



L20

Lowrider Bass Generator

Congratulations on your purchase of a Sound Storm signal processor.

It has been designed, engineered and manufactured to bring you the highest level of performance and quality, and will afford you years of listening pleasure.

Thank you for making Sound Storm Laboratories your choice for car audio entertainment!

USER'S MANUAL

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Why use the Bass Generator?

The Sound Storm Laboratories L20 Lowrider Bass Generator is a specialized mobile audio component designed to restore and enhance the bass frequencies present in your music.

It is like an acoustic magnifying lens. The flexible control system permits you to identify the bass frequency as a “center frequency” around which maximum enhancement will occur. This is similar to the central frequency selected in a parametric equalizer.

The range of frequencies enhanced can be very narrow or relatively wide. By using the “Effect Range” control you can decide if you want a particular bass frequency to punch much harder than usual or a wider range of frequencies to be boosted.

About the built-in PWM Subsonic Filter

Any device that increases the level of the deep bass can increase the rumble and incur the risk of damaging your speaker system.

That’s why we decided to include a PWM Subsonic Filter in the L20. Generally, setting this filter to 33Hz (which will eliminate frequencies below 33Hz) will offer protection for most speaker systems.

You may also want to experiment and set the Subsonic filter to a higher frequency, as this sometimes has the effect of making the sound louder and cleaner.

Where do I place the L20 in my mobile audio system?

The L20 is placed in a mobile sound system **AFTER** the audio source (like a head unit) and **AHEAD** of any crossovers, equalizers or amplifiers. Please see the example on page 7 of this user’s manual.

This unit features balanced RCA (line level) inputs. This circuitry allows it to handle very high input signal voltages up to 15V rms) but still minimize induced noise.

Its basic function is to boost the voltage level of the bass frequency range you have selected. You set the output level using the 4-position Bass Output Control switch on the front panel. The maximum output level the L20 can produce is 10V rms.

Installation

Choose a mounting location where the unit will not distract or otherwise interfere with the driver's ability to control the vehicle.

Use only the installation parts and hardware provided with the unit to ensure proper installation. Using other parts can cause malfunction and possible damage to this product.

Avoid installing the unit in a location which is subject to high temperatures, direct sunlight, hot air from such sources as heaters or exhaust lines, or where it will be subject to contact with dust, dirt, moisture or excessive vibration.

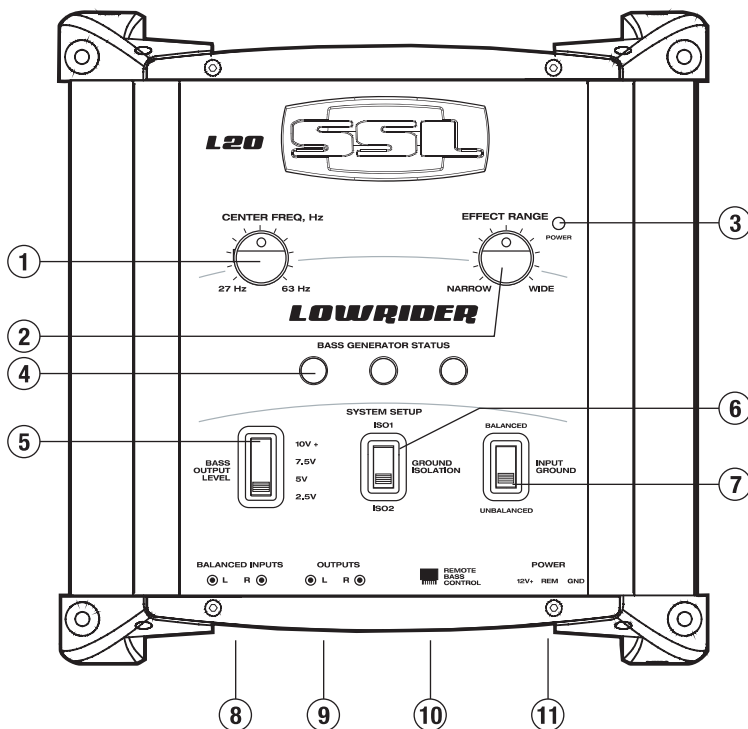
IMPORTANT: Before you connect this unit to your audio system....

Be sure that the output voltage you have selected with the Bass Output Control switch is within the acceptable input voltage range of that device.

If the output level is set too high, you may damage the input stage of the amp or other device. Also, even if the amplifier can handle it, the bass boost may be great enough to cause high bass distortion which can damage your speakers.

If you have any doubts, always select a lower level first and see if the bass enhancement you achieve is enough – you can always increase it more.

Controls and features



① CENTER FREQUENCY CONTROL

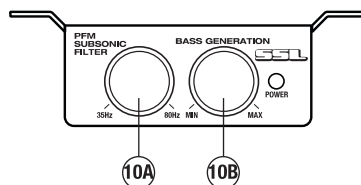
Use this control to set the center frequency for the bass enhancement processing.

② EFFECT RANGE CONTROL

This control allows you to determine whether or not you want the bass generation to occur over a wide range of frequency around the center frequency or to be tightly focused at the central frequency.

③ POWER INDICATOR

The L20 is designed to be turned on and off remotely using the REMOTE power connection. When the head unit or other triggering device is turned on, the L20's power LED will be illuminated.



④ BASS GENERATOR STATUS

When bass signals are presented at sufficient levels, the enhancement circuitry will start generating enhanced bass output. The bass generator status lights will flash when the generation activity is present.

⑤ BASS OUTPUT LEVEL SELECTOR

Use this selector to control the boost level presented to your attached audio components. Be careful to set it conservatively so it does not damage the attached equipment.

Controls and features, continued

⑥ GROUND ISOLATION SELECTOR

Occasionally, alternator whine may appear in a system because the source unit and the amplifier are grounded differently. If this occurs, switch the setting to the other setting.

⑦ INPUT GROUND SELECTOR

For most installations, this switch is set to the BALANCED position. In some systems, however, the source unit may look for the audio ground thru the RCA connectors. In this event, you should change the setting to UNBALANCED.

⑧ BALANCED L/R AUDIO INPUTS

⑨ L/R AUDIO OUTPUTS

⑩ REMOTE LEVEL CONTROL

This remote control is intended to be mounted under the vehicle dash near the driver to allow fingertip control of the L20. It has two controls:

⑩A PWM SUBSONIC FILTER

This control is used primarily to set a cutoff point for the bottom end of the lower frequencies in order to minimize rumble and other low frequency noise which can damage your audio system.

⑩B BASS GENERATION CONTROL

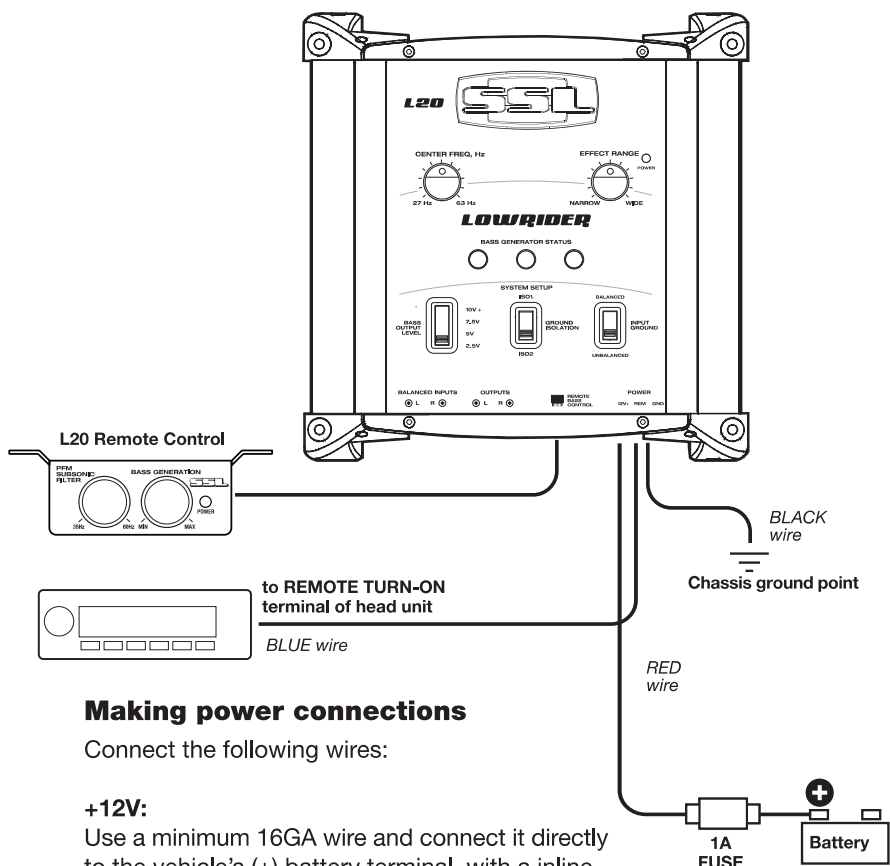
Use this control to adjust the level of bass generation the L20 creates. This control offers boost and cut from the voltage level selected using the Bass Output Level selector.

⑪ POWER CONNECTIONS

Connect this unit as you would any audio component. In particular, however, you should make sure the ground connection is very secure, not too long, and made of a heavy gauge wire. This will help ensure that the L20's bass enhancement activities do not introduce engine or alternator noise into your audio signal.

Power and Remote Level Control connections

Please note that this unit contains an internal ON/OFF switch, which is activated when the head unit is turned on. For this reason, in order to use this crossover, your head unit must have a remote-turn on lead.



Making power connections

Connect the following wires:

+12V:

Use a minimum 16GA wire and connect it directly to the vehicle's (+) battery terminal, with a inline 3A fuse within 18 inches of the battery.

GND (Ground):

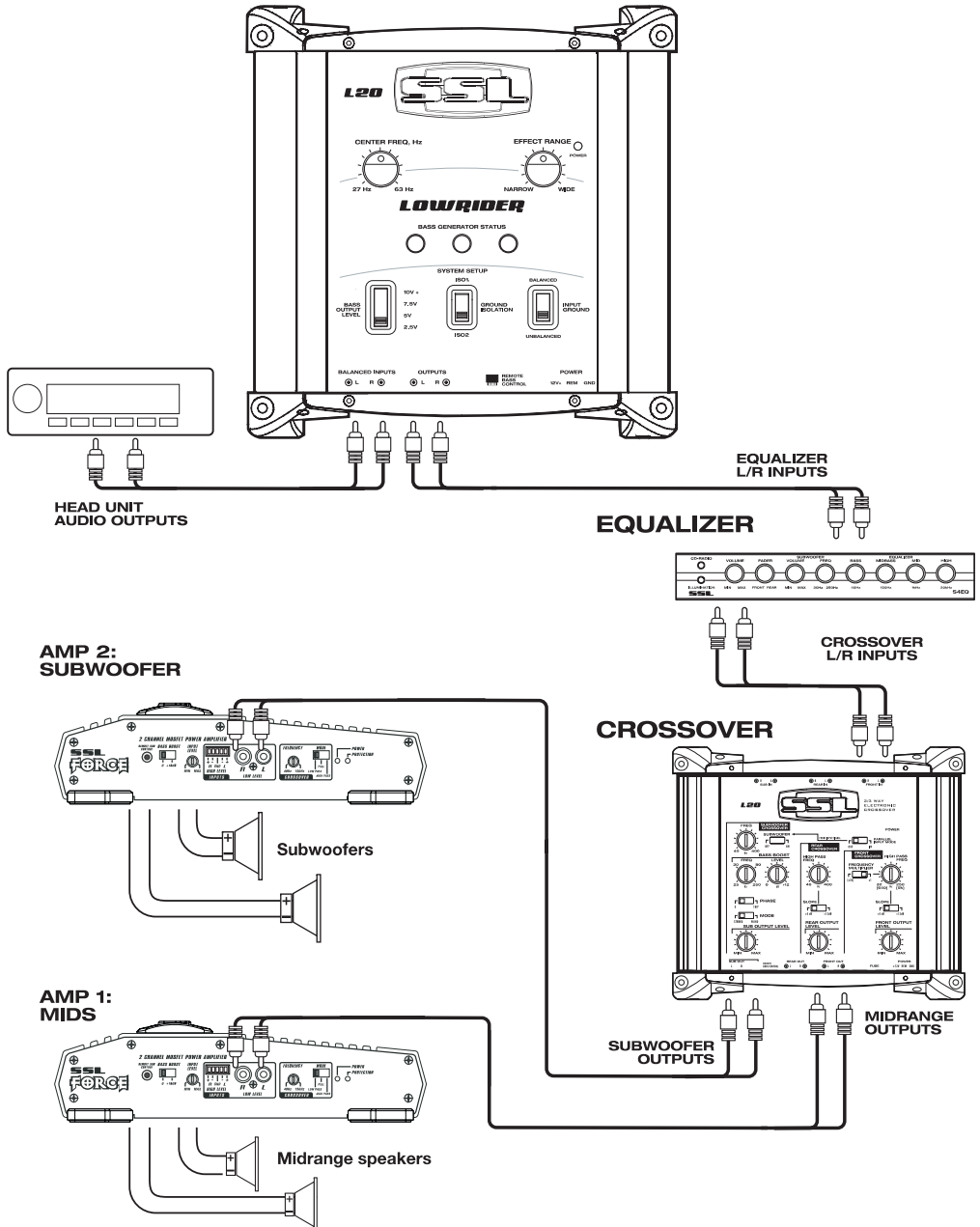
Use a minimum 16GA wire and connect it to a clean, solid chassis ground point as close to the crossover as possible.

REM (Remote):

Use a minimum 16GA wire and connect it to the Remote Turn-On lead of your head unit.

Audio connections

Always install immediately after the audio source unit, ahead of all other audio components such as equalizers, crossovers and amplifiers. The systems shown below is an example – your system may vary. Always use high-quality cables for best audio results.



Specifications

L20 Lowrider Bass Generator

Powerful low frequency enhancement system for bass afficianados

Input voltage level	15V rms
Output voltage level	10V peak (maximum)
Frequency response	10Hz - 100kHz (+/- 1dB)
THD	0.003%
Signal-to-noise ratio	130dB
Balanced input noise rejection	>60dB
Input impedance	10 k-ohm
Output impedance	150 ohms
Power supply type	PMW
Fuse rating	1A

All specifications subject to change without notice.

Troubleshooting

If you experience operation or performance problems with this product, compare your installation with the electrical wiring diagram on the previous pages. If problems persist, read the following troubleshooting tips which may help eliminate the problems.

SYMPTOM	POSSIBLE REMEDY
Unit will not power up.	<i>Check that Battery (+) and Ground connections are not reversed. Check that all wires are properly connected and that adequate voltage (11-16V) is present. Check that fuse is not blown.</i>
Sound is very distorted.	<i>Check that input level and output level are set correctly. Input level should match the output of the source unit, and output level should match the sensitivity of the audio unit connected to the Bass Generator's outputs.</i>
Volume level is very low.	<i>Check that input level and output level are set correctly. Input level should match the output of the source unit, and output level should match the sensitivity of the audio unit connected to the Bass Generator's outputs.</i>
Engine noise (alternator whine)	<i>Verify that the ground connection is secure, near the unit, and uses a heavy gauge wire. Check that the Battery (+) wire is not unnecessarily long. Try connecting to power from a different point in the vehicle.</i>