

# Stinger



SPX350X2 / SPX700X4

Amplifier Manual

## Features

- RCA or High Level Signal Input
- Weather Resistant for Marine and Power Sports
- Ultra Compact Chassis
- High and Low Pass Crossovers
- Direct Insert Power Terminals
- Remote Volume Control with Mute Included
- Efficient Class D Topology

## Specifications

### SPX350X2 2 CHANNEL SPECIFICATIONS

Frequency Response:  $\pm 1$  dB from 20Hz to 20kHz  
 Signal to Noise Ratio:  $>110$ dB  
 High and Low Pass Crossovers: 12dB per Octave  
 Low Pass Crossover Range: 40Hz to 400Hz  
 High Pass Crossover Range: 40Hz to 400Hz  
 Input Range: 200 millivolts to 12 volts  
 Lowest Recommend Load: 4 ohm Bridged or 2 ohm Stereo  
 Typical Efficiency: 80%  
 Damping Factor: Greater than 200

RMS Power 14.4Vdc  $\leq 1\%$  THD

125 x 2 @ 4 ohm Stereo  
 175 x 2 @ 2 ohm Stereo  
 350 x 1 @ 4 ohm Bridged

Recommended Fuse Size:  
 Power/Ground Wire Size:  
 Dimensions:

30 amp  
 8 Gauge  
 120mm L x 130mm W x 41mm H  
 4.72" L x 5.11" W x 1.6" H



### SPX700X4 4 CHANNEL SPECIFICATIONS

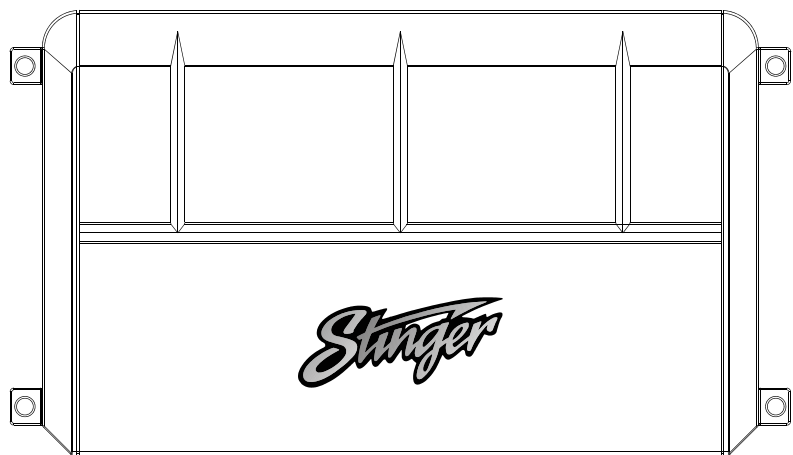
Frequency Response:  $\pm 1$  dB from 20Hz to 20kHz  
 Signal to Noise Ratio:  $>110$ dB  
 High and Low Pass Crossovers: 12dB per Octave  
 Low Pass Crossover Range: 40Hz to 400Hz  
 High Pass Crossover Range: 40Hz to 400Hz  
 Input Range: 200 millivolts to 12 volts  
 Lowest Recommend Load: 4 ohm Bridged (bridge rear channels only) or 2 ohm Stereo  
 Typical Efficiency: 80%  
 Damping Factor: Greater than 200

RMS Power 14.4Vdc  $\leq 1\%$  THD

125 x 4 @ 4 ohm Stereo  
 175 x 4 @ 2 ohm Stereo  
 125 x 2 @ 4 ohm Stereo +  
 350 x 1 @ 4 ohm Bridged  
 (Rear Channels only)

Recommended Fuse Size:  
 Power/Ground Wire Size:  
 Dimensions:

60 amp  
 8 Gauge  
 215mm L x 130mm W x 41mm H  
 8.5" L x 5.11" W x 1.6" H



**SPX350X2**  
2 Channel Power Amplifier

**SPX700X4**  
4 Channel Power Amplifier

**RCA INPUT**

Connect preamp signal cables from the source unit to RCA inputs in harness.

**RCA OUTPUT**

Provides a full range signal for an additional amplifier. There is no signal loss if using this output.

**CROSSOVER FREQUENCY**

Controls the crossover point for the speaker outputs, 40Hz-400Hz Low or High Pass.

**LEVEL**

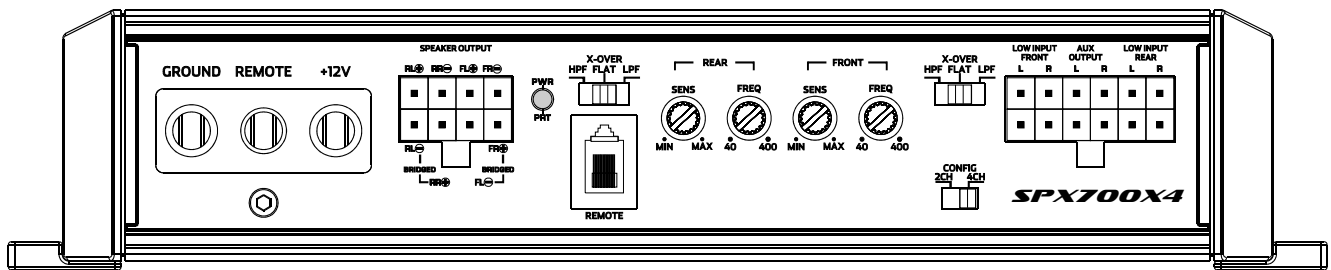
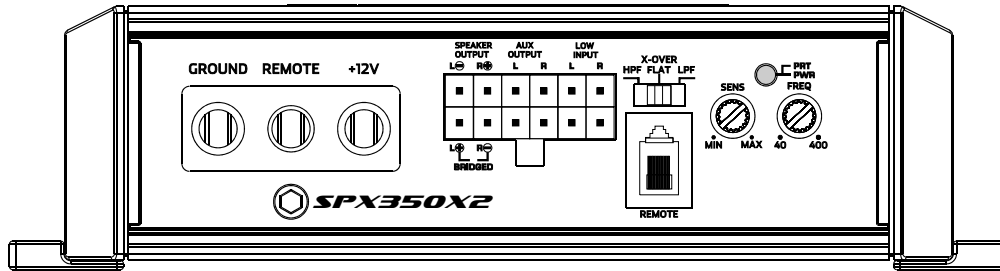
Used to reach maximum amplifier power with a wide variety of signal sources.

**HI INPUT**

Connect a factory system's headunit or amplifier outputs, no LOC needed. Use Stinger X12LINE or cut away RCA ends to use as Line Level Input.

**REMOTE LEVEL CONTROL w/MUTE (REMOTE)**

This port is for connecting the optional remote level control. This allows up to 20dB of volume adjustment by turning or push to mute.



**12V+**

This must be connected to the fused positive terminal (+12V) of the car's battery. The fuse must be located within 18 inches of the battery. Recommended fuse rating is 30 amperes.

**REMOTE**

This must be connected to switched +12V, usually a trigger wire coming from the head unit or ignition. This is not used if using Hi input auto on feature. **Only Rear Channels are controlled by Remote Level Controller.**

**GND**

This must be connected to the negative terminal of the car's battery or bolted to a clean, unpainted part of the chassis of the vehicle.






**SPEAKER OUTPUTS**

Used to connect the amplifier to speakers. SPX350X2 minimum impedance is 2 ohm stereo or 4 ohm mono.

**INPUT CONFIGURATION (SPX700X4 only)**

CONFIG switch on front panel can be used to select either 2CH inputs or 4CH inputs depending on your source unit capabilities. Select 2CH if only 2 channels of signal are available, this helps avoid having to use Y-connectors to drive 4 channels with only 2 channels of signal available.

## System tuning

1. Install all system fuses.
2. Set the amplifier's input sensitivity controls to their minimum positions (full counterclockwise). 
3. Set all amplifier signal routing switches according to your system's design. 
4. Make preliminary adjustments to the crossover frequency, usually 80Hz is good starting point for high and low pass. It may be necessary to fine tune the crossover frequency later for the best overall sound quality. 
5. If using an Remote Level Control, set it to maximum (full clockwise). 
6. Turn the headunit on with the volume set to minimum.
6. Visually check the amplifier's has powered on by the power LED.
8. Check the condition of all other components to make sure they are powered up.
9. Set the headunit's tone controls, balance, and fader to the center (flat) position. Turn off any loudness or other signal processing features.
10. Set the volume control of the source unit for maximum undistorted output (on most headunits / media devices this will be approximately 7/8 of maximum volume). Use a very clear and dynamic recording. 
11. Turn up the input level control until the speakers reach maximum undistorted output.

12. Repeat input level adjustments for all other amplifiers.
13. Reduce the source unit volume to a comfortable level.
14. Listen to various musical selections to check overall system balance. Compare front to rear, midbass to midrange, etc. If one speaker set is too loud compared to another, then its level must be lowered to blend correctly with the other speakers. The idea is to reference all speakers to the weakest set.
15. Fine tune crossover frequencies to achieve the smoothest possible blending of each speaker set.
16. With all levels set correctly, the system will reach overall maximum undistorted output at the volume level set in step 10.

### Volume Control with Mute Function

The included volume control will allow for +/- 20dB of level adjustment from the remote based on the level set in the previous step.

In some instances this will not be enough to completely mute the output level depending on the amount of input signal. In these cases, a mute function allows for instant mute of output without adjusting the volume control.

To activate the mute function, press the volume control knob inward until it clicks.

**To return to previous output level; press the control knob again.**

## Troubleshooting

**No power:** Check voltage at amplifier with a DMM (volt meter). B+ and REM (with head unit on) the voltage should register between 12.2V and 14.6V when using the attached ground lead of the amplifier. Check fuse at amplifier and at the battery. Use a meter to verify connection from one end of the fuse to the other, breaks may not always be visible. If the fuse is blown, check the power wire and also the amplifier for a short. If the short is in the amplifier itself, see your Stinger dealer. If no short is present, replace the fuse.

**Power without sound:** Turn the amplifier off and check all input and output signal cables and power connections. Check the speakers for shorts with a DMM (volt meter) or by connecting them to another audio source. After making sure everything is correct, turn the amplifier on again.

**"Motor Boating" - the power indicator going off repeatedly when the audio system is on:** Check the amplifier's connection to the battery. Check battery voltage. If low, recharge or replace the battery. Check all ground connections.

**Power without sound and the PROTECT LED is lit:** The red PROTECT LED lights when the amplifier shuts down for either thermal or over-current protection. A high internal amplifier operating temperature will trigger thermal shutdown: after it cools about 5°C, the amplifier will restart. A shorted speaker lead or operation into unusually low impedance loads will trigger over-current shutdown: cycle power at the amplifier REM terminal to restore operation. Check for shorted speaker wiring or damaged speakers or crossover systems if over-current shutdown occurs.

**No sound from one side:** Check the balance control in the head unit. Check speaker connections. Check signal input connection.

**Frequent amplifier shutdown with automatic recovery:** This indicates chronic amplifier thermal shutdown because of operation at consistently high internal temperatures. High operating temperature can be caused by inadequate ventilation. Make sure you are not running a lower than recommend impedance. Also check for damaged speakers or passive crossover systems. Finally, chronic thermal shutdown may result from otherwise normal operation of the amplifier at elevated output power levels, which can be resolved by providing additional amplifier cooling, installing a higher-power amplifier, or reducing amplifier output level.

**Very low output:** Check your head unit's fader control or the amplifier's input sensitivity level. Make sure HP frequency control is not set too high and LP frequency control is not set too low at the same time.

## WARRANTY:

### LIMITED WARRANTY ON AMPLIFIERS

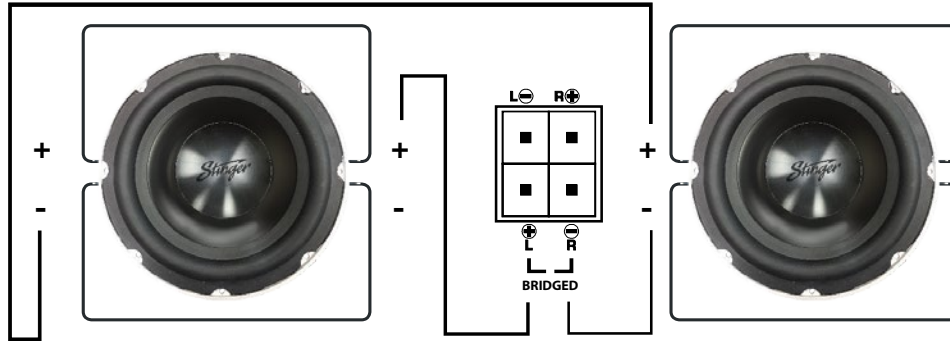
Stinger warrants this product to be free of defects in materials and workmanship for a period of one (1) years from the original date of purchase. This warranty is not transferable and applies only to the original purchaser from an authorized Stinger dealer in the United States of America only. Should service be necessary under this warranty for any reason due to manufacturing defect or malfunction, Stinger will (at its discretion), repair or replace the defective product with new or remanufactured 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.

### INTERNATIONAL WARRANTIES:

Products purchased outside the United States of America are covered only by that country's Authorized Stinger reseller and not by Stinger. Consumers needing service or warranty information for these products must contact that country's reseller for information.

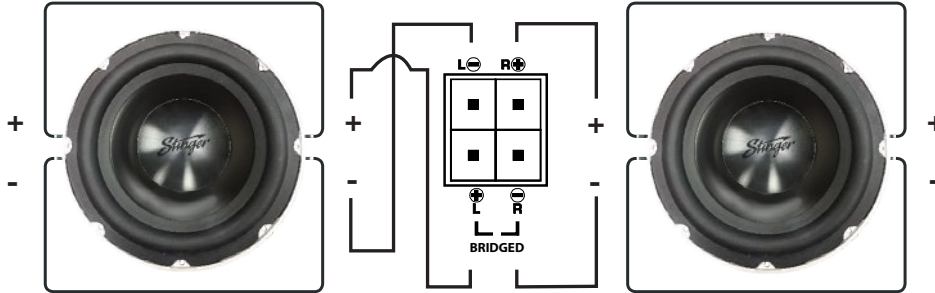
## System Diagrams

### Dual 2 Ohm Subwoofers



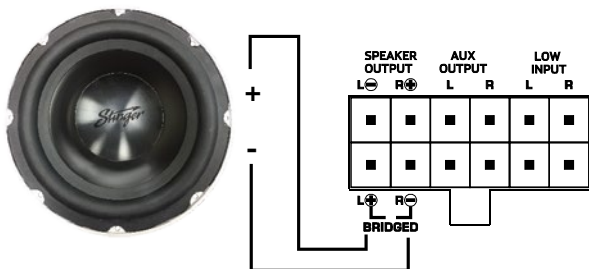
All voice coils are wired in parallel, then each speaker in series for a 8 ohm bridged load

### Dual 4 Ohm Subwoofers



voice coils are wired in parallel and wired to each channel for a 2 Ohm load on each channel

### Single 4 Ohm Subwoofer SPX350X2



### Single 4 Ohm Subwoofer SPX700X4

