



## ***Using Remote Request Commands to Upload and Download from your CNC Console*** (For V7.0.117 and higher – Revised RHL 11/17/05)

### **General Instructions**

The concept of a Remote Request Command is to create a “Remote Request Command program” at your CNC console with the CNC’s editor into which you enter the command to either get a file from the SuiteFactory database or save one to that database. Response files are sent to the CNC at appropriate times with codes describing an action or problem.

The SuiteFactory system administrator must set up the Remote Request leader and trailer format of this response file so that it is compatible with the specific CNC. For example, the Remote Request leader for a Fanuc CNC is % CR LF O2222 CR LF and the trailer is %. To do this, from the main tool bar click Machines. Choose the machine you wish to configure. Click Properties. Select Protocol and then select Remote Request Parameters.

The Style tab will be selected. Checkmark “Enable Remote Requests.”

### ***Style Tab***

Select **XYZ** or **Customized** command style. **XYZ** is the style all previous versions of SuiteDNC used when the Remote Request feature was referred to as CCL (CCI Command Language). **XYZ** style can be used with almost any CNC whether or not it has a full keyboard. The **Customized** command style enables you to use a set of word commands that are customizable for use with modern CNC’s that have full keyboards and support comments.

Decide and select a queuing style: **Standard** or **Dynamic**.

If you selected **XYZ** command style, then you must use **Standard** queuing. **Standard** is the style all previous versions of SuiteDNC used when the Remote Request feature was referred to as CCL. It works as follows: If you manually queue up several files to send to your CNC and then abort the Remote Request Command ‘listening’ file that is normally at the top of the queue to make the first job active, that ‘listening’ file does not reappear until you read in all the files you have queued up. Should you want to request something different you have to read in all the queued files first before the ‘listening’ file reappears (or manually intervene at a computer or terminal).

With the **Dynamic** style, when manually queuing up several files to be sent, you do not have to abort the ‘listening’ file. At the CNC you request the next file by putting the command (STARTNEXT) in your Remote Request Command program and output it to the SuiteDNC system. Upon receiving the (STARTNEXT) command SuiteDNC makes the next job on the queue active, and you read it into your CNC memory. The ‘listening’ file then reappears at the top of the queue. So, you can either issue the (STARTNEXT) command again or any other command to get or save a file.

### ***Analysis Tab for XYZ Style only***

Select whether or not to strip white space from the filename presented in the a “Remote Request Command program” Some editors in older CNCs without comment capability put spaces between letters since they assume that all letters are G-code letter addresses.

Select whether or not to strip comments from the received “Remote Request Command program”. Some older CNC’s output some header information at the top of all programs punched out. This header could contain X, Y or Z’s which would be interpreted by SuiteDNC as a command. If you select this, you must then configure what starts and ends the comment to be stripped. For example, ( and) or \*/ and /\* .

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## **Customized Commands Tab**

Here you can edit the various built-in commands. See Table on page 6, below.

Set the timeout to at least 60 seconds. Setup the Remote Request Leader and Trailer. For example, for FANUC CNC's using the Remote Request Leader dialog, enter 1,% 1,CR 1,LF 1,O 4,2 1,CR 1, LF and then click Close. Using the Remote Request Trailer dialog enter 1,% . If M02 or M30 is required to mark the end of a program then the trailer is 1,M 1,0 1,2 1,CR 1,LF 1,% and then click close.

Another example is for a Siemens CNC. The leader is %2222<CR><LF> and the trailer is M30<CR><LF>.

Please note that the selection of 2222 is only an example. You can use whatever program name you wish.

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## XYZ Style Commands

XYZ is the style all previous versions of SuiteDNC used when the Remote Request feature was referred to as CCL. This style can be used with almost any CNC whether or not it has a full keyboard. Xfile\_name is the command for requesting a file from the DNC database and Y or Zfile\_name is the command for sending a file to the DNC database.

### ***To Get a File from the DNC System (XYZ Commands)***

One time – memory mode

**You are storing the program in CNC memory.**

1. Edit the ‘Remote Request command’ program, O1111, for example, (or whatever it is called on your CNC):  
Alter the Xvalue where ‘value’ is the name of the file exactly as it is stored in the SuiteFactory database.  
If you have multiple versions of the file create a second line with Xvalue where ‘value’ is the version you want.
2. Send (Punch, Output) program O1111 to the DNC system:  
When sending is complete wait at least 10 seconds.
3. Get the file you requested:  
Select the Read (Input, In) function on the CNC. If required by the CNC, type the CNC file name before executing the Read.
4. When reading is complete, check your program and make sure there were no problems. If the DNC system had a problem locating the requested file or if that file was not assigned to your machine, instead of the program you requested, you will get a response file, O2222, for example, (or whatever it is called), with a coded error message rather than the file you requested. For example, an N6 response means that the program could not be found in the DNC database. Make sure that you spelled it correctly in the “Remote Request command program” O1111. An N12 response means that the program exists in the database, but it is not assigned to your machine.
5. If you got a response file delete it now. Correct the problem then try again.

### ***To Get a File from the DNC System (XYZ Commands)***

Loop mode – Drip Feed

**You are running the program in drip mode via the RS-232 port**

1. Edit the “Remote Request command program”, O1111, for example, (or whatever it is called on your CNC):  
Alter the Xvalue where ‘value’ is the name of the file exactly as it is stored in the SuiteFactory database.  
If you have multiple versions of the file create a second line with Xvalue where ‘value’ is the version, you want.  
Add a third line with M0 (*that’s the number zero*) or M02 alone on that line.
2. Send (Punch, Output) program O1111 to the DNC system:  
When sending is complete wait at least 10 seconds (30 seconds if you are doing header operations).
3. Start running the program you requested:  
Put the CNC in “Tape mode” or select program source as an RS-232 port. This depends upon how the CNC works. Consult the manual. Not all CNC’s allow drip feed mode.  
Press Cycle Start on the CNC to begin executing the program. ***Please note! In this mode you cannot backup in the program. If you have to start over from some previous line, then you will have to go to the DNC computer console to Search for that “safe start” line in the Monitor Machines window.***

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4. If the DNC system had a problem locating the requested file or if that file was not assigned to your machine, instead of the program you requested, you will get a response file, O2222, for example, (or whatever it is called), with a coded error message rather than the file you requested. For example, an N6 response means that the program could not be found in the DNC database. Make sure that you spelled it correctly in the "Remote Request command program" O1111. An N12 response means that the program exists in the database, but it is not assigned to your machine.
5. If you got a response file. Correct the problem then try again.
6. After the program is completed, it re-queues itself so that you can make another part.
7. When you are done you have to go to the DNC console and Abort the job via the Monitor Machines window.

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## **To Send a File to the DNC System (XYZ Commands)**

### Save a program in the DNC database

1. Edit the "Remote Request command program", O1111, for example, (or whatever it is called on your CNC):  
Alter the Yvalue or Zvalue, where 'value' is the name of the file exactly as you want it named on the DNC system.  
If your system is configured for single version only then "value" must be a new and unique name.  
If your system is configured to use the automatic naming function for new files, then make 'value' = 0. For example, Y0 or Z0.

2. Send (Punch, Output) program O1111 to the DNC system:  
When sending is complete wait at least 10 seconds (30 seconds if you are doing header operations).

3. Get the response file which tells you the DNC system is ready to save your program:  
Select the Read (Input, In) function on the CNC. If required by the CNC, type the CNC file name, (for example, O2222) before executing the Read.

The contents of O2222 should have the code, N1, in the first line. This means that SuiteFactory is ready to receive the DNC file you want to save.

If there was a problem with your request to save the file, instead of the N1 code you will get a different code. For example, N7 means that SuiteFactory could not use the name, "value", you specified probably because your system is configured for single version only and the DNC file name you specified was already used. Delete the response file, change the value to something unique and try again.

4. **Delete the response file** (for example, O2222) from CNC memory.

5. Send (Punch, Output) the tape file you want to save:  
When the sending is complete, wait at least 10 seconds (30 seconds if you are doing header operations).

6. Get the response file (for example, O2222) which tells you that SuiteFactory successfully saved your program:

The contents of O2222 should have the code, N2, in the first line. This means the DNC system successfully received the tape file that you wanted to save.

7. **Delete the response file** (for example, O2222) from CNC memory.

## Customized Style Commands

The **Customized** command style enables you to use a set of word commands that are customizable for use with modern CNC's that have full keyboards and support comments. The default commands are:

Customizable Command	Description
(GET dnc_file_name,dnc_file_version)	Get dnc_file_name,dnc_file_version once to be sent to the CNC memory. Dnc_file_version is optional. If it is not included with the command, then the latest version <b>assigned</b> to that CNC is queued.
(GETLOOP dnc_file_name, dnc_file_version	Get dnc_file_name,dnc_file_version and queue it up continuously in drip feed mode. Dnc_file_version is optional. If it is not included with the command, then the latest version <b>assigned</b> to that CNC is queued
(SAVE dnc_file_name)	This command is inserted as a comment at the beginning of the program you want to save. After the entire program is sent to the DNC database successfully, a Remote Request response is sent back with code N2 (xxxxx Bytes Received OK).
(RECEIVE new_file_name)	This command tells SuiteDNC to queue up the file, new_file_name for receiving from the CNC. When this command is received a Remote Request response is sent back with code N1 (Ready to Receive) It will also echo in the response the file name and version it is queuing to receive. After the entire program is sent to the DNC database successfully, a Remote Request response is sent back with code N2 (xxxxx Bytes Received OK)
(ABORT)	If after issuing a RECEIVE command, you change your mind then you can send the command ABORT . After the new_file_name is de-queued, a Remote Request response will be sent with code N3 (Receive Aborted)
(STARTNEXT)	This command is used with the Dynamic Queuing style. You can manually queue up several jobs to be sent to a CNC. To get them you issue this (STARTNEXT) command.
(OPER=operator_name, remote_request_command	This command is used to identify the user who issued a Remote Request from the CNC. An example is (OPER=JOHN,GET AP3334565-03)

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## **To Get a File from the DNC System (Customized Commands)**

One time, memory mode

**You are storing the program in CNC memory.**

1. Edit the "Remote Request command" program, O1111, for example, (or whatever it is called on your CNC):  
Enter (GET file\_name,file\_version) or (OPER=user\_name, GET file\_name,file\_version) if entering your DNC user login name is required. "File\_name,file\_version" is the name of the file and version number exactly as it is stored in the SuiteFactory database.  
If you have multiple versions of the file, then add to the command the version you want. If you do not specify a version number, you will either get the latest version **assigned to the machine** or **response N12** if SuiteFactory is configured to warn you if the assigned version is not the latest.
2. Send (Punch, Output) program O1111 to the DNC system:  
When sending is complete wait at least 10 seconds (30 seconds if you are doing header operations).
3. Get the file you requested:  
Select the Read (Input, In) function on the CNC. If required by the CNC, type the CNC file name before executing the Read.
4. When reading is complete, check your program and make sure there were no problems. If the DNC system had a problem locating the requested file or if that file was not assigned to your machine, instead of the program you requested, you will get a response file, O2222, for example, (or whatever it is called), with a coded error message rather than the file you requested. For example, an N6 response means that the program could not be found in the DNC database. Make sure that you spelled it correctly in the "Remote Request command program" O1111. An N12 response means that the program exists in the database, but it is not assigned to your machine.
5. If you got a response file delete it now. Correct the problem then try again.

For example, entering (**GET AB2234-6,4**) in your dummy program O1111 and sending (punching, outputting) it to the DNC system will cause the program AB2234-6 version 4 to be queued up to be sent to the CNC; that is, if AB2234-6 version 4 exists and is assigned to your CNC. If not, you will get a response program called O2222, for example, instead, with an error message describing the problem.

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## **To Get a File from the DNC System (Customized Commands)**

Loop mode – Drip Feed

**You are running the program in drip mode via the RS-232 port**

1. Edit the “Remote Request command program”, O1111, for example, (or whatever it is called on your CNC):  
Enter (GETLOOP file\_name,file\_version) or (OPER=user\_name,GETLOOP file\_name,file\_version) if entering your DNC user login name is required. “File\_name is the name of the file exactly as it is stored in the SuiteFactory database and file\_version is the version you want.  
If you have multiple versions of the file, then add to the command the version you want. If you do not specify a version, you will either get the latest version **assigned to the machine** or **response N12** if SuiteFactory is configured to warn you if the assigned version is not the latest.
2. Send (Punch, Output) program O1111 to the DNC system:  
When sending is complete wait at least 10 seconds (30 seconds if you are doing header operations).
3. Start running the program you requested:  
Put the CNC in “Tape mode” or select program source as an RS-232 port. This depends upon how the CNC works. Consult the manual. Not all CNC’s allow drip feed mode.  
Press Cycle Start on the CNC to begin executing the program. ***Please note! In this mode you cannot backup in the program. If you have to start over from some previous line then you will have to go to the DNC computer console to Search for that “safe start” line in the Monitor Machines window.***
4. If the DNC system had a problem locating the requested file or if that file was not assigned to your machine, instead of the program you requested, you will get a response file, O2222, for example, (or whatever it is called), with a coded error message rather than the file you requested. For example, an N6 response means that the program could not be found in the DNC database. Make sure that you spelled it correctly in the “Remote Request command program” O1111. An N12 response means that the program exists in the database, but it is not assigned to your machine.
5. If you got a response file. Correct the problem then try again.
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## **To Send a File to the DNC System**

**Method I – Queues a response file with the N1(Ready to Receive) code before queuing the actual file. This is similar to the Y or Z method.**

Save a program in the DNC database

1. Edit the “Remote Request command program”, O1111, for example, (or whatever it is called on your CNC):  
Enter (RECEIVE new\_file\_name) or (OPER=user\_name,RECEIVE new\_file\_name) where ‘new\_file\_name’ is the name of the file exactly as you want it named on the DNC system.  
If your system is configured for single version only then “new\_file\_name” must be a new and unique name.  
If your system is configured to use the automatic naming function for new files, then make ‘new\_file\_name’ = 0. For example, (RECEIVE 0) or (OPER=user\_name,RECEIVE 0)..

2. Send (Punch, Output) program O1111 to the DNC system:  
When sending is complete wait at least 10 seconds.

3. Get the response file which tells you the DNC system is ready to save your program:  
Select the Read (Input, In) function on the CNC. If required by the CNC, type the CNC file name, (for example, O2222) before executing the Read.

The contents of O2222 should have the code, N1, in the first line. This means that SuiteFactory is ready to receive the DNC file you want to save.

If there was a problem with your request to save the file, instead of the N1 code you will get a different code. For example, N7 means that SuiteFactory could not use the name, “value”, you specified probably because your system is configured for single version only and the DNC file name you specified was already used. Delete the response file, change the value to something unique and try again.

4. **Delete the response file** (for example, O2222) from CNC memory.

5. Send (Punch, Output) the tape file you want to save:  
When the sending is complete, wait at least 10 seconds.

8. Get the response file (for example, O2222) which tells you that SuiteFactory successfully saved your program:

The contents of O2222 should have the code, N2, in the first line. This means the DNC system successfully received the tape file that you wanted to save.

6. **Delete the response file** (for example, O2222) from CNC memory.

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## **To Send a File to the DNC System**

**Method II – Add the Save command at the top of the actual file you wish to save.**

Save a program in the DNC database

1. Edit the program you wish to save.

Enter the line (SAVE new\_file\_name), where 'new\_file\_name' is the name of the file exactly as you want it named on the DNC system.

If your system is configured for single version only then "new\_file\_name" must be a new and unique name.

If your system is configured for multiple versions, if "new\_file\_name" exists then the next version will be created.

If your system is configured to use the automatic naming function for new files, then make 'new\_file\_name' = 0. For example, (SAVE 0).

2. Send (Punch, Output) the program you wish to save to the DNC system:

When sending is complete wait at least 10 seconds (30 seconds if you are doing header operations).

3. Get the response file (for example, O2222) which tells you that SuiteFactory successfully saved your program:

The contents of O2222 should have the code, N2 (xxxxx bytes receive OK) in the first line followed by the name of the program on the second line and the version number on the third line. This means the DNC system successfully received the tape file that you wanted to save.

4. **Delete the response file** (for example, O2222) from CNC memory.

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