

12 bits, the first 6 of which constitute the warning character. Thus, the user programs may use all ASCII characters, but alphanumeric information and common symbols require only six bits of storage.

Some additional problems of Teletype use require a brief description of the actual hardware involved. The connection between the computer and any single Teletype is a loop of wire, beginning and ending in the computer room. This loop can be thought of as directional, passing through various pieces of hardware in the order described below. The equipment is capable of sending or receiving 10 characters per second; each character consists of 11 bits. A bit is represented by the presence or absence of a current through the wire for 1/110 second. Presence of a current represents a one; absence of current represents a zero. The equipment arrayed along the transmission wire includes the following.

A. Computer Room (send)

1. A continuous source of one's (that is, a current source).
2. A computer send station—equipment capable of temporarily breaking the current flow to send zero's under control of the computer.

B. Teletype

1. A Teletype send station, operating under control of the keyboard, functionally identical to the computer send station.
2. A Teletype receive station, which interprets the signals on the line and delivers the characters that they represent to the Teletype printing and carriage control mechanisms.