

ECA 400 FT-NMR SYSTEM

OPERATING PROCEDURE (FOR USER)

1. On the monitor, you will see 3 windows
 - a) Delta Console (Fig. 1.0)
 - b) Sample: scc (Sample Tool) (Fig. 2.0 at page 2)
 - c) Spectrometer control (Fig. 3.0 at page 4)

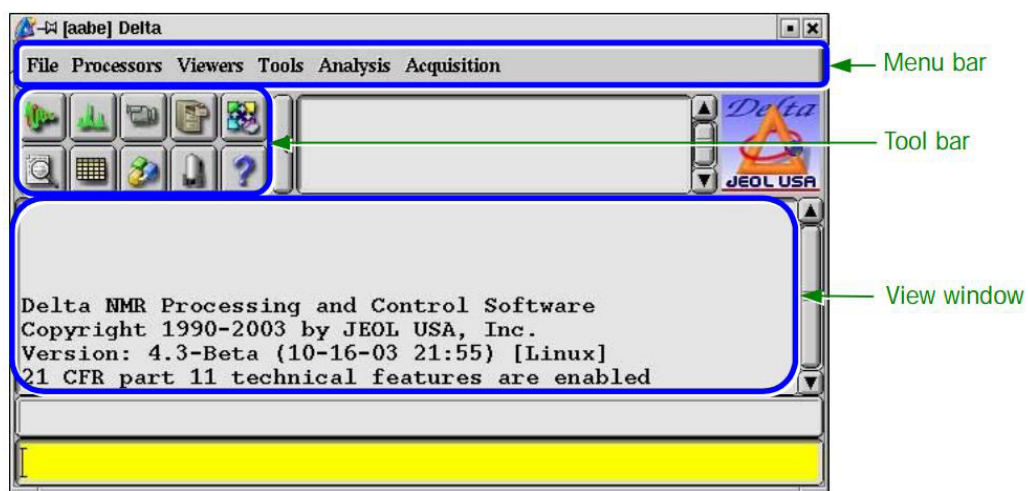


Fig: 1.0 Delta Console Window

2. Introducing Sample To The System

- i. Go to Sample Tool Window (Fig 2.0, Sample scc)




Fig 2.0 Sample Tool Window

- ii. Enter slot number in Slot box in Sample State (Refer Fig 2.1)



Fig. 2.1: Sample State Icon

- iii. After the sample has been loaded, click on  to turn on the spinner (Refer to Fig. 2.2)

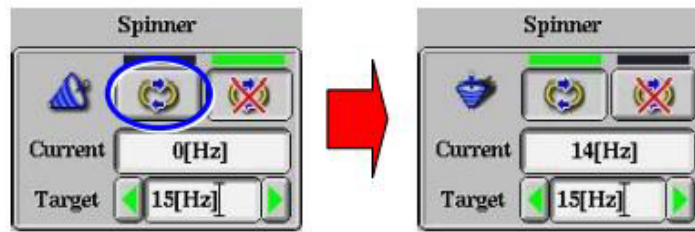


Fig 2.2: Spinner Icon

- iv. Select a solvent, from the list

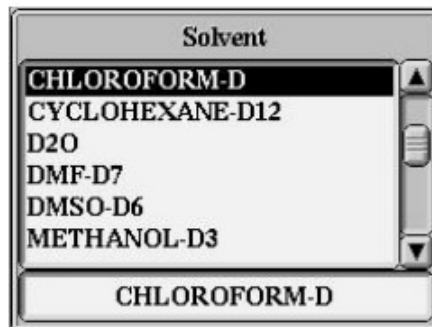



Fig 2.3: List of Solvent

- v. Click on Shim and lock icon  (Refer Fig. 2.4)




	Gradient Shim&Lock	Automatically locking is performed after performing the gradient shimming.
---	-------------------------------	---

Fig 2.4: Lock Control

- vi. Please wait for state of NMR lock and state of shim turn green (Refer Fig. 2.5)

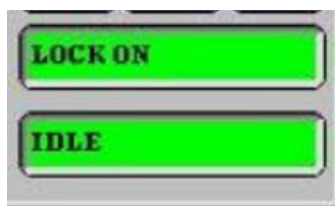


Fig. 2.5: Status of NMR Lock and Shim

3. Running The Experiments

- i. Go to Spectrometer Control Window (3.0)

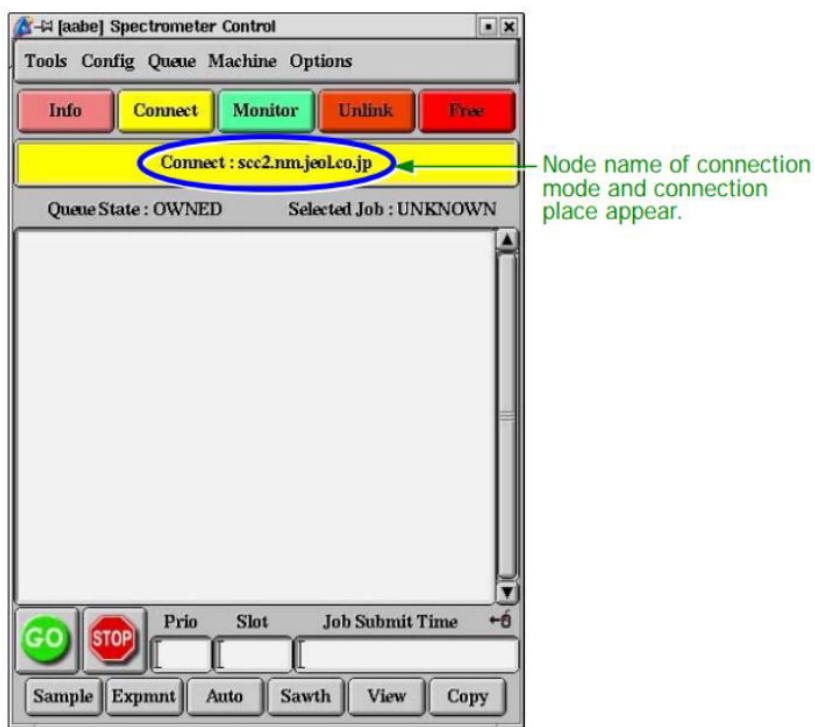


Fig. 3.0: Spectrometer Control Window

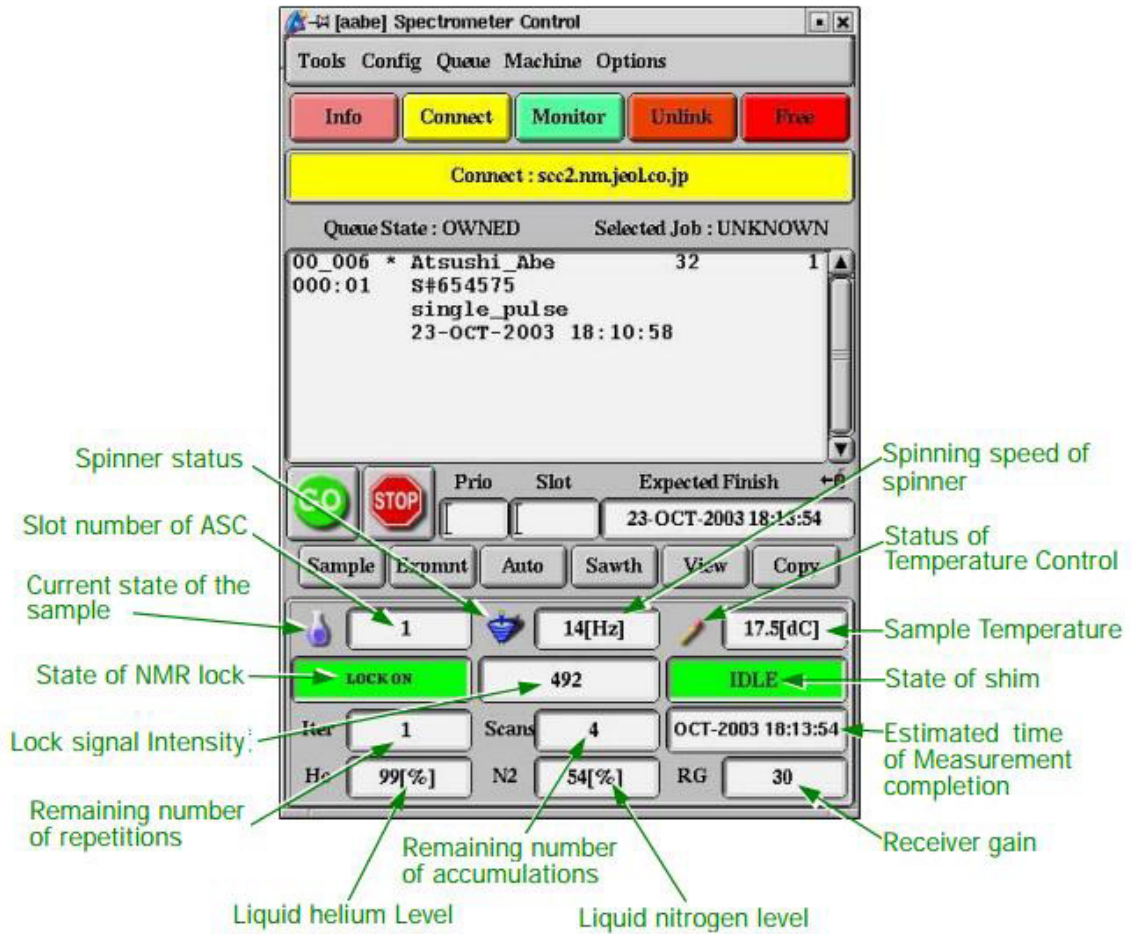


Fig. 3.1: Spectrometer Control and its function

- ii. Click on Expmnt (Refer to Fig. : 3.2)



Fig. 3.2: Button at Spectrometer Control

- iii. Open Experiment Window is displayed as below (Refer Fig 3.3)

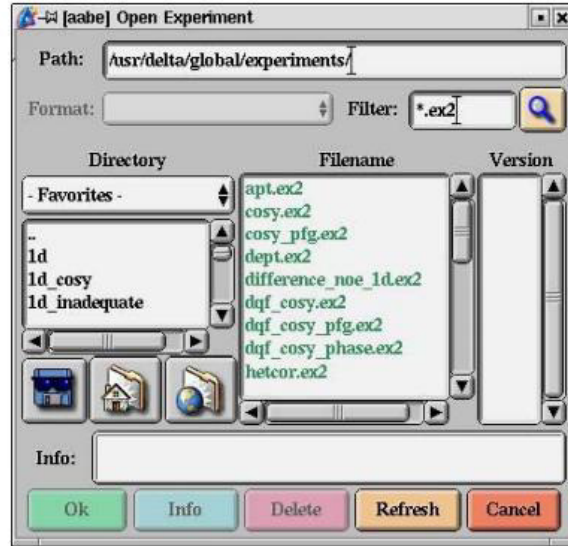


Fig. 3.3: Open Experiment Window

- iv. Select the experiment from the filename column (Fig. 3.3). For any 1D & 2D measurement, e.g. 13C, Noe-diff etc., please refer to Measurement User's Manual in Chapter 4 & 5. Here, we select single pulse experiment.
- v. Click Ok
- vi. Experiment Tool window is displayed as below (Refer Fig. 3.4)

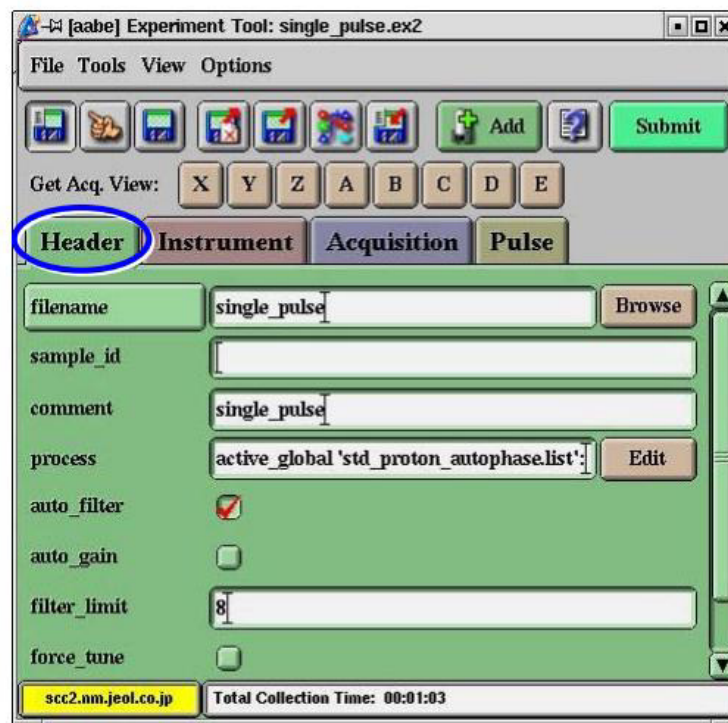


Fig. 3.4: Experiment Tool Window

- vii. At Header Section (Fig. 3.4), enter
 - a) File name
 - b) Sample id
 - c) Tick in auto_gain box
 - d) Tick in force_tune box
- viii. Go to Instrument section and check the solvent, refer Fig. 3.5

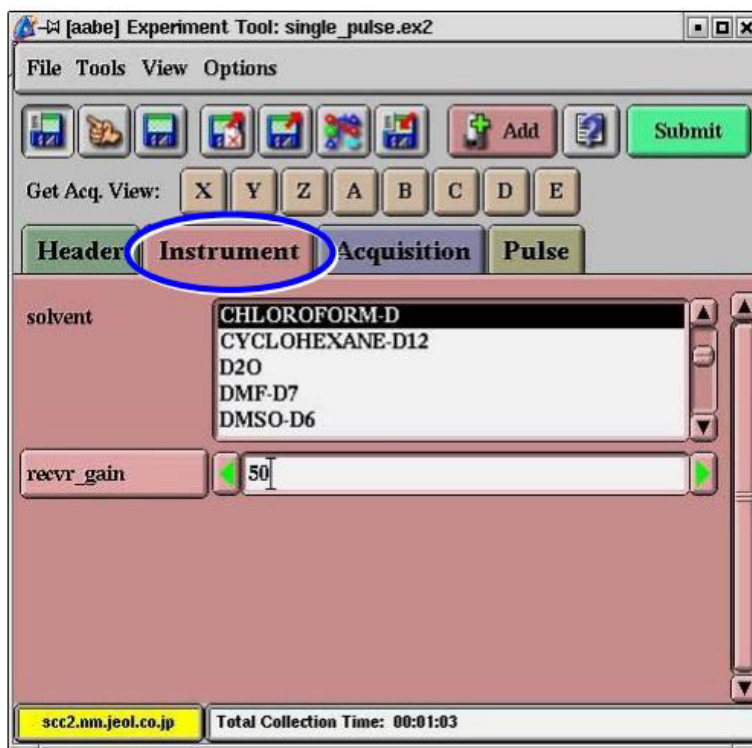


Fig. 3.5: Instrument Section

- ix. Go to Acquisition section as shown at Fig. : 3.6
You may change parameter that needed for your experiment in the Acquisition section

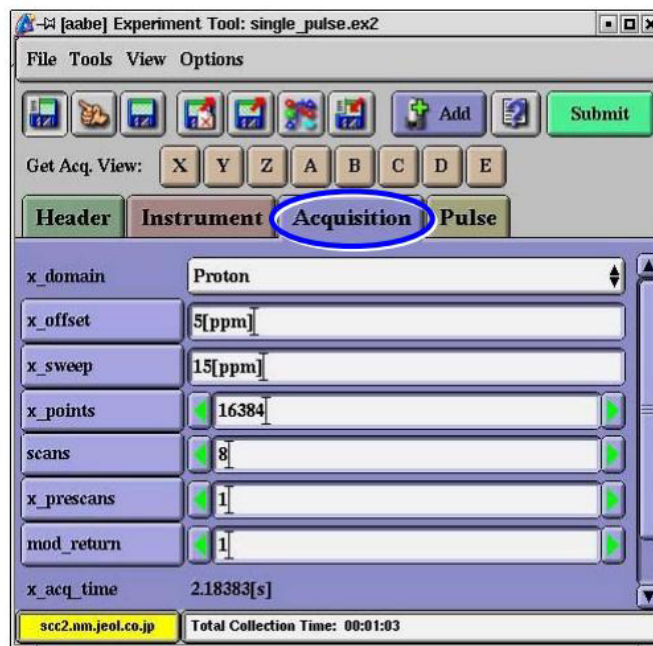


Fig. 3.6: Acquisition Section

- x. Go to Pulse section, see Fig. 3.7
- xi. You may change parameter that needed in the Pulse section

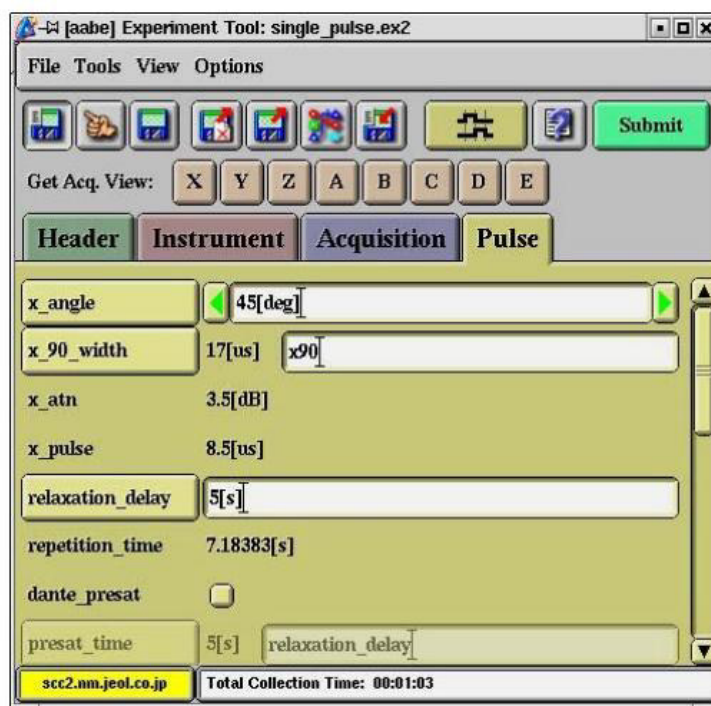


Fig. 3.7: Pulse Section

- xii. After completing key in all needed parameter, then click "Submit" button, refer Fig. 3.8

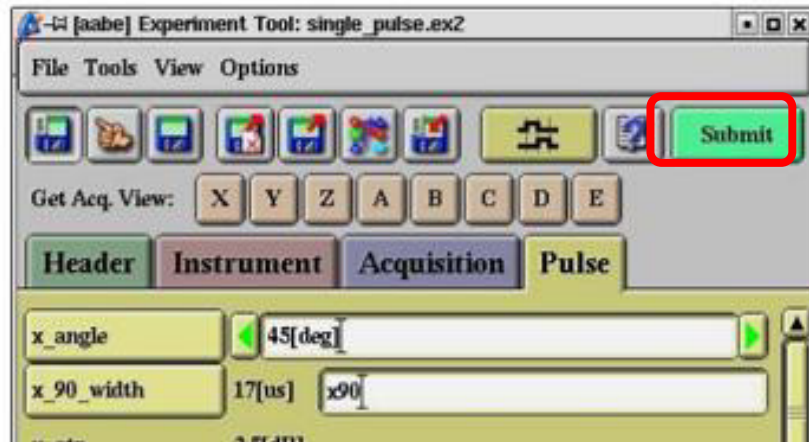


Fig. 3.8 Experiment Tool Window (Submit Button Highlighted)

- xiii. "Inform" window will be displayed (Fig. 3.9) then click GO button



Fig. 3.9: Inform Window

- xiv. On the "spectrometer control" window will show the status of the experiment (Fig. 3.10)



Fig. 3.10: Spectrometer control shows **measuring** in progress



The symbol means **accumulating** data in progress.

4.0 Ejecting the sample

- i. Go to Sample State box
- ii. Enter "0" in the slot column (Fig. 4.0)

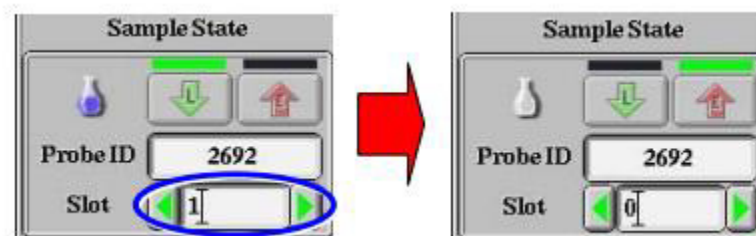


Fig. 4.0: Sample state box

- iii. Press advance button at ASC (automatic sample changer) until you can take your nmr tube safely.