

# CVNC Command and Interface Cross-Reference

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Order No. DOC36842-003

CADDS 5 Revision 6.0

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# Preface

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The following alphabetical list describes all CVNC commands available for CVNC–M2, CVNC–M3, and CVNC–M5, including CVNC editor and star buffer commands, special CADD5 commands, and OS–based commands for CVNC users. CVNC macro commands are also indicated.

The list indicates within which application the command is available (unless the command can be used in all of these applications) and shows the task set(s) or menu selection and icon that access the command, where applicable.

You can add additional icons for CVNC commands or customized commands. See the *Customizer and Icon Editor User Guide* for more information.

Note that commands consisting of symbols (for example, >) are listed at the end.

## New in CADD5 5 CVNC Revision 5

Here is a listing of new commands and icons for this revision.

- DEFPROF5
- DEFZPRO3
- PROFILE5
- UNCUT
- ZPROF3

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### Related Documents

As a CVNC user, you should be familiar with the CADDs and CVNC programming environment. Important references include:

- *Understanding CVNC*
- *CVNC System User Guide and Menu Reference*
- *CVNC Editor Guide*
- Command reference and user guide(s) for your application
- *CVNC System Variables Guide*
- *Customizing CVNC*
- *CVNC Master Index*
- *CVNC Work Examples*

# Commands and Menu Options

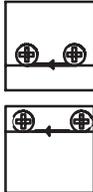
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This chapter alphabetically lists all the CVNC commands and their corresponding menu options.

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Command	Description	Task Set	Icon or Menu Selection
<b>A</b>			
A	Reexecutes a CVNC editor command. (Editor)		
ACCEL	Specifies an accelerating feed rate at the start of each tool pass during a machining operation. (M5)	4-AXIS MILL 5-AXIS MILL	
APLANE	Automatically generates plane and feed commands on individual lines in absolute values.		
APPROACH	Moves the tool from its current location to a new location at the APPROACH feed rate.	2-AXIS MILL	
AREAMILL	Generates lace cut tool paths to clear an area within a boundary and around a number of islands.	2-AXIS MILL	
ASSIGN	Specifies variables for a status definition file and a point macro pass-through statement.		
AUDIT	Inserts the text of JCF commands as comment lines in the APT, CLFile, or COMPACT II output file.	SETUP MILL	

Command	Description	Task Set	Icon or Menu Selection
<b>B</b>			
B	Moves the pointer backward one line.	ED	
B [n]	Moves the pointer backward the specified number of lines.		
B:	Moves the pointer backward to the command that generated the digitized graphic tool path segment.		
B.	Moves the pointer backward to the last file mark.		
B [/string]	Moves the pointer backward to the specified string of characters.	ED	
BORE	Processes boring of holes to specified depths or through surfaces.	2-AXIS MILL	
BR	Suppresses lengthy output to the screen when you move forward or backward in your JCF.		

Command	Description	Task Set	Icon or Menu Selection
BRING	Merges an external APT, CLFile, or COMPACT II file into the output at the point you execute this command.	SETUP MILL	
<b>C</b>			
C [/string1 /string2]	Replaces string1 with string2.	ED	
C [//string/]	Prefixes the current line with string.		
C [/string//]	Deletes the text in string from the current line.		
CALCRAD	Calculates the tool offset necessary to cut an entity when the entity height is greater than the z-depth of a milling tool.	2-AXIS MILL 3-AXIS MILL 4-AXIS MILL 5-AXIS MILL	
CALL	Calls a command file from the JCF.	SETUP MILL	
CHECKLIB	Specifies a CVMAC executable library containing check macros and turns check macros on or off.	SETUP MILL	

Command	Description	Task Set	Icon or Menu Selection
checkutil	Creates check macros. (UNIX-based)		
CHGTOOL	Invokes the use of a new cutting tool and produces the output needed to change that tool on a machine.		
CLEAR	Moves the tool from its current location to a new location at the CLEAR feed rate.	2-AXIS MILL	
CMFIL	Identifies a command file.	SETUP MILL	
COLDIST	Forces CVNC to check for collisions whenever the distance between successive tool points becomes greater than the value specified with the exp modifier. (M3/M5)	3-AXIS MILL	
		4-AXIS MILL	
		5-AXIS MILL	
COLISION	Invokes automatic collision checking for tool paths generated by the SURFCUT3 and SURFINT3 commands (M3) and the SURFCUT4 and SURFCUT 5 commands (M5).	3-AXIS MILL	
		4-AXIS MILL	
		5-AXIS MILL	

Command	Description	Task Set	Icon or Menu Selection
COMLIB	Specifies the name(s) of a command file library.	SETUP MILL	
CONFIG	Specifies the active rotary axes of a machine tool and one or two pivot point locations in absolute or increment mode.	SETUP MILL	
CONVERT	Converts the selected NCVISION tool path motion statement corresponding to the tool path type.		
COOLANT	Turns the coolant on and off; it also regulates the coolant flow.	2-AXIS MILL 3-AXIS MILL 4-AXIS MILL 5-AXIS MILL ROUGHER	
CPL	Specifies a new active Cplane.	Cplane:	DEFINE SELECT
CSINK	Supports countersinking and chamfering to a specified diameter.	2-AXIS MILL	

Command	Description	Task Set	Icon or Menu Selection
CUT	Moves the cutting tool from its current location to a new location at the CUT feed rate; performs a cut.	<div style="border: 1px solid black; padding: 2px; display: inline-block; margin-bottom: 2px;">2-AXIS MILL</div> <div style="border: 1px solid black; padding: 2px; display: inline-block; margin-bottom: 2px;">3-AXIS MILL</div> <div style="border: 1px solid black; padding: 2px; display: inline-block; margin-bottom: 2px;">4-AXIS MILL</div> <div style="border: 1px solid black; padding: 2px; display: inline-block;">5-AXIS MILL</div>	
CUT ARC	Moves the tool from its current location along an arc without referencing CADDs geometry.	<div style="border: 1px solid black; padding: 2px; display: inline-block; margin-bottom: 2px;">2-AXIS MILL</div> <div style="border: 1px solid black; padding: 2px; display: inline-block; margin-bottom: 2px;">3-AXIS MILL</div> <div style="border: 1px solid black; padding: 2px; display: inline-block; margin-bottom: 2px;">4-AXIS MILL</div> <div style="border: 1px solid black; padding: 2px; display: inline-block;">5-AXIS MILL</div>	
CUT ENTITY	Moves the cutting tool at the CUT feed rate along a specified drive entity from its current location to, on, or a past specified entity.	<div style="border: 1px solid black; padding: 2px; display: inline-block; margin-bottom: 2px;">2-AXIS MILL</div> <div style="border: 1px solid black; padding: 2px; display: inline-block; margin-bottom: 2px;">3-AXIS MILL</div> <div style="border: 1px solid black; padding: 2px; display: inline-block; margin-bottom: 2px;">4-AXIS MILL</div> <div style="border: 1px solid black; padding: 2px; display: inline-block;">5-AXIS MILL</div>	
cvmcomp	Invokes the CVMAC compiler. (OS-based)		
cvmlink	Takes a macro file which is on disk and builds it into a macro library. (OS-based)		

Command	Description	Task Set	Icon or Menu Selection
<b>D</b>			
D	Deletes the current line. (Editor)	ED	
D [n]	Deletes lines forward the specified number of lines. (Editor)		
D.	Deletes lines forward to the next file mark. (Editor)		
DATUM	Identifies a Cplane on the CADDs part model that defines the location and orientation of the machine coordinate system and machine zero.	SETUP MILL	
DECEL	Specifies a decelerating feed rate at the end of each tool pass during a machining operation. (M5)	4-AXIS MILL 5-AXIS MILL	
DEFAMILL	Defines defaults for the AREAMILL command.	2-AXIS MILL	
DEFEXT	Defines tool extensions and causes CVNC to detect collisions between the extended tool and surfaces defined as collision surfaces. (M3/M5)		

Command	Description	Task Set	Icon or Menu Selection
DEFINDEX	Defines defaults for the INDEX to a CPL command.		
DEFPLUN	Defines the plunge direction and distance for a tool path projected onto a group of surfaces using the PROJECT command with the ASDEF modifier. (M3/M5)	3-AXIS MILL	
DEFPLUN3	Defines the plunge direction and distance for the SURFCUT3, SURFINT3, ZPROF3, and PROFILE3 commands. (M3/M5)	3-AXIS MILL	
DEFPLUN4	Defines the plunge direction and distance for the SURFCUT4 command. (M5)	4-AXIS MILL	
DEFPLUN5	Defines the plunge direction and distance for the SURFCUT5, SWARFCUT, and PROFILE5 commands. (M5)	5-AXIS MILL	
DEFPROF3	Defines defaults for the PROFILE3 command. (M3/M5)	3-AXIS MILL	
DEFPROF5	Defines defaults for the PROFILE5 command. (M5)	5-AXIS MILL	

Command	Description	Task Set	Icon or Menu Selection
DEFPROJ	Defines defaults for the PROJECT command. (M3/M5)	3-AXIS MILL	
DEFRET	Defines the retract direction and distance for a tool path projected onto a surface group using the PROJECT command with the ASDEF modifier. (M3/M5)	3-AXIS MILL	
DEFRET3	Defines the retract direction and distance for SURFCUT3, SURFINT3, ZPROF3, and PROFILE3 operations. (M3/M5)	3-AXIS MILL	
DEFRET4	Defines the retract direction and distance for the SURFCUT4 command. (M5)	4-AXIS MILL	
DEFRET5	Defines the retract direction and distance for the SURFCUT5, SWARFCUT, and PROFILE5 commands. (M5)	5-AXIS MILL	
DEFSINT3	Defines defaults for the SURFINT3 command. (M3/M5)	3-AXIS MILL	
DEFSURF3	Defines defaults for the SURFCUT3 command. (M3/M5)	3-AXIS MILL	

Command	Description	Task Set	Icon or Menu Selection
DEFSURF4	Defines defaults for the SURFCUT4 command. (M5)	4-AXIS MILL	
DEFSURF5	Defines defaults for the SURFCUT5 command. (M5)	5-AXIS MILL	
DEFSWARF	Defines defaults for the SWARFCUT command. (M5)	5-AXIS MILL	
DEFTOOL	Defines cutting tools and their parameters.		
DEFZPRO3	Defines defaults for the ZPROF3 command. (M3/M5)	3-AXIS MILL	
DELETE JCF	Deletes a JCF from your JCF directory. (CADD5)	JCF Management	
DELTOOL	Deletes a specified tool from the current tool library.		

Command	Description	Task Set	Icon or Menu Selection
DIACOMP	Sets the cutting tool diameter compensations to either the left or right of the tool path.	SETUP MILL	
DISPLAY	Specifies graphic characteristics of the tool path and tool display.		
DPOCK	Generates multiple pocket cuts to a specified depth at a specified angle.	2-AXIS MILL	
DPROF	Generates multiple profile paths to an entity boundary at incremental depth values at a specified angle until, and including, the final depth.	2-AXIS MILL	
DRILL	Drills blind (to depth and thru-holes in standard, peck, and break-chip mode.	2-AXIS MILL	
DRILL MATERIAL	Contains options allowing the processing of one or more drill holes on a material model defined and activated by the MODEL command. (M3/M5)	ROUGHER	

Command	Description	Task Set	Icon or Menu Selection
<b>E</b>			
E	Specifies edit mode for the current line. (Editor)	ED	
E, [n]	Specifies the line to edit in a current line comprised of several lines of continuation. (Editor)		
E* [n]	Initiates an editing session of a previously defined star buffer. (Star buffer)		
ECHO COLOR	Provides a way to temporarily highlight individual entities, groups of entities (NCGROUP) and surface lists during your CVNC session by changing their color.		
ECHO CONTAIN	Uses the surface lists input, plus the values used by the SURFCUT3 command, to create a containment boundary. (M3/M5)		
ECHO HILIGHT	Provides a way to temporarily highlight individual entities, groups of entities (NCGROUP) and surface lists during your CVNC session by changing their font.		

Command	Description	Task Set	Icon or Menu Selection
ECHO JCF	Prints the miptrs of all entities that have been created by a given JCF in PROTECT mode. (CADD5)		 ECHO JCF PROTECT ENTS ECHO JCF BY JCF NAME
ECHO SURFSIDE	Displays arrows pointing in the surface normal direction on selected surfaces, wireframe entities, and surface lists. (M3/M5)		
ED	Allows a single entity or a group of entities to be redigitized. (Editor)	ED	
EX	Switches execution of the current line off and on. (Editor)	ED	
EXEC	Executes a text file containing valid CVNC commands or a combination of CVNC and CADD5 commands. (Editor)		
EXEC, [filename]	Executes the specified text file from within your JCF. (Editor)		UTILITY RUN EXECUTE FILE

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<b>Command</b>	<b>Description</b>	<b>Task Set</b>	<b>Icon or Menu Selection</b>
EXIT	Files your JCF and returns to the CADDs prompt, overwrites any previously existing JCF with the same name, saves the tool path geometry created during the session, and creates an output file if the OUTPUT command has been used to initialize output. (Editor)		 

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Command	Description	Task Set	Icon or Menu Selection
<b>F</b>			
F	Moves the pointer forward one line. (Editor)	ED	
F [n]	Moves the pointer forward the specified number of lines. (Editor)		
F.	Moves the pointer forward to the next file mark. (Editor)		
F [/string]	Moves the pointer forward to the specified string of characters. (Editor)	ED	
FEED	Specifies feed rates for motion commands.	SETUP MILL    4-AXIS MILL 2-AXIS MILL    5-AXIS MILL 3-AXIS MILL    ROUGHER	
FILE	Respecifies the file name for your JCF.		
FILE*	Returns to normal mode and saves all changes made during star buffer edit mode. (Star buffer)		

Command	Description	Task Set	Icon or Menu Selection
FRSTPASS	Switches the application of the FRSTPASS feed rate on and off. (M5)	4-AXIS MILL 5-AXIS MILL	
FMILL	Automatically face mills an area defined by two selections with the tool on or tangent to the entities. (Macro)	2-AXIS MILL	
FU	Restores full output to the screen when you move forward or backward in your JCF. (Editor)		
<b>G</b>			
GENERATE JCF	Generates a CVNC JCF from an existing NCVISION tool path. (CADD5)		
GOUGE	Switches the application of gouge avoidance on and off. (M5)	4-AXIS MILL 5-AXIS MILL	 
GR	Switches between two modes for frequency of graphics updating. (Editor)	ED	

Command	Description	Task Set	Icon or Menu Selection
GRAPHIC	Activates and deactivates graphic fonting of tool path segments on the basis of feed rate and motion type.		
<b>H</b>			
HOMEPT	Specifies a starting and a home location for the tool.	SETUP MILL	
<b>I</b>			
I*	Initiates star buffer input mode. (Star buffer)		
IC	Allows you to enter a single CADD5 command within your CVNC session. (Editor)		
IL	Inserts a line of application command where text is the text of the application command you are inserting into the JCF. (Star buffer)		
IN	Enters the next nested level. (Editor)		

Command	Description	Task Set	Icon or Menu Selection
INX	Enters the next nested level. (Unlike IN, INX executes commands that have not been executed before going into them. INX also recognizes the lowest command level and performs no further action at this level. (Editor)		
INDEX (a Rotary Axis)	Invokes rotary motion from the current position with respect to the x-, y-, and z-axes around one or two pivot points.	<input type="button" value="2-AXIS MILL"/> <input type="button" value="3-AXIS MILL"/> <input type="button" value="4-AXIS MILL"/> <input type="button" value="5-AXIS MILL"/>	
INDEX (a Cplane)	Positions one or two rotary devices to a predefined Cplane.	<input type="button" value="2-AXIS MILL"/> <input type="button" value="3-AXIS MILL"/> <input type="button" value="4-AXIS MILL"/> <input type="button" value="5-AXIS MILL"/>	
			
L*	Displays a list of star buffers associated with the JCF. (Star buffer)		
LANGUAGE	Specifies the grammar file directory to be used in the active CVNC session where the _voc and _grm compile files have been previously stored.	<input type="button" value="SETUP MILL"/>	

Command	Description	Task Set	Icon or Menu Selection
LEGROUP	Lists the number of entities and tags within an entity NCGROUP.		 VERIFY NCGROUP
LET	Assigns a number or text to a variable used as an argument in subsequent JCF commands.		
LIST JCF	Lists information for all or selected JCF file names associated with your currently active part. (CADD5)	JCF Management	
LISTOOL	Lists the parameters of one tool or all the tools in the current tool library or in another tool library.		
<b>M</b>			
MACLIB	Specifies the name(s) of macro library files.	SETUP MILL	
macutil	Automatically compiles and links appended grammar files. (OS-based)		

Command	Description	Task Set	Icon or Menu Selection
MATERIAL OFFSET	Applies a positive or negative material offset to all surfaces encountered in the ECHO CONTAIN, SURFCUT3, SURFINT3, and PROJECT commands. (M3/M5)	<div style="border: 1px solid black; padding: 2px; display: inline-block; margin-bottom: 2px;">2-AXIS MILL</div> <div style="border: 1px solid black; padding: 2px; display: inline-block; margin-bottom: 2px;">3-AXIS MILL</div> <div style="border: 1px solid black; padding: 2px; display: inline-block; margin-bottom: 2px;">4-AXIS MILL</div> <div style="border: 1px solid black; padding: 2px; display: inline-block;">ROUGHER</div>	
MAXSWEEP	Controls the maximum 3-D distance for adjacent tool tip points generated by the SURFCUT3 and PROJECT commands. (M3/M5)		
MIRROR	Allows repeated and mirrored manipulations of a previously names (using the [ (BLOCK) and NAME commands) and executed block of JCF lines.	<div style="border: 1px solid black; padding: 2px; display: inline-block;">2-AXIS MILL</div>	
MODEL	Defines and activates (or deactivates) the material model. (M3/M5)	<div style="border: 1px solid black; padding: 2px; display: inline-block;">ROUGHER</div>	 
MOVE	Moves the tool from its current location to a new location at RAPID traverse.	<div style="border: 1px solid black; padding: 2px; display: inline-block; margin-bottom: 2px;">2-AXIS MILL</div> <div style="border: 1px solid black; padding: 2px; display: inline-block; margin-bottom: 2px;">3-AXIS MILL</div> <div style="border: 1px solid black; padding: 2px; display: inline-block; margin-bottom: 2px;">4-AXIS MILL</div> <div style="border: 1px solid black; padding: 2px; display: inline-block; margin-bottom: 2px;">5-AXIS MILL</div> <div style="border: 1px solid black; padding: 2px; display: inline-block;">ROUGHER</div>	

Command	Description	Task Set	Icon or Menu Selection
MULTAX	Switches the output in and out of multiaxis mode.	SETUP MILL	
<b>N</b>			
NAME	Names a block of commands in a JCF for a subsequent operation using the TRANSLATE, ROTATE, and MIRROR commands.		
ncgram append	Appends statements to grammar files that reference CVMAC macros, and pass-through statements. (UNIX-based)		
NCGROUP	Defines and names a group of locations or entities to be referenced later by CVNC motion commands.		
nclinker	Concatenates NC output files into a final file. (OS-based)		
ncoutput	Specifies the file name of an existing JCF compiled file and output format to generate output. (OS-based)		
ncverify	Processes and displays the data collected with the OUTPUT VERIFY command. (OS-based)		

Command	Description	Task Set	Icon or Menu Selection
			
OFF	Turns off syntax checking and execution of command lines. (Editor)		
ON	Specifies syntax checking and execution of command lines. (Editor)		
OUT	Moves forward to the first line of the next level up. (Editor)		
OUTLIB	Specifies a library containing output macros used to produce customized output.	SETUP MILL	
OUTPUT	Specifies the output format and file name.	SETUP MILL	
OUTPUT VERIFY	Specifies how tool path verification information will be set up and generated for subsequent processing by the nverify command.	SETUP MILL	

Command	Description	Task Set	Icon or Menu Selection
<b>P</b>			
P	Displays 5 JCF lines. (Editor)	ED	
Pn	Displays lines forward from the specified number. (Editor)	ED	
P:	Displays lines identified by a digitize. (Editor)		
PLn	Displays n active lines. (Editor)		
PACK	Removes wasted space from the binary JCF files (jcfname._jcf and jcfname._cmp). (Editor)		UTILITY DATABASE MANAGEMENT
PACK JCF	Compresses a part database to minimum size following fragmentation by editing. (CADD5)	JCF Management	
PLANE ZAPPR	Defines a plane for approaches to a workpiece.	SETUP MILL	
PLANE ZAPPR	Defines a clearance plane based on an absolute z-value.	SETUP MILL	

Command	Description	Task Set	Icon or Menu Selection
PLANE ZREF	Defines a reference plane for setting the values of other planes.	SETUP MILL	
PLANE ZRETRACT	Defines a retract plane based on an absolute z-value.	SETUP MILL	
PLANE ZWORK	Defines a ZWORK plane.	SETUP MILL	
PLUNGE	Moves the tool from its current location to a new location at the PLUNGE feed rate.	2-AXIS MILL ROUGHER	
POCKET	Clears an area bounded by a set of specified entities.	2-AXIS MILL	
PRINT	Prints numbers, text, and system and user variables (except those containing coordinates in the CADD5 text window).		 SHOW/PRINT EXPRESSION
printclt	Translates binary CLFiles into text files. (OS-based)		

Command	Description	Task Set	Icon or Menu Selection
PROFILE	Performs boundary machining on a specified number of entities (200) in the order of entity selection.	2-AXIS MILL	
PROFILE3	Generates 3-D contouring tool paths. (M3/M5)	3-AXIS MILL	
PROFILE5	Performs 5-axis profiling. (M5)	5-AXIS MILL	
PROGRAM	Enters the specified CVNC application and creates a new JCF or enters an existing JCF. (CADD5)	JCF Management	
PROJECT	Projects 2 1/2-axis tool motion on a set of surfaces, allowing for material offsets (MATERIAL OFFSET) and machining stock (STOCK PART). (M3/M5)	3-AXIS MILL	
			
QUIT	Returns to the CADD5 prompt, restores the CADD5 database and graphics to the state they were in when you entered CVNC (except for inserted entities and tags), and does not file this version of your JCF. (Editor)		<div data-bbox="1551 1206 1692 1239" style="border: 1px solid black; padding: 2px; display: inline-block;">FILE</div> <div data-bbox="1551 1263 1707 1295" style="border: 1px solid black; padding: 2px; display: inline-block;">QUIT JCF</div>

Command	Description	Task Set	Icon or Menu Selection
QUIT*	Returns to normal mode without saving changes made during star buffer edit mode. (Star buffer)		
<b>R</b>			
READ	Prompts for the assignment of numeric, text, or NCGROUP values to a system variable.		
REMOVE NCPROTECT	Removes the referenced or created entities selected from the CVNC-related CADDs groups, thus enabling them to be deleted using the CADDs DELETE ENTITY command. (CADDs)		<div style="border: 1px solid black; padding: 2px; display: inline-block;">ENTITY</div> <div style="border: 1px solid black; padding: 2px; display: inline-block;">REMOVE PROTECTION</div>
REPAINT	Redisplays system graphics.		
RESTART	Positions the pointer to the first line in the JCF. (Editor)		
RESTORE	Replaces the current JCF with a previous JCF of the same name that was stored in the jcfsave/_bcd directory using SAVE. (Editor)		
RESU	Moves to CADDs level from within a CVNC session. (Enter RESUME NCPROC to return to CVNC.) (Editor)	<div style="border: 1px solid black; padding: 2px; display: inline-block;">2-AXIS MILL</div> <div style="border: 1px solid black; padding: 2px; display: inline-block;">RESUME CADDs</div>	

Command	Description	Task Set	Icon or Menu Selection
RESUME NCPROC	Returns from CVNC to your CVNC work session at the point you left it with the RESU command. (CADD5)	3-AXIS MILL 5-AXIS MILL RESUME CVNC	
RETRACT	Moves the cutting tool from its current location to a new location at the RETRACT feed rate.	3-AXIS MILL	
ROTATE	Allows repeated and rotated manipulations of a previously named (using the [ (Block) and NAME commands) and executed block of JCF lines.	2-AXIS MILL	
<b>S</b>			
SAVE	Saves a text JCF under the jcfsave directory. (Editor)		
SCALLOP	Calculates the scallop height on assumption that the heel angle for the next pass is the same as the previous one at the same point. (M5)	4-AXIS MILL 5-AXIS MILL	 

Command	Description	Task Set	Icon or Menu Selection
SECURE	Saves your JCF contents and CADDs part during a work session. (Editor)		<div style="border: 1px solid black; padding: 2px; display: inline-block;">FILE</div> <div style="border: 1px solid black; padding: 2px; display: inline-block;">FILE JCF AND PART</div>
SEE	Switches between two display modes for tag and location data. (Editor)	<div style="border: 1px solid black; padding: 2px; display: inline-block;">ED</div>	
SELECT LAY	Changes the active layer during a work session.		<div style="border: 1px solid black; padding: 2px; display: inline-block;">Lay</div> <div style="border: 1px solid black; padding: 2px; display: inline-block; margin-left: 10px;">SELECT</div>
seq_list	Allows you to create, modify, and view sequence lists used to create output generation. (OS-based)		
sequence_output	Allows you to generate output from multiple JCFs or predefined sequence lists. (OS-based)		
SETAX	Defines a rearrangement of the output coordinate system when writing to the output file.		
SHOW	Displays the value of a system variable or a list of tags and stock values for all entities with stock.		<div style="border: 1px solid black; padding: 2px; display: inline-block; text-align: center;">?</div> <div style="border: 1px solid black; padding: 2px; display: inline-block;">SHOW/PRINT EXPRESSION</div>

Command	Description	Task Set	Icon or Menu Selection
SHOW MATERIAL	Controls the graphical appearance of the current model (created and activated with the MODEL command). (M3/M5)	ROUGHER	
SHOW TOOL	Displays the tool motion between selected points on the tool path.		
SINTCUT4	Initiates a 4-axis surface intersection tool path. (M5)	4-AXIS MILL	
SINTCUT5	Initiates a 5-axis surface intersection tool path. (M5)	5-AXIS MILL	
SINTMORE	Continues a surface intersection cut started with SINTCUT4 or SINTCUT5. (M5)	4-AXIS MILL	
		5-AXIS MILL	
SPEED	Specifies the spindle speed for a milling operation.	2-AXIS MILL	
		3-AXIS MILL	
		ROUGHER	
		4-AXIS MILL	
		5-AXIS MILL	

Command	Description	Task Set	Icon or Menu Selection
SPROF	Generates multiple profile paths at incremental stock values until and including the final stock. (Macro)	2–AXIS MILL	
STATUS	Activates a status display that has been previously defined by a status definition file.		
STOCK	Specifies offsets to boundaries or entities during machining.)	2–AXIS MILL 3–AXIS MILL ROUGHER 4–AXIS MILL 5–AXIS MILL	
SURFCUT3	Generates 3–axis surface machining tool paths. (M3/M5)	3–AXIS MILL	
SURFCUT4	Generates 4–axis surface machining tool paths. (M5)	4–AXIS MILL	
SURFCUT5	Generates 5–axis surface machining tool paths. (M5)	5–AXIS MILL	

Command	Description	Task Set	Icon or Menu Selection
SURFINT3	Generates a 3-axis surface intersection tool path. (M3/M5)	3-AXIS MILL	
SWARFCUT	Allows surface machining with the side of the cutter. (M5)	5-AXIS MILL	
SYN	Specifies syntax checking without execution. (Editor)		
<b>T</b>			
T	Displays the current line. (Editor)		
T:	Performs a type operation based on the line identified by a digitize. (Editor)		
T*n	Displays the contents of the star buffer with index number n. (Star buffer)		
TAG	Specifies how CVNC handles untagged entities.		
TAP	Supports tapping of blind and thru-holes.	2-AXIS MILL	

Command	Description	Task Set	Icon or Menu Selection
TEXTOUT	Passes a text string directly to an APT or COMPACT output file.	SETUP MILL	
TL	Displays the next active line. (Editor)		
TL [n]	Displays a specified number of active lines. (Editor)		
TLIB	Activates a tool library.		
TOLER	Specifies the inner and outer tolerance values for machining motion.	SETUP MILL 2-Axis MILL 3-Axis MILL ROUGHER 4-Axis MILL 5-Axis MILL	
TOOL	Positions the cutting face of the tool with respect to the contact point and the surface parameter. (M5)	4-Axis MILL 5-Axis MILL	
TOOLAXIS	Controls the attitude of the tool axis with respect to the part surface. (M5)	5-Axis MILL	

Command	Description	Task Set	Icon or Menu Selection
TOOLEXT	Specifies which tool extensions are required for collision checking during SURFCUT3 or SURFINT3 operations. (M3/M5)		
TRANSLATE	Allows repeated and translated manipulations of a previously named (using the [(Block) and NAME commands) and executed block of JCF lines.	2-AXIS MILL	
TW	Displays the contents of the last text string located by the CVNC editor. (Editor)		
<b>U</b>			
UNCUT	Marks unmachined areas during SURFCUT3 operations. (M3/M5)	3-AXIS MILL	
UNDEL	Restores the lines flagged for deletion. (Editor)	ED	
UPHILL	Limits the steepness of downward tool path motions during SURFCUT3 operations. (M3/M5)	3-AXIS MILL	

Command	Description	Task Set	Icon or Menu Selection
<b>W</b>			
W	Writes a block of commands in a JCF to an external file specified with the COMLIB command. (Editor)		
W, [filename]	Writes the newly created command file to the specified file name. (Editor)		
WATERLINE	Generates roughing tool paths to machine the material model generated and activated by the MODEL command. (M3/M5)	ROUGHER	
<b>X</b>			
X* [n]	Executes a star buffer with index number n. (Star buffer)		
X* [n,m]	Executes a star buffer with index number n (in the range 0 to 9) a specified number of times (m). (Star buffer)		
X* [n],\$	Executes a star buffer with index number n (in the range 0 to 9) repeatedly until reaching a condition that will not allow further execution (for example, [DONE]). (Star buffer)		

Command	Description	Task Set	Icon or Menu Selection
<b>Z</b>			
ZPROF3	Generates 3–axis profile finishing tool paths. (M3/M5)	3–AXIS MILL	
<b>Symbols</b>			
!	Displays CVNC editor command information in the documentation window. (Editor)		 COMMAND HELP
#!	Displays the system variables listing in the documentation window (Editor)		 COMMAND HELP
command!	Displays online help in the documentation window for the specified command name. (Editor)		 COMMAND HELP
?	Switches online help in the status window and the popup menu on and off. (Editor)		

Command	Description	Task Set	Icon or Menu Selection
~	Permits a CADDs command to be entered within a CVNC session. (Editor)	ED	
* [n]	Repeats the last application command you have just entered in your JCF and makes it the new current line. (Editor)		
!!	Repeats the last application command you have just entered in your JCF and makes it the new current line. (Editor)		
#	Selects JCF lines to be copied (Editor)		
#>	Identifies as a comment any alphanumeric text that follows a hash mark (# followed by a right angle bracket (>)) in columns 1 and 2. (Editor)		
+[/string ]	Adds a specified text string to the end of the current line. (Editor)		
-	Removes a file mark from the current line. (Editor)		
.	Places a file mark on the current line. (Editor)		
/	Locates a specified string in the JCF at any nested level. (Editor)		

Command	Description	Task Set	Icon or Menu Selection
<	Selects a line(s) to be cut from the preceding file mark to the one before the current line. (Editor)		
=	Inserts before the current line the line(s) selected with the # (Select) command. (Editor)		
>	Specifies the destination for the line(s) previously cut using the < (Cut) command. (Editor)		
[	Prepares a block of JCF lines. (Editor)		
]	Mends a call to a high-level command (such as AREAMILL), a command file, or a macro. (Editor)		
=	Inserts before the current line the line(s) selected with the # (Select) command. (Editor)		



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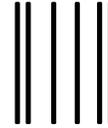
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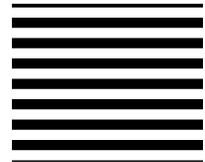
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