

The Font Collection Sumerian3D

by Carsten Peust

Introduction




















Cuneiform is a three-dimensional script. The wedges are impressed into clay tablets and often overlap one another. All previous cuneiform fonts have rendered the wedges as simple black shapes and do not give a good impression of what authentic cuneiform signs actually look like. The present TrueType fonts attempt to reflect the three-dimensional appearance of original cuneiform signs as closely as possible.




















The fonts have been designed for laying out Sumerian texts and are modelled on the sign shapes current in the Gudea and Ur III periods (around 2000 BC). The characters are distributed over subfonts distinguished by index numbers (Sumerian3D_1.ttf, Sumerian3D_2.ttf, etc.). Out of the theoretically possible 255 characters per font, only 109 have been used, namely those which can easily be typed on most western keyboards. All characters needed are directly available on familiar English, German, French, Spanish and many additional keyboards (but note that for English keyboards on Windows operating systems, the option "US International Keyboard" should be enabled to activate the functionality of the right Alt key). Only on some more exotic keyboards, a few characters cannot be typed. Most text editors have a function "Insert Symbol" or the like which can be used in that case. When keying the characters, it should be made sure that any autocorrect functions of the text editor, in particular functions that automatically replace simple quotes by typographical quotes, have been disabled.





















Although Sumero-Akkadian cuneiform has been included in Unicode since version 5.0, I have decided not (yet) to implement a Unicode font. Several details of the code point assignment are disputed, so that it does not seem quite clear yet whether the current code table is really the definitive one. It is also true that not all distinctions that I consider relevant are presently implementable. For a writing system such as cuneiform, the decision as to which form varieties represent distinct characters and which ones are merely minor variations of one sign, as well as the distinction between single complex characters and sequences of two characters, is notoriously difficult and could only be solved pragmatically and probably inconsistently, to some degree, also in the design of the present fonts.

















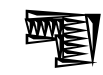



In the present version, four fonts are provided that cover 388 characters altogether. The first font (Sumerian3D_1.ttf) contains 109 signs of particularly high frequency and should suffice for typing most of the characters in a running text. Additional glyphs are provided in Sumerian3D_2.ttf, Sumerian3D_3.ttf, and Sumerian3D_4.ttf.

















Character overview Sumerian3D_1.ttf
















key	cuneiform sign	transliteration
!		KAL
"		UD
#		GAL ₂
\$		ŠU
%		ŠA ₃
&		SAG
'		ITI
(	EN
)		NIN
*		AN
+		IZ
,		KID
-		LA ₂
.		LU ₂
/		ŠE
0		UN
1		DIŠ
2		MIN
3		EŠ ₅

4		GU ₄
5		IA ₂
6		AŠ ₃
7		IMIN
8		USSU
9		ILIMMU
:		LUGAL
;		ŠE ₃
<		TUR
=		NAM
>		GAL
?		GAN
@		DUB
A		A ₂
B		BI
C		KU
D		DI
E		IM
F		NE



G		GI
H		HI
I		IN
J		IGI
K		KI
L		LI
M		MI
N		NI
O		GU
P		PI
Q		GA ₂
R		RI
S		SI
T		TI
U		U ₂
V		NU
W		TU
X		SU
Y		RU
Z		ZI



[	AD
\		TE
]		AMA
^		GI ₄
-		NIG ₂
`		IB ₂
a		A
b		BA
c		HU
d		DA
e		E
f		ME
g		GA
h		HA
i		I
j		ŠA
k		KA
l		LA
m		MA
n		NA





















o		BU
p		PA
q		SILA ₃
r		RA
s		SA
t		TA
u		U
v		MU
w		DU
x		ZU
y		LU
z		ZA
{		UŠ
}		MUNUS
~		UR
°		DIGIR+EN





















à		AB
â		MAN
ä		MAH
è		AG
é		E ₂
ê		EŠ
ì		AL
î		NIMIN
ò		AR
ô		NINNU
ö		DU ₃
ù		U ₃
û		MAŠ
ü		KU ₃
€		TUG





















Character overview Sumerian3D_2.ttf





















key	cuneiform sign	transliteration
!		DAR
"		NUMUN






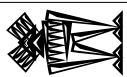







#		URU
\$		NIM













%		KALAM
&		AB ₂
'		NUN
(	ARAD
)		ARAD ₂
*		SA ₆
+		ŠU+NIGIN ₂
,		UB
-		HUŠ
.		LUM
/		TUG ₂
0		GAN ₂
1		AŠ
2		MIN ₅
3		EŠ ₆
4		LIMMU ₂
5		IA ₇
6		AŠ ₄
7		IMIN ₂
8		USSU ₂

9		ILIMMU ₂
:		MAŠ ₂
;		AM
<		SIKI
=		APIN
>		EREN
?		BUR
@		SAR
A		ANŠE
B		BAR
C		SIG ₅
D		DAM
E		EL
F		ME ₃
G		GU ₂
H		HUL ₂
I		INNIN
J		EDIN
K		KAM
L		LUH





M		UM
N		NINA
O		UR ₃
P		ZU+AB
Q		KIN
R		ENGUR
S		SUD
T		TAG
U		BULUG ₃
V		GIN ₂
W		GIR ₂
X		ŠEŠ+KI
Y		ŠIR
Z		ALAM
[	U ₈
\		KU ₄ (REC56)
]		UZ ₃
^		SIG ₄
-		SIG
`		KAŠ ₄






a		AMAR
b		BAL
c		ŠIM
d		DIB
e		DU ₆
f		ERIM
g		GIM
h		HAR
i		IL ₂
j		IR
k		KUR
l		LAGAB
m		MA ₂
n		NIR
o		UR ₂
p		LAM
q		AG ₂
r		BAD
s		SUM
t		TAR





















u		UL
v		TUM ₃
w		UG
x		ŠEŠ
y		PAB
z		NA ₂
{		KAB
}		ZAG
~		MUŠ
°		KA ₂
à		GAB
â		NIMIN ₃
ä		ŠUŠANA





















è		GUR
é		DE ₂
ê		NIEŠ
ì		KAR ₂
î		AŠ ₂
ò		MAR
ô		BANLIMMU
ö		ŠANABI
ù		EZEN
û		BANIA
ü		KINGUSILI
€		SILA ₄





















Character overview Sumerian3D_3.ttf

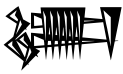


















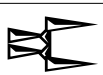
key	cuneiform sign	transliteration
!		DIM
"		MIR
#		KASKAL
\$		AŠGAB

%		BUR ₂
&		LAL ₃
'		UR ₄
(	LA ₂ +DIŠ
)		LA ₂ +AŠ

*		MUL
+		URUDU
,		ŠAR+UGUNU ₂
-		GARADIN ₉
.		ŠAR+U
/		IŠ
0		DIŠ+U
1		AŠ ₁₁
2		TAB(var.)
3		EŠ ₂₃
4		LIMMU ₂ (var.)
5		IA ₉ (var.)
6		LX
7		LXX
8		LXXX
9		LXXXX
:		LAGAR
;		TUR ₃
<		LA ₂ +MIN
=		TAB

>		LA ₂ +MIN ₅
?		URI
@		ŠEN
A		GIR ₃
B		BARA ₂
C		SUG
D		GEŠTIN
E		DUB ₂
F		BIL ₂
G		GIGIR
H		GIL
I		IDIGNA
J		KUN
K		GU ₇
L		ŠUD ₃
M		MUG
N		NAGAR
O		ŠITA ₂
P		NIGIN
Q		MEN

R		ENME
S		GIR
T		GUL
U		UKKIN
V		DUL ₃
W		DUN ₄
X		HUB ₂
Y		BANŠUR
Z		AZ
[	LA ₂ +EŠ ₅
\		KU ₄ (REC145)
]		LA ₂ +LIMMU ₅
^		SUHUR
-		SUR
`		DAR ₃
a		ALIM
b		LUL
c		U ₅
d		DIN
e		IL

f		ŠUL
g		GAR ₃
h		HAL
i		IB
j		KUM
k		EME
l		PU ₃
m		MUN
n		NAG
o		ŠITA
p		PIRIG
q		GAZ
r		UŠ ₂
s		SISKUR
t		UNUG
u		UGUNU ₂
v		TAH
w		LAH ₄
x		EŠEMIN ₅
y		NINDA ₂













z		ŠAM ₂
{		KID ₂
}		GEME ₂
~		BALAG
°		NUNUZ
à		AH
â		MES
ä		URU ₁₈
è		GAD
é		KISAL















ê		DAG
ì		BAPPIR
î		NAGA
ò		BAD ₃
ô		BANLIMMU(var.)
ö		GUR ₈
ù		KEŠ ₂
û		BANIA(var.)
ü		GUG ₂
€		SIG ₇












Character overview Sumerian3D_4.ttf














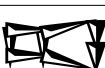
key	cuneiform sign	transliteration
!		LIŠ
"		UD(var.)
#		GURU ₅
\$		
%		KIB
&		
'		UD(gunû)


(
)		
*		GUR ₇
+		
,		
-		
.		KUŠU ₂
/		SU ₇


0		HAŠHUR
1		AŠ(var.)
2		TAB(var.2)
3		EŠ ₆ (var.)
4		DIŠ(var.)
5		U(var.)
6		MAN(var.)
7		EŠ(var.)
8		
9		
:		
;		
<		
=		BURU ₅
>		
?		
@		
A		ADDA(var.)
B		BURU ₁₄
C		SAG ₅

D		DUR
E		MURU ₂
F		
G		GIŠGAL
H		GUKKAL
I		
J		
K		GIR ₁₆
L		ŠEG ₉
M		MURGU ₂
N		
O		
P		PAN
Q		GAZI
R		ESIR ₂
S		SU ₄
T		
U		UBUR
V		TUN ₃
W		AD ₂

X		
Y		ZI ₂ (var.)
Z		ZUM ₂
[
\		
]		
^		
–		
`		
a		ADDA
b		
c		ŠID
d		DUG
e		EGER
f		ŠUBUR
g		GAM
h		ZAH ₃
i		
j		ŠARA ₂
k		KIŠ

l		LULIM
m		MUZUG ₅
n		NIGIN ₄
o		
p		PEŠ ₂
q		KUNGA ₂
r		
s		SUHUŠ
t		TUL ₂
u		USAN ₃
v		
w		
x		URI ₃
y		ZI ₂
z		ZUM
{		ASARI
}		ARHUŠ
~		
°		
à		KU ₇

â		
ä		AD ₃
è		
é		
ê		
ì		
î		

ò		
ô		
ö		
ù		
û		
ü		
€		DIN+GAD

Index transliteration > key

The following index indicates for a given sign in transliteration which key in which of the fonts is to be used to type it. The transliteration follows R. Borger, *Mesopotamisches Zeichenlexikon* (AOAT 305), Münster 2005. The three columns represent (1) transliteration – (2) font number – (3) key to type. Entries such as "am₃ = a-an" indicate that a sign is a concatenation of two elementary glyphs which are to be typed separately.

(1)	Ø	(3)
a	1	a
a ₂	1	A
a ₃	1	P
ab	1	à
ab ₂	2	&
ad	1	[
ad ₂	4	W
ad ₃	4	ä
ad ₆	4	a
ad ₆ (var.)	4	A
adda	4	a
adda(var.)	4	A
adda ₂	4	ä

ag	1	è
ag ₂	2	q
agrig = igi-dub		
ah	3	à
aka	1	è
al	1	ì
alam	2	Z
alan	2	Z
alim	3	a
am	2	;
am ₃ = a-an		
ama	1]
amar	2	a
ambar	3	C

an	1	*
an+en	1	°
angur	2	R
anše	2	A
apin	2	=
ar	1	ò
arad	2	(
arad ₂	2)
arhuš	4	}
asari	4	{
aš	2	1
aš(var.)	4	1
aš ₂	2	î
aš ₃	1	6

aš ₄	2	6
aš ₁₁	3	1
aša ₅	2	0
ašgab	3	\$
az	3	Z
ba	1	b
bad	2	r
bad ₃	3	ò
bal	2	b
balag	3	~
ban ₂	1	û
baneš	2	î
bania	2	û
bania(var.)	3	û
banlimmu	2	ô

banlimmu(va r.)	3	ô
banmin	1	p
bansur	3	Y
banšur	3	Y
bappir	3	ì
bar	2	B
bar ₃	3	ê
bara ₂	3	B
be	2	r
bi	1	B
bil ₂	3	F
bu	1	o
bu ₃	3	l
bulug ₃	2	U
bur	2	?
bur ₂	3	%
buru ₅	4	=
buru ₁₄	4	B
da	1	d
dab	2	d
dag	3	ê
dagal	1]]
dah	3	v
dam	2	D
dar	2	!
dar ₃	3	`
de ₂	2	é
de ₃	1	F
di	1	D
dib	2	d
digir	1	*
digir+en	1	°
dim	3	!
din	3	d

din+gad	4	€
dir = si-a		
diš	1	l
diš(var.)	4	4
diš+u	3	0
du	1	w
du ₃	1	ö
du ₆	2	e
du ₈	2	à
dub	1	@
dub ₂	3	E
dug	4	d
dug ₃	1	H
dug ₄	1	k
dul ₃	3	V
dul ₄	3	W
dumu	1	<
dun	3	f
dun ₄	3	W
dur	4	D
e	1	e
e ₁₁	2	e
e ₁₁ = du ₆ -du		
e ₂	1	é
e ₃ = ud-du		
ed ₂ = ud-du		
ed ₃	2	e
edin	2	J
eger	4	e
el	2	E
eme	3	k
en	1	(
engar	2	=

engur	2	R
enme	3	R
ensi ₃ = enme- li		
eren	2	>
erim	2	f
erin	2	>
erin ₂	2	f
esir ₂	4	R
eš	1	ê
eš(var.)	4	7
eš ₂	1	;
eš ₅	1	3
eš ₆	2	3
eš ₆ (var.)	4	3
eš ₁₈	3	l
eš ₂₃	3	3
eše ₃	2	r
ešemin ₅	3	x
ezen	2	ù
ga	1	g
ga ₂	1	Q
gab	2	à
gab ₂	2	{
gad	3	è
gag	1	ö
gal	1	>
gal ₂	1	#
gam	4	g
gan	1	?
gan ₂	2	0
gar	1	-
gar ₂ = sa-ni		
gar ₃	3	g

garadin ₉	3	-
gaz	3	q
gazi	4	Q
ge ₂₃	3	l
geme ₂	3	}
geštin	3	D
gi	1	G
gi ₂	1	,
gi ₄	1	^
gibil	3	F
gig = mi- nunuz		
gigir	3	G
gil	3	H
gim	2	g
gin	1	w
gin ₂	2	V
gir	3	S
gir ₂	2	W
gir ₃	3	A
gir ₁₆	4	K
giš	1	+
gišgal	4	G
gišimmar	2	*
gu	1	O
gu ₂	2	G
gu ₄	1	4
gu ₇	3	K
gub	1	w
gub ₃	2	{
gug = za-gul		
gug ₂	3	ü
gukkal	4	H
gul	3	T
gum	3	j

gun ₄	3	t
gur	2	è
gur ₄	2	l
gur ₇	4	*
gur ₈	3	ö
guru ₅	4	#
guz	2	.
ha	1	h
hab	2	l
hal	3	h
har	2	h
hašhur	4	0
he ₂	1	?
hi	1	H
hu	1	c
hub ₂	3	X
hul = ši-ur		
hul ₂	2	H
hun	1	;
hur	2	h
huš	2	-
i	1	i
i ₃	1	N
ia ₂	1	5
ia ₄ = ni-ud		
ia ₇	2	5
ia ₉ (var.)	3	5
ib	3	i
ib ₂	1	`
id	1	A
id ₂ = a-engur		
idigna	3	I
idim	3	r

ig	1	#
igi	1	J
iku	2	0
il	3	e
il ₂	2	i
ilimmu	1	9
ilimmu ₂	2	9
im	1	E
imin	1	7
imin ₂	2	7
in	1	I
inanna	2	I
inim	1	k
innin	2	I
ir	2	j
ir ₃	2	(
iri	2	#
iš	3	/
iti	1	'
iz	1	+
ka	1	k
ka ₂	2	°
ka ₅	3	b
kab	2	{
kal	1	!
kalam	2	%
kam	2	K
kar = te-a	3	
kar ₂	2	ì
karadin ₉	3	-
kaskal	3	#
kaš ₄	2	`
ke ₄	1	,
keš ₂	3	ù

keš ₃ = u-an-din+gad		
ki	1	K
kib	4	%
kid	1	,
kid ₂	3	{
kil	2	l
kin	2	Q
kingusili	2	ü
kisal	3	é
kiš	4	k
kiša ₂	4	W
kišib ₃	1	@
ku	1	C
ku ₂	3	K
ku ₃	1	ü
ku ₄ (REC145)	3	\
ku ₄ (REC56)	2	\
ku ₅	2	t
ku ₇	4	à
kud	2	t
kug	1	ü
kum	3	j
kun	3	J
kunga ₂	4	q
kur	2	k
kur ₂	2	y
kurum ₇ =		
igi+nig ₂		
kuš	1	X
kušu ₂	4	.
la	1	l
la ₂	1	-
la ₂ +aš	3)

la ₂ +diš	3	(
la ₂ +eš ₅	3	[
la ₂ +limmu ₅	3]
la ₂ +min	3	<
la ₂ +min ₅	3	>
lagab	2	l
lagar	3	:
lah ₄	3	w
lal	1	-
lal ₃	3	&
lam	2	p
li	1	L
libir = igi-še ₃		
lid	2	&
lil ₂	1	,
limmu ₂	2	4
limmu ₂ (var.)	3	4
limmu ₅	1	z
liš	4	!
lu	1	y
lu ₂	1	.
lugal	1	:
luh	2	L
lul	3	b
lulim	4	l
lum	2	.
lunga ₃	3	ì
LX	3	6
LXX	3	7
LXXX	3	8
LXXXX	3	9
ma	1	m
ma ₂	2	m
mah	1	ä
man	1	â

man(var.)	4	6
mar	2	ò
maš	1	û
maš ₂	2	:
me	1	f
me ₃	2	F
men	3	Q
mes	3	â
mi	1	M
mi ₂	1	}
min	1	2
min ₅	2	2
mir	3	"
mu	1	v
mu ₂	2	@
mug	3	M
mul	3	*
mun	3	m
munu ₄	2	U
munus	1	}
mur	2	h
mur ₇	2	^
murgu	2	^
murgu ₂	4	M
muru ₂	4	E
muš	2	~
muš ₃	2	I
mušen	1	c
muzug ₅	4	m
na	1	n
na ₂	2	z
na ₄ = ni-ud		
nag	3	n
naga	3	î

nagar	3	N
nam	1	=
nanše	2	N
nar	3	b
ne	1	F
ni	1	N
ni ₃	1	-
nieš	2	ê
nig ₂	1	-
nigidaeš	2	ê
nigidamin	2	â
nigin	3	P
nigin ₂	2	l
nigin ₄	4	n
nim	2	\$
nimgir	3	"
nimin	1	î
nimin ₃	2	â
nin	1)
nin ₉ = munus-ku		
nina	2	N
ninda	1	-
ninda ₂	3	y
ninnu	1	ô
nir	2	n
nisag ₂	4	C
niš	1	â
nita	1	{
nita ₂	2	(
nu	1	V
nu ₂	2	z
num ₂	2	.
numun	2	"
nun	2	'

nunuz	3	°
pa	1	p
pa ₃ = ši-ru		
pab	2	y
pad = u-nig ₂		
pad ₃ = ši-ru		
pan	4	P
par ₃	3	ê
peš	3	S
peš ₂	4	p
pi	1	P
pirig	3	p
pirig ₃	2	w
piš	3	S
pu	1	o
pu ₃	3	l
qa	1	q
ra	1	r
ra ₂	1	w
ri	1	R
ri ₂	2	#
ru	1	Y
sa	1	s
sa ₂	1	D
sa ₄ = hu-na ₂ ~ na ₂ -hu		
sa ₆	2	*
sag	1	&
sag ₅	4	C
sal	1	}
sam ₂	3	z
sar	2	@
si	1	S
si ₄	4	S

sig	2	-
sig ₂	2	<
sig ₄	2	^
sig ₅	2	C
sig ₆	2	*
sig ₇	3	€
siki	2	<
sikil	2	E
sil ₃	1	q
sil ₄	2	€
silig ₅	3	Y
sim	1	=
sipa = pa-lu		
sir ₃	2	ù
siskur	3	s
su	1	X
su ₃	2	S
su ₄	4	S
su ₇	4	/
su ₈	3	w
sud	2	S
sug	3	C
suhur	3	^
suhuš	4	s
sukkal	2	L
sul	3	f
sum	2	s
sun ₂	3	T
sur	3	-
ša	1	j
ša ₃	1	%
ša ₆	2	*
šab = pa-ib		
šah	3	f

šam ₂	3	z
šanabi	2	ö
šar+u	3	.
šar+ugunu ₂	3	,
šar ₂	1	H
šara ₂	4	j
še	1	/
še ₃	1	;
šeg ₉	4	L
šen	3	@
šeš	2	x
šeš+ki	2	X
ši	1	J
šid	4	c
šilig ₅	3	Y
šim	2	c
šir	2	Y
šir ₃	2	ù
šita	3	o
šita ₂	3	O
šu	1	\$
šu+nigin ₂	2	+
šub	1	Y
šubur	4	f
šud ₃	3	L
šul	3	f
šum	2	T
šur	3	–
šušana	2	ä

ta	1	t
tab	3	=
tab(var.)	3	2
tab(var.2)	4	2
tag	2	T
tag ₄	3	{
tah	3	v
tar	2	t
te	1	\
ti	1	T
tim	3	!
tin	3	d
tir = še-nir		
tu	1	W
tug	1	€
tug ₂	2	/
tuku	1	€
tul ₂	4	t
tum	1	`
tum ₃	2	v
tun ₃	4	V
tur	1	<
tur ₃	3	;
tuš	1	C
u	1	u
u(var.)	4	5
u ₂	1	U
u ₃	1	ù
u ₄	1	"

u ₅	3	c
u ₆ = ši-e	3	
u ₈	2	[
ub	2	,
ubur	4	U
ud	1	"
ud(var.)	4	"
ud(gunû)	4	'
ud ₅	2]
udu	1	y
ug	2	w
ug ₃	1	0
ugunu ₂	3	u
ukkin	3	U
ul	2	u
um	2	M
un	1	0
unken	3	U
unug	3	t
ur	1	~
ur ₂	2	o
ur ₃	2	O
ur ₄	3	'
uri	3	?
uri ₃	4	x
uru	2	#
uru ₄	2	=
uru ₅	3	ö
uru ₁₈	3	ä

urudu	3	+
usan ₃	4	u
ussu	1	8
ussu ₂	2	8
uš	1	{
uš ₂	3	r
uš ₂ also = be		
ušu ₃	1	ê
uz = še-hu		
uz ₃	2]
uz ₅	2	[
uzug ₅	4	m
za	1	z
za ₂ = ni-ud		
za ₃	2	}
zadim	3	M
zag	2	}
zah ₃	4	h
zalag ₂	2	f
zi	1	Z
zi ₂	4	y
zi ₂ (var.)	4	Y
zi ₃	1	;
zu	1	x
zu+ab	2	P
zum	4	z
zum ₂	4	Z

Version history

General policy: Signs may be added and sign forms may be modified/ corrected in future versions. Signs available in older versions will not be moved to different keys in future versions.

Version 1 released on 12 Oct 2006: 218 signs in two TrueType fonts for Windows.

Version 2 released on 8 Dec 2006: Numerous corrections, particularly corrections of wedge sequences following W. Sallaberger in F. Ismail et al., *Administrative Documents from Tell Beydar* (Subartu 2), Brepols 1996, p. 33ff.

Version 3 released on 17 Jan 2007: Third font added, now 327 signs altogether; sign forms corrected.

Version 4 released on 15 Mar 2009: Fourth font added, now 388 signs altogether; sign forms corrected.

Version 5 released on 8 Nov 2009: Technical bug fixed.

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