



Compare this with WAVY LINES, a Bliss-letter which comprises 51 characters, and which uses 8 radicals to organize them.

							
FIRE.ON.SKYLINE	FIRE	HEAT	MANGO	VASE	EXTINGUISHINGWATER.ON.SKYLINE		CHANNEL
							
CLOUD	WATER	OIL	STEAM	RAIN	HAIL	WATER FLOWER	BEVERAGE
							
SAUCE	BATH	TADPOLE	ICE	COLD	FREEZING	THAWING	SOLIDIFYIG
							
MELTING	POOL	SPRAY	CONDENSATION	SNOW	SNOWFLAKE	FLOOD	DRYNESS
							
PUDDLE	WAVE	RIVER	OAR	TWO-PADDLED OAR	FJORD	ISLAND	MUD
							
SWAMP	FIBRE	STRAP	REVERSED FIRE	MEDICINE	REVERSED WATER	SPERM	FERTILIZATION
							
MISCARRIAGE		BARRIER CONTRACEPTIVE		SPERMICIDE			

Above coloured in green are Bliss-characters with ordinary meanings which are also used as radicals. Coloured in blue are Bliss-characters without ordinary meanings which are *only* used as radicals. And coloured in red is a Bliss-character without an ordinary meaning that was formerly used as a radical, in both BFU and the BRG. In those sources, the character  $\lambda$  SQUIRREL was sorted under the radical  $\lambda$  FIRE ON SKYLINE, but now all animals have been moved to their own Bliss-letter,  $\pi$  ANIMALS, so the radical  $\lambda$  FIRE ON SKYLINE no longer has clients. Nevertheless, because it and similar radicals were a part of the uninfluential BRG, they are proposed to be encoded as characters which have been used, to facilitate discussion and interchange of that discussion in plain text.

In the list below the 12 radicals used in the BRG but not today are marked with “[BRG]”. New radicals established because of the creation of new Bliss-characters since 1998 or moving old ones from one place in the sorting order to another are marked “[new]”. The entire set of radicals within each Bliss-letter of the Bliss-alphabet, first as presented in the BRG (the first box), and then typeset by me with additions and omissions noted (the second box), following the order given in the BRG. The left column uses UCS-style names; the right column shows the glosses given in the BCI Authorized Vocabulary.

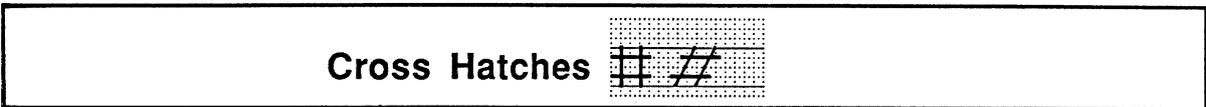
The name of a meaningless radical is the same as the name of the meaningful character that it looks like, with modifications to describe differences in size, position, or orientation. The following name elements are not used in the names of meaningful Bliss-characters: SKYLINE, MIDLINE, EARTHLINE, DOUBLE-WIDE, EXTENDED, INVERTED, REVERSED, ROTATED, or TURNED.



- > FIRE ON SKYLINE fire\_on\_skyline\_(RADICAL) [BRG]
- > FIRE fire
- / FIBRE fibre [new]
- ~ WATER ON SKYLINE water\_on\_skyline\_(RADICAL)
- ~ WATER water,fluid,liquid
- ~ PUDDLE puddle,pool,water\_(ground\_level)
- > REVERSED FIRE fire\_(reversed)\_(RADICAL)
- ~ REVERSED WATER water\_(reversed)\_(RADICAL)



- ♡ FEELING feeling,emotion,sensation



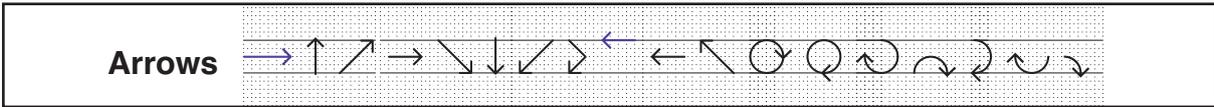
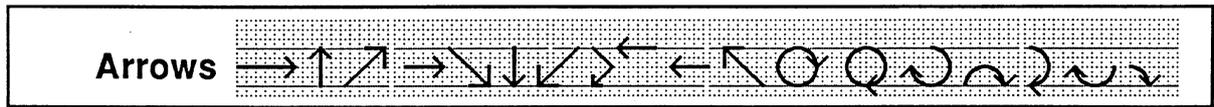
- # CLOTH cloth,fabric,material,textile,net
- # NUMBER number



- 🏠 BUILDING house,building,dwelling,residence



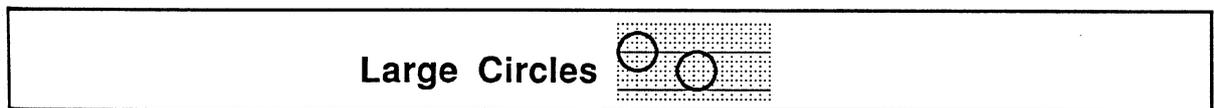
- 👂 EAR ear



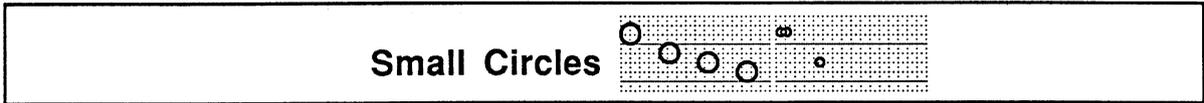
→	EXTENDED FORWARDS	forward_(extended)_(RADICAL)
↑	UPWARDS	up,upward
↗	UPWARDS AND FORWARDS	upward_and_forward
→	FORWARDS	forward
↘	DOWNWARDS AND FORWARDS	downward_and_forward
↓	DOWNWARDS	down,downward
↙	DOWNWARDS AND BACKWARDS	downward_and_backward
↯	BENT ARROW	arrow_(bent)
←	BACKWARDS ON SKYLINE	backward_on_skyline_(RADICAL)
←	BACKWARDS	backward,back
↖	UPWARDS AND BACKWARDS	upward_and_backward
⊙	YEAR	year
⊚	ORBIT	orbit
↻	ROTATION	rotation,circulation,orbit,lap,circle,round
⤴	SCOOP	scoop
⤶	JUMP	jump
↪	TURN	turn,turning
↩	HOP	hop_(forwards)



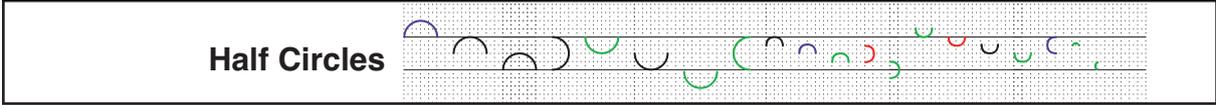
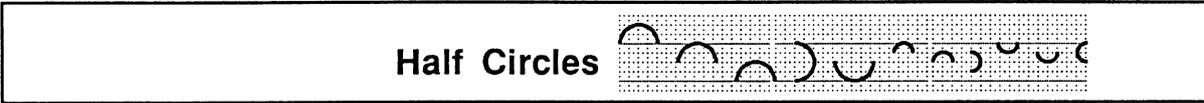
⊗	WHEEL OF DHARMA	Dharma_wheel
⊙	WHEEL	wheel



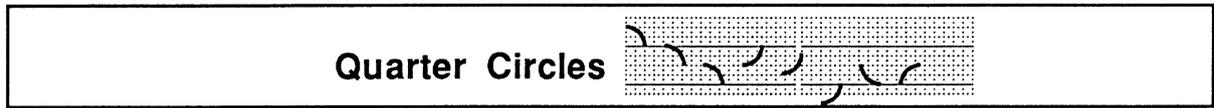
○	ZENITH	zenith
○	SUN	sun



- MOUTH ATOP SKYLINE      mouth\_atop\_skyline\_(RADICAL)
- MOUTH BENEATH SKYLINE      mouth\_beneath\_skyline\_(RADICAL)
- MOUTH      mouth
- MOUTH ATOP EARTHLINE      mouth\_atop\_earthline\_(RADICAL)
- MOUTH BENEATH EARTHLINE      mouth\_beneath\_earthline\_(RADICAL) [new]
- COMBINE MARKER      combine\_marker [punctuation, not a radical]
- DEGREE      degree [new as radical though it existed already]
- KERNEL      kernel,particle



- ⌒ MIND ATOP SKYLINE      mind\_atop\_skyline\_(RADICAL)
- ⌒ MIND      mind,intellect,reason
- ⌒ ARC      bow,arc
- ) CURVE      curve,curved\_line
- ⌒ BASKETBALL HOOP      container,basket\_(high) [new]
- ⌒ CONTAINER      container,bowl,holder,pouch,basket
- ⌒ GOLF CUP      container,golf\_(low) [new]
- ( REVERSED CURVE      curve\_(reversed)\_(RADICAL) [new]
- ^ CONCEPT      concept
- ^ CONCEPT ATOP MIDLINE      concept\_atop\_midline\_(RADICAL)
- ^ CONCEPT BENEATH MIDLINE      concept\_beneath\_midline\_(RADICAL) [new]
- ) SMALL CURVE ON MIDLINE      curve\_(small)\_on\_midline\_(RADICAL) [BRG]
- ) SMALL CURVE ON EARTHLINE      curve\_(small)\_on\_earthline\_(RADICAL) [new]
- ⌒ ANTLER ATOP SKYLINE      antler\_atop\_skyline\_(RADICAL) [new]
- ⌒ ANTLER BENEATH SKYLINE      antler\_beneath\_skyline\_(RADICAL) [BRG]
- ⌒ ANTLER      antler
- ⌒ HYPHEN      hyphen [new]
- ( SMALL REVERSED CURVE      curve\_(small,reversed)\_beneath\_skyline\_(RADICAL)
- BENEATH SKYLINE
- ^ SMALL CONCEPT BETWEEN SKYLINE      concept\_(small)\_between\_skyline\_and\_midline\_(RADICAL)
- AND MIDLINE      [new]
- ⌒ QUARTER-SIZED REVERSED CURVE      curve\_(quarter-sized,reversed)\_atop\_earthline\_(RADICAL)
- ATOP EARTHLINE      [new]



∩	WING ATOP SKYLINE	wing_atop_skyline_(RADICAL)
∩	WING	wing
∩	WING ATOP EARTHLINE	wing_atop_earthline_(RADICAL)
∩	TURNED GRASS BENEATH SKYLINE	grass_(turned)_beneath_skyline_(RADICAL)
∩	TURNED GRASS ON MIDLIN	grass_(turned)_on_midline_(RADICAL)
∩	TURNED GRASS BENEATH EARTHLINE	grass_(turned)_beneath_earthline_(RADICAL)
∩	PARABOLIC ANTENNA	receiver,dish,antenna_(parabolic)
∩	GRASS	grass



∩	ROTATED PAST	past_(rotated)_(RADICAL)
)	PAST	past
(	FUTURE	future
∩	SMALL ROTATED PAST ATOP SKYLINE	past_(small,rotated)_atop_skyline_(RADICAL) [new]
)	AGO	again,then_(past)
(	LATER BENEATH SKYLINE	later_beneath_skyline_(RADICAL) [new]
(	LATER ON MIDLIN	later_on_midline_(RADICAL) [new]
(	LATER	then,so,later
(	SMALL LATER ATOP SKYLINE	later_(small)_atop_skyline_(RADICAL) [BRG]
(	SMALL LATER ATOP MIDLIN	later_(small)_atop_midline_(RADICAL)
⋄	PIT	pit,stone

Note that INDICATOR PAST  and INDICATOR FUTURE  (above) and INDICATOR THING  (below) are combining characters. These are not sorted at the first level like base characters, and so are not sorted within any Bliss-letters; they are found at the end of the Bliss-alphabet.



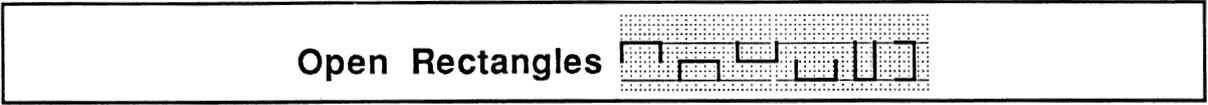
□	ENCLOSURE	enclosure
□	THING BENEATH SKYLINE	thing_beneath_skyline_(RADICAL)
□	THING	thing,object
□	THING ATOP EARTHLINE	thing_atop_earthline_(RADICAL)
◇	DIAMOND ON SKYLINE	diamond_on_skyline_(RADICAL)
◇	DIAMOND	square_(oblique),diamond_(square) [new]



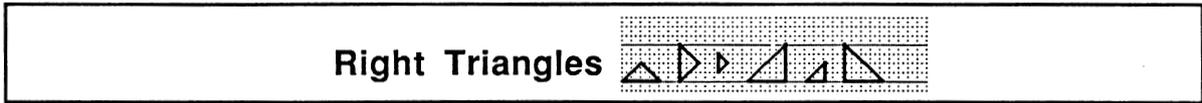
- EXTENDED RECTANGLE      rectangle\_(extended)\_(RADICAL)
- RECTANGLE                  rectangle\_(geometric\_shape)
- CARD                          card [new]
- PAPER                         paper,card,page



- DOOR                         door
- ROOM                        room
- OPENING                    opening
- PUBLIC ROOM              public\_room
- SHORT GLASS              glass\_(short),glass\_(small) [new]



- CANOPY                     canopy
- TABLE                    table
- CUBICLE                    cubicle
- CORONET                  coronet,circlet
- BASE                        foundation,base,fundament
- CROQUET HOOP          croquet\_hoop [new]
- GLASS                      glass,drinking\_glass

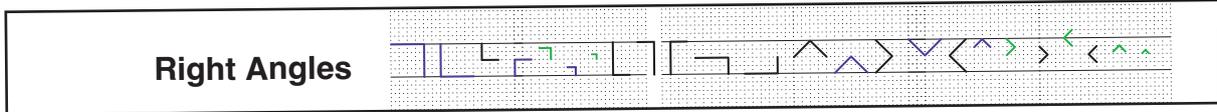


△	MAKING	making,production,fashioning
▷	CAUSE	cause
▸	THEREFORE	therefore,so,so_that
▽	TURNED MAKING BENEATH SKYLINE	making_(turned)_beneath skyline_(RADICAL) [new]
∟	MOUNTAIN	mountain
⋈	JIB	jib [new]
⋈	STONE	stone,rock
⊖	REVERSED MOUNTAIN	mountain_(reversed)_(RADICAL) [new]

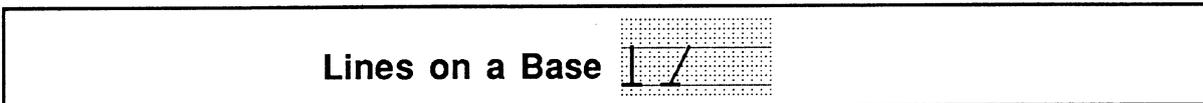


·	DOT ON SKYLINE	dot_on_skyline_(RADICAL)
·	DOT BETWEEN SKYLINE AND MIDLINE	dot_beneath_skyline_and_midline_(RADICAL)
·	DOT	dot
·	DOT BETWEEN MIDLINE AND EARTHLINE	dot_beneath_midline_and_earthline_(RADICAL)

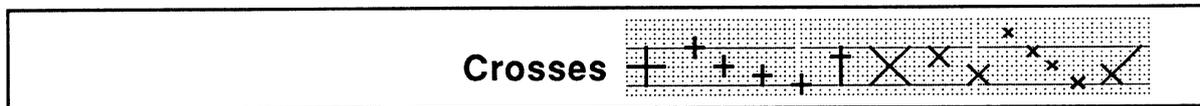
Note that the dot above the skyline was used as a radical for INDICATOR DESCRIPTION BEFORE THE FACT  $\overset{\cdot}{\square}$ , which is a combining character. These are not sorted at the first level like base characters, and so are not sorted within any Bliss-letters; they are found at the end of the Bliss-alphabet. Note too that the dot atop the earthline is identical to BLISSYMBOL FULL STOP, and is not used as a radical to find any characters, so it has not been proposed for encoding independent of the BLISSYMBOL FULL STOP.



┌	LARGE <b>TURNED</b> ARM ATOP <b>EARTHLINE</b>	arm_(large,turned)_atop_earthline_(RADICAL)
└	LARGE ARM ATOP <b>EARTHLINE</b>	arm_(large)_atop_earthline_(RADICAL)
┘	ARM	arm
┐	<b>INVERTED</b> ARM ATOP <b>EARTHLINE</b>	arm_(inverted)_atop_earthline_(RADICAL)
↗	NORTHEAST POINTER	pointer_(northeast) [new]
↘	SMALL <b>TURNED</b> ARM ATOP <b>EARTHLINE</b>	arm_(small,turned)_atop_earthline_(RADICAL)
↙	SMALL NORTHEAST POINTER	pointer_(northeast,small) [new]
└	LEFT	left_turn,left_(position)
┌	PERSON STANDING	standing_(standing_person)
┐	RIGHT	right_turn,right_(position)
└	PERSON LYING PRONE	prone,person_lying_on_stomach,person_lying_prone
└	PERSON LYING SUPINE	reclining,lying_(person_lying_down)
^	PROTECTION	protection,shelter
^	PROTECTION ATOP <b>EARTHLINE</b>	protection_atop_earthline_(RADICAL)
>	GREATER THAN	greater_than_(relation)
∨	<b>TURNED</b> PROTECTION	protection_(turned)_(RADICAL)
<	LESS THAN	less_than_(relation)
^	SMALL PROTECTION BENEATH <b>SKYLINE</b>	protection_(small)_beneath_skyline_(RADICAL)
>	ABOUT BENEATH <b>SKYLINE</b>	about_beneath_skyline_(RADICAL) [new]
>	ABOUT	about,concerning,in_relation_to,of,on
<	BY MEANS OF ON <b>SKYLINE</b>	by_means_of_on_skyline_(RADICAL) [new]
<	BY MEANS OF	by,by_means_of,of
^	UPWARDS POINTER	pointer_(upwards) [new]
^	SMALL UPWARDS POINTER	pointer_(small,upwards) [new]

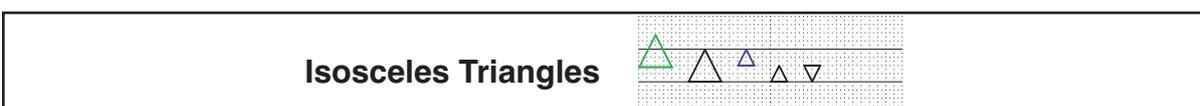
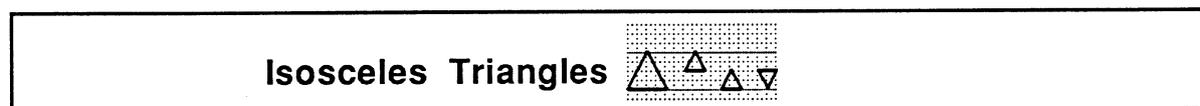


⊥	PERPENDICULAR	perpendicular [new]
┆	PERSON	person,human_being,individual,human
/	NEED	need_(needy_person)
⊥	NEUTER	neuter [new]

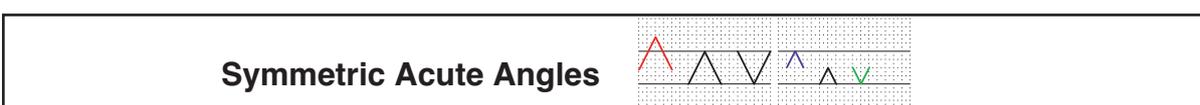
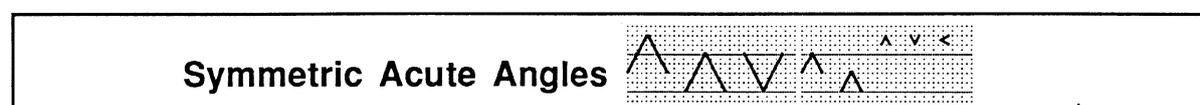


+	ADDITION	addition,gain
+	WITH	with
+	AND	and,also,plus,too
+	LOW AND	and_(low)
+	BELONGS TO	belongs_to,of_(possessive)
†	CROSS	cross,Christianity_(in_combinations)
×	MULTIPLICATION	multiplication
×	MUCH BENEATH SKYLINE	much_beneath_skyline_(RADICAL)
×	MUCH	group_of,much_of,many_of,quantity_of
*	PLURAL BENEATH SKYLINE	plural_beneath_skyline_(RADICAL)
*	PLURAL ON MIDLINE	plural_on_midline_(RADICAL)
*	PLURAL ON EARTHLINE	plural_on_earthline_(RADICAL)
✓	KNIFE	knife,sword

Note that INDICATOR PLURAL  $\overset{*}{\square}$  is a combining character. These are not sorted at the first level like base characters, and so are not sorted within any Bliss-letters; they are found at the end of the Bliss-alphabet.

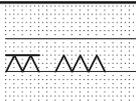


△	CREATION ON SKYLINE	creation_on_skyline_(RADICAL) [new]
△	CREATION	mouth
△	FEMALE BENEATH SKYLINE	female_beneath_skyline_(RADICAL)
△	FEMALE	female_(gender)
▽	TOOTH	tooth

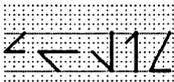


^	ACTION ON SKYLINE	action_on_skyline_(RADICAL) [BRG]
^	ACTION	action,act,deed
∨	EVALUATION	evaluation,value
^	ACTIVITY BENEATH SKYLINE	activity_beneath_skyline_(RADICAL)
^	ACTIVITY OR MALE	activity,male_gender_(in_combinations)
∨	VALUE	evaluation,value_(half-sized) [new]

Note that INDICATOR ACTION ◻̂, INDICATOR DESCRIPTION ◻̇, and INDICATOR PASSIVE ◻̄ are combining characters. These are not sorted at the first level like base characters, and so are not sorted within any Bliss-letters; they are found at the end of the Bliss-alphabet.

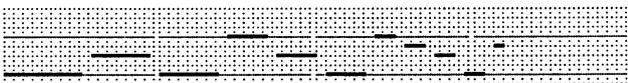
**Animals** 

- ⌘ ANIMAL animal,beast
- ⌘⌘ INSECT insect,bug

**Asymmetric Acute Angles** 

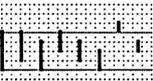
**Asymmetric Acute Angles** 

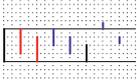
- < ANGLE angle [*new as radical*]
- <- SMALL ANGLE BENEATH SKYLINE angle\_(small)\_beneath\_skyline\_(RADICAL)
- <-| HAND POINTING pointer\_(hand)
- <-|/ HAND hand
- <-|/ BARB barb
- <-|/ NOSE nose

**Horizontal Lines** 

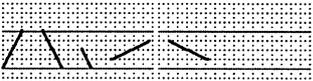
**Horizontal Lines** 

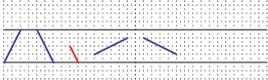
- DOUBLE-WIDE GROUND ground\_(double-wide)\_(RADICAL)
- EXTENDED SUBTRACTION subtraction\_(extended)\_(RADICAL) [*BRG*]
- EXTENDED GROUND ground\_(extended)\_(RADICAL)
- SKY sky
- SUBTRACTION subtraction,loss
- GROUND earth,ground,land
- WITHOUT ON SKYLINE without\_on\_skyline\_(RADICAL)
- WITHOUT BETWEEN SKYLINE AND MIDLINE without\_between\_skyline\_and\_midline\_(RADICAL)
- WITHOUT minus,no,without
- ENVIRONS environs
- SMALL WITHOUT BETWEEN SKYLINE AND MIDLINE without\_(small)\_between\_skyline\_and\_midline\_(RADICAL) [*BRG*]

**Vertical Lines** 

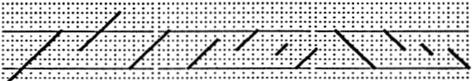
**Vertical Lines** 

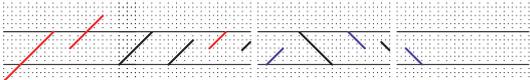
	LINE	line,stripe
	EXTENDED IT BENEATH SKYLINE	it_(extended)_beneath_skyline_(RADICAL) [BRG]
	EXTENDED IT ATOP EARTHLINE	it_(extended)_atop_earthline_(RADICAL) [BRG]
	IT BENEATH SKYLINE	it_beneath_skyline_(RADICAL)
	IT ON MIDLIN	it_on_midline_(RADICAL)
	IT	it,itsself
	SMALL IT ATOP SKYLINE	it_(small)_atop_skyline_(RADICAL)
	SMALL IT ATOP MIDLIN	it_(small)_atop_midline_(RADICAL)

**Slanted Lines**  
(Diagonal of a Rectangle) 

**Slanted Lines** 

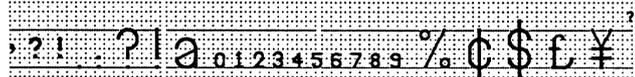
/	SLANTED LINE ON EARTHLINE	slanted_line_on_earthline_(RADICAL)
\	REVERSED SLANTED LINE	slanted_line_(reversed)_(RADICAL)
\	SMALL REVERSED SLANTED LINE	slanted_line_(small,reversed)_(RADICAL) [BRG]
/	ROTATED REVERSED SLANTED LINE	slanted_line_(rotated,reversed)_(RADICAL)
\	ROTATED SLANTED LINE	slanted_line_(rotated)_(RADICAL)

**Diagonal Lines** 

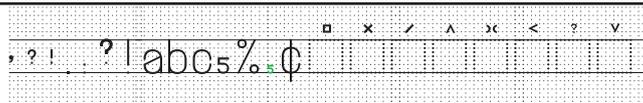
**Diagonal Lines** 

/	EXTENDED DESTRUCTION	destruction_(extended)_(RADICAL) [BRG]
/	DESTRUCTION ON SKYLINE	destruction_on_skyline_(RADICAL) [BRG]
/	DESTRUCTION	deletion,cancellation,destruction
/	THREE-QUARTER-SIZED DESTRUCTION ON EARTHLINE	destruction_(three-quarter-sized)_on_earthline_(RADICAL)
/	SMALL DESTRUCTION BENEATH SKYLINE	destruction_(small)_beneath_skyline_(RADICAL) [BRG]
/	THE	the
/	SMALL DESTRUCTION ATOP EARTHLINE	destruction_(small)_atop_earthline_(RADICAL)
\	PEN	pen
\	SMALL PEN BENEATH SKYLINE	pen_(small)_beneath_skyline_(RADICAL)
\	A OR ANY	a,an,any
\	SMALL PEN ATOP EARTHLINE	pen_(small)_atop_earthline_(RADICAL)

## International Alphanumeric Characters



## Punctuation, indicators, etc.



'	APOSTROPHE ON <b>MIDLINE</b>	apostrophe_on_midline_(RADICAL)
?	INTERROGATIVE WHAT	interrogative_what
!	INTENSITY	intensity
.	FULL STOP	period,point,full_stop,decimal_point
:	COLON	colon
?	QUESTION MARK	question_mark
!	EXCLAMATION MARK	exclamation_mark
abc	LATIN ALPHABET	alphabet,letters_(lowercase)
5	DIGIT FIVE	five_(digit),5 [new]
%	PERCENT SIGN	percent,percentage,%
₅	INDEX DIGIT FIVE	five_(index_number)
¢	CENT SIGN	cent
□	INDICATOR THING	indicator_(thing)
⊠	INDICATOR PLURAL	indicator_(plural)
⊡	INDICATOR DEFINITE	indicator_(definite)
⊢	INDICATOR ACTION	indicator_(action)
⊣	INDICATOR PRESENT ACTION	indicator_(present_action)
⊤	INDICATOR PRESENT CONDITIONAL	indicator_(conditional)
⊥	INDICATOR PASSIVE	indicator_(passive)
⊦	INDICATOR DESCRIPTION	indicator_(description)

### What were the BRG-only radicals used for?

⌋	FIRE ON <b>SKYLINE</b>	fire_on_skyline_(RADICAL) [BRG]
↯	SQUIRREL	now sorted with ↯ ANIMALS
⋈	SMALL CURVE ON <b>MIDLINE</b>	curve_(small)_on_midline_(RADICAL) [BRG]
↷	CETACEAN	radical in error; it is actually ON EARTHLINE: ↷,↷ The BRG version could be considered a typo.
⋈	ANTLER BENEATH <b>SKYLINE</b>	antler_beneath_skyline_(RADICAL) [BRG]
↯	porcine animal	now sorted with ↯ ANIMALS
⋈	SMALL LATER ATOP <b>SKYLINE</b>	later_(small)_atop_skyline_(RADICAL) [BRG]
⊕	HAIR	now sorted with ⊕ LARGE CIRCLES (faces)
⊕	MANE	now sorted with ⋈ PARENTHESSES (bodies)
⋈	ACTION ON <b>SKYLINE</b>	action_on_skyline_(RADICAL) [BRG]
⋈	GOD	radical in error; it is actually ⋈ CREATION ON SKYLINE
—	<b>EXTENDED</b> SUBTRACTION	subtraction_(extended)_(RADICAL) [BRG]
⊖	PLANET	now sorted with ⊖ LARGE CIRCLES (globes)

-	SMALL WITHOUT BETWEEN SKYLINE AND MIDLINE	without_(small)_between_skyline_and_midline_(RADICAL) [BRG]
☆	MAPLE LEAF	now sorted with ^ RIGHT ANGLES
	EXTENDED IT BENEATH SKYLINE	it_(extended)_beneath_skyline_(RADICAL) [BRG]
⌋	ACCOUNTS	now sorted with □ RECTANGLES as it is based on □ PAPER
\	SMALL REVERSED SLANTED LINE	slanted_line_(small,reversed)_(RADICAL) [BRG]
⊖	HANDBAG	now sorted with ∩ HALF CIRCLES (handles)
/	EXTENDED DESTRUCTION	destruction_(extended)_(RADICAL) [BRG]
↗	SAW	now sorted with △ RIGHT TRIANGLES (the teeth)
/	DESTRUCTION ON SKYLINE	destruction_on_skyline_(RADICAL) [BRG]
⊙	TANK	now sorted with ⊙ WHEELS
/	SMALL DESTRUCTION BENEATH SKYLINE <i>no actual entry</i>	destruction_(small)_beneath_skyline_(RADICAL) [BRG] <i>radical in error; never used</i>