

**MicroPower/Pascal-RSX/VMS
Messages Manual**

Order No. AA-AK14C-TK

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MicroPower/Pascal-RSX/VMS Messages Manual

Order No. AA-AK14C-TK

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This manual describes diagnostic messages that you may encounter during MicroPower/Pascal development. Included in this manual are the MicroPower/Pascal utility program messages, language messages, and exception codes generated by the MicroPower/Pascal kernel, run-time system, and compiler. Explanations and recovery procedures accompany the messages and codes where necessary or appropriate for this release.

This manual supersedes the *MicroPower/Pascal-RSX/VMS Messages Manual*, AA-AK14B-TK.

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Preface

Structure of This Document

This manual describes diagnostic messages that you may encounter during MicroPower/Pascal development. It is organized into four chapters, as follows:

- Chapter 1 describes the order and format of the messages and hard error conditions and explains how to increase storage space and memory resources.
- Chapter 2 describes messages issued by the utility programs that are used for MicroPower/Pascal development: COPYB, MERGE, MIB, PASDBG, and RELOC.
- Chapter 3 describes the command line, compile-time, and compiler malfunction error messages for the MicroPower/Pascal language.
- Chapter 4 describes the exception codes generated by the MicroPower/Pascal run-time system.

Chapter 1

Introduction

You may encounter various types of messages during MicroPower/Pascal development. The messages you receive may be either software related or hardware related. Other messages may require you to increase your file storage or your memory resources.

This chapter explains the order and format of the messages described in Chapters 2, 3, and 4; suggests solutions to hard error conditions; and explains how to increase file storage and memory resources.

1.1 Message Order

The utility program messages (Chapter 2) and the command line and compiler malfunction messages (Sections 3.1 and 3.3) are listed in alphabetical order. The command generating the specific COPYB, MERGE, MIB, or RELOC message will be printed below the error message on your display terminal or hard-copy terminal listing. Sometimes names or values from the operation you are performing appear in the message, as described below.

xx	A specific command option that is copied into messages from commands you have typed
AAAAAA	A label or name that is copied into a message from a program you are using
a	A single character that you typed, usually the single-letter abbreviation for a file or command option
dev spec	A device specification that is copied from one of your commands
filespec	A file specification that is copied from one of your commands
directory-spec	A directory specification of up to 31 (decimal) characters
MMMMMM NNNNNN	Specific values that the system reports as part of a message, usually a count total, address, or offset (current at the time of the message)
n	A single digit that you type, usually the unit number in a device specification

1.2 Message Format

This manual shows messages in the same form as they appear on your display terminal or on hard-copy terminal listings. The COPYB, MERGE, MIB, and RELOC utility program messages appear in the following form:

PROG-S-MESSAGE TEXT

PROG is the name of the program that issued the message, and S is a code letter indicating the severity of the error. Table 1-1 summarizes the five possible severity codes for S.

Table 1-1: Error Severity Levels

Level	Severity Code	Effect
Information	I	Execution continues. The program detected a condition that can affect execution at a later time and that may require future action.
Warning	W	Execution continues. The program detected a condition that may cause errors in execution. Corrective action may be necessary.
Error	E	Execution terminates. The program detected an error that will cause other errors during execution. Corrective action is necessary.
Fatal/Severe	F	Execution terminates. The program detected a serious error. You must enter another command to continue processing.
Unconditional Abort	U	Execution terminates. An extremely serious error occurred that prevents further processing.

MicroPower/Pascal compile-time error messages appear in the following form:

Number Text

The compiler command line and compiler malfunction messages appear in the following form:

?PASCAL-S-MESSAGE TEXT

PASDBG messages appear in the following form:

?PASDBG-S-MESSAGE, TEXT

In addition to the severity codes listed in Table 1-1, PASDBG messages may contain the code C, which represents consistency check.

1.3 Hard Error Conditions

Certain error conditions are detected by the hardware rather than by the software. For those errors, the development system prints a short message on the console terminal. The corrective action that you take depends on the type of hard error condition and the device in use.

A hard error condition is often simple to correct. The message will indicate an off-line or write-locked device, for example, and the system may wait until you correct the problem. The following common hard error conditions may be in that category:

- The device is not on line.
- The device is write protected (output only).
- The input file is corrupted.
- Parity error.
- Unit select error.
- The volume is full (output only), or your disk quota is exceeded (VMS systems).
- The volume is not correctly formatted.
- The volume is not mounted in the device.

When you have determined and corrected the condition, enter the command line again and try the operation again.

Other hard errors indicate more serious problems, such as bad blocks on the system volume or a malfunction of the hardware. For such problems, you may have to reinitiate the operation or use another device. In extreme cases, you may need the advice of a hardware specialist.

1.4 Increasing File Storage

During an output operation, an error message may indicate that your output volume has insufficient space or, if the volume is directory structured, that space is not available for a new directory entry. In that case, try one or more of the following solutions:

- Ask the system manager to increase your disk quota (VMS systems).
- Delete or transfer to a backup volume any unnecessary files on the output volume.
- Make sure that you have set up your development system according to the instructions in the appropriate installation guide and the release notes for your MicroPower/Pascal system.
- Use another volume with more space.

1.5 Using Physical Target Memory Effectively

In general, you can reduce the maximum amount of target memory that an application requires at a given time in one of the following ways:

- Remove any unnecessary testing code.
- Optimize the kernel. (See the *MicroPower/Pascal Run-Time Services Manual* for information about optimizing the kernel.)
- Reduce the size of the kernel structure space. (See the *MicroPower/Pascal Run-Time Services Manual* for information about reducing the size of the kernel structure space.)
- If possible, reduce the amount of memory used by your program's heap and stack by reducing the `DATA_SPACE` and `STACK_SIZE` parameters.
- Investigate the possibility of using a shared library. (See the *MicroPower/Pascal Run-Time Services Manual* and the *MicroPower/Pascal-RSX/VMS System User's Guide* for information about shared libraries.)
- If possible, do not build the program with the `/D` option and/or do not build the debugger service module (DSM) into the kernel; or, reduce the size of the program. If you build the program without the `/D` option, the program's symbols will not be written to the debugger symbol table (DBG) file and hence will not be available to PASDBG. If you do not build the DSM into the kernel, you cannot debug your application with PASDBG. (See the *MicroPower/Pascal Debugger User's Guide* for further information on debugging a MicroPower/Pascal application.)

If, after trying those suggestions, memory for your application is still insufficient, you must increase the amount of memory in your target system hardware.

Chapter 2

Utility Program Messages

This chapter describes the COPYB, MERGE, MIB, PASDBG, and RELOC MicroPower/Pascal utility program messages you may encounter in MicroPower/Pascal development. When messages apply to only one operating system environment, the name of the operating system appears in parentheses beside the message.

2.1 COPYB Messages

CPB-F-Bootstrap in MIM file invalid for MicroPower/Pascal

Explanation: The memory image (MIM) file contains an invalid bootstrap. A previous version of a MicroPower/Pascal bootstrap file may have been used.

User Action: Rebuild the MIM file and add a valid bootstrap.

CPB-F-Comma in command line and input

Explanation: Commas are not permitted in the command line, and an input file must be specified.

User Action: Specify only one input file in the command line, and do not use commas.

CPB-F-Command I/O error

Explanation: An error occurred while COPYB was reading the command line.

User Action: Check that the device is on line and try the operation again. If the error persists, check for hardware errors. Check the procedures in Section 1.3 for recovery from hard error conditions.

CPB-F-Command syntax error

Explanation: The indicated invalid command line contains a syntax error.

User Action: Check for a typing error and enter a legal command line.

CPB-F-Corrupted or non-RT disk; invalid RT directory

Explanation: The specified device does not contain a volume with a valid RT-11 directory.

User Action: Check that the correct volume is mounted and that it is not corrupted. Ensure that it has been initialized as an RT-11 volume.

CPB-F-Device already allocated to another image (VMS)

Explanation: Another user or process has allocated the specified device.

User Action: Wait until the other user or process deallocates the device; then try the operation again.

CPB-F-Device not attachable (RSX)

Explanation: The device is not available for attaching.

User Action: Check the device status and correct the problem.

CPB-F-Device not ready or not mounted foreign (VMS)

Explanation: The specified device is not ready or is not mounted foreign.

User Action: Check that the device is ready and that the volume is mounted as a foreign device.

CPB-F-Directory read error

Explanation: The device is not ready (all RSX systems) or is not mounted foreign (RSX-11M-PLUS and Micro/RSX systems only).

User Action: Check that the device is ready (all RSX systems) and that it is mounted as a foreign device (RSX-11M-PLUS and Micro/RSX systems).

Explanation: A hardware error occurred on the device directory.

User Action: Check the procedures in Section 1.3 for recovery from hard error conditions.

CPB-F-Directory specification illegal in RT file spec—filespec

Explanation: The file specification must be legal for RT-11. The file specification may not contain a directory specification.

User Action: Remove the directory specification.

CPB-F-Error detaching from attached device

Explanation: A system error occurred.

User Action: Try the operation again. If the problem persists, submit a Software Performance Report (SPR).

CPB-F-Error parsing file name or assigning LUN to device

Explanation: The file specification must be legal for RT-11.

User Action: Check for typing errors in the file specification. For VMS systems, check logical device name assignments.

Explanation: A system error may have occurred.

User Action: If the error persists, submit a Software Performance Report (SPR).

CPB-F-File not a memory image (MIM) file

Explanation: The input file is not a memory image (MIM) file.

User Action: Check for typing errors in the file name.

CPB-F-File not found on device—filespec

Explanation: The specified input file was not found on the volume.

User Action: Check for a typing error in the file specification. Verify that the correct volume is in the drive and that the correct unit was specified. Use FLX (or EXCHANGE for VMS V4.0 and higher) to verify that the file is on the device.

CPB-F-Illegal device—dev spec

Explanation: The maximum number of characters permitted in the device name is 16(decimal) for a VMS device and 6(decimal) for an RSX device.

User Action: Enter the command line again. Ensure that the device name does not exceed its character limit. Verify that the device is valid for the system in use.

CPB-F-Illegal filename—filespec

Explanation: The indicated file name is illegal, contains a wildcard (* or %), or is too long.

User Action: Check for a typing error in the command line. Ensure that the command line does not contain wildcards.

CPB-F-Illegal Get Command Line error code

Explanation: A system error occurred.

User Action: Try the operation again. If the problem persists, submit a Software Performance Report (SPR).

CPB-F-Illegal RT file specification—filespec

Explanation: The file specification must be legal for RT-11.

User Action: Try the operation again, specifying a legal RT-11 file specification.

CPB-F-Illegal option; only /CS allowed

Explanation: An option other than /CS was specified.

User Action: The only valid option is /CS. Check for typing errors in the command line.

CPB-F-Indirect command syntax error

Explanation: The indirect file specification contains a syntax error.

User Action: Check for a typing error and enter a legal command line.

CPB-F-Indirect file depth exceeded

Explanation: The maximum permissible indirect file depth (1) has been exceeded.

User Action: Rewrite the command files so that they do not exceed the file depth limit.

CPB-F-Indirect file open error

Explanation: The indirect command file was not found.

User Action: Check for typing errors in the command line. Ensure that the file specification is correct and that the file exists.

CPB-F-No bootstrap in file

Explanation: The specified memory image (MIM) file does not contain a MicroPower/Pascal bootstrap. Either a bootstrap was not added to the MIM file or the wrong MIM file was specified.

User Action: Add a bootstrap to the MIM file, or check for a typing error in the command line.

CPB-F-No input file specified

Explanation: No input file was specified.

User Action: Specify the correct input file.

CPB-F-No such device on system

Explanation: The specified device is not on the system or was not SYSGENed into the system.

User Action: Ensure that the device is on the system and has been SYSGENed into the system.

Explanation: The device name contains an illegal character or an invalid unit number.

User Action: Check for a typing error in the device name.

CPB-F-No value or 0 specified for /CS option

Explanation: The value for the /CS option was missing, or 0 was specified.

User Action: Provide a valid CSR value for the /CS option.

CPB-F-Only a single input file allowed and no commas allowed

Explanation: More than one input file was specified, and commas were used.

User Action: Specify only one input file in the command line, and do not use commas.

CPB-F-Output file may not be specified

Explanation: An output file was specified.

User Action: Do not specify an output file.

CPB-F-Read error

Explanation: A hardware error occurred on the device.

User Action: Check the procedures in Section 1.3 for recovery from hard error conditions.

CPB-F-Unable to attach device (RSX)

Explanation: Another user or terminal has allocated the specified device.

User Action: Wait until the other user or terminal deallocates the device; then try the operation again.

Explanation: The specified device is a mounted Files-11 volume, not an RT volume.

User Action: Check for a typing error in the device name, and ensure that the proper volume is in the specified device.

CPB-F-Wild cards illegal in file spec—filespec

Explanation: Asterisks (*) or percent (%) symbols occur in the file specification.

User Action: Enter the command line again, without using wildcards.

CPB-F-Write error writing bootstrap to block 0

Explanation: A hardware error occurred while COPYB was writing the bootstrap to the boot block.

User Action: Check the procedures in Section 1.3 for recovery from hard error conditions.

CPB-W-Device is not a supported MicroPower/Pascal device; Are you sure?

Explanation: The output device is not supported by MicroPower/Pascal. No bootstrap file for that device is supplied with the MicroPower/Pascal kit.

User Action: Ensure that you have specified the correct device, that the memory image (MIM) file is on that device, and that the bootstrap you have written for that device is installed in the MIM file. If those are the correct conditions, answer YES to write the bootstrap to the device. If you specified the wrong device, answer NO and specify the correct device.

If the MIM file is on the wrong device, answer NO and exit from COPYB. Then copy the MIM file to the correct device and run COPYB again.

CPB-W-File name truncated to 6 character RT limit—filnam.typ

Explanation: Because the specified file name exceeded the RT-11 limit of six characters, the specified file name was truncated to that indicated in the message. The COPYB operation continues, using the indicated file name.

If you used FLX (or EXCHANGE on VMS Version 4.0 or higher) to copy the memory image (MIM) file to the RT-11 output device, FLX or EXCHANGE truncated any file name longer than six characters to the RT-11 6-character limit. FLX performs this action without displaying a message of any kind.

User Action: If you intended to use the file with the truncated name, the operation was successful. If that is the incorrect file, specify the correct RT-11 file name with no more than six characters.

CPB-W-Volume has non-MicroPower/Pascal boot; Are you sure?

Explanation: The output device has a non-MicroPower/Pascal boot on it.

User Action: Answer YES if you intend to overwrite the existing bootstrap with the MicroPower/Pascal bootstrap; answer NO if you wish to specify a new device.

2.2 MERGE Messages

MRG-F-Bad GSD in—filespec

Explanation: An illegal global symbol directory (GSD) record was found in the file. The file is probably not a valid object module.

User Action: Verify that the correct file names were specified as input. Recompile or reassemble to obtain a good object module and try the MERGE operation again. If the error persists, verify that the source code is correct.

MRG-F-Bad ISD in—filespec

Explanation: An invalid internal symbol directory (ISD) command exists in the input file. The file is probably not a valid object module.

User Action: Check for a typing error in the command line and verify that the correct file names were specified as input. Recompile or reassemble to obtain a good object module and try the MERGE operation again. Do not use the /DE option on the kernel symbol table (STB) or a shared library STB file or on the left side of the equal sign if the kernel STB or a shared library STB file is an input file. If the error persists, submit a Software Performance Report (SPR).

MRG-F-Bad ISD symbol in—filespec

Explanation: An error occurred because a global symbol or program section named in an internal symbol directory (ISD) record was not defined in a global symbol directory (GSD) record. This error can also be caused by specifying a symbol table record (STB) file with the /DE option.

User Action: Recompile or reassemble the indicated file. Do not use the /DE option on the kernel STB or a shared library STB file or on the left side of the equal sign if the kernel STB or a shared library STB file is an input file. If the error persists, submit a Software Performance Report (SPR).

MRG-F-Bad RLD in—filespec

Explanation: An invalid relocation directory (RLD) record exists in the input file. The file is probably not a valid object module.

User Action: Check for a typing error in the command line and verify that the correct file names were specified as input. Recompile or reassemble to obtain a good object module and try the MERGE operation again. If the error persists, check the source code to make sure that all modules contributing to a data p-sect are word aligned.

MRG-F-Cannot reference both user-mode and supervisor-mode libraries

Explanation: Symbol table (STB) files for both types of libraries were specified as input files.

User Action: Specify only one type of library. The application may be built with one or more user-mode libraries or one supervisor-mode library.

MRG-F-Close error on file—filespec

Explanation: A hardware error occurred.

User Action: Check the procedures in Section 1.3 for recovery from hard error conditions.

MRG-F-Command I/O error

Explanation: An error occurred while MERGE was reading the command line.

User Action: Check that the device is on line and try the operation again. If the error persists, check for hardware errors. Check the procedures in Section 1.3 for recovery from hard error conditions.

MRG-F-Command syntax error

Explanation: The indicated invalid command line contains a syntax error.

User Action: Check for a typing error and enter a legal command line.

MRG-F-Error getting LUN characteristics

Explanation: An error occurred while MERGE was getting the characteristics of the logical unit number (LUN) for either the command input or the map file.

User Action: Try the operation again. If the condition persists, submit a Software Performance Report (SPR).

MRG-F-File not found—filespec

Explanation: The indicated input file was not found on the specified or default device or on the specified or default directory.

User Action: Use the correct file or device specification. Check that the device is ready and that it is mounted.

Explanation: If the indicated file specification is only a period (.) with no name or extension, an error occurred while MERGE was parsing the actual file specification.

User Action: Ensure that the file specification does not contain a dollar sign (\$) or underscore (_) and is not longer than nine characters.

On VMS systems, use a single logical assignment for both the device and the directory on those file specifications that contain device and/or directory specifications. If a file specification contains a specified directory (without a logical for both the device and the directory), any succeeding file specifications with logicals may cause problems.

MRG-F-Illegal character in /xx value

Explanation: An illegal character was used in the value supplied for the indicated option.

User Action: Check for typing errors in the command line and ensure that legal Radix-50 characters are used for values. Enter the command line again.

MRG-F-Illegal device—dev spec

Explanation: The device specification exceeds its limit. The maximum number of characters permitted in the device name is 16(decimal) for a VMS device and 6(decimal) for an RSX device.

User Action: Enter the command line again. Ensure that the device name does not exceed its character limit. Verify that the device is valid for the system in use.

MRG-F-Illegal directory—directory-spec

Explanation: The directory specification exceeds its limit. The maximum number of characters permitted in the directory name is 31(decimal) for a VMS directory and 11(decimal) for an RSX directory.

User Action: Check for a typing error in the command line. Ensure that the directory name does not exceed its character limit.

MRG-F-Illegal file name—filespec

Explanation: The indicated file name is illegal, contains a wildcard (* or %), or is too long.

User Action: Check for a typing error in the command line. Ensure that the command line does not contain wildcards, and that the file name is not longer than nine characters.

MRG-F-Illegal Get Command Line error code

Explanation: A system error occurred.

User Action: Try the operation again. If the error persists, submit a Software Performance Report (SPR).

MRG-F-Illegal option or option value

Explanation: An illegal option or option value was specified in the command line.

User Action: Check for typing errors. Try the operation again, using the correct option and a legal option value. Valid MERGE options are listed in the *MicroPower/Pascal-RSX/VMS System User's Guide*.

MRG-F-Illegal record type in—filespec

Explanation: A formatted binary record had a type not in the range of 1 to 10(octal). The file is probably not a valid object module.

User Action: Verify that the correct file names were specified as input and check for a typing error in the command line. Recompile or reassemble the source files to obtain a good object module and try the MERGE operation again. If the specified file is an object library, check that the /LB option was specified for the file.

MRG-F-Incompatible use of /UL or /SL on file—filespec

Explanation: The /UL or /SL option was used incorrectly. The /UL option may have been specified on a supervisor-mode library symbol table (STB) file. The /SL option may have been specified on a user-mode library STB file. Or, the /UL or /SL option was specified on a file other than a library STB file.

User Action: Check the command line for typing errors. Match the /UL and /SL options with the correct type of library STB files, respectively.

MRG-F-Incorrect library module specification

Explanation: A library module name, specified with the /LB option, contains a non-Radix-50 character.

User Action: Check for typing errors and ensure that the module name contains only legal Radix-50 characters.

MRG-F-Indirect command syntax error

Explanation: The indirect file specification contains a syntax error.

User Action: Check for a typing error and enter a legal file specification.

MRG-F-Indirect file depth exceeded

Explanation: The maximum permissible indirect file depth (3) has been exceeded.

User Action: Rewrite the command files so that they do not exceed the file depth limit.

MRG-F-Indirect file open error

Explanation: The indirect command file was not found.

User Action: Check for a typing error in the command line. Ensure that the file specification is correct and that the file exists.

MRG-F-Insufficient memory

Explanation: Memory was insufficient to accommodate the command, the symbol table, the library module list, or the resultant output module.

User Action: Try the operation again. If the error persists, submit a Software Performance Report (SPR).

MRG-F-Library list overflow

Explanation: The MERGE library routines list buffer was exceeded.

User Action: Perform the merge in several steps rather than trying to merge all files at once.

MRG-F-Module AAAAAA not in library—filespec

Explanation: The indicated module, specified with the /LB option, was not in the indicated object library.

User Action: Check for typing errors. Ensure that the /LB option was specified on the correct object library and that the object library contains the module.

MRG-F-More than seven user-mode libraries specified

Explanation: Too many user-mode library symbol table (STB) files were specified.

User Action: Specify no more than seven user-mode library STB files.

MRG-F-Only one supervisor-mode library allowed

Explanation: More than one supervisor-mode library symbol table (STB) file was specified.

User Action: Specify no more than one supervisor-mode library STB file.

MRG-F-Open failure on file—filespec

Explanation: The indicated file could not be opened. If the indicated file specification is only a period (.) with no name or extension, an error occurred while MERGE was parsing the actual file specification.

User Action: Check for typing errors in the command line. Ensure that the file specification does not contain a dollar sign (\$) or underscore (_) and is not longer than nine characters.

MRG-F-Read error in—filespec

Explanation: A hardware error occurred while MERGE was reading the indicated input file.

User Action: Check the procedures in Section 1.3 for recovery from hard error conditions.

MRG-F-Request core block allocation error

Explanation: A system error occurred.

User Action: Try the operation again. If the problem persists, submit a Software Performance Report (SPR).

MRG-F-Required input file missing

Explanation: The command line contains no input files.

User Action: Check for typing errors in the command line. Enter a command that includes input files.

MRG-F-Size overflow of section AAAAAA

Explanation: The indicated program section, when concatenated, was larger than 32K words.

User Action: Reduce the size of the program section.

MRG-F-Symbol table overflow

Explanation: Too many global symbols were used in the program.

User Action: The MERGE operation cannot take place with the current input files. Reduce the number of global symbols and perform the merge again.

MRG-F-/UL or /SL missing on referenced library STB file—filespec

Explanation: Either /UL was missing on a user-mode library symbol table (STB) file or /SL was missing on a supervisor-mode library STB file.

User Action: Use the /UL or /SL options on the appropriate files.

MRG-F-Write error in—filespec

Explanation: A hardware error occurred while MERGE was writing the indicated output file.

User Action: Check the procedures in Section 1.3 for recovery from hard error conditions.

MRG-W-Conflicting section attributes AAAAAA in—filespec

Explanation: The program section was defined with attributes different from those of previous definitions. The attributes of the first definition are used, and MERGE processing continues.

User Action: Check the source programs and use the desired section attributes for that section.

MRG-W-Multiple definition of AAAAAA in—filespec

Explanation: The symbol indicated was defined more than once. The first definition is used, and MERGE processing continues.

User Action: Make sure that each symbol is defined only once in all modules.

MRG-W-Non-MicroPower ISDs; creating MicroPower ISDs for—filespec

Explanation: The indicated object file had non-MicroPower/Pascal internal symbol directory (ISD) records. MicroPower/Pascal ISDs are created for each global symbol directory (GSD) record symbol definition in the file.

User Action: For a MACRO-11 module, reassemble the source file. Ensure that the /EN:DBG MACRO-11 assembler option is not used. Then merge the object file again.

Explanation: For a Pascal module, this message indicates a corrupted object module.

User Action: For a Pascal module, recompile the source file and merge the object file again.

MRG-W-Non-MicroPower ISDs; creating MicroPower ISDs for XXXX module(s) in library—filespec

Explanation: The indicated object library has one or more modules with non-MicroPower/Pascal internal symbol directory (ISD) records. NNNNNN(decimal) modules referenced had non-MicroPower/Pascal ISDs.

MicroPower/Pascal ISDs are created for each global symbol directory (GSD) record symbol definition for each of those modules.

User Action: For a MACRO-11 module, reassemble the source files for the modules in the library. Ensure that the /EN:DBG MACRO-11 assembler option is not used.

Explanation: For a Pascal module, this error indicates a corrupted object module.

User Action: For a Pascal module, recompile the source file and rebuild the library.

MRG-W-Undefined globals:

Explanation: The globals listed were undefined. They are listed on the terminal and also in the load map when requested.

User Action: Check for a typing error in the command line. Correct the source program. Verify that all necessary modules are specified in the command line or are in the libraries specified. In the case of a partial merge, this message is informational only.

2.3 MIB Messages

MIB-F-Bad ISD

Explanation: An illegal internal symbol directory (ISD) record was in the file. The input symbol table (STB) file is probably not a valid STB file.

User Action: Verify that the correct file names were specified as input. Rebuild the input files and try the MIB operation again.

MIB-F-Bootstrap file invalid for MicroPower/Pascal—filespec

Explanation: The indicated file does not contain a valid MicroPower/Pascal bootstrap. A previous version of a MicroPower/Pascal bootstrap file may have been used.

User Action: Specify a valid MicroPower/Pascal bootstrap file.

MIB-F--Cannot install ID process in application that does not have J11 mapping

Explanation: The kernel was built without J11 mapping support. J11 mapping support is required for ID processes.

User Action: Either rebuild the process image (PIM) file belonging to the process as a non-ID process or edit the kernel configuration file to include J11 mapping support; then rebuild the entire application.

MIB-F--Cannot install library while initializing kernel

Explanation: The /KI option was specified while MIB was installing a library. The kernel must be built first; then shared libraries may be installed.

User Action: First build the kernel; then build and install the shared library.

MIB-F--Cannot install supervisor-mode library in application that does not have J11 mapping

Explanation: J11 mapping support is required for supervisor-mode libraries.

User Action: Edit the kernel configuration file so that it includes J11 mapping support, and rebuild the entire application; or build the library as a user-mode library instead.

MIB-F--Cannot install supervisor-mode library; one is already installed

Explanation: Only one supervisor-mode library is allowed in an application.

User Action: Build a new, combined supervisor-mode library, installing it in the memory image (MIM) file in place of the existing one.

The routines from the second supervisor-mode library may also be merged into each static process that references them.

MIB-F--Cannot install user-mode library in application that has J11 mapping

Explanation: The application has J11 mapping support, so only one supervisor-mode library is allowed. User-mode libraries are not allowed.

User Action: If no supervisor-mode library is installed in the application, rebuild the library as a supervisor-mode library. If a supervisor-mode library is already installed, build a new, combined supervisor-mode library, installing it in the memory image (MIM) file in place of the existing supervisor-mode library.

The user-mode library routines may also be merged into each static process that references them.

MIB-F--Close error on file—filespec

Explanation: A hardware error occurred.

User Action: Check the procedures in Section 1.3 for recovery from hard error conditions.

MIB-F-Command I/O error

Explanation: An error occurred while MIB was reading the command line.

User Action: Check that the device is on line and try the operation again. If the error persists, check for hardware errors. Check the procedures in Section 1.3 for recovery from hard error conditions.

MIB-F-Command syntax error

Explanation: The indicated invalid command line contains a syntax error.

User Action: Check for a typing error and enter a legal command line.

MIB-F-File not found—filespec

Explanation: The indicated input file was not found on the specified or default device or on the specified or default directory.

User Action: Use the correct file or device specification. Check that the device is ready and that it is mounted.

Explanation: If the indicated file specification is only a period (.) with no name or extension, an error occurred while MIB was parsing the actual file specification.

User Action: Ensure that the file specification does not contain a dollar sign (\$) or underscore (—) and is not longer than nine characters.

On VMS systems, use a single logical assignment for both the device and directory on those file specifications that contain device and/or directory specifications. If a file specification contains a specified directory (without a logical for both the device and the directory), any succeeding file specifications with logicals may cause problems.

MIB-F-/GC value too large

Explanation: The value that was specified with the /GC option was too large.

User Action: See the *MicroPower/Pascal-RSX/VMS System User's Guide* for the valid range of option values. Try the operation again.

MIB-F-Hardware memory specification table too fragmented

Explanation: The hardware memory specification table generated by the configuration file exceeds two blocks. The MEMORY macro was invoked more than 168 times in the configuration file.

User Action: Edit the configuration file to create a valid file with fewer than 168 invocations of the MEMORY macro. Rebuild the entire application.

MIB-F-Illegal character in /QB program section name

Explanation: The specified program section contains an illegal character.

User Action: Examine the command string for errors in syntax, ensuring that legal Radix-50 characters are used for the section name.

MIB-F-Illegal character in /xx value

Explanation: An illegal character was used in the value supplied for the indicated option.

User Action: Check for typing errors in the command line and ensure that Radix-50 characters are used for values. Enter the command line again.

MIB-F-Illegal command

Explanation: An incorrect command was issued to MIB. For example, the debug (DBG) file was specified as output without the symbol table (STB) as input. An output memory image (MIM) file was specified with no process image (PIM) or MIM file as input and no /PR or /GC option. The /KI option was specified along with an input MIM file.

User Action: Verify that the correct files were specified as input. Check for a typing error in the command line. See the *MicroPower/Pascal-RSX/VMS System User's Guide* for the correct MIB command syntax.

MIB-F-Illegal device—dev spec

Explanation: The device specification exceeds its limit. The maximum number of characters permitted in the device name is 16(decimal) for a VMS device and 6(decimal) for an RSX device.

User Action: Enter the command line again. Ensure that the device name does not exceed its character limit. Verify that the device is valid for the system in use.

MIB-F-Illegal directory—directory-spec

Explanation: The directory specification exceeds its limit. The maximum number of characters permitted in the directory name is 31(decimal) for a VMS directory and 11(decimal) for an RSX directory.

User Action: Check for a typing error in the command line. Ensure that the directory name does not exceed its character limit.

MIB-F-Illegal file format—filespec

Explanation: The indicated file has an incorrect format or is corrupted. One of the file's internal tables is incorrect.

User Action: Verify that the file is valid for its type. Rebuild the file. If the error persists, submit a Software Performance Report (SPR).

MIB-F-Illegal file name—filespec

Explanation: The indicated file name is illegal, contains a wildcard (* or %), or is too long.

User Action: Check for a typing error in the command line. Ensure that the command line does not contain wildcards, and that the file name is not longer than nine characters.

MIB-F-Illegal Get Command Line error code

Explanation: A system error occurred.

User Action: Try the operation again. If the error persists, submit a Software Performance Report (SPR).

MIB-F-Illegal option or option value

Explanation: An illegal option or option value was specified in the command line.

User Action: Try the MIB operation again, using the correct option and a legal option value. Valid MIB options are listed in the *MicroPower/Pascal-RSX/VMS System User's Guide*.

MIB-F-Illegal PIM file; ID process cannot have I-space sections after D-space sections—filespec

Explanation: The process image (PIM) file is corrupted. If the process was built ID, all I-space sections must precede all D-space sections.

User Action: Rebuild the PIM file and try the MIB operation again. If the condition persists, submit a Software Performance Report (SPR).

MIB-F-Illegal PIM file; kernel cannot be built ID—filespec

Explanation: The kernel must be built non-ID.

User Action: Rebuild the process image (PIM) file; do not specify the /ID option. Then try the MIB operation again.

MIB-F-Illegal record type in—filespec

Explanation: The symbol table (STB) file has an incorrect format or is corrupted.

User Action: Rebuild the file and try the MIB operation again.

MIB-F-Indirect command syntax error

Explanation: The indirect file specification contains a syntax error.

User Action: Check for a typing error and enter a legal file specification.

MIB-F-Indirect file depth exceeded

Explanation: The maximum permissible indirect file depth (3) has been exceeded.

User Action: Rewrite the command files so that they do not exceed the file depth limit.

MIB-F-Indirect file open error

Explanation: The indirect command file was not found.

User Action: Check for a typing error in the command line. Ensure that the file specification is correct and that the file exists.

MIB-F-Insufficient memory

Explanation: Not enough buffer space exists to process this command.

User Action: Try the MIB operation again. If the error persists, submit a Software Performance Report (SPR).

MIB-F-Invalid bootstrap for MicroPower/Pascal in—filespec

Explanation: The indicated memory image (MIM) file contains an invalid bootstrap. A previous version of a MicroPower/Pascal bootstrap may have been used.

User Action: Rebuild the MIM file and include a valid MicroPower/Pascal bootstrap file.

MIB-F-Invalid option combination

Explanation: The options specified are mutually exclusive.

User Action: See the *MicroPower/Pascal-RSX/VMS System User's Guide* for information on MIB and its options.

MIB-F-Invalid section start for kernel specified in—filespec

Explanation: The command line specified the /KI option; and either the process image (PIM) file in a RAM-only system contains more than two noncontiguous segments, or the PIM file in a ROM/RAM system contains other than two (one or more than two) noncontiguous segments.

User Action: Try the RELOC operation again, using the correct command. Then try the MIB operation again.

MIB-F-Library with same name AAAAAA is already installed in—filespec

Explanation: The library being installed has the same name as a library that is already installed in a memory image (MIM) file.

User Action: A library that is already installed in the MIM file is being installed again. If you wish to leave the already installed library in the MIM file, skip this part of the installation and continue building your application. If you wish to replace the already installed library, rebuild the application either entirely or from a point before the installation of this library.

The library being installed has the same name but is different from the library already in the MIM file. Rebuild the process image (PIM) file with RELOC, using the /NM option to change the name of the library being installed. Then try the MIB operation again.

MIB-F-Mapped section start not on a 4K-word virtual address boundary in—filespec

Explanation: The memory image (MIM) file is for a mapped system, but each noncontiguous section in the process image (PIM) file does not start on a 4K-word virtual address boundary.

User Action: Rebuild the PIM file with RELOC, using the /AL, /DR, /DW, /RO, /RW, and/or /QB options and values that are on 4K-word boundaries.

MIB-F-Mapped static process or library list element does not start on a 4K-word virtual address boundary in—filespec

Explanation: The static process or library list element for a mapped application must start on a 4K-word virtual address boundary.

User Action: Rebuild the process image (PIM) file, ensuring that the .ALST. program section, which defines the static process or library list element, starts on a 4K-word boundary.

Explanation: You declared a p-sect having a name that alphabetically comes before .ALST.

User Action: Rename the p-sect to a name that alphabetically follows .ALST.

MIB-F-MIM file memory specification table too fragmented

Explanation: The memory allocation table in the memory image (MIM) file overflowed its limit of 253(decimal) entries. For a mapped system, the /QB option was used to specify physical section addresses "manually." For an unmapped system, the base addresses specified to RELOC caused too many holes.

User Action: For a mapped application, try the MIB operation again, specifying fewer noncontiguous sections. For an unmapped application, try the RELOC and MIB operations again, specifying base addresses to RELOC that cause less memory fragmentation.

MIB-F-MIM file too small; cannot extend small MIM file in place

Explanation: The existing output memory image (MIM) file is not large enough to accommodate the new process or the bootstrap.

User Action: Try the MIB operation again, specifying an input MIM file and an output MIM file to create a new output MIM file.

MIB-F-No bootstrap in file—filespec

Explanation: The /RB option was specified for removing the bootstrap, but the indicated memory image (MIM) file does not contain a bootstrap.

User Action: Do not specify /RB, since the MIM file does not contain a bootstrap.

MIB-F-No bootstrap file specified with /BS option

Explanation: The /BS option requires a MicroPower/Pascal bootstrap file to be specified.

User Action: Try the operation again, specifying an appropriate bootstrap file.

MIB-F-Nonexistent physical memory specified in—filespec

Explanation: The process image (PIM) file for an unmapped system indicates that the process or library should be installed at an address that does not exist in the memory image (MIM) file.

User Action: Rebuild the PIM file, either specifying valid base addresses or allowing RELOC to relocate the process automatically by looking up free addresses in the MIM file.

MIB-F-No required files specified

Explanation: No output memory image (MIM) file, input MIM file, or debug (DBG) file was specified on the command line.

User Action: Depending on the operation, at least one of the required files must be specified. See the *MicroPower/Pascal-RSX/VMS System User's Guide* for information on those files required for each MIB operation.

MIB-F-No static process or library list element in—filespec

Explanation: The process image (PIM) file specified does not contain a valid static process or library. For a static process, either the Pascal PROGRAM heading or the MACRO-11 DFSPC\$ macro call was omitted from the relevant source file.

User Action: For a static process, correct the source file and rebuild the PIM file. See the *MicroPower/Pascal Language Guide* or the *MicroPower/Pascal Run-Time Services Manual* for information about declaring static processes.

Explanation: For a shared library, the /SL or /UL was omitted from the RELOC step.

User Action: For a shared library, perform the RELOC operation again and include the appropriate option. Then try the MIB operation again.

MIB-F-Not a valid bootstrap file—filespec

Explanation: The indicated file does not contain a valid bootstrap.

User Action: Try the MIB operation again, specifying a valid bootstrap file.

MIB-F-Not enough memory for RO segment

Explanation: Not enough free memory is in the memory image (MIM) file for the read-only (RO) segment in the process image (PIM) file.

User Action: If you specified less memory in the configuration file than is available on the target system, edit the configuration file to make more target memory available to your application. Then rebuild the application. If no more memory is available, increase the amount of target memory or see Section 1.5 for suggestions on how to better use the existing physical target memory.

MIB-F-Not enough memory for RW segment

Explanation: Not enough free RAM memory is in the memory image (MIM) file for the read/write (RW) segment in the process image (PIM) file.

User Action: If you specified less memory in the configuration file than is available on the target system, edit the configuration file to make more target memory available to your application. Then rebuild the application. If no more memory is available, increase the amount of target memory or see Section 1.5 for suggestions on how to better use the existing physical target memory.

MIB-F-Open failure on file—filespec

Explanation: The indicated file could not be opened. If the indicated file specification is only a period (.) with no name or extension, an error occurred while MIB was parsing the actual file specification.

User Action: Check for typing errors in the command line. Ensure that the file specification does not contain a dollar sign (\$) or underscore (_) and is not longer than nine characters.

MIB-F-Options illegal on bootstrap file specification

Explanation: The bootstrap file specification may not contain any options.

User Action: Try the operation again, omitting the options on the bootstrap file.

MIB-F-/PR value too large

Explanation: The value that was specified with the /PR option was too large.

User Action: See the *MicroPower/Pascal-RSX/VMS System User's Guide* for the valid range of option values.

MIB-F-Process with the same name AAAAAA is already installed in—filespec

Explanation: The process being installed has the same name as a process that is already installed in a memory image (MIM) file.

User Action: A process that is already installed in the MIM file is being installed again. If you wish to leave the already installed process in the MIM file, skip this part of the installation and continue building your application. If you wish to replace the already installed process, rebuild the application either entirely or from a point before the installation of this process.

Explanation: The process being installed has the same name but is different from the process already in the MIM file.

User Action: Change the name of the process being installed by editing the source file and rebuilding that process.

MIB-F-/QB invalid with unmapped MIM file

Explanation: The /QB option was specified, but the memory image (MIM) file was for an unmapped system.

User Action: See the *MicroPower/Pascal-RSX/VMS System User's Guide* for information about /QB. Do not specify the /QB option with an unmapped MIM file.

MIB-F-/QB section not found, AAAAAA in—filespec

Explanation: The /QB option was specified, but the program section specified does not exist in the process image (PIM) file.

User Action: Use the correct section name.

MIB-F-Read error in—filespec

Explanation: A hardware error occurred while MIB was reading the indicated input file.

User Action: Check the procedures in Section 1.3 for recovery from hard error conditions.

MIB-F-Referenced library AAAAAA goes past 32K-word addressing limit

Explanation: A mapped user-mode library causes the process to exceed the 32K-word addressing limit. This error should be detected by RELOC.

User Action: Check the symbol table (STB) file and the process image (PIM) file for the library to ensure that they were both created with the same invocation of RELOC. If necessary, rebuild the application starting with the installation of the library.

MIB-F-Referenced library AAAAAA not installed in MIM file

Explanation: The indicated shared library is referenced by the process being installed, but the library is not yet installed in the memory image (MIM) file.

User Action: Install the library in the MIM file, and then install the referencing process.

MIB-F-Request core block allocation error

Explanation: A system error occurred.

User Action: Try the operation again. If the problem persists, submit a Software Performance Report (SPR).

MIB-F-Specified memory for /QB section unavailable or nonexistent

Explanation: The /QB option was specified, but the specified physical address was already in use or does not exist in the memory image (MIM) file.

User Action: Try the MIB operation again, using the correct address. Check the RELOC map of the process image (PIM) file for sizes and the map of the input MIM file for available memory.

MIB-F-Start address in referencing process does not agree with start address of any installed library

Explanation: A process references a user-mode library, but the physical address at which the process references the library does not match any library in the memory image (MIM) file. For a mapped application, the MIM file is corrupted. For an unmapped application, the MIM file may be corrupted, or the wrong library symbol table (STB) file may have been used when the referencing process was merged.

User Action: For a mapped application, rebuild the application entirely or from a point before any user-mode libraries were installed. For an unmapped application, check the STB and process image (PIM) files for the library to ensure that the correct STB file was used when the referencing process was being rebuilt. Rebuild the application from a point before the library or referencing process was installed.

MIB-F-Supervisor-mode library D-space uses more than just APR 0

Explanation: The supervisor-mode library contains more than 4K words of read-only (RO) data. This problem should be detected by RELOC.

User Action: Rebuild the library and produce a RELOC map. Check the map to ensure that the total size of D-space is less than 4K words. If necessary, reduce the size of the data program sections and rebuild the library.

MIB-F-Syntax error on /BS file specification

Explanation: The bootstrap file specification contains a syntax error.

User Action: Try the operation again, specifying a valid bootstrap file specification.

MIB-F-Syntax error or missing delimiter on /BS file specification

Explanation: The bootstrap file specification contains a syntax error.

User Action: Try the operation again, specifying a valid bootstrap file specification.

MIB-F-Too many noncontiguous sections in—filespec

Explanation: The process image (PIM) file contains more than eight noncontiguous sections. The PIM file is probably invalid or was built incorrectly.

User Action: Rebuild the PIM file and try the MIB operation again, using fewer than eight noncontiguous sections.

MIB-F-Too many static process or library list elements in—filespec

Explanation: The process image (PIM) file contains more than one static process or library declaration, or several static processes or libraries were merged to produce the PIM file.

User Action: Check the source code. Rebuild the PIM file, starting with the MERGE operation, and include only one static process or library.

MIB-F-Too much memory specified in—filespec

Explanation: The memory image (MIM) file contains either more than 32K words of physical memory minus the size of the I/O page for unmapped systems or more than 2048K words of memory minus the size of the I/O page for mapped systems.

User Action: Edit the configuration file and rebuild the MIM file.

MIB-F-Unavailable memory specified in—filespec

Explanation: The process image (PIM) file specified is for an unmapped system, and the memory specified was already in use.

User Action: Rebuild the PIM file, either specifying valid base addresses or allowing RELOC to relocate the process automatically by looking up free addresses in the memory image (MIM) file.

MIB-F-Unsupported configuration—Configured memory for kernel does not start at 0

Explanation: No memory is configured at 0. This error occurs only with the /KI option.

User Action: Check the memory macros in the configuration file to ensure that memory is configured at 0. Edit the configuration file and rebuild the application.

MIB-F—Unsupported configuration—ROM/RAM application and ROM does not start at 0

Explanation: RAM memory is configured at 0. This error occurs only with the /KI option.

User Action: For ROM/RAM systems, enough ROM memory must be configured starting at 0 for the kernel RO segment. Check the memory macros to ensure that ROM memory is configured at 0. Edit the configuration file and rebuild the application.

MIB-F—Write error in—flspec

Explanation: A hardware error occurred while MIB was writing the indicated output file.

User Action: Check the procedures in Section 1.3 for recovery from hard error conditions.

MIB-W—/BS Invalid with MIM file that contains boot; /BS ignored

Explanation: The memory image (MIM) file already contains a bootstrap. Other MIB processing continues.

User Action: Try the operation again, omitting the /BS option from the command. You can remove the bootstrap by using the /RB option.

MIB-W—Conflict with mapping type; process AAAAAA uses APR n

Explanation: This error occurs for mapped applications only. The process has a mapping type other than general, and one of the reserved active page registers (APRs) is used for process code or data. For a privileged process, APRs 4 to 7 are reserved. For a device-access process, APR 7 is reserved; for a driver process, APRs 4 to 7 are reserved. MIB installs the process, but run-time errors may occur.

User Action: See the *MicroPower/Pascal Run-Time Services Manual* for information about mapping types. Reduce the size of the code and data; use different options to RELOC to avoid use of any reserved APRs; or change the mapping type, if that is possible, and rebuild the process.

MIB-W—Conflict with mapping type; process AAAAAA uses APR n to map user-mode library AAAAAA

Explanation: This error occurs for mapped applications only. The process has a mapping type other than general, and one of the reserved active page registers (APRs) is used to map a referenced user-mode library. For a privileged process, APRs 4 to 7 are reserved. For a device-access process, APR 7 is reserved. For a driver process, APRs 4 to 7 are reserved. MIB installs the process, but run-time errors may occur.

User Action: See the *MicroPower/Pascal Run-Time Services Manual* for information about mapping types. If the user-mode library was built absolute, rebuild the application from the point before the library was installed, and specify a start address for the library that avoids the reserved APRs or build it relocatable. If the user-mode library was built relocatable and RELOC set up the start address for the referenced library, either reduce the size of the process code and data and rebuild, or merge the needed library routines into the process. If the user-mode library was built relocatable and you specified a start virtual address for it, using the /LS option, rebuild and either specify an address to avoid the reserved APRs, or omit the /LS option and let RELOC determine a start address.

MIB-W-DBG file too big; installation will cause record number to exceed maximum size of 65535(10)

Explanation: The debug (DBG) file will exceed its maximum permissible size if the new process or library symbols are installed. The DBG file is left unchanged, and other MIB processing continues.

User Action: Rebuild the DBG file from an earlier point, without including the symbols for all the previous processes and libraries. If the error persists, submit a Software Performance Report (SPR).

MIB-W-Incompatible version number in library

Explanation: The memory image (MIM) file has been corrupted, or a library in the MIM file was built with an older version of the shared library object (OBJ) file (LIBSUP.OBJ for supervisor-mode libraries, LIBUSR.OBJ for user-mode libraries).

User Action: Rebuild the application either entirely or from a point before the installation of any libraries. If the error persists, submit a Software Performance Report (SPR).

MIB-W-Incompatible version number in process

Explanation: The memory image (MIM) file has been corrupted, or a process in the MIM file was built with an older version of the kernel.

User Action: Rebuild the application either entirely or from a point before the installation of any static processes.

MIB-W-Kernel free RAM table too fragmented

Explanation: Too many entries are in the kernel free-RAM table for the space allocated. The table overflowed, and some of the free RAM cannot be reclaimed. The smallest free-RAM segment is deleted from the table.

User Action: Rebuild the process or library so that it uses fewer segments of RAM memory, or edit the configuration file to increase the size of the free-RAM table, and rebuild the entire application.

MIB-W-Library AAAAAA, referenced in library relocation ISD, not referenced by process

Explanation: The library indicated was referenced in an internal symbol directory (ISD) record in the library symbol table (STB) file of the process, but that library is not referenced by the process, according to the process image (PIM) file.

User Action: Check for typing errors in the command line. Check the STB and the PIM files to ensure that they were created in the same invocation of RELOC. If necessary, rebuild the two files and try the MIB operation again.

MIB-W-Mapping conflict; kernel uses APR n

Explanation: This error occurs for mapped applications only. One of the reserved APRs (2, 3, or 7) is used for kernel code or data.

User Action: Reduce the size of the kernel code or data.

MIB-W-No ISD records in—filespec

Explanation: The symbol table (STB) file does not contain internal symbol directory (ISD) records for debugging. Either the file specified is not a valid STB file or the /DE option was omitted from the compilation, MERGE, or RELOC operations used to build the STB file. The debug (DBG) file is left changed, and other MIB processing continues.

User Action: Repeat the MIB operation, using the correct STB file specification, or rebuild the STB file, using the /DE option.

**MIB-W-Not enough room in mapping area of static process list element for referenced library
AAAAAA**

Explanation: This error occurs for unmapped applications only. RELOC should detect the error for the mapped case. The noncontiguous segments for the process in the process image (PIM) file plus the referenced user-mode libraries make more than eight noncontiguous segments. Each referenced library adds one noncontiguous segment.

User Action: Rebuild the PIM file to make the number of noncontiguous segments, including referenced libraries, eight or less.

MIB-W-Process not found, AAAAAA in—filespec

Explanation: The process name specified with the /PR or /GC option was not found in the memory image (MIM) file. Any other MIB processing continues.

User Action: Check for typing errors in the process name. Check a map of the MIM file to ensure that the process is installed in the MIM file. Use the correct process name.

2.4 PASDBG Messages

?PASDBG-C-FFRDFAIL, ff read fail

Explanation: A disk error occurred while PASDBG was reading the debug (DBG) file.

User Action: Try the command again. If the error persists, check the procedures in Section 1.3 for recovery from hard error conditions.

Explanation: The DBG file is corrupted.

User Action: Create a new DBG file and try the command again.

?PASDBG-C-UNEXMSG, Unexpected target message: AAAAAA

Explanation: After the target was loaded, PASDBG interrogated the debugger service module (DSM) and has received an unexpected answer.

User Action: The target software has been corrupted by the user program. Use the INITIALIZE command to check the status of the DSM.

?PASDBG-E-AMBENT, Ambiguous BREAK/TRACE/WATCH specified

Explanation: An ambiguous breakpoint, tracepoint, or watchpoint was specified.

User Action: Use the ordinal number of the breakpoint, tracepoint, or watchpoint—for example, 2 for the second point—in the command. Use the SHOW BREAK, SHOW TRACE, or SHOW WATCH command to find the appropriate ordinal value.

?PASDBG-E-BADASYN, Receiving noise on comm line

Explanation: Noise, such as extraneous characters, was received on the communication link between the host and target systems.

User Action: Check the connections of the serial cable connecting the host and target for grounding or other problems. Check the entire cable for sources of noise, such as power supplies and motors.

?PASDBG-E-BADLINK, Target communication failure in AAAAAA

Explanation: Communication with the target has failed.

User Action: Try the PASDBG INITIALIZE command to reinitialize the debugger service module (DSM) in the target. If INIT fails to establish communication, reload the target.

Explanation: PASDBG is looping internally because the application program contaminated the DSM.

User Action: Type CTRL/C to exit the loop.

?PASDBG-E-BADMIM, Illegal MIM file format

Explanation: PASDBG has opened the file that was specified in the LOAD command. However, the file is not a valid memory image (MIM) file, and PASDBG has aborted the LOAD operation.

User Action: Reissue the LOAD command, specifying a valid MIM file.

?PASDBG-E-BADMODE, Illegal use of mode switch

Explanation: The user tried to examine a Pascal data item by using an illegal mode switch—for example, trying to examine an integer datum by using the /REAL switch.

User Action: Do not use the switch.

?PASDBG-E-BADORD, Ordinal value not defined

Explanation: An enumerated scalar value that is not in the scalar type definition was specified.

User Action: Try the command again, using a defined value.

?PASDBG-E-BOTLDERR, Load error, halt switch ?

Explanation: PASDBG has established communication with the target microcode (ODT) but cannot communicate with the target processor. Usually, this indicates that the target processor HALT switch was in the HALT position.

User Action: Ensure that the target processor HALT switch is set to ENABLE.

?PASDBG-E-BOTMIM, Bootstrap installed in MIM file

Explanation: The file that was specified in the LOAD command contains a bootstrap, or the file was not a MIM file.

User Action: Rebuild the file without using MIB's /BS option, or use a MIM file. Then try loading the file again.

?PASDBG-E-BRINDATA, Cannot set BREAKPOINT in data

Explanation: An attempt was made to set a breakpoint or tracepoint in a data area or on a variable.

User Action: Try the SET BREAK or SET TRACE operation again, setting the breakpoint or tracepoint on a statement or instruction.

?PASDBG-E-BRINDSM, Cannot set breakpoints in DSM

Explanation: Setting a breakpoint or tracepoint in the debugger service module (DSM) is illegal.

User Action: Do not set a breakpoint or tracepoint in the DSM.

?PASDBG-E-COMPLEX, Command is too complex

Explanation: A command was used that is too long or too complex.

User Action: Use a smaller command or examine the entire substructure.

?PASDBG-E-ERRBOT, Read error on "TDBOTU/M/C.BOT"

Explanation: A device error in accessing the TDBOTU/M/C bootstrap occurred during the target LOAD operation.

User Action: Try the LOAD operation again, using a new copy of TDBOTU.BOT, TDBOTM.BOT, or TDBOTC.BOT.

?PASDBG-E-ERRMIM, Error on MIM file access or bad terminal driver

Explanation: A device error in reading the specified memory image (MIM) file occurred during the target LOAD operation.

User Action: Try the LOAD operation again.

Explanation: The terminal driver installed in the memory image was incorrectly configured to use the control status register (CSR) 177560, which is reserved for PASDBG.

User Action: Rebuild the kernel and device drivers, using a copy of the prefix file TTPFX.MAC that does not use CSR 177560.

Explanation: The MIM file was very small, containing only a kernel or a kernel with a small program.

User Action: Ignore the message.

?PASDBG-E-EXTSYM, Variable external to current scope

Explanation: The variable being examined is defined as EXTERNAL to the module in which scope is set.

User Action: Set scope to the module in which the variable is defined as GLOBAL.

?PASDBG-E-HLPERR, I/O error in reading the help file

Explanation: An I/O error was caused by a corrupted file and/or disk.

User Action: Restore the file from the distribution kit. If the error occurs again, try building another system disk.

?PASDBG-E-HLPMAX, Too many help parameters

Explanation: The HELP command was invoked with more than 10 parameters.

User Action: Try the HELP command again, using fewer than 10 parameters.

?PASDBG-E-ILLDEPR, Illegal register for deposit

Explanation: A register that is out of range was specified in a DEPOSIT or an EXAMINE command.

User Action: Try the command again, specifying a register in the range of 0 to 5 for DEPOSIT or 0 to 7 for EXAMINE.

?PASDBG-E-ILLLINE, Illegal line in window

Explanation: The user attempted to use an invalid window line.

User Action: Check command, fix, and reissue.

?PASDBG-E-ILLTYPE, Illegal data type

Explanation: An attempt was made to change the value of a variable with a value of another type.

User Action: Try the command again, depositing a value of the correct type.

?PASDBG-E-ILLWIND, Illegal window value

Explanation: An attempt was made to manipulate a window in a way that is not allowed—for example, by trying to write to a nonexistent window.

User Action: Read the section in the *PASDBG User's Guide* on creating, deleting, or using windows, and enter a valid command.

?PASDBG-E-LABNDF, Label not defined in current scope

Explanation: The label specified was not found in the current scope.

User Action: Try the command again, using the correct label number, or use the SET SCOPE command to change the scope to include the procedure that contains the label definition.

?PASDBG-E-LOGOPEN, Log file already open

Explanation: An attempt was made to open two log files simultaneously.

User Action: Close the current log file before opening another.

?PASDBG-E-NOANS DSM does not respond; target corrupt?

Explanation: After the target was loaded, PASDBG interrogated the debugger service module (DSM) and has received no answer.

User Action: Either the target software has been corrupted by the user program or the communication hardware between the host and target is defective. Use the INITIALIZE command to check the status of the DSM and the communication line.

?PASDBG-E-NOCHAN, No free channels for file open

Explanation: Too many files have been opened at once—for example, memory image (MIM), debug (DBG), and indirect command files.

User Action: Close some files.

?PASDBG-E-NOCOMM, No target communication (check power and cables)

Explanation: The target system did not halt and enter console octal debugging technique (ODT) in response to the host's simulated break signal.

User Action: Check that the target is set up as described in the MicroPower/Pascal installation guide for your host system (target power is on, cables and module jumpers are properly installed, baud rates between host and target match, target is configured to respond to break by entering console ODT).

?PASDBG-E-NOCURP, No process active

Explanation: No process was set, but a command that requires a process to be set was issued.

User Action: Use the SET PROCESS command to set the appropriate process; then try the command again.

?PASDBG-E-NOFILE, Cannot open file AAAAAA

Explanation: An attempt was made to read a file that is not on the system.

User Action: Check for a typing error in the command line and verify that the correct device name, file name, and file type were specified.

Explanation: An attempt was made to create a log file on a write-protected device.

User Action: Unprotect the device or put the log file on a different device.

Explanation: An attempt was made to create a log file on a device with insufficient free space.

User Action: Ensure that sufficient free space is on the device for the log file.

Explanation: An attempt was made to read or write to a file for which you do not have the appropriate access privileges.

User Action: Change the protection on the file, or specify a file name with the appropriate access privileges.

?PASDBG-E-NOFREE, No free entries in table

Explanation: Too many active watchpoints or breakpoints and tracepoints have been specified.

User Action: Cancel some unused breakpoints, tracepoints, or watchpoints. Since breaks and traces come from the same table, canceling one can make room for the other. Also, some watchpoints use more than one table slot (real numbers use two slots).

?PASDBG-E-NOHALT, Target could not be stopped, target communication failure

Explanation: The target code has been corrupted.

User Action: Reload the memory image (MIM) file into the target.

?PASDBG-E-NOHEAP, No heap found

Explanation: No heap was found in the process specified in the SHOW HEAP command.

User Action: Reissue the SHOW HEAP command, specifying the correct process.

?PASDBG-E-NOHELP, Cannot find help file PASDBG.HLP

Explanation: The PASDBG.HLP file is not located on the system device.

User Action: Copy PASDBG.HLP from your distribution kit to the device and directory in which you originally installed MicroPower/Pascal, and issue the HELP command again.

?PASDBG-E-NOISD, No symbol file

Explanation: The LOAD or LOAD/SYMBOL command was issued, but the debug (DBG) file was not found.

User Action: Check for typing errors in the command line. If no DBG file exists, rebuild the application, specifying the DBG file as well as the memory image (MIM) file.

?PASDBG-E-NOMOD, Module not found AAAAAA

Explanation: The SET PROGRAM command was issued, but the module name specified was not found in the debug (DBG) symbol table file.

User Action: Check for typing errors in the command line. If the module is not included in the DBG file, rebuild it to include the module.

?PASDBG-E-NOPFP, Procedure/Function/Process not found AAAAAA

Explanation: Routine AAAAAA was not found in the specified scope.

User Action: Specify the correct routine name or scope path to the routine.

?PASDBG-E-NOPROC, No such process

Explanation: The process specified was not found on the target system. If the process is static, it may have been deleted from the system. If the process is dynamic, it may not have been created.

User Action: Check for typing errors in the command line. Use the correct process name.

?PASDBG-E-NOPROCN, Static process not found:AAAAAA

Explanation: The static process AAAAAA was not found on the target system.

User Action: Check for typing errors in the command line. Use the correct process name.

?PASDBG-E-NOPROG, Program not found:AAAAAA

Explanation: The program AAAAAA was not found on the target system.

User Action: Check for typing errors in the command line. Use the correct process name.

?PASDBG-E-NOSCOPE, No scope set

Explanation: The command issued required the scope to be set.

User Action: Set the scope.

?PASDBG-E-NOSTR, Illegal use of structure reference

Explanation: An attempt was made to use a structure illegally by depositing a series of values.

User Action: Deposit each element of a structure individually.

?PASDBG-E-NOSTRU, No structure found

Explanation: An attempt was made to examine an entire structure, but the structure was not found in the debug (DBG) file.

User Action: Check for typing errors in the command line. If the module that contains the structure is not included in the DBG file, rebuild the file so that it includes the module.

?PASDBG-E-NOSUCHBR, No such BREAK/TRACE/WATCH point

Explanation: An attempt was made to show or cancel a breakpoint, tracepoint, or watchpoint that had not been set, had been previously canceled, or was specified with an incorrect address expression.

User Action: Check for typing errors in the command line.

?PASDBG-E-NOTD, Unable to access communication line, TD

Explanation: Logical device name TD: was not assigned.

User Action: Assign the logical name TD: to the communication line.

Explanation: The line assigned as TD: is allocated to and/or in use by another user.

User Action: Check whether the TD: line is in use by another user.

Explanation: Under VAX/VMS, you do not have read/write access to the line assigned as TD:.

User Action: Change the line protection to allow you read/write access.

?PASDBG-E-NOTERM, No closing quote in literal

Explanation: A literal was used, but the closing single quotation mark (') was omitted. Literal strings must be enclosed in single quotation marks.

User Action: Include the appropriate quotation marks.

?PASDBG-E-NXM, Target memory access error, address, NNNNNN

Explanation: PASDBG attempted to access a nonexistent or unmapped (mapped targets only) target memory.

User Action: Make sure that you used the correct memory address. SET PROCESS to the correct process.

?PASDBG-E-OUTRNGE, Array index out of range

Explanation: The index specified for an array reference was out of the defined subrange.

User Action: Check the command line for typing errors. Specify an array index that is in the correct range.

?PASDBG-E-PRGNSET, No program set

Explanation: No program was set, but a command that requires a program to be set was issued.

User Action: Use the SET PROGRAM command to set the program.

?PASDBG-E-RANGE, Illegal use of range

Explanation: An attempt was made to examine a range of variables. Ranges apply only to statements and addresses.

Ranges of variables can be examined only in MACRO-11 debugging mode. (See the *MicroPower/Pascal Debugger User's Guide* for information on MACRO-11 debugging mode and the EXAMINE command.)

User Action: Enter the SET MODE MACRO command to set PASDBG to MACRO-11 debugging mode. Then examine a range of variables. Then enter the SET MODE PASCAL command to return to Pascal debugging mode.

?PASDBG-E-SCANERR, Command scanner error at or near AAAAAA

Explanation: PASDBG could not interpret the command.

User Action: Correct the syntax of the command.

?PASDBG-E-STMTNDF, Statement not defined in current scope

Explanation: The command issued referred to a statement number that is not defined in the current scope.

User Action: Check for typing errors in the command line or use the SET SCOPE command to set the correct scope.

?PASDBG-E-STRLONG, String too long

Explanation: An attempt was made to deposit a string in a variable, but the string exceeded the length of the variable.

User Action: Use a string no longer than the variable.

?PASDBG-E-SYMNDF, Symbol not defined in current scope

Explanation: The command issued referred to a symbol name that is not defined in the current scope.

User Action: Check for typing errors in the command line or use the SET SCOPE command to set the correct scope.

?PASDBG-E-SYNTAX, Illegal syntax at or near AAAAAA

Explanation: The syntax of the command issued was incorrect.

User Action: Use the correct syntax.

?PASDBG-E-TARHALT, Target halted; PASDBG in uODT mode

Explanation: The target has halted and is now executing console octal debugging technique (ODT) (NNNNNN = PC value for next instruction in target). Target can be forced to halt with the SET ODT command.

User Action: You may use ODT commands, displayed in reverse video on a VT100 or VT200-series terminal as described in the *Microcomputers and Memories* handbook. Type the ODT P command to restart the target, or type CTRL/C to resume the PASDBG operation.

?PASDBG-E-TSSREQ, /TARGET or /SYMBOL required

Explanation: A file name with a type other than MIM or DBG was used with the LOAD command, but neither the /TARGET nor the /SYMBOL option was used. One of these options is required to indicate whether to load the target or the symbol table (STB) file.

User Action: Check for typing errors in the command line and correct the file type, or use the /TARGET or /SYMBOL option.

?PASDBG-E-TWOBPT, Cannot set two breakpoints on the same location

Explanation: An attempt was made to place two breakpoints, two tracepoints, or a breakpoint and tracepoint at the same location.

User Action: You may place only one breakpoint or one tracepoint at a location.

?PASDBG-E-UNDKSYM, KERNEL sym undef:AAAAAA

Explanation: The kernel symbol was not defined in the debug (DBG) file as the command requires. The DBG file was not loaded or was built without the kernel symbols.

User Action: Load the DBG file or rebuild the application so that it includes the kernel internal symbol directory (ISD) records.

?PASDBG-E-WNDCNF, Windows cannot overlap

Explanation: An attempt was made to create a window in a space already allocated by a user-defined window.

User Action: Use the SHOW WINDOW command to note where the windows already are, and then create the window elsewhere.

?PASDBG-E-WNDOTINY, Window 0 too small

Explanation: An attempt was made to make window 0 too small. Window 0 is the default window and must always be at least five lines long.

User Action: Specify a smaller value for the bottom of the window you were trying to create.

?PASDBG-F-BOTVER, Incorrect version of TDBOTU/M.BOT

Explanation: An attempt was made to load a version of the boot file that was not compatible with this version of PASDBG.

User Action: Use the TDBOTU/M.BOT file that came with this version of PASDBG.

?PASDBG-F-NOBRK, Task ...BRK not installed

Explanation: PASDBG is unable to spawn the privileged task ...BRK. The most likely reason is that ...BRK, included in the MicroPower/Pascal kit, has not been installed.

User Action: Ensure that the ...BRK task is installed on your system.

?PASDBG-I-BOOT1, Loading bootstrap

Explanation: PASDBG is beginning to load the primary bootstrap loader program into the target's memory.

User Action: This message indicates normal operation, and no action is necessary.

?PASDBG-I-BOOT2, Loading user image. Please wait...

Explanation: PASDBG has loaded and started the primary bootstrap loader program in the target's memory. The primary bootstrap is now loading the secondary bootstrap, which in turn will load the memory image (MIM) file.

User Action: This message indicates normal operation, and no action is necessary.

?PASDBG-I-KSYNAC, Mapping set; kernel symbols not available

Explanation: Either the SET PROGRAM KERNEL or the SET KERNEL command was entered, but either there are no kernel symbols in the debugger symbol table (DBG) file or there is no DBG file.

User Action: Rebuild the DBG file so that it includes kernel symbols.

See the *MicroPower/Pascal-RSX/VMS System User's Guide* and the *MicroPower/Pascal Debugger User's Guide* for information on debugging a MicroPower/Pascal application with debugger support.

?PASDBG-I-NODSM, No DSM—target not yet loaded

Explanation: The target is not loaded or does not contain the debugger service module (DSM).

User Action: Load the target or rebuild the memory image (MIM) file so that it includes the DSM (DEBUG=YES in the configuration file).

Explanation: If ?PASDBG-E-TARHALT preceded this message, the CONFIG.MAC file specified more RAM than is contained in the target.

User Action: Edit CONFIG.MAC so that RAM is correctly specified, and rebuild the application; or reconfigure target memory to conform to CONFIG.MAC.

?PASDBG-I-NOLOG, No log file open

Explanation: The CLOSE command was issued, but no log file was open.

User Action: Use the CLOSE command only if a log file is open.

?PASDBG-I-NONESET, None set

Explanation: PASDBG displays this message when a SHOW BREAK, SHOW TRACE, or SHOW WATCH command is entered and no breakpoints, tracepoints, or watchpoints are set, respectively.

User Action: This message is informational.

?PASDBG-I-PHYMAP, Mapping set to physical

Explanation: Mapping has been set to physical, so subsequent address references are treated as physical addresses.

User Action: This message is informational.

?PASDBG-I-SCPRSET, Scope and process set

Explanation: PASDBG displays this message after a SET PROGRAM command is issued and the module, scope, and process have been set.

User Action: This message is informational.

?PASDBG-I-TLXM, Target loaded exiting to monitor

Explanation: A GO/EXIT or EXIT/GO command caused the target to proceed and exit to monitor level.

User Action: None.

?PASDBG-W-BADVER, MIM file version number incompatible with debugger

Explanation: The version number produced by the compiler and the kernel macros does not match the version number of the debugger.

User Action: Rebuild the (MIM) file, using the corresponding version of MicroPower/Pascal.

Explanation: The memory image (MIM) file was not produced during the same application build as the debugger symbol table (DBG) file.

User Action: Rebuild the entire application to include debugger support.

?PASDBG-W-DATLONG, Data too long, truncated

Explanation: The data you attempted to deposit in a variable was longer than the data type of that variable. For example, an attempt was made to deposit a real number value into an integer variable.

User Action: Check the values and data type of the data and variable in question.

?PASDBG-W-ILLMODE, Illegal use of option—ignored

Explanation: An attempt was made to examine a Pascal variable in a mode that is not valid for that variable.

User Action: Examine the variable location that corresponds to the variable, using any mode option.

?PASDBG-W-NOFRAME, Stack frame not found for AAAAAA

Explanation: The stack frame for a local variable has not been created, because the procedure containing the variable has not been called, the frame does not exist on the current process stack, or the process has not started and therefore does not have a stack. Also, a process in which the variable is not defined could have been set. Local variables are not created and cannot be referenced until the process, procedure, or function is entered.

User Action: Correct the command and set a breakpoint at the first statement of the procedure, function, or process.

?PASDBG-W-NOMODW, Module AAAAAA not found, no module set

Explanation: The command issued referred to a module name that is not in the debug (DBG) file. The program is set, but the module is not.

User Action: Use the SET PROGRAM/MODULE command to set the correct module name.

?PASDBG-W-NOSTACK, No stack frames for process

Explanation: The process has not been started, or the stack frames are not linked together (the /DE option was not used when the program was compiled).

User Action: Make sure that the process has started, or recompile or reassemble the program.

Explanation: An attempt was made to examine a static or a dynamic process stack entry before the process was created or after it terminated. Examples of entries are any variables, attributes, or subprogram parameters declared in the process.

User Action: You may examine entries on the process stack only after the process is invoked and before it terminates. Otherwise, the process stack does not exist.

Explanation: The SET PROCESS command was not issued before a process stack entry was examined (see preceding *Explanation*).

User Action: Issue the SET PROCESS command before examining process stack entries.

?PASDBG-W-ODDADDR, Illegal use of odd address, using word address

Explanation: The command specified an odd address on a word operation.

User Action: Use the /BYTE option if examining or depositing to a virtual byte location.

2.5 RELOC Messages

RLC-F-Address space exceeded

Explanation: The high limit of all program sections exceeded 32K words when all sections were concatenated at the specified boundaries. This error can be caused by use of the /AL, /EX, /QB, /RO, /RW, or /UP options or by using too large a program.

User Action: For an unmapped application, rewrite the program to make it smaller; perform the RELOC operation again, without using the /AL, /EX, /QB, /RO, /RW, or /UP options; or perform the RELOC operation again, using different option values.

For a mapped application, you can recover by using any of the following:

- Rewrite the program to make it smaller; perform the RELOC operation again, without using the /AL, /EX, /QB, /RO, /RW, or /UP options; or perform the RELOC operation again, using different option values.
- Divide the static process into multiple static processes.
- If the target system has J11 mapping support, build the application with data and instruction-space (ID) separation.

RLC-F-Address space exceeded—x-Space

Explanation: If the message indicates an I- (instruction) space error, the sum of all I-space sections exceeds 32K words.

If the message indicates a D- (data) space error, the sum of all D-space sections exceeds 32K words.

This error can be caused by the use of the /AL, /DR, /DW, /EX, /QB, /RO, /RW, or /UP options or by using too large a program.

User Action: You can recover by using either or both of the following:

- Rewrite the program to make it smaller; perform the RELOC operation again, without using the /AL, /DR, /DW, /EX, /QB, /RO, /RW, or /UP options; or specify different option values.
- Divide the process into multiple static processes.

RLC-F-Bad complex relocation

Explanation: A complex relocation string in a relocation directory (RLD) record in the input merged object (MOB) file was found to be invalid.

User Action: Check for typing errors in the command line and verify that the correct file name was specified as input. Recompile or reassemble and run the MERGE operation again to obtain a good MOB file. Try the RELOC operation again. If the error persists, verify that the source code is correct.

RLC-F-Bad GSD

Explanation: An invalid global symbol directory (GSD) exists in the input merged object (MOB) file. The MOB file is probably not in valid object module format.

User Action: Verify that the correct file names were specified as input and check for typing errors in the command line. Recompile or reassemble and run the MERGE operation again to obtain a good MOB file. Then try the RELOC operation again.

RLC-F-Bad ISD

Explanation: An invalid internal symbol directory (ISD) record exists in the input merged object (MOB) file. The MOB file is probably not in valid object module format.

User Action: Check for typing errors in the command line and verify that the correct file names were specified as input. Recompile or reassemble and run the MERGE operation again to obtain a good MOB file. Then try the RELOC operation again. If the error persists, submit a Software Performance Report (SPR).

RLC-F-Bad ISD symbol

Explanation: An error occurred because a global symbol or program section named in an internal symbol directory (ISD) record in the input merged object (MOB) file was not defined in a global symbol directory (GSD) record.

User Action: Recompile or reassemble and run the MERGE operation again to produce a good MOB file. Then try the RELOC operation again. If the error persists, submit a Software Performance Report (SPR).

RLC-F-Bad RLD

Explanation: An invalid relocation directory (RLD) record exists in the input file. The merged object (MOB) file is probably not in valid object module format.

User Action: Check for typing errors in the command line and verify that the correct file name was specified as input. Recompile or reassemble and run the MERGE operation again to produce a good MOB file. Then try the RELOC operation again. If the error persists, check the source code to make sure that all modules contributing to a data program section are word aligned.

RLC-F-Bad RLD symbol—AAAAAA

Explanation: An error occurred because a global symbol or program section named in a relocation record was not defined in a global symbol directory (GSD) record.

User Action: Recompile or reassemble the files and run the MERGE operation again to produce a good MOB file. Then try the RELOC operation again. If the error persists, submit a Software Performance Report (SPR).

RLC-F-Close error on file—filespec

Explanation: A hardware error occurred.

User Action: Check the procedures in Section 1.3 for recovery from hard error conditions.

RLC-F-Command I/O error

Explanation: An error occurred while RELOC was reading the command line.

User Action: Check that the device is on line and try the operation again. If the error persists, check for hardware errors. See Section 1.3 for procedures for recovery from hard error conditions.

RLC-F-Command syntax error

Explanation: The indicated invalid command line contains a syntax error.

User Action: Check for a typing error and enter a legal command line.

RLC-F-Error getting LUN characteristics

Explanation: An error occurred while RELOC was getting the characteristics of the logical unit number (LUN) for either the command input or the map file.

User Action: Try the operation again. If the condition persists, submit a Software Performance Report (SPR).

RLC-F-Hardware memory specification table too fragmented

Explanation: The hardware memory specification table in the input memory image (MIM) file, generated by the configuration file when the kernel was built, exceeds two blocks. The MEMORY macro was invoked more than 168 times in the configuration file.

User Action: Edit the configuration file to create a valid file with fewer than 168 invocations of the MEMORY macro. Rebuild the entire application.

RLC-F-Illegal character in /LS library name

Explanation: A non-Radix-50 character was specified in a library name.

User Action: Examine the command string for errors in syntax, making sure that legal Radix-50 characters are used in the library name.

RLC-F-Illegal character in /xx program section name

Explanation: A non-Radix-50 character was specified in a program section name, with the indicated option.

User Action: Examine the command string for errors in syntax, making sure that legal Radix-50 characters are used in the program section name.

RLC-F-Illegal character in /xx value

Explanation: An illegal character was used in the value supplied for the indicated option.

User Action: Check for typing errors in the command line and ensure that legal Radix-50 characters are used for values. Enter the command line again.

RLC-F-Illegal device—dev spec

Explanation: The device specification exceeds its limit. The maximum number of characters permitted in the device name is 16(decimal) for a VMS device and 6(decimal) for an RSX device.

User Action: Ensure that the device name does not exceed its character limit. Verify that the device is valid for the system in use.

RLC-F-Illegal directory—directory-spec

Explanation: The directory specification exceeds its limit. The maximum number of characters permitted in the directory name is 31(decimal) for a VMS directory and 11(decimal) for an RSX directory.

User Action: Check for a typing error in the command line. Ensure that the directory name does not exceed its character limit.

RLC-F-Illegal file format—filespec

Explanation: The indicated memory image (MIM) file is not of the correct format or is corrupted.

User Action: Rebuild the MIM file. If the error persists, submit a Software Performance Report (SPR).

RLC-F-Illegal file name—filespec

Explanation: The indicated file name is illegal, contains a wildcard (* or %), or is too long.

User Action: Check for a typing error in the command line. Ensure that the command line does not contain wildcards, and that the file name is not longer than nine characters.

RLC-F-Illegal Get Command Line error code

Explanation: A system error occurred.

User Action: Try the operation again. If the condition persists, submit a Software Performance Report (SPR).

RLC-F-Illegal input file format

Explanation: The input merged object (MOB) file was not processed by MERGE before submittal to RELOC.

User Action: Use the MERGE utility program to process the input file. Then try the RELOC operation again.

RLC-F-Illegal option or option value

Explanation: An illegal option or option value was specified in the command line.

User Action: Check for typing errors. Try the operation again, using the correct option and a legal option value. Valid RELOC options are listed in the *MicroPower/Pascal-RSX/VMS System User's Guide*.

RLC-F-Illegal record type in—filespec

Explanation: A formatted binary record in the input merged object (MOB) file had a type not in the range of 1 to 10(octal). The format of the file is probably not valid.

User Action: Verify that the correct file names were specified as input and check for typing errors in the command line. Recompile or reassemble the source; run the MERGE operation again; then try the RELOC operation again.

RLC-F-Illegal reference to supervisor-mode library—AAAAAA

Explanation: A reference was made to the indicated symbol in the supervisor-mode library. The symbol is not the destination of a JSR or a JMP instruction.

User Action: If the error occurred in user MACRO-11 code, check the source file to ensure that all references to supervisor-mode library symbols use only the JSR or JMP instructions. Change any references that do not use either JSR or JMP instructions, and rebuild.

If the error occurred in OTS or compiler code, you should repeat the procedure. If the error persists, submit a Software Performance Report (SPR).

RLC-F-Illegal to specify base for absolute library—AAAAAA

Explanation: A base address was specified for the indicated library, but the library was previously built absolute. The base address cannot be changed, because it was fixed when the library was built.

User Action: Do not specify a base address for the indicated library.

RLC-F-Indirect command syntax error

Explanation: The indirect file specification contains a syntax error.

User Action: Check for a typing error and enter a legal file specification.

RLC-F-Indirect file depth exceeded

Explanation: The maximum permissible indirect file depth (3) has been exceeded.

User Action: Rewrite the command files so that they do not exceed the file depth limit.

RLC-F-Indirect file open error

Explanation: The indirect command file was not found.

User Action: Check for a typing error in the command line. Ensure that the file specification is correct and that the file exists.

RLC-F-Input file not found—filespec

Explanation: The indicated input file was not found on the specified or default device or on the specified or default directory.

User Action: Use the correct file or device specification. Check that the device is ready and that it is mounted.

Explanation: If the indicated file specification is only a period (.) with no name or extension, an error occurred while RELOC was parsing the actual file specification.

User Action: Ensure that the file specification does not contain a dollar sign (\$) or underscore (_) and is not longer than nine characters.

On VMS systems, use a single logical assignment for both the device and the directory on those file specifications that contain device and/or directory specifications. If a file specification contains a specified directory (without a logical for both the device and the directory), any succeeding file specifications with logicals may cause problems.

RLC-F-Insufficient memory

Explanation: Memory was insufficient to accommodate the command, the symbol table, or the resultant output.

User Action: Try the operation again. If the error persists, submit a Software Performance Report (SPR).

RLC-F-Invalid bootstrap for MicroPower/Pascal in—filespec

Explanation: The indicated memory image (MIM) file contains an invalid bootstrap. A previous version of a MicroPower/Pascal bootstrap may have been used.

User Action: Rebuild the MIM file and include a valid MicroPower/Pascal bootstrap file.

RLC-F-Invalid option combination

Explanation: Two or more mutually exclusive options were specified in the command line.

User Action: See the *MicroPower/Pascal-RSX/VMS System User's Guide* for a description of the RELOC options.

RLC-F-Libraries must be reentrant—R/W program section not allowed

Explanation: The library being built had R/W program sections of nonzero length.

User Action: If the error occurred in user code, check the source files, edit the files to make all program sections read-only, and rebuild the library.

If the error occurred in OTS or compiler code, repeat the procedure. If the error persists, submit a Software Performance Report (SPR).

RLC-F-Load address odd

Explanation: An odd address was specified with the /QB or /LS option.

User Action: Try the operation again, specifying an even address.

RLC-F-Mapped MIM file illegal as input file—filespec

Explanation: Input memory image (MIM) files are not permitted when you are building a mapped application.

User Action: If you are building a mapped application, do not specify an input MIM file. If you are building an unmapped application, check for typing errors in the command line. Verify that the file is an unmapped MIM file; then try the operation again.

RLC-F-No value or 0 specified for /xx

Explanation: An option, such as /UP or /EX, that requires a value was specified, but no value was included.

User Action: Try the operation again, including a value on the option.

RLC-F-No memory available for referenced library—AAAAAA

Explanation: This error is for mapped applications only. Not enough mapping segments are available for the indicated referenced shared library.

User Action: Check to see that the total size of the process and all referenced shared libraries does not exceed the limit of 32K words. If that size is greater than 32K words, edit the source files to reduce the size and rebuild the process.

If the 32K-word limit is not exceeded, check for mapping conflicts. Perform the MERGE and RELOC operations again to produce a RELOC map, but do not include the referenced libraries in this build. Examine the RELOC and MIB maps to determine if enough room exists for the process and all the referenced libraries. See if any conflicts exist between the process and any absolute libraries. Repeat the build procedure and include the indicated libraries, specifying new base addresses, as necessary, to avoid conflicts.

RLC-F-Not enough memory for RO segment

Explanation: Not enough free memory is in the input memory image (MIM) file for the read-only (RO) segment needed for the merged object (MOB) file.

User Action: If you specified less memory in the configuration file than is available on the target system, edit the configuration file to make more target memory available to your application. Then rebuild the application. If no more memory is available, increase the amount of target memory or see Section 1.5 for suggestions on how to better use the existing physical target memory.

RLC-F-Not enough memory for RW segment

Explanation: Not enough free memory is in the input memory image (MIM) file for the read-write (RW) segment in the merged object (MOB) file.

User Action: If you specified less memory in the configuration file than is available on the target system, edit the configuration file to make more target memory available to your application. Then rebuild the application. If no more memory is available, increase the amount of target memory or see Section 1.5 for suggestions on how to better use the existing physical target memory.

RLC-F-Odd /xx value specified

Explanation: An odd option value was specified with the indicated option.

User Action: Specify an even option value.

RLC-F-Open failure on file—filespec

Explanation: The indicated file could not be opened. If the indicated file specification contains only a period (.) with no name or extension, an error occurred while RELOC was parsing the actual file specification.

User Action: Check for typing errors in the command line. Ensure that the file specification does not contain a dollar sign (\$) or underscore (_) and is not longer than nine characters.

RLC-F-Process was not merged with library—XXXXXX

Explanation: The indicated referenced library was specified with the /LS option and a base address, but the process does not reference that library.

User Action: Repeat the operation, but do not specify the indicated library.

Explanation: The library's symbol table (STB) file was omitted in the MERGE step.

User Action: Merge again and include the library's STB file. Then try the RELOC operation again.

RLC-F-Read error in—filespec

Explanation: A hardware error occurred while RELOC was reading the indicated input file.

User Action: Check the procedures in Section 1.3 for recovery from hard error conditions.

RLC-F-Request core block allocation error

Explanation: A system error occurred.

User Action: Try the operation again. If the condition persists, submit a Software Performance Report (SPR).

RLC-F-Required input MOB file missing

Explanation: The command line contains no input merged object (MOB) file.

User Action: Check for typing errors in the command line. Enter a command that includes an input MOB file.

RLC-F-Size overflow of section—AAAAAA

Explanation: When the program section load address is added to the section size, the result exceeds 32K words.

User Action: Reduce the size of the program either in this section or elsewhere in the program.

RLC-F-Specified mapped library base not on 4K-word boundary

Explanation: A specified base address for a referenced mapped user-mode library, specified with the /LS option, is not on a 4K-word boundary.

User Action: Specify an address that is on a 4K-word boundary.

RLC-F-Supervisor-mode library data greater than 4K words

Explanation: The combined length of the read-only (RO) data program sections in a supervisor-mode library is greater than 4K words.

User Action: Edit the source files to reduce the size of the data program sections and rebuild.

RLC-F-Symbol table overflow

Explanation: Too many global symbols were used in the program.

User Action: Reduce the number of global symbols. Recompile or reassemble, remerge, and then try the RELOC operation again.

RLC-F-The section .ALST. not found

Explanation: This error message pertains only to ID processes.

The program section .ALST., which contains the static process list element, was not found in the merged object (MOB) file.

User Action: For a Pascal process, edit the source file to include a PROGRAM statement. For a MACRO-11 process, edit the source file and include a Define Static Process (DFSPC\$) macro call.

RLC-F-Too many program sections

Explanation: More than 255(decimal) program sections were specified.

User Action: Reduce the number of program sections. Recompile or reassemble the source files; run the MERGE operation again; then try the RELOC operation again.

RLC-F-Too much memory specified in—filespec

Explanation: The input memory image (MIM) file contains either more than 32K words of physical memory minus the size of the I/O page for unmapped systems or more than 2048K words of memory minus the size of the I/O page for mapped systems.

User Action: Edit the configuration file and rebuild the MIM file.

RLC-F-/UP value not a power of 2

Explanation: The value specified with the /UP option is not a power of 2.

User Action: Specify a value that is a power of 2.

RLC-F-Word relocation error at NNNNNN

Explanation: During concatenation of data program sections, a word reference was moved to an odd byte.

User Action: Place the .EVEN assembler directive at the end of the data program sections to make sure that all word references will be on a word boundary when relocated.

RLC-F-Write error in—filespec

Explanation: A hardware error occurred while RELOC was writing the indicated output file.

User Action: Check the procedures in Section 1.3 for recovery from hard error conditions.

RLC-W-Bad extend section—AAAAAA

Explanation: The indicated program section, specified with the /EX option, was not found in the input file. RELOC continues processing without extending the section.

User Action: Check for typing errors in the section name with the /EX option; use the correct section name.

RLC-W-Byte relocation error at NNNNNN

Explanation: RELOC attempted to relocate byte quantities but failed because the result of the operation was greater than 377(octal). NNNNNN represents the address at which the error occurred. The relocated value is truncated to eight bits, and RELOC processing continues.

User Action: Check the source program to verify that the address in question is a correct expression. Recompile or reassemble the source files; run the MERGE operation again; then try the RELOC operation again.

RLC-W-Complex relocation divide by 0

Explanation: An attempt was made to divide by 0 in a complex relocation string. A result of 0 is returned, and RELOC continues processing.

User Action: Check the logic in the expression string of the program.

RLC-W-Conflicting section attributes in AAAAAA

Explanation: The program section was defined with attributes different from those of previous definitions in the file. The attributes of the first definition are used, and RELOC processing continues. This problem should be detected by MERGE.

User Action: Check the source program and use the desired section attributes for the program section. Recompile or reassemble the source files; run the MERGE operation again; then try the RELOC operation again.

RLC-W-Illegal virtual section

Explanation: A virtual section was specified in the input file. MicroPower/Pascal does not support virtual sections. The section is ignored, and RELOC processing continues.

User Action: Do not use virtual sections.

RLC-W-Multiple definition of AAAAAA

Explanation: The indicated symbol is defined twice. The first definition is used, and RELOC processing continues. This problem should be detected by MERGE.

User Action: Check for typing errors in the command line and verify that the correct file name was specified as input. Recompile or reassemble the source files; run the MERGE operation again; then try the RELOC operation again.

RLC-W-/QB section not found—AAAAAA

Explanation: The indicated section, specified with the /QB option, was not found in the input merged object (MOB) file. RELOC processing continues and ignores the start address for the indicated section.

User Action: Check for typing errors in the section name. Check the source to make sure that the section is defined. Specify the correct section name.

RLC-W-Round section not found

Explanation: The program section name, specified with the /UP option, was not found in the symbol table. RELOC processing continues with no round-up action.

User Action: Check the source to make sure that the section is defined. Specify the correct section name.

RLC-W-Specified section start too low, ignored—AAAAAA

Explanation: The load address specified for the indicated section was smaller than the combined size of the sections that came before it. The specified start address is ignored, and RELOC processing continues.

User Action: Leave the relocation as is, or try the operation with an appropriate start address.

RLC-W-Text located in ASECT

Explanation: An attempt was made to place code or data in the ASECT. MicroPower/Pascal does not support this operation. The code or data is ignored.

User Action: The ASECT is an ABS p-sect, and hence no code or data can be placed in it. Place the code or data in a REL p-sect.

If offsets are defined by using only .BLKB or .BLKW directives in the ASECT, they work correctly.

RLC-W-Text located in "blank" program section

Explanation: The blank program section has a nonzero length.

User Action: The blank program section is the default program section for the MACRO-11 assembler, which is a read/write section. The text may therefore not be placed in the memory image (MIM) file and hence may not be loaded when the MIM file is loaded.

If the data belongs in a R/W section, you must initialize the data at run-time.

If the data is supposed to be in a read-only section, ensure that you have used the proper, supplied macro or the appropriate MACRO-11 .PSECT declaration to declare a read-only section.

RLC-W-Undefined globals:

Explanation: The globals listed at the terminal and in the memory map, when requested, were undefined. This problem should be detected by MERGE.

User Action: Check for typing errors in the source program. Verify that all necessary object modules are indicated in the command line or are in the specified libraries.

Chapter 3

Language Messages

This chapter describes the command line, compile-time, and compiler malfunction error messages for the MicroPower/Pascal language.

3.1 Pascal Command Line Errors

?PASCAL-F--Cannot specify both object and listing file with /FI option

Explanation: The /FI option allows either an object file or a listing file to be specified.

User Action: To obtain both an object file and a listing file, invoke the compiler separately for each file.

?PASCAL-F--/CH option requires value

Explanation: The /CH option was specified without a checking type.

User Action: See Chapter 8 of the *MicroPower/Pascal-RSX/VMS System User's Guide* for a list of checking types.

?PASCAL-F--Illegal value on /CH option

Explanation: An unrecognized checking type was specified for the check option.

User Action: See Chapter 8 of the *MicroPower/Pascal-RSX/VMS System User's Guide* for information on checking types.

?PASCAL-F--Illegal value on /IN option

Explanation: The code type specified is not a valid type abbreviation.

User Action: See Chapter 8 of the *MicroPower/Pascal-RSX/VMS System User's Guide* for a list of code types and their abbreviations.

?PASCAL-F-/IN option requires value

Explanation: The output code option was specified without a code type.

User Action: See Chapter 8 of the *MicroPower/Pascal-RSX/VMS System User's Guide* for a list of code type choices.

3.2 Compile-Time Pascal Errors

1 Syntax: ";" expected

Explanation: A new statement was started before the previous one was properly ended with a semicolon.

User Action: Insert a semicolon at the end of the statement.

2 Syntax: "," expected

Explanation: A comma must be used to separate multiple array indexes and multiple WITH object variables.

User Action: Insert a comma between array indexes or between WITH object variables.

3 Syntax: ":" expected

Explanation: A colon must be used to separate a variable name from a type identifier.

User Action: Insert a colon between the variable name and the type identifier.

4 Syntax: ":=" expected

Explanation: The assignment statement syntax requires the assignment operator.

User Action: Insert the assignment operator between the variable name and the expression.

5 Syntax: ")" expected

Explanation: The expression must be enclosed in parentheses.

User Action: Check the source code for matching parentheses.

6 Syntax: "]" expected

Explanation: Array variables and array declarations must be enclosed in brackets.

User Action: Check the source code for matching brackets.

7 Syntax: "=" expected

Explanation: An equal sign must be used to separate a constant identifier from a constant value or to separate a type identifier from a type definition.

User Action: Insert an equal sign between the constant identifier and the constant or between the type identifier and the type definition.

8 Syntax: "[" expected

Explanation: Array variables and array declarations must be enclosed in brackets.

User Action: Check the source code for matching brackets.

9 Syntax: ".." expected

Explanation: The .. symbol must be used between the endpoints of a user-defined subrange.

User Action: Insert the symbol .. between the endpoints of the subrange.

10 Syntax: "(" expected

Explanation: The expression must be enclosed in parentheses.

User Action: Check the source code for matching parentheses.

11 Syntax: "\"" expected

Explanation: String literals must be enclosed in quotation marks.

User Action: Check the source code for matching quotation marks.

12 Syntax: ";" expected after procedure body

Explanation: A semicolon must be used following the END for a procedure.

User Action: Insert a semicolon at the end of the procedure.

13 Syntax: "." expected after main program body

Explanation: A period (.) must follow the END statement for the main program body.

User Action: Use a period, not a semicolon.

14 Syntax: "BEGIN" expected

Explanation: The delimiter BEGIN was not found at the beginning of a compound statement, routine, or program.

User Action: Check the source code for matching BEGIN/END pairs.

15 Syntax: "END" expected

Explanation: The delimiter END was not found at the end of a compound statement, routine, or program.

User Action: Check the source code for matching BEGIN/END pairs.

16 Syntax: "UNTIL" expected

Explanation: No UNTIL was found at the end of a REPEAT statement sequence.

User Action: Check the source code for matching REPEAT/UNTIL pairs.

17 Syntax: "THEN" expected

Explanation: The THEN symbol was omitted from an IF/THEN statement sequence. A THEN clause should follow the conditional expression.

User Action: Check for a syntax error in the expression.

18 Syntax: "OF" expected

Explanation: CASE statements and array and set declarations require the reserved word OF.

User Action: Insert the reserved word OF after the case selector or before the base type.

19 Syntax: "DO" expected

Explanation: The reserved word DO is expected after the Boolean expression in a WHILE statement or the final value in a FOR statement.

User Action: Insert the reserved word DO after the Boolean expression or after the final value.

20 Syntax: "TO" or "DOWNT0" expected

Explanation: The upper and lower bounds of a FOR statement must be separated by TO or DOWNT0.

User Action: Check for a syntax error in the initial expression.

21 Syntax: "ARRAY" expected

Explanation: Begin an array declaration with the reserved word ARRAY.

User Action: Insert the reserved word ARRAY at the beginning of an array declaration.

22 Syntax: "PROGRAM" or "MODULE" expected

Explanation: A Pascal source must start with a PROGRAM or a MODULE declaration.

User Action: Begin a program or a module with the appropriate reserved word.

23 Syntax: File variable expected

Explanation: I/O statements for files other than INPUT or OUTPUT require a file variable.

User Action: Rewrite the statement so that it contains a file variable.

24 Syntax: Identifier expected

Explanation: The indicated statement requires an identifier.

User Action: Rewrite the statement so that it contains the appropriate identifier.

25 Syntax: Type name expected

Explanation: The type of a procedure or function parameter must be a type name or a conformant array schema.

User Action: Rewrite the parameter list so that it contains a type name or a conformant array schema.

26 Syntax: Binary operator expected

Explanation: The indicated expression does not contain the correct number of operands in relation to the operators used.

User Action: Rewrite the expression so that it contains the appropriate number of operands.

27 Syntax: Operand expected

Explanation: The indicated expression does not contain the correct number of operands in relation to the operators used.

User Action: Rewrite the expression so that it contains the appropriate number of operands.

28 Syntax: Integer label expected

Explanation: The target of a GOTO statement is not a valid label.

User Action: Rewrite the statement so that it contains a legal label.

29 Syntax: Variable of type RECORD expected

Explanation: An attempt was made to specify the field of a variable that is not a record.

User Action: Check the variable declaration.

30 Syntax: Variable of type ARRAY expected

Explanation: An attempt was made to subscript a variable that is not an array.

User Action: Check the variable declaration.

31 Syntax: Variable of type PACKED ARRAY OF CHAR expected

Explanation: The indicated statement requires a variable of type PACKED ARRAY OF CHAR.

User Action: Rewrite the statement so that it contains a variable of type PACKED ARRAY OF CHAR.

32 Syntax: String constant expected

Explanation: The indicated statement requires a string constant.

User Action: Rewrite the statement so that it contains a string constant.

33 Syntax: File variable or pointer variable expected

Explanation: The symbol "" was seen after a variable that is not a pointer or a file.

User Action: Check for a syntax error in the expression.

34 Syntax: Array of characters expected

Explanation: The indicated statement requires a variable of type ARRAY OF CHAR.

User Action: Rewrite the statement so that it contains a variable of type ARRAY OF CHAR.

35 Syntax: Pointer variable expected

Explanation: The NEW and DISPOSE routines require a field variable when they use tag fields.

User Action: Rewrite the statement so that it contains a pointer variable.

36 Syntax: Field variable expected for NEW

Explanation: The NEW and DISPOSE routines require a field variable when they use tag fields.

User Action: Rewrite the statement so that it contains a field variable.

37 Syntax: Boolean value expected

Explanation: The expression in an IF, WHILE, or REPEAT statement must be Boolean.

User Action: Rewrite the statement so that it contains a Boolean expression.

38 Syntax: Procedure name expected

Explanation: Procedure declarations require a name following the reserved word PROCEDURE.

User Action: Rewrite the declaration so that it contains a procedure name.

39 Syntax: Function name expected

Explanation: Function declarations require a name following the reserved word FUNCTION.

User Action: Rewrite the declaration so that it contains a function name.

40 Syntax: Variable name expected

Explanation: The indicated statement requires a variable.

User Action: Rewrite the statement so that it contains the appropriate variable.

41 Syntax: Record identifier expected

Explanation: The WITH statement requires a record.

User Action: Rewrite the statement so that it contains a record identifier.

42 Syntax: Identifier expected

Explanation: The indicated statement requires an identifier.

User Action: Rewrite the statement so that it contains the appropriate identifier.

43 Syntax: Integer value expected

Explanation: The indicated statement requires an integer.

User Action: Rewrite the statement so that it contains the appropriate integer value.

44 Syntax: "]" or "," must follow index expression

Explanation: The subscript expression is terminated by a right bracket (]), and array indexes are separated by a comma.

User Action: Check for a syntax error in the index expression.

45 Syntax: Unexpected ")"

Explanation: The symbol ")" was detected where it was not expected.

User Action: Check the source code for matching parentheses.

46 Syntax: Use ";" to separate declarations

Explanation: Consecutive declarations must be separated by a semicolon (;).

User Action: Insert a semicolon between the declarations.

47 Line too long

Explanation: The indicated source line, including expanded tabs, exceeds 160 characters.

User Action: Rewrite the source line so that it contains fewer than 160 characters.

48 Illegal character

Explanation: An illegal character was found at the indicated point. Any character with an ASCII code less than 32(decimal), other than CR, LF, TAB, and FF, is an illegal character.

User Action: Rewrite the source line so that it contains only legal characters.

49 Illegal real number

Explanation: In a real number, at least one digit is required following the decimal point, or an exponent should follow the E in a real constant.

User Action: Rewrite the source line so that it contains a legal real number.

50 Error limit exceeded

Explanation: The program contains too many errors for the compiler to continue.

User Action: Correct the reported errors and recompile.

51 Illegal digit for radix

Explanation: The indicated constant contains a digit or digits not legal for its radix.

User Action: Rewrite the source line so that it contains a legal constant.

52 Illegal integer value

Explanation: Integers must be in the range -32768 to 32767.

User Action: Rewrite the source line so that it contains only legal integers.

53 Illegal value for real number

Explanation: Real constants must be in the range $-2.938736E-39$ to $1.701411E+38$.

User Action: Rewrite the source line so that it contains only legal real numbers.

54 String of length zero

Explanation: A character constant with no characters (for example, "") was detected.

User Action: Rewrite the source line so that it contains a legal string literal.

55 Variable must be cast to type of same size

Explanation: Type casting may not change the size of a variable.

User Action: Rewrite the source line so that it contains a type identifier compatible with the variable. In some instances, you may cast a variable of one size to a type of a different size if you enclose the value in parentheses. See the *MicroPower/Pascal Language Guide* for information about type casting.

56 Illegal use of reserved word

Explanation: A reserved word was used as a constant, a variable, or a type name.

User Action: Rewrite the source line, using an identifier that is not a reserved word.

57 Nesting limit exceeded

Explanation: The combined nesting levels of the program, routines, and WITH and FOR statements cannot exceed 15.

User Action: Restructure the statements so that the nesting limit is not exceeded.

58 Extra END found after block

Explanation: An extra END statement follows a procedure or a function block.

User Action: Check the source file for matching BEGIN/END pairs.

59 Extra procedures found after main program body

Explanation: The main program body must be the last block in a PROGRAM. Any additional procedures should occur before the main program body.

User Action: Resequence program sections so that all procedures precede the main program block.

60 Extra statements found after end of program

Explanation: The program end was followed by additional statements.

User Action: Check the source file for matching BEGIN/END pairs.

61 Extra text found after end of program

Explanation: The program end was followed by additional text.

User Action: Check the source file for matching BEGIN/END pairs.

- 62 Block must begin with LABEL, CONST, TYPE, VAR, PROCEDURE, FUNCTION, PROCESS, or BEGIN**
Explanation: The header of a program or a routine was not followed by LABEL, CONST, TYPE, VAR, PROCEDURE, FUNCTION, PROCESS, or BEGIN.
User Action: Check the nesting and order of procedures and functions.
- 63 Block declarations are incorrectly ordered**
Explanation: In a nested procedure, a VAR declaration was used after a PROCEDURE or a FUNCTION declaration at the same level.
User Action: Resequence the declarations.
- 64 Label is target of illegal GOTO**
Explanation: The indicated label is not within the scope of its definition.
User Action: Place the label definition within the scope that uses the label.
- 65 Block ended incorrectly**
Explanation: An illegal symbol follows a block.
User Action: Check for a syntax error at the end of the block.
- 66 Statement ended incorrectly**
Explanation: An illegal symbol follows a statement.
User Action: Check for a syntax error at the end of the statement.
- 67 Unexpected ELSE clause**
Explanation: The symbol ELSE was detected where it was not expected.
User Action: Check for a misplaced semicolon (;) following the THEN clause of the preceding IF/THEN sequence.
- 68 Illegal CASE label**
Explanation: A specified CASE label was not in the range of the case selector expression, or the same CASE label was used again.
User Action: Rewrite the CASE statement, using only legal case labels.
- 69 ELSE clause not allowed in CASE statement**
Explanation: The default clause in a CASE statement must be preceded by OTHERWISE.
User Action: Check for misuse of an IF statement.
- 70 Illegal label**
Explanation: Alphabetic characters are not valid label characters.
User Action: Rewrite the source line so that it contains a legal label.

71 Procedures do not have a result type

Explanation: A result type was declared for a procedure in the procedure declaration. Procedures, unlike functions, do not return result types.

User Action: Remove the result type from the procedure declaration.

72 Illegal parameter element

Explanation: The specified actual parameter does not comply with the rules for VAR parameters.

User Action: See Chapter 6 of the *MicroPower/Pascal Language Guide* for the rules about VAR parameters.

73 Function identifier is never assigned a value

Explanation: Function values are returned by assigning the resultant value to the name of the function. That was not done in the function.

User Action: Assign a value to the function identifier.

74 Ill-formed expression

Explanation: The indicated expression does not contain the correct number of operands in relation to the operators used.

User Action: Rewrite the expression so that it contains the appropriate number of operands.

75 Illegal constant

Explanation: The indicated structured constant does not match its type or contains a variable.

User Action: Rewrite the source line so that it contains a valid structured constant.

76 Declaration terminated incorrectly

Explanation: An illegal symbol follows a declaration.

User Action: Check for a syntax error at the end of a declaration section.

77 Illegal type syntax

Explanation: The TYPE declaration is incorrect.

User Action: Check for a syntax error in the TYPE declaration.

78 Too many procedures

Explanation: The limit on procedures, functions, and processes in a compilation unit is 110 for RSX, 300 for VMS.

User Action: Restructure the program so that that limit is not exceeded.

79 Too many forward references

Explanation: The number of unresolved forward references cannot exceed 25.

User Action: Restructure the program so that that limit is not exceeded.

80 Too many Identifiers

Explanation: The number of active identifiers cannot exceed 997 for RSX, 3000 for VMS.

User Action: Restructure the program so that that limit is not exceeded.

81 Too many strings or identifiers

Explanation: Too many strings or identifiers were used, or the strings or identifiers were too long.

User Action: Reduce the size or the number of strings, or shorten the identifier names.

82 Illegal directive

Explanation: An illegal compiler directive, a word preceded by %, was found.

User Action: Check for a typing error in the %INCLUDE directive.

83 Too many %INCLUDE levels

Explanation: Only five levels of INCLUDE files may be nested below the primary file.

User Action: Check for a recursive reference to an INCLUDE file.

84 Identifier cannot be redefined or defined after use at this level

Explanation: Once defined at a given level, an identifier cannot be redefined at the same level.

User Action: Rewrite the source line, using a unique identifier.

85 Undefined identifier

Explanation: The indicated identifier was not declared.

User Action: Provide an appropriate declaration for the indicated identifier.

86 Array subscript out of range

Explanation: An array is indexed with a value outside the subscript range declared for the array.

User Action: Rewrite the source line so that it contains a legal array subscript.

87 Integer overflow or division by zero

Explanation: The MOD, DIV, or / operator has a denominator that was evaluated to 0, or the two constant operands of that operator will overflow when the operation is executed.

User Action: Rewrite the expression.

88 Illegal array index

Explanation: The indicated array declaration defines an array too large to be represented in memory.

User Action: Rewrite the array declaration.

89 Value out of range

Explanation: The value of the expression in an assignment statement exceeds the range of the target variable on the left side.

User Action: Rewrite the expression.

90 Illegal subrange

Explanation: The upper limit of a subrange was lower than the lower limit of the subrange, based on the ordinal values of their base type.

User Action: Rewrite the declaration of the subrange.

91 Index must be nonreal scalar type

Explanation: A real number may not be used as an array index.

User Action: Rewrite the source line so that it contains a legal array index.

92 Set must be nonreal scalar type

Explanation: Real numbers may not be used as set elements.

User Action: Rewrite the source line so that it contains a legal set.

93 Illegal set value

Explanation: The indicated set definition contains a value greater than 256.

User Action: Rewrite the source line so that it contains a legal set value.

94 Case label must be nonreal scalar type

Explanation: The case label must be a nonreal scalar type that is the same as the type of the case selector.

User Action: Rewrite the case statement so that it contains a legal case label.

95 Case label type does not match tag field type

Explanation: In a case variant declaration, one of the variant labels was not of the same type as the case label.

User Action: Rewrite the declaration so that it contains legal case variant labels.

96 Tag identifier already used in this record

Explanation: The indicated case variant label was previously defined.

User Action: Rewrite the declaration so that it contains unique case variant labels.

97 Label cannot be redefined at this level

Explanation: The indicated label was previously defined.

User Action: Rewrite the source line, using unique labels.

98 Undeclared label

Explanation: In a GOTO statement, a label was used that was not previously declared.

User Action: Provide a declaration for the indicated label.

99 Multiply-defined label

Explanation: The indicated label was previously defined.

User Action: Rewrite the source line, using unique labels.

100 Undefined tag field

Explanation: One of the extra parameters of the NEW/DISPOSE procedures or SIZE functions did not appear in the variant label list.

User Action: Rewrite the source line so that it contains a legal variant.

101 Undefined label

Explanation: All declared labels must be defined in the procedure or the program in which they are declared.

User Action: Provide a declaration for the indicated label.

102 Undefined forward procedure/function/process

Explanation: The body for a procedure, function, or process that was declared FORWARD was not defined.

User Action: Provide a body for the indicated procedure, function, or process.

103 Undefined forward type

Explanation: A type was declared as a pointer to another type that was not defined in the block being compiled.

User Action: Provide a declaration for the indicated type.

104 Parameter list cannot be duplicated in forward-declared procedure/function/process body

Explanation: The parameter list must be specified at the FORWARD or the EXTERNAL declaration and may not be duplicated at the declaration of the procedure, function, or process body.

User Action: Rewrite the source line so that it does not contain the parameter list.

105 Function result type cannot be duplicated in forward-declared function body

Explanation: A function result type must be specified at the forward declaration and may not be duplicated at the function heading of the body.

User Action: Rewrite the source line so that it does not contain the result type.

106 Multiply-defined forward procedure/function/process name

Explanation: Procedures, functions, and processes may be defined FORWARD only once in a compilation unit.

User Action: Rewrite the program so that FORWARD routines are defined only once.

107 This function was declared as a forward procedure

Explanation: The definitions for the indicated function conflict.

User Action: Check the declarations of the indicated routine.

108 This procedure was declared as a forward function

Explanation: The definitions for the indicated procedure conflict.

User Action: Check the declarations of the indicated routine.

109 External procedures/functions must be defined at outermost level

Explanation: Procedures or functions that are nested inside other procedures or functions cannot be declared EXTERNAL or GLOBAL.

User Action: Remove the attributes or move the routine to the outermost level.

110 Function cannot be applied to an operand of this type

Explanation: The actual parameter to a standard function has an error.

User Action: Rewrite the source line so that it contains a legal parameter.

111 Illegal format syntax

Explanation: The WRITE parameter contains too many colons (:). Only one colon is permitted when you write an integer; only two colons are permitted when you write a real number.

User Action: Rewrite the source line so that it contains a legal format syntax.

112 Illegal format expression

Explanation: An illegal value was detected following a colon in a WRITE statement. Only integers are permitted as values.

User Action: Rewrite the source line so that a legal expression follows the colon.

113 Variables of this type are not allowed in READ statements

Explanation: The indicated variable cannot be read with a READ statement.

User Action: Remove the indicated variable from the READ statement.

114 Variable missing in READ statement

Explanation: A READ statement must contain at least one variable.

User Action: Rewrite the statement so that it contains at least one variable.

115 Variables of this type are not allowed in WRITE statements

Explanation: Sets, records, and structured types—except packed arrays of characters—may not be written directly to a text file.

User Action: Remove the indicated variable from the WRITE statement.

116 Undefined variant label

Explanation: The indicated case variant label was not defined.

User Action: Check the record declaration.

117 Value missing in WRITE statement

Explanation: A WRITE statement must contain at least one value.

User Action: Rewrite the statement so that it contains at least one value.

118 Too many actual parameters

Explanation: The call to the procedure or the function has more actual parameters than the number declared.

User Action: Check the procedure or the function declaration.

119 Too few actual parameters

Explanation: The call to the procedure or the function has fewer actual parameters than the number declared.

User Action: Check the procedure or the function declaration.

120 Actual parameter type does not match formal parameter type

Explanation: The actual parameter is not type compatible with the corresponding formal parameter.

User Action: Check the formal parameter list.

121 Operator cannot be applied to these operand types

Explanation: The indicated operator may not be used with those operands.

User Action: Rewrite the expression.

122 Unary "+" and "-" cannot be applied to set operands

Explanation: The "+" and "-" symbols are arithmetic operators, not set operators.

User Action: Rewrite the expression.

123 Illegal comparison of record, array, file, or pointer values

Explanation: A relational operator can compare only operands that are scalars or packed arrays of characters.

User Action: Rewrite the expression.

124 Cannot assign a real value to an Integer variable

Explanation: A real value must be converted to an integer value before it can be assigned to an integer variable.

User Action: Use the TRUNC or the ROUND functions to convert the real value to an integer value.

125 Operands are of differing or incompatible type

Explanation: The indicated line contains an operation between two operands whose types do not conform to the compatibility rules.

User Action: See the *MicroPower/Pascal Language Guide* for type-compatibility rules.

126 No strict inclusion of sets allowed

Explanation: The IN operator requires an ordinal value on the left and a set on the right. A set on the left is illegal.

User Action: Rewrite the expression.

127 Illegal IN operands

Explanation: The left operand on the IN operator must be of the same type as the elements of the set used as the right operand.

User Action: Rewrite the expression.

128 FOR loop control variable must be declared at this level

Explanation: The FOR loop control variable must be declared in the same procedure, function, or process in which the FOR statement is used.

User Action: Provide a declaration in the proper scope for the FOR loop control variable.

129 Illegal FOR loop control variable

Explanation: Neither a real number nor a long integer may be used as a FOR loop control variable.

User Action: Rewrite the statement so that it contains a legal FOR loop control variable.

130 Expression type is incompatible with FOR index type

Explanation: The initial value type or the final value type in a FOR statement is not compatible with the index variable type.

User Action: Rewrite the statement so that it contains legal values.

131 CASE selection expression must be a nonreal scalar type

Explanation: A real number may not be used as a CASE selector.

User Action: Rewrite the statement so that it contains legal case selectors.

132 CASE label does not match selection expression type

Explanation: The CASE label type is not the same as the selector expression.

User Action: Rewrite the statement so that it contains legal case labels.

133 Index expression type does not match array declaration

Explanation: The type of the expression used to index the array does not match the array index type.

User Action: Check the array declaration.

134 Expressions or packed fields cannot be passed as VAR parameters

Explanation: Procedure or function VAR parameters must be variables. Expression and packed record fields are not allowed.

User Action: See Chapter 6 of the *MicroPower/Pascal Language Guide* for the rules about VAR parameters.

135 Long integer not allowed here

Explanation: LONG_INTEGER variables are not permitted in FOR loops or as array indexes.

User Action: Rewrite the source line, substituting a LONG_INTEGER with an INTEGER type. See the *MicroPower/Pascal Language Guide* for a complete description of the use of LONG_INTEGERs and restrictions on their use.

136 Subrange of long integers not allowed

Explanation: A subrange of LONG_INTEGER is not permitted.

User Action: Rewrite the source line to ensure that it does not include a subrange of type LONG_INTEGER.

137 Assignment operands are of differing or incompatible types

Explanation: The target of an assignment statement must be assignment compatible with the expression being assigned to it.

User Action: See the *MicroPower/Pascal Language Guide* for type-compatibility rules.

138 Cannot pack unstructured types

Explanation: Only record or array types can be packed. Individual variables cannot be declared with the PACKED attribute.

User Action: Remove the PACKED attribute.

139 File cannot contain a file component

Explanation: The type definition of a file cannot contain any file types.

User Action: Rewrite the type definition.

140 Multiply-defined CASE label

Explanation: The case label was already used within the case statement.

User Action: Rewrite the statement so that it contains unique case labels.

141 Illegal function assignment

Explanation: The value assigned to the function result is not compatible with the function result type.

User Action: See the *MicroPower/Pascal Language Guide* for type-compatibility rules.

142 FOR index variable missing

Explanation: A FOR statement must have a control variable.

User Action: Rewrite the statement so that it contains a control variable.

143 Reassignment of FOR loop control variable not allowed

Explanation: The FOR loop control variable may not be modified inside the body of the loop.

User Action: Rewrite the FOR loop so that it does not modify the control variable.

144 Only functions can be called from expressions

Explanation: A procedure was called from within the expression. Procedures, unlike functions, do not return values and may not be called from expressions.

User Action: Rewrite the expression.

145 Assignment to constants not allowed

Explanation: The left side of an assignment must be a variable. You cannot assign values to a constant.

User Action: Rewrite the statement so that it contains a variable.

146 Must assign value before using variable

Explanation: A variable was used before a value was assigned to it.

User Action: Assign a value to the variable.

147 Strings may not cross line boundaries

Explanation: The end of a line was detected before the end of a string literal.

User Action: Terminate the string before the end of the line.

148 Type casting may not increase the size of a variable

Explanation: Type casting may not change the size of a variable.

User Action: Rewrite the source line so that it contains a type identifier compatible with the variable.

149 Type casting must use type identifier

Explanation: The right operand of a type cast (::) must be a type identifier.

User Action: Rewrite the source line so that it contains a type identifier.

150 Positional parameter after nonpositional in parameter list

Explanation: When both positional and nonpositional parameters are in a parameter list, the positional parameters must appear before any nonpositional parameters.

User Action: Reorder the parameter list.

151 Multiply-defined nonpositional parameter

Explanation: The indicated parameter was previously defined in the parameter list.

User Action: Rewrite the source line so that it contains unique parameters.

152 No default value specified for this parameter

Explanation: Formal parameters without a default value must have an actual parameter when the routine is called.

User Action: Rewrite the source line so that it contains an actual parameter.

153 Default values allowed only on subprogram formal parameters

Explanation: Default values cannot be applied to VAR or procedure/function parameters.

User Action: Rewrite the routine so that your code assigns the value explicitly.

154 Default must be either external or declared at program level

Explanation: The specified default value does not comply with the rules for default values.

User Action: See the *MicroPower/Pascal Language Guide* for rules on default values.

155 Incompatible attributes

Explanation: The indicated line contains attributes having conflicting meanings.

User Action: Rewrite the source line so that it contains compatible attributes.

156 The POS and BIT attributes may be used only in packed records

Explanation: The POS and BIT attributes may not be used in a record that is not declared PACKED.

User Action: Rewrite the declaration so that it contains the reserved word PACKED.

157 POS value conflicts with alignment requirements

Explanation: The specified use of the POS attribute does not comply with the rules for its use.

User Action: See the *MicroPower/Pascal Language Guide* for rules on the use of the POS attribute.

158 POS and AT locations can refer to only one variable or field name

Explanation: The specified use of the POS and AT attributes does not comply with the rules for their use.

User Action: See the *MicroPower/Pascal Language Guide* for rules on the use of the POS and AT attributes.

159 AT attribute not allowed here

Explanation: The AT attribute may be used only at the outermost level.

User Action: Restructure the program so that it contains the AT attribute at the outermost level.

160 Unrecognized or illegal attribute

Explanation: The attribute is illegal or is not allowed in that context.

User Action: Rewrite the source line so that it contains a legal attribute.

161 Identifier can be declared GLOBAL or EXTERNAL only at program (top) level

Explanation: The GLOBAL and EXTERNAL attributes may be used only at the outermost level.

User Action: Restructure the program so that GLOBAL and EXTERNAL identifiers occur at the top level.

162 Illegal reference to a WRITEONLY data item

Explanation: A read access was attempted on an item declared with a WRITEONLY attribute.

User Action: Rewrite the source line so that it uses the WRITEONLY attribute legally.

163 Illegal reference to a READONLY data item

Explanation: A write access was attempted on an item declared with a READONLY attribute.

User Action: Rewrite the source line so that it uses the READONLY attribute legally.

164 Unknown formal parameter

Explanation: The indicated actual parameter has no corresponding formal parameter.

User Action: Check the parameter list and correct the source program.

165 Attributes for PROCESSES are not allowed on PROCEDURES and FUNCTIONS

Explanation: Attributes may be applied only to processes.

User Action: Remove the attributes from the procedure or the function.

166 TERMINATE attribute legal only on procedures at first level within a PROCESS

Explanation: The TERMINATE attribute was detected on a procedure that is nested “too deep” inside a process.

User Action: Restructure the program so that it contains the TERMINATE procedure at the correct nesting level.

167 An item of this type will not fit in the given size

Explanation: When you use the BIT, BYTE, and WORD attributes, the type of the variable must be smaller than or equal to the size indicated by the chosen attribute.

User Action: Rewrite the source line so that it uses the BIT, BYTE, and WORD attributes legally.

168 INITIALIZE procedures must be declared at outermost level

Explanation: Procedures with the INITIALIZE attribute may not be nested within other procedures.

User Action: Move the procedure with the INITIALIZE attribute to the outermost level.

169 Nonpositional formal parameter not found

Explanation: An actual parameter was specified, using the nonpositional syntax, for an undefined formal parameter.

User Action: Check the procedure/function declaration.

170 Unsupported runtime environment

Explanation: An undefined value was specified for the SYSTEM attribute. “MICROPOWER” is the only valid value.

User Action: Rewrite the source line so that it contains the value “MICROPOWER” for the SYSTEM attribute.

171 This function meaningful only as a WRITE parameter

Explanation: The BIN, OCT, and HEX functions are permitted only in a WRITE statement.

User Action: Rewrite the source line so that the BIN, OCT, and HEX functions are used legally.

172 Fields of a record must have increasing offsets

Explanation: When you use the POS attribute, the values for consecutive fields must have increasing values.

User Action: Rewrite the record declaration so that it contains increasing values for consecutive POS attributes.

173 Parameters not allowed on INITIALIZE procedures

Explanation: A procedure with the INITIALIZE attribute may not have any parameters.

User Action: Rewrite the INITIALIZE procedure without parameters.

174 External aliasing not allowed on variable lists

Explanation: If a 6-character build-time name is specified with the EXTERNAL or the GLOBAL attribute, the identifier list must contain only one element.

User Action: Rewrite the source line so that it contains only one 6-character build-time name.

175 Conformant arrays are restricted to one parameter

Explanation: Conformant arrays are used to declare a single parameter and may not contain an identifier list.

User Action: Reduce the number of parameters in the array declaration.

176 Packed conformant arrays may be only one dimension of CHAR

Explanation: Packed conformant arrays may be only of type CHAR.

User Action: Rewrite the source line so that it contains a legal conformant array.

177 I/O not legal from within an INITIALIZE procedure

Explanation: No input or output is permitted from an INITIALIZE procedure.

User Action: Rewrite the INITIALIZE procedure so that it does not contain any I/O statements.

178 Type identifier not allowed here

Explanation: The indicated structured constant contains a misplaced type identifier.

User Action: Rewrite the source line so that it contains a legal structured constant.

179 Files must be passed as VAR parameters

Explanation: A file must not be passed as a value parameter.

User Action: Rewrite the source line so that it passes the file as a VAR parameter.

180 READLN, WRITELN, and PAGE may be applied only to TEXT files

Explanation: The predefined routines READLN, WRITELN, and PAGE may be used only on files of type TEXT.

User Action: Use the PUT or the GET procedure on files that are not of type TEXT.

181 ":" not allowed here

Explanation: Declarations may not contain attributes on the left side of the colon.

User Action: Rewrite the source line so that it contains attributes only on the right side of the colon.

182 /* ... */ comments not allowed

Explanation: Comment delimiters permitted are (* *) and { }.

User Action: Substitute a legal form of comment delimiters.

183 Operand stack overflow; expression too complex

Explanation: During evaluation of the indicated expression, an internal compiler stack overflowed.

User Action: Rewrite the expression as several simpler expressions.

184 DATA_SPACE must be larger than STACK_SIZE

Explanation: The value for the DATA_SPACE attribute must be larger than the value for the STACK_SIZE attribute.

User Action: Substitute a larger value for the DATA_SPACE attribute.

185 Illegal set expression

Explanation: The indicated expression contains a set variable that is not compatible with the base type.

User Action: Rewrite the source line so that it contains a legal set expression.

186 Illegal value for PRIORITY attribute

Explanation: Valid values for the PRIORITY attribute are 1 through 255.

User Action: Rewrite the source line so that it contains a legal value for the PRIORITY attribute.

187 Multiply-defined TERMINATE procedure

Explanation: The indicated TERMINATE procedure was already defined.

User Action: Rewrite the program so that it contains unique TERMINATE procedures.

188 Illegal Integer value

Explanation: Integers must be in the range -32768 to 32767.

User Action: Rewrite the source line so that it contains only legal integers.

189 Declarations exceed 65536 bytes/bits for unpacked/packed structures

Explanation: The indicated declaration is too large. Packed structures may not exceed 65536 bits, and unpacked structures may not exceed 65536 bytes.

User Action: Rewrite the source line so that it contains a valid declaration.

190 Nonstandard: Nondecimal constant

191 Nonstandard: Type casting

192 Nonstandard: Default parameter value

193 Nonstandard: Nonpositional parameter

194 Nonstandard: Extended attributes

195 Nonstandard: PROCESS declaration

196 Nonstandard: Extended directive

197 Nonstandard: Structured function result type

198 Internal compiler error—please contact Digital Equipment Corporation

Explanation: An internal compiler error occurred. The error may be the result of overflowing an internal data structure or an internal consistency check.

User Action: See the *MicroPower/Pascal Release Notes*. If additional help is needed, submit a Software Performance Report (SPR).

3.3 Compiler Malfunction Errors

In the unlikely event that a compiler malfunction occurs during compilation, the compiler fails to perform properly and cannot produce object code or macro code. In a few cases, recovery is possible by altering the compilation unit or by providing more disk space for the compiler's output files. Appropriate suggestions are provided for those error messages in which that sort of recovery may be possible. In no case should you use an object file generated by the compiler after it issues one of those messages.

You cannot easily interpret a compiler malfunction error, because its text refers to internal compiler data structures rather than to your program. When you encounter such an error on an RSX host system, usually an internal capacity limit has been exceeded. If you are writing large programs, you should anticipate this possibility and be familiar with Appendix I of the *MicroPower/Pascal Language Guide*. The compiler is not designed to guard against capacity overflow or to give you diagnostics that point to places in source code where compiler capacity was exceeded. Rather, one of several malfunction errors may be displayed that suggests that capacity overflow has taken place. For those errors, as well as for a few others, the suggestions for user action may allow compilation to succeed.

If a malfunction error is displayed for which no recovery suggestion is given or if the recovery suggestion is not relevant to the source program, you should submit a Software Performance Report (SPR). Your program is probably not at fault but results in erroneous compiler execution.

If the system detects a compiler error not covered in the following list, the following message is printed:

?PASCAL-F-Unknown error in MMMMMM NNNNNN

The messages in this category are:

?PASCAL-F-Blockentry pseudo-op missing—MMMMMM

?PASCAL-F-Cache error

?PASCAL-F-Cache error in code generator

?PASCAL-F-Cache overflow

Explanation: Possibly recoverable. Use of the /CH or the /DE command option increases the size of the generated code and may cause compiler limitations to be exceeded.

User Action: Eliminate either the /CH or the /DE option (or both) and recompile.

?PASCAL-F-Context stack overflow

?PASCAL-F-Duplicate DISPOSE

?PASCAL-F-End of file (EOF)

?PASCAL-F-Error in allowmodify

?PASCAL-F-Error in settemp

?PASCAL-F-Error opening code file

Explanation: The disk is off line or powered down.

User Action: Place the disk on line; restore power.

Explanation: Insufficient space exists for the object code file.

User Action: Delete or purge unnecessary files.

?PASCAL-F-Error opening compiler work files

Explanation: The disk is off line or powered down.

User Action: Place the disk on line; restore power.

Explanation: Insufficient space exists for one or more of the three temporary work files.

User Action: Delete or purge unnecessary files.

?PASCAL-F-Error opening listing file

Explanation: The disk is off line or powered down.

User Action: Place the disk on line; restore power.

Explanation: Insufficient space exists for the listing file.

User Action: Delete or purge unnecessary files.

?PASCAL-F-Error searching procedure range list

?PASCAL-F-Errors diagnosed—MMMMMM

?PASCAL-F-File not found—AAAAAA

?PASCAL-F-For stack overflow

?PASCAL-F-Illegal cache page address

?PASCAL-F-Illegal debug symbol—MMMMMM

?PASCAL-F-Illegal debug type—MMMMMM

?PASCAL-F-Illegal debug var type—MMMMMM

?PASCAL-F-Illegal forstack index

?PASCAL-F-Illegal instruction in putmac—MMMMMM
?PASCAL-F-Illegal instruction in putobj—MMMMMM
?PASCAL-F-Illegal keytable index in copylinkverify
?PASCAL-F-Illegal keytable index in keytableverify
?PASCAL-F-Illegal keytable index in lastkeyverify
?PASCAL-F-Illegal keytable index in properaddressverify
?PASCAL-F-Illegal keytable index in tempspverify
?PASCAL-F-Illegal keytable index in travrsverify
?PASCAL-F-Illegal labeltable index
?PASCAL-F-Illegal markstack index
?PASCAL-F-Illegal mode in refexternalvariable
?PASCAL-F-Illegal offset in adjustoffsets—MMMMMM, NNNNNN
?PASCAL-F-Illegal operator—MMMMMM
?PASCAL-F-Illegal parameter name type
?PASCAL-F-Illegal psect index in defforindex—MMMMMM
?PASCAL-F-Illegal psect index in dolevel—MMMMMM
?PASCAL-F-Illegal psect index in fixmac—MMMMMM
?PASCAL-F-Illegal psectindex in putoffset of putobj
?PASCAL-F-Illegal psectindex in putrelative of putobj
?PASCAL-F-Illegal psectindex in writeoffset of putmac
?PASCAL-F-Illegal pseudo-op—MMMMMM
?PASCAL-F-Illegal pseudo-op before blockcode—MMMMMM
?PASCAL-F-Illegal pseudo-op in chkdis
?PASCAL-F-Illegal standardid in sysroutine—MMMMMM
?PASCAL-F-Illegal statement kind—MMMMMM
?PASCAL-F-Illegal tempkey index
?PASCAL-F-Illegal value for L on temptarget—MMMMMM

?PASCAL-F-Illegal value for target on inttempX— M M M M M M

?PASCAL-F-Include file not found—AAAAAA

?PASCAL-F-lsdsym2 pseudo-op missing— M M M M M M

?PASCAL-F-Label pool overflow— M M M M M M

Explanation: Possibly recoverable. May be caused by a program with too many labels or with large procedures.

User Action: Try revising the procedures to use fewer labels, or partition larger procedures into two or more smaller procedures.

?PASCAL-F-NEW exceeded memory

?PASCAL-F-Node pool overflow— M M M M M M

Explanation: Use of the /CH or the /DE command option increases the size of the generated code and may cause compiler limitations to be exceeded.

User Action: Eliminate either the /CH or the /DE option (or both) and recompile.

Explanation: The problem may be caused by a program with large procedures.

User Action: Try partitioning large procedures into two or more smaller procedures.

Explanation: The problem may be caused by a sparse CASE statement.

User Action: Reduce the CASE statement or translate the CASE statement into a logically equivalent IF-THEN-ELSE construct.

Explanation: The problem may be caused by a CASE statement that is too large.

User Action: Check the CASE statement to see if the maximum range of 3000(decimal) was exceeded.

?PASCAL-F-Nonexternal procedure without address— M M M M M M

?PASCAL-F-Not yet implemented— M M M M M M

?PASCAL-F-Operand stack overflow

?PASCAL-F-Out of memory near line— M M M M M M

Explanation: Possibly recoverable. The problem may be caused by a program either with too many labels, type declarations, or default parameters or with a large procedure.

User Action: Reduce the number of labels, type declarations, and/or default parameters. Try revising the procedure containing the indicated line number by coding the algorithm to use structured statements or fewer labels or by partitioning the procedure into two or more smaller procedures. See the *MicroPower/Pascal Language Guide* for further information on compiler limits.

?PASCAL-F-Pascal label array overflow— M M M M M M

?PASCAL-F-Procedure information missing— M M M M M M

?PASCAL-F--Severe error

?PASCAL-F--Stack aligned in newtemp

?PASCAL-F--Stack overflow

Explanation: Possibly recoverable. The problem may be caused by a program either with too many labels, type declarations, or default parameters or with a large procedure.

User Action: Reduce the number of labels, type declarations, and/or default parameters. Try revising the procedure containing the indicated line number by coding the algorithm to use structured statements or fewer labels or by partitioning the procedure into two or more smaller procedures. See the *MicroPower/Pascal Language Guide* for further information on compiler limits.

?PASCAL-F--Temporary key pool overflow

?PASCAL-F--Too many GSD records

?PASCAL-F--Too many keys

Explanation: Use of the /CH or the /DE option increases the size of the generated code and may cause compiler limitations to be exceeded.)

User Action: Eliminate either the /CH or the /DE option (or both) and recompile.

Explanation: The problem may be caused by a program with large procedures.

User Action: Try partitioning large procedures into two or more smaller procedures.

Explanation: Possibly recoverable. An expression may be too complex, especially when the /I:NHD option is selected.

User Action: Try simplifying complex expressions. You may need to introduce a combination of intermediate statements and intermediate results. If an expression is passed as an actual value parameter, assign the expression to a variable and pass the variable as the parameter.

?PASCAL-F--Transfer error

Explanation: Hardware error—bad block, device powered down, device off line, or write locked.

User Action: Correct the error condition and retry.

?PASCAL-F--Trap to 4

?PASCAL-F--Undeleted temporaries

Explanation: Possibly recoverable. An expression may be too complex, especially when the /I:NHD option is selected.

User Action: Try simplifying complex expressions. You may need to introduce a combination of intermediate statements and intermediate results. If an expression is passed as an actual value parameter, assign the expression to a variable and pass the variable as the parameter.

?PASCAL-F--Unexpected dolevel pseudo-op with level 0

?PASCAL-F-Unexpected gblextdecl pseudo-op

?PASCAL-F-Unexpected isdsym1/isdsym2 pseudo-op

?PASCAL-F-With stack overflow

?PASCAL-F-Write past end of file (EOF)

Explanation: Possibly recoverable. Not enough contiguous disk space is available for compiler file allocation.

User Action: Delete or purge unnecessary files.

Chapter 4

Exception Codes

This chapter contains an alphabetized list of exception codes and the corresponding messages that are generated by run-time errors in the application and reported by PASDBG. For additional information on exception codes, see the *MicroPower/Pascal Run-Time Services Manual*.

For each message, the exception code and the message that is displayed by PASDBG are shown in **boldface** type. *Facility*: identifies the type that the messages belong to. Each message is followed by an explanation and possible methods for correcting the problem.

If you continually receive an exception message and are unable to correct the associated problem or if you can correct the problem by a method that is not listed under the possible recovery procedures, please submit a Software Performance Report (SPR).

Note

The messages listed below are reported when an exception occurs in Pascal, OTS, or other nonkernel code.

If an exception occurs while your application is running in the kernel or an ISR, PASDBG prints the message:

FATAL KERNEL vector-number TRAP address

The vector-number printed identifies the vector through which the trap came, which indicates the type of trap. (For information on the cause of the trap, see your target processor hardware manual.) The address printed identifies the location of the instruction after the trapped instruction.

All such exceptions halt the system.

Common causes of fatal kernel traps are:

- Bad argument to a kernel primitive
- Corrupted kernel data base
- Bad configuration file information

ES\$ABO, I/O aborted

Facility: SOFT I/O

Explanation: A read request is stopped by a stop request.

User Action: Initiate the appropriate action for the application. For example, issue another read request.

ES\$ABT, I/O request canceled by user or aborted by remote node

Facility: HARD IO

Explanation: The driver could not complete the request.

User Action: See the *MicroPower/Pascal I/O Services Manual* for information about the specific driver.

ES\$AOV, Already owned vector; cannot connect

Facility: SYSTEM SERVICE

Explanation: A call specifying a previously connected vector was made either to `CONNECT_INTERRUPT` or `CONNECT_SEMAPHORE` or to the `CINT$` primitive.

User Action: Verify that the driver prefix files specify the correct vectors for the target system. If any part of your application uses `CONNECT_INTERRUPT` or `CONNECT_SEMAPHORE` or the `CINT$` primitive, verify that those requests use the correct vector; use the vector only once within a given application.

ES\$ASO, Array subscript out of bounds

Facility: RANGE

Explanation: A reference was made to an array subscript that is not within the bounds of the array declaration.

User Action: Correct the program logic to ensure that a valid array reference is made.

ES\$ATN, Device attention required

Facility: HARD IO

Explanation: Operator attention is required for the device.

User Action: See the *MicroPower/Pascal I/O Services Manual* for information about the specific driver.

ES\$BIV, Illegal Boolean value

Facility: SOFT IO

Explanation: The value is not a valid Boolean.

User Action: Specify a valid Boolean value.

ES\$BOT, Beginning-of-tape (BOT) detected

Facility: HARD IO

Explanation: The beginning-of-tape marker was detected.

User Action: The message may either indicate an error condition or be informational, depending on the logic of your program.

ES\$BPT, User-coded BPT instruction executed or simulated

Facility: BREAKPOINT TRAP

Explanation: A BPT instruction was executed.

User Action: This message is informational if the application uses breakpoint traps, or it may indicate corrupted code.

ES\$BRK, Break trap to vector 140

Facility: EXECUTION

Explanation: Either the break key on the console terminal was pressed, or a BHALT signal occurred on the bus.

User Action: This message is informational and appears only on applications that are executing on either the FALCON or the FALCON-PLUS microcomputer. See the *SBC-11/21 Single-Board Computer User's Guide* or the *SBC-11/21-PLUS Single-Board Computer User's Guide*.

ES\$BUS, Bus error: illegal address, bus timeout; trap to 4

Facility: MEMORY FAULT

Explanation: A time-out error occurred on the bus. If the application was executing on either the KDJ-11A or the KDS-11B microprocessor, an odd address was accessed as a word operand.

If the application was executing on any valid target system, this exception can also indicate that an attempt was made to access nonexistent memory.

User Action: Check for the following: hardware configuration, missing or malfunctioning memory and/or devices, or the memory and CSR specifications in the configuration and driver prefix files that you used to build your application. (Check the configuration and driver prefix files for incorrect configuration parameters.) Also check to see if your application was executing data, your stack was corrupted, or you referenced an invalid pointer.

ES\$CDN, Cannot specify both descriptor and name

Facility: SYSTEM SERVICE

Explanation: In some Pascal system services commands, you cannot specify both a name and a descriptor. For example, when using the SIGNAL procedure, you cannot reference the semaphore by both a descriptor and a name.

User Action: Specify either a name or a descriptor. (See the *MicroPower/Pascal Language Guide* for information about names and descriptors and the particular service involved.)

ES\$CON, Floating-point conversion error

Facility: NUMERIC

Explanation: The floating-point processor detected a conversion error on a conversion operation between integers and floating-point numbers.

User Action: Check that the value being converted is in the range of type INTEGER or LONG_INTEGER.

ES\$CSO, Case selector out of range

Facility: RANGE

Explanation: The value of a case selector had no "path," and an OTHERWISE clause was not present.

User Action: Check the program logic and possibly add an OTHERWISE clause.

ES\$CTL, Controller error

Facility: HARD IO

Explanation: A hardware controller error was detected.

User Action: See the *MicroPower/Pascal I/O Services Manual* for information about the specific driver.

ES\$DAL, Device already allocated

Facility: HARD IO

Explanation: The device has already been opened and is owned by another process.

User Action: See the *MicroPower/Pascal I/O Services Manual* for information about the specific driver.

ES\$DAS, Direct access requested on sequential file

Facility: SOFT IO

Explanation: Direct access was attempted on a file that was opened for sequential access.

User Action: Correct the source code so that it accesses the file sequentially, or open the file for DIRECT access.

ES\$DCF, Device full

Facility: SOFT IO

Explanation: No more blocks are available on the device for data storage.

User Action: Delete one or more files from the disk, or mount a new disk on the drive.

ES\$DDP, Dispose of already disposed pointer

Facility: RESOURCE

Explanation: An attempt was made to do a DISPOSE(..) on a previously disposed pointer.

User Action: Check the program logic. Ensure that the program does not perform a DISPOSE on a previously disposed structure.

ES\$DIO, Directory I/O error

Facility: SOFT IO

Explanation: The ancillary control process (ACP) received an I/O error while trying to perform a directory operation.

User Action: Check that the device is ready—for example, powered up and on line. Check to see that the medium has not been damaged by a head crash or misuse. If the condition persists, submit a Software Performance Report (SPR).

ES\$DNU, Node is unreachable

Facility: SOFT IO

Explanation: An attempt was made to perform a networking operation with a destination node that is not available.

User Action: Perform the operation when the node is available. See the *MicroPower/Pascal I/O Services Manual* for additional information.

ES\$DRF, Directory full

Facility: SOFT IO

Explanation: The directory is full, and no additional files may be added.

User Action: This condition may be corrected by deleting files from the directory, creating a new directory that contains additional segments, or calling the SQUEEZE_DIRECTORY procedure. See the *MicroPower/Pascal Language Guide* for information on creating new directories.

ES\$DRV, Drive error

Facility: HARD IO

Explanation: An error occurred on the drive.

User Action: See the *MicroPower/Pascal I/O Services Manual* for information about the specific driver.

ES\$DVF, Attempt to signal device driver or ACP failed

Facility: SOFT IO

Explanation: An OPEN request failed. Either the ancillary control process (ACP) or the particular device driver is not running.

User Action: Check to see that the ACP or driver process is installed. Rebuild the application so that it includes the ACP and/or the device driver.

Explanation: BUFFER_SIZE specified in OPEN statement is too large.

User Action: Reduce BUFFER_SIZE to a maximum of 7680 bytes for direct-access block replaceable devices and 8128 for other devices. (See the explanation of OPEN in the *MicroPower/Pascal Language Guide* for more information.)

ES\$EMT, EMT instruction executed or simulated

Facility: EMULATOR TRAP

Explanation: An EMT instruction was executed. The low bytes of the codes are user specifiable in the range 0 to 255.

User Action: If emulator traps are used by the application, this message is informational. If not, this message may indicate corrupted code.

ES\$EOF, End of file encountered

Facility: SOFT IO

Explanation: An end-of-file condition was encountered.

User Action: Depending on the logic of your application, this message is informational or indicates an error condition.

ES\$EPN, Exception procedure not defined

Facility: SYSTEM SERVICE

Explanation: A REVERT was performed on an exception procedure that is not currently ESTABLISHED.

User Action: Check the program logic to ensure that the program does not make multiple calls to REVERT.

ES\$EVL, End of volume

Facility: HARD IO

Explanation: The end-of-tape (EVL) marker was encountered.

User Action: This message may either indicate an error condition or be informational, depending on the logic of your program.

ES\$FAO, File variable already open

Facility: SOFT IO

Explanation: The file variable is already open.

User Action: Check the program to ensure that the file is not opened more than once before an intervening CLOSE is performed.

ES\$FDZ, Floating-point division by 0

Facility: NUMERIC

Explanation: The value 0 was used as a divisor in a real-number expression.

User Action: Use a value other than 0 as a divisor.

ES\$FIV, Illegal floating-point value

Facility: SOFT IO

Explanation: The value of the floating-point number is not valid.

User Action: The floating-point value must have a magnitude in the range 2.938736×10^{-39} to $1.701411 \times 10^{+38}$.

ES\$FNF, File not found

Facility: SOFT IO

Explanation: An attempt was made to open a nonexistent file.

User Action: Check your code to ensure that an existing file is opened with the HISTORY := OLD parameter or that a new file is created and opened with the HISTORY := NEW parameter.

ES\$FNO, File variable not open

Facility: SOFT IO

Explanation: An attempt was made to access a file variable that had not been opened.

User Action: Open the file before accessing it.

ES\$FNR, File variable not reset

Facility: SOFT IO

Explanation: A GET or a READ was attempted on a file variable that was not previously RESET.

User Action: Perform a RESET before issuing a GET or a READ.

ES\$FNW, File variable not rewritten

Facility: SOFT IO

Explanation: A call to PUT or WRITE was attempted on a file variable on which a REWRITE was not performed, or the UPDATE option of the ACCESS_METHOD parameter to OPEN was not specified.

User Action: Perform a REWRITE or specify ACCESS_METHOD := UPDATE in the OPEN statement, whichever is appropriate.

ES\$FOP, Floating-point opcode error, trap to vector 244

Facility: ILLEGAL OPERATION

Explanation: The floating-point processor detected an invalid op code.

User Action: Ensure that the program has not accidentally modified itself.

ES\$FOR, Format error

Facility: HARD IO

Explanation: The disk has a format error.

User Action: The format of the disk is invalid or damaged. Use a disk with the proper format. See the *MicroPower/Pascal System User's Guide* for your host system for information about formatting disks.

ES\$FOV, Floating-point overflow

Facility: NUMERIC

Explanation: The value of a real-number expression was greater than $1.701411 \times 10^{+38}$.

User Action: Check the program logic to ensure that the expression's value is less than $1.701411 \times 10^{+38}$.

ES\$FRM, Framing error

Facility: HARD IO

Explanation: A framing hardware error occurred on a serial line.

User Action: See the *MicroPower/Pascal I/O Services Manual* for information about the specific driver.

ES\$FRO, File is read-only; no write access allowed

Facility: SOFT IO

Explanation: An attempt was made to rewrite a file that was opened with the HISTORY := OLD parameter.

User Action: Check the program logic. Files that are to be rewritten cannot be opened with the HISTORY:=OLD parameter.

ES\$FUN, Floating-point underflow

Facility: NUMERIC

Explanation: The value of a real-number expression was less than 2.938736×10^{-39} .

User Action: Check the program logic to ensure that the expression's value is greater than 2.938736×10^{-39} .

ES\$FVC, File-variable contention error

Facility: SOFT IO

Explanation: Two or more processes within a static process family attempted to access the same file variable at the same time.

User Action: To eliminate this race condition, either use the MUTEX (LOCK, UNLOCK) file exclusion or use semaphores to control access to the file variable.

ES\$IAD, Invalid address; odd or not in user space

Facility: SYSTEM SERVICE

Explanation: An argument to a kernel primitive was odd or not in the invoking process's address space.

User Action: See the *MicroPower/Pascal Run-Time Services Manual* or the *MicroPower/Pascal Language Guide* for information about the particular primitive causing the problem. Then check the argument(s) causing the problem.

ES\$IBN, Invalid block number

Facility: HARD IO

Explanation: An invalid block number on the disk was specified.

User Action: See the *MicroPower/Pascal I/O Services Manual* for information about the specific driver.

ES\$ICD, Invalid driver configuration data

Facility: SOFT IO

Explanation: A specification in the prefix file is incorrect for the particular device.

User Action: See the *MicroPower/Pascal I/O Services Manual* for information about the specific driver.

ES\$IDA, Invalid device address

Facility: HARD IO

Explanation: An invalid address on the disk was specified.

User Action: See the *MicroPower/Pascal I/O Services Manual* for information about the specific driver.

ES\$IDR, Invalid directory format

Facility: SOFT IO

Explanation: The device blocks containing the directory may have been improperly altered, the device medium may have been damaged by a head crash or careless handling, or a directory may not exist on the medium.

User Action: Check for an uninitialized volume. You can optionally replace the medium or create a new directory with the INIT_DIRECTORY procedure. That procedure is part of the INTDIR module that is on the distribution kit.

ES\$IDS, Illegal device specification

Facility: SOFT IO

Explanation: The device specification was illegal or invalid.

User Action: Ensure that the program contains correct device specifications, that the device exists in the target configuration and the appropriate handler is included at application build time, and that the handler has not been terminated.

ES\$IDZ, Integer division by 0

Facility: NUMERIC

Explanation: The value 0 was used as a divisor in an integer expression.

User Action: Use a value other than 0 as a divisor.

ES\$IFN, Invalid function

Facility: SOFT IO

Explanation: A function that is not defined for the ancillary control process (ACP) or device driver was requested.

User Action: See the *MicroPower/Pascal I/O Services Manual* for information about the specific driver.

ES\$IFS, Illegal file specification

Facility: SOFT IO

Explanation: The file specification was illegal or invalid.

User Action: Ensure that the program contains correctly formatted file and device specifications.

ES\$IFW, Illegal field width

Facility: SOFT IO

Explanation: The specified field width parameter in a call to WRITE or WRITELN was not a positive number.

User Action: Use only positive nonzero numbers to specify field width.

ES\$IIV, Illegal integer value

Facility: SOFT IO

Explanation: The value is not a valid integer.

User Action: Values of type INTEGER must be in the correct range (–32768 to 32767) when your program reads an integer or you type an integer at the target’s terminal.

ES\$ILL, Illegal or reserved instruction, trap to vector 10

Facility: ILLEGAL OPERATION

Explanation: An instruction that is illegal for this type of processor was executed.

User Action: Check that the program does not use instruction codes that are invalid for the target processor—for example, building an application using EIS compilation mode for execution on a FALCON or FALCON-PLUS.

ES\$ILV, Illegal long integer value

Facility: SOFT IO

Explanation: The value is not a valid long integer.

User Action: Values of type LONG_INTEGER must be in the correct range (–2147483647 to 2147483647).

ES\$INM, Modulus of a negative integer

Facility: NUMERIC

Explanation: A nonpositive number was used in a modulus—for example, 5 MOD –2.

User Action: A modulus of type INTEGER or LONG_INTEGER must be positive and in the correct range for an INTEGER or LONG_INTEGER, respectively.

ES\$INS, Invalid network specification

Facility: SOFT IO

Explanation: An error in the network file specification was detected; the file specification is invalid.

User Action: Correct the file specification.

ES\$IOV, Integer arithmetic overflow

Facility: NUMERIC

Explanation: An arithmetic overflow occurred during compilation with the CHECK option specified, or the overflow occurred during execution with a target configured NHD.

User Action: Increase the size of the variable.

ES\$IPM, Illegal parameter to a kernel primitive

Facility: SYSTEM SERVICE

Explanation: The specified parameter was not within the bounds of the parameter type.

User Action: Make sure that the correct parameter was specified. See the *MicroPower/Pascal Run-Time Services Manual* or the *MicroPower/Pascal Language Guide* for information about the particular primitive. Then verify the argument(s) causing the problem.

ES\$IPR, Illegal primitive

Facility: SYSTEM SERVICE

Explanation: A valid request was issued from an invalid context.

User Action: Recovery depends on the individual primitive. See the *MicroPower/Pascal Run-Time Services Manual* for information on the specific primitive.

ES\$IRS, Illegal rename specification

Facility: SOFT IO

Explanation: A call to the `RENAME_FILE` procedure specified two different devices.

User Action: Devices must be the same for a rename operation.

ES\$IST, Invalid structure descriptor

Facility: SYSTEM SERVICE

Explanation: The specified structure descriptor was invalid.

User Action: Make sure that the structure descriptor is properly initialized. Make sure that the structure has been created and not subsequently deleted, that the structure descriptor is not corrupted, and that a required device handler was not excluded from the application if the error occurs on a device request.

Note

If a structure has been created with a name, be aware that the name is case sensitive. For example, if your program refers to `STRNAM` but the structure was created with the name `strnam`, this exception will be reported.

ES\$IUP, Illegal use of UPDATE or DIRECT parameter

Facility: SOFT IO

Explanation: The `OPEN` procedure's `UPDATE` or `DIRECT` option may be used only on directory-structured devices.

User Action: Be sure to use these parameters only when opening files on directory-structured devices (disks).

ES\$IVC, Illegal vector address

Facility: SYSTEM SERVICE

Explanation: The specified vector was out of range.

User Action: Be sure that the vector address is correct and in the range V_MIN..V_MAX, as defined by the processor macro in the configuration file. See the *MicroPower/Pascal Run-Time Services Manual* for information on the configuration file.

ES\$IVD, Invalid data

Facility: HARD IO

Explanation: A driver objected to data that was passed as a parameter.

User Action: This error is specific to each driver. See the *MicroPower/Pascal I/O Services Manual* for information about the specific driver.

ES\$IVL, Invalid length specified

Facility: SOFT IO

Explanation: An operation was requested with a length parameter that is invalid for the driver or server.

User Action: See the *MicroPower/Pascal I/O Services Manual* for information on the driver or server.

ES\$IVM, Invalid mode

Facility: HARD IO

Explanation: A valid operation was requested with the driver or server in an improper mode to perform the operation.

User Action: See the *MicroPower/Pascal I/O Services Manual* for information on the driver or server.

ES\$IVP, Invalid parameter

Facility: HARD IO

Explanation: A parameter in the request packet was missing or illegal.

User Action: See the *MicroPower/Pascal I/O Services Manual* for information about the specific driver.

ES\$LDZ, Long integer division by zero

Facility: NUMERIC

Explanation: An attempt was made to divide a variable of type LONG_INTEGER by 0.

User Action: Correct the program logic to ensure that a value other than 0 is used as a divisor.

ES\$LIC, Long integer to integer conversion error

Facility: NUMERIC

Explanation: Too large a LONG_INTEGER variable was used in a conversion to type INTEGER.

User Action: Perform conversions of LONG_INTEGER variables to INTEGER variables only if the LONG_INTEGER variable is in the range -32768 to 32767.

ES\$LNM, Modulus of a negative long integer

Facility: NUMERIC

Explanation: An attempt was made to perform modulo arithmetic with a negative variable of type LONG_INTEGER.

User Action: Do not attempt this type of operation. Perform modulo arithmetic only with unsigned positive or long integers.

ES\$LNP, Log of nonpositive value

Facility: NUMERIC

Explanation: An attempt was made to take the log of a number less than or equal to 0.

User Action: Check the program logic; the log of a number less than or equal to 0 is undefined.

ES\$LNR, Local node has no room for logical link

Facility: RESOURCE

Explanation: An attempt was made to open a network link, but not enough links were specified in the NSP prefix file. For example, a maximum of two links were specified, and a third link was attempted.

User Action: Increase the logical link maximum in the NSP prefix file.

ES\$LOV, Long integer overflow

Facility: NUMERIC

Explanation: The contents of a variable of type LONG_INTEGER increased beyond the value of type LONG_INTEGER.

User Action: Check the source code to see that the contents of the variable do not exceed the value of type LONG_INTEGER.

ES\$LRJ, Link rejected by remote task

Facility: SOFT IO

Explanation: A task link was rejected at the remote node.

User Action: This error is dependent on the remote system. Consult the documentation for the remote-node operating system. This message does not apply and cannot occur if the remote node is a MicroPower/Pascal application.

ES\$LUC, Long integer to unsigned conversion error

Facility: NUMERIC

Explanation: An error occurred during conversion of a variable of type LONG_INTEGER to type UNSIGNED.

User Action: A negative long integer cannot be converted to an unsigned integer. A positive long integer can be converted to an unsigned integer only if the long integer is within the range of an unsigned integer (0 to 65535).

ES\$MDN, Must specify descriptor or name

Facility: SYSTEM SERVICE

Explanation: Either a structure descriptor or a name is required in the call.

User Action: Specify the proper name or descriptor for the operation.

ES\$MMU, Memory management error, trap to vector 250

Facility: MEMORY FAULT

Explanation: A mapped application accessed an invalid virtual address or attempted to write to a page that was defined as read-only.

User Action: Check the application for invalid pointers or for a corrupted stack. Verify that the process was built with the correct mapping type. Verify the program logic if DRAM primitives are in use.

ES\$MPT, Memory parity error, trap to vector 114

Facility: MEMORY FAULT

Explanation: A memory parity error was detected.

User Action: Check memory hardware for malfunctions.

ES\$NFA, No free APR for window mapping

Facility: RESOURCE

Explanation: An attempt was made to create a mapped window, but no PAR was available to map the new window to the process.

User Action: You may use the following techniques to recover from this error. You may unmap an existing window before mapping the new window; or, if the target is a J-11 and you are not using I/D separation, you may consider building your application with I/D separation and/or use supervisor-mode shared libraries in order to increase your virtual address space; or you may reduce the size of the window to be mapped if its length is a multiple of the APR's.

ES\$NFR, No free RAM available

Facility: RESOURCE

Explanation: A device driver attempted to allocate free RAM by using the kernel ALRG\$ primitive, but the memory was not available.

User Action: Ensure that enough free RAM is available to the device driver. See the *MicroPower/Pascal I/O Services Manual* for information about the specific driver.

ES\$NFS, Device not file structured

Facility: SOFT IO

Explanation: An attempt was made to access a file of random organization on a device that does not support random access.

User Action: Ensure that your application accesses files of random organization on devices that support random access.

ES\$NID, No interrupt dispatch block configured for vector

Facility: SYSTEM SERVICE

Explanation: A call was made to the CONNECT_INTERRUPT or CONNECT_SEMAPHORE procedures (CINT\$ primitive), but no interrupt descriptor block (IDB) was established for the specified vector.

User Action: Check the DEVICES macro in the configuration file for the vector in question.

ES\$NIL, Reference of a NIL pointer

Facility: RANGE

Explanation: A reference was made to a pointer with a 0 value.

User Action: Ensure that the program uses pointers correctly.

ES\$NIP, No I/O in progress

Facility: SOFT IO

Explanation: The system cannot stop I/O on a line that has no I/O in progress.

User Action: Make sure that the line has an uncompleted read request before issuing a stop request.

ES\$NLZ, NEW request of length 0

Facility: RESOURCE

Explanation: The NEW procedure was called with a record size of parameter 0.

User Action: Ensure that the program is not attempting to create an empty record—for example, VAR Foo = RECORD END;.

ES\$NMB, Insufficient DATA_SPACE for I/O buffer

Facility: RESOURCE

Explanation: An attempt was made to create a buffer, but not enough space was available for allocation.

User Action: Increase the size of the heap by specifying a larger value for the DATA_SPACE attribute.

ES\$NMC, Insufficient space for operation in RTACP pool

Facility: RESOURCE

Explanation: \$DPLSZ, a parameter in the ACP prefix configuration file, is too small. This parameter specifies the size of the RTACP pool.

User Action: Edit the ACP prefix file to increase the size of \$DPLSZ.

ES\$NMF, Insufficient DATA_SPACE for file variable

Facility: RESOURCE

Explanation: An attempt was made to allocate space from the heap for the data structure describing a file, but insufficient space was available.

User Action: Increase the size of the heap by specifying a larger value for the DATA_SPACE attribute.

ES\$NMK, Insufficient pool space for kernel structure

Facility: RESOURCE

Explanation: An attempt was made to create a process or a structure without enough space in the kernel pool.

User Action: Increase the kernel pool by increasing the size of the STRUCTURES argument in the RESOURCES macro in the configuration file.

ES\$NMP, Insufficient DATA_SPACE for user structure

Facility: RESOURCE

Explanation: The NEW procedure attempted to create a dynamic variable, but insufficient space for this data structure was in the heap.

User Action: Increase the size of the heap by specifying a larger value for the DATA_SPACE attribute.

ES\$NMS, Insufficient DATA_SPACE for process stack

Facility: RESOURCE

Explanation: An attempt was made to create a process, but there was insufficient room for the stack.

User Action: Increase the size of the heap by specifying a larger value for the DATA_SPACE attribute.

ES\$NNS, No Network Service process installed

Facility: RESOURCE

Explanation: An attempt was made to open the network driver, but the driver was not running or not installed (built).

User Action: Ensure that the network driver is built into the application. If the condition persists, submit a Software Performance Report (SPR).

ES\$NOR, Normal or successful completion

Facility: Not applicable

Explanation: Normal or successful completion of an operation. It is returned by the Pascal OTS only when you select the optional STATUS parameter provided with many of the requests.

User Action: None.

ES\$NRF, No reference data present

Facility: SOFT IO

Explanation: A driver was expecting a REF_DATA parameter during a Send operation. Some function that was sent to the driver required the REF_DATA parameter. Either the reference data was not specified, or the value of REF_LENGTH was 0.

User Action: Ensure that you send the REF_DATA parameter, or specify a nonzero value for the REF_LENGTH parameter.

ES\$NXM, Nonexistent or read-only memory

Facility: HARD IO

Explanation: An attempt was made by a driver to read or to write to nonexistent memory or to write to read-only memory.

User Action: Check that read and write operations are performed on valid memory or that write operations are not attempted on read-only memory.

ES\$NXU, Nonexistent unit

Facility: HARD IO

Explanation: A nonexistent unit was specified in a device.

User Action: Ensure that you specify valid unit numbers within a device.

ES\$OFL, Device off line or not mounted

Facility: HARD IO

Explanation: Operator attention is required for the device.

User Action: See the *MicroPower/Pascal I/O Services Manual* for information about the specific driver.

ES\$OVF, Data overflow

Facility: HARD IO

Explanation: The buffer is too small to hold incoming data.

User Action: Increase the size of the input buffer, and see the *MicroPower/Pascal I/O Services Manual* for information about the specific driver.

ES\$OVR, Device overrun

Facility: HARD IO

Explanation: The overflow bit in the device's input register was set. The device wrote new data into that buffer before your application had time to read the previous data.

User Action: This error message usually indicates a performance problem. This error can occur if your application uses high-speed serial lines. The causes of this problem depend on the hardware in use and the nature of the application. See the *MicroPower/Pascal I/O Services Manual* for information about the specific driver.

ES\$PAL, Path to remote task has been lost

Facility: SOFT IO

Explanation: The logical link between two nodes is no longer accessible.

User Action: Close the link; then try the operation again. See the *MicroPower/Pascal I/O Services Manual* for additional information.

ES\$PAR, Parity error

Facility: HARD IO

Explanation: A parity error occurred on an asynchronous serial line.

User Action: Verify that the device is functioning properly or that the correct baud ratio has been specified.

ES\$PCC, Program consistency check

Facility: RANGE

Explanation: This code represents a MicroPower/Pascal internal consistency check.

User Action: Submit a Software Performance Report (SPR).

ES\$PNA, Packet not available to support request

Facility: HARD IO

Explanation: The driver could not get a packet.

User Action: See the *MicroPower/Pascal I/O Services Manual* for information about the specific driver.

ES\$PRO, File protection error

Facility: SOFT IO

Explanation: An attempt was made to delete or rename a protected file or to create a new file with the same name as an existing protected file.

User Action: Unprotect the file with the UNPROTECT_FILE procedure.

ES\$PWR, Device power failure

Facility: HARD IO

Explanation: A power failure occurred on the device.

User Action: See the *MicroPower/Pascal I/O Services Manual* for information about the specific driver.

ES\$RDE, Reply descriptor expected by RECEIVE_ACK

Facility: SYSTEM SERVICE

Explanation: A valid reply semaphore descriptor was not specified on the corresponding Send operation.

User Action: If a reply is required, the SEND_ACK and RECEIVE_ACK procedures should be used. If not, the SEND and RECEIVE procedures should be used.

ES\$REF, Attempted read past logical EOF

Facility: SOFT IO

Explanation: The read operation continued past the file limits. The data that was read may not be valid.

User Action: This exception can occur when you use the FIND procedure with an invalid index parameter.

ES\$RNR, Remote node has no room for logical link

Facility: RESOURCE

Explanation: An attempt was made to create a logical link with a remote node, but the remote node has no room to create the logical link.

User Action: This error is dependent on the remote system. Consult the documentation for the remote-node operating system. This message does not apply and cannot occur if the remote node is a MicroPower/Pascal application.

ES\$RSZ, Record size of 0 specified

Facility: SOFT IO

Explanation: The OPEN (OTS) routine attempted to call the NEW procedure with a record length of 0.

User Action: Be sure that the program has not created an empty record—for example, VAR Foo = RECORD END;.

ES\$SEO, Set element out of range

Facility: RANGE

Explanation: A reference was made to a set element that was not within the bounds of the set declaration.

User Action: Make sure that the specified element or set is correct.

ES\$SIU, Structure is in use

Facility: SYSTEM SERVICE

Explanation: An attempt was made to delete a structure that is in use.

User Action: Do not delete a structure while it is in use.

ES\$SNI, Structure name already in use

Facility: SYSTEM SERVICE

Explanation: The specified structure name already exists.

User Action: Choose a unique name. Verify that multiple copies of a static process were not included in the application.

ES\$SPD, I/O processing stopped

Facility: HARD IO

Explanation: The device shut itself off.

User Action: See the *MicroPower/Pascal I/O Services Manual* for information about the specific driver.

ES\$SRN, Square root of a negative value

Facility: NUMERIC

Explanation: An attempt was made to take the square root of a negative number.

User Action: Check the program logic; the square root of a negative number is undefined.

ES\$STO, Stack overflow

Facility: RANGE

Explanation: A process has overflowed its stack.

User Action: Increase the value specified for the `STACK_SIZE` parameter or `STACK_SIZE` attribute to increase the amount of stack space allocated to the process.

ES\$STU, Stack underflow

Facility: RANGE

Explanation: A process has underflowed its stack. Although a Pascal process is unlikely to underflow its stack, the stack guard word may have been corrupted by errors, such as an adjacent stack overflow or a bad pointer.

User Action: Determine which process is corrupting the stack guard word, and take corrective action.

ES\$TIM, Device timeout

Facility: HARD IO

Explanation: A time-out error on the device occurred.

User Action: See the *MicroPower/Pascal I/O Services Manual* for information about the specific driver.

ES\$TNF, Task not found

Facility: SOFT IO

Explanation: A request was made to open a remote task, but the task was not available.

User Action: Check the source code to see that you are calling the correct task. Check the remote system to see if the task is available.

ES\$TRP, TRAP instruction executed or simulated

Facility: TRAP

Explanation: A TRAP instruction was executed. The low byte of the code is user specifiable in the range 0 to 255.

User Action: If traps are used by the application, this message is informational. If not, this message may indicate corrupted code.

ES\$UDV, Undefined floating-point variable

Facility: NUMERIC

Explanation: The floating-point processor detected an undefined variable—for example, -0.

User Action: Check the program logic for uninitialized variables.

ES\$UDZ, Unsigned division by 0

Facility: NUMERIC

Explanation: The value 0 was used as a divisor in an unsigned integer expression.

User Action: Check the program logic to ensure that a value other than 0 is used as a divisor.

ES\$UFN, Unsupported function

Facility: SOFT IO

Explanation: The driver recognizes the function but will not perform it. For example, if a process attempts to send an OPEN parameter to the ETHERNET driver, the ETHERNET driver cannot be accessed like a Pascal file.

User Action: See the *MicroPower/Pascal I/O Services Manual* for information about the specific driver.

Explanation: Certain ancillary control process (ACP) functions may not have been selected in the driver prefix file. For example, certain functions may have been built into the ACP by the editing of the the prefix file followed by an attempt to use functions that were not included in the file.

User Action: See the *MicroPower/Pascal I/O Services Manual*, and check that all functions you use are contained in the driver prefix file.

ES\$UIV, Illegal unsigned value

Facility: SOFT IO

Explanation: The value is not a valid unsigned integer.

User Action: Values of type UNSIGNED must be in the range 0 to 65535.

ES\$UNS, Unsafe volume

Facility: HARD IO

Explanation: Operator attention is required for the device.

User Action: See the *MicroPower/Pascal I/O Services Manual* for information about the specific driver.

ES\$UOV, Unsigned arithmetic overflow

Facility: NUMERIC

Explanation: The value of an unsigned integer expression exceeded 65535.

User Action: Check the program logic to ensure that the expression's value is in the range 0 to 65535.

ES\$VEC, Vector fetch error, trap to vector 0

Facility: MEMORY FAULT

Explanation: This message applies to FALCON and FALCON-PLUS only. A device failed to supply a vector after requesting an interrupt.

User Action: Check the hardware configuration for missing or malfunctioning memory and/or devices.

ES\$VSE, Variable subrange exceeded

Facility: RANGE

Explanation: A reference was made to a subrange element that was not within the bounds of the declaration.

User Action: Check the specified element or subrange.

ES\$WEF, Attempted write past logical EOF

Facility: SOFT IO

Explanation: The next write operation will exceed the file limits. The condition of the file is unpredictable.

User Action: Indicate a larger file size in the OPEN statement. Check for sufficient free space on the appropriate device.

ES\$WLK, Write-locked unit

Facility: HARD IO

Explanation: A write to a device was attempted, but the drive was write protected.

User Action: If you wanted to write to the device but it was write locked, ensure that the drive is not write locked. If you want the device to be write locked, edit your source code to ensure that you do not write to that device.

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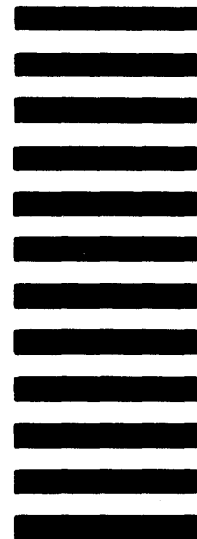
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