finish to the amplifiers circuit board. Without this protective coating a standard uncoated automotive amps circuit board could fall victim to the harsh environment on your boat. If your looking for great sound, versatility and durability SOUNDSTREAM has you covered.

SOUNDSTREAM amplifiers provides high-performance sound reinforcement for your marine audio equipment. The Tri-Mode bridging capabilities allow flexibility in multiple speaker configurations.

To achieve optimum performance, it is highly recommended that you read this owners manual before beginning installation.

FEATURES

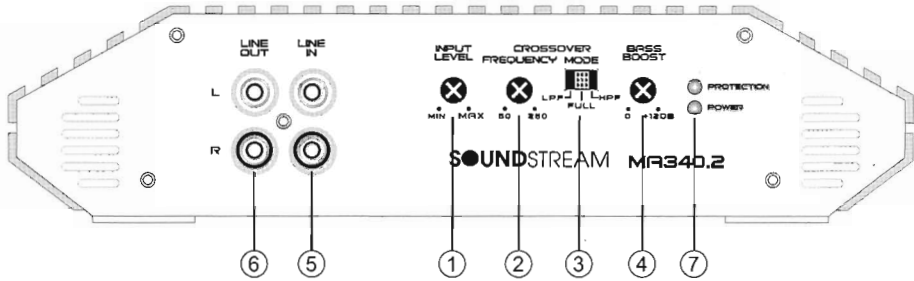
- Features
- Digital full range amplifier
- Fully regulated PWM power supply
- MOSFET circuitry
- Conformal-Coated Circuit board
- 2 Ohm stable stereo
- Tri-guard amplifier protection
- IDI™ (Intelligent Distress Indicator) gives a visual indicator of the amplifiers protection status
- Platinum RCA inputs and outputs
- Bi-linear selectable crossovers for inputs and outputs (Hi/Full/Low)
- Continuously variable High pass filter: 50Hz~250Hz (12dB slopes)
- Continuously variable Low pass filter: 50Hz~250Hz (12dB slopes)
- Subwoofer equalizer control: 0~12dB
- Input sensitivity: 200mV~8V
- Frequency response: 10Hz~20KHz
- S/N ratio: 100dB
- OEM floating ground input
- Platinum 4-gauge power connectors
- Tri-mode operation

Specifications

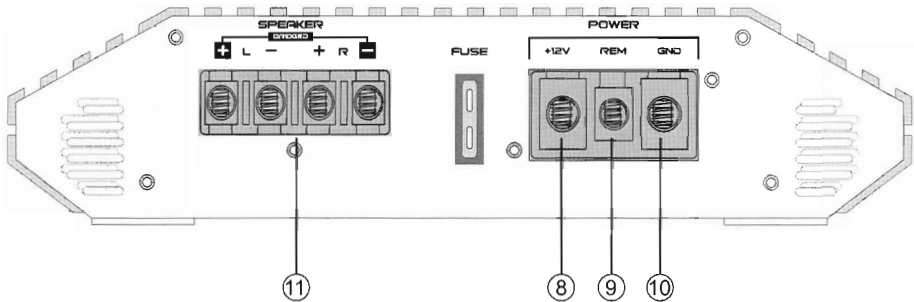
MODEL	CHANNEL	RMS @ 4 OHM	RMS @ 2 OHM	@ 4 OHM (BRIDGE)	FUSE	DIMENSIONS
MA340.2	2	85 x 2	170 x 2	340 x 1	25A x 1	8.7" x 2" x 8.8"
MA700.2	2	175 x 2	350 x 2	700 x 1	25A x 2	8.7" x 2" x 11.5"
MA680.4	4	85 x 4	170 x 4	340 x 2	30A x 2	8.7" x 2" x 12.7"

Controls & Functions

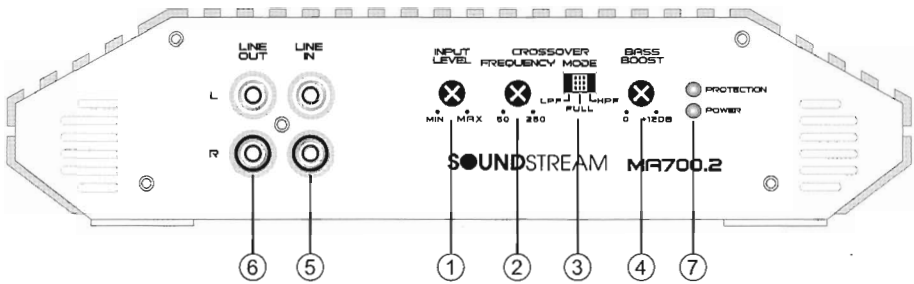
MA340.2 FRONT



MA340.2 REAR

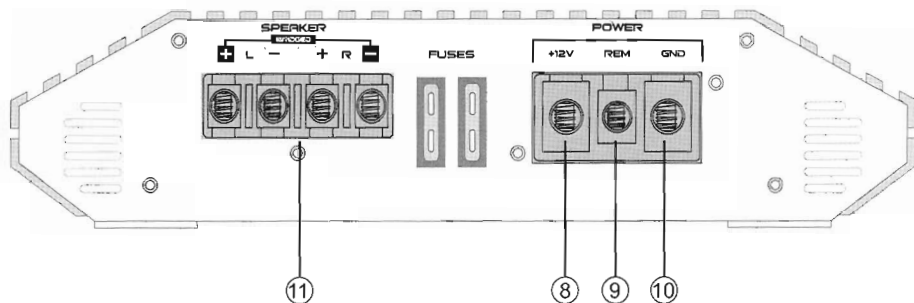


MA700.2 FRONT

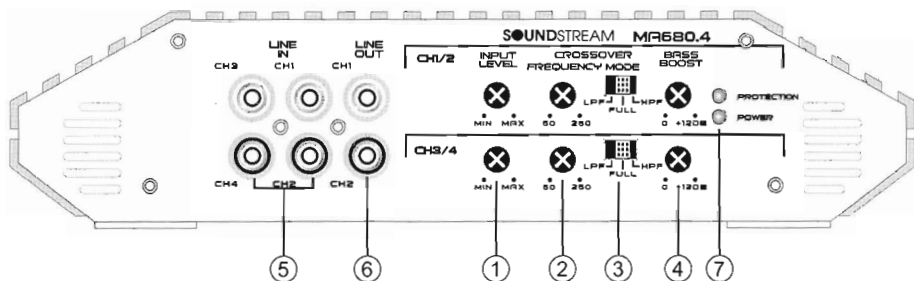


Controls & Functions

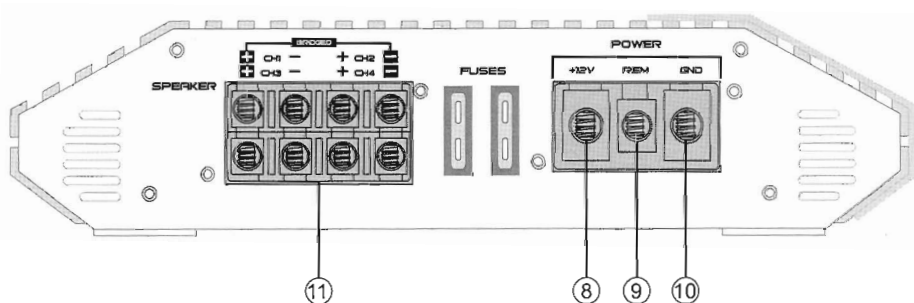
MA700.2 REAR



MA680.4 FRONT



MA680.4 REAR



Controls & Functions

1. Input Level Adjustment



This control adjusts the amplifier's input sensitivity. Input sensitivity is variable from 200 Millivolts to 8 volts. Clockwise increases sensitivity. Counterclockwise decreases sensitivity. The amplifier can be driven to full power with a wide range of signal levels. A lower signal level will require increased sensitivity for full power. A higher signal level will require decreased sensitivity. Avoid setting sensitivity lower than necessary as this would introduce unwanted distortion.

2. Crossover Frequency Control



This control is used to set the desired bass frequency (50~ 250HZ). The filter acts to cut-off frequencies above the set-point. In general, the selected frequency should closely match the resonant frequency of the speaker box.

3. Mode (Crossover) Switch



Adjust the crossover for your chosen installation method.

- LPF : Low pass filter-only bass tones go to speakers. Use with woofer or sub-woofer
- FULL :No filter-all tones go to speakers. Use with full-range speakers, or with external crossovers.
- HPF : High pass filter-blocks very low tones from the speakers.

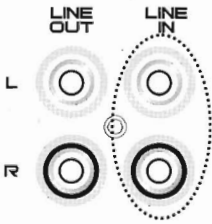
Controls & Functions

4. Bass Boost Control

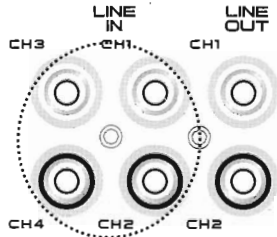


By using the bass boost function, bass notes at 50Hz are emphasized as much as 12dB.

5. Low Level Input RCA jacks



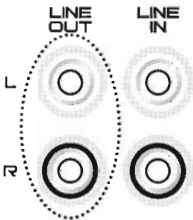
MA340.2 / 700.2



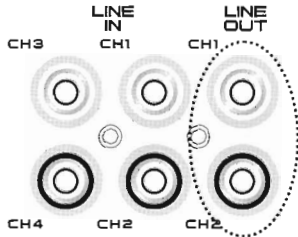
MA680.4

These inputs are for signal cables from the source. Always use high quality shielded RCA cables.

6. Low Level OUT RCA jacks



MA340.2 / 700.2



MA680.4

The LINE OUT allows you to build multiple amplifier systems without having to use splitter cords to distribute the signal. Now it is simply a matter of bringing one set of RCAS into the first amplifier, then using the line out RCA jacks as the feed to the next amplifier.

Controls & Functions

7. LED Indicator

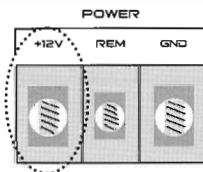


PWR(Power): This GREEN LED will illuminate when the amplifier is turned "ON". If it fails to illuminate, check the power connections to the Amplifier and fuses.

PROT(Protection): The amplifier protection circuitry will disable the amplifier if input overload, short circuit or extremely high temperature conditions are detected. When the protection mode is in operation, the LED indicator on the side panel will be illuminated, indicating the amplifier has gone into a self-preservation mode.

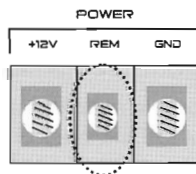
If you observe that the Protection LED is lit, please check the system carefully to determine what has caused the protection circuit to engage. The amplifier can be reset by turning the remote power off and then on again. If the amplifier shut down due to a thermal overload condition, please allow it to cool down before restarting. If the amplifier shut down because of an input overload or short circuit, be sure to repair these conditions before attempting to power up the amplifier again.

8. B+ Terminal (Battery positive)



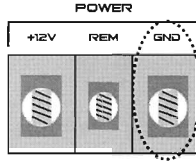
Due to the power requirements of the Amplifier, this connection should be made directly to the positive(+) terminal of battery. For safety measure, install an in-line fuse Holder (not included) as close to the battery positive(+) terminal as possible with an ampere rating ; not to exceed total value of fuses in Amp.

9. Remote Power On



Controls & Functions

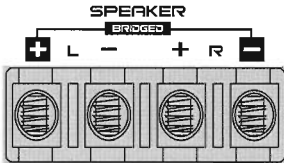
10. B- Terminal (Chassis ground)



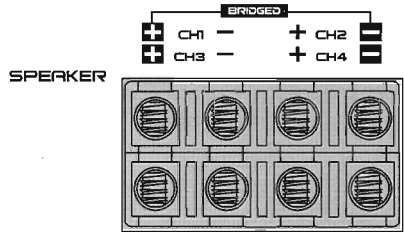
To avoid unwanted ignition noise caused by ground loops, it is essential that the Amplifier be grounded to a clean, bare, metal surface of the vehicles chassis.

Note : GROUND WIRE SHOULD NOT BE EXTENDED MORE THAN 3 FT (1 METER).

11. Speaker terminals



MA340.2 / 700.2



MA680.4

The mounting position of your amplifier will have a great effect on its ability to dissipate heat generated during normal operation. Under normal conditions, the heat sink will dissipate sufficient heat to avoid thermal shutdown. However please do not install the amplifier in a wooden box or similar device as this will prevent the amplifiers ability to dissipate heat. Allow at least 1 inch (2.54 cm) of clearance around the amplifier for proper airflow.

MOUNTING PRECAUTIONS

Take the following precautions prior to mounting the amplifier:

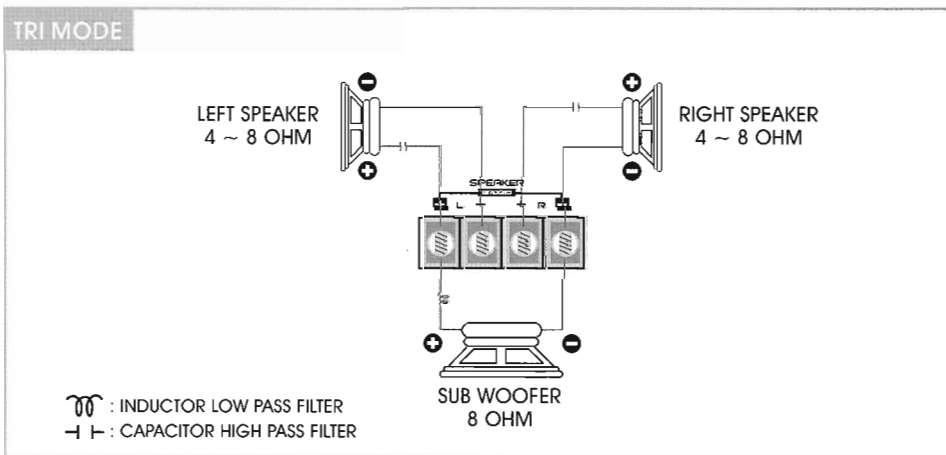
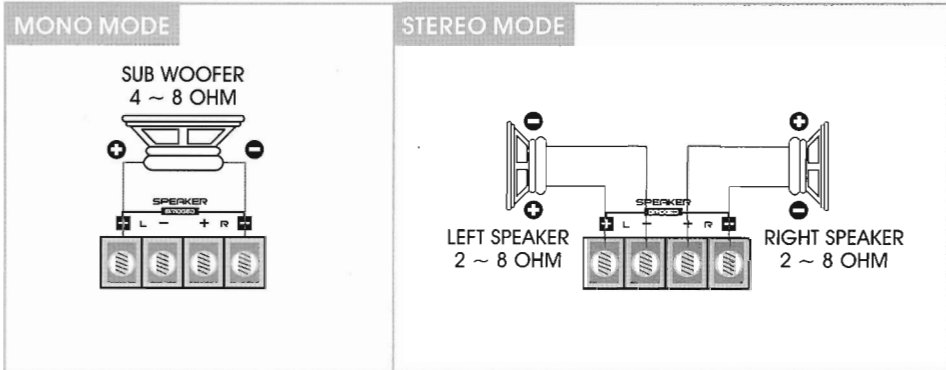
1. Make sure it is safe to mount the amplifier in that location. Failure to do so can result in serious damage to the boat.
2. Use the provided stainless steel hardware to mount the amplifier and additional accessories.
3. Extra care and attention is necessary in marine installations due to the uncertainty of water conditions.

Additional precautions and suggestions:

1. For the most efficient cooling, mount the amplifier so cool air runs along the length of the heat sink, rather than across them. To increase air movement and circulation.
2. Mount the amplifier on a rigid surface; avoid mounting to subwoofer enclosures or areas prone to vibration.
3. Use the amplifier as a template to mark the mounting holes. Prior to drilling and holes, make sure the proposed mounting holes will not cut into the fuel tank, fuel lines, electrical wiring, or through the boat.
4. Do not mount the amplifier where it is susceptible to water.

Wiring Diagram

MA340.2 / 700.2



TRI MODE OPERATIONAL OUTPUT allows a Speaker to be operated in MONO mode¹ while the main speakers are playing in stereo. Leave the Crossover (Sub-woofer) switch on "Full" position. Use a 100 Volt, non polar capacitor for a high pass crossover and a wire coil (inductor) to block high frequencies from the (Sub) Woofer as shown in the figure below. Capacitor and inductor values as written in the section below determine crossover frequencies.

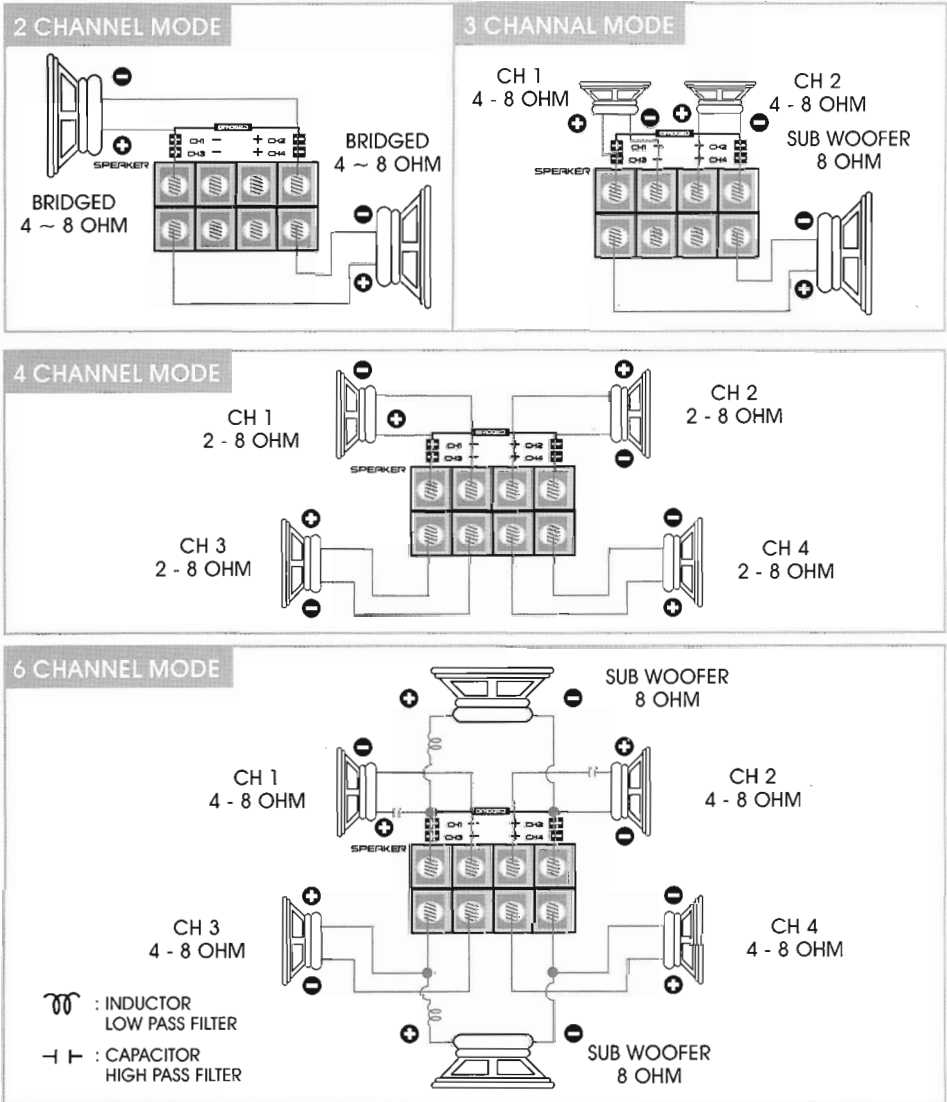
SPEAKER IMPEDANCE

FREQUENCY	4 OHMS		8 OHMS	
	H	C	H	C
60 Hz	11.8 mH	600 uF	23 mH	300 uF
80 Hz	8.2 mH	500 uF	16 mH	250 uF
100 Hz	6.2 mH	400 uF	12 mH	200 uF
120 Hz	4.2 mH	300 uF	8 mH	150 uF

6 dB/Octive High Pass and Low Pass Filter

Wiring Diagram

MA680.4



SPEAKER IMPEDANCE

FREQUENCY	4 OHMS		8 OHMS	
	H	C	H	C
60 Hz	11.8 mH	600 uF	23 mH	300 uF
80 Hz	8.2 mH	500 uF	16 mH	250 uF
100 Hz	6.2 mH	400 uF	12 mH	200 uF
120 Hz	4.2 mH	300 uF	8 mH	150 uF

6 dB/Octive High Pass and Low Pass Filter

Tuning on the Amplifier

The amplifier automatically turns on within a few seconds after remote voltage is applied. If your system is set-up so that the headunit provides the remote voltage; then it would turn on when your stereo is turned on. Note that there are alternate means of providing the 12 volt remote control signal, including installing an auxiliary switch.

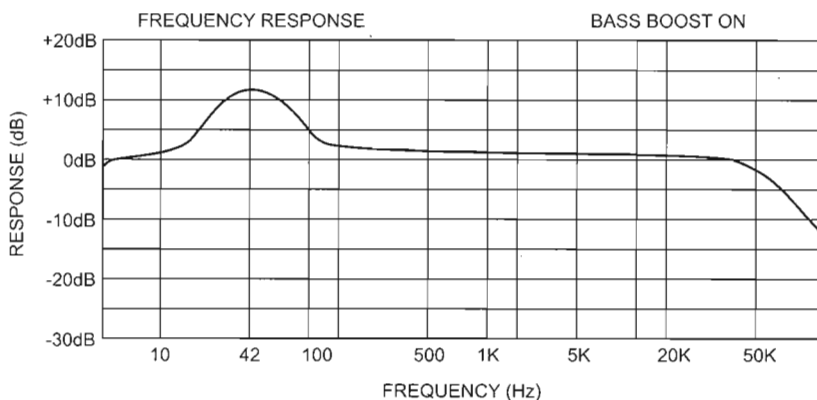
Adjusting The Audio Level

As stated previously, it is important to obtain a close match between the source unit's output voltage and the amplifier's sensitivity or admittance setting.

1. Use a screwdriver to turn GAIN (MIN / MAX) fully counterclockwise to MIN.
2. Turn the auto sound system's volume control to about one-third of its full range.
3. Adjust GAIN (MIN / MAX) to a comfortable listening level.
4. Turn up the auto sound system's volume control until the sound begins to distort. Then immediately turn the volume down to a point just before where the distortion began.

Caution : Never turn up the auto sound system's volume control more than needed to adjust the audio level, more than two thirds of its maximum volume.

5. Adjust GAIN (MIN / MAX) until the sound is at the maximum level you want the amplifier to produce.
6. Adjust the auto sound system's volume control to a comfortable listening level.



NOTE: Raising the Bass frequency allows higher frequencies to reach the bass speakers while blocking lower frequencies from midrange speakers. Lowering the Bass frequencies allows lower frequencies to reach the midrange speakers while blocking higher frequencies from bass speakers.

Trouble Shooting

SYMPTOMS	CHECK	REMEDY
NO SOUND	Is the power LED illuminated? (NO)	Check all fuses to amplifier. Be sure Turn-on lead is connected check signal leads. Check gain control. Check Tuner/Deck volume level. Clean contacts on fuse holders.
	Is the Diagnostic LED illuminated? (YES)	Check for speaker short or amplifier overheating.
AMP NOT SWITCHING ON	No power to power wire	Repair power wire or connections.
	No power to remote wire with receiver on	Check connections to radio.
	Burnt or broken fuse	Replace fuse
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 the problem is occurring before the amp.
AMP TURNING OFF MEDIUM / HIGH VOLUME	Check Speaker load impedance	Be sure proper speaker load impedance recommendations are observed. (If you use an ohmmeter to check speaker resistance, please remember that DC resistance and AC impedance may not be the same.)
PROTECTION LAMP ON	Shut down	Turn radio down Wait for AMP to cool
	Speaker wires shorted	Separate speaker wires and insulate