

SILVER AUDIO PROCESSORS

SILVER AUDIO PROCESSOR 4B-FM

Highly effective but economical 4-band processor



The Silver Audio Processor 4B-FM includes a digital stereo generator and a 4 band processor. It can be used for FM, Internet streaming as well as Digital Radio.

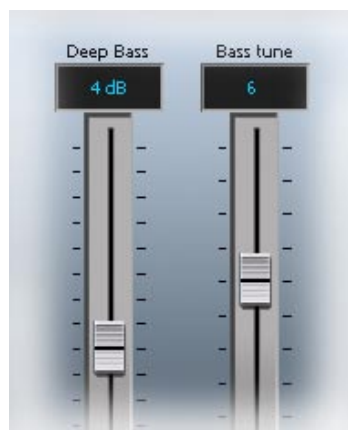
Input Selection and Conditioning

The Silver Audio Processor 4B-FM offers the user input selection, gain control and a selection from a range of stereo/mono options. The audio is then routed through defeatable high pass, phase rotating and pre-emphasis filters.

A silence detector provides automatic primary to secondary input failure switch.

Bass Enhancement

2 forms of bass enhancement are offered: a 12dB/Octave shelving filter with up to 12dB of gain and a peaking filter that can be set to provide up to 6dB of gain on 1 of 4 frequencies with a choice of 4 Q's.



Wideband AGC

For a transparent input leveling function the Silver Audio Processor 4B-FM employs RMS detected AGC stage that has various hidden (automatic) intelligent controls. Return to platform level and speeds interface to the intelligent silence gating preventing hunting and suck-up during quiet passages. A sophisticated window gating system prevents small unnecessary level changes.

Xover

The Silver Audio Processor 4B-FM uses linear-phase time aligned digital FIR filtering to split the audio spectrum into 4 bands while maintaining sonic transparency.

Multi-Band AGC

Like the wideband AGC the Silver Audio Processor 4B-FM processes each band with RMS based levelers. Each band gain control processing function can be configured in different manners to provide different effects. Adjustable ratios, band couplings and complex gating features afford the user with full control of this important re-equalization stage of the processor.

Multi-Band Limiters

Each band has its own dynamic peak limiter. Multiple time

constant based detectors with built in adjustable hold and delay functions significantly reduce distortion.

Mixer

The six bands are 'virtually' mixed together at this stage. In truth, the six bands have become three. The three bands are fed off into the 2 peak processing paths.

Distortion Controlled Clippers (Peak Control path 1)

The clipping algorithms peak limit (clip) and linear phase filter the audio in three bands for maximum distortion control before being fed to the final clipper stages.

Look-ahead limiter (Peak Control path 2)

Processing is performed in three bands for maximum transparency and clarity. A cut-shelving filter is provided to compensate for the effect of pre-emphasis when the Silver Audio Processor 4B-FM is used to process FM signals at the same time. It is also used for HD applications as well as for web-stream

Output selection, processing and routing

The user can select where each processing path is routed to and provides output level controls. A de-emphasis option is provided on both the analogue and digital outputs. The digital output sample rate can also be configured to a variety of settings.

The analogue output also has one extra path that can be routed to its outputs. This is a lower latency path that bypasses the final clipper stages and reduces delay by more than 4ms.

Stereo encoder

The stereo encoder is highly over-sampled and offers superb stereo performance. A composite clipping function is provided for those who wish to use it.

SILVER AUDIO PROCESSOR 4B-FM rear panel

