

TECHNICAL UPDATES

by TeeJet Technologies

from **TeeJet**

INSTRUCTIONS: RX400P WAAS UPDATE

WAAS SATELLITE UPDATE

TeeJet Technologies' RX400P receiver takes advantage of WAAS (Wide Area Augmentation System) - the US Government's free DGPS correction system. WAAS exists primarily to improve the accuracy of GPS for aviation applications, but it is a convenient and effective solution for agriculture as well. The WAAS signal is currently transmitted by three geostationary satellites that are completely independent of the GPS satellite system. Two of these satellites (referred to as PRN 122 and PRN 134) are scheduled to be decommissioned on July 16, 2007. Once those satellites cease broadcasting correction signals, PRN 135 and PRN 138 will be the only active WAAS satellites. Many DGPS receivers will need to be updated to receive the configuration change in order to continue receiving the WAAS correction signal.

To update an RX400P receiver, you will need to be able to power up the unit and connect the receiver to a laptop computer. If you already have the required cables, download the software from www.teejet.com and proceed. If not, order kit # 90-02442.

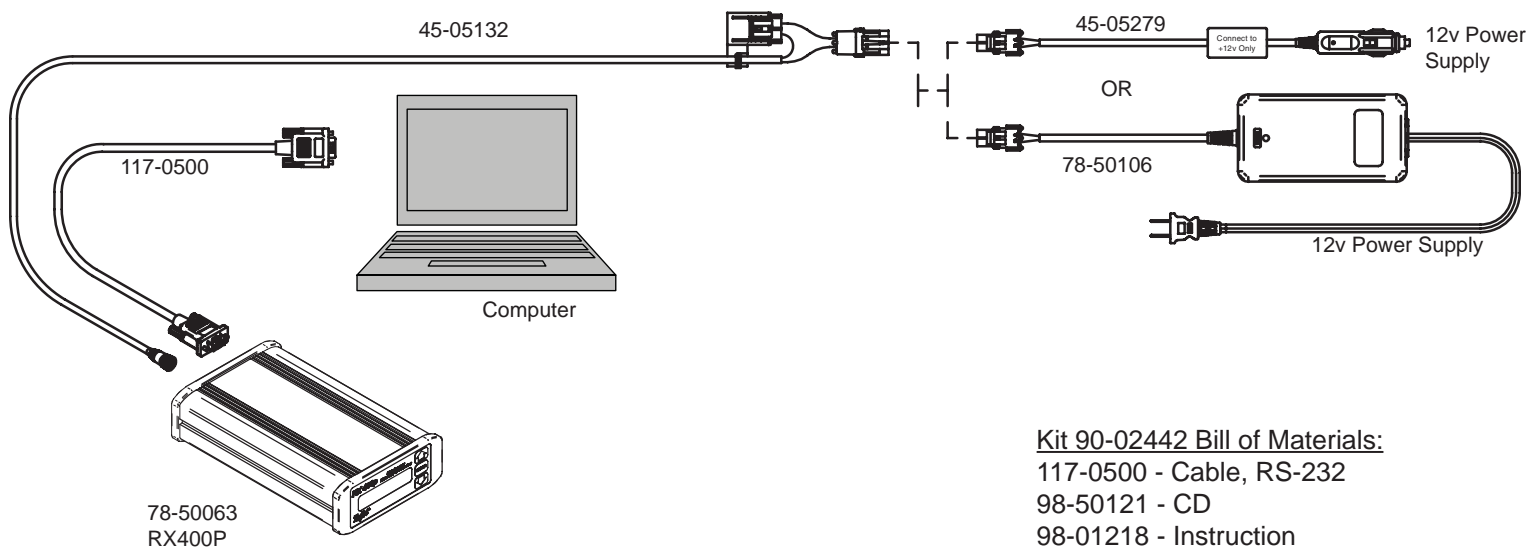
NOTE: Before beginning the update procedures, it is imperative that you know the COM port to which your computer's serial port is assigned. This is critical for the success of the firmware update.

NOTE: Most newer laptops do not have serial ports so a USB to serial port adapter is required. Please follow the instructions provided with the individual USB port adapter prior to firmware installation (Belkin recommended).

NOTE: Newer laptops with USB ports typically recognize that when a serial port adapter is used, the COM port may be greater than COM 4. This WAAS update software must be executed on COM ports 1-4 or it will not function. Please locate a computer that utilizes COM ports 1-4 or contact TeeJet Technologies for further instructions.

PROCEDURES FOR FIRMWARE UPDATE

1. Connect the receiver to the appropriate cables as per the following illustrations BUT DO NOT POWER UP THE GPS RECEIVER AT THIS TIME. Make sure the serial cable is connected to the MAIN PORT of the 400P.



Kit 90-02442 Bill of Materials:

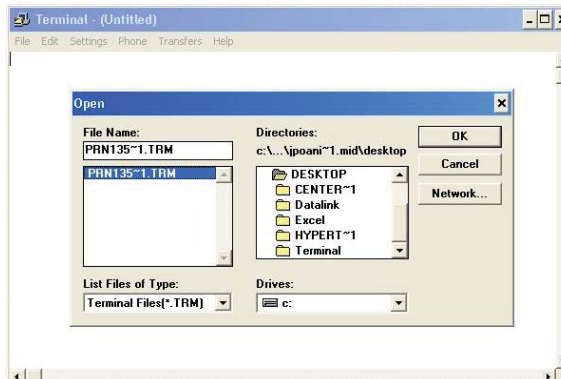
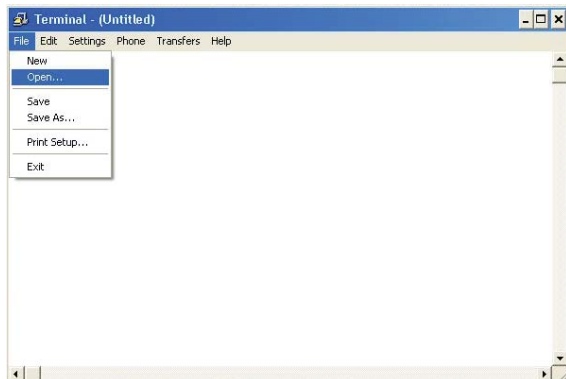
- 117-0500 - Cable, RS-232
- 98-50121 - CD
- 98-01218 - Instruction
- 98-01217 - Notice
- 84-01018 - Label, Small Key WAAS Update PRN 135, 138
- 78-50106 - Power Supply
- 45-05279 - Cable, Power Cigarette
- 45-05132 - Cable, Power

TECHNICAL UPDATES

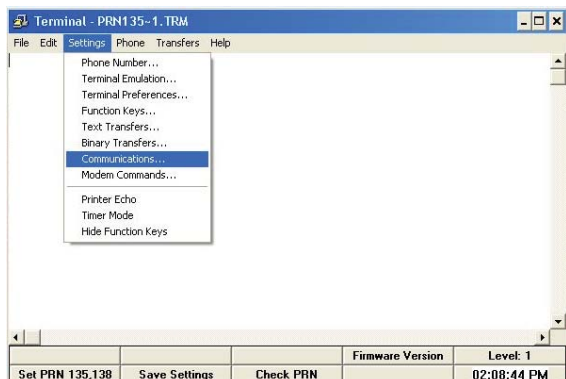
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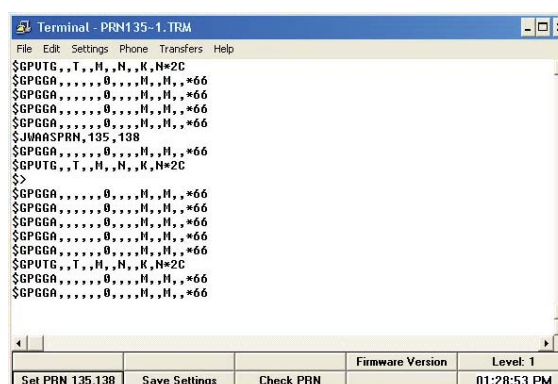
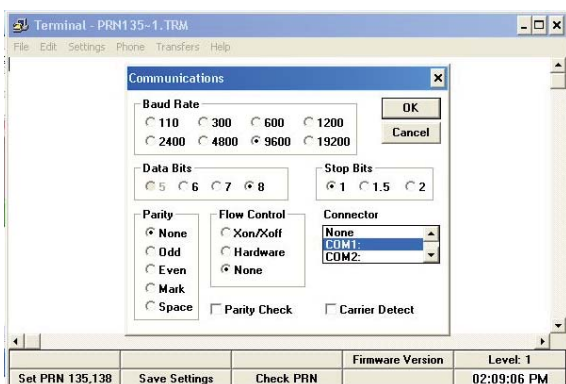
2. Start the software program "Terminal.exe". From there, open the software "PRN135_138.trm"
 - a. The software is provided on a CD ROM or is available for download at www.teejet.com.



3. Power up the receiver. This is accomplished by pressing the power button on the back of the unit.
4. Adjust the COM Port settings for the receiver to be updated.
 - a. To adjust the communications settings, select the "Settings" menu. Select the "Communications" option.



- b. Set the Baud Rate to the appropriate setting (9600 is the most common for RX400P). Set the Connector to the COM Port that is assigned to the computer's serial port. This may vary by computer setup. Scrolling data may be displayed from this step forward.



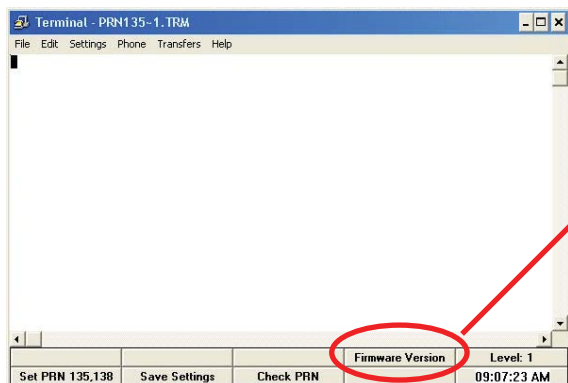
Example of screen with scrolling data

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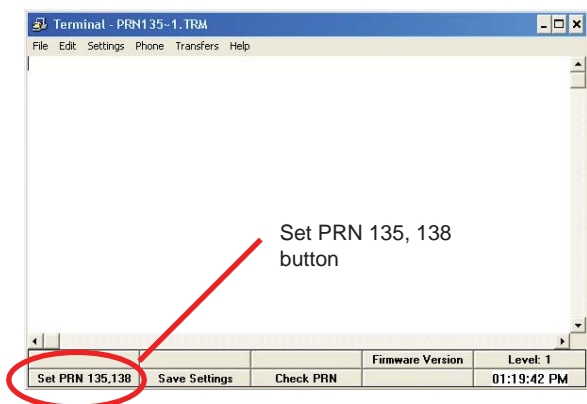
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5. Check the Firmware version of the receiver by pressing the “Firmware Version” button. If the version is 6.8j or greater (e.g., k, l, m, etc.) an upgrade is not required. **DO NOT PROCEED.**



Firmware Version button

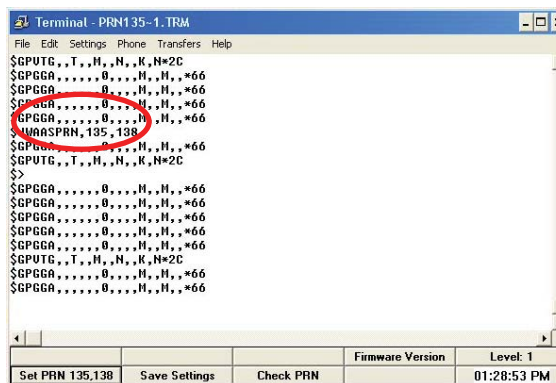
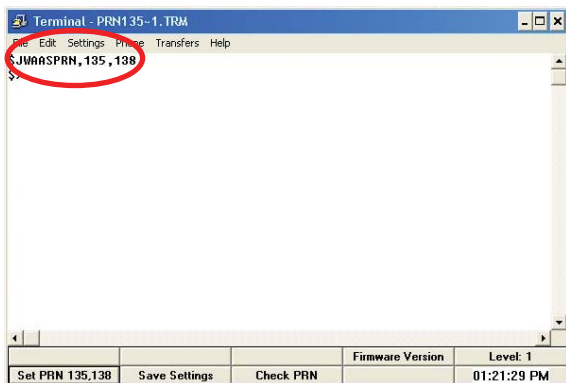
6. Press the “SET PRN 135, 138” button.



NOTE: Some versions may scroll through lines of data relatively quickly. To stop the scrolling, click and hold the mouse on the screen (anywhere on the screen will work). You can then read the screen. Once you release the mouse button the screen will continue to scroll.

NOTE: Most older versions of receivers may not transmit scrolling data.

7. The message “\$JWAASPRN, 135, 138” should be displayed on the screen along with other scrolling data in some cases.



Example of screen with scrolling data

