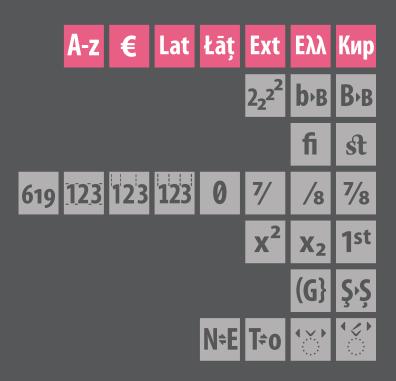
Fira Sans Ultra

Carrois' Technical Documentation



Copyright © 2014 by Carrois Type Design

No part of this publication may be reproduced, stored in a retrieval system, or transmittet, in any form or by any means, electronic, mecanical, photocopying, recording or otherwise, without the prior written consent of the publisher.

This publication and the information herein is furnished AS IS, is subject to change without notice, and should not be constured as a commitment by Carrois Type Design. Carrois Type Design assumes no resposibility for any errors or inaccuracies, makes no warranty of any kind (express, implied or statutory) with respect to this publication, and expressly disclaims any and all warranties of merchantability, fitness for particular purposes and noninfringement of third party rights. Brand or product names, used in this publication, are the trademarks or registered trademarks of their respective holders.

For questions and comments please contact:

Carrois Type Design GbR Simplonstr. 54 10245 Berlin Germany Tel.: +49 (30) 920 389 66

Tel.: +49 (30) 920 389 66 e-Mail: post@carrois.com Internet: <u>www.carrois.com</u>

Document generated 2014/07/02-08:52:45 with e-font PDF Generator

Table of Content

Encoded Characters	4
Basic Latin	4
Latin-1 Supplement	4
Latin Extended-A	5
Latin Extended-B	5
Spacing Modifier Letters	5
Combining Diacritical Marks	5
Greek and Coptic	6
Cyrillic	6
Cyrillic Supplement	7
Latin Extended Additional	7
Greek Extended	7
General Punctuation	7
Superscripts and Subscripts	8
Currency Symbols	8
Letterlike Symbols	8
Number Forms	8
Arrows	8
Mathematical Operators	8
Miscellaneous Technical	9
Geometric Shapes	9
Dingbats	9
Miscellaneous Symbols and Arrows	9
Private Use Area	9
Alphabetic Presentation Forms	9
Arabic Presentation Forms-B	10
Unencoded Glyphs	10
Small Capitals From Capitals, Small Capitals	11
Case-Sensitive Forms	12
Discretionary Ligatures	12
Denominators	12
	12
Denominators, Fractions Fractions, Numerators	12
Localized Forms	13
Numerators	13
Old Style Figures, Proportional Figures	13
	13
Old Style Figures, Tabular Figures	13
Proportional Figures	
Small Capitals	14
Tabular Figures Slashed Zero	14
Other	14
	14 15
OpenType Layout Features Substitution Features	15
Positioning Features	16
Codepages	17
MacOS	17
MS Windows	17
ISO	17
Languages	18
Latin	18
Cyrillic	18
Greek	18

Encoded Characters

All encoded characters should be accessible with every unicode capable application. For details about Unicode Blocks visist the <u>Unicode Website</u>.

Basic Latin

Block from 0000 to 007F

000D	0020	0021	0022	0023	0024	0025	0026	0027	0028	0029	002A	002B	002C	002D	002E
		Ī	**	#	\$	%	&	T)	*	+	•	-	•
002F	0030	0031	0032	0033	0034	0035	0036	0037	0038	0039	003A	003B	003C	003D	003E
1	0	1	2	3	4	5	6	7	8	9	•	:	<	=	>
003F	0040	0041	0042	0043	0044	0045	0046	0047	0048	0049	004A	004B	004C	004D	004E
?	@	A	B	C	D	E	F	G	H		J	K	L	M	N
004F	0050	0051	0052	0053	0054	0055	0056	0057	0058	0059	005A	005B	005C	005D	005E
0	P	Q	R	S	T	U	V	W	X	Y	Z		1]	^
005F	0060	0061	0062	0063	0064	0065	0066	0067	0068	0069	006A	006B	006C	006D	006E
	•	a	b	C	d	e	f	g	h	i	j	k	l	m	n
006F	0070	0071	0072	0073	0074	0075	0076	0077	0078	0079	007A	007B	007C	007D	007E
0	p	a	r	S	t	u	v	W	X	V	Z	{		}	~
_		_	_	_	_		_			7	_				

Latin-1 Supplement

Block from 0080 to 00FF

00A0	00A1	00A2	00A3	00A4	00A5	00A6	00A7	00A8	00A9	00AA	00AB	00AC	00AD	00AE	00AF
	i	¢	£	Ħ	¥		§	••	©	a	<<	-	_	®	-
00B0	00B1	00B2	00B3	00B4	00B5	00B6	00B7	00B8	00B9	00BA	00BB	00BC	00BD	00BE	00BF
0	±	2	3		μ	¶	•	_	1	<u>o</u>	>>	1/4	1/2	3/4	į
00C0	00C1	00C2	00C3	00C4	00C5	00C6	00C7	00C8	00C9	00CA	00CB	00CC	00CD	00CE	00CF
À	Á	Â	Ã	Ä	Å	Æ	Ç	È	É	Ê	Ë	ì	ĺ	Î	Ϊ
00D0	00D1	00D2	00D3	00D4	00D5	00D6	00D7	00D8	00D9	00DA	00DB	00DC	00DD	00DE	00DF
Ð	Ñ	Ò	Ó	Ô	Õ	Ö	×	Ø	Ù	Ú	Û	Ü	Ý	Þ	ß
00E0	00E1	00E2	00E3	00E4	00E5	00E6	00E7	00E8	00E9	00EA	00EB	00EC	00ED	00EE	00EF
à	á	â	ã	ä	å	æ	Ç	è	é	ê	ë	ì	ĺ	î	ï
00F0	00F1	00F2	00F3	00F4	00F5	00F6	00F7	00F8	00F9	00FA	00FB	00FC	00FD	00FE	00FF
ð	ñ	Ò	Ó	ô	Õ	Ö	•	Ø	ù	ú	û	ü	ý	þ	ÿ

Latin Extended-A

Block from 0100 to 017F

0100	0101	0102	0103	0104	0105	0106	0107	0108	0109	010A	010B	010C	010D	010E	010F
Ā	ā	Ă	ă	Ą	ą	Č	Ć	Ĉ	Ĉ	Ċ	Ċ	Č	č	Ď	ď
0110	0111	0112	0113	0114	0115	0116	0117	0118	0119	011A	011B	011C	011D	011E	011F
Ð	đ	Ē	ē	Ĕ	ĕ	Ė	ė	Ę	ę	Ě	ě	Ĝ	ĝ	Ğ	ğ
0120	0121	0122	0123	0124	0125	0126	0127	0128	0129	012A	012B	012C	012D	012E	012F
Ġ	ġ	Ģ	ģ	Ĥ	ĥ	Ħ	ħ	Ĩ	ĩ	Ī	ī	Ĭ	ĭ	J	j
0130	0131	0132	0133	0134	0135	0136	0137	0138	0139	013A	013B	013C	013D	013E	013F
i		IJ	ij	Ĵ	ĵ	K	k	K	Ĺ	ĺ	L	l	Ľ	ľ	Ŀ
0140	0141	0142	0143	0144	0145	0146	0147	0148	0149	014A	014B	014C	014D	014E	014F
ŀ	Ł	ł	Ň	ń	Ŋ	ņ	Ň	ň	'n	Ŋ	ŋ	Ō	ō	Ŏ	ŏ
0150	0151	0152	0153	0154	0155	0156	0157	0158	0159	015A	015B	015C	015D	015E	015F
Ő	ő	Œ	œ	Ŕ	ŕ	R	ŗ	Ř	ř	Ś	Ś	Ŝ	ŝ	Ş	ş
0160	0161	0162	0163	0164	0165	0166	0167	0168	0169	016A	016B	016C	016D	016E	016F
Š	Š	T	t	Ť	ť	Ŧ	ŧ	Ũ	ũ	Ū	ū	Ŭ	ŭ	Ů	ů
0170	0171	0172	0173	0174	0175	0176	0177	0178	0179	017A	017B	017C	017D	017E	
Ű	ű	U	u	Ŵ	ŵ	Ŷ	ŷ	Ÿ	Ź	ź	Ż	ż	Ž	ž	
_		Z	~~												

Latin Extended-B

Block from 0180 to 024F



Spacing Modifier Letters

Block from 02B0 to 02FF



Combining Diacritical Marks

Block from 0300 to 036F

-	•	^	~	_	•	•	••	0	**	~	•	6		
0300	0301	0302	0303	0304	0306	0307	0308	030A	030B	030C	0313	0314	0326	0327

Greek and Coptic

Block from 0370 to 03FF

0384	0385	0386	0388	0389	038A	038C	038E	038F	0390	0391	0392	0393	0394	0395	0396
	•4	Ά	'E	Ή	1	0	'Y	Ώ	Ϋ	A	B	Г	Δ	E	Z
0397	0398	0399	039A	039B	039C	039D	039E	039F	03A0	03A1	03A3	03A4	03A5	03A6	03A7
H	Θ		K	Λ	M	N		0	П	P	Σ	T	Y	Φ	X
03A8	03A9	03AA	03AB	03AC	03AD	03AE	03AF	03B0	03B1	03B2	03B3	03B4	03B5	03B6	03B7
Ψ	Ω		Ÿ	ά	έ	ή	í	ΰ	α	β	Y	δ	3	ζ	η
03B8	03B9	03BA	03BB	03BC	03BD	03BE	03BF	03C0	03C1	03C2	03C3	03C4	03C5	03C6	03C7
θ	l	K	λ	μ	V	ξ	0	π	P	5	σ	T	U	φ	X
03C8	03C9	03CA	03CB	03CC	03CD	03CE									
Ψ	ω	Ĩ	Ü	Ó	Ů	Ŵ									

Cyrillic

Block from 0400 to 04FF

0400	0401	0402	0403	0404	0405	0406	0407	0408	0409	040A	040B	040C	040D	040E	040F
È	Ë	Ђ	Ĺ	E	S		Ĩ	J	Љ	њ	ħ	K	Й	У	Ų
0410	0411	0412	0413	0414	0415	0416	0417	0418	0419	041A	041B	041C	041D	041E	041F
A	Б	B	Г	Д	E	Ж	3	И	Й	K	Л	M	Н	0	П
0420	0421	0422	0423	0424	0425	0426	0427	0428	0429	042A	042B	042C	042D	042E	042F
P	C	T	У	Φ	X	Ц	Ч	Ш	Щ	Ъ	Ы	Ь	Э	Ю	Я
0430	0431	0432	0433	0434	0435	0436	0437	0438	0439	043A	043B	043C	043D	043E	043F
a	6	B	Г	Д	e	Ж	3	И	й	K	Л	M	H	0	П
0440	0441	0442	0443	0444	0445	0446	0447	0448	0449	044A	044B	044C	044D	044E	044F
p	C	T	y	ф	X	Ц	4	Ш	Щ	Ъ	Ы	Ь	Э	Ю	Я
0450	0451	0452	0453	0454	0455	0456	0457	0458	0459	045A	045B	045C	045D	045E	045F
è	ë	ħ	ŕ	E	S	i	ï	j	љ	њ	ħ	Ŕ	Й	Ĭ	¥
0462	0463	0472	0473	0474	0475	0490	0491	0492	0493	0496	0497	0498	0499	049A	049B
Ъ	5	θ	θ	V	V	ľ	ď	F	F	Ж	Ж	3	3	Ķ	K
049C	049D	04A0	04A1	04A2	04A3	04AA	04AB	04AC	04AD	04AE	04AF	04B0	04B1	04B2	04B3
K	K	K	ĸ	Щ	Щ	C	Ç	Ţ	Ţ	Y	Y	¥	¥	X	X
04B6	04B7	04B8	04B9	04BA	04BB	04C0	04C1	04C2	04CB	04CC	04CF	04D0	04D1	04D2	04D3
Ч	ц	4	4	h	h		Ж	Ж	y	y	l	Ă	ă	Ä	ä

Ţ	Ţ	Ы	Ы												
04F6	04F7	04F8	04F9												
Ö	Ö	θ	0	Ö	ë	Ä	Ë	У	ÿ	ÿ	ÿ	ÿ	ű	Ÿ	ÿ
04E6	04E7	04E8	04E9	04EA	04EB	04EC	04ED	04EE	04EF	04F0	04F1	04F2	04F3	04F4	04F5
Æ	æ	Ě	ĕ	9	ð	ä	ä	Ж	Ж	3	3	Й	Й	Й	Й
04D4	04D5	04D6	04D7	04D8	04D9	04DA	04DB	04DC	04DD	04DE	04DF	04E2	04E3	04E4	04E5

Cyrillic Supplement

Block from 0500 to 052F

051C 051D 0524 0525 0526 0527

WwДқҚ

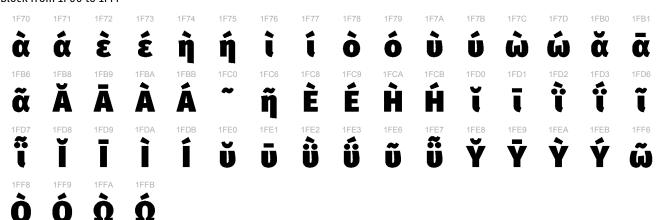
Latin Extended Additional

Block from 1E00 to 1EFF



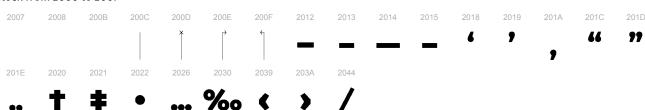
Greek Extended

Block from 1F00 to 1FFF



General Punctuation

Block from 2000 to 206F



Superscripts and Subscripts

Block from 2070 to 209F

0 4 5 6 7 8 9 + - = ()	
	2082 2083
2070 2074 2075 2076 2077 2078 2070 2070 2070 2070 2070 2070	0083 2083

Currency Symbols

Block from 20A0 to 20CF

20AC



Letterlike Symbols

Block from 2100 to 214F

2116 2122 2126 212E



Number Forms

Block from 2150 to 218F

1/3 2/3 1/5 2/5 3/5 4/5 1/6 5/6 1/8 3/8 5/8 7/8 1/

Arrows

Block from 2190 to 21FF



Mathematical Operators

Block from 2200 to 22FF



Miscellaneous Technical

Block from 2300 to 23FF

2326

2327

2328

232B









23CE

Geometric Shapes

Block from 25A0 to 25FF

25AF 25CA





Dingbats

Block from 2700 to 27BF



Miscellaneous Symbols and Arrows

Block from 2B00 to 2BFF







Private Use Area

Block from E000 to F8FF











Alphabetic Presentation Forms

Block from FB00 to FB4F

FB01 FB02





Arabic Presentation Forms-B

Block from FE70 to FEFF

FEFF

Unencoded Glyphs

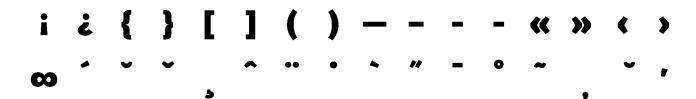
All unencoded glyphs are accessible with OpenType layout feature capable applications. For a complete list of supported OpenType layout features see the next section.

Small Capitals From Capitals, Small Capitals

A	Á	Ă	Â	Ä	À	Ā	Ą	Å	Ã	Æ	É	B	C	Ć	č
Ç	ĉ	ċ	D	Đ	Ď	Ð	E	É	Ĕ	Ě	Ê	Ë	Ė	È	Ē
Ę	F	G	Ğ	Ĝ	Ģ	Ġ	H	Ħ	Ĥ	ı	í	Ĭ	î	ï	i
ì	IJ	ī	Į	ĩ	J	ĵ	K	Ķ	L	Ĺ	Ľ	Ļ	Ĺ	Ł	M
N	Ń	Ň	Ņ	Ŋ	Ñ	0	ó	ŏ	ô	ö	ò	ő	ō	Ø	Ó
õ	Œ	P	Þ	Q	R	Ŕ	Ř	Ŗ	S	Ś	š	ş	ŝ	Ş	T
Ŧ	Ť	Ţ	Ţ	U	Ú	Ŭ	Û	Ü	ù	ű	Ū	Ų	ů	ũ	V
W	Ŵ	ŵ	W	ŵ	X	Y	Ý	Ŷ	Ÿ	Ŷ	Z	ź	ž	ż	A
Б	В	Г	ŕ	ď	Д	E	È	Ë	Ж	3	И	Ă	À	K	Ŕ
Л	M	H	0	П	P	C	T	У	ў	Ф	X	ч	ц	ш	щ
Ų	Я	Ь	ъ	Ы	љ	њ	S	E	3	ı	ï	J	Ћ	Ю	Ђ
Ъ	θ	V	F	Ж	3	Ķ	K	ĸ	H	Щ	Ç	τ	Y	¥	X
ц	4	h	h	ı	¥	Ă	Ä	Ě	9	ë	Ā	θ	ë	ë	Ţ
ÿ	ű	ÿ	Ţ	Ы	W	A	В	Г	Λ	E	Z	H	Θ	I	K



Case-Sensitive Forms



Discretionary Ligatures



Denominators

() = - +

Denominators, Fractions

0 1 2 3 4 5 6 7 8 9

Fractions, Numerators

0 1 2 3 4 5 6 7 8 9

Localized Forms



Numerators

$$() = - +$$

Old Style Figures, Proportional Figures

Old Style Figures, Tabular Figures

0 1 2 3 4 5 6 7 8 9 # - ¢
$$x \in \mathbb{Z}$$
£ $x \approx - \div = x \geq \infty$ $x \in \mathbb{Z}$
8 % $x \in \mathbb{Z}$
8 % $x \in \mathbb{Z}$
9 % $x \in \mathbb{Z}$

Proportional Figures

€

Small Capitals



Tabular Figures

0 1 2 3 4 5 6 7 8 9 # - ¢
$$x \ \xi$$
 £ $x \ \approx \ \sim \ \vdots \ = \ > \ \geq \ \infty \ \int \ < \ \leq \ \neg \ - \ \times \ \neq \ \delta$ % % + $x \ = \ \nabla \ \Sigma \ O \ \xi \ \circ \ + \ x \ \neq \ \delta$

Slashed Zero



Other



OpenType Layout Features

For details about OpenType Layout Features see the OpenType Layout tag registry.

Substitution Features



Access All Alternates

This feature makes all variations of a selected character accessible.



Small Capitals

This feature turns lowercase characters into small capitals. This corresponds to the common SC font layout. It is generally used for display lines set in Large and small caps, such as titles. Forms related to small capitals, such as oldstyle figures, may be included.



Small Capitals From Capitals

This feature turns capital characters into small capitals.



Standard Ligatures

Replaces a sequence of glyphs with a single glyph which is preferred for typographic purposes. This feature covers the ligatures which the designer/manufacturer judges should be used in normal conditions.



Discretionary Ligatures

Replaces a sequence of glyphs with a single glyph which is preferred for typographic purposes. This feature covers those ligatures which may be used for special effect, at the user's preference.



Old Style Figures

This feature changes selected figures from the default lining style to oldstyle form.



Lining Figures

This feature changes selected figures from oldstyle to the default lining form.



Proportional Figures

Replaces figure glyphs set on uniform (tabular) widths with corresponding glyphs set on glyph-specific (proportional) widths.



Tabular Figures

Replaces figure glyphs set on proportional widths with corresponding glyphs set on uniform (tabular) widths.



Slashed Zero

Some fonts contain both a default form of zero, and an alternative form which uses a diagonal slash through the counter. This feature allows the user to change from the default 0 to a slashed form.



Numerators

Replaces selected figures which precede a slash with numerator figures, and replaces the typographic slash with the fraction slash.



Denominators

Replaces selected figures which follow a slash with denominator figures.



Fractions

Replaces figures separated by a slash with 'common' (diagonal) fractions.



Superscript

Replaces lining or oldstyle figures with superior figures (primarily for footnote indication), and may replace lowercase letters with superior letters (primarily for abbreviated French titles).



Subscript

The "subs" feature may replace a default glyph with a subscript glypht.



Ordinals

Replaces default alphabetic glyphs with the corresponding ordinal forms for use after figures.



Case-Sensitive Forms

Shifts various punctuation marks up to a position that works better with all-capital sequences or sets of lining figures; also changes oldstyle figures to lining figures.



Localized Forms

This feature enables localized forms of glyphs to be substituted for default forms.

Positioning Features



Capital Spacing

Globally adjusts inter-glyph spacing for all-capital text. Most typefaces contain capitals and lowercase characters, and the capitals are positioned to work with the lowercase. When capitals are used for words, they need more space between them for legibility and esthetics.



Kerning

Adjusts amount of space between glyphs, generally to provide optically consistent spacing between glyphs.



Mark Positioning

Positions mark glyphs with respect to base glyphs.



Mark to Mark Positioning

Positions marks with respect to other marks. Required in various non-Latin scripts like Arabic.

Codepages

Mac₀S

MacOS Central Europe MacOS Croatian MacOS Cyrillic MacOS Greek MacOS Icelandic MacOS Roman MacOS Romanian MacOS Turkish

MS Windows

MS Windows 1250 Central European MS Windows 1251 Cyrillic MS Windows 1252 Western (ANSI) MS Windows 1253 Greek MS Windows 1254 Turkish MS Windows 1257 Baltic

ISO

ISO 8859- 1 Latin 1 (Western)
ISO 8859- 2 Latin 2 (Central Europe)
ISO 8859- 3 Latin 3 (Tu, Malt, Gal, Esp)
ISO 8859- 4 Latin 4 (Baltic)
ISO 8859- 5 Cyrillic

ISO 8859-9 Latin 5 (Turkish) ISO 8859-10 Latin 6 (Scandinavian) ISO 8859-13 Latin 7 (Baltic 2) ISO 8859-15 Latin 9 ISO 8859-16 Latin 10

Languages

Information about languages is mainly based on the Unicode Common Locale Data Repository. For details visit the <u>Unicode CLDR Project</u>.

Latin

Afar Afrikaans Albanian Asu Basque Bemba Bena Bosnian Breton Catalan Chiga Cornish Crimean Tatar Croatian Czech Danish Dutch Embu English Esperanto Estonian Faroese Filipino **Finnish** French Frisian West Friulian Ga

Galician
Ganda
German
Gusii
Hungarian
Icelandic
Indonesian
Interlingua
Irish
Italian
Jju
Kabuverdian
Kalaallisut
Kalenjin
Kamba
Kikuyu

Italian
Jju
Kabuverdianu
Kalaallisut
Kalenjin
Kamba
Kikuyu
Kinyarwanda
Koro
Kurdish
Latvian
Lithuanian
Low German
Luo
Luyia
Machame
Makonde
Malagasy
Malay

Maltese
Manx
Maori
Meru
Moldavian
Morisyen
North Ndebele
Norwegian Bokmål
Norwegian Nynorsk
Nyanja
Nyankole
Occitan
Oromo
Polish

Polish
Portuguese
Romanian
Romansh
Rombo
Rwa
Saho
Samburu
Sami Northern
Sango
Sena
Serbian
Shambala
Shona
Sidamo

Slovak Slovenian Soga Somali Sorbian, Lower Sorbian, Upper Sotho, Northern Sotho. Southern South Ndebele Spanish Swahili Swati Swedish Swiss German Taita Taroko Teso

Taroko Teso Tsonga Tswana Turkish Tyap Vunjo Welsh Wolof Xhosa Zulu

Cyrillic

Azerbaijani Bashkir Belarusian Bulgarian Buriat Chechen Kazakh Macedonian Mongolian Russian Serbian Tajik Tatar Uighur Ukrainian Uzbek

Greek

Greek