

TOC™S2 Processor Data for use in digital processors:

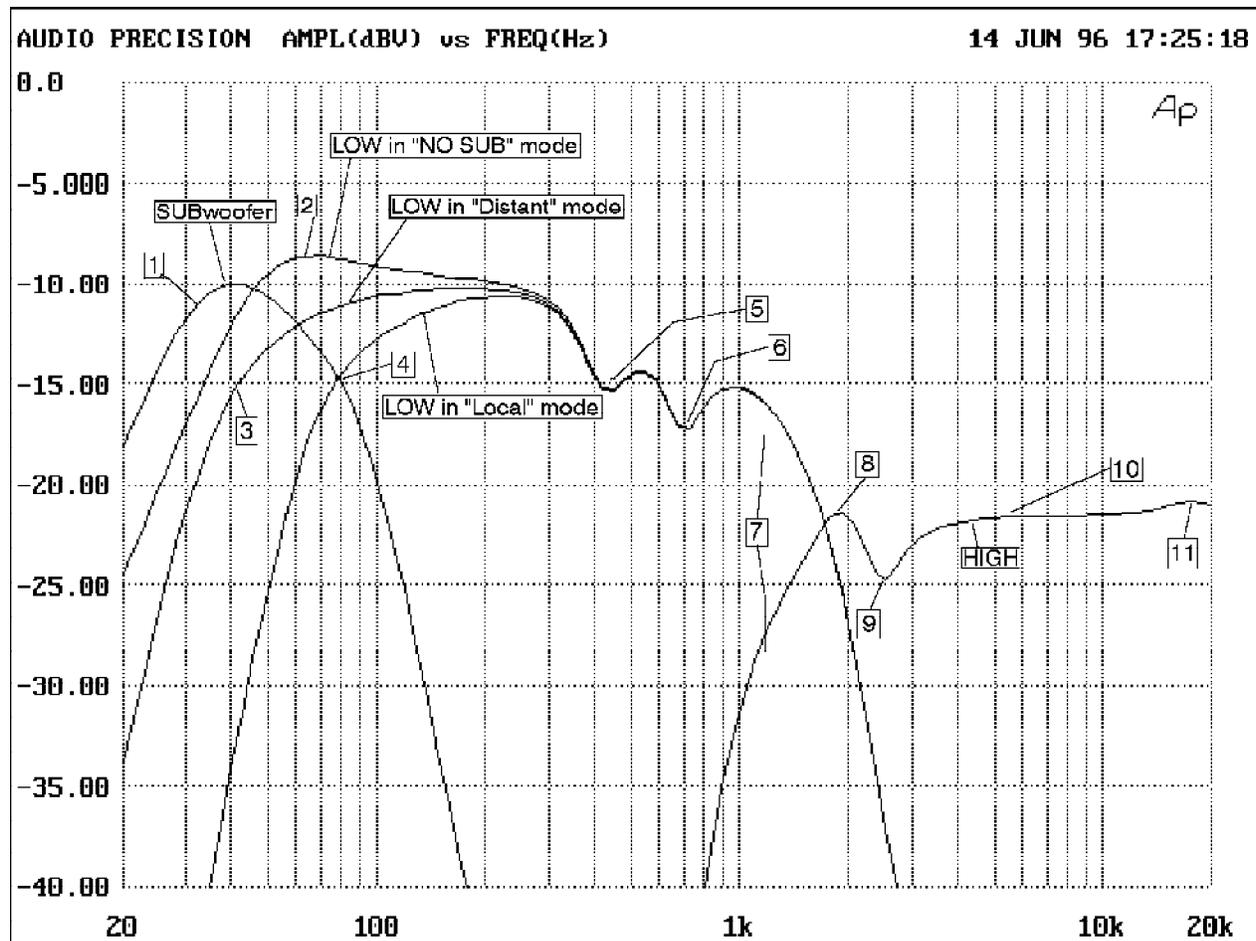
The Dividing Filters used in this processor are 24 dB/Octave (4 pole) "Linear Phase". They are a proprietary filter type which is not available in digital processors. The best thing to substitute is 24 dB/Octave (4 pole) "Linkwitz-Riley".

The dividing frequencies are 80 Hz and 1.2 kHz.

If the frequencies and Q of each filter section are adjustable, The table the right shows these settings:

	Section 1	Section 2
1.2 kHz lowpass	810 Hz Q=0.6	1.44 kHz Q=1.3
1.2 kHz highpass	1.78 kHz Q=0.6	1.0 kHz Q=1.3
80 Hz lowpass	54.0 Hz Q=0.6	96.0 Hz Q=1.3
80 Hz highpass	118.5 Hz Q=0.6	66.7 Hz Q=1.3

When SubWoofers are not being used, there is EQ added to the LOW output (See curve labeled "LOW in 'NO SUB' mode").



There are a number of Equalization points. If possible, the ones below 1.2 kHz should be at the processor input (before the dividing filters) so that the group delay is the same on all of the outputs. The EQ points above 1.2 kHz have less delay (due to lower Q and higher frequency). These have less effect on the delay differences than the others. All of them are labeled with numbers in the graph.

1. The SUB input has a 35 Hz high pass filter with a Q of 1.0.

2. The LOW in "NO SUB" mode has a 50 Hz high pass filter with a Q of 1.0.
3. The LOW in "Distant" mode has a 50 Hz high pass filter with a Q of 0.6.
4. Lower crossover point (80 Hz).
5. 430 Hz dip, -3 dB, Q=9.
6. 700 Hz dip, -4 dB, Q=9.
7. Upper crossover point (1.2 kHz).
8. 1.8 kHz peak, +2 dB, Q=4.
9. 2.5 kHz dip, -3 dB, Q=7.
10. 5.3 kHz peak, +1 dB, Q=3.5.
11. 18 kHz, +1.5 dB, Q=3.

Delay settings:

High Frequency output	none
Low Frequency output	160 microseconds
SubWoofers output	300 microseconds

Since monitors on stage seldom require much low end below 100 Hz, SW-2.2 cabinets would likely be used with the processor set for response like the "LOW in 'Distant' mode" curve (with a 50 Hz highpass filter having a Q of 0.6). This may still produce more low end than is needed. When using an S2 processor, leaving the "LOCAL/DISTANT" button out produces the curve labeled "LOW in 'Local' mode".

In situations where FT-2.2 cabinets are flown, it may be necessary to add additional delay (as much as 500 microseconds or more) to the SUB output to compensate for path length differences between the audience and the two parts of the system. This may also require reversing the polarity of the Subs. The operator may need to experiment to see what produces the flattest low end response in a particular venue.