

Vol. 5 No.4

April, 2001

NYDXA@Hotmail.com

**DELAYED RESPONSE**

**DOCUMENTS SHOW FDNY RADIO PROBLEMS**

**NEWSDAY**

*by William Murphy, Staff Writer*

The new radios that firefighters rely on in life-threatening situations were twice returned to the manufacturer because of design problems, according to internal Fire Department documents. In addition, the documents show that top officials were notified March 14, the day after the new Motorola radios were put into service, that there were problems.

Yet the department did not pull the radios out of service until March 20, a day after a Queens firefighter collapsed and his call for help could not be heard by most of the firefighters on the scene. Much of the information to date about the radio snafu has come from documents compiled by fire unions and City Comptroller Alan Hevesi, a Democratic candidate for mayor.

Another Democratic mayoral candidate, City Council Speaker Peter Vallone (D-Astoria) is expected to speak on the issue tomorrow, when the council conducts an oversight hearing on the radio issue. Fire union officials say problems with the radios were reported during testing at the Fire Academy in January and February.

Department officials have maintained for the past several weeks that there were no confirmed reports of safety problems until the March 19 incident in Richmond Hills. The day after that incident, several staff chiefs from fire headquarters in Brooklyn conducted further tests at the Fire Academy on Randall's Island, said Frank Gribbon, deputy commissioner for public information. Those tests showed there were problems in transmissions when more than one radio was sending, Gribbon said, but he could not explain why the problem was not discovered during testing by the department's Tactical Training Unit. But the Uniformed Fire Officers Association has compiled reports from its supervisory officers -- reports written to their department bosses -- that contradict the

Established 1984

department's official position.

On March 14, for example, Battalion Chief Mark Ferran sent a written report to Chief of Operations Daniel Nigro reporting problems with the radios. "This occurred at a Haz-Mat [hazardous materials] incident where there were no critical communications like those that occur at serious fires," wrote Ferran, whose command is based in Long Island City.

That memo was dated one day after the new radios went into service. Two days later, Nigro's subordinate, Citywide Tour Commander Donald Burns, alerted all chiefs to potential problems with the radios.

The Burns message to field commanders, however, said only that there had been "rumors of problems but there has been no official notification." Gribbon said the only reports of problems were with echoes and a short delay in transmission with new digital technology, which has to encode the human voice before transmitting the message. One chief said he heard his own voice being transmitted after he had finished speaking.

Gribbon said firefighters and superior officers should have been aware of the issues because the department had sent videos from Motorola to every firehouse in the city to alert them to the echoes and delay.

He said he could not explain why so many senior commanders were surprised by the performance of the radios and wrote memos critical of their capability during the first days of their use. Also, Gribbon and other top department officials had never publicly disclosed the existence of the video or the earlier concern about feedback and delay in transmission until last week.

The department had to return hundreds of the radios last year after they proved not to be water-resistant, officials confirmed last week. The Fire Department insisted at first that it could not have conducted extensive field tests on the new

radios because they use a different form of transmission than the radios then in use. Mayor Rudolph Giuliani shot down the department's argument days later, saying it made a mistake in the way it introduced the radios. "They didn't train people in the Fire Department for enough time to get used to the new technology, and a mistake was made with it. That mistake is not going to happen again," Giuliani said. In addition to failing a test in which they were submerged in shallow water in May 2000, new radios in a prior shipment also had been returned to Motorola in 1999 because they did not give a feedback signal to indicate they were working, according to documents submitted to the comptroller's office by the Fire Department. "There is no written documentation; it was all discussion," the department said in response to a request for documents to show how the radios were tested and why they were returned. Gribbon said last month that the problems with the feedback were discovered in testing with Rescue Co. 2 in Brooklyn but claimed that it was never tested under fire conditions, only by handling the units as a practice.

Yet the department's response to the comptroller's office said specifically that Rescue 2 field-tested the radios "under actual fire conditions." Capt. Peter Gorman, head of the Uniformed Fire Officers Association, said the Fire Department has focused more of its attention on the March 19 fire than on the operational problems with the radios. "They didn't want to hear about any problems," Gorman said. "They just didn't want to hear about it."

*Editors Note: We've been reading about these alleged problems for about one month. During that time I personally have had several conversations with people who have used these radios, been involved with their distribution, and someone who works for the manufacturer. What has become very apparent is that the problem is with how FDNY wants to use the radios, NOT how the radios work! In one instance, the fire fighter needed to transmit while others were transmitting. An analog radio would at least the presence of another signal and theoretically result in saving a life. In the article above we now see mention of a fire fighter complaining of a delay or "echo" which, as we know, is a characteristic of a digital radio. The conclusion someone with a bit of radio savvy could come to is that FDNY has their own special needs that digital radios probably won't be able to provide. Their older analog radios are durable and proven. You would think that in such a critical application someone with common sense would say, "if it isn't broken than don't fix it!"*

## **MAJOR SOLAR STORMS CONTINUE!**

### X-Class Solar Flare Disrupts HF Radio

*(Reprinted from Popular Com E Mail News Letter)*

April 3, 2001

No less than three significant X-class solar flares were observed on 2 April from the large sunspot group known as NOAA Region number 9393. Two class X1 flares occurred in quick succession near the mid-UTC day of 02 April (one at 10:14 UTC [6:14 am EDT] and the other at 11:45 UTC [7:45 am EDT]). These events were associated with a probable partial halo coronal mass ejection (partly directed toward the Earth).

The third major solar flare from Region 9393 proved to be the largest in more than 10 years. It reached an x-ray class X17 x-ray level at 21:51 UTC (5:51 pm EDT) and was associated with an additional fairly high velocity coronal mass ejection that may have also contained a minor Earthward-directed component.

This very energetic solar flare was also responsible for accelerating high-energy protons toward the Earth. At the present time, protons with energies greater than 10 MeV (million electron volts) traveling at near the speed of light, have been observed in the near-Earth space environment with densities over 1,000 times stronger than normal background levels. Although this radiation storm pales in comparison to others that have been observed during this and other solar cycles, the energetic protons bombarding the Earth are causing serious communications problems for radio stations broadcasting signals via the ionosphere through the polar regions of the Earth. The energetic protons are redirected by the Earth's magnetic field into the polar ionosphere where they ionize the lower ionosphere. This ionization is responsible for strongly absorbing radio signal energy and is preventing some transpolar radio communications. This phenomenon is known as Polar Cap Absorption (or PCA) and is a major nuisance for shortwave radio broadcasters and aircraft flying the polar routes.

The strong proton activity is also capable of producing charging related anomalies on orbiting spacecraft and may (in severe cases) damage sensitive spacecraft equipment. The energetic protons are also capable of distracting sensitive star-tracking cameras on spacecraft that use the

stars to maintain the proper orientation. They also create significant levels of noise on cameras in space. GOES weather spacecraft may see increased levels of noise in the images produced. The SOHO spacecraft cameras (that look directly at the Sun) are very heavily affected by these proton bombardments. They can also decrease the efficiency and life expectancy of solar array panels that feed spacecraft with electrical power.

Additional major solar flares (and proton flares) are possible from powerhouse active Region 9393 before it rotates behind the western limb of the Sun and out of view over the next 2 to 3 days.

Finally, a FOURTH major X-class solar flare was observed early on 3 April at 03:57 UTC (11:57 pm EDT on 02 April). This event reached a class X1.2 x-ray intensity, but was somewhat of a surprise in that it originated from a NEW active sunspot region just now rotating into view around the southeastern limb of the Sun. So although Region 9393 is departing the western limb of the Sun over the next few days, we now appear to have another complex active region coming into view around the limb of the Sun, which may provide us with additional major levels of solar flare activity. This new region is presently too close to the limb to discern any significant detail. A closer examination of this new region will have to wait another day or two when it rotates fully into view.

All of the activity that occurred on 02 and thus far on 3 April has resulted in a total of one (possibly two) coronal mass ejections that appear to contain some mass that is directed toward the Earth. Space weather forecasters believe there is a chance that a minor auroral storm could develop on 04 and/or 05 April following the arrival of these CME(s). Although the magnitude of the auroral activity is not expected to reach the intensities that allowed aurora to be observed well into the southern states and northern Mexico regions on 31 March, there is a fair chance dark-sky middle latitude regions might be able to glimpse periods of moderately strong activity.

A middle latitude auroral activity watch has therefore been issued for the 04 to 06 April time period, with heaviest emphasis on 04 and 05 April. People interested in observing auroral activity are encouraged to monitor conditions and watch for possible periods of enhanced activity occurring on these dates.

### **FCC TAKES FIRST STEPS TO REALLOCATE SEVERAL UHF TV CHANNELS**

[http://www.fcc.gov/Bureaus/Wireless/News\\_Release/2001/nrwl0109.html](http://www.fcc.gov/Bureaus/Wireless/News_Release/2001/nrwl0109.html)

Washington, D.C. - The Federal Communication Commission (FCC) began the process today of reallocating television Channels 52-59 (the 698-746 MHz spectrum band) for new commercial wireless and broadcast services. The Commission also proposed rules for the licensing, operating, and competitive bidding of wireless and other licenses in this 48 MHz of spectrum. The FCC is reclaiming this spectrum for new commercial services as part of its transition of TV broadcasting from analog to digital transmission systems.

#### **Background**

The Communications Act requires the FCC to assign spectrum by auctions in the 700 MHz band (698-806 MHz) that is reclaimed from broadcast television as a result of the transition from analog to digital television (DTV). The Commission anticipates auction of the 698-746 band prior to September 30, 2002, consistent with the Balanced Budget Act of 1997.

The reclamation of the 700 MHz band is occurring as a result of the planned migration of broadcasters into the "core" broadcast spectrum (currently Channels 2-51) that will occur when they convert from analog to digital operations. As part of the conversion process, Congress has provided for a transition period during which broadcasters may continue to operate their existing analog systems while using a second channel to transmit their DTV signals. The transition period is targeted to end in 2006, but the Commission is statutorily required to extend that date on a market-by-market basis if one or more of the four largest network stations or affiliates are not broadcasting in digital, digital to analog converter technology is not generally available, or 15% or more television households in the market are not receiving a digital signal. At the end of this transition, analog service will cease, and the remaining broadcast operations above Channel 51 will be relocated into the core broadcast spectrum.

The FCC previously reallocated the upper portion of the 700 MHz band (747-806 MHz, or television Channels 60-69), and adopted service and licensing rules for this spectrum. The Commission allocated 24 megahertz for public safety, 30 MHz for

new commercial services, and created a 6 megahertz guard band. The Commission is in the process of licensing the Guard Band, and will auction the remaining 30 megahertz of commercial spectrum commencing September 12, 2001.

### **ART BELL & HAROLD ORT**

<http://www.artbell.com>

Just received some great news that Art Bell will be having Harold Ort of Popular Communications magazine on his show on April 16, 2001 (Monday night.) I've heard Art with Harold on before and the show is very interesting try to tune in. For most readers, this can be heard on WABC 770AM. The show airs from 1:00 a.m. to 5:00 a.m. Art Bell archives his shows on the web you can still hear his show at your convenient time.

Bob from the Bronx 73zzzzzz

### **SONY ANNOUNCES NEW "SOFTWARE RADIO"**

[http://www.nikkeibp.asiabiztech.com/nea/200101/ale rt\\_120439.html](http://www.nikkeibp.asiabiztech.com/nea/200101/ale rt_120439.html)

Sony Computer Science Laboratories, Inc has prototyped its first software radio, named Software Programmable and Hardware Reconfigurable

Architecture for Network (SOPRANO) 1.0. Modulation, demodulation and other basic radio functions are implemented in software, which can be changed to allow a single unit to support multiple radio protocols.

The supported band is from 500MHz to 9GHz, meaning it can handle existing mobile telephones as well as third-generation (3G) mobile telecommunications (IMT-2000), wireless local area networks (LAN) and Bluetooth. The firm developed a frequency conversion integrated circuit (IC) using the Multi-port Direct Conversion technique, for use in the SOPRANO 1.0 receiver.

The standard direct conversion scheme uses a mixer IC to convert the input into orthogonal (I/Q) signals, but because the mixer IC phase characteristics vary in frequency, performance degrades as bandwidth increases. The new approach adds the received signal to a reference (local oscillator) signal to generate three signals with phase differences.

These are amplitude-rectified, and the detected voltages are vector-processed to produce an orthogonal signal. Because the phase difference is

used, instead of the phase itself, the variation is absorbed. The frequency conversion IC integrates three amplitude detectors and phase shifters, measures 2.4mm x 1.8mm, and has a peak current consumption of 3mA. It was manufactured with 0.5micron rule GaAs hetero junction bipolar transistor (HBT) technology

### **DOITT SYSTEM UPDATE**

Eddie, K2EPM has been very busy with his BC-780 running under WinScan780. He passes on this info he has recently compiled.

"Today I logged hits on the NYC DOITT System using a BC-780 with WinScan780. I have not researched who belongs to what code, you can look this up on [www.n2nov.net](http://www.n2nov.net), this list is only meant to help you figure out what codes are most active. This log was compiled over a 12 hour period from 9AM to 9PM.

I used the fleet map of: b0=s4; b1=s0; b2=s12; b4=s13

### **HITS**

000-1  
000-4  
000-8  
200-14  
400-1 thru 400-14

800] (yes, the character " ] " showed up several times, I don't know if this is a glitch or not.)

8224, 8256, 8304, 8336, 8480, 8512, 8528, 8544  
8576, 8608, 8624, 8672, 8688, 8720, 8736, 8752  
8784, 8800, 8816, 8832, 8848, 8864, 8880, 8912  
8928, 8944, 8960, 8976, 912], 9120, 920], 9616  
9648, 9680, 9712

Eddie Muro - K2EPM

### **SOME INTERESTING WEB SITES**

Courtesy KB2EOQ

<http://www.netsync.net/users/obrienaj/carc.htm>

Courtesy N2NOV

Middlesex County Scanner Info

<http://home.att.net/~rpribush/middle.html>

<http://uweb.superlink.net/jcr1434/scanner/middlesex.html>

### **NJ HOSPITAL JEMS 2 DTMF CODES**

<http://uweb.superlink.net/jcr1434/scanner/jems2.html>

Several weeks ago we were asked if anyone knew the touch tone codes used to dispatch hospitals and medical related traffic. Justin passes this page along which should answer any questions you may have.

### **NEW JERSEY FOREST FIRE SERVICE**

Unbeknown to many, we are now at the beginning of the fire season. The NJFFS offers some great listening, and the action is not limited to daytime / weekends.

Ch 6: **159.375** PL 179.9 Simplex Operations

Ch 7: **151.415** PL 179.9 North Region Repeater

Ch 8: **151.475** PL 179.9 Central Region Rptr

Ch 9: **151.265** PL 179.9 South Region Rptr

Ch10: **159.285** PL 179.9 Air Operations

### **HMMMM....**

Funny how certain topics seem to pop up all at once. Over the past week I have seen four mentions of people who are having problems recording from their 780 using VOX type tape recorders. In all cases the end user is complaining of a hum on the audio. In one of the four postings the writer states that using a "three to two prong" AC adapter solved the problem. At this point it became very obvious to me what was happening. It also suggests that the problem may indicate a more serious problem that could represent a very serious health hazard.

Most consumer electronic products use a two prong AC plug. Professional / industrial equipment and many power supplies often add a third prong which is connected to earth ground. By most electrical codes in the US the "common" wire on your AC line should be at the same electrical potential as earth ground. Theoretically, we should be able to measure between "common" and earth ground and see no resistance - zero ohms. In reality, this is often not the case.

Consumer electronic equipment uses "common" as its ground, usually isolated via the power transformer. If a device using a three pronged AC connection is integrated with a two prong device, and a difference in potential exists we create a "ground loop." If you know how to use an AC volt meter here's a simple test you can do. Measure between the third prong ("ground") and the AC common line on the AC outlet your equipment is plugged into. If you see 0 volts, decrease the voltage scale on the meter until you are in a very

low scale, say 0-10 volts. Any AC voltage you can measure should not be there.

While using a 3-2 prong adapter may hide the problem, consider the following.

Let's say that for reasons unknown you loose the "common" wire on the service feed to your house. The third wire "ground" was added for this very scenario. In theory it is "equal" to the common line and would serve as the return path. If "common" and "ground" are not equal than the return path becomes the person in contact with the device in question. Your name is immediately changed to Ted Bundy and you can add "conductor" to your resume.

The solution is to have a licensed electrician check your house wiring as soon as possible. Similar situations can arise with TV's and VCR's that are connected to cable TV systems. Often your cable TV company will have to install a ground block and tie it to the ground rod used at your service entrance. And finally, I have seen countless cases where power strips, especially those with surge suppression, can introduce ground loop problems. When troubleshooting and such problems I suggest having your equipment plugged directly into the AC wall outlet.

Bob, WA2SQQ

### **FRS MONITORING**

Aside from the hundreds of families using FRS, I have personally monitored some very interesting traffic. Insurance company surveillance, private detectives, and last night some activity using DVP on 462.7125. Between the DVP, retransmission of some sort of air surveillance in which Omaha was involved. In the Clifton, NJ area we also have several stations obviously running more power than allowed, slowly transforming the FRS band into a new CB band. Take a listen, you'll be surprised what you might hear!

### ***The Urban DX'er would like to thank all those who contributed to this months issue!***

Charlie - N2NOV, "R" from Bridgeport, CT,  
"MFR301" & Metro Fire Radio, Joe Walc - K2JA ,  
Warren Silverman - N2RAH, NEWSDAY