
TECHNICAL NOTE TN-969
**How to Upgrade Firmware in
TM8100 and TM8200 Mobile Radios**

1 July 2005

Applicability

This Technical Note details how to upgrade Firmware in TM8100 and TM8200 radios. The principles are the same for these and also TM9100 and TP9100 APCO P25 radios.

1. Upgrading firmware

**Upgrading Firmware in
the TM8100**

STEP 1: Saving the Calibration file

- Open the TM8000 Calibration Application from the Start Menu of Windows. **Start > Programs > Tait Applications > TM8000.**
- In this application select the com port required in **Tools > Options.**
- Read the radio's Calibration information using **Radio > Read** or clicking the Yellow arrow read-from-radio icon on the toolbar.



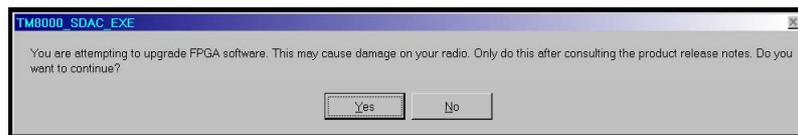
- Once completed save this file to the PC by selecting **File > Save As.** By default this will be saved using the radio's serial number eg: "TM8000 Cal – 19xxxxxx"

STEP 2: Saving the personality file

- Open the TM8100 Programming Application from the Start Menu of Windows. **Start > Programs > Tait Applications > TM8000.**
- In this application select the com port required in **Tools > Options.**
- Read the radio's personality datafile using **Radio > Read** or clicking the Yellow arrow read-from-radio icon on the toolbar.
- Once completed save this file to the PC by selecting **File > Save As.**

STEP 3: Upgrading firmware

- Select the Download application in the TM8100 Programming Application. This is located in **Tools > Download**
 - A new window will open.
- On this window you can view the currently loaded firmware version(s) by clicking **Report Configuration**.
- To change the firmware version click the **Download** button.
- A 'browse' window will open to search for the saved location of the new firmware.
- Once the firmware file QMA1Fstd_xx_xx_xx_xx.s2 is located click 'Open'.
- The Downloading will start automatically.
- The following windows *may* appear:



- Select Yes.
- Another pop up will then ask you to cycle the power to the Radio.



- Do this by **removing** the DC supply to the radio.
 - Wait 5 seconds.
 - Re-apply the DC.
- The TM8115 radio will then display 'UP' during the upgrade process.
- Once the upgrade process is complete the Radio's display may change to 'Pr' or return to channel display.

This means that the download process has now completed.

STEP 4: Programming back the databases

- Close the Download Application window.
- In the Programming Application load in the previously saved customer's datafile. Click **File > Open**.
- Write the database to the radio using either **Radio > Program** or clicking the Red arrow write-to-radio icon on the toolbar.



- Once completed close the Programming Application.
- Click (or open) the TM8000 Calibration Application again.
- Load the previously saved customer's calibration datafile. Click **File > Open**.
- Write this file into the radio by selecting **Radio > Program** or clicking the Red arrow write-to-radio icon on the toolbar.
- Close the Calibration Application.
- Upgrade process complete.

Upgrading Firmware in the TM8200

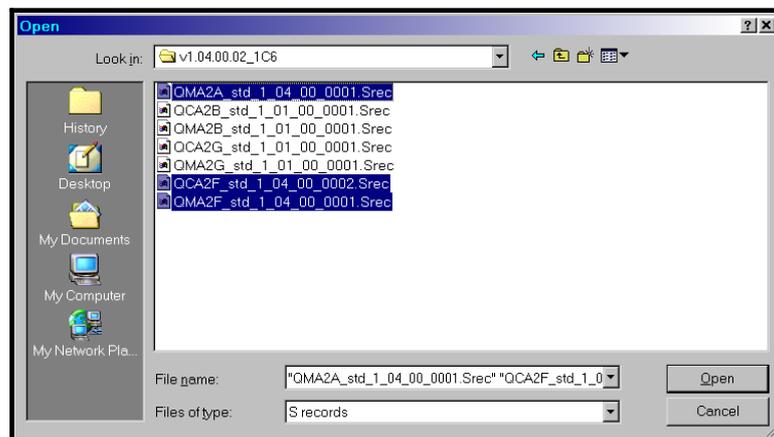
Other than using the TM8200 Programming Application instead of the TM8100 App, the process for upgrading the TM8200 mobile radio is exactly the same as the TM8100 defined previously.

The only differences to note is there are different firmware version codes for the body and the head. These are identified below:

- QMA1Fstd_xx_xx_xx_xx.Srec – TM8100 (Mobile) **F**irmware.
- QMA2Fstd_x_xx_xx_xxxx.Srec – TM8200 (**M**obile) Firmware.
- QCA2Fstd_x_xx_xx_xxxx.Srec – TM8200 (**C**ontrol Head) Firmware.
- QMA2Gstd_x_xx_xx_xxxx.Srec – TM8200 (Mobile **FPGA**) file.
- QMA2Astd_x_xx_xx_xxxx.Srec – TM8200 Mobile **A**udio (DSP) file.

When upgrading a TM8200 there may be only as few as three of the total of seven files required to be upgraded.

- In the 'browse' window you can select all required files by pressing "Ctrl / Left-Click" and clicking only the required files. In the screenshot below only the Firmware files for the head and body are selected.
- Click Open and the process will continue. The files will write to the radio and head in sequence.



Follow the same steps to write back the personality/calibration files to the TM8200 as described for the TM8100.

Compliance Issues

None.

CSO Instruction

Inform all sales and technical staff of the upgrade process instructions.

2. Issuing Authority

Name and Position of Issuing Officer

Graham Brenchley
Technical Support Engineer

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Associate.

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