

# Unicode request for double caron

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This proposal, officially supported by the International Phonetic Association after evaluation by the IPA Alphabets, Charts and Fonts Committee (Nicolaidis 2024), requests a compound tone diacritic, ǿ, that was covered by the Report of the Kiel Convention. It replaces [L2/23-189](#).

Ligatures of IPA tone diacritics are potentially open-ended, but extended ligatures generally consist of alternating acute and grave accents. The quadruple ligature acute-grave-acute-grave (double circumflex), ǿ̂, is currently supported by Unicode, but its expected partner, grave-acute-grave-acute (double caron), ǿ̃, is not.

Ligatures longer than four tone accents are unknown, and the requested diacritic is approaching the limit as to what is practical to fit over a single letter.

This proposal was previously made in 2023 July under the rather unhelpful name ‘Unicode request for an IPA compound tone diacritic’ (L2/23-189). It was deferred as ‘no consensus’ at the time, pending evaluation by the IPA as to whether it should be encoded.

## Character

ǿ 1ACF COMBINING DOUBLE CARON.

## Properties

1ACF;COMBINING DOUBLE CARON;Mn;230;NSM;;;;;N;;;;;

## References

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

P.J. Roach (1989) Report on the 1989 Kiel Convention. *JIPA* 19:2.

# Chart

Assigned cells are medium grey. Light-grey cells are proposed in separate requests.

## Combining Diacritical Marks Extended

1AB0

1AEF

	1AB	1AC	1AD	1AE	1AF
0	◌̃	◌̄	◌̅		
1	◌̆	◌̇	◌̈		
2	◌̉	◌̊	◌̋		
3	◌̌	◌̍	◌̎		
4	◌̏	◌̐	◌̑		
5	◌̒	◌̓	◌̔		
6	◌̖	◌̗	◌̘		
7	◌̙	◌̚	◌̛		
8	◌̜	◌̝	◌̞		
9	◌̟	◌̠	◌̡		
A	◌̢	◌̣	◌̤		
B	◌̥	◌̦	◌̧		
C	◌̨	◌̩	◌̪		
D	◌̬	◌̭	◌̮		
E	◌̯	◌̰	◌̱		
F	◌̲	◌̳			

# Figures

Pitch pattern		Diacritical tone marks		Tone letters	
high	extra high vs. high	´X	ˆX	⌈	⌈
mid		¯X		⌋	⌋
low	vs. extra low	˘X	˙X	⌋	⌋
rise		↘X		∧	
fall		↗X		∨	
high rise		↗X		∧	
vs.		↘X		∨	
low rise		↗X		∧	
high fall		↘X		∨	
vs.		↗X		∧	
low fall		↘X		∨	
rise fall		↘↗X		∧∨	
fall rise		↗↘X		∨∧	
rise fall rise etc.		↘↗↘X		∧∨∧	

Figure 1. Roach (1989: 76). Correspondences between the two tone-marking systems of the IPA. The diacritics for contour tones in the middle column are mostly supported by Unicode (˘ ˆ ˘ ˙ ˘ ˙ ˘ ˙). Only the last, ˙, has yet to be encoded, though coincidentally its converse, ˘, is encoded at U+1AB0.

ISO/IEC JTC 1/SC 2/WG 2  
**PROPOSAL SUMMARY FORM TO ACCOMPANY SUBMISSIONS  
 FOR ADDITIONS TO THE REPERTOIRE OF ISO/IEC 10646<sup>1</sup>.**

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

Please read Principles and Procedures Document (P & P) from [std.dkuug.dk/JTC1/SC2/WG2/docs/principles.html](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 [std.dkuug.dk/JTC1/SC2/WG2/docs/summaryform.html](http://std.dkuug.dk/JTC1/SC2/WG2/docs/summaryform.html).  
 See also [std.dkuug.dk/JTC1/SC2/WG2/docs/roadmaps.html](http://std.dkuug.dk/JTC1/SC2/WG2/docs/roadmaps.html) for latest *Roadmaps*.

**A. Administrative**

<b>1. Title:</b>	<i>Additional phonetic click 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 April 14</i>	
5. Requester's reference (if applicable):		
6. Choose one of the following:		
This is a complete proposal:		<i>yes</i>
(or) More information will be provided later:		

**B. Technical – General**

1. Choose one of the following:		
a. This proposal is for a new script (set of characters):		<i>no</i>
Proposed name of script:		
b. The proposal is for addition of character(s) to an existing block:		<i>yes</i>
Name of the existing block:	<i>Combining Diacritical Marks Extended</i>	
2. Number of characters in proposal:		<i>1</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?		<i>yes</i>
a. If YES, are the names in accordance with the “character naming guidelines” in Annex L of P&P document?		<i>yes</i>
b. Are the character shapes attached in a legible form suitable for review?		<i>yes</i>
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?		<i>yes</i>
b. Are published examples of use (such as samples from newspapers, magazines, or other sources) of proposed characters attached?		<i>yes</i>
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)?		<i>no</i>

**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 [www.unicode.org](http://www.unicode.org) for such information on other scripts. Also see Unicode Character Database ([www.unicode.org/reports/tr44/](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.

<sup>1</sup> 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	<i>yes: L2/23-189</i> <i>No consensus at the time from the SAH; now supported by the IPA</i>
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:	<i>yes</i> <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:	<i>transcription</i>
5. Are the proposed characters in current use by the user community? If YES, where? Reference:	<i>yes</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:	<i>no</i>
7. Should the proposed characters be kept together in a contiguous range (rather than being scattered)?	
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:	<i>no</i>
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:	<i>no</i>
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:	<i>no</i>
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:	<i>no</i> <i>no</i>
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)	<i>no</i>
13. Does the proposal contain any Ideographic compatibility characters? If YES, are the equivalent corresponding unified ideographic characters identified? If YES, reference:	<i>no</i>