

Broadcast Tools[®] ADMS 44.22 DSP firmware load procedure

HyperTerminal or similar com program should be running using the following protocol 9600, 8,N,1 with flow control set to NONE. Complete HyperTerminal instructions may be downloaded from our web site. <http://www.broadcasttools.com/pdf/HyperTerminalInstr.pdf>

1.1 Reset and Firmware Update Commands

The programming and reset commands are special commands that are received and executed by the serial communications processor. All other commands communicate with the ADMS 44.22 DSP processor. These commands are not unit-specific. Sending one of these commands affects all units connected to the terminal. For this reason they do not follow the standard command format. The syntax for these commands is exactly as shown, with no asterisk, Unit ID, or carriage return.

<TAB>R Reset unit

Reboots the DSP and reloads the settings specified by the power up DIP switch (User, or Last Saved). Pressing the <TAB> key causes unit ID=0 to send the following text response:

Download new firmware (D) Reset unit (R) / any other key to quit:<CR><LF>

Press 'R' to reset the unit. If a unit with ID=0 is not present, this message will not be displayed. Nonetheless, pressing R after <TAB> will reset all units with ID=0. Pressing any key other than 'D' or 'R' puts the unit back into normal operating mode.

<TAB>D Download firmware

Puts the unit into Firmware Update Mode. Only one ADMS 44.22 can be updated at a time, and this unit must be set to ID=0. Firmware updating is not supported with multi-drop RS-232 communication. Therefore in setups where multiple units are connected to the same multi-drop RS-232 port, the unit whose ID=0 must be disconnected from 232. To update the second unit, set its ID to 0 and update it in the same manner as the first.

Pressing <TAB> causes unit ID=0 to send the following text response:

Download new firmware (D), Reset unit (R), any other key to quit:<CR><LF>

Press 'D' to start the firmware download process. Pressing any key other than 'D' or 'R' puts the unit back into normal operating mode. When you press 'D', a second confirmation message appears in your terminal:

Download new firmware (y/n)?

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Pressing 'Y' initiates an XModem file download, and pressing any other key puts the unit back in normal operating mode. When you press 'Y', the following text appears:

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Erasing Flash ...  
Entering XModem Mode ... <CR><LF>
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Firmware Update Mode requires the Xmodem transfer protocol to send the binary firmware image file to the ADMS 44.22 program flash memory. When the letter 'C' begins printing underneath the message, you may begin sending the ADMS 44.22 binary firmware file using standard Xmodem protocol (Xmodem 1 k is not recommended). When the transfer is complete, the unit will reboot and load either the Last Saved settings or User Preset, according to the setting of the PWR UP switch (SW6).

If for any reason the Xmodem fails to complete, the ADMS 44.22 will time out after not receiving data for more than one second and go back to waiting for a new Download Firmware operation. At this point however, the program memory has been erased from flash and the unit becomes inoperable except for the ability to download new firmware. Once an XModem transfer fails, the baud rate of the unit reverts to the 9600 baud default for all subsequent serial communications. After a successful Download at 9600 baud , the unit reverts back to its programmed baud rate.