

DEVELOPMENT OF A FREQUENCY METER CIRCUIT

Project report

by

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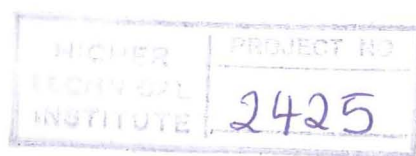
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CHAPTER 1

Frequency meter

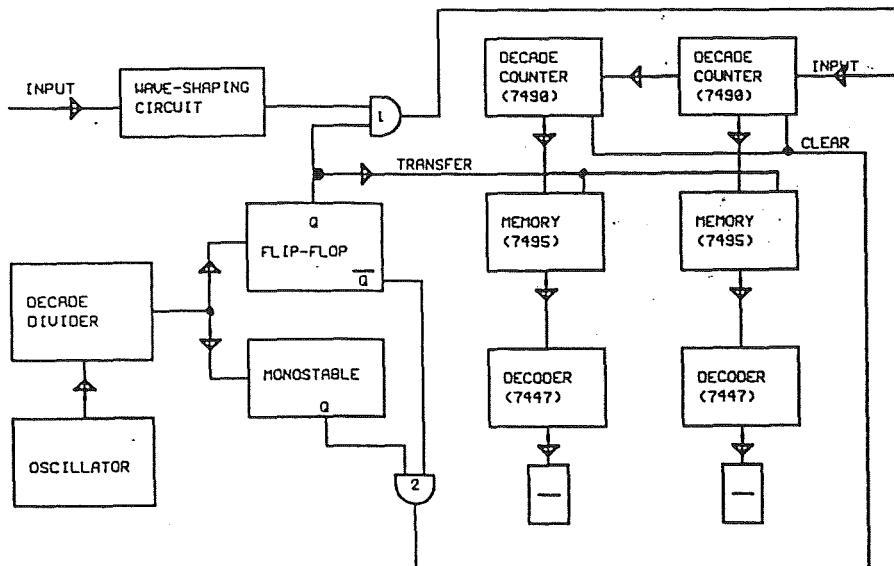
1.1 Introduction

A frequency meter is a useful device that measures the frequency of an input signal. Also it can measure the period. This is very easy since the frequency is contrarily proportional to the period as it can be seen from the equation (1 - 1).

$$f = \frac{1}{T} \quad (1 - 1)$$

There are many ways to measure the frequency. One way is shown in figure 1 - 1. The oscillator give pulses which has a very low frequency compared to the input signal. So when the output Q of the flip - flop is one the gate 1 is permitting to pass through the pulses of the input signal. Since the period of the oscillator is known and also the number of pulses of the input signal that passed these preset time, the frequency can be found by the equation (1 - 2).

$$f = \frac{n}{T} \quad (1 - 2)$$



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