PDP

INSTALLATION MANUAL



DIGITAL EQUIPMENT CORPORATION

PHYSICAL CHARACTERISTICS

The PDP-1 Programmed Data Processor is a high-speed, stored-program, digital computer made of modular, solid-state circuits. Each PDP-1 is tailormade to specific customer needs by selecting the proper equipment from a list of central processor and input-output options. A typical system installation could include one or more of the units described below. In most cases system units are housed in standard Digital cabinets. However, some pieces of equipment, especially those that require writing surfaces or tables for accessory equipment, have specially designed cabinets. Note that dimensions in the table are for complete units, standing alone. If desired, units may be attached to one another by removing end panels. Over-all dimensions will then be reduced by the width of the removed panels (1-1/4 inches per side for standard cabinets); weight will be reduced by 45 pounds per panel.

Note: All figures maximum.

	Central Processor	Core Memory 170 Control 171	Drum File 23	CRT Display 30	CRT Display 31	Card Punch and Control 40	Card Reader and Control 421
Weight (lb)	1,500	400	900	350	1,600	938	225
Dimensions (in.) Width Depth Height	98-1/2 27-1/16 69-1/8	22-1/4 27-1/16 69-1/8	44-1/2 27-1/16 69-1/8	49-1/8 34-1/8 48-3/4	105 27-1/16 69-1/8	70-1/4 27-1/16 69-1/8	30 17-3/4 42
Service Clearance (in.) Front Rear	8-3/4 14-7/8	8-3/4 14-7/8	8-3/4 14-7/8	0 13	8-3/4 14-7/8	8-3/4 14-7/8	0 6-5/8
Heat Dissipation (Btu/hr)	6,820	1,020	2,565	3,137	5,865	3,922	450
Current (A) Nominal Surge	20 30	1.3	9	8	15 15	11 17	1.3
Power Dissipation (kw)	2.00	0.30	0.75	0.90	1.70	1.15	0.20
Notes	Four standard cabinets, one with table pro- truding 17 inches.	One standard cabinet contain- ing two memory modules and one control.	Two stan- dard cabi- nets.	Includes Light Pen 370.	Two standard cabinets a dis- play ta- ble, and Light Pen 370.	Standard cabinet and punch; eight-inch clear-ance, both sides of punch.	

ENVIRONMENTAL REQUIREMENTS

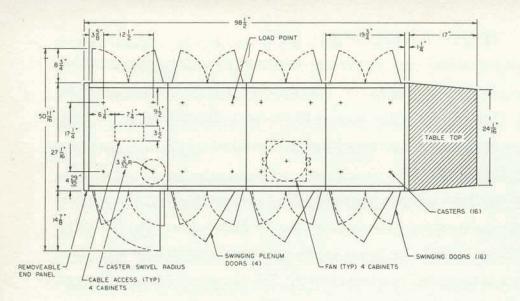
The central processor and input-output devices operate satisfactorily under ordinary conditions of humidity, shock and vibration in a 50 to 100°F temperature range. However, a 70 to 85°F range is recommended. Tolerable humidity is up to 80 percent. Consult the system heat characteristics that follow in planning room air conditioning if required.

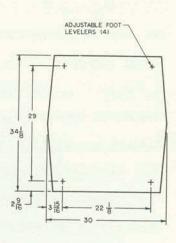
POWER REQUIREMENTS

Each unit of the PDP-1 system requires a separate source of 105- to 125-volt, 60-cycle, single-phase power. (On special request, the central processor can be factory-wired for 220-volt, one- or two-phase power or 50 cycle ac.) The power source must also be capable of maintaining constant nominal current and supplying transient current. The electrical characteristics of individual units appear in the table below.

Note: All figures maximum.

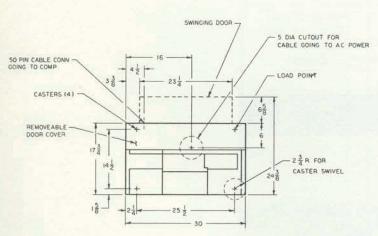
Magnetic Tape Transport 50 Control 52 Magnetic Tape Transport 555 Control 555 Control 550		Magnetic Tape Transport 570 Controls 57A and 131	Line Printer 644	Analog-Digital Converter 138 Multiplexer Control 139	
1,100	520	1,150	1,500	80	
44-1/2 27-1/16 69-1/8	22-1/4 27-1/16 69-1/8	54-3/4 32-1/2 69-1/8	56 30 55	=	
18-3/8 14-7/8	18-3/8 14-7/8	18-3/8 14-7/8	0 21	=======================================	
3,478	4,300	9,550	2,500	130	
11 16.5	11 30	25 50	15 30	2.8	
1.02	1.26	2.80	1.50	0.04	
Two stan- dard cabi- nets. Two dual transports and one control in a stan- dard cab- inet.		510 and 131 housed in standard cabinet; 570 in 32- 1/2 inch square cab- inet.	Also, 30- inch clear- ance left and right.	Occupies six panels of space in exist- ing cabi- nets.	



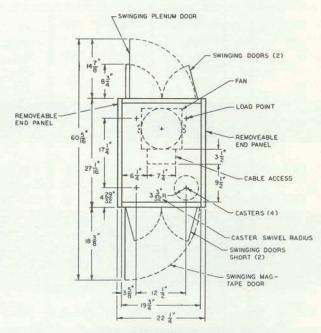


Central Processor

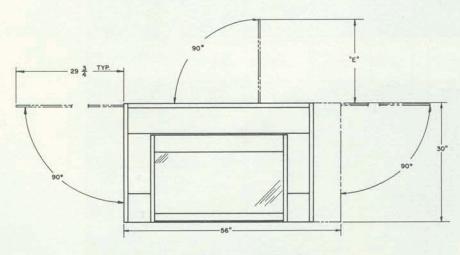
Keyboard Printer



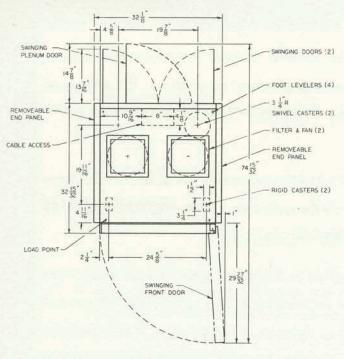
Card Reader and Control Type 41



Standard Cabinet

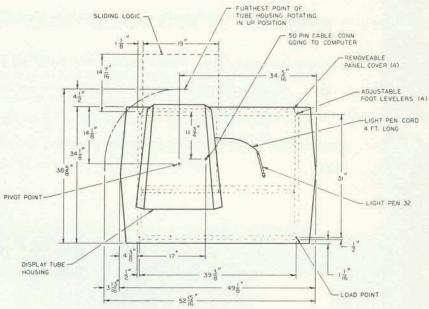


Line Printer Type 644

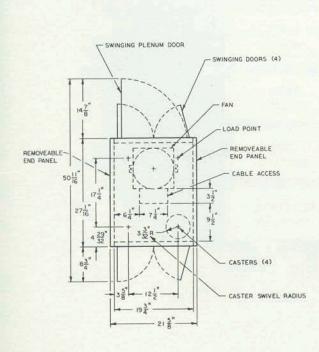


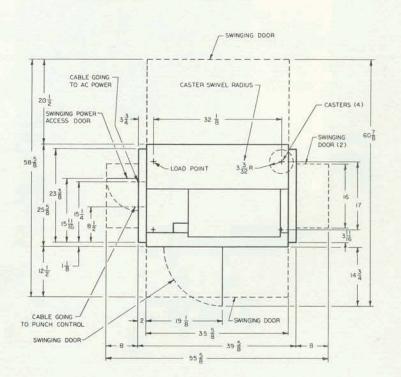
Plan views are scaled at 1/2 inch per foot. The outlines of the various units may be traced in any desired arrangement to plan the installation layout.

Tape Transport Type 570



Precision CRT Display Type 30





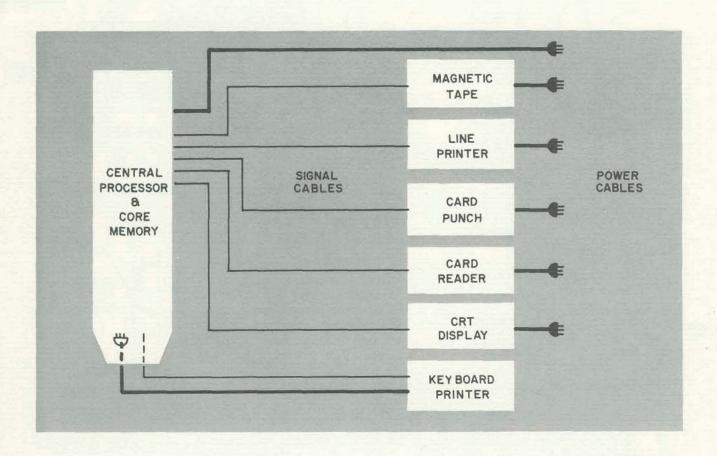
Card Punch Control and Card Punch Type 40

CABLING REQUIREMENTS

System power sources must be provided with 115-volt, 20-amp, Hubbel Twistlock, flush receptacles (or their equivalent) to mate with input-output equipment power cables. The same kind of receptacle, but with a 30-amp current rating, is required for the central processor power cable.

Fifty-wire shielded signal cables with Amphenol 115-114P male connectors at both ends inter-connect system units. Any special equipment used with the system must have Amphenol 115-114S female connectors and 1391 shells to accept signal cables.

Unless otherwise specified, power cables are supplied in 20-foot lengths, permanently wired at one end to individual units. Signal cables come unattached in 25-foot lengths. Power and signal cables measure 11/16 and 13/16 of an inch in diameter, respectively. Power and signal cables enter cabinets through bottom ports. Cabling for a typical system installation is shown below.



DIGITAL'S SERVICE POLICY

Digital's reputation for reliability owes a great deal to rigid quality control and customer field service. Before delivery all Digital products are thoroughly tested by trained checkout teams. Each module and every piece of accessory equipment is subjected to rigorous tests, many of them conducted by specially designed, automatic checkout devices. Computers and special systems are checked electrically and logically by numerous programmed routines.

During system checkout customers are invited to visit the Maynard manufacturing facility to inspect and become familiar with their equipment. Computer customers may also send personnel to free instruction courses on computer operation, programming, and maintenance conducted regularly in Maynard, Massachusetts.

Digital's engineers are available during installation and test for assistance or consultation. Further technical assistance in the field is provided by home office design engineers or branch office application engineers in New York, Washington, Chicago, Pittsburgh, Los Angeles, San Francisco, Ottawa, Sydney (Australia), Reading (U.K.), and Munich.



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