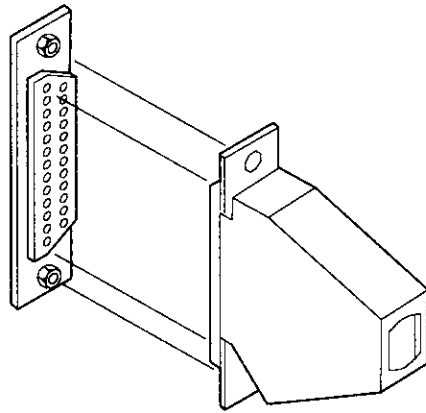

Appendix A. Tool Requirements

This appendix contains the descriptions and part numbers for special tools used to service the IBM 6151 System Unit.

Wrap Plugs for the Service Representative

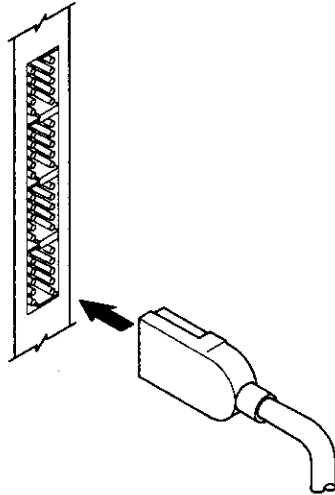
The wrap plugs used by the service representative are stored in the back of this manual. The wrap plugs used by the customer are stored in the back of the *Problem Determination Guide*. You are directed by the diagnostic program when to install or remove a wrap plug.

The Printer Adapter Wrap Plug (Part Number 8259228) is not shipped with this manual or the *Problem Determination Guide*. This is the same wrap plug used with the IBM Personal Computer.



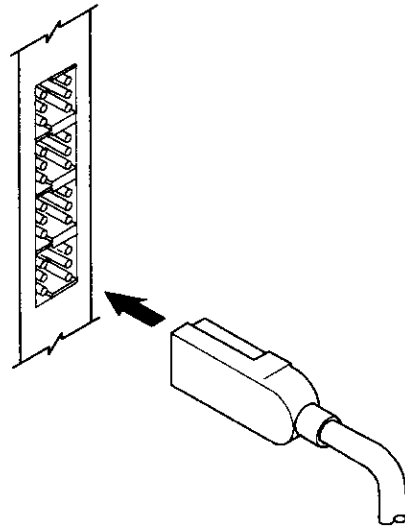
AJZB180

Printer Adapter Wrap Plug (Part Number 8529228)



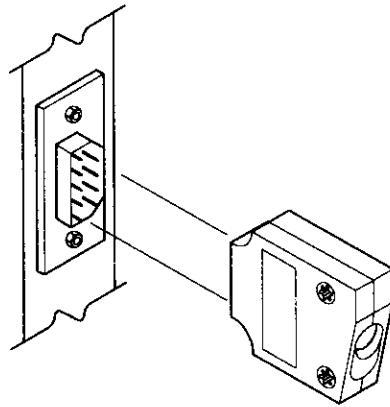
AJZB181

4-Port Asynchronous RS-232C Adapter Wrap Plug (Part Number 6298966)



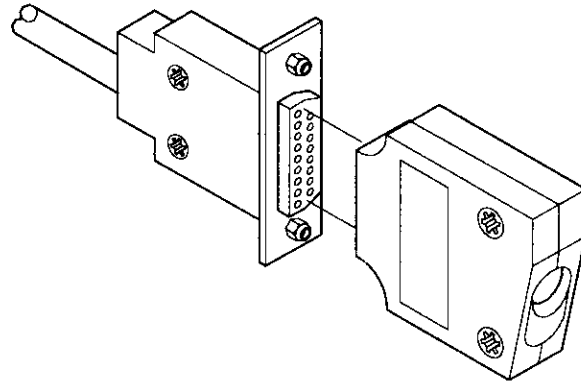
AJZB182

4-Port Asynchronous RS-422A Adapter Wrap Plug (Part Number 6298967)



AJZB183

Serial Port Wrap Plug, 9-pin (Part Number 6298965)

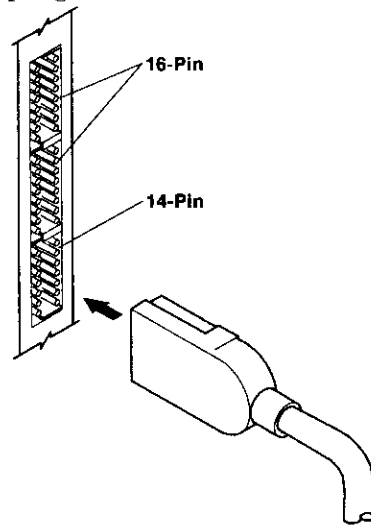


AJZB184

Serial Port Cable Wrap Plug, 25-pin (Part Number 6298964)

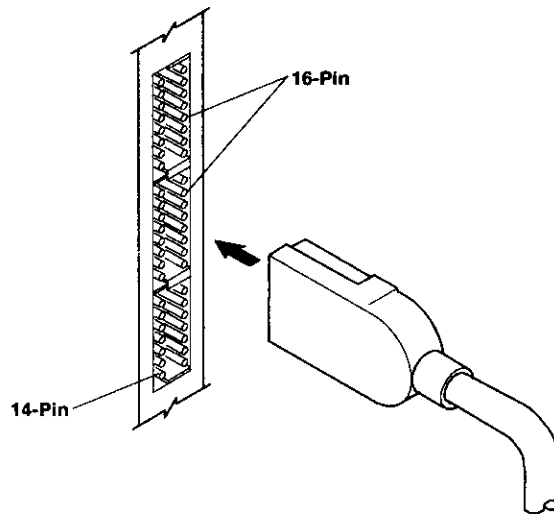
Wrap Plugs for the Customer

The wrap plugs used by the customer are stored in the back of the *Problem Determination Guide*. You are directed by the diagnostic program when to install or remove a wrap plug.



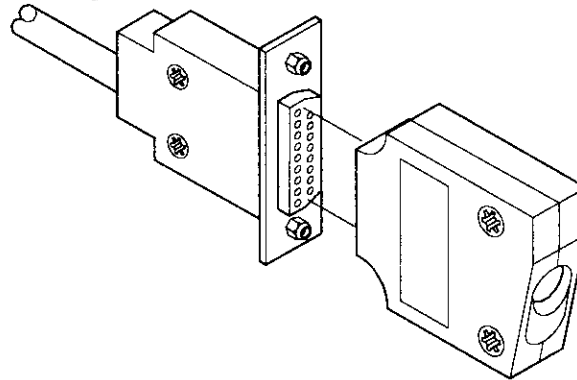
AJZB186

Multiprotocol 14-Pin Wrap Plug (Part Number 6487608)



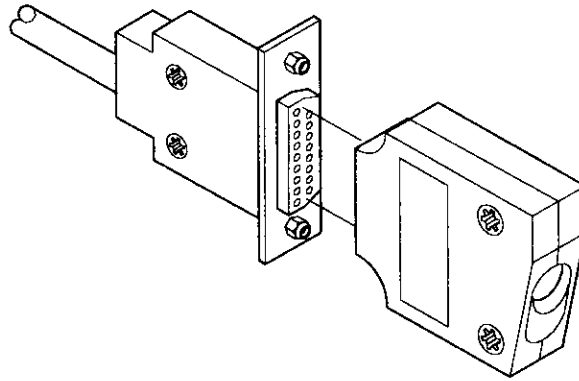
AJZB187

Multiprotocol 16-Pin Wrap Plug (Part Number 6487609)



AJZB185

Multiprotocol X.21 15-Pin Cable Wrap Plug (Part Number 6487605)

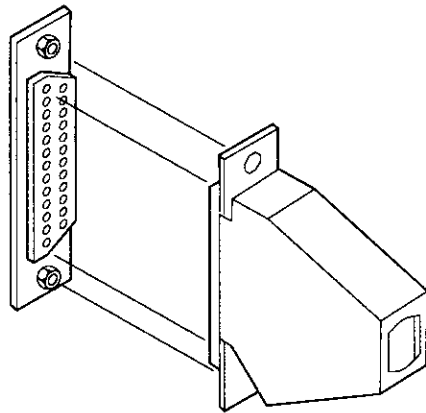


AJZB184

Multiprotocol RS-232 Cable Wrap Plug (Part Number 6487606)

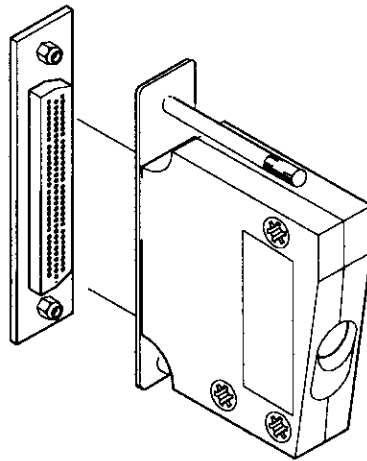
AJZB184

Multiprotocol RS-366 Cable Wrap Plug (Part Number 6487607)



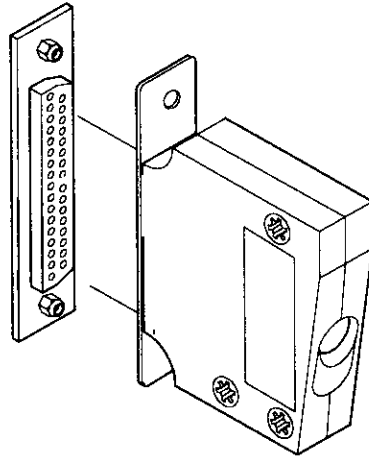
AJZB188

Baseband Adapter Wrap Plug (Part Number 6299189)



AJZB243

RS-232/MIL-188 Diagnostic Wrap Plug (Part Number 08F3247)

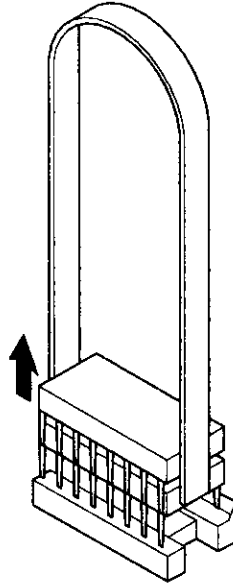


AJZB242

RS-422 Diagnostic Wrap Plug (Part Number 08F3241)

Module Puller

To remove a module, grasp the module with the module puller and gently lift one end and then the other, to avoid bending the pins.



AJZB189

Module Puller (Part Number 9900764)

Multimeter

A multimeter is used to measure resistance during the safety check. Use your normal multimeter for this check.

Appendix B. SRA to FRU Cross-Reference List

This appendix contains a list of the Service Repair Action (SRA) numbers used on the IBM 6151 System Unit. Use this list to determine the FRU part number or service action each SRA number represents.

SRA Number	Part Number	Description
10x	6299231	System board
12x	6848223	IBM RT PC 1MB Memory Expansion Option
15x	6299228	2MB Memory Expansion Option
16x	61X6157	4MB Memory Expansion Option
18x	08F3587	Enhanced Advanced Processor Board
19x	6299220	RT PC Floating-Point Accelerator
1Cx	61X6814	Advanced Floating-Point Accelerator (Level 1)
1Dx	61X7005	4MB Fast Memory Expansion Option
1Ex	61X7009	8MB Fast Memory Expansion Option
20x	6299226	RT PC AT Coprocessor Option
21x	8286115	AT 512 KB Memory Expansion Option
22x		I/O memory error. Check for nonsupported memory.
23x	8286147	AT Serial/Parallel Adapter
24x	8286127	AT Math Co-Processor module
26x		I/O memory error. Check for nonsupported memory.
28x	08F3193	Multiprotocol Adapter
2Bx	6299231	System board
2Cx	6299231	System board
2Ex	08F3727	RT PC Expansion Unit Adapter
2Fx	8529251	Receiver Card
30x	69X8142	IBM Token-Ring Network RT PC Adapter
31x	8286171	IBM PC Network Adapter
34x	8665792	3278/79 Emulation Adapter

SRA Number	Part Number	Description
35x 36x	61X6339	4-Port Asynchronous RS-232C Adapter I/O memory error. Check for nonsupported memory.
37x	8286139	AT 512 KB Memory Expansion Option module
38x	6487562	RT PC 5080 Peripheral Adapter
39x	79X3782	4-Port Asynchronous RS-422A Adapter
3Ax	6247891	IBM S/370 Host Interface Adapter
3Bx	08F3172	8-Port Asynchronous RS-422A Adapter
3Cx	08F3166	8-Port Asynchronous RS-232C Adapter
3Dx	08F3170	8-Port Asynchronous MIL-STD 188 Adapter
3Ex		RT PC 6192 Power Problem
3Fx	08F3544	RT PC 6192 Expansion Board
40x	61X6809	Baseband Adapter
41x	8654215	Enhanced Graphics Adapter
42x	6323468	Graphics Memory Expansion Card
43x	00F2357	Advanced Monochrome Graphics Display Adapter
44x	8654219	Graphics Memory Module (1 each)
45x	00F2350	Advanced Color Graphics Display Adapter
47x	6299351	Extended Monochrome Graphics Display Adapter
49x	8529148	IBM Monochrome Display and Printer Adapter
4Ax	6247662	IBM Megapel display processor board
4Bx	6247666	IBM Megapel display controller board
4Bx	6247529	IBM Megapel display controller board (labeled 16M)
4Cx	08F3589	Advanced Floating-Point Accelerator (Level 2)
4Dx	22F9207	RT PC Expansion Unit Cable
4Fx	00F2226	IBM 6156 Bezel/Cable Assembly
51x	08F3358	Fixed-Disk Drive Type E310
52x	79X3431	AT Fixed-Disk and Diskette Drive Adapter
53x	6299201	Battery
54x	8529171	IBM 5151 Display, low voltage
54x	8529209	IBM 5151 Display, high voltage
58x	6321035	IBM 5154 Display, Model 001, low voltage
58x	6321049	IBM 5154 Display, Model 002, high voltage, Northern Hemisphere
58x	6321036	IBM 5154 Display, Model 003, high voltage, Southern Hemisphere
59x	6848113	IBM 6154 Display, low voltage group 1

SRA Number	Part Number	Description
59x	6848114	IBM 6154 Display, low voltage group 2
59x	6848115	IBM 6154 Display, low voltage group 3
59x	6848116	IBM 6154 Display, high voltage group 1
59x	6848117	IBM 6154 Display, high voltage group 2
59x	6848118	IBM 6154 Display, high voltage group 3
59x	6848119	IBM 6154 Display, high voltage group 4
5Ax	08F3174	8-Port Cable Assembly - RS-422A
5Bx	61X7001	RT PC SCSI Adapter
5Cx	0855253	RT PC SCSI Adapter Fuse (1A 250V)
5Dx	08F3826	IBM 6156 Model 003
5Fx	08F3168	8-Port Cable Assembly - RS-232C/MIL-STD 188
60x	6299240	IBM 6153 Display, low voltage
60x	6299241	IBM 6153 Display, high voltage
61x		IBM 5081 Display, low voltage
61x		IBM 5081 Display, high voltage
62x	22F9462	IBM 6155 Display, low voltage
62x	22F9463	IBM 6155 Display, high voltage
63x	6453886	Operator panel board
64x	68X3752	High Capacity Diskette Drive
65x	08F3825	IBM 6156 Model 001
70x	61X6942	Fixed-Disk Drive Type R70
71x	08F3358	Fixed-Disk Drive Type H310
74x	6299235	Fixed-Disk Drive Type R40
75x	08F3612	Portable Disk Drive Adapter
76x	00F2273	Fixed-Disk Drive Type E114
77x	79X3989	Fixed-Disk Drive Type E70
78x	1392366	Keyboard, United States English
78x	1392374	Keyboard, United Kingdom English
78x	1392376	Keyboard, French
78x	1392378	Keyboard, German
78x	1392382	Keyboard, Spanish
78x	1392380	Keyboard, Italian
78x	1392388	Keyboard, Portuguese
78x	1392384	Keyboard, Danish
78x	1392383	Keyboard, Norwegian
78x	1392385	Keyboard, Finnish/Swedish
78x	1392389	Keyboard, Belgian-French/Dutch
78x	1392387	Keyboard, Swiss German/French

SRA Number	Part Number	Description
78x	1392373	Keyboard, Canadian-French
79x	00F2384	Mouse
7Ax	6248436	IBM 5085 Dials Feature
7Bx	6246799	IBM 5085 LPPK Feature
7Cx	6248522	Stylus for Models 11, 11A, 12, 12A
7Dx	6248523	Cursor for Models 11, 11A, 12, 12A
7Ex	6248514	IBM 5083 Model 11 Tablet
7Ex	6248516	IBM 5083 Model 11A Tablet
7Ex	6248524	Cable, IBM 5083 to RT PC
7Fx	08F3556	IBM 6192 DC to DC Converter Assembly
80x	6248513	IBM 5083 Model 12 Tablet
80x	6248515	IBM 5083 Model 12A Tablet
80x	6248524	Cable, IBM 5083 to RT PC
81x	08F3391	IBM 6157 tape drive, low voltage
81x	6298375	IBM 6157 tape drive, high voltage
82x	00F2160	ESDI Magnetic Media Adapter
84x	79X3766	Processor board
85x	6299222	Streaming Tape Drive Adapter
86x	08F3766	Extended ESDI Magnetic Media Adapter
87x	6299485	Keylock
88x	6298452	Power supply, U.S.
88x	6298454	Power supply, WT low voltage
88x	6298453	Power supply, WT high voltage
88x	6952291	Power cable, Paraguay, Uruguay
88x	6952300	Power cable, U.S., Venezuela, Canada, Japan, Saudi Arabia
88x	6952301	Power cable, Cook County, Illinois
88x	6952311	Power cable, Australia, New Zealand, Argentina
88x	6952320	Power cable, Northern Europe, Greece, Turkey
88x	6952329	Power cable, Denmark
88x	6942347	Power cable, South Africa
88x	6952356	Power cable, U.K., Ireland, Hong Kong, Singapore
88x	6952365	Power cable, Switzerland
88x	6952374	Power cable, Italy, Chile
88x	6942383	Power cable, Israel
88x	1838574	Power cable, Thailand
8Ax	6248427	Stylus for Model 1
8Bx	6248428	Cursor for Model 1

SRA Number	Part Number	Description
8Cx	6248426	IBM 5083 Model 1 Tablet
8Dx		Network problem
8Ex	08F3639	Advanced Processor board
8Fx		SCSI bus problem
91x		Attached device
95x	8286173	IBM PC Network Translator
95x	8286174	Connection hardware
95x	8286176	Power transformer, U.S.
95x	8286177	Power transformer, WT
981		POST Error 5c or 05
984		POST Error 23
986		Undetermined problem
989		Missing Option
98A		Format fixed disk
98B		Compatibility problem
991		Obvious problem
A1x	61X6800	Cable, fixed-disk and diskette drive
A5x		External power cable (from error log entry)
A6x	8286182	Cable, PC Network 7.62m (25 foot)
A6x	8286172	Adapter, PC Network Cable
A6x	8286183	Cable, PC Network 15.24m (50 foot)
A6x	8286184	Cable, PC Network 30.48m (100 foot)
A6x	8286185	Cable, PC Network 60.96m (200 foot)
A7x	6298240	RT PC Modem Cable - RS-232C (10 Pin)
A8x	8286170	AT Modem Cable - RS232C/9 Pin
AAx	79X3777	Cable, fixed-disk and diskette drive positions A - E
B1x	6339088	IBM Token-Ring Network RT PC Adapter Cable
B2x	8529214	IBM PC Parallel Printer Cable
B3x	6298963	RT PC Serial Printer Cable (9 Pin)
B4x	6298526	RT PC ASCII Terminal Cable - RS-232C (10 Pin)
B4x	79X3914	RT PC ASCII Terminal Cable RS-232C (10/25M-Pin)
B5x	6298246	RT PC ASCII Terminal Cable - RS-422A (6 pin), 20 m
B5x	6487640	RT PC ASCII Terminal Cable - RS-422A (6 pin), 3 m
B6x	6298525	RT PC Serial Printer Cable (10 Pin)
B6x	8286194	AT Serial Adapter Connector (10 inch)

SRA Number	Part Number	Description
B6x	6848247	RT PC ASCII Terminal Cable (9-Pin)
B7x	6294813	RT PC Modem Cable - RS-232C (16 Pin)
B8x	6294815	RT PC Automatic Calling Cable - RS-366
B9x	6294817	RT PC Modem Cable - X.21
CCx		Software problem
CDx		External power problem (from error log entry)
CEx		DMA channel error (from error log entry)
CFx		I/O channel error (from error log entry)
D1x		Data link problem
D2x		Modem problem
D3x		Modem interface problem (from error log entry)
D6x		Electrostatic discharge problem
D7x		Media problem (from error log entry)
D8x		Autocalling unit interface problem (from error log)
F4x		Unidentified processor board
F6x		Unidentified memory option
F7x		Unidentified drive cable
F8x		Unidentified fixed-disk and diskette drive adapter
F9x		See supplemental information
FAx		See supplemental information
FBx		Unidentified fixed-disk drive
FCx		Unidentified diskette drive

Appendix C. Error Log Information

This appendix provides a brief overview of the **Error Log** and the associated commands used by the AIX Operating System. Additional information and detailed descriptions are provided in the *AIX Operating System Commands Reference* manual and the software problem determination part of the *Problem Determination Guide*.

The Error Log Information is useful in determining the failing area of the system unit or the software. Where possible, both intermittent and permanent failures are recorded in the Error Log. Intermittent failures of the hardware and software may not be detected by the diagnostic programs.

The **errdemon** command is used to start logging error data in the Error Log.

The **errstop** command is used to stop the logging of error data in the Error Log.

The **errpt** command is used by the AIX Operating System to read the data in the Error Log and display or print a report from that data.

The following pages briefly describe the commands and the reports they produce. See Error Log Command Examples in this appendix for examples of commands.

Error Log Reports

There are two basic types of Error Log Reports. They are the *Summary Report* and the *Detail Report*.

Summary Report

The Summary Report is the default report of the **errpt** command. The Summary Report provides one-line descriptions of each error record or information record stored in the Error Log. The Summary Report can be limited to specific data such as; permanent errors or hardware errors. Examples of the commands to produce these reports are given under Error Log Command Examples in this appendix.

The following information is provided in a Summary Report:

Date/Time	Provides the date and time the entry was logged.
Class	Provides the class of the error such as; hardware or software.
Subclass	Provides additional information about the error class such as; the device or component that caused the error.
Type	Provides information about the severity of the error such as; permanent, or temporary.
Device	For hardware errors the device is identified, if possible.
Cause	If the cause for the error can be determined, the cause is listed here.

Detail Report

The Detail Report provides detail information on each error recorded in the Error Log. In addition to the information provided on the Summary Report, the Detail Report provides the following hardware service related information.

Service Request Number Provides the Service Request Number (SRN) for the error. This number has from one to four Service Repair Action (SRA) numbers in it. Each SRA corresponds to a FRU. The SRA numbers are listed in the most to least likely failure order.

Probable Cause Provides a description of the most likely cause of the failure.

User Action Lists actions that the user can do to help isolate the failure.

The Error Report Command

The AIX Operating System recognizes the **errpt** command to display or print an error report. The **errpt** command is entered when the **#** or **\$** prompt is displayed by the AIX Operating System.

The **errpt** command has several extensions to define the type report you want, type errors included, time period, and other limits on the data included.

The extensions described here are for service related information. If you need more information, see *Error Log Command Examples* in this appendix or see the *AIX Operating System Commands Reference* manual.

Use the following format and explanations as an example.

errpt ff ff ccc,ttt ffMMddhhmmyy ffMMddhhmmyy | dddd

- ff** The flags are used to select the type report and the limits desired.
- a Produces a detail report.
 - d Limits the report to a certain class (**ccc**) and type (**ttt**) of error. Separate the class and type with a comma.
 - e Include entries with earlier date and time.
 - n Include only entries from a specific node.
 - s Include entries with later date and time.
- ccc** The class of errors included in the report.
- h00** All hardware errors. These errors are normally caused by the hardware or media.
 - s00** All software errors. These errors are normally caused by the software programs.
 - i00** All IPL/shutdown errors. These are not errors but provide data on the date and time a shutdown or IPL occurred.

-
- ttt** The type errors included in the report.
- t01** All permanent errors. Permanent errors are errors that occur each time the operation is attempted.
 - t02** All temporary errors. Temporary errors are errors that do not prevent an operation from completing.
 - t03** Information only. Information entries in the error log provide data about an event.
 - t04** Counters. Counter errors are transient errors that exceed the threshold count for that error.
- MMddhhmmyy** Sets the date and time limits to be included in the error report. This allows you to print only errors that occurred before or after a certain date and time. See Error Log Command Examples for the use of this parameter.
- MM** Month
 - dd** Day
 - hh** Hour
 - mm** Minute
 - yy** Year
- dddd** Specifies the device to print or display the report on.
- pg** Display the selected report one page at a time. Press the **Enter** key to display the next page. An EOF is displayed at the end of the report. Press the **Enter** key to return to the AIX Operating System.
 - print** Print the selected report. The report prints on the printer assigned as the default printer for the AIX Operating System.

Error Log Command Examples

The following Error Log Command Examples illustrate some of the common reports. For details see the *AIX Operating System Commands Reference* manual. All commands can be issued when the # prompt is displayed.

The following example turns the Error Log On.

```
/usr/lib/errdemon
```

The following example turns the Error Log Off.

```
errstop
```

The following example displays a summary report of the complete error log, one page at a time.

```
errpt | pg
```

The following example prints a summary report of the complete error log.

```
errpt | print
```

The following example prints a detailed report of the permanent hardware errors that occurred between 10:05 AM June 1, 1985 and 2:25 PM June 3, 1985.

```
errpt -a -d h00,t01 -s0601100585 -e0603142585 | print
```

The following example displays a summary report of all the software errors in the error log, one page at a time.

```
errpt -d s00 | pg
```

The following examples delete the error log files.

```
rm -f /usr/adm/ras/errfile.0
```

```
rm -f /usr/adm/ras/errfile.1
```

Glossary

A. See *ampere*.

ac. See *alternating current*.

adapter. A device for connecting two parts that differ.

alternating current (ac). A current that periodically reverses its direction of flow.

American National Standard Code for Information Exchange (ASCII). The standard code, using a coded character set consisting of 7-bit coded characters (8 bits including parity check), used for information exchange between data processing systems, data communication systems, and associated equipment. The ASCII set consists of control characters and graphic characters.

ampere (A). A unit of measure for electric current.

ASCII. See *American National Standard Code for Information Exchange*.

asynchronous transmission. In data communications, a method of transmission in which the bits included in a character, or block of characters, occur during a specific time interval. However, the start of each character or block of characters

can occur at any time during this interval. Contrast with *synchronous transmission*.

BIOS. Basic Input/Output System

bits per second (bps). A unit of measurement representing the number of discrete binary digits transmitted by a device in one second.

bps. See *bits per second*.

British thermal units (BTU). A standard unit of measurement of heat.

BTU. See *British thermal units*.

byte. (1) A sequence of eight adjacent binary digits that are operated on as a unit. (2) A binary character operated on as a unit. (3) The representation of a character.

C. See *celsius*.

Celsius (C). A temperature scale. Contrast with Fahrenheit (F).

characters per second (cps). A standard unit of measurement for the speed at which a printer prints.

computer. A functional unit that can do substantial computation, including many arithmetic operations or logic operations,

without intervention by a human operator during a run.

configuration. (1) The arrangement of a computer system or network as defined by the nature, number, and the chief characteristics of its functional units. More specifically, the term configuration may refer to a hardware configuration or a software configuration. (2) The devices and programs that make up a system, subsystem, or network.

cps. See *characters per second*.

cursor. (1) A movable symbol (such as an underline) on a display, used to indicate to the operator where the next typed character will be placed or where the next action will be directed. (2) A marker that indicates the current data access location within a file.

data. (1) A representation of facts, concepts, or instructions in a formalized manner suitable for communication, interpretation, or processing by human or automatic means. (2) Any representations, such as characters or analog quantities, to which meaning is, or might be assigned.

direct memory access (DMA). A method of transferring data between main storage and I/O devices that does not require processor intervention.

disk drive. The same as fixed disk drive.

diskette. A thin, flexible magnetic plate that is permanently sealed in a protective

cover. It can be used to store information copies from the disk or another diskette.

diskette drive. A mechanism used to read and write information on diskettes.

display. (1) A device for visual presentation of information. (2) To present data visually.

DMA. See *direct memory access*.

duplex. Pertains to communications data that can be sent and received at the same time. Same as *full duplex*.

ECC. See *error-checking and correction*.

error-checking and correction (ECC). The detection, in the processing unit, and correction of all single-bit errors, plus the detection of double-bit and some multiple-bit errors.

F. See *fahrenheit*.

Fahrenheit (F). A temperature scale. Contrast with Celsius (C).

FCC. Federal Communications Commission.

field-replaceable unit (FRU). Parts or devices that can be replaced during the normal servicing of the equipment.

fixed-disk drive. A mechanism used to read and write information on fixed disk.

format. (1) A defined arrangement of such things as characters, fields, and lines, usually used for displays, printouts,

or files. (2) The pattern which determines how data is recorded.

FRU. See *field-replaceable unit*.

hardware. The equipment, as opposed to the programming, of a computer system.

hertz (Hz). A unit of frequency equal to one cycle per second.

Hz. See *hertz*.

initial program load (IPL). The process of loading the system programs to prepare the system to run jobs. See *initialize*.

initialize. To set counters, switches, addresses, or contents of storage to 0 or other starting values at the beginning of, or at prescribed points in, the operation of a computer routine.

input/output (I/O) device. A device in a data processing system by which data may be entered into the system, received from the system, or both.

interrupt. (1) To temporarily stop a process. (2) In data communications, to take an action at a receiving station that causes the sending station to end a transmission. (3) A signal sent by an I/O device to the processor when an error has occurred or when assistance is needed to complete I/O. An interrupt usually suspends execution of the currently executing program.

IPL. See *initial program load*.

I/O. See *input/output device*.

k. Prefix kilo; 1000.

K. When referring to storage capacity, 1024.

m. Meter.

M. When referring to computer storage capacity, 1, 048, 576.

memory. Storage on electronic chips. Examples of memory are random access memory, read only memory, or registers. See *storage*.

modem (modulator-demodulator). A device that converts data from a computer to a signal that can be transmitted on a communications line, and converts the signal received to data for the computer.

operating system. Software that controls the execution of programs; an operating system may provide services such as resource allocation, scheduling, input/output control, and data management.

PEL. See *picture element*.

picture element (PEL). The smallest displayable unit on a display.

port. (1) To make the programming changes necessary to allow a program that runs on one type of computer to run on another type of computer. (2) An access point for data input to or data output from a computer system.

POST. See *power-on self-test*.

power-on self-test (POST). Tests that run first after initial power on to test the operation of the system.

power supply. A device that produces the power needed to operate electronic equipment.

processor. (1) In a computer, a functional unit that interprets and executes instructions. (2) A functional unit, a part of another unit such as a terminal or a processing unit, that interprets and executes instructions.

program. A file containing a set of instructions conforming to a particular programming language syntax.

radio frequency (RF). An ac frequency that is higher than the highest audio frequency. So called because of the application to radio communication.

RAM. See *random access memory* and *read/write memory*.

random access memory (RAM).
Read/write memory.

raster. A predetermined pattern of lines that provides uniform coverage of a display space.

read. To acquire or interpret data from a storage device, from a data medium, or from another source.

read-only memory (ROM). A storage device whose contents cannot be modified.

The memory is retained when power is removed.

read/write memory. A storage device whose contents can be modified. Also called RAM.

resident. Permanently located in memory, such as read-only memory.

ROM. See *read-only memory*.

RS232C. A standard by the EIA for communication between computers and external equipment.

setup. (1) In a computer that consists of an assembly of individual computing units, the arrangement of interconnections between the units, and the adjustments needed for the computer to operate. (2) The preparation of a computing system to perform a job or job step. Setup is usually performed by an operator and often involves performing routine functions, such as mounting tape reels. (3) The preparation of the system for normal operation.

software. (1) Computer programs, procedures, and rules concerned with the operation of a data processing system. (2) Contrast with hardware.

source number. The two leftmost digits of a service request number. Identifies the entity that sensed the error.

SRA number. Service repair action number.

SRN. Service request number.

storage. (1) The location of saved information. (2) In contrast to memory, the saving of information on physical devices such as disk or tape. See *memory*. (3) The retention of data in a storage device. (4) The placement of data into a storage device.

synchronous transmission. (1) Data transmission which the time of occurrence of each signal representing a bit is related to a fixed time frame. (2) Data transmission which the sending and receiving devices are operating continuously at substantially the same frequency and are maintained, through correction, in a desired phase relationship.

TD. Transmit data.

transmission. (1) The sending of data from one place for reception elsewhere. (2) In ASCII and data communication, a

series of characters including headings and text. (3) The dispatching of a signal, message, or other form of intelligence by wire, radio, telephone, or other means. (4) One or more blocks or messages. For BSC and start-stop devices, a transmission is terminated by an EOT character. (5) Synonymous with data transmission.

V. See *volt*.

volt. The basic practical unit of electric pressure. The potential that causes electrons to flow through a circuit.

W. See *watt*.

watt. The practical unit of electric power.

write. To make a permanent or transient recording of data in a storage device or on a data medium.



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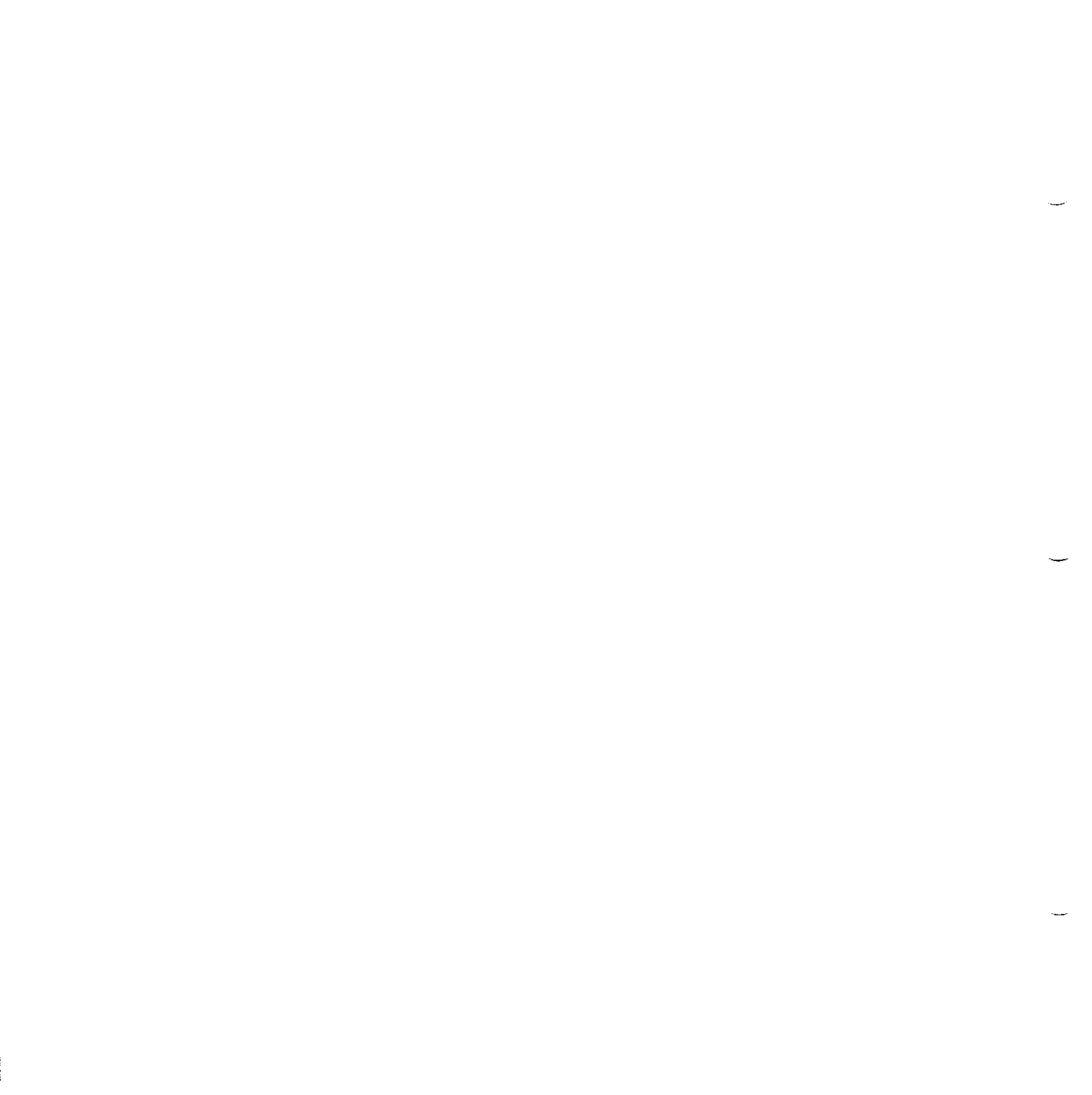
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