# **Supplemental Arrows-B**

Range: 2900-297F

This file contains an excerpt from the character code tables and list of character names for *The Unicode Standard, Version 5.0.* 

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-5.0/ for charts showing only the characters added in Unicode 5.0. See http://www.unicode.org/Public/5.0.0/charts/ for a complete archived file of character code charts for Unicode 5.0.

#### **Disclaimer**

These charts are provided as the on-line reference to the character contents of the Unicode Standard, Version 5.0 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 5.0 (ISBN 0-321-48091-0), online at http://www.unicode.org/versions/Unicode5.0.0/, as well as Unicode Standard Annexes #9, #11, #14, #15, #24, #29, #31, and #34, the other Unicode Technical Reports and Standards, and the Unicode Character Database, which are available on-line.

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.

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See http://www.unicode.org/pending/pending.html and http://www.unicode.org/alloc/Pipeline.html.

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|   | 290             | 291                   | 292      | 293      | 294   | 295           | 296           | 297                                |
|---|-----------------|-----------------------|----------|----------|---|---------------|---------------|------------------------------------|
| 0 | <del></del>     | <b>&gt;-</b> *        | <b>→</b> | ×        | 0   | $\overline{}$ | 1             |                                    |
|   | 2900            | 2910                  | 2920     | 2930     | 2940  | 2950          | 2960          | 2970                               |
| 1 | <del>-  »</del> | ····›                 | 5        | X        | $\Diamond$  | 1             | 1             | $\Rightarrow$                      |
|   | 2901            | 2911                  | 2921     | 2931     | 2941  | 2951          | 2961          | 2971                               |
| 2 | #               | T                     | ~        | X        | $\rightarrow$                                     | <u> </u>      | <b>=</b>      | $\stackrel{\sim}{\longrightarrow}$ |
|   | 2902            | 2912                  | 2922     | 2932     | 2942  | 2952          | 2962          | 2972                               |
| 3 | <b>⇒</b>        | 1                     | 5        | <b>~</b> | $\longleftrightarrow$                             | -             | 11            | ₩                                  |
|   | 2903            | 2913                  | 2923     | 2933     | 2943  | 2953          | 2963          | 2973                               |
| 4 | <b>#</b>        | <b>&gt;</b> →         | 7        | <b>→</b> | $\stackrel{\longrightarrow}{\longleftrightarrow}$ | T             | $\Rightarrow$ | $\Rightarrow$                      |
|   | 2904            | 2914                  | 2924     | 2934     | 2944  | 2954          | 2964          | 2974                               |
| 5 | <b>⊢</b> ≫      | <del>&gt;  &gt;</del> | 5        | 7        | <b>→</b>  | 1             | ↓             | ≅                                  |
|   | 2905            | 2915                  | 2925     | 2935     | 2945  | 2955          | 2965          | 2975                               |
| 6 | ₩               | <b>&gt;</b> ⇒         | 2        | Ų        | ←+  | <del></del>   | <b>=</b>      | ≨                                  |
|   | 2906            | 2916                  | 2926     | 2936     | 2946  | 2956          | 2966          | 2976                               |
| 7 | $\Rightarrow$   | <del>&gt;+&gt;</del>  | X        | <b>\</b> | <del>-×&gt;</del>                                 | <b>→</b>      | =             | ₩                                  |
|   | 2907            | 2917                  | 2927     | 2937     | 2947  | 2957          | 2967          | 2977                               |
| 8 | ‡               | <del>&gt;  ≫</del>    | X        | )        | <del>(0)</del>                                    | 1             | =             | ≥                                  |
|   | 2908            | 2918                  | 2928     | 2938     | 2948  | 2958          | 2968          | 2978                               |
| 9 | 7               | $\prec$               | X        | (        | <b>↑</b>  | 1             | ightharpoons  | U↑                                 |
|   | 2909            | 2919                  | 2929     | 2939     | 2949  | 2959          | 2969          | 2979                               |
| Α | $\blacksquare$  | <b>—</b>              | X        | 2        | <del></del>                                       | 4             | <b>=</b>      | $\in$                              |
|   | 290A            | 291A                  | 292A     | 293A     | 294A  | 295A          | 296A          | 297A                               |
| В | ₩               | -≪                    | ×        | 7        | <del>←</del>                                      | <b>⊢</b>      | =             | ₽                                  |
|   | 290B            | 291B                  | 292B     | 293B     | 294B  | 295B          | 296B          | 297B                               |
| С | ←-              | <b>&gt;</b>           | X        | (1       | 1   | 1             | <u></u>       | +                                  |
|   | 290C            | 291C                  | 292C     | 293C     | 294C  | 295C          | 296C          | 297C                               |
| D | <b>-</b> →      | <b>◆</b> ←            | X        | <b>(</b> | 1   | Ţ             | =             | ⊣                                  |
|   | 290D            | 291D                  | 292D     | 293D     | 294D  | 295D          | 296D          | 297D                               |
| Е | <b>←</b>        | →•                    | X        | ى        |   | $\vdash$      | 11            | Υ                                  |
|   | 290E            | 291E                  | 292E     | 293E     | 294E  | 295E          | 296E          | 297E                               |
| F | <b></b> →       | <b>◆</b> ←            | X        | S        |   | $\vdash$      | 11            | T                                  |
|   | 290F            | 291F                  | 292F     | 293F     | 294F  | 295F          | 296F          | 297F                               |

| Miscellaneous arrows |                      |  |       | <b>→</b> •                               | RIGHTWARDS ARROW FROM BAR TO BLACK<br>DIAMOND       |
|----------------------|----------------------|--|-------|--|---|
| 2900                 | <del>-+»</del>       | RIGHTWARDS TWO-HEADED ARROW WITH                                     | 2921  | 5  | NORTH WEST AND SOUTH EAST ARROW                     |
|                      |                      | VERTICAL STROKE  | 2922  | 2  | NORTH EAST AND SOUTH WEST ARROW                     |
| 0004                 |                      | = z notation partial surjection                                      | 2923  | 5  | NORTH WEST ARROW WITH HOOK                          |
| 2901                 | <del>-  »</del>      | RIGHTWARDS TWO-HEADED ARROW WITH<br>DOUBLE VERTICAL STROKE           | 2924  | 1  | NORTH EAST ARROW WITH HOOK                          |
|                      |                      | = z notation finite surjection                                       | 2925  | 5  | SOUTH EAST ARROW WITH HOOK                          |
| 2902                 | #                    | LEFTWARDS DOUBLE ARROW WITH VERTICAL                                 | 2926  | 2  | SOUTH WEST ARROW WITH HOOK                          |
| 2302                 | 4-                   | STROKE   | 0     | :  |   |
| 2903                 | $\Rightarrow$        | RIGHTWARDS DOUBLE ARROW WITH   |       | SSI                                      | ng arrows for knot theory                           |
|                      |                      | VERTICAL STROKE  | 2927  | X  | NORTH WEST ARROW AND NORTH EAST                     |
| 2904                 | <b>#</b>             | LEFT RIGHT DOUBLE ARROW WITH VERTICAL                                | 2928  | . 7                                      | ARROW   |
| 2905                 | ↦                    | STROKE<br>RIGHTWARDS TWO-HEADED ARROW FROM                           | 2920  | X  | NORTH EAST ARROW AND SOUTH EAST<br>ARROW            |
| 2903                 | 1 "                  | BAR  | 2929  | X  | SOUTH EAST ARROW AND SOUTH WEST                     |
|                      |                      | = maps to  |       |  | ARROW   |
| 2906                 | ∉                    | LEFTWARDS DOUBLE ARROW FROM BAR                                      | 292A  | ×  | SOUTH WEST ARROW AND NORTH WEST                     |
|                      |                      | = maps from  | 2020  |  | ARROW   |
|                      |                      | → 27FB ← long leftwards arrow from bar                               | 292B  | ×  | RISING DIAGONAL CROSSING FALLING<br>DIAGONAL        |
| 2907                 | $\Rightarrow$        | RIGHTWARDS DOUBLE ARROW FROM BAR                                     | 292C  | ×  | FALLING DIAGONAL CROSSING RISING                    |
|                      |                      | = maps to  |       |  | DIAGONAL  |
|                      |                      | → 27FC → long rightwards arrow from bar                              | 292D  | X  | SOUTH EAST ARROW CROSSING NORTH EAST                |
| 2908                 | ţ                    | DOWNWARDS ARROW WITH HORIZONTAL                                      | 000   |  | ARROW   |
| 0000                 | •                    | STROKE   | 292E  | X  | NORTH EAST ARROW CROSSING SOUTH EAST ARROW          |
| 2909                 | Ŧ                    | UPWARDS ARROW WITH HORIZONTAL<br>STROKE                              | 292F  | X  | FALLING DIAGONAL CROSSING NORTH EAST                |
| 290A                 | 1                    | UPWARDS TRIPLE ARROW   |       |  | ARROW   |
| 200/1                | ""                   | → 21D1 ↑ upwards double arrow  | 2930  | X  | RISING DIAGONAL CROSSING SOUTH EAST                 |
|                      |                      | → 27F0 1 upwards quadruple arrow                                     | 0004  |  | ARROW   |
| 290B                 | ₩                    | DOWNWARDS TRIPLE ARROW   | 2931  | ×  | NORTH EAST ARROW CROSSING NORTH WEST ARROW          |
| 2000                 | *                    | → 21D3 ↓ downwards double arrow                                      | 2932  | ×  | NORTH WEST ARROW CROSSING NORTH EAST                |
|                      |                      | → 27F1 \$\psi\$ downwards quadruple arrow                            | 2002  | ^  | ARROW   |
| 290C                 | ←-                   | LEFTWARDS DOUBLE DASH ARROW  |       |  |   |
| 290D                 | <b>-→</b>            | RIGHTWARDS DOUBLE DASH ARROW   |       | cei                                      | laneous curved arrows                               |
| 290E                 | <b>←</b>             | LEFTWARDS TRIPLE DASH ARROW  | 2933  | $\rightarrow$                            | WAVE ARROW POINTING DIRECTLY RIGHT                  |
| 290F                 | <del>)</del>         | RIGHTWARDS TRIPLE DASH ARROW   |       |  | → 219D ~ rightwards wave arrow                      |
| 2910                 | <b>≻-</b> ≫          | RIGHTWARDS TWO-HEADED TRIPLE DASH                                    | 2934  | ♪  | ARROW POINTING RIGHTWARDS THEN                      |
| 0044                 |                      | ARROW  | 2935  | 7  | CURVING UPWARDS<br>ARROW POINTING RIGHTWARDS THEN   |
| 2911<br>2912         | ><br>T               | RIGHTWARDS ARROW WITH DOTTED STEM                                    | 2333  |  | CURVING DOWNWARDS                                   |
| 2912                 | 1                    | UPWARDS ARROW TO BAR<br>DOWNWARDS ARROW TO BAR                       | 2936  | Ų  | ARROW POINTING DOWNWARDS THEN                       |
| 2914                 | <del>*</del>         | RIGHTWARDS ARROW WITH TAIL WITH                                      | 0007  |  | CURVING LEFTWARDS                                   |
| 2011                 |                      | VERTICAL STROKE  | 2937  | 4  | ARROW POINTING DOWNWARDS THEN<br>CURVING RIGHTWARDS |
|                      |                      | = z notation partial injection                                       | 2938  | )  | RIGHT-SIDE ARC CLOCKWISE ARROW                      |
| 2915                 | <del>/  )</del>      | RIGHTWARDS ARROW WITH TAIL WITH                                      | 2939  | ζ  | LEFT-SIDE ARC ANTICLOCK WISE ARROW                  |
|                      |                      | DOUBLE VERTICAL STROKE   | 293A  | ,<br>,                                   | TOP ARC ANTICLOCK WISE ARROW                        |
| 2016                 |                      | = z notation finite injection  | 293B  | <u></u>                                  | BOTTOM ARC ANTICLOCK WISE ARROW                     |
| 2916                 | <b>&gt;→</b>         | RIGHTWARDS TWO-HEADED ARROW WITH TAIL                                | 293C  | $\sim$                                   | TOP ARC CLOCKWISE ARROW WITH MINUS                  |
|                      |                      | = bijective mapping  | 293D  | 4  | TOP ARC ANTICLOCK WISE ARROW WITH PLUS              |
|                      |                      | = z notation bijection   | 293E  | ی  | LOWER RIGHT SEMICIRCULAR CLOCKWISE                  |
| 2917                 | <del>&gt;+&gt;</del> | RIGHTWARDS TWO-HEADED ARROW WITH                                     | 000   |  | ARROW   |
|                      |                      | TAIL WITH VERTICAL STROKE  | 293F  | G  | LOWER LEFT SEMICIRCULAR ANTICLOCKWISE ARROW         |
| 20.40                |                      | = z notation surjective injection                                    | 2940  | Ó  | ANTICLOCK WISE CLOSED CIRCLE ARROW                  |
| 2918                 | <del>/  &gt;</del>   | RIGHTWARDS TWO-HEADED ARROW WITH<br>TAIL WITH DOUBLE VERTICAL STROKE | 20.0  | Ŭ  | → 20DA © combining anticlockwise ring               |
|                      |                      | = z notation finite surjective injection                             |       |  | overlay   |
|                      |                      | - z notation finite surjective injection                             | 2941  | Ò  | CLOCKWISE CLOSED CIRCLE ARROW                       |
| Arro                 | wc                   | tails  |       |  | → 20D9 © combining clockwise ring overlay           |
| 2919                 |                      | LEFTWARDS ARROW-TAIL   | Α     |  |   |
| 291A                 | $\succ$              | RIGHTWARDS ARROW-TAIL  |       |  | s combined with operators                           |
| 291B                 | ~                    | LEFTWARDS DOUBLE ARROW-TAIL  | 2942  | $\overrightarrow{\leftarrow}$            | RIGHTWARDS ARROW ABOVE SHORT                        |
| 291C                 | <b>&gt;</b>          | RIGHTWARDS DOUBLE ARROW-TAIL   | 20.42 | ←  | LEFTWARDS ARROW AROVE SHORT                         |
| NA:-                 | II                   |  | 2943  | $\stackrel{\longleftarrow}{\rightarrow}$ | LEFTWARDS ARROW ABOVE SHORT<br>RIGHTWARDS ARROW     |
| Miscellaneous arrows |                      |  |       | $\stackrel{\longrightarrow}{\leftarrow}$ | SHORT RIGHTWARDS ARROW ABOVE                        |
| 291D                 | <b>←</b>             | LEFTWARDS ARROW TO BLACK DIAMOND                                     | 2944  |  | LEFTWARDS ARROW                                     |
| 291E                 | →•                   | RIGHTWARDS ARROW TO BLACK DIAMOND                                    | 2945  | $\stackrel{+}{\longrightarrow}$          | RIGHTWARDS ARROW WITH PLUS BELOW                    |
| 291F                 | •←                   | LEFTWARDS ARROW FROM BAR TO BLACK<br>DIAMOND                         | 2946  | ←  | LEFTWARDS ARROW WITH PLUS BELOW                     |
|                      |                      | DIMINIOND  |       |  |   |

- RIGHTWARDS ARROW THROUGH X
- 2948 <del>(0)</del> LEFT RIGHT ARROW THROUGH SMALL CIRCLE
- ₹ 2949 UPWARDS TWO-HEADED ARROW FROM SMALL CIRCLE

### Double-barbed harpoons

- → LEFT BARB UP RIGHT BARB DOWN HARPOON 294B LEFT BARB DOWN RIGHT BARB UP HARPOON
- 294C
- UP BARB RIGHT DOWN BARB LEFT HARPOON 294D 1
- UP BARB LEFT DOWN BARB RIGHT HARPOON 294E LEFT BARB UP RIGHT BARB UP HARPOON
- 294F t UP BARB RIGHT DOWN BARB RIGHT HARPOON
- 2950 LEFT BARB DOWN RIGHT BARB DOWN
- 2951 UP BARB LEFT DOWN BARB LEFT HARPOON

# Modified harpoons

- 2952 LEFTWARDS HARPOON WITH BARB UP TO BAR 2953
- RIGHTWARDS HARPOON WITH BARB UP TO BAR
- T 2954 UPWARDS HARPOON WITH BARB RIGHT TO BAR
- 2955 Ţ DOWNWARDS HARPOON WITH BARB RIGHT TO BAR
- 2956 LEFTWARDS HARPOON WITH BARB DOWN TO BAR
- 2957 RIGHTWARDS HARPOON WITH BARB DOWN TO BAR
- UPWARDS HARPOON WITH BARB LEFT TO BAR 2958
- 2959 DOWNWARDS HARPOON WITH BARB LEFT TO BAR
- 295A LEFTWARDS HARPOON WITH BARB UP FROM BAR
- 295B RIGHTWARDS HARPOON WITH BARB UP FROM BAR
- 295C 1 UPWARDS HARPOON WITH BARB RIGHT FROM BAR
- 295D τ DOWNWARDS HARPOON WITH BARB RIGHT FROM BAR
- 295E LEFTWARDS HARPOON WITH BARB DOWN FROM BAR
- 295F RIGHTWARDS HARPOON WITH BARB DOWN FROM BAR
- 2960 1 UPWARDS HARPOON WITH BARB LEFT FROM
- 2961 1 DOWNWARDS HARPOON WITH BARB LEFT FROM BAR

# Paired harpoons

- 2962 LEFTWARDS HARPOON WITH BARB UP ABOVE LEFTWARDS HARPOON WITH BARB DOWN
- 2963 11 UPWARDS HARPOON WITH BARB LEFT BESIDE UPWARDS HARPOON WITH BARB RIGHT
- 2964 RIGHTWARDS HARPOON WITH BARB UP ABOVE RIGHTWARDS HARPOON WITH BARB DOWN
- 11 DOWNWARDS HARPOON WITH BARB LEFT 2965 BESIDE DOWNWARDS HARPOON WITH BARB
- 2966 LEFTWARDS HARPOON WITH BARB UP ABOVE RIGHTWARDS HARPOON WITH BARB UP
- 2967 LEFTWARDS HARPOON WITH BARB DOWN ABOVE RIGHTWARDS HARPOON WITH BARB
- 2968 RIGHTWARDS HARPOON WITH BARB UP ABOVE LEFTWARDS HARPOON WITH BARB UP
- 2969 RIGHTWARDS HARPOON WITH BARB DOWN ABOVE LEFTWARDS HARPOON WITH BARB DOWN
- 296A LEFTWARDS HARPOON WITH BARB UP ABOVE LONG DASH
- 296B LEFTWARDS HARPOON WITH BARB DOWN BELOW LONG DASH

- 296C RIGHTWARDS HARPOON WITH BARB UP ABOVE LONG DASH
- 296D RIGHTWARDS HARPOON WITH BARB DOWN BELOW LONG DASH
- 296E UPWARDS HARPOON WITH BARB LEFT BESIDE DOWNWARDS HARPOON WITH BARB RIGHT
- 296F DOWNWARDS HARPOON WITH BARB LEFT BESIDE UPWARDS HARPOON WITH BARB RIGHT

### Miscellaneous arrow

RIGHT DOUBLE ARROW WITH ROUNDED HEAD  $\rightarrow$  2283  $\supset$  superset of

# Arrows combined with relations

- EQUALS SIGN ABOVE RIGHTWARDS ARROW
- 2972 TILDE OPERATOR ABOVE RIGHTWARDS ARROW
- 2973 LEFTWARDS ARROW ABOVE TILDE OPERATOR
- 2974 RIGHTWARDS ARROW ABOVE TILDE
- OPERATOR 2975 RIGHTWARDS ARROW ABOVE ALMOST EOUAL ⇌
- TO 2976 ≤ LESS-THAN ABOVE LEFTWARDS ARROW
- 2977  $\leftarrow$ LEFTWARDS ARROW THROUGH LESS-THAN
- 2978 GREATER-THAN ABOVE RIGHTWARDS ARROW
- $\subseteq$ 2979 SUBSET ABOVE RIGHTWARDS ARROW
- 297A € LEFTWARDS ARROW THROUGH SUBSET
- 297B SUPERSET ABOVE LEFTWARDS ARROW

#### Fish tails

- 297C ⊱ LEFT FISH TAIL
- 297D RIGHT FISH TAIL
- 297E UP FISH TAIL
- 297F DOWN FISH TAIL