Instrument Setup Guide

Step	Function or Dialog Box	<Keystroke>/[Select]/<*Data Entry*>	Comment
A	**PREPARE**		Purpose: adjust field and optimize shims. Run if instrument idle ≥ week otherwise skip to **B**.
1	Sample		Tap water, spinning. (Do not use the sealed Homo Adj. sample supplied with original CW instrument)
2	Enter PNMR.	<Alt+Tab>	(If necessary.)
3	Acquire data.	**H1>**prep<Enter>	Spectrometer enters GS mode.
4	Gain Adjusted		The spectrometer adjusts the receiver gain.
5	Spectrum acquisition		Prep takes a spectrum
6	Enter NUTS and process data.	<Alt+Tab> **>**a2	Trim phase as required. Use cursor to determine peak position in ppm, including sign.
7	Enter PNMR and set field for shimming.	<Alt+Tab> *value*<Enter>	Change to PNMR and enter the peak position in the User Input box.
8	Adjust spinning speed.	**Adjust spin air flow** <Ctrl+Q>	Adjust spinning speed so the crest-to-crest spacing in the FID is about 5 horizontal divisions.
9	Minimize side bands.		Y, X, Z, etc shims optimized. Note *
10	Adjust spinning speed.	**Adjust spin air flow** <Ctrl+Q>	Adjust spinning speed so the crest-to-crest spacing in the FID is about 2 horizontal divisions.
11	Optimize resolution.		Spinning shims set, spectrum acquired. Note *
12	Enter NUTS and process data.	<Alt+Tab> **>**a2	(Trim phase as required.) Use cursor to determine peak position in ppm, including sign.
13	Enter PNMR and set field.	<Alt+Tab> *value* <Enter>	Change to PNMR and enter the peak position in the User Input box.
B	**SHIM THE MAGNET**		Purpose: Optimize resolution.
1	Sample		5% ethylbenzene or 5% ethylmethacrylate
2	Enter PNMR.	<Alt+Tab>	(If necessary.)
3	Enter shim routine.	**H1>**shim<Enter> or **C13>**shim<Enter>	The spectrometer automatically adjusts the gain before shimming.
4	Enter RD value	*value* <Enter>	Dilute sample RD=5; Conc. sample RD=2
5	Shim		Allow time to shim. Note *
C	**TMS REFERENCE**		Purpose: Correctly position the spectrum.
1	Sample		5% ethylbenzene or 5% ethylmethacrylate
2	Enter PNMR.	<Alt+Tab>	(If necessary.)
3	Verify parameters.		Verify that the parameters make sense
4	Acquire data.	H**1>**zg<Enter><Enter> to use the default file name	If FID display is red, reduce RG, and repeat zg. Proceed to next step when prompted.
5	Enter NUTS and process data	<Alt+Tab> **>**a2	(Trim phase as required.) Use cursor to determine TMS peak position in ppm, including sign.
6	Enter PNMR and enter TMS peak position.	<Alt+Tab> **H1>**fo <Enter> *value* <Enter> 0 <Enter>	Switch back to PNMR, execute the fo command, enter TMS position determined above for current position, and 0 (zero) for desired position. Repeat to confirm.
7	Adjust offset.		*Manual shims only*: Set the offset on the shim unit to the value shown in the "Set Shim" dialog box.
D	**PHASE CHECK ^{1}H**		If Step 5 above does not give spectrum with correct phase, see "Update Phase Correction Parameters" in the Appendix.

* *Systems with manual shims only*: Carefully follow the screen prompts until the shim routine goes to next step or exits to PNMR.