MISSING DESIGN

I read with interest Ray Marston's article, "CMOS Clock Circuits", in the November 1984 issue, but noticed that he missed one design that has been my favorite for reasons of its simplicity; that design is shown in Fig. 1.

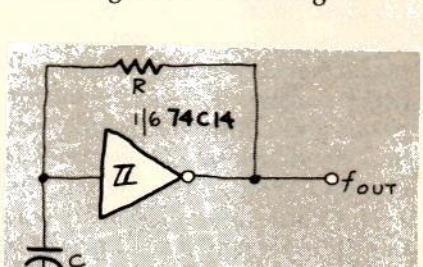

FIG. 1

Using the 74C14 gives you six oscillators to each IC package. Duty cycle is typically 50%, and frequency is given by the equation:

$$f_{OUT} = \frac{1}{RC\ln\left[\left(\frac{V_{CC}-V_{TL}}{V_{CC}-V_{TU}}\right)\left(\frac{V_{TU}}{V_{TL}}\right)\right]}$$

where: V_{TU} = Upper trip point
V_{TL} = Lower trip point

This oscillator was described by Gerald Buurma in "AN-140 CMOS Schmitt Trigger—A Uniquely Versatile Design Component", appearing in the 1977 National Semiconductor *CMOS Databook*.

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