SVX4
2-Way/3-Way
Front/Rear
Staggered Frequency
Electronic Crossover

OWNER’S MANUAL
Thank you for purchasing the Soundstream SVX4. You now own one of the finest automotive electronic crossovers mode, a precision component with audiophile performance.

For maximum performance, we suggest you take a few moments to read through this manual, to better acquaint yourself with the design features and capabilities of your new SVX4.

This Soundstream product is the result of American craftsmanship and the highest quality control standards. You can expect the SVX4 to deliver many years of listening pleasure. To further help protect your investment and to aid us with service questions, please fill in and retain the following requested information:

- Model Number:
- Serial Number:
- Dealer’s Name:
- Date of Purchase:
- Date of Installation:

We’ve designed the SVX4 to be a flexible component for planning and building your ideal car audio system. This three-channel electronic crossover is equipped with separate front and rear stereo inputs and includes controls for configuring two-way or three-way crossover systems. With this design, the fader control (on the head unit) always remains active, allowing you to achieve a desired front/rear sound balance.

In the 2-way configuration, the SVX4 provides high pass and subwoofer outputs. In the 3-way mode, incoming stereo audio is divided into band-limited outputs for front tweeter and mid-range speakers, a high pass output for rear speakers, and low frequency outputs for subwoofers.

The individual level controls and continuously-variable, 12 dB per octave filters give you a wide range of adjustment options. High input levels (e.g., from a factory radio) are easily accommodated via plug-in terminal strip and associated level match control.

The subwoofer channel also contains a selectable 12 dB or 24 dB (mono) per octave filter to set the “tightness” contour of bass frequencies. The subwoofer channel has separate On/Off controls on both front/rear outputs for constant or fadeable bass, and on 18 dB per octave filter to suppress harmful subsonic signals.
CONNECTIONS AND CONTROLS

Power Connections
Red: Connect to constant +12 V dc.
Black: Connect to chassis ground.
Orange: Connect to selected remote turn-on.
Orange/Black: Connect to RCA input/output connectors, and a rugged painted steel enclosure. And to insure stable, noise-free operation, we incorporate a switching power supply with a high current remote output delay circuit for timed turn-on of power amplifiers.

Connections

Figure 1. Rear panel of SVX4 contains power connections, input and output connections, and high level input connections with level match control.

Figure 2. Front panel of SVX4 contains crossover controls for rear, subwoofer, and front channels and includes a power indicator.

Crossover Controls

Rear Channel
LEVEL: continuously-variable output level control for adjusting the stereo level from the rear HIGH PASS OUT jacks.
FREQ: continuously-variable, 100 to 500 Hz crossover frequency control for stereo high-pass audio from the rear HIGH PASS OUT jacks.
SUB: slide switch to track subwoofer frequencies on or off with the rear channel. When SUB is off, bass will fade as you adjust the fader control toward the front channel. When SUB is on and the front SUB switch is off, bass will track the rear channel. For constant bass, set both [Front and Rear] SUB switches to on.

Subwoofer Channel
LEVEL: continuously-variable output level control for adjusting the stereo level from the SUB OUT jacks.
FREQ: continuously-variable crossover frequency control for stereo or mono low-pass audio from the SUB OUT jacks. When the switch is in the SUB OUT mono position, the front OUT is mono (i.e., each OUT jack is a mono signal), and the FREQ control uses the white scale. When the switch is stereo, on, and the FREQ control uses the aqua scale.
FREQ: continuously-variable crossover frequency control for stereo or mono low-pass audio from the SUB OUT jacks.

Front Channel
SUB: slide switch to track subwoofer frequencies on or off with the front channel. When SUB is off, bass will fade as you adjust the fader control toward the rear channel. When SUB is on and the rear SUB switch is off, the bass will track the front channel. For constant bass, set both [Front and Rear] SUB switches to on.

2W/3W: side switch for setting the front channel to either 2-way or 3-way operation.

TWEETER FREQ (aqua): continuously-variable, 2.4 to 5.6 kHz crossover frequency control for stereo high-pass audio from the front TWEETER OUT jacks. This control is active when the 2W/3W switch is in 3W position.

TWEETER LEVEL (aqua): continuously-variable output level control for adjusting the stereo level from the front TWEETER OUT jacks. Control is only active when 2W/3W is in the 3W position.

SATELLITE/MOD FREQ: When 2W/3W is set to 2W, this control becomes a continuously-variable, 100 to 500 Hz satellite crossover frequency control.
quency control for stereo high-pass audio from the Front SATELITE OUT (white).

When 2W/3W is set to 3W, this control (some frequencies) sets the starting crossover point for stereo audio from the Front MID OUT (white). The ending crossover point is automatically set as a symmetrical value determined by the setting mode on the TWEETER FREQ control.

SATELITE/MID LEVEL: Continuously-variable output level control for adjusting the stereo level from the Front SATELITE/MID OUT jacks.

Power Indicator
Red LED lights when power is on.

APPLICATIONS
The SVX4 can be used in either 2-way or 3-way system designs, as shown in Figures 3 and 4.

Figure 3 shows a basic system that uses satellite speakers for front and rear sound staging. The SVX4 is configured for 2-way operation by sliding the 2W/3W switch to 2W.

Audio signals from Front and Rear HIGH PASS OUT drive front and rear amplifiers. Passive crossovers on each amplifier's outputs further divide the amplified signals to the satellites' mid-range and tweeter speakers. The SUB OUT channel drives on amplifier and subwoofer speakers.

Figure 4 shows a design that uses separate tweeter and mid-bass systems for the front channel and satellite speakers for the rear channel. The SVX4 is configured for 3-way operation by sliding the 2W/3W switch to 3W.

The Front TWEETER OUT drives a front amplifier and a pair of tweeters. The Front HIGH PASS OUT drives a second front amplifier and a set of mid-bass components. The Rear HIGH PASS OUT drives a (third) rear amplifier and a pair of satellite speakers containing passive crossovers feeding tweeters and mid-bass components. The SUB OUT channel drives a fourth amplifier and subwoofer speakers.

INSTALLATION
Automotive sound system installations can be tricky, especially for first-timers. For this reason, we recommend using a professional installer, who has the tools and, more importantly, the experience to do the job right. If you decide to install the equipment yourself, we hope this manual will serve as a helpful guide.

Before attempting on installation study the applications shown in Figures 3 and 4. Use either proven design as a "blueprint" for your system installation, or as a starting point for creating your own custom system. With proper installation and adjustment, the SVX4 will reward you with reliable operation and optimum performance.

Recommended Signal Cables
The SVX4 uses gold-plated RCA type jocks for all audio connections, except for certain high level inputs (see Connections and Controls). For best signal transfer, we recommend using Soundstream DL or equivalent premium cable.

Wiring Layout
Determine how your vehicle's wiring is laid out, and plan to run your new wiring along the same routes. Be sure to keep power wires away...
from all audio signal wires. (NOTE: Wires containing audio signals can cross a power wire, but not run alongside it.)

You can route the new wires under the carpeting, but make sure they do not interfere with the vehicle's normal operation. Keep all wires inside the vehicle, hidden from passengers. An exposed wire can inadvertently be pulled out, and may cause disconnection or shorting.

location and Mounting

The SVX4 is compact in size and it generates virtually no heat. It can be located almost anywhere within the passenger compartment, trunk, or storage area. However, do not install the SVX4 in the engine compartment, or in any outside location exposed to dirt and moisture.

Use the SVX4 as a guide to mark drill holes. Before mounting the SVX4 to your vehicle's exterior, inspect the site for any hidden brake or gas lines, wires, or cables.

For New Installations

If you are installing the SVX4 as part of a new system, we suggest ‘bench testing’ your entire system prior to mounting any components. By connecting the system to an external +12 V dc power source, you can test the components outside the vehicle to verify your installation scheme. Otherwise, try connecting the system components to your vehicle’s electrical system before actually mounting each component.

In either case, connect the components exactly as intended in the final installation. Make all power connections lost, test the system, and then disconnect all power until final installation is complete.

Connecting Audio Signal Cables and Power Wires

1. Make sure power to your audio system is off.
2. Connect audio signal cables according to your system plan.

NOTE: For high level inputs, insert the bare-end wires from the factory radio harness into the openings located on the enclosed mole barrier strip connector. Follow the wire codes screened on the SVX4 rear panel, as shown in Figure 1. After tightening the screws at each opening, insert the connector into the matching female connector on the SVX4.

3. Connect the block wire to good chassis ground (e.g., bare metal or bolt, not pointed or coated).
4. Connect the orange wire to your head unit’s remote turn-on connection. This enables the SVX4 to follow a timed sequence for minimal turn-on and turn-off thumps.
5. If desired, connect the orange/black wire (from the High Current Remote Output decay circuit) to the power amplifier’s remote input connection (for amplifier turn-on delay).
6. Connect the red wire directly, through a 0.5 A in-line (fast-blow) fuse, to a constant +12 Vdc source, so that it is “hot,” even when the ignition is off. Try connecting it to the battery cable itself, or tapping into a power lead on an amplifier.

SETTINGS AND ADJUSTMENTS

Level Settings

1. Set all SVX4 output level controls to their minimum positions (i.e., full counter-clockwise). Set all crossover controls to their respective 12 o’clock positions. Turn on the system on and verify that the SVX4 Power indicator is on.

NOTE: If you are using the high input connections, set the level match control initially at the mid-point position. After completing step 4, listen to the overall level to determine if you need to further boost or cut the initial setting.

2. Set the head unit volume control to its mid-point position, play your favorite CD or tape, and turn up the SVX4 front output level controls (i.e., Sub/Mid and Tweeter in 3W), until the music reaches a comfortable listening level.

3. Next, turn-up the SVX4 rear level control until it is almost at the same level as the front channel. This setting will create a more realistic soundstage.

4. Set the subwoofer level control for a desired amount of bass, according to your taste in music.

Crossover Adjustment

The optimum crossover settings depend on two factors: the characteristics of your loudspeakers and the acoustics of your vehicle. Before making any adjustments, check the loudspeaker owner’s manual for specific crossover recommendations. Otherwise, follow these steps to adjust the SVX4 crossover controls:

5. Adjust the tweeter and mid frequency controls (or satellite frequency control in 2W) while listening to music. Try setting the control to either side of the initial 12 o’clock position and note any differences in the vocals. With some experimentation, you'll find the setting that sounds best.

6. Adjust the subwoofer frequency in the same way described in step 5. This time listen to the bars. You should find a setting that will give you a solid sound with minimum “boom” from resonating frequencies. Experiment with the 12 dB/24 dB button. The 24 dB slope will produce a “tight” mono bass, while the 12 dB slope will create a “loose” stereo bass.
Your SVX4 is protected by a limited warranty. Please read the enclosed warranty information carefully. Should any problem occur, contact your local Soundstream dealer.

**SPECIFICATIONS**

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<tr>
<th>Parameter</th>
<th>Specification</th>
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<tbody>
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<td>Crossover Slopes</td>
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<td>High Pass</td>
<td>12 dB per octave</td>
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<td>Subwoofer</td>
<td>12 dB per octave (stereo) or 24 dB per octave (mono)</td>
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<td>Crossover Frequencies</td>
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<td>Low Pass (mono)</td>
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<td>Low Pass (stereo)</td>
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<td>High Pass (2W)</td>
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<td>Mid-Range (3W)</td>
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