

The ultimate UTAU flag list.

PREMISE

You might be wondering why, in the year of the Lord 2018, I'm writing an UTAU flag list, even if some of the resamplers aren't even available anymore and most of them haven't been updated since 2014. Well, first, for posterity.

Also, because, while flag lists exist, they are either obsolete or incomplete. The aim of this document is to list all the flags and the resamplers they work for in a single document, while also trying to give a brief explanation of what they do.

I've tried my best, reading all the possible readmes and testing the flags, but errors are bound to be made and I'm sure there are a ton there, especially in the description of the flags because, honestly, some of them were very confusing.

If you spot some, please, please don't hesitate to contact me, either in English or in Italian, via twitter at @susrever, on the utaforum, where I also go by the same handle, or via mail at the address cocomerigialli@gmail.com

RESOURCES

This document wouldn't be there if not for those, already available lists. A big, big shout-out to the authors and to those who contributed to those threads!

- <http://old.utaforum.net/index.php?PHPSESSID=mqvn5pt16neun67ldv72pfo93&topic=550.45> [In English.]
- https://www.tapatalk.com/groups/international_utau/list-of-flags-t3075.html [In English.]
- <http://utaforum.net/resources/resamplers-flags-list.83/> [In English.]
- <http://utau.wiki/flags> [In English.]
- <http://utauarianna.altervista.org/tutorials/i-flag-tutorial-in-italiano/> [In Italian. Not available anymore. Archived at <https://web.archive.org/web/20120621144723/http://utauarianna.altervista.org/tutorials/i-flag-tutorial-in-italiano/>]
- <https://webhost.engr.illinois.edu/~khua5/index.php/2016/04/07/the-complete-moresampler-tutorial/> [In English.]
- <https://www10.atwiki.jp/utau2008/pages/39.html> [In Japanese.]

Also, a big shout-out to @AngelOfGears for helping me deciphering some of those flags descriptions and for checking this guide over.

LIST OF RESAMPLERS

- bkh01
Available at : <http://z-server.game.coocan.jp/utau/utautop.html#bkh01>
Latest update : 2012
- EFB-GT
Available at : <http://custom-made.seesaa.net/article/312529786.html>
Latest update : 2013
- EFB-GW
Available at : not available anymore
- EFB-PB
Available at : not available anymore
- Fresamp 11
Available at : https://twitter.com/ameyaP_/status/12641592834
Latest update : 2010
- Fresamp 14
Available at : https://twitter.com/ameyaP_/status/310071123410821120
Latest update : 2013
- moresampler
Available at : <https://webhost.engr.illinois.edu/~khua5/index.php/moresampler/>
Latest update : 2018
- phavoco
Available at : https://twitter.com/ameyaP_/status/309931073045942272
Latest update : 2013
- Resampler
Available at : Comes with UTAU.
Latest update : 2013
- TIPS
Available at : <http://scientistb.web.fc2.com/program/>
Latest update : 2014

- tn_fnds
Available at : http://z-server.game.coocan.jp/utau/utautop.html#tn_fnds
Latest update : 2013
- UTAUGROWL
Available at : <http://ch.nicovideo.jp/torifly0/blomaga/ar647243>
Latest update : 2015
- vs4u
Available at : <http://ackiesound.ifdef.jp/soko.html#vs4u>
Latest update : 2014
- WARP
Available at : <http://custom-made.seesaa.net/article/312530509.html>
Latest update : 2013
- w4u
Available at : http://utau2008.xrea.jp/mp3/engine_hikaku.html
Latest update : 2013

TABLE OF RESAMPLERS / FLAGS COMPATIBILITY

	bkh01	EFB-GT	fresamp	Moresampler	M4	phavoco	resampler	TIPS	tn_fnds	GROWL	vs4u	WARP	w4u
A	Y			Y									
a			Y				Y						
B	Y		Y			Y	Y	Y				Y	Y
b				Y			Y					Y	
C							Y						
c							Y						
D							Y						
E							Y						
e				Y									
F			Y		Y		Y						
G			Y				Y						
g	Y		Y	Y	Y	Y	Y	Y	Y		Y	Y	Y
H			Y		Y		Y	Y				Y	
h							Y	Y					
L			Y				Y						
M	Y												
N			Y			Y	Y						
n			Y										
K			Y									Y	
Mb				Y									
MC				Y									

Md				Y									
MD				Y									
ME				Y									
Me				Y									
MG				Y									
Mm				Y									
Mo				Y									
Mr				Y									
Ms				Y									
Mt				Y									
O	Y												
P	Y	Y	Y	Y			Y	Y				Y	Y
R								Y					
S								Y					
t	Y	Y	Y	Y	Y	Y	Y	Y				Y	Y
V								Y					
W			Y				Y	Y					
w										Y			
Y					Y		Y						
x							Y						
<										Y			
>										Y			
=										Y			
%										Y			

FLAGS

Reminder :

LOCAL FLAGS (those applied directly on the notes in note property) take precedence over **GENERAL FLAGS** (those applied in the rendering options)

- \$direct = true
Range : NONE
Effect : Tells UTAU to ignore the oto.ini It works with all the resamplers.
- ?
Range : NONE
Effect : when put IN FRONT OF A NOTE (ex : ?a) it tells UTAU to ignore the prefix.map. Since it doesn't depend on the resampler, this flag will work with every resampler.

- A
Range : 0 / 100
Default : 0
Effect : Amplitude modulation. This flag modulates the amplitude in correlation with change of pitch.
FOR RESAMPLER / FRESAMP ONLY : A works, but it has the same function as "a".
- a
Range : 0 / unknown
Default : 100
Effect : For values < 100 it stretches the pink part of the oto.
For values > 100 it compresses the pink part of the oto.
- B
Range : 0 / 100
Default : 50
Effect : Changes the breathiness **BEFORE** the formant filter.
It is not influenced by flags C, D, E, H, h.
- b
Range : 0 / 100
Default : 50
Effect : Changes the breathiness **AFTER** the formant filter.
FOR MORESAMPLER ONLY : Amplitude gain for unvoiced consonants. This flag amplifies or attenuates unvoiced consonants (e.g. /t/ /k/ /s/) by a factor of 0.05 times the number after b. It has less or no effect for voiced consonants (e.g. /g/, /m/). Its range for moresampler is -20 / 100.
- C
Range : 0 / 100
Default : 0
Effect : Low-pass filter **BEFORE** the formant filter. Reduces higher frequencies.
When set to 100, the volume is 100% at 0kHz, 50% at 11kHz, and 0% at 22kHz.
- c
Range : 0 / 100
Default : 0
Effect : Low-pass filter, analog to C but it operates **AFTER** the formant filter.
- D
Range : 0 / 100
Default : 0
Effect : Low-pass filter **BEFORE** the formant filter. Cuts midrange.
When set to 100, the volume is 100% at 0kHz, 0% at 11kHz, and 100% at 22kHz.
- E
Range : 0 / 100

Default : 0

Effect : Low pass filter **BEFORE** the formant filter. Cuts lower frequencies.

When set to 100, the volume is 100% at 0kHz, 0% at 7.1kHz, 100% at 11kHz, and 0% at 22kHz.

- e
Range : NONE
Effect : Changes the rendering method from looping to stretching.

- F
Range : 0 / 100
Default : 3
Effect : Determines the strength of the formant filter

- G
Range : NONE
Effect : Forces the resampler to re-generate the .fqr files

- g
Range : -99 / 99
Default : 0
Effect : Values from -99 to 0 make the voice sound more masculine
Values from 0 to 99 make the voice sound more feminine.

- H
Range : 0 / 99
Default : 0
Effect : A low-pass filter to emphasize the bass and cut the treble.

- h
Range : 0 / 99
Default : 0
Effect : A low-pass filter to emphasize the higher frequencies of the consonants.

- L
Range : 0 / 99
Default : 3
Effect : Sets the strength of the formant filter. Takes precedence over F.

- M
Range : 0 / 100
Default : 0
Effect : Mitigates the metallic sound.

- N
Range : NONE

Effect : Turns the formant filter off.

- n
Range : 0 / 100
Default : 0
Effect : Determinates the strength of the formant filter. Less effective than F. Useful for reducing the noise in the mid-range and treble.
- K
Range : 0 / 100
Default : 0
Effect : A comb filter based on the Fundamental Frequency.
- Mb
Range : 0 / 100
Default : 0
Effect : Positive values correspond to breathier voice and negative values reduce the breathing noise.
- MC
Range : 0 / 100
Default : 0
Effect : Adds a roar-like noise to the voice.
- Md
Range : -100 / 100
Default : 0
Effect : It changes the degree of amplitude modulation received by breathing noise due to the periodicity of glottal air flow.
- MD
Range : 0 / 100
Default : 0
Effect : Has an effect similar to growl but vibrates faster.
- ME
Range : - 100 / 100
Default : 0
Effect : Formant emphasis - given positive values, it emphasizes the formants; given negative values, the voice becomes fuzzy.
- Me
Range : NONE
Effect : Forces the sampling method from stretching to looping.

- MG
Range : 0 / 100
Default : 0
Effect : Adds growl.
- Mp
Range : 0 / 100
Default : 0
Effect : Adds random perturbations to the pitch.
- Mm
Range : 0 / 100
Default : 100
Effect : Interpolating between the classical speech model used before version 0.3.0 and the novel model used since then.
- Mo
Range : -100 / 100
Default : 0
Effect : It changes the degree of jaw opening during phonation. Positive values correspond to wide opening and vice versa.
- Mr
Range : - 100 / 100
Default : 0
Effect : This flag creates a "singer's formant" around 3kHz if set to positive; otherwise it reduces the formant.
- Ms
Range : 0 / 10
Default : 0
Effect : It fixes the occasional 'pops' that mostly occurs when shifting down the pitch. Higher number corresponds to stronger stabilization. This flag is recommended when the popping only occasionally occurs, otherwise turn on `analysis-anti-distortion` instead.
- Mt
Range : 0 / 100
Default : 0
Effect : It changes the extent to which the vocal folds are stressed or relaxed. Positive values correspond to tensor voice quality and vice versa.
- O
Range :
Effect : Shifts the pitches of the voice. Higher values may make the voice crack.

- P
Range : 0 / 100
Default : 86
Effect : Peak compressor.
- R
Range : NONE
Effect : Forces the resampler to re-generate the .pmk files before rendering.
- S
Range : 0 / 100
Default : 0
Effect : Adjusts the strength of the singing formant. (2500Hz ~ 4000Hz)
- t
Range : -9 / 9
Default : 0
Effect : Flag to adjust the pitch by 10 cents.
- V
Range : 0 / 100
Default : 0
Effect : Regulates the power of the voice.
- W
Range : 0 / 100
Default : 0
Effect : Destroys the consonants and gives a metallic sound.
- w
Range : 0 / 100
Default : 50
Effect : Adds growl.
- x
Range : -100 / 100
Default : 0
Effect : It affects the voice based on the distance to the recording voice. Higher values make the voice brighter, lower muffled.
- Y
Range : 0 / 100
Default : 0
Effect : Changes the breathiness of the vowel.

- <
Range : 0 / 100
Default : 50
Effect : It specifies the strength of the frequency of the growl.
- >
Range : 0 / 100
Default : 50
Effect : It specifies the length of the frequency of the growl.
- _
Range : -100 / 100
Default : 0
Effect : The volume will fluctuate with the frequency of the growl.
- %
Range : -100 / 100
Default : 0
Effect : If the note has vibrato, the volume will fluctuate with the pitch. When cross-fading two notes, they must have the same flag value.