Combined Table of Contents

The following table lists every page ever printed in a research edition. In general the presence of a page in an edition is signaled by +; a number instead of + indicates that the page appeared in a different chapter of that edition. An appended name in brackets [ ] means that a manual page was later incorporated into or obsoleted by the named page.

Research software that was not included in distribution tapes was generally omitted from the v6 and v7 manuals. For v7 an addendum about unexported software was printed for local use; items from it are flagged L.

Thus one can infer from the table that *apl* existed from v5 through v7, but was never distributed. In v5 it lived in chapter 6, "User maintained commands." It disappeared with v8, a casualty of the conversion from PDP-11s to VAXes.

Many trivial name changes are quietly ignored, e.g. a change from *cons*(4) in v8 to *console*(4) in v9 and from *file system*(V) in v1-v3 to *fs*(V) in v4-6 to *filsys*(5) in v7-9. The short descriptions also changed from time to time; those given here are from v7 or else from the edition where the page first appeared.

1. Commands

In v1-v6, commands were classified as standard or as "user maintained," the latter being relegated to chapter 6. In this list both categories appear in chapter 1. Games, though, are listed with chapter 6 as always.

Edition	Title	Purpose
1 2 3 4 5 6 7 8 9		
. . . . . . + + +	intro	introduction to commands
. + + ...	:	place label [goto]
. . . . + +	=	redo previous shell command
+ . + ...	acct	get connect-time accounting
. . . . . . + . +	adb	debugger
. . . . + .	altran	language for algebraic computation [langs]
. . . . 6 . L . .	apl	APL interpreter
. . . . + +	apply	apply a command to a set of arguments
. . . . + +	apsend	send troff output to aps-5
+ + + + + + + + +	ar	archive and library maintainer
. . . . + . .	arcv	convert archives to new format
+ + + + + + + + +	as	assembler
. . . . + .	asa	interpret ASA control characters
. . . . + +	ascii	interpret ASCII characters
. . . . . . + + +	at	execute commands at a later time
. . . . . . + + +	awk	pattern scanning and processing language
. . . 6 6 6 . . .	azel	obtain satellite predictions
+ + + ...	b	compile b program
. . . . +	backup	backup and recover files
. . . . . . + . .	badblk	dispose of unusable disk
+ + + + 6 + + . .	bas	basic [hoc]
6 6	basic	DEC supplied basic [langs]
. . . . . . + + +	basename	strip filename affixes
. . . . . + + + +	bc	arbitrary-precision arithmetic language
+	boot	reboot system [20boot(8)]

Edition (1 2 3 4 5 6 7 8 9)	Title	Purpose
. . . . . . L . .	bs	a compiler/interpreter for modest-sized programs
. . . . + +	bundle	collect files for distribution
6 6 . 6 6 6 + + 7	cal	print calendar
. . . . . . + + +	calendar	reminder service
. . . . . . L . .	call	ring a telephone
. . . . + +	can	interface to Cannon laser-printer spooler
+ + + + + + + + +	cat	catenate and print
. . . + 6	catsim	phototypesetter simulator
. . . . . . + + +	cb	C program beautifier
. . . . + +	cbt	btree utilities
. + + + + + + + + +	cc	C compiler
. . . . . . + . .	cd	change working directory [sh]
. . + + + + . . .	cdb	C debugger [adb]
. . . . . . L + .	cflow	generate C flow graph
+ + + + + + . . .	chdir	change working directory [cd]
+ + + + + + + + +	chmod	change mode
+ + + + + 8 + 8 8	chown	change owner or group
. . . . +	cin	C interpreter
. . . . + +	cite	process citations in a document
. . . . + .	clear	clear terminal screen
+ + + + + + + + +	cmp	compare two files
. . . . 6 6 + . .	col	filter reverse line feeds [column]
. . . . + +	column	column alignment
. . . . + + + + +	comm	select or reject lines common to two sorted files
. . . . + .	con	connect to another UNIX [dcon]
. . . . + +	coreid	identify source of a core image
+ + + + + + + + +	cp	copy file
. . . . . . L + +	cpio	copy file archives in and out
. 6 + + + + L . .	cref	cross-reference table
. . + . . . + + 6	crypt	encode/decode
. . . . + +	ct	call terminal (and start a session)
. . . . + + +	cu	call Unix
. . . . + +	cut	rearrange columns of text
. . . . + +	cyntax	C syntax checker
. . . . + +	d202	phototypesetter filters
6 6	das	disassembler [adb]
+ + + + + + + + +	date	print and set the date
+ + + + + + . . .	db	symbolic debugger [adb]
+	dbppt	write binary paper tape [dump]
+ + + + + + + + +	dc	desk calculator
. . . . + +	dcon	remote login and execution
. . . . + + + + +	dd	convert and copy a file
. . . . + + +	deroff	remove nroff, troff, tbl and eqn constructs
+ + + 8 8 8 + + +	df	disk free
. . . . + + + + +	diff	differential file comparator
. . . . + + .	diff3	3-way differential file comparison
. . . . + +	dired	directory editor
. . . . + +	docgen	generate a document from a script
. . . . + +	doctype	guess command line for formatting a document
6 6 8	dli	load DEC binary paper tapes
6 6	dpt	read DEC ASCII paper tapes

Edition	Title	Purpose
1 2 3 4 5 6 7 8 9		
. . . . L . . draw		edit a circuit diagram
. + ... ds		verify directory hierarchy
+ + + + + + . . . dsw		delete files interactively [rm]
+ . . . . dtf		format DECtape
+ + + + + + + + + du		summarize disk usage
. . . . + . . dumpdir		print the names of files on a dump tape
. + + + + + + + + echo		echo arguments
+ + + + + + + + + ed		text editor
. . . . + . efl		extended Fortran language preprocessor
. . . . + + + + + eqn		typeset mathematics
. . . . + + + expr		evaluate arguments as an expression
. + + + + + . . . exit		end command sequence [sh]
. . . . + + + f77		Fortran 77 compiler
. . + + 6 6 + + + factor		factor a number, generate large primes
. + + + + + . . . fc		compile Fortran program [f77]
. + + + + 6 . . . fed		form-letter editor [form]
. . . . L . . fget		retrieve files from HIS 6000
. . . + . + + + + file		determine file type
+ + ... find		find file with a given name
. . . . + + + + + find		find files
. . . . + fmt		ultra-simple text formatter
+ . . . . for		compile fortran program [fc]
+ + + + + 6 L . . form		generate form letter
. . + ... forml		generate form letters
. . . . . . L . . fsend		send files to HIS 6000
. . . . . . L . . gcat		send phototypesetter output to HIS 6000 [apsend]
. . . . + + getuid		get user identity
. . . . . . L . . gex		graphics exerciser for Tektronix 4014
. + + + + + . . . goto		command transfer [sh]
. . . . + gone.fishing		automatic reply to mail
. . . . 6 . . . . graf		draw graph on GSI terminal
. . . . + + grap		pic preprocessor for drawing graphs
. . . . . 6 + + + graph		draw a graph
. . . . . . L . . greek		interpret extended character set
. . . + + + + + + grep		search a file for a pattern
. . . . 6 6 . . . gsi		interpret funny characters on GSI terminal
. . . . + + hang		start a process in stopped state
. . . . + + hoc		interactive floating point language
. . . . . . L . . huff		Huffman code file compression [pack]
+ . . . . hup		hang up typewrite
. . + 6 6 . . . . hyphen		find hyphenated words
. . . . 6 . L . . ibm		submit off-line job to HO IBM 370
. . . . + . icont		Icon language translator and compiler
. . . . + + ideal		troff preprocessor for drawing pictures
. . . . + + idiff		interactive file comparison
. + + + + + . . . if		conditional command [sh]
. . . . . . L . . iget		get files from Holmdel IBM 370
. . . . . . + + . iostat		report I/O statistics [load]
. . . . . . L . . isend		send files to Holmdel IBM 370
. . . . + + + join		relational database operator
. . 8 + + + + + + kill		terminate a process with extreme prejudice

Edition										Title	Purpose
1	2	3	4	5	6	7	8	9			
.	.	.	.	.	.	.	L	.	.	labmake	print address labels on GCOS [lab]
.	.	.	.	.	.	.	.	+	+	lab	label maker
.	.	.	.	.	.	.	.	.	+	langs	altran, basic, ... languages
.	.	.	.	.	.	.	.	+	.	last	report recent logins [who]
.	.	.	.	.	.	.	.	.	+	latex	tex macro packages and bibliographies
.	.	.	.	.	.	.	.	+	+	lcomp	line-by-line profiler
+	.	.	.	.	.	.	.	.	.	lbppt	read binary paper tape [restor]
+	+	+	+	+	+	+	+	+	+	ld	loader
.	.	.	.	.	.	.	L	.	.	lde	logic design equation language
.	.	.	.	.	.	.	+	+	+	learn	computer aided instruction about UNIX
.	.	.	.	.	.	.	+	+	+	lex	generator of lexical analysis programs
.	.	.	.	.	.	.	.	+	.	lisp	lisp interpreter and compiler [langs]
.	.	.	.	.	.	.	+	+	+	lint	a C program verifier
+	+	+	+	+	+	+	+	+	+	ln	make a link
.	.	.	.	.	.	.	.	.	+	load	load and input-output statistics
.	+	+	+	+	+	+	8	8		login	sign on
.	.	.	.	.	.	.	+	+	+	look	find lines in a sorted list
.	.	.	.	.	.	.	+	.	.	lookall	look through all text files on UNIX
.	.	.	.	.	.	.	+	.	+	lorder	find ordering relation for an object library
.	.	.	+	.	+	+	+	+		lpr	line printer spooler
+	+	+	+	+	+	+	+	+	+	ls	list contents of directory
.	.	.	.	.	.	+	+	+		m4	macro processor
.	+	+	6	6	6	.	.	.		m6	macroprocessor [m4]
.	.	.	.	.	.	.	.	+	+	Mail	send and receive mail
+	+	+	+	+	+	+	+	+	+	mail	send or receive mail among users
.	.	.	.	.	.	.	+	+	+	make	maintain program groups
.	+	+	+	+	+	+	+	+	+	man	print sections of this manual
.	.	.	.	.	.	.	.	+	.	matlab	interactive matrix desk calculator [langs]
.	.	.	+	.	.	.	.	.		merge	merge several files [sort]
+	+	+	+	+	+	+	+	+	+	mesg	permit or deny messages
.	.	.	.	.	.	.	.	.	+	mk	maintain (make) related files
+	+	+	+	+	+	+	+	+	+	mkdir	make a directory
.	.	.	.	.	.	.	.	.	+	mkpkg	make and install packages
.	.	.	.	.	.	.	.	.	+	monk	typeset documents and letters
.	+	+	.	.	.	.	.	.		mt	save/restore files on magtape [tar]
+	+	+	+	+	+	+	+	+	+	mv	move or rename files and directories
.	.	.	.	+	+	.	.	.		neqn	typeset mathematics on a terminal [eqn]
.	.	.	.	.	.	.	.	+	+	netnews	send or receive news articles
.	.	.	.	.	.	.	.	+	+	newer	test file modification dates
.	.	.	.	.	+	+	+	+		newgrp	log in to a new group
.	.	.	.	.	.	.	.	+	+	news	print news items
.	.	.	.	.	.	.	L	.	.	nfs	communicate with Spider File System
.	.	.	.	.	.	L	1	6		number	convert Arabic numerals to English
.	.	.	+	+	+	+	+	+		nice	run a command at low priority
+	+	+	+	+	+	+	+	+	+	nm	print name list
.	.	.	.	6	.	.	.	.		npr	print file on Spider line-printer
.	.	.	+	+	+	.	.	.		nohup	run a command at low priority [nice]
.	+	+	+	+	+	.	.	.		nroff	format text for printing [troff]
+	+	+	+	+	+	+	+	+	+	od	octal dump
.	+	+	+	+	+	L	.	.		opr	print file off-line
.	+	+	6	.	.	.	.	.		ov	page overlay file print

Edition	Title	Purpose
1 2 3 4 5 6 7 8 9		
. . . . + +	p	paginate
. . . . + +	pack	compress and expand files
. . . . + .	paper	list input on HP2621P printer
. . . . + +	pascal	language interpreter
. . . . + +	pc	pascal language compiler
. . + + + + + + +	passwd	install new password or user
. . . + + + . . .	pfe	print floating exception
. . . . + +	pic	troff preprocessor for drawing pictures
. . . . + .	pick	pick arguments [apply]
. . . . . . L . .	place	design physical layout of a circuit
. . . . 6	plog	make a graph on the gsi terminal
. . . + 6 6 + + +	plot	graphics filter
. . . . + .	post	send mail to users by name
. . . . + +	postnews	submit netnews articles
+ + + + + + + + +	pr	print file
. . . . +	prefer	maintain and use bibliographic references
. . . . . . + . .	prep	prepare text for statistical processing
. . . . . 6 . . .	primes	print all primes larger than somewhat [factor]
. . . . . . L . .	prom	read and write proms through the PROLOG promwriter
. . + + ...	proof	compare text files [diff]
. . . . + + + + +	prof	display profile data
. . 8 + + + + + +	ps	process status
. 6 6 6 6 . + + +	ptx	permuted index
. . . . + .	pubindex	make inverted bibliographic index [refer]
. . . . + +	push	datakit remote file copy
. . . . + + + + +	pwd	working directory name
. . . . + .	pxp	pascal printer, profiler, and cross-reference lister
. . . . + +	random	sample lines from a file or provide random exit code
. . . . + .	ranlib	convert archives to random libraries [ar]
. . . . . . + . + .	rc	Ratfor compiler [langs]
. . . . + +	readnews	read news articles
. . . . + + +	refer	find and insert literature references in documents
. . . . . + + + +	rev	reverse lines of a file
+ + + + + ...	rew	rewind DECtape
+	rkd	dump disk to tape
+	rkf	format RK disk
+	rkl	load disk from tape
+ + + + + + + + +	rm	remove (unlink) files
+ + + + + + . . .	rmdir	remove (delete) directory [rm]
+ + + + + + + . .	roff	format text
. . . . + +	ropy	remote file copy for arpa internet
. . . . +	rscan	scan pages on ricoh scanner and display on 5620
+	sdate	adjust date and time
. . . . + +	sdb	symbolic debugger
. . . . . . L . .	sdiff	side-by-side difference program
. . . . +	seal	mailable data file
. . . . . . + + +	sed	stream editor
. . . . +	sendcover	send cover sheet to the library
. . . . + +	seq	print sequences of numbers
. . . . + +	server	run anonymous command on another machine
. . . . 6	sfs	structured file scanner

Edition	Title	Purpose
1 2 3 4 5 6 7 8 9		
+ + + + + + + + + sh		command language
. . + + + + . . . shift		adjust shell arguments [sh]
. . . . + + ship		automatic software distribution
. . + + + + + + + size		size of an object file
. . . 6 6 6 L 7 7 sky		obtain ephemerides
. . . + + + + + + sleep		suspend execution for an interval
. . + + 6 6 L + . sno		compile Snobol programs [langs]
. . . . + + snocone		snobol with syntactic sugar
6 + + + + + + + + sort		sort or merge files
. . + + 6 6 L . . speak		send words to voice synthesizer
. . . . + + + + + spell		find spelling errors
. . . . + . spitbol		Snobol language compiler [langs]
. . . 6 6 6 + . . spline		interpolate smooth curve
. . + + + + + + + split		split a file into pieces
+ + + ... stat		get file status
+ + + + + + + + + strip		remove symbols and relocation bits
. . . . + + . struct		structure Fortran programs
. + + + + + + + + stty		set terminal options
. . . . + submit		install document in database
+ + + + + . + + + sum		sum and count blocks in a file
. . . . . . + + + tabs		set terminal tabs
. + ... tacct		connect-time accounting
. . . . . . + + + tail		deliver the last part of a file
+ + + ... tap		manipulate DECtape
. . . . + + tape		identify and manipulate magnetic tape
. . . . . . + + + tar		tape archiver
. . . . . 6 + + + tbl		format tables for nroff or troff
. . . . + . . tc		troff output interpreter
. . . . . . L . . tekstare		convert tektronix picture to hard copy graphics [can]
. . . . + + + + + tee		pipe fitting
. . . . + . telnet		user interface to the telnet protocol
. . . . . . + + + test		condition command
. . . . + tex		text formatting and typesetting
. . + + + + + + + time		time a command
. . . . . . + + . tk		paginator for the Tektronix 4014
. 6 + 6 6 6 L . . tmg		compile tmgl program
. . . . + + + touch		update date last modified of a file
. . . + + + + . . tp		manipulate tape archive [tar]
. . . . + + + + + tr		translate characters
. . . . + + trace		protocol compiler and analyzer
. . . . + . track		selective remote file copy
. . + + + + + + + troff		text formatting and typesetting
. . . . . . + + + true		provide truth values
. . . . + . tset		set terminal modes
. + + + + . L . . tss		communicate with MH-TSS (GCOS)
. . . . . . + + + tsort		topological sort
+ + + + + + + + + tty		get terminal name
+ + + + ... type		print file on IBM 2741
. . + + + + L . . typo		find typographic errors
. . . . . . L . . ufs		Spider Network Communication
. . . . + + ul		print underlines on screen terminals

Edition	Title	Purpose
1 2 3 4 5 6 7 8 9		
+ + + ... un		fine undefined symbols
. . + + + + + + + uniq		report repeated lines in a file
. . . . . . 6 + 7 7 units		conversion program
. . . . . . + . . . usort		sort and merge files, discarding duplicate lines [sort]
. . . . + + + uucp		unix to unix copy
. . . . . . L . . uudiff		directory comparison between machines
. . . . + + uustat		uucp status inquiry and job control
. . . . + + + uux		unix to unix command execution
. . . . . . L . . vc		verification of tests for C programs [lcomp]
. . . . + + + vi		screen oriented (visual) display editor based on ex
. . . . + + view2d		movie of a function f(x,y,t)
. . . . + + vis		show invisible characters
. . . . + . visi		mathematical spreadsheet
. . + ... vs		generate voice synthesizer phonemes
. . . + + + + . . wait		await completion of process [sh]
+ + + + + + + + + wc		word count
. . . . . . L . . wcheck		look for inconsistencies in a circuit description
+ + + + + + + + + who		who is on the system
. . . . . . L . . wrap		generate control information for wiring a circuit board
+ + + + + + + + + write		write to another user
. . . . + + wwb		writers workbench
. . . . + + wwv		print and set the date from accurate clock
. . . . . . L . . xref		cross reference for C programs
. . . . + + . xsend		secret mail
. . 6 6 6 + + + + yacc		yet another compiler-compiler

2. System calls

Edition	Title	Purpose
1 2 3 4 5 6 7 8 9		
. . . . + + + + + intro		introduction to system calls and error numbers
. . . . . . + + + access		determine accessibility of file
. . . . . . + + + acct		turn accounting on or off
. . . . . . + + + alarm		schedule signal after specified time
. . + ... + . boot		reboot the system
+ + + + + + . . . break		set program break [brk]
. . . . . . + + + brk		change core allocation
+ + + ... cemt		catch EMT traps [signal]
+ + + + + + + + + chdir		change default directory
+ + + + + + + + + chmod		change mode of file
+ + + + + + + + + chown		change owner and group of a file
+ + + + + + + + + close		close a file
+ + + + + + + + + creat		create a new file
. . + + + + . . . csw		read the console switches
. . . . + deprecated		system calls to be avoided
. . + + + + + + + dup		duplicate an open file descriptor
+ + + + + + + + + exec		execute a file
+ + + + + + + + + exit		terminate process
. . . . + fmount		mount or remove file system
+ + + + + + + + + fork		spawn new process
. . + ... fpe		catch floating exception errors [signal]
+ + + + + + . . . fstat		status of open file [stat]

Edition	Title	Purpose
1 2 3 4 5 6 7 8 9		
. . . + + + . . .	getgid	get group identification [getuid]
. . . . . . + + . .	getpid	get process identification [getuid]
+ + + + + + + + +	getuid	get user and group identity
. . . . + .	gmount	mount or remove non-standard file system [fmount]
+ + + + + + . . .	gtty	get typewrite mode [ioctl]
. + ...	hog	set low-priority status [nice]
+ + + ...	ilgins	catch illegal instruction trap [signal]
. . . + + + + . .	indir	indirect system call [syscall]
+ + + ...	intr	catch or inhib interrupts [signal]
. . . . . . + + +	ioctl	control device
. + + + + + + + +	kill	send signal to a process
+ + + + + + + + +	link	link to a file
. . . . . . + . .	lock	lock a process in primary memory
. . . . . . + + +	lseek	move read/write pointer
+ + + ... +	mkdir	create directory
. . . + + + + + +	mknod	make a directory or a special file
+ + + + + + + + .	mount	mount or remove file system [fmount]
. . . . . . + . .	mpx	create and manipulate multiplexed files
. . + + + + + + +	nice	set program priority
+ + + + + + + + +	open	open for reading or writing
. . . + . . + + +	pause	stop until signal
. . . . . . + . .	phys	allow a process to access physical addresses
. . + + + + + + .	pipe	create an interprocess channel
. . . . . . + . .	pkon	establish packet protocol
. . . . + + + + +	profil	execution time profile
. . . . . + + + .	ptrace	process trace [proc(4)]
+ + + ...	quit	catch or inhibit quits [signal]
+ + + + + + + + +	read	read from file
+ + + ...	rele	release processor
+ + + + + + . . .	seek	move read or write pointer [lseek]
. . . . + +	select	synchronous I/O multiplexing
. . . + + + . . .	setgid	set process group ID [setuid]
+ + + + + + + + +	setuid	set user and group ID
+ + + ...	smdate	set date modified of file [utime]
. . . + + + + + +	signal	catch or ignore signals
. + + + + + . . .	sleep	delay execution [alarm]
+ + + + + + + + +	stat	get file status
+ + + + + + + + +	stime	set time
+ + + + + + . . .	stty	set mode of typewriter [ioctl]
. + + + + + + + +	sync	update super-block
. . . . + +	syscall	indirect system call
+ + ...	tell	find read or write pointer [seek]
+ + + + + + + + +	time	get date and time
. . + + + + + + +	times	get process times
. . . . . . + + +	umask	set file creation mode mask
+ + + + + + . . .	umount	dismount file system [mount]
+ + + + + + + + +	unlink	remove directory entry
. . . . . . + + +	utime	set file times
+ + + + + + + + +	wait	wait for process to terminate
+ + + + + + + + +	write	write on a file

3. Subroutines

Edition	Title	Purpose
1 2 3 4 5 6 7 8 9		
. . . . + + +	intro	introduction to library functions
. . . . . + + + +	abort	generate IOT fault
. . . . . + + . .	abs	integer absolute value, sign function [arith]
. . . . + +	arith	integer arithmetic functions
. . . . + + . . .	alloc	core allocator [malloc]
. . . . . . + + +	assert	program verification
. + + + + + . . .	atan	arctangent [sin]
+ + + + + + + + +	atof	convert ASCII to numbers
+ + + . . + . . .	atoi	convert ASCII to integer [atof]
. . . . + +	cbt	compressed B-tree subroutines
. . . . + +	chrtab	simple character bitmaps
. . + + ...	compar	string compare for sort
. + ...	const	floating point constants
. . . . . 7 L . .	cr	coroutine scheme
. . + + + + + + +	crypt	DES encryption
+ + + + + + + + +	ctime	convert date and time to ASCII
. . . . . . + + +	ctype	character classification
. . . . + +	curses	screen functions with 'optimal' cursor motion
. . . . + .	db	database subroutines
. . . . . . + + +	dbm	data base subroutines
. . . . + +	dialout	place call on ACU
. . . . + +	directory	directory operations
. . . . + +	dkmgr	establish datakit server
. . + ...	ddsput	display characters on Picturephone
. . + + + + + + +	ecvt	output conversion
. . . . . + + + +	end	last locations in program
. . . . . . L + +	erf	error function
+ + + + + + + + +	exp	exponential, logarithm, power, square root
. . . . . . + + +	fclose	close or flush a stream
. . . . . . + + +	ferror	stream status inquiries
. . . . +	fio	fast buffered I/O
. . . . + + + + +	floor	absolute value, floor, ceiling functions
. . . . . . + . .	fmod	floating modulus function [floor]
. . . . . . + + +	fopen	open a stream
+ + + + + + . . .	fptrap	floating-point simulator
. . . . . . + + +	fread	buffered binary input/output
. . . . . . + + +	frexp	split into mantissa and exponent
. . . . . . + + +	fseek	reposition a stream
+ + + ...	ftoa	convert floating to ASCII [ecvt]
. . + ...	ftoo	convert floating to octal
. . . . + +	ftw	file tree walk
. . . . . . L + +	galloc	storage allocation with garbage collection
. . . . + + L + +	gamma	log gamma function
. + + + ...	gerts	communicate with GCOS
. . . . + + . + +	getarg	get command arguments from Fortran
+ + + + + + + + +	getc	get character or word from stream
. . . + + + . . .	getchar	read character [getc]
. . . . . . + + +	getenv	value for environment name

Edition 1 2 3 4 5 6 7 8 9	Title	Purpose
. . . . +	getfields	break a string into fields
. . . . + +	getfsent	get file system descriptor file entry
. . . . . . + + +	getgrent	get group file entry
. . . . . . + + +	getlogin	get login name
. . . . + +	getopt	get option letter from argv
. . . . . . + + +	getpass	read a password
. . . + + + + . .	getpw	get name from UID
. . . . . . + + +	getpwent	get password file entry
. . . . . . + + +	gets	get a string from a stream
. . . . + +	getwd	get current directory
. . . + + + . . .	hmul	high-order product
. + + + + . + + +	hypot	euclidean distance
. . . + + + . . .	ierror	catch Fortran errors
. . . . +	internet	internet networking functions
. . . . +	ipc	set up communications between unrelated processes
. . . . . . + . .	iread	insistent read
+ + + ...	itoa	convert integer to ASCII
. . . . . . + + +	j0	bessel functions
. . . . . . + + +	l3tol	convert between 3-byte integers and long integers
. . . + + + . . .	ldiv	long division
7	liba	standard assembly-language library
7	libb	standard B library
7	libf	standard Fortran library
. . . . . . + . .	libr	remote file access
. . . . + + . . .	locv	long output conversion [printf]
+ + + + + + . . .	log	logarithm base e [exp]
. . . . . . + + +	malloc	main memory allocator
. . . . . . L + +	map	map projections
. . . . + +	memory	memory operations
+ + + + ...	mesg	print string on typewriter [printf]
. . . . . . + + +	mktemp	make a unique file name
. . . + + + + +	monitor	prepare execution profile
. . . . . . + + +	mp	multiple precision integer arithmetic
. . . + + + . . .	nargs	argument count
. + + + + + + + +	nlist	get entries from name list
. . . + + + + + +	perror	system error messages
. . . . . . + . .	pkopen	packet driver simulator
. . . . . . + + +	plot	graphics interface
. . . . . . + + +	popen	initiate I/O to/from a process
. . . . + +	port	mathematical library for Fortran
. . + + + + . . .	pow	take powers of numbers [exp]
. . . . +	print	print formatted output
. . . + + + + + .	printf	output formatters
+ + + ...	ptime	print time
. . . . + +	ptopen	find and open a pseudo-terminal file
+ + + + + + + + +	putc	put character or word on a stream
. . . + + + . . .	putchar	write character [putc]
. . . . . . + + +	puts	put a string on a stream
. + + + + + + + +	qsort	quicker sort
. . + + + + + + +	rand	random number generator
. . . . + .	regex	regular expression handler [regexp]

Edition 1 2 3 4 5 6 7 8 9	Title	Purpose
. . . . + +	regexp	regular expression handler
. . . + + + . . .	reset	execute non-local goto [setjmp]
. + + . . 7 L . .	salloc	string allocation and manipulation
. . . . . . + + +	scanf	formatted input conversion
. . . . . . + + +	setbuf	assign buffering to a stream
. . . + + + . . .	setfil	specify Fortran file name
. . . . . . + + +	setjmp	non-local goto
+ + + + + + + + +	sin	trigonometric functions
. . . . . . + + +	sinh	hyperbolic functions
. . . . . . + + +	sleep	suspend execution for interval
. + + + + + . . .	sqrt	square root [exp]
. . . . . . + + +	stdio	standard buffered input/output package
. . . . . . + + +	string	string operations
. . . . . . + + +	swab	swap bytes
+ + + + ...	switch	transfer depending on value
. . . . . . + + +	system	issue a shell command
. . . . +	tcp	tcp networking functions
. . . . + +	tdkdial	open a datakit connection to a remote server
. . . . + +	termcap	terminal independent operation routines
. . . . + +	tolower	force upper or lower case
. . + + + + + + +	ttyname	find name of a terminal
. . . . +	udp	udp networking functions
. . . . +	uname	get password file entry
. . . . . . + + +	ungetc	push character back into input stream
. . . . + +	varargs	variable argument list
. . . . + +	view2d	movie of a function f(x,y,t)
. . . + + ...	vt	display (vt01) interface

4. Special files

Terminology changed often in this section. In v3 mnemonic names were replaced by pallid hardware part designations, For example *tty* became *kl* and *ppt* became *pc.* Lately the trend has reversed, with the appearance of *drum* and *cons.*

Edition 1 2 3 4 5 6 7 8 9	Title	Purpose
. . . . + +	bufld	buffering line discipline
. . . . +	connld	connection line discipline
. . . . + +	cons	console interface
. . . + + + + . .	cat	phototypesetter interface
. . . + ...	da	voice response unit
. . . + + + . . .	dc	remote typewriter
. . . . + + . . .	dh	DH-11 communications multiplexor
. . . . . . L + +	dk	Datakit interface
. + + + + + + . .	dn	DN-11 ACU interface
. . . . + +	drum	paging device
. + + + + + . . .	dp	201 dataphone
. . . . . . + . .	du	DU-11 201 data-phone interface
. . . . + +	fd	file descriptor file
. . . . . + + . .	hp	RH-11/RP04, RP05, RP06 moving-head disk
. . . . . + + . .	hs	RH11/RS03-RS04 fixed-head disk file
. . . . . + + . .	ht	RH-11/TU-16 magtape interface
. . + + + + . . .	kl	console typewriter [cons]

Edition 1 2 3 4 5 6 7 8 9	Title	Purpose
. + . . + + . . .	lpr	line printer
. . . . + +	mesgld	message line discipline
+ + + + + + + + .	mem	core memory
. . . . + +	mt	magtape interface
. . . . . + + + +	null	data sink [under *mem* in v5]
. . + + + + . . .	pc	punched paper tape
. . . . + . .	pk	packet driver
+ + ...	ppt	punched paper tape [pc]
. . . . + +	proc	process file system
. . . . + +	pt	interprocess I/O junctor files
. . . . + +	ra	DEC MSCP disks (RA60, RA80, RA81)
+ + + + + + + . .	rf	RF11/RS11 fixed-head disk file
+ + + + + + + + .	rk	RK-11/RK03 or RK05 disk
. + + + + + + . .	rp	RP-11/RP03 moving-head disk
. . . . + +	stream	stream I/O control calls
+ + + ...	tap	DECtape file
. . . + + + + . .	tc	TC-11/TU56 DECtape
. . . + + . L . .	tiu	Spider interface
. + + + + + + . .	tm	TM-11/TU-10 magtape interface [mt]
+ + ...	tty	console typewriter [kl]
. . . . + + + . +	tty	general terminal interface [ttyld]
+ + ...	tty0...	remote typewrite [dc]
. . . . + +	ttyld	terminal processing
. . . . + . .	vp	Versatec printer-plotter
. . . + + . L . .	vs	voice synthesizer interface
. . + + + ...	vt	storage-tube display

5. File formats and conventions

In v1-v5, section 5 was restricted to "File formats"

Edition 1 2 3 4 5 6 7 8 9	Title	Purpose
+ + + + + + + + +	a.out	assembler and link editor output
. . . . . . + + +	acct	execution accounting file
+ + + + + + + + +	ar	archive (library) file format
. . . . +	backup	incremental backup file
+	bppt	binary paper tape format
+ + + + + + + + +	core	format of core image file
. . . . . . L . +	cpio	format of cpio archive
+ + + + + + + + +	dir	format of directories
. . . . + + + . .	dump	incremental dump format
. . . . . . + + +	environ	user environment
. . . . + . .	file.g	drawing editor file format
+ + + + + + + + +	filsys	format of file system volume
. . . . + +	fstab	static information about the file system
. . . . . + + + +	group	group file
. + ...	ident	GCOD ident cards
. . . . . . + + +	map	digitized map formats
. . . . + . .	mpxio	multiplexed i/o
. . . . + + + + +	mtab	mounted file system table
. . . . + .	news	USENET network news article, utility files
. . . . + .	newsrc	information file for readnews

Edition	Title	Purpose
1 2 3 4 5 6 7 8 9		
+ + + + + + + + + passwd		password file
. . . . . . 7 + + + plot		graphics interface
. . . . + polyhedra		database format
. . . . + ... speak.m		voice synthesizer vocabulary
. . . . + + stab		symbol table types
. . . . . . L . . tar		format of tar archive
. . . . + + termcap		terminal capability database
. + + + + + + . . tp		DEC/mag tape formats
. . . . + + + + + ttys		terminal initialization data
. . . . + + types		primitive system types
+ + ... uids		map names to user ID's [passwd]
+ + + + + + + + + utmp		login records
. . . . + + view2d		movie of a function f(x,y,t)
. . . . + + whoami		computer name
. + + + + + . . . wtmp		accounting files [utmp]

6. Games

In v1 through v6 chapter 6 was called "User maintained maintained programs." Only the games from those editions are listed here; other pages from those chapters 6 are listed with chapter 1 or chapter 7.

Edition	Title	Purpose
1 2 3 4 5 6 7 8 9		
. . . . . . L + + adventure		dungeon-exploration game
. . . . . . + + + arithmetic		provide drill in number facts
. . . . + + atc		air traffic controller
. . . . . . + + + backgammon		the game
. . . . . . + + + banner		make long posters
1 . . . . . + + + bcd		convert to antique media
+ + + + + + + . . bj		the game of black jack
. . . . + + boggle		word games
. . . . + + bridge		card game
. . . . + + card		card games
. . . . + . . checkers		game
+ . . + + + + . . chess		the game of chess
. . . . + + . ching		the book of changes and other cookies
. . . + + + . . . cubic		three dimensional tic-tac-toe
. . . . + + doctor		psychiatric consultation
. . . . + festoon		memo writer
. . . . + . fortune		cookies
. . . + + . + . . maze		generate a maze problem
+ + . + + + + . . moo		guessing game
. . . . . . L . . morse		convert letters to morse code
. . . . . . L . . psych		pattern generators
. . . . . + + + + quiz		test your knowledge
. . . . + . . reversi		a game of dramatic reversals
. . . . + + snake		display chase game
. . . . . . L + + trek		war games
. . . . + + worms		silly demos
+ + . + + 6 + . . ttt		tic-tac-toe
. . . . + . . words		word games [boggle]
. . . . + + + . . wump		the game of hunt-the-wumpus

7. Data bases and language conventions

Chapter 7 has had many names:

v1-v5	Miscellaneous
v6	User maintained subroutines
v7	Macro packages and language conventions
v8-v9	Databases and language conventions

1	2	3	4	5	6	7	8	9	Title	Purpose
.	.	.	.	.	.	.	+	+	apnews	present ap wire stories
+	+	+	+	+	5	+	+	+	ascii	map of ASCII character set
.	.	.	.	.	.	.	+	.	candest	canon laser printers [can(1)]
.	.	.	.	.	.	L	.	.	cdl	circuit description language
.	.	.	.	.	.	.	+	+	dict	look up words in English dictionaries
.	.	.	.	.	.	+	+	+	eqnchar	special character definitions for eqn
.	.	.	.	.	.	.	+	+	font	typesetter fonts
.	.	+	+	+	5	+	.	.	greek	graphics for extended HdY-37 type-box
.	.	.	.	.	.	+	.	.	hier	file system hierarchy
+	+	.	.	.	.	.	.	.	kbd	map of HdY 37 keyboard
.	.	.	.	.	.	.	+	+	library	bell labs library service
+	+	.	.	.	.	.	.	.	login	logging on and logging off the system
.	.	.	.	.	.	.	+	+	mail	address conventions and rewrite rules
.	.	.	.	.	.	+	+	+	man	macros to typeset manual
.	.	.	.	.	.	L	+	+	map	draw maps on various projections
.	.	.	.	.	.	.	.	+	mbits	macros for typesetting bitmaps
.	.	.	.	.	.	.	+	+	mcs	macros for formatting cover sheets
.	.	.	.	.	+	+	+	+	ms	macros for formatting manuscripts
.	.	.	.	.	.	.	.	+	papers	browse database of locally authored papers
.	.	.	.	.	.	.	.	+	netnews	recent articles, utility files
.	.	.	.	.	.	.	.	+	poly	database of polyhedra
+	.	.	.	.	.	.	.	.	suftab	roff's suffix table
+	+	+	+	+	5	.	.	.	tabs	set tab stops on typewrite [tabs(1)]
.	.	.	.	.	.	.	+	+	tel	local and private telephone books
.	.	.	.	.	.	.	+	.	telno	retrieve from bell labs phone book [tel]
.	.	.	.	.	.	+	+	.	term	conventional names
.	.	.	+	+	.	.	.	.	tmheader	TM cover sheet
.	.	.	.	.	.	.	+	+	town	gazetteer of US places
.	.	.	.	.	.	.	+	+	troff	addenda to troff manual
.	.	+	+	+	.	L	.	.	vsp	voice synthesizer phonemes
.	.	.	.	.	.	.	+	+	weather	conditions and forecast by town

8. Maintenance commands and procedures

Pages from chapter 1 of v1, v2, and v7 that appeared in chapter 8 of other editions are included here. In v1 and v2 there was no chapter 8 and in v7 many system maintenance commands were placed in chapter 1, with the identification "1M".

Chapter 8 is the most turbulent part of the manual: maintenance procedures, being known only to a few, and often being embedded in just one or two shell scripts may be more lightly changed than mainstream facilities. Moreover, much of chapter 8 is concerned with hidden procedures that are usually invoked automatically.

It has alway been problematic just how much to say about such changeable things that so few people need to know about. Maintenance programs may remain "unofficial" for years. For example, one or another

version of *findo,* for scouring trash out of full file systems, had existed since the earliest days, yet it was not documented until v8.

Edition	Title	Purpose
1 2 3 4 5 6 7 8 9		
. . . . + +	11	pdp11 support
. . + + + ...	20boot	rebooot 11/20 system
. . . . . + 1 + +	ac	login accounting
. . . . +	arff	read RT11 files
+	as2	assembler's pass 2
. . . . + +	asd	automatic software distribution
+	ba	B assembler
. . . . +	backup	backup administration
+	bc	B compiler
+	bilib	B interpreter
+ + + + + + + . .	boot	startup procedures [reboot]
+	brt1,brt2	B start and finish
. 6	chash	prepare symbol table lem
1 1 + + + ...	check	check consistency of file system [icheck]
. . . . . + . . .	chgrp	change group [chown]
. . 1 + + + 1 + +	clri	clear i-node
. . . . +	config	configure a Unix kernel
. . . . + +	cpp	C language preprocessor
. . . . . + + . .	crash	what to do when the system crashes
. . . . . + + + +	cron	clock daemon
. . + . . + 1 . .	dcheck	file system directory consistency check [icheck]
. . . . + +	dmesg	system diagnostic messages
. 1 7 7 + + L . .	dpd	dataphone daemons
. . . . + + 1 . .	dump	incremental file system dump
+	f1,f2,f3,f4	Fortran compiler passes
. . . . . . L . .	fget.demon	fget daemons
. . . . + +	finddev	find process using a device
. . . . + +	findo	find objectionable files
. . . . + +	fsck	file system consistency check and interactive repair
. + + 7 + + + + +	getty	set typewriter mode
+ + + 7 + + . . .	glob	argument expander
. . . . . + 1 + +	icheck	file system storage consistency check
. + + + + + + + +	init	process control initialization
. . . + ...	ino	get the i-number of a file
. 1 + ...	istat	file status by i-number
. . . . +	ldpcs	load correct microcode
. . . . + + L + +	lpd	line printer daemon
. . . . . . + + +	makekey	generate encryption key
. . . . +	mgrproc	service remote computing requests
. . . . . . + . .	mkconf	generate configuration tables [config]
1 . . + + + 1 + +	mkfs	construct a file system
. . . + + + 1 + +	mknod	build special file
1 1 + + + + 1 + +	mount	mount and dismount file system
+ + + + + ...	msh	mini Shell
. . . . . + 1 . .	ncheck	generate names from i-numbers [icheck]
. . . . + +	netfs	network file system
. . . . + +	netstat	show network status for ARPA internet

Edition									Title	Purpose
1	2	3	4	5	6	7	8	9		
.	.	.	.	.	.	.	+	+	oops	process status
.	.	.	.	.	.	1	+	+	pstat	print system facts
.	.	.	.	.	.	1	+	+	quot	summarize file system ownership
.	.	.	.	.	.	.	+	+	rarepl	replace bad blocks on MSCP drive
.	.	.	.	.	.	.	+	+	rc	boot script
.	.	.	.	.	.	.	+	+	reboot	bootstrapping procedures
.	.	1	+	+	.	.	.	.	reloc	relocate object files
.	.	.	.	.	.	.	+	+	renice	alter priority of running process by changing nice
.	.	.	.	+	+	1	.	.	restor	incremental file system restore
.	.	.	.	.	.	.	+	.	rmdir	unlink directory
.	.	.	.	+	+	1	+	+	sa	system accounting
.	1	+	.	.	.	.	.	.	salv	repair damaged file system
.	.	.	.	.	.	.	+	+	savecore	save a core dump of the operating system
.	.	.	.	.	.	.	+	+	showq	state of stream I/O system
.	.	.	.	.	.	.	.	+	smash	rewrite bad disk sectors
1	1	+	+	+	+	1	+	+	su	substitute user id temporarily
.	.	.	.	.	.	.	+	+	swapon	specify paging/swapping device
.	.	.	+	+	+	+	+	+	sync	update the super block
.	.	+	.	.	.	.	.	.	swtmp	truncate accounting file
1	1	+	.	.	.	.	.	.	tm	get time information
1	1	+	+	+	+	.	.	.	umount	dismount removable file system [mount]
.	.	.	.	.	.	.	+	+	upas	address driven mailer
.	.	.	+	+	+	+	+	+	update	periodically update the super block
.	.	.	.	.	.	.	+	+	uucheck	check uucp directories and permissions file
.	.	.	.	.	.	.	+	+	uucico	file transport program for the uucp system
.	.	.	.	.	.	L	+	+	uuclean	uucp spool directory cleanup
.	.	.	.	.	.	.	+	.	uusched	uucp file transport scheduler [uucico]
.	.	.	.	.	.	.	+	+	uuxqt	create remote command requests
.	.	.	.	.	.	.	+	+	vmstat	report virtual memory statistics
.	.	.	.	.	+	1	+	+	wall	write to all users
.	.	.	.	.	.	.	+	.	xstr	preprocessor for sharing strings in C programs

9. Teletype 5620-related software

Edition									Title	Purpose
1	2	3	4	5	6	7	8	9		
.	.	.	.	.	.	.	+	+	intro	introduction to jerq-related software

9.1 Commands

.	.	.	.	.	.	.	+	+	32ld	bootstrap loader for the 5620
.	.	.	.	.	.	.	+	+	3cc	MAC-32 compiler for the 5620
.	.	.	.	.	.	.	+	+	blitblt	make hard copy image
.	.	.	.	.	.	.	.	+	brush	painting program
.	.	.	.	.	.	.	+	+	cip	picture drawing program
.	.	.	.	.	.	.	+	+	face	show faces on a jerq
.	.	.	.	.	.	.	.	+	flicks	movie graphics for 5620
.	.	.	.	.	.	.	.	+	getfont	replace terminal's default font
.	.	.	.	.	.	.	+	+	icon	icon editor
.	.	.	.	.	.	.	+	+	jf	font editor
.	.	.	.	.	.	.	+	.	jim	text editor [sam]
.	.	.	.	.	.	.	+	+	jx	jerq execution and stdio interpreter
.	.	.	.	.	.	.	+	+	graphdraw	edit (combinatoric) graph
.	.	.	.	.	.	.	+	+	lens	bitmap magnifier

Edition	Title	Purpose
1 2 3 4 5 6 7 8 9		
. . . . +	menudrop	leave a menu lying around
. . . . + +	mugs	convert gray-scale images into icons
. . . . + +	mux	layer multiplexor for the jerq
. . . . + +	paint	draw pictures in a layer
. . . . + +	ped	picture editor
. . . . + +	pi	process inspector
. . . . + +	pico	graphics editor
. . . . + +	proof	troff output interpreter for jerq
. . . . +	pvmon	gray-scale picture preview window for 5620
. . . . +	reader	examine typeset documents
. . . . + +	rebecca	graphics touch-up editor
. . . . + +	ruler	measure things on the screen
. . . . + .	sysmon	display system statistics [vismon]
. . . . +	sam	screen editor with structural regular expressions
. . . . + +	term	nonstandard mux terminals
. . . . + +	thinkblt	print on ThinkJet
. . . . +	vismon	system statistics and mail notification
. . . . + +	windows	create and initialize windows

9.2 System calls

. . . . + +	button	mouse control
. . . . + +	newlayer	layer control and graphics
. . . . + +	newproc	jerq process control
. . . . + +	request	jerq I/O requests

9.3 Subroutines

. . . . + +	add	arithmetic on points and rectangles
. . . . + +	alloc	allocate memory
. . . . + +	bitblt	basic jerq graphics functions
. . . . + +	circle	circle drawing functions for jerq
. . . . + +	cos	integer math functions
. . . . + +	menuhit	present user with menu and get selection
. . . . + +	string	jerq text and font operations
. . . . +	thinkclient	ThinkJet routines

9.4 Devices

. . . . + +	jioctl	jerq ioctl requests
. . . . + +	mouse	jerq mouse interface

9.5 File formats and conventions

. . . . + +	bitfile	format of bitmap file
. . . . + +	faced	network face server
. . . . + +	font	jerq font layouts
. . . . +	movies	graphics movie file formats
. . . . + +	pads	user interface package
. . . . + +	types	basic jerq graphics data types

9.6 Games

. . . . + +	crabs	graphical marine adventure game
. . . . + +	demo	graphic demonstration and games
. . . . +	gebaca	get back at corporate america
. . . . + +	pen	doodle anywhere on the screen
. . . . +	pengo	squash the sno-bees
. . . . + +	twid	dabble in oils

9.7 Data bases

. . . . + +	blitmap	map plots and path finding on a jerq

Edition   Title   Purpose

1 2 3 4 5 6 7 8 9