

NAME

ascii — map of ASCII character set

SYNOPSIS**cat /usr/pub/ascii****DESCRIPTION***Ascii* is a map of the ASCII character set, to be printed as needed. It contains:

000	nul	001	soh	002	stx	003	etx	004	eot	005	enq	006	ack	007	bel
010	bs	011	ht	012	nl	013	vt	014	np	015	cr	016	so	017	si
020	dle	021	dcl	022	dc2	023	dc3	024	dc4	025	nak	026	syn	027	etb
030	can	031	em	032	sub	033	esc	034	fs	035	gs	036	rs	037	us
040	sp	041	!	042	"	043	#	044	\$	045	%	046	&	047	'
050	(	051	)	052	*	053	+	054	,	055	—	056	.	057	/
060	0	061	1	062	2	063	3	064	4	065	5	066	6	067	7
070	8	071	9	072	:	073	;	074	<	075	=	076	>	077	?
100	@	101	A	102	B	103	C	104	D	105	E	106	F	107	G
110	H	111	I	112	J	113	K	114	L	115	M	116	N	117	O
120	P	121	Q	122	R	123	S	124	T	125	U	126	V	127	W
130	X	131	Y	132	Z	133	[	134	\	135	]	136	^	137	_
140	`	141	a	142	b	143	c	144	d	145	e	146	f	147	g
150	h	151	i	152	j	153	k	154	l	155	m	156	n	157	o
160	p	161	q	162	r	163	s	164	t	165	u	166	v	167	w
170	x	171	y	172	z	173	{	174		175	}	176	~	177	del

00	nul	01	soh	02	stx	03	etx	04	eot	05	enq	06	ack	07	bel
08	bs	09	ht	0a	nl	0b	vt	0c	np	0d	cr	0e	so	0f	si
10	dle	11	dcl	12	dc2	13	dc3	14	dc4	15	nak	16	syn	17	etb
18	can	19	em	1a	sub	1b	esc	1c	fs	1d	gs	1e	rs	1f	us
20	sp	21	!	22	"	23	#	24	\$	25	%	26	&	27	'
28	(	29	)	2a	*	2b	+	2c	,	2d	—	2e	.	2f	/
30	0	31	1	32	2	33	3	34	4	35	5	36	6	37	7
38	8	39	9	3a	:	3b	;	3c	<	3d	=	3e	>	3f	?
40	@	41	A	42	B	43	C	44	D	45	E	46	F	47	G
48	H	49	I	4a	J	4b	K	4c	L	4d	M	4e	N	4f	O
50	P	51	Q	52	R	53	S	54	T	55	U	56	V	57	W
58	X	59	Y	5a	Z	5b	[	5c	\	5d	]	5e	^	5f	_
60	`	61	a	62	b	63	c	64	d	65	e	66	f	67	g
68	h	69	i	6a	j	6b	k	6c	l	6d	m	6e	n	6f	o
70	p	71	q	72	r	73	s	74	t	75	u	76	v	77	w
78	x	79	y	7a	z	7b	{	7c		7d	}	7e	~	7f	del

FILES

/usr/pub/ascii

NAME

eqnchar — special character definitions for eqn

SYNOPSIS

eqn /usr/pub/eqnchar [files] | **troff** [options]

neqn /usr/pub/eqnchar [files] | **nroff** [options]

DESCRIPTION

Eqnchar contains *troff* and *nroff* character definitions for constructing characters that are not available on the Graphic Systems typesetter. These definitions are primarily intended for use with *eqn* and *neqn*. It contains definitions for the following characters

<i>ciplus</i>	$\oplus$	$\parallel$	$\parallel$	<i>square</i>	$\square$
<i>citimes</i>	$\otimes$	<i>langle</i>	$\langle$	<i>circle</i>	$\bigcirc$
<i>wig</i>	$\sim$	<i>rangle</i>	$\rangle$	<i>blot</i>	$\blacksquare$
<i>-wig</i>	$\equiv$	<i>hbar</i>	$\hbar$	<i>bullet</i>	$\bullet$
<i>> wig</i>	$\succsim$	<i>ppd</i>	$\perp$	<i>prop</i>	$\propto$
<i>< wig</i>	$\lesssim$	<i><-></i>	$\longleftrightarrow$	<i>empty</i>	$\emptyset$
<i>= wig</i>	$\equiv$	<i><=></i>	$\Leftrightarrow$	<i>member</i>	$\in$
<i>star</i>	$*$	$ $	$\nless$	<i>nomem</i>	$\notin$
<i>bigstar</i>	$*$	$ >$	$\nless$	<i>cup</i>	$\cup$
<i>=dot</i>	$\dot{=}$	<i>ang</i>	$\angle$	<i>cap</i>	$\cap$
<i>orsign</i>	$\vee$	<i>rang</i>	$\lrcorner$	<i>incl</i>	$\sqsubset$
<i>andsign</i>	$\wedge$	<i>3dot</i>	$\vdots$	<i>subset</i>	$\subset$
<i>=del</i>	$\triangleq$	<i>thf</i>	$\ddots$	<i>supset</i>	$\supset$
<i>oppA</i>	$\forall$	<i>quarter</i>	$\frac{1}{4}$	<i>!subset</i>	$\subsetneq$
<i>oppE</i>	$\exists$	<i>3quarter</i>	$\frac{3}{4}$	<i>!supset</i>	$\supsetneq$
<i>angstrom</i>	$\text{\AA}$	<i>degree</i>	$^{\circ}$		

FILES

/usr/pub/eqnchar

SEE ALSO

troff(1), eqn(1)

NAME

`greek` — graphics for extended TTY-37 type-box

SYNOPSIS

`cat /usr/pub/greek [| greek -Tterminal ]`

DESCRIPTION

Greek gives the mapping from `ascii` to the 'shift out' graphics in effect between SO and SI on model 37 Teletypes with a 128-character type-box. These are the default greek characters produced by *nroff*(1). The filters of *greek*(1) attempt to print them on various other terminals. The file contains:

alpha	α	A	beta	β	B	gamma	γ	\
GAMMA	Γ	G	delta	δ	D	DELTA	Δ	W
epsilon	ϵ	S	zeta	ζ	Q	eta	η	N
THETA	Θ	T	theta	θ	O	lambda	λ	L
LAMBDA	Λ	E	mu	μ	M	nu	ν	@
xi	ξ	X	pi	π	J	PI	Π	P
rho	ρ	K	sigma	σ	Y	SIGMA	Σ	R
tau	τ	I	phi	ϕ	U	PHI	Φ	F
psi	ψ	V	PSI	Ψ	H	omega	ω	C
OMEGA	Ω	Z	nabla	∇	I	not	$\neg$	-
partial	∂	]	integral	$\int$	^			

SEE ALSO

`greek(1)`, `nroff(1)`

NAME

hier — file system hierarchy

DESCRIPTION

The following outline gives a quick tour through a representative directory hierarchy.

```

/      root
/dev/   devices (4)
        console
            main console, tty(4)
        tty* terminals, tty(4)
        cat phototypesetter cat(4)
        rp* disks, rp, hp(4)
        rrp* raw disks, rp, hp(4)
        ...
/bin/   utility programs, cf /usr/bin/ (1)
        as      assembler
        cc      C compiler executive, cf /lib/ccom, /lib/cpp, /lib/c2
        ...
/lib/   object libraries and other stuff, cf /usr/lib/
        libc.a  system calls, standard I/O, etc. (2,3,3S)
        ...
        ccom    C compiler proper
        cpp     C preprocessor
        c2      C code improver
        ...
/etc/   essential data and dangerous maintenance utilities
        passwd  password file, passwd(5)
        group   group file, group(5)
        motd    message of the day, login(1)
        mtab    mounted file table, mtab(5)
        ddate   dump history, dump(1)
        ttys    properties of terminals, ttys(5)
        getty   part of login, getty(8)
        init    the father of all processes, init(8)
        rc      shell program to bring the system up
        cron    the clock daemon, cron(8)
        mount   mount(1)
        wall    wall(1)
        ...
/tmp/   temporary files, usually on a fast device, cf /usr/tmp/
        e*      used by ed(1)
        ctm*    used by cc(1)
        ...
/usr/   general-purpose directory, usually a mounted file system
        adm/    administrative information
            wtmp  login history, utmp(5)
            messages
                hardware error messages
            tracct phototypesetter accounting, troff(1)
            vpacct line printer accounting lpr(1)
/usr    /bin
        utility programs, to keep /bin/ small
        tmp/    temporaries, to keep /tmp/ small

```

```

stm*   used by sort(1)
raster used by plot(1)
dict/  word lists, etc.
       words  principal word list, used by look(1)
       spellhist
           history file for spell(1)
games/
       hangman
       quiz.k/ what quiz(6) knows
           index  category index
           africa countries and capitals
           ...
include/
       standard #include files
       a.out.h object file layout, a.out(5)
       stdio.h standard I/O, stdio(3)
       math.h (3M)
       ...
       sys/   system-defined layouts, cf /usr/sys/h
           acct.h process accounts, acct(5)
           buf.h  internal system buffers
           ...
lib/   object libraries and stuff, to keep /lib/ small
       libm.a math routines (3M)
       libplot.a
           plotting routines, plot(3)
       libF77.a
           Fortran runtime support
       libI77.a
           Fortran I/O
       lint[12]
           subprocesses for lint(1)
       llib-lc dummy declarations for /lib/libc.a, used by lint(1)
       llib-lm dummy declarations for /lib/libc.m
       atrun  scheduler for at(1)
       struct/ passes of struct(1)
       ...
       tmac/  macros for troff(1)
           tmac.an
               macros for man(7)
           tmac.s macros for ms(7)
           ...
       font/  fonts for troff(1)
           ftR   Times Roman
           ftB   Times Bold
           ...
       uucp/  programs and data for uucp(1)
           L.sys remote system names and numbers
           uucico the real copy program
           ...
       units  conversion tables for units(1)

```

```

    eign    list of English words to be ignored by ptx(1)
/usr/  man/
      volume 1 of this manual, man(1)
        man0/ general
            intro  introduction to volume 1, ms(7) format
            xx     template for manual page
        man1/ chapter 1
            as.1
            mount.1m
            ...
        cat1/ preprinted pages for man1/
            as.1
            mount.1m
            ...
    spool/ delayed execution files
        at/    used by at(1)
        lpd/   used by lpr(1)
            lock    present when line printer is active
            cf*     copy of file to be printed, if necessary
            df*     daemon control file, lpd(8)
            tf*     transient control file, while lpr is working
        mail/  mailboxes for mail(1)
            uid     mail file for user uid
            uid.lock
                    lock file while uid is receiving mail
        secretmail/
            like mail/
        uucp/  work files and staging area for uucp(1)
            LOGFILE
                summary log
                LOG.* log file for one transaction
    wd        initial working directory of a user, typically wd is the user's login name
            .profile set environment for sh(1), environ(5)
            calendar
                user's datebook for calendar(1)
    doc/      papers, mostly in volume 2 of this manual, typically in ms(7) format
    c         C manual
    ...
/usr/  src/
      source programs for utilities, etc.
        cmd/  source of commands
            as/    assembler
            ar.c   source for ar(1)
            ...
        troff/ source for nroff and troff(1)
            font/  source for font tables, /usr/lib/font/
                    ftR.c    Roman
                    ...
            term/  terminal characteristics tables, /usr/lib/term/
                    tab300.c
                        DASI 300
                    ...

```

```

...
libc/  source for functions in /lib/libc.a
crt/   C runtime support
csu/   startup and wrapup routines needed with every C program
       crt0.s  regular startup
       mcrt0.s modified startup for cc -p
sys/   system calls (2)
       access.s
       alarm.s
...
stdio/ standard I/O functions (3S)
       fgets.c
       fopen.c
...
gen/   other functions in (3)
       abs.c
...
compall
       shell procedure to compile libc
mklib  shell procedure to make /lib/libc.a
libI77/ source for /lib/libI77
libF77/
sys/   system source
       h/     header (include) files
           acct.h  acct(5)
           stat.h  stat(2)
       ...
       sys/   source for system proper
           main.c
           pipe.c
           sysent.c
               system entry points
       ...
       games/ source for /usr/games

```

SEE ALSO

ls(1), *ncheck*(1), *find*(1), *grep*(1)

BUGS

The position of files is subject to change without notice.

NAME

man — macros to typeset manual

SYNOPSIS

nroff —man file ...

troff —man file ...

DESCRIPTION

These macros are used to lay out pages of this manual. A skeleton page may be found in the file /usr/man/man0/xx.

Any text argument *t* may be zero to six words. Quotes may be used to include blanks in a 'word'. If *text* is empty, the special treatment is applied to the next input line with text to be printed. In this way .I may be used to italicize a whole line, or .SM followed by .B to make small bold letters.

A prevailing indent distance is remembered between successive indented paragraphs, and is reset to default value upon reaching a non-indented paragraph. Default units for indents *i* are ens.

Type font and size are reset to default values before each paragraph, and after processing font and size setting macros.

These strings are predefined by —man:

*R '®', '(Reg)' in *nroff*.

*S Change to default type size.

FILES

/usr/lib/tmac/tmac.an

/usr/man/man0/xx

SEE ALSO

troff(1), man(1)

BUGS

Relative indents don't nest.

REQUESTS

Request	Cause If no Break	Argument	Explanation
.B <i>t</i>	no	<i>t</i> =n.t.l.*	Text <i>t</i> is bold.
.BI <i>t</i>	no	<i>t</i> =n.t.l.	Join words of <i>t</i> alternating bold and italic.
.BR <i>t</i>	no	<i>t</i> =n.t.l.	Join words of <i>t</i> alternating bold and Roman.
.DT	no	.5i li...	Restore default tabs.
.HP <i>i</i>	yes	<i>i</i> =p.i.*	Set prevailing indent to <i>i</i> . Begin paragraph with hanging indent.
.I <i>t</i>	no	<i>t</i> =n.t.l.	Text <i>t</i> is italic.
.IB <i>t</i>	no	<i>t</i> =n.t.l.	Join words of <i>t</i> alternating italic and bold.
.IP <i>x i</i>	yes	<i>x</i> =""	Same as .TP with tag <i>x</i> .
.IR <i>t</i>	no	<i>t</i> =n.t.l.	Join words of <i>t</i> alternating italic and Roman.
.LP	yes	-	Same as .PP.
.PD <i>d</i>	no	<i>d</i> =.4v	Interparagraph distance is <i>d</i> .
.PP	yes	-	Begin paragraph. Set prevailing indent to .5i.
.RE	yes	-	End of relative indent. Set prevailing indent to amount of starting .RS.
.RB <i>t</i>	no	<i>t</i> =n.t.l.	Join words of <i>t</i> alternating Roman and bold.
.RI <i>t</i>	no	<i>t</i> =n.t.l.	Join words of <i>t</i> alternating Roman and italic.
.RS <i>i</i>	yes	<i>i</i> =p.i.	Start relative indent, move left margin in distance <i>i</i> . Set prevailing indent to .5i for nested indents.
.SH <i>t</i>	yes	<i>t</i> =n.t.l.	Subhead.

.SM *t* no *t*=n.t.l. Text *t* is small.
 .TH *n c x* yes - Begin page named *n* of chapter *c*; *x* is extra commentary, e.g. 'local', for page foot. Set prevailing indent and tabs to .5i.
 .TP *i* yes *i*=p.i. Set prevailing indent to *i*. Begin indented paragraph with hanging tag given by next text line. If tag doesn't fit, place it on separate line.

* n.t.l. = next text line; p.i. = prevailing indent

NAME

ms — macros for formatting manuscripts

SYNOPSIS

nroff —ms [options] file ...

troff —ms [options] file ...

DESCRIPTION

This package of *nroff* and *troff* macro definitions provides a canned formatting facility for technical papers in various formats. When producing 2-column output on a terminal, filter the output through *col(1)*.

The macro requests are defined below. Many *nroff* and *troff* requests are unsafe in conjunction with this package, however these requests may be used with impunity after the first .PP:

- .bp begin new page
- .br break output line here
- .sp n insert n spacing lines
- .ls n (line spacing) n=1 single, n=2 double space
- .na no alignment of right margin

Output of the *eqn*, *neqn*, *refer*, and *tbl(1)* preprocessors for equations and tables is acceptable as input.

FILES

/usr/lib/tmac/tmac.s

SEE ALSO

eqn(1), *troff(1)*, *refer(1)*, *tbl(1)*

REQUESTS

Request	Initial Value	Cause Break	Explanation
.1C	yes	yes	One column format on a new page.
.2C	no	yes	Two column format.
.AB	no	yes	Begin abstract.
.AE	-	yes	End abstract.
.AI	no	yes	Author's institution follows. Suppressed in TM.
.AT	no	yes	Print 'Attached' and turn off line filling.
.AU x y	no	yes	Author's name follows. <i>x</i> is location and <i>y</i> is extension, ignored except in TM.
.B x	no	no	Print <i>x</i> in boldface; if no argument switch to boldface.
.B1	no	yes	Begin text to be enclosed in a box.
.B2	no	yes	End text to be boxed . print it.
.BT	date	no	Bottom title, automatically invoked at foot of page. May be redefined.
.BX x	no	no	Print <i>x</i> in a box.
.CS x...	-	yes	Cover sheet info if TM format, suppressed otherwise. Arguments are number of text pages, other pages, total pages, figures, tables, references.
.CT	no	yes	Print 'Copies to' and enter no-fill mode.
.DA x	nroff	no	'Date line' at bottom of page is <i>x</i> . Default is today.
.DE	-	yes	End displayed text. Implies .KE.
.DS x	no	yes	Start of displayed text, to appear verbatim line-by-line. <i>x</i> =I for indented display (default), <i>x</i> =L for left-justified on the page, <i>x</i> =C for centered, <i>x</i> =B for make left-justified block, then center whole block. Implies .KS.
.EG	no	-	Print document in BTL format for 'Engineer's Notes.' Must be first.
.EN	-	yes	Space after equation produced by <i>eqn</i> or <i>neqn</i> .
.EQ x y	-	yes	Precede equation; break out and add space. Equation number is <i>y</i> . The optional argument <i>x</i> may be <i>I</i> to indent equation (default), <i>L</i> to left-adjust the

			equation, or <i>C</i> to center the equation.
.FE	-	yes	End footnote.
.FS	no	no	Start footnote. The note will be moved to the bottom of the page.
.HO	-	no	'Bell Laboratories, Holmdel, New Jersey 07733'.
.I <i>x</i>	no	no	Italicize <i>x</i> ; if <i>x</i> missing, italic text follows.
.IH	no	no	'Bell Laboratories, Naperville, Illinois 60540'
.IM	no	no	Print document in BTL format for an internal memorandum. Must be first.
.IP <i>x y</i>	no	yes	Start indented paragraph, with hanging tag <i>x</i> . Indentation is <i>y</i> ens (default 5).
.KE	-	yes	End keep. Put kept text on next page if not enough room.
.KF	no	yes	Start floating keep. If the kept text must be moved to the next page, float later text back to this page.
.KS	no	yes	Start keeping following text.
.LG	no	no	Make letters larger.
.LP	yes	yes	Start left-blocked paragraph.
.MF	-	-	Print document in BTL format for 'Memorandum for File.' Must be first.
.MH	-	no	'Bell Laboratories, Murray Hill, New Jersey 07974'.
.MR	-	-	Print document in BTL format for 'Memorandum for Record.' Must be first.
.ND <i>date troff</i>	no		Use date supplied (if any) only in special BTL format positions; omit from page footer.
.NH <i>n</i>	-	yes	Same as .SH, with section number supplied automatically. Numbers are multilevel, like 1.2.3, where <i>n</i> tells what level is wanted (default is 1).
.NL	yes	no	Make letters normal size.
.OK	-	yes	'Other keywords' for TM cover sheet follow.
.PP	no	yes	Begin paragraph. First line indented.
.PT	pg #	-	Page title, automatically invoked at top of page. May be redefined.
.PY	-	no	'Bell Laboratories, Piscataway, New Jersey 08854'
.QE	-	yes	End quoted (indented and shorter) material.
.QP	-	yes	Begin single paragraph which is indented and shorter.
.QS	-	yes	Begin quoted (indented and shorter) material.
.R	yes	no	Roman text follows.
.RE	-	yes	End relative indent level.
.RP	no	-	Cover sheet and first page for released paper. Must precede other requests.
.RS	-	yes	Start level of relative indentation. Following .IP's are measured from current indentation.
.SG <i>x</i>	no	yes	Insert signature(s) of author(s), ignored except in TM. <i>x</i> is the reference line (initials of author and typist).
.SH	-	yes	Section head follows, font automatically bold.
.SM	no	no	Make letters smaller.
.TA <i>x...</i>	5...	no	Set tabs in ens. Default is 5 10 15 ...
.TE	-	yes	End table.
.TH	-	yes	End heading section of table.
.TL	no	yes	Title follows.
.TM <i>x...</i>	no	-	Print document in BTL technical memorandum format. Arguments are TM number, (quoted list of) case number(s), and file number. Must precede other requests.
.TR <i>x</i>	-	-	Print in BTL technical report format; report number is <i>x</i> . Must be first.
.TS <i>x</i>	-	yes	Begin table; if <i>x</i> is <i>H</i> table has repeated heading.
.UL <i>x</i>	-	no	Underline argument (even in troff).
.UX	-	no	'UNIX'; first time used, add footnote 'UNIX is a trademark of Bell Laboratories.'
.WH	-	no	'Bell Laboratories, Whippany, New Jersey 07981'.

NAME

terminals — conventional names

DESCRIPTION

These names are used by certain commands and are maintained as part of the shell environment (see *sh(1)*, *environ(5)*).

1620	DIABLO 1620 (and others using HyType II)
1620-12	same, in 12-pitch mode
300	DASI/DTC/GSI 300 (and others using HyType I)
300-12	same, in 12-pitch mode
300s	DASI/DTC 300/S
300s-12	same, in 12-pitch mode
33	TELETYPE® Model 33
37	TELETYPE Model 37
40-2	TELETYPE Model 40/2
43	TELETYPE Model 43
450	DASI 450 (same as Diablo 1620)
450-12	same, in 12-pitch mode
450-12-8	same, in 12-pitch, 8 lines/inch mode
735	Texas Instruments TI735 (and TI725)
745	Texas Instruments TI745
dumb	terminals with no special features
hp	Hewlett-Packard HP264? series terminals
4014	Tektronix 4014
tn1200	General Electric TermiNet 1200
tn300	General Electric TermiNet 300
vt05	Digital Equipment Corp. VT05

Commands whose behavior may depend on the terminal accept arguments of the form **-Tterm**, where *term* is one of the names given above. If no such argument is present, a command may consult the shell environment for the terminal type.

SEE ALSO

stty(1), *tabs(1)*, *plot(1)*, *sh(1)*, *environ(5)*
troff(1) for *nroff*

BUGS

The programs that ought to adhere to this nomenclature do so only fitfully.