WANG LABORATORIES, INC.
ONE INDUSTRIAL AVENUE, LOWELL, MASSACHUSETTS 01851, TEL. (617) 851-4111, TWX 710 343-6769, TELEX 94-7421

DATA SHEET

The Model 9030 IEEE-488 Interface allows a Wang 2200 Work Station (2200 WS) to be compatible with other devices using the IEEE 488-1975 standard.

The interface board fits inside the housing of the 2200 WS Central Processing Unit (CPU). A 24 pin amphenol connector, at the rear of the CPU chassis, provides the input/output connection. Input/output circuits for the Model 9030 interface are TTL/DTL* compatible. Digital information is transferred between systems components in byte serial and bit parallel modes along with BUS control and management information. Devices connected to the interface board may be any one of the following:

Listeners:	Devices receiving information (printers, programmable power supply, etc.)
Talkers:	Devices sending information only (digital meter, counters, etc.)
Talker/Listeners:	Devices sending and receiving information (programmable analyzers, counters, etc.)
Controllers:	Devices controlling information on the BUS (computers, intelligent instruments, etc.)

With the Model 9030 Interface, the 2200 WS can serve as either the system controller (controlling, talking or listening) or as a noncontroller (talking or listening). The Model 9030 is designed to operate with $GIO statements. The $GIO statements are necessary to properly control the Model 9030; however, once protocol is established, other BASIC statements may be used to transfer information.

The 9030 can be field-settable (by an authorized Wang service representative) to operate as a controller or non-controller. It supports the following subset of the IEEE 488-1975 Specification in each mode:

CONTROLLER

- C1 – System Controller
- C2 – Send IFC (Interface Clear)
- C3 – Send REN (Remote Enable)
- C4 – Recognize SRQ (Service Request)
- C25 – Send all standard multi-line interface messages and in addition
  - Parallel Poll
  - Take Control Synchronously
- SR1 – Send Service Request
- L2 – Basic Listener
- T4 – Basic Talker
- AH1 – Full Acceptor Handshake
- SH1 – Full Source Handshake

*TTL = transistor-transistor logic
DTL = diode-transistor-Logic

MODEL 9030 IEEE-488 INTERFACE

DATA SHEET

NON-CONTROLLER

- CO – System Non-Controller
- PP2 – Respond to Parallel Poll (configuration field-settable).
- SR1 – Send Service Request
- L2 – Basic Listener
- T4 – Basic Talker
- AH1 – Full Acceptor Handshake
- SH1 – Full Source Handshake

SPECIFICATIONS

Power Requirements
Supplied by the CPU

Connector
A 24-pin Amphenol input/output connector

Number of Devices
15 maximum

BUS Length
20 meters maximum

Signal Levels
Logic "0" (HIGH ⩾ 2.0 volts)
Logic "1" (LOW ⩽ 0.8 volts)

Signal Definitions**
Data Transfer Control
- DAV Data valid
- NRFD Not ready for data
- NDAC Data not accepted

General Interface Management
- ATN Attention
- IFC Interface clear
- SRQ Service request
- REN Remote enable
- EOI End or identify

SPECIFICATIONS (Cont.)

Data Bus Control

DI01	DI05
DI02	DI06
DI03	DI07
DI04	DI08

Data Transfer Rate
30 k bytes/sec

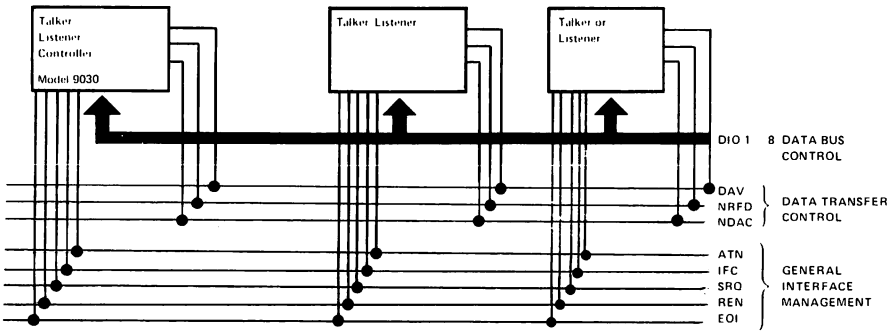
Model 9030 Connector Pin Assignments

Pin Number	Function	Pin Number	Function
1	DIO 1	13	DIO 5
2	DIO 2	14	DIO 6
3	DIO 3	15	DIO 7
4	DIO 4	16	DIO 8
5	EOI	17	REN
6	DAV	18	DAV GND
7	NRFD	19	NRFD GND
8	NDAC	20	NDAC GND
9	IFC	21	IFC GND
10	SRQ	22	SRQ GND
11	ATN	23	ATN GND
12	SHIELD	24	LOGIC GND

ORDERING SPECIFICATIONS

An interface providing information transfer between a Wang WS Central Processing Unit and devices that conform to IEEE 488-1975 standard. As a controller the interface must meet subsets: C1, C2, C3, C4, C25, SR1, L2, T4, AH1, and SH1. As a noncontroller the interface must meet subsets: CO, PP2, SR1, L2, T4, AH1, and SH1.

Standard Warranty Applies



**For complete IEEE STD 488-1975 definitions and specifications, refer to: Institute of Electrical Engineers, Inc. publication of 4/4/75, "IEEE Standard Digital Interface for Programmable Instrumentation".

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