

## TECHNICAL NOTE TN-1137-SR

### TM9155, TP9155, TP9160 Subscriber Unit Firmware Upgrade to v2.04.00.0002

22<sup>nd</sup> December 2005

#### Applicability

This Technical Note applies to the firmware utilised in the TM9155 APCO P25 mobile, TP9155 and TP9160 APCO P25 hand portable radios – henceforth referred to as APCO subscriber units.

## 1. Introduction

The APCO subscriber unit firmware v2.04.00.0002 has been released to manufacturing to replace the previous firmware (v1.04.00.0001) being installed in APCO subscriber units.

#### What does this work with?

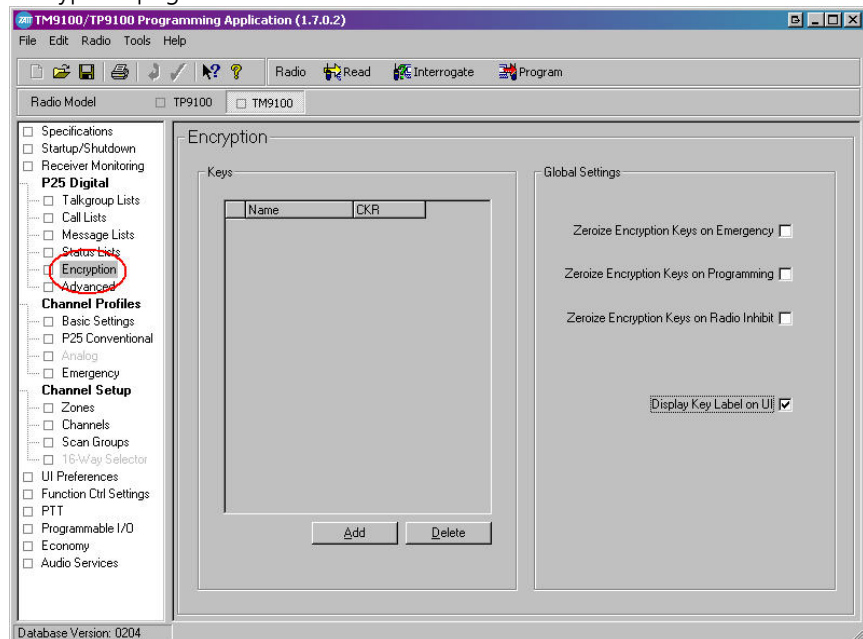
This firmware is compatible with the TM9100/TP9100 Programming Application v1.07.0.0002 or later and Calibration Application V1.02.00.0005 or later.

## 2. Changes

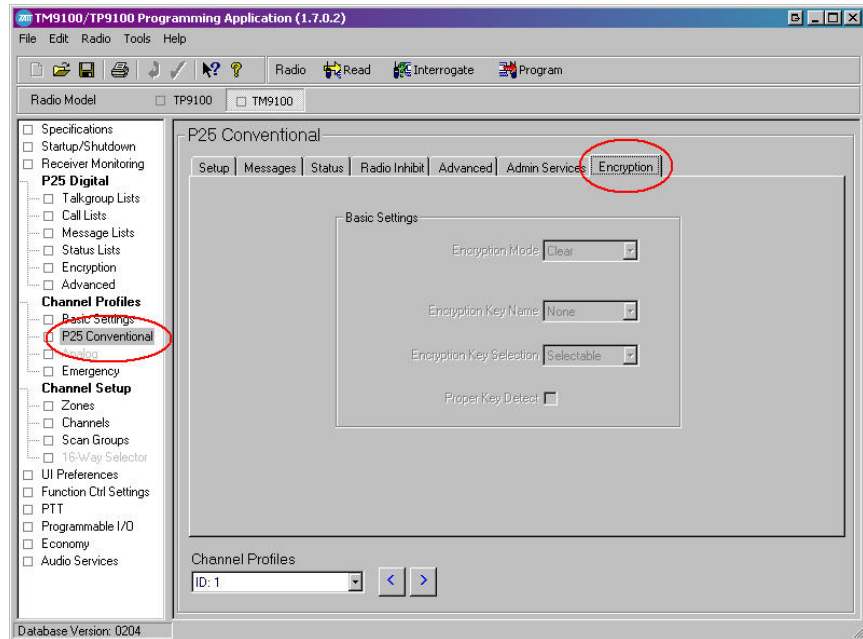
#### What New Features Have Been Added?

DES (**D**igital **E**ncryption **S**tandard) Encryption has been added in this release. This form of encryption uses a 64 bit/8 octet (16 Hex digit) “key variable” that is loaded into the radio via a KVL3000+ Keyloader in conjunction with a Tait adaptor (TPA-SV-020). Once loaded into the radio it is not possible to read the key variable(s) back out.

There are two areas in the XPA that deals with Encryption. The first is the Encryption page.



The second area is the Encryption tab on the P25 Conventional page.



For a full explanation of the Encryption pages please refer to the Online Help in the programming application, the Encryption Key Loading Guide which can be found on the Taitworld support website ([www.taitworld.com/support](http://www.taitworld.com/support)) or contact Technical Support.

## What Enhancements Have Been Made?

The following enhancements have been made to existing features:

- Voting - optimised for Two Channel Voting.
- TIMS51388 - Display RSSI value instead of RSSI Bar
- TIMS51473 - Display Firmware version when PTT pressed during Power up

## What Issues have been resolved in this release?

Firmware version 2.04.00.0002 resolves the following issues in the APCO subscriber units:

- TIMS49217 - When scanning with priority channels, do not toggle buttons quickly
- TIMS51434 - Portable displays four function keys under key settings menu
- TIMS51377 - Programming the Portable radio with programmable IO pins makes 16-way selector non-functional
- TIMS51112 - List Operation Wrap Around - Mobile and Portable
- TIMS51216 - Contrast and Backlighting changing after programming
- TIMS51262 - Error beep when Emergency mode successfully entered
- TIMS51294 - Radio acknowledges Call Alert while in Emergency Mode
- TIMS51299 - Enabling Lock Radio at the same time as PTTing locks the terminal in Transmit
- TIMS51319 - Bad antenna results in message being displayed during Radio Unit Monitor
- TIMS50702 - Programming a stunned Radio enables old configuration
- TIMS51191 - Failure to re-open mute if APCO signal temporarily lost
- TIMS51070 - Talk party ID doesn't display and sometimes crashes

- TIMS51051 - Individual Call screen not displayed when Backlighting = Continuous
- TIMS51462 - Radio does not start in Silent Mode when first powered on after programming
- TIMS51463 - Radio does not start in Quite Mode when first powered on after programming
- TIMS51500 - Enabling or Disabling confidence tones does not work
- TIMS47753 - No keypad confidence tones when entering radio ID numerically
- TIMS51910 - Dual Mode gets stuck in Tx
- TIMS51933 - Radio stopped transmitting if PTT pressed and released quickly and continuously in a voting or scan group.
- TIMS51901 - APCO Signalling not been Displayed on UI
- TIMS51709 - Battery Gauge on TP9100 reads Half-full with Flat Battery
- TIMS52307 - 3Way Selector not set correctly on power up
- TIMS52277 - Powering up into a vote or Scan group no Menus appear
- TIMS52235 - Radio does not unmute when under security lock and received a radio monitor message.
- TIMS52234 - Radio's behaviour incorrect when under security lock and received a call alert.
- TIMS52189 - Tx modulation type (C4FM/Widepulse) is set on every channel change.
- TIMS51837 - Repeater Talk Around operating correctly on groups using 3 way selector and toggle switch.
- TIMS39023 - Fixed LCD contrast menu
- TIMS51726 - Cannot receive audio if trying to send a message whilst in a voting group
- TIMS51725 - Radio does not acknowledge receipt of message if in a voting group
- TIMS52528 - Power Up Message not being displayed
- TIMS52467 - Caller ID not displayed when radio starts in a voting group
- TIMS52453 – Distorted audio heard if uplink from transmitting radio is marginal.
- TIMS52657 - Radio Crashing in Econ Mode
- TIMS52234 - Radio's behaviour incorrect when under security lock and received a call alert.
- TIMS52626 - LCD contrast on Portable does not go to zero when stunned
- TIMS52912 - Individual call tx when voting not working properly

## What Are The Known Limitations?

Firmware version 2.04.00.0002 has the following known major limitations:

- TIMS52899 - Portable reset while PTTing and changing between vote group and channel
- TIMS52633 - Analogue/FM tx takes ~ 1 sec to unmute while voting dual mode channels
- TIMS52995 - Radio on Dual Mode Tx=FM does not respond to P25 admin services
- TIMS52967 - Portable stuck in transmission in response to R.U.M (Radio Upgrade manager).
- TIMS52697 - Radio's behaviour inconsistent while voting and making an individual call
- TIMS52695 - Radio's behaviour inconsistent while voting and trying to use the P25 services
- Economy Mode should not be used with Voting.

<b>Compliance Issues</b>	None
<b>CSO Instruction</b>	<b>CSO's</b> – Please inform all logistics, sales and technical staff of these changes.

### 3. Issuing Authority

<b>Name and Position of Issuing Officer</b>	Paul Anderson Technical Support Engineer		
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