readMe_Wiegrebe_and_Meddis_2004

There are two models in this package

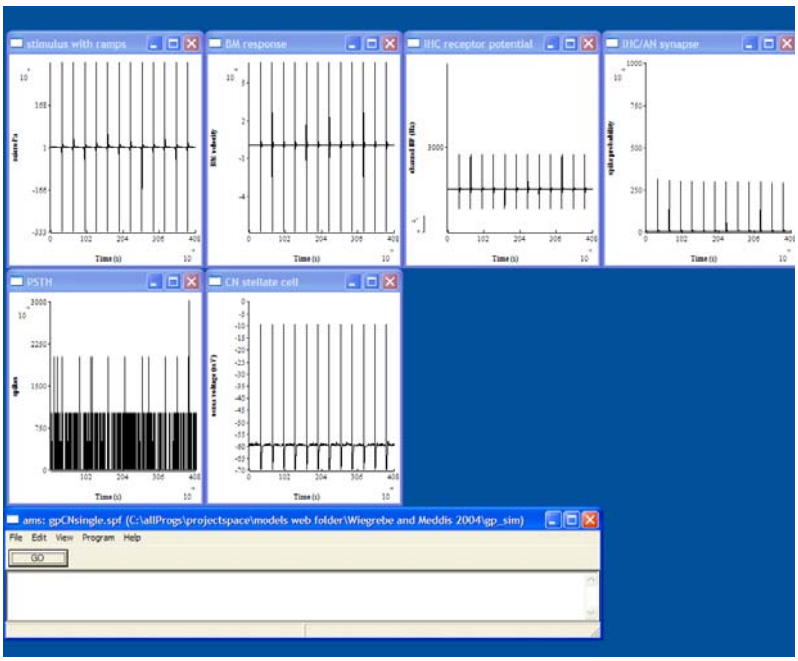
- A single channel guinea pig model in folder
  - *~\Wiegrebe and Meddis 2004\human_sim*
- A multi-channel human model in folder
  - *~Wiegrebe and Meddis 2004\human_sim*

To use these models you should first install DSAM software

You can run either model immediately by launching AMS and then selecting either *gpCNsingle.spf* or *human_pitch.spf.*

gpCNsingle.spf reads in a .wav file called gpSignal.wav containing a pulse train and process it through the model.
You can create your own file and call it gpSignal.wav. It should have a sample rate of at least 20 kHz and be a mono file. Slower sample rates and stereo files may cause problems

When you run the model it should yield a screen like this

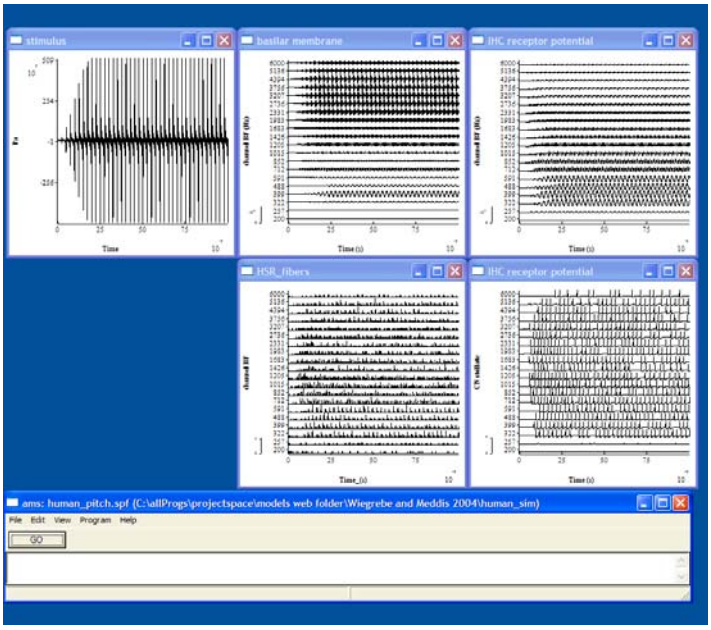


The final screen is the chopper response. This response is saved to an .aif file suitable for re-input to another AMS model. If you want this as a text file, you can change this by setting the name of the output file to xxx.dat.

human_pitch.spf reads in a .wav file called humanSignal.wav containing a pulse train and process it through the model.

You can create your own file and call it humanSignal.wav. It should have a sample rate of at least 20 kHz and be a mono file. Slower sample rates and stereo files may cause problems

When you run the model it should yield a screen like this



The final screen represents the response of a chopper neurons in a number of BF channels.

MATLAB
Here is a simple MATLAB program to give you MATLAB control over the model

```
function Wiegrebe_Meddis (modelFileName)
results=runDSAMsim(modelFileName);
figure (1), clf
[r c]=size(results);
if r==1
     plot (results)
else
    surf(results),   view(-20,80)
end
```

To run from the MATLAB command window:

```
Wiegrebe_Meddis ('human_sim\human_pitch.sim')
```