

Progressive DNC – CNC Parameters Config Settings Matrix

In Progressive DNC, once a machine has been added to the system, the CNC config settings are available to be set per the machine and operation method requirements. Operation method typically consist of CNC direct or manual user file transfer via the user interface. In order to utilize CNC direct, CNC parameters are required to allow the software and CNC control to fluently talk to each other. PDNC has intuitive intelligence that presents the CNC config options to the end user based on the assigned *Connection Type* (Moxa model & firmware version, Moxa wired vs wireless, Comtrol Hub model, serial number & firmware version, Ethernet CNC, etc.) and in some cases the response from the associated device via the Simple Network Management Protocol (SNMP). This knowledge about the end device in addition to SNMP responses allow the UI to only display relevant configuration settings for the end user. Below is a Matrix that lists, explains, and provides an example of each setting in CNC parameters section of PDNC. These setting are assigned per machine. As mentioned, not all settings are applicable for all connection types.

Group Name	PDNC Config Field Name	Possible Values	Meaning
Automatic Upload	Automatic Upload start of file	% or \$	This value signifies the start of the file using Automatic Upload.
Automatic Upload	Automatic Upload save start of file	true or false	Choose whether or not to save the start of the file when using Automatic Upload.
Automatic Upload	Automatic Upload end of file	% or \$	This value signifies the end of the file using Automatic Upload.
Automatic Upload	Automatic Upload save end of file	true or false	Choose whether or not to save the end of the file when using Automatic Upload.
Automatic Upload	Automatic Upload start of filename	(or O or :	Specify the start of the filename that will be saved.
Automatic Upload	Automatic Upload end of filename) or :	Specify the end of the filename that will be saved.
Automatic Upload	Automatic Upload filename prefix	Usually blank	If used, it's the prefix set for the filename. This is custom and varies
Automatic Upload	Automatic Upload filename suffix	Usually blank	If used, it's the suffix set for the filename. This is custom and varies.
Automatic Upload	Automatic Upload strip characters	^000;^018;^020	Strip out hidden characters in program not needed for upload. Separate each value with a semicolon.
Automatic Upload	Automatic Upload translations	Usually blank	Seldom used; specifies character translation and is custom.
Automatic Upload	Automatic Upload handshake required	true or false	Used only when Xon\Xoff and RTS/CTS is not used, and specific handshaking is needed for communication.

Automatic Upload	Automatic Upload handshake receive character	^017	Handshake character received from machine if not using RTS/CTS and Xon/Xoff
Automatic Upload	Automatic Upload handshake send character	^018	Handshake character sent to machine to allow data transfer.
Automatic Upload	file extension for generated filename	.txt or .dat or .min	The extension that you want a file to save as.
Automatic Upload	Automatic Upload timeout (in seconds)	10	Amount of time before software stops reading for an upload in seconds.
Automatic Upload	Automatic Upload path separator of filename	* or -	this separates the command part of the file from the filename.
Automatic Upload	Automatic Upload backup file extension	.bak	Extension to save the backup file as; .bak is usually used.
Automatic Upload	upload confirmation	upload.cim	File sent back to machine to let operator know it has been saved.
CNC Direct	CNC Direct delay before sending	10 or 15	This is used if Moxa Xon/Xoff start mode is set to on. Time is in seconds.
CNC Direct	Start Command	(or O or N1	Symbol that starts the beginning of the filename for 7000 program. N1 is used in limited keyboard.
CNC Direct	End command) : or ^010	Symbol that ends the command that you are using for 7000 program. If using limited keyboard end with ^010
CNC Direct	End of filename) : or ^010	Symbol that ends the filename that you are using for 7000 program. If using limited end with ^010
CNC Direct	Turn on Software protocol for one transfer	true or false	mainly used on Mazak Controls. Used for transfer of protocol program and then turns off for normal G code programs.
CNC Direct	Parameter Separator	- or <blank>	Separates the command from filename. Normally a dash (-) or left blank.
CNC Direct	Download command	could be XD or R	Signifies the start of the download command.
CNC Direct	Upload Command	XU or UP	Used for sending programs back, but only needed if you have a different CNC direct upload program.
CNC Direct	default file extension for download commands	usually blank	Not used unless you have a specific file extension that you want to use.

CNC Direct	Number of characters to scan for command or filename	50 to 100	This is how many characters it reads to see if it is an upload or a request file and to read the name. If set to low it will not find it.
CNC Direct	error filename	usually blank	This is if you have an error file that would come back and tell you it could not find the file. It would be specified by file put in place.
CNC Direct	upload end of block	^010 or ^013^010	This will either be ^010 or ^013^010. This is reading carriage return line feed or just line feed at the end of each program line.
CNC Direct	match exact filename	true or false	If set true, software will specifically look for that file and only that file.
Download	Enable Xon\Xoff mode	FALSE	Set to false as XON\XOFF is handled via Moxa unit.
Download	Xon\Xoff start	On	Set to On by default. You do not need to change this.
Download	Drip feed send by line	TRUE	This is always set to true; it allows drip-feeding if needed.
Download	Drip feed send by # of characters	1	Keep as default set to 1. This is how it determines how many characters used for drip-feeding.
Download	drip feed delay in seconds	0.1	Drip feed delay time. Keep default setting of .1.
Download	End of block	^010 or ^013^010	This will be set to either ^010 or ^010^013. It determines what will be at the end of each program line.
Download	Download strip characters	^000;^018;^020	Strip out hidden characters in program not needed for download. Separate each value with a semicolon.
Download	Download time out	10 or 15	Specified amount of time to read in program after sending out a request. Time is in seconds.
Download	Start transmission	%	Value that begins transmission of the program. Normally set as %
Download	End Transmission	%	Value that ends transmission of the program. Also normally set as %.
Download	download translation	Usually blank	Seldom used; specifies character translation and is custom.
Download	Pre - download program	Usually blank	Specifies special custom program to be sent before download. This is hardly ever used.

Download	Start comment string	START	Highly custom and seldom used; a string of characters used to specify the start of a comment.
Download	End comment string	END	Highly custom and seldom used; a string of characters used to specify the end of a comment.
Download	Strip to Start Transmission	true or false	Strips out any characters before designated start of program.
Ethernet CNC	Ethernet CNC Command filename	O7000.txt	Name of the command file for ethernet CNC machines only.
Hardware	Firmware version (P5150A Model)	1.5.4 Build 19102919	Version of firmware being used for P5250A models only.

General Notes

Refer to PDF printout of machine from Configurator if formerly using DNCPro. Instructions for obtaining PDF are on the BTS website.

Use a carrot (^) before entering an ASCII code into the config (I.E. Use ^010 not 010)

Use the ASCII **decimal value** for any value that does not translate directly to an ASCII character (I.E. Use ^010 not LF)

Use the ASCII **character value** for any value that translates directly to an ASCII character (I.E. Use % not ^037)

Use the decimal value to denote <space> (I.E. ^000 not <space>)

Do not use carrots when entering ASCII character value

If multiple ASCII values for a given field, enter values in order with no spaces (I.E. ^010^013)***

*** For Upload/Download Strip Characters **ONLY**, separate each value with a semicolon (I.E. ^010;^013;^020)

Refer To the ASCII Table in PDNC for easier translation