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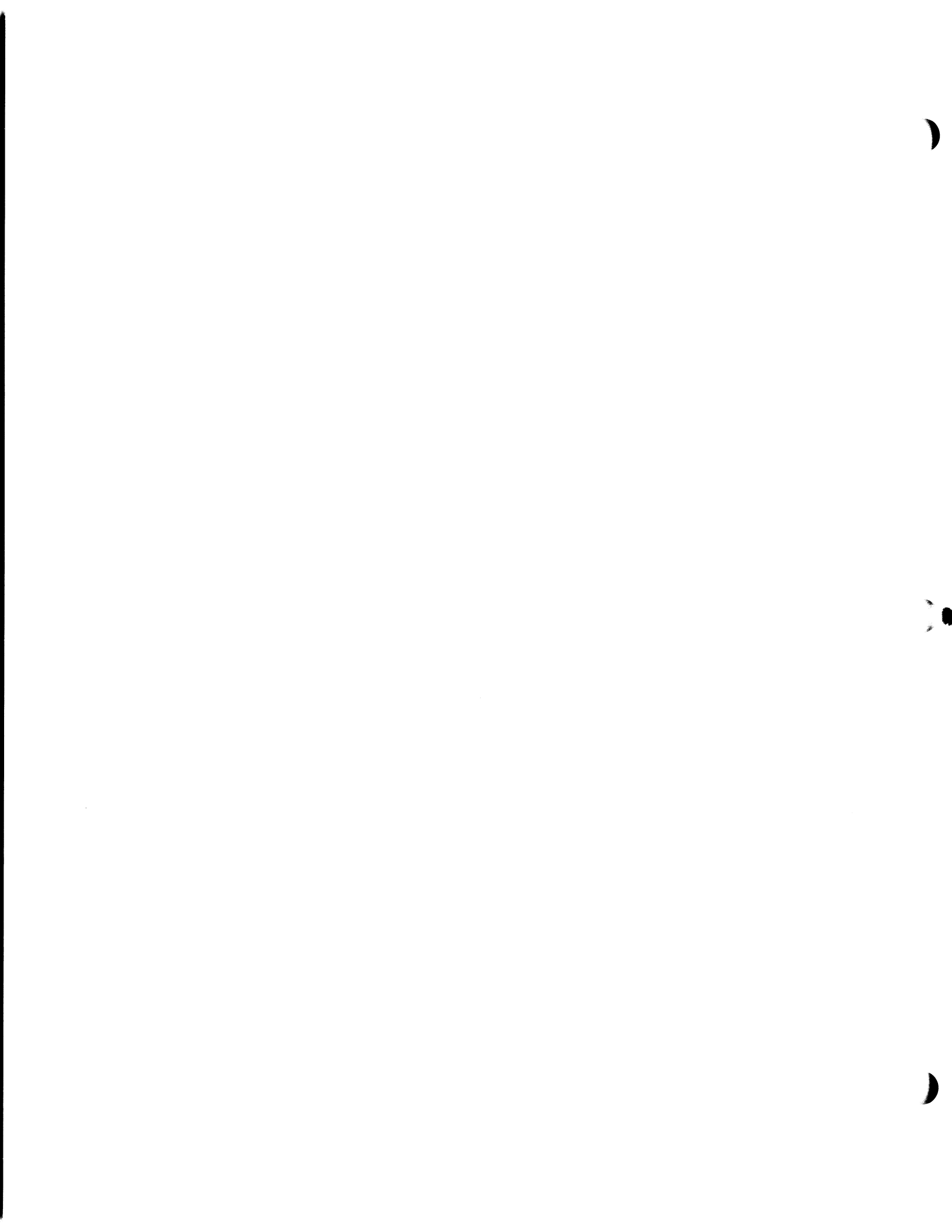
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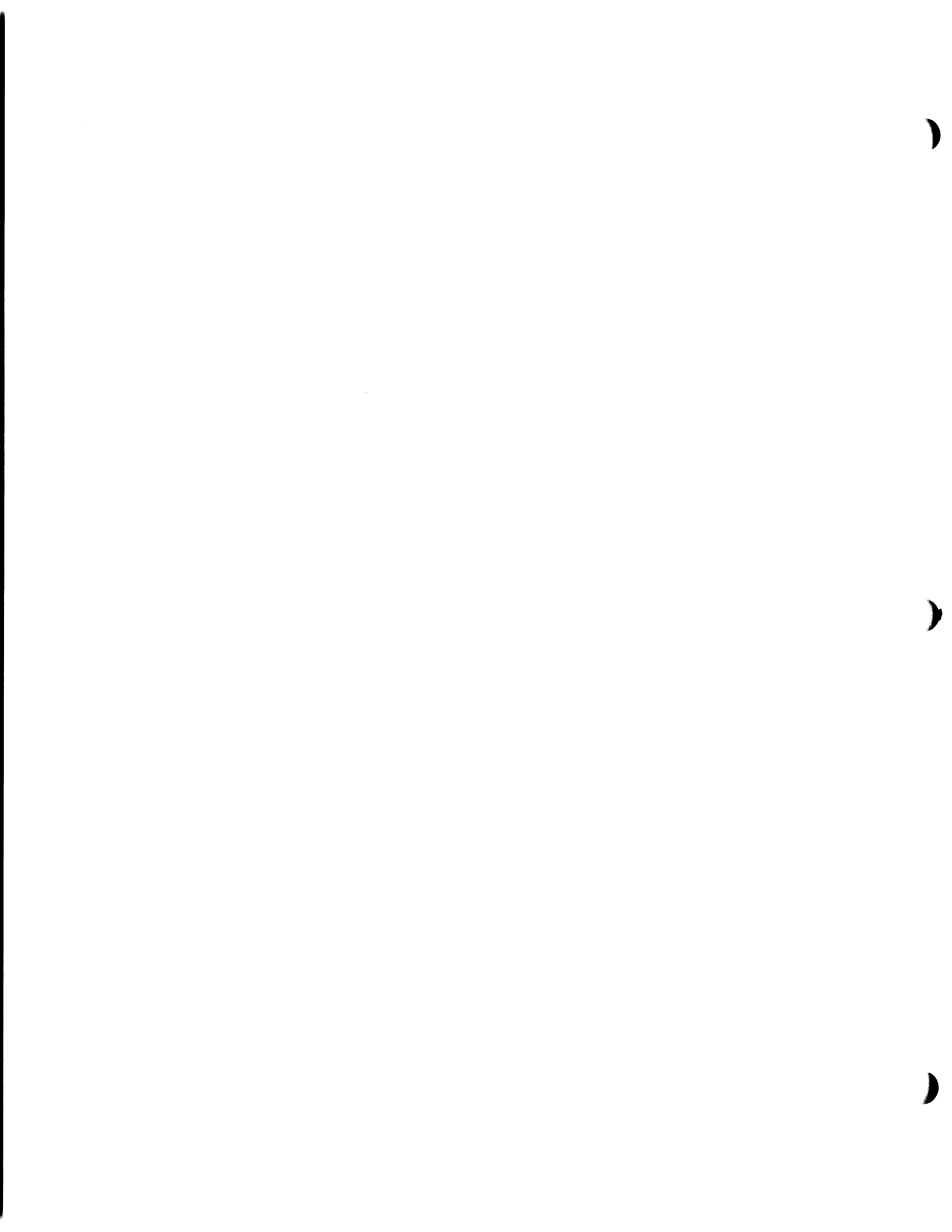
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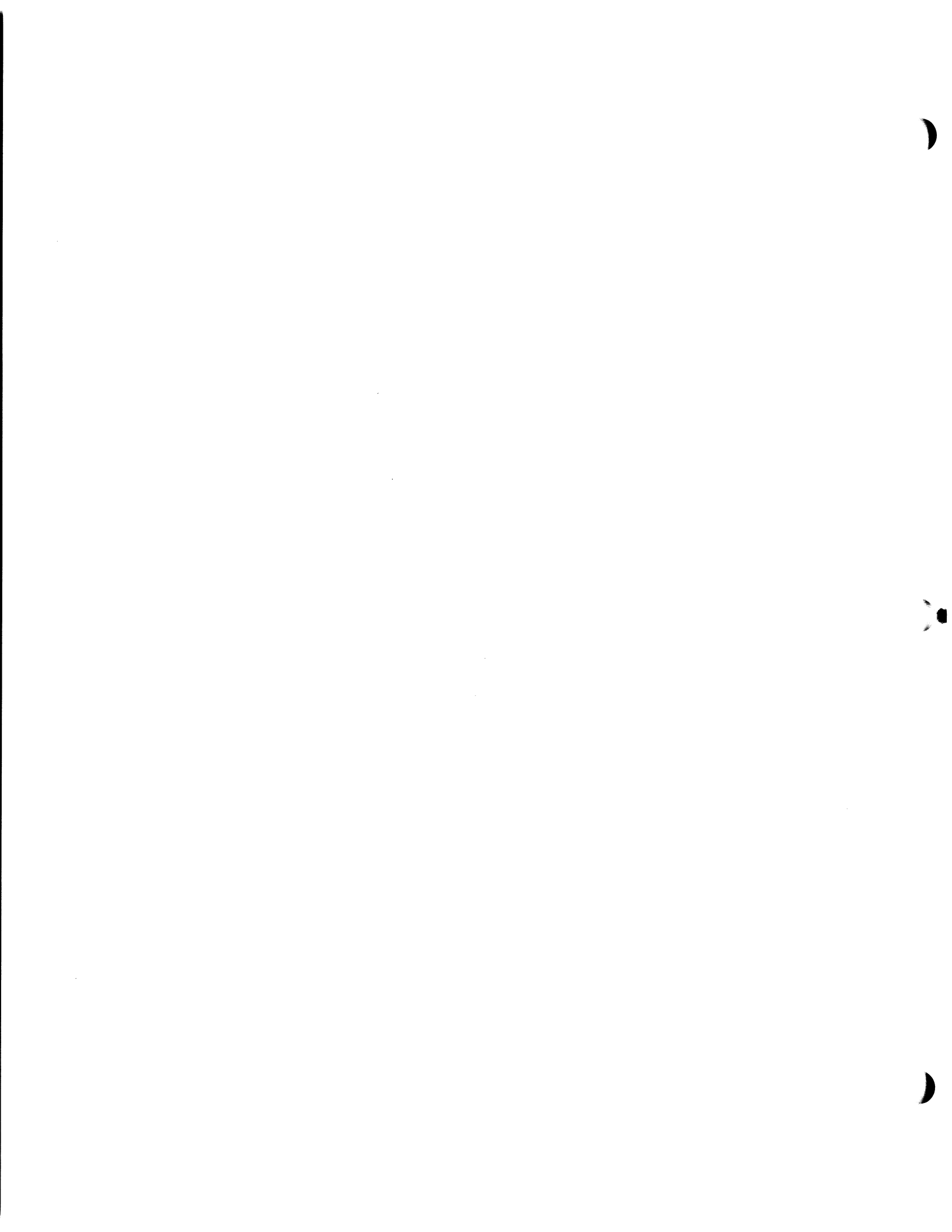
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16 Channel Asynchronous Line Multiplexer-2



16 Channel Asynchronous Line Multiplexer-2

1. General Description

The Asynchronous Line Multiplexer-2 (ALM-2) is a serial communications subsystem assembly. It provides an interface between the VME bus and the sixteen RS-232-C serial ports and the single (Centronics compatible) parallel printer port.

The ALM-2 consists of a Controller board, a Device Connector Assembly (DCA) and two Data cables to connect the Controller board to the DCA.

- The ALM-2 Controller board provides the interface between the VME bus and the DCA. The Controller board also has a Centronics compatible parallel printer port.
- The rack or wall mountable DCA has sixteen RS-232-C/RS-423 ports for connection to customer equipment, and two Data ports for connection to the Controller board.
- The two Data cables (2.4 meters in length) connect the Controller board to the DCA (a cable is not provided for the printer port).

The ALM-2 is a slave-only VME device, and uses Direct Memory Access from its on-board RAM to communicate with the serial ports. It uses full-duplex signalling, and has a maximum data transfer rate of 19200 baud (for RS-232) or 38400 baud (for RS-423) on all 16 serial channels. Asynchronous devices using the RS-232-C standard signal levels can be connected to the ALM-2 assembly. Sun software can configure each channel separately to work with serial devices at any of the following baud rates:

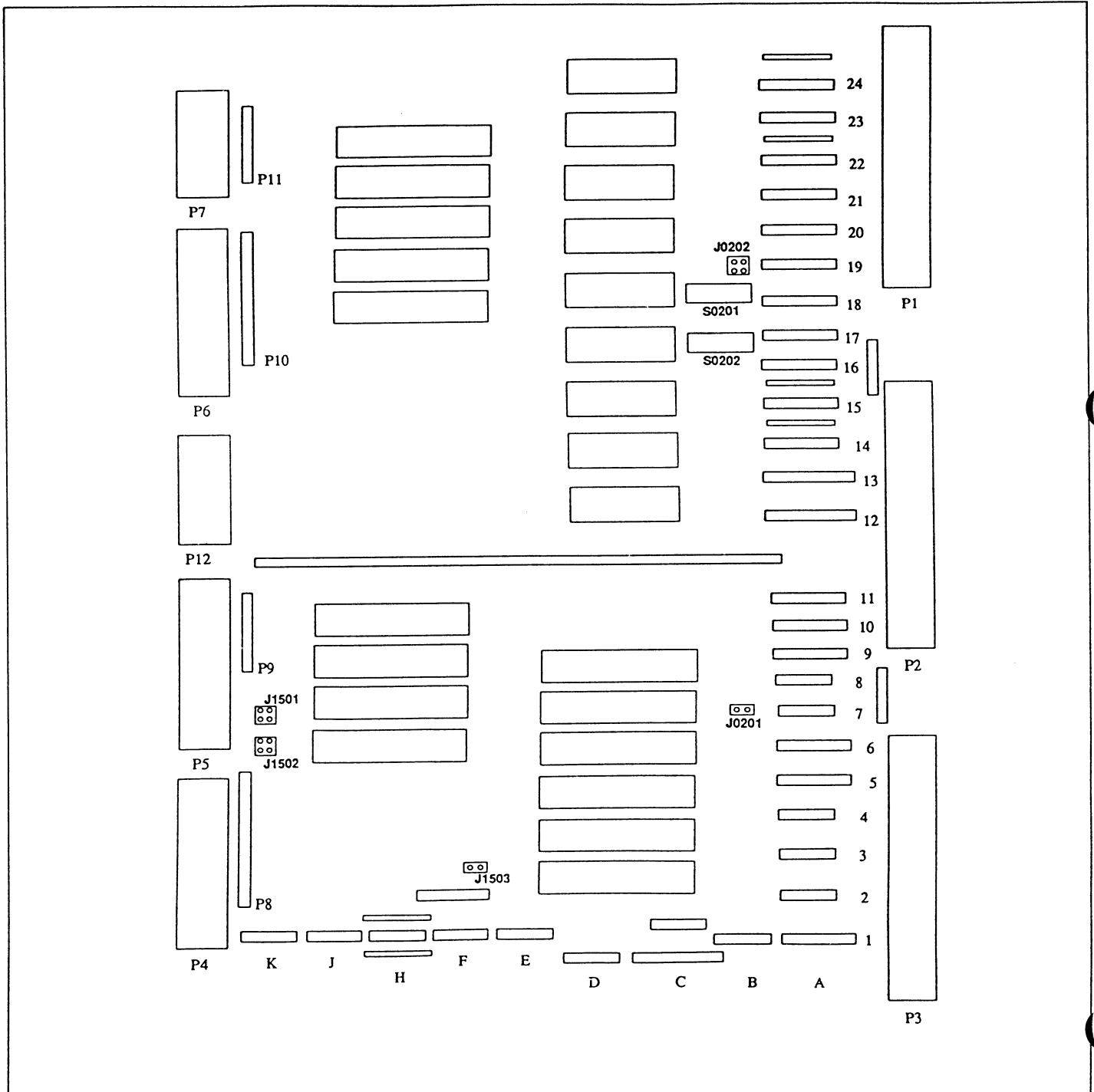
50, 75, 110, 134.5, 150, 300, 600, 1200, 1800, 2400, 4800, 9600, 19200 and 38400.

2. Jumper and Switch Locations for the ALM-2

Figure 1 shows the jumper and switch *locations* on the ALM-2 Controller Board, and Table 1 describes the jumper and switch *settings*. Cabling Diagrams are given in the Installation Manual (Sun P/N 813-1029-XX).

All jumpers and switches on the ALM-2 Controller board have Reference Designators printed on the board next to them. To make it easy to locate the desired component, the ALM-2 printed circuit board also uses a grid location system. The grid location *letters* are silk screened on the shorter sides of the board. The grid location *numbers* are silk screened on the long side of the board adjacent to the VME bus. For example: the VME bus address switches (**S0202** and **S0201**) are located at grid locations B-17 and B-18.

Figure 1 ALM-2 Jumper and Switch Locations



3. Jumper and Switch Settings for the ALM-2

Table 1 shows the correct switch and jumper settings for the ALM-2.

NOTE : All directions, such as left, right, top and bottom, refer to the component side of the board with the VME bus connectors on your right.

Table 1 ALM-2 Jumper and Switch Settings

Jumper Settings			
Function	Designator	Location (approx.)	Setting
Selects RS232 or RS449 for Port Ø.	J1501	K-7	Jumper the left-hand pins (RS232)
Selects RS232 or RS449 for Port 1.	J1502	K-7	Jumper the left-hand pins (RS232)
Test Jumper for Oscillator	J1503	F-2	Jumper <i>must</i> be installed for correct operation.
Test Jumper for Oscillator	J0201	A-7	Jumper <i>must</i> be installed for correct operation.
VME Address bus size	J0202	B-19	Jumper the <i>top</i> two pins for operation of Sun-3 and later Sun Workstations.

Switch Settings				
(Section 1 of a Switch Block is on your LEFT)				
Function	Designator	Location (approx.)	Switch Section	Setting
ALM-2 Board Address on the VME bus	S0202	B-17	8, 7, 6, 5 4, 3, 2	ON
			1	OFF
ALM-2 Board Address on the VME bus (continued)	S0201	B-18	3, 4, 5, 6 7, 8	ON
			1 *	ON if ALM-2 Board is designated Ø or 2, OFF if ALM-2 Board is designated 1 or 3.
			2 *	ON if ALM-2 Board is designated Ø or 1, OFF if ALM-2 Board is designated 2 or 3.

* **IMPORTANT NOTE:** *The Sun ALM-2 board occupies the same VME address space as the Sun Multiprotocol Communications Processor (MCP). So, for example, if you had two MCP boards already in the system and you wished to add an ALM-2, the ALM-2 would be designated as Board 2 in the VME addressing (with the two MCP boards being Boards Ø and 1 respectively).*



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