

The Centronics' interface to the Honeywell 316 or 516 computer accepts 12-bit parallel data from the computer, converts this input into two 7-bit ASCII characters, and transfers the two characters one at a time, to the printer.

The interface logic is contained on a single printed circuit board located in the interface card slot in the Centronics printer. A 20 foot cable connects the printer to the computer. One end of the cable plugs into the standard interface connector at the rear of the printer. The other end of the cable, is attached to a small printed circuit card which contains driver circuits for each interface signal from the computer to the printer. This buffer card along with two 6-inch ribbon cable jumpers plugs into any I/O bus cable position in the computer.

Data is transferred to the printer interface via the Output Bus (OTB) while address and command code information is sent over the Address Bus, in accordance with the following format. A description of each command code is contained in Table 1.

**OUTPUT BUS  
(OTB)**

3	8	11	16
1st (left) Character		2nd Character	

**ADDRESS BUS  
(ADB)**

7	10	11	16
Command Code		Address (Prewired to Octal 03)	

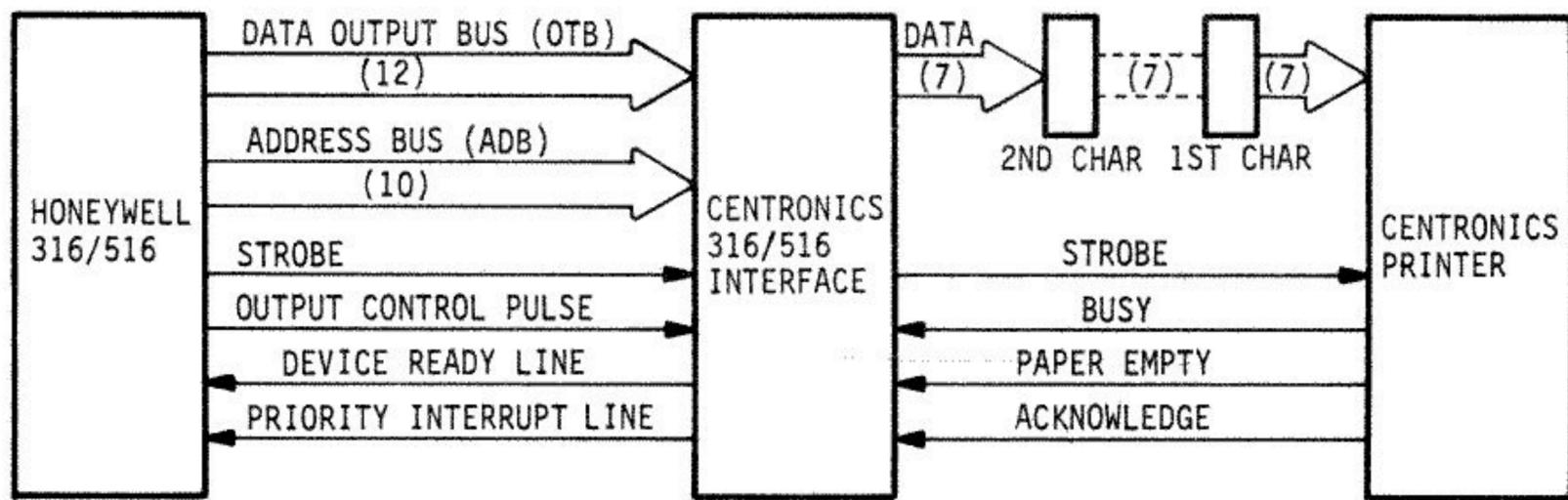
The interface activates a Priority Interrupt Line (PILOO-) to request a program interrupt whenever the interface is ready to receive new data. The line goes active when the following conditions are met: (1) a Load Buffer (01) command has been received to enable the interface, (2) the printer is not busy, (3) the printer is not currently acknowledging the previous operation, and (4) the interface has strobed the second character to the printer.

A Device Ready Line (DRLIN-) is used by the interface to reflect the status of the interface during a skip instruction. The line goes active in response to the following command codes and interface status: (1) a skip if ready command (00) is received and the interface has been enabled and is ready to receive data; or (2) a CR (02) or Skip on Not Busy (04) command is received and the printer is not currently busy or acknowledging the previous operation; or (3) a Skip on Paper OK command (03) is received and the printer is not out of paper.

The interface allows a Centronics printer to operate with Honeywell's 316/516 \$OLA subroutine (ASCII Output to Printer).

Due to the six bit per character input, some of the optional features normally offered with Centronics printers are not available when using this interface.

# CENTRONICS INTERFACE FOR HONEYWELL 316 AND 516 COMPUTERS



316/516 INTERFACE CONTROL CODES

Control Code ABD7-10	316/516 Command	Interface Response	Interface Bit 7	Data To Printer
00 (octal)	OTA - Accept Characters or SKIP - Skip if Ready	Allows RRLIN pulse from 316/516 to strobe data from Output Bus. Activates DRLIN line if interface is ready to accept data.	BIT 6 Inverted	-
01	OCP - Load Buffer	Allows OCP pulse to set Enable and Ready flip-flops in the interface.	BIT 6 Inverted	-
02	OCP - Carriage Return SKIP - Skip on Not Busy	Combines with OCP pulse to encode a CR code for the printer. Also activates DRLIN line if printer is not busy.	0	015 (octal)
03	SKIP - Skip on Paper OK	Activates DRLIN line if printer is not out of paper.	-	-
04	SKIP - Skip on Not Busy	Activates DRLIN line if printer is not busy.	-	-
12	OCP - Bell	Combines with OCP pulse to encode a BELL code for the printer.	0	007
13	OCP - Form Feed	Combines with OCP pulse to encode an FF code for the printer.	0	014
14	OCP - Vertical Tab	Combines with OCP pulse to encode VT code for the printer.	0	013
15	OCP - Line Feed	Combines with OCP pulse to encode an LF code for the printer.	0	012
17	OCP - Elongated Character	Combines with OCP pulse to encode an elongated character code for the printer.	0	016

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