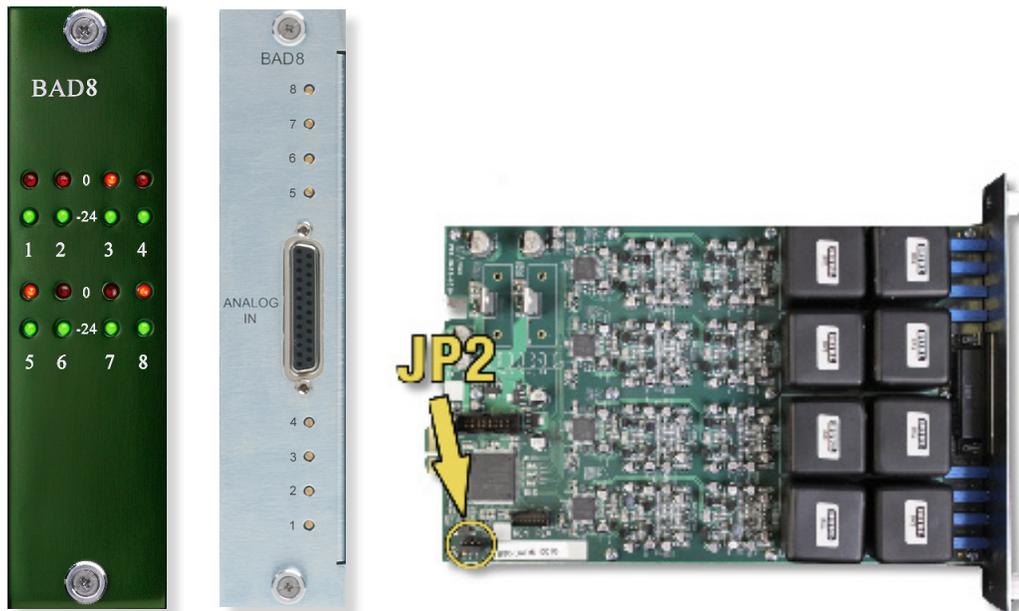# BURL

BAD8 DAUGHTER CARD

The BAD8 requires BMBx ROM2 or later

Quick Start Guide

Important information regarding BAD8 and BAD4 latency:

If you plan on using BAD8's in combination with BAD4's, you *must* adjust the BAD8 delay to match the BAD4 delay when using simultaneously in order to maintain phase consistency. If you are using the BAD8 independently, (i.e. BAD8 for tracking and BAD4 for mixing) this is *not* a concern.

The BAD4 has a fixed delay (latency) from analog input to BMB output of 66 samples, whereas the BAD8 delay is configurable from 7 samples to 66 samples. **Adjusting the delay will change the filter setting and it will change the sound.** The factory default setting is 7 samples of delay. Not only is this the lowest latency, but we believe this filter sounds the best.
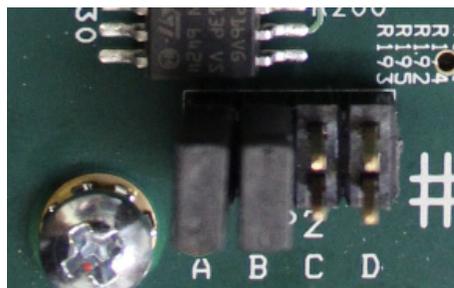
JUMPER SETTINGS

In order to match the BAD4 delay, you *must* set two jumpers. **Jumper A** adds a raw delay of 21 samples and **Jumper B** switches to a longer delay filter of 45 samples. Both combined add to the 66 samples of delay necessary to match BAD4. NOTE: All ADC's and DAC's have a delay which is inherent in their conversion from high speed sigma-delta data to PCM data. There is digital signal processing involved that requires a low pass digital filter. **Each type of filter has its own sound and its own delay.** When in doubt, just go with the default setting.

Here are the **Jumpers (JP2)** and their effect. **To match BAD4, Jumper A and B:**
- No Jumper set: 7 samples of delay, default short filter
- Jumper A: 21 samples of delay (just adds delay)
- Jumper B: 45 samples of delay, long filter
- Jumper C: 16 samples of delay, alternate short filter
- Jumper D: High pass filter bypass (not recommended)
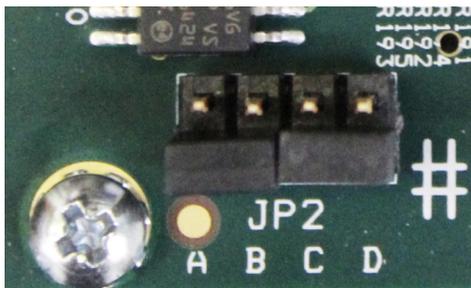
**Default Jumper Settings,
7 samples of delay**

**BAD4 matched,
66 samples of delay**

In addition to the low pass filter settings, we allow the user to bypass the high pass filter (low cut filter). The high pass filter is normally used to cut out any DC offset that is in the analog audio. The high pass filter has a very low cutoff point. Bypassing the high pass filter will give you slightly better low end, but **it can have negative side affects if not used carefully.** If you plan on processing the audio data with plug-ins or boosting the signal in any way, the DC offset can increase and cause undesirable clicks and pops in the audio, especially if auto fade in/out is not enabled on playback.
- If you are using the BAD8 as just a record and playback device (for example, in mastering) or if you plan to use a high pass filter plug-in, experimenting with the high pass filter by-pass might be worth checking out. Again, proceed with caution.
- For more information regarding BAD8 and MOTHERSHIP delay and Pro Tools hardware inserts, refer to **www.burlaudio.com/bad8** for more details.