



Information Sheet IS13007A

NVLT Series FM Transmitter - Software Upgrade

(from NVLT SW 3.3 to NVLT SW 4.x)

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INFORMATION SHEET

1 INTRODUCTION

The NVLT Series FM transmitter is a microprocessor controlled unit. Periodically, enhancements or improvements to the system are identified and made available. Implementation of these improvements requires a software upgrade. This information sheet describes the update to the new version 4.x software from NVLT software 3.3.

NOTE

Upgrading the NVLT series transmitter software may introduce new AUI menu structures and features that were previously not available or described in the technical instructions manual.

Review the applicable Nautel Software Bulletin on [ftp://www3.nautel.com/](http://www3.nautel.com/) to view the changes for specific software versions. Associated documentation (technical manuals, related Information Sheets, etc.) that will assist in operating with the new software are also found at this URL.

1.1 Equipment Affected

This procedure applies to NVLT series FM transmitters upgrading to NVLT software version 4.x.

1.2 Responsibility for Implementation of Procedure

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

1.3 Scheduling

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

1.4 Manpower Requirements

It is estimated that implementing this modification will require 60 minutes to complete. Note that it is necessary for the transmitter to be placed in an off-air status for the duration of this procedure.

1.5 Special Tools/Test Equipment

Along with standard hand tools (screwdriver, nut driver, etc.) the following test equipment may be required. Review the procedure to determine which items apply.

- Laptop w/ mouse (i.e., local computer for direct connection) or Network computer with Windows and Internet Explorer Web browser.
- CAT5 Ethernet cable
- Software (*.tgz file)
- USB flash drive, formatted to FAT32, with latest OS recovery files.



2 PRELIMINARY CHECKS

- (a) Determine the current software revision installed - via the advanced user interface (AUI), go to **Menu/System Settings/Upgrade Software**. The Current Version should be 3.3.0.2. (If not, you must upgrade to NVLT SW 3.3 using the procedure described in paragraph 4, noting that the software file can be found at <ftp://www3.nautel.com/>.) Click **Details**. Note the current software revision for Audio Player, AUI, Axia Livewire Module, Controller, Exciter B (if applicable), Orban Inside (if applicable), Rack, Server, SNMP Agent and Watchdog.
- (b) Contact Nautel for the most recent software revision and download *.tgz file to a laptop or network location.

3 OS RECOVERY

Prior to transferring upgrade files to the transmitter, an OS recovery reset must be performed to restore the transmitter's operating system. This feature is only available using the front panel display.

NOTE

Complete the OS recovery procedure detailed in Information Sheet IS13001A.

When updating to NVLT software version 4.0 some user settings will be lost, including: user accounts, logs, SNMP configuration, email configuration, time zone, notifications and playlists. It is recommended that all User Settings be logged prior to performing the OS recovery and checked upon completion of the change.

4 TRANSFERRING UPGRADE FILE

The following steps assume either the laptop will be used to connect directly to the transmitter OR the transmitter and network computer are currently connected to the same network.

4.1 Transmitter IP Configuration

- (a) From the transmitter AUI, go to **Menu/User Settings/Network Setup**.
- (b) Record your current network settings (IP Address, Subnet Mask, Default Gateway).
- (c) If connecting to the transmitter directly with a laptop, you must set a static IP address. This can only be done via the front panel interface. From the front panel UI's Main Menu, go to **User Settings/Network Settings** and set the IP address as follows:
 - DHCP: OFF
 - IP Address: 10.10.10.2
 - Netmask: 255.255.255.0
- (d) Set the transmitter for remote control.



4.2 Laptop IP Setup

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

- (a) On the laptop go to **Start Menu/Control Panel/Network Connections/Local Area Network**.
- (b) In the **Local Area Network Status**, open the **General** tab and choose **Properties**. Scroll down and highlight **Internet Protocol (TCP/IP)**. Choose **Properties**.
- (c) In the Internet Protocol (TCP/IP) Properties window, select Use the following IP address.
- (d) Enter the following settings:
 - IP Address: 10.10.10.1
 - Subnet Mask: 255.255.255.0
 - Default Gateway: 192.168.1.2
- (e) In the Internet Protocol (TCP/IP) Properties window, select OK.
- (f) In the Local Area Connection Properties window, select **OK**.
- (g) In the Local Area Connection Status window, select **Close**.
- (h) Close the Network Connections window.

4.3 Transfer Software Upgrade File to Transmitter

- (a) If using a laptop, connect the laptop network interface card to the transmitter LAN (A1J8A) connector on the rear panel using a CAT5 Ethernet cable. Open Internet Explorer and search for 10.10.10.2. The transmitter login screen should appear.
- (b) If using a network computer, open Internet Explorer and search for the IP address recorded in step (b) of Transmitter IP Configuration. (See page 3.4.2 of the equipment Operations and Maintenance Manual.) The transmitter login screen should appear.
- (c) At the transmitter login screen enter:
 - User: "Nautel" or "****", where **** is the user assigned user name
 - Password: leave blank (default) or "****", where **** is the user assigned password
- (d) Navigate through the AUI to **Menu/System Settings/Upgrade Software**, click the **Manage Files** button and press **Browse**. Locate the software upgrade *.tgz file stored on the laptop or network computer, and press **Upload** to load the file into the transmitter upload file list. Allow this operation to complete.



4.4 Installing New Software

- (a) Set the transmitter to RF Off and for remote control. If the transmitter is already in remote control mode, turn off the transmitter using the AUI on the laptop.

NOTE

Perform the following steps remotely using the AUI on the laptop.

- (b) Go to the AUI **Menu/System Settings/Upgrade Software** screen and select the upgrade *.tgz file from the Select Upgrade File list (should highlight in blue) and press **Start Upgrade**.
- (c) After a successful load (status is 100% complete and a message indicates a successful load), cycle the ac power (turn off, then on) on the NVLT transmitter.
- (d) This completes the software upgrade. From the remote AUI, go to **Menu/User Settings/Network Setup**, and enter the network settings (IP address, Subnet Mask, Default Gateway etc.) that were recorded in step (b) of section 3.1 of this document.
- (e) Login and repeat step (a) in section 2 of this document to determine if the current version is the same as the upgrade version - this confirms the upgrade was successful.
- (f) If the upgrade was not successful, repeat steps (a) through (e). If still unsuccessful, contact Nautel.

5 POST UPGRADE OPERATION

No transmitter operational settings should be modified after the version 4.0 software upgrade. All presets and calibration settings should be preserved except for those listed below in section 5.1.

NOTE

If the transmitter reports an "Exc (A or B)-Missing Preset" alarm and the banner section of the AUI displays "Unknown Preset" after the version 4.0 software upgrade has been performed, modify the desired preset by ± 100 W, then save it. This will clear the fault. The preset can then be modified back to the original power level and saved once again. The "Exc (A or B)-Missing Preset" alarm should not reappear and the correct name should display in the AUI banner section.

5.1 Post Upgrade Checks

There are new settings within the 4.0 software upgrade (as well as pre-existing AUI settings) that should be configured/checked upon completion of the upgrade. These include:

1. Screen Saver Timeout
2. Audio Low Thresholds
3. FM Mode Spectrum Mask
4. NTP enable/disable
5. Call Sign/ID
6. Turn On Delay
7. FM Polarity
8. Remote Analog Outputs

