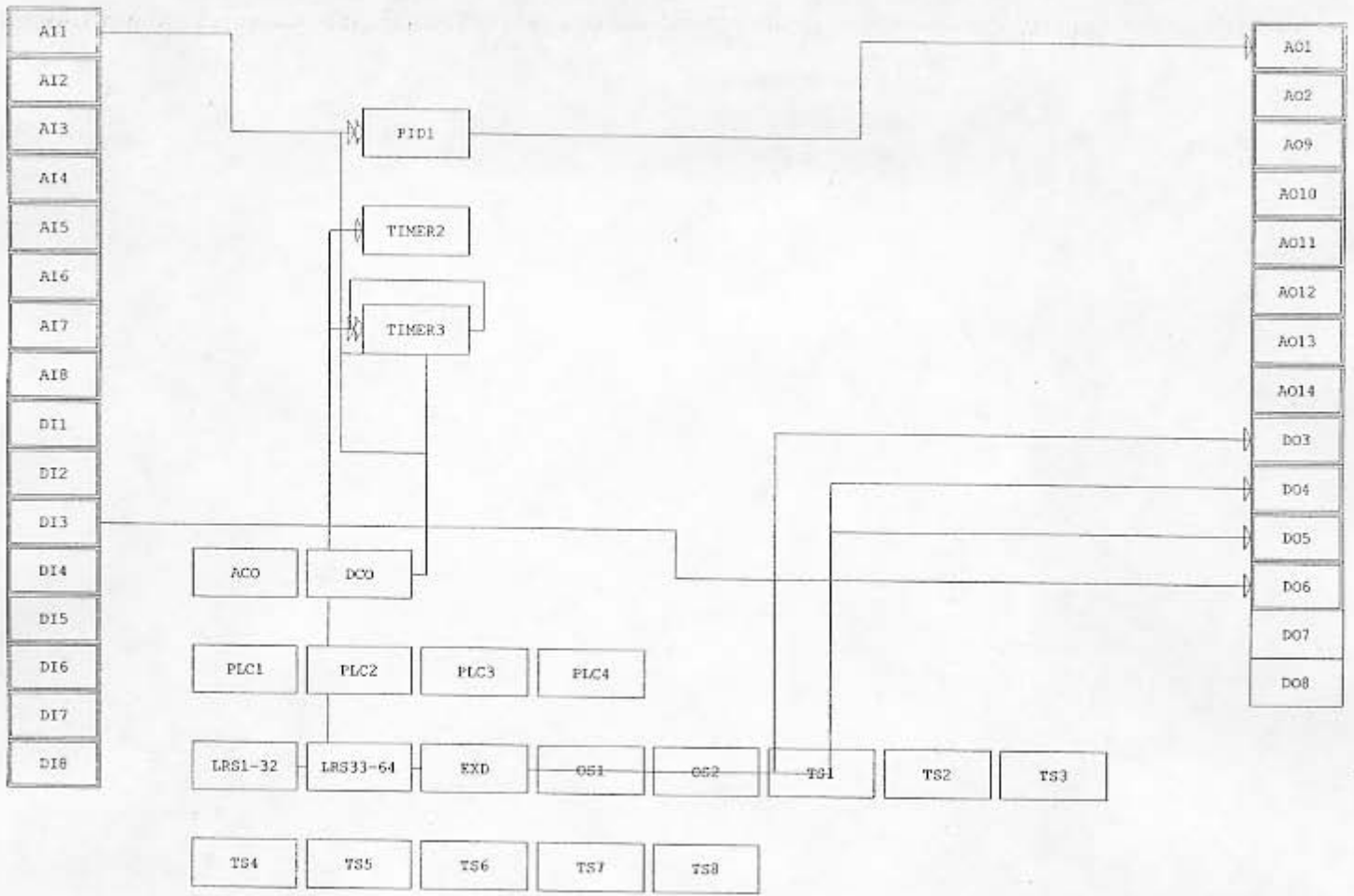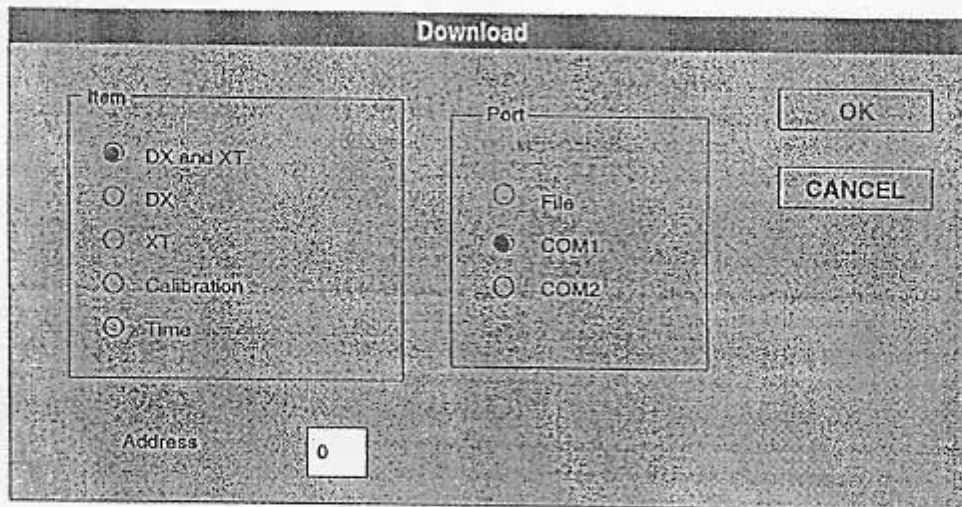# SR VACUUM SKID DX9100 REPLACEMENT

Copying program from one unit to another.

1. Shut down desired SR vacuum skid.
2. Apply locks to breaker if needed.
3. Open DX9100 front cover and loosen mounting screw.
4. Remove old DX9100 from vacuum skid.
5. Set jumpers and address switches on replacement DX9100 the same as the old DX9100. Note old DX9100 address.
6. Place old DX9100 in programming base.
7. Attach RS232 serial programming cable to 9 pin connector marked "DX" to RS232 connector on programming base.
8. Attach the other end of programming cable marked "PC" to serial port on computer.
9. Turn on computer and allow it to boot up.
10. Apply power to programming base (24 vac).
11. On the PC under "**PROGRAMS**" menu select "**Configuration Tools**".
12. Select "**GX-9100**" program from menu.
13. From "**Action**" menu select "**Upload**".
14. Choose "**DX and XT**" Item and "**COM1**" as Port.
15. Enter address as determined above.
16. Click "OK" button.
17 An hour glass cursor appears while uploading.
18. Click on "OK" button in Upload Complete window.
19. Save file as name of your choosing if desired.
20. Remove power from programming base.
21. Remove old DX9100.
22. After confirming that jumpers and address of replacement DX9100 are correct, install the replacement DX9100 in base and apply power.
23. After the replacement DX has initialized select "**Download**" from "**Action**" menu.
24. Make sure that the correct **address, port** and "**DX and XT**" have been selected .
25. Click "**OK**" to start downloading. Replacement DX9100 should display "**HALT**" while downloading and then reinitialize itself.
26. Close "**Download complete**" window.
27. Remove power from programming base and remove replacement DX9100.
28. **Calibration values are stored in eeprom and are not uploaded or downloaded during the life of the controller.**
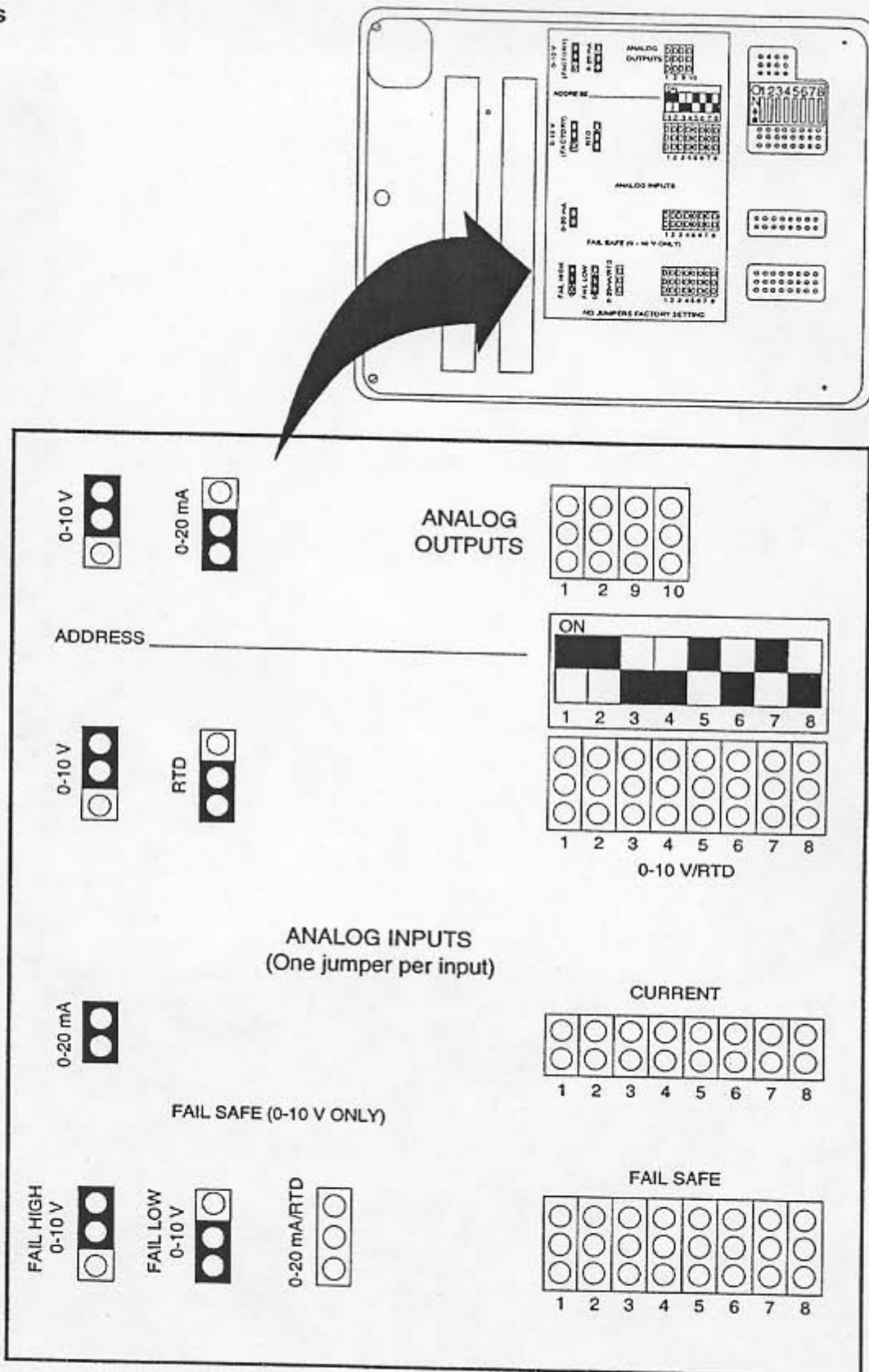
AI1		AO1
AI2		AO2
AI3	PID1	AO9
AI4		AO10
AI5	TIMER2	AO11
AI6		AO12
AI7	TIMER3	AO13
AI8		AO14
DI1		DO3
DI2		DO4
DI3		DO5
DI4	ACO DCO	DO6
DI5		DO7
DI6	PLC1 PLC2 PLC3 PLC4	DO8
DI7		
DI8	LRS1-32 LRS33-64 EXD OS1 OS2 TS1 TS2 TS3	

TS4   TS5   TS6   TS7   TS8

Upload or Download window

Download

Item
- ◉ DX and XT
- ○ DX
- ○ XT
- ○ Calibration
- ◉ Time

Address [0]

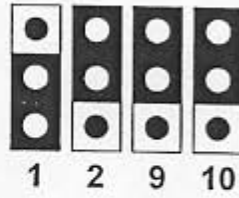Port
- ○ File
- ● COM1
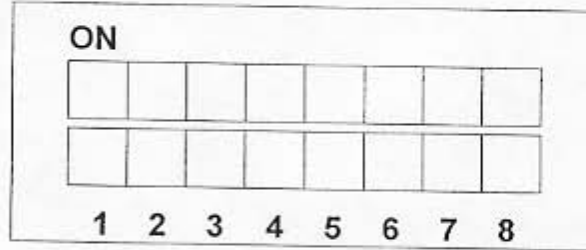- ○ COM2

[OK]

[CANCEL]

download

Figure 15: Jumper Details for the DX-9100-8454 Controller

SR VACUUM SKID DX9100 JUMPER SETTINGS

ANALOG OUTPUTS

1 2 9 10

0 - 10V

0 - 20 MA
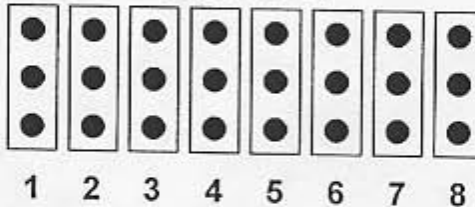
ADDRESS

ON

1 2 3 4 5 6 7 8

ANALOG INPUTS

1 2 3 4 5 6 7 8
0 - 10V/RTD

0 - 10V

RTD

0 - 20 MA

NO JUMPER

CURRENT

1 2 3 4 5 6 7 8

0 - 20 MA

FAIL SAFE

1 2 3 4 5 6 7 8
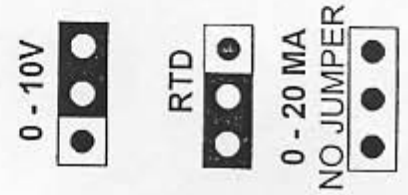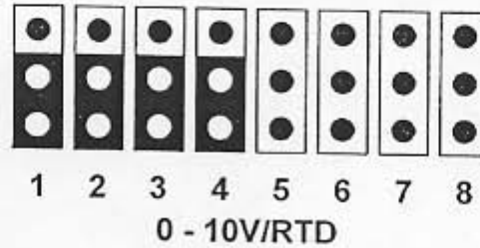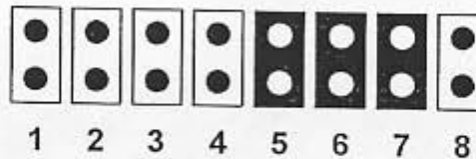
SR VACUUM SKID DX9100 ADDRESS SETTINGS

SECTORS	DX 9100 ADDRESS
1 - 2	118
3 - 4	119
5 - 6	118
7 - 8	119
9 - 10	118
11 - 12	119
13 - 14	118
15 - 16	119
17 - 18	118
19 - 20	119
21 - 22	118
23 - 24	119
25 - 26	118
27 - 28	119
29 - 30	118
31 - 32	119
33 - 34	118
35 - 36	119
37 - 38	118
39 - 40	119

ADDRESS

SWITCH SETTINGS

ON

118

1 2 3 4 5 6 7 8

119

1 2 3 4 5 6 7 8

Via the GX Tool

Download via the N2 Bus

Connect an RS-232-C/RS-485 converter (type MM-CVT101-x in North America and type IU-9100-810x in Europe) to one of the serial communication ports (COM1 or COM2) of the personal computer on which the GX Tool is running. Connect the N2 Bus of the DX-9100 to the converter unit connected to the PC.

Set the address switches and jumpers on the DX-9100 and XT/XP devices (if used) as required, and connect the XT/XP devices to the XT Bus of the DX-9100. (See the DX-9100 and XT-9100 technical bulletins for details.)

If the DX-9100 (and XT/XP devices) are installed and wired, verify all field wiring and sensor voltage/current signals. It is recommended that controlled devices be isolated during download and initial startup.

Note: **Do not download an untested configuration into an installed device. Test the configuration on a simulator panel before downloading.**

Apply 24 VAC power to the DX-9100 and the XT/XP devices, if connected.

On the GX Tool, with the needed configuration on screen, select DX-9100, DOWNLD, DX. Enter the DX-9100 address (0-255) in the "Controller Address" field and the PC serial communication port (1 or 2) in the "PC Port" field. Press <Enter>.

Checks are made before the data is downloaded to the controller, and a message is displayed on the screen if a value is outside the normal range for that parameter. The user may abort the download process and change the value in the configuration, or press <Enter> to ignore the message and download the entered value.

When the download is complete, if XT/XP devices are connected, select DX-9100, DOWNLD, XT. Verify that the correct "PC Port" is selected and press <Enter>.

For subsequent downloads, where the XT addresses have not been changed, the loading can be done in one process by selecting DX-9100, DOWNLD, and DX&XT.

Download via RS-232-C Port

Connect the serial communication port of the PC directly to the RS-232-C port of the DX-9100 Controller. See *DX-9100 Extended Digital Controller Technical Bulletin* for details. Proceed as above in the *Download via the N2 Bus* section.

Upload via the N2 Bus or RS-232-C Port

Via the GX Tool

Only complete DX-9100/XT-9100 configurations should be uploaded from the DX-9100. Select DX-9100 and NEW to clear the PC screen. Select DX-9100, UPLOAD, DX&XT. Enter the DX-9100 Controller address (0-255) and PC port (1 or 2). Press <Enter>.

Via the SX Tool

The configuration entered into the DX-9100 Controller may be stored in the service module as an ALGORITHM for transfer to another controller. Refer to the SX-9100 Service Module User's Guide for further details.

Calibration Values

ok

Each DX-9100 Controller has a set of unique calibration values, which are set in the factory before delivery. These calibration values are stored in EEPROM and will not normally be necessary to change or reenter these values during the life of the controller. If the user wishes to secure the calibration data on diskette, the calibration values may be uploaded and downloaded using the GX Tool.

If it becomes necessary to recalibrate the inputs and outputs of a controller, this can be done using either the SX Tool. See the *SX-9100 Service Module User's Guide*.

Via the GX Tool

Connect the DX-9100 Controller to the PC as described under *Download/Upload*. To upload the calibration values, on the GX Tool select DX-9100 and NEW to clear the PC screen. Select DX-9100, UPLOAD, and CALIBR. Enter the DX-9100 Controller address (0-255) and PC port (1 or 2). Press <Enter>. When the upload is complete, press <Enter>, reselect DX-9100 and then SAVE. Save the uploaded calibration values in a file unique for this controller.

To download calibration values, select DX-9100 and READ. Read in the name of the calibration file unique for this controller. Select DX-9100, DOWNLOAD, and CALIBR. Enter the DX-9100 Controller address (0-255) and PC port (1 or 2). Press <Enter>.

Showing Connections

There are three ways to show the module connections in detail:

1. Double-clicking connected modules reveals all the source and destination points of that module. Lines will appear between all connected source and destination points.

2. Under the Data option of the module menu, a data window appears which contains the data for all the destination points and parameters of a module.

3. Selecting Show Connections will bring up a dialog box showing all source point connections for the selected module.
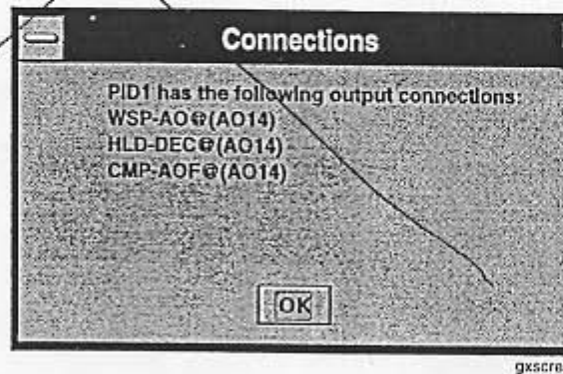

gxscre9

Figure 61: A Window Showing Connections

Saving the Configuration

To save a GX-9100 configuration, click the Save button on the toolbar or select Save from the File menu. The configuration will save under the current file name.

Note: If you save a configuration while in Show Selected mode, the entire configuration does save. However, the next time you open the saved file, you will only see the selected view. To see entire configuration, select Show All from the View menu.

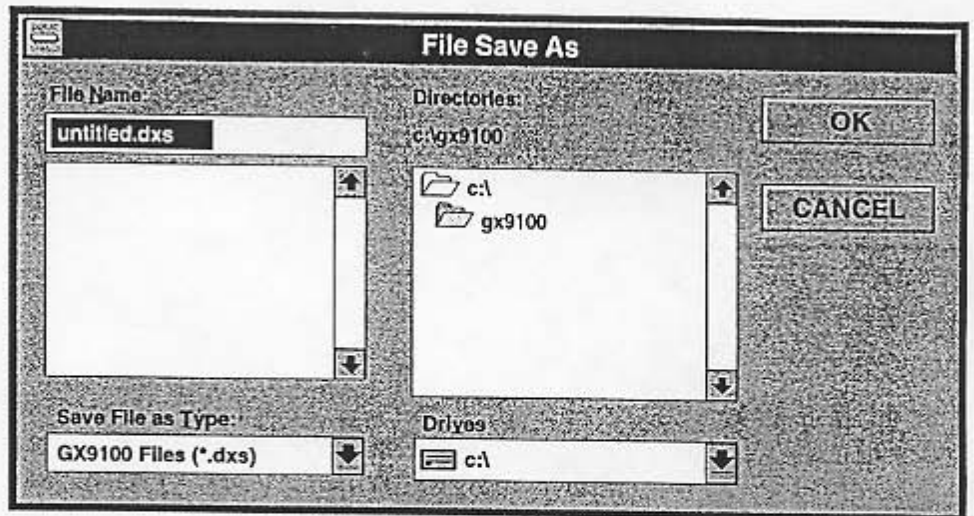If you are saving the configuration for the first time, the following window displays.

Figure 62: Save As Window

To save a GX-9100 configuration under a different file name, select Save As from the File menu. The window displayed in Figure 62 displays. Type in the new file name, and click OK. The configuration will be saved under the new name.

Downloading to a DX Controller

To download the configuration to the DX controller:

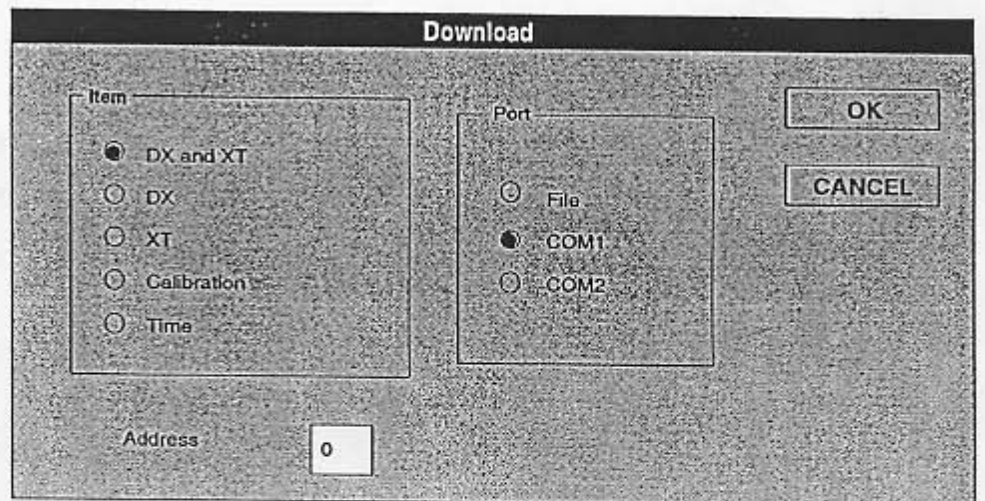1. Select Download from the Action menu. The following dialog box will appear.

Figure 63: Download Dialog Box

2. Select the item you want to download it to and the port you want to use for the download by clicking the round radio buttons.