

Miscellaneous Technical

Range: 2300–23FF

This file contains an excerpt from the character code tables and list of character names for
The Unicode Standard, Version 7.0

This file may be changed at any time without notice to reflect errata or other updates to the Unicode Standard.
See <http://www.unicode.org/errata/> for an up-to-date list of errata.

See <http://www.unicode.org/charts/> for access to a complete list of the latest character code charts.
See <http://www.unicode.org/charts/PDF/Unicode-7.0/> for charts showing only the characters added in Unicode 7.0.
See <http://www.unicode.org/Public/7.0.0/charts/> for a complete archived file of character code charts for Unicode 7.0.

Disclaimer

These charts are provided as the online reference to the character contents of the Unicode Standard, Version 7.0 but do not provide all the information needed to fully support individual scripts using the Unicode Standard. For a complete understanding of the use of the characters contained in this file, please consult the appropriate sections of The Unicode Standard, Version 7.0, online at <http://www.unicode.org/versions/Unicode7.0.0/>, as well as Unicode Standard Annexes #9, #11, #14, #15, #24, #29, #31, #34, #38, #41, #42, #44, and #45, the other Unicode Technical Reports and Standards, and the Unicode Character Database, which are available online.

See <http://www.unicode.org/ucd/> and <http://www.unicode.org/reports/>

A thorough understanding of the information contained in these additional sources is required for a successful implementation.

Fonts

The shapes of the reference glyphs used in these code charts are not prescriptive. Considerable variation is to be expected in actual fonts. The particular fonts used in these charts were provided to the Unicode Consortium by a number of different font designers, who own the rights to the fonts.

See <http://www.unicode.org/charts/fonts.html> for a list.

Terms of Use































































































































































































































































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	230	231	232	233	234	235	236	237	238	239	23A	23B	23C	23D	23E	23F
0	 2300	 2310	 2320	 2330	 2340	 2350	 2360	 2370	 2380	 2390	 23A0	 23B0	 23C0	 23D0	 23E0	 23F0
1	 2301	 2311	 2321	 2331	 2341	 2351	 2361	 2371	 2381	 2391	 23A1	 23B1	 23C1	 23D1	 23E1	 23F1
2	 2302	 2312	 2322	 2332	 2342	 2352	 2362	 2372	 2382	 2392	 23A2	 23B2	 23C2	 23D2	 23E2	 23F2
3	 2303	 2313	 2323	 2333	 2343	 2353	 2363	 2373	 2383	 2393	 23A3	 23B3	 23C3	 23D3	 23E3	 23F3
4	 2304	 2314	 2324	 2334	 2344	 2354	 2364	 2374	 2384	 2394	 23A4	 23B4	 23C4	 23D4	 23E4	 23F4
5	 2305	 2315	 2325	 2335	 2345	 2355	 2365	 2375	 2385	 2395	 23A5	 23B5	 23C5	 23D5	 23E5	 23F5
6	 2306	 2316	 2326	 2336	 2346	 2356	 2366	 2376	 2386	 2396	 23A6	 23B6	 23C6	 23D6	 23E6	 23F6
7	 2307	 2317	 2327	 2337	 2347	 2357	 2367	 2377	 2387	 2397	 23A7	 23B7	 23C7	 23D7	 23E7	 23F7
8	 2308	 2318	 2328	 2338	 2348	 2358	 2368	 2378	 2388	 2398	 23A8	 23B8	 23C8	 23D8	 23E8	 23F8
9	 2309	 2319	 2329	 2339	 2349	 2359	 2369	 2379	 2389	 2399	 23A9	 23B9	 23C9	 23D9	 23E9	 23F9
A	 230A	 231A	 232A	 233A	 234A	 235A	 236A	 237A	 238A	 239A	 23AA	 23BA	 23CA	 23DA	 23EA	 23FA
B	 230B	 231B	 232B	 233B	 234B	 235B	 236B	 237B	 238B	 239B	 23AB	 23BB	 23CB	 23DB	 23EB	
C	 230C	 231C	 232C	 233C	 234C	 235C	 236C	 237C	 238C	 239C	 23AC	 23BC	 23CC	 23DC	 23EC	
D	 230D	 231D	 232D	 233D	 234D	 235D	 236D	 237D	 238D	 239D	 23AD	 23BD	 23CD	 23DD	 23ED	
E	 230E	 231E	 232E	 233E	 234E	 235E	 236E	 237E	 238E	 239E	 23AE	 23BE	 23CE	 23DE	 23EE	
F	 230F	 231F	 232F	 233F	 234F	 235F	 236F	 237F	 238F	 239F	 23AF	 23BF	 23CF	 23DF	 23EF	

Miscellaneous technical

- 2300 ∅ DIAMETER SIGN
→ 2205 ∅ empty set
- 2301 ↘ ELECTRIC ARROW
• from ISO 2047
• symbol for End of Transmission
- 2302 ☰ HOUSE
- 2303 ^ UP ARROWHEAD
→ 005E ^ circumflex accent
→ 02C4 ^ modifier letter up arrowhead
→ 2038 ^ caret
→ 2227 ^ logical and
- 2304 v DOWN ARROWHEAD
→ 02C5 v modifier letter down arrowhead
→ 2228 v logical or
→ 2335 v countersink
- 2305 ⋈ PROJECTIVE
→ 22BC ⋈ nand
- 2306 ≀ PERSPECTIVE
- 2307 3 WAVY LINE
→ 2E3E 3 wiggly vertical line
→ 3030 ~ wavy dash

Ceilings and floors

These characters are tall and narrow mathematical delimiters, in contrast to the quine corners or half brackets. They are also distinct from CJK corner brackets, which are wide quotation marks.

- 2308 ⌈ LEFT CEILING
= APL upstile
→ 2E22 ⌈ top left half bracket
→ 300C ⌈ left corner bracket
- 2309 ⌋ RIGHT CEILING
→ 20E7 ⌋ combining annuity symbol
→ 2E23 ⌋ top right half bracket
- 230A ⌊ LEFT FLOOR
= APL downstile
→ 2E24 ⌊ bottom left half bracket
- 230B ⌋ RIGHT FLOOR
→ 300D ⌋ right corner bracket
→ 2E25 ⌋ bottom right half bracket

Crops

- 230C ⌞ BOTTOM RIGHT CROP
• set of four "crop" corners, arranged facing outward
- 230D ⌟ BOTTOM LEFT CROP
- 230E ⌠ TOP RIGHT CROP
- 230F ⌡ TOP LEFT CROP

Miscellaneous technical

- 2310 ⇐ REVERSED NOT SIGN
= beginning of line
→ 00AC ⇐ not sign
- 2311 ◻ SQUARE LOZENGE
= Kissen (pillow)
• used as a command delimiter in some very old computers
→ 2BCF ◻ rotated white four pointed cusp
- 2312 ⤵ ARC
= position of any line
→ 25E0 ⤵ upper half circle
- 2313 ⤴ SEGMENT
= position of a surface
- 2314 ⤵ SECTOR

- 2315 ☎ TELEPHONE RECORDER
- 2316 ⊕ POSITION INDICATOR
= true position
→ 2BD0 ⊕ square position indicator
- 2317 ≡ VIEWDATA SQUARE
→ 22D5 ≡ equal and parallel to
- 2318 ⌘ PLACE OF INTEREST SIGN
= command key (1.0)
= operating system key (ISO 9995-7)
- 2319 ⌵ TURNED NOT SIGN
= line marker

User interface symbols

- 231A ⌚ WATCH
→ 23F0 ⌚ alarm clock
→ 1F550 ⌚ clock face one o'clock
~ 231A FE0E text style
~ 231A FE0F emoji style
- 231B ⌚ HOURGLASS
= alchemical symbol for hour
~ 231B FE0E text style
~ 231B FE0F emoji style

Quine corners

These form a set of four quine corners, for quincuncial arrangement. They are also used in upper and lower pairs in mathematic, or more rarely in editorial usage as alternatives to half brackets.

- 231C ⌞ TOP LEFT CORNER
→ 2E00 ⌞ right angle substitution marker
→ 2E22 ⌞ top left half bracket
- 231D ⌟ TOP RIGHT CORNER
- 231E ⌠ BOTTOM LEFT CORNER
- 231F ⌡ BOTTOM RIGHT CORNER

Integral pieces

- 2320 ∫ TOP HALF INTEGRAL
→ 23AE ∫ integral extension
- 2321 ∫ BOTTOM HALF INTEGRAL

Frown and smile

- 2322 ☹ FROWN
→ 2040 ☹ character tie
- 2323 ☺ SMILE
→ 203F ☺ undertie

Keyboard symbols

- 2324 ⌨ UP ARROWHEAD BETWEEN TWO HORIZONTAL BARS
= enter key
- 2325 ⌨ OPTION KEY
- 2326 ☒ ERASE TO THE RIGHT
= delete to the right key
- 2327 ☒ X IN A RECTANGLE BOX
= clear key
- 2328 ⌨ KEYBOARD
→ 1F5A6 ⌨ keyboard and mouse
→ 1F5AE ⌨ wired keyboard

Deprecated angle brackets

These characters are deprecated and are strongly discouraged for mathematical use because of their canonical equivalence to CJK punctuation.

- 2329 < LEFT-POINTING ANGLE BRACKET
 → 003C < less-than sign
 → 2039 ‹ single left-pointing angle quotation mark
 → 27E8 ‹ mathematical left angle bracket
 ≡ 3008 ‹ left angle bracket
- 232A > RIGHT-POINTING ANGLE BRACKET
 → 003E > greater-than sign
 → 203A › single right-pointing angle quotation mark
 → 27E9 › mathematical right angle bracket
 ≡ 3009 › right angle bracket

Keyboard symbol

- 232B ☒ ERASE TO THE LEFT
 = delete to the left key

Chemistry symbol

- 232C ⬡ BENZENE RING

Drafting symbols

- 232D ⌢ CYLINDRICITY
 232E ⌢ ALL AROUND-PROFILE
 232F ⌢ SYMMETRY
 2330 // TOTAL RUNOUT
 2331 ⌢ DIMENSION ORIGIN
 2332 ⌢ CONICAL TAPER
 2333 ⌢ SLOPE
 → 25FA ⌢ lower left triangle
- 2334 □ COUNTERBORE
 → 2423 □ open box
- 2335 √ COUNTERSINK
 → 2304 √ down arrowhead

APL

- 2336 ⊥ APL FUNCTIONAL SYMBOL I-BEAM
 2337 □ APL FUNCTIONAL SYMBOL SQUISH QUAD
 → 2395 □ apl functional symbol quad
 → 25AF □ white vertical rectangle
 → 2AFF □ n-ary white vertical bar
- 2338 □ APL FUNCTIONAL SYMBOL QUAD EQUAL
 2339 □ APL FUNCTIONAL SYMBOL QUAD DIVIDE
 233A □ APL FUNCTIONAL SYMBOL QUAD DIAMOND
 → 26CB □ white diamond in square
- 233B □ APL FUNCTIONAL SYMBOL QUAD JOT
 → 29C7 □ squared small circle
- 233C □ APL FUNCTIONAL SYMBOL QUAD CIRCLE
 233D ○ APL FUNCTIONAL SYMBOL CIRCLE STILE
 233E ◎ APL FUNCTIONAL SYMBOL CIRCLE JOT
 → 229A ◎ circled ring operator
 → 29BE ◎ circled white bullet
- 233F ⁄ APL FUNCTIONAL SYMBOL SLASH BAR
 → 1019A ⁄ roman as sign
- 2340 ⁄ APL FUNCTIONAL SYMBOL BACKSLASH BAR
 → 29F7 ⁄ reverse solidus with horizontal stroke
- 2341 □ APL FUNCTIONAL SYMBOL QUAD SLASH
 → 29C4 □ squared rising diagonal slash
- 2342 □ APL FUNCTIONAL SYMBOL QUAD BACKSLASH
 → 29C5 □ squared falling diagonal slash
- 2343 □ APL FUNCTIONAL SYMBOL QUAD LESS-THAN

- 2344 □ APL FUNCTIONAL SYMBOL QUAD GREATER-THAN
 2345 + APL FUNCTIONAL SYMBOL LEFTWARDS VANE
 2346 + APL FUNCTIONAL SYMBOL RIGHTWARDS VANE
 2347 □ APL FUNCTIONAL SYMBOL QUAD LEFTWARDS ARROW
 2348 □ APL FUNCTIONAL SYMBOL QUAD RIGHTWARDS ARROW
 2349 ○ APL FUNCTIONAL SYMBOL CIRCLE BACKSLASH
 → 29B0 ○ reversed empty set
- 234A ⊥ APL FUNCTIONAL SYMBOL DOWN TACK UNDERBAR
 = up tack underbar
 • preferred naming for APL tack symbols now follows the London Convention in ISO/IEC 13751:2000 (APL Extended)
 → 22A5 ⊥ up tack
- 234B Δ APL FUNCTIONAL SYMBOL DELTA STILE
 234C □ APL FUNCTIONAL SYMBOL QUAD DOWN CARET
 234D □ APL FUNCTIONAL SYMBOL QUAD DELTA
 234E ⊥ APL FUNCTIONAL SYMBOL DOWN TACK JOT
 = up tack jot
 → 22A5 ⊥ up tack
- 234F + APL FUNCTIONAL SYMBOL UPWARDS VANE
 2350 □ APL FUNCTIONAL SYMBOL QUAD UPWARDS ARROW
 2351 ⊥ APL FUNCTIONAL SYMBOL UP TACK OVERBAR
 = down tack overbar
 → 22A4 ⊥ down tack
 → 3012 ⊥ postal mark
- 2352 ∇ APL FUNCTIONAL SYMBOL DEL STILE
 2353 □ APL FUNCTIONAL SYMBOL QUAD UP CARET
 → 28B9 □ up arrowhead in a rectangle box
- 2354 □ APL FUNCTIONAL SYMBOL QUAD DEL
 2355 ⊥ APL FUNCTIONAL SYMBOL UP TACK JOT
 = down tack jot
 → 22A4 ⊥ down tack
- 2356 + APL FUNCTIONAL SYMBOL DOWNWARDS VANE
 2357 □ APL FUNCTIONAL SYMBOL QUAD DOWNWARDS ARROW
 2358 ' APL FUNCTIONAL SYMBOL QUOTE UNDERBAR
 2359 Δ APL FUNCTIONAL SYMBOL DELTA UNDERBAR
 235A ◇ APL FUNCTIONAL SYMBOL DIAMOND UNDERBAR
- 235B ○ APL FUNCTIONAL SYMBOL JOT UNDERBAR
 235C ○ APL FUNCTIONAL SYMBOL CIRCLE UNDERBAR
 235D ∩ APL FUNCTIONAL SYMBOL UP SHOE JOT
 → 2A40 ∩ intersection with dot
- 235E □ APL FUNCTIONAL SYMBOL QUOTE QUAD
 235F ⊕ APL FUNCTIONAL SYMBOL CIRCLE STAR
 → 229B ⊕ circled asterisk operator
- 2360 □ APL FUNCTIONAL SYMBOL QUAD COLON
 2361 ⊥ APL FUNCTIONAL SYMBOL UP TACK DIAERESIS
 = down tack diaeresis
 → 22A4 ⊥ down tack
- 2362 ∇ APL FUNCTIONAL SYMBOL DEL DIAERESIS
 2363 * APL FUNCTIONAL SYMBOL STAR DIAERESIS
 2364 ø APL FUNCTIONAL SYMBOL JOT DIAERESIS
 = hoot
- 2365 ○ APL FUNCTIONAL SYMBOL CIRCLE DIAERESIS
 = holler
- 2366 ∩ APL FUNCTIONAL SYMBOL DOWN SHOE STILE

2367	⌘	APL FUNCTIONAL SYMBOL LEFT SHOE STILE
2368	˜	APL FUNCTIONAL SYMBOL TILDE DIAERESIS = smirk
2369	➤	APL FUNCTIONAL SYMBOL GREATER-THAN DIAERESIS
236A	̣	APL FUNCTIONAL SYMBOL COMMA BAR
236B	̤	APL FUNCTIONAL SYMBOL DEL TILDE
236C	̥	APL FUNCTIONAL SYMBOL ZILDE
236D	̦	APL FUNCTIONAL SYMBOL STILE TILDE
236E	̧	APL FUNCTIONAL SYMBOL SEMICOLON UNDERBAR
236F	⌘	APL FUNCTIONAL SYMBOL QUAD NOT EQUAL
2370	?	APL FUNCTIONAL SYMBOL QUAD QUESTION → 2BD1 ⬢ uncertainty sign
2371	⌞	APL FUNCTIONAL SYMBOL DOWN CARET TILDE
2372	⌠	APL FUNCTIONAL SYMBOL UP CARET TILDE
2373	ι	APL FUNCTIONAL SYMBOL IOTA
2374	ρ	APL FUNCTIONAL SYMBOL RHO
2375	ω	APL FUNCTIONAL SYMBOL OMEGA
2376	α	APL FUNCTIONAL SYMBOL ALPHA UNDERBAR
2377	ε	APL FUNCTIONAL SYMBOL EPSILON UNDERBAR
2378	ι	APL FUNCTIONAL SYMBOL IOTA UNDERBAR
2379	ω	APL FUNCTIONAL SYMBOL OMEGA UNDERBAR
237A	α	APL FUNCTIONAL SYMBOL ALPHA

Graphics for control codes

237B	✓	NOT CHECK MARK • from ISO 2047 • symbol for Negative Acknowledge
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Miscellaneous technical

237C	⌵	RIGHT ANGLE WITH DOWNWARDS ZIGZAG ARROW
------	---	---

Graphics for control codes

237D	⌵	SHOULDERED OPEN BOX • from ISO 9995-7 • keyboard symbol for No Break Space → 2423 ⌵ open box
237E	⌶	BELL SYMBOL • from ISO 2047
237F	†	VERTICAL LINE WITH MIDDLE DOT • from ISO 2047 • symbol for End of Medium

Keyboard symbols from ISO 9995-7

2380	⌵	INSERTION SYMBOL
2381	⌶	CONTINUOUS UNDERLINE SYMBOL
2382	⌷	DISCONTINUOUS UNDERLINE SYMBOL
2383	⌸	EMPHASIS SYMBOL
2384	⌹	COMPOSITION SYMBOL
2385	⌺	WHITE SQUARE WITH CENTRE VERTICAL LINE = center
2386	⌻	ENTER SYMBOL
2387	⌼	ALTERNATIVE KEY SYMBOL
2388	⌽	HELM SYMBOL = control → 2638 ⌽ wheel of dharma
2389	⌾	CIRCLED HORIZONTAL BAR WITH NOTCH = pause
238A	⌿	CIRCLED TRIANGLE DOWN = interrupt, break

238B	⌿	BROKEN CIRCLE WITH NORTHWEST ARROW = escape
238C	⌿	UNDO SYMBOL

Electrotechnical symbols from IR 181

238D	⌿	MONOSTABLE SYMBOL
238E	⌿	HYSTERESIS SYMBOL
238F	⌿	OPEN-CIRCUIT-OUTPUT H-TYPE SYMBOL
2390	⌿	OPEN-CIRCUIT-OUTPUT L-TYPE SYMBOL
2391	⌿	PASSIVE-PULL-DOWN-OUTPUT SYMBOL
2392	⌿	PASSIVE-PULL-UP-OUTPUT SYMBOL
2393	⌿	DIRECT CURRENT SYMBOL FORM TWO
2394	⌿	SOFTWARE-FUNCTION SYMBOL

APL

2395	⌿	APL FUNCTIONAL SYMBOL QUAD → 2337 ⌿ apl functional symbol squish quad → 25AF ⌿ white vertical rectangle
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Keyboard symbols from ISO 9995-7

2396	⌿	DECIMAL SEPARATOR KEY SYMBOL
2397	⌿	PREVIOUS PAGE → 1F519 ⌿ back with leftwards arrow above
2398	⌿	NEXT PAGE
2399	⌿	PRINT SCREEN SYMBOL
239A	⌿	CLEAR SCREEN SYMBOL → 20E2 ⌿ combining enclosing screen

Bracket pieces

239B	{	LEFT PARENTHESIS UPPER HOOK
239C	{	LEFT PARENTHESIS EXTENSION
239D	{	LEFT PARENTHESIS LOWER HOOK
239E	}	RIGHT PARENTHESIS UPPER HOOK
239F	}	RIGHT PARENTHESIS EXTENSION
23A0	}	RIGHT PARENTHESIS LOWER HOOK
23A1	[LEFT SQUARE BRACKET UPPER CORNER
23A2	[LEFT SQUARE BRACKET EXTENSION
23A3	[LEFT SQUARE BRACKET LOWER CORNER
23A4]	RIGHT SQUARE BRACKET UPPER CORNER
23A5]	RIGHT SQUARE BRACKET EXTENSION
23A6]	RIGHT SQUARE BRACKET LOWER CORNER
23A7	{	LEFT CURLY BRACKET UPPER HOOK
23A8	{	LEFT CURLY BRACKET MIDDLE PIECE
23A9	{	LEFT CURLY BRACKET LOWER HOOK
23AA	{	CURLY BRACKET EXTENSION
23AB	}	RIGHT CURLY BRACKET UPPER HOOK
23AC	}	RIGHT CURLY BRACKET MIDDLE PIECE
23AD	}	RIGHT CURLY BRACKET LOWER HOOK

Special character extensions

23AE		INTEGRAL EXTENSION → 2320 ∫ top half integral → 2321 ∫ bottom half integral
23AF	—	HORIZONTAL LINE EXTENSION • used for extension of arrows → 23D0 vertical line extension

Bracket pieces

23B0		UPPER LEFT OR LOWER RIGHT CURLY BRACKET SECTION = left moustache
23B1		UPPER RIGHT OR LOWER LEFT CURLY BRACKET SECTION = right moustache

Summation sign parts

- 23B2 ∑ SUMMATION TOP
 23B3 ∑ SUMMATION BOTTOM
 → 2211 ∑ n-ary summation

Horizontal brackets

These characters are also used as delimiters of vertical text in non-CJK terminal emulation.

- 23B4 ⌈ TOP SQUARE BRACKET
 → FE47 ⌈ presentation form for vertical left square bracket
 23B5 ⌋ BOTTOM SQUARE BRACKET
 → FE48 ⌋ presentation form for vertical right square bracket
 23B6 ⌋ BOTTOM SQUARE BRACKET OVER TOP SQUARE BRACKET
 • only used for terminal emulation

Terminal graphic characters

- 23B7 ↓ RADICAL SYMBOL BOTTOM
 23B8 | LEFT VERTICAL BOX LINE
 23B9 | RIGHT VERTICAL BOX LINE

Scan lines for terminal graphics

The scan line numbers here refer to old, low-resolution technology for terminals, with only 9 scan lines per fixed-size character glyph. Even-numbered scan lines are unified with box-drawing graphics.

- 23BA - HORIZONTAL SCAN LINE-1
 23BB - HORIZONTAL SCAN LINE-3
 23BC - HORIZONTAL SCAN LINE-7
 23BD - HORIZONTAL SCAN LINE-9

Dentistry notation symbols

- 23BE ⌈ DENTISTRY SYMBOL LIGHT VERTICAL AND TOP RIGHT
 → 2308 ⌈ left ceiling
 23BF ⌋ DENTISTRY SYMBOL LIGHT VERTICAL AND BOTTOM RIGHT
 → 230A ⌋ left floor
 23C0 ⌚ DENTISTRY SYMBOL LIGHT VERTICAL WITH CIRCLE
 23C1 ⌚ DENTISTRY SYMBOL LIGHT DOWN AND HORIZONTAL WITH CIRCLE
 23C2 ⌚ DENTISTRY SYMBOL LIGHT UP AND HORIZONTAL WITH CIRCLE
 23C3 ⌚ DENTISTRY SYMBOL LIGHT VERTICAL WITH TRIANGLE
 23C4 ⌚ DENTISTRY SYMBOL LIGHT DOWN AND HORIZONTAL WITH TRIANGLE
 23C5 ⌚ DENTISTRY SYMBOL LIGHT UP AND HORIZONTAL WITH TRIANGLE
 23C6 ⌚ DENTISTRY SYMBOL LIGHT VERTICAL AND WAVE
 23C7 ⌚ DENTISTRY SYMBOL LIGHT DOWN AND HORIZONTAL WITH WAVE
 23C8 ⌚ DENTISTRY SYMBOL LIGHT UP AND HORIZONTAL WITH WAVE
 23C9 ⌚ DENTISTRY SYMBOL LIGHT DOWN AND HORIZONTAL
 → 22A4 T down tack
 → 252C T box drawings light down and horizontal

- 23CA ⊥ DENTISTRY SYMBOL LIGHT UP AND HORIZONTAL
 → 22A5 ⊥ up tack
 → 2534 ⊥ box drawings light up and horizontal
 23CB ⊥ DENTISTRY SYMBOL LIGHT VERTICAL AND TOP LEFT
 → 2309 ⊥ right ceiling
 23CC ⊥ DENTISTRY SYMBOL LIGHT VERTICAL AND BOTTOM LEFT
 → 230B ⊥ right floor

Miscellaneous technical

- 23CD □ SQUARE FOOT

Keyboard and UI symbols

- 23CE ↵ RETURN SYMBOL
 • may be shown with either hollow or filled glyph
 → 21B5 ↵ downwards arrow with corner leftwards
 → 2B90 ↵ return left
 23CF ➤ EJECT SYMBOL
 • UI symbol to eject media

Special character extension

- 23D0 | VERTICAL LINE EXTENSION
 • used for extension of arrows
 → 23AF — horizontal line extension

Metrical symbols

- 23D1 ∪ METRICAL BREVE
 23D2 ∪ METRICAL LONG OVER SHORT
 23D3 ∪ METRICAL SHORT OVER LONG
 23D4 ∪ METRICAL LONG OVER TWO SHORTS
 23D5 ∪ METRICAL TWO SHORTS OVER LONG
 23D6 ∪ METRICAL TWO SHORTS JOINED
 23D7 ⌒ METRICAL TRISEME
 → 1D242 ⌒ combining greek musical triseme
 23D8 ⌒ METRICAL TETRASEME
 → 1D243 ⌒ combining greek musical tetraseme
 23D9 ⌒ METRICAL PENTASEME
 → 1D244 ⌒ combining greek musical pentaseme

Electrotechnical symbols

- 23DA ⊥ EARTH GROUND
 23DB ⌚ FUSE

Horizontal brackets

These are intended for bracketing terms of mathematical expressions where their glyph extends to accommodate the width of the bracketed expression

- 23DC ⌐ TOP PARENTHESIS
 → FE35 ⌐ presentation form for vertical left parenthesis
 23DD ⌐ BOTTOM PARENTHESIS
 → FE36 ⌐ presentation form for vertical right parenthesis
 23DE ⌐ TOP CURLY BRACKET
 → FE37 ⌐ presentation form for vertical left curly bracket
 23DF ⌐ BOTTOM CURLY BRACKET
 → FE38 ⌐ presentation form for vertical right curly bracket
 23E0 ⌐ TOP TORTOISE SHELL BRACKET
 → FE39 ⌐ presentation form for vertical left tortoise shell bracket

23E1  BOTTOM TORTOISE SHELL BRACKET
→ FE3A  presentation form for vertical right tortoise shell bracket

Miscellaneous technical

23E2  WHITE TRAPEZIUM

Chemistry symbol

23E3  BENZENE RING WITH CIRCLE


Miscellaneous technical

23E4  STRAIGHTNESS

23E5  FLATNESS

23E6  AC CURRENT

23E7  ELECTRICAL INTERSECTION

23E8  DECIMAL EXPONENT SYMBOL
• Algol-60 token for scientific notation literals

User interface symbols

23E9  BLACK RIGHT-POINTING DOUBLE TRIANGLE
= fast forward

23EA  BLACK LEFT-POINTING DOUBLE TRIANGLE
= fast rewind

23EB  BLACK UP-POINTING DOUBLE TRIANGLE


23EC  BLACK DOWN-POINTING DOUBLE TRIANGLE


23ED  BLACK RIGHT-POINTING DOUBLE TRIANGLE WITH VERTICAL BAR



23EE  BLACK LEFT-POINTING DOUBLE TRIANGLE WITH VERTICAL BAR

23EF  BLACK RIGHT-POINTING TRIANGLE WITH DOUBLE VERTICAL BAR




23F0  ALARM CLOCK
→ 231A  watch
→ 1F550  clock face one o'clock
→ 1F570  mantelpiece clock




23F1  STOPWATCH




23F2  TIMER CLOCK



23F3  HOURGLASS WITH FLOWING SAND
→ 231B  hourglass

23F4  BLACK MEDIUM LEFT-POINTING TRIANGLE
= reverse, back
• preferred to 25C0  black left-pointing triangle
→ 1F780  black left-pointing isosceles right triangle



23F5  BLACK MEDIUM RIGHT-POINTING TRIANGLE
= forward
• preferred to 25B6  black right-pointing triangle
→ 1F782  black right-pointing isosceles right triangle

23F6  BLACK MEDIUM UP-POINTING TRIANGLE
= increase
• preferred to 25B2  black up-pointing triangle
→ 1F781  black up-pointing isosceles right triangle

23F7  BLACK MEDIUM DOWN-POINTING TRIANGLE
= decrease
• preferred to 25BC  black down-pointing triangle
→ 1F783  black down-pointing isosceles right triangle

23F8  DOUBLE VERTICAL BAR
= pause
→ 2016  double vertical line

23F9  BLACK SQUARE FOR STOP
= stop
→ 25FC  black medium square

23FA  BLACK CIRCLE FOR RECORD
= record
→ 26AB  medium black circle