

Appendix N

What Can Go Wrong When Loading Tasks and Files

This appendix describes some problems you might encounter when loading tasks and files to the rack.

N.1 Error Messages on the Personal Computer Screen

Error messages that appear on the personal computer screen are usually specific enough to help you pinpoint any problems you are experiencing. In most cases error messages are also specific to the operation that was in process when the error occurred. When you see an error message on the screen during any loading operation, first write down the message. Then, after checking to make sure your connection to the rack is good, and that you are loading the correct file to the designated Processor or UDC module, re-try the operation. Generally, it is best to load every file (except operating system files, which are loaded separately) and task to the rack at one time using the LOAD ALL option.

This section will describe errors that might be difficult to resolve using error messages only. The section is organized by when the error could occur. However, if you load tasks and files to the rack using the LOAD ALL command, you might see any of these errors during the procedure.

N.1.1 Errors that Occur When Loading an AutoMax Processor Operating System or UDC Operating System

In most cases, errors that occur when loading an operating system to the rack are due to improper cabling or high Processor or UDC utilization (a combination of large tasks executing very fast, accompanied by error code "00" on a Processor faceplate). Always make sure that you have a good connection between the personal computer and the rack before trying to communicate with the rack. In addition, it is good practice to stop any tasks that are running in the rack (using the STOP ALL command) before trying to re-load an operating system to the rack. In most cases, re-trying the loading operation will be successful. In rare cases, it may be necessary to replace a Processor module or UDC module in the rack.

N.1.2 Errors that Occur When Loading a Rack Configuration or Drive Parameter Object File

Errors that can occur when loading a rack configuration are usually due to a mismatch between the actual hardware in the rack and what is described in the configuration. For example, it is possible that the configuration describes a hardware module that was mistakenly placed into the wrong slot in the rack, or one that was not installed in the rack at all. It is also possible that the configuration file or parameter object file is actually meant for

another rack. Error messages displayed while loading a UDC task may reference PMI tunables, task tick rates, or a “PMI OS.” These error messages indicate a problem in UDC tasks or the UDC operating system.

N.1.3 Errors that Occur When Loading Tasks

Errors that can occur when loading tasks are usually specific enough to pinpoint the problem. If a particular task is specified in the error message, contact your software supplier. Error messages displayed while loading a parameter object file may reference PMI tunables, task tick rates, or a “PMI OS.” These error messages indicate a problem in UDC tasks or the UDC parameter object file. Other errors that may occur:

“Task not found”

- attempting to load a task that does not exist in the specified directory on the personal computer

“Task not installed”

- either a task or the rack configuration file has not been loaded into the rack successfully

“Critical task cannot be stopped by itself”

- only a STOP ALL command can stop this task, which you are trying to stop individually

“Task already exists in chassis” and “Given UDC drive already contains a task”

- warns you that if you continue with the loading operation, you will over-write an existing task with the same name

“Invalid data type in symbol table” or “Invalid control type in symbol table”

- there is an error in the configuration file in this rack; it is also possible that the wrong configuration file has been loaded or a wrong task has been loaded

“Too many tunables”

- too many tunable variables defined in a UDC task

“No symbol table present” or “Array name not found”

- error in the configuration file in this rack

N.1.4 Errors that Can Occur in More than One Type of Loading

If an error message indicates insufficient memory on a Processor, the configuration and/or tasks are too large for the amount of memory available on a Processor. Note that this error may occur even if there is technically enough memory (in kilobytes) on the Processor. If tasks have been deleted from the rack or loaded to the rack numerous times individually, the memory available may be fragmented into many small areas, none of which are large enough to store the task or configuration file.

If you see the error **“No common storage allocated,”** there has been an error in the sequence of loading. In this case, you must load (or re-load) the rack configuration to the Processor module. It is very important to load the files in this order if you are loading individual files. Alternately, you can choose the LOAD ALL command

and the Programming Executive software will automatically load the files in the correct sequence.

N.2 Processor or Universal Drive Controller Module LEDs Displaying Errors

If the Processor module OK LED is off or the two seven-segment LEDs on the Processor faceplate display a code, see instruction manual J-3650, which describes the AutoMax Processor module. If the seven-segment LEDs display “LO” (reading top to bottom), this simply means that you need to load the operating system to the Processor.

For racks containing a Universal Drive Controller module, the “OS OK” LED on the module will turn on only after it has received its operating system. See instruction manual S-3007 for more information about the Universal Drive Controller module.

N.3 Loss of Task Modifications Made Online

If you or someone else makes changes to tunable variables in existing application tasks in the rack, or makes changes to Ladder Logic/PC tasks on the rack, you must save those tasks back from the rack to the personal computer. This will ensure that you have a copy of the same task on both the personal computer and the rack.

If you do not save tasks back from the rack to the personal computer, and a situation arises that requires you to re-load all tasks to the rack, the version of each task that does exist on the personal computer will write over the version in the rack when all tasks are loaded. If the version of the task on the personal computer is not the most up-to-date version, that is, you or someone else made the changes described above to tasks in the rack, the changes will be lost.

N.4 Tasks in the Rack Do Not Go into Run

Tasks in the rack will go into run, i.e., execute the instructions stored in the task, when they are put into run by the operator using the RUN command. The status (run, stop, or error) of all tasks in the rack can be accessed from the Online menu display. If tasks are not running and there is no error in the rack, you can use the RUN command to start a task or all tasks in the rack.

The nature of the application may require that tasks go back into run after a power cycle (power going off, then on). This is made possible by using the AUTO-RUN software switch. If AUTO-RUN is enabled when power is turned off and then turned on again, all tasks that were in run when power went off will go into run again, assuming there are no errors in the rack.

If AUTO-RUN is enabled and tasks do not automatically go into run when power is turned back on, there is an error in the rack.