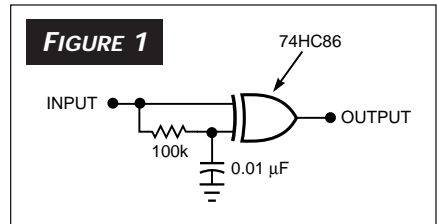


## Signals and Noise suggestion

In reference to the Design Idea “[Edge detector runs off of single supply](#)” (*EDN*, Dec 4, 1997, pg 140), a much simpler design exists. My simpler circuit consists of one EXOR gate, one resistor, and one capacitor ([Figure 1](#)).

When both inputs of the gate are at the same levels, the output is low. When the input changes state, one input of the gate is delayed by the RC network. During this time, the output goes high, dropping back low after the delay. Output pulse width is determined primarily by the RC network. Input levels must be compatible with



the gate used. I have used this circuit for several years in test and monitoring equipment.

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 Custom Equipment Company  
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## Reader nickels and dimes us

Programming devices in-system by PC-based boundary scan is inarguably cost-effective, but I doubt it can change the basic rules of simple arithmetic, as is suggested by the box “[Production programming—a nickel an IC](#)” (*EDN*, Nov 20, 1997, pg 134). Here, we are told that a PC-based programming station costs \$15 per hour to operate, in which case an IC requiring 20 sec for programming has a programming cost of five cents.

If we work out this third-grade arithmetic problem, we find that \$15 per hour equals 25 cents per minute, or \$0.004167 per sec. Therefore, a 20-sec programming operation costs \$0.004167 times 20, or 8.33 cents—more like a dime a chip, not a nickel a chip!

*Eric Kinast*  
 Fellow  
 Datascope Corp  
 via the Internet

## Sound off

“Signals & Noise” lets you express your opinions on issues raised in the magazine’s articles or on any engineering-related topic. Send your letters to Signals and Noise Editor, *EDN*, 275 Washington St, Newton, MA 02158 or e-mail us at [kase@cahners.com](mailto:kase@cahners.com). Our fax is 1-617-558-4470. *EDN* reserves the right to edit letters for clarity and length.