## ISO/IEC JTC1/SC2/WG2 <br> Coded Character Set <br> Secretariat: Japan (JISC)

## Doc. Type: Draft disposition of comments

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Comments were received from Canada, China, France, Germany, Hungary, Ireland, Romania, United Kingdom, and USA. The following document is the draft disposition of those comments. The disposition is organized per country.

Note - The full content of the ballot comments have been included in this document to facilitate the reading. The dispositions are inserted in between these comments and are marked in Underlined Bold Serif text, with explanatory text in italicized serif.

In addition, this draft contains at the end charts for the blocks that are modified according to these proposed dispositions, either through addition or glyph changes. Pure name changes are not included. Characters originally proposed in Pdam1.2 are highlighted in yellow, newly proposed are highlighted in yellow/blue and glyphs changes are highlighted in blue.

The total characters count stands at $\mathbf{1 9 7 9}$ ( $\mathbf{1 8 4 6}$ per resolution M58.23 -2 per editor's note in the amendment +135 per this draft disposition). From the charts used for Pdam1.2, there are 147 additions, 12 deletions, and 25 glyph changes.

## Canada: Positive with comment

## Technical comment

## T1. Old Hungarian name:

Canada will have no objection to changing the name (and the corresponding names of the characters in the repertoire) of currently named script 'Old Hungarian' to 'Rovas', to address one of the main objections expressed by the Hungarian national body expert in the feedback document http://www.dkuug.dk/jtc $1 / \mathrm{sc} 2 / \mathrm{wg} 2 / \mathrm{docs} / \mathrm{n} 4120 . \mathrm{pdf}$ on the JTC1/SC2/WG2 ad hoc report in http://www.dkuug.dk/jtc $1 / \mathrm{sc} 2 / \mathrm{wg} 2 / \mathrm{docs} / \mathrm{n} 4110 . \mathrm{pdf}$ on the topic in 2011 Helsinki WG2 meeting.

Noted<br>See also comments from China (T1), France (T1), Hungary (T1 and T2), and Romania.<br>See disposition of comment $T 1$ from Hungary.

## China: Positive with comment

## Technical comment

## T1. Old Hungarian:

China request JTC1/SC2 NBs to reach consensuses on all issues of every amendment acceptable solution on Old Hungarian before it becomes a part of IS.

## Noted

See also comments from Canada (T1), France (T1), Hungary, and Romania.
See disposition of comments $T 1$ and $T 2$ from Hungary. It is clear that unless consensus is reached on an acceptable repertoire for Hungarian which can be augmented as typically done for other scripts, it is unlikely that the repertoire will be included in this amendment when published.

## France: Positive with comment

## Technical comment

## T1. Old Hungarian name:

"Old Hungarian" is a denomination that may cause confusion and lack consistency
1/ Possible sources of confusion

- "Old Hungarian" also describes a stage in the history of Hungarian that is essentially attested by texts written in the Latin script
- "Old Hungarian script" was natively used to write Hungarian well into the post-renaissance period in some communities, thus relating to stages of the language by far post-dating Old Hungarian
- "Old Hungarian" is used in print even today in instances that symbolically aim at highlighting some elements of continuity in Hungarian history. Nevertheless the language used in such instances is Modern Hungarian and there should be no confusion on that point.

2/ Lack of consistency
The document provides code points for uppercase and lowercase letters, then rightfully underlines that "The use of uppercase letters is a modern innovation". This document thereby seeks to offer solutions helping modern usage of this script. There is some contradiction to recognizing evolutions of a script in its modern usage and still call it "Old"

Proposed change by France:
Change the denomination of this script to "Hungarian rovas" or simply "Rovas", in the same way that other scripts in 10646 are named with no reference to the language it is/was used for ("ogham, deseret, devanagari...)"

## Propose non acceptance

See also T1 comments from Canada, China, France, Hungary, and Romania.
See disposition of comment T1 from Hungary.

## Germany: Negative

The vote is turned into YES if the requests in comments T1 and T4 are accepted.

## Technical comments

## T1. Naming of the "Intonation marks for Lithuanian dialectology":

The names of the following characters do not describe the characters as shown in the code charts and the original proposal (WG2 N4070 " Second revised proposal to add characters used in Lithuanian dialectology"):

2B4E SHORT NORTH EAST ARROW
2B4F SHORT SOUTH EAST ARROW
2B5A NORTH EAST ARROW WITH HOOKED HEAD
2B5B SOUTH EAST ARROW WITH HOOKED TAIL
2B5C NORTH EAST ARROW WITH HORIZONTAL TAIL
2B5D SOUTH EAST ARROW WITH HORIZONTAL TAIL

The inclination of the arrows is in no case even near to $45^{\circ}$, as the terms "NORTH EAST" and "SOUTH EAST" unambiguously denote, neither in the code chart nor in the original proposal. Thus, the names are plain wrong.

Proposed change by Germany:
Germany repeats its request already expressed in WG2 N4085 to name the character correctly as follows:

U+2B4E SHORT SLANTED NORTH ARROW
U+2B4F SHORT BACKSLANTED SOUTH ARROW
U+2B5A SLANTED NORTH ARROW WITH HOOKED HEAD
U+2B5B BACKSLANTED SOUTH ARROW WITH HOOKED TAIL
U+2B5C SLANTED NORTH ARROW WITH HORIZONTAL TAIL
U+2B5D BACKSLANTED SOUTH ARROW WITH HORIZONTAL TAIL

Germany considers its request accepted also if the term "NORTH EAST" is replaced by "NORTH NORTH EAST" or "ONE OCLOCK", and the term "SOUTH EAST" is replaced by "SOUTH SOUTH EAST" or "FIVE OCLOCK", instead of "SLANTED" resp. "BACKSLANTED".

## Propose acceptance

## T2. Integration of the accepted proposal WG2 N4078 " Revised Proposal to enable the use of Combining Triple Diacritics in Plain Text"

WG2 N4078 provides a way to handle diacritics spanning over three or more characters by using joining parts combined with each of the single base letters. For diacritics below, new characters were accepted; for diacritics above, existing characters are devised. While the appropriate annotations are given for the new characters (summarized for $\mathrm{U}+\mathrm{FE} 2 \mathrm{~B}$ ), they are missing for the existing ones.

Proposed change by Germany:
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Following the wording of the annotation for $\mathrm{U}+\mathrm{FE} 2 \mathrm{~B}$, add the following annotation to $\mathrm{U}+\mathrm{FE} 26$ :
"• Used with combining left and right half ligature above to extend above more than two characters.".

## Propose acceptance in principle

See also comment $T 4$ from Ireland.
It is not exactly true that there is no annotation for the existing ones. However it is done differently, using an annotation preceding the 3 characters (FE24..FE26). The annotation system will be modified to be consistent among those spanning combining marks, possibly including the new ones proposed by Ireland.
Note that this is editorial, not technical.

## T3. Placement of Wingdings characters

Germany has not objected to encode the Wingdings symbols when discussing this issue in Helsinki in principle, but has requested that only such symbols will get into the BMP for which actual use is shown.

Proposed change by Germany:
As a practical solution, Germany requests now that all arrows which show special head shaping or decorative elements will be moved to the SMP into the block "Supplemental Arrows-C, which has enough space. Thus:

Move 2B60...2BAE to 1F880...1F8CE,
in exchange move 1F880...18F89 to 2B60...2BF9 as this series contains keyboard symbols which are in use.

Move 2BD0...2BE7 to 1F8D0...1F8E7.

Also, move 2BBE...2BBF into the "Ornament Symbols" block 1F650...1F67F, to have the "heavy punctuation marks" together.

Any rearrangement within the affected blocks following these movements is accepted.

## Propose partial acceptance

See also comments T1and T10 from Ireland.
There is no benefit anymore at having characters in the BMP versus the SMP. Characters should be grouped instead according to similarities. On that aspect, it is reasonable to group keyboard related symbols together. However, some of the characters in question (1F880..1F889) are considered for removal as already encoded. This comment was consolidated with the request from Ireland and the following was accepted:

- Move 2BA3..2BAA to the 1F8xx block
- Move 2BDO..2BE7 to the lF8xx block

The resulting layout for the 2Bxx block leaves many holes available for additional keyboard related characters. See disposition of comment T1 from Ireland for further details.

## T4. Removing of Wingdings characters which do not comply with the Unicode character/glyph model

As part of the Wingdings addition, the following character series are included:

U+1F670 LIGATURE ET
U+1F671 BOLD LIGATURE ET
U+1F672 SANS-SERIF AMPERSAND
U+1F673 BOLD SANS-SERIF AMPERSAND
U+1F674 BOLD AMPERSAND
U+1F678 BOLD INTERROBANG
U+1F679 SANS SERIF INTERROBANG
U+1F67A BOLD SANS-SERIF INTERROBANG

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Regarding the interrobangs, the original Wingdings proposal WG2 N4115 also shows a "serifed-font-style" interrobang (ID 2093) which is considered to be unified with U+203D INTERROBANG.

This is glyph encoding. Even if it is agreed that Wingding characters are to be included into Unicode without proof of actual use (but only based on availability on a large part of present-day computing equipment), there is no argument that roundtrip encoding between Unicode (ISO/IEC 10646) and the "existing standard" Wingdings is necessary (which would be the only reason to accept glyph encoding). Also, unifying just one glyph (the "serifedfont- style" one) with the existing character is arbitrary.

In fact, all these characters already are perfectly represented in Unicode (by U+0026 AMPERSAND and U+203D INTERROBANG), and U+1F671 is perfectly represented in Unicode when U+1F670 is accepted. The exact glyph is to be selected by the rendering system (font etc.), according to the Unicode character/glyph model (as it has to be done even with the PDAM 1.2 character set, as a "serifed-font-style" interrobang glyph can only be gained by selecting an appropriate font)..

Proposed change by Germany:
Germany requests the removal of the listed characters except U+1F670.

To offer a compromise, Germany considers this comment accepted also if the following is done, based on the fact that the specific appearance of the "sans-serif ampersand" may constitute a character identity rather than a glyph variation, and based on the fact that there already are "heavy" variants of punctuation marks in the Dingbats block:

Only U +1 F678 and $\mathrm{U}+1 \mathrm{~F} 679$ are removed. The other characters are renamed as follows:

U+1F670 SCRIPT LIGATURE ET
U+1F671 HEAVY SCRIPT LIGATURE ET SYMBOL
U+1F672 LIGATURE OPEN ET (or similar)
U+1F673 HEAVY LIGATURE OPEN ET (or similar) SYMBOL
U+1F674 HEAVY AMPERSAND SYMBOL
U+1F67A HEAVY INTERROBANG SYMBOL
following by any rearrangement of the code points (including, but not requested here, moving of 1F670/1F672/1F675 to the Supplemental Punctuation block in the BMP).

## Propose acceptance in principle

See also comments T1and T10 from Ireland.
Accepting the compromise of renaming the controversial characters resolves the issue for all but the 'interrobang' characters. The problems remain for the serif versus sans-serif distinctions which is specific to the Wingdings set and did not exist in Dingbats. The argument for preserving these 4 variants was to maintain a source separation rule for Wingdings which would be destroyed if those 4 interrobang characters are not encoded separately. The compromise proposed by Germany preserves dis-unification for one serif character (Wingdings2-093), one sans-serif character (wingdings2-096) but unifies the other two. It would have been cleaner to dis-unify either the two sans-serifs or the two serifs, but not a mix. It should also be noted that none of the Wingdings symbols shown here enlarged are good representation of the interrobang symbol:

| Glyph ID | Wingdings 2-093 | Wingdings 2-094 | Wingdings 2-095 | Wingdings 2-096 |
| :--- | :--- | :--- | :--- | :--- |
| Proposed <br> UCS | 203D | 1F678 | $1 \mathrm{F679}$ | 1F67A |
| Glyph | r |  |  |  |

Following are two glyph representations of the character 203D INTERROBANG in commonly used fonts in Windows (one serif, the other sans-serifs):


Based on this, we could either encode the four Wingdings interrobang variants separately from the original interrobang punctuation. This would preserve source separation for the Wingdings set. The preferred alternative which is a variant of the compromise from Germany is to propose a new character for 1F678 (instead of 1F67A) and not encode the sans-serifs variants. This is deemed acceptable because perfect round trip mapping between UCS and Wingdings is not required.

This would result in the removal of two characters (1F679 and 1F67A) from the amendment. The new names and locations are as follows (after taking into account comment T7 from Ireland):
U+1F670 SCRIPT LIGATURE ET ORNAMENT
U+1F671 HEAVY SCRIPT LIGATURE ET ORNAMENT
U+1F672 LIGATURE OPEN ET ORNAMENT
U+1F673 HEAVY LIGATURE OPEN ET ORNAMENT
U+1F674 HEAVY AMPERSAND ORNAMENT
U+1F679 HEAVY INTERROBANG ORNAMENT
Delta count (characters added from Pdam1.2: -2)

## T5. Completing the set of "Sans-Serif heavy double quotation mark ornaments"

As part of the Wingdings addition, the following character series is included:

U+1F676 SANS-SERIF HEAVY DOUBLE TURNED COMMA QUOTATION MARK ORNAMENT U+1F677 SANS-SERIF HEAVY DOUBLE COMMA QUOTATION MARK ORNAMENT

This series is only usable for American typography and lacks the opening quotation mark which is needed for German typography done in the same style.

Proposed change by Germany:
Germany requests the addition of the character completing this series:

## U+1F67x SANS-SERIF LOW HEAVY DOUBLE COMMA QUOTATION MARK ORNAMENT

(a formal proposal will be submitted in time).

For formal reasons only, Germany notes that this comment is accepted also if U+1F676/1F677 are withdrawn from PDAM 1.2 for any reason.

## Propose acceptance in principle

This is also part of the addition request in the comment 77 from Ireland. Character name is slightly modified as follows with proposed location at 1F678:

U+1F678 SANS-SERIF HEAVY LOW DOUBLE COMMA QUOTATION MARK ORNAMENT

Delta count (characters added from Pdam1.2: $-2+1=-1$ )

## T6. Request to add the characters proposed in WG2 N4068 to PDAM1.3

WG2 N4068 was submitted to SC2/WG2 as a liaison proposal by SC35, requesting the encoding of missing Latin small capital and modifier letters. This proposal was on the agenda of the JTC1/SC2/WG2 June 6-10, 2011, in Helsinki. In fact, at that meeting, it was not discussed due to lack of time.

Germany already had requested the addition in WG2 N4085, section 3. As this German request persists, the text of that section is repeated here, with added text shown in italics.

The German NB welcomes this proposal, especially (besides the reasons listed in the proposal) as it will save the time to discuss and decide any single character whenever new evidence is found.

In discussions on the Unicode mailing list and forum, concerns were issued that having the sets of modifier letters derived from the basic Latin letters (A...Z) complete will invite users to "misuse" them, by using them to obtain a different style instead denoting of a different semantic (like using the small capital letters to get smallcaps). However, this already can be done with the current almost complete sets, and has to be taken into account by search engines etc. anyway (and imposes no real problem as all these characters have compatibility equivalences to the respective base letters). It also should be noted that quasistandards like the Adobe Glyph List 2.0 already have encoded such complete sets (using the PUA), thus indicating style by character selection rather by markup is already an existing practice. (Such practice may be considered "bad", but standards are there for serving their users rather than for educating them.)

In addition, concerns were issued that encoding the modifier forms of the basic Latin letters (A... Z ) will encourage proposals for more letters. The addition of the complete set of basic Latin squared letters A...Z in Unicode 6.0 (like the encircled letters long ago) has proven that such is not an automatic consequence.

Moreover, the German NB is concerned about the fact that SC35/WG2, which identifies characters in keyboard standards by Unicode values only recently, has partially to deviate from this in a recent standard draft (ISO/IEC 9995-9 CD), by the plain fact that specifying a method to enter raised, lowered, and small capital forms of the basic Latin letters A...Z/a...z (as part of language orthographies, not as style) results in a mapping to a character set which cannot completely enumerated by Unicode. Even if the PUA positions used in that draft "are only for internal reference", there is the danger that they will in fact be used by referencing to an international standard, thus weakening the position of Unicode for a larger audience. This can be avoided when $S C 2 / W G 2$ is prepared to cooperate with SC25/WG2 by accepting the characters proposed in N4068 in time.

Thus, the German NB requests the addition of the characters proposed in N4068 now to PDAM 1.3 of ISO/IEC 10646.

Technical note: The code range of the block "Phonetic Extensions Supplement B" referred to in N4068 is now part of the block "Latin Extended-E". However, the proposed code points for the characters there are still appropriate.

## Propose non acceptance

Because this has been controversial, it does not seem appropriate to add it to the ballot content at this stage but should be discussed and negotiated separately from this disposition at the next WG2 meeting.

## Hungary: Negative

## Technical comments

## T1. Clause 31, Annex A.1: Old Hungarian name:

The term Old Hungarian is incorrect. The correct term is "Szekely-Hungarian Rovas". The term "Old Hungarian" is used for a completely different script, namely the medieval version of the Hungarian Latin-based orthography. See ISO/IEC JTC1/Sc2/WG2 N4120, Section 2.1 for the detailed reasoning
(http://std.dkuug.dk/JTC1/sc2/wg2/docs/n4120.pdf)
Proposed change by Hungary:
Change the term "Old Hungarian" to "Szekely-Hungarian Rovas"

## Propose non acceptance

See also comments T1 from Canada, China, France, Hungary, and Romania.
The naming of that block has proven controversial, and from further discussion among experts it does not seem that consensus can be reached without a face to face meeting with all interested experts, including representative for the Hungary MB.
The content of the amendment will be left unchanged, still using 'Old Hungarian'. However an Editor's note will be added to the text mentioning the following:

The terminology 'Old Hungarian' is only tentative. Other terms for naming the repertoire and the characters within have been suggested:

- Szekely-Hungarian Rovas
- Rovas
- Rovasiras
- Hungarian Runic

Interested experts are invited to come to a consensus either through the ballot process or at the disposition of comment taking place at the next WG2 meeting, February 2012,Mountain View, CA, USA. In absence of consensus, the encoding of this repertoire into ISO/IEC 10646 may be postponed.

## T2. Annex G: Old Hungarian character set:

The proposed character set for the Szekely-Hungarian Rovas (with the incorrect name "Old Hungarian") is incorrect. Reasons:

1. The character repertoire is based on the outdated results of the palaeography in the early 20th century and some unscientific and popular web sites, on which information is unreliable and incorrect in many cases. Oppositely, the correct character repertoire must contain the contemporary and the historical Szekely-Hungarian Rovas characters, which are listed in the proposal of the Hungarian Standard Body; see ISO/IEC JTC1/SC2/WG2 N4007, Section 3.1, http://std.dkuug.dk/JTC1/sc2/wg2/docs/n4007.pdf Proposed change by Hungary:

The "Old Hungarian" block is unacceptable and unimprovable; therefore it must be completely changed to the character repertoire in the proposal of the Hungarian Standard Body, see ISO/IEC JTC1/SC2/WG2 N4007, Section 3.1, http://std.dkuug.dk/JTC1/sc2/wg2/docs/n4007.pdf

## Propose non acceptance

Saying that the current block is unacceptable and 'unimprovable'[sic] is an overstatement. Comparing the repertoires between the ballot text and the document $N 4007$ shows that the ballot repertoire is a clean subset with the exception of 10C9D OLD HUNGARIAN CAPITAL LETTER NIKOLSBURG OE and 10C9E OLD HUNGARIAN SMALL LETTER NIKOLSBURG OE. It would be more constructive to provide rationale for the 24 characters or so which are part of N 4007 which were not added in the amendment text. This is the regular process
and could still be pursued by the Hungary MB. Furthermore, until the amendment is finalized the repertoire can be augmented and re-ordered.
2. The term "Old Hungarian" is already used by Hungarian linguists for denoting the medieval version of the Hungarian Latin-based script, which is wildly different to the Szekely-Hungarian Rovas script (for instance, see Ch. 3 of N4120 (2011-07-05)). Therefore, using the term "Old Hungarian" for the Szekely-Hungarian Rovas is misleading. More details about the Old Hungarian script: http://wiki.rovas.info/index.php/Old_Hungarian_script
3. The Szekely-Hungarian Rovas script has been developed ca. the end 8hc., in the Ancient Hungarian linguistic period (1st millennium BC - 896 AD ), before the Old Hungarian linguistic period (896-1526). Consequently, using the name "Old Hungarian script" for an earlier script would be misleading.
4. Using the expression "Old Hungarian" for denoting the Szekely-Hungarian Rovas has no tradition either in Hungarian culture or in the script history.

## Propose noted

See disposition of comment T1.

Moreover, there are several arguments for the term "Szekely-Hungarian Rovas":
5. The variety of traditional names for this script usually contains adjectives; the most frequent ones being "Szekely" and "Hungarian". Therefore, the widely accepted name "Szekely-Hungarian Rovas" correctly reflects the traditional naming. The Hungarian ethnic group Szekelys played a key role in preserving the tradition of Szekely-Hungarian Rovas and regard this script as key part of their identity.
6. Throughout history, the term Rovas has been widely used, moreover having found common use in the Hungarian language today. Although the term "Rovas" is of Hungarian-origin, it has been widely used in numerous languages; see in the Ch. 4 of N4120 (2011-07-05).
7. The Rovas using community organized the "Living Rovas" Conference in 2008, in Hungary, which was the largest ever Rovas user/researcher meeting. At this conference, after a detailed discussion, the attendance made the resolution that the English name of the script is "Szekely-Hungarian Rovas" - being the correct translation of the appropriate Hungarian term "székely-magyar rovás".
8. The term "Rovas" is a category name; three related scripts belong to this script family, namely: Szekely-Hungarian Rovas, Carpathian Basin Rovas (see N4144, 2011-10-12), and Khazarian Rovas (see N4145, 2011-10-12). The close relation of Carpathian Basin Rovas to Szekely-Hungarian Rovas has been shown by linguist and Turkologist Gyula Németh in 1932. Moreover, according to the archaeologist-historian István Erdélyi, the Khazarian Rovas is related to Carpathian Basin Rovas and Szekely-Hungarian Rovas. More details about the Rovas script family:
http://wiki.rovas.info/index.php/Rovas_Script_Family

## Propose Noted

See disposition of comment T1.
9. The research into the field of the Rovas scripts are mainly published in Hungarian and only little information is available in English. Consequently, the English databases are outdated in most cases. Especially, the results of the last 2-3 decades are missing from western literature as only a small portion of the Hungarian publications on this topic have been translated. The contributions of the Hungarian NB use and refer to the results of international and the Hungarian scholars.
10. The proposed character names are incorrect. These are based on few medieval relics. However, the characters of this script have well accepted names both in scientific and popular literature. The main reason for encoding the Szekely-Hungarian Rovas script is for present-day use, therefore, the contemporary character names of the letters has to be used in the standard. The archaic character names used in the N4110 resolution shows an outdated state of the Rovas-related paleography of the early 20th century. During that time, a Szekely-Hungarian Rovas relic, the so-called Nikolsburg Alphabet was the only significant Rovas relic. Based on this, only a static view of the Szekely-Hungarian Rovas scripts existed in the early 20th century. However, after exploring several archaeological finds in the 20th-21st centuries, several earlier Rovas relics where found, making possible further advances of Rovas script history.

## Propose non acceptance

It should be noted that over $50 \%$ of the letter names are identical between N4107 and the amendment text under ballot. Of the rest, the difference is typically an additional ' $E$ ' on the ballot text, like 'LETTER EF' versus 'LETTER F'. The editor would appreciate constructive and detailed comments from the Hungary MB showing why the ' $E$ ' prefix is incorrect.
The document http://std.dkuug.dk/jtc1/sc2/wg2/docs/n4110.pdf showing the result of the Ad-hoc committee in Helsinki WG2 meeting provides more details on the current name rationale.
11. Another essential condition to be considered is the vital present-day use of the Szekely-Hungarian Rovas orthography. The user base of the Szekely-Hungarian Rovas is represented in every country in Europe where Hungarian populations exist and in the global Hungarian community as well. Currently, in every part of the Hungarian society including the state administration, the number of Szekely-Hungarian Rovas users is dynamically increasing. This strong and conscious user support is clearly manifested, as in the Hungarian NB professional and civil Rovas stakeholders officially support the three Rovas proposals - the Szekely-Hungarian Rovas (N4007), the Carpathian Basin Rovas (N4144), and the Khazarian Rovas (N4145).

## Noted

## T3. Clause 31, Annex A.1: Old Hungarian name:

The term Old Hungarian ... [full duplicate of T1, see disposition of comment T1]

## T4. Annex G: Old Hungarian character set:

The proposed character set $\ldots$. [partial duplicate of T2, see disposition of comment T2]

## Ireland: Negative

Ireland disapproves the draft with the technical and editorial comments given below.
Acceptance of these comments and appropriate changes to the text will change our vote to approval. In the attached charts, characters proposed to be added to the PDAM are coloured in yellow, and characters whose names are proposed to be changed are coloured in blue.
Characters which have been proposed to be moved have "• was xxxx" in the names list indicating their code position in PDAM 1.2.
(Please refer to SC2 N4207 for charts, these are not duplicated in the dispositions of comments)

## Technical comments

## T1. Page 52, Row 2B0: Miscellaneous Symbols and Arrows.

a) Ireland recommends the removal of the following characters from this table (to be moved elsewhere):

```
2BA3, 2BA4, 2BA5, 2BA6, 2BA7, 2BA8, 2BA9, 2BAA
2BBE, 2BBF
2BC3, 2BC4, 2BCB, 2BCD
2BD0, 2BD1, 2BD2, 2BD3, 2BD4, 2BD5, 2BD6, 2BD7, 2BD8, 2BD9, 2BDA, 2BDB
2BE0, 2BE1, 2BE2, 2BE3, 2BE4, 2BE5, 2BE6, 2BE7, 2BE9, 2BEA, 2BEB, 2BEC, 2BED, 2BEE, 2BEF,
2BF0, 2BF1, 2BF2, 2BF3
```


## Propose partial acceptance

See also comment T3 from Germany.
All characters are moved except for 2BC3,2BC4,2BCB, 2BC, and 2BE9..2BF2. This is to keep some room for keyboard related characters. This preserves the main point of this comment which was to remove most arrows that were not simple triangle-headed arrows.
b) Ireland recommends moving the following characters to this table:

1F800, 1F801, 1F802, 1F803, 1F804, 1F805, 1F806, 1F807, 1F808, 1F809, 1F80A, 1F80B, 1F80C, 1F80D, 1F80E, 1F80F
1F810, 1F811, 1F812, 1F813, 1F814, 1F815, 1F818, 1F819, 1F81A, 1F81B, 1F81C, 1F81D, 1F81E, 1F81F
1F820, 1F821, 1F822, 1F823, 1F824, 1F825, 1F826, 1F827
1F834, 1F835
1F878, 1F879, 1F87A, 1F87B, 1F87C, 1F87D
1F880, 1F881, 1F882, 1F883, 1F884, 1F885, 1F886, 1F887, 1F888, 1F889

## Propose partial acceptance

See also comment T3 from Germany.
Only two characters ( $1 F 878$ and $1 F 879$ ) are moved to the 2Bxx table. Another set ( $1 F 880 . .1 F 889$ ) is not moved because they will be removed from the repertoire from being unified with already encoded character. Other arrow related characters are maintained in the 1F8xx block. This is in accordance with German comment.
c) Ireland recommends adding the following new characters to this table:

```
2B74 LEFT RIGHT TRIANGLE-HEADED ARROW TO BAR
2B75 UP DOWN TRIANGLE-HEADED ARROW TO BAR
2B77 NORTH EAST TRIANGLE-HEADED ARROW TO BAR
2B79 SOUTH WEST TRIANGLE-HEADED ARROW TO BAR
2B7A LEFTWARDS TRIANGLE-HEADED ARROW WITH DOUBLE HORIZONTAL STROKE
2B7C RIGHTWARDS TRIANGLE-HEADED ARROW WITH DOUBLE HORIZONTAL STROKE
2B81 UPWARDS TRIANGLE-HEADED ARROW LEFTWARDS DOWNWARDS TRIANGLE-HEADED ARROW
2B82 RIGHTWARDS TRIANGLE-HEADED ARROW OVER LEFTWARDS TRIANGLE-HEADED ARROW
2BD0 UPWARDS TRIANGLE-HEADED ARROW WITH HEAVY SHAFT
2BD1 DOWNWARDS TRIANGLE-HEADED ARROW WITH HEAVY SHAFT
```


## Propose partial acceptance

Refer to SC2 N4207 for charts.
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Code points are as suggested except for 2BDO and 2BD1 which are encoded in the 1F8xx block as 1F835 and 1 F837.
Nevertheless, Ireland is invited to submit a separate document showing rationale for these new characters. Delta count (characters added from Pdam1.2: $-1+10=9$ )
d) Ireland recommends ordering the characters in the table as shown below.

## Propose acceptance in principle

Refer to SC2 N4207 for charts.
Within characters moved or added, the order of arrows suggested by Ireland is used.

## T2. Page 65, Row A72: Latin Extended-A. With reference to ISO/IEC JTC1/SC2/WG2

N4030R "Proposal for the addition of six Latin characters to the UCS", Ireland requests that the following characters be added to PDAM 1.2:

A796 LATIN CAPITAL LETTER B WITH FLOURISH
A797 LATIN SMALL LETTER B WITH FLOURISH
A7AB LATIN CAPITAL LETTER REVERSED OPEN E
A7AC LATIN CAPITAL LETTER SCRIPT G
A7F6 LATIN CAPITAL LETTER SIDEWAYS I
A7F7 LATIN SMALL LETTER SIDEWAYS I

## Propose non acceptance

Refer to SC2 N4207 for charts.
Although the block where these characters have content under ballot the characters above are not related to the balloted characters. These should be discussed and negotiated separately from this disposition.

## T3. Page 65, Row A72: Latin Extended-A: A79F LATIN LETTER MIDDLE DOT

Ireland reiterates its strong support for the encoding of A79F LATIN LETTER MIDDLE DOT in this table.

## Noted

$\overline{\text { See also comments Tlfrom UK and US. }}$

## T4. Page 71, Row FE2: Combining Half Marks.

With reference to ISO/IEC JTC1/SC2/WG2 N4130R "Proposal for encoding the Caucasian Albanian script in the SMP of the UCS",
a) Ireland requests that the character at FE2B COMBINING CONJOINING MACRON BELOW be moved to FE2D.

## Propose acceptance

b) Ireland also requests that the following characters be added to PDAM 1.2:

```
FE2B COMBINING MACRON LEFT HALF BELOW
FE2C COMBINING MACRON RIGHT HALF BELOW
```


## Propose acceptance

Refer to SC2 N4207 for charts.
See comment T2 from Germany
These additions are accepted to facilitate disposition of comments coming from Germany and Ireland and to harmonize the set. Nevertheless these additions should also be discussed and negotiated separately from this disposition.
Delta count (characters added from Pdam1.2: 9+2=11)
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## T5. Page 98, Row 11AC: Pau Cin Hau.

Ireland requests that the inherent vowel - A be added to the names of the characters from 11AC0 through 11AD4. The assertions given by the author of N4017 for this were not sufficient to omit a vowel from the character names, as is the normal practice for UCS names for scripts of this region. In fact, the use of an -a does not imply that there is an inherent vowel in the alphabet (anymore than -e implies that there is an inherent vowel in Old Italic. Ireland strongly prefers to use the transliteration names as attested in Figures 2 and 8 of N4017. We do not request a change to the names of the final consonants, as the proposed names are congruent with other names of similar characters in the UCS.

## Propose acceptance in principle

See also comment $T 2$ from US.
The two name changes requested by the US will be affected by this comment.

## T6. Page 113, Row 1F30: Miscellaneous Symbols and Pictographs.

a) Ireland recommends adding the following new characters to this table:

```
1F395 BOUQUET OF FLOWERS
1F397 BEAMED DESCENDING MUSICAL NOTES
1F569 RIGHT SPEAKER WITH ONE SOUND WAVE
1F56A RIGHT SPEAKER WITH THREE SOUND WAVES
1F596 REVERSED VICTORY HAND
1F597 REVERSED HAND WITH MIDDLE FINGER EXTENDED
1F598 RAISED HAND WITH PART BETWEEN MIDDLE AND RING FINGERS
1F5DF DECREASE FONT SIZE SYMBOL
```


## Propose acceptance

See also comment T6 from US.
The characterlF395 BOUQUET OF FLOWERS is also proposed by the US and is part of the original Wingdings set. Nevertheless, for the character proposed at 1F597 further discussion may be in order. In all cases, Ireland is invited to submit a separate document showing rationale for these new characters. Code points have been moved to take into consideration other comments, resulting in the following code positions:
1F395 BOUQUET OF FLOWERS
1F39D BEAMED DESCENDING MUSICAL NOTES
1F581 RIGHT SPEAKER WITH ONE SOUND WAVE
1F582 RIGHT SPEAKER WITH THREE SOUND WAVES
1F596 REVERSED VICTORY HAND
1 F597 REVERSED HAND WITH MIDDLE FINGER EXTENDED
1F598 RAISED HAND WITH PART BETWEEN MIDDLE AND RING FINGERS
1F5E7 DECREASE FONT SIZE SYMBOL
Delta count (characters added from Pdam1.2: $11+8=19$ )
b) Ireland recommends changing the 1F581 BLACK ENVELOPE WITH WHITE LIGHTNING to ENVELOPE WITH LIGHTNING. There is no inherent necessity for there to be "blackness" in the envelope or "whiteness" in the lightning. The essential concept of this symbol is "electronic mail". The essential glyphs here are those of an envelope (which is white) and of 26A1 HIGH VOLTAGE SIGN (which is black).

## Propose acceptance

Note that the character is located at 1F586 in the charts included with the comment from Ireland and was located at 1F585 in the ballot document and is now located at 1F587.
c) Ireland recommends using a reversed 270D WRITING HAND glyph for 1F58A LEFT WRITING HAND.

## Propose acceptance

Note that the character is located at 1F590 in the charts included with the comment from Ireland and was located at 1F58A in the ballot document and is now located at 1F590.
Page 13
d) Ireland recommends basing the glyph for 1F5DB BLACK FOLDER on the glyph for 1F5DA FOLDER.

## Propose acceptance

Note that the character is located at 1F5C8 in the charts included with the comment from Ireland and was located at 1F5DB in the ballot document and is now located at 1F5C8.
e) Ireland recommends ordering the characters in the table as shown below.

## Propose acceptance in principle

Final ordering based on other comment dispositions. Because of the large number of additions requested by other member bodies in the same block, an extensive reordering was performed using the general principle suggested by Ireland.

## T7. Page 128, Row 1F65: Ornament Symbols.

a) Ireland requests the change of the block name to "Ornamental Dingbats"; these characters are dingbats, not symbols for things.

## Propose acceptance

b) Ireland requests that 2 BBE and 2 BBF be moved into this table.

## Propose acceptance

c) Ireland requests that the word POINTING be added to the names of 1F650, 1F651, 1F652, 1F653, 1F654, 1F655, 1F656, 1F657.

## Propose acceptance

The word 'POINTING' is added in front of 'LEAF' as in 1F650 NORTH WEST POINTING LEAF.
d) Ireland requests that the word ORNAMENT be added to the names of 1F670, 1F671, 1F672, 1F673, 1F674, 1F675. The word "ornaments" should also be added to the section headings.

## Propose acceptance

See also comment T4 from Germany.
The word 'ORNAMENT' is added at the end of all these names as in 1 F670 LIGATURE ET ORNAMENT. Note that some names were changed following the disposition of the comment 74 from Germany.
e) Ireland recommends adding the following new character to this table:

1F678 SANS-SERIF HEAVY LOW DOUBLE COMMA QUOTATION MARK ORNAMENT

## Propose acceptance

See comment T5 from Germany.
Delta count (characters added from Pdam1.2: 19), no change because already included earlier
f) Ireland recommends ordering the characters in the table as shown below.

## Propose acceptance in principle

From the original ballot table, the only changes are the reordering of the rocket ornament and the removal of two interrobang symbols with the following characters moved up by two position.

## T8. Page 130, Row 1F68: Transport and Map Symbols.

a) Ireland requests that 2BCB and 1F6E6 be moved into this table.

## Propose non acceptance

The Postscript name of the original source for $2 B C B$ is 'query' which does not relate it to a transport and map symbols set; therefore it is not clear that the character should be moved. The code point 1F6E6 is already part of that table but could be moved within the table as suggested by Ireland. Note however that the US comment T6 requests many additions in the same block. Therefore similarly to a similar request for the Miscellaneous Symbols and Pictographs block, it seems wise to wait for the other additions to be processed before reordering the set.
b) Ireland recommends ordering the characters in the table as shown below.

## Propose non acceptance

See disposition of comment T8 a) just above.

## T9. Page 132, Row 1F78: Geometric Shapes Extended.

a) Ireland recommends ordering the characters in the table as shown below.

## Propose acceptance

Note that the character shown at 1F7CE in the Irish chart is incorrect. It should be the character as shown in IF7ED in the ballot document.

T10. Page 136, Row 1F80: Supplemental Arrows-C.
Ireland recommends the removal of the following characters from this table (to be moved elsewhere):

1F800, 1F801, 1F802, 1F803, 1F804, 1F805, 1F806, 1F807, 1F808, 1F809, 1F80A, 1F80B, 1F80C, 1F80D, 1F80E, 1F80F
$1 \mathrm{~F} 810,1 \mathrm{~F} 811,1 \mathrm{~F} 812$, 1F813, 1F814, 1F815, 1F818, 1F819, 1F81A, 1F81B, 1F81C, 1F81D, 1F81E, 1F81F
1F820, 1F821, 1F822, 1F823, 1F824, 1F825, 1F826, 1F827
1F834, 1F835
1F878, 1F879, 1F87A, 1F87B, 1F87C, 1F87D
1F880, 1F881, 1F882, 1F883, 1F884, 1F885, 1F886, 1F887, 1F888, 1F889

## Propose partial acceptance

See also comment T3 from Germany.
Only 1F878 and 1F879 are moved out of this block.
b) Ireland recommends moving the following characters to this table:

2BA3, 2BA4, 2BA5, 2BA6, 2BA7, 2BA8, 2BA9, 2BAA
2BD0, 2BD1, 2BD2, 2BD3, 2BD4, 2BD5, 2BD6, 2BD7, 2BD8, 2BD9, 2BDA, 2BDB
2BE0, 2BE1, 2BE2, 2BE3, 2BE4, 2BE5, 2BE6, 2BE7

## Propose acceptance

See also comment T3 from Germany.
c) Ireland recommends adding the following new characters to this table:

| 1F801 | UPWARDS TRIANGLE-HEADED ARROW WITH NARROW SHAFT |
| :--- | :--- |
| 1F803 | DOWNWARDS TRIANGLE-HEADED ARROW WITH NARROW SHAFT |
| 1F805 | UPWARDS TRIANGLE-HEADED ARROW WITH MEDIUM SHAFT |
| 1F807 | DOWNWARDS TRIANGLE-HEADED ARROW WITH MEDIUM SHAFT |
| 1F809 | UPWARDS TRIANGLE-HEADED ARROW WITH BOLD SHAFT |
| 1F80B | DOWNWARDS TRIANGLE-HEADED ARROW WITH BOLD SHAFT |
| 1F80D | UPWARDS TRIANGLE-HEADED ARROW WITH VERY HEAVY SHAFT |
| 1F80F | DOWNWARDS TRIANGLE-HEADED ARROW WITH VERY HEAVY SHAFT |
| 1F811 | UPWARDS FINGER-POST ARROW |

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## Propose acceptance in principle

Some of these locations are changed based on results from other comments dispositions:
1F829 UPWARDS TRIANGLE-HEADED ARROW WITH NARROW SHAFT
1F82B DOWNWARDS TRIANGLE-HEADED ARROW WITH NARROW SHAFT
1F82D UPWARDS TRIANGLE-HEADED ARROW WITH MEDIUM SHAFT
1F82F DOWNWARDS TRIANGLE-HEADED ARROW WITH MEDIUM SHAFT
1 F831 UPWARDS TRIANGLE-HEADED ARROW WITH BOLD SHAFT
1F833 DOWNWARDS TRIANGLE-HEADED ARROW WITH BOLD SHAFT
1F839 UPWARDS TRIANGLE-HEADED ARROW WITH VERY HEAVY SHAFT
1F83B DOWNWARDS TRIANGLE-HEADED ARROW WITH VERY HEAVY SHAFT
1F83D UPWARDS FINGER-POST ARROW
1F83F DOWNWARDS FINGER-POST ARROW
Delta count (characters added from Pdam1.2: 19+10=29)
d) Ireland recommends ordering the characters in the table as shown below.

## Propose acceptance in principle

The order within each arrow group has been changed according to the Irish comment. However, some of these locations have been modified, based on results from other comments dispositions.

## Editorial comments

## E1. Page 21, Row 090: Devanagari.

Ireland requests to know why the dotted circle has been removed from the glyph 0903 DEVANAGARI SIGN VISARGA.

## Accepted

This was a chart production issue which has been fixed since then.

## E2. Page 30, Row ODO: Malayalam.

Ireland recommends that the missing dotted circles for 0D44, 0D4E, and 0D62 be restored.

## Accepted in principle

This was a chart production issue which has been fixed since then. Note that the glyph for 0D4E has been modified to include a dotted rectangular frame and no dotted circle based on separate feedback.

## E3. Page 47, Row 230: Miscellaneous Technical.

Ireland requests that the annotations for $23 \mathrm{~F} 4,23 \mathrm{~F} 5,23 \mathrm{~F} 6$, and 23 F 7 be changed to simple cross-references to $25 \mathrm{C} 0,25 \mathrm{~B} 6,25 \mathrm{~B} 2$, and 25 BC respectively. The choice of isosceles right triangle and equilateral triangle for these audio and video navigation functions is surely a matter of choice of the implementor.

We request therefore that reciprocal annotations be placed in the Geometric Shapes block.

## Propose non acceptance

The new proposed characters are grouped in a set called 'User interface symbols'. The characters located in the Geometric shapes have no such connotation. The addition of the new UI symbols partially recognized that the characters located in the geometric symbols were not as well suited for UI purpose.

## E4. Page 47, Row 230: Miscellaneous Technical.

Ireland suggests that a cross reference to 2016 DOUBLE VERTICAL LINE be placed at 23F8, and vice-versa.

## Accepted

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## E5. Page 48, Row 270: Dingbats.

Ireland suggests that the chart glyph for 2700 BLACK SAFETY SCISSORS be modified to look more "safety-like" and somewhat less like the glyph for 2702.

## Accepted in principle

Pending an updated font from Ireland

## E6. Page 52, Row 2B0: Miscellaneous Symbols and Arrows.

Ireland recommends the correction of the misspelling "overal" to "overall" for 2B4F.

## Accepted

Other accepted name changes:

- Misspelling correction for 2B87 DOWNWARDS TRIANGLE-HEADED PAIRED ARROWS,
- Replacement of ‘CENTERED’ by ‘CENTRED’(6 occurrences),
- IF39D MUSICAL PERFORMANCE becomes IF39C BEAMED ASCENDING MUSICAL NOTES
- IF3F6 CROSSED TOOLS becomes 1F5FO HAMMER AND WRENCH
- 2BCD OVAL SHAPE WITH SHADOW becomes 2BD LEFT SHADOWED BLACK OVAL
- IF5DD CANCELLATION-X becomes IF5E5 CANCELLATION X
- IF5DE FONT SIZE SIGN becomes 1F5E6 INCREASE FONT SIZE SYMBOL


## Romania: Negative

## Technical comment

## T1. Old Hungarian name:

The block "Old Hungarian" is not adequate for encoding as such.
Proposed change by Romania:
Discussions with the specialists in the TC


#### Abstract

Noted This is really not actionable from a ballot disposition of comments point of view. Discussions have taken place several times, including experts from Hungary at various WG2 meetings. The current repertoire was created following discussion an ad-hoc committee in Helsinki taking into consideration various inputs, including Hungary MB.


## United Kingdom: Positive with comments

## Technical comment:

## T.1. Clause 31 Latin Extended-D

Once again we reaffirm our support for the encoding of A78F LATIN LETTER MIDDLE DOT (see also the UK ballot comments for ISO/IEC 10646:2003 FPDAM8, SC2 N4123). This character cannot be suitably represented by any existing character, such as U+00B7 MIDDLE DOT (a punctuation mark with the wrong character properties) or U+02D1 MODIFIER LETTER HALF TRIANGULAR COLON (wrong glyph shape and wrong semantics), and no convincing arguments have been advanced for not encoding it. As there is a pressing need to use it for representing Tangut phonetic data, we would strongly object to any further delay in the encoding of this character.

## Noted

## USA: Negative

## Technical comments:

## T.1. Latin Extended-D

Justification for the request to remove this character is contained in N3678 (L2/09-278). A viable alternative to encoding a separate letter middle dot, for the purposes cited by the original proposal, would be to use the already encoded modifier letter, U+02D1 MODIFIER LETTER HALF TRIANGULAR COLON.

Proposed change by US:
The U.S. requests the removal of U+A78F LATIN LETTER MIDDLE DOT. We reiterate that this character is unnecessary and is a damaging duplication for the standard and should be removed from the amendment.

## Propose not acceptance

See also comment T1 from UK.
The character can remain in the proposed amendment with the understanding that it may still be removed before the amendment enters the enquiry phase.

## T.2. Pau Cin hau

The revised names for 11AC5 PAU CIN HAU LETTER Y and 11ACA PAU CIN HAU LETTER X (to "PAU CIN HAU LETTER Z" and "PAU CIN HAU LETTER KH") better reflect the modern phonology and Latin orthography for the Tedim language, which uses this script. The new names for glottal-stop marks are better descriptors of the characters properties and usage. The new name for 11AF1 PAU CIN HAU MID - LEVEL TONE LONG FINAL is a correction.

Proposed change by US:
The U.S. requests the following name changes:
CODE POINT CURRENT NAME NEW NAME

| 11AC5 | PAU CIN HAU LETTER Y | PAU CIN HAU LETTER Z |
| :--- | :--- | :--- |
| 11ACA | PAU CIN HAU LETTER X | PAU CIN HAU LETTER KH |
| 11AE7 | PAU CIN HAU GLOTTAL STOP VARIANT | PAU CIN HAU SANDHI GLOTTAL STOP |
| 11AEA | PAU CIN HAU GLOTTAL STOP VARIANT FINALPAU CIN HAU SANDHI GLOTTAL STOP FINAL |  |
| 11AF0 | PAU CIN HAU GLOTTAL STOP OTHER | PAU CIN HAU GLOTTAL STOP VARIANT |
| 11AF1 | PAU CIN HAU MID- LEVEL TONE LONG | PAU CIN HAU MID- LEVEL TONE LONG FINAL |

## Propose acceptance in principle

See also comment $T 5$ from Ireland.
The names for 11AC5 and 11ACA are changed to PAU CIN HAU LETTER ZA and PAU CIN HAU LETTER KHA respectively.

## T.3. Old Italic

The proposal has demonstrated that Rhetic can amply be covered by the Old Italic script.

Proposed change by US:
The U.S. requests the addition of U+1032F OLD ITALIC LETTER TTE, as proposed in N4046 (L2/11-146).

## Propose non acceptance

There is controversy about this topic based on discussion at the last WG2 meeting, and the US is invited to engage in further discussion with interested experts and to provide new evidences.

## T.4. Miscellaneous Symbols and Pictographs

An error appears in the names list.
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Proposed change by US:
The character U+1F545 SYMBOL FOR CHAPTER MARKS contains an error in the name, and should be corrected to: SYMBOL FOR MARKS CHAPTER.

## Accepted

## T.5. Combining Half Marks

Two errors appear in the names list.

Proposed change by US:
Two character names are in error and need have "DOUBLE" removed from their names:
(Current names)
U+FE29 COMBINING DOUBLE TILDE LEFT HALF BELOW
U+FE2A COMBINING DOUBLE TILDE RIGHT HALF BELOW
(Corrected names)
U+FE29 COMBINING TILDE LEFT HALF BELOW
U+FE2A COMBINING TILDE RIGHT HALF BELOW.

## Accepted

## T.6. (various blocks containing Webdings and Wingdings)

The U.S. requests the addition of Webdings characters and modifications to the set of Wingdings characters currently in the PDAM 1.2 (SC2 N4201), as described in N4143 (L2/11-344).

## Propose acceptance in principle

The document $N 4143$ asks for reunification of 10 characters (Wingdings-239 to 248, corresponding to the white arrows) and the addition of 113 Webdings characters.
The reunification of the 10 white arrows is associated with a request to use the glyphs from the Wingdings set to represent these 10 characters in the UCS. The 10 characters in question are consistent among themselves and are also more compatible in design with keyboard symbols which are typically associated with these symbols.

## More context on the white arrows

In October 2010 in Pulsan, WG2 resolved to change the glyphs for 5 of these white arrows to make them much thicker in a style that was closer to the symbols found in keyboard (along with 9 other keyboard related symbols in the same block). This was incorporated in the FCD of $106463^{\text {rd }}$ edition.
In June 2011 in Helsinki, per accepting comment E. 2 from US, these glyph changes were undone, partially on the issue that the change was inconsistent with the rest of the white arrow set in the 2B00..2B04 ranges. And we also knew by then that the Wingding set was bringing some new element into the discussion.
The original rationale as expressed in Pulsan was that white arrow set in the 2190-21FF block was too 'skinny' to represent appropriately keyboard symbols. But the 'fix' as done in the FCD went too far in the fattening and created a sync issue with other white arrows. In that aspect the Wingdings white arrows are a much better compromise.
Checking on how some commercial fonts implemented these characters (mostly Japanese and symbol oriented ones) shows that they vary widely, not implementing the current 'skinny' type but mostly varying on fat shapes. The basic 4 white arrows have been in 10646/Unicode since version 2.0 of Unicode and SO/IEC10646-1:1993 (likely) and probably came from SJIS mapping.

This means that the argument for preserving current shapes based on implementations is not that strong. The Wingdings shapes are much closer to what is currently implemented and they are also closer to what would be expected for the representation of related keyboard symbols.

Concerning glyph modifications，the document N4113 calls to attention some unification between UCS and Wingdings that could cause glyph changes in the UCS．Among those，beyond the white arrow sets mentioned above， others deserve further study．The first category shows characters that should probably not be unified：

| Wing dings ID | Wing dings glyph | UCS | UCS glyph | Name and comment |
| :---: | :---: | :---: | :---: | :---: |
| 0138 | － | 1F3CA | 会 | SWIMMER <br> The U glyph is so schematic that it does not serves as the same symbol even if the meaning is related |
| 0143 | W | 1F4C8 | 㜢 | CHART WITH UPWARDS TREND |
| 0209 | 8 － | 1F511 | 0 | KEY <br> Difference in abstraction makes them not substitutable，the W glyph is an old fashioned key |
| 0119 | $\square$ | 1F6A9 | $P$ | TRIANGULAR FLAG ON POST The U glyph does not express＇golf＇semantics |

The second category shows characters that should be unified but with change to the current glyphs to adopt the $W$－glyph：

| Wing dings ID | Wing dings glyph | UCS | UCS glyph | Name and comment |
| :---: | :---: | :---: | :---: | :---: |
| 0037 | $9 p$ | 1F3C6 | 象 | TROPHY |
| 1038 | $\square$ | 1F4D6 | 閏圆 | OPEN BOOK |
| 1044 | － | 1F4EA | 国 | CLOSED MAILBOX WITH LOWERED FLAG， |
| 1045 | － | 1F4EB | 第 | CLOSED MAILBOX WITH RAISED FLAG |
| 1046 | －1 | 1F4EC | 田 | OPEN MAILBOX WITH RAISED FLAG，not an Emoji character |
| 1047 | $\bigcirc$ | 1F4ED | $\theta$ | OPEN MAILBOX WITH LOWERED FLAG，not an Emoji character |
| 0181 | 50\％ | 1F4F7 | © | CAMERA |
|  | $M$ | 1F507 | $4$ | SPEAKER WITH CANCELLATION STROKE，need to resized， see 1F508 |
| 0088 | 4 | 1F508 | 4 | SPEAKER，current glyph is too small，size needs to be increased for all in range 1F507－1F50A for consistency |
|  | 4） | 1F509 | 4） | SPEAKER WITH ONE SOUND WAVE |
|  | $(t))$ | 1F50A | $(\Delta))$ | SPEAKER WITH THREE SOUND WAVES |
| 0118 | 1 | 1F68D | $\theta$ | ONCOMING BUS <br> The $U$ glyph does not like a bus in isolation |
| 0128 | $\stackrel{10}{10}$ | 1F6B9 | $\dot{0}$ | MENS SYMBOL <br> U glyph are much less common depiction of these on signage， especially WOMENS SYMBOL |

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| Wing <br> dings <br> ID | Wing <br> dings <br> glyph | UCS | UCS <br> glyph | Name and comment |
| :--- | :--- | :--- | :--- | :--- |
| 0129 | $\dot{\text { it }}$ | 1F6BA | $\dot{\operatorname{qu}}$ | WOMENS SYMBOL <br> See above. Note that the design could be intermediate between <br> current Wingdings design and UCS design. |
|  |  | 1F6BB | $\dot{\operatorname{\eta i}} \mid \dot{\boldsymbol{T}}$ | This is not a Wingdings character but would need to be redrawn <br> according to design above |

Concerning the addition of the 113 Webdings characters, the main impetus for adding them in the amendment is to encode the whole repertoire at once, given that there is still ample time to refine the proposal. Here are some metrics on the Webdings repertoire:

- The repertoire has 222 characters,
- 51 are currently proposed and did not get any negative feedback in the ballot,
- 54 are not proposed because existing UCS characters exist that represent these appropriately,
- 117 (113 original +4 after disposition) are still not proposed for encoding.

Based on this it clear that a large part of repertoire is not controversial, and it is reasonable to engage in a discussion concerning the encoding of the remaining 117 characters, with the assumption that some of the names and representative glyphs will be changed.

In conclusion, accepting this comment in principle would lead to 117 character additions ( 113 original +4 from the table above), 10 removals, and 25 glyph changes ( 10 for the white arrows +15 from the table above). The table below shows all 117 additions. The UCS code points highlighted in yellow are different from the values from WG2 N4113 and have been modified to accommodate other additions and reordering requested by Germany and Ireland (many referenced glyphs are not shown in the following table but will be displayed correctly in the amendment chart). Because one of the addition was also proposed by Ireland, this results in 116 (117-1) additions and 10 removals for a delta of 106 characters.

Delta count (characters added from Pdam1.2: 29+106=135)

| ID | glyph | UCS | Name |
| :---: | :---: | :---: | :---: |
| 0035 | (2) | 1F56F | NO PIRACY |
| 0036 | * | 1F5F6 | DARK SUNGLASSES $=\text { cool }$ |
| 0038 | 8 | 1F396 | MEDAL = award |
| 0040 | Q | 1F570 | LEFT SPEECH BUBBLE |
| 0041 | 5 | 1F571 | RIGHT SPEECH BUBBLE |
| 0042 | 第 | 1F576 | MOOD BUBBLE <br> = new <br> $\rightarrow$ 1F4A5 $\square$ collision symbol |
| 0043 | \% | 1F579 | LIGHTNING MOOD BUBBLE <br> = updated <br> $\rightarrow 26 \mathrm{~A} 1 \square$ high voltage |
| 0046 |  | 2BC9 | CHECKER BOARD <br> $\rightarrow 259 \mathrm{E} \square$ quadrant upper right and lower left |
| 0063 | $4$ | 1F3F8 | BALLOT BOX WITH BALLOT = vote <br> $\rightarrow 2612 \boxtimes$ ballot box with x |
| 0065 |  | 1F3D0 | BUILDING CONSTRUCTION SIGN <br> = under construction <br> $\rightarrow 1$ F6A7 $\square$ construction sign |
| 0066 | 4 4 | 1F3D1 | WHITE HOUSES WITH TERRAIN <br> = town <br> $\rightarrow$ 1F3E1 $\square$ house with garden |

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| ID | glyph | UCS | Name |
| :---: | :---: | :---: | :---: |
| 0067 | ＊ | 1F3D2 | CITYSCAPE <br> ＝skyline，city <br> $\rightarrow$ 1F306 cityscape at dusk |
| 0068 | 通 | 1F3D3 | CONDEMNED HOUSE WITH TERRAIN <br> ＝derelict site <br> $\rightarrow$ 1F3E0 $\square$ house building |
| 0069 | $0 \cdot 4$ | 1F3D4 | DESERT TERRAIN <br> ＝desert <br> $\rightarrow$ 1F335 $\square$ cactus |
| 0070 | 䍖 | 1F3D5 | FACTORY WITH TERRAIN <br> ＝factory <br> $\rightarrow$ 1F3ED $\square$ factory |
| 0071 | 自 | 1F3D6 | CLASSICAL FACADE WITH TERRAIN ＝public building |
| 0072 | 140 | 1F3D7 | SINGLE HOUSE WITH TERRAIN <br> ＝home <br> $\rightarrow$ 1F3E1 house with garden |
| 0073 | $\frac{1}{5}$ | 1F3D8 | BEACH WITH UMBRELLA <br> ＝beach <br> $\rightarrow$ 26F1 umbrella on ground |
| 0074 | $\stackrel{*}{*}$ | 1F3D9 | DESERT ISLAND <br> ＝island <br> $\rightarrow$ 1F334 $\square$ palm tree |
| 0075 | Ev | 1F3DA | HIGHWAY WITH BILLBOARD ＝motorway |
| 0077 | $0$ | 1F3DB | MOUNTAIN OR VOLCANO <br> ＝mountain <br> $\rightarrow 1$ F30B $\square$ volcano <br> $\rightarrow$ 1F5FB $\square$ mount fuji <br> $\rightarrow$ 26FO mountain |
| 0080 | 素 | 1F3DC | $\begin{aligned} & \text { TRAIL } \\ & =\text { park } \\ & \rightarrow 1 \text { F } 332 \square \text { evergreen tree } \end{aligned}$ |
| 0081 | $\mathrm{n}^{\text {者 }}$ | 1F3DD | $\begin{aligned} & \text { CAMPING } \\ & \rightarrow 26 F A \square \text { tent } \end{aligned}$ |
| 0082 | 2＊ | 1F3DE | TRAIN TRACKS WITH TERRAIN ＝railroad |
| 0083 | 爱 | 1F3DF | SPORTS ARENA WITH TERRAIN ＝stadium |
| 0084 |  | 1F6C7 | SHIP AND OCEAN ＝ship <br> ＝cruise line vacation <br> $\rightarrow$ 1F6A2 $\square$ ship |
| 0085 | （1） | 1F584 | BULLHORN WITH SOUND WAVES <br> ＝sound on <br> $\rightarrow 1$ F4E3 $\square$ cheering megaphone <br> $\rightarrow 1 F 50 \mathrm{~A} \square$ speaker with three sound waves |
| 0086 | 4 | 1F583 | BULLHORN <br> ＝sound off <br> $\rightarrow 1$ F508 $\square$ speaker |
| 0090 | \％ | 1F395 | BOUQUET OF FLOWERS <br> ＝occasion <br> $\rightarrow$ 1F490 bouquet |
| 0091 | － | 1F574 | LEFT THOUGHT BUBBLE |
| 0093 | 36 | 1F575 | RIGHT THOUGHT BUBBLE $\rightarrow$ 1F4AD $\square$ thought balloon |
| 0094 | 9 | 1F572 | TWO SPEECH BUBBLES |
| 0095 | 3 | 1F573 | THREE SPEECH BUBBLES ＝conference |
| 0100 | $\bigcirc$ | 1F5F1 | SHIELD <br> ＝US road sign interstate highway |
| 0101 | ili | 1F37F | BLACK PACKAGE <br> $\rightarrow 1$ F381 $\square$ wrapped present <br> $\rightarrow$ 1F4E6 package |

Page 23

| ID | glyph | UCS | Name |
| :---: | :---: | :---: | :---: |
| 0102 | 曹 | 1F6CA | ONCOMING FIRE ENGINE <br> $=$ fire <br> $\rightarrow 1$ F692 $\square$ fire engine |
| 0104 | \％ | 1F6CB | BLACK AMBULANCE <br> $=$ medical <br> $\rightarrow 1$ F691 ambulance |
| 0106 | $\sim$ | 1F6CC | SMALL AIRPLANE $\rightarrow 2708$＊airplane |
| 0107 | 施 | 1F6CE | SATELLITE |
| 0109 | $\stackrel{\text { Vr }}{ }$ | 1F56E | MAN IN BUSINESS SUIT LEVITATING ＝jump |
| 0111 | － | 1F6CB | MOTOR BOAT SIDEWAYS <br> ＝boat <br> $\rightarrow$ 1F6A4 $\square$ speedboat |
| 0116 | N | 1F6C6 | DIESEL LOCOMOTIVE WITH TERRAIN <br> $=$ train <br> $\rightarrow 1$ F682 $\square$ steam locomotive <br> $\rightarrow 1$ F686 train |
| 0117 | © | 1F6C8 | UNDERGROUND TRAIN $=$ metro $\rightarrow 1$ F687 $\square$ metro |
| 0119 | 1 | 1F3F1 | GOLF PENNANT |
| 0123 | 縎 | 1F578 | LEFT ANGER BUBBLE <br> ＝shout left |
| 0125 | 紞 | 1F579 | RIGHT ANGER BUBBLE ＝shout right |
| 0126 | $N$ | 1F57A | LIGHTNING MOOD <br> $=$ lightning bolt <br> $\rightarrow 26 \mathrm{~A} 1 \square$ high voltage sign |
| 0130 | \＄ | 1F6D0 | BOY SYMBOL $=\text { boy }$ |
| 0131 | 1 | 1F6D1 | $\begin{aligned} & \text { GIRL SYMBOL } \\ & =\text { girl } \end{aligned}$ |
| 0132 | $\theta$ | 1F6D2 | SWADDLED BABY SYMBOL <br> ＝baby <br> $\rightarrow 1$ F6BC $\square$ baby symbol |
| 0133 | － | 1F56C | BLACK EXTRATERRESTRIAL ALIEN <br> $=$ scifi <br> $\rightarrow$ 1F47D $\square$ extraterrestrial alien |
| 0134 | ＇V＇ | 1F3CC | WEIGHT LIFTER <br> ＝health |
| 0137 | 1 | 1F3CD | GOLFER |
| 0138 | － | 1F3CB | RIGHTWARDS SWIMMER |
| 0140 | 600 | 1F3CE | MOTORCYCLE RIDER ＝motorcycle |
| 0141 | 5 | 1F3CF | RACE CAR WITH RIDER = race car |
| 0143 |  | 1F5F2 | STOCK CHART ＝finance |
| 0144 | \％ | 1F5F3 | OIL DRUM ＝commodities |
| 0145 | ®ิ | 1F5F4 | BLACK MONEY BAG $=$ money $\rightarrow$ FIF4BO money bag |
| 0146 | $\odot$ | 1F5F5 | $\begin{aligned} & \text { PRICE TAG } \\ & =\text { price } \\ & \rightarrow \text { 1F516 } \square \text { bookmark } \end{aligned}$ |
| 0149 | $f$ | 1F5F7 | DAGGER KNIFE <br> ＝rated for violence <br> ＝hate <br> $\rightarrow 1$ F52A hocho |


| ID | glyph | UCS | Name |
| :---: | :---: | :---: | :---: |
| 0150 | $\theta$ | 1F5F8 | $\begin{aligned} & \text { LIPS } \\ & =\text { rated for sex } \\ & =\text { kiss } \\ & \rightarrow 1 \text { F } 48 \mathrm{BB} \square \text { kiss mark } \end{aligned}$ |
| 0151 | F | 1F5F9 | SPEAKING HEAD SILHOUETTE <br> ＝rated for strong language |
| 0160 | 是 | 1F56D | SLEUTH OR SPY ＝investigate |
| 0161 | ค | 1F568 | MANTELPIECE CLOCK <br> ＝clock <br> $\rightarrow 23 F 0 \square$ alarm clock |
| 0162 | 日 | 1F5D9 | FRAMED PICTURE WITH TILES $=$ frames |
| 0163 | 区 | 1F5DA | FRAME WITH AN X ＝no frames，no picture |
| 0164 | E | 1F5EA | CLIPBOARD SIDEWAYS <br> $\rightarrow$ 1F4CB $\square$ clipboard |
| 0165 | $\square$ | 1F5DB | CALENDAR EMPTY $=$ note $\rightarrow 1$ F4C5 $\square$ calendar |
| 0166 | 1 | 1F5DC | CALENDAR DAY－1 <br> ＝calendar <br> $\rightarrow$ 1F4C6 $\square$ tear－off calendar |
| 0167 | $\square$ | 1F5EB | OPEN BOOK FLAT <br> ＝book <br> $\rightarrow$ 1F4D6 $\square$ open book |
| 0169 | － | 1F5EC | ROLLED－UP NEWSPAPER <br> ＝news <br> $\rightarrow$ 1F4F0 $\square$ newspaper |
| 0170 | 腱 | 1F5DD | INDEX CARD WITH CIRCLED TEXT ＝classified |
| 0171 | $\theta$ | 1F5DE | $\begin{aligned} & \text { CARD FILE BOX } \\ & =\text { archive } \end{aligned}$ |
| 0172 |  | 1F5DF | BLACK CARD INDEX <br> $=$ index <br> $\rightarrow 1 F 4 C 7 \square$ card index |
| 0173 | 国 | 1F5D8 | FRAMED PICTURE ＝art |
| 0176 | 部面 | 1F398 | MUSICAL KEYBOARD WITH PLUGS <br> ＝midi，midi keyboard <br> $\rightarrow 1$ F3B9 $\square$ musical keyboard |
| 0177 | 雫 | 1F399 | STUDIO MICROPHONE <br> ＝microphone <br> $\rightarrow$ 1F3A4 $\square$ microphone |
| 0180 | $\checkmark$ | 1F39E | $\begin{aligned} & \text { FILM } \\ & =\text { film clip } \end{aligned}$ |
| 0182 | $\cdots$ | 1F39F | ADMISSION TICKETS <br> ＝ticket <br> $\rightarrow 1$ F3AB $\square$ ticket |
| 0184 | \％ | 1F4FD | FILM PROJECTOR <br> $=$ movies <br> $\rightarrow 1$ F3A6 $\square$ cinema |
| 0186 | －0 0 | 1F4FE | PORTABLE STEREO |
| 0188 | t | 1F39A | LEVEL SLIDER <br> ＝level control |
| 0189 | ® | 1F39B | CONTROL KNOBS <br> ＝audio control |
| 0190 | $\square$ | 1F4FF | TELEVISION FLAT CRT $\rightarrow$ 1F4FA $\square$ television |
| 0191 | 國 | 1F5AF | COMPUTER MONITOR $\rightarrow$ 1F4BB $\square$ personal computer |
| 0195 | 1 | 1F5AD | JOYSTICK |


| ID | glyph | UCS | Name |
| :---: | :---: | :---: | :---: |
| 0196 | \％ | 1F5AE | BLACK GAME CONTROLLER <br> ＝game pad <br> $\rightarrow$ 1F3AE $\square$ video game |
| 0198 | 1 | 1F5A7 | TELEPHONE RECEIVER WITH PAGE $=f a x$ <br> $\rightarrow$ 1F4E0 $\square$ fax machine |
| 0200 | － | 1F5AC | CLAMSHELL MOBILE PHONE <br> ＝cellular phone <br> $\rightarrow$ 1F4F1 $\square$ mobile phone |
| 0201 | － | 1F5AB | TELEPHONE ON TOP OF MODEM |
| 0206 | 雷 | 1F5E8 | COMPRESSION |
| 0209 | 8 － | 1F5E9 | OLD KEY |
| 0213 | O | 1F321 | WHITE SUN <br> ＝sunny <br> $\rightarrow 263 \mathrm{C}$ white sun with rays |
| 0214 | Q | 1F322 | WHITE SUN WITH SMALL BLACK CLOUD <br> ＝mostly sunny <br> $\rightarrow 26 \mathrm{C} 5 \square$ sun behind cloud |
| 0215 | $\underline{m}$ | 1 F323 | WHITE SUN BEHIND BLACK CLOUDS ＝mostly cloudy |
| 0216 | － | 1F324 | WHITE SUN BEHIND BLACK CLOUDS <br> AND RAIN <br> ＝showers |
| 0217 | － | 1F325 | $\begin{aligned} & \text { BLACK CLOUD } \\ & =\text { cloudy } \\ & \rightarrow 2601 * \text { cloud } \end{aligned}$ |
| 0218 | $\ldots$ | 1F326 | BLACK CLOUD AND SNOW <br> ＝snow，snow showers |
| 0219 | $\ldots$ | 1F327 | BLACK CLOUD AND RAIN ＝rain |
| 0220 | $\stackrel{\square}{4}$ | 1F328 | BLACK CLOUD AND THUNDER <br> ＝lightning，thunderstorm <br> $\rightarrow 26 \mathrm{C} 8 \square$ thunder cloud and rain |
| 0221 | 5 | 1F329 | BLACK CLOUD AND TORNADO <br> ＝tornado，twister |
| 0222 | 穿理 | 1F32A | WIND BLOWING FACE $=$ wind |
| 0223 | 3 | 1F32B | $\begin{aligned} & \hline \text { FOG } \\ & \rightarrow 1 \text { F301 } \square \text { foggy } \\ & \hline \end{aligned}$ |
| 0226 | 歯 | 1F3F4 | COUCH AND LAMP <br> ＝furniture，lifestyles |
| 0227 | 4 | 1F3F5 | BED IN PERSPECTIVE <br> ＝hotel，guestrooms，accommodation <br> $\rightarrow$ 1F3E8 $\square$ hotel |
| 0230 | － | 1F3F6 | BELLHOP BELL <br> ＝reception，services |
| 0231 | 易 | 1F3F7 | TWO SHOPPING BAGS ＝shopping |
| 0234 | $\triangle$ | 1F6D9 | TRIANGLE WITH ROUNDED CORNERS <br> ＝caution <br> $\rightarrow 25 \mathrm{~B} 3 \Delta$ white up－pointing triangle |
| 0235 | צ | 1F5ED | BLACK PUSHPIN <br> ＝marker <br> $\rightarrow$ 1F4CC $\square$ pushpin |
| 0237 | $\cdots$ | 2BEC | THREE RAYS ABOVE |
| 0238 | 八 | 2BED | THREE RAYS BELOW |
| 0239 | $シ$ | 2BEE | THREE RAYS LEFT <br> $\rightarrow 269 \mathrm{E} \square$ three lines converging right |
| 0240 | ＝ | 2BEF | THREE RAYS RIGHT $\rightarrow 269 \mathrm{~F} \square$ three lines converging left |

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| ID | glyph | UCS | Name |
| :--- | :--- | :--- | :--- |
| 0241 | 丸 | 1F6CD | AIRPAANE RISING <br> = airplane |
| 0242 |  | 1F3FE | CHIPMUNK <br> = animal |
| 0255 | 1F3FF | DOVE <br> $=$ peace |  |

## Editorial comments:

## E.1. Page 1, Typographic error

The following line should remove an " s " in "formats":
Insert the following entry in the list of formats characters:
Accepted

## E.2. Page 1, 3, 4, and 5 Typographic errors

On pages 1, 3, 4, and 5and 5, the block name "Short hand" should be replaced by "Shorthand."

## Accepted

## E.3. Duployan

The named aliases for $\mathrm{U}+1 \mathrm{BC} 0 \mathrm{~B}, \mathrm{U}+1 \mathrm{BC} 70-\mathrm{U}+1 \mathrm{BC} 75$ and $\mathrm{U}+1 \mathrm{BC} 80$ has a recurrent typo: "Pernin ReportersÖ". It should be "Pernin Reporters', with a single quote instead of "Ö".
Accepted

## E.4. Enclosed Alphanumeric Supplement

The italicized comment immediately above U $+1 F 10 B$ should remove the "s" in "complements":
These digits complements the sans-serif digit sets in the Dingbat block 2780-2789 and 278A-2793.
Accepted

## E.5. Geometric Shapes Extended

In the italicized comment, the verb should just be "originate" (instead of "are originated"):
These geometric shapes are originated from the Webdings/Wingdings collections.
Accepted

## E.6. Limbu

The requested glyph modifications will more faithfully reflect those shown in the original proposal N3975 (L2/11-008) and be more consistent with other glyphs in the chart.

Proposed change by US:
The U.S. requests the glyphs for U+191D LIMBU LETTER GYAN and U+191E LIMBU LETTER TRA be modified as follows:
(Current)

| $\boldsymbol{Z}$ | $\boldsymbol{Z}$ |
| :---: | :---: |
| 190 C | 191 C |
| $\mathbf{5}$ | $\mathbf{5}$ |
| 190 D | 191 D |
| $\boldsymbol{Z}$ | 5 <br> 190 E |

(glyphs in original proposal)
76
(glyphs in figure 1)

## Accepted



## E.7. Devanagari

The proposed glyph change will more faithfully reflect the shape shown in the revised proposal N3970 (L2/10-475R), dated 23 May 2011.

Proposed change by US:
The U.S. requests the glyph for U+0978 DEVANAGARI LETTER MARWARI DDA be modified as follows:

## (Current)


(as reflected in revised proposal)

## お

## E.8. Cover page and pages 1 and 3, Typographic error

The title of the PDAM on the cover page of N4201 currently reads: "Amendment 1: Linear A, Palmyrene, Manichean, Khojki, Khudawadi, Bassa Vah, Duployan, and other characters". The script name "Manichean" is a typo for "Manichaean" and should also be corrected on pages 1 and 3.
Accepted


Various signs

| 0900 | 8 | DEVANAGARI SIGN INVERTED CANDRABINDU <br> ＝vaidika adhomukha candrabindu |
| :---: | :---: | :---: |
| 0901 | 8 | DEVANAGARI SIGN CANDRABINDU <br> ＝anunasika <br> $\rightarrow 0310 \stackrel{\circ}{\circ}$ combining candrabindu |
| 0902 | ¢ | DEVANAGARI SIGN ANUSVARA ＝bindu |
| 0903 | \％ | DEVANAGARI SIGN VISARGA |

Independent vowels


## Consonants

0915 क DEVANAGARI LETTER KA
0916 ख DEVANAGARI LETTER KHA
0917 ग DEVANAGARI LETTER GA
0918 घ DEVANAGARI LETTER GHA
0919 ङ DEVANAGARI LETTER NGA
091A च DEVANAGARI LETTER CA
091B छ DEVANAGARI LETTER CHA
091C ज DEVANAGARI LETTER JA
091D झ DEVANAGARI LETTER JHA
091E $丁$ DEVANAGARI LETTER NYA
091F ट DEVANAGARI LETTER TTA
0920 ठ DEVANAGARI LETTER TTHA
0921 ड DEVANAGARI LETTER DDA
0922 ढ DEVANAGARI LETTER DDHA
0923 ण DEVANAGARI LETTER NNA
0924 त DEVANAGARI LETTER TA
0925 थ DEVANAGARI LETTER THA
0926 द DEVANAGARI LETTER DA
0927 ध DEVANAGARI LETTER DHA
0928 न DEVANAGARI LETTER NA
0929 ऩ DEVANAGARI LETTER NNNA
－for transcribing Dravidian alveolar n
三0928 न 093C
092A प DEVANAGARI LETTER PA
092B फ DEVANAGARI LETTER PHA
092C ब DEVANAGARI LETTER BA
092D भ DEVANAGARI LETTER BHA
092E म DEVANAGARI LETTER MA
092F य DEVANAGARI LETTER YA
0930 र DEVANAGARI LETTER RA

| 0931 | र | DEVANAGARI LETTER RRA <br> －for transcribing Dravidian alveolar r <br> －half form is represented as＂Eyelash RA＂ 三0930 र 093C ? |
| :---: | :---: | :---: |
| 0932 | ल | DEVANAGARI LETTER LA |
| 0933 | ¢ | DEVANAGARI LETTER LLA |
| 0934 | क | DEVANAGARI LETTER LLLA <br> －for transcribing Dravidian I $\equiv 0933 \text { ळ 093С }$ |
| 0935 | व | DEVANAGARI LETTER VA |
| 0936 | श | DEVANAGARI LETTER SHA |
| 0937 | ष | DEVANAGARI LETTER SSA |
| 0938 | स | DEVANAGARI LETTER SA |
| 0939 | ह | DEVANAGARI LETTER HA |

Dependent vowel signs for Kashmiri
093A DEVANAGARI VOWEL SIGN OE
093B of DEVANAGARI VOWEL SIGN OOE

## Various signs

$\begin{array}{lcl}\text { 093C } & \text { DEVANAGARI SIGN NUKTA } \\ & & \text { • for extending the alphabet to new letters } \\ \text { 093D } & \text { S } & \text { DEVANAGARI SIGN AVAGRAHA }\end{array}$
Dependent vowel signs
093E T DEVANAGARI VOWEL SIGN AA
093F f DEVANAGARI VOWEL SIGN I
－stands to the left of the consonant
0940 को DEVANAGARI VOWEL SIGN II
0941 \＆DEVANAGARI VOWEL SIGN U
0942 DEVANAGARI VOWEL SIGN UU
0943 \＆DEVANAGARI VOWEL SIGN VOCALIC R
0944 § DEVANAGARI VOWEL SIGN VOCALIC RR
0945 DEVANAGARI VOWEL SIGN CANDRA E
＝candra
0946 DEVANAGARI VOWEL SIGN SHORT E
－for transcribing Dravidian vowels
0947 DEVANAGARI VOWEL SIGN E
0948 D DEVANAGARI VOWEL SIGN AI
0949 ॅॅ DEVANAGARI VOWEL SIGN CANDRA O
094A of DEVANAGARI VOWEL SIGN SHORT O
－for transcribing Dravidian vowels
094B ो DEVANAGARI VOWEL SIGN O
094C of DEVANAGARI VOWEL SIGN AU
Virama
094D Q DEVANAGARI SIGN VIRAMA
＝halant（the preferred Hindi name）
－suppresses inherent vowel

## Dependent vowel signs

094E DEVANAGARI VOWEL SIGN PRISHTHAMATRA E
－character has historic use only
－combines with E to form Al，with AA to form O， and with O to form AU
094F को DEVANAGARI VOWEL SIGN AW
－Kashmiri

## Sign

0950 ॐ DEVANAGARI OM

## Vedic tone marks

0951 DEVANAGARI STRESS SIGN UDATTA
＝Vedic tone svarita
－mostly used for svarita，with rare use for udatta
－used also in Vedic texts written in other scripts
$\rightarrow 1$ CDA vedic tone double svarita
0952 DEVANAGARI STRESS SIGN ANUDATTA
＝Vedic tone anudatta
－used also in Vedic texts written in other scripts
$\rightarrow 1 \mathrm{CDC}$ ；vedic tone kathaka anudatta

## Accent marks

| 0953 |  | DEVANAGARI GRAVE ACCENT |
| :---: | :---: | :---: |
|  |  | $\rightarrow 0300$ ̀े combining grave acce |
| 0954 |  | DEVANAGARI ACUTE ACCENT |
|  |  | $\rightarrow 0301$ ó combining acute acc |

Dependent vowel sign
$0955 \quad$ DEVANAGARI VOWEL SIGN CANDRA LONG E
－used in transliteration of Avestan
Dependent vowel signs for Kashmiri
0956 DEVANAGARI VOWEL SIGN UE
0957 DEVANAGARI VOWEL SIGN UUE
Additional consonants
0958 क़ DEVANAGARI LETTER QA三0915 क 093C
0959 ख DEVANAGARI LETTER KHHA三0916 ख 093C
095A ग़ DEVANAGARI LETTER GHHA三0917 ग 093C ？
095B ज़ DEVANAGARI LETTER ZA三091C ज 093C ？
095C ड़ DEVANAGARI LETTER DDDHA $\equiv 0921$ ड 093C ？
095D ढ़ DEVANAGARI LETTER RHA三0922 ढ 093C ？
095E फ़ DEVANAGARI LETTER FA三092B फ 093C ．
095F य DEVANAGARI LETTER YYA $\equiv 092 \mathrm{~F}$ य 093C

## Additional vowels for Sanskrit

0960 ॠ DEVANAGARI LETTER VOCALIC RR
0961 ल DEVANAGARI LETTER VOCALIC LL
0962 © DEVANAGARI VOWEL SIGN VOCALIC L
0963 \＆DEVANAGARI VOWEL SIGN VOCALIC LL

## Generic punctuation for scripts of India

These punctuation marks are for common use for the scripts of India despite being named＂DEVANAGARI＂．They also occur as abbreviation signs in some South Indian scripts．

```
0 9 6 4 ~ \| ~ D E V A N A G A R I D A N D A ~
```

```
0 9 6 4 ~ \| ~ D E V A N A G A R I D A N D A ~
```

＝purna viram
－phrase separator
0965 ॥ DEVANAGARI DOUBLE DANDA
＝deergh viram

## Digits

0966 －DEVANAGARI DIGIT ZERO
0967 ？DEVANAGARI DIGIT ONE
0968 ₹ DEVANAGARI DIGIT TWO
0969 ₹ DEVANAGARI DIGIT THREE
096A ૪ DEVANAGARI DIGIT FOUR
096B ५ DEVANAGARI DIGIT FIVE

|  | 190 | 191 | 192 | 193 | 194 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 0 | 引 <br> 1900 | $\omega$ <br> 1910 | $\begin{gathered} \mathrm{C} \\ 1920 \end{gathered}$ | $\mathbf{V}_{1930}$ | $6$ $1940$ |
| 1 | $\neq$ | $\widehat{\mathbf{O}}$ |  | $0$ |  |
| 2 | $\underset{1902}{C}$ | $\widetilde{c}_{1912}$ | $\underset{1922}{6}$ | 0 <br> 1932 |  |
| 3 | 3 <br> 1903 | Q1 <br> 1913 | $\begin{gathered} 1923 \\ \hline 19 \end{gathered}$ | $\underset{1933}{\circ}$ |  |
| 4 |  | $Z$ | （） 99 <br> 1924 | $0$ | $\begin{gathered} 9 \\ 1944 \\ \hline \end{gathered}$ |
| 5 | $3^{\circ}$ | $\$$ | ${\underset{1925}{C}}_{9}^{9}$ | ${ }_{1935}$ | $\underset{\substack{945}}{p}$ |
| 6 | $\begin{gathered} \boldsymbol{D} \\ 1906 \end{gathered}$ | $1916$ | $\underset{1926}{\square} 99$ | 04 <br> 1936 |  |
| 7 | $E$ <br> 1907 | $\mathcal{F}$ | （ $1927$ | ${ }_{1937}$ | $6$ |
| 8 | $\underset{1908}{ }$ | $M$ | $1928$ | ${ }_{1938}^{\mathbf{U}}$ |  |
| 9 | $\xi_{1909}$ | $\underset{1919}{ \pm}$ | （） <br> 1929 | (\%) |  |
| A | $\begin{aligned} & \overline{\mathcal{X}} \\ & { }_{190} \end{aligned}$ |  | $\underset{192 \mathrm{~A}}{\mathbf{2}}$ | （） <br> 193A | $\underset{194 A}{X}$ |
| B | $\underset{1908}{3}$ |  | )ص1 | $\frac{C}{193 B}$ | $6$ |
| C | あ <br> 190C | $\underset{1910}{Z}$ |  |  |  |
| D | $5$ | $\boldsymbol{7}$ |  |  | $8$ |
| E | そ |  |  |  |  |
| F |  |  |  |  |  |

Page 32

| Consonants |  |  |
| :---: | :---: | :---: |
| 1900 | 3 | LIMBU VOWEL－CARRIER LETTER |
| 1901 | Z | LIMBU LETTER KA |
| 1902 | a | LIMBU LETTER KHA |
| 1903 | 子 | LIMBU LETTER GA |
| 1904 | प | LIMBU LETTER GHA |
| 1905 | $3^{\circ}$ | LIMBU LETTER NGA |
| 1906 | ว | LIMBU LETTER CA |
| 1907 | E | LIMBU LETTER CHA |
| 1908 | Э | LIMBU LETTER JA |
| 1909 | $\xi$ | LIMBU LETTER JHA |
| 190A | あ | LIMBU LETTER YAN |
| 190B | 3 | LIMBU LETTER TA |
| 190C | あ | LIMBU LETTER THA |
| 190D | 5 | LIMBU LETTER DA |
| 190E | घ | LIMBU LETTER DHA |
| 190F | z | LIMBU LETTER NA |
| 1910 | $\omega$ | LIMBU LETTER PA |
| 1911 | 0 | LIMBU LETTER PHA |
| 1912 | 乙 | LIMBU LETTER BA |
| 1913 | a | LIMBU LETTER BHA |
| 1914 | 乙 | LIMBU LETTER MA |
| 1915 | 了 | LIMBU LETTER YA |
| 1916 | ス | LIMBU LETTER RA |
| 1917 | 9 | LIMBU LETTER LA |
| 1918 | 4 | LIMBU LETTER WA |
| 1919 | $\checkmark$ | LIMBU LETTER SHA |
| 191A | q | LIMBU LETTER SSA |
| 191B | の | LIMBU LETTER SA |
| 191C | $\mathcal{L}$ | LIMBU LETTER HA |
| 191D | 万 | LIMBU LETTER GYAN ＝jnya |
| 191E | इ | LIMBU LETTER TRA |


| 193B | LIMBU SIGN SA－I |  |
| :--- | :--- | :--- |
| 193C | ＜reserved＞ |  |
| 193D | ＜reserved＞ |  |
| 193E | ＜reserved＞ |  |
| $193 F$ | ＜reserved＞ |  |
| 1940 | b | LIMBU SIGN LOO |
| 1941 | ＜reserved＞ |  |
| 1942 | ＜reserved＞ |  |
| 1943 | ＜reserved＞ |  |
| 1944 | $?$ | LIMBU EXCLAMATION MARK |
| 1945 | LIMBU QUESTION MARK |  |

Digits
1946 O LIMBU DIGIT ZERO
1947 b LIMBU DIGIT ONE
1948 ＾LIMBU DIGIT TWO
1949 S LIMBU DIGIT THREE
194A X LIMBU DIGIT FOUR
194B 6 LIMBU DIGIT FIVE
194C G LIMBU DIGIT SIX
194D 8 LIMBU DIGIT SEVEN
194E V LIMBU DIGIT EIGHT
194F 7 LIMBU DIGIT NINE

| Dependent vowel signs |  |  |
| :---: | :---: | :---: |
| 1920 | － | LIMBU VOWEL |
| 1921 | $\mathrm{O}^{2}$ | LIMBU VOWEL SIGN I |
| 1922 | $\bigcirc$ | LIMBU VOWEL SIGN U |
| 1923 | 09 | LIMBU VOWEL SIGN EE |
| 1924 | 09 | LIMBU VOWEL SIGN AI |
| 1925 | $\bigcirc$ | LIMBU VOWEL SIGN OO |
| 1926 | $\bigcirc$ | LIMBU VOWEL SIGN AU |
| 1927 | － | LIMBU VOWEL SIGN E |
| 228 |  | LIMBU VOWEL SIGN O |

Subjoined consonants
1929 O～LIMBU SUBJOINED LETTER YA
192A O LIMBU SUBJOINED LETTER RA
192B Oa LIMBU SUBJOINED LETTER WA

## Final consonants

1930 ○ $\subset$ LIMBU SMALL LETTER KA
1931 O LIMBU SMALL LETTER NGA
1932 ㅇ LIMBU SMALL LETTER ANUSVARA
1933 ㅇ LIMBU SMALL LETTER TA
1934 －LIMBU SMALL LETTER NA
1935 ○ 4 LIMBU SMALL LETTER PA
1936 O LIMBU SMALL LETTER MA
1937 －LIMBU SMALL LETTER RA
1938 OU LIMBU SMALL LETTER LA

## Various signs

1939 ．LIMBU SIGN MUKPHRENG
193A ○ LIMBU SIGN KEMPHRENG


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## Simple arrows

| 2190 | $\leftarrow$ | LEFTWARDS ARROW <br> $\rightarrow$ 20EA $\ominus$ combining leftwards arrow overlay |
| :---: | :---: | :---: |
| 2191 | $\uparrow$ | UPWARDS ARROW <br> －IPA：egressive airflow |
| 2192 | $\rightarrow$ | RIGHTWARDS ARROW ＝ z notation total function |
| 2193 | $\downarrow$ | DOWNWARDS ARROW <br> －IPA：ingressive airflow |
| 2194 | $\stackrel{ }{\bullet}$ | LEFT RIGHT ARROW <br> $=\mathrm{z}$ notation relation |
| 2195 | 1 | UP DOWN ARROW |
| 2196 | $\checkmark$ | NORTH WEST ARROW |
| 2197 | フ | NORTH EAST ARROW |
| 2198 | $\downarrow$ | SOUTH EAST ARROW |
| 2199 | $\checkmark$ | SOUTH WEST ARROW |
| Arrow | s w | th modifications |
| 219A | ＊ | LEFTWARDS ARROW WITH STROKE <br> －negation of $2190 \leftarrow$ $\equiv 2190 \leftarrow 0338 \not$ |
| 219B | $\rightarrow$ | RIGHTWARDS ARROW WITH STROKE <br> －negation of $2192 \rightarrow$ $\equiv 2192 \rightarrow 0338 \not \subset$ |
| 219C | $\sim$ | LEFTWARDS WAVE ARROW <br> $\rightarrow 2$ B3F $\sim$ wave arrow pointing directly left |
| 219D | $\sim$ | RIGHTWARDS WAVE ARROW |
| 219E | ＊ | LEFTWARDS TWO HEADED ARROW <br> ＝fast cursor left |
| 219 F | $\uparrow$ | UPWARDS TWO HEADED ARROW <br> ＝fast cursor up |
| 21A0 | $\rightarrow$ | RIGHTWARDS TWO HEADED ARROW <br> ＝z notation total surjection <br> ＝fast cursor right |
| $21 \mathrm{A1}$ | $\downarrow$ | DOWNWARDS TWO HEADED ARROW <br> ＝form feed <br> ＝fast cursor down |
| 21A2 | － | LEFTWARDS ARROW WITH TAIL |
| 21A3 | $\rightarrow$ | RIGHTWARDS ARROW WITH TAIL ＝z notation total injection |
| 21A4 | $\mapsto$ | LEFTWARDS ARROW FROM BAR |
| 21A5 | 1 | UPWARDS ARROW FROM BAR |
| 21A6 | $\mapsto$ | RIGHTWARDS ARROW FROM BAR ＝z notation maplet |
| 21A7 | I | DOWNWARDS ARROW FROM BAR <br> ＝depth symbol |
| 21A8 | 1 | UP DOWN ARROW WITH BASE |
| 21A9 | $\stackrel{+}{ }$ | LEFTWARDS ARROW WITH HOOK |
| 21AA | $\checkmark$ | RIGHTWARDS ARROW WITH HOOK |
| 21AB | $\stackrel{+}{+}$ | LEFTWARDS ARROW WITH LOOP |
| 21AC | $\rightarrow$ | RIGHTWARDS ARROW WITH LOOP |
| 21AD | $\cdots$ | LEFT RIGHT WAVE ARROW |
| 21AE | $\leftrightarrow$ | LEFT RIGHT ARROW WITH STROKE <br> －negation of $2194 \leftrightarrow$ $\equiv 2194 \leftrightarrow 0338$ |
| 21AF | 4 | DOWNWARDS ZIGZAG ARROW <br> ＝electrolysis |

## Arrows with bent tips

Other arrows with bent tips to complete this set can be found in the Miscellaneous Symbols and Arrows block．
21B0 i UPWARDS ARROW WITH TIP LEFTWARDS
21B1 户 UPWARDS ARROW WITH TIP RIGHTWARDS
21B2 ل DOWNWARDS ARROW WITH TIP LEFTWARDS

21B3 $L$ DOWNWARDS ARROW WITH TIP RIGHTWARDS

## Keyboard symbols and circle arrows

21B4 I RIGHTWARDS ARROW WITH CORNER DOWNWARDS
$=$ line feed
21B5 d DOWNWARDS ARROW WITH CORNER LEFTWARDS
－may indicate a carriage return or new line
$\rightarrow 23 C E 』$ return symbol
21B6 $\curvearrowleft$ ANTICLOCKWISE TOP SEMICIRCLE ARROW
$21 B 7 \sim$ CLOCKWISE TOP SEMICIRCLE ARROW
21B8 ₹ NORTH WEST ARROW TO LONG BAR ＝home
21 B9 $\leftrightarrows$ LEFTWARDS ARROW TO BAR OVER RIGHTWARDS ARROW TO BAR $=$ tab with shift tab
21BA $u$ ANTICLOCKWISE OPEN CIRCLE ARROW
21BB $\cup$ CLOCKWISE OPEN CIRCLE ARROW
Harpoons
21BC＜LEFTWARDS HARPOON WITH BARB UPWARDS
21BD - LEFTWARDS HARPOON WITH BARB DOWNWARDS
21BE i UPWARDS HARPOON WITH BARB RIGHTWARDS
21BF 1 UPWARDS HARPOON WITH BARB LEFTWARDS
$21 \mathrm{CO} \rightarrow$ RIGHTWARDS HARPOON WITH BARB UPWARDS
$21 \mathrm{C1} \rightarrow$ RIGHTWARDS HARPOON WITH BARB DOWNWARDS
21C2 \ DOWNWARDS HARPOON WITH BARB RIGHTWARDS
21C3 」 DOWNWARDS HARPOON WITH BARB LEFTWARDS

## Paired arrows and harpoons

21C4 $\rightleftarrows$ RIGHTWARDS ARROW OVER LEFTWARDS ARROW
21C5 $\uparrow \downarrow$ UPWARDS ARROW LEFTWARDS OF DOWNWARDS ARROW
$21 \mathrm{C} 6 \leftrightarrows$ LEFTWARDS ARROW OVER RIGHTWARDS ARROW
$21 C 7 \leftleftarrows$ LEFTWARDS PAIRED ARROWS
21C8 $\uparrow \uparrow$ UPWARDS PAIRED ARROWS
$21 \mathrm{C} 9 \Rightarrow$ RIGHTWARDS PAIRED ARROWS
21CA $\downarrow \downarrow$ DOWNWARDS PAIRED ARROWS
$21 \mathrm{CB} \leftrightharpoons$ LEFTWARDS HARPOON OVER RIGHTWARDS HARPOON
$21 \mathrm{CC} \rightleftharpoons$ RIGHTWARDS HARPOON OVER LEFTWARDS HARPOON

Double arrows
21CD $\nLeftarrow$ LEFTWARDS DOUBLE ARROW WITH STROKE
－negation of $21 \mathrm{DO}=$
$\equiv 21 \mathrm{D} 0=0338$ 。
21CE LEFT RIGHT DOUBLE ARROW WITH STROKE
－negation of 21D4 $\Leftrightarrow$
$\equiv 21 \mathrm{D} 4 \Leftrightarrow 0338 \not \subset$
21CF $\Rightarrow$ RIGHTWARDS DOUBLE ARROW WITH STROKE
－negation of 21D2 $\Rightarrow$
$\equiv 21 \mathrm{D} 2 \Rightarrow 0338$ ø
21D0 $\Leftarrow$ LEFTWARDS DOUBLE ARROW
21D1 介 UPWARDS DOUBLE ARROW
21D2 $\Rightarrow$ RIGHTWARDS DOUBLE ARROW
21D3 $\Downarrow$ DOWNWARDS DOUBLE ARROW

| 21D4 | $\Leftrightarrow$ | LEFT RIGHT DOUBLE ARROW |
| :---: | :---: | :---: |
| 21D5 | II | UP DOWN DOUBLE ARROW |
| 21D6 | § | NORTH WEST DOUBLE ARROW |
| 21D7 | \＃ | NORTH EAST DOUBLE ARROW |
| 21D8 | ＊ | SOUTH EAST DOUBLE ARROW |
| 21D9 | ／ | SOUTH WEST DOUBLE ARROW |
| Miscellaneous arrows and keyboard symbols |  |  |
| 21DA | 气 | LEFTWARDS TRIPLE ARROW |
| 21DB | $\Rightarrow$ | RIGHTWARDS TRIPLE ARROW |
| 21DC | ＜ | LEFTWARDS SQUIGGLE ARROW <br> $\rightarrow 2$ B33 km long leftwards squiggle arrow |
| 21DD | m | RIGHTWARDS SQUIGGLE ARROW |
| 21DE | $\ddagger$ | UPWARDS ARROW WITH DOUBLE STROKE ＝page up |
| 21DF | $\pm$ | DOWNWARDS ARROW WITH DOUBLE STROKE ＝page down |
| 21E0 | 4 | LEFTWARDS DASHED ARROW |
| 21E1 | $\uparrow$ | UPWARDS DASHED ARROW |
| 21E2 | $\stackrel{\text {－}}{ }$ | RIGHTWARDS DASHED ARROW |
| 21E3 | $\square$ | DOWNWARDS DASHED ARROW |
| 21E4 | $\leftarrow$ | LEFTWARDS ARROW TO BAR <br> ＝leftward tab |
| 21E5 | $\rightarrow$ | RIGHTWARDS ARROW TO BAR $=$ rightward tab |

## White arrows and keyboard symbols

| 21E6 | － | LEFTWARDS WHITE ARROW <br> $\rightarrow 2 \mathrm{BOO}$＜north east white arrow |
| :---: | :---: | :---: |
| 21 E7 | ヘ | UPWARDS WHITE ARROW <br> ＝shift <br> ＝level 2 select（ISO 9995－7） |
| 21E8 | $\Rightarrow$ | RIGHTWARDS WHITE ARROW <br> ＝group select（ISO 9995－7） |
| 21E9 | $\sqrt{3}$ | DOWNWARDS WHITE ARROW |
| 21EA | 凹 | UPWARDS WHITE ARROW FROM BAR ＝caps lock |
| 21EB | II | UPWARDS WHITE ARROW ON PEDESTAL ＝level 2 lock |
| 21EC | $\underline{1}$ | UPWARDS WHITE ARROW ON PEDESTAL WITH HORIZONTAL BAR <br> ＝capitals（caps）lock |
| 21ED | $\mathbb{1 1}$ | UPWARDS WHITE ARROW ON PEDESTAL WITH <br> VERTICAL BAR <br> ＝numeric lock |
| 21EE | Û | UPWARDS WHITE DOUBLE ARROW <br> ＝level 3 select |
| 21EF | f | UPWARDS WHITE DOUBLE ARROW ON PEDESTAL <br> ＝level 3 lock |
| 21F0 | $\Leftrightarrow$ | RIGHTWARDS WHITE ARROW FROM WALL ＝group lock |
| 21F1 | $\kappa$ | NORTH WEST ARROW TO CORNER ＝home |
| 21F2 | $v$ | SOUTH EAST ARROW TO CORNER ＝end |
| 21F3 | 㐱 | UP DOWN WHITE ARROW <br> ＝scrolling <br> $\rightarrow 2 \mathrm{BO} 4 \Leftrightarrow$ left right white arrow |

Miscellaneous arrows
21 F4 $\Leftrightarrow$ RIGHT ARROW WITH SMALL CIRCLE
$\begin{array}{lll} & \rightarrow 2 \text { left arrow with small circle } \\ 21 F 5 & \text { it } \begin{array}{l}\text { DOWNWARDS ARROW LEFTWARDS OF } \\ \\ \\ \\ \text { UPWARDS ARROW }\end{array}\end{array}$
$\begin{array}{lll} & \rightarrow 2 \text { left arrow with small circle } \\ 21 F 5 & \text { it } \begin{array}{l}\text { DOWNWARDS ARROW LEFTWARDS OF } \\ \\ \\ \\ \text { UPWARDS ARROW }\end{array}\end{array}$
$\begin{array}{lll} & \rightarrow 2 \text { left arrow with small circle } \\ 21 F 5 & \text { it } \begin{array}{l}\text { DOWNWARDS ARROW LEFTWARDS OF } \\ \\ \\ \\ \text { UPWARDS ARROW }\end{array}\end{array}$
$21 \mathrm{E} 1 \uparrow$ UPWARDS DASHED ARROW
21E2 $\rightarrow$ RIGHTWARDS DASHED ARROW
21E3 DOWNWARDS DASHED ARROW
21E4 $\leftarrow$ LEFTWARDS ARROW TO BAR ＝leftward tab
＝rightward tab

21E6 ↔ LEFTWARDS WHITE ARROW
$\rightarrow 2 \mathrm{BOO} \curvearrowright$ north east white arrow
＝shift
＝level 2 select（ISO 9995－7）
RIGHP SLI（ISO 995－7）
DOWNWARDS WHITE ARROW
＝caps lock
21EC $\quad$ level 2 lock
UPWARDS WHITE ARROW ON PEDESTAL WITH HORIZONTAL BAR
＝capitals（caps）lock
VERTICAL BAR
＝numeric lock
＝level 3 select
PEDESTAL
＝level 3 lock
＝group lock
＝home
＝end

| 21F6 | 三 | THREE RIGHTWARDS ARROWS <br> $\rightarrow 2$ B31 $\leftleftarrows$ three leftwards arrows |
| :---: | :---: | :---: |
| $21 F 7$ | ＋ | LEFTWARDS ARROW WITH VERTICAL STROKE |
| 21F8 | $\rightarrow$ | RIGHTWARDS ARROW WITH VERTICAL STROKE <br> ＝z notation partial function |
| 21F9 | $\leftrightarrow$ | LEFT RIGHT ARROW WITH VERTICAL STROKE <br> ＝z notation partial relation |
| 21FA | ${ }_{4}$ | LEFTWARDS ARROW WITH DOUBLE VERTICAL STROKE |
| 21FB | ＋ | RIGHTWARDS ARROW WITH DOUBLE VERTICAL STROKE <br> $=z$ notation finite function |
| 21FC | ${ }^{(1)}$ | LEFT RIGHT ARROW WITH DOUBLE VERTICAL STROKE <br> ＝z notation finite relation |
| 21FD | $\leftarrow$ | LEFTWARDS OPEN－HEADED ARROW |
| 21FE | $\rightarrow$ | RIGHTWARDS OPEN－HEADED ARROW |
| 21FF | $\leftrightarrow$ | LEFT RIGHT OPEN－HEADED ARROW |

$21 F 7+\overrightarrow{\text { LEFTWARDS ARROW WITH VERTICAL STROKE }}$ ＝z notation partial function
21F9 $\leftrightarrow$ LEFT RIGHT ARROW WITH VERTICAL STROKE ＝z notation partial relation
$\begin{array}{ll} & \text { STROKE } \\ 21 \mathrm{FB} \rightarrow \\ \text { RIGHTWARDS ARROW WITH DOUBLE VERTICAL }\end{array}$ STROKE
$=z$ notation finite function
21FC $\quad$（ LEFT RIGHT ARROW WITH DOUBLE VERTICAL STROKE
＝z notation finite relation
21FD $\leftarrow$ LEFTWARDS OPEN－HEADED ARROW
21FE $\rightarrow$ RIGHTWARDS OPEN－HEADED ARROW
$21 F F \quad \leftrightarrow$ LEFT RIGHT OPEN－HEADED ARROW

|  | 2B0 | 2B1 | 2B2 | 2B3 | 2B4 | 2B5 | 2B6 | 2B7 | 2B8 | 2B9 | 2BA | 2BB | 2BC | 2B | 2BE | 2BF |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 0 | $\underset{2 \mathrm{BOO}}{\substack{2}}$ |  |  | $\begin{aligned} & \text { + } \\ & 2 B 30 \end{aligned}$ | $\begin{aligned} & \rightleftharpoons \\ & \stackrel{2 B 40}{\rightleftharpoons} \end{aligned}$ | $\hbar$ $2 B 50$ |  | $\begin{aligned} & \boldsymbol{I}- \\ & 2 B 70 \end{aligned}$ | $\qquad$ | $\begin{array}{r} 7 \\ 2 \mathrm{~B} 90 \\ \hline \end{array}$ | $\begin{aligned} & \text { 2BAO } \\ & \hline \end{aligned}$ | $\underset{2 B B O}{M}$ | $2 B C O$ |  | $\Lambda$ <br> 2BEO | $\rangle$ <br> 2BF0 |
| 1 | $\begin{aligned} & \boxed{8} \\ & 2 B 01 \\ & \hline \end{aligned}$ |  | $5$ | $\underset{(2 B 31}{\leftarrow}$ | $\stackrel{\sim}{\sim}$ | $2 B 51$ | $2 \mathrm{~B} 61$ | 2B71 | $\begin{aligned} & \uparrow \downarrow \\ & 2881 \\ & \hline \end{aligned}$ | 2B91 | 2BA1 | $\stackrel{4}{4}$ | 2BC1 | 2BD1 | X 2BE1 |  |
| 2 | $\underset{2 B 02}{\Sigma y}$ |  | 2B22 | $\begin{gathered} \text { 2B32 } \end{gathered}$ | $\stackrel{\leftarrow}{\approx}$ | $\begin{array}{r} \dot{4} \\ 2 B 52 \\ \hline \end{array}$ | $\begin{aligned} & \longrightarrow \\ & 2 B 62 \end{aligned}$ | $\begin{aligned} & \rightarrow \mathbf{I} \\ & 2 \mathrm{~B} 72 \end{aligned}$ | $\underset{2 \mathrm{~L} 82}{\boldsymbol{\sim}}$ | 2B92 | $\underset{2 \mathrm{BA} 2}{\longrightarrow}$ | D | 2BC2 |  | 2BE2 |  |
| 3 | $\underset{2 B 03}{ }$ | 2B13 |  | foun <br> 2B33 | $\xrightarrow{3 B 43}$ |  | 2B63 | $\underset{2 \mathrm{t} 73}{\downarrow}$ | $\begin{gathered} \downarrow \uparrow \\ 2883 \\ \hline \end{gathered}$ | 2B93 | $\xrightarrow{\longrightarrow}$ | $\overbrace{2}^{2 B B 3}$ | 2BC3 |  | － 2BE3 |  |
| 4 | $\stackrel{\square}{\square}$ | 2B14 | 2B24 | $\begin{aligned} & k+ \\ & 2 B 34 \end{aligned}$ |  | 2B54 | $\begin{gathered} \longleftrightarrow \\ 2 B 64 \end{gathered}$ | $\begin{gathered} \|\leftrightarrow\| \\ 2 B 74 \end{gathered}$ |  |  | 2BA4 | E | 2BC4 |  | 2BE4 |  |
| 5 |  |  | $2 \mathrm{~B} 25$ | $\begin{aligned} & K+H \\ & 2 B 35 \end{aligned}$ | $\underset{\text { 2B45 }}{\rightleftharpoons}$ |  | $2 \mathrm{~B} 65$ | $\underset{2 B 75}{\downarrow}$ | 2B85 |  | $\underset{2 \mathrm{e} A 5}{\boldsymbol{f}}$ | $\sum_{2 B B 5}$ | $2 \mathrm{BC} 5$ |  |  |  |
| 6 | 2B06 | $\ggg 2 B 16$ | $2 \mathrm{~B} 26$ | $\begin{aligned} & K-1 \\ & 2836 \end{aligned}$ | $\overrightarrow{{ }_{2 B 46}}$ | OB |  | $\overline{\text { K }}$ |  |  | 2BA6 | $\sqrt{2 B B 6}$ | 2BC6 |  | 2BE6 |  |
| 7 | 2B07 |  |  | $\begin{gathered} \mathbb{H}-\prec \\ 2 \text { 2B37 } \end{gathered}$ | $\sim$ <br> 2B47 | $\bigcirc$ | $\begin{gathered} \text { त } \\ \text { 2B67 } \end{gathered}$ |  | $\underset{\substack{\text { 2B87 }}}{\substack{\text { L }}}$ |  |  | $\sum_{2 B B 7}$ | 2BC7 |  |  |  |
| 8 |  |  | $\begin{gathered} \diamond \\ 2 B 28 \\ \hline \end{gathered}$ | 〈•••••• <br> 2B38 | $\begin{aligned} & \overrightarrow{\mathrm{A}} \\ & 2 \mathrm{Z} 48 \end{aligned}$ |  | $\begin{array}{r} \boldsymbol{y} \\ 2 \mathrm{~B} 68 \end{array}$ | $\underset{2 B 78}{\underline{\boldsymbol{M}}}$ | 2888 |  | 2BA8 | 몸 | 2BC8 |  | $5$ |  |
| 9 | 2B09 | 2B19 | $2 \mathrm{~B} 29$ | $\begin{aligned} & \mathrm{H} \\ & 2 \mathrm{~K} 39 \end{aligned}$ | $\underset{\sim}{\sim}$ | 2B59 | ${ }_{2 \mathrm{~B} 69}$ | $\underset{2 B 79}{\underline{-}}$ | $\begin{gathered} 2889 \\ \end{gathered}$ |  | 2BA9 | 붐 <br> 2BB9 | 2BC9 |  | $\begin{gathered} \text { 2BE9 } \end{gathered}$ |  |
| A |  | 2B1A | $2 \mathrm{~B} 2 \mathrm{~A}$ | $\begin{aligned} & \mathrm{H} K \\ & 2 \mathrm{~K} 3 \mathrm{~A} \end{aligned}$ |  | $\prod_{2 B 5 \mathrm{~A}}^{\Omega}$ |  | $\begin{aligned} & 4 H \\ & 2 B 7 A \end{aligned}$ | $2 B 8 A$ |  | 2BAA |  | 2BCA |  | 2BEA |  |
| B | $\begin{aligned} & 18 \mathrm{ZOB} \\ & \end{aligned}$ | $2 \mathrm{~B} 1 \mathrm{~B}$ | $\begin{gathered} \Delta \\ 2 B 2 B \end{gathered}$ | $\begin{aligned} & K / K \\ & 2 \text { 2взв } \end{aligned}$ | $\begin{aligned} & \approx \\ & 2 \mathrm{Z} 4 \mathrm{~B} \end{aligned}$ | $\xlongequal[2 B 5 B]{ }$ |  | $\begin{gathered} \mathcal{F} \\ \text { 2B7B } \end{gathered}$ | （1） <br> 2B8B |  | 2BAB |  | 2BCB |  | $\begin{gathered} 4 \\ 2 B E B \\ \hline \end{gathered}$ |  |
| C |  | $2 \mathrm{~B} 1 \mathrm{C}$ | 2B2C | $\begin{aligned} & \mathbb{K} K \\ & 2 B 3 C \end{aligned}$ | $\begin{aligned} & \overline{2 B 4 C} \end{aligned}$ | $\underset{2 \mathrm{~B} 5 \mathrm{C}}{ }$ |  | $\begin{aligned} & H \mathrm{H} \\ & 2 \mathrm{B7C} \end{aligned}$ | $\underbrace{}_{2 \mathrm{BBC}}$ |  | 2 BAC |  | 2BCC |  | 11／ |  |
| D |  | $2 \mathrm{B1D}$ | 2B2D | $\begin{aligned} & \text { KHK } \\ & 2 B 3 D \end{aligned}$ | $\underset{2}{\Sigma}$ | $\downarrow$ |  | $\begin{gathered} \text { 表 } \\ \text { 2B7D } \end{gathered}$ | $\bigcup_{2 B 8 D}$ |  |  |  |  |  | 2BED |  |
| E | $\begin{gathered} \square \\ 2 \mathrm{BOE} \end{gathered}$ | 2B1E |  |  | $\uparrow$ <br> 2B4E | $L$ <br> 2B5E | $\circlearrowright$ <br> 2B6E | $\xrightarrow{\mid \xrightarrow{\longrightarrow}}$ <br> 2B7E | $2 \mathrm{~B} 8 \mathrm{E}$ |  | 2BAE | 2BBE |  |  | 2BEE |  |
| F | $\begin{array}{r} \boldsymbol{r} \\ 2 \mathrm{BOF} \end{array}$ | $2$ | $\bigcap_{2 B 2 F}$ | $\begin{aligned} & \sim \\ & 2 B 3 F \end{aligned}$ | $\downarrow$ <br> 2B4F | L | $\underbrace{5}_{2 B 6 F}$ | $\underset{\text { 2B7F }}{\underset{\sim}{7}}$ | $\underbrace{}_{2 \mathrm{BBF}}$ |  | 2BAF | $\begin{gathered} \square \\ 2 B B F \\ \hline \end{gathered}$ | 2BCF |  | $\begin{aligned} & \text { こ } \\ & \text { 2BEF } \end{aligned}$ |  |


| White and black arrows |  |
| :--- | :--- |
| Other white and black arrows to complete this set can be |  |
| found in the Arrows and Dingbats blocks. |  |
| 2B00 | $\checkmark$ |
| 2BORTH EAST WHITE ARROW |  |

## Circle

2 B24

BLACK LARGE CIRCLE
$\rightarrow 25 \mathrm{CF}$ black circle
$\rightarrow 25 \mathrm{EF} \bigcirc$ large circle
$\rightarrow$ 1F534 large red circle

## Diamonds and lozenges

2B25 * BLACK MEDIUM DIAMOND
$\rightarrow$ 25C6 black diamond
2B26 $\diamond$ WHITE MEDIUM DIAMOND
$\rightarrow 25 \mathrm{C} 7 \diamond$ white diamond
$\rightarrow 1$ F754 $\diamond$ alchemical symbol for soap
2B27 • BLACK MEDIUM LOZENGE
2B28 • WHITE MEDIUM LOZENGE
$\rightarrow$ 25CA $\diamond$ lozenge
2B29 • BLACK SMALL DIAMOND
$\rightarrow 22$ C4 - diamond operator
$\rightarrow$ 1F538 small orange diamond
2B2A • BLACK SMALL LOZENGE
2B2B - WHITE SMALL LOZENGE
Ellipses
2B2C - BLACK HORIZONTAL ELLIPSE
2B2D OHITE HORIZONTAL ELLIPSE
2B2E BLACK VERTICAL ELLIPSE
2B2F 0 WHITE VERTICAL ELLIPSE

## Mathematical arrows

These provide the opposite direction complement for arrows for mathematical use not originally encoded in both a leftwards and rightwards direction.

```
2B30 LEFT ARROW WITH SMALL CIRCLE
    21F4 right arrow with small circle
2B31 \Xi THREE LEFTWARDS ARROWS
    ->21F6 引 three rightwards arrows
2B32 LEFT ARROW WITH CIRCLED PLUS
    \rightarrow 2 7 F 4 ~ \oplus ~ r i g h t ~ a r r o w ~ w i t h ~ c i r c l e d ~ p l u s
2B33 (mm LONG LEFTWARDS SQUIGGLE ARROW
    \rightarrow 2 7 F F ~ m m ~ l o n g ~ r i g h t w a r d s ~ s q u i g g l e ~ a r r o w ~
    21DC}<m=l\mp@code{leftwards squiggle arrow
2B34 * LEFTWARDS TWO-HEADED ARROW WITH
    VERTICAL STROKE
    \rightarrow 2 9 0 0 \rightarrow > ~ r i g h t w a r d s ~ t w o - h e a d e d ~ a r r o w ~ w i t h ~
        vertical stroke
2B35 LEFTWARDS TWO-HEADED ARROW WITH
    DOUBLE VERTICAL STROKE
    \rightarrow 2 9 0 1 ~ \# ~ r i g h t w a r d s ~ t w o - h e a d e d ~ a r r o w ~ w i t h ~
        double vertical stroke
2B36 < LEFTWARDS TWO-HEADED ARROW FROM BAR
    \rightarrow 2 9 0 5 ~ H ~ r i g h t w a r d s ~ t w o - h e a d e d ~ a r r o w ~ f r o m
        bar
2B37 *-< LEFTWARDS TWO-HEADED TRIPLE DASH
    ARROW
    \rightarrow 2 9 1 0 ~ r \gg ~ r i g h t w a r d s ~ t w o - h e a d e d ~ t r i p l e ~ d a s h
        arrow
2B38 <.... LEFTWARDS ARROW WITH DOTTED STEM
            \rightarrow 2 9 1 1 ~ = \rightarrow > ~ r i g h t w a r d s ~ a r r o w ~ w i t h ~ d o t t e d ~ s t e m ~
2B39 ** LEFTWARDS ARROW WITH TAIL WITH
    VERTICAL STROKE
    \rightarrow 2 9 1 4 \gg ~ r i g h t w a r d s ~ a r r o w ~ w i t h ~ t a i l ~ w i t h ~ v e r t i c a l ~
        stroke
2B3A 4* LEFTWARDS ARROW WITH TAIL WITH DOUBLE
    VERTICAL STROKE
    \rightarrow 2 9 1 5 ~ ) / \sim ~ r i g h t w a r d s ~ a r r o w ~ w i t h ~ t a i l ~ w i t h ~ d o u b l e
        vertical stroke
```



| 2B65 | 1 | UP DOWN TRIANGLE-HEADED ARROW $=\mathrm{w}-3050$ <br> $\rightarrow 2195$ I up down arrow |
| :---: | :---: | :---: |
| 2B66 | $\leqslant$ | NORTH WEST TRIANGLE-HEADED ARROW $\begin{aligned} & =w-3037 \\ & \rightarrow 2196 \star \text { north west arrow } \end{aligned}$ |
| 2B67 | $\nearrow$ | NORTH EAST TRIANGLE-HEADED ARROW $\begin{aligned} & =w-3038 \\ & \rightarrow 2197 \text { 冗 north east arrow } \end{aligned}$ |
| 2B68 | $\downarrow$ | $\begin{aligned} & \text { SOUTH EAST TRIANGLE-HEADED ARROW } \\ & =\mathrm{w}-3040 \\ & \rightarrow 2198 \searrow \text { south east arrow } \end{aligned}$ |
| 2B69 | $\checkmark$ | SOUTH WEST TRIANGLE-HEADED ARROW $\begin{aligned} & =w-3039 \\ & \rightarrow 2199 \swarrow \text { south west arrow } \end{aligned}$ |

Triangle-headed dashed arrows
2B6A $+\cdots$ LEFTWARDS TRIANGLE-HEADED DASHED ARROW
$=\mathrm{w}-3051$
$\rightarrow 21$ E0 $\rightarrow \cdots$ leftwards dashed arrow
2B6B $\uparrow$ UPWARDS TRIANGLE-HEADED DASHED ARROW
$=\mathrm{w}$-3053
$\rightarrow 21 E 1 \hat{i}$ upwards dashed arrow
2B6C $\quad \rightarrow$ RIGHTWARDS TRIANGLE-HEADED DASHED ARROW
$=\mathrm{w}$-3052
$\rightarrow 21 E 2 \rightarrow$ rightwards dashed arrow
2B6D $\ddagger$ DOWNWARDS TRIANGLE-HEADED DASHED ARROW
$=\mathrm{w}$-3054
$\rightarrow 21$ E3 downwards dashed arrow
Triangle-headed open circle arrows
2B6E $\circlearrowright$ CLOCKWISE TRIANGLE-HEADED OPEN CIRCLE ARROW
$=\mathrm{w}-3080$
$\rightarrow 21 \mathrm{BB} \cup$ clockwise open circle arrow
2B6F $\circlearrowleft$ ANTICLOCKWISE TRIANGLE-HEADED OPEN CIRCLE ARROW
$=\mathrm{w}$-3081
$\rightarrow 21 \mathrm{BA} \cup$ anticlockwise open circle arrow
Triangle-headed arrows to bar
2B70 $\leftarrow$ LEFTWARDS TRIANGLE-HEADED ARROW TO
BAR
$=W-3041$
$=$ left tab
$\rightarrow 21 E 4 \leftarrow$ leftwards arrow to bar
2B71 $\bar{\uparrow}$ UPWARDS TRIANGLE-HEADED ARROW TO BAR
$=w-3043$
= up tab
$\rightarrow 2912$ T upwards arrow to bar
2B72 $\rightarrow$ RIGHTWARDS TRIANGLE-HEADED ARROW TO BAR
$=\mathrm{w}$-3042
= right tab
$\rightarrow 21$ E5 $\rightarrow$ rightwards arrow to bar
2B73 $\downarrow$ DOWNWARDS TRIANGLE-HEADED ARROW TO BAR
$=w-3044$
= down tab
$\rightarrow 2913 \downarrow$ downwards arrow to bar
2B74 $\leftrightarrow \leftrightarrow$ LEFT RIGHT TRIANGLE-HEADED ARROW TO BAR
2 B75 I UP DOWN TRIANGLE-HEADED ARROW TO BAR

| 2B76 | $\bar{\chi}$ | NORTH WEST TRIANGLE-HEADED ARROW TO BAR $\begin{aligned} & =w-3045 \\ & =\text { home } \end{aligned}$ |
| :---: | :---: | :---: |
| 2B77 | $\bar{\nearrow}$ | NORTH EAST TRIANGLE-HEADED ARROW TO BAR |
| 2B78 | $\geq$ | SOUTH EAST TRIANGLE-HEADED ARROW TO $\begin{aligned} & \text { BAR } \\ & =w-3046 \\ & =\text { end } \end{aligned}$ |
| 2B79 | $\underline{\underline{1}}$ | SOUTH WEST TRIANGLE-HEADED ARROW TO BAR |

Triangle-headed arrows with double horizontal stroke
2B7A * LEFTWARDS TRIANGLE-HEADED ARROW WITH DOUBLE HORIZONTAL STROKE
2B7B 手 UPWARDS TRIANGLE-HEADED ARROW WITH DOUBLE HORIZONTAL STROKE
$=w$-3047
= page up
2B7C $\quad \rightarrow$ RIGHTWARDS TRIANGLE-HEADED ARROW WITH DOUBLE HORIZONTAL STROKE
2B7D $\ddagger$ DOWNWARDS TRIANGLE-HEADED ARROW WITH DOUBLE HORIZONTAL STROKE $=w-3048$
= page down

## Paired triangle-headed arrows

2B7E $\xrightarrow[\rightarrow]{\leftrightarrows}$ HORIZONTAL TAB KEY $=w-3070$
2B7F $£ \uparrow$ VERTICAL TAB KEY
$=w-3071$
2B80 $\leftrightarrows$ LEFTWARDS TRIANGLE-HEADED ARROW OVER RIGHTWARDS TRIANGLE-HEADED ARROW $=w$-3068
$\rightarrow 21 \mathrm{C} 6 \leftrightarrows$ leftwards arrow over rightwards arrow
2B81 $\uparrow \downarrow$ UPWARDS TRIANGLE-HEADED ARROW LEFTWARDS DOWNWARDS OF TRIANGLEHEADED ARROW
2B82 $\rightleftarrows \quad$ RIGHTWARDS TRIANGLE-HEADED ARROW OVER LEFTWARDS TRIANGLE-HEADED ARROW
2B83 $\downarrow \uparrow$ DOWNWARDS TRIANGLE-HEADED ARROW LEFTWARDS OF UPWARDS TRIANGLE-HEADED ARROW
$=\mathrm{w}$-3069
$\rightarrow 21 \mathrm{C} 6 \leftrightarrows$ leftwards arrow over rightwards arrow
2B84 $\leftleftarrows$ LEFTWARDS TRIANGLE-HEADED PAIRED ARROWS
$=\mathrm{w}$-3072
$\rightarrow 21 C 7 \leftleftarrows$ leftwards paired arrows
2B85 $\uparrow \uparrow$ UPWARDS TRIANGLE-HEADED PAIRED ARROWS
$=W-3074$
$\rightarrow 21 \mathrm{C} \uparrow \uparrow$ upwards paired arrows
2B86 $\rightarrow$ RIGHTWARDS TRIANGLE-HEADED PAIRED ARROWS
$=\mathrm{w}$-3073
$\rightarrow 21 \mathrm{C} 9 \rightrightarrows$ rightwards paired arrows
2 B87 $\downarrow$ DOWNWARDS TRIANGLE-HEADED PAIRED ARROWS
$=\mathrm{w}$-3075
$\rightarrow 21 \mathrm{CA} \downarrow \downarrow$ downwards paired arrows

## Circled arrows

2B88 $\in$ LEFTWARDS BLACK CIRCLED WHITE ARROW $=W$ - 1219
2B89 (1) UPWARDS BLACK CIRCLED WHITE ARROW $=\mathrm{W}-1221$

| 2B8A | $\bigcirc$ | RIGHTWARDS BLACK CIRCLED WHITE ARROW <br> $=\mathrm{w}-1220$ <br> $\rightarrow 27 B 2$ circled heavy white rightwards arrow |
| :---: | :---: | :---: |
| 2B8B | （1） | DOWNWARDS BLACK CIRCLED WHITE ARROW $=w-1222$ |
| Triangle－headed u－shaped arrows |  |  |
| 2B8C | 5 | ANTICLOCKWISE TRIANGLE－HEADED RIGHT U－ SHAPED ARROW $=w-3079$ |
| 2B8D | $\cup$ | ANTICLOCKWISE TRIANGLE－HEADED BOTTOM U－SHAPED ARROW $=w-3077$ |
| 2B8E | G | ANTICLOCKWISE TRIANGLE－HEADED LEFT U－ SHAPED ARROW $=w-3078$ |
| 2B8F | $\Omega$ | ANTICLOCKWISE TRIANGLE－HEADED TOP U－ SHAPED ARROW <br> ＝ w －3076 <br> $\rightarrow 21$ B6 $\curvearrowleft$ anticlockwise top semicircle arrow |
| Keyboard symbols |  |  |
| 2B90 | $\checkmark$ | RETURN LEFT <br> $=\mathrm{w}$－3064 <br> $\rightarrow$ 23CE $\sqrt{ }$ return symbol |
| 2B91 | $\zeta$ | RETURN RIGHT <br> ＝w－3065 |
| 2B92 | － | NEWLINE LEFT $=w-3066$ |
| 2B93 | 5 | NEWLINE RIGHT $=w-3067$ |
| Triangle－headed arrows with bent tips |  |  |
| 2BA0 | $\leftarrow$ | DOWNWARDS TRIANGLE－HEADED ARROW WITH LONG TIP LEFTWARDS $=w-3056$ <br> $\rightarrow 21 \mathrm{B2}$ 』 downwards arrow with tip leftwards |
| 2BA1 | $\checkmark$ | DOWNWARDS TRIANGLE－HEADED ARROW WITH LONG TIP RIGHTWARDS $=w-3057$ <br> $\rightarrow 21 \mathrm{B3} \mathrm{~L}$ downwards arrow with tip rightwards |
| 2BA2 | $\vdash$ | UPWARDS TRIANGLE－HEADED ARROW WITH LONG TIP LEFTWARDS $=\mathrm{w}-3058$ <br> $\rightarrow 21 \mathrm{BO} \uparrow$ upwards arrow with tip leftwards |
| 2BA3 | $\stackrel{ }{ }$ | UPWARDS TRIANGLE－HEADED ARROW WITH LONG TIP RIGHTWARDS $=\mathrm{w}-3059$ <br> $\rightarrow 21 \mathrm{~B} 1$ 『 upwards arrow with tip rightwards |
| 2BA4 | ¢ | LEFTWARDS TRIANGLE－HEADED ARROW WITH LONG TIP UPWARDS $=\mathrm{w}-3060$ <br> $\rightarrow 2$ B11～leftwards arrow with tip upwards |
| 2BA5 | 」 | RIGHTWARDS TRIANGLE－HEADED ARROW WITH LONG TIP UPWARDS $=w-3061$ <br> $\rightarrow 2 \mathrm{BOF} \rightarrow$ rightwards arrow with tip upwards |
| 2BA6 | 「 | LEFTWARDS TRIANGLE－HEADED ARROW WITH LONG TIP DOWNWARDS $=w-3062$ <br> $\rightarrow 2 \mathrm{~B} 10 \sim$ leftwards arrow with tip downwards |
| 2BA7 | 7 | RIGHTWARDS TRIANGLE－HEADED ARROW WITH LONG TIP DOWNWARDS <br> $=w$－3063 <br> $\rightarrow 2 \mathrm{BOE} \neg$ rightwards arrow with tip downwards |

Black curved arrows

| 2BA8 | $\sim$ | BLACK CURVED DOWNWARDS AND LEFTWARDS ARROW $=w-3201$ |
| :---: | :---: | :---: |
| 2BA9 | $\rightarrow$ | BLACK CURVED DOWNWARDS AND RIGHTWARDS ARROW $=w-3202$ <br> $\rightarrow 27 A 5 \rightarrow$ heavy black curved downwards and rightwards arrow |
| 2BAA | $\bigcirc$ | BLACK CURVED UPWARDS AND LEFTWARDS ARROW $=w-3203$ |
| 2BAB | $\rightarrow$ | BLACK CURVED UPWARDS AND RIGHTWARDS ARROW <br> ＝ $\mathrm{w}-3204$ <br> $\rightarrow 27$ A6 $\boldsymbol{\rightarrow}$ heavy black curved upwards and rightwards arrow |
| 2BAC | t | BLACK CURVED LEFTWARDS AND UPWARDS ARROW $=w-3205$ |
| 2BAD | J | BLACK CURVED RIGHTWARDS AND UPWARDS ARROW $=w-3206$ |
| 2BAE | 1 | BLACK CURVED LEFTWARDS AND DOWNWARDS ARROW $=w-3207$ |
| 2BAF | 1 | BLACK CURVED RIGHTWARDS AND DOWNWARDS ARROW $=w-3208$ |

Ribbon arrows

| 2BBO | － | RIBBON ARROW DOWN LEFT $=w-1195$ |
| :---: | :---: | :---: |
| 2BB1 | （ ${ }^{4}$ | RIBBON ARROW DOWN RIGHT ＝w－1196 |
| 2BB2 | 玄 | RIBBON ARROW UP LEFT $=\mathrm{w}-1197$ |
| 2BB3 | a | RIBBON ARROW UP RIGHT $=w-1198$ |
| 2BB4 | A | RIBBON ARROW LEFT UP $=w-1199$ |
| 2BB5 | 㐱 | RIBBON ARROW RIGHT UP $=w-1200$ |
| 2BB6 | ， | RIBBON ARROW LEFT DOWN $=W-1201$ |
| 2BB7 | ทֶ | RIBBON ARROW RIGHT DOWN $=\mathrm{w}-1202$ |

## Keyboard symbols

2BB8 令 UPWARDS WHITE RECTANGULAR ARROW FROM BAR
＝w－3088
＝caps lock
－may also be a shift lock
$\rightarrow 21 \mathrm{EA}$ 菅 upwards white arrow from bar
2BB9 令 UPWARDS WHITE RECTANGULAR ARROW FROM BAR WITH HORIZONTAL BAR
＝w－3089
＝caps lock
$\rightarrow 21 \mathrm{EC}$ II upwards white arrow on pedestal with horizontal bar

## Miscellaneous arrow symbol

2BBA $\ddagger\}$ FOUR CORNER ARROWS CIRCLING ANTICLOCKWISE
＝w－0096
＝loop

## White rectangular arrow shaft

Vertical alignment and thickness compatible with white arrows

```
2BBE व WHITE RECTANGULAR ARROW SHAFT WIDTH
    ONE
    =W-1249
2BBF ם WHITE RECTANGULAR ARROW SHAFT WIDTH
    TWO THIRDS
    =W-1250
```


## Centred geometric shapes

2BCO ■ BLACK SQUARE CENTRED
＝ $\mathrm{w}-2190$
2BC1 BLACK DIAMOND CENTRED
＝W－2191
2BC2 TURNED BLACK PENTAGON
＝w－2193
2BC3－HORIZONTAL BLACK OCTAGON
$=\mathrm{w}$－2196
＝black octagon 1
2BC4 BLACK OCTAGON
＝ w －2197
＝black octagon 2
2BC5－BLACK MEDIUM UP－POINTING TRIANGLE CENTRED
＝W－3129
2BC6 $\boldsymbol{\nabla}$ BLACK MEDIUM DOWN－POINTING TRIANGLE CENTRED
＝w－3130
$2 \mathrm{BC7}$－BLACK MEDIUM LEFT－POINTING TRIANGLE CENTRED
$=\mathrm{w}-3131$
2BC8 BLACK MEDIUM RIGHT－POINTING TRIANGLE CENTRED $=w-3132$

```
Miscellaneous symbol
2BC9 CHECKER BOARD
    = w-0046
    \rightarrow 2 5 9 E \| q u a d r a n t ~ u p p e r ~ r i g h t ~ a n d ~ l o w e r ~ l e f t
```

Half circles
2BCA - TOP HALF BLACK CIRCLE
$=\mathrm{w}$-2188
2BCB - BOTTOM HALF BLACK CIRCLE
$=\mathrm{w}-2189$

## Cusp shapes

2BCC $\diamond$ LIGHT FOUR POINTED BLACK CUSP
$=\mathrm{w}-2246$
$\rightarrow 2726$ black four pointed star
2BCD $\quad$ R ROTATED LIGHT FOUR POINTED BLACK CUSP $=\mathrm{w}-2247$
2BCE $\downarrow$ WHITE FOUR POINTED CUSP
$=\mathrm{w}$－1178
$\rightarrow 2727$ « white four pointed star
2BCF ROTATED WHITE FOUR POINTED CUSP
$=\mathrm{w}-1179$
$\rightarrow 2311$ ■ square lozenge
Shadowed geometric shapes
2BDO ○ LOWER RIGHT SHADOWED WHITE CIRCLE
$=\mathrm{w}-1109$
＝circle shadow down
$\rightarrow 274 \mathrm{D}$ O shadowed white circle

| 2BD1 O | UPPER RIGHT SHADOWED WHITE CIRCLE $=w-1166$ <br> $\rightarrow$ 274D O shadowed white circle |
| :---: | :---: |
| Oval shape |  |
| 2BD2 | LEFT SHADOWED BLACK OVAL $=\mathrm{w}-0212$ <br> ＝hole |
| Keyboard symbol |  |
| 2BEO 囚 | UP ARROWHEAD IN A RECTANGLE BOX <br> $=\mathrm{w}-1121$ <br> ＝escape <br> $\rightarrow 2353 \boxtimes$ apl functional symbol quad up |

## Ballot symbols

```
2BE1 x BALLOT SCRIPT X
    =x mark
```

    = w -2079
    2BE2 ख BALLOT BOX WITH SCRIPT X
= box $\times$ mark
= w -2081
2BE3 $\times$ BALLOT BOLD SCRIPT X
= x mark bold
$\rightarrow 2717 \boldsymbol{X}$ ballot x
$=W$-1251
2BE4 $\mathbb{\square}$ BALLOT BOX WITH BOLD SCRIPT X
= box x mark bold
$=\mathrm{w}$-1253
2BE5 $\boxtimes$ BALLOT BOX WITH LIGHT X
$=$ box $x$
$=\mathrm{w}$-2083
$\rightarrow$ 2612 $\begin{aligned} & \text { ballot box with } \mathrm{x}\end{aligned}$
2BE6 $\otimes$ CIRCLED X
$=\mathrm{w}$-2085
$\rightarrow 2297 \otimes$ circled times
2BE7 $\otimes$ CIRCLED BOLD X
$=$ circled $\times$ bold
= w-2086
2BE8 $\theta$ CIRCLED REVERSE LIGHT SOLIDUS
= prohibit
$=\mathrm{w}$-2087
2BE9 $\checkmark$ LIGHT CHECK MARK
= check
$=\mathrm{w}$-2080
2BEA $\checkmark$ BALLOT BOX WITH BOLD CHECK
= box mark bold
$=\mathrm{w}-1254$

## Position indicator

| 2BEB \＃ | SQUARE POSITION INDICATOR |
| ---: | :--- |
|  | $=w-1176$ |
|  | $=$ register square |
|  | $\rightarrow 2316 \phi$ position indicator |

## Three－rays symbols

```
2BEC w. THREE RAYS ABOVE
    = W-0237
2BED " THREE RAYS BELOW
    = w-0238
2BEE シ THREE RAYS LEFT
    = w-0239
    ->269E }\geqslant\mathrm{ three lines converging right
2BEF ミ THREE RAYS RIGHT
    = W-0240
    \rightarrow 2 6 9 F = ~ t h r e e ~ l i n e s ~ c o n v e r g i n g ~ l e f t
```

```
Diamond shape
2BFO \diamond UNCERTAINTY SIGN
        = w-1180
        = query
        \rightarrow 2 3 7 0 ? ~ a p l ~ f u n c t i o n a l ~ s y m b o l ~ q u a d ~ q u e s t i o n
        \rightarrow \text { FFFD < replacement character}
```



Combining half marks
FE20 $\sigma$ COMBINING LIGATURE LEFT HALF
FE21 COMBINING LIGATURE RIGHT HALF $\rightarrow 0361$ combining double inverted breve
FE22 COMBINING DOUBLE TILDE LEFT HALF
FE23 - COMBINING DOUBLE TILDE RIGHT HALF $\rightarrow 0360$ combining double tilde

## Continuous macrons for Coptic

These are used in combinations to represent continuous macrons over a sequence of Coptic letters.

| FE24 | - | COMBINING MACRON LEFT HALF |
| :---: | :---: | :---: |
| FE25 | $\overline{0}$ | COMBINING MACRON RIGHT HALF |
| FE26 | - | COMBINING CONJOINING MACRON |
|  |  | $\rightarrow 0304$ ¢ combining |
|  |  | $\rightarrow$ 035E - combining double ma |

## Combining half marks below

These are used in combinations to represent ligature, tilde, and macron that extend below more than two characters
FE27 COMBINING LIGATURE LEFT HALF BELOW
FE28 9 COMBINING LIGATURE RIGHT HALF BELOW $\rightarrow$ 035C e combining double breve below
FE29 - COMBINING TILDE LEFT HALF BELOW
FE2A © COMBINING TILDE RIGHT HALF BELOW
FE2B © COMBINING MACRON LEFT HALF BELOW
FE2C - $\quad$ COMBINING MACRON RIGHT HALF BELOW
FE2D © COMBINING CONJOINING MACRON BELOW

|  | 11AC | 11AD | 11AE | 11AF |
| :---: | :---: | :---: | :---: | :---: |
| 0 |  |  |  | 11AFO |
| 1 |  | $\underset{111001}{Z}$ | 11AE1 | $\Longrightarrow$ <br> 11AF1 |
| 2 | ${ }_{11 \mathrm{AC2}}$ | $\underset{11 \mathrm{AD} 2}{\boldsymbol{p}}$ | $\begin{gathered} P \\ 11 \mathrm{AE} 2 \end{gathered}$ | $\underset{\text { 11AF2 }}{7}$ |
| 3 | $11 \mathrm{AC3}$ |  | $8$ |  |
| 4 |  | $H$ | 11AE4 |  |
| 5 |  |  |  |  |
| 6 | $\xrightarrow{11 \mathrm{AC6}}$ | $\underset{{ }_{11 A D 6}}{2}$ | $\begin{gathered} \text { • } \\ \text { 11AE6 } \end{gathered}$ | U <br> 11AF6 |
| 7 | $\underset{11 \mathrm{AC7}}{ }$ | 11AD7 |  | LV <br> 11AF7 |
| 8 | $8$ | $\underset{11 \mathrm{AD} 8}{\boldsymbol{A}}$ | 11AE8 |  |
| 9 |  |  | 11AE9 |  |
| A | $3$ | $\boldsymbol{7}$ | $\\| \bullet$ <br> 11AEA |  |
| B | $e_{11 \mathrm{ACB}}$ | $\boldsymbol{N}_{11 \mathrm{ADB}}$ |  |  |
| C | $\mathcal{E}_{11 \mathrm{ACC}}$ |  | F |  |
| D |  | $7$ |  |  |
| $E$ | 11ACE | $H$ 11ADE |  |  |
| F |  | $\underset{11 \mathrm{ADF}}{\mathbf{V}}$ | 11AEF |  |


| 11AC0 | [6 | PAU CIN HAU LETTER PA |
| :---: | :---: | :---: |
| 11AC1 | (1) | PAU CIN HAU LETTER KA |
| 11AC2 | C | PAU CIN HAU LETTER LA |
| 11AC3 | Q | PAU CIN HAU LETTER MA |
| 11AC4 | B | PAU CIN HAU LETTER DA |
| 11 AC5 | U | PAU CIN HAU LETTER ZA |
| 11AC6 | ก | PAU CIN HAU LETTER VA |
| 11 AC7 | 2 | PAU CIN HAU LETTER NGA |
| 11AC8 | 2 | PAU CIN HAU LETTER HA |
| 11AC9 | r | PAU CIN HAU LETTER GA |
| 11ACA | X | PAU CIN HAU LETTER KHA |
| 11ACB | e | PAU CIN HAU LETTER SA |
| 11ACC | $\varepsilon$ | PAU CIN HAU LETTER BA |
| 11ACD | И | PAU CIN HAU LETTER CA |
| 11ACE | L | PAU CIN HAU LETTER TA |
| 11ACF | 6 | PAU CIN HAU LETTER THA |
| 11AD0 | © | PAU CIN HAU LETTER NA |
| 11AD1 | Z | PAU CIN HAU LETTER PHA |
| 11AD2 | ? | PAU CIN HAU LETTER RA |
| 11AD3 | h | PAU CIN HAU LETTER FA |
| 11AD4 | H | PAU CIN HAU LETTER CHA |
| Vowels |  |  |
| 11AD5 | $\gamma$ | PAU CIN HAU LETTER A |
| 11AD6 | 2 | PAU CIN HAU LETTER E |
| 11AD7 | ๆ | PAU CIN HAU LETTER I |
| 11AD8 | A | PAU CIN HAU LETTER O |
| 11AD9 | d | PAU CIN HAU LETTER U |
| 11ADA | 7 | PaU CIN HAU LETTER UA |
| 11ADB | $\wedge$ | PAU CIN HAU LETTER IA |

## Final consonants

11ADC $\vartheta$ PAU CIN HAU LETTER FINAL P
11ADD T PAU CIN HAU LETTER FINAL K
11ADE H PAU CIN HAU LETTER FINALT
11ADF V PAU CIN HAU LETTER FINAL M
11AEO 3 PAU CIN HAU LETTER FINAL N
11AE1 $\cap$ PAU CIN HAU LETTER FINAL L
11AE2 P PAU CIN HAU LETTER FINAL W
11AE3 2 PAU CIN HAU LETTER FINAL NG
11AE4 O PAU CIN HAU LETTER FINAL Y

## Tone marks

11AE5 I PAU CIN HAU RISING TONE LONG
11AE6 1. PAU CIN HAU RISING TONE
11AE7 : PAU CIN HAU SANDHI GLOTTAL STOP
11AE8 II PAU CIN HAU RISING TONE LONG FINAL
11AE9 II. PAU CIN HAU RISING TONE FINAL
11AEA II: PAU CIN HAU SANDHI GLOTTAL STOP FINAL
11AEB 1 PAU CIN HAU SANDHI TONE LONG
11AEC F: PAU CIN HAU SANDHI TONE
11AED ir PAU CIN HAU SANDHI TONE LONG FINAL
11AEE if: PAU CIN HAU SANDHI TONE FINAL
11AEF - PAU CIN HAU MID-LEVEL TONE
11AFO : PAU CIN HAU GLOTTAL STOP VARIANT
11AF1 $\rightrightarrows$ PAU CIN HAU MID-LEVEL TONE LONG FINAL
11AF2 $\quad 3$ PAU CIN HAU MID-LEVEL TONE FINAL
11AF3 $\downarrow$ PAU CIN HAU LOW-FALLING TONE LONG
11AF4 $\downarrow$ PAU CIN HAU LOW-FALLING TONE
11AF5 : PAU CIN HAU GLOTTAL STOP
11AF6 U PAU CIN HAU LOW-FALLING TONE LONG FINAL


1F40 1F41 1F42 1F43 1F44 1F45 1F46 1F47 1F48 1F49 1F4A 1F4B 1F4C 1F4D 1F4E 1F4F

|  | $\underset{\substack{\mathrm{F} 400}}{\underset{\sim}{2}}$ | 絾 <br> 1 F410 | 8 | Re 1F430 | (8)(0) |  | ${ }_{1 F 460}$ | 毣 <br> $1 F 470$ |  |  <br> 1 F490 | $3$ 1F4AO | $\underset{1 F 4 B 0}{\$}$ | DVD <br> 1 F4C0 | $C_{1 F 4 D 0}$ |  | $\underset{\text { 1F4F0 }}{\substack{i n}}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | $\underbrace{\infty}_{1 F 401}$ | Tip | er | （－） <br> 1 F431 | （0） <br> 1 F441 | $\underset{1 F 451}{1}$ | 10 <br> 1F461 | $\text { ( } 6$ $1 \mathrm{~F} 471$ | $\begin{gathered} \text { 敬 } \\ 1 F 481 \end{gathered}$ | (3)운 $1 F 491$ | 汽 <br> 1F4A1 |  | $\vartheta$ <br> 1 F4C1 | $\begin{aligned} & \square ?^{2} \\ & { }^{2}=401 \end{aligned}$ | 8 <br> 1F4E1 | 葍 <br> 1F4F1 |
| 2 | Min | 莩 9 <br> $1 F 412$ | 露 <br> 1F422 | 1F432 | $\overbrace{1 F 442}$ | $\begin{aligned} & 2 \\ & 1 F 452 \end{aligned}$ | [ <br> 1F462 | $\begin{gathered} \hat{心} \\ \text { 1F472 } \end{gathered}$ | ${ }^{2}$ <br> 1F482 | 品 <br> 15492 | r <br> 1F4A2 | $\$$ <br> 1F4B2 | v <br> 1F4C2 | 1F4D2 | 酮 <br> 1F4E2 | $\Rightarrow$ |
| 3 | $\begin{gathered} 46-20 \\ 1 F 403 \end{gathered}$ | 空 <br> 1F413 | 號 <br> 1F423 |  <br> 1 1F433 |  | $6 \Omega$ | $\rho 8$ <br> 1F463 |  |  | $\begin{aligned} & \text { ‘́son" } \\ & \text { 1F493 } \end{aligned}$ | 1F4A3 |  | 霊 <br> 1F4C3 | 向 <br> 1F4D3 |  | $\begin{aligned} & \text { 1(2) } \\ & \text { 1F4F3 } \end{aligned}$ |
| 4 | $5$ 1F404 | 1F414 | 识 <br> 1F424 | $\begin{gathered} \text { 4in } \\ 1 F 434 \end{gathered}$ | 1F444 | $0$ <br> 1F454 | $\Omega$ | 1F474 | 人 <br> 1F484 |  | $\begin{aligned} & \text { ZZZ } \\ & \text { 1F4A4 } \end{aligned}$ |  | 里 <br> 1F4C4 | 1F4D4 | 買 <br> 1F4E4 | 蓈 <br> 1F4F4 |
| 5 |  | $\begin{aligned} & 2515\} \\ & 1 F 415 \end{aligned}$ |  | $1 \text { F435 }$ | 1 F445 | $E$ | $\Omega$ <br> 1 F465 | (Fand | $\begin{aligned} & 9 g_{9}^{y} \\ & 1 F 485 \end{aligned}$ |  | S 1F4A5 | $\$$ <br> 1F4B5 | $\begin{aligned} & \text { 繙 } \\ & \text { 1F4C5 } \end{aligned}$ | 1F4D5 | 是 | （B） <br> 1F4F5 |
| 6 |  | $\begin{aligned} & 26-17 \\ & 17416 \end{aligned}$ | $\begin{aligned} & 8 \\ & 1 F 426 \end{aligned}$ |  | $8$ 1F446 | $\begin{gathered} \text { 開 } \\ 1 F 456 \end{gathered}$ | क人 <br> 1 F466 | 會 <br> 1F476 | 寀 <br> 1F486 | $\begin{gathered} 6+5 \\ 17496 \\ \hline \end{gathered}$ | $\rho_{0}$ <br> 1F4A6 | $€$ <br> 1F4B6 | 12 <br> 1746 | $\underset{1 F 4 D 6}{\infty}$ | （7） <br> 1F4E6 | $\Psi_{1 F 4 F 6}$ |
| 7 | $\{2$ <br> 1F407 | ？ <br> 1 F417 | 1 <br> 1F427 | （8） <br> 1F437 | $k$ <br> 1F447 | $\pi$ <br> 1 F457 | 6． <br> 1F467 | （10） <br> 1 F477 | rat <br> 1F487 | $0$ | 1 <br> 1F4A7 | $£$ <br> 1F4B7 | $5=$ <br> 1F4C7 | $\begin{aligned} & \text { 1F4D7 } \\ & \hline \end{aligned}$ | 或 <br> 1F4E7 | 1F4F7 |
| 8 | $\begin{aligned} & 5 \sim 3 \\ & 1 F 408 \end{aligned}$ |  | 等 <br> 1 F428 | $10$ <br> 1F438 | $\underset{1 F 448}{\varepsilon}$ | 綗 |  | $\begin{aligned} & \text { Sixicis } \\ & \text { 1F478 } \end{aligned}$ | $\begin{gathered} \text { 急 } \\ \text { 1F488 } \end{gathered}$ | $\%$ <br> 1 F498 | $\begin{aligned} & =3 \\ & 1 F 4 A 8 \end{aligned}$ | 用皃 <br> 1F4B8 | $\begin{aligned} & \text { 眷 } \\ & 1 \text { 1F4C8 } \end{aligned}$ | $\begin{aligned} & \text { P1F4D8 } \\ & \hline \end{aligned}$ | N/IN |  |
| 9 |  |  | $\begin{aligned} & \text { ODO } \\ & 1 F 429 \end{aligned}$ | (99) <br> 1F439 | $\underset{1 F 449}{3}$ | 1F459 |  |  | $\begin{gathered} 5 \\ 1 F 489 \end{gathered}$ | 1F499 | $\underbrace{e^{5}}_{\text {1F4A9 }}$ | $\begin{aligned} & \text { 様 } \\ & \text { 1F4B9 } \end{aligned}$ | 里 <br> 1F4C9 | 1F4D9 | $\underset{\text { 1F4E9 }}{\stackrel{n}{4}}$ | 1F4F9 |
| A | § <br> 1F40A | 0 <br> 1F41A | $\underset{1 F 42 A}{\text { enf }_{2}}$ |  | fill <br> 1F44A | $\begin{gathered} 1 F 45 \mathrm{~A} \\ \hline \end{gathered}$ | Nivivil <br> 1F46A | 禺 1F47A | $\theta$ <br> 1F48A | $1 \text { 1F49A }$ | $\underset{\text { 1F4AA }}{e}$ | $\underset{\text { 1F4BA }}{6}$ | H <br> 1F4CA |  | $-2$ | 䆆萑 <br> 1F4FA |
| B | 1F40B | $\begin{aligned} & \text { 繙 } \\ & \text { 1F41B } \end{aligned}$ | $\begin{gathered} \text { Ey } \\ 1942 B \end{gathered}$ |  | $\mathbb{N}$ <br> 1F44B | $\underset{1 F 45 B}{\square}$ | $\begin{gathered} \text { in in } \\ \text { iF46B } \\ \hline \end{gathered}$ |  | $\begin{gathered} \text { 1F48B } \end{gathered}$ | 1F49B | $\begin{aligned} & \text { H2 } \\ & \text { 1F4AB } \end{aligned}$ | 1F4BB | $\underset{1 F 4 C B}{\curvearrowleft}$ | $\because$ <br> 1F4DB | $-7$ |  |
| C | $\underset{\text { 1F40c }}{9}$ |  | E. | $(8)$ <br> 1F43C | $\left[\right.$ <br> 1F44C | Cracto <br> 1 F45C |  |  |  | $\underset{\text { 1F49C }}{\substack{0}}$ | $\begin{aligned} & \text { 1F4AC } \\ & \hline \end{aligned}$ | $\square$ <br> 1F4BC | 2 <br> 1 F 4 CC | ${ }^{4}$ <br> 1F4DC | $-\sqrt{1 F 4 \mathrm{EC}}$ | 1F4FC |
| D | 冢 <br> 1F40D | $\begin{aligned} & \text { 处会 } \\ & \text { 1F41D } \end{aligned}$ |  | 0 <br> 1F430 | 3 <br> 1F44D | （5） <br> 1F45D | $\begin{gathered} \text { ivin } \\ \text { ifin } \\ \text { 1F46D } \end{gathered}$ | $\circledast$ 1F47D | （ ） <br> 1F48D | $1 \text { 1F49D }$ | $\begin{gathered} 1 \text { 1F4AD } \\ \end{gathered}$ | (ब) $1 \mathrm{~F} 4 \mathrm{BD}$ | $\begin{gathered} \rho \\ 1 F 4 C D \\ \hline \end{gathered}$ | $\begin{aligned} & \text { 1F4DD } \end{aligned}$ | $=\sqrt{7}$ | $2$ |
|  | 20 | 然家 <br> 1F41E | and <br> 1F42E | $\%$ <br> 1F43E | 誢 <br> 1F44E | $B$ <br> 1F45E | 皆 <br> 1F46E | $\begin{gathered} \text { O-t } \\ \text { AF47E } \end{gathered}$ |  |  | 多 <br> 1F4AE | 1F4BE | $\underset{1 F A C E}{0}$ | $\underset{\text { 1F4DE }}{\substack{ \\\hline}}$ | 芴 <br> 1F4EE | $\begin{aligned} & \text { ORO } \\ & \text { 1F44FE } \end{aligned}$ |
| F | 9 <br> 1F40F | $\begin{aligned} & \text { Ref } \\ & \text { 1F41F } \end{aligned}$ |  |  | $i_{1 F 44 F}^{2}$ | $\begin{gathered} 1 \text { 1F45F } \end{gathered}$ |  |  | Fes <br> 1F48F | $\begin{aligned} & \sqrt{2} \\ & 1 F 49 \mathrm{~F} \end{aligned}$ | $\underline{100}$ | $\theta$ <br> 1F4BF | $\begin{aligned} & 8 \\ & \text { 1F4CF } \end{aligned}$ | 1F4DF |  | 1F4FF |

1F50 1F51 1F52 1F53 1F54 1F55 1F56 1F57 1F58 1F59 1F5A 1F5B 1F5C 1F5D 1F5E 1F5F

|  |  |  | $\bigcirc$ | ¢ |  | （1）（1） | （1） | $Q_{\text {\％}}$ |  |  | 0 | 國 | $\underset{\sin a}{ }$ | $\mathrm{P}_{\substack{\text { nem } \\ \text { nex }}}$ | 氟边 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\cdots$ | － | 昭 | 造 | $\pm$ | （1） | （1）（1） | （1） | －1 | （1） | है | $\beta$ | \％ | 㚗 | $\square$ | 9 | 0 |
| $2{ }_{2}{ }_{1}$ | $\mathrm{V}_{152}$ |  | ■ | $\pm$ | ${ }^{(1)}$ | （1）（1） | （1） | $P^{2}($（ $(1)$ | （（1） | cem | 1 | $)^{\text {a }}$ | 舄 | ¢ | $\square_{\text {con }} \square$ | $]^{\text {max }}$ |
| 0 | $\underline{\sim}$ | 翮 | $\square$ | ¢ | （1） | （1）（1） | （1） | Pl | 4 | ，my | 1 | E | $\bigcirc$ |  | 5 | T |
| ¢ | $\triangle$ | ${ }^{4} 8$ | （1） | ： 8 | （1） | （1） | （1） | $\cdots$ | （1）1 | 3 | $\downarrow$ | 退 | 酉 |  | 20 | ）${ }^{\text {eb }}$ |
|  | $\pm$ | ${ }^{*}$ | － | M | （1） | （1）（1） | （1）${ }_{\text {cxise }}$ | － | $\underset{y m b e x}{\Delta x}$ | 8 | 4 | ¢ | 娄 |  | － | － |
|  |  | Q | $\checkmark$ | § | （1） | （1）（1） | （1） | \％ | $\pm$ | B | 1 | 回 | 匀 |  | 島 $A$ | A |
|  | $10$ | $\downarrow$ | $\theta$ | t | （1） | （1）（1） | （1） |  | $\underset{\pi x \pi}{\infty}$ | d | 0 | T |  |  | ［1］ | $A_{4}+$ |
| 4 | © | 人 | $\stackrel{*}{*}$ | ¢ | （1） | （1） 2 | － | ＊ |  | M | 2 | ¢0 |  | 1 | 䦽 | O |
| $1$ | 우웅 | $\infty$ | $\underset{\text { Hex }}{*}$ | ॐ | （1） | （1） 8 | － | 会 | ¢ | ${ }_{\substack{f \\ \text { yexa }}}$ | \％${ }^{\text {ma }}$ | 曾 |  |  | $\square^{8}$ | $-$ |
| (1)) | En | $a$ | $\triangle$ |  |  | （1） | 8 A | N8 | 8 | － | \％ | 色 | 圆 | 区 | 区 | 5 |
| $\underset{y}{6}=$ | $8$ | $7$ | $\underset{\sim}{\mathbb{V}+\pi}$ |  |  | （1） | $\stackrel{1}{8}$ |  |  | $\sigma$ | $\underline{1}$ | O |  |  | $\underset{\operatorname{trax}}{\square}$ |  |
| $\overbrace{t \rightarrow x}$ |  | $\frac{1}{2}$ | $\underset{\max }{\Delta}$ |  |  | （1） 0 | － |  |  | － | － | 盛 |  | ${\underset{x}{x}}^{1} \underline{11}$ | i] | co |
| $Q_{0}$ |  | $\lambda$ | $\nabla$ |  |  | （1） 1 | 1 |  |  | － | d | $20$ |  |  | 囷 1 | ${ }_{\text {co }}$ |
| $\theta$ | （B） | \％ |  |  |  | （1） |  |  |  | $\rightarrow$ | mas | 氯 |  |  | \％ | 3 |
| 둘 | 10 |  |  |  |  | （1）（2） |  |  |  | － | － | 氖 | 目 |  | 0 |  |

Weather，landscape，and sky symbols

1F300 6 | CYCLONE |
| :--- |
| ＝typhoon，hurricane |

1F301 FOGGY
1F302 CLOSED UMBRELLA
1F303 NIGHT WITH STARS
1F304 SUNRISE OVER MOUNTAINS
1F305 SUNRISE
1F306 CITYSCAPE AT DUSK
1F307 SUNSET OVER BUILDINGS
1F308 RAINBOW
1F309 BRIDGE AT NIGHT
1F30A WATER WAVE
1F30B VOLCANO
1F30C MILKY WAY

## Globe symbols

1F30D EARTH GLOBE EUROPE－AFRICA
1F30E EARTH GLOBE AMERICAS
1F30F EARTH GLOBE ASIA－AUSTRALIA
$1 F 310$ GLOBE WITH MERIDIANS
－used to indicate international input source， world clocks with time zones，etc．
Moon，sun，and star symbols
1 F311 NEW MOON SYMBOL
$\rightarrow 25 \mathrm{CF}$ black circle
1 F312 WAXING CRESCENT MOON SYMBOL
1F313 FIRST QUARTER MOON SYMBOL
＝half moon
$\rightarrow$ 25D0 circle with left half black
1F314 O WAXING GIBBOUS MOON SYMBOL
＝waxing moon
1 F315 $\bigcirc$ FULL MOON SYMBOL
$\rightarrow 25 \mathrm{CB} \bigcirc$ white circle
1 F316 WANING GIBBOUS MOON SYMBOL
1 F317 LAST QUARTER MOON SYMBOL
$\rightarrow$ 25D1 circle with right half black
1F318 WANING CRESCENT MOON SYMBOL
1 F319 $\circlearrowright$ CRESCENT MOON
－may indicate either the first or last quarter moon
$\rightarrow$ 263D D first quarter moon
$\rightarrow$ 263E © last quarter moon
1F31A（3）NEW MOON WITH FACE
1F31B $\ddagger$ FIRST QUARTER MOON WITH FACE
1F31C LAST QUARTER MOON WITH FACE
1F31D FULL MOON WITH FACE

1F31F 该 GLOWING STAR
1 F320 « \＆

## Weather symbols

## 1F321 ○ WHITE SUN

＝sunny
＝w－0213
$\rightarrow$ 263C white sun with rays
1 F322 a WHITE SUN WITH SMALL BLACK CLOUD
＝mostly sunny
$=\mathrm{w}-0214$
$\rightarrow$ 26C5 ® sun behind cloud
1 F323－WHITE SUN BEHIND BLACK CLOUDS
＝mostly cloudy
$=\mathrm{w}-0215$

Plant symbols

| 1F330 | $\ominus$ | CHESTNUT |
| :--- | :--- | :--- |
| 1F331 | の | SEEDLING |
| 1F332 | 条 | EVERGREEN TREE |
| 1F333 | Q | DECIDUOUS TREE |
| 1F334 | $*$ | PALM TREE |
| 1F335 | CACTUS |  |
| 1F336 | HOT PEPPER |  |
|  |  | $=$ hot |
|  |  | $=$ w－0044 |

1 F337 シ TULIP
$\rightarrow 2698$ \＆flower
1F338 © CHERRY BLOSSOM
1 F339 ROSE
1F33A＊HIBISCUS
1F33B SUNFLOWER
1F33C 彩 BLOSSOM ＝daisy
1F33D EAROF MAIZE
1F33E $\stackrel{\text { EAR OF RICE }}{ }$
1F33F＊HERB
1 F340 is FOUR LEAF CLOVER $\rightarrow 2618 *$ shamrock
1F341＊MAPLE LEAF
1F342 FALLEN LEAF
1F343－LEAF FLUTTERING IN WIND
1F344 \＆MUSHROOM
Fruit and vegetable symbols
1F345 TOMATO

| 1F346 | AUBERGINE <br> ＝eggplant |
| :--- | :--- | :--- |
| 1F347 | GRAPES |
| 1F348 | MELON |
| 1F349 | WATERMELON |
| 1F34A | TANGERINE |
| 1F34B | LEMON |
| 1F34C | BANANA |
| 1F34D | PINEAPPLE |
| 1F34E | RED APPLE |
| 1F34F | GREEN APPLE |
| 1F350 © | PEAR |
| 1F351 | PEACH |
| 1F352 | CHERRIES |
| 1F353 | STRAWBERRY |

## Food symbols

1 F354 HAMBURGER
＝fast food place
1F355 SLICE OF PIZZA
1F356 MEAT ON BONE
1 F357 d POULTRY LEG
1F358 RICECRACKER
1F359 RICE BALL
1F35A $\ominus$ COOKED RICE
＝bowl of rice
1F35B CURRY AND RICE
＝Japanese style curry
1F35C 巛 STEAMING BOWL
＝ramen noodles
1F35D S．SPAGHETTI
1F35E © BREAD
1F35F 䶖 FRENCH FRIES
1F360 ROASTED SWEET POTATO
1 F361 \＆DANGO
＝mochi balls on skewer
1 F362 ODEN
＝seafood on skewer
1F363 SUSHI
1 F364 FRIED SHRIMP
1 F365 © FISH CAKE WITH SWIRL DESIGN
1F366 SOFT ICE CREAM
1 F367 $\theta$ SHAVED ICE
1F368 ICE CREAM
1F369 © DOUGHNUT
1F36A © COOKIE
＝biscuit
1F36B CHOCOLATE BAR
1F36C \＆CANDY
1F36D LOLLIPOP
1F36E \＆CUSTARD
1F36F HONEYPOT
1F370 合 SHORTCAKE
1F371 BENTO BOX
1F372 웅 POTOFFOOD
1 F373 © COOKING
＝frying pan，cooking utensil
1F374 4 f FORK AND KNIFE
＝restaurant，meal
－glyph may show a fork and spoon
－glyph may show a crossed fork and knife
－glyph may show a fork and knife with a plate

## Beverage symbols

| 1F375 罖 | TEACUP WITHOUT HANDLE <br> $\rightarrow 2615$ \％hot beverage <br> $\rightarrow 26 \mathrm{FE}$ cup on black square |
| :---: | :---: |
| 1F376 Co | SAKE BOTTLE AND CUP |
| 1 F377 | WINE GLASS |
| 1F378 Y | COCKTAIL GLASS |
| 1 F 379 \％ | TROPICAL DRINK |
| 1 F 37 A － | BEER MUG |
| 1F37B | CLINKING BEER MUGS ＝cheers |
| 1F37C 建 | BABY BOTTLE |
| Food sym |  |
| 1F37D 10］ | FORK AND KNIFE WITH BLACK PLATE <br> ＝dining <br> $=\mathrm{w}-0228$ <br> $\rightarrow$ 1F374 WI fork and knife |

## Celebration symbols

1F37F BLIACK PACKAGE
＝w－0101
$\rightarrow$ 1F381 wrapped present
$\rightarrow$ 1F4E6 ${ }^{\text {inim }}$ package
1F380 RIBBON
1F381 WRAPPED PRESENT
$\rightarrow$ 1F4E6 ${ }^{*}$ package
1 F382 BIRTHDAY CAKE
1F383 JACK－O－LANTERN
＝Hallowe＇en
1F384－CHRISTMAS TREE
1F385 FATHER CHRISTMAS
＝Santa Claus
1F386 FIREWORKS
1F387 略 FIREWORK SPARKLER
－long，stick－like firework that looks like a burning incense stick
1F388 BALLOON
1F389～PARTY POPPER
1F38A 蟖 CONFETTIBALL
＝congratulations
1F38B TANABATA TREE
＝tanabata tree with wishing papers
1F38C CROSSED FLAGS
－Japanese national holiday
1F38D A PINEDECORATION
－Japanese new year＇s door decoration
1F38E JAPANESE DOLLS
－Japanese Hinamatsuri or girls＇doll festival
1F38F CARP STREAMER
1F390 \＆WIND CHIME
1F391 R ROON VIEWING CEREMONY
－Japanese Otsukimi harvest celebration
1F392 SCHOOL SATCHEL
－Japanese school entrance ceremony
1F393 GRADUATION CAP
－graduation ceremony
1 1F394 HEART WITH TIP ON THE LEFT
＝favorite
＝ w －0089
$\rightarrow 2665$ black heart suit


| $\begin{aligned} \text { 1F3CF } & \text { RACE CAR WITH RIDER } \\ & =\text { race car } \\ & =\mathrm{w}-0141 \end{aligned}$ |
| :---: |
| Buiding and map symbols |
| ```1F3D0 BUILDING CONSTRUCTION SIGN = under construction = w-0065 \rightarrow \text { 1F6A7 construction sign}``` |
| $\begin{aligned} & \text { 1F3D1 WHITE HOUSES WITH TERRAIN } \\ &= \text { town } \\ &=\text { w-0066 } \\ & \rightarrow 1 F 3 E 1 \text { 買, house with garden } \end{aligned}$ |
| 1F3D2 <br> CITYSCAPE <br> ＝skyline，city <br> $=w$－0067 <br> $\rightarrow$ 1F306 馬 cityscape at dusk |
| 1F3D3 CONDEMNED HOUSE WITH TERRAIN <br> ＝derelict site <br> $=w-0068$ <br> $\rightarrow$ 1F3E0 1 d house building |
| 1F3D4 DESERT TERRAIN <br>  $=$ desert <br>  $=w-0069$ <br>  $\rightarrow 1$ F335 bactus |
| $\begin{aligned} \text { 1F3D5 } \begin{aligned} \Psi & \text { FACTORY WITH TERRAIN } \\ & =\text { factory } \\ & =w-0070 \\ & \rightarrow \text { F3ED } \end{aligned} \text { ly factory } \end{aligned}$ |
| $\begin{aligned} \text { 1F3D6 } \end{aligned} \begin{aligned} & \text { CLASSICAL FACADE WITH TERRAIN } \\ & \\ & \text { = public building } \\ & = \\ & \\ & \text { w-0071 } \end{aligned}$ |
| SINGLE HOUSE WITH TERRAIN <br> ＝home <br> $=\mathrm{w}-0072$ <br> $\rightarrow$ 1F3E1 盆 house with garden |
| 1F3D8 BEACH WITH UMBRELLA $\begin{aligned} & =\text { beach } \\ & =w-0073 \end{aligned}$ <br> $\rightarrow$ 26F1 黑 umbrella on ground |
| $\begin{aligned} \text { 1F3D9 * } & \text { DESERT ISLAND } \\ = & \text { island } \\ & =w-0074 \\ & \rightarrow 1 F 334 \text { * palm tree } \end{aligned}$ |
| 1F3DA HIGHWAY WITH BILLBOARD <br>  <br>  <br>  <br>  <br> $=$ <br> motorway -0075 |
| 1F3DB MOUNTAIN OR VOLCANO <br>  $=$ mountain <br>  $=$ w－0077 <br>  $\rightarrow 1$ F30B volcano <br>  $\rightarrow 1$ F5FB $\boldsymbol{a}$ mount fuji <br>  $\rightarrow 26 F 0 ~ m o u n t a i n ~$ |
| $\begin{aligned} \text { 1F3DC } & \text { TRAIL } \\ & =\text { park } \\ & =w-0080 \\ & \rightarrow 1 \text { F332 } \end{aligned}$ |
| $\begin{aligned} \text { 1F3DD } \end{aligned} \begin{aligned} \text { 未丷 } & \text { CAMPING } \\ & =w-0081 \\ & \rightarrow 26 F A \boldsymbol{A} \text { tent } \end{aligned}$ |
| 1F3DE TRAIN TRACKS WITH TERRAIN <br> ＝railroad <br> $=w-0082$ |
| $\begin{aligned} \text { 1F3DF } & \text { SPORTS ARENA WITH TERRAIN } \\ & \text { stadium } \\ & =w-0083 \end{aligned}$ |

## Building and map symbols

| 1F3E0 | HOUSE BUILDING |
| :--- | :--- |
| 1F3E1 謟 | HOUSE WITH GARDEN |
|  | home，house with yard |

## 1F3E2 㽣 OFFICE BUILDING <br> 1F3E3 㯖 JAPANESE POST OFFICE

$\rightarrow 3012 \bar{\top}$ postal mark
1F3E4 圈 EUROPEAN POST OFFICE
1F3E5 團 HOSPITAL
$\rightarrow$ 26E8 $\oplus$ black cross on shield
1F3E6 圈 BANK
$\rightarrow$ 1F131 B squared latin capital letter b
1F3E7 溙 AUTOMATED TELLER MACHINE
＝ATM
1F3E8
$\rightarrow$ 1F157 $\boldsymbol{H}$ negative circled latin capital letter $h$
1F3E9 圔 LOVE HOTEL
1F3EA 四 CONVENIENCE STORE
1F3EB 圂 SCHOOL
1F3EC DEPARTMENT STORE
1F3ED ty FACTORY
＝industrial production site
＝date of production
$\rightarrow$ 26ED
1F3EE IZAKAYA LANTERN
＝japanese izakaya restaurant
1F3EF 杰 JAPANESE CASTLE
1F3FO EUROPEAN CASTLE
$\rightarrow$ 26EB Ґ castle

## Flag symbols

```
1F3F1 I GOLF PENNANT
    = flag
    = w-0119
    ->1F6A9 P triangular flag on post
```

1F3F2 位 WAVING WHITE FLAG
＝flag
$=\mathrm{w}$－1079
$\rightarrow 2690$ white flag
1F3F3 ß PENNANT
$=\mathrm{w}-1080$
$\rightarrow$ 1F6A9 P triangular flag on post

## Accommodation symbols

1F3F4 齿 COUCH AND LAMP
＝furniture，lifestyles
$=\mathrm{w}-0226$
1F3F5～BED IN PERSPECTIVE
＝hotel，guestrooms，accommodation
$=\mathrm{w}-0227$
$\rightarrow$ 1F3E8 䱚 hotel
1F3F6 气 BELLHOP BELL
＝reception，services
$=\mathrm{w}-0230$
1F3F7 TWO SHOPPING BAGS
＝shopping
$=\mathrm{w}-0231$

## Ballot symbol

| 1F3F8 | BALLOT BOX WITH BALLOT |
| ---: | :--- |
|  | $=$ vote |
|  | $=w-0063$ |
|  | $\rightarrow 2612 \boxtimes$ ballot box with $x$ |






| 1F4EB | CLOSED MAILBOX WITH RAISED FLAG <br> ＝mailbox containing mail |
| :---: | :---: |
| 1F4EC | OPEN MAILBOX WITH RAISED FLAG |
| 1F4ED © | OPEN MAILBOX WITH LOWERED FLAG |
| 1F4EE 曶 | POSTBOX <br> ＝mailbox for sending mail |
| 1F4EF P | POSTAL HORN |
| 1F4F0 | NEWSPAPER |
| 1F4F1 自 | MOBILE PHONE |
| 1F4F2－ | MOBILE PHONE WITH RIGHTWARDS ARROW AT LEFT <br> －making a phone call |
| 1F4F3 | VIBRATION MODE |
| 1F4F4 的 | MOBILE PHONE OFF |
| 1F4F5＊ | NO MOBILE PHONES |
| 1F4F6 Pill | ANTENNA WITH BARS <br> ＝cellular reception |
| Audio and video symbols |  |
| 1F4F7 | CAMERA |
| $1 F 4 F 8 \mathbb{N}$ | ＜reserved＞ |
| 1F4F9 V | VIDEO CAMERA |
| 1F4FA 首 T | TELEVISION |
| 1F4FB 自 P | RADIO |
| 1F4FC V | VIDEOCASSETTE |
| $\begin{aligned} 1 F 4 F D & \\ & = \\ & =\end{aligned}$ | FILM PROJECTOR $\begin{aligned} & =\text { movies } \\ & =\text { w-0184 } \\ & \rightarrow 1 \mathrm{~F} 3 \text { A6 } \text { 眯 cinema } \end{aligned}$ |
| 1F4FE $\begin{aligned} & \text { P } \\ & = \\ & =\end{aligned}$ | PORTABLE STEREO = stereo $=\mathrm{w}-0186$ |
| 1F4FF $\begin{aligned} \square & \\ & \\ & =\end{aligned}$ | TELEVISION FLAT CRT <br> －more modern form <br> ＝ w －0190 <br> $\rightarrow$ 1F4FA 总 television |



Words with arrows
1F519 घ घex BACK WITH LEFTWARDS ARROW ABOVE
$\rightarrow 2397$ 跑 previous page
1F51A Eno END WITH LEFTWARDS ARROW ABOVE
$1 F 51 B$ 요 ON WITH EXCLAMATION MARK WITH LEFT RIGHT ARROW ABOVE
1F51C som SOON WITH RIGHTWARDS ARROW ABOVE
1F51D
＝top of page
Enclosed alphanumeric symbols
1F51E（B）NO ONE UNDER EIGHTEEN SYMBOL
1F51F 10 KEYCAPTEN $\rightarrow$ 20E3 combining enclosing keycap
User interface input status symbols
1F520 㢵 INPUT SYMBOL FOR LATIN CAPITAL LETTERS
1F521 䜿 INPUT SYMBOL FOR LATIN SMALL LETTERS
1F522 㮌 INPUT SYMBOL FOR NUMBERS
1 F523 骻 INPUT SYMBOL FOR SYMBOLS
1 F524 明 INPUT SYMBOL FOR LATIN LETTERS ＝English input（ABC）
Tool symbols
1F525 FIRE
1F526 \＆ELECTRIC TORCH
＝flashlight
1 F527 $>$ WRENCH
1F528 $\times$ HAMMER
1F529 NUT AND BOLT
1 F52A $\sim \mathrm{HOCHO}$
＝Japanese kitchen knife
1F52B 7 PISTOL
1F52C $\&$ MICROSCOPE
1F52D 入 TELESCOPE
1F52E CRYSTALBALL
1F52F SIX POINTED STAR WITH MIDDLE DOT
$\rightarrow 2721$ star of david
1 F530（O JAPANESE SYMBOL FOR BEGINNER
1F531 TRIDENT EMBLEM

## Geometric shapes



## User interface symbols

1F53A $\mathbb{A}$ UP-POINTING RED TRIANGLE
$\rightarrow 25$ B2 $\mathbf{A}$ black up-pointing triangle
1F53B $\nabla$ DOWN-POINTING RED TRIANGLE
$\rightarrow$ 25BC $\boldsymbol{\nabla}$ black down-pointing triangle
1F53C 』 UP-POINTING SMALL RED TRIANGLE
= play arrow up
$\rightarrow$ 25B4 $\wedge$ black up-pointing small triangle
1F53D $\nabla$ DOWN-POINTING SMALL RED TRIANGLE
= play arrow down
$\rightarrow 25 \mathrm{BE}$ black down-pointing small triangle

## Religious symbols

1 F540 $\oplus$ CIRCLED CROSS POMMEE

- Orthodox typikon symbol for great feast service

1F541 $\oplus$ CROSS POMMEE WITH HALF-CIRCLE BELOW

- Orthodox typikon symbol for vigil service

1F542 + CROSS POMMEE

- Orthodox typikon symbol for Polyeleos
$\rightarrow 2722+$ four teardrop-spoked asterisk
1 F543 \& NOTCHED LEFT SEMICIRCLE WITH THREE DOTS
- Orthodox typikon symbol for lower rank feast

1F544 :8 NOTCHED RIGHT SEMICIRCLE WITH THREE
DOTS

- Orthodox typikon for lower rank feast

1F545 \̂M SYMBOL FOR MARKS CHAPTER

- Orthodox typikon for difficult sections

1 F546 ъ WHITE LATIN CROSS
= cross outline
= w -1085
$\rightarrow 271 \mathrm{E}$ f shadowed white latin cross
1 F547 † HEAVY LATIN CROSS
= w-2134
1F548 © CELTIC CROSS
$=\mathrm{w}$-1087
1F549 ऊ OM SYMBOL
= w-1092

- devanagari font type independent
$\rightarrow 0950$ ॐ devanagari om
Clock face symbols
1F550 (1) CLOCK FACE ONE OCLOCK
$\rightarrow 231 \mathrm{~A}$ 是 watch
$\rightarrow 23$ F0 © alarm clock
1 F551 (ㄷ) CLOCK FACE TWO OCLOCK
1F552 (1) CLOCK FACE THREE OCLOCK
1F553 (1) CLOCK FACE FOUR OCLOCK
1F554 (1) CLOCK FACE FIVE OCLOCK

| 1F555 | (1) CLOCK FACE SIX OCLOCK |
| :---: | :---: |
| 1 F556 | (1) CLOCK FACE SEVEN OCLOCK |
| 1F557 | (1) CLOCK FACE EIGHT OCLOCK |
| 1 F558 | (1) CLOCK FACE NINE OCLOCK |
| 1 1F559 | (1) CLOCK FACE TEN OCLOCK |
| 1F55A | (1) CLOCK FACE ELEVEN OCLOCK |
| 1F55B | (1) CLOCK FACE TWELVE OCLOCK |
| 1F55C | (7) CLOCK FACE ONE-THIRTY |
| 1F55D | (T) CLOCK FACE TWO-THIRTY |
| 1F55E | (-) CLOCK FACE THREE-THIRTY |
| 1F55F | (1) CLOCK FACE FOUR-THIRTY |
| 1 F560 | (1) CLOCK FACE FIVE-THIRTY |
| 1 F561 | (1) CLOCK FACE SIX-THIRTY |
| 1 F562 | (1) CLOCK FACE SEVEN-THIRTY |
| 1 1F563 | (7) CLOCK FACE EIGHT-THIRTY |
| 1F564 | (7) CLOCK FACE NINE-THIRTY |
| 1 1F65 | (1) CLOCK FACE TEN-THIRTY |
| 1 F566 | (1) CLOCK FACE ELEVEN-THIRTY |
| 1F567 | (1) CLOCK FACE TWELVE-THIRTY |

Miscellaneous symbols
1 F568 a MANTELPIECE CLOCK
= clock
$=\mathrm{w}-0161$
$\rightarrow 23$ FO © alarm clock
1F569 \& RINGING BELL
$=W$-1037
$\rightarrow$ 1F514 $\Delta$ bell
1F56A of CANDLE
= w-1039
1F56B \& BLACK SKULL AND CROSSBONES
= skull and crossbones
$=\mathrm{w}$-1078
$\rightarrow 2620 \%$ skull and crossbones
1F56C BLACK EXTRATERRESTRIAL ALIEN
= scifi
$=w-0133$
$\rightarrow$ 1F47D $\odot$ extraterrestrial alien
1F56D - SLEUTH OR SPY
= investigate
$=W-0160$
1F56E MAN IN BUSINESS SUIT LEVITATING
= jump
$=W-0109$
1F56F (e) NO PIRACY
$=W-0035$
Bubble symbols

| 1F570 a $\begin{aligned} & \text { LEFT SPEECH BUBBLE } \\ &=w-0040\end{aligned}$ |
| :---: |
| 1F571 RIGHT SPEECH BUBBLE |
| $\begin{aligned} 1 \text { F572 } & \text { TWO SPEECH BUBBLES } \\ & =\text { chat } \\ & =w-0094 \end{aligned}$ |
| $\begin{aligned} 1 \text { F573 } & \text { THREE SPEECH BUBBLES } \\ & =\text { conference } \\ & =w-0095 \end{aligned}$ |
| 1F574 |
| $\begin{aligned} \text { 1F575 } & \text { RIGHT THOUGHT BUBBLE } \\ & =w-0093 \\ & \rightarrow 1 F 4 A D \end{aligned}$ |



```
1F58D LOWER LEFT FOUNTAIN PEN
    = fountain pen
    = w-2034
    \rightarrow 2 7 1 1 ~ c ` ~ w h i t e ~ n i b ~
1F58E LOWER LEFT PAINTBRUSH
    = brush
    =w-2035
1F58F LOWER LEFT CRAYON
    = crayon
    = w-2036
```

Hand symbols
1F590 LEFT WRITING HAND
$=\mathrm{w}$-1064
$\rightarrow$ 270D writing hand
1 F591 है TURNED OK HAND SIGN
$=w$-1066
$\rightarrow$ 1F44C ok hand sign
1 F592 RAISED HAND WITH FINGERS SPLAYED
= halt
$=\mathrm{w}-1073$
$\rightarrow 270 \mathrm{~B}$ raised hand
1F593 sivm REVERSED RAISED HAND WITH FINGERS
SPLAYED
= w-2078
1 F594 B REVERSED THUMBS UP SIGN
$=w-2060$
$\rightarrow$ 1F44D thumbs up sign
1 F595 \& REVERSED THUMBS DOWN SIGN
$=w$-2061
$\rightarrow$ 1F44E ${ }^{\text {B }}$ thumbs down sign
1F596 B REVERSE VICTORY HAND
1 F597 REVERSED HAND WITH MIDDLE FINGER
EXTENDED
1F598 RAISED HAND WITH PART BETWEEN MIDDLE
AND RING FINGERS
1 F599 WHITE DOWN POINTING LEFT HAND INDEX
$=\mathrm{w}$-1072
$\rightarrow 261 \mathrm{~F}$ 每 white down pointing index
$\rightarrow$ 1F447 《 white down pointing backhand
index
1F59A $\quad$ SIDEWAYS WHITE LEFT POINTING INDEX
= w-2062
$\rightarrow 261$ C white left pointing index
1F59B SIDEWAYS WHITE RIGHT POINTING INDEX
= w-2063
$\rightarrow 261 \mathrm{E}$ white right pointing index
1F59C - SIDEWAYS BLACK LEFT POINTING INDEX
= w-2064
1F59D - SIDEWAYS BLACK RIGHT POINTING INDEX
= w-2065
1F59E - BLACK LEFT POINTING BACKHAND INDEX
$=W$-2068
$\rightarrow$ 1F448 $\approx$ white left pointing backhand index
1F59F - BLACK RIGHT POINTING BACKHAND INDEX
= w-2069
$\rightarrow$ 1F449 $\approx$ white right pointing backhand index
1F5AO d SIDEWAYS WHITE UP POINTING INDEX
= w-2070
$\rightarrow$ 261D 쓘 white up pointing index
1F5A1 SIDEWAYS WHITE DOWN POINTING INDEX
= w-2071
$\rightarrow$ 261F 挴 white down pointing index

1F5A2 SIDEWAYS BLACK UP POINTING INDEX $=\mathrm{w}$－2072

1F5A3 SIDEWAYS BLACK DOWN POINTING INDEX ＝w－2073
1F5A4 BLACK UP POINTING BACKHAND INDEX $=W$－2076
$\rightarrow$ 1F446 \＆ white up pointing backhand index
1F5A5 BLACK DOWN POINTING BACKHAND INDEX $=W$－2077
$\rightarrow$ 1F447 is white down pointing backhand index

## Communication symbols

1F5A6（ LEFT HAND TELEPHONE RECEIVER
＝phone
＝w－0197
$\rightarrow$ 1F4DE $\boldsymbol{\Omega}$ telephone receiver
1F5A7 《 TELEPHONE RECEIVER WITH PAGE
＝fax
$=\mathrm{w}-0198$
$\rightarrow$ 1F4EO 迺 fax machine
1F5A8 〕 RIGHT HAND TELEPHONE RECEIVER
＝telephone handset
$=\mathrm{w}-2040$
1F5A9 骨 WHITE TOUCHTONE TELEPHONE
＝telephone
＝w－2039
$\rightarrow 260 \mathrm{~F}$ white telephone
1F5AA 료․ BLACK TOUCHTONE TELEPHONE
＝telephone solid
$=\mathrm{w}-1040$
$\rightarrow 260$ E $\boldsymbol{B}$ black telephone
1F5AB TELEPHONE ON TOP OF MODEM ＝modem
$=\mathrm{w}-0201$
1F5AC CLAMSHELL MOBILE PHONE
＝cellular phone
$=\mathrm{w}-0200$
$\rightarrow$ 1F4F1 1 mobile phone

## Game symbols

1F5AD \＆JOYSTICK
＝w－0195
1F5AE BLACK GAME CONTROLLER
＝game pad
$=\mathrm{w}-0196$
$\rightarrow$ 1F3AE video game

## Computer symbols

| 1F5AF 튼 | $\begin{aligned} & \text { COMPUTER MONITOR } \\ & =\text { w-0191 } \\ & \rightarrow \text { 1F4BB토. personal computer } \end{aligned}$ |
| :---: | :---: |
| 1F5B0 | DESKTOP COMPUTER <br> ＝tower computer <br> ＝w－0192 |
| 1F5B1 | $\begin{aligned} & \text { KEYBOARD AND MOUSE } \\ & =w-0193 \\ & \rightarrow 2328 \text { 毘 keyboard } \end{aligned}$ |
| 1F5B2 品 | THREE NETWORKED COMPUTERS <br> ＝computer network <br> ＝ W －0194 |

1F5B3 PRINTER
＝ $\mathrm{w}-0202$
$\rightarrow$ 1F4E0 䧗 fax machine
1F5B4 a POCKET CALCULATOR
＝calculator
$=\mathrm{w}-0203$

```
1F5B5 BLACK HARD SHELL FLOPPY DISK
    = disk
    = w-0205
    -> 1F4BE H floppy disk
1F5B6 WHITE HARD SHELL FLOPPY DISK
    = w-1060
    -> 1F4BE H floppy disk
1F5B7 SOFT SHELL FLOPPY DISK
    =W-1061
    -> 1F4BE| floppy disk
1F5B8 TAPE CARTRIDGE
    = w-2057
1F5B9 WIRED KEYBOARD
    = keyboard
    = w-1055
    \rightarrow 2 3 2 8 ~ \# \# \# \# ~ k e y b o a r d ~
1F5BA © ONE BUTTON MOUSE
    = w-2058
1F5BB % TWO BUTTON MOUSE
    =w-1056
1F5BC 囬 THREE BUTTON MOUSE
    = w-2059
1F5BD 2` TRACKBALL
    = w-1057
    = ballpoint
1F5BE 员 OLDPERSONAL COMPUTER
    = personal computer
    = w-1058
    \rightarrow 1 F 4 B B \text { [a personal computer}
1F5BF 曰 HARDDISK
    =w-1059
1F5CO }\square\mathrm{ SCREEN
    = monitor
    = w-2053
    \rightarrow 2 0 E 2 ~ c o m b i n i n g ~ e n c l o s i n g ~ s c r e e n
1F5C1 昌 PRINTERICON
    = w-2054
    ->1F5B3 printer
1F5C2 息 FAXICON
    = w-2055
    TF4E0 箇 fax machine
1F5C3 \odot OPTICAL DISCICON
    = compact disc
    = w-2056
    \rightarrow \text { 1F4BF optical disc}
```

Office symbols
1F5C4 屋 DOCUMENT WITH TEXT
= w-0157
1F5C5 DOCUMENT WITH TEXT AND PICTURE
= w-0158
1F5C6 图 DOCUMENT WITH PICTURE
= graphic document
$=\mathrm{w}-0159$

User interface symbols
1F5C7 $\square$ FOLDER
＝directory
$=\mathrm{w}-1048$
$\rightarrow$ FF4C1 $\otimes$ file folder
1F5C8 BLACK FOLDER
＝folder
＝ $\mathrm{w}-0204$
1F5C9 OPEN FOLDER
$=\mathrm{w}$－1049
$\rightarrow$ 1F4C2 $\otimes$ open file folder


```
1F5F2 STOCK CHART
        = finance
        = w-0143
        ->1F4C8 chart with upwards trend
1F5F3 OILDRUM
        = commodities
        = w-0144
1F5F4 B` BLACK MONEY BAG
        = money
        = w-0145
        ->1F4BO (%) money bag
1F5F5 & PRICE TAG
        = price
        = w-0146
        \rightarrow \text { 1F516 \ी bookmark}
1F5F6 * DARK SUNGLASSES
    = cool
    = w-0036
```


## Rating symbols

The following symbols give rating symbols, part of this set is 1F46A for Family rating
1F5F7 $f$ DAGGER KNIFE
= rated for violence
= hate
$=\mathrm{w}-0149$
$\rightarrow$ 1F52A ~ hocho
1F5F8 ○ LIPS
= rated for sex
$=$ kiss
$=\mathrm{w}-0150$
$\rightarrow 1 \mathrm{~F} 48 \mathrm{~B}$ kiss mark
1F5F9 § SPEAKING HEAD SILHOUETTE
= rated for strong language
$=\mathrm{w}-0151$

## Map symbol

1F5FA WORLD MAP
$=\mathrm{W}-0251$
Cultural symbols
1F5FB - MOUNT FUJ
1F5FC A TOKYOTOWER
1F5FD * STATUE OF LIBERTY
1F5FE SILHOUETTE OF JAPAN
1F5FF MOYAI

- Japanese stone statue like Moai on Easter Island


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```
Leaf ornaments
1F650 & NORTH WEST POINTING LEAF
        = w-1209
1F651 & SOUTH WEST POINTING LEAF
        =W-1210
1F652 CJ NORTH EAST POINTING LEAF
        = w-1211
1F653 && SOUTH EAST POINTING LEAF
        =w-1212
1F654 \P TURNED NORTH WEST POINTING LEAF
    = w-1206
1F655 % TURNED SOUTH WEST POINTING LEAF
    =w-1205
1F656 & TURNED NORTH EAST POINTING LEAF
        =w-1208
1F657 & TURNED SOUTH EAST POINTING LEAF
    = w-1207
```


## Vine leaf ornaments

```
1 1F658 ~ NORTH WEST POINTING VINE LEAF = w-2102
1 F659 \& SOUTH WEST POINTING VINE LEAF = w-2103
1F65A なo NORTH EAST POINTING VINE LEAF = w-2101
1F65B \(\sim\) SOUTH EAST POINTING VINE LEAF = W-2104
1F65C ~ HEAVY NORTH WEST POINTING VINE LEAF = W-1155
1F65D HEAVY SOUTH WEST POINTING VINE LEAF = w-1156
1F65E な HEAVY NORTH EAST POINTING VINE LEAF = w-1154
1F65F \(\boldsymbol{\infty}\) HEAVY SOUTH EAST POINTING VINE LEAF = W -1157
```


## Pointing bud ornaments

```
1F660 80 NORTH WEST POINTING BUD \(=\mathrm{w}-1151\)
1F661 \& SOUTH WEST POINTING BUD \(=\mathrm{w}-1152\)
1 F662 \(\operatorname{cs}\) NORTH EAST POINTING BUD
\[
=w-1150
\]
1 F663 @ SOUTH EAST POINTING BUD = w-1153
\(1 F 664\) EO HEAVY NORTH WEST POINTING BUD = w-2098
1F665 s HEAVY SOUTH WEST POINTING BUD = w-2099
1 F666 cs HEAVY NORTH EAST POINTING BUD = w-2097
1 1F667 @ HEAVY SOUTH EAST POINTING BUD \(=\mathrm{w}-2100\)
```


## Quilt square ornaments

```
\(1 F 668\) HOLLOW QUILT SQUARE ORNAMENT = w-2147
1 HO69 HOLLOW QUILT SQUARE ORNAMENT IN BLACK SQUARE
= \(\mathrm{w}-2148\)
1F66A \(\mathscr{O}\) SOLID QUILT SQUARE ORNAMENT
\(=\mathrm{w}-1203\)
\(=\) fourfold knot ornament
```

```
1F66B SOLID QUILT SQUARE ORNAMENT IN BLACK SQUARE
\(=w-1204\)
= inverse fourfold knot ornament
```


## Rocket ornaments

1F66C - LEFTWARDS ROCKET

$$
=w-0247
$$

$\rightarrow$ 1F680 R rocket
1F66D $\perp$ UPWARDS ROCKET = w -0249
1F66E - RIGHTWARDS ROCKET = w -0248
1F66F I DOWNWARDS ROCKET $=\mathrm{w}-0250$
ET ligature and ampersand ornaments
1 F670 eT SCRIPT LIGATURE ET ORNAMENT
$=\mathrm{w}-1106$
= italic ampersand lower case
1F671 eT HEAVY SCRIPT LIGATURE ET ORNAMENT = w-2089
1F672 \& LIGATURE OPEN ET ORNAMENT = w -2091
1F673 \& HEAVY LIGATURE OPEN ET ORNAMENT = w-2092
1 1F674 \& HEAVY AMPERSAND ORNAMENT = w-2090
1F675 \& SWASH AMPERSAND ORNAMENT
$=w-1107$
= italic ampersand

## Quotation mark ornaments

1F676 " SANS-SERIF HEAVY DOUBLE TURNED COMMA QUOTATION MARK ORNAMENT
= w -1125
$\rightarrow$ 275D ${ }^{66}$ heavy double turned comma
quotation mark ornament
1F677 " SANS-SERIF HEAVY DOUBLE COMMA QUOTATION MARK ORNAMENT = w -1126
$\rightarrow 275 \mathrm{E} 9$ heavy double comma quotation mark ornament
1F678 „, SANS-SERIF HEAVY LOW DOUBLE COMMA QUOTATION MARK ORNAMENT

## Interrobang ornament

1F679 ? HEAVY INTERROBANG ORNAMENT
= $w$-2094
$=w-2096$

## Heavy solidus ornaments

1F67A VERY HEAVY SOLIDUS
= W-0047
1F67B VERY HEAVY REVERSE SOLIDUS
$=W-0092$

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1F6CC

| 1 F680 | \％ | ROCKET |
| :---: | :---: | :---: |
| 1 F681 | ¢ | HELICOPTER |
|  |  | $\rightarrow 2708$ airplane |
| 1 F682 | \％ | STEAM LOCOMOTIVE |
| 1 1F683 | ＋1 | RAILWAY CAR |
| 1 F684 | $\leqslant$ | HIGH－SPEED TRAIN |
| 1 F685 | E | HIGH－SPEED TRAIN WITH BULLET NOSE |
| 1 1F686 | 周 | TRAIN <br> ＝intercity train |
| 1 F687 | 閏 | METRO <br> ＝subway，underground train |
| 1 F688 | 風 | LIGHT RAIL |
| 1 1F689 | 風 | STATION <br> ＝train，subway station |
| 1F68A | 面 | TRAM |
| 1F68B | 皿 | TRAM CAR |
| 1F68C | \％ | BUS |
| 1F68D | \＃ | ONCOMING BUS |
| 1F68E | 面 | TROLLEYBUS |
| 1F68F | $\stackrel{1}{1}$ | BUS STOP |
| 1 F690 | 沓 | MINIBUS |
| 1 F691 | 里 | AMBULANCE |
| 1 F692 | 产 | FIRE ENGINE |
| 1 F693 | － | police Car |
| 1 1F694 | 白 | ONCOMING POLICE CAR |
| 1 1F695 | $\cdots$ | TAXI |
| 1 F696 | 尚 | ONCOMING TAXI |
| 1 1F697 | ¢ | AUTOMOBILE |
| 1 F698 | － | ONCOMING AUTOMOBILE |
| 1 1F699 | 。故 | RECREATIONAL VEHICLE |
| 1F69A | － | DELIVERY TRUCK <br> $\rightarrow$ 26DF black truck |
| 1F69B | －m | ARTICULATED LORRY |
| 1F69C | d | TRACTOR |
| 1F69D | 罵 | MONORAIL |
| 1F69E | 罒 | MOUNTAIN RAILWAY |
| 1F69F | 픛 | SUSPENSION RAILWAY |
| 1F6A0 | 面 | MOUNTAIN CABLEWAY |
| 1F6A1 | 面 | AERIAL TRAMWAY |
| 1F6A2 | 㿻 | SHIP |
|  |  | $\rightarrow$ 26F4 ferry |
| 1 F 6 A 3 |  | ROWBOAT |
|  |  | $\rightarrow 26 \mathrm{~F} 5$ 约 sailboat |
| 1F6A4 SPEEDBOAT |  |  |
| Traffic signs |  |  |
| 1F6A5 |  | HORIZONTAL TRAFFIC LIGHT |
| 1F6A6 ： |  | VERTICAL TRAFFIC LIGHT |
| 1F6A7 |  | CONSTRUCTION SIGN |
|  |  | $\rightarrow$ 26CF K pick |
| 1F6A8 | 管 | POLICE CARS REVOLVING LIGHT |
|  |  | ＝rotating beacon |

Signage and other symbols
1F6A9 P TRIANGULAR FLAG ON POST
＝location information
$\rightarrow 26$ F3 $\boldsymbol{\Delta}$ flag in hole
1F6AA DOOR
1F6AB $\oslash$ NO ENTRY SIGN
$\rightarrow 20 \mathrm{EO} @$ combining enclosing circle backslash
$\rightarrow 26 \mathrm{D4}$ no entry
1F6AC SMOKING SYMBOL

```
1F6CD A AIRPLANE RISING
    = airplane
    = w-0241
1F6CE SATELLITE
    = w-0107
```

Signages and other symbols
1F6D0 BOY SYMBOL
= boy
= $\mathrm{w}-0130$
1F6D1 GIRL SYMBOL
= girl
= w-0131
1F6D2 SWADDLED BABY SYMBOL
= baby
$=\mathrm{w}-0132$
$\rightarrow$ 1F6BC * baby symbol
1F6D3 $\triangle$ TRIANGLE WITH ROUNDED CORNERS
= caution
$=\mathrm{w}-0234$
$\rightarrow 25 \mathrm{B3} \triangle$ white up-pointing triangle
1F6D4 (i) CIRCLED INFORMATION SOURCE
= information
$=\mathrm{w}-0105$

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These geometric shapes originate from the
Webdings/Wingdings collections.

## Isosceles right triangles

| 1 F780 |  | BLACK LEFT-POINTING ISOSCELES RIGHT TRIANGLE $=w-3124$ |
| :---: | :---: | :---: |
| 1 F781 | - | BLACK UP-POINTING ISOSCELES RIGHT TRIANGLE $=w-3126$ |
| 1 F782 | - | BLACK RIGHT-POINTING ISOSCELES RIGHT TRIANGLE $=w-3125$ |
| 1 F783 | $\nabla$ | BLACK DOWN-POINTING ISOSCELES RIGHT TRIANGLE =w-3128 |

## Black circle

Constitute a set as follows: 22C5, 2219, 1F784, 2022, 2981,
26AB, and 25CF

```
1F784 - BLACK SLIGHTLY SMALL CIRCLE
    = black circle 3
    = w-2150
```


## White circles

Adjective refers to the thickness of the ring.
Constitute a set as follows: 25CB, 2B58, 1F785..1F789.
1 F785 O MEDIUM BOLD WHITE CIRCLE $=$ ring 3
$=\mathrm{w}-2154$
$\rightarrow 26$ AA O medium white circle
1 F786 O BOLD WHITE CIRCLE
$=$ ring 4
$=\mathrm{w}-1162$
= very heavy circle
1 1F787 O HEAVY WHITE CIRCLE
= ring 5
$=w-2155$
1 1F788 ○ VERY HEAVY WHITE CIRCLE $=$ ring 6
$=w-1163$
$1 F 789$ - EXTREMELY HEAVY WHITE CIRCLE $=$ ring 7
= w-2156

## White circle containing another black circle

Constitute a set as follows: 2299, 1F78A, and 29BF
1F78A $\bigcirc$ WHITE CIRCLE CONTAINING BLACK SMALL CIRCLE
$=$ ring button 2
$=\mathrm{w}-1164$

## Target symbol

```
1F78B © ROUND TARGET
    = w-1165
    ~25CE O bullseye
    ->29BE © circled white bullet
    \rightarrow 2 \mathrm { B57 } \bigcirc \text { heavy circle with circle inside}
```


## Black squares

Constitute a set as follows: 1F78C, 2B1D, 1F78D, 25AA,
$25 \mathrm{FE}, 25 \mathrm{FC}$, and 2612
1F78C - BLACK TINY SQUARE

$$
\begin{aligned}
& =\text { black square } 1 \\
& =w-2159
\end{aligned}
$$

```
1F78D - BLACK SLIGHTLY SMALL SQUARE
    = black square 3
    = w-2160
```


## White squares

Constitute a set as follows: 25A1, 1F78D..1F792

| 1F78E $\square$ | LIGHT WHITE SQUARE |
| ---: | :--- |
|  | $=b o x 2$ |
|  | $=\mathrm{w}-1168$ |

1F78F $\square$ MEDIUM WHITE SQUARE
= box 3
$=\mathrm{w}-1111$
1 F790 BOLD WHITE SQUARE
= box 4
$=\mathrm{w}-1112$
= heavy white square
1F791 - HEAVY WHITE SQUARE = box 5 $=\mathrm{w}-2164$
$1 F 792$ VERY HEAVY WHITE SQUARE = box 6 $=w-2165$
1 1F793 EXTREMELY HEAVY WHITE SQUARE = box 7 $=\mathrm{w}-2166$

White squares containing another black square
Constitute a set as follows: 1F794, 25A3, and 1F795
1 F794 WHITE SQUARE CONTAINING BLACK VERY SMALL SQUARE
= box button 1
$=\mathrm{w}$-2167
1 F795 WHITE SQUARE CONTAINING BLACK MEDIUM SQUARE
= box button 3
$=\mathrm{w}$-2169

## Target symbol

```
1F796 回 SQUARE TARGET
    =W-2170
```


## Black diamonds

Constitute a set as follows: 1F797, 1F798, 2B29, 1F799, 2B25, and 25C6

| 1 F797 | BLACK TINY DIAMOND <br> = black diamond 1 <br> $=\mathrm{w}-2171$ |
| :---: | :---: |
| 1 F798 | BLACK VERY SMALL DIAMOND <br> = black diamond 2 <br> $=\mathrm{w}-2172$ |
| 1 F799 | BLACK MEDIUM SMALL DIAMOND <br> = black diamond 4 <br> = w-1119 |

White diamonds containing another black diamond
Constitute a set as follows: 1F798, 25C8, and 1F799
1F79A 队 WHITE DIAMOND CONTAINING BLACK VERY SMALL DIAMOND
$=$ diamond button 1
$=\mathrm{w}-2176$
1F79B $\diamond$ WHITE DIAMOND CONTAINING BLACK MEDIUM DIAMOND
$=$ diamond button 3
$=\mathrm{w}-2178$

## Target symbol <br> 1F79C $\Leftrightarrow$ DIAMOND TARGET <br> $=\mathrm{w}-2179$

## Lozenges

Constitute a set as follows: $1 F 79 D, 1 F 79 E, 2 B 2 A, 1 F 79 F$, 2B27, 29EB, and 25CA
1F79D • BLACK TINY LOZENGE
= black lozenge 1
= w -2180
1F79E • BLACK VERY SMALL LOZENGE
= black lozenge 2
= w-2181
1F79F • BLACK MEDIUM SMALL LOZENGE
= black lozenge 4
$=\mathrm{w}-1115$
White lozenge containing another black lozenge
1F7A0 今 WHITE LOZENGE CONTAINING BLACK SMALL LOZENGE
= lozenge button
$=\mathrm{w}-2185$

## Greek crosses

```
1F7A1 + THINGREEK CROSS
    = cross 1
    = w-2198
1F7A2 + LIGHT GREEK CROSS
    = cross 2
    = w-2199
1F7A3 + MEDIUM GREEK CROSS
    = cross 3
    = w-2200
```

1F7A4 + BOLD GREEK CROSS
= cross 4
= w-2201
1F7A5 + VERY BOLD GREEK CROSS
= cross 5
$=\mathrm{w}-2202$
1F7A6 + VERY HEAVY GREEK CROSS
= cross 6
$=\mathrm{w}-2203$
1F7A7 + EXTREMELY HEAVY GREEK CROSS
$=$ cross 7
$=\mathrm{w}-2204$

## Saltires

```
1F7A8 }\times\mathrm{ THIN SALTIRE
    =x }
    = w-2205
1F7A9 }\times\mathrm{ LIGHT SALTIRE
    =x2
    =w-2206
1F7AA × MEDIUM SALTIRE
    =x3
    = w-2207
1F7AB }\times\mathrm{ BOLD SALTIRE
    =x4
    = w-2208
1F7AC > HEAVY SALTIRE
    =x5
    = w-2209
1FTAD X VERY HEAVY SALTIRE
    =x6
    = w-2210
1F7AE * EXTREMELY HEAVY SALTIRE
    =x7
    =W-2211
```

Five spoked asterisks

```
1F7AF * LIGHT FIVE SPOKED ASTERISK
    =w-2212
1F7B0 * MEDIUM FIVE SPOKED ASTERISK
    = w-2213
1F7B1 * BOLD FIVE SPOKED ASTERISK
    =W-2214
1F7B2 * HEAVY FIVE SPOKED ASTERISK
    = W-2215
1F7B3 * VERY HEAVY FIVE SPOKED ASTERISK
    = W-2216
1F7B4 * EXTREMELY HEAVY FIVE SPOKED ASTERISK
    = w-2217
```


## Six spoked asterisks

1F7B5 * LIGHT SIX SPOKED ASTERISK = w -2218
1F7B6 * MEDIUM SIX SPOKED ASTERISK = w-2219
1F7B7 * BOLD SIX SPOKED ASTERISK = w-2220
1F7B8 * HEAVY SIX SPOKED ASTERISK = W-2221
1F7B9 * VERY HEAVY SIX SPOKED ASTERISK = w-2222
1F7BA * EXTREMELY HEAVY SIX SPOKED ASTERISK = w -2223
Eight spoked asterisks
1F7BB * LIGHT EIGHT SPOKED ASTERISK $=W$-2224
1F7BC * MEDIUM EIGHT SPOKED ASTERISK = w-2225
1F7BD * BOLD EIGHT SPOKED ASTERISK = w-2226
1F7BE * HEAVY EIGHT SPOKED ASTERISK $=W$-2227
1F7BF * VERY HEAVY EIGHT SPOKED ASTERISK $=\mathrm{w}-2228$

## Three pointed stars

1F7C0 ^ LIGHT THREE POINTED BLACK STAR $=\mathrm{w}$-2229
1F7C1 ^ MEDIUM THREE POINTED BLACK STAR $=W$-1169
1F7C2 ^ THREE POINTED BLACK STAR $=\mathrm{w}$-2230
1F7C3 A MEDIUM THREE POINTED PINWHEEL STAR $=\mathrm{w}-2241$
Four pointed stars

```
1F7C4 + LIGHT FOUR POINTED BLACK STAR
    \(=w\)-2231
1F7C5 + MEDIUM FOUR POINTED BLACK STAR
    = W-1170
1F7C6 \(\downarrow\) FOUR POINTED BLACK STAR
    = w -2232
    - 2726 black four pointed star is a cusp
    \(\rightarrow 2726\) black four pointed star
1F7C7 \(\&\) MEDIUM FOUR POINTED PINWHEEL STAR
    = w-2242
1F7C8 + REVERSE LIGHT FOUR POINTED PINWHEEL
    STAR
    \(=w-0108\)
    = navigate
```


## Five pointed stars

Constitute a set as follows: 1F7C6, 2605, 1F7C7, and 272F
1F7C9 $\star$ LIGHT FIVE POINTED BLACK STAR $=\mathrm{w}-2233$
1F7CA $\star$ HEAVY FIVE POINTED BLACK STAR $=W-2234$

## Six pointed stars

Constitute a set as follows: 2736, 1F7C8..1F7CA
1F7CB * MEDIUM SIX POINTED BLACK STAR = w-1172
1F7CC $*$ HEAVY SIX POINTED BLACK STAR $=W-2236$
1F7CD SIX POINTED PINWHEEL STAR $=\mathrm{W}-2244$
Eight pointed stars
Constitute a set with 2735, other two: 2737 and 2738 are oriented differently
1F7CE * MEDIUM EIGHT POINTED BLACK STAR $=\mathrm{w}$-2237
$\rightarrow 2737$ * eight pointed rectilinear black star
1F7CF HEAVY EIGHT POINTED BLACK STAR
$=\mathrm{w}-1173$
$\rightarrow 2738 *$ heavy eight pointed rectilinear black star
1F7D0 VERY HEAVY EIGHT POINTED BLACK STAR $=W$-2238
1F7D1 HEAVY EIGHT POINTED PINWHEEL STAR $=W-1175$
$\rightarrow 2735$ * eight pointed pinwheel star
Twelve pointed stars
Constitute a set as follows: 1F7CF, 2739, 1F7D0, and 1F7D1
1F7D2 * LIGHT TWELVE POINTED BLACK STAR = w-2239
1F7D3 HEAVY TWELVE POINTED BLACK STAR $=W-1174$
1F7D4 㴔 HEAVY TWELVE POINTED PINWHEEL STAR $=\mathrm{w}-2245$


## Arrows with small triangle arrowhead

| 1F800 | $\leftarrow$ | LEFTWARDS ARROW WITH SMALL TRIANGLE ARROWHEAD $=\mathrm{w}-3153$ |
| :---: | :---: | :---: |
| 1F801 | $\dagger$ | UPWARDS ARROW WITH SMALL TRIANGLE ARROWHEAD $=w-3155$ |
| 1F802 | $\rightarrow$ | RIGHTWARDS ARROW WITH SMALL TRIANGLE ARROWHEAD $=w-3154$ |
| 1 1803 | 1 | DOWNWARDS ARROW WITH SMALL TRIANGLE ARROWHEAD $=w-3156$ |

Arrows with medium triangle arrowhead

```
1F804 \leftarrow LEFTWARDS ARROW WITH MEDIUM TRIANGLE
    ARROWHEAD
    = w-3157
1F805 \uparrow UPWARDS ARROW WITH MEDIUM TRIANGLE
    ARROWHEAD
    = w-3159
1F806 -> RIGHTWARDS ARBROW WITH MEDIUM
    TRIANGLE ARROWHEAD
    =w-3158
1F807 \downarrow DOWNWARDS ARROW WITH MEDIUM
    TRIANGLE ARROWHEAD
    = w-3160
```

Arrows with large triangle arrowhead

```
1F808 & LEFTWARDS ARROW WITH LARGE TRIANGLE
    ARROWHEAD
    = W-3161
1F809 ^ UPWARDS ARROW WITH LARGE TRIANGLE
    ARROWHEAD
    =w-3163
1F80A }->\mathrm{ RIGHTWARDS ARROW WITH LARGE TRIANGLE
    ARROWHEAD
    =w-3162
1F80B \downarrow DOWNWARDS ARROW WITH LARGE TRIANGLE
    ARROWHEAD
    = w-3164
```


## Sans-serif arrows

1F80C $\leftarrow$ LEFTWARDS SANS-SERIF ARROW
= w-3102
$\rightarrow 2190 \leftarrow$ leftwards arrow
1F80D $\uparrow$ UPWARDS SANS-SERIF ARROW
$=w-3104$
$\rightarrow 2191$ 个 upwards arrow
1F80E $\rightarrow$ RIGHTWARDS SANS-SERIF ARROW
$=\mathrm{w}$-3103
$\rightarrow 2192 \rightarrow$ rightwards arrow
1F80F $\downarrow$ DOWNWARDS SANS-SERIF ARROW
= w-3105
$\rightarrow 2193 \downarrow$ downwards arrow
1 F810 $\leftrightarrow$ LEFT RIGHT SANS-SERIF ARROW
= W-3110
$\rightarrow 2194 \leftrightarrow$ left right arrow
1F811 $\downarrow$ UP DOWN SANS-SERIF ARROW
= W-3111
$\rightarrow 2195$ I up down arrow
1F812 $<$ NORTH WEST SANS-SERIF ARROW
= w-3106
$\rightarrow 2196$ s north west arrow
1 F813 $\nearrow$ NORTH EAST SANS-SERIF ARROW
= w-3107
$\rightarrow 2197$ フ north east arrow

```
1F814 \searrow SOUTH EAST SANS-SERIF ARROW
    = w-3109
    ->2198\ south east arrow
1F815 \swarrow SOUTH WEST SANS-SERIF ARROW
    = w-3108
    2199\ south west arrow
```

Arrows with small equilateral arrowhead
1F818 $\leftarrow$ LEFTWARDS ARROW WITH SMALL EQUILATERAL ARROWHEAD $=w$-3137
1 F819 1 UPWARDS ARROW WITH SMALL EQUILATERAL ARROWHEAD
$=\mathrm{w}$-3139
1F81A $\rightarrow$ RIGHTWARDS ARROW WITH SMALL EQUILATERAL ARROWHEAD $=w-3138$
1F81B $\downarrow$ DOWNWARDS ARROW WITH SMALL EQUILATERAL ARROWHEAD $=\mathrm{w}$-3140

## Arrows with equilateral arrowhead

1F81C $\leftarrow$ LEFTWARDS ARROW WITH EQUILATERAL ARROWHEAD
= W-3141
1F81D $\uparrow$ UPWARDS ARROW WITH EQUILATERAL ARROWHEAD
$=w-3143$
1F81E $\rightarrow$ RIGHTWARDS ARROW WITH EQUILATERAL ARROWHEAD
$=\mathrm{w}-3142$
1F81F $\downarrow$ DOWNWARDS ARROW WITH EQUILATERAL ARROWHEAD
$=\mathrm{w}-3144$
Heavy arrows with equilateral arrowhead
$1 F 820 \leftarrow$ HEAVY LEFTWARDS ARROW WITH EQUILATERAL ARROWHEAD
= w -3145
1 1F821 $\uparrow$ HEAVY UPWARDS ARROW WITH EQUILATERAL ARROWHEAD
= w-3147
1 F822 $\rightarrow$ HEAVY RIGHTWARDS ARROW WITH EQUILATERAL ARROWHEAD $=w$-3146
1F823 $\downarrow$ HEAVY DOWNWARDS ARROW WITH EQUILATERAL ARROWHEAD $=w-3148$
Heavy arrows with large equilateral arrowhead
1F824 \& HEAVY LEFTWARDS ARROW WITH LARGE EQUILATERAL ARROWHEAD $=\mathrm{w}$-3149
1F825 4 HEAVY UPWARDS ARROW WITH LARGE EQUILATERAL ARROWHEAD = W-3151
1F826 $\rightarrow$ HEAVY RIGHTWARDS ARROW WITH LARGE EQUILATERAL ARROWHEAD = w -3150
1 F827 $\downarrow$ HEAVY DOWNWARDS ARROW WITH LARGE EQUILATERAL ARROWHEAD $=w-3152$
Triangle headed arrows with narrow shaft

| 1F828 | $\leftarrow$ | LEFTWARDS TRIANGLE-HEADED ARROW WITH |
| ---: | :--- | ---: | :--- |
|  | NARROW SHAFT |  |
|  | $=$ W-3165 |  |
| 1F829 $\uparrow$UPWARDS TRIANGLE-HEADED ARROW WITH <br>  <br>  <br>  <br>  <br> NARROW SHAFT |  |  |


| 1F82A $\rightarrow$ | RIGHTWARDS TRIANGLE－HEADED ARROW <br> WITH NARROW SHAFT |
| ---: | :--- |
| $=$ w－3166 |  |

Triangle headed arrows with medium shaft
1F82C $\leftarrow$ LEFTWARDS TRIANGLE－HEADED ARROW WITH MEDIUM SHAFT $=w$－3167
1F82D $\uparrow$ UPWARDS TRIANGLE－HEADED ARROW WITH MEDIUM SHAFT
1F82E $\rightarrow$ RIGHTWARDS TRIANGLE－HEADED ARROW WITH MEDIUM SHAFT $=w-3168$
1F82F $\downarrow$ DOWNWARDS TRIANGLE－HEADED ARROW WITH MEDIUM SHAFT
Triangle headed arrows with bold shaft
1F830 $\leftarrow$ LEFTWARDS TRIANGLE－HEADED ARROW WITH BOLD SHAFT
＝w－3169
1F831 $\uparrow$ UPWARDS TRIANGLE－HEADED ARROW WITH BOLD SHAFT
1 F832 $\rightarrow$ RIGHTWARDS TRIANGLE－HEADED ARROW WITH BOLD SHAFT $=w-3170$
1F833 $\downarrow$ DOWNWARDS TRIANGLE－HEADED ARROW WITH BOLD SHAFT

Triangle headed arrows with heavy shaft
1 F834－LEFTWARDS TRIANGLE－HEADED ARROW WITH HEAVY SHAFT
$=\mathrm{w}-3171$
1F835 $\uparrow$ UPWARDS TRIANGLE－HEADED ARROW WITH HEAVY SHAFT
1F836 $\rightarrow$ RIGHTWARDS TRIANGLE－HEADED ARROW WITH HEAVY SHAFT ＝w－3176
1F837 】 DOWNWARDS TRIANGLE－HEADED ARROW WITH HEAVY SHAFT
Triangle headed arrows with very heavy shaft
1 1F838－LEFTWARDS TRIANGLE－HEADED ARROW WITH VERY HEAVY SHAFT $=\mathrm{w}-3177$
1F839 1 UPWARDS TRIANGLE－HEADED ARROW WITH VERY HEAVY SHAFT
1F83A $\rightarrow$ RIGHTWARDS TRIANGLE－HEADED ARROW WITH VERY HEAVY SHAFT
$=w-3178$
1F83B 】 DOWNWARDS TRIANGLE－HEADED ARROW WITH VERY HEAVY SHAFT

## Finger－post arrows

1F83C LEFTWARDS FINGER－POST ARROW ＝w－3179
1F83D UPWARDS FINGER－POST ARROW
1F83E－RIGHTWARDS FINGER－POST ARROW ＝ w － 3180
1F83F DOWNWARDS FINGER－POST ARROW

## Squared arrows

1F840＊LEFTWARDS SQUARED ARROW ＝w－3181
1F841＊UPWARDS SQUARED ARROW ＝w－3183
1 F842＊RIGHTWARDS SQUARED ARROW $=w-3182$

## 1F843＊DOWNWARDS SQUARED ARROW

 ＝w－3184
## Compressed arrows

1 F844 LEFTWARDS COMPRESSED ARROW ＝w－3189
1F845－UPWARDS COMPRESSED ARROW ＝w－3191
1F846 RIGHTWARDS COMPRESSED ARROW ＝w－3190
1F847－DOWNWARDS COMPRESSED ARROW $=\mathrm{w}-3192$

## Heavy compressed arrows

1F848 LEFTWARDS HEAVY COMPRESSED ARROW ＝w－3193
1 F849－UPWARDS HEAVY COMPRESSED ARROW ＝w－3195
1F84A RIGHTWARDS HEAVY COMPRESSED ARROW $=\mathrm{w}-3194$
$\rightarrow 27 A 7$ squat black rightwards arrow
1F84B－DOWNWARDS HEAVY COMPRESSED ARROW $=w-3196$

## Heavy arrows

1F84C LEFTWARDS HEAVY ARROW
＝w－3197
1F84D © UPWARDS HEAVY ARROW ＝w－3199
1F84E $\Rightarrow$ RIGHTWARDS HEAVY ARROW ＝w－3198
1F84F DOWNWARDS HEAVY ARROW ＝w－3200
Wide－headed light barb arrows
1F850 $\leftarrow$ WIDE－HEADED LEFTWARDS LIGHT BARB ARROW
＝w－3209
1 F851 $\uparrow$ WIDE－HEADED UPWARDS LIGHT BARB ARROW ＝w－3211
1F852 $\rightarrow$ WIDE－HEADED RIGHTWARDS LIGHT BARB ARROW
＝ w －3210
1F853 $\downarrow$ WIDE－HEADED DOWNWARDS LIGHT BARB ARROW ＝ w － 3212
1 1F854 К WIDE－HEADED NORTH WEST LIGHT BARB ARROW
＝w－3213
1F855 7 WIDE－HEADED NORTH EAST LIGHT BARB ARROW
＝ w －3214
1F856 $>$ WIDE－HEADED SOUTH EAST LIGHT BARB ARROW $=\mathrm{w}-3216$
1 1F857 $\quad$ WIDE－HEADED SOUTH WEST LIGHT BARB ARROW
$=\mathrm{w}-3215$

## Wide－headed barb arrows

1F858 $\leftarrow$ WIDE－HEADED LEFTWARDS BARB ARROW ＝W－1223
1F859 个 WIDE－HEADED UPWARDS BARB ARROW ＝w－1225
1F85A $\rightarrow$ WIDE－HEADED RIGHTWARDS BARB ARROW ＝ w －1224
1F85B $\downarrow$ WIDE－HEADED DOWNWARDS BARB ARROW $=\mathrm{w}-1226$

```
1F85C < WIDE-HEADED NORTH WEST BARB ARROW
    = w-1227
1F85D \ WIDE-HEADED NORTH EAST BARB ARROW
    = w-1228
1F85E \(>\) WIDE-HEADED SOUTH EAST BARB ARROW \(=\mathrm{w}-1230\)
1F85F \(\boldsymbol{K}\) WIDE-HEADED SOUTH WEST BARB ARROW \(=\mathrm{w}-1229\)
```

Wide-headed medium barb arrows
1F860 $\leftarrow$ WIDE-HEADED LEFTWARDS MEDIUM BARB ARROW
= w-3217
1 F861 $\uparrow$ WIDE-HEADED UPWARDS MEDIUM BARB ARROW = w-3219
1 F862 $\rightarrow$ WIDE-HEADED RIGHTWARDS MEDIUM BARB ARROW
$=\mathrm{w}$-3218
$\rightarrow 2794 \rightarrow$ heavy wide-headed rightwards arrow
1F863 $\downarrow$ WIDE-HEADED DOWNWARDS MEDIUM BARB ARROW
$=w-3220$
1 1F864 К WIDE-HEADED NORTH WEST MEDIUM BARB ARROW
= w -3221
1F865 $\boldsymbol{\lambda}$ WIDE-HEADED NORTH EAST MEDIUM BARB ARROW = w -3222
1 1F866 】 WIDE-HEADED SOUTH EAST MEDIUM BARB ARROW = w-3224
1 1F867 $\boldsymbol{K}$ WIDE-HEADED SOUTH WEST MEDIUM BARB ARROW $=\mathrm{w}-3223$
Wide-headed heavy barb arrows
1 F868 $\leftarrow$ WIDE-HEADED LEFTWARDS HEAVY BARB ARROW $=\mathrm{w}-1231$
1F869 个 WIDE-HEADED UPWARDS HEAVY BARB ARROW = w -1233
1 F86A $\rightarrow$ WIDE-HEADED RIGHTWARDS HEAVY BARB ARROW = W-1232
1F86B $\downarrow$ WIDE-HEADED DOWNWARDS HEAVY BARB ARROW $=\mathrm{w}-1234$
1F86C $\boldsymbol{T}$ WIDE-HEADED NORTH WEST HEAVY BARB ARROW
$=\mathrm{w}-1235$
1F86D $\boldsymbol{\lambda}$ WIDE-HEADED NORTH EAST HEAVY BARB ARROW
= w - 1236
1F86E צ WIDE-HEADED SOUTH EAST HEAVY BARB ARROW $=\mathrm{w}-1238$
1F86F $\boldsymbol{K}$ WIDE-HEADED SOUTH WEST HEAVY BARB ARROW
$=\mathrm{w}-1237$
Wide-headed very heavy barb arrows
1 F870 WIDE-HEADED LEFTWARDS VERY HEAVY BARB ARROW $=\mathrm{w}-3225$

```
1F871 ^ WIDE-HEADED UPWARDS VERY HEAVY BARB
    ARROW
    =w-3227
1F872 }->\mathrm{ WIDE-HEADED RIGHTWARDS VERY HEAVY
        BARB ARROW
        =w-3226
1F873 \downarrow WIDE-HEADED DOWNWARDS VERY HEAVY
        BARB ARROW
        = w-3228
1F874 R WIDE-HEADED NORTH WEST VERY HEAVY
        BARB ARROW
    = w-3229
1F875 % WIDE-HEADED NORTH EAST VERY HEAVY BARB
    ARROW
    = w-3230
1F876 \ WIDE-HEADED SOUTH EAST VERY HEAVY BARB
    ARROW
    = w-3232
1F877 WIDE-HEADED SOUTH WEST VERY HEAVY
    BARB ARROW
    = w-3231
```


## Arrowheads

These sets are narrower than the dingbats set
1F878 \& THREE-D TOP-LIGHTED LEFTWARDS EQUILATERAL ARROWHEAD $=\mathrm{w}-1215$
1F879 A THREE-D RIGHT-LIGHTED UPWARDS EQUILATERAL ARROWHEAD = w -1217
1F87A > THREE-D TOP-LIGHTED RIGHTWARDS EQUILATERAL ARROWHEAD
= $\mathrm{w}-1216$
$\rightarrow 27 \mathrm{~A} 2>$ three-d top-lighted rightwards arrowhead
1F87B $\vee$ THREE-D LEFT-LIGHTED DOWNWARDS EQUILATERAL ARROWHEAD = W -1218
1F87C < BLACK LEFTWARDS EQUILATERAL ARROWHEAD $=\mathrm{w}$-3133
1F87D A BLACK UPWARDS EQUILATERAL ARROWHEAD = w-3135
1F87E > BLACK RIGHTWARDS EQUILATERAL ARROWHEAD
$=\mathrm{w}$-3134
$\rightarrow 27 \mathrm{~A} 4$ black rightwards arrowhead
1F87F $\vee$ BLACK DOWNWARDS EQUILATERAL ARROWHEAD
= w-3136
1F880 • LEFTWARDS TRIANGLE ARROWHEAD = w-3233
= draw left
1 F881 . UPWARDS TRIANGLE ARROWHEAD
= w-3235
= draw up
1 F882 , RIGHTWARDS TRIANGLE ARROWHEAD $=\mathrm{w}-3234$
= draw right
1F883 DOWNWARDS TRIANGLE ARROWHEAD
= w-3236
= draw down
1F884 \& LEFTWARDS WHITE ARROW WITHIN TRIANGLE ARROWHEAD
$=\mathrm{w}-3237$
= draw double left

| 1F885 | - | UPWARDS WHITE ARROW WITHIN TRIANGLE ARROWHEAD $\begin{aligned} & =w-3239 \\ & =\text { draw double up } \end{aligned}$ |
| :---: | :---: | :---: |
| 1 1F886 | > | RIGHTWARDS WHITE ARROW WITHIN TRIANGLE ARROWHEAD $\begin{aligned} & =w-3238 \\ & =\text { draw double right } \end{aligned}$ |
| 1F887 | $v$ | DOWNWARDS WHITE ARROW WITHIN TRIANGLE ARROWHEAD $=w-3240$ <br> = draw double down |
| Notche |  | ows |
| 1F888 | - | LEFTWARDS ARROW WITH NOTCHED TAIL = w-3185 |
| 1 F889 | 1 | UPWARDS ARROW WITH NOTCHED TAIL $=w-3187$ |
| 1F88A | $\Rightarrow$ | RIGHTWARDS ARROW WITH NOTCHED TAIL $=w-3186$ <br> $\rightarrow 27 \mathrm{AF} \Rightarrow$ notched lower right-shadowed white rightwards arrow |
| 1F88B | $\downarrow$ | DOWNWARDS ARROW WITH NOTCHED TAIL $=w-3188$ | ARROWHEAD

= w-3239
= draw double up
TRIANGLE ARROWHEAD
$=\mathrm{w}$-3238
= draw double right
TRIANGLE ARROWHEAD
$=\mathrm{w}$-3240
= draw double down

## Notched arrows

## Heavy arrow shaft

Vertical alignment and thickness compatible with heavy shaft arrows
1F88C - HEAVY ARROW SHAFT WIDTH ONE $=W$ - 3172
1F88D • HEAVY ARROW SHAFT WIDTH TWO THIRDS $=W$ - 3173
1F88E • HEAVY ARROW SHAFT WIDTH ONE HALF $=W$ - 3174
1F88F • HEAVY ARROW SHAFT WIDTH ONE THIRD $=\mathrm{w}-3175$

## Shaded white arrows

```
1F890 < LEFTWARDS BOTTOM-SHADED WHITE ARROW
        =W-3090
1F891 }=>\mathrm{ RIGHTWARDS BOTTOM SHADED WHITE
        ARROW
        = w-3091
1F892 LEFTWARDS TOP SHADED WHITE ARROW
        = w-3092
1F893 }=>\mathrm{ RIGHTWARDS TOP SHADED WHITE ARROW
        =w-3093
1F894 < LEFTWARDS LEFT-SHADED WHITE ARROW
    =w-3094
1F895 }=>\mathrm{ RIGHTWARDS RIGHT-SHADED WHITE ARROW
    =W-3095
    27A9 }\boldsymbol{>}\mathrm{ right-shaded white rightwards arrow
1F896 < LEFTWARDS RIGHT-SHADED WHITE ARROW
    =w-3096
1F897 }=>\mathrm{ RIGHTWARDS LEFT-SHADED WHITE ARROW
        = w-3097
        ~27AA }=>\mathrm{ left-shaded white rightwards arrow
1F898 & LEFTWARDS BACK-TILTED SHADOWED WHITE
        ARROW
        =w-3098
1F899 }=>\mathrm{ RIGHTWARDS BACK-TILTED SHADOWED
    WHITE ARROW
    = W-3099
    ->27AB}=>\mathrm{ back-tilted shadowed white
        rightwards arrow
```

