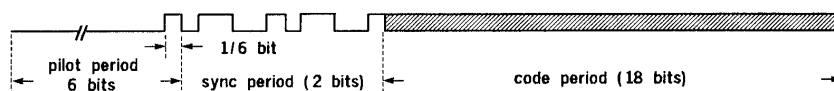


The WaterHound uses a Holtek Encoder IC model HT-640. This device generates an 18 bit word based on the state of the data and address pins. The worst case duty cycle for high bits is 48% as illustrated below.

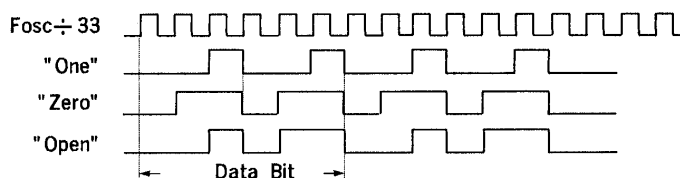
I. Functional Description —

1. Encoder Operation

Upon receipt of a TE signal (active high), the HT— 640 begins a 3 word transmission cycle and repeats this transmission cycle until the TE signal has been removed. One transmission cycle is composed of 3 data words each contains 3 periods as shown below:



The HT— 640 detects the logic state of address and data pins (A0~A13, D0~D3) and transmits these information during code period, it is capable of transmitting 4 different data with 3^{14} address. Each address/data pin can be set as one of three following logic states:



The 'OPEN' state data input will be interpreted as logic low by decoder since the decoder output has only two states.

HT—640 Encoder Flowchart

