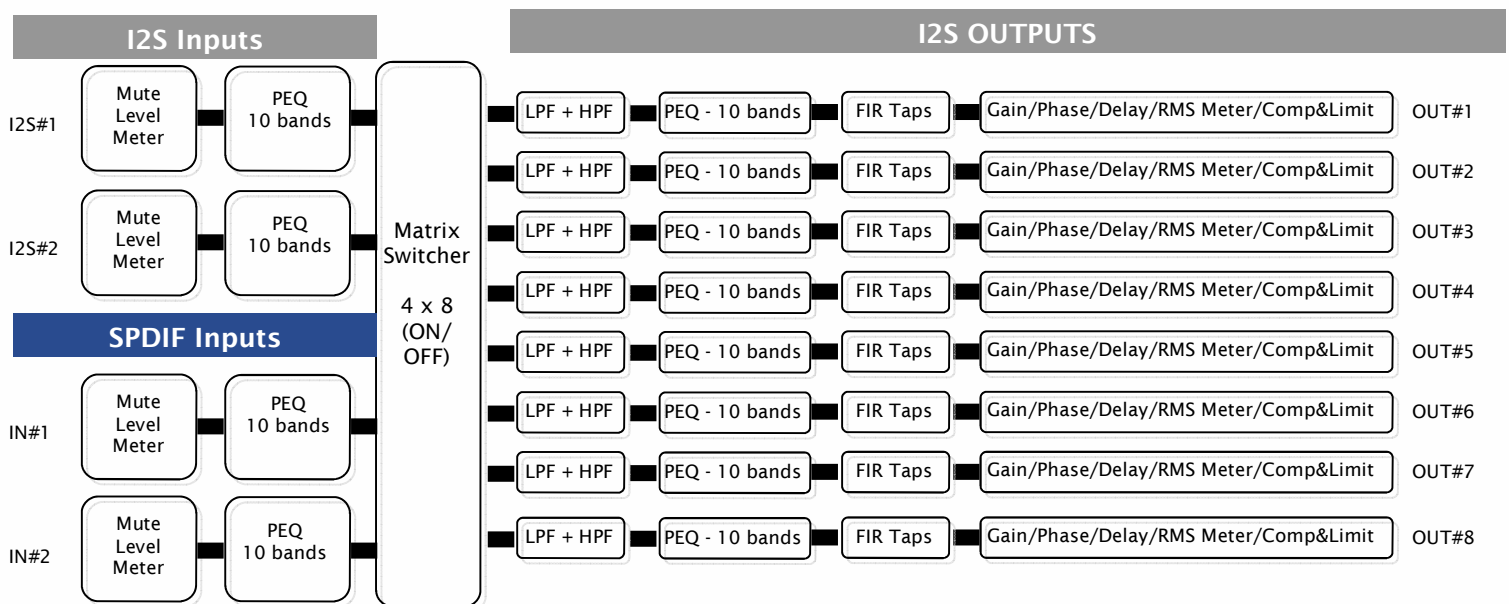


The miniSHARC 4x8 plug-in v1.0 is the a versatile plug-in for the miniSHARC product line. Providing FIR and IIR filtering in large banks of biquads (20/ch) and FIR taps (Up to 10240taps total), this plug-in is well fitted for no compromise multi-way crossover filter applications. Please consult the user manual of the miniSHARC for more info.

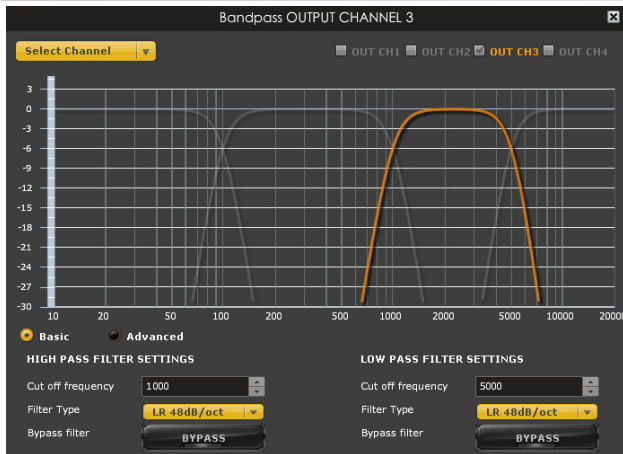
Algorithm and plug-in configuration

Item	Description
Sampling frequency / Resolution	48kHz / 32bit Floating point or 96kHz/32bit
Inputs	2 input channels from I2S digital pins, 2 input channels from SPDIF. Includes ASRC to match DSP sample rate
Input mute/select	Click-less input mute per channel and input selection
Digital gain	Fader gain from +12dB to -72dB
Input/ Output meters	Real time monitoring of all channels with RMS meter.
FIR filter section	Up to 10240 @48kHz /4096 @ 96kHz total taps available for the whole platform. Freely available in 8 x FIR sections (1 on each output) with up to 2048 taps each Text input or file input (.bin in IEEE754 format)
Crossover Filters - Low/High Pass (IIR)	Butterworth up to 8th order (6 to 48dB/oct) / Linkwitz-Riley up to 8th order (12 to 48dB/oct) / Bessel Frequency: 10Hz to 20kHz in 1Hz increments Advanced mode for custom biquad filter input via Text file. Up to 8 biquads for crossover section
Parametric Equalizers (PEQ) (Peak/Low&High shelf / Custom)	10 PEQ bands per input, 10 PEQ bands per output Frequency: 10Hz to 20kHz, 1Hz increments Gain: 0 to 16dB, 0.1dB increments / Q: 0.5 to 50, 0.1 digit increment Type: Peak of Shelf (low/high) & Per-band bypass feature
Mixer	Central mixer for 4 x 8 cross-point configuration (ON/OFF)
Delay (time alignment)	Up to 3000ms (3s) per channel (3m) in 0.02ms increments
Polarity	Invert polarity 180degree per channel
Compressor/Limiter	Per channel Comp/Lim on all outputs. Controls for Threshold/Ratio/Attack/Release & Bypass
Output mute	Individual output mute
Master output gain	Control master output digital gain fader from -80 to 0dB via VOL-FP accessory (Purchased separately)
IR Learning remote	Learn control commands from NEC/Philips/Sony remote

SYSTEM DIAGRAM



CROSSOVER SECTION



LOW PASS FILTER SETTINGS

Cut off frequency: 100 [Slider]

Filter Type: LR 48dB/oct [Dropdown]

Bypass filter: BYPASS [Button]

HIGH PASS FILTER SETTINGS

Cut off frequency: 10 [Slider]

Filter Type: LR 48dB/oct [Dropdown]

Bypass filter: [Dropdown menu with options: BW 48dB/oct, LR 12dB/oct, LR 24dB/oct, LR 48dB/oct, Bessel]

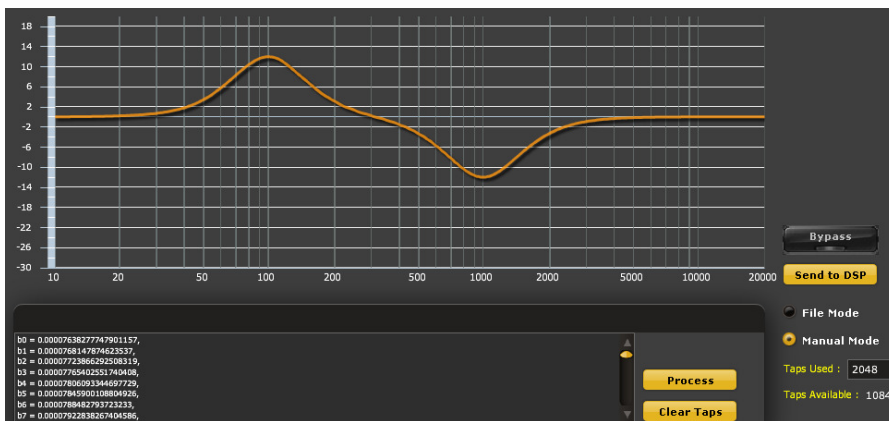
Wide range of filter choices Up to 8th order (48dB/oct)

Channel linking feature to link up settings to Left & Right channels

Bypass feature to listen to the effect of filter settings

Advanced Biquad format to enter your own biquad format

FIR SECTION



Up to 10240 taps @ 48k / 4096 @96k freely assignable in 8 sections of up to 2048 taps

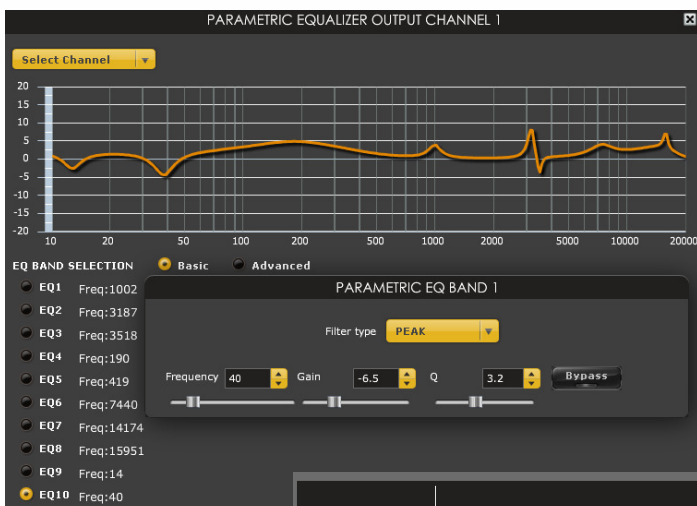
File Mode accepts binary file (.bin) as IEEE754 format

Manual Mode accepts manual input of taps

Advanced mode to input custom biquads per channel

Real time channel linking to keep PEQ settings of two channels synchronized

PARAMETRIC EQUALIZER SECTION / MATRIX MIXER FOR ROUTING



PARAMETRIC EQ BAND 1

```

biquad1,
b0=1.0051408330060732,
b1=-1.9623383878204694,
b2=0.974164622737144,
a1=1.9623383878204694,
a2=-0.9793054552797876
    
```

Process [Button]

Bypass [Button]

Output Channel 1 [Dropdown] Link Enabled

		I2S Out							
I2S In		Output1	Output2	Output3	Output4	Output5	Output6	Output7	Output8
Input1		On	On	On	On	Off	Off	Off	Off
Input2		Off	Off	Off	Off	On	On	On	On
SPDIF In		Output1	Output2	Output3	Output4	Output5	Output6	Output7	Output8
Input3		On	On	On	On	Off	Off	Off	Off
Input4		Off	Off	Off	Off	On	On	On	On