

How to Shim in Several Easy Steps

1. Fit the Skope field probes and connect the Elara shim coils,
2. Make a high-res B0 field map, load it into Arche and generate the shim_tmp.npy file. Copy this file into the shared area. Also copy the .PAR/.REC into the shared area.
3. Open Skope and select a working directory in which to store the Skope data. Perform a position and off-resonance calibration with the Skope probes and save the calibration.
4. Perform a scan with the Skope probes – as short as possible. Copy the .scan file *from this scan* into the shared area.
5. On the Skope and MR Shim computers, navigate to the shimmer directory either in the file explorer or at a command prompt.
6. Start the server either by double clicking on `shimming_server.py`, or running ***python ./shimming_server.py***.
7. Start the clients by double clicking on their .py file, or by running ***python*** <client name> at the command prompt:
 - i. `console_client.py` (Skope) – tell it you are console 1.
 - ii. `mrshim_client.py` (MR Shim)
 - iii. Connect the MATLAB client by running the sections down to “%% initiate python client interface”. (Skope)
8. Check all the clients are connected by running ***list*** at a [shimmer]: prompt and looking at the output on the server. (All shimmer commands must be typed at the shimmer console, they cannot be typed in at the server).
9. At a [shimmer] prompt, run ***relay mrshim !start*** to enable shimming.
10. In the MATLAB client, run the sections that create the mask, the spherical harmonics &c. down to and including the section that configures and sends the scan definition. Run the section that creates the figure,
11. Then run the section that starts the scan, and then the one that fetches the data and sets the currents in the loop.
12. Use ***relay mrshim !stop*** to set the currents back to zero and ignore further shim instructions. Use ***relay mrshim !start*** to resume.
13. Disconnect a client with ***relay <client name> disconnect*** at the [shimmer] prompt, or the second-to-last MATLAB section. Disconnect all the clients and stop the server with the ***halt*** command. Disconnect MATLAB from Skope using the final section.

For more detailed information, including how to solve commonly occurring issues, see the User Guide.

Shimmer Quick Start by Mags (ppyrt4@nottingham.ac.uk). Please send me any problems.