



TECHNICAL NOTE TN-1009-SR

TM8200 Commercial Upgrade Firmware V1.04 & PC App V1.03

18th April 2005

Applicability

This Technical Note details the features and functionality of the TM8200 commercial release of V1.04.00.0002 radio firmware and V1.03.00.0001 Programming Application.

1. Introduction

Second Release Information

The second release of the Programming Application for the TM8200 is version 1.03. The latest TM8000 Calibration Application is version 2.73. This Calibration Application is common across the TM8000 range.

This release is intended as a maintenance release to the first release of TM8250 Conventional firmware. No major functionality has been added, nor has any major features.

If a keypad microphone TMAA02-08 is fitted or removed from the TM8200 microphone port the radio will need to be power cycled as the radio will only recognise the microphone is there or not during a start-up sequence.

Upgrading TM8200 radios

NOTE: Do not upgrade Demo or Field Trial radios past v1.01.00.06 unless the factory has reprogrammed the radio's OTP first.

To upgrade existing TM8200 Firmware to v1.04:

- Upgrade the Calibration and TM8200 PC Applications to the latest versions. These are:
 - PC Application v1.03.00.0001
 - Calibration Application v2.73.00.0008

➤ Read and save the radio's personality (.m82p) and calibration (.m8c)
In the PC application:

- Click on *Tools > Download > Report Configuration* to verify the current Firmware version
- Click *Download* and the Application will open a browse box for the saved location of the seven (7) [.Srec] Firmware files that were downloaded as QMA2Fstd_01_04_00_0002.S2.

NOTE: If you have a TM8250 that already has V01.01.00.0001 components loaded, there is no need to overwrite these files. The download application will dictate what you are able to download.

- Click *Open* to continue and the TM8200 will display "(i) Programming Mode" and download the seven [.Srec] files.
- The display will be blank except for backlighting during the upgrade process.

Once the Firmware download is complete the radio display will return to "(i) Programming Mode".

- Reprogram the saved personality and calibration files back to the radio. The radio will now reset to normal operation.

2. Release Information

First Production Serial Numbers

From radio serial number **19044934** all TM8200 radios built have Firmware v1.04 (serial number to be defined with production build).

This firmware has been used in production since the **24th of March 2005**.

Firmware Changes and Resolved Issues

- **New Bands Supported:**
 - The **A4** (66-88MHz) band is now supported.
 - The **C0** band (174-225MHz) is now supported, though no RF equipment is yet available for sale in this band. (TIMS00033250)
 - The **H7** band is now supported. This is the band specific for the High Power Mobile that covers the frequency range of 450-520MHz. (Raised as TIMS 43611)
- **Improved Scanning and Voting Performance:**

Scanning performance on local and remote head configurations has been improved. (Raised as TIMS 42404)
- **Radio Not Releasing Channel:**

When a group is active (scan or vote group) and the PTT is pressed and released, under certain situations the group will not release the TX channel. These situations are:

 - 1) When selection of the TX channel takes a long time and the PTT is released before the channel is selected.
 - 2) When the 'Inhibit PTT Outside a Call' programmable option is set and the radio is not inside a call and the PTT is pressed.

(Raised as TIMS 43886)
- **Volume Control Problems with Remote Kits:**

A problem was discovered with the Class D audio amplifier in the TM8200 Remote kit that would cause the received audio through the speaker to shut down. This was a rare issue that would only occur when volume was set to close to full level and a highly deviated signal was received. The remedy is to have a staged PA gain in the remote head (Raised as TIMS 043377).
- **Mute Chatter:**

It was noticed on A4 Band radios on the TM8100 that when the following channel combination is chosen: Narrowband Country Squelch setting

The hysteresis on the noise mute decreases. Approximately around -123dBm RF level, the mute starts to chatter. There is no chattering when there is no RF present.

This was tracked down to a digital filter internal overflow in the DSP code. (Raised as TIMS 40359)

PC Application Changes and Resolved Issues

- **Support for H7 Band:**

Support to enable the programming of H7 band high power mobiles has been added into this build of the TM8200 XPA.

Known Limitation(s)

- **Copy and Paste Error:**

Sometimes when copying over existing channel data, the PC application will allow two channels to have the same channel number.

Compliance Issues	No known compliance issue.
CSO Instruction	Please inform all technical staff and accredited dealers of the updates to the PC Application and enhancements to radio Firmware available for the TM8200 mobile radio.

3. Issuing Authority

Name and Position of Issuing Officer	Barry Crates Technical Support Team Leader
Confidentiality	Confidential – This message or document contains proprietary information intended only for the person(s) or organisation(s) to whom it is addressed. All Recipients are legally obliged to not disclose Tait technological or business information to any persons or organisations without the written permission of Tait.
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