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i The Decision Making Process

In this section, our objective is to help you extract the most out of your investment in your audio system. May we take a moment of your time with the following suggestions.

The aim of high fidelity audio is to attempt to recreate the original performance in its entirety via the recorded medium. To help you get to know what various instruments really do sound like, listen to live concerts of musical performances that you prefer. Select a few recordings of similar performances for comparison. Your Perreaux equipment will (and the rest of your system should) provide a precise duplication in your listening area of the total musical performance, including the ambience of the venue in which the recording was made.

Read Magazines

Read hi-fi and audiovisual magazines, particularly the equipment reviews and letters to the editor sections. Use these as a general guide only, and try to read "between the lines". Remember no one specifically sets out to downgrade a particular piece of equipment, so what is not included in the review is often as important as the actual printed content.

Choose Your Hi-Fi Dealer Carefully

Choose your hi-fi dealer carefully; they are your professional guide. Preferably, they should be knowledgeable about music and recording techniques as well as the equipment itself. They should be able to provide a total service, including installation, system "tuning" advice, problem solving and after sales service. Frequent your dealer and listen to a variety of equipment using recordings, which are familiar to you. Ask questions and listen to advice, but remember to trust your own ears to tell you what sounds right for you. If possible, listen to your equipment choice in your own listening area before you finally make your purchase.

When deciding on your system you will need to differentiate between sales gimmicks and cosmetic wizardry, as against practical features and facilities. Recognise the "Christmas Tree Syndrome"- namely, the more flashing lights and switches the better it must be. Bear in mind that you are paying for these, and because of the necessity of careful pricing, compromises may have been made in the internal component quality vital for accurate sound reproduction. Each component through which the audio signal must pass will add its own character to the music you hear, hence the expression, "colouration". Perreaux products are carefully designed to minimise componentry within the audio signal path. All componentry used is of highest quality and only included when absolute necessity is established; no component is there for a free ride or to correct for deficiencies elsewhere in the circuitry. With Perreaux, emphasis is placed on maximum sound quality, component and unit reliability and long life.



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Introducing the Perreaux Radiance Series

Key Features

The Perreaux “Radiance” series is our finest quality offering. This series incorporates some of the highest levels of audio engineering available today.

- Compact
- Stylish
- High-powered design
- Dual mono, linear power supply construction
- Enhanced audio design – featuring, *non-invasive protection system, full DC coupling, minimal internal wiring, non-magnetic componentry and advanced MOSFET output stage*
- Fully microprocessor controlled – featuring, *high-level control, protection and display options*
- Remote controller, custom designed and built
- Phono and USB options
- Fully software upgradeable

The Perreaux “Radiance” 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 Radiance Series R200i integrated amplifier.

Martin van Rooyen

Managing Director
Perreaux Industries Ltd

iii Important Safety Instructions

Note: Please read all instructions carefully before attempting to operate your Perreaux R200i integrated amplifier.

- Please disconnect your system from the mains before attempting to connect or disconnect cables.
- Please disconnect your system from the mains before attempting to clean your unit.
- Please keep electrical equipment out of reach of children.
- Please unplug sensitive electronic equipment during electrical storms.
- Please replace any fuse with the value and type specified.
- DO NOT disconnect the mains earth from the system.
- Avoid operating the R200i with the cover removed.
- Avoid using any liquid inside the R200i.
- Avoid restricting or blocking ventilation access for the R200i.
- DO NOT bypass any fuse.
- DO NOT attempt to repair the R200i. In the event of a problem, please contact your Perreaux dealer.
- Avoid exposing the R200i to extremely high or low temperatures.
- DO NOT operate this product in an explosive atmosphere.

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Features at a Glance

Remote Controller

Fully Featured

Full control of the amplifier, and connected Perreaux Radiance series peripherals is possible with the custom designed 36-button remote controller.

LED Indication

Each time a key is depressed, a LED representing the selected source is illuminated briefly. This greatly avoids confusion.

Compact and Ergonomic

Designed to sit snugly in the palm of your hand, the remote is compact, comfortable to hold and practical to use.

Quality

The remote is constructed from high quality cast zinc and acrylic materials.

Custom Designed and Built

The remote has been custom designed and built by the Perreaux engineers and befits the Radiance series perfectly.

Integrated Amplifier

Integrated

By eliminating the interface between separate pre and power amplifiers and removing concerns about impedance matching, the R200i provides a shorter, purer signal path without costly exposed interconnect cables and separate power cords.

Stylish

The front panel is carved from 10mm (0.39 inch) thick aluminium, and then heavily electroplated in either a Satin or Black Chrome finish. Particular attention has been paid to every aspect of the product styling. All control functions and display settings are accessed from within the central ellipse on the front panel. The cover is made from high gloss black acrylic.

Compact

At 430mm wide x 105mm high x 340mm deep (16.9" x 4.1" x 13.4") The R200i is extremely compact.

Highly Powered

Capable of continuously delivering 200W into 8 Ω (360W into 4 Ω), the R200i is highly powered. Utilising 6 very high current Toshiba MOSFETs per channel, the R200i handles even the most difficult loads with ease.

Dual Mono Construction

Featuring dual mono construction. There are two separate toroidally wound power supplies, rectification and smoothing sections. This topology maintains maximum channel separation independent of load.

Dual Capacitive Smoothing

Four filter capacitors (40,000uF per channel, 80,000uF total) per channel are coupled in parallel to reduce power supply resistance. The power supply is extremely rigid, capable of delivering huge amounts of power instantaneously. The result is significantly improved dynamic capabilities.

Separate Control Toroidal Power Supply

All control circuitry is supplied from a separate toroidally wound multi tap transformer. This eliminates any risk of noise contamination through the supply.

Large High Quality Binding Posts/Speaker B Selector

The output of the amplifier features two pairs of high quality binding posts per channel that enables two separate zones to be controlled. Alternately at the touch of a button they can be internally coupled, and used for bi wiring a single pair of speakers.

Sophisticated Protection Package

The R200i features a sophisticated protection package for the amplifier and connected load. Protection covering: supply (soft charge), clipping, over current, over temperature, DC offset, internal AC supply, DC fuse protection.

Non-Invasive Protection

The protection is non-invasive and therefore will not alter or degrade the signal path

Full DC Coupling

The amplifier is fully DC coupled from the preamplifier input terminals to the speaker binding posts.

Totally Microprocessor Controlled

All functions are managed by a powerful onboard microprocessor.

Full Information

In the event that the amplifier protects itself, the user is fully informed of any activity via the display.

Highest-Grade Double-Sided Printed Circuit Boards

All printed circuit boards utilised within the R200i are constructed from the highest-grade fiberglass base stock. Tracks are etched from 2oz copper. This provides added stability under variable thermal or electrical loads and assures maximum signal integrity, separation and product life.

Minimal Internal Wiring

Meticulous attention to the overall design and placement of each component has resulted in an internal environment that is virtually devoid of all internal wiring.

Ultra Short Signal Path

Careful attention has been paid to the signal path within the amplifier. It is ultra short and very carefully routed to avoid power components and digital lines.

Thermal Management System

Comprehensive thermal monitoring. Left and right heat sink temperature (C°) is displayed in real time on the display. These variables are utilised by the microprocessor for individual channel over temperature monitoring and protection.

Non-Magnetic Components Used for the Chassis and Cover

The chassis and all associated metalwork have been manufactured from high quality grade aluminum and acrylic. These high quality non-magnetic components negate the possibility of harmful circulating eddy currents building up within the amplifier.

Directly Soldered Preamplifier Inputs and Outputs

Preamplifier Inputs and Outputs are directly soldered to the printed circuit board. There are no connecting cables to increase parasitic inductance, capacitance and resistance.

Highly Customisable

The R200i is highly user configurable. Options to assign input labels, balance, initial volume, maximum volume, brightness, display timeout, energy saver, speaker B and last input used, provide maximum flexibility to the user. All user settings are retained in non-volatile EEPROM.

Home Theatre Integration

The preamplifier bypass function enables effortless integration into a home theatre system.

Two-Volume Level Instruction Set

The R200i can be programmed with two volume level instruction sets. The first set applies a default to the switch on volume level. The second applies a limit to the maximum setting of the volume control.

Dual Ramp Speed Volume Control

The volume control ramps upward from 0 to 59 in approximately 10 seconds and downward from 59 to 0 in approximately 5 seconds.

Smart Mute

The muting function integrates seamlessly with the volume control. Under normal conditions, depressing mute will completely attenuate the volume control. While in mute mode the user can reduce the volume level (volume -), so that when volume is restored it will recommence at the reduced setting. This action will not alter the mute function. Conversely if the volume level is increased (volume +), this instantaneously overrides any mute action and increases the volume setting from its pre-mute state.

Large Format Alphanumeric Vacuum Fluorescent Display

The R200i display is a sharp and bright alphanumeric vacuum fluorescent display (VFD) featuring a 2-line/16-character display. The software has been utilised to provide double-height digits, a bar graph of volume, the input currently selected and other settings and options.

Adjustable Display Lighting

The display of the R200i can be adjusted to suit ambient room conditions, 4 adjustable settings are available. Alternately the display lighting can be switched off.

Remote On/Off

The R200i and connected peripherals can be remotely switched on and off.

Energy Saver Feature

There are 8 internal timers available that enable the amplifier to run for a period of time then power down into standby mode. These range from 1 hour through to 2 days.

Future-Proof

Your distributor is capable of upgrading the software contained on both amplifier and remote handset via a connected PC. This protects and future-proofs your investment in the Perreux R200i.

Optional Modules

Moving Coil/Magnet Phono Stage

The R200i features a very high quality phono stage option.

USB Connection

This option facilitates the streaming of music directly from your computer's hard disc drive. Incorporating a very high-resolution digital to analog converter (DAC) module, this option is designed to further enhance your flexibility and enjoyment with the R200i.

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Special Design Features

An Integrated Amplifier?	<p>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 company's shared vision than at any other time in the past.</p> <p>The R200i 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.</p> <p><i>To follow is a discussion on some of the technological design features that have been incorporated into the R200i.</i></p>
Emphasis on Size	<p>At 430mm wide x 105mm high x 340mm deep (16.9" x 4.1" x 13.4") it's low profile and small footprint ensure that the R200i can be used in almost any environment.</p>
Construction	<p>The milled aluminium front panel, thick black acrylic cover, functional heat sinks and solid remote controller are all hallmarks of the Perreaux brand.</p> <p>The beautifully styled front panel is milled from solid 10mm (0.39 inch) thick aluminium and offered in either Satin or Black Chrome electroplate finishes. Inset within the elongated ellipse is a blue alphanumeric vacuum fluorescent display, all functions are accessed via 5 individually backlit push buttons.</p> <p>The cover is manufactured from thick black acrylic. No cover fixing screws are visible. A series of slots run down each side of the cover to facilitate air ventilation.</p> <p>By placing the heat sinks on the outside of the product, the R200i, they are able to breathe freely and operate at highest efficiency.</p> <p>The multifunction remote controller is small, stylish and ergonomically designed for comfort. It is manufactured from cast zinc alloy and offered in either Satin or Black Chrome electroplate finishes, matching the R200i front panel.</p>

The User Interface

The user interface is a blend of minimalism, functionality and aesthetics.

Front Panel Interface.

All user interaction takes place within the ellipse. The highest level of user interaction is assured via the 2-line/16-character alphanumeric vacuum fluorescent display (VFD). In combination with the VFD, the five large format buttons with backlit labels situated either side of the display, provide the user with full interaction.

Handheld Remote Controller

The 36 button remote controller has been designed to provide complete interaction with the R200i and other nominated Perreux peripherals.

On account of the compactness of design, all functions are accessible with your thumb.

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”.

Perreux 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 Perreux audio designs for more than a quarter of a century.

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 User Interface

We carefully study the user interface and par down the number of buttons and associated clutter leaving just the essential and no more. How tempting it has been over the years to loose sight of our core values as technology or trends have made it possible. That is one of the reasons why our older products still have such a high resale value today. The user interface has and always will remain simple, free from adornments, clean and uncluttered.

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. That is why our amplifier heat sinks are not hidden, but instead feature prominently in all our designs. 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.

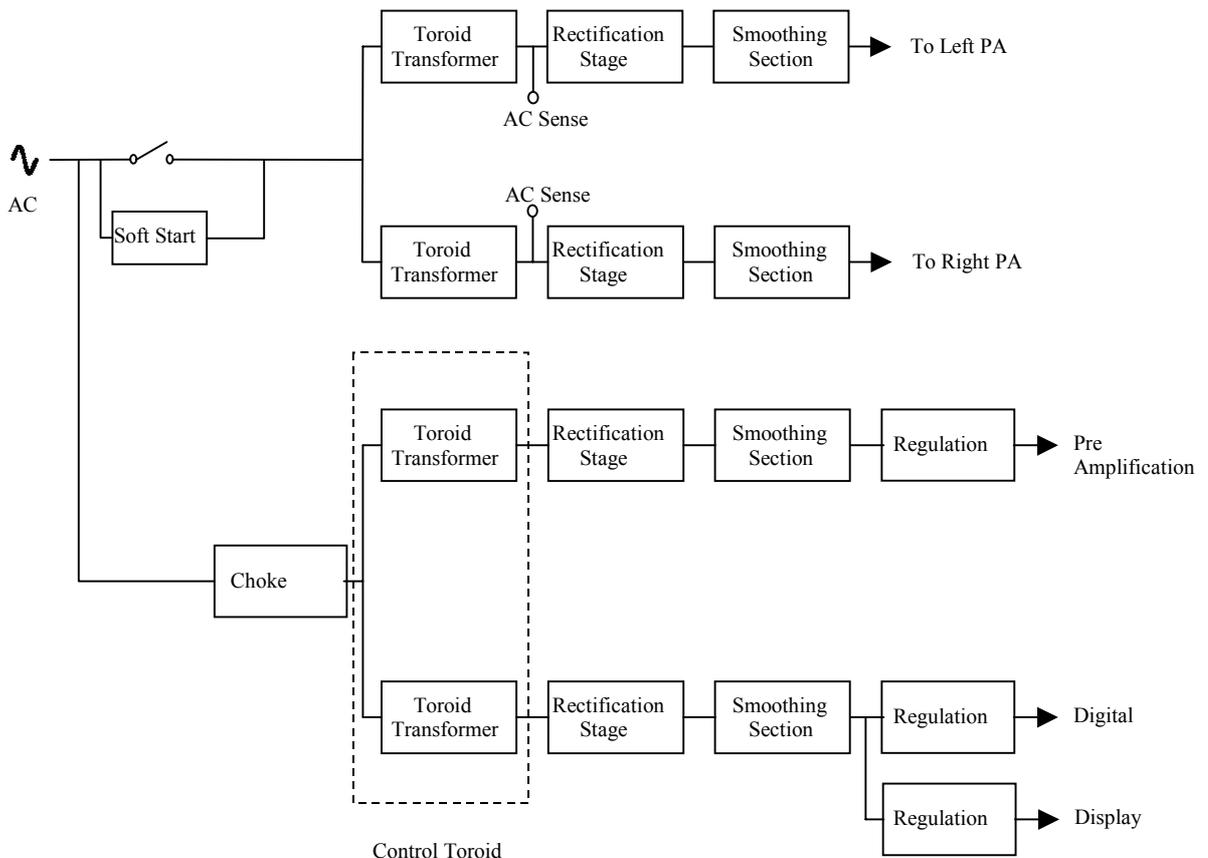
Minimalism in a Wider Context

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”.

The Power Supplies

The Perreaux R200i features four separate power supplies, whose task it is to provide clean, stable DC power to the various circuit elements within the amplifier.



Control Voltage Supply

All user interface digital and control circuits, source their power from an isolated DC supply. The supply features a custom wound, multi tap toroidal transformer directly soldered to the PCB. By incorporating a separate control supply, it minimises the possibility of noise entering the audio circuitry.

Preamplifier Voltage Supply

The preamplifier section is also powered from it's own separate low voltage supply, thereby further reducing the possibility of noise entering the audio circuitry.

Separate Left and Right Channel Power Supplies (Dual-Mono)

The concept behind dual-mono topology is to incorporate two amplifiers within a single enclosure. By incorporating 2 x high quality power supplies into the design, the R200i maintains maximum channel separation.

Huge Smoothing Section

Four filter capacitors (40,000uF per channel, 80,000uF total) per channel are coupled in parallel for greatly reduced power supply resistance and, consequently, significantly improved dynamic capabilities.

The sonic benefits of a power supply as high a quality as the R200i has are significant, resulting in effortless reproduction of dynamic contrast as well as stable and detailed stereo imaging.

The Preamplifier Section

The preamplifier features five analogue input pairs. Four pairs of single ended RCA inputs and a single pair of balanced XLR inputs.

A high quality, class A phono stage can be installed within the R200i. Alternately, provision is allowed for to fit a Perreaux designed and built digital USB interface module, featuring a very highly specified digital to analog converter (DAC).

Two single ended output pairs are also provided: A pair of single ended "direct" and "preamplifier" outputs.

Perreaux engineers have carefully eliminated any signal borne noise at the input, before the possibility of propagation occurs. In addition to this, only highest quality components such as "Burr Brown" and "Crystal" are used throughout the preamplifier stage. The result is a low noise, highly dynamic and detailed resolution of the connected source.

The Volume Control	<p>The R200i features precision dual electronically controlled resistor ladder network volume controls, with special consideration given to the layout. Local supply regulation and passive bypass components are used to assure optimal results.</p> <p>An active output stage is incorporated to ensure signal integrity to the dual power amplification stages and single ended preamplifier output stage. It is capable of driving a 470Ω load with a dynamic range of 116dB.</p>
The Output Stage	<p>Each output stage incorporates 6 Toshiba high current MOSFETs. With a theoretical maximum current capability of 36 amps, there is a massive amount of headroom inbuilt into this unit. Being larger devices, they have a lower on-state resistance, this feature is significant as less heat is required to be dissipated by the heat sinks.</p> <p>For optimal heat dissipation, each device is evenly spaced across the current gain board.</p> <p>Special emphasis has been given to the circuit layout, thereby ensuring sonic integrity.</p>
Protection Functions	<p>The R200i features a sophisticated protection package for the mains supply, amplifier and connected load. Protection covering: External AC supply, Maximum volume, Internal AC supply, Clipping, Over current, Over temperature, DC Offset, Internal fuse failure protection. For a complete discussion on the onboard protection functions, please refer to Chapter 3 “Protection Functions”.</p>
Input Configuration	<p>Input labels are user assignable. At switch on, the unit always resorts back to the last input used.</p>
The Role of the Micro-Processor	<p>The onboard microprocessor handles all interfacing, monitoring, and switching functions.</p> <p>The design also provides for maximum separation between digital and analogue circuitry.</p> <p>User configured settings are stored in non-volatile EEPROM. The R200i is fully software upgradeable.</p>

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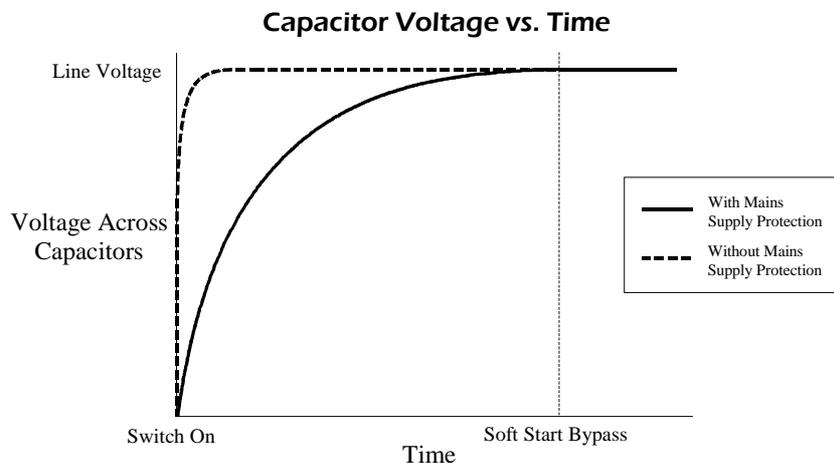
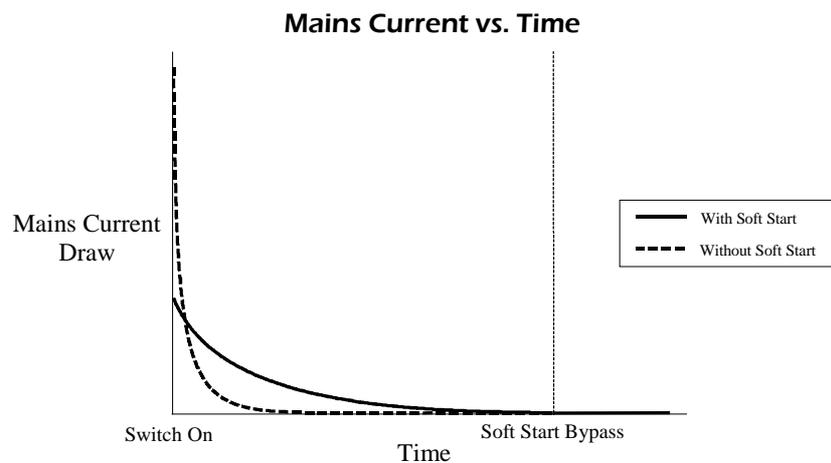
Protection Functions

The R200i has been carefully designed for continuous delivery of highest quality audio at full rated output. Protection from internal, external component failure and user error is an integral part of our design philosophy. This “system wide approach” provides some of the highest levels of security that an integrated amplifier can add to any system. This in turn works to better safeguard your investment in high quality audio componentry.

An explanation of the R200i protection functions is listed below.

External AC Supply Protection

The R200i incorporates 80,000uF of smoothing capacitance within its onboard power supply. The unit features a soft charging circuit, whose role at switch on, is to slowly charge the internal smoothing capacitors to full operating level. This design ensures that potentially harmful inrush current effects never occur at switch on. This in turn acts to protect the mains supply and any sensitive equipment that may be sharing it. Charge time at switch on is approximately four seconds.



Maximum Volume Protection

The maximum volume of the R200i can be software configured. This function works to protect the connected speaker load from possible damage due to application of excess power.

This feature can prove useful during special events or in instances where the audio system is being enjoyed by those who are unfamiliar with the capability of the R200i in relation to the connected speaker load.

Note: All fault conditions described below are left or right channel specific and will be displayed individually.

When a fault occurs, the ONLY user actions allowable are:
 Preamp volume can be lowered
 Standby button can be operated

The electronic over current protection function is the ONLY exception to this rule, as a reset can be attempted by depressing the "MENU/ENTR" button.

Internal AC Supply Protection

The R200i monitors it's dual AC toroidal transformer voltages, that in turn supply the rectification stages. In the event that either toroidal transformer AC output should fail, the amplifier will shut down and display the words "AC FAULT"

Note: In the event of an AC fault, please allow time for the internal toroidal transformers to cool down (several hours). These units have an internal (automatically resetting) 120°C thermal switch on board, which will reset when cool.

If the fault does not clear after the recommended time, please consult your Perreaux dealer.

For more information, please refer to Chapter 15 "Faultfinding Your R200i" and consult the "Description of Amplifier Faults" section.

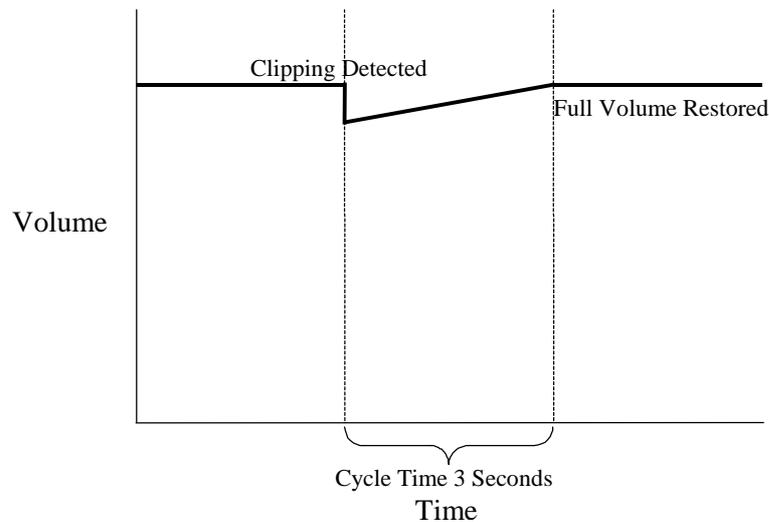
Clipping Protection

An automatic electronic clipping protection circuit has been designed into the unit. In the event that volume load demand is unsustainable, an internal clipping protection algorithm is automatically activated. Under these conditions, the volume setting is instantly reduced and then gradually restored to the original volume set point. The clipping cycle time is typically three seconds. The amplifier will display the word "CLIPPING" during this time.

If during the restoration period, clipping is detected again, the process is repeated. In this way, maximum volume demand is maintained without sustaining any of the negative effects that a connected load can potentially suffer from typical amplifier clipping conditions.

Please refer to the following diagram.

Clipping Protection



Over Current Protection

The R200i features an electronic over current protection function. In the event that demand exceeds the amplifier's full rated continuous output current, the unit will protect itself and the connected speaker load from possible damage.

Over current protection will operate under the following conditions:

- Accidental shorting of the speaker output terminals
- Speaker driver/crossover faults
- Excessive current demand exceeding the R200i continuous output rating

In the event of an over current fault, the words "OVER CURRENT" will be displayed on the amplifier's front panel. The amplifier will shut down. An over-current fault is user resetable by depressing the "MENU/ENTR" button on the display.

For more information, please refer to Chapter 15 "Faultfinding Your R200i" and consult the "Description of Amplifier Faults" section.

Over Temperature Protection

A comprehensive thermal management system is employed. The surface temperature of each heat sink is continually being monitored and contrasted against predetermined values. Under high load demands, the external heat sink temperature may rise above a predetermined trigger point. In the event of an over temperature fault occurring, the system has been designed to protect itself by disconnecting the over heated channel. In this manner, the channel can be allowed to cool down rapidly.

Individual heat sink temperatures can be read out in °C in real time on the amplifier's display.

At 85°C (185°F) the amplifier will automatically disengage the connected speaker load from the left or right hand channel and the words “OVER TEMP” will be displayed. To prevent the protection function from cycling around the trigger point, a hysteresis band has been included. This feature ensures that once initiated, the heat sink temperature must be reduced by 5°C (41°F), to 80°C (176°F) before the channel once again becomes active.

For more information on over temperature protection, please refer to Chapter 9 “Interacting with Your R200i”.

Note: The user can connect any load from 1Ω to infinity. In the event that the connected load and volume demand is excessive, the R200i will protect itself.

DC Offset Protection

DC servos are used to correct for potentially damaging DC offset from source components. The correction range is ±15V, at the output of the amplifier. If the DC offset is in excess of ±600mV, the amplifier will disconnect the output and display the words “DC OFFSET”.

For more information, please refer to Chapter 15 “Faultfinding Your R200i” and consult the “Description of Amplifier Faults” section.

Internal Fuse Failure Protection

There are four fuses mounted in series with the amplifier’s two internal DC buses. In the event that any one of the fuses should fail, the amplifier will automatically detect the fault, disconnect the output and display the words “+ FUSE FAIL” or “– FUSE FAIL”

Note: If a positive fuse only fails, under certain circumstances, other fault conditions may appear on the display. Please check with your Perreux dealer.

For more information, please refer to Chapter 15 “Faultfinding Your R200i” and consult the “Description of Amplifier Faults” section.

Note: Every fault condition described above is left or right channel specific.

Multiple Faults

For more information on multiple faults, please refer to Chapter 15 “Faultfinding Your R200i” and consult the “Description of Amplifier Faults” section.

4 Unpacking and Placement

Unpacking Procedure

The R200i is packaged for maximum protection. Please carefully read the instructions below before proceeding to unpack the unit. Be extremely careful.

- Inspect both ends of the cardboard box and open at the end without the central staple by slitting the reinforced tape at either side.
- Fold back the flaps and tip the package on end and the inner box will slide out.
- Lay the inner box down flat and upright, open it conventionally by separating the top tray from the bottom.
- Remove the polystyrene block at the front of the amplifier; this contains the remote controller, batteries, screwdriver and white cotton gloves.
- The product can now be removed from the bottom packaging. This will be easier if you have someone to help you by holding the base of the box.
- Alternately, the bottom tray and amplifier could be tipped upside down and the bottom packaging removed. If opened in this manner, please ensure that you turn the contents over again.

Note: Be very careful to secure the unit if you are planning to flip the package upside down.

- Remove the two white polystyrene protectors off either side of the amplifier, leaving the black material covering.
- Please use the white cotton gloves provided to assist with further unpacking and placement of the R200i.

Note: The cover is made from black acrylic and the front panel features an electroplate finish, both of which can easily be damaged. Please take special precautions when handling your amplifier.

- Pull back the material and remove the protective black tissue from the front panel.
- Carefully peel off the adhesive protective material on the R200i cover.

The amplifier is now unpacked and ready for further installation.

Note: Please retain all packaging material for future transport.

Box Contents	1 x R200i Integrated amplifier 1 x R200i Product manual 1 x R200i Remote control 1 x Detachable AC power cord 2 x AAA alkaline batteries 1 x Philips screwdriver 1 x Pair of white cotton gloves
Placing Your R200i	The R200i should generally be placed close to your source equipment, keeping the interconnect cabling short. We strongly recommend keeping the R200i on it's own separate shelf to allow for proper ventilation.
Ventilation Requirements	The R200i is a high-powered amplifier. For optimal performance, the unit <u>MUST</u> receive adequate ventilation. <ul style="list-style-type: none">▫ Please do not install in a sealed cabinet.▫ Please do not stack products directly on top of the unit.▫ Please do not cover the product with a cloth or similar.▫ Please do not mount the R200i directly onto carpeted surfaces.▫ As a “rule of thumb”, allow 100mm (3-4 inches) around all sides of the product and mount the R200i on a flat surface, ensuring that the unit has adequate access to free flowing air.▫ In the event that the R200i is to be incorporated into custom cabinetry, please refer to Chapter 19 “Physical Dimensions”.
Note:	<hr/> <p>Please take all necessary steps to ensure that the unit receives adequate ventilation</p> <hr/>