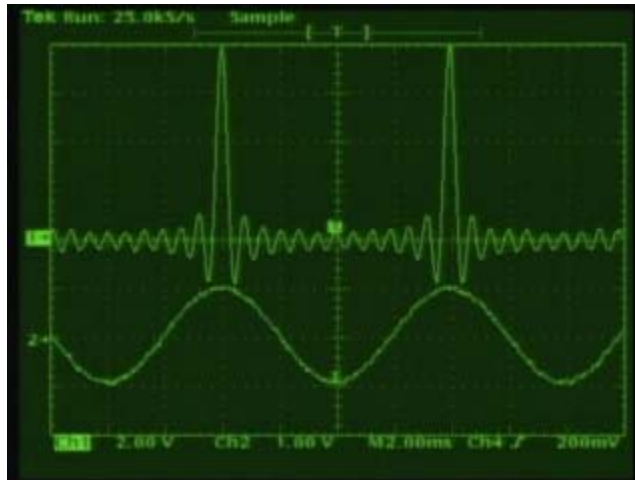


Question #341

Shown in the photograph below is a 100 Hz pulse train synthesized by the first 12 harmonics. Click on the photograph to see and hear the wave being synthesized.



Now suppose that all of the odd harmonics, beginning with $N=1$, are removed from the synthesized wave.

When we remove the odd harmonics from the synthesized wave, which of the following will happen?

- (a) The sound will go up one octave but remain the same timbre.
- (b) The sound will go down one octave but remain the same timbre.
- (c) The sound will remain at the same pitch but with a different timbre.
- (d) The sound will remain virtually unchanged: the same pitch and the same timbre.
- (e) Other. (You must explain.)

Click here for [Answer #341](#) after March 30, 2009.

[Question of the Week](#)

[Outreach Index Page](#)

[Lecture-Demonstration Home Page](#)



For questions and comments regarding the *Question of the Week* contact [Dr. Richard E. Berg](#) by e-mail or using phone number or regular mail address given on the [Lecture-Demonstration Home Page](#).