

```
#
# X-SAMPA to Unicode
#
```

```
#----- CONSONANTS -----
```

```
# Plosive
```

p	p
b	b
t	t
d	d
t`	ʈ
d`	ɖ
c	c
J\	ʃ
k	k
g	g
q	q
G\ ?	G ʔ

```
# Nasal
```

m	m
F	ɱ
n	n
n`	ɳ
J	ɲ
N	ŋ
N\ ?	ɴ

```
# Trill
```

B\ ?	B ʙ
---------	--------

r	ɾ
R\	ʀ

Tap or flap

4	ɾ
r`	ɽ

Fricative

p\	ɸ
B	β
f	f
v	v
T	θ
D	ð
s	s
z	z
S	ʃ
Z	ʒ
s`	ʂ
z`	ʐ
C	ç
j\	ɟ
x	x
G	ɣ
X	χ
R	ʀ
X\	ħ
?\	ʕ
h	h
h\	ɦ

Lateral fricative

K	ƙ
K\	ƕ

Approximant

P	ɸ
v\	ɹ
r\	ɻ
r\`	ɹ̥
j	ɟ
M\	ɰ

Lateral approximant

l	ɭ
l̥	ɮ
L	ʎ
L\	ɭ

#----- CONSONANTS (NON-PULMONIC) -----

Clicks

O\	⊙
\<	
!\	!
=\<	‡
\ \<	

Voiced implosives

b_<	ɓ
d_<	ɗ
ʝ_<	ɟ
g_<	ɠ
G_<	ɠ

Ejectives

_>	'
p_>	p'
t_>	t'
k_>	k'
s_>	s'

#----- VOWELS -----

Close

i	i
y	y
I	ɪ
Y	ʏ
ɪ	ɪ
ɨ	ɨ
U	u
M	ɯ
u	u

Close-mid

e	e
2	ø
@\	ə
@	ə
8	ɵ
7	ɤ
o	o

Open-mid

E	ɛ
---	---

{	æ
9	œ
3	ɜ
6	ɐ
3\	ɞ
V	ʌ
O	ɔ

Open

a	a
&	œ
A	ɑ
Q	ɒ

#----- OTHER SYMBOLS -----

W	ʌ
w	w
H	ɥ
H\	ɦ
<\	ɸ
>\	ɹ
s\	ɕ
z\	ʒ
l\	ɭ
x\	ɧ
k_p	\overline{kp}
t_s	\overline{ts}

#----- SUPRASEGMENTALS -----

"a	'a
----	----

%a	ǎ
a:	a:
e:\	ė
e_X	ě
.	.
a-\e	<u>ae</u>

#----- TONES & WORD ACCENTS

e_T	ě
e_H	é
e_M	ē
e_L	è
e_B	è
e_/_	ě
e_R	ě
e_L_H	ě
e_\	ê
e_F	ê
e_H_L	ê
e_T_H	ē
e_B_L	ě
e_H_T	ě
e_L_B	è
e_L_H_L	ě
e_R_F	ě

e_/_\ ã

e_H_L_H ã

e_F_R ã

e_\/ ã

! ↓

^ ↑

<!> ↓

<^> ↑

<R> ↗

</> ↗

<F> ↘

<\/> ↘

more tones below

#----- DIACRITICS -----

n_0 ñ

s_v š

t_h t^h

O_O ɔ̣

O_c ɔ̣

u_+ ɯ

i_- ɨ

e_" ë

e_x ě

n= ñ

n_= ñ

i_`	i̇
@`	ø̇
3`	ɜ̇

b_t	ḃ
b_k	b̈
t_N	ṫ
t_w	t ^w
t'	t ^j
t_j	t ^j
t_G	t ^v
t_?\ 	t ^ʳ

l_e	ł
5	ł
e_r	ę
e_o	ę
a_A	ą
a_q	ą

t_d	ṫ
t_a	ẗ
t_m	ẗ
n~	ñ
n_~	ñ
d_n	d ⁿ
e_l	e ^l
d_}	d ^ʳ

#----- ALL TONES -----

	ł
-----	---

<L>	┆
<M>	┆
<H>	┆
<T>	┆
<BB>	┆
<BL>	┆
<BM>	┆
<BH>	┆
<BT>	┆
<LB>	┆
<LL>	┆
<LM>	┆
<LH>	┆
<LT>	┆
<MB>	┆
<ML>	┆
<MM>	┆
<MH>	┆
<MT>	┆
<HB>	┆
<HL>	┆
<HM>	┆
<HH>	┆
<HT>	┆
<TB>	┆
<TL>	┆
<TM>	┆
<TH>	┆
<TT>	┆
<BBB>	┆
<BBL>	┆
<BBM>	┆

<BBH>	∧
<BBT>	∧
<BLB>	∨
<BLL>	∧
<BLM>	∧
<BLH>	∧
<BLT>	∧
<BMB>	∨
<BML>	∧
<BMM>	∧
<BMH>	∧
<BMT>	∧
<BHB>	∧
<BHL>	∧
<BHM>	∧
<BHH>	∧
<BHT>	∧
<BTB>	∧
<BTL>	∧
<BTM>	∧
<BTH>	∧
<BTT>	∧
<LBB>	∨
<LBL>	∨
<LBM>	∨
<LBH>	∨
<LBT>	∨
<LLB>	∨
<LLL>	⊥
<LLM>	∧
<LLH>	∧
<LLT>	∧

<LMB>	↘
<LML>	↘
<LMM>	↗
<LMH>	↗
<LMT>	↗
<LHB>	↘
<LHL>	↘
<LHM>	↗
<LHH>	↗
<LHT>	↗
<LTB>	↘
<LTL>	↘
<LTM>	↗
<LTH>	↗
<LTT>	↗
<MBB>	↘
<MBL>	↘
<MBM>	↘
<MBH>	↘
<MBT>	↘
<MLB>	↘
<MLL>	↘
<MLM>	↘
<MLH>	↘
<MLT>	↘
<MMB>	↘
<MML>	↘
<MMM>	┃
<MMH>	↗
<MMT>	↗
<MHB>	↘
<MHL>	↘

<MHM>	↖
<MHH>	↖
<MHT>	↖
<MTB>	↘
<MTL>	↘
<MTM>	↘
<MTH>	↖
<MTT>	↖
<HBB>	↘
<HBL>	↘
<HBM>	↘
<HBH>	↘
<HBT>	↘
<HLB>	↘
<HLL>	↘
<HLM>	↘
<HLH>	↘
<HLT>	↘
<HMB>	↘
<HML>	↘
<HMM>	↖
<HMH>	↖
<HMT>	↖
<HHB>	↘
<HHL>	↘
<HHM>	↖
<HHH>	└
<HHT>	↖
<HTB>	↘
<HTL>	↘
<HTM>	↖
<HTH>	↖

<HTT>	∩
<TBB>	∪
<TBL>	∪
<TBM>	∪
<TBH>	∪
<TBT>	∪
<TLB>	∪
<TLL>	∪
<TLM>	∪
<TLH>	∪
<TLT>	∪
<TMB>	∪
<TML>	∪
<TMM>	∪
<TMH>	∪
<TMT>	∪
<THB>	∪
<THL>	∪
<THM>	∪
<THH>	∪
<THT>	∪
<TTB>	∪
<TTL>	∪
<TTM>	∪
<TTH>	∪
<TTT>	∩

#----- END -----