

# Silhouette SX25i

25W Integrated Amplifier



## Owners Manual





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## Introducing the Perreaux Silhouette Series

Designed as a range of high quality, yet affordable modules; the 'Silhouette' series will compliment and enhance your existing system.

Drawing on our extensive knowledge gained from more than a quarter of a century of developing highest quality audio products, the 'Silhouette' concentrates our legendary design and build quality into a compact package without sacrificing performance.

The Perreaux 'Silhouette' series provides performance levels never before seen in its class.

### Key Features

- Class A signal stages
- Highest quality internal power supply featuring a custom designed, fully shielded toroidal transformer and 13200 $\mu$ F of smoothing capacitance
- Optimal internal layout incorporating total separation between channels
- Enhanced audio design featuring highest quality PCB and minimal internal wiring
- Preout connections
- High current drive
- Compact
- Stylish

*The Perreaux "Silhouette" series takes you even closer to the elusive goal of "The Perfect Re-Creation of a Musical Event".*

From all of us at Perreaux Industries Limited, thank you for choosing the Perreaux Silhouette Series SX25i Integrated Amplifier.



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## Important Safety Instructions

Note: Please read all instructions carefully before attempting to operate your Perreaux "Silhouette" SX25i Integrated Amplifier.

**ALWAYS** switch off power to your system before attempting to connect or disconnect cables.

**ALWAYS** disconnect your system from the mains before attempting to clean your unit.

**ALWAYS** keep electrical equipment out of reach of children.

**ALWAYS** unplug sensitive electronic equipment during electrical storms.

**NEVER** disconnect the mains earth from the system.

**NEVER** operate the SX25i with the cover removed.

**NEVER** use any liquid inside the SX25i.

**NEVER** bypass any fuse.

**NEVER** attempt to repair the SX25i. In the event of a problem, please contact your Perreaux dealer.

**NEVER** expose the SX25i to extremely high or low temperatures.

**NEVER** operate this product in an explosive atmosphere.



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# 1

## Unpacking and Placement

### Unpacking Procedure

The SX25i is packaged for maximum protection. To open, sit the box upright and cut the reinforced tape at the top of the box. The product can now be removed.

Pull the foam protecting end-caps off either side of the unit and remove the black material covering.

The SX25i Integrated amplifier is now unpacked and ready for further installation.

### Note:

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Please retain all packaging material for future transport.

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### Box Contents

- 1 x SX25i Integrated amplifier
- 1 x Product manual
- 3 x Performance analysis charts
- 1 x Detachable AC power cord

### Placing Your SX25i

The SX25i should generally be placed close to your source equipment, thus keeping interconnect cabling between the SX25i and associated components as short as practical. This will reduce the systems susceptibility to radio frequency interference and the negative effects associated with long cables.

### Ventilation Requirements

The SX25i is a convection cooled amplifier. For optimal performance, the unit MUST receive adequate ventilation.

- Please do not cover the product with a cloth or similar.
- Please do not mount the SX25i directly onto carpeted surfaces.

In the event that the SX25i is to be incorporated into custom cabinetry, please refer to the dimensional information provided in the Physical Dimensions section of the manual (Chapter 12).

### Note:

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Please take all necessary steps to ensure that the unit receives adequate ventilation

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If you are like us, the first thing you will want to do is to play your favourite piece of music through your new SX25i. The following instructions are written to enable you to achieve this as quickly as possible. These are not comprehensive instructions, but are designed to enable you to play music now!

Note: Please take the time to read the SX25i manual thoroughly as it incorporates many features, which will enhance its operation.

### **Placement**

The SX25i is a convection cooled amplifier and best results will be achieved when placed on a solid surface with adequate ventilation. DO NOT place on a carpeted floor or cover the amplifier!

Place the SX25i close or near the source component in order to make as short a connection as possible.

### **Turn off associated components**

This minimises the potential to damage any other components when connecting your SX25i into the system.

### **Connect source to SX25i**

Connect the audio output from the source component to the inputs at the rear of the SX25i. Refer to Chapter 4 for Rear Panel information.

### **Connect loud speaker cables to SX25i**

Connect your left and right channel loudspeaker leads to the binding posts at the rear of the amplifier. Refer to Chapter 4 for Rear Panel information.

Note: Make sure the nominal impedance of the loudspeakers is not lower than  $2\Omega$ .



## **Switch on SX25i**

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Caution!

Prior to connecting the AC mains, please check the voltage label on the rear panel to ensure that your unit conforms to the power supply in your area. Never attempt to connect the unit to the incorrect voltage.

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Insert the power cord supplied into the rear of the SX25i and into the wall. Switch on the socket at the wall and turn on the power of the SX25i by setting the power switch down.

## **Switch on source component**

Power up your source component and start your favourite recording. Slowly increase the SX25i volume to achieve a comfortable listening level.

## **CONGRATULATIONS!**

Now that you have achieved your first objective, sit back, relax and please read the rest of the manual at your own pace in your favourite armchair whilst sipping a hot cup of coffee. You'll find the whole experience much more pleasurable whilst listening to music.



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## Front Panel Functions



#### **1 Power LED**

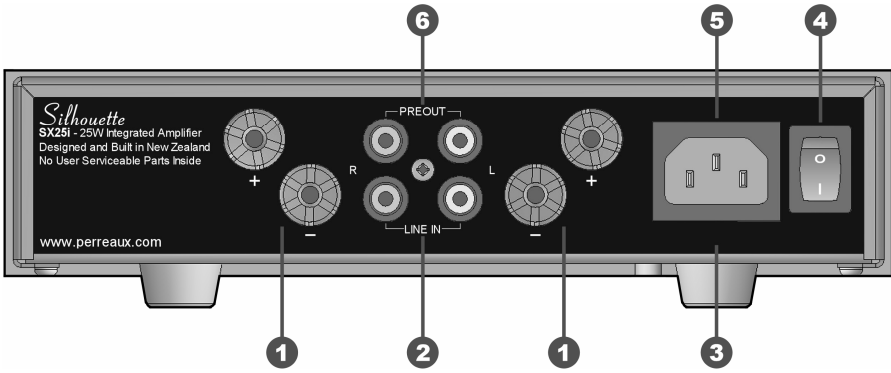
This blue LED indicates the power status of your SX25i integrated amplifier.

#### **2 Volume Control**

The high-quality, machined aluminium knob is the sole user interface, reminding the user at every touch of the superior build quality designed into the SX25i. Volume control motion is smooth and accurate, providing absolute control with near infinite gain resolution.

# 4

## Rear Panel Functions



### 1 Right and Left Speaker Binding Posts

Binding posts are clearly marked and colour coded RED Positive (+) and BLACK Negative (-). This polarity must be observed when connecting loudspeakers, i.e. positive terminal of the SX25i to the positive terminal of the loudspeaker and negative terminal of the SX25i to the negative terminal of the loudspeaker.

Caution!

Never connect the amplifier's output terminals to any device other than a loudspeaker.

Please do not short-circuit the amplifier's output terminals.

Never connect the output of one amplifier to the output terminals of another amplifier.

Do not over-tighten the binding posts on your amplifier.

### 2 Right and Left Line Inputs

Input from source component, accepts a standard unbalanced (RCA) input. The left channel connection is on the right when looking from the rear, indicated by white inner ring. For more information on input specifications, please refer to Chapter 11.

### 3 Serial Number/Voltage Label

The serial number is unique to your SX25i. Please record this number and store it in a safe place. For any service related enquiry, please be prepared to quote the product serial number to Perreaux personnel or their service representative.

The voltage displayed in this area is the **ONLY** voltage that can be accepted by the unit.

Caution!

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Never attempt to connect the unit to the incorrect voltage.

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### 4 On/Off Switch

When operating the switch down, power is applied to the SX25i.

### 5 AC Mains Input

An IEC-standard mains input is provided at the rear of the unit. The AC cord set is removable, allowing it to be upgraded at your will.

### 6 Right and Left Preouts

The preamp level output accepts a standard unbalanced (*RCA*) connector. This signal is adjusted with the volume control and is ideal for connection to an active subwoofer or second amplifier in a bi-amping configuration. The left channel connection is on the right when looking from the rear, indicated by the white inner ring.

Perreaux has been designing and manufacturing only the highest quality audio componentry for more than a quarter of a century. Technology has continued to evolve rapidly over that time and our knowledge and application of design, materials and manufacturing techniques has advanced in tandem with this. Today's Perreaux range comes closer to fulfilling our shared vision than at any other time in the past.

The SX25i has been developed to meet customer demands for compact higher quality products. Careful attention has been taken throughout the development phase, not to make compromises that would degrade the high quality of reproduction that the unit is capable of delivering.

To follow is a discussion on some of Perreaux design philosophies that have been incorporated into the entire range.

### **Minimalist Design**

Leading British architect, John Pawson, writes:

*“The Minimum can be defined as the perfection that an object achieves when it is no longer possible to improve it by subtraction. This is the quality that an object has when every component, every detail, and every junction has been reduced or condensed to the essentials. It is the result of the omission of the inessentials”.*

Perreaux has historically embraced the minimalist ethic from an audio design perspective only. The concept of “less equating to more” has been at the heart of all Perreaux audio designs for more than a quarter of a century. Our current product offering takes the minimalist ethic to new levels by totally embracing the concept.

### **Minimalist Electronics**

We wish to maximise the quality of your listening pleasure by keeping the componentry and signal path as uncluttered, short and clean possible. All components in the signal path, even those of the highest quality have an effect on the signal, thereby altering the quality of the reproduction in some way. Our aim is to recreate in its entirety, the original performance by not adding or subtracting anything, irrespective of the source.

## **Minimalist Aesthetics**

Our products appeal to those who seek the ultimate in audio exclusivity, namely the perfect blend of “form and function”.

“Form and function” are both tough masters. We make no excuses for producing some of the most distinctive high-end audio products on the planet. We let “form and function” blend together in perfect harmony. This surely is the essence of true minimalist utilisation.

## **Minimalism in a Wider Context**

John Pawson writes:

*“Clearly simplicity has dimensions to it that go beyond the purely aesthetic: it can be seen as the reflection of some innate, inner quality, or the pursuit of philosophical or literary insight into the nature of harmony, reason, and truth”.*

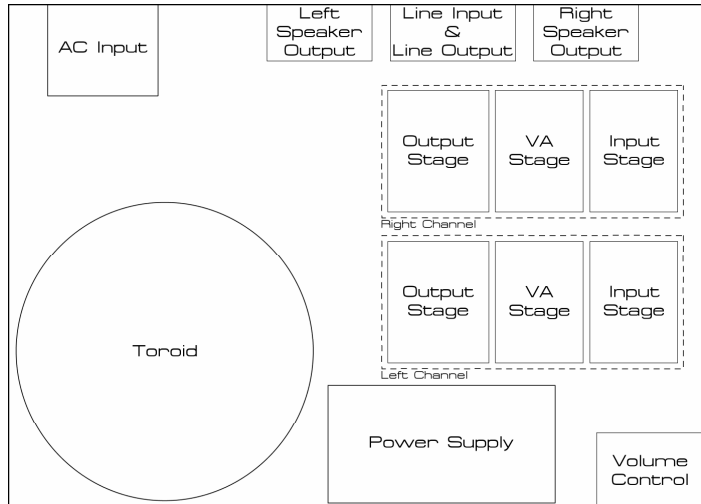
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## Special Design Features

### Construction

The SX25i is stylish and unobtrusive. The front panel is made from high quality solid 6.0mm (0.2”) thick aluminium extrusion featuring our trademark machined Perreaux logo and large volume control knob. These are finished in durable and stylish satin chrome finish electroplate. On/off status is provided via a discreet blue LED inset into the front panel. The chassis and cover are both manufactured from heavy gauge steel. No cover fixing screws are visible. These minimalist styling cues combine seamlessly to allow form and function to blend in harmony and are typical hallmarks of the Perreaux brand.

### Circuit Topology



### Compact

At 216mm (8.5”) wide x 58mm (2.3”) high x 190mm (7.5”) deep the SX25i is extremely compact.

### Integrated

By eliminating the interface between separate pre and power amplifiers and removing concerns about impedance matching, the SX25i provides a shorter, purer signal path without costly exposed interconnect cables and separate power cords.

### Unsurpassed Performance

Capable of continuously delivering 25w per channel into an 8Ω load and 35W into 4Ω, the SX25i is powerful. When correctly matched to loudspeakers, the SX25i will deliver unsurpassed performance in its class and will effortlessly drive a vast array of smaller loudspeakers with the control and authority that people have come to expect from Perreaux products.

**Finest Quality Components Used Throughout**

The SX25i features a 98VA toroidally wound mains transformer directly soldered to the PCB, Wima / Elna brand capacitors, highest quality Zobel network, customized internal heat sink solution and mains and channel fusing. The PCB is double-sided and constructed from the highest quality fibreglass base stock featuring 2oz tracks.

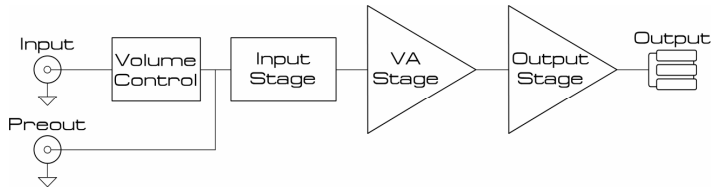
**The Power Supply**

Perreaux has specially developed a fully shielded 98VA internal toroidal based power supply. No fewer than six filter capacitors are coupled in parallel providing a total of 13,200uF of power supply smoothing, keeping ripple to a minimum. As a result the power supply is extremely rigid, capable of delivering instantaneous power requirements demanded by musical transients. The result is significantly improved dynamic capabilities.

**Simple control functionality**

Front panel features on/off LED indication and volume control knob. The rear panel comprises a mains input receptacle, allowing the cord set to be upgraded if desired, mains switch, high quality speaker binding posts, RCA line input and preout.

**Single Channel Block Diagram**



**Ultra Short Signal path**

Careful attention has been paid to the signal path within the amplifier. It is ultra short, guarded by ground planes where necessary and carefully routed to avoid contamination from power supply and high current bearing sections.

**Input Stage**

Utilising a stable current source, along with accurate current mirroring circuitry, the input stage of the SX25i, in combination with the overall circuit topology, provides precise detail resolution and definitive sonic transparency.

**PCB Layout**

Special attention has been lavished on the PCB layout. The unit is symmetrical in design with each channel being isolated from the other. The super clean custom designed power supply is physically segregated from the rest of the sensitive electronics.

**Signal Ground**

Special attention has been paid to ground planes to maintain sonic purity. All signal grounding is optimised to provide a platform for a black background and increased dynamic range.

Note:	<p>Please switch the unit off and remove the cord set from the rear of the Amplifier before attempting to clean your SX25i in the manner described below.</p> <p>Never apply liquid directly to the SX25i.</p> <p>Never use abrasives.</p> <p>Never rub in a circular motion.</p>
<b>Cover</b>	<p>The cover features a durable high quality powder coat finish. To remove finger marks and dirt, lightly rub the surface with a soft cloth.</p> <p>If the dirt is not removed, dip your cloth in a mild solution of soap and water, squeeze excess moisture from it and then gently reapply to the surface.</p> <p>Stubborn dirt may be removed by the application of a small quantity of isopropyl alcohol, applied directly to the cleaning cloth only, and reworking the effected area.</p>
<b>Front Panel</b>	<p>The SX25i front panel features a high quality electroplate finish. Over time the surface may retain finger marks and may need to be cleaned to restore it to original condition.</p> <p><b>Regular Cleaning</b></p> <p>Gently wipe the front panel with a very clean cotton cloth. Wipe across the surface and never in a circular motion.</p> <p><b>Removing Stubborn Marks</b></p> <p>Only attempt this infrequently, as too regular or vigorous application may damage the surface.</p> <p>Apply a small quantity of any car polish containing carnauba wax to a very clean cotton cloth.</p>
Note:	<p>The car polish must state "Safe for Clear Coats" as the polish will therefore contain the absolute minimum amount of abrasive compound.</p> <p>Gently wipe over the front panel in lateral motion, allow to dry then gently wipe off with a very clean cotton cloth.</p>





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## Warranty Information

### **1 Year Limited Warranty**

The Perreaux SX25i is warranted free from defects in material and workmanship under normal use for a period of 1-year (365 days) from the date of purchase.

To extend the warranty of the Perreaux SX25i to three (3) years from date of purchase, please return a fully completed warranty registration form along with a copy of the original receipt of purchase to:

Perreaux Industries Ltd  
PO Box 305  
Mosgiel  
Dunedin 9053  
New Zealand

For the Extended Warranty Registration Form, please refer to Chapter 9.

### **3 Year Extended Warranty**

The extended warranty for the Perreaux SX25i is three (3) years from the date of purchase. If during the warranty period the SX25i exhibits defects in materials and/or workmanship, it will be repaired or replaced, at our option, without charge for either parts or labour, at our factory in New Zealand. The warranty does not apply to any unit that has been misused, abused or altered.

Any unit that is not performing satisfactorily may be returned to the factory in New Zealand for evaluation. Return authorisation must first be obtained by either calling or writing to Perreaux prior to shipping the unit. Perreaux Industries Ltd and it's authorised distributors and dealers shall not be held liable for any freight or insurance charges. Freight and insurance charges to and from the Perreaux factory will be the sole responsibility of the owner of the unit.

There is no other express warranty on the SX25i. Neither this warranty nor any other warranty, express or implied, including any implied warranties of merchantability of fitness, shall extend beyond the warranty period. No responsibility is assumed for any incidental or consequential damages.

### **Obtaining Service**

In the event that you are experiencing difficulty with your SX25i, please as a first step consult the troubleshooting guide in Chapter 10. For further assistance, please contact your Perreaux dealer.



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# Extended Warranty Registration Form

Please complete this form and either fax, mail or e-mail it, along with a copy of the original receipt, to Perreaux Industries Ltd.

Fax: +64 3 489 2976

Mail: Perreaux Industries Ltd  
PO Box 305  
Mosgiel  
Dunedin 9053  
New Zealand

E-mail: nz.info@perreaux.com

Alternatively, complete the online Warranty Registration Form on our website – [www.perreaux.com](http://www.perreaux.com).



## 3 Year Extended Warranty Form



Name:

Address:

Suburb:

City:

Country:

Telephone:

E-mail:

Website:

Product:

Serial No:

Dealer:

Purchase Date:  /  /   
                  d d       m m       y y y y

**There is no  
output from  
my system**

Please use this guide if you are experiencing any problems with the SX25i in your system. It will provide possible solutions for some given symptoms.

**SX25i not turned on**

Make sure the SX25i power switch is in the DOWN position.

**AC cord not plugged in**

Check that the AC cord is plugged into the IEC socket on the rear of the SX25i.

**Mains power not turned on**

Check if the power is turned on at the mains socket on the wall.

**Interconnect cables not connected**

Make sure that the input and output interconnect cables are plugged in and are connected to the respective RCA sockets on the rear of the SX25i.

**Source not turned on**

Check that your source component is plugged in to the mains and the power is turned on.

**Source not set to play**

Ensure that your source component is playing the recording you would like to listen to, and that pause is not pressed.

**No volume setting**

Make sure that the volume on your SX25i is set to a suitable level.

**SX25i set to incorrect input**

Confirm that the input on your SX25i is connected to the appropriate source output.

**Loud speakers not connected**

Check that your loud speakers are firmly connected via cables into the binding posts on the rear of the SX25i.

**I can hear a hum coming through my loud speakers**

Input sockets and/or output binding posts corroded  
Check that the input and output RCA sockets and binding posts on the rear of the SX25i are free from corrosion.

Interconnect cables damaged  
Make sure that the integrity of your interconnect cables is sound and they are firmly connected to your source and the SX25i.

SX25i is close to external interference  
Check the proximity of your SX25i to any possible source of EMI and/or RF interference, for example computers, televisions, amplifiers, speakers, etc. Ideally the SX25i should be placed as close as possible to your source.



The correlation between published specifications and sonic quality can be unreliable. A list of numbers reveals virtually nothing. All technical measurements must be subject to qualitative as well as quantitative interpretation. Measurements of the SX25i reveal excellent results by any standards. Tested at 115V and 230V after a 10 minute warm up period.

**Specifications  
in Brief**

Rated Power Output ( <i>per channel</i> ).....	25W <sub>RMS</sub> into 8Ω
.....	35W <sub>RMS</sub> into 4Ω
Voltage Swing.....	55.2V <sub>p-p</sub>
Input Sensitivity.....	0.63V <sub>RMS</sub>
Maximum Gain.....	27.1dB
Input Impedance:	
Typically.....	40kΩ
Total Harmonic Distortion ( <i>THD+N</i> ):	
Typically.....	0.002%, @ 1kHz into 8Ω
20Hz to 20kHz.....	<0.02%
Frequency Response:	
20Hz–20kHz.....	+0dB, -0.25dB
5Hz–60kHz.....	+0dB, -1.0dB
Signal to Noise Ratio:	
Rated Output ( <i>unweighted</i> ).....	100dB
Dynamic Headroom ( <i>rated with music</i> ).....	>2.0dB
Power Consumption:	
Idle.....	10W
Maximum ( <i>at 35W per channel into 4Ω</i> ).....	80W

**Audio Connections**

Inputs.....	1 pair line level ( <i>RCA</i> )
Outputs.....	1 pair preout level ( <i>RCA</i> )
.....	2 pairs speaker binding posts

**Other Connections**

IEC AC mains input receptacle

**Mains Input Voltage**

115V or 230V AC at 50Hz/60Hz  
(*Set within the SX25i at time of manufacture*)



### Internal Mains Fuse Rating

1 x 2SB 1A slow blow  
*(NOT user serviceable)*

### Internal Output Fuse Rating

2 x 2SB 4A normal blow  
*(NOT user serviceable)*

### Overall Dimensions

Width.....216mm (8.5")  
Depth.....192mm (7.6")  
Height..... 58mm (2.3")

### Weight

Gross .....3.0kg (6.6lb)  
Net..... 2.4kg (5.3lb)

## Specifications Explained

Rated Power Output (*per channel*).....25W<sub>RMS</sub> into 8Ω

This is the optimum operating level of the unit, offering the best performance whilst allowing a large enough buffer to accommodate the unpredictable nature of music. It is the reference output level to which other specifications, such as sensitivity and gain, are referred. The Rated Output does not indicate the full capability of the SX25i.

Voltage Swing ..... 55.2V<sub>p-p</sub>

Loud transients call for a sudden burst of power from the amplifier to drive the speakers. This force is voltage. Peak-to-peak voltage is a more useful specification than Watts when it comes to delivering power to a speaker.

Input Sensitivity .....0.63V<sub>RMS</sub>

The Input Sensitivity figure indicates the input voltage required to achieve “rated” output (25W<sub>RMS</sub> into 8Ω).

Maximum Gain ..... 27.1dB

The amount of amplification the amplifier is asserting on the input signal. Gain can be calculated by dividing the rated output by the input sensitivity.

Input Impedance..... 40kΩ

The resistance “load” that is presented to the source component that is driving the SX25i.



THD+N .....0.002%, @ 1kHz into 8 $\Omega$

Total Harmonic Distortion + Noise is the percentage of output signal which is made up of frequencies added due to harmonics of the fundamental frequency and noise. By using low-noise input circuitry and Class A signal stages, Perreux engineers have kept this figure to a minimum.

Frequency Response.....20Hz to 20kHz, +0dB -0.25dB

Describes the frequency range where the amplitude or strength of the output signal deviates by no more than 0.25dB.

Signal to Noise Ratio (*unweighted*)..... 100dB

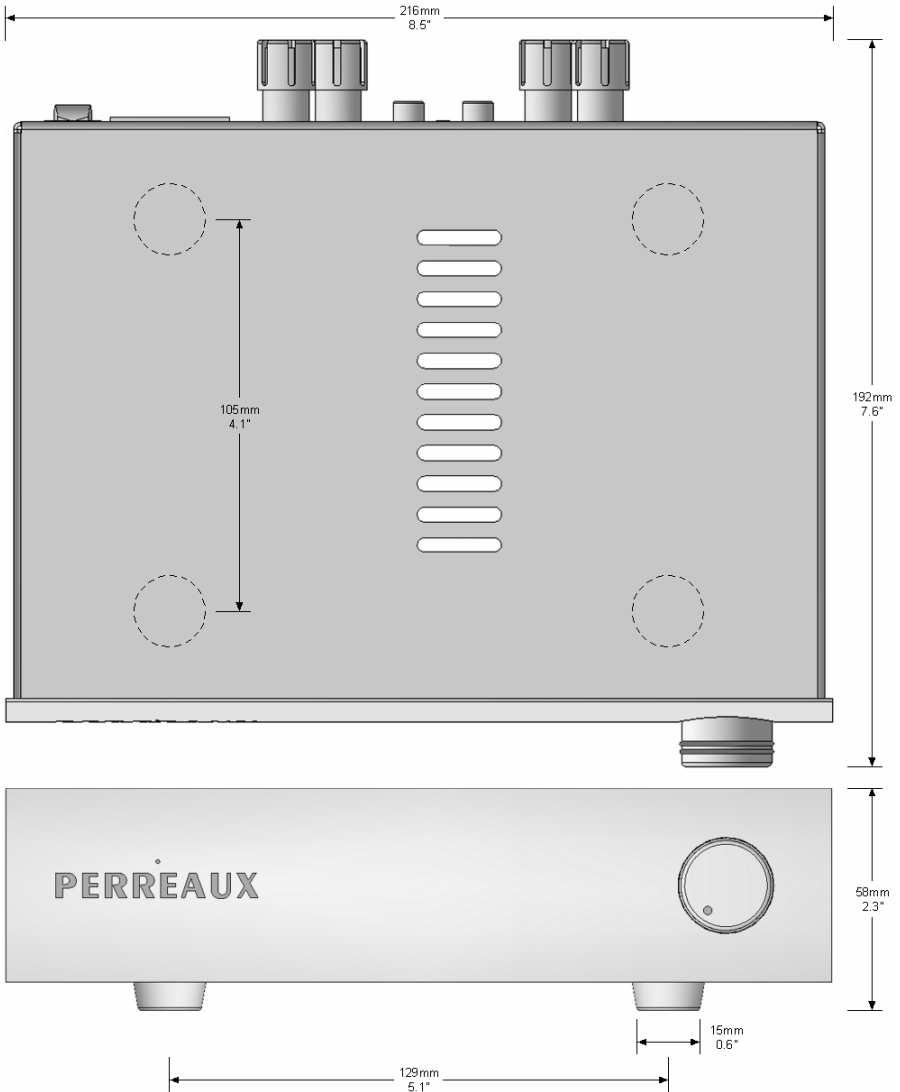
The ratio of desired signal to noise signals in the output. Integrated reproduction is susceptible to noise because of the nature of the environment to reveal every detail. This is why Perreux engineers have designed the SX25i to maintain a low noise floor.

Dynamic Headroom ..... >2.0dB

This indicates the SX25i can provide more than enough extra power to cope with the sharpest musical transients. Without adequate headroom, an amplifier can become unstable under clipping conditions. Perreux amplifiers are intrinsically stable under all dynamic conditions.

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# Physical Dimensions







For more information please contact your Perreaux dealer, or contact:

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Mosgiel  
Dunedin 9053  
New Zealand

Ph: +64 3 489 2975

Fax: +64 3 489 2976

E-mail: [nz.info@perreaux.com](mailto:nz.info@perreaux.com)

Internet: [www.perreaux.com](http://www.perreaux.com)

