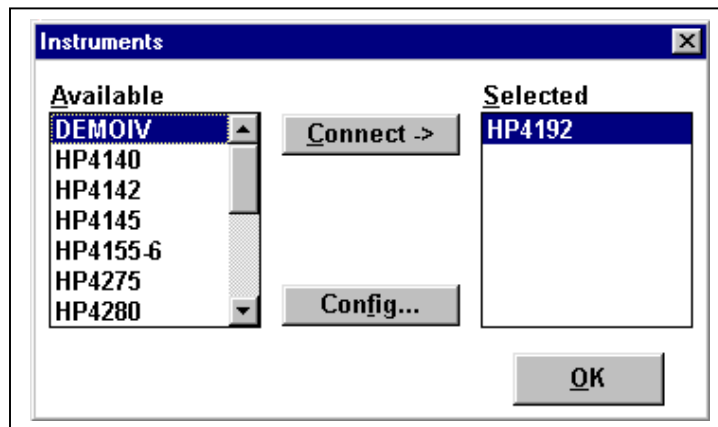


## INSTRUCTIONS ON HOW TO SET UP AUTOSEQUENCE IN METRICS ICS

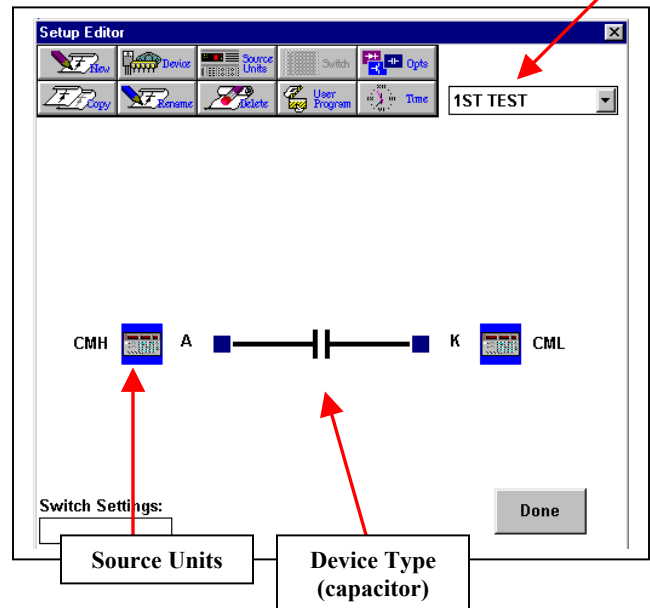
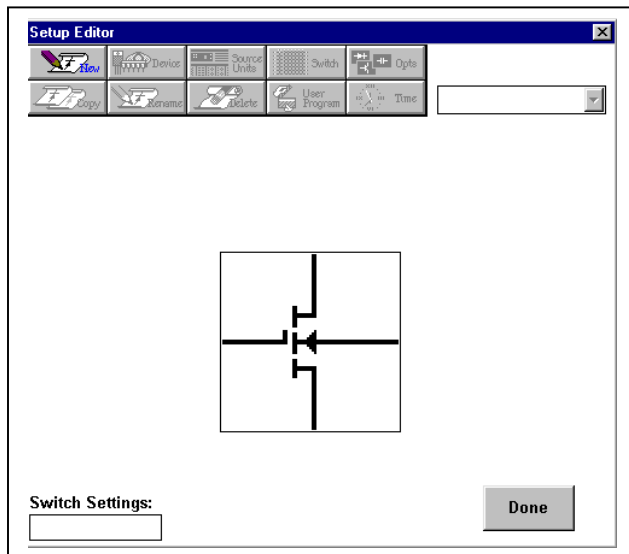
by Chris Lohn

This will enable the user to make multiple measurements under different conditions (i.e. gate voltage sweep at multiple drain voltages) without being present to change settings after each individual measurement is performed. Each measurement is setup (defined) before any measurements occurs. The user will then select which measurements (setups) will be performed in the measurement sequence. The selected measurements are done sequentially and the data appears on a separate spreadsheet for each measurement.

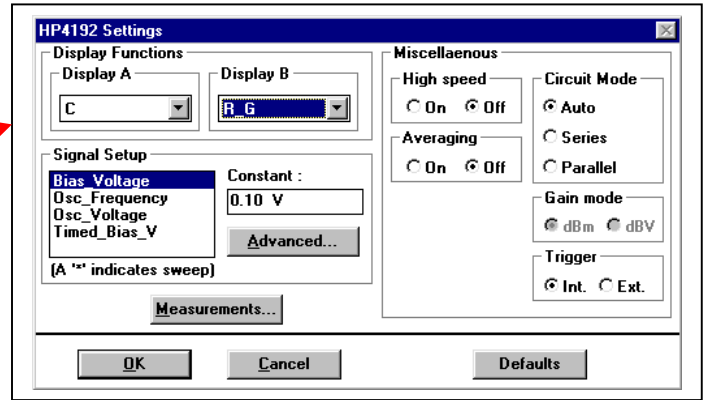
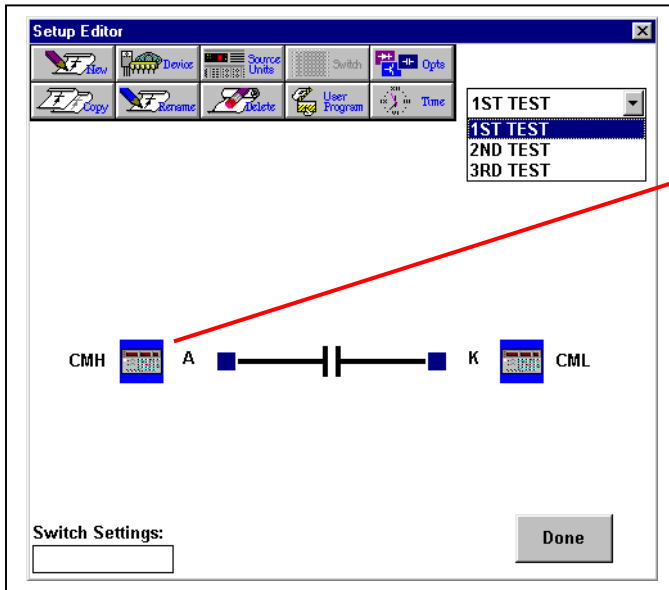
- (1) Open the software - Interactive Characterization Software (ICS) Metrics Technology, Inc.
- (2) Click on 'Instruments' → 'Select Instrument' → 'Connect'



- (3) Click on 'Measure' → 'Edit Setup'



- (4) Click on 'New' and enter the name of the New Setup. The name of the setup ("1st TEST") will appear on the upper right hand corner.
- (5) Select the Device type and then add the Source Units to the inputs for the Setup.

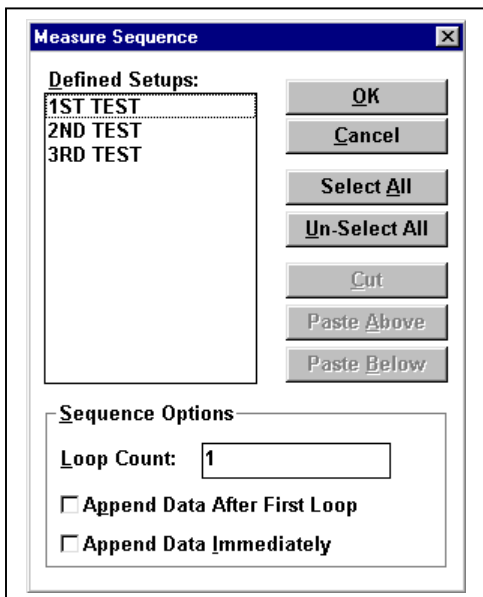


Pop up window for measurement settings for source unit CMH.

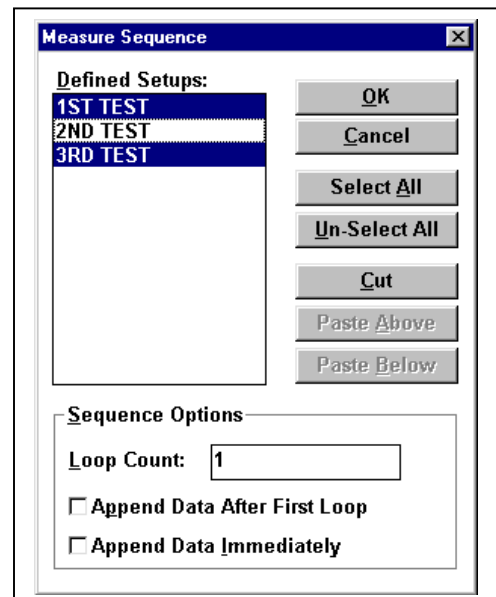
(6) Additional setups can be created by repeating steps 4 and 5. For example, the setups 2nd TEST and 3rd TEST were created as seen in the pull down menu in the upper right corner. Generally, the additional setups will be of the same device type and with the same source units.

(7) Specify the measurement conditions for the each setup. Select the setup by clicking on the tab in the upper right corner. Next double click on the source unit icon to define the measurement conditions for the setup selected. When you double click on the source unit icon, a window with the measurement settings for that particular source unit will open. You will then choose the next setup (i.e. “2nd TEST”) and define the measurement conditions for that particular setup. Each setup will need to have the measurement conditions defined.

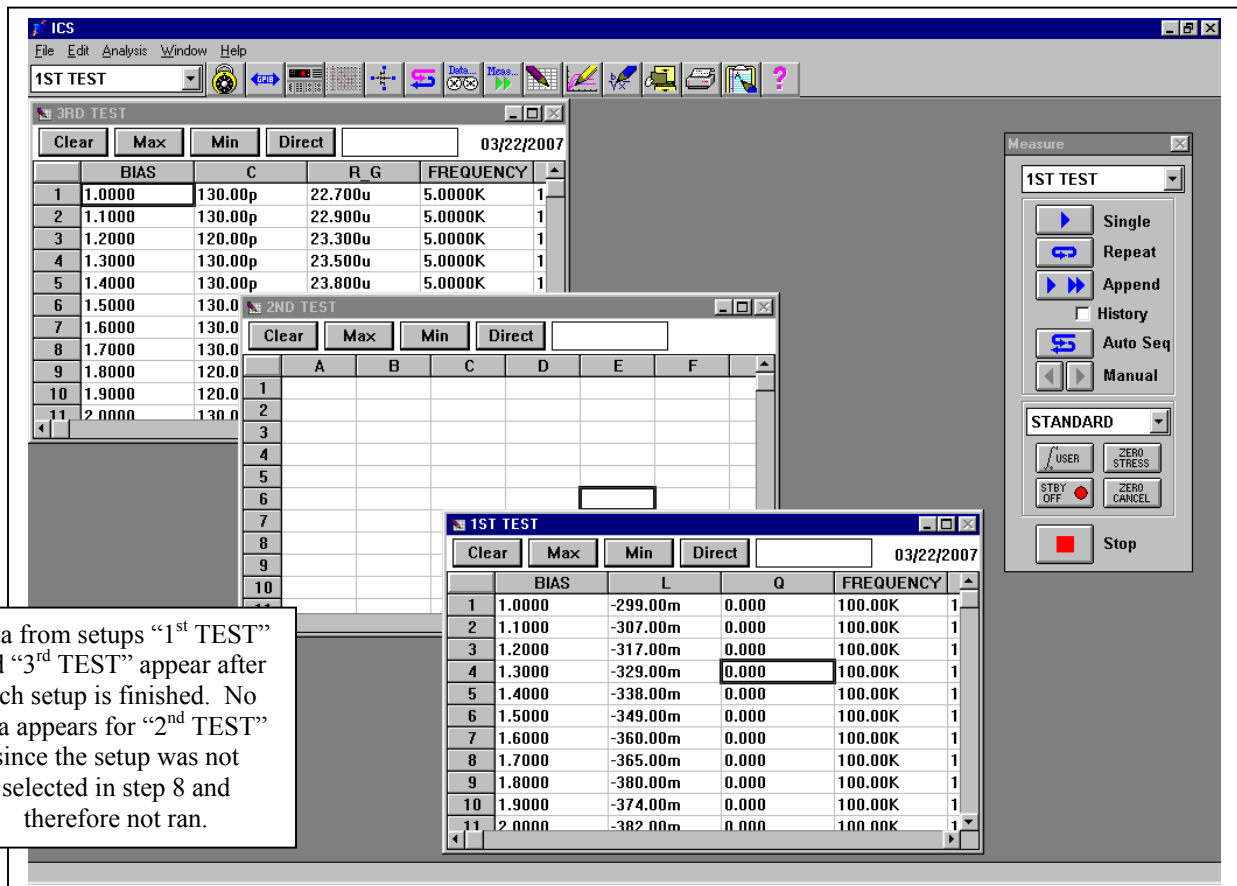
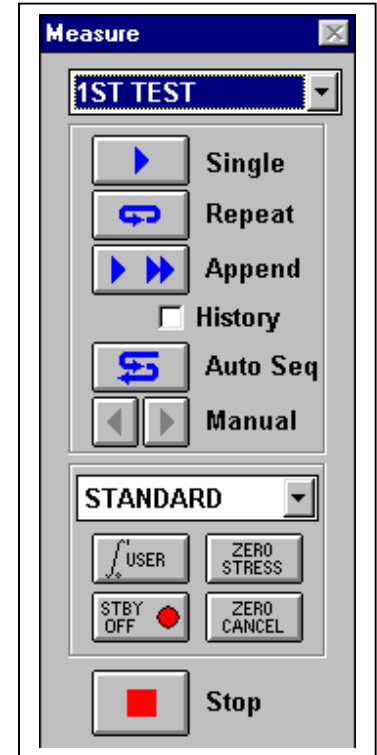
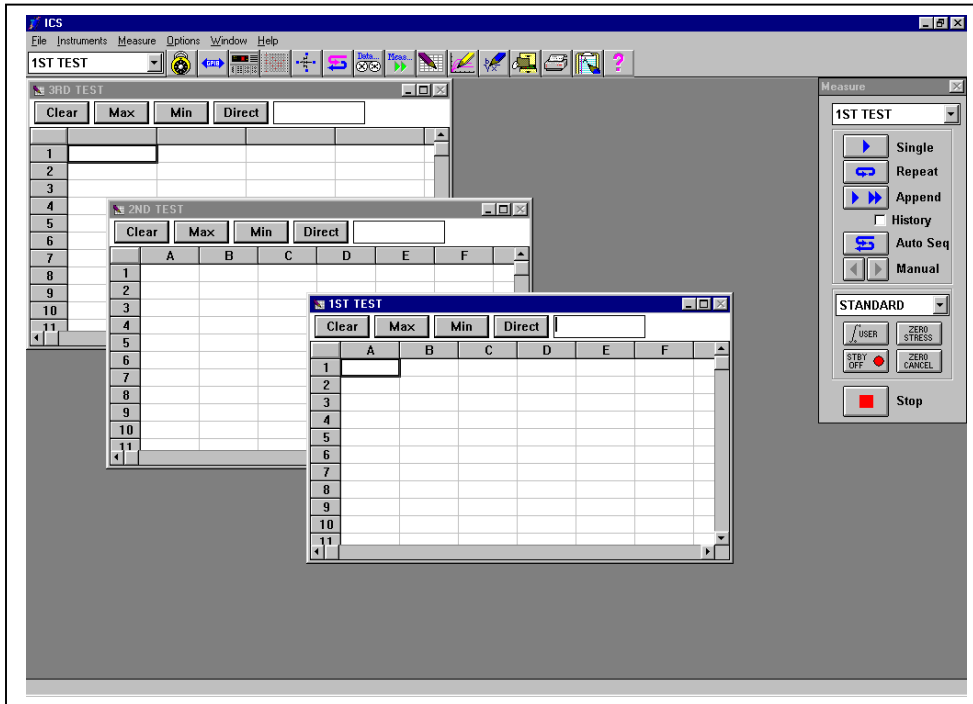
(8) Click on ‘Measure’ → ‘Select Sequence’. Select the Defined Setups you wish to include in your measurement autosequence and then click OK. You may change the order in which the Setups (measurements) are made by cutting/pasting. You may also loop the sequence and make the measurement more than once (you figure this out on your own).



Setups “1<sup>st</sup> TEST” and “3<sup>rd</sup> TEST” were selected and will be ran (measured) during the autosequence



(9) Click on 'Measure' → 'Measure' and the measure window will appear on the screen. Click on 'Auto Seq' to run all of the setups you selected. The computer (ICS software) will change the necessary settings on the measurement tool and perform the first measurement (1st TEST) and put the collected data in the spreadsheet labeled 1st TEST. The software will then make the necessary setting changes and perform the second measurement (3rd TEST) and put the collected data in the appropriate spreadsheet. The setup 2nd TEST will not run since it was not selected in the measure sequence (step 8).



Data from setups "1<sup>st</sup> TEST" and "3<sup>rd</sup> TEST" appear after each setup is finished. No data appears for "2<sup>nd</sup> TEST" since the setup was not selected in step 8 and therefore not ran.

(10) To save the defined setups, click on 'File' → 'Save As' and enter a name in Attribute #1 and comments in the Comment section. You can then later open up the ICS software and click on 'File' → 'Open' to select the project (multiple setups) you wish to use. This eliminates the need to redefine each setup (or multiple setups) after the software has been exited and re-opened.

**File Manager - Open**

**Attribute #1** Test 1-3

**Attribute #2** FeTiO3IV  
FREQSWP\_BIASSTEP  
FS5T0100HZBIASN5T05

**Attribute #3** Test 1-3  
VSWPN5T05FQSTEP

**Attribute #4**

**Attribute #5**

**Attribute #6**

**Comment:** Test1: 1 to 2V@100kHz, Test2: 1 to 2V @50

**OK** **Cancel**