



March 3, 2008

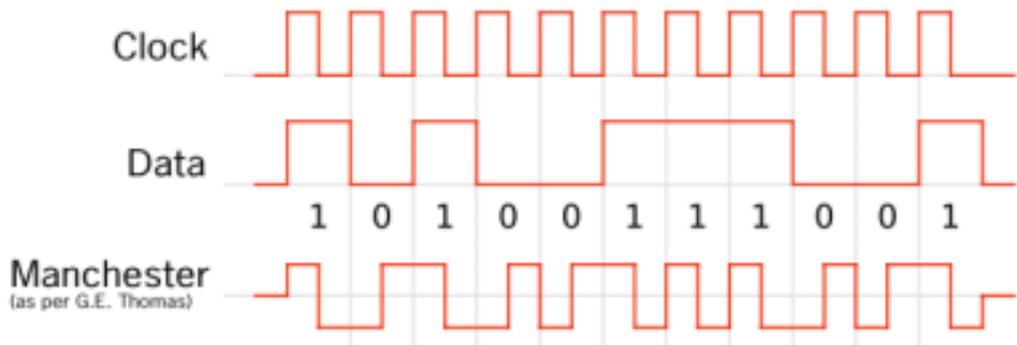
American TCB
6731 Whittier Ave
Suite C110
McLean, VA 22101
Attn: Mr. T. Johnson, Examining Engineer

RE: your e-mail dated February 28, 2008; Risco Ltd.
FCC ID:JE4RWRT433, ATCB005950

Reply to ATCB remarks for Wireless sirens

1. The approval is not a modular approval. The sirens themselves are to be approved. The revised file "Operational_description_18076_rev2" and Confidentiality_letter_18076_rev2 were uploaded on March 3, 2008.
2. The frequency scans (pre-scans) were performed in anechoic chamber and the measurements at the specific frequencies (final measurements) were performed at an OATS as appears in headings of plots 7.2.1- 7.2.26.
3. First the default value is indeed 60 minutes and not 65 minutes, the operational description was changed accordingly, please refer to "Operational_description_18076_rev2".
Second, all the menus discussed in this manual, are menus of the WisDom control panel and not in the siren. The feature of changing the supervision time of the panel is in the installer menu of the WisDom panel and not in the user menu, so user cannot change the supervision time value. Installer shall not touch this value in order to comply with FCC requirements.
This can be added to the installer manual, if needed.
4. Page 3 of the manual mentions the "Upload/Download" software. That is the name of the software. This is a software used with the WisDom main control panel and not the siren. The installer can connect to the WisDom panel to his laptop, and then using upload/download software it can program the WisDom.
One of the features in the WisDom, which can be control either by upload/download Software or by entering the installer menu using the keypad, is to initiate a self test in the siren. This is the same length and format of message like the other messages (such as tamper, alarm, low bat, etc).
5. A separate letter is provided for the issue of the need for professional installer. File "Professional_installation_letter_18076" was uploaded via Cover Letter folder.
6. The method, format, protocol and length of all the unit messages are the same.
The siren is sending a message to the panel. This message can be alarm, tamper, low voltage battery and acknowledge (for transmissions which are sent by the panel to the siren and the siren sends an acknowledgment).
All messages (expect acknowledge of course) are sent once to the panel.
When the panel receives the transmission it sends acknowledgment signal to the siren.
If the siren doesn't receive acknowledgment in 2.5 sec, it assumes the panel didn't get the message and send it again. Up to 7 repetition can occur (8 bursts total) if there is no reply from the panel.
The test report shows two plots for each mode, one with a control panel present (1 burst) and one without the control panel present (8 bursts).
Each of this bursts can be treated as a new event, since the cause for the transmissions is the lack of ack from the panel. And so, the max time of cease transmission is 2.5 sec.

7. Normally operating transmitter sends the message to a control panel and receives the acknowledgment. Upon this the transmission associated with any single event like tamper, initialization, alarm or other is finished. The second and so on transmissions are associated with a lack of acknowledgment and mean that normal system operation is disturbed. In other words each of consecutive transmissions is triggered by lack of acknowledgment which cannot occur under the normal system operation.
8. The modulation used in the system is Manchester code. See below:



So a change of data ("1" after "0" or the opposite) cause the high and low periods to merge and the bitrate looks like half the actual bit rate (what you refer to as the big pulses). When there is a series of "1" or "0" then you get the actual bit rate (2.4KHz) which look like the small pulses. Either way the duty cycle of each pulse is 50% (ideally) and either way the count shall show the same duty cycle for worth 100ms:

Each pulse shall be 416µs, 50% of it shall be On time: 208us
 There are 140 pulses in a bursts, so total on time: 29.12
 So 29.12% duty is average factor of 10.7dB

However HL have measured the worst of all pulses, which is 0.48ms "On" time and 0.144ms "Off" time (duty cycle of 76.8% instead of 50% ideally) and calculated the average factor accordingly, so they got 6.7dB instead of 10.7dB.

We accepted this worst case calculation to avoid having to measure the length of each pulse and pulse, and the result is a worst case average factor.

Sincerely,



Efi Goren,
 Certification Engineer
 Risco Ltd.