

Visual LISP™ Function Reference Chart

for AutoCAD® 2000

Visual LISP Extensions to AutoLISP®

Before using the AutoLISP extensions, issue the following command: (vl-load-com)
The vl-load-com function also initializes ActiveX™ support for AutoLISP

Collection Manipulation Functions

(vlax-for symbol collection [expression1 [expression2 ...]])
(vlax-map-collection obj function)

Curve Measurement Functions

(vlax-curve-getArea curve-obj)
(vlax-curve-getDistAtParam curve-obj param)
(vlax-curve-getDistAtPoint curve-obj point)
(vlax-curve-getEndParam curve-obj)
(vlax-curve-getEndPoint curve-obj)
(vlax-curve-getParamAtDist curve-obj param)
(vlax-curve-getParamAtPoint curve-obj point)
(vlax-curve-getPointAtDist curve-obj dist)
(vlax-curve-getPointAtParam curve-obj param)
(vlax-curve-getStartParam curve-obj)
(vlax-curve-getStartPoint curve-obj)
(vlax-curve-isClosed curve-obj)
(vlax-curve-isPeriodic curve-obj)
(vlax-curve-isPlanar curve-obj)
(vlax-curve-getClosestPointTo curve-obj givenPt [extend])
(vlax-curve-getClosestPointToProjection curve-obj givenPt normal [extend])
(vlax-curve-getFirstDeriv curve-obj param)
(vlax-curve-getSecondDeriv curve-obj param)

Data Conversion Functions

(vlax-3D-point list)
(vlax-3D-point x y [z])
(vlax-ename->vla-object entname)
(vlax-make-variant value type)
(vlax-safearray-fill var 'element-values)
(vlax-safearray-get-dim var)
(vlax-safearray-get-element var element)
(vlax-safearray-get-l-bound var dim)
(vlax-safearray-get-u-bound var dim)
(vlax-safearray-put-element var element value)
(vlax-safearray-type var)
(vlax-safearray->list var)
(vlax-tmatrix list)
(vlax-variant-change-type var type)
(vlax-variant-type var)
(vlax-variant-value var)
(vlax-vla-object->ename obj)

Dictionary Functions

(vlax-ldata-delete dict key)
(vlax-ldata-get dict key [default-data])
(vlax-ldata-list dict)
(vlax-ldata-put dict key data)
(vlax-ldata-test data)

Method Invocation Functions

(vlax-invoke-method obj method list)
(vlax-method-applicable-p obj method)

Object-Handling Functions

(vlax-create-object "prog-id")
(vlax-dump-object obj)
(vlax-erased-p obj)
(vlax-get-acad-object)
(vlax-get-object "prog-id")
(vlax-import-type-library :tlb-filename filename
[:methods-prefix mprefix :properties-prefix
pprefix :constants-prefix cprefix])
(vlax-method-applicable-p obj method)
(vlax-object-released-p obj)
(vlax-read-enabled-p obj)
(vlax-release-object obj)
(vlax-typeinfo-available-p obj)
(vlax-write-enabled-p obj)

Property-Handling Functions

(vlax-get-property obj property)
(vlax-property-available-p obj prop [T])
(vlax-put-property obj property arg)

AutoLISP Functions

Basic Functions

Arithmetic

(+ [number number] ...)	(float number)
(- [number number] ...)	(gcd int1 int2)
(* [number number] ...)	(log number)
(/ [number number] ...)	(logand int int ...)
(~ int)	(logior int int ...)
(1- number)	(lsh int number)
(1+ number)	(max number number ...)
(abs number)	(min number number ...)
(atan num1 [num2])	(minusp number)
(cos ang)	(rem num1 num2 ...)
(exp number)	(sin ang)
(exp base power)	(sqrt number)
(fix number)	(zerop number)

String-Handling Functions

(strcase string [which])	(vl-string-position char code str [start-pos] [end-pos])
(strcat string1 [string2] ...)	(vl-string-right-trim character set string)
(strlen [string] ...)	(vl-string-search pattern string [start-pos])
(substr string start [length])	(vl-string-subst new-str pattern string [start-pos])
(vl-print-to-string object)	(vl-string-translate source-set dest-set str)
(vl-princ-to-string object)	(vl-string-trim char set str)
(vl-string-elt string position)	(vl-string->list string)
(vl-string-left-trim character set string)	(vl-string->string list)
(vl-string-mismatch str1 str2 [post1 post2 ignore-case-p])	(vl-string-match string pattern)

Equality & Conditional Functions

(= numstr [numstr] ...)	(cond (test1 result1 ...) ...)
(/ = numstr [numstr] ...)	(eq expr1 expr2)
(< numstr [numstr] ...)	(equal expr1 expr2 [fuzz])
(<= numstr [numstr] ...)	(if testexpr thenexpr [elseexpr])
(> numstr [numstr] ...)	(or expr ...)
(>= numstr [numstr] ...)	(repeat int expr ...)
(and expr ...)	(while testexpr expr ...)
(Boole func int1 int2 ...)	

Error-Handling Functions

(alert string)	(vl-catch-all-apply function list)
(*error string)	(vl-catch-all-error-message error-obj)
(exit)	(vl-catch-all-error-p arg)
(quit)	

Utility Functions

Query & Command Functions

(acad_colorid colornum [flag])	(setenv varname)
(acad_helpdlg helpfile topic)	(setfunhelp function [helpfile [topic [command]])
(command [arguments] ...)	(setvar varname value)
(getcfg cfname)	(ver)
(getcname cname)	(vl-cmdf [arguments] ...)
(getenv variable-name)	(vlax-add-cmd global-name func-sym [local-name cmd-flags])
(getvar varname)	(vlax-remove-cmd global-name)
(help [helpfile [topic [command]])	
(setcfg cfname cfval)	

Display Control Functions

(graphscr)	(print [expr [file-desc]])
(gdraw from to color [highlight])	(prompt msg)
(grtext box text [highlight])	(redraw [ename [mode]])
(grves [v1 [v2]])	(terpri)
(menucmd string)	(textpage)
(menugroup groupname)	(textscr)
(print [expr [file-desc]])	(vports)
(princ [expr [file-desc]])	

User Input Functions

(entsel [msg])	(getorient [pt] [msg])
(getangle [pt] [msg])	(getpoint [pt] [msg])
(getcorner pt [msg])	(getreal [msg])
(getdist [pt] [msg])	(getstring [cr] [msg])
(getfilled title default ext flags)	(initget [bits] [string])
(getint [msg])	(nentsel [msg])
(getkeyword [msg])	(nentselp [msg] [pt])

Geometric Functions

(angle pt1 pt2)	(osnap pt mode)
(distance pt1 pt2)	(polar pt ang dist)
(inters pt1 pt2 pt3 pt4 [onseg])	(textbox elist)

Conversion Functions

(angtof string [mode])	(cvunit value from to)
(angtos angle [mode [precision]])	(distof string [mode])
(ascii string)	(itoa int)
(atof string)	(rtos number [mode [precision]])
(atoi string)	(trans pt from to [disp])
(chr integer)	

Device Access Functions

(grread [track] [allkeys [curtype]])	(tablet code [row1 row2 row3 direction])
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Symbol-Handling Functions

(atom item)	(read [string])
(atoms-family format [symlist])	(set sym expr)
(boundp sym)	(setq sym1 expr1 [sym2 expr2] ...)
(not item)	(type item)
(null item)	(vl-symbol-name symbol)
(numberp item)	(vl-symbol-value symbol)
(quote expr)	(vl-symbolp object)

List Manipulation Functions

(acad_strlist lst)	(vl-cons list-variable)
(append lst ...)	(vl-every-predicate-function list [more-lists]...)
(assoc item alist)	(vl-list* object [more-objects]...)
(car lst) and (cdr lst)	(vl-list->string char-codes-list)
(cons new-list element list)	(vl-list-length list-or-cons-object)
(foreach name list expr ...)	(vl-member-if predicate function list)
(last list)	(vl-member-if-not predicate function list)
(length list)	(vl-position symbol list)
(list expr ...)	(vl-remove element-to-remove list)
(listp item)	(vl-remove-if predicate function list)
(mapcar function list1 ... listn)	(vl-remove-if-not predicate function list)
(member expr list)	(vl-some-predicate-function list [more-lists]...)
(nth n lst)	(vl-sort list less?-function)
(reverse list)	(vl-sort-i list less?-function)
(subst newitem olditem list)	(vl-string->list string)

Function-Handling Functions

(apply function list)	(trace function ...)
(defun sym argument-list expr ...)	(untrace function ...)
(eval expr)	(defun-q sym [arguments] [/variables...] expr ...)
(lambda arguments expr ...)	(defun-q-list-ref function)
(prgn [expr] ...)	(defun-q-list-set 'sym)

Application-Handling Functions

(add)	(autoload filename cmdlist)
(arc)	(load filename [onfailure])
(autoload symbol-name [onfailure])	(startapp appcmd file)
(autoload application [onfailure])	(vl-baload "filename")
(autoload filename cmdlist)	(vl-vbarun "macroname")
(autoload filename cmdlist)	(vlax-add-cmd "global-name" "func-sym" ["local-name" cmd-flags])

File-Handling Functions

(close file-desc)	(vl-file-ename "old-filename" "new-filename")
(findfile filename)	(vl-file-size "filename")
(open filename mode)	(vl-file-system "filename")
(read-char [file-desc])	(vl-filename-base "filename")
(read-line [file-desc])	(vl-filename-directory "filename")
(vl-directory-files [directory pattern directories])	(vl-filename-extension "filename")
(vl-file-copy "source-filename" "destination-filename" [append])	(vl-filename-mktemp ["pattern" "directory" "extension"])
(vl-file-delete "filename")	(write-char num [file-desc])
(vl-file-directory-p "filename")	(write-line string [file-desc])

Selection Set, Object & Symbol Table Functions

Selection Set Manipulation Functions

(addl [ename ss1])	(ssmemb ename ss)
(addp [ename ss])	(ssname ss index)
(assoc [mode] int1 [pt2] [pt-list] [filter-list])	(ssname ss index)
(getfirst)	(sssetfirst gripset [pickset])
(sslength ss)	

Object (Entity)-Handling Functions

(entdel ename)	(vlax-dump-object obj)
(entget ename [applist])	(vlax-erased-p obj)
(entlast)	(vlax-get-acad-object)
(entmake [elist])	(vlax-method-applicable-p obj method)
(entmakex [elist])	(vlax-object-released-p obj)
(entmod elist)	(vlax-read-enabled-p obj)
(entnext [ename])	(vlax-release-object obj)
(entupd ename)	(vlax-typeinfo-available-p obj)
(handent handle)	(vlax-write-enabled-p obj)

Extended Data-Handling Functions

(regapp application)	(xdsize list)
(xdroom ename)	

Symbol Table & Dictionary-Handling Functions

(dictadd ename symbol newobj)	(tblnext table-name [rewind])
(dictdel ename symbol)	(tblobjname table-name symbol)
(dictnext ename symbol [rewind])	(tblsearch table-name symbol [setnext])
(dictrename ename oldsym newsym)	(vlax-ldata-delete dict key)
(dictsearch ename symbol [setnext])	(vlax-ldata-get dict key [default-data])
(namedobjdict)	(vlax-ldata-list dict)
(setview view_description [vport_id])	(vlax-ldata-put dict key data)
(svalid sym_name)	(vlax-ldata-test data)

Memory Management Functions

Memory Management Functions

(alloc int)	(gc)
(expand number)	(mem)

Reactor Functions

Reactor Functions

(vlr-acdb-reactor data callbacks)	(vlr-numbers reactor)
(vlr-added-p obj)	(vlr-pels reactor)
(vlr-beep-reaction [args])	(vlr-pels-p reactor)
(vlr-current-reaction-name)	(vlr-pick-release reactor)
(vlr-data obj)	(vlr-reaction-names reactor-type)
(vlr-data-set obj data)	(vlr-reaction-set reactor event function)
(vlr-edl-reactor data callbacks)	(vlr-reactions reactor)
(vlr-linker-reactor data callbacks)	(vlr-reactors reactor-type)
(vlr-load-reactors)	(vlr-remove reactor)
(vlr-object-reactor owners data callbacks)	(vlr-remove-all reactor-type)
(vlr-owner-add reactor owner)	(vlr-trace-reaction any number of arguments)
(vlr-owner-remove reactor owner)	(vlr-type reactor)
	(vlr-types)

VLX Namespace Functions

VLX Namespace Functions

(vl-ax-import [function] [application])	(vl-exit-with-value value)
(vl-doc-export [function])	(vl-list-exported-functions "appname")
(vl-doc-import [function] [application])	(vl-list-loaded-vlx)
(vl-doc-ref symbol)	(vl-unload-vlx "appname")
(vl-doc-set symbol value)	(vlx-loaded-p "appname")
(vl-exit-with-error "msg")	

Namespace Communication Functions

Namespace Communication Functions

(vl-bb-ref 'variable)	(vl-load-all "filename")
(vl-bb-set variable value)	(vl-propagate 'variable)

Windows Registry Functions

Windows Registry Functions

(vlax-product-key)	(vl-registry-read reg-key [val-name])
(vl-registry-delete reg-key [val-name])	(vl-registry-write reg-key [val-name val-data])
	(vl-registry-descendents reg-key [val-names])

