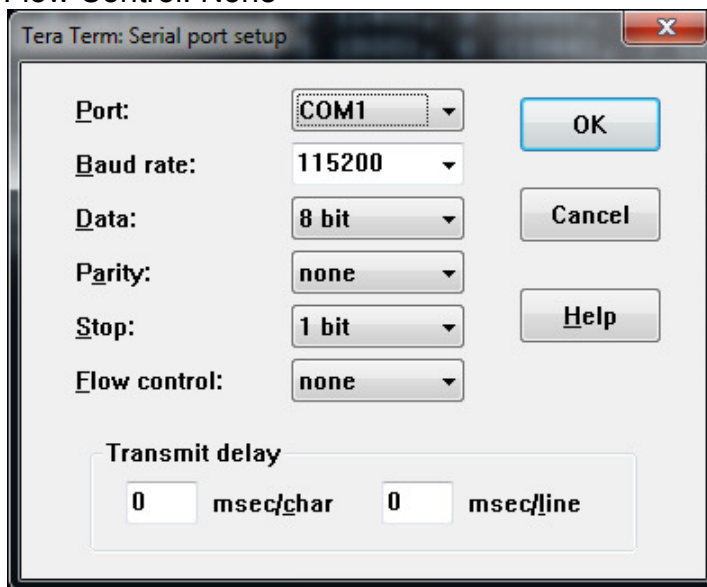


Instructions for Universal Deck Box Upgrade from UDB-9000E to UDB-9400E

To perform this regression the following items are required:

- PC with a serial port
 - DB9 –DB9 serial cable (pass through not NULL)
 - Terminal Emulator Program
 - ProComm Plus
 - Indigo Terminal Emulator
 - TeraTerm (Provided)
 - S-270-66, S-270-67 and S-270-70 software, latest versions
1. Using the terminal emulator configure the serial port as follows:
Baud Rate: 115200
Data bit: 8
Parity: None
Stop bit: 1
Flow Control: None



2. Connect the PC serial port to the COM1 serial port of the deck box.

- Power on the deck unit while pressing the ESC key repeatedly when in the terminal program to enter the boot loader.

```
Boot Loader version X.X
user:1>
```

- Change the privilege level to root by using the command: setpriv root
The password is neptune

```
user:1>setpriv root
Enter password: *****
Privilege level changed to root.
Ok
root:2>
```

- Update the boot loader to S-270-66 Boot Loader application by using the command: update 0x200000 (follow on screen instructions)

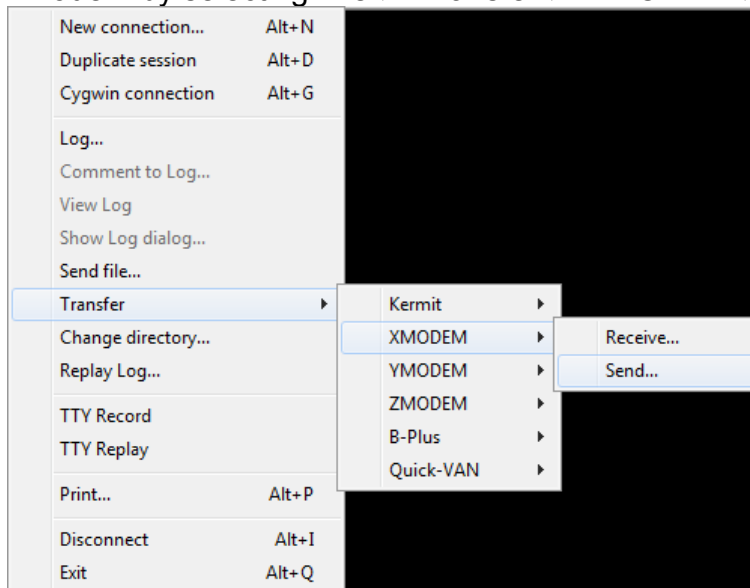
```
root:2>update 0x200000

*** WARNING ***
BOOT LOADER UPDATE: Transmit ONLY a 'boot.rom' file. Loading a non-boot-loader
executable will render your modem inoperable!

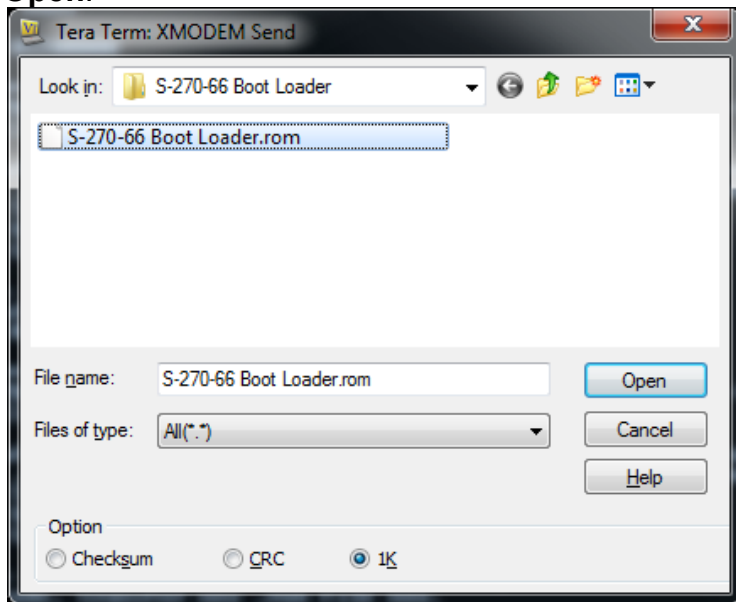
Once the upload starts, use your terminal program's file transfer function
to send a new .rom file to the modem with 1K-Xmodem or regular Xmodem
Hyperterm: Transfer -> Send File...
Procomm: Online -> Send File...
Others: Consult documentation.

>>> Hit 'y' to continue, any other key to cancel:
```

- When prompted send the S-270-66 Boot Loader.rom file to the modem using 1K-Xmodem by selecting File ► Transfer ► XMODEM ► Send...:



7. Select the S-270-66 Boot Loader.rom file and select 1K at the bottom then select **Open**:



8. When the boot loader is properly updated you will get a confirmation:

```
Verifying image... OK
Ok
root:3>
```

9. Power down the modem completely.
10. Power on the modem while pressing the ESC key repeatedly when in the terminal program to enter the boot loader again.

```
Boot Loader version X.X
<FFS-enabled>
[BOOT] user:1>
```

11. Change the privilege level to update using the command: setpriv update

```
[BOOT] user:1>setpriv update
Privilege level changed to update.
Ok
[BOOT] update:2>
```

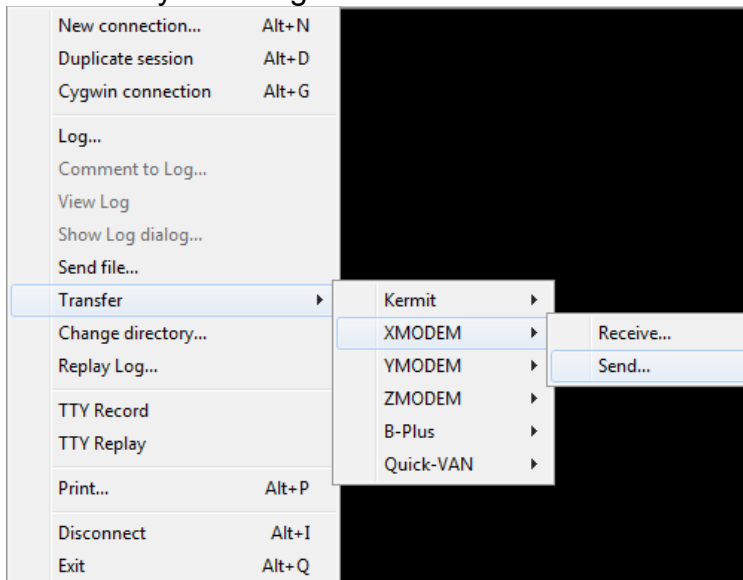
12. Load the diag utility into the modem using the command: update diag
Press Y to continue.

```
[BOOT] update:2>update diag

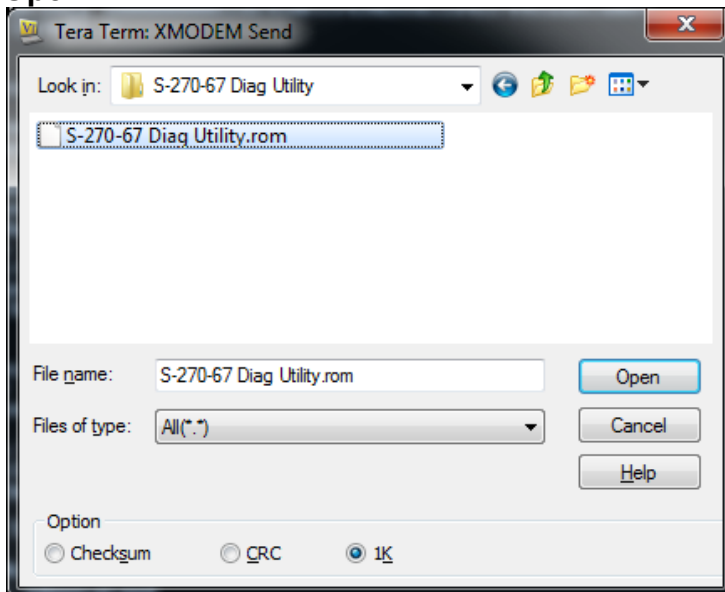
*** WARNING ***
This command will replace the current version of firmware in flash memory.
Once the upload starts, use your terminal program's file transfer function
to send a new .rom file to the modem with 1K-Xmodem or regular Xmodem
Hyperterm: Transfer -> Send File...
Procomm: Online -> Send File...
Others: Consult documentation.

>>> Hit 'y' to continue, any other key to cancel:
```

13. When prompted send the S-270-67 Diag Utility.rom file to the modem using 1K-Xmodem by selecting File ► Transfer ► XMODEM ► Send...:



14. Select the S-270-67 Diag Utility.rom file and select 1K at the bottom then select **Open**:



15. When the transfer is complete replacement of the diag utility will be verified.

```

Verifying image... OK
Ok
[BOOT] update:3>
  
```

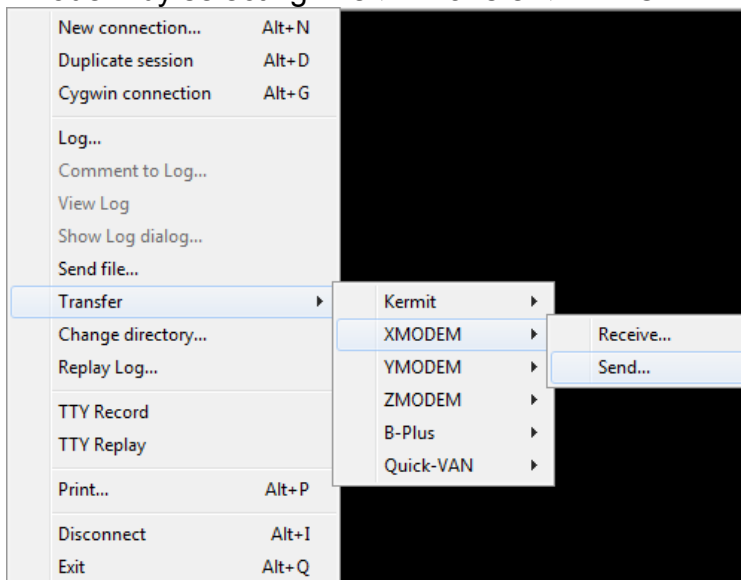
16. Load the deck box firmware into the modem using the command: update
 Press Y to continue.

```
[BOOT] update:3>update

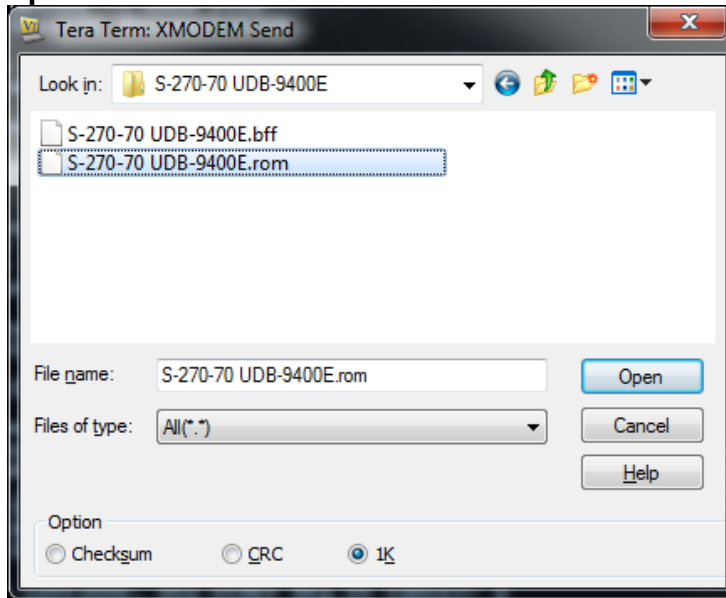
*** WARNING ***
This command will replace the current version of firmware in flash memory.
Once the upload starts, use your terminal program's file transfer function
to send a new .rom file to the modem with 1K-Xmodem or regular Xmodem
Hyperterm: Transfer -> Send File...
Procomm: Online -> Send File...
Others: Consult documentation.

>>> Hit 'y' to continue, any other key to cancel:
```

17. When prompted send the S-270-70 UDB-9400E.rom file to the modem using 1K-Xmodem by selecting File ► Transfer ► XMODEM ► Send....



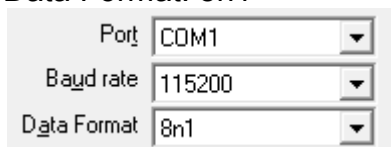
18. Select the S-270-70 UDB-9400-E.rom file and select 1K at the bottom then select **Open**:



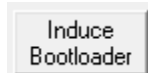
19. When the transfer is complete replacement of the deck box firmware will be verified.

```
Verifying image... OK
Ok
[BOOT] update:4>
```

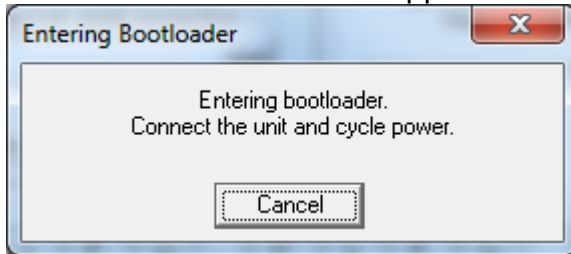
20. Power down the modem completely.
21. Connect the serial cable to the COM2 serial port of the deck box.
22. Start up the Qlarity Downloader program and set it to:
 PORT: (YOUR COM PORT)
 Baud Rate: 115200
 Data Format: 8n1



23. Click on the induce bootloader button.

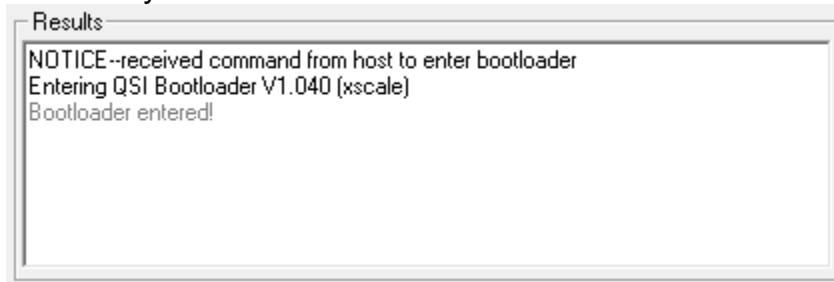


24. The Bootloader screen will appear.



25. Power on the deck unit.

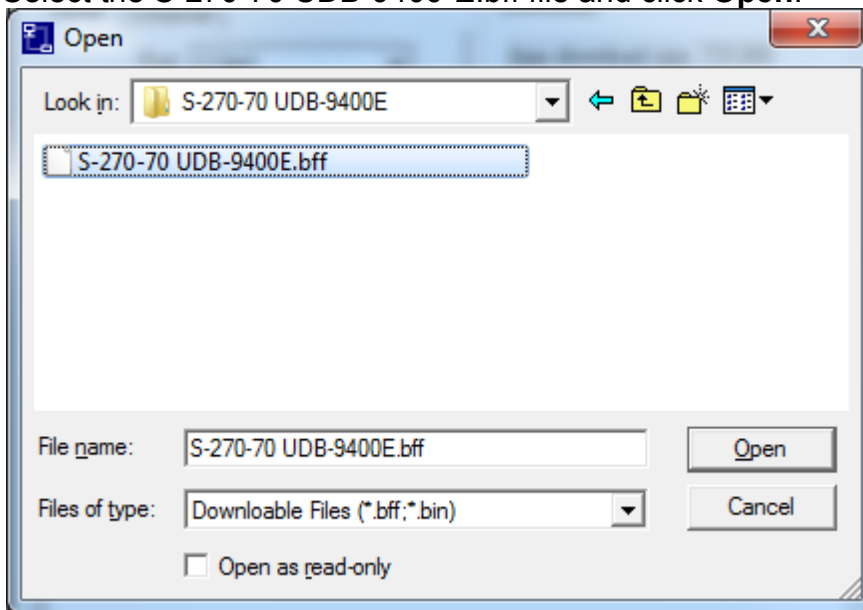
26. The Qlarity Downloader will enter the bootloader as shown below:



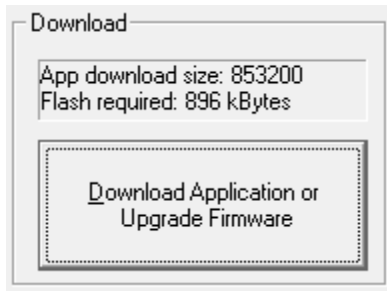
27. At the top of the Qlarity Downloader click the browse button:



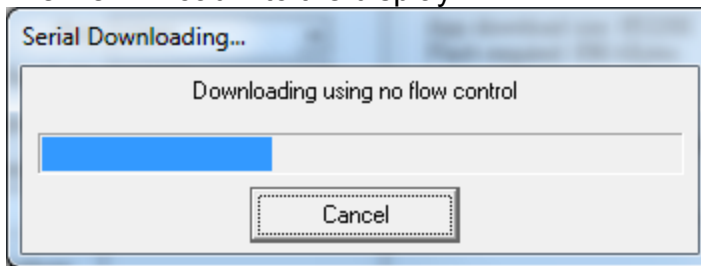
28. Select the S-270-70 UDB-9400-E.bff file and click **Open**:



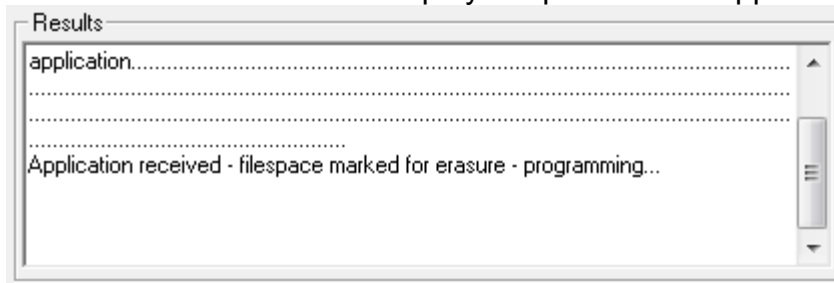
29. In the Qlarity Downloader click on the button Download Application or Upgrade Firmware:



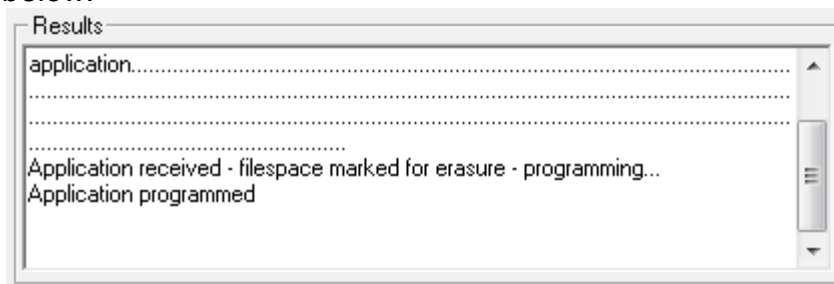
30. The file will load into the display:



31. Once the file is loaded the display will process the application:



32. When the application is programmed by the display it will output the message below:



33. The display will then reboot on its own.

34. Confirm during boot that the display reads:



35. Close the Qlarity Downloader.

36. Power down the deck unit completely.

37. Using the terminal emulator configure the serial port as follows:

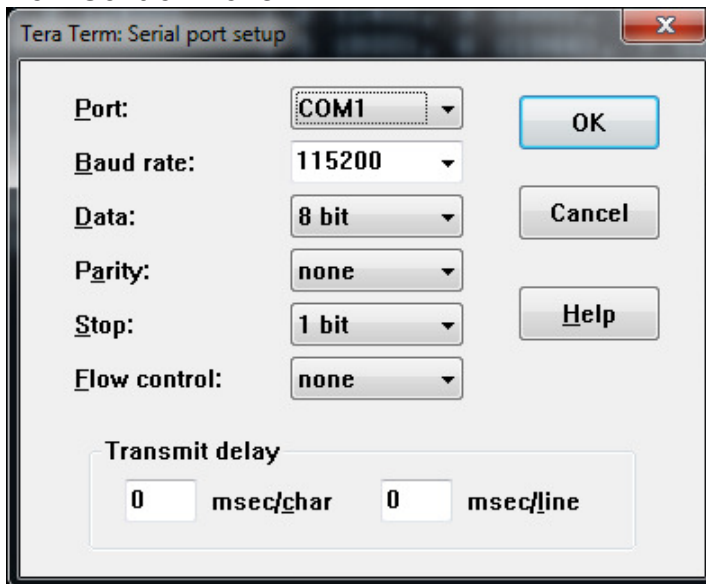
Baud Rate: 115200

Data bit: 8

Parity: None

Stop bit: 1

Flow Control: None



38. Connect the PC serial port to the COM1 serial port of the deck box.

39. Power on the modem while pressing the ESC key repeatedly when in the terminal program to enter the boot loader again.

```
Boot Loader version X.X  
<FFS-enabled>  
[BOOT] user:1>
```

40. Enter the Diagnostic Utility using the command: rundiag

```
4th Generation Modem  
Diagnostic Utility rev X.X  
[DIAG] user:1>
```

41. Run the Power-On Self Test using the command: post

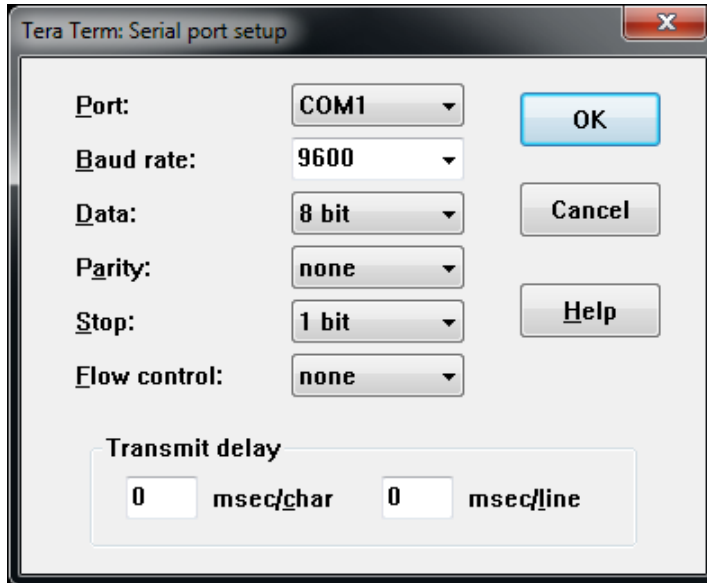
```
[DIAG] user:1>post  
  
Power-On Self Test.  
I/R:  
          McBSP - [PASS]  
No further TRs identified  
  
Memory:  
          Ext. RAM - [PASS]  
          Flash - [PASS]  
NVRAM:  
          Rcv Module - [PASS]  
          T/R - [PASS]  
          DSP - [PASS]  
  
4th Generation Modem  
Diagnostic Utility rev X.X  
[DIAG] user:1>
```

All values should be PASS. If ANY values are FAIL please contact Teledyne Benthos.

42. Power down the modem completely.

43. Using the terminal emulator configure the serial port as follows:
Baud Rate: 9600

Data bit: 8
Parity: None
Stop bit: 1
Flow Control: None



44. Power on the modem and verify the unit boots to the new version Standard Modem firmware.

```
Teledyne Benthos UDB-9400E
<coprocessor ver 2.0>
LF Frequency Band
Universal Deck Box modem-enabled export version
Jan 10 2013 16:18:16
Features enabled [Dual Serial Port]
CONNECT 008000 bits/sec
```

45. If you see the warning message below follow the inset procedure:

WARNING: no factory config file found.

- Enter command modem using the command mode interrupt: +++
user:1>
- Create a standard configuration file by using the command: cfg store
user:1>cfg store
Configuration stored.
user:2>
- Create a factory configuration file using the standard configuration file as a base using command: cp /ffs/standard.ini /ffs/factcfg.ini
user:2>cp /ffs/standard.ini /ffs/factcfg.ini
Ok
user:3>
- Reboot the modem using the command: reboot
user:3>reboot

- e. The modem will not reboot with no warning message.

```
Teledyne Benthos UDB-9400E  
<coprocessor ver 2.0>  
LF Frequency Band  
Universal Deck Box modem-enabled export version  
Jan 10 2013 16:18:16  
Features enabled [Dual Serial Port]  
CONNECT 008000 bits/sec
```

46. Your software upgrade is complete.