



# Nautel Firmware Uploader – J1000

## **IS06005A**

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## INFORMATION SHEET

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### 1 INTRODUCTION

This document describes how to install a firmware update on a Nautel J1000 transmitter.

#### 1.1 Equipment Affected

This procedure involves the J1000 transmitter and a Windows-based PC.

#### 1.2 Responsibility for Implementation of Procedure

This procedure should be carried out by qualified station maintenance personnel.

#### 1.3 Scheduling

Implement this procedure at the convenience of station maintenance personnel.

#### 1.4 Manpower Requirements

This procedure requires approximately one hour for a technician to complete.

#### 1.5 Parts Required

You will need a null-modem (cross-over) DB9 serial cable that is long enough to connect between the PC and the rear of the J1000's exciter. Note the PC normally has a male connection and will require a female plug while the J1000 has a female connection requiring a male plug.

### 2 PREPARING THE J1000 TRANSMITTER

(a) Press **RF OFF** on the J1000 transmitter.

(b) Connect a null-modem (cross-over) DB9 serial cable from an available COM port on a Windows-based PC to the DB9 serial port on the rear of the J1000 transmitter's exciter (J10).

### 3 UPLOADING FIRMWARE

From a windows-based PC, install the firmware upgrade on the J1000 transmitter as follows:

- (a) Using the PC, open the Nautel Code Uploader application by running `NcodeUploader.exe`.
- (b) Open the **Settings** dialog box. Ensure that the correct COM port is selected for use with the programmer. High-speed programming is optional; if a programming attempt is made with High-speed programming enabled, and it fails, try again with High-speed programming disabled. The **Additional Timeout** setting should be set to 100 ms. Click **OK** when done.
- (c) Open the **Upload Atmel Firmware** dialog box. A popup window will indicate the status of establishing a connection to the transmitter. A message will indicate if the connection was successful.
  - If the failure message appears when you are not connecting with a power cycle sequence, check your COM port connection and null modem and return to step (b).
  - Upon a successful indication proceed to step (d).
- (d) Check both the **Insert proper flash checksum** and the **Keep my current EEPROM file** checkboxes.



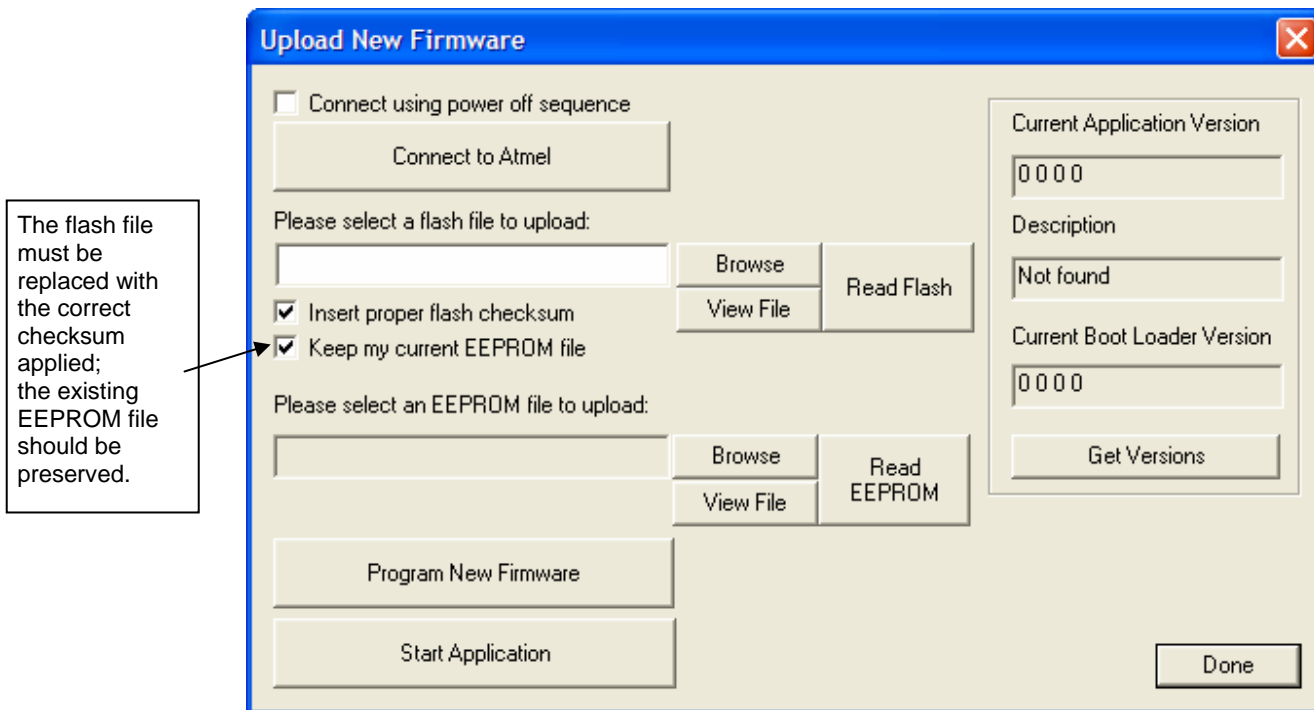


Figure 1: Upload New Firmware Screen

- (e) Load the flash file containing the firmware update.
  - Press the upper-most **Browse** button to locate the file.
  - The file name is JAZZ\_NAPC143\_1\_mmddyy.hex
  - mmddyy indicates the build date of the firmware file.
- (f) Click on the **Read EEPROM** button (see Figure 1) to save the EEPROM to a local folder. Note the location of the saved file for future reference.
- (g) NcodeUploader will verify the integrity of the flash file and a pop-up will indicate success or failure.
- (h) Click on the **Program New Firmware** button to begin the update process.
  - (i) A pop-up will appear indicating the progress of the update. When the upgrade finishes, a second pop-up will appear to indicate whether the update failed or succeeded.
  - (j) If the update was successful, click on the **Read Flash** button to begin a verify cycle. Select “*verify against existing file*” and press OK. The dialogue *reading firmware from device* will appear. After reading is complete, a new dialogue to select the file to compare to will open. Browse to the file that was programmed and press open.
  - (k) If the response is *Verified Flash File Successfully* press OK, otherwise repeat paragraph 3.
  - (l) Press the **Start Application** button to re-boot the J1000 transmitter. Close NcodeUploader and disconnect the serial cable.

