



Technical Support

TECHNICAL NOTE

Technical Note TN-926

TM8000 'Reset' Issue and Recommendations

29 September 2004

Applicability

This Technical Note details the findings of investigation into a spate of issues where TM8100 radios would reset and subsequent operation would fail.

1. Information

Technical Support were made aware during August 2004 by TOC-NZ that as many as five national NZ dealers were complaining that users' radios would reset and appear to return to normal operation, but would actually enter one of three different modes.

1. The User Interface would lock-up and not allow function button or channel change operation.
2. The radio could receive normally, transmit RF and CTCSS, but would not transmit audio.
3. The radio would indicate a constant receive signal (green LED permanently active) but there would be no receive audio, or transmit audio.

The user may not have identified the reset of the radio, as it did not always 'beep' with the subsequent start-up procedure.

Extensive investigation by TOC-NZ, Technical Support and EST with one specific customer, including a two-day on-site vehicle investigation in Auckland, produced some important characteristics and these were detailed on return to Christchurch.

Discussions with Development on the findings of the trip highlighted the likely problem as zero debounce time on the microphone hookswitch. This was likely to saturate the processor and this would lead to loss of synchronisation with the FPGA, where all audio is processed.

The next TM8100 Firmware release will have code modification to provide a debounce solution for the microphone hookswitch.

