

- The labiodental plosives <ɸ ɓ> from 20th-century Bantuist literature (e.g. Clement Doke, *The Southern Bantu Languages*, OUP, 1954), and continuing into the 21st century (Ladefoged & Maddieson, *The Sounds of the World's Languages*, Blackwell, 1996; Wolfgang Kehrein, *Phonological Representation and Phonetic Phasing*, De Gruyter, 2002), where the superscripts can be used to transcribe the epenthetic plosives of [ɱ^ɸf] and [ɱ^ɓv].

The Unicode character properties of modifier <ɸ ɓ> refer to the baseline letters <ɸ> and <ɓ>, which aren't yet encoded and are therefore requested here. They are illustrated in the figures.

The ICPLA is considering adding the labiodental plosives ɸ ɓ, the fricative trill ɽ, and the central approximants j w to ExtIPA (Martin Ball, p.c. 2024), so modifiers may prove useful there as well.

On naming: A reviewer of a draft of this proposal asked about the name of <ɸ> as modifier 'barred turned h,' and why that shouldn't apply instead to a hypothetical modifier turned ħ. In an upcoming proposal on barred and slashed letters, we will propose that, going forward, 'stroke' be restricted to short strokes that cross a single ascender or descender, consistent with U+0127 LATIN SMALL LETTER H WITH STROKE <ħ>, and that 'barred' be used for letters with a longer stroke that crosses the body of the letter, as in U+AB30 LATIN SMALL LETTER BARRED ALPHA <ᄁ>. Thus in that upcoming proposal we will request <ħ> as 'barred h,' and the letters <ɸ> and <ɓ> are requested here as 'barred turned h' and 'barred w.' If a turned ħ is ever needed, it would be 'turned h with stroke,' consistent with the name of U+0127 LATIN SMALL LETTER H WITH STROKE.

Characters

Barred letters

- ɸ 1DF3E LATIN SMALL LETTER BARRED TURNED H.
- ɓ 1DF3F LATIN SMALL LETTER BARRED W.

Modifier phonetic letters

- ɸ 1DFD8 MODIFIER LETTER SMALL BARRED TURNED H
- ɸ̇ 1DFD9 MODIFIER LETTER SMALL J WITH STROKE
- ɸ̈ 1DFDA MODIFIER LETTER SMALL UPSILON WITH STROKE
- ɸ̉ 1DFDB MODIFIER LETTER SMALL BARRED W
- ɸ̊ 1DFDC MODIFIER LETTER SMALL N WITH LONG RIGHT LEG.
- ɸ̋ 1DFDD MODIFIER LETTER SMALL R WITH LONG LEG
- ɸ̌ 1DFDE MODIFIER LETTER SMALL DB DIGRAPH
- ɸ̍ 1DFDF MODIFIER LETTER SMALL QP DIGRAPH
- ɸ̎ 1DFE0 MODIFIER LETTER SMALL DEZH DIGRAPH WITH CURL
- ɸ̏ 1DFE1 MODIFIER LETTER SMALL DEZH DIGRAPH WITH RETROFLEX HOOK
- ɸ̐ 1DFE2 MODIFIER LETTER SMALL ESH WITH CURL
- ɸ̑ 1DFE3 MODIFIER LETTER SMALL ESH WITH RETROFLEX HOOK

𐌆 1DFE4 MODIFIER LETTER SMALL TESH DIGRAPH WITH CURL
𐌆 1DFE5 MODIFIER LETTER SMALL TESH DIGRAPH WITH RETROFLEX HOOK
𐌇 1DFE6 MODIFIER LETTER SMALL EZH WITH CURL
𐌇 1DFE7 MODIFIER LETTER SMALL EZH WITH RETROFLEX HOOK

Modifier small capitals (subheading together with subsequent 2 characters)

ᵰ 1DFE8 MODIFIER LETTER SMALL CAPITAL D

Properties

Cross-referenced code points in red are proposed here, or are provisionally assigned, and may change.

1DF3E;LATIN SMALL LETTER BARRED TURNED H;Ll;0;L;;;;N;;;;;
1DF3F;LATIN SMALL LETTER BARRED W;Ll;0;L;;;;N;;;;;
1DFD8;MODIFIER LETTER SMALL BARRED TURNED H;Lm;0;L;<super> 1DF3E;;;;N;;;;;
1DFD9;MODIFIER LETTER SMALL J WITH STROKE;Lm;0;L;<super> 0249;;;;N;;;;;
1DFDA;MODIFIER LETTER SMALL UPSILON WITH STROKE;Lm;0;L;<super> 1D7F;;;;N;;;;;
1DFDB;MODIFIER LETTER SMALL BARRED W;Lm;0;L;<super> 1DF3F;;;;N;;;;;
1DFDC;MODIFIER LETTER SMALL N WITH LONG RIGHT LEG;Lm;0;L;<super> 019E;;;;N;;;;;
1DFDD;MODIFIER LETTER SMALL R WITH LONG LEG;Lm;0;L;<super> 027C;;;;N;;;;;
1DFDE;MODIFIER LETTER SMALL DB DIGRAPH;Lm;0;L;<super> 0238;;;;N;;;;;
1DFDF;MODIFIER LETTER SMALL QP DIGRAPH;Lm;0;L;<super> 0239;;;;N;;;;;
1DFE0;MODIFIER LETTER SMALL DEZH DIGRAPH WITH CURL;Lm;0;L;<super> 1DF2B;;;;N;;;;;
1DFE1;MODIFIER LETTER SMALL DEZH DIGRAPH WITH RETROFLEX HOOK;Lm;0;L;<super>
1DF19;;;;N;;;;;
1DFE2;MODIFIER LETTER SMALL ESH WITH CURL;Lm;0;L;<super> 0286;;;;N;;;;;
1DFE3;MODIFIER LETTER SMALL ESH WITH RETROFLEX HOOK;Lm;0;L;<super> 1D98;;;;N;;;;;
1DFE4;MODIFIER LETTER SMALL TESH DIGRAPH WITH CURL;Lm;0;L;<super> 1DF2C;;;;N;;;;;
1DFE5;MODIFIER LETTER SMALL TESH DIGRAPH WITH RETROFLEX HOOK;Lm;0;L;<super>
1DF1C;;;;N;;;;;
1DFE6;MODIFIER LETTER SMALL EZH WITH CURL;Lm;0;L;<super> 0293;;;;N;;;;;
1DFE7;MODIFIER LETTER SMALL EZH WITH RETROFLEX HOOK;Lm;0;L;<super> 1D9A;;;;N;;;;;
1DFE8;MODIFIER LETTER SMALL CAPITAL D;Lm;0;L;<super> 1D05;;;;N;;;;;

DoNotEmit data

For historical reasons, IPA letters with retroflex hook are not canonically equivalent to the letter plus the retroflex hook diacritic. They should thus be listed in DoNotEmit.txt.

1078A 0322; 1DFE1; Precomposed_Form # MODIFIER LETTER SMALL DEZH DIGRAPH, COMBINING RETROFLEX HOOK BELOW; MODIFIER LETTER SMALL DEZH DIGRAPH WITH RETROFLEX HOOK

1DB4 0322; 1DFE3; Precomposed_Form # MODIFIER LETTER SMALL ESH, COMBINING RETROFLEX HOOK BELOW; MODIFIER LETTER SMALL ESH WITH RETROFLEX HOOK

107AE 0322; 1DFE5; Precomposed_Form # MODIFIER LETTER SMALL TESH DIGRAPH, COMBINING RETROFLEX HOOK BELOW; MODIFIER LETTER SMALL TESH DIGRAPH WITH RETROFLEX HOOK

1DBE 0322; 1DFE7; Precomposed_Form # MODIFIER LETTER SMALL EZH, COMBINING RETROFLEX HOOK BELOW; MODIFIER LETTER SMALL EZH WITH RETROFLEX HOOK

References

Martin Ball & Joan Rahilly (2013) *Phonetics: The Science of Speech*. Routledge.

Eliel Lagercrantz (1939) *Lappischer Wortschatz*, vol. 1–2. Suomalaisugrilainen seura, series ‘Lexica Societatis Fenno-ugricae’ (no 6), Helsinki.

Katerina Nicolaidis (2024) ‘Unicode support for historical and para-IPA letters.’ Letter submitted to the Unicode Technical Committee, 01 January 2024. [L2/24-049](#).

Gabriel Nissim (1981) *Le bamileke-ghomálá’ (parler de Bandjoun, Cameroun)*. Société d’études linguistiques et anthropologiques de France.

Chart

Greyed out cells are assigned (medium grey) or proposed elsewhere (light grey).

Latin Extended-G

1DF00

1DFFF

	1DF0	1DF1	1DF2	1DF3	1DF4	1DF5	1DF6	1DF7	1DF8	1DF9	1DFA	1DFB	1DFC	1DFD	1DFE	1DFF
0	ƒ	ƒ	ƒ	ƒ											ƒ	ƒ
1	ƒ	ƒ	ƒ	ƒ											ƒ	ƒ
2	ƒ	ƒ	ƒ	ƒ											ƒ	ƒ
3	ƒ	ƒ	ƒ	ƒ											ƒ	ƒ
4	ƒ	ƒ	ƒ	ƒ											ƒ	ƒ
5	ƒ	ƒ	ƒ	ƒ											ƒ	ƒ
6	ƒ	ƒ	ƒ	ƒ											ƒ	ƒ
7	ƒ	ƒ	ƒ	ƒ											ƒ	ƒ
8	ƒ	ƒ	ƒ	ƒ										ƒ	ƒ	ƒ
9	ƒ	ƒ	ƒ	ƒ										ƒ	ƒ	ƒ
A	ƒ	ƒ	ƒ	ƒ										ƒ	ƒ	ƒ
B	ƒ	ƒ	ƒ	ƒ										ƒ	ƒ	ƒ
C	ƒ	ƒ	ƒ	ƒ										ƒ	ƒ	ƒ
D	ƒ	ƒ	ƒ	ƒ										ƒ	ƒ	ƒ
E	ƒ	ƒ	ƒ	ƒ										ƒ	ƒ	ƒ
F	ƒ	ƒ	ƒ	ƒ										ƒ	ƒ	ƒ

Figures

ɥ, A.P.I. ɥ ou ʉ, centrale non arrondie fermée
 y, A.P.I. j, semi-consonne palatale
 ʷ, A.P.I. ɥ, " labio-palatale
ɥ, transcrite habituellement ɥ, semi-consonne pré-dorsale.

2.33. Le phonème /ɥ/
 Son identité phonologique est apparue dans les oppositions
ɥ/y - cf. 2.30
ɥ/w - cf. 2.31
ɥ/ʷ - cf. 2.32
 Il se réalise semi-consonne pré-dorsale, étirée, mi-ouverte.

Figure 1. Nissim (1981: 15, 67). Contrast of the para-IPA approximant <ɥ>, for a central semivowel, with w, j, ɥ.

Table 5.3 Vowels and semi-vowels

	front unr.	front r.	central unr.	central r.	back unr.	back r.
Vowel	i	y	ɨ	ɥ	ɯ	u
Semi-vowel	j	ɥ	j	w	ɥ	w

Figure 2. Ball & Rahilly (2013: 88). <w> as the implicit IPA symbol for a central [w], and the semivowel equivalent of an exolabial [ɥ]. It is difficult to typeset with a overstriking diacritic due to the width of the letter w.

Kapitälchen: P P, Ṗ Ṗ (Ṗ) T (Ṫ) T, Ṫ Ṫ Ṫ K K, K̇ K̇ K̇ (K̇ K̇)
 B Ḃ Ḃ Ḃ Ḃ D Ḋ Ḋ Ḋ Ḋ G Ġ Ġ Ġ Ġ Ġ
 C (Ċ) Ċ (Ċ) Ċ (Ċ) Ċ — S (Ṡ) Ṡ (Ṡ) Ṡ (Ṡ) Ṡ
 L (L̇) (L̇) (L̇) (L̇) L̇ L̇ R (Ṙ) (Ṙ) (Ṙ) (Ṙ)
 M Ṁ Ṁ N Ṅ Ṅ Ṅ Ṅ Ṅ H Ḣ Ḣ
 V V̇ W Ẇ Ẇ Ẇ J J, H Ḣ H, Ḣ Ḣ Ḣ
 Am oberen Rande der Zeile: L L̇ L̇ L̇ R M N Ṅ H W J H B D G (P) T K

Figure 3. Lagercrantz (1939: 1236). Modifier small-cap <Ṗ> with other baseline and modifier Kapitälchen (small capitals).

ISO/IEC JTC 1/SC 2/WG 2
PROPOSAL SUMMARY FORM TO ACCOMPANY SUBMISSIONS
FOR ADDITIONS TO THE REPERTOIRE OF ISO/IEC 10646¹.

Please fill all the sections A, B and C below.

Please read Principles and Procedures Document (P & P) from <http://std.dkuug.dk/JTC1/SC2/WG2/docs/principles.html> for guidelines and details before filling this form.

Please ensure you are using the latest Form from <http://std.dkuug.dk/JTC1/SC2/WG2/docs/summaryform.html>.

See also <http://std.dkuug.dk/JTC1/SC2/WG2/docs/roadmaps.html> for latest Roadmaps.

A. Administrative

1. Title:	<i>Miscellaneous historical and para-IPA modifier letters</i>
2. Requester's name:	<i>Kirk Miller</i>
3. Requester type (Member body/Liaison/Individual contribution):	<i>individual</i>
4. Submission date:	<i>2024 June 6</i>
5. Requester's reference (if applicable):	
6. Choose one of the following:	
This is a complete proposal:	<input type="checkbox"/>
(or) More information will be provided later:	<input type="checkbox"/>

B. Technical – General

1. Choose one of the following:	
a. This proposal is for a new script (set of characters):	<input type="checkbox"/>
Proposed name of script:	
b. The proposal is for addition of character(s) to an existing block:	<input checked="" type="checkbox"/>
Name of the existing block:	<i>Latin Extended-G</i>
2. Number of characters in proposal:	<i>19</i>
3. Proposed category (select one from below - see section 2.2 of P&P document):	
A-Contemporary	<input checked="" type="checkbox"/>
B.1-Specialized (small collection)	<input type="checkbox"/>
B.2-Specialized (large collection)	<input type="checkbox"/>
C-Major extinct	<input type="checkbox"/>
D-Attested extinct	<input type="checkbox"/>
E-Minor extinct	<input type="checkbox"/>
F-Archaic Hieroglyphic or Ideographic	<input type="checkbox"/>
G-Obscure or questionable usage symbols	<input type="checkbox"/>
4. Is a repertoire including character names provided?	<input checked="" type="checkbox"/>
a. If YES, are the names in accordance with the “character naming guidelines” in Annex L of P&P document?	<input checked="" type="checkbox"/>
b. Are the character shapes attached in a legible form suitable for review?	<input checked="" type="checkbox"/>
5. Fonts related:	
a. Who will provide the appropriate computerized font to the Project Editor of 10646 for publishing the standard?	<i>Kirk Miller</i>
b. Identify the party granting a license for use of the font by the editors (include address, e-mail, ftp-site, etc.):	<i>SIL (Gentium release)</i>
6. References:	
a. Are references (to other character sets, dictionaries, descriptive texts etc.) provided?	<input checked="" type="checkbox"/>
b. Are published examples of use (such as samples from newspapers, magazines, or other sources) of proposed characters attached?	<input checked="" type="checkbox"/>
7. Special encoding issues:	
Does the proposal address other aspects of character data processing (if applicable) such as input, presentation, sorting, searching, indexing, transliteration etc. (if yes please enclose information)?	<input checked="" type="checkbox"/>

8. Additional Information:

Submitters are invited to provide any additional information about Properties of the proposed Character(s) or Script that will assist in correct understanding of and correct linguistic processing of the proposed character(s) or script. Examples of such properties are: Casing information, Numeric information, Currency information, Display behaviour information such as line breaks, widths etc., Combining behaviour, Spacing behaviour, Directional behaviour, Default Collation behaviour, relevance in Mark Up contexts, Compatibility equivalence and other Unicode normalization related information. See the Unicode standard at <http://www.unicode.org> for such information on other scripts. Also see Unicode Character Database (<http://www.unicode.org/reports/tr44/>) and associated Unicode Technical Reports for information needed for consideration by the Unicode Technical Committee for inclusion in the Unicode Standard.

¹ Form number: N4502-F (Original 1994-10-14; Revised 1995-01, 1995-04, 1996-04, 1996-08, 1999-03, 2001-05, 2001-09, 2003-11, 2005-01, 2005-09, 2005-10, 2007-03, 2008-05, 2009-11, 2011-03, 2012-01)

C. Technical - Justification

1. Has this proposal for addition of character(s) been submitted before? If YES explain	 no
2. Has contact been made to members of the user community (for example: National Body, user groups of the script or characters, other experts, etc.)? If YES, with whom? If YES, available relevant documents:	 yes <i>The International Phonetic Organization</i> <i>(see letter of support)</i>
3. Information on the user community for the proposed characters (for example: size, demographics, information technology use, or publishing use) is included? Reference:	
4. The context of use for the proposed characters (type of use; common or rare) Reference:	 phonetic
5. Are the proposed characters in current use by the user community? If YES, where? Reference:	 yes <i>see References section</i>
6. After giving due considerations to the principles in the P&P document must the proposed characters be entirely in the BMP? If YES, is a rationale provided? If YES, reference:	 no
7. Should the proposed characters be kept together in a contiguous range (rather than being scattered)?	 no
8. Can any of the proposed characters be considered a presentation form of an existing character or character sequence? If YES, is a rationale for its inclusion provided? If YES, reference:	 no
9. Can any of the proposed characters be encoded using a composed character sequence of either existing characters or other proposed characters? If YES, is a rationale for its inclusion provided? If YES, reference:	 no
10. Can any of the proposed character(s) be considered to be similar (in appearance or function) to, or could be confused with, an existing character? If YES, is a rationale for its inclusion provided? If YES, reference:	 no
11. Does the proposal include use of combining characters and/or use of composite sequences? If YES, is a rationale for such use provided? If YES, reference: Is a list of composite sequences and their corresponding glyph images (graphic symbols) provided? If YES, reference:	 no
12. Does the proposal contain characters with any special properties such as control function or similar semantics? If YES, describe in detail (include attachment if necessary)	 no
13. Does the proposal contain any Ideographic compatibility characters? If YES, are the equivalent corresponding unified ideographic characters identified? If YES, reference:	 no