NCS-C250 Repeater Thump Filters

Introduction

The NCS-C250 in the RPTR Mode incorporates Thump Filters which prevent a radio which is returning to the receive mode from the transmit mode, from keying other selected radio transmitters due to spurious received signal indications. This prevents the ping-pong effect of one radio keying the other radio and so forth.

Thump Filter Controls

The Thump Filter consists of two controls:

1. The first thump filter control is the Thumptimer. This timer does the following:

a) If a radio is transmitting, the busy light for that radio is ignored so it won't try to cause another radio selected for repeating to go into transmit.

b) If a radio has just stopped transmitting, it looks to see if a receive signal indication is present or becomes present within 200 msec. If so, it assumes the received signal indication is a false "thump" from the radio and ignores it and won't try to cause another radio selected for repeating to go into transmit.

c) If the apparent "thump " condition lasts more than 2 seconds, it is assumed that a valid signal is present and the received signal indicator is treated as valid so that any other radio(s) selected in the repeat mode can begin repeating the transmission.

d) If User Option 4 (Thumptimer Disable) is On, the thumptimers are disabled and no delay occurs between repeat transmitting on one radio and repeat transmitting on another radio.

2. The second thump filter control is the AUX Thumptimer. With this function turned ON (Factory Programming Function 4 - default Off) the timer works as follows:
If a radio has just returned to RCV from XMT, a received signal indication from any other radios is ignored for 500 msec. This prevents spurious signals from other radios from keying another radio.