

TECHNICAL UPDATES

by TeeJet Technologies

from **TeeJet**

INSTRUCTIONS: RX360P WAAS UPDATE

WAAS SATELLITE UPDATE

TeeJet Technologies' RX360P product 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 RX360P receiver, you will need to be able to power up the unit and connect the receiver to a laptop or desktop computer. If you already have the required cables, download the software from www.teejet.com and proceed. If not, order kit # 90-02443.

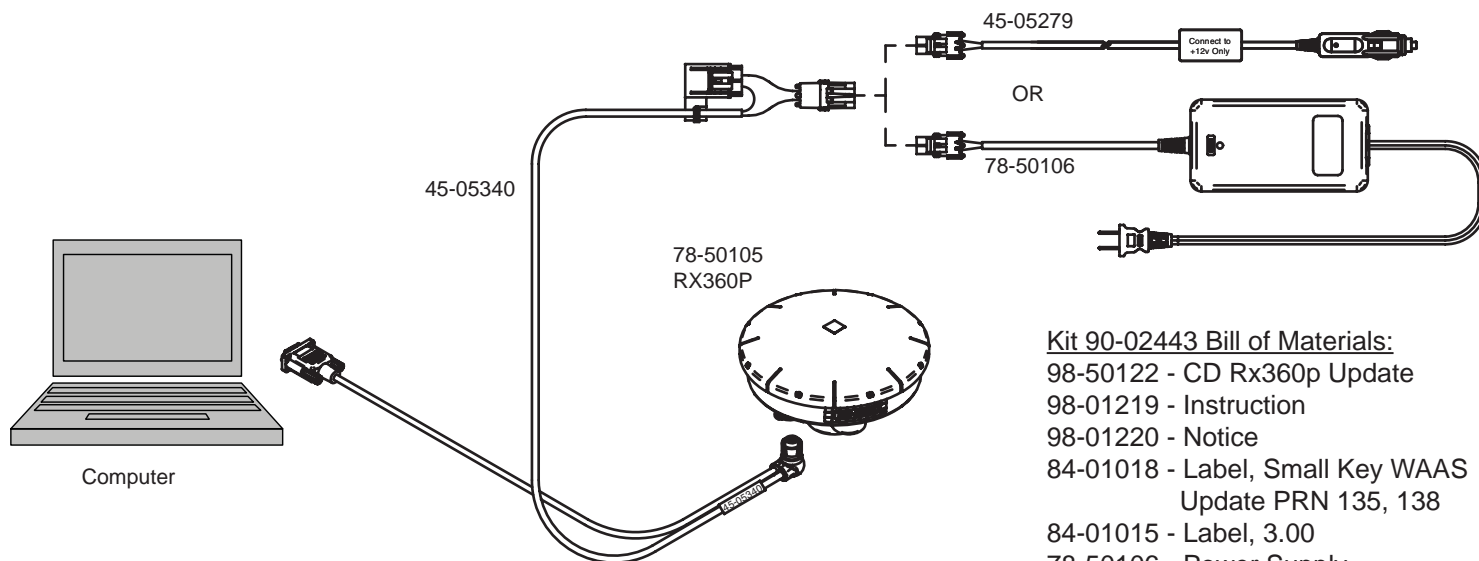
NOTE: Before beginning the update procedures, it is imperative that you know the COM port to which your computer's serial port is assigned. This is critical for the success of the firmware update.

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 serial 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 9. This WAAS update software must be executed on COM ports 1-9 or it will not function. Please locate a computer that utilizes COM ports 1-9 or contact TeeJet Technologies for further instructions.

PROCEDURES FOR FIRMWARE UPDATE

1. All receivers should have a sticker located near the neck of the receiver. Any receivers with software prior to version 3.0 (i.e., 1.74) must have their software updated. ALL RECEIVERS, REGARDLESS OF SOFTWARE VERSION, MUST BE CONFIGURED FOR THE NEW SATELLITES. If the receiver has a 3.0 sticker, install the cables according to the following illustration and proceed to Step 8. If not, proceed with Step 2.
2. Connect the receiver to the appropriate cables as per the following illustrations BUT DO NOT POWER UP THE GPS RECEIVER AT THIS TIME.



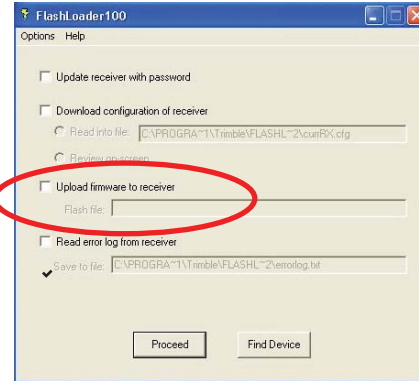
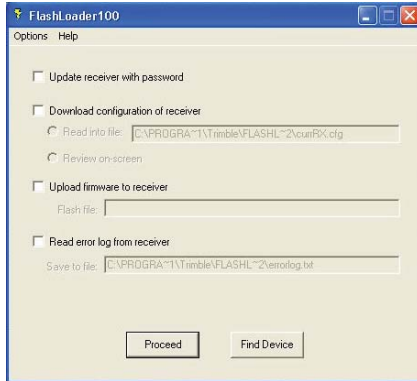
Kit 90-02443 Bill of Materials:
98-50122 - CD Rx360p Update
98-01219 - Instruction
98-01220 - Notice
84-01018 - Label, Small Key WAAS Update PRN 135, 138
84-01015 - Label, 3.00
78-50106 - Power Supply
45-05340 - Cable, Deutsch to DB9
45-05279 - Cable, Power Cigarette

TECHNICAL UPDATES

from **TeeJet**

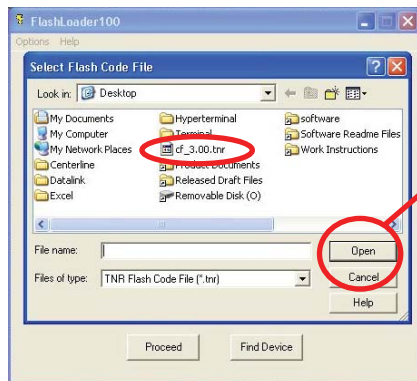
by TeeJet Technologies

2. Install the software program “FL100v210.exe” from the CD. Once installed, launch the program “FlashLoader.exe”. The main FlashLoader100 screen will be displayed. Check “Upload firmware to receiver”.

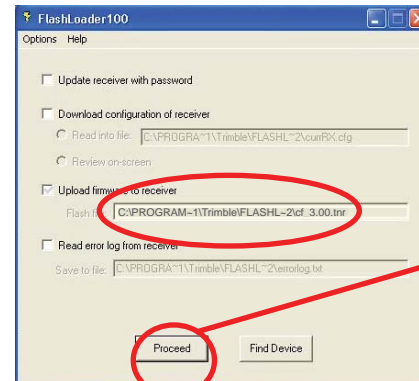


3. Power up the RX360P receiver.

4. The Select Flash Code File window will be displayed. Select the file “cf_3.00.tnr” and press the “Open” button. The file will be populated in the Upload firmware to receiver field. Press the “Proceed” button.

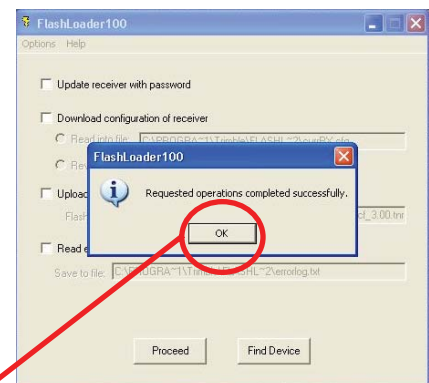
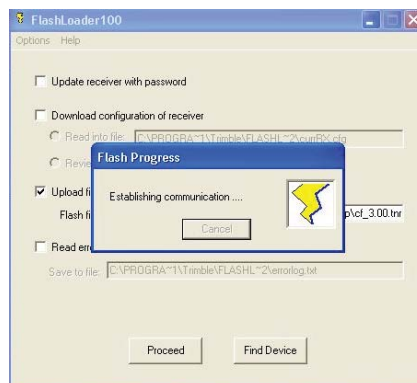


Open button



Proceed button

A Flash Progress screen will be displayed with the message “Establishing communication...” Once communication has been established, the new firmware will be uploaded and a progress bar will be displayed. When the upload is complete, the message “Requested operations completed successfully” will be displayed. Press the “OK” button.




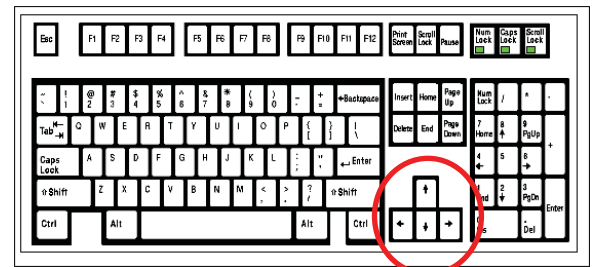
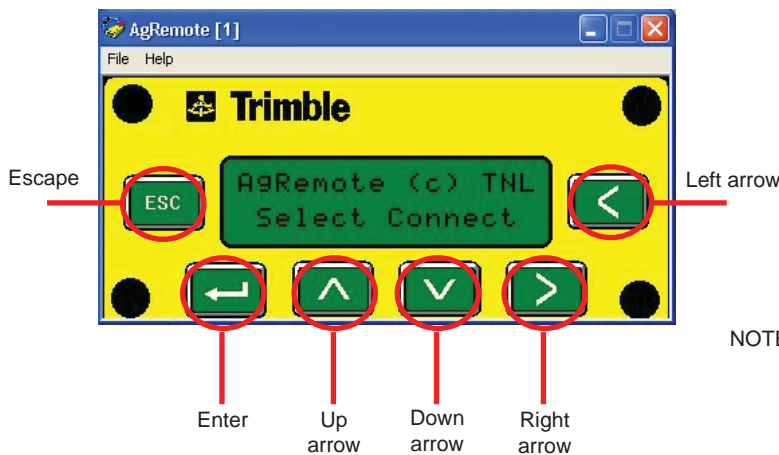
OK button

TECHNICAL UPDATES

from **TeeJet**

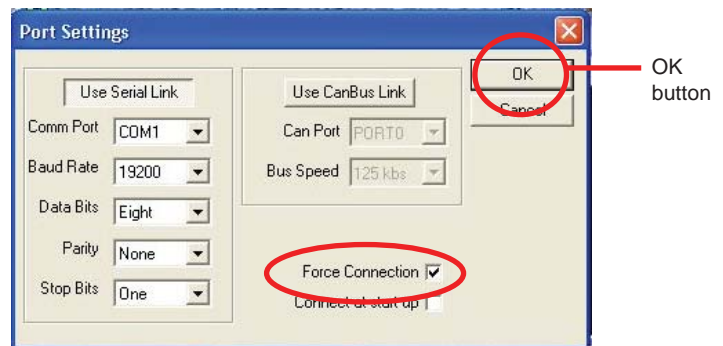
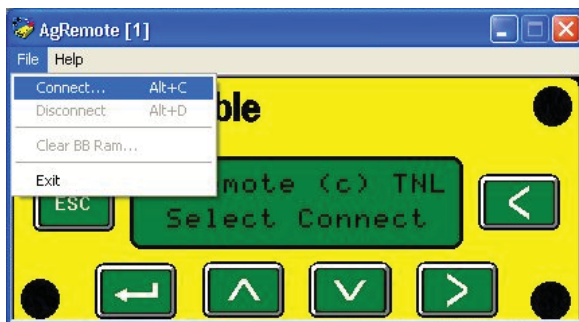
by TeeJet Technologies

5. Close the FlashLoader program . Software has been successfully updated to 3.00.
6. Remove the existing version sticker and replace it with the 3.00 sticker.
7. Cycle power (Off/On) to the receiver.
8. Double click on the "AgRemote122.exe" file to install the AgRemote program. Once the installation is complete, double click on "AgRemote.exe" to launch the program. The AgRemote main screen will be displayed. Navigation is accomplished via the buttons on the screen (point and click) or can also be accomplished through the arrow keys on a standard computer keyboard. THE KEYBOARD METHOD IS THE EASIEST TO USE.



NOTE: There is a slight lag time between when a button is pressed on the display and when the screen responds so please be patient.

9. To establish communications with the receiver, select "File" and select the option "Connect". The Port Settings window will be displayed. Connection properties should be set exactly as displayed in the illustration.



Port Settings should be set to:

Comm Port: COM1 (or whatever was established as the communication port of the computer).
Baud Rate: 19200
Data Bits: Eight
Parity: None
Stop Bits: One

Make sure the "Force Connection" box is checked. Press the "OK" button.

TECHNICAL UPDATES

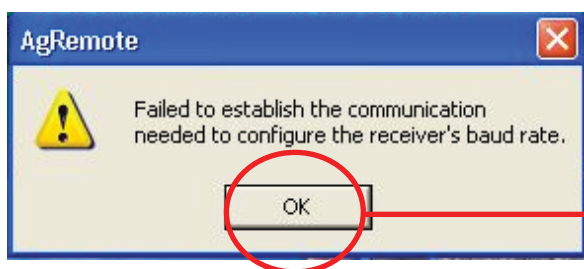
from **TeeJet**

by TeeJet Technologies

8. The message “Attempting To Connect to RCVR” will be displayed.



9. It is not uncommon for a communications error to occur at this point during the process. If one does occur, the message “Failed to establish the communication needed to configure the receiver’s baud rate” will be displayed. Press the “OK” button and cycle power to the receiver (Off/On). Return to Step 8 to relaunch the AgRemote program and proceed. If no error message occurs, continue with Step 10.



OK button

10. Once the receiver is connected, a general message will be displayed as illustrated below.



11. Satellite updates are accomplished through a series of Arrow buttons, which will navigate the menu on the receiver and change the default settings.

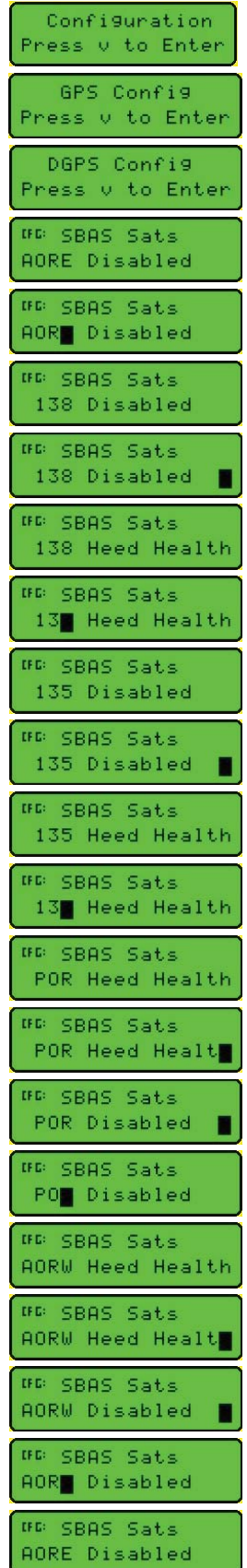
NOTE: If a navigation mistake is made and the desired screen is not reached, use the opposite key to backtrack until the correct screen appears in the display. For example, if the procedure requires the Down Arrow to be pressed 5 times and it is accidentally pressed 6 times, the Up Arrow can be pressed 1 time to correct the situation.

TECHNICAL UPDATES

by TeeJet Technologies

from TeeJet®

12. To update the satellites:
 - a. Press the Right Arrow twice. The Configuration screen will be displayed.
 - b. Press the Down Arrow once. The GPS Configuration screen will be displayed.
 - c. Press the Right Arrow once. The DGPS Configuration screen will be displayed.
 - d. Press the Down Arrow 4 times. The SBAS Sats window screen will be displayed.
 - e. Press the Right Arrow once. The SBAS Sats window will display a blinking cursor.
 - f. Press the Down Arrow once. The SBAS Sats window will display "138 Disabled".
 - g. Press the Right Arrow once. The cursor will move all the way to the right.
 - h. Press the Down Arrow 2 times. The SBAS Sats window will display "138 Heed Health".
 - i. Press the Left Arrow once. The cursor will move to the "8" position.
 - j. Press the Down Arrow 3 times. The SBAS Sats window will display "135 Disabled".
 - k. Press the Right Arrow once. The cursor will move all the way to the right.
 - l. Press the Down Arrow 2 times. The SBAS Sats window will display "135 Heed Health".
 - m. Press the Left Arrow once. The cursor will move to the "5" position.
 - n. Press the Down Arrow once. The SBAS Sats window will display "POR Heed Health".
 - o. Press the Right Arrow once. The cursor will move all the way to the right.
 - p. Press the Down Arrow once. The SBAS Sats window will display "POR Disabled".
 - q. Press the Left Arrow once. The cursor will move to the "R" position.
 - r. Press the Up Arrow 7 times. The SBAS Sats window will display "AORW Heed Health".
 - s. Press the Right Arrow once. The cursor will move all the way to the right.
 - t. Press the Down Arrow once. The SBAS Sats window will display "AORW Disabled".
 - u. Press the Left Arrow once. The cursor will move to the "W" position.
 - v. Press the Enter button. This will remove the cursor from the screen.

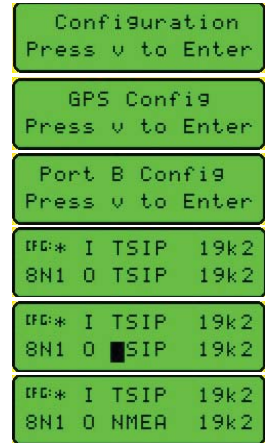


TECHNICAL UPDATES

from **TeeJet**

by TeeJet Technologies

- w. Press the Escape button 2 times. This will return the screen to “Configuration”.
- x. Press the Down Arrow once. This screen will display “GPS Config”.
- y. Press the Right Arrow 3 times. The screen will display “Port B Config”.
- z. Press the Down Arrow once. The screen will display “I TSIP 19k2”.
- aa. Press the Right Arrow 6 times. The cursor will move to the “T” position.
- bb. Press the Up Arrow once. The screen will display “NMEA” on the 2nd line.
- cc. Press the Enter button.
- dd. An error message will be displayed. The error message means the updates have been successful.



- 13. Press the “OK” button. Close the programs and power down the receiver.
- 14. Apply the label “WAAS PRN 135, 138” on the receiver.
- 15. The process is complete.