

12.0 ONLINE MENU: CONNECT

The Connect menu is used to change the baud rate, enter the password, release the password, set or release access, and enable/disable AUTO RUN for the rack. You can also display a list of users. These options are described below. To select the Connect menu, enter "C" for at the Online menu shown in figure 11.1. The resulting menu is shown in figure 12.1.

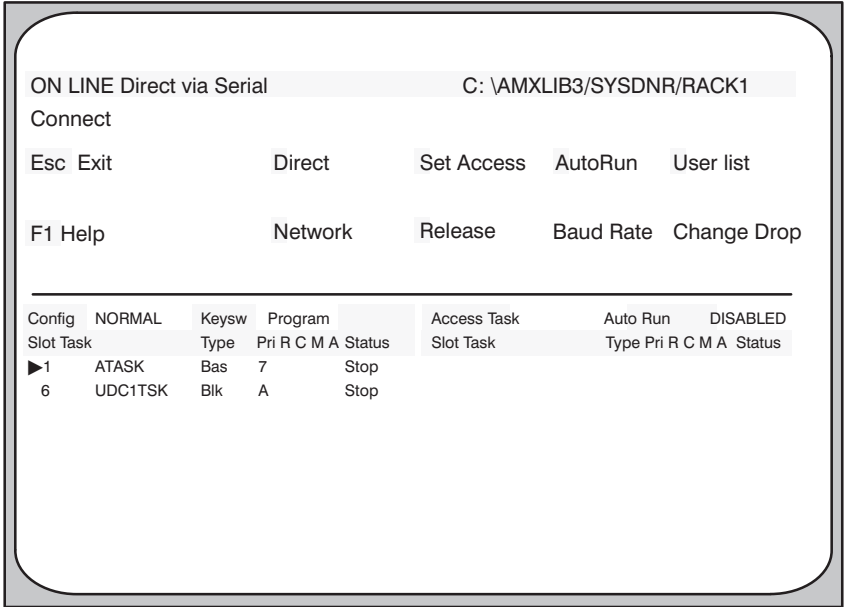


Figure 12.1 - CONNECT Menu

12.1 Changing the Baud Rate

Typing "B" for "Baud Rate" from the Connect menu shown in figure 12.1 allows you to increment or decrement the default baud rate used for communication with the rack. For the M/N 57C435 Processor, the default is 19200 baud. For the M/N 57C431 Processor, the default is 9600 baud. Use the up and down arrow keys to increment and decrement the baud rate displayed. The allowable baud rates are 1200, 2400, 4800, 9600, and 19200 baud.

12.2 Setting Access

Typing “S” for Set Access from the Connect menu shown in figure 12.1 allows you to set various levels of access to the tasks in the rack. If the keyswitch on the rack power supply is in any position other than PROGRAM, setting any level of access has no effect because the keyswitch has already set a lower level of privileged access. See section 9.2 for more information on security access levels.

If the keyswitch is not in the PROGRAM position, or if you do not have the required access level, the options available to you from the Online menu shown in figure 11.1 are limited to monitoring variables.

If the keyswitch is in the PROGRAM position and you try to load, run or stop tasks, set or force variables, or do online editing of tasks without first entering the password, you will be prompted for the password. If you do not enter the password, you will be unable to execute these functions.

Entering the password gives you DATA access, which limits you to modifying COMMON variables. When you try to execute a function which requires a higher level of access, AutoMax will automatically grant the required level of access if it is available. Table 12.1 shows the levels of access available to you based on your current level of access and the access levels of other users connected to the rack. DATA access and RACK access are set by executing the Set Access function with no task selected. TASK access is set by executing the Set Access function with a specific task selected. For example, if you have no access when you select the Set Access function, and you have no task selected, AutoMax will request the password. If you enter the password and no other user has access to the rack, you will be asked if you want RACK access. If you respond “Y” (Yes), no other user will be able to obtain access to the tasks in the rack. If you respond “N” (No), AutoMax will ask you if you want access to all tasks.

Table 12.1 - Setting Access

User's Present Access Level	Other Users' Access Level	Access Levels Available to User
None	None	DATA, single task, all tasks, RACK
	DATA	DATA, single task
	TASK	DATA, single task
	RACK	None
DATA	None	single task, all tasks, RACK
	DATA	single task, all tasks
	TASK	single task
TASK	None	single task, all tasks, RACK
	DATA	single task, all tasks
	TASK	single task

The Programming Executive software is shipped from the factory with the password “AUTOMAX”. You can change the password using either of the two password utilities described in section 9.2.

12.3 Releasing Access

Typing “R” for Release Access from the Connect menu shown in figure 12.1 allows you to release various levels of access to the rack. If you have either TASK or RACK access, and you select Release Access without first selecting a task, AutoMax will ask you if you want to release your present access level as well as DATA access. If you presently have DATA access, it will be released without a prompt from AutoMax. If you selected a task before selecting Release Access, access will be released for the selected task only.

When all levels of access have been released, PROGRAM mode is effectively disabled even though the keyswitch on the rack power supply is still in the PROGRAM position.

12.4 Setting AUTO-RUN

WARNING

BEFORE TURNING ON POWER TO THE SYSTEM, YOU MUST MAKE CERTAIN YOU UNDERSTAND THE RESULTS OF ALL APPLICATION TASKS. OUTPUTS MAY CHANGE STATE, RESULTING IN MACHINE MOVEMENT. FAILURE TO OBSERVE THIS PRECAUTION MAY RESULT IN BODILY INJURY OR DAMAGE TO EQUIPMENT.

Entering “A” for “AUTO-RUN” at the Connect menu allows you to enable/disable AUTO-RUN as long as the password is entered and the keyswitch is in PROGRAM. When AUTO-RUN is disabled, all tasks will be in STOP mode on power up. When AUTO-RUN is enabled, all tasks that were in RUN mode before power to the rack was turned off will go back into RUN when power is turned back on.

By default, AUTO-RUN will be disabled when the AutoMax operating system is loaded to the rack. It will remain disabled until you enable it. After AUTO-RUN is enabled, it will remain enabled until you disable it. It will not be disabled when you enter the password, change access level, or set or force variables.

You can define a common variable, AUTORUNSTATUS@, that will indicate whether AUTORUN is enabled for the rack. See 7.2.2 for more information.

The following conditions must be met for AUTO-RUN to be initiated:

1. AUTO-RUN must be enabled through the Online PROGRAMMING option on the AutoMax MAIN menu.
2. The system re-initialization described in 10.14 must occur with no errors.
3. Each task specified in the configuration for the rack except for utility tasks is present and installed on the correct AutoMax Processor or UDC module, and was running when power was cycled.

See 12.4.1 for more information about tasks that will not be put into run with AUTO-RUN even if conditions 1-3 above are met.

If there is any discrepancy between the information in the configuration for the rack and an actual application task, the fault code “E” “0” is displayed on the AutoMax Processor and no application tasks are re-started. In a multiple Processor configuration, this check is performed by one Processor only. The particular Processor on which the fault code appears bears no relation to the location of the problem.

Tasks are re-started in order of priority from highest to lowest on each Processor module. Tasks with the same priority are started in alphabetical order. Tasks on different Processors are not synchronized. In addition, unless the programmer uses interrupts to synchronize them, tasks on UDC modules are not synchronized with tasks on AutoMax Processors.

Task execution always begins from the first statement in the task, regardless of the point at which the task stopped. Tasks on different UDC modules will be re-started independently of each other. The drive A task is always executed first, followed by the drive B task. UDC task execution always begins from the first statement in the task, regardless of the point at which the task may have been stopped. After CCLK is enabled, the starting of tasks on all UDC modules in the rack will be coordinated.

12.4.1 Application Tasks Not Re-Started with AUTO-RUN

The following tasks are not re-started automatically when the system powers up and AUTO-RUN is enabled.

1. Any task that was not in run when power was turned off. You must put the task into run manually. See 15.0 for more information about running tasks.
2. Any task that was stopped by a STOP or STOP-ALL command issued from the personal computer. You must put the task(s) into run manually. See 15.0 for more information about running tasks.
3. Any task that was stopped by the occurrence of a STOP-ALL fault described in 10.12. You should first clear any error codes from the error log or from Processor LEDs and then put the task into run manually. See 19.0 for more information about clearing the error log or LEDs and 15.0 for more information about running tasks.

12.4.2 Application Task AUTO-RUN and Memory Fragmentation

Occasionally, there may be insufficient memory in the Processor(s) after a system re-start to accommodate application tasks that were initially loaded (recall that the tasks must be “built” again) due to memory fragmentation. Since system re-starts are inevitable, after loading the rack configuration and application tasks, you should verify that there will be sufficient memory should a re-start occur. You can do this by issuing a STOP-ALL command from the personal computer or by cycling power and then checking that all application tasks are present and installed.

12.5 Setting the Drop Number for a PC3000 Rack

Typing “C” for “Change Drop” from the Connect menu shown in figure 12.1 allows you to set the physical drop number for a PC3000 rack. Note that the number entered must match the one assigned to the PC3000 when it was configured offline.

12.6 Connecting to a Network or a Local Rack

You can communicate with an AutoMax rack by using either an RS-232 serial connection to a Processor in the rack or by using a PC Link module (M/N 57C445). You can choose which one of these methods you want to use for communication to AutoMax racks (see section 5.5.3 for instructions).

When using a serial connection, communication between the personal computer running the AutoMax Executive software and a given rack in the system can take place either directly with the local rack or over a network through the Network Communication module (M/N 57C404A). The default status is direct communication with the rack that is physically connected to the personal computer. See 12.6.1 and 12.6.2 for more information on direct and network communication.

When using a PC Link module, communication can be established with any rack on the network through the coaxial cable that is used by the network. Direct communication with the local rack is not an option when using the PC Link module. See 12.6.2 for more information on network communication.

Note that you do not need to establish a network connection through the Online menu to load an operating system over a network. The loading procedure is always performed through the Commands menu in the System Configurator.

12.6.1 Direct Communication with the Local Rack

Selecting “D” for “Direct” from the Online CONNECT menu will cause the Executive software to send all communication to the internal PC3000 or to the rack to which the personal computer is directly connected. The words “Direct via Serial” or “Direct via Internal PC3000” will be visible on the top line of most Online menu screens. Direct connection is the default status.

12.6.2 Network Communication

Selecting “N” for “Network” from the Online CONNECT menu will cause the Executive software to send all communication to the network rack (drop) specified. Until you change the type of connection, either by using “N” for “Network” to connect to another network rack or by using “D” for “Direct,” all communication will take place with the specified rack.

If you are using a PC Link module, the Executive software will display the screen shown in figure 12.3. You can skip to the description that follows figure 12.3.

If you are using serial communication, the Executive software will display the screen shown in figure 12.2.

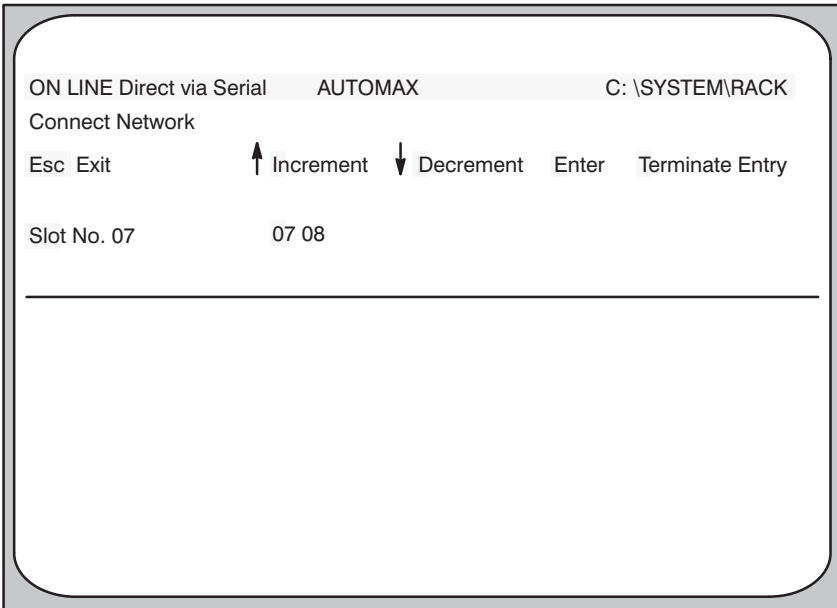


Figure 12.2 - Online Connect Network Menu (Select Network)

If you are using serial communication, you must select the slot in the local rack that contains the Network Communications module (M/N 57C404A and later) which is on the network that contains the rack you want to communicate with. Use the up and down arrows to scroll through the available slots, which are displayed on the screen, or type the number of the slot. When you have selected a slot, enter <CR>. The Executive software will display the screen shown in figure 12.3.

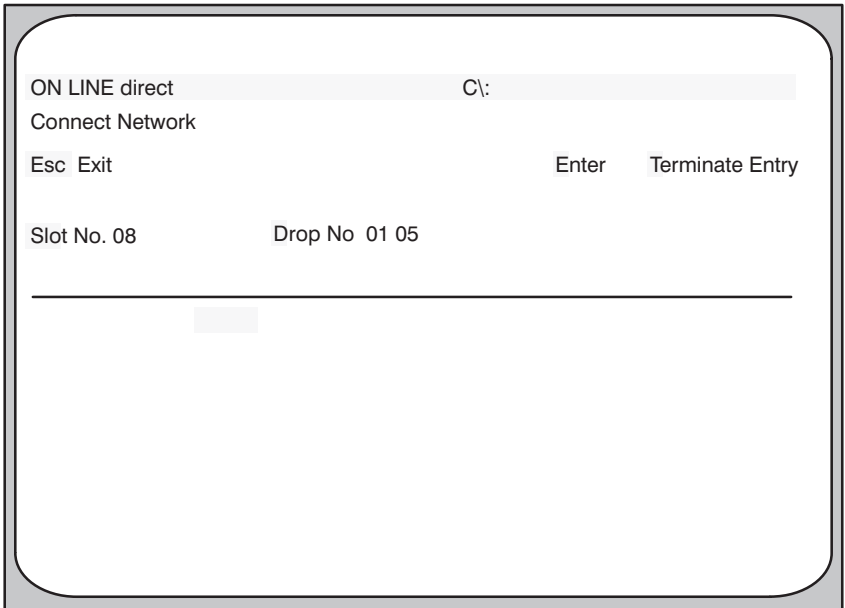


Figure 12.3 - Online Connect Network Menu (Select Network Rack)

From the screen shown in figure 12.3, select the rack (drop) number on the network. The drop numbers available are shown in blocks of 15. You can use the PgUp and PgDn keys to see other blocks of drops, if applicable. Enter the drop number you wish to connect to and <CR>. From this point until you change your connection through the Online CONNECT menu again, all communications will take place with the network drop chosen. The top line of most ON LINE screens will display the drop number of the rack with which the personal computer is communicating.

12.7 Displaying the Network Connection Table

Up to four users can be connected to the same AutoMax rack over the network. Typing "U" for "Userlist" from the Connect menu shown in figure 12.1 allows you to display the Network User List. The Network User List displays users who are connected to the network. See figure 12.4.

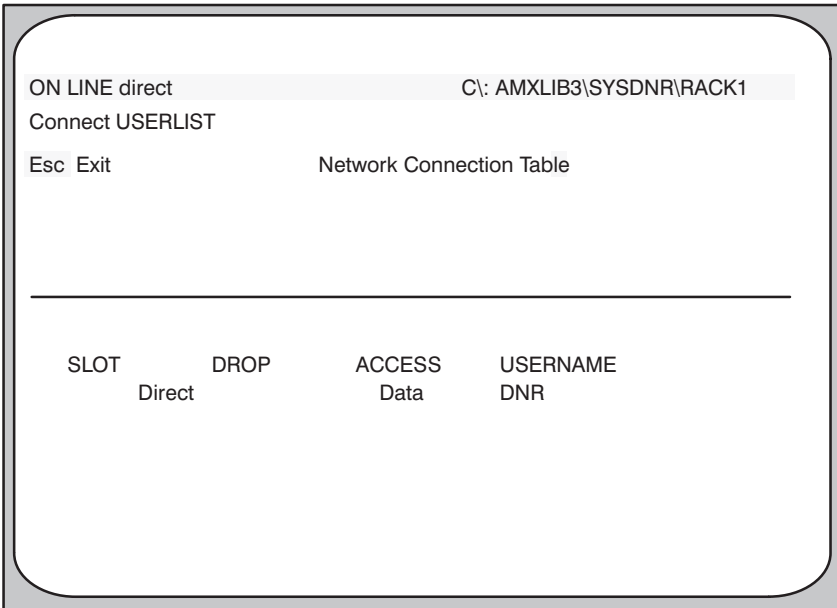


Figure 12.4 - Network Connection Table

The SLOT column shows the number of the slot that contains the Network module that is being used to communicate with the rack (drop). If the user is using direct communication with the local rack, this field will display DIRECT.

The DROP column shows the number of the network drop to which the user is connected. If the user is using direct communication with the local rack, this field will display DIRECT.

The ACCESS column shows the user's access level (None, Data, Task, or Rack). See section 9.2 for a description of access levels.

The USERNAME column shows the name that was entered in AutoMax Setup.