	CICADA ENGINEERING SPECIFICATION	DOCUMENT NO. TFTR-10A2-H57
		PAGE 1 OF 4
		DATE- 5/2/77
SUBJECT Standard Timing Pulse		PREPARED BY H. Del Gatto

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SYSTEM MANAGER

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REVISIONS

DATE	DESCRIPTION

1.0 Abstract:

The purpose of this specification is to define the characteristics of a standard electronic pulse signal. The information contained herein shall provide a complete description of subject and shall serve as an interface standard for the CICADA system at the TFTR facility.

2.0 Reference Documents:

2.1 Facility Clock Subsystem, TFTR Specification TFTR 10B4-H401.

3.0 Introduction:

The subject signal will be used to effect time synchronization between various component parts of the TFTR electronic control and instrumentation system.

All time dependent systems within the TFTR complex will therefore be designed to accept and/or transmit the Standard Timing Pulse.

In addition to the many timing (trigger) applications of the timing pulse signal, one specific application will be for the purpose of inputting a "time event" to the Facility Clock Subsystem (FCS). When used in the application, the timing pulse will cause a specific ASCII character to be encoded upon the distributed FCS. The encoded FCS signal will be available throughout the TFTR area and may be simultaneously decoded for use at various remote areas. A single timing pulse used in this manner becomes a powerful method of accomplishing synchronism throughout the TFTR system.

4.0 Basic Feature

The Timing Pulse shall be a positive going pulse signal whose nominal width and peak to peak amplitude shall be 1.0 u sec. and 5v, respectively.

5.0 Mechanical Characteristics

The mechanical interface requirement for the subject pulse shall be dependent upon its use. A recommended means of transmission shall be 50 Ohm co-axial cable with shield ground at

the transmitting end only.

6.0 Electrical Characteristics:

The Standard Timing Pulse output shall be capable of driving one hundred fifty (150) feet of high quality 50 Ohm cable, transformer coupled and terminated with 50 Ohms. The characteristics of which are depicted by Figure 10.1.

6.1 Amplitude - 5vpp $\pm$20%

6.2 Pulse Width - 1.0 u sec $\pm$10%

6.3 Rise and Fall Time - 50 n sec max

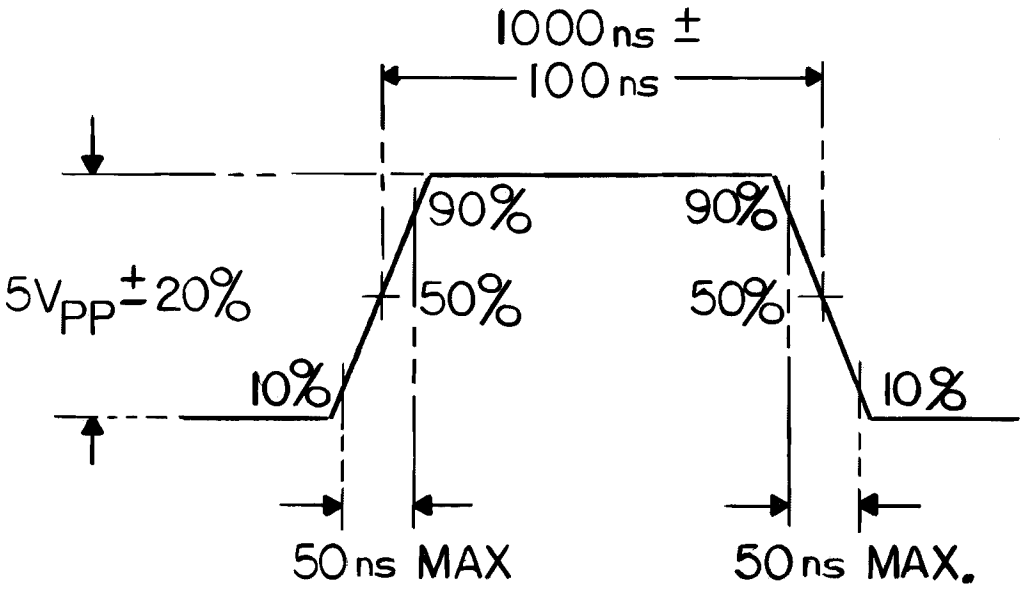

FIG 10.1
STANDARD TIMING PULSE