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## Technical Note TN-609

### **Information on the Noise Blanker Circuit of the T2000**

20 March 2000

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#### **Applicability**

This Technical Note only applies to the T2000 radio product range.

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## **1. Introduction.**

#### Information

The noise blanker circuitry has been designed to prevent ignition noise interfering with the ability of the T2000 mobile to receive effectively. However, sometimes the circuit can be operating when not required. Therefore, this technical note will outline the situations in which the noise blanker circuit should be left enabled and when it should be disabled.

## 2. Information

### Facts about Noise Blanker

#### **Positive Aspects of the Noise Blanker:**

- 1/ Less noise in receiver when operating in electrically noisy vehicles
- 2/ Less noise in receiver when operating in close proximity to other electrically noisy vehicles.

#### **Neutral Aspects of the Noise blanker:**

- 1/ The noise blanker is more effective on VHF radios than UHF radios.
- 2/ The effect of the noise blanker is more beneficial the lower in frequency the radio is.

#### **Negative Aspects of the Noise Blanker:**

In high energy RF areas (within 3 to 8 KM of site), the noise blanker can:

- 1/ Make reception worse due to too much clipping out of the IF signal.
- 2/ Cause loss of Sync or loss of data in trunking or data radios.

#### **Solutions:**

Not a simple problem to resolve because environments with high levels of electric noise (. ie. city), are also the most likely areas for high energy RF conditions.

The Noise blanker works better between RF signal levels between about -115DBM to – 80/90 dBm. Weak signals are noisy in any case so are not so noticed. Very strong signals blank out the effect of the noise blanker.

Users operating out in the country areas where RF energy levels are much lower than the city should still leave the noise blanker circuitry enabled.

## 3. Issuing authority

### Name and position of issuing officer

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