



PERMANENT
MEMORANDUM

M -1118
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DATE August 11, 1961

SUBJECT Types and Quantities of Components Used in PDP-1
TO PDP-1 Distribution List

ABSTRACT

Lists, in three tables, the system module types and power supply types used in the standard PDP-1, the Automatic Multiply and Divide Package, and the 16-Channel Sequence Break System. Components of each module and supply type are described and the quantities of each are given.

FROM Computer Division

APPROVED

TABLE I Components of Plug-In Modules Used in PDP-1

Module No.	Description	Components			Number of Modules Used		
		Description	Quantity Used		Standard PDP-1	Auto. Multiply Divide	Sequence Break System
			Critical	Non-Critical			
1103	6 inverters with no load resistors	carbon resistors	12	7	64		8
		mica capacitors	6				
		MA80 transistors	6				
		D-001 diodes		6			
		D-602 diodes		4			
1103R	6 inverters with clamped load resistors	carbon resistors	18	1	18		
		mica capacitors	6				
		MA80 transistors	6				
		D-001 diodes		6			
		D-662 diodes	4				
1104	4 inverters with clamped load resistors	carbon resistors	12	1	64		2
		mica capacitors	4				
		MA80 transistors	4				
		D-001 diodes		4			
		D-662 diodes	4				
1105	5 inverters with clamped load resistors	carbon resistors	13	1	69	10	1
		mica capacitors	5				
		MA80 transistors	5				
		D-001 diodes		3			
		D-662 diodes	4				
1110	two 6-input diode gates driving inverters	carbon resistors	6	5	5		
		mica capacitors	2				
		MA80 transistors	2				
		D-001 diodes	12	2			
		D-662 diodes	4				
1111	two 6-input diode gates driving inverters	Carbon resistors	6	1	11	2	8
		MA80 transistors	2				
		D-001 diodes	12	2			
		D-662 diodes	4				

TABLE I Components of Plug-In Modules Used in PDP-1

Module No.	Description	Components			Number of Modules Used		
		Description	Quantity Used		Standard PDP-1	Auto. Multiply Divide	Sequence Break System
			Critical	Non-Critical			
1150	binary to octal decoder	carbon resistors	24	17	5		
		mica capacitors	8				
		MA80 transistors	8				
		D-001 diodes	12	8			
		D-662 diodes	4				
1151	binary to octal decoder	carbon resistors	24	1	4		
		mica capacitors		2			
		MA80 transistors	8				
		D-001 diodes	24	8			
		D-662 diodes	12				
1201	flip-flop with 2 complement inputs, output buffers, and 2 inverters	4 winding pulse transformers	2		33	5	
		carbon resistors	20	4			
		mica capacitors	10				
		MA80 transistors	6				
		D-001 diodes					
		D-662 diodes	6				
		Ceramic Capacitors	4	3			
1209	two flip-flops each with two set and clear inputs, both sides of outputs buffered, and 2 inverters	carbon resistors	38	2	36		
		mica capacitors	10				
		MA80 transistors	10				
		D-001 diodes	20				
		D-662 diodes	8				
		Ceramic capacitors	8	2			
1304	delay circuit providing pulse at end of delay and level during delay variable in 3 ranges.	carbon resistors	19		1		
		mica capacitors	5				
		MA80 transistors	4				
		D-001 diodes	11				
		D-662 diodes	4				
		Ceramic capacitors	1	2			
		MD27 transistor	1				
		2 winding pulse transformers	3				
		Mylar capacitors	2				
		Wirewound trimpot	1				

TABLE I Components of Plug-In Modules Used in PDP-1

Module No.	Description	Components		Number of Modules Used			
		Description	Quantity Used		Standard PDP-1	Auto. Multiply Divide	Sequence Break System
			Critical	Non-Critical			
1310	A tapped delay line (1 usec.) driving an inverter	carbon resistors	5		10		
		MA80 transistors	1				
		D-003 diodes	1				
		Technitrol epoxy coated distributed delay line (no taps)	4				
		Same delay line, but 3 taps	1				
1311	Two tapped delay line (0.2 usec. each) driving inverters	carbon resistors	6		3	6	
		MA80 transistors	2				
		Technitrol delay lines 3 taps (as above)	2				
		D-662 diodes	2				
1410	Schmitt circuit, switch filter, and a pulse generator	carbon resistors	14	3	5		
		mica capacitor	1				
		MD27 transistors	3				
		Ceramic capacitors	1	1			
		D-001 diodes	2	2			
		Aluminum electrolytic capacitor	1				
1540	Sense amplifier for memory	2N1754 transistors	2		18		
		MD27 transistors	1				
		carbon resistors	17	2			
		MA80 transistors	5				
		Ceramic capacitors	4	1			
		D-662 diodes	3				
		Tantalum solid electrolytic capacitor	2				
		1% deposited carbon resistors	6	2			
		carbon trimpot, A/B	2				
		D-001 diodes	4	2			

TABLE I Components of Plug-In Modules Used in PDP-1

Module No.	Description	Components			Number of Modules Used		
		Description	Quantity Used		Standard PDP-1	Auto. Multiply Divide	Sequence Break System
			Critical	Non-Critical			
1607	3 Pulse amplifiers and 3 inverters	carbon resistors	21	9	24	10	
		mica capacitors	6				
		Ceramic capacitors	3	2			
		MA80 transistors	3				
		MD27 transistors	6				
		2 winding pulse transformers	6				
		D-001 diodes	15				
		D-662 diodes	4				
1675	9 indicator drivers	carbon resistors	9		14		
		2N1370 transistors	9				
1669	9 indicator drivers	carbon resistors	18		5		
		2N1370 transistors	9				
1703	9 switch contact filtering circuits	carbon resistors	18	1	4		
		Al. electrolytic capacitors	9				
		Ceramic capacitors		1			
		D-001 diodes		20			
1972	core memory read-write switch	carbon resistors	28		37		
		D-001 diodes	16	4			
		D-662 diodes		4			
		MD27 transistors	4				
		2N1065 (mesa) transistors	4				
		2N1204 transistors	8				
1973	memory driver	carbon resistors	12		2		
		mica capacitors	3				
		Ceramic capacitors		2			
		Al. electrolytic capacitors		2			
		D-001 diodes	2				
		D-662 diodes	4				
		MA80 transistors	1				
		MD27 transistors	3				
		2N1204 transistors	4				

TABLE I Components of Plug-In Modules Used in PDP-1

Module No.	Description	Components		Number of Modules Used			
		Description	Quantity Used		Standard PDP-1	Auto. Multiply Divide	Sequence Break System
			Critical	Non-Critical			
1976	resistor board	1/2% wirewound resistors	8		16		
		carbon resistors	8				
		mylar capacitors	8				
1978	resistor board	1/2% wirewound resistors	8		3		
		carbon resistors	16				
		mylar capacitors	8				
4105	5 inverters with clamped load resistors	carbon resistors	13	1	9		
		mica capacitors	5				
		2N1305 transistors	5				
		D-001 diodes		3			
		D-662 diodes	4				
4106	6 inverters with no load resistors	carbon resistors	12	7	4		2
		mica capacitors	6				
		2N1305 transistors	6				
		D-001 diodes		6			
		D-662 diodes		4			
4110	two 6-input diode gates driving inverters	carbon resistors	6	5	5		
		mica capacitors	2				
		2N1305 transistors	2				
		D-001 diodes	12	2			
		D-662 diodes	4				
4113	6 two-input diode gates driving inverters	carbon resistors	18	1	3	2	9
		ceramic capacitors		7			
		2N1754 transistors	6				
		D-001 diodes	12	6			
		D-662 diodes	16				
4128	2 pulse inverters driving 8 capacitor-diode gates	carbon resistors	14	1	9		16
		mica capacitors	10				
		ceramic capacitors		1			
		2N1754 transistors	2				
		D-001 diodes	8	2			
		D-662 diodes		4			

TABLE I Components of Plug-In Modules Used in PDP-1

Module No.	Description	Components			Number of Modules Used		
		Description	Quantity Used		Standard PDP-1	Auto. Multiply Divide	Sequence Break System
			Critical	Non. Critical			
4201	flip-flop with 2 complement inputs, output buffers, and 2 inverters	2-winding pulse transformers	2		2		
		carbon resistors	33	3			
		mica capacitors	14				
		ceramic capacitors		6			
		2N1754 transistors	2				
		2N1305 transistors	4				
		D-001 diodes	10	2			
		D-662 diodes	4				
4209	2 flip-flops each with 2 set, 2 clear, and one complement input, both outputs buffered, and 2 inverters	carbon resistors	50	1	5		
		mica capacitors	22				
		ceramic capacitors		6			
		2N1754 transistors	4				
		2N1305 transistors	6				
		d-001 diodes	12	4			
		D-662 diodes	4				
		4214	4 flip-flops	carbon resistors			
mica capacitors	8						
ceramic capacitors				17			
2N1754 transistors	8						
D-001 diodes	4			8			
D-662 diodes	4						
D-664 diodes	8						
4301	delay circuit providing pulse at end of delay and level during delay. delay variable in 5 ranges			carbon resistor	19		9
		wire-wound trimpot	1				
		mica capacitors	4				
		ceramic capacitors	1	3			
		mylar capacitors	2				
		2N1754 tantalum solid electrolytic capacitor	2				
		2N1754 transistors	2				
		2N1305 transistors	3				
		D-001 diodes	6	3			
		D-662 diodes	4				
		2-winding pulse transformers	3				

TABLE II Components of Power Supplies Used in PDP-1

Power Supply No.	Description	Components		Number of Power Supplies Used			
		Description	Quantity Used		Standard PDP-1	Auto. Multiply Divide	Sequence Break System
			Critical	Non-Critical			
710	+10 volt power supply	Triad F-40X transformer	1		1		
		1N1217 diodes	2				
		Al. electrolytic capacitors	2				
		Power resistors	2				
		10M10Z5 zener diode	1				
		fuse	1				
		dual 1000 volt capacitor	1				
730	dual variable 20 vlt. power supply	Resonant transformer DEC part no. 100-X-1010	1		2		
		1N1227 diodes	8				
		Al. electrolytic capacitors	4				
		variacs	2				
		voltmeters	2				
		fuses	2				
		dual 1000 volt capacitor	1				
741	dual 15 volt 6 amp power supply	Resonant transformer DEC part no. 100-X-1010	2		4		
		1N1341 diodes	4				
		Al. electrolytic capacitors	4				
		dual 1000 volt capacitors	1				
733	memory temperature compensated supply	Resonant transformer DEC part no. 100-X-1010	1		1		
		Al. electrolytic capacitors	6				
		dual 1000 volt capacitors	1				

TABLE III Summary of Components Used in PDP-1

Component	Description	Quantity Used		
		Critical	Non-Critical	Total
Transistors	MA-80 (2N1427) PHILCO MAT 4.35	1939		
	MD-27 (2N501) 6.35 4.65	332		
	2N1370 TI 1.72 1.48	196		
	2N1305 RCA 1.77 .51	391		
	2N1204	304		
	2N1065 (Mesa) GI 2.25 1.50	148		
	2N1148	21		
	2N176 MIT RCA 1.65 1.10	8		
	2N1304 RCA 1.77 .51	2		
	2N1754	194		
TOTALS		3535		3535
Diodes	D-001 (1N276)	2463	1561	4024
	D-662 (1N645)	1666	308	1974
	D-003 (1N994)	10		10
	D-664 (CSD 2425)	72	148	220
	1N1217	25		25
	1N1341	18		18
	1N1227	16		16
	1N429 (Zener)	2		2
TOTALS	4272	2017	6289	
Resistors	Carbon	9641	1461	11102
	1% Deposited carbon	108	36	144
	1/2% Wirewound	152		152
	Power wirewound	2		2
	10 Watt wirewound	2		2
	3 Watt wirewound	10		10
	25 Watt wirewound	2		2
	1% wirewound	10		10
TOTALS	9927	1497	11424	
Capacitors	Dual 1000 volt	4		4
	Aluminum electrolytic	61	4	65
	ceramic	826	553	1379
	Mica	2493	8	2501
	Mylar	172		172
	Tantalum Solic electro	54		54
TOTALS	3610	565	4175	
Transformers	2 Winding pulse	348		
	4 Winding pulse	66		
	Triad F-40X	1		
	Resonant DEC 100-X-1010	11		
TOTALS	426			

TABLE III Summary of Components Used in PDP-1

Components	Description	Quantity Used		
		Critical	Non-Critical	Total
Delay Lines	Technitrol epoxy	40		
	Coated distributed, no taps	16		
	Same, but with 3 taps			
TOTALS		56		
Trimpots	Wirewound	10		
	Carbon, A/B	36		
		46		
TOTALS		46		
Fuses	10M10Z5 Zener diode	1		
	fuse	4		
		5		
TOTALS		5		
Voltmeters		6		
Variacs		4		

- NOTES: (1) Semi-conductor counts for both modules and power supplies.
 (2) PDP-1 uses a total of 544 plug-in modules; there are only 35 different kinds.
 (3) PDP-1 uses a total of 8 power supplies; there are only 4 different kinds.