

Procedure for Operating Stimulus Computer During Scans

1. Log in as user “scan”.
2. Turn on the sound card and speakers if they are not already on.
3. Open MATLAB by double-clicking its desktop icon.
4. MATLAB should automatically open “Typical_Retinotopy_Scan_Protocol.m” and set the current directory to a subfolder named with today's date within “Scan_Stim_Output” (/home/scan/Scan_Stim_Output).
 - a. The stimulus code and stimulus files are located in /usr/share/stim . There is also a desktop shortcut called “Main_Stim_Code” that points to this folder.
5. Run stimulus code as needed. Save any outputs that you need from that code (e.g., text files with timing information) in /home/scan/Scan_Stim_Output .
6. Log out and turn off the sound card and speakers when you finish scanning.

Do not change the display resolution.

Changing the display resolution could make this computer inoperable.

Other Information and Troubleshooting Tips

- *Changing the display resolution in Ubuntu System Settings could make the computer inoperable* because the display configuration files required for Psychtoolbox to use 1 monitor for MATLAB and 1 monitor for stimuli do not interact well with the tools that the Ubuntu system settings manager uses to adjust screen resolution preferences.
- The display resolution is currently fixed to the default/”native”/maximum resolution of the monitors connected to the computer.
- Regarding audio:
 - Clockwise rotation of the big silver “monitor” knob on the front of the Focusrite Scarlett 6i6 sound card increases the volume of all connected speakers.
 - The sound card should be connected to the computer via USB cable.
 - 2 main speakers and 1 synch pulse generator/speaker typically should be connected to the sound card’s output channels 1-2 and 3 (respectively). Other output channels usually provide no audio signals.
 - If the detection system is not receiving stim-synch pulses and/or if you try to play sound and cannot hear anything from the speakers even when everything is correctly connected, turned on, and set to sufficiently high volume, then open the sound settings panel from the speaker icon menu in the upper-right corner of the screen and check that the sound card (Multichannel Output, Scarlett 6i6) is the selected output device. If not, then click on the sound card’s name to select it.
- If Psychtoolbox starts to display its welcome screen at the beginning of all stimulus runs and you want to stop this, then you can restart MATLAB or run “Screen(‘Preference’,’VisualDebugLevel’,3);” in MATLAB.