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# A Computer Simulated Digital Oscilloscope

Jon D. Yoquelet

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# **A COMPUTER SIMULATED DIGITAL OSCILLOSCOPE**

Prepared for  
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by  
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December 9, 1993

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## INFORMATIVE ABSTRACT

My own interest was the motivation in the research and development of a low cost computer simulated digital oscilloscope. It is my hope that others may be able to take advantage of all the simulator I have developed. The development task was very challenging and interesting to complete. The computer simulated digital oscilloscope report consists of several different topics, which are best summarized as follows:

- System requirements include: an 80386SX IBM compatible computer with a 1.2MB disk drive, a monitor, and 640K RAM.
- Simulator Development which consists of; the development cycle, defining the product's software, defining the product's hardware, debugging the software, debugging the hardware, and integrating the hardware and the software together.
- Software development was done with the high level programming language QuickC.
- The oscilloscope program contains: four header files, five sub-routines, a couple of nested loops, and the main program.
- Hardware development consists of: an interfacing card, used in conjunction with an 8255 PPI, an analog-to-digital converter, and signal conditioning circuitry.