

☛ Select your solvent, and **GO!**

- Automatic locking
- Automatic shimming
- Automatic processing and referencing
- Graphical interface
- Button- & menu-driven

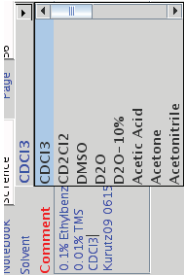
NEW

- Command line interface
- Manual lock
- Manual shim

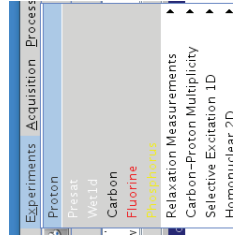
DTO

NmrJ

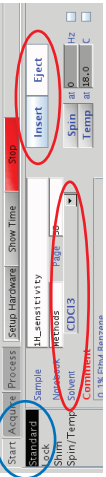
the EASY WAY



☛ Pull down the solvent selector and choose your solvent.
(*This is the key to succeeding with the automated setup!*)



☛ From the main menu bar, pull down the "Experiment" selector and choose your first type of spectrum, e.g. "Proton"



☛ In the **Start/Standard** panel, click the Eject button, swap samples, click the Insert button

lets

IMSERC NMR

☛ This is the first in a series of mini-zines about special topics in chemical NMR

☛ For running updates on new capabilities, tips, and helpful mini-zines please visit our new blog:

www.imserc-nmr.org

(Keep up to date using the blog's RSS feed)

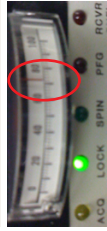
☛ Sign up to our new Twitter account! Receive alerts to major events such as major hardware or software upgrades and power outages! We won't spam!

twitter.com/imserc_nmr

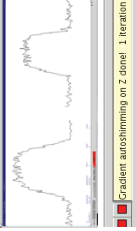
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i>No further lock adjustment is necessary!



When complete, you should see the "Gradient Autosimming on Z done!" message at the bottom of the window. ☛ If lock is not restored after gradient shimming, click "Find z0" again. Using this method of locking and shimming should result in a lock level between ~60 and 80.



☛ Click the "Gradient Shim" button to shim



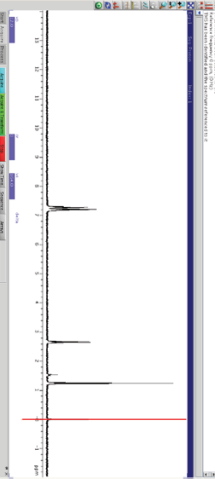
Note: the lock level will bounce around before re-establishing lock. If lock is not established, check your solvent selection. If that's ok and you still aren't locked, proceed to gradient shimming anyway.



☛ Click the "Find z0" button to establish lock

with 'Lock

Finished!



VnmrJ: • automatically processes the spectrum
• detects if TMS is in your sample
• references the scale to TMS or solvent

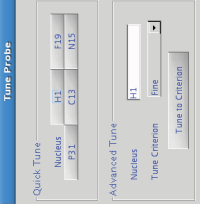
☛ Save your data. Click the "Save" icon, choose a location, and give your file a name.

Troubleshooting

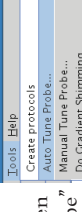
- Make sure your solvent choice is correct
- If lock level is <30 and shims are poor, resort to the command line and type **Ts(cdc13)** to retrieve standard shims, then click "Gradient Shim" button again.
- Spectrum quality is degraded by insufficient solution (<0.5mL), particulates, concentrated acid, low-quality and scratched tubes, etc.
- Mixed solvents may need to be referenced manually
- If problems persist, please contact Yiyang or Josh

☛ Tuning done. OK - tuned to 400.157 MHz with match at within 3.7 percent of optimum

Time Probe



☛ In the "Quick Tune" part of the Tune Probe panel, click your nucleus. If you need a different nucleus, e.g., Pt195, type its name in the "Nucleus" box in the "Advanced Tune" area, select a Tune Criterion from its pulldown, and click, "Tune to Criterion". You may observe blinking lights and spinning knobs on the Protune units. The process should finish with a message like this:

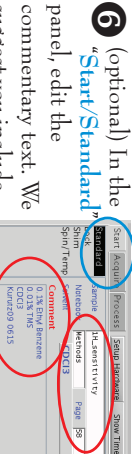


☛ From the top menu bar, open "Tools...Auto Tune Probe"

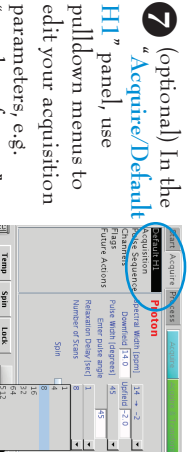
M400 is our only Varian spectrometer equipped with a probe capable of direct observation of diverse nuclei AND automated tuning.

(M400 only)

Acquire

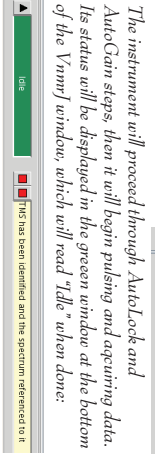


☛ (optional) In the **Start/Standard** panel, edit the commentary text. We suggest you include sample details here.



☛ (optional) In the **Acquire/Default** panel, use pulldown menus to edit your acquisition parameters, e.g. "number of scans".

☛ Click the "Acquire" button.



The instrument will proceed through AutoLock and AutoGain steps, then it will begin pulsing and acquiring data. Its status will be displayed in the green window at the bottom of the VnmrJ window, which will read "Idle" when done:

