



Processor Settings  
**Model LS9000**

**Crossover**

|                        | Frequency | Slope                 |
|------------------------|-----------|-----------------------|
| LF w/o subwoofer - HPF | 50Hz      | 24dB Oct. Butterworth |
| LF w/subwoofer - HPF   | 80Hz      | 24dB Oct. Butterworth |
| LF - LPF               | 264Hz     | 24dB Oct. Butterworth |
| MF - HPF               | 306Hz     | 24dB Oct. Butterworth |
| MF - LPF               | 1,224Hz   | 24dB Oct. Butterworth |
| HF - HPF               | 1,224Hz   | 24dB Oct. Butterworth |

**Equalization**

|               | Frequency | BW*  | Q    | Level |
|---------------|-----------|------|------|-------|
| LF (Optional) | 85Hz      | .333 | 4.32 | +4dB  |
| LF            | 210       | .5   | 2.87 | -9dB  |
| LF            | 242       | .42  | 3.42 | -2dB  |
| MF            | 917Hz     | .333 | 4.32 | -6dB  |
| MF            | 1,374Hz   | .125 | 11.5 | -7dB  |
| MF            | 1,587Hz   | .05  | 28.8 | -15dB |
| HF            | 1,633Hz   | .125 | 11.5 | -4dB  |
| HF            | 4,000Hz   | .5   | 2.87 | +5dB  |
| HF            | 14,200Hz  | .5   | 2.87 | +9dB  |

Equalization Settings were developed in an anechoic environment

**Delay**

|    | Time     | Polarity |
|----|----------|----------|
| LF | none     | positive |
| MF | none     | positive |
| HF | .41 msec | positive |

Some DSP units will change the propagation delay for each output depending on how much processing is on that channel

**Limiting**

|    | RMS Voltage  |
|----|--|
| LF | 64 Volts, 16 msec attack, 256 msec release, 100:1 ratio (recommended predictive peak stop @ 126 Volts or amp clipping) |
| MF | 64 Volts, 2 msec attack, 32 msec release, 100:1 ratio (recommended predictive peak stop @ 126 Volts or amp clipping)   |
| HF | 20 Volts, 30 msec attack, 480 msec release, 100:1 ratio (recommended predictive peak stop @ 50 Volts or amp clipping)  |

*With Ribbon TPAC installed* — **NO RMS LIMITING REQUIRED (Transparent Protection Audio Circuit)**  
*(for very high SPL applications, a predictive peak stop limiter @ 50 Volts is recommended)*

See Application Note "Setting System Limiters"

**Gain**

|    |      |
|----|------|
| LF | 0    |
| MF | -2dB |
| HF | -4dB |

Assumes amplifiers have equal voltage gain

**\* BW Disclaimer**  
Different DSP processor manufactures are not consistent in their implementation of digital parametric EQs. **The SLS recommended filters will not be replicated by all DSP devices.** If the DSP device that is used continuously varies the Q value of the filter depending on the +/- dB level, the DSP will not match our settings. (Most of these devices do not allow filter Q to be shown at all.)