PICTURE KYMOPHONE command-line argument format:

>> picky w 0 1 d 1 1 0.95 all 44100 24 c:/sourcefile.tif

All arguments are optional but must be entered in order. Defaults are shown above. They specify:

1. Type of output requested

w = Wav, creates WAV file(s) for single images
x = creates concatenated WAV file(s) for a batch, plus reference file with clicks at join points
s = creates concatenated stereo WAV file(s) for a batch with clicks at join points in right channel
v = Vector, saves vector(s) for a single image as .mat
b = Batch, saves concatenated vector(s) for a batch as .mat
m = Matrix, saves matrix/matrices for a batch as .mat
h = Help, prints list of command-line arguments
t = Transduction, prints list of transduction options
o = Output, prints list of output options
p = Processing mode, prints list of processing mode options
a = Adjustments, prints list of adjustment options

2. Processing mode

0 = Process single image independently
1 = Process single image independently; save amplitude range values
2 = Process single image independently; overwrite any saved amplitude range values that are exceeded
3 = Process single image using previously saved amplitude range values
50 = Process multiple images independently from one another
51 = Process multiple images to consistent amplitude range auto-detected for group
52 = Process multiple images using previously saved amplitude range values

3. Power to which source pixel intensity values will be raised before calculations are performed

4. Numerical format configuration

d = double precision format, simultaneous processing (*requires most memory*)
s = single precision format, simultaneous processing
D = double precision format, columns processed separately
S = single precision format, columns processed separately (*requires least memory*)

5. Adjustments of slope and DC offset

2 = apply 20 Hz high pass filter (2nd order Butterworth) to single image result(s)
3 = center endpoints of single image result(s) on zero
5 = apply 20 Hz high pass filter (2nd order Butterworth) to concatenated batch result
7 = center endpoints of concatenated batch result on zero
11 = set first sample from image in batch equal to last sample from previous image
To select multiple options, multiply them.

6. Impulse rejection threshold for sample-to-sample change as decimal value of amplitude range, 0 (0%) to 1 (100%)

7. Decimal value to which amplitude values will be normalized for WAV output, 0 (0%) to 1 (100%)

8. Type(s) of transduction

all = all four available types
pdp = only position displacement (raw positional values)
pvl = only position velocity (derivative/rate of change of positional values)
idp = only intensity displacement (raw intensity values)
ivl = only intensity velocity (derivative/rate of change of intensity values)
pos = both position-based options (pdp and pvl)
int = both intensity-based options (idp and ivl)
dis = both displacement-based options (pdp and idp)
vel = both velocity-based options (pvl and ivl)
Any other three-character string will suppress file generation, e.g., if goal is only to set levels.

9. Sample rate for WAV output

10. Bit depth for WAV output

11. File path of source image, not available for batch processing modes (50+)