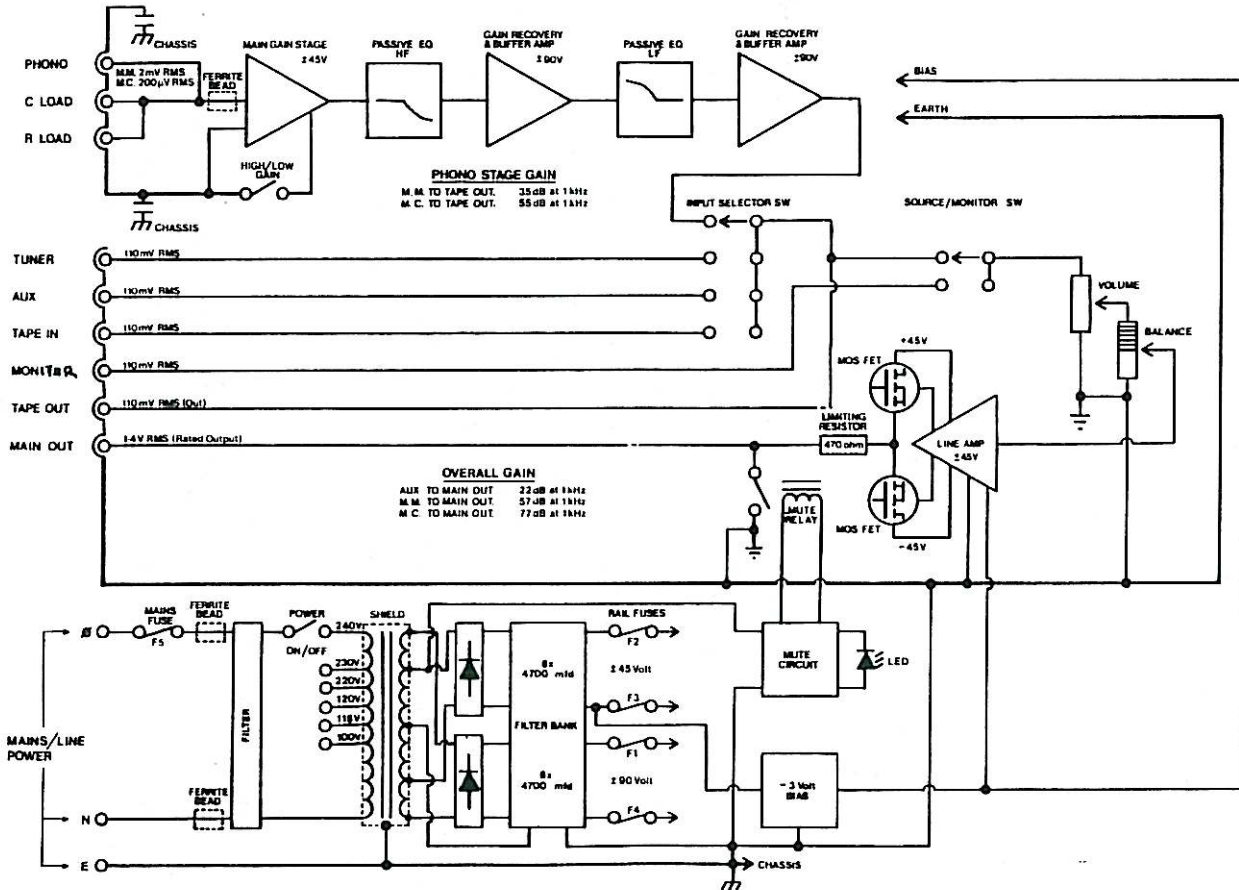


BLOCK DIAGRAM Perreux SM2 PREAMPLIFIER
 ONE CHANNEL SHOWN, OTHER CHANNEL IDENTICAL. POWER SUPPLY AND RELAY CIRCUIT COMMON TO BOTH CHANNELS.



Perreux—SM2 Specifications

Frequency Response: 20Hz to 50kHz +/- 0.25dB.
Comment: The "Standard" specification with which everyone is familiar. Actually, "frequency response" is a misnomer: technically, it should be called "amplitude response versus frequency" for it describes how uniform the amplitude or strength of signals of various frequencies is maintained. It is generally thought that a difference of 1dB is the least that can be perceived by ear. To better that by a wide margin, the SM2 is "spec'd" four times tighter.

Input Sensitivity/Input Impedance:
 Moving Coil: 200uV rms at 1 kHz/50k ohms, 100pF
 Moving Magnet: 2mV rms at 1 kHz/50k ohms, 100pf
 All others: 110mV rms/25k ohms.

Comment: There are many ways of specifying "sensitivity". The numbers given above indicate the input level required to achieve "rated" output, that is, 1.4 volts rms, with the volume control fully advanced. Since this output is sufficient to drive most power amps to their maximum output level, the SM2's sensitivity figures indicate the minimum input levels you'll need to drive your power amp to its full capability. Dividing rated output voltage by input-sensitivity rating gives the "gain" of the Preamplifier. Since the gain of a phono Preamplifier varies with frequency in accordance with the RIAA equalization curve, sensitivity must be specified at a particular frequency (1 kHz is "standard reference").

Input Sensitivity/Input Impedance
Comment: Input impedance defines the "load" that the Preamplifier presents to the source that is driving it. Phono-input impedance is quite critical—in terms of its resistive and capacitive components—because phono cartridges are designed to produce optimum response only when properly loaded. The "ideal" load varies from cartridge to cartridge, so the Perreux SM2 has been designed with a low input capacitance and a relatively high input resistance, this allows you to "pad" the input impedance to the optimum for your cartridge by plugging parallel resistors and capacitors into the special jacks provided. The specific input

impedance of high-level terminals—tape and aux—is not critical provided that it is sufficiently high so as not to load the source unduly.

Input Overload:

Moving Coil: 120mV rms at 1 kHz
Moving Magnet: 1.2V rms at 1 kHz
All Others: 50V

Comment: "Input Overload" specifies the maximum signal level that each input circuit can handle without clipping. The input-overload specs on the SM2 are truly incredible! They exceed those of typical Preamps by a factor of 20dB — 10 times! The SM2 can be used with any phono cartridge or high-level source (such as a digital-audio-disc player) with absolutely no fear of overload.

Rated Output: 1.4V rms into 10k ohms or higher.

Comment: This is the SM2's "reference" output level to which other specifications, such as sensitivity, are referred. Rated output does not indicate the Preamplifier's full capability. This is given by the maximum output, as follows:—

Maximum Output: 27V rms into 10k ohms or higher.

Comment: The extraordinarily high supply voltages used in the SM2 together with its MOSFET output stage provide it with exceptional dynamic range. It is capable of an output level almost 20 times greater than it will ever be called upon to deliver. Since the signal itself uses only a small proportion of this potential, only the linear, low distortion portion of the output stage operating curve is used.

Main Output Source Impedance: 470 ohms

Comment: The MOSFET output stage also provides low output impedance and short-circuit protection. Low output impedance is necessary to ensure full-range response when driving lengthy cables between Preamp and Power Amp. The SM2 will easily drive 200 feet of shielded cable giving you unlimited flexibility in placing your Power Amp.

Tape-Output Level/Source Impedance: 110mV/2k ohms.

Comment: This rating specifies the tape-record output when the inputs are driven by signals of rated sensitivity. The SM2 is designed to provide more than adequate drive for any tape recorder at an output

impedance sufficiently low to prevent treble rolloff.

Minimum Recommended Load: 10k ohms

Comment: All ratings are based upon a 10k ohm load, the value specified by the IHF standard. The ratings are valid at all higher load impedances as well.

Distortion (THD and IMD):

Phono Input: 0.005% 20Hz to 20kHz at rated sensitivity rising to 0.01% at 0.9V input at 1 kHz.
All Others: less than 0.0009% 20Hz to 20kHz at rated sensitivity rising to 0.008% at 26V output at 1 kHz into 10k ohms or higher.
Less than 0.008% at 100kHz at rated output into 10k ohms.

Comment: Thanks to its exceptionally high supply voltages and selected components, the SM2 generates virtually no distortion—of any type at any frequency even when driven at exceptionally high levels.

Noise (Inputs Loaded):

Moving Coil:

-64dB re rated input (20Hz to 20kHz unweighted)
-72dB re rated input (A-weighted)

Moving Magnet:

-78dB re rated input (20Hz-20kHz unweighted)
-86dB re 10-mV input (20Hz-20kHz unweighted)
-86dB re rated input (A-weighted)

All Others:

-104dB (20Hz-20kHz unweighted)
-108dB (A-weighted)

Comment: The SM2 is one of the few Preamplifiers whose noise level at all frequencies between 20Hz and 20kHz is so low that we dare specify it "unweighted" as well as "A-weighted". The "unweighted" specification takes full account of annoying hum components that are virtually ignored by "A-weighting".

RIAA Accuracy: +/- 0.25dB

Comment: Essentially this specifies the "frequency response" of the phono Preamp which must conform precisely to the IEC equalization curve for proper disc reproduction.

Channel Separation: 70dB, 20Hz to 20kHz, all inputs.

Comments: Few manufacturers specify the channel separation of a Preamp because "separation" is not

supposed to be a problem in amplifiers. Unfortunately, that's not the case. Poor wire routing plays havoc with high-frequency separation while poor power supply design impairs low-frequency separation. Since we've taken care of this problem, we can specify channel separation at all frequencies with confidence.

Output Stage Phase Accuracy: +/- 1 degree, 20Hz to 20kHz.

Comment: Another frequently ignored specification! But an important one because phase accuracy and channel separation determine the quality and stability of the stereo image.

Dimensions (WxDxH) 48.2 x 33.1 x 5.3cm (19 x 13 x 2.14 inches)

Shipping Weight: 12 lbs

While the information given is true at the time of printing, small production changes in the course of our company's policy of improvement through research and design might not necessarily be indicated by the specifications.

We would ask you to check the appointed Perreux dealer if clarification on any point is required.



Manufactured in New Zealand by
Perreux Sound Ltd, Napier