



SX-5800
Bedienungsanleitung
Owner's Manual

SIGNUM SERIES

Congratulations on your purchase of a ESX SIGNUM Amplifier. These quality audio products are designed and engineered to afford you years of uncompromised musical service. ESX has utilized the latest electronic technologies in order to deliver a superb listening experience.

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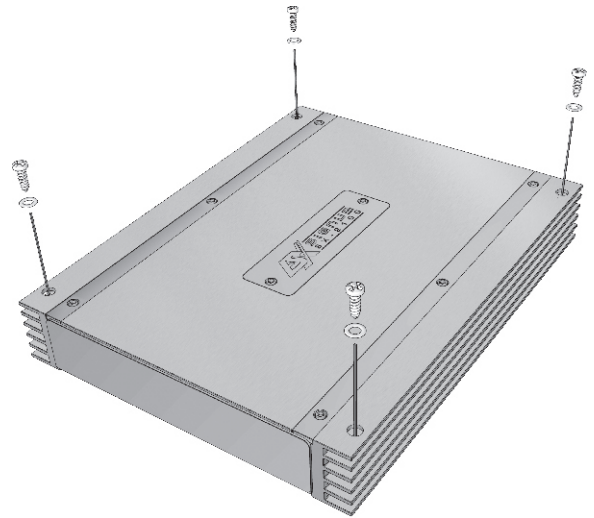
General Installation Notes

The amplifier is generally mounted in the rear trunk area but can be mounted in any convenient area such as beneath a seat. Please be sure to locate this unit where you have reasonable air circulation and protection from moisture. When considering the mounting location you should minimize the length of the power and speaker leads. Minimizing both leads will yield a more reliable installation. It is also important to ensure that the heat sink fins are not against a panel or a surface, preventing air circulation. Do not install the amplifier on a subwoofer box or on vibrating parts of the vehicle, since the vibrations can cause damage to the amplifiers electrical components.

Installation of the amplifier

Mark the location for the mounting screw holes by using the amplifier as a template. Drill holes at the marked locations and firmly fasten the amplifier in place with the mounting screws supplied in the accessory kit.

Before drilling or cutting any holes, investigate the layout of your automobile thoroughly: Take care when working near the gas lines or hydraulic lines and electrical wiring.



Electrical Connection

Ground (GND)

This wire is the electrical ground and must be fastened securely to the vehicle chassis. The best method is to use a threading sheet metal screw since the threads cut into bare metal. Ensure that all paint or other insulation is removed from around the hole area, and using self tapping screw, securely affix the bare wire ends to the vehicle chassis. Use as short a piece of cable as possible - use the same gauge as was used for the +12V cable. Make sure that the connection is safe, a loose connection may result in amplifier noise and fault condition.

Remote (REM)

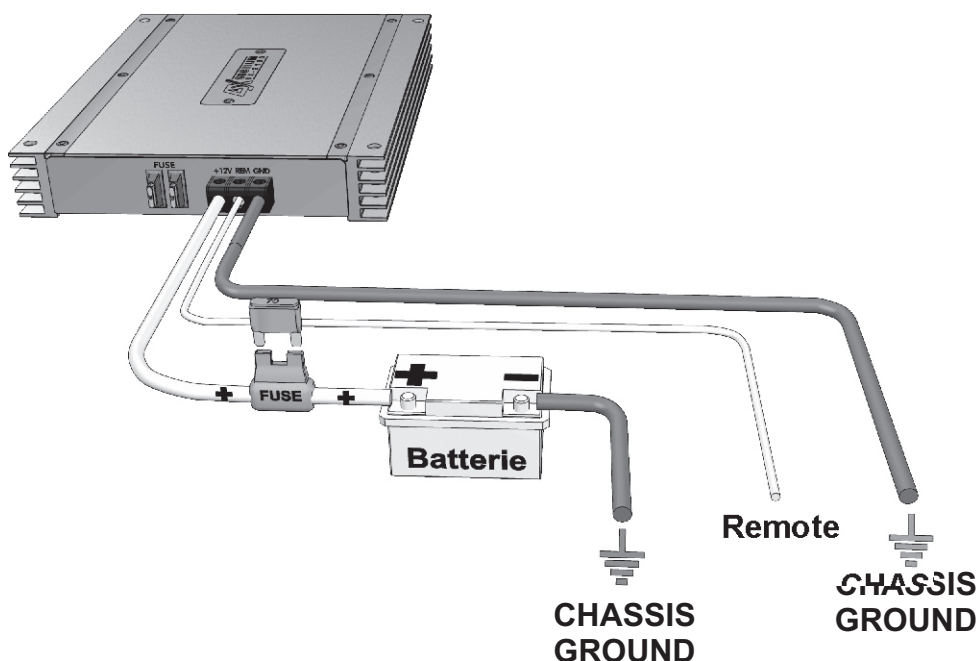
Many radios or other music sources have an output terminal for connection of the remote turn-on of the power amplifier. If a radio doesn't have a remote turn-on feature, then you can use the antenna relay wire, which activates the antenna motor. Please note, if the power antenna retracts when the radio is operating, then you cannot use the antenna relay wire to operate the remote turn-on.

Batterie Connection (+12V)

This wire is usually connected directly to the positive battery terminal. Ensure that the + power supply wire is fused via an assigned fuse in line with the + power supply wire. Please use a sufficient gauge for the installed amplifiers. This connection must be completed using spade lug with insulating sleeve.

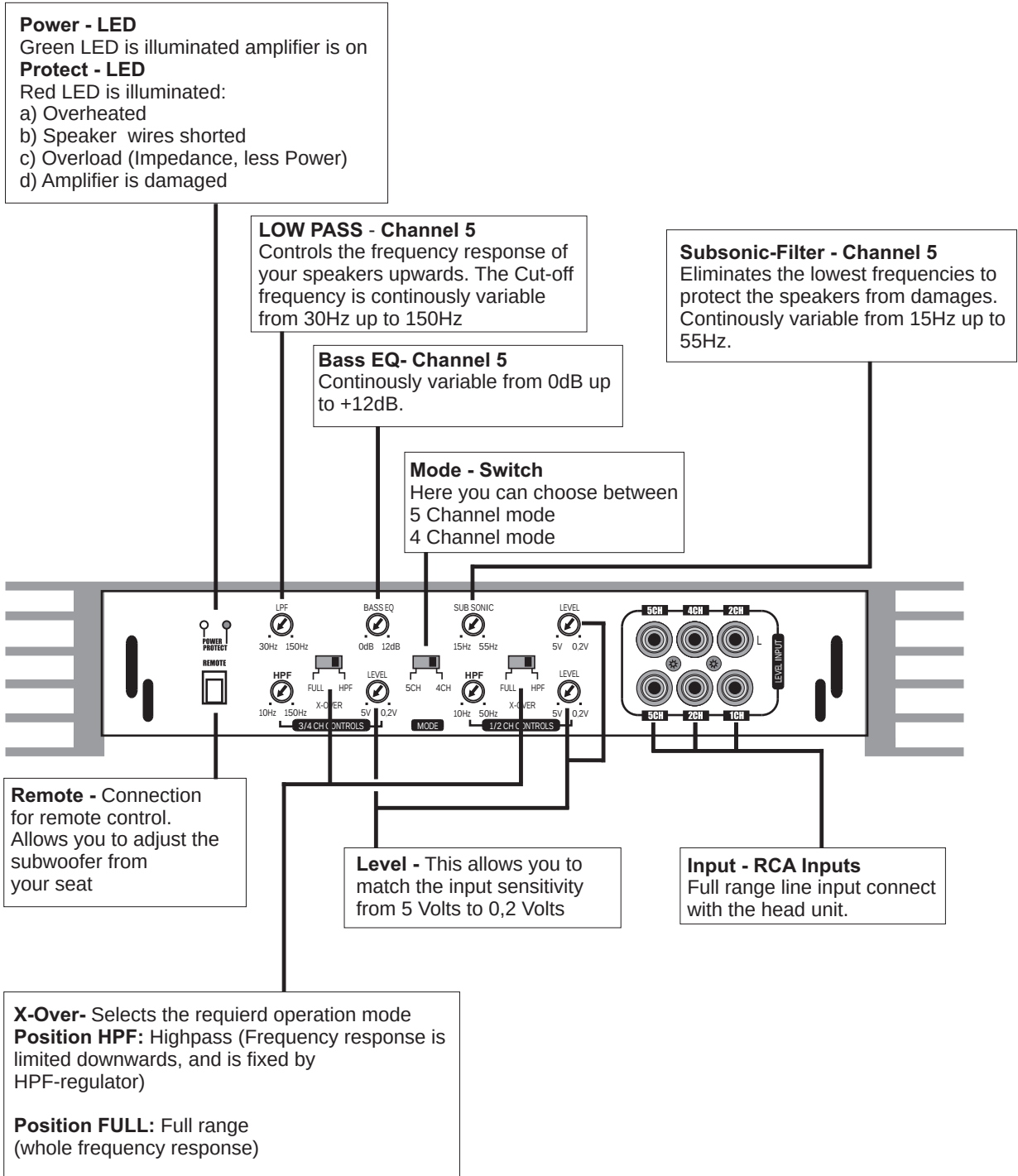
Fuses

The integrated amplifier fuses protect the units from short circuit and overload. The fuse rating is for 4 Ohm loads (impedance) of the speakers, for 2 Ohm loads the fuses may have to get increased by up to 50% in case of higher power consumption.



5-Channel Amplifier SX-5800

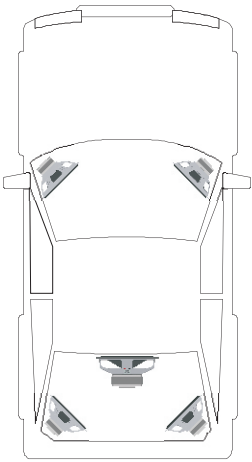
Functions and Controls



5-Channel Amplifier SX-5800

Speaker wiring and Connection

Stereo-Mode (5-Channel - with Front-/Rearsystem and Subwoofer)



Interconnect Cable checklist :

- Connect the RCA outputs from head unit with the RCA Inputs (LINE INPUT 1CH&2CH / 3CH&4CH) of the 4 Channel amplifier with two RCA Cables.
- Connect the RCA outputs of the (LINE OUT) 4-Channel Amplifier with the RCA inputs(LINE INPUT) of the 1-Channel/Mono amplifier with an RCA cable.
- Connect the Front- & Rear-Speakers with a good RCA cable with the speaker outputs (SPEAKER OUTPUT/ + 1CH -, + 2CH -, + 3CH -, + 4CH -) of the 4-Channel amplifier.
- Connect the Subwoofer with a good RCA Cable with the Speaker outputs (SPEAKER / + -) of the 1-Channel/Mono Amplifier.
- The minimum final speaker impedance must not be below 2 Ohm per channel. Too low speaker loads result in too high heat dissipation and may cause the amplifier run into protection.
- Please observe speaker channel and polarity as printed by the speaker terminal

Caution!

Be careful not to connect speaker (-) to the ground or vehicle chassis.

X-Over- (Front-/Rearsystem 1 up to 4 Channel)

- When you use bigger speaker systems (Ø20cm plus), set on FULL RANGE-position (FULL RANGE).
- When you use smaller speaker systems (Ø8.7cm - Ø16cm), set on HIGHPASS- position (HIPASS). The cut-off frequency should be between 60Hz - 150Hz. It is controlled by the HIPASS-regulator.

Subwoofer (Channel 5)

- The cut-off frequency should be between 60Hz - 150Hz. It is controlled by the Lowpass-regulator.

Bass EQ-(Channel 5)

- Allows you to adjust the bass boost from 0dB up to 12dB.

Caution! Please use the Bass-Boost carefully. The additional boost may result in clipping or overload.

Subsonic-filter (Channel 5)

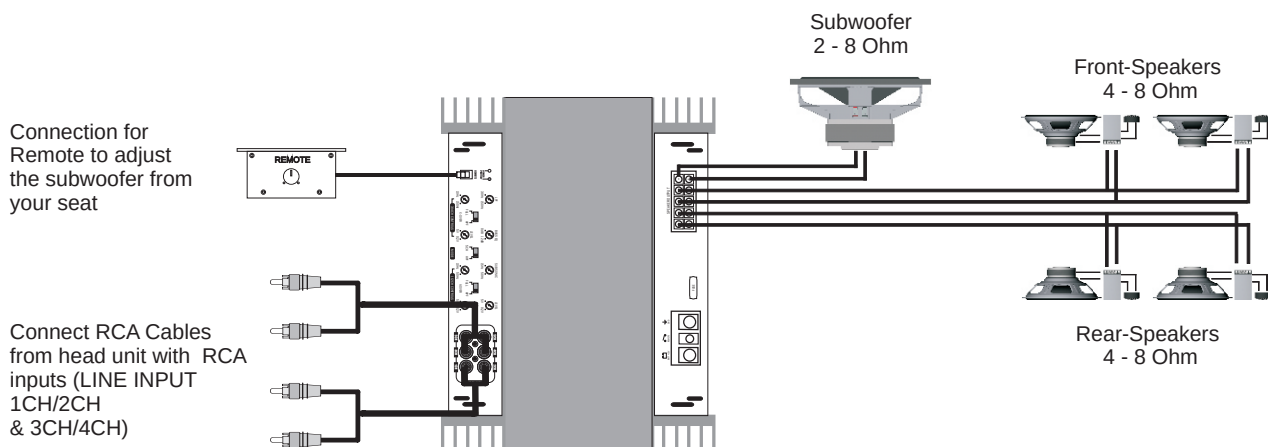
- Eliminates the lowest frequencies to protect your Subwoofer from damages. Cut-off frequency should be between 20Hz and 55Hz

Level

- Turn the INPUT LEVEL control on the amplifier to 5V position.
- Turn the head unit volume control to about 80-90% of its full setting.
- Turn the INPUT LEVEL control clockwise until you hear some distortion.
- Then turn back the INPUT LEVEL control slightly until you can hear clean sound.

Mode

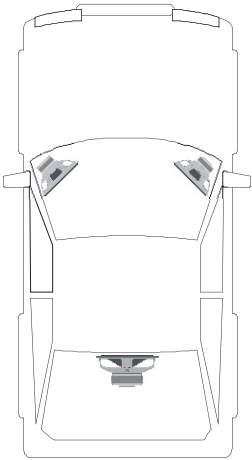
- Set mode switch on 5CH-position



5-Channel Amplifier SX-5800

Speaker wiring and Connection

3-Channel - with Frontsystem and Mono/Subwoofer



Interconnect cable checklist :

- Connect the RCA outputs from head unit with the RCA Inputs (LINE INPUT 1CH&2CH / 3CH&4CH) of the 4 Channel amplifier with two RCA Cables.
- Connect the RCA outputs of the (LINE OUT) 4-Channel Amplifier with the RCA inputs(LINE INPUT) of the 1-Channel/Mono amplifier with an RCA cable.
- Connect the Front- & Rear-Speakers with a good RCA cable with the speaker outputs (SPEAKER OUTPUT/ + 1CH -, + 2CH -, + 3CH -, + 4CH -) of the 4-Channel amplifier.
- Connect the Subwoofer with a good RCA Cable with the Speaker outputs (SPEAKER / + -) of the 1-Channel/Mono Amplifier.
- The minimum final speaker impedance must not be below 2 Ohm per channel. Too low speaker loads result in too high heat dissipation and may cause the amplifier run into protection.
- Please observe speaker channel and polarity as printed by the speaker terminal

Caution!

Be careful not to connect speaker (-) to the ground or vehicle chassis.

X-Over- (Front-/Rearsystem 1 up to 4 Channel)

- When you use bigger speaker systems (Ø20cm plus), set on FULL RANGE-position (FULL RANGE).
- When you use smaller speaker systems (Ø8.7cm - Ø16cm), set on HIGHPASS- position (HIPASS). The cut-off frequency should be between 60Hz - 150Hz. It is controlled by the HIPASS-regulator. When you use this configuration the LOPASS CONFIG - Switch is out of function.

Subwoofer (Channel 5)

- The cut-off frequency should be between 60Hz - 100Hz. It is controlled by the Lowpass-regulator

Bass EQ-(Channel 5)

- Allows you to adjust the bass boost from 0dB up to 12dB

Caution! Please use the Bass-Boost carefully. The additional boost may result in clipping or overload.

Level

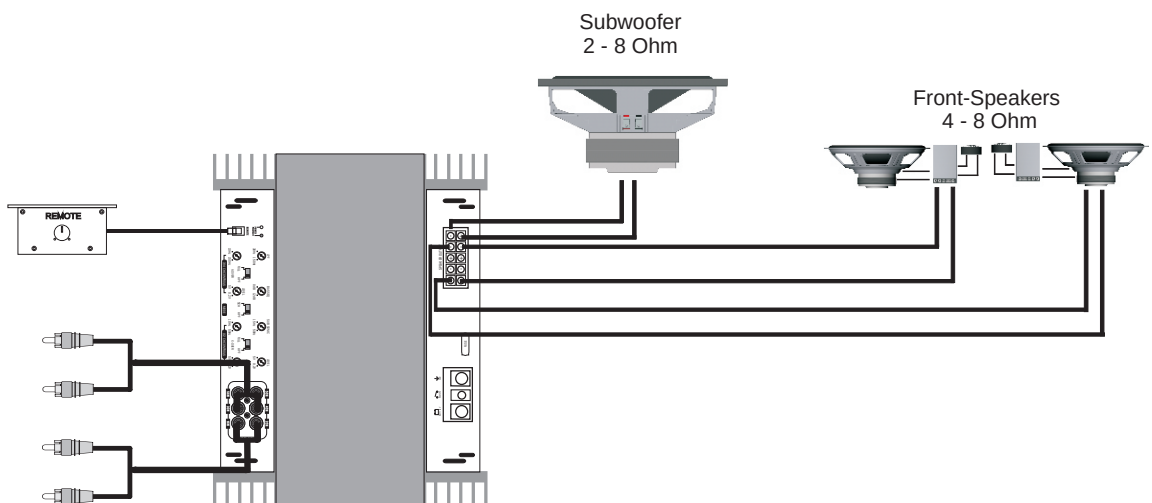
- Turn the INPUT LEVEL control on the amplifier to 5V position.
- Turn the head unit volume control to about 80-90% of its full setting.
- Turn the INPUT LEVEL control clockwise until you hear some distortion.
- Then turn back the INPUT LEVEL control slightly until you can hear clean sound.

Mode

- If there is only one RCA output at your head unit, set mode-switch on 2CH-position. 5CH-Stellung bringen.

Connection for Remote to adjust the subwoofer from your seat

Connect RCA Cables from head unit with RCA inputs (LINE INPUT 1CH/2CH & 3CH/4CH)



Trouble Shooting

System does not turn on

1. Check all fuses.
2. Check all connections.
3. Measure the +12 volt and remote turn on voltages at the amplifier terminals. If these are non-existent or low, take voltage measurements at fuse holders, distribution blocks, the head unit's +12 volt and remote leads to localize the problem.

Noise problems

1. Check the speaker wiring
2. Speakers are damaged

No Signal at Channels

1. Set Balance and Fader from head unit on Zero-Position
2. Check wiring (Amplifier, Speakers)
3. Speakers are damaged

Hiss or white noise

1. Speakers are overload
2. High levels of white noise usually occurs when amplifier level controls are turned up too high - readjust according to the procedures in section "Setting up systems after installation for best performance"
3. Another major problem that can cause excessive hiss, is a noisy head unit - unplug the amplifier input RCA cables, and if the hiss level reduces, the source unit is at fault.

No Stereo-Sound or Low Output

1. Check speaker wiring (-and+)

Amplifier Protection-Mode (red LED is illuminated)

1. Speaker cables are shorted
2. Inadequate cooling - relocate or remount to provide better natural airflow over the fins.
Driving high power levels into low impedances - back off on the volume control, and/or make sure you are not loading the amplifier with less than the recommended loudspeaker impedance.
3. Make sure that the battery voltage, as measured at the amplifier's +12 volt and ground terminals, is 11 volts or more.

Electrical interference

The inside of an automobile is a very hostile electrical environment. The multitude of electrical systems, such as the ignition system, alternator, fuel pumps, air conditioners to mention just a few, create radiated electrical fields, as well as noise on the +12 volt supply and ground. Remember to isolate the problem - first unplug amplifier input RCA cables, if the noise is still present, check the speaker leads, if not, plug the RCA's back, and investigate the source driving the amplifier, one component at a time.

A ticking or whine that changes with engine RPM:

1. This problem could be caused by radiation pickup of RCA cables too near to a fuel pump or a distributor, for instance, - relocate cables.
 2. Check that the head unit ground is connected straight to the vehicle chassis, and does not use factory wiring for ground.
 3. Try to supply the head unit with a clean +12 volt supply directly from the battery +, instead of using a supply from the in dash wiring/fusebox.
- This type of noise can be more difficult to pinpoint, but is usually caused by some kind of instability, causing oscillations in the system.

A constant whine:

1. Check all connections, especially for good grounds.
2. Make sure that no speaker leads are shorting to exposed metal on the vehicle chassis.
3. RCA cables are notorious for their problematic nature, so check that these are good, in particular the shield connections.

Caution!

In your amplifier there are protection circuits integrated. Short Circuit Protection engaged: The amplifier will turn off and try to come back on immediately. The amplifier will cycle like this indefinitely, with "blips" of sound each time. If this is the case, check your speakers and wiring for low impedance and short circuits. Thermal Protection engaged: The amplifier will turn off and several minutes later will come back on. In this case, ensure that there is nothing blocking the normal convective airflow of the amplifier. No obstruction should be within 2" of the amplifier on all sides.

NOTE: Low battery voltage will cause the amplifier to run warmer and possibly damage the amplifier.

Technische Daten

	SX-5800
Kanäle	5
Ausgangsleistung bei 14.4 Volt	
Watt an 4 Ohm - RMS	4 x 75 / + 1 x 200
Watt an 2 Ohm - RMS	4 x 125 / + 1 x 300
Ausgangsleistung bei 14.4 Volt gebrückt	
Watt an 4 Ohm - RMS	2 x 250 / + 1 x 300
Frequenzgang -3dB	20Hz - 30kHz
Dämpfungsfaktor	>200
Signal-Rauschabstand	>90dB
Kanaltrennung	>74dB
Klirrfaktor (THD&N)	< 0.5%
Eingangsempfindlichkeit Kanäle 1&2/3&4/5	0.2 - 5 Volt
Frequenzweichen Kanäle 1&2	
Schalter Vollbereich/Hochpass	FULL / HPF
Variable Hochpassweiche 12 dB	10Hz - 150Hz
Variable Tiefpassweiche 12 dB	-
BassBoost-Regler bei 45Hz	-
Frequenzweichen Kanäle 3&4	
Schalter Vollbereich/Hochpass	FULL / HPF
Variable Hochpassweiche 12 dB	10Hz - 150Hz
Variable Tiefpassweiche 12 dB	-
BassBoost-Regler bei 45Hz	-
Frequenzweichen Kanal 5	
Variable Tiefpassweiche 12 dB	30Hz - 150Hz
BassBoost-Regler bei 45Hz	0dB - 12dB
Subsonic-Filter	15Hz - 55Hz
Bass-Remote Kabelfernbedienung	Ja
Abmessungen in mm	
Breite x Höhe	282 x 50
Länge	500

Specifications

	SX-5800
Channels	5
Output Power Ratings at 14.4 Volts	
Watts at 4 Ohms - MAX.	4 x 75 / + 1 x 200
Watts at 2 Ohms - MAX.	4 x 125 / + 1 x 300
Output Power Ratings at 14.4 Volts bridged	
Watts at 4 Ohms - RMS	2 x 250 / + 1 x 300
Frequency Response -3dB	20Hz - 30kHz
Damping factor	>200
Signal to noise ratio	>90dB
Channel separation	>74dB
THD & N	<0.5%
Input Gain Control Channels 1&2 / 3&4 / 5	0.2 - 5 Volt
Crossover Channel 1 & 2	
Switch Full range / Highpass	Full / HPF
Variable Highpass Crossover 12 dB	10Hz - 150Hz
Variable Lowpass Crossover 12 dB	-
Bass Boost Control at 45Hz	-
Crossover Channel 3 & 4	
Switch Full range / Highpass	Full / HPF
Variable Highpass Crossover 12 dB	10Hz - 150Hz
Variable Lowpass Crossover 12 dB	-
Bass Boost Control at 45Hz	-
Crossover Channel 5	
Variable Lowpass Crossover 12 dB	30Hz - 150Hz
Subsonic-Filter	15Hz - 55Hz
Bass Boost Control at 45Hz	0dB - 12dB
Bass Remote Control	Yes
Heatsink size in mm	
Width x Hight	282 x 50
Length	500