



PROX4.1
5 WAY ELECTRONIC CROSSOVER

Owner's Manual
and
Installation Guide

Congratulation!

Congratulations! You have purchased a **SOUNDSTREAM** product of the highest quality! Thank you for trusting the **SOUNDSTREAM** brand and congratulations to your new PROX4.1 crossover. Our products are developed with the most modern electronic technologies to ensure the product with quality and performance. In this manual you will find all relevant information for the use of your product. In case of doubt consult our technical support department.

The **SOUNDSTREAM** PROX4.1 is an equipment developed for use in automotive sound systems, effecting the frequency cuts through active electronic filters, being a crossover of compact size and modern design. It features nickle-plated RCA-type signal connectors, ensuring the best audio signal, as well as being assembled with rigorously selected, high-quality components. Your adjustments are complete and for better enjoyment of its operation, we recommend the complete reading from manual, where they are explained all their functions in detail.

Please read this manual carefully, following all the information in a precise way. They are very important and allow your equipment to work perfectly. If necessary, consult our technical support and clarify all your doubts.

Preferably for good quality cables and as short as possible to avoid noise and hissing. Install the GND (-) terminal directly to the battery and make a good grounding to the chassis.

For safety reasons, route all cables through suitable harnesses and away from sharp edges. Take care not to route the signal cables (RCA) next to the power cables, audio output, electronic injection modules, ignition and starter.

The installation site is very important. Always install in firm locations and away from vibration. Never install your PROX4.1 fixed to the speakers. Always use shielded RCA cables that have higher noise immunity and ensure better audio quality for the system.

Model and Serial # _____ **Installation Shop** _____

Dealer's Name _____ **Installation Date** _____

Date of Purchase _____

CAUTIONS! Prolonged listening at extremely high levels may result in hearing loss. Even though your car audio system with your new Soundstream PROX4.1 FIVE WAY ELECTRONIC CROSSOVER sounds better than anything you've ever heard, exercise caution to prevent hearing damage.

SPECIFICATIONS

Power Source:	14.4 volts DC negative ground
Input current:	0.5 amp max
Distortion:	0.01% THD at 1V output level
Frequency Response:	10Hz - 30KHz +/-3dB
S/N Ratio:	> 100dB
Separation:	60dB
Crossover Slope Rate:	18dB per octave
Input Impedance:	20K Ohms
Output Impedance:	100 Ohms
Output Gain:	1:2 (+6dB)
Output Voltage level:	9 volts max
Dimensions:	142mm x 170mm x 46mm

Trouble Shooting Guide

If the unit does not turn-on, and / or the power indicator LED is NOT illuminated, do this:

- 1) Check and make sure that B+ and GND are not reversed
- 2) Check that all power wires are properly connected and has the appropriate potential (11- 16 volts)
- 3) Check that the fuse is intact.

If you experience high audible distortion or low output volume:

- 4) Check that the input and output levels are set correctly. Input should match the source and output should match the sensitivity of the host.
- 5) Check the crossover settings; make sure they are correct; for high "Q" systems, set the crossover half an octave above the desired point and for low "Q" systems, set it 1 octave or more above.

If you experience whining or engine noises:

- 6) Verify that the GND connection is secure and the conductor (wire) is not too thin and unnecessarily long.
- 7) Check that the B+ wire is not too thin and unnecessarily long.
- 8) Change the power source; try taking power from a different point.

LOW OUTPUT: The Low output can receive audio output either through the Front In input via the Low / Rear input, and the signal switching is by the Front / Rear switch. After selecting the signal source for the Low channel, we have the following settings: Subsonic Filter 24dB, LPF, phase switch, bass boost setting, level adjustment and on / off switch.

Subsonic Filter 24dB: By key, you can select the following cuts: Flat, 30Hz, 50Hz or 80Hz.

LPF: 12dB lowpass filter with variable setting between 50 and 300Hz.

Phase Key: Used to rotate the phase of the Low path to 0 or 180.

Bass Boost: Variable bass boost setting between 0 and 12dB.

Level Adjust: adjusts the audio signal level of the track used.

On / Off switch: Disables the audio signal on the track, without changing the "Level".

MID LOW OUTPUT: The Mid Low output, receives audio signal through the Front In input, having the following possible settings: HPF, LPF, level adjustment and on / off switch.

HPF: 12dB high pass filter with variable setting between 50Hz and 400Hz.

LPF: 12dB low pass filter with variable setting between 300Hz and 5KHz.

Level Adjust: adjusts the audio signal level of the track used.

On / Off switch: Disables the audio signal on the track, without changing the "Level".

MID HIGH OUTPUT: The Mid High output receives audio signal through the Front In input, having the following possible settings in this way: HPF, LPF, level adjustment and on / off switch.

HPF: High pass filter of 12dB, with variable adjustment between 550Hz and 3KHz.

LPF: Low Pass Filter of 12dB with adjustable adjustment between 4KHz and 20KHz.

Level Adjustment: Adjust the audio signal level of the track used.

On / Off Switch: Disables the audio signal of the track, without changing the "Level"

HIGH Output: The High output receives audio signal through the Front In input, having the following possible settings in this way: HPF, Level Adjustment and On / Off Switch. This path does not have LPF, having a response up to 100KHz.

HPF: High pass filter of 12dB, with variable adjustment between 2KHz and 10KHz.

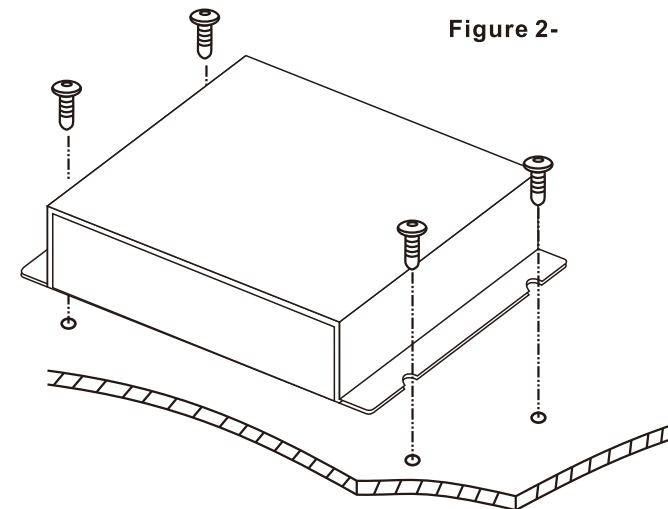
Level Adjustment: Adjust the audio signal level of the track used.

On / Off Switch: Disables the audio signal of the track, without changing the "Level"

MOUNTING PRECAUTIONS

The PROX4.1 crossover can be mounted in any convenient location in your vehicle that allows access to the controls and is away from moisture. The flanges on the chassis have mounting holes which can be used as a template for screw holes. For easy system set-up, mount the crossover so the front panel controls will be accessible after installation. In addition, observe the following precautions:

1. Mount the crossover on a rigid surface. Do not install the crossover on plastic or other combustible materials.
2. Prior to drilling, make sure proposed mounting holes will not cut into the fuel tank, fuel lines, brake lines (under chassis), or electrical wiring.
3. Avoid mounting to subwoofer enclosures or areas prone to vibration.



WIRING PRECAUTIONS

Read all wiring precautions. If you are not sure of the connections, contact your authorized **SOUNDSTREAM** dealer.

If you are using a source unit, without a remote turn-on lead, the PROX4.1 can be turned on with a switched accessory lead. You can find this accessory power source in the factory harness at the back of the radio. It is the lead that turns on and off with the key.

1. Before installation, make sure the source unit Power switch is in the OFF position.
2. Disconnect the negative (-) lead of the battery before making any power connections.
3. A clean chassis ground connection is critical to the performance of your crossover. Use the shortest ground wire possible and securely connect to the car chassis to minimize resistance and avoid noise problems.
4. Refer to the Figure 3 when making electrical connections. Connect the Xover's positive (+) lead via a fuse directly to the positive (+) terminal on the battery. Use red-insulated 18-gauge (or larger) wire for the crossover's positive (+) power lead and the same-gauge black insulated wire for the ground.
5. To avoid noise problems, run the crossover's positive (+) power lead and the amplifier's positive (+) power lead along one side of the vehicle to the battery. Run the remote turn-on wire and RCA audio cables down the center, and route the speaker wires along the remaining side. If wires must cross, run them perpendicular to each other.
6. When creating passage holes for the power wire, use grommets to eliminate any sharp edges created during drilling. This will protect the wire from being nicked and causing a short circuit.
7. Extra cable can cause signal loss and act as an "ANTENNA" for noise. Use only high-quality RCA cables that are no longer than necessary to make a direct connection with the source unit and amplifiers.

Using the PROX4.1

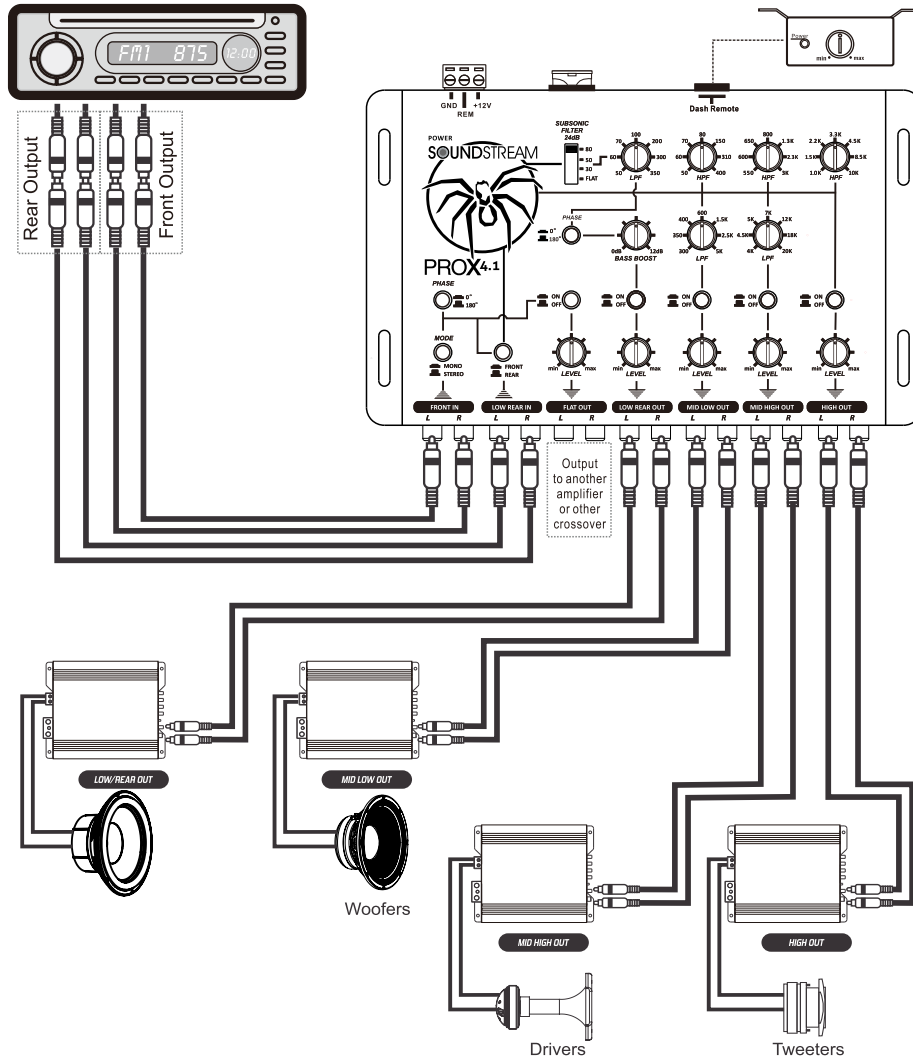
The **SOUNDSTREAM** PROX4.1 crossover aims to divide and direct the musical signal according to each frequency band of audio, sending this signal to the audio amplifiers and consequently to the electroacoustic transducers (loudspeakers, drivers and etc). The correct frequency division guarantees the sound system a higher performance since each type of speaker only works with the frequencies that it responds best. In addition, the loudspeaker to work only with frequencies appropriate to it, is more protected by avoiding accidental burns. When in doubt about the appropriate frequency cuts, always consult the speaker manufacturer.

The PROX4.1 has 2 audio signal inputs called Front IN and Low / Rear IN. The Front In input is responsible for receiving audio signal and sends it to the FLAT, Mid Low, Mid High and High outputs. The Front In signal can also be directed to the LOW channel through the Front / Rear key located just above the Low / Rear input. The Low / Rear input is only used to send audio to the Low output. This input can be connected to the Rear or Sub outputs of the car radio if it is available on the device used. The Low / Rear input connection is not obligatory, so the Low output can also receive audio through the Front In. The Front / Rear switch is responsible for this switching.

Front In: In the "Front In" input we also have 2 adjustment keys, a mono / stereo key and another Phase key. The chase mono / stereo serves to mix (sum) the input channels L and R, forming a mono signal that is sent to the outputs. In the stereo position, the separation of the stereo channels L and R in the output channels is continued. At the Phase switch, it performs a phase rotation of 180° in the audio signal from the Front IN input sent to the Mid Low, Mid High and High outputs. This rotation is important in cases where we have another sound system connected to the PROX4.1 Flat output. By performing the phase rotation 0/180 we can avoid canceling acoustical signals from one system to the other, having a sum effect of the sound pressure. This feature is useful when you want to "link" several vehicles to play the same song.

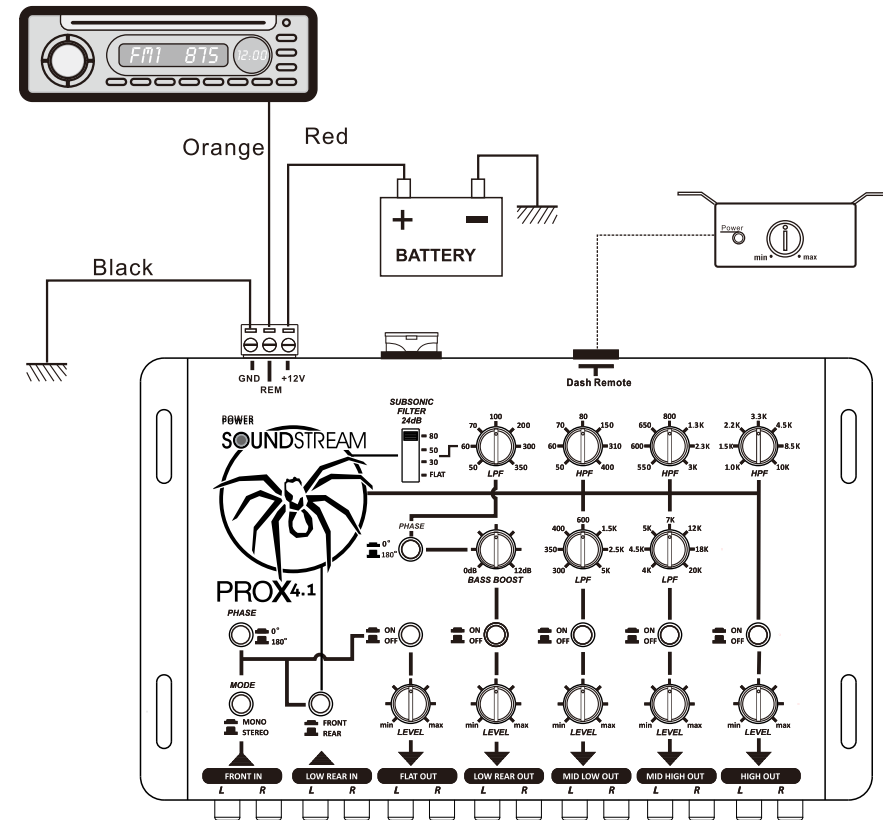
Flat Output: The flat output has a "level" setting, whose purpose is to adjust the audio level at the output. In addition to the level setting, you also have an ON / OFF switch, you can turn off the audio signal at the output without changing the level setting. This output receives signal from the front IN input and can be used for interconnection of systems, sending signal to another vehicle per exercise.

Signal Connection



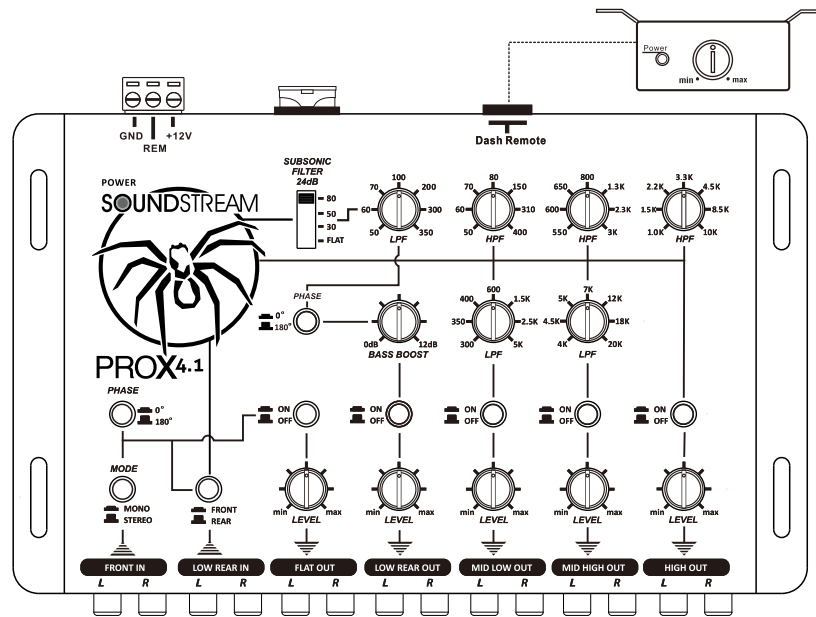
Power connection

- **B+(12V)** : Connect a red wire to the car battery or other power source.
- **REMOTE** : Connect an orange wire to remote activating (12V DC) wire of car stereo or equalizer.
- **GND** : Connect a black wire to the car chassis for ground connection.



(Figure 3)

PROX4.1 Top Cover Controls And Technical characteristics:



- 5 Way Electronic Crossover
- 1 Flat Out and 4-way variable filters
- Filters of 12dB / Octave
- Level adjustment on all routes
- 24db Subsonic Filter Switch
- Mute key on all channels
- Phase adjustment 0°/180° General and via Low
- Selection of front entry / rear via Low
- Variable Subwoofer Bass Boost Control
- Frequency response (-1dB) 10Hz to 100Khz
- Input impedance: 10K Ohms
- Output Impedance: 100 Ohms
- Current consumption: 250mA
- Power supply: 10V to 16V
- Protection system: Inversion of polarity
- Channel separation:> 80dB
- Harmonic Distortion (THD): <0.02%
- Maximum input level: 4 VRMS
- Maximum output level: 8.5 VRMS
- Weight: ~ 800 grams
- General 0°/180° phase inversion for all channels except via LOW
- Mono / Stereo switch makes sum of FRONT L and R input channels
- Dash Mount Remote Subwoofer Level Control

SOUNDSTREAM PROX4.1 is a 5 Way Electronic Crossover, five channels included 1 Flat Out and 4-way variable filters (Low Rear, Mid Low, Mid High and High)

Channel FLAT: Level adjustment -infinite at 0dB
Mute switch ON / OFF

Channel LOW REAR: HPF Subsonic 24dB / octave Flat / 30/50 / 80Hz selectable by key
LPF 12dB / octave Variable from 50Hz to 300Hz
Phase adjustment 0/180 via key
Bass Boost setting from 0 to + 12dB, 45Hz
Level adjustment -infinite at 0dB
Mute Switch ON / OFF
FRONT / LOW signal input selection via key

Channel MID LOW: HPF 12dB / octave variable from 50Hz to 400Hz
LPF 12dB / octave Variable from 300Hz to 5KHz
Level adjustment -infinite at 0dB
Mute Switch ON / OFF

Channel MID HIGH: HPF 12dB / octave variable from 550Hz to 3KHz
LPF 12dB / octave Variable from 4KHz to 20KHz
Level adjustment -infinite at 0dB
Mute Switch ON / OFF

Output Path HIGH: HPF 12dB / octave variable from 2KHz to 10KHz
Level adjustment -infinite at 0dB
Mute Switch ON / OFF