

How can I observe non-repetitive information on a fast serial link?

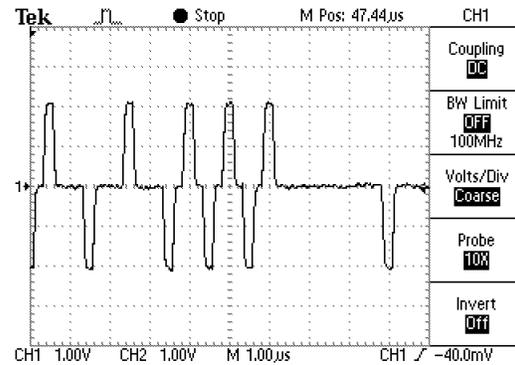
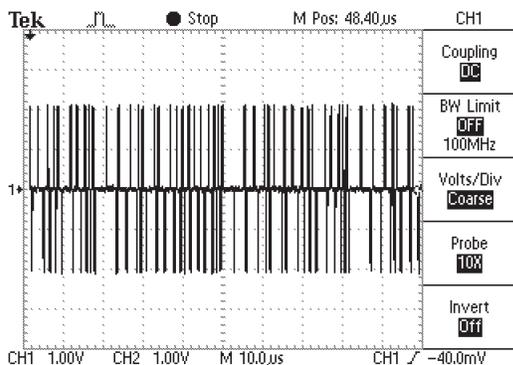
As electronic products become smaller and more complex, the use of fast serial links becomes increasingly common. Unfortunately, their use has outpaced the development of test and measurement tools, creating challenges for the engineers who design, troubleshoot, and repair products with fast serial links.

The problem: Need to observe non-repetitive information on a fast serial link

- Analog oscilloscopes do not have the writing rate or the storage capability necessary to display non-repetitive fast serial data.
- Many digital oscilloscopes do not capture enough data to accurately display a non-repetitive fast serial sequence.

The solution: Capture and examine a serial data stream with the TDS 200

- Because the TDS 200 has a very fast single-shot sampling rate, you can acquire and examine a portion of a repetitive or non-repetitive serial data sequence.
- Viewing the data in greater detail lets you identify problems or verify that the data is correct.



Troubleshooting Tip

Using the TDS 200 to view non-repetitive information on a fast serial link

1. Trigger on the rising edge of the serial data
2. Adjust the time per division until a single bit is small, yet not too small for easy viewing
3. Adjust the time per division to acquire 10 times more data (three clicks counterclockwise)
4. Use the horizontal position to move the trigger point to the left side of the display
5. Press RUN/STOP to stop acquiring
6. While acquisitions are stopped, adjust the time per division back to where each bit is easy to view (three clicks clockwise)
7. Use the horizontal position to pan through the long sequence of serial data