

This Application Note is pertinent to  
Unidrive Classic and Mentor II/Quantum III Drives with CoProcessors

## Saving/Restoring All Drive & CoProcessor Data

Our CT Browser has the ability to upload not only Drive data but also all parameter data (200-300 parameter registers ) contained within the MD29 or UD7x coprocessors . This short guide will outline the procedure to upload and save and how to restore all drive and coprocessor data.

The following procedure assumes that one is using our Browser version 2.1.1 or greater. Previous versions could be used but this version allows one to use a standard serial cable ( one end 9 pin D male, other 9 pin D female ) to be plugged into the free RS232 port on the UD7x coprocessor module. ( The Browser would need to be setup for MD29MON communication mode to use the 232 comm port.)

The Browser can be obtained from our website at:

[http://www.emersonct.com/download\\_usa/software\\_drives.htm](http://www.emersonct.com/download_usa/software_drives.htm)

or by clicking the following link: [CT Browser](#)

### Communication Setup

The easiest way to upload/download data to/from our coprocessors is to utilize the RS232 port.

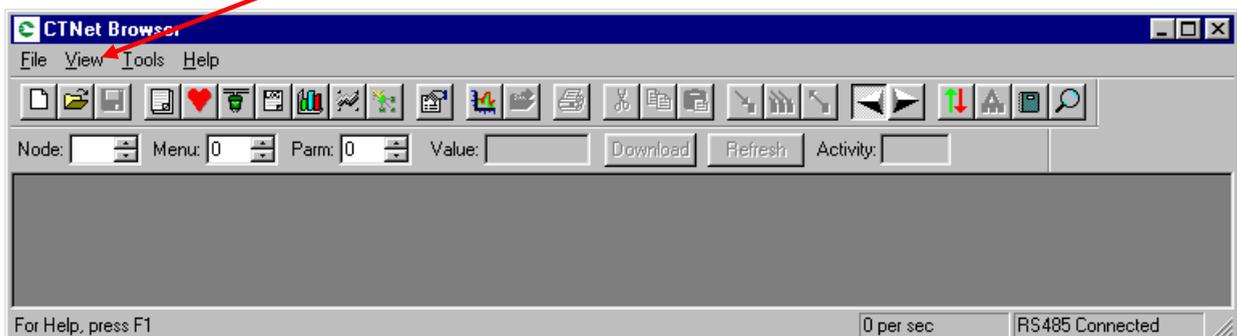


UD7x Co Processor  
Except UD71 & UD78

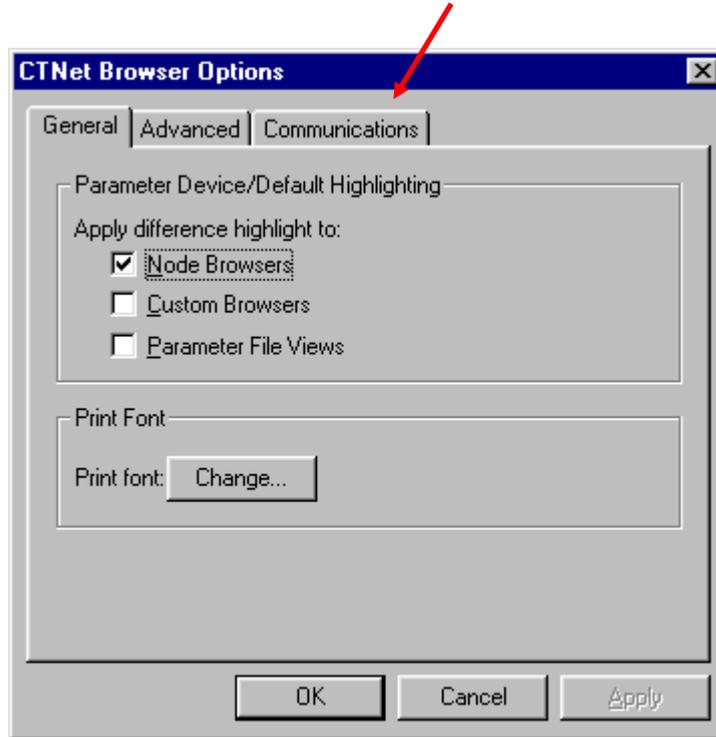


MD29 or MD29AN  
Co Processor

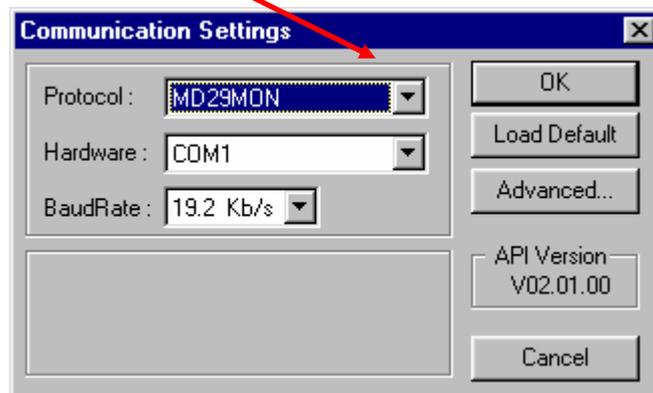
To setup for RS232 Communications click on **VIEW** then select **OPTIONS**



Then select the Communications tab

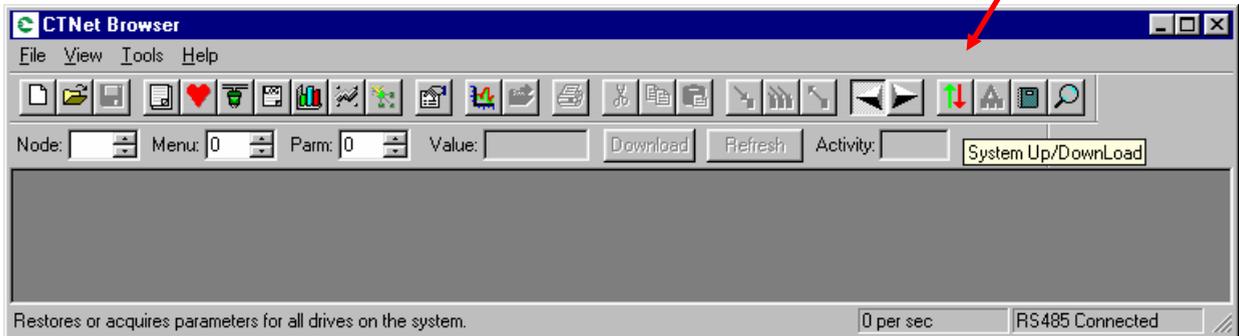


Select MD29MON from the protocol select pull down, then OK.

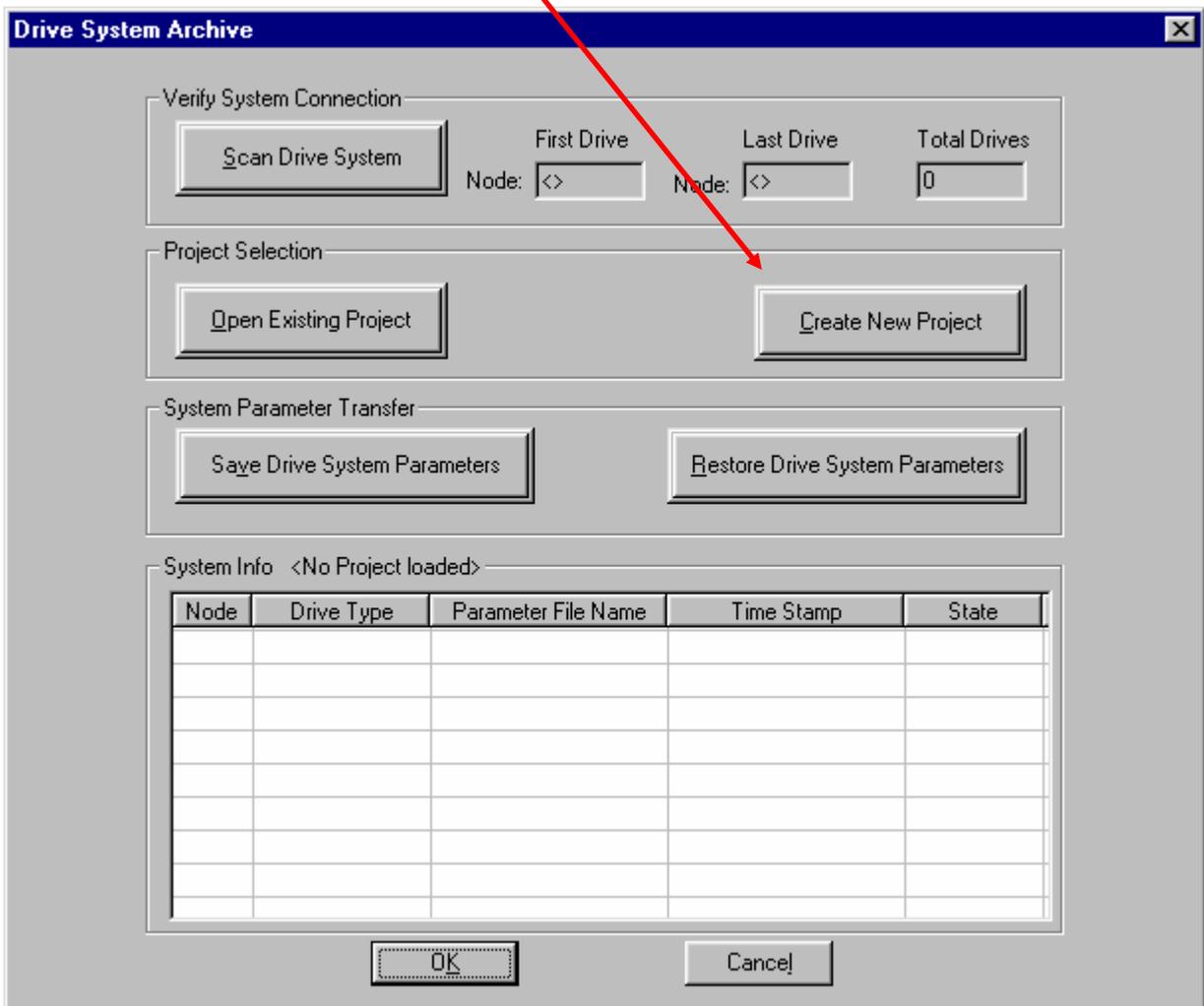


# Saving All Drive Data to Disk

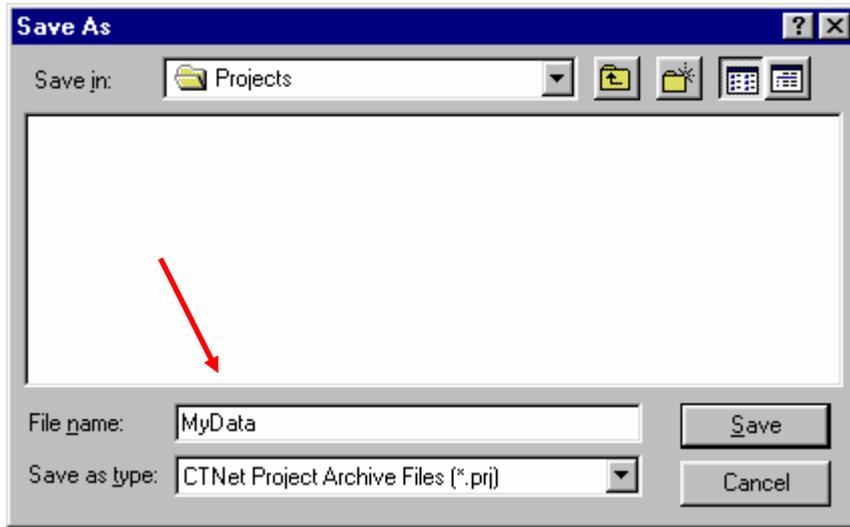
From the main screen of the CT Browser, click on the Red and Green up/down arrows to open the Drive System Archival window.



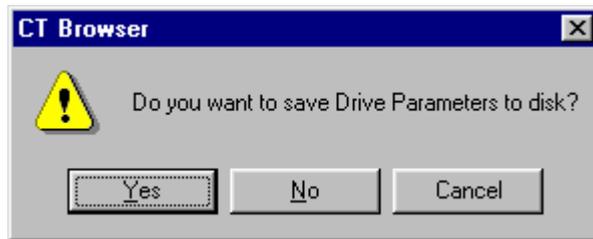
Then click on the **CREATE NEW PROJECT** button.



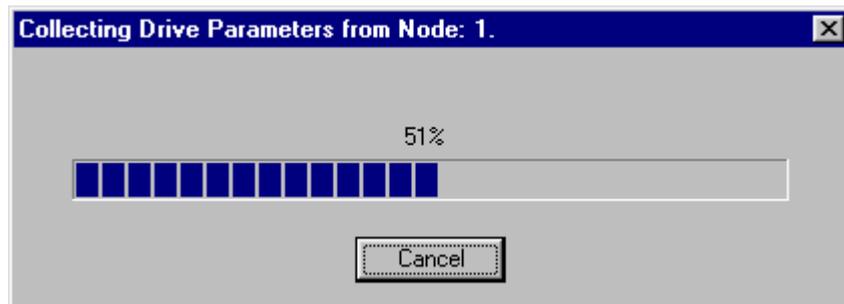
Click on the Filename cell and enter a name for the data you wish to save. After you click on **SAVE**, a project file ( w/extension .prj ) and folder will be created.



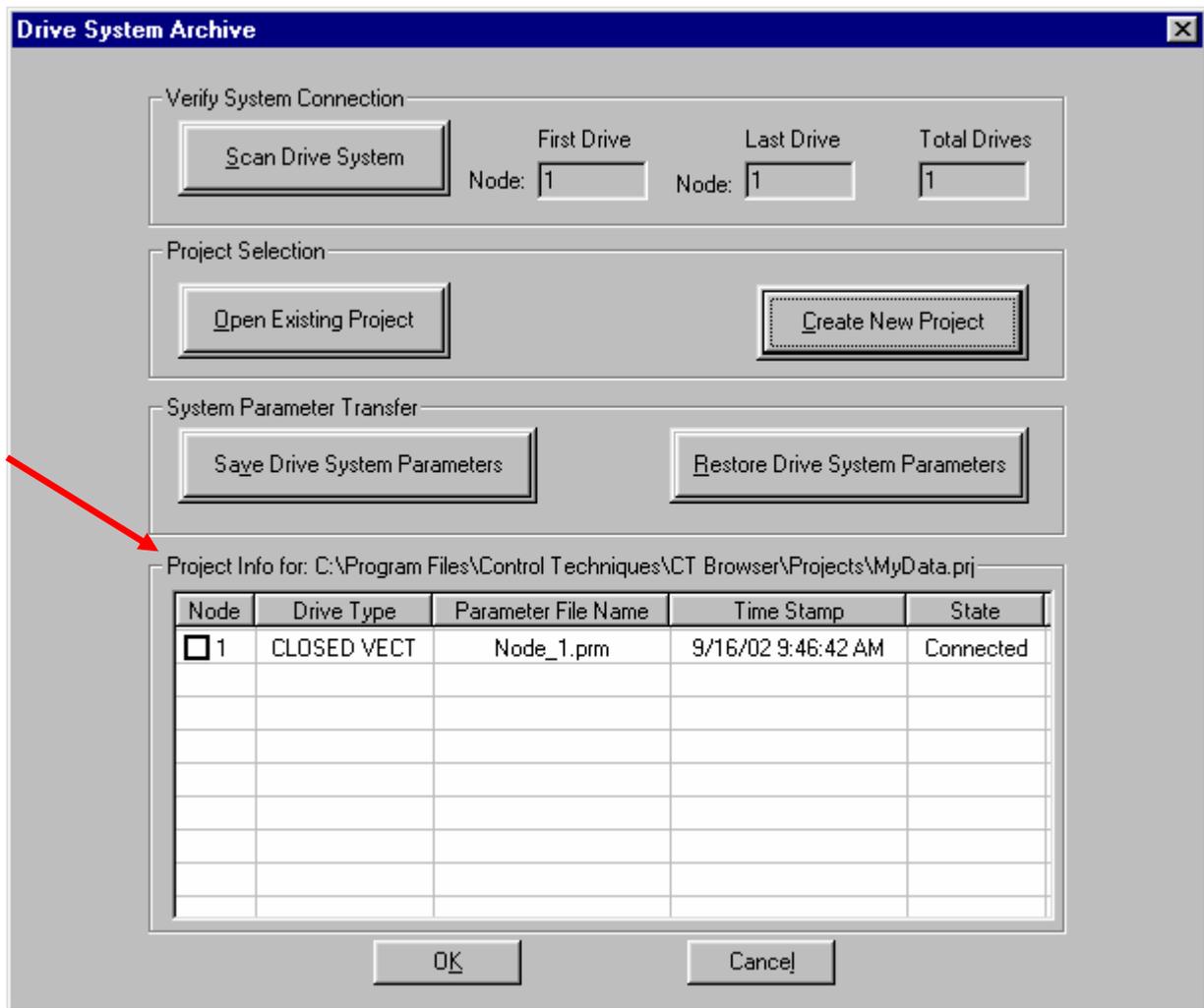
In addition, the Browser will now prompt you to begin the UPLOAD and will save the data to a file named NODE1 within the newly created File Folder.



After clicking **YES** ( or depressing ENTER ) , a progress bar should appear. This will take about 30 seconds.

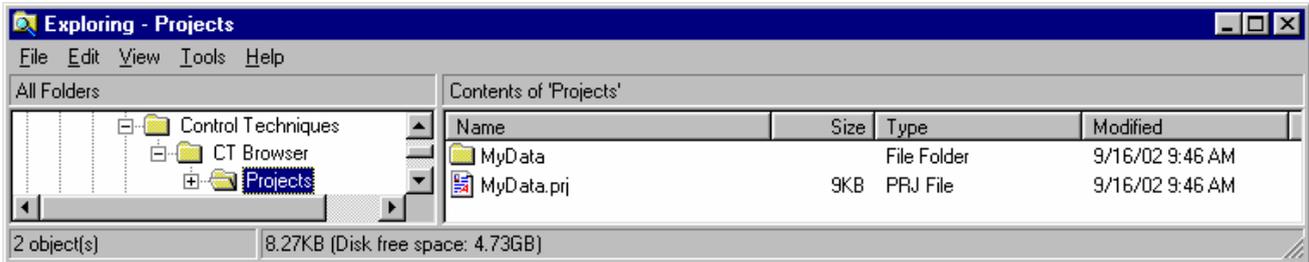


Following the upload and saving procedure, the archival screen will indicate that a file has been saved and its full path location.



At this point your entire drive data set including coprocessor data should be saved under the data file named Node\_1.prm to be accessed by the xxxx.prj project filename you entered.

If you wish to move or email this data file, include both contents of the folder ( the Node\_1.prm file ) and project file ( with the .prj extension ). After transferring these 2 files, the recipient would create a folder being the same file name as the .prj file and you would place the Node\_1.prm file into that folder within the Projects folder of the CT Browser.



# Drive Data Restoration

## For Unidrives

It is important when replacing a Unidrive that the drive basic operating mode: **Open Loop, Vector or Servo** , be set before downloading using the Browser.

- 1) To set the drive mode, go to parameter #0.00 and enter 1254 to permit mode changes.
- 2) Then go to #0.48 and select the correct Drive operating mode.
- 3) Then depress the RED reset button- this completes the Operating Mode changeover.
- 4) If the original drive had a Small Option module, SOM, UD5x – it must be present before attempting parameter restoration !

Failure to set the correct operating mode will result in download failures- many parameters either do not exist or their format is different in different modes – ie Open Loop speeds are in Hz and in Closed Loop modes CL Vector & Servo speeds are in RPM.

Should a coprocessor fail, it will be necessary to restore the entire previously saved drive data file using the CT Browser. Click on the Red/Green up/down arrows to invoke the Drive System Archival window.

**Note:** *If you are merely replacing a drive but the coprocessor is being moved from old drive to the new drive, it may be desirable to simply use UniSoft or MentorSoft to restore just the drive data rather than risk disturbing the internal coprocessor data-which can be critical. In order to just extract and restore Drive parameters one could use the basic drive configuration software, UniSoft or MentorSoft. These programs with Instructions can be obtained by clicking the blue links below or from:*

**UniSoft** for Unidrive Classics AC Drives

**Parameter Extraction/Replacement for Unidrive Classics CTAN182**

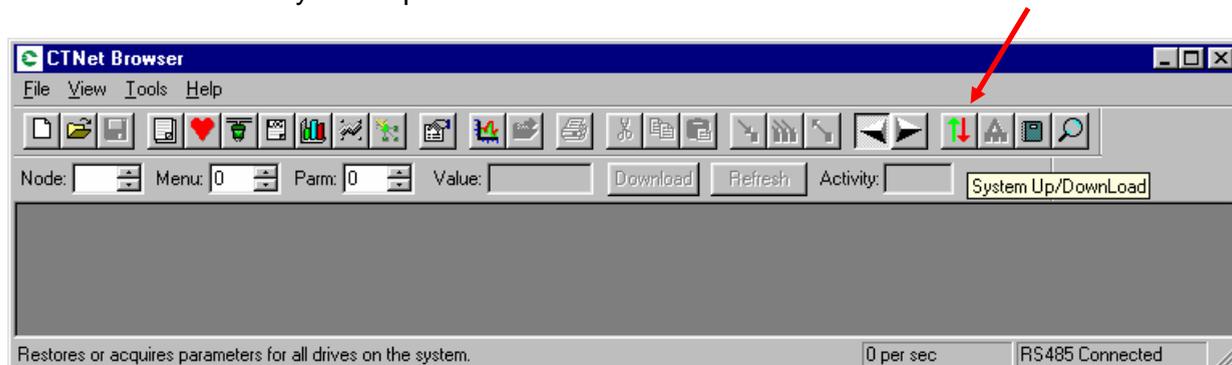
**MentorSoft** for Mentor II/ Quantum III DC Drives

**Parameter Extraction/Replacement for Mentor II/Quantum III CTAN193**

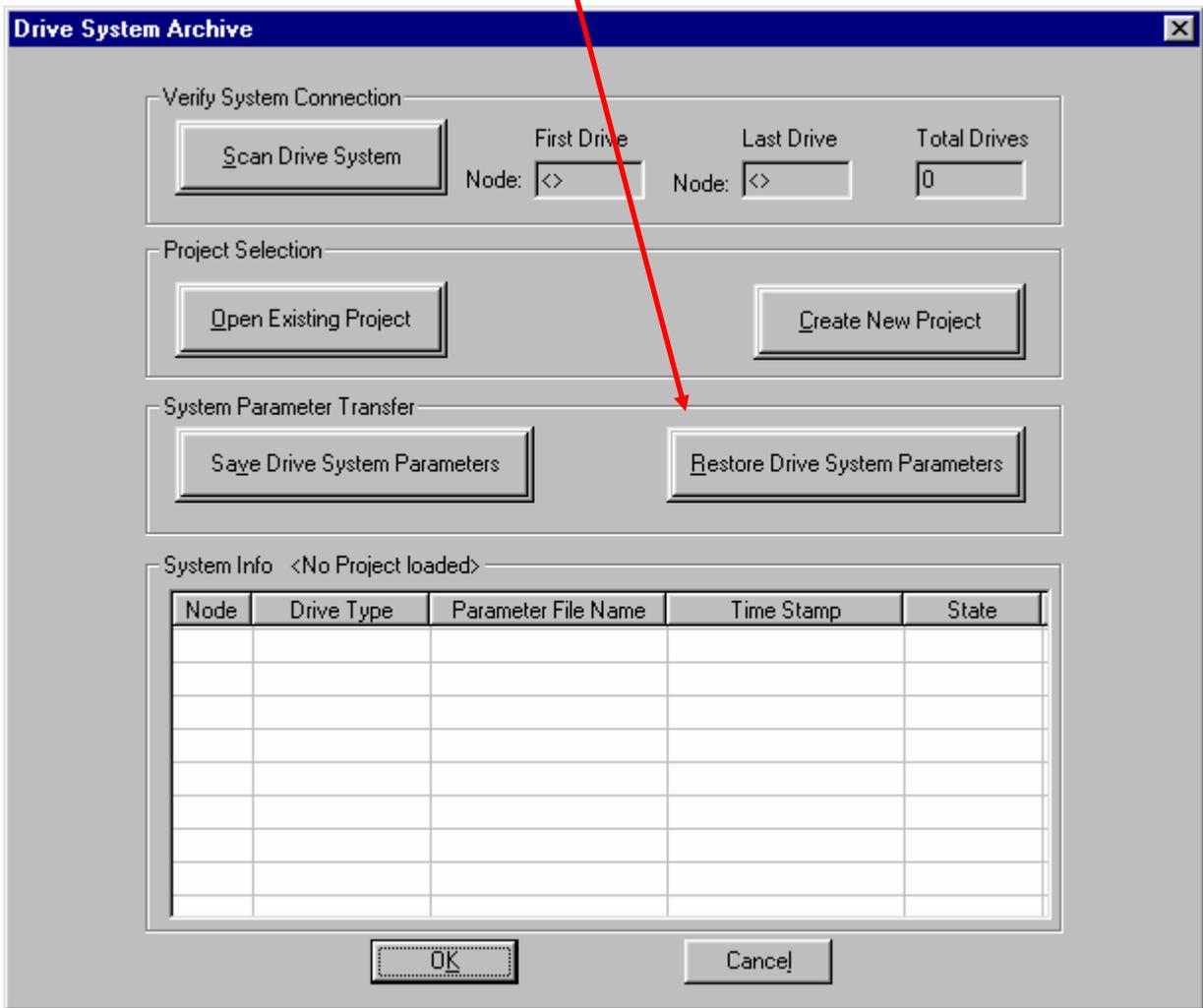
[http://www.emersonct.com/download\\_usa/software\\_drives.htm](http://www.emersonct.com/download_usa/software_drives.htm)

One can also obtain this material by typing CTAN182 or CTAN193 into Google

However, to continue with the full restoration process using the Browser ( which will also write over parameters in the UD7x coprocessor modules ), start by clicking the Green Up and Red Down arrow icon for System Up/Download.



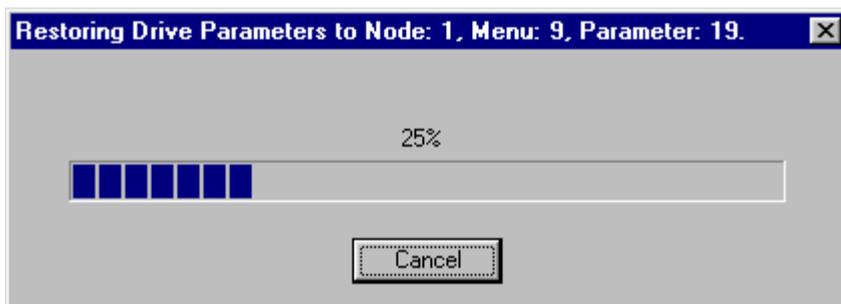
With your RS232 cable plugged in to the RS232 port of the coprocessor ( see page 1 ) , click on RESTORE DRIVE SYSTEM PARAMETERS (**CAUTION: DRIVE MUST NOT BE IN RUN!**)



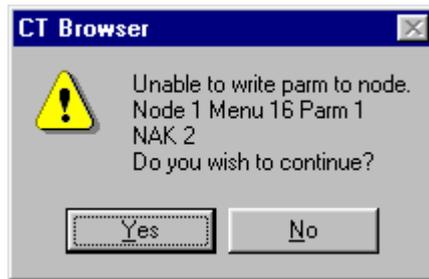
).

Click on your project filename then **OPEN**.

A progress bar should open as the data is being downloaded.



During download, a few parameters may flag a complaint as shown below:



Don't be alarmed. This Unidrive parameter for instance is a Read Only parameter that reflect which type of SOM ( small option module ) is plugged into the drive. Simply depress ENTER to continue on. You may get a couple more up at #90.05 and #90.06 which are encoder revolutions and position information.

When complete, data has been restored into both the drive and coprocessor memory areas **but this data has not be saved** as yet.

## **STORING DRIVE DATA**

After you have restored the Drive data, it is important to Store those parameters.

**Unidrive** – Depress the UP and DOWN arrows simultaneously on the front of the drive. This should take you to location xx.00. Depress the M button then left arrow 3x and Up arrow 1x. This should cause a flashing 1000 to appear. Depress M then the Red reset button. Drive data is stored.

Depress M again and left arrow 3x up arrow 1x, right arrow 2x and up arrow to a 7. At this point you should see a flashing 1070. Depress M then the Red reset button. This will complete the store and reset the coprocessor to begin acting on this new data.

**Quantum III/Mentor II** - go to any menu parameter 0 ( ie. xx.00 ). Depress **Mode** and set xx.00 = 1. Depress the **Mode** button again. Depress **RESET** and the drive data should be stored.

Questions: ?? Ask the author :

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