# Serial Pattern Trigger

## Pass-Fail Mask Test Used To Acquire Serial Data Pattern

Triggering on a known serial data pattern is often required in data communications applications. LeCroy scopes do not have a serial data trigger mode but you can use the pass-fail mask test to acquire waveforms that match a user selected data pattern.

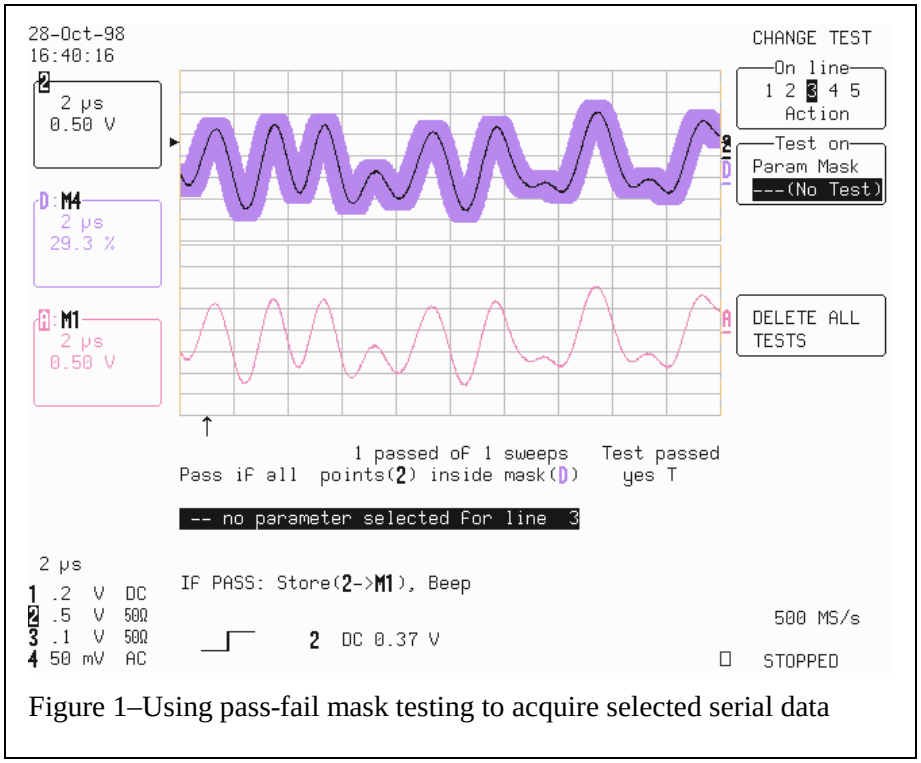


Figure 1–Using pass-fail mask testing to acquire selected serial data

Figure 1 shows a mask created to match a data pattern, selected from a CDMA serial data stream. The pass-fail test is setup to pass when data falls within the mask containing the desired serial data pattern. When the acquired data fits within the mask the waveform is stored to internal memory M1. If the clock rate is not an exact sub-multiple of the scope's time/division setting desired area is selected using the measurement gating cursors

The waveforms matching the desired serial pattern can be viewed using one of the zoom traces. In figure 2 trace A has been setup to view the waveforms stored in memory M1. In this example 5 of 1307 acquisitions contained data matching the desired pattern.

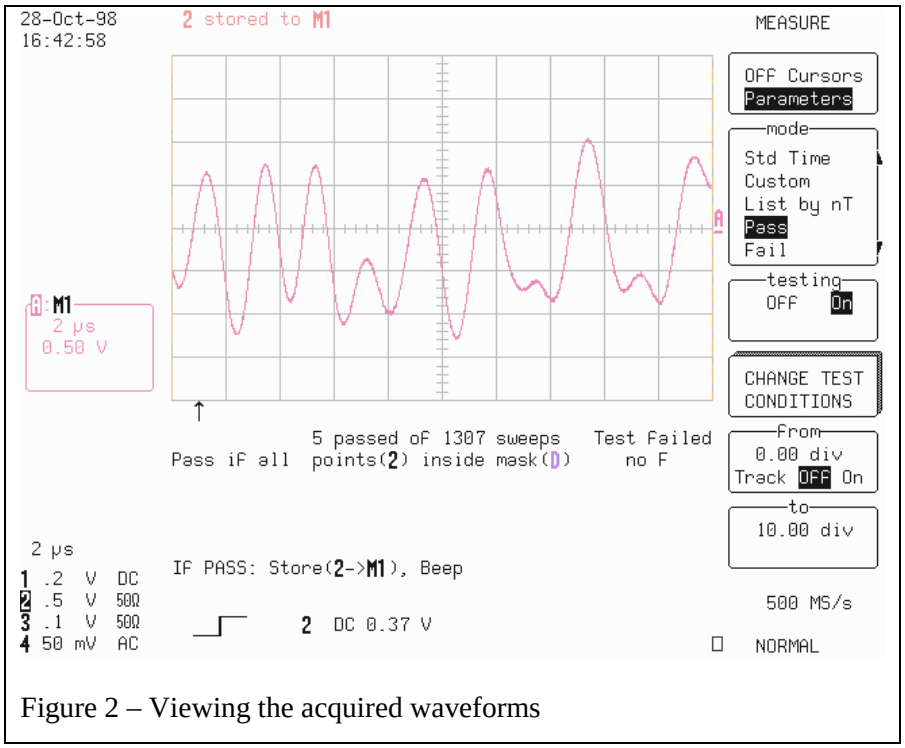


Figure 2 – Viewing the acquired waveforms