

UltraRAE DOS Firmware & Tube Data Upgrade Procedures

This tech note explains how to upgrade the UltraRAE firmware and tube data in order to recognize the new benzene bar code and support future tubes.

Procedures to Upgrade the Firmware

1. Installing UltraRAE Software On Your Computer

- Insert the software disk into the floppy disk drive
- Click on “Start”, “Run...”.
 - In the “Open:” box, type in “a:\setup” and then press “Enter”.
- Follow the instructions on the screen and the UltraRAE software will be installed on your computer with Windows 95.

2. Connect the UltraRAE unit to the computer’s serial port with the serial cable.

3. Upgrade the firmware

- Run the download program
 - In Windows 95, use your mouse pointer to click on “Start”, “Programs”, “Pro-RAE7200”, and then “DownLoad Firmware” to run the program.
- Set the UltraRAE to PC communication mode
 - Turn on the UltraRAE unit, press the MODE key several times until it shows “PC comm?”, press “Y/+” and the unit will show “...ready”.
- Choose options in the download
 - The following message will show up on the screen. Press “1” if your UltraRAE is connected to COM1.program

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RAE Systems, download Program, rev 2.20
Enter serial port #, COM (1-4): 1
COM 1 ready

Download Program rev 2.20

A=Input file to download, requires boot switch
B=Input file to download, on-line upgrade
C=6811 bootloader test (echo 256 bytes)
S=Serial port response test. (at 9600 baud)
Q=Quit

Enter command:

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- Closing the program
 - Type “Q” to quit the download program. When it asks “Terminate program?”, type in “y”, then click on the “X” button to close the DOS window.

Choose “B” for on-line upgrade (do not press the “Enter” key after typing the “B”), enter “ultraerae” for the file name. When it asks “...are you sure (y/n)?”, press “y”, and then wait for the firmware to download. It takes about 3 minutes. After the new firmware has been downloaded, the UltraRAE will be turned off automatically.

Note: The download needs to be initiated within 1 minute after finishing step 3.2, otherwise the unit will exit the PC communication mode and step 3.2 needs to be repeated.

4. Update the tube configuration

- Run the configure program
 - In Windows 95, use your mouse pointer to click on “Start”, “Programs”, “Pro-RAE7200”, and then “Config UltraRAE” to run the program.
- Set the UltraRAE to PC communication mode
 - Turn on the UltraRAE unit, press MODE key several times until it shows “PC comm?”, press “Y/+” and the unit will show “reacomm?”, press “Y/+” and the unit will show “...ready”.
- Choose options in the configuration program
 - The following message will show up on the screen. Press “1” if your UltraRAE is connected to the Com1, press the “Enter” key when step 4.2 is ready.

Choose “T” for tube data update. When it ask “Are you sure?”, press “y”, and then wait for the tube data to download. For every block of the data transmitted, you should see “Transmitting

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Enter serial port #, COM (1-4): 1
COM 1 ready
Monitor must be in PC comm Ready....mode.
Push any key when ready.
Reading configuration, please wait....
Acknowledged command!

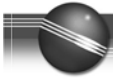
Instrument model is PGM-7200
Monitor PCB revision level is C!
Monitor firmware version is 2.23!

UltraRAE Setup Program rev 2.23

U=User Type (PROGRAM, DISPLAY)
B=Backlight time-out adjust
C=Comfort beep (adjust/off)
R=Restore default serup
P=Passowrd clear
T=Tube data update
<ESC> to exit

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data.”, “Acknowledged”. If you do not see “Acknowledged”, you may need to turn off the unit and then try the preceding procedure again, until you see “Acknowledged” for all the transmitted data blocks. Note: The download needs to be initiated within 1 minute after finishing step 4.2, otherwise the unit will exit the PC communication mode and you need to do step 4.2 again.

- **Closing the program**

Press the “Esc” key to quit the configuration program. When it asks “Terminate program?”, type in “y”, then click on the “X” button to close the DOS window.

After the tube data is downloaded, the UltraRAE is ready to operate with the new V2.23 firmware.