



NX Series AM Transmitters Software Upgrade Procedure

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IS09005A NX Series AM Transmitter

Software Upgrade Procedure

INFORMATION SHEET

1 INTRODUCTION

The NX Series AM transmitter is a microprocessor controlled unit. Periodically, enhancements or improvements to the operating system are identified and made available. This requires a software update.

1.1 Equipment Affected

This procedure applies to NX Series AM Transmitters.

1.2 Responsibility for Implementation of Procedure

This procedure should be carried out by qualified station maintenance personnel who are familiar with the NX series AM transmitter.

1.3 Scheduling

This procedure may be implemented at the convenience of station maintenance personnel.

1.4 Manpower Requirements

It is estimated that implementing this modification will require 30 minutes to complete. Note that it is necessary for the transmitter to be placed in an off-air status for a portion of this procedure.

1.5 Special Tools/Test Equipment

Along with standard hand tools (screwdriver, nutdriver, etc.), the following test equipment is required:

- laptop (i.e., local computer for direct connection) or Network computer with Windows and Internet Explorer Web browser
- CAT5 Ethernet Cable
- software for transmitter (*.tgz) file
- USB mouse (may be required if a new compact flash card is used)



2 PRELIMINARY CHECKS

- (a) Determine the current software revision installed. Via the Advanced User Interface (AUI) screen, go to **Menu / Software Configuration / Upgrade Subsystem Software**. Select the *.tgz file from the boot image list (should highlight in blue) and press **About**. Note the current software revisions.
- (b) Contact Nautel for the most recent "Downloadable" software revision and download *.tgz file to a computer or receive new compact flash card (which contains the upgrade *.tgz file).

NOTE

If a new compact flash card was received, continue to paragraph 3. If not, proceed to paragraph 4.

3 COMPACT FLASH CARD SWAP

If a new compact flash card was received with the upgrade *.tgz file, proceed as follows:

- (a) From the transmitter AUI, go to **Menu/ Software Configuration / Network Setup**, and record your current network settings (IP address, Subnet Mask, Default Gateway).
- (b) Unplug the single board computer (SBC) power connector P8 – located behind a cover on the rear of the door (use 7mm nut-driver – M4 hardware).
- (c) Remove the current compact flash card – bottom edge of SBC. Note orientation of card.
- (d) Install new card (noting orientation) and plug in SBC power connector P8.

(e) The AUI should boot up and the transmitter login screen should appear (or the main screen – depending if *Auto Login* was enabled for the active user).

(f) Proceed to paragraph 5.

4 TRANSFERRING UPGRADE FILE

The following steps assume either a network connection to the transmitter **OR** a direct connection to the transmitter. If the intention is to use a computer directly connected to the transmitter proceed to paragraph 4.1b. Otherwise, proceed to paragraph 4.1a.

4.1a Network Configuration/Setup

(a) From the transmitter AUI, go to **Menu / Software Configuration / Network Setup** and record the transmitters IP address. Proceed to paragraph 4.3.

4.1b Direct Connection

(a) From the transmitter AUI, go to **Menu / Software Configuration / Network Setup**

(b) Select '*Static IP*' and set as follows:

IP Address: **10.10.10.2**
Subnet Mask: **255.255.255.0**
Default Gateway: **192.168.1.2**

Press **Apply** then **Reboot Now**.

(c) Place the transmitter into **Remote** control.

4.2 Computer IP Setup

The following steps assume the operating system is *Windows XP*; adapt as required for computers with different operating systems.

(a) Use a CAT5 Ethernet cable to connect your computer's Ethernet port to the transmitter's Ethernet port (J1 on the AUI).

(b) On your computer, go to **Start Menu / Control Panel / Network Connections / Local Area Network**.

(c) In the Local Area Network Status, open the **General** tab and choose **Properties**. Scroll down and highlight **Internet Protocol (TCP/IP)**. Choose **Properties**.

(d) In the *Internet Protocol (TCP/IP) Properties* window, select **Use the following IP address**.

(e) Enter the following settings:

IP Address: **10.10.10.1**
Subnet Mask: **255.255.255.0**
Default Gateway: **192.168.1.2**

(f) In the *Internet Protocol (TCP/IP) Properties* window, select **OK**.

(g) In the *Local Area Connection Properties* window, select **OK**.

(h) In the *Local Area Connection Status* window, select **Close**.

(i) Close the *Network Connections* window.

4.3 Transfer software upgrade file to Transmitter

(a) Using your computer, open Internet Explorer, and type in the IP address listed in the appropriate Network Configuration paragraph (4.1a or 4.1b) in the address bar and press enter. The transmitter login screen should appear.

(b) At the transmitter login screen enter:

User: Nautel or ****
Password: *none* (default) or ****

**** denotes user assigned password and user name.

(c) Navigate through the AUI to **Menu / Software Configuration / Upgrade Subsystem Software** and press **Browse**. Locate the software update *.tgz file and press **Upload** to load the file into the transmitter boot image list.



5 FLASHING TRANSMITTER WITH UPGRADE SOFTWARE

- (a) Ensure the transmitter is in **Local** control and RF Power is **Off**. Perform the following steps locally (in front of the transmitter AUI).
- (b) Go to the **AUI Menu / Software Configuration / Upgrade Subsystem Software** screen and select the update ***.tgz** file from the boot image list (should highlight in blue) and press **Begin Flash**.
- (c) If the AUI is not responding, connect a USB mouse to the USB port at the base of the transmitter's single-board computer (SBC). Go to the **AUI Menu/ Hardware Configuration/Touch Screen Calibration** screen. Touch each display as it appears. This should restore AUI control. Return to step (b).
- (d) If the transmitter does not respond, or nothing appears to happen, cycle the main ac breaker and repeat step (b).

CAUTION

Note the red warning text at the top of the AUI screen – do not leave this page until after the flash process is complete.

- (e) After a successful load (*boot status indicates 100% complete and notes that cubes should be reset*) press **Reset** and go to the **Maintenance** screen in **Menu / Software Configuration** and select **Reboot Touchscreen / AUI**.
- (f) This completes the software upgrade. Restore the former network settings on the transmitter and laptop as required [see paragraph 4].
- (g) Login and repeat step 2 (a) to verify that the current version is the same as the upgrade version – this confirms the upgrade was successful.

