



**MAKE IT AN  
EXPERIENCE**





# Ten Mincho—*To Boldly Go Where No Japanese Font Has Gone Before*

Dr Ken Lunde | Sr Computer Scientist 2 | CJKV Type Development | Adobe Systems Incorporated

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# Birth Statistics



# Birth Statistics

Ten Mincho—韶明朝



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Typeface Designer—Ryoko Nishizuka 西塚涼子

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Faces—Regular & *Italic*

OpenType Features—32 GSUB & 7 GPOS

# Birth Statistics

いろはにほへと  
ちりぬるを  
わかよたれそ  
つねならむ  
うゐのおくやま  
けふこえて  
あさきゆめみし  
ゑひもせす  
色は匂へど  
散りぬるを  
我が世誰ぞ  
常ならん  
有為の奥山  
今日越えて  
浅き夢見じ  
酔ひもせず



# Adobe-Identity-0 ROS





# Adobe-Identity-0 ROS

Special-purpose ROS—Registry, Ordering & Supplement



# Adobe-Identity-0 ROS

Special-purpose ROS—Registry, Ordering & Supplement

Used by *Kazuraki*

Successfully used by the *Source Han* & *Noto CJK* families

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Unicode-based working glyph names

*uni8C82* for U+8C82 韶

# Kanji



# Kanji

## 6,469 Kanji



# Kanji

6,469 Kanji

JIS X 0208 + Jōyō Kanji + Jinmei-yō Kanji

# Kanji

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No Unencoded Kanji

# Kanji

6,469 Kanji

JIS X 0208 + Jōyō Kanji + Jinmei-yō Kanji

No Unencoded Kanji

JIS2004-style

倦僅儲兔冤卿廐又叛叟咬哨喰嘲噂噌囀堵媿屑屠巷庖廟迴徘徽  
恢愈扁挺挽抄捲掄摯摺撰擢斧晦杓杖梗檣楯榔槌槌樽櫛歎汲  
淫溢溺漣瀕瀞瀦灘灸灼煉煎煽爺牌牙狡猷甌甕甦疼瞥祁祇禰秤  
稗穿竈笈筵箭箸篇篝簾粲粲翫翰腱腿艘芒芦茨葛蓬蔑蔽薩薯藷  
虔蛸蝨蝕蠅襖訊訝註詮詵諺謎謬豹賭辻辿迂迄迦逗這逢逼遁遜  
遡鄭酋釜鑄鍵鎚鏗隙鞞鞞鞞鞞餡餅餌餐饗駁騙鮫鯖鰯鱒鴉鵠懲



# Unicode Coverage







# Unicode Coverage

Row U+00xx: UniTenMincholt-UTF32-H

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0																
1																
2		!	"	#	\$	%	&	'	(	)	*	+	,	-	.	/
3	0	1	2	3	4	5	6	7	8	9	:	;	<	=	>	?
4	@	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
5	P	Q	R	S	T	U	V	W	X	Y	Z	[	\	]	^	_
6	`	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o
7	p	q	r	s	t	u	v	w	x	y	z	{		}	~	
8																
9																
A	ı	ç	£	¤	¥	ı	§	¨	©	ª	«	¬	-	®	-	
B	±	²	³	µ	¶	·	¸	¹	º	»	¼	½	¾	¿		
C	À	Á	Â	Ã	Ä	Å	Æ	Ç	È	É	Ê	Ë	Ì	Í	Î	Ï
D	Ð	Ñ	Ò	Ó	Ô	Õ	Ö	×	Ø	Ù	Ú	Û	Ü	Ý	Þ	ß
E	à	á	â	ã	ä	å	æ	ç	è	é	ê	ë	ì	í	î	ï
F	ð	ñ	ó	ô	õ	ö	÷	ø	ù	ú	û	ü	ý	þ	ÿ	

Adobe-Identity-0

Row U+30xx: UniTenMincho-UTF32-H

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0		、	。	々	々	々	々	々	々	々	々	々	々	々	々	々
1	【	】	〒	≡	[	]			〔	〕			～	ゝ		ゝ
2	㊦															
3			/	ト	\						こ		へ			
4	あ	あ	い	い	う	う	え	え	お	お	か	が	き	ぎ	く	
5	ぐ	げ	げ	こ	さ	ざ	し	ず	ず	せ	ぜ	そ	ぞ	た		
6	だ	ち	ち	つ	つ	づ	て	と	と	な	に	ぬ	ね	の	は	
7	ば	ぱ	ひ	び	び	ふ	ぶ	ぶ	へ	べ	ほ	ほ	ほ	ま	み	
8	む	め	も	や	や	ゆ	ゆ	よ	よ	ら	り	る	れ	ろ	わ	わ
9	ゐ	ゑ	を	ん	づ	か	け									
A	ア	ア	イ	イ	ウ	ウ	エ	エ	オ	オ	カ	ガ	キ	ギ	ク	
B	グ	ケ	ゲ	コ	ゴ	ザ	シ	ジ	ス	ズ	セ	ゼ	ソ	ゾ	タ	
C	ダ	チ	ヂ	ツ	ツ	ヅ	テ	デ	ト	ド	ナ	ニ	ヌ	ノ	ハ	
D	バ	パ	ヒ	ビ	ピ	フ	ブ	ブ	ヘ	ベ	ペ	ホ	ボ	ポ	マ	ミ
E	ム	メ	モ	ヤ	ユ	ユ	ヨ	ヨ	ラ	リ	ル	レ	ロ	ワ	ウ	
F	キ	エ	ヲ	ン	ヴ	カ	ケ	ヴ	キ	エ	ヂ	一	、	、	、	、

Adobe-Identity-0

Row U+4Exx: UniTenMincho-UTF32-H

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0	一	丁		七				万	丈	三	上	下		不	与	
1	丐	丑			且	丕	世	世	丘	丙					丞	
2	冏						並				个				中	
3	卯	串						丸	丹		主	井			丿	
4		父	乃			久					之	乍	乎	乏		
5							屮	乖	乘	乘	乙			九	乞	也
6			乚													
7		乱		乳												乾
8	龜		亂			了		予	争	事	事	二		于		
9	云	互			五	井		亘	瓦		些	亜		亞	亟	
A	一	亡	亢			交	亥	亦		亨		享	京	亭	亮	
B	京			毫			亶					人				
C	什	仁	仂		仄		仆	仇			今	介		仍	从	仏
D						仔	仕	他	仗	付	仙			仝	仞	仟
E							代	令	以						仞	仞
F	仰		仲						件	价				任		

Adobe-Identity-0



# Rich Latin Support





# Rich Latin Support

Ten Oldstyle



# Rich Latin Support

## Ten Oldstyle Typeface Designer—Robert Slimbach

# Rich Latin Support

## Ten Oldstyle Typeface Designer—Robert Slimbach Regular, Medium, Semibold & Bold

# Rich Latin Support

Ten Oldstyle

Typeface Designer—Robert Slimbach

Regular, Medium, Semibold & Bold

All glyphs included in *Ten Mincho*



# Rich Latin Support

The quick brown marten jumps over the  
fox and lazy dog.

# Rich Latin Support

The quick brown marten jumps over the  
fox and lazy dog.

*The quick brown marten jumps over the fox  
and lazy dog.*

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The quick brown marten jumps over the  
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THE QUICK BROWN MARTEN JUMPS OVER  
THE FOX AND LAZY DOG.



# Rich Latin Support

0123456789

*0123456789*

# Rich Latin Support

0123456789

0123456789

*0123456789*

*0123456789*

# Rich Latin Support

0123456789

0123456789

0123456789

0123456789

0123456789

0123456789

# Rich Latin Support

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0123456789

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0123456789



# Rich Latin Support

0123456789

*0123456789*

0123456789

*0123456789*

0123456789

*0123456789*

0123456789

00112233445566778899

# Rich Latin Support

0123456789

0123456789

0123456789

0123456789

0123456789

0123456789

0123456789

00112233445566778899

0 1 2 3 4 5 6 7 8 9



# OpenType Features



# OpenType Features

## GSUB

## GPOS

aalt

hist

ordn

ss02

halt

case

hwid

pnum

ss03

kern

ccmp

ital

pwid

subs

palt

c2sc

liga

ruby

sup

vert

dlig

lnum

salt

tnum

vhal

dnom

locl

sinf

vert

vkern

frac

numr

smcp

vrt2

vpal

fwid

onum

ss01

zero



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## GSUB

## GPOS

aalt

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numr

onum

ordn

pnum

pwid

ruby

salt

sinf

smcp

ss01

ss02

ss03

subs

sup

tnum

vert

vrt2

zero

halt

kern

palt

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vhal

vkern

vpa

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aalt

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hwid

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liga

lnum

locl

numr

onum

ordn

pnum

pwid

ruby

salt

sinf

smcp

ss01

ss02

ss03

subs

sup

tnum

vert

vrt2

zero

halt

kern

palt

vert

vhal

vkern

vpa

# OpenType Features

## GSUB

---

expt

hojo

jp78

jp83

jp90

nlck

trad



# OpenType Features

## GSUB

~~expt~~

~~hojo~~

~~jp78~~

~~jp83~~

~~jp90~~

~~nłck~~

~~trad~~

# Italic



# Italic

## Separate style-linked *Italic* face

# Italic

Separate style-linked *Italic* face  
*Italic* glyphs accessible via 'ital' GSUB feature



# Italic

Separate style-linked *Italic* face  
*Italic* glyphs accessible via 'ital' GSUB feature  
833 *Italic* glyphs

# Italic

Separate style-linked *Italic* face  
*Italic* glyphs accessible via 'ital' GSUB feature  
833 *Italic* glyphs  
595 *Italic* glyphs are encoded

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Separate style-linked *Italic* face  
*Italic* glyphs accessible via 'ital' GSUB feature  
833 *Italic* glyphs  
595 *Italic* glyphs are encoded  
No small caps

# OpenType Collection





# OpenType Collection

Separate OpenType Fonts—4MB each

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Separate OpenType Fonts—4MB each

OpenType Collection—Only 4MB

# OpenType Collection

Separate OpenType Fonts—4MB each

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Regular & *Italic*—Same CFF (*Compact Font Format*)

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Regular & *Italic*—Same CFF (*Compact Font Format*)

*Source Han & Noto CJK* deployment format



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macOS—Version 10.8 and up

Windows—Version 1607 and up

Adobe apps—CS6 and up

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Regular & *Italic*—Same CFF (*Compact Font Format*)

*Source Han & Noto CJK* deployment format

macOS—Version 10.8 and up

Windows—Version 1607 and up

Adobe apps—CS6 and up

Available soon through [Fontspring](#)...

# Language-sensitive Features



# Language-sensitive Features

Default—Proportional

---

‘Marten’ “Marten”

# Language-sensitive Features

Default—Proportional

---

‘Marten’ “Marten”

Japanese—Proportional, aligned to em-box

---

‘韶明朝’ “韶明朝”



# Language-sensitive Features

Default—Proportional

---

‘Marten’ “Marten”

Japanese—Proportional, aligned to em-box

---

‘韶明朝’ “韶明朝”

Full-width via ‘fwid’ GSUB feature

---

‘韶明朝’ “韶明朝”

# Language-sensitive Features

## Default—proportional or full-width

---

α·©®´μ<sup>1/4</sup>1/2<sup>3/4</sup>-•€™<sup>1/3</sup>2/3<sup>1/8</sup>3/8<sup>5/8</sup>7/8≈

α·©®´μ<sup>1/4</sup>1/2<sup>3/4</sup>-•€™<sup>1/3</sup>2/3<sup>1/8</sup>3/8<sup>5/8</sup>7/8≈

§ ° ± ™ × ÷ π - — † ‡ …‰ ' " ℓ ← ↑ → ↓ ∂ Σ √ ∞ ≠ ■ ▲ △ ► ▷ ▼ ▽ ◀ ◁ ◆ ◎ ✓

# Language-sensitive Features

## Default—proportional or full-width

---

α · © ® ´ μ<sup>1/4</sup> 1/2<sup>3/4</sup> - • €<sup>TM</sup> 1/3<sup>2/3</sup> 1/8<sup>3/8</sup> 5/8<sup>7/8</sup> ≈

α · © ® ´ μ<sup>1/4</sup> 1/2<sup>3/4</sup> - • €<sup>TM</sup> 1/3<sup>2/3</sup> 1/8<sup>3/8</sup> 5/8<sup>7/8</sup> ≈

§ ° ± ™ × ÷ π - — † ‡ …‰ ' " ℓ ← ↑ → ↓ ∂ Σ √ ∞ ≠ ■ ▲ △ ► ▷ ▼ ▽ ◀ ◁ ◆ ● ✓

## Japanese—all full-width (alternatively 'fwid' GSUB)

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§ ° ± ™ × ÷ π - — † ‡ …‰ ' " ℓ ← ↑ → ↓ ∂ Σ √ ∞ ≠ ■ ▲ △ ► ▷ ▼ ▽ ◀ ◁ ◆ ● ✓



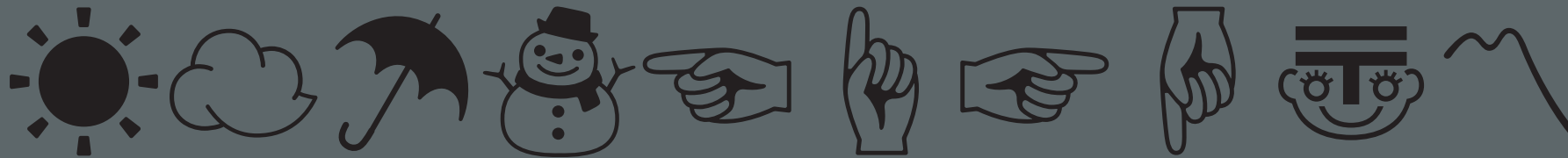


# SVG Glyphs





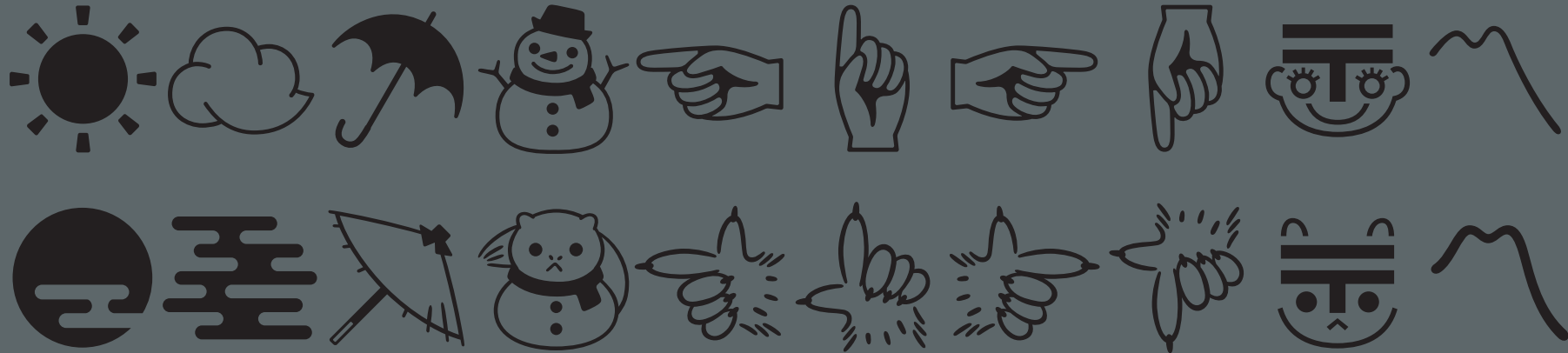
# SVG Glyphs



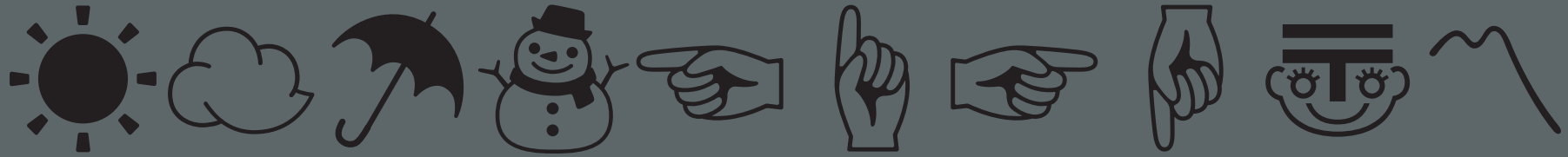
# SVG Glyphs



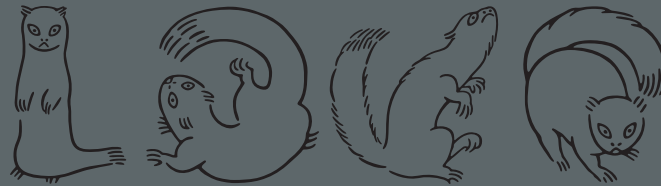
# SVG Glyphs



# SVG Glyphs



貂



貂





# Unicode Variation Sequences





# Unicode Variation Sequences

## Base Characters

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欄廊朗虜類猪神祥福諸都侮僧勉勤卑嘆噐墨層悔憎懲敏暑梅海渚漢煮  
琢碑社祉祈祐祖祝禍禎穀突節練繁署者臭著視謁謹賓贈逸難響

## CJK Compatibility Ideographs

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欄廊朗虜類猪神祥福諸都侮僧勉勤卑嘆噐墨層悔憎懲敏暑梅海渚漢煮  
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# Unicode Variation Sequences

## Base Characters

欄廊朗虜類猪神祥福諸都侮僧勉勤卑嘆器墨層悔憎懲敏暑梅海渚漢煮  
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## CJK Compatibility Ideographs

欄廊朗虜類猪神祥福諸都侮僧勉勤卑嘆器墨層悔憎懲敏暑梅海渚漢煮  
琢碑社祉祈祐祖祝禍禎穀突節練繁署者臭著視謁謹賓贈逸難響

## Adobe-Japan1 IVSes...

欄廊朗虜類猪神祥福諸都侮僧勉勤卑嘆器墨層悔憎懲敏暑梅海渚漢煮  
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## ...or SVSes

欄廊朗虜類猪神祥福諸都侮僧勉勤卑嘆噐墨層悔憎懲敏暑梅海渚漢煮  
琢碑社祉祈祐祖祝禍禎穀突節練繁署者臭著視謁謹賓贈逸難響

# For More Information...

- *Ten Mincho* on Typekit
- Typekit Blog article — 日本語
- CJK Type Blog article — 日本語









@ken\_lunde — @CJKType — @IVD\_Registrar

<https://adobe.ly/2udreIx>



**Adobe**

@ken\_lunde — @CJKType — @IVD\_Registrar

<https://adobe.ly/2udreIx>