



Fig. A1. Sampled sine wave.

The maximum dc shift, dC , is independent of θ , and occurs when:

$$dx = s/2$$

$$dy = s/2$$

$$dz = s/2$$

This maximum is given by:

$$\hat{dC} = s/2 \quad (22)$$

APPENDIX II Calculation of Typical Cases

Consider an 8-bit system (256 levels, 255 steps) covering a signal having a peak-to-peak value of 166 IRE units. Then the LSB (least significant bit) is equivalent to 0.651 IRE units.

The possible quantizing error in each sample is $\pm 1/2$ LSB or 0.325 IRE units.

Suppose a test signal consists of a sub-carrier having a peak value of 10 IRE units (20 IRE units p-p). Then:

$$A = 10$$

and the maximum error in A is given by Eq. 20 of Appendix I:

$$\hat{dA} = \frac{2s}{3}$$

where $s = 0.651$

Therefore:

$$\hat{dA} = 0.434 \text{ IRE units,}$$

which is 4.34% of the 10-IRE-unit signal.

Similarly, the maximum error in θ is given by Eq. 21:

$$\begin{aligned} \hat{d\theta} &= \left(\frac{s}{2A} \cdot \frac{4}{3} \right) \text{ rad} \\ &= \left(\frac{0.651}{20} \cdot \frac{4}{3} \right) = 0.0434 \text{ rad} = 2.49^\circ. \end{aligned}$$

The maximum error in C , from Eq. 22, is given by:

$$\hat{dC} = s/2 = 0.325 \text{ IRE units.}$$

References

1. John R. Rossi, "Color decoding a PCM NTSC television signal," *Jour. SMPTE*, 83: 489-495, June 1974.
2. John P. Rossi, "Digital television image enhancement," *Jour. SMPTE*, 84: 545-551, July 1975.

118th SMPTE Technical Conference & Equipment Exhibit, *New York City*

Change of Dates

The dates of the 118th Conference were changed to 17-22 October, it was announced by Conference Vice-President **Harry Teitelbaum**, Hollywood Film Co. The meeting will still be held at the Americana Hotel in New York.

Program Plans

Paul Wittlig, CBS Television Network, has accepted the position of Program Chairman for the 118th SMPTE Conference, it was announced by SMPTE Editorial Vice-President **K. Blair Benson**, Goldmark Communications Corp.

Though it is still too early to report on specific program plans, the program will take a new approach this time. The sessions will be organized in steps from production through post-production and distribution. For example, the first part of the program will involve production aspects of film and tape, including shooting, studio operations, lighting and sound recording. The second part of the program will discuss post-production, including laboratory, editing techniques for film and tape, sound, special effects and graphics. Finally, the program will focus on the end products: distribution, exhibition, projection, television receivers, videodiscs, and the like, will be discussed.

According to Wittlig, the first Topic Chairman appoint-

ment is **E. Carlton Winckler**, Imero Fiorentino Associates, who will be in charge of the Production end of the program. Winckler, who has wide experience in film and video production, is now Senior Production Consultant for Imero Fiorentino.

Please watch the upcoming issues of the *Journal* for news on the development of the technical program.

Call for Papers

Those interested in presenting a paper at the New York Conference should write to SMPTE Headquarters, Att: Conference Programs Secretary, 862 Scarsdale Ave., Scarsdale, NY 10583, or call (914) 472-6606. The appropriate forms and information will be sent out immediately.

The required forms, plus a 500-750-word synopsis of each paper, are due at SMPTE Headquarters by 28 May.

Additional Appointments

Edward Messina, ABC-TV, has been appointed Local Arrangements Chairman by SMPTE Conference Vice-President Harry Teitelbaum. Teitelbaum also announced the appointment of **Charles Ahto**, Tape-Films, Inc., as Equipment Exhibit Chairman. Additional appointments will be announced in the March *Journal*.