Troubleshooting FAQ

LOCKING AND SHIMMING

Q: The lock signal is erratic (jumping up and down), what do I do?
A: Try one or all of the following:

1. Is the sample properly centered in the magnet?
2. Reduce the lock power.
3. Adjust the lock phase.
4. Reload the standard shims.

Q: I've got the sample locked, but when I move to the shim window, the lock level drops dramatically.
A: The lockphase value is set incorrectly. Adjust lockphase to maximize the lock level.

Q: All my peaks are doublets or have tailing edges.
A: Reload the standard shims. If your sample is short (<5cm tall), the Z2 and Z4 shims will need to be adjusted considerably. Keep shimming.

Q: My sample doesn't spin.
A: Eject the sample and wipe off the base of the spinner.
We also recommend you use at least Wilmad 507 quality tubes and do not oven-dry your tubes as this tends to warp them.

SPECTROMETER PROBLEMS

Q: I get the following error: "Autogain failure, gain driven to zero, reduce pulsewidth."
A: This usually happens when your sample is very concentrated or there is a very tall (solvent?) peak in your sample. Reduce tpwr and/or pw so you are not giving a full 90° pulse at full power.

Q: The screen froze. What do I do?
A: Open a shell window (hold down the right mouse button in background and drag the mouse to "shell").

Type **ps -ef**
Find the process called "master Vnmr"
Kill it by typing: **kill -HUP number_of_process**
This will log you out of the terminal.

Q: The **[Acqi]** button does not respond or is missing.
A: Try the following in order:

(1) Type **acqi**

(2) If this does not solve the problem, type **abortallacqs** and wait several minutes.

(3) If this does not solve the problem, open a shell window (hold down the right mouse button in background and drag the mouse to "shell").

Type **su acqproc** then <return> at the password prompt.
You will see the message "Killing Expproc"
Type **su acqproc** again and another <return> at the password prompt.
You will see the message "Starting Expproc"

(4) If this does not solve the problem,
Type **su acqproc** then <return> at the password prompt.
You will see the message "Killing Expproc"
PRESS THE RESET BUTTON ON THE INSIDE OF THE CONSOLE
(DO NOT DO THIS IF YOU HAVE NOT BEEN SHOWN FIRST!)
Type **su acqproc** again and another <return> at the password prompt.
You will see the message "Starting Expproc"

Q: There are experiments queued and I did not queue them.
A: See previous question (**[Acqi]** button does not respond.)

Q: The status says "Inactive."
A: See previous question (**[Acqi]** button does not respond.)

Q: The spectrum doesn't automatically appear after acquisition.
A: Type "wft" then see previous question (**[Acqi]** button does not respond.)

VARIABLE TEMPERATURE

Q: The temperature controller is not responding.
A: Turn the orange button off then back on and reset the temperature. Type su.
If this does not work, the console may need to be rebooted.

INTEGRATION

Q: I messed up on my integration. Can I start over?
A: Type **cz** to clear all the integral resets.

Q: My integration values are too small (or all zero).
A: Type **ins=100**

Q: Can I trust my integrations?
A: For quantitative integrations, it is very important that the nuclei have time to relax after each pulse. This time is 5 times the T_1 of the protons of interest. Since you probably have no idea of the T_1 of your molecule (unless you performed a T_1 experiment), try setting **d1=30** and reacquiring your data.
Other factors involved:

- There should be no peaks within 10% of the edges of the spectrum.
- The S/N should be at least 250:1 for the smallest peak to be integrated.
- The same area should be included or excluded for all peaks.
- The baseline should be flat.

DISPLAYING

Q: The baseline isn't flat. How can I fix this?
A: Integrate *all* of your peaks. Then type **bc** for baseline correction.
A2: Alternatively, adjust the level and tilt values for the integration via the **[Lvl/Tlt]** button.

Q: How do I see the parameter screen if it is covered by the graphics window?
A: Click on the **[Flip]** menu button.

PLOTTING

Q: My spectrum doesn't plot.
A: Did you type "page"? Is LaserJet_300R selected? Have you checked both plotters in the NMR lab? Is the plotter out of paper? Is the plotter offline (press the "online" button)?

Q: I plotted two spectra on the same page.
A: This usually occurs when the vertical position is not high enough on the screen to allow integration values to print underneath the spectrum. You get the error "pir requires a minimum vp of 12." Set **vp=12**. Clear the last page by typing **page('clear')**, then repeat your plotting commands.

Q: The spectrum is not plotting horizontally.
A: Select LaserJet_300R as your plotter with the **[Change Plotter]** button. Or type **plotter='LaserJet_300R'**

Q: The plotter says "Paper Jam" and I can't find the jam.
A: This usually means that the plotter is out of paper. Refill the bottom tray, lift the lid of the plotter up, then push it back down. This will trick the plotter into thinking that you fixed the jam.

Q: After processing my 2D dataset, I get the error: "scale outside boundaries, adjust sc,wc,sc2, or wc2"
A: Set **wc=wc2** and redisplay (**dconi**)

Q: Where is the paper?
A: In the cabinet below the laserprinter (LaserJet_300R).

RETRIEVING DATA

Q: When trying to retrieve a file, I get the error message: "cannot read and load text file."
A: Try joining another experiment (e.g. jexp2) and retrieving the file there. This often happens when you are logged into more than one workstation at a time.

Q: I am trying to make a postscript or ASCII file and it will not create the file (computer beeps several times).
A: Make sure you are in your data directory and not a CD-ROM directory: **cd('/data/6-lettercode')** and then write the file. You cannot write to the CD-ROMs or the VAC-200 or VAC-300 directories.

Q: I need to see someone else's data.
A: Go to their directory by typing: **cd('/data/6-lettercode')**, then select **[File]** from the menu buttons to list their files.

Q: I can't see all my files on the screen.
A: Click on the **[Flip]** menu button.