## BETTER CLOCK GENERATOR

The clock generator circuit for the Digi-Designer shown on page 59 of the February issue of **Radio-Electronics** can be improved with three simple changes:

1. The output waveform has an on time of 45% and an off time of 55%. This is due to the capacitor being charged exponentially and discharged linearly. A

symmetrical output can be obtained by adding a resistor, approximately 27,000 ohms, from the 5-volt supply to pin 2 of IC1. However, this will increase the frequency by approximately 10%.

- 2. IC1 pin 5 should be connected to ground when switch 1 is in the off position to prevent high-frequency oscillations.
- 3. The output waveform can be improved by using the unused gates in IC1 as buffer stages per attached sketch.
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