



## Preset Considerations

Due to the DSP architecture differences in the Bias VQ and V3/V9 range it's important to understand the latency differences when using mixed amplifier configurations. The impulse response time differential can cause potential phase alignment errors of  $360^\circ$  or more resulting in decreased system performance and listener fatigue.

Therefore our standard medium/large format Bias VQ presets come with a default *input EQ* delay of **4.36ms**. This figure is not the "phase alignment frequency" but a necessary delay to align the outputs of the amplifiers.

If a loudspeaker using this input delay is going to be used for foldback monitoring then we recommend that the input delay on the VQ is removed. If the monitoring system requires low frequency extension then it's recommended the subwoofer is also powered using a Bias VQ in an effort to reduce overall system latency.

## DSP latency times

### **In > DSP > Out Latency Bias V3/V9**

Analogue only: 5.0ms

AES: 6.0ms

AES (Analogue backup mode): 6.0ms

### **In > DSP > Out Latency Bias VQ**

Analogue only: 0.64ms