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## **DTX-145 & DTX-445 Radios Manufactured Oct 2012 to March 2013 With Firmware Revisions 30.12 and 30.20**

### **Issue:**

DTX-145 and 445 radios manufactured from **October 2012 to March 2013 with firmware versions 30.12 (wideband/narrowband) or 30.20 (narrowband-only)** will have transmitter-to-receiver attack time issues **if used in applications that do not use the radio's squelch circuitry i.e. the audio output is never muted**. Radios with firmware versions 30.12 (wideband/narrowband) and 30.20 (narrowband only) are slow to output receive audio after a transmit-to-receive transition (i.e. receive attack time) when the squelch circuit is not used.

Firmware versions mentioned above had a section of code removed that appeared to be redundant. Unfortunately, that section of code is needed when the radio is used in an application that does not use the squelch circuit.

In the more common configuration i.e. one where squelch is used, the carrier detect signal takes the microcontroller out of sleep mode and thus, functions correctly with regard to receive attack time.

However, if the radio squelch is defeated by placing the radio in "monitor" mode or when the radio is configured with the PC programmer and the check box "Auxiliary Output Always On" mode is selected, the time to output receive audio after the cessation of transmit can be as long as 270 milliseconds. This is in contrast to the nominal 15 millisecond receive attack time of a correctly operating radio.

### **Solution:**

If excessive receive attack time is experienced and cannot be tolerated in the application, the radio can be flash upgraded in the field to the corrected firmware version 30.21 (narrowband-only). The firmware upgrade can be downloaded from <http://www.ritron.com/tech>

### **Before upgrading to firmware V 30.21, you must first update the DTXL PC programmer to Version 2.3.3. The Updated PC programmer is also located at [www.ritron.com/tech](http://www.ritron.com/tech)**

- After the updated programmer is installed and the firmware version V 30.21 file: 9s1N3021.s19 is copied to a directory of your choosing, connect the Ritron programming cable to the radio.
- Run the Ritron programmer and select "Radio" from the menu, then "Upgrade Firmware".
- Locate and click on the file 9s1N3021.s19 and then click "Open".
- The firmware upgrade will take about 7 minutes.
- Make sure power is not interrupted during this process.
- Radios can also be returned to the factory for the firmware upgrade.