How to use Agilent NMR manually (day time at IBS600 or KARA400)

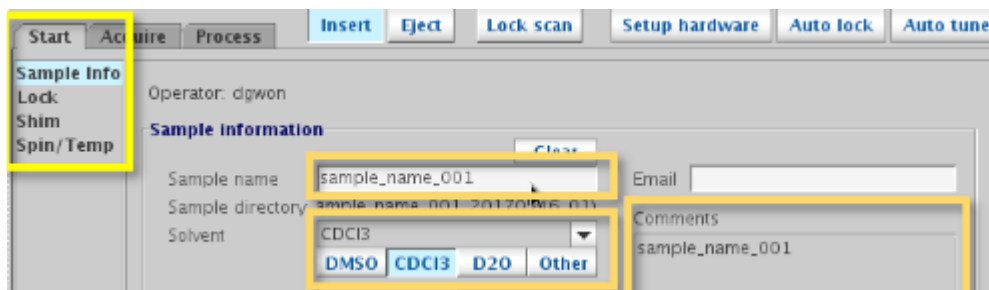1. Adjust depth of NMR tube in Spinner turbine with depth gauge.

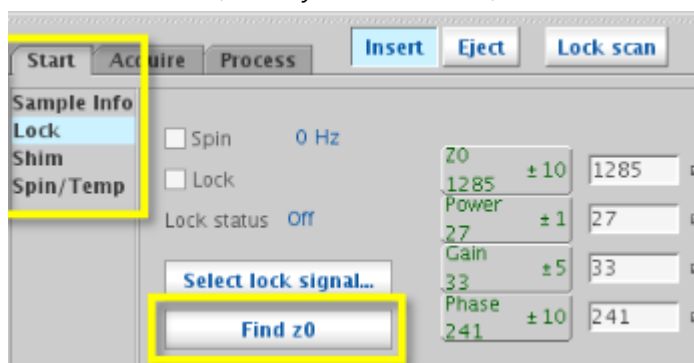2. login on vnmrj with your account. Click "eject" → input NMR tube into magnet → click "insert"

3. check status is 'Idle'

4. input 'Sample name' and select 'solvent'.
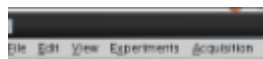
5. click "find Z0" (usually takes 3~5 sec)

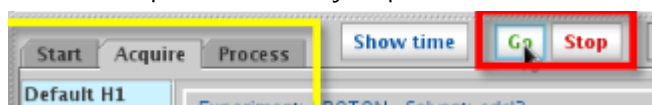6. click "Gradient Shim" Never touch mouse and keyboard until gradient shim is done('idle'). .

7. check 'Lock Status' is 'Regulated'. If not, click "Find Z0" again.

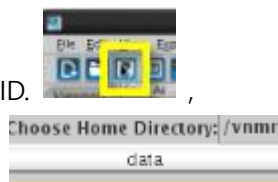8. Click "Experiment" at top menu bar and select experiment.

9. Click "Acquire" tab → adjust parameters at "Default" → Click "Go"

10. When Experiment is done('idle'), Click 'Save as' to save FID. ,

Click "data" button → double-click your account →Save Fid.

(Blank is not allowed for filename)

11. Uncheck "Lock" checkbox

12. Click "Eject"→ take out sample → Click "Insert".

13. Click "logout" (Near "Gradeint Shim").

Tips

1. Sample volume should be more than 600ul. If not, "Gradient shim" is not properly working.

5. If "Gradient Shim" button is not working after Clicking 'find z0' → Click "Proton" of experiment list at Top Menu solvent→ Click "Gradient shim" again.

6. Still "Gradient shim" button is not working → Click "Acquisition" at Top Menu → "Do Gradient shimming" → "Use lk/Gradient Map" for Gradient Shimming.

6-1. If sample volume is less than 600ul, but user still want to use gradient shimming → type "gmapsys".
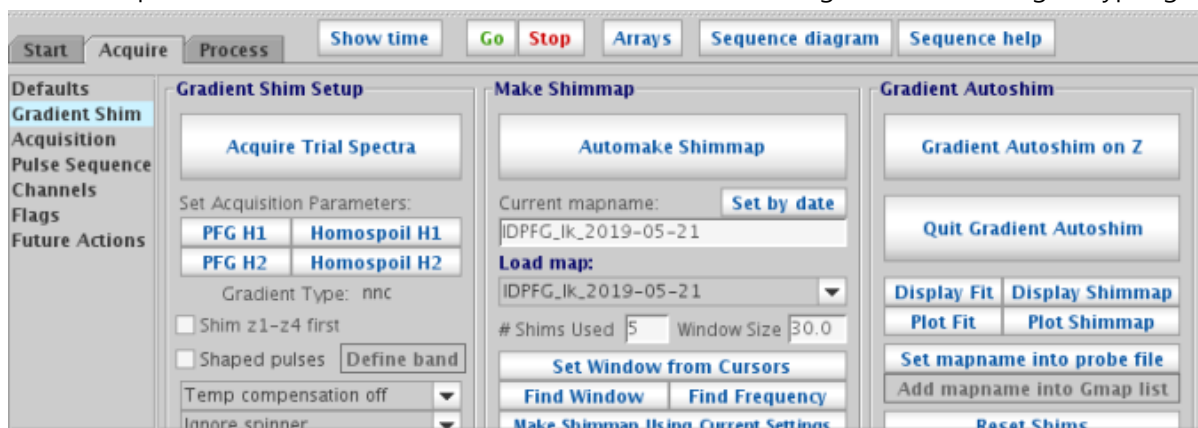
Set parameter properly. # "Shim Used" : 3~5, #"Window Size" : 24~32.

Click "Gradient Autoshim on Z" and wait until done("Idle") → Click "Quit Gradient Autoshim"

6-2. After Gradient Shim, check 'Z1~ Z7' value is between -10,000 ~ 10,000. If out of range, Click "Read default shims" and Do 'Gradient shimming' again.
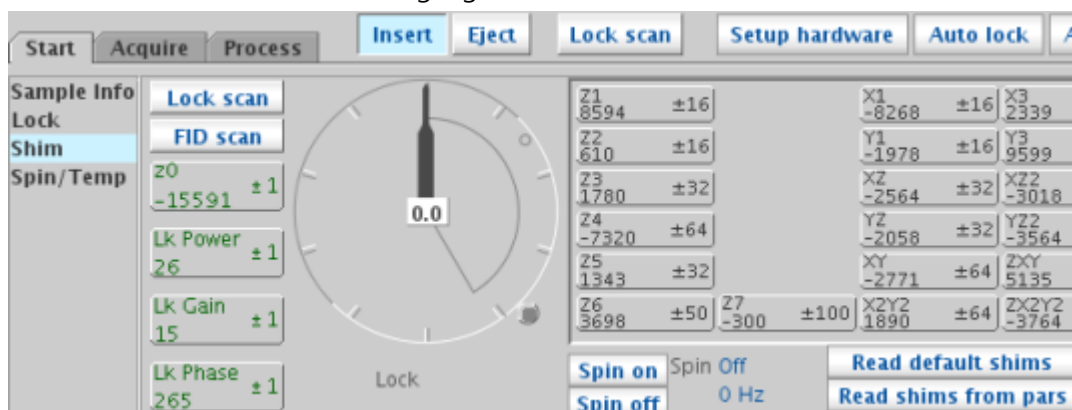
Still have problem with gradient shimming → Click "Read default shims" → adjust shim manually

7. If 'lock status' is 'not regulate' → change '(lk) Power' and '(lk)Gain' to adjust 'Lock level between 40~60.
Gain > Power and 0< Gain – power <10

13 . Never click 'system logout'