

## C. Computer Room (receive)

A computer receiver which interprets the signals on the line and delivers the characters to the scanner. The scanner sends an interrupt to the computer when a complete character has been received.

Of the 11 bits per character, only eight are used for the ASCII code. These are preceded by an "activation" bit (always zero) and followed by two "deactivation" bits (always one's). The activation bit notifies the two receivers that a character is arriving; thus, an inactive Teletype will cause no "character received" interrupts since no activation bits will be present. The deactivation bits are needed to synchronize the Teletype receiver with the computer.

Note that a character transmitted by the computer send station will be received both at the Teletype and at the computer receive station, and will cause a "character received" interrupt in the same way as a character originating at the Teletype send station. This is called the "echo" character and can be used, if desired, to verify the correct operation of the transmission line. The arrival of the echo character also indicates that the line is free for transmission of another character by the Teletype service routine.

Each Teletype is equipped with a BREAK key (ASCII, "NULL"), which works differently from the other Teletype keys. Depressing the BREAK key breaks the transmission wire; that is, it sends a continuous stream of zero bits as long as it is depressed. The use of the BREAK key is intended to signal to the Executive that the user wishes to terminate current operations and start some-