

```

function FAME(FolderName, file_name, number_of_bands, FMbandwidth,
AMcutoff, FMcutoff, SNR, MaskerFile)
%
% This Matlab program processes a sound file according to the proposed
FAME
% speech processing strategy. Please see the following reference for
details.
%
% [1] K. Nie, G.S. Stickney and F.G. Zeng. Encoding frequency
modulation to Improve
% cochlear implant performance in noise. IEEE Trans. on Biomedical
% Engineering, vol. 52, pp.64-73, 2005
%
% Inputs:
%
% FolderName=the folder that contains a speech sound file
to be
%
% processed. Please don't put '\\'
at the end.
%
% e.g., 'c:\sounds'
%
% file_name=the name of the sound file. e.g. 'aaa.wav'
%
% Note: Normally, the sampling frequency should be
16 kHz
%
% or above. In this case, the overall processing
%
% bandwidth is from 80-8000 Hz. Otherwise, the
%
% processing bandwidth is 300-5500 Hz.
%
% number_of_bands=the number of bands in the FAME
processing.
%
% Its typical range is from 1 to
32 bands.
%
% FMbandwidth=the bandwidth of FM in each subband. Its
%
% typical value is 0, 200, or 500
Hz.
%
% Here, setting the FM bandwidth
to 0 Hz is
%
% equivalent to the AM-only
%
% condition.
%
% AMcutoff=determines the cutoff frequency of the AM low-
pass
%
% filter. Its typical value is 5, 50 or
500 Hz.
%
% FMcutoff=determines how smooth the FM is. Its typical
value
%
% is 400 Hz.
%
% Note: If you want to produce a new sound in quiet, please put
the
%
% above 6 arguments in your call function. Otherwise, please
%
% specify the next 2 arguments.
%
%
% SNR=signal-to-noise ratio in dB. If you want to add a
%
% masker to the original sound, please
specify the SNR value
%
% and also the following masker file.
%
% MaskerFile=the name of the masker or background noise.
%
% This file should be in the same folder as
the
%
% input sound file.
%
% Note: the length of the masker should be

```

