With the Model 2207A I/O Interface Controller, the following non-Wang equipment can be interfaced directly to the Central Processing Unit (CPU) of a System 2200 configuration:

- an RS-232-C compatible Teletype®, e.g., the Model 33 or 35,
- a Teletype-equivalent terminal, or
- an RS-232-C compatible, asynchronous transmission laboratory instrument.

The controller supports asynchronous transmission rates up to 1200 baud and two modes of operation called ASCII and Binary. Five "baud rate" buttons on the mounting bar permit selection of any one of the following rates: 110, 150, 300, 600 and 1200 baud. The ASCII/Binary switch determines the operational mode and the associated character format.

With the ASCII/Binary switch in the "out" position, the ASCII mode for Teletype terminal input/output or tape read/punch operations is in effect. The data format is 7-level ASCII with an even-parity high-order eighth bit. When data is transferred to the CPU via the interface, the parity bit is stripped from each character (i.e., the high-level bit is always zero). When a standard Teletype BREAK signal is received, the interface automatically decodes the signal and sends a HALT/STEP signal to the CPU. Similarly, when a standard ESC (Escape) character is received, the interface sends a RESET signal to the CPU. Thus, a Teletype plugged into a Model 2207A interface can function as a console input device for a System 2200 CPU.

On the other hand, with the ASCII/Binary switch in the "in" position, the data format is 8-bit and no special processing of the high-order eighth bit occurs during input or output operations. Decoding of BREAK and ESC characters is inhibited. This second mode of operation can be used to input discrete binary data or input any 8-bit character set.

The Model 2207A interface plugs into any I/O slot in a CPU chassis and has a 25-pin female plug to facilitate direct connection of a Teletype or other equipment having a cable and an RS-232-C compatible male plug. The interface operates with interchange signals recommended by the Electronics Industries Association in "EIA Standard RS-232-C."

An RS-232-C compatible Teletype or Teletype-like device, a 2200 Series CPU, and the Model 2207A controller can be used as a stand-alone computer with punched paper tapes serving as the offline storage medium. To control tape read/punch operations via the DATALOAD BT and DATASAVE BT statements, the CPU must be one of the following models: the 2200B, C, T or a 2200S with Option 22, 23 or 24.

To control input and output operations for interfaced laboratory instruments, the $GIO statement is recommended. The following CPU models have the $GIO statement in their BASIC language instruction set: the 2200B or C with Option 2, the 2200S with Option 23 or 24, and the 2200T.
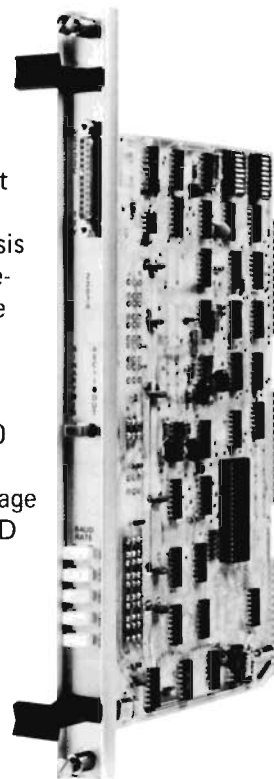
2207A I/O INTERFACE CONTROLLER

DATA SHEET

SPECIFICATIONS

Size of Controller Board

Length . . . . 14 in. (35.56 cm)
Depth . . . . 6 in. (15.24 cm)
Width . . . . 1 in. (2.54 cm)

Electrical Connector

Receives a 25-pin RS-232-C compatible male plug.

Asynchronous Format

ASCII mode: 1 start bit, 7 data bits plus an even
parity bit, 2 stop bits.
Binary mode: 1 start bit, 8 data bits, 2 stop bits.

Transmission Rate

Selectable rates of 110, 150, 300, 600, and 1,200
baud.

Special Features

Decodes Teletype BREAK signal into HALT/STEP
command and Teletype ESC (Escape) character
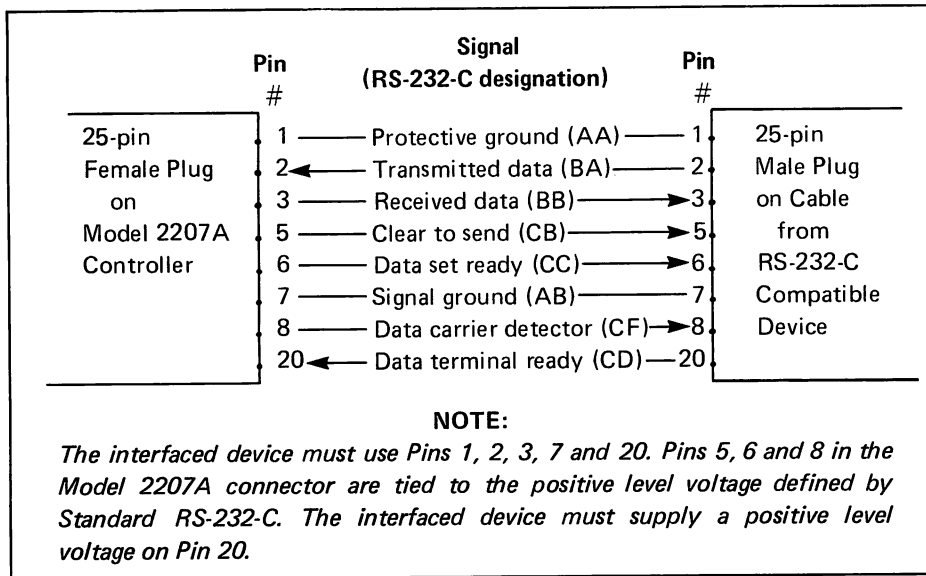into RESET command when operating in ASCII
mode.

Power Requirements

Supplied by the CPU.

Model 2207A Connector Pin Assignments
(From the Viewpoint of an Interfaced Device)

25-pin Female Plug on Model 2207A Controller	Pin #	Signal (RS-232-C designation)	Pin #	25-pin Male Plug on Cable from RS-232-C Compatible Device
	1	Protective ground (AA)	1	
	2 ◄—	Transmitted data (BA)	2	
	3	Received data (BB) —►	3	
	5	Clear to send (CB) —►	5	
	6	Data set ready (CC) —►	6	
	7	Signal ground (AB)	7	
	8	Data carrier detector (CF) —►	8	
	20 ◄—	Data terminal ready (CD)	20	

NOTE:

*The interfaced device must use Pins 1, 2, 3, 7 and 20. Pins 5, 6 and 8 in the
Model 2207A connector are tied to the positive level voltage defined by
Standard RS-232-C. The interfaced device must supply a positive level
voltage on Pin 20.*