

Causes of Clicks on DSP4000 Output

With any digital audio system, there are a myriad of faults that can manifest themselves as clicks on the output of the system. Here are some possible cures:

Case 1 intermittent clicks about once a second

These clicks are variable in timing and level and ONLY occur when sample rates are 44.1, 44.056 or when digital inputs or other external sync sources are used, that is to say they DO NOT occur when using the internal 32k and 48k sampling rates. They can be best demonstrated by selecting preset "Oscillator 440" and setting *freq* to 18000, and *level* to 10.0dB.

If clicks occur under these circumstances, try the following:

- 1) If possible, operate at 48kHz internal sampling.
- 2) If U1 (74F74) is Motorola, (shown by the "Bat" symbol), replace it with a Texas Instruments 74F74.
- 3) If U21 is 74F161, replace it with 74HCT163.

Case 2 random clicks, often minutes apart, especially noticeable on reverb, on digital i/p only.

These clicks are result from variations in the received sample rate causing the DSP4000 to 'recalibrate'. Later versions of software (2.158 and above) allow a much wider range of sample rates before recalibration occurs.