

***BREAKING NEWS!******FDNY - EMS TESTING MOTOROLA******XTS3500R RADIOS***

FDNY-EMS will be conducting a test of the new Motorola XTS 3500R radios from July 5th to July 26th in the South Bronx and the southern half of Staten Island. The radios will be configured differently for the crew members and for the supervisors. The crew members will have a zone for the current EMS freqs, a zone for the ten UHF MED channels, a zone for FDNY fireground (digital/analog) and a zone that has NYPD CW1. The supervisors will have the same layout except for NYPD zone which will also have the new inter-op channels. The radios will be configured to use a "soft-key" to change between the zones instead of the A/B/C toggle on the top so that more than 3 zones can be used. Supervisors radios will also be able to scan among selected channels. After the test is concluded on July 26th, comments will be accepted from the participants for FDNY review during mid-August.

**ZONE EMS Freq - PL**

1 CW RPTR	478.0125/85.4
2 CW CMD	478.0125/85.4 (simplex)
3 MAN S	483.3625/85.4
4 MAN C	483.4875/85.4
5 MAN N	483.2375/85.4
6 BX S	477.8375/85.4
7 BX N	478.2125/85.4
8 QNS W	477.9125/85.4
9 QNS E	483.6125/85.4
10 BK N	478.2625/85.4
11 BK C	477.8625/85.4
12 BK S	484.2375/85.4
13 S.I	484.4875/85.4
14 RADIO	ID ONLY
15 TAC 1	477.8625/85.4 simplex
16 TAC 2	487.4875/85.4 simplex

**Zone ALS**

1 MED 1	463.000
2 MED 2	463.025
3 MED 3	463.050
4 MED 4	463.075
5 MED 5	463.100
6 MED 6	463.125
7 MED 7	463.150
8 MED 8	463.175
9 MED 9	462.950
0 MED 10	462.975

**Zone FG**

1 FG1	486.11875 simplex
2 FG2	486.88125 simplex
3 FG3	487.13125 simplex
4 QN FG	486.13125 simplex
5 BK FG	486.89375 simplex
6 MN FG	486.14375 simplex
7 BX FG	486.10625 simplex
8 SI FG	487.14375 simplex
9 HI RISE RPTR	483.3875
10 BATTALION MOBILE RPTR	483.7375
11 SUBWAY RPTR 1	(Possible 460.575 /173.8)
12 SUBWAY RPTR 2	(Possible 460.625 /173.8)
13 EMS TAC 2	487.4875/85.4 simplex
14 RAILROAD RPTR	UNKNOWN

**PD**

1 CW1	470.6875/100.0
2 CW1 SI	482.6625/100.0
3 CW IO	482.6875/110.9
4 CW IO SI	482.3875/110.9
5 MN IO	482.7125/123.0
6 BX IO	482.7375/136.5
7 BK IO	482.7875/151.4
8 QN IO	482.8125/167.9
9 SI IO N	482.8375/186.2
10 SI IO S	482.5375/186.2

**LAPD GOES DIGITAL**

Caught this on the Strong Signals page

<http://www.strongsignals.net/> ...From Kevin Williams, NI8H, out in California comes word of the changes to the LAPD radio system LA City turned off ALL of their analog repeaters last night [June 18] at 2200 hours PST.

The ONLY analog repeater they are using is for the LAPD Access channel to permit other departments a single repeater pair to advise LA of pursuits, etc entering LA. All other repeaters are APCO-25 only.

There are two other analog frequencies being used. One is CLEMARS Gold (simplex) and Administrative Net which is used for low power comms within the City jail system. This same freq is being used as an APCO-25 repeater pair.

The ASTRO saber III UHF radios being used by the officers have NOT been programmed in mixed mode receive and therefore, none of the officers can hear the jailers or vice-versa.

## **DIGITAL MARINE RADIOS**

**By John Brownlee**

[http://www.saltwatersportsman.com/boating/vhf\\_radios\\_go\\_digital.html](http://www.saltwatersportsman.com/boating/vhf_radios_go_digital.html)

Imagine picking up the microphone of your VHF radio from wherever you happen to be fishing and effortlessly placing a telephone call to any number in the world. Imagine further that this phone call is digital, private, and available 24 hours a day, even far from sight of land, beyond the reach of other technologies like cellular telephone service, and all at a surprisingly affordable cost. Sound far-fetched? Not hardly. It's actually right around the corner.

For the full story, check out the web page mentioned above!

## **APCO 25 RECEPTION MAY NOT BE FAR OFF**

If you've been following some of the conversations in the various scanner related news groups than you already know that there's been a lot of discussion about methods of receiving the Apco 25 digital standard, While once believed that it was virtually impossible, it now appears to it might be possible using software and a simple interface. Parallel to these efforts, Uniden is working on an Apco 25 scanner that is rumored to be released in about one year.

What is often assumed is that digital modes are being created to offer "privacy" and security. While a portion of the development efforts may include this goal, digital modes offer much more efficient use of the ever decreasing radio spectrum. Charlie, N2NOV ran across these comments which put the issues into perspective when someone suggested that receiving digital transmissions was almost impossible.

"Au Contraire - the current 12.5 khz Astro/APCO-25 voice modulation is somewhat filtered 4 level MFSK not terribly different from FLEX paging waveforms. It was designed to be demodulatable by more or less conventional FM IF systems and discriminators. One should be able to decode APCO-25 voice using just a discriminator tap and suitable signal processing. The signal processing required is a bit more sophisticated than an op amp slicer but not terribly different in principle - for strong signals it would actually be possible to get away with using one of those 4 level slicers, but for optimum performance one needs to do some additional tricks.

Of course the data out of such a slicer is a stream of symbol values that encode frames of vocoded voice and a good bit of other information along with lots of extra bits for error correction. So it takes some hairy software to correct the errors, sort out the information into vocoder frames and convert the vocoder frames into speech audio using the IMBE algorithm.

Thus an add in board would presumably consist of an A/D converter to digitize the signal out of the discriminator, some filtering, and a DSP chip that would do the bit slicing and decoding and IMBE and send audio out an A/D chip to the speaker. And this board would presumably tap into the discriminator output and the scanner audio section. It might also interface with the scanner control processor to coordinate its decoding with the rest of the scanner software such as the trunking code.

It has long been possible to decode APCO 25 with a scanner with the discriminator output fed into the sound card input of a suitable laptop with suitable software - but patent issues make it a bit hard to release such code to the public at large. These days it might even be possible to port the software to a PDA or handheld PC with a sound system....

## **CONDOLANCES**

As I was sitting at the table eating my bran flakes this morning I was also reading the paper (Newsday) when I ran across this Obituary:

**Ruth Kneitel**, 94, Cartoon Performer, Script Writer  
Ruth F. Kneitel was in her 20's when her father's animated film studio, Fleischer Studios, created the popular, sexy cartoon character Betty Boop, among other famous icons. For years, Kneitel herself would be part of the cartoon world, even as a performer participating in a show that included the famous character. Kneitel, a cartoon script writer, died on June 7. She was 94.

"She wrote a number of cartoon scripts around the 1950s for 'Popeye' and 'Casper the Friendly Ghost,' " said her son **Thomas Kneitel**, a senior editor for Popular Communications in Hicksville. It went on for about another 6 or 7 paragraphs telling about her life.

Ed Muro - K2EPM, Long Island, New York

*Editors Note: Our condolences go out to Tom. For those readers who don't recognize the name, Tom Kneitel has been responsible for several electronic and communications magazines for as long as I can remember. These include Popular Communications a,d "S9".*

### **GREAT DATA MODE PAGE**

Quite often we receive E mail from readers who ask where one can obtain information and software to monitor the various digital modes we run across. Charlie, N2NOV stumbled upon a Dutch page that offers a very wide variety of software. While the page is in Dutch, there's enough English to let you know what they are offering. I strobgly urge you check this out!

<http://www.geocities.com/CapeCanaveral/Hangar/8539/04DATA.HTM>

### **ON THE SHORTWAVES**

**Radio Nepal** <http://www.catmando.com/radionepal/>

Nepal is one of those countries you have heard about, but very few people have ever visited there. For the shortwave enthusiast this would certainly be a great catch. Several years ago I was lucky enough to work 9N1MM on 20M. Fr Moran was an American missionary who was one of the few hams in that country. Unfortunately, he passed away so Nepal is probably unavailable at this time. The Radio Nepal site mentioned above offers Real Audio links to the station. Check it out.

### **AERO RADIO TRAFFIC**

de N2OAD, Joe

Here some freqs. for the net...

Traffic Helo to Traffic Helo (Shadow Traffic) **122.75**

Not sure if it's the same as the Skywrite freq. Also  
**131.425** Blimp on ground comms @ Teterboro.  
Medevac Lehigh Valley PA - **155.22**  
Penn Star dispatch **155.385** PL 100.0  
Statflight Upstate Ny **463.000** PL 179.9  
Thanks  
Joe,N2OAD

### **VISITOR FEEDBACK**

Greetings,

Just wanted to compliment you on your web site. I was unaware of it until today when I found a link to it from Strong Signals.

I live on Cape Cod in Massachusetts. During band openings NYPD is received here loud and clear on 476 and 477 MHz. Your web site will be a great resource for me determining who's who in the future. Best wishes...

Scott Halligan/KC1UA

Scan Cape Cod - <http://www.scancapecod.net>

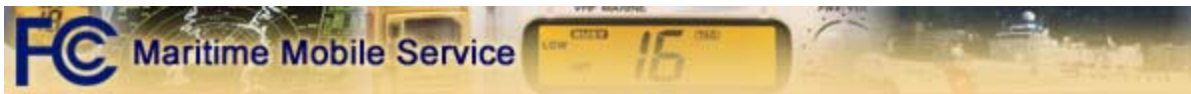
### **MARINE SCANNING**

And finally, as the summer heats up we officially kick off the July 4<sup>th</sup> Holiday weekend in just a few days. I came across two web sites that did a nice job of laying out the marine channels. These are attached as the last two pages of this months Urban DX'er.

As you know, this newsletter is created using Adobe Acrobat. Having recently upgraded to version 5.0, one new feature makes it a snap to capture entire web sites and convert them to PDF files. I suggest you visit the Adobe web site and upgrade the newest version of the Adobe Acrobat reader. It offers many new features, some of whic are planned for future issues of The Urban DX'er.

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

Charlie - N2NOV, "R" from Bridgeport, CT, "Strong Signals.Net, N2OAD, K2EPM,



[FCC](#) > [WTB](#) > [Maritime Mobile Service](#) > Marine VHF Radio Channels

[WTB Site Map](#)

## Marine VHF Radio Channels

The chart below summarizes a portion of the FCC rules -- 47 CFR [80.371\(c\)](#) and [80.373\(f\)](#)

Type of Message	Appropriate channel(s)
<b>DISTRESS SAFETY AND CALLING</b> - Use this channel to get the attention of another station (calling) or in emergencies (distress and safety).	16
<b>INTERSHIP SAFETY</b> - Use this channel for ship-to-ship safety messages and for search and rescue messages and ships and aircraft of the Coast Guard.	6
<b>COAST GUARD LIAISON</b> - Use this channel to talk to the Coast Guard (but first make contact on Channel 16).	22
<b>NONCOMMERCIAL</b> - Working channels for voluntary boats. Messages must be about the needs of the ship. Typical uses include fishing reports, rendezvous, scheduling repairs and berthing information. Use Channels 67 and 72 only for ship-to-ship messages.	9 <sup>6</sup> , 68, 69, 71, 72, 78, 79 <sup>4</sup> , 80 <sup>4</sup> , 67 <sup>7</sup> .
<b>COMMERCIAL</b> - Working channels for working ships only. Messages must be about business or the needs of the ship. Use channels 8, 67, 72 and 88 only for ship-to-ship messages.	1 <sup>5</sup> , 7, 8, 9, 10, 11, 18, 19, 63 <sup>5</sup> , 67, 7, 79, 80, 88 <sup>1</sup>
<b>PUBLIC CORRESPONDENCE (MARINE OPERATOR)</b> - Use these channels to call the marine operator at a public coast station. By contacting a public coast station, you can make and receive calls from telephones on shore. Except for distress calls, public coast stations usually charge for this service.	24, 25, 26, 27, 28, 84, 85, 86, 87, 88 <sup>2</sup>
<b>PORT OPERATIONS</b> - These channels are used in directing the movement of ships in or near ports, locks or waterways. Messages must be about the operational handling movement and safety of ships. In certain major ports, Channels 11, 12 and are not available for general port operations messages. Use channel 20 only for ship-to-coast messages. Channel 77 is limited to intership communications to and from pilots	1 <sup>5</sup> , 5 <sup>3</sup> , 12, 14, 20, 63 <sup>5</sup> , 65, 66, 73, 74, 77
<b>NAVIGATIONAL</b> - (Also known as the bridge-to-bridge channel.) This channel is available to all ships. Messages must be about ship navigation, for example, passing or meeting other ships. You must keep your messages short. Your power output must not be more than one watt. This is also the main working channel at most locks and drawbridges.	13, 67
<b>MARITIME CONTROL</b> - This channel may be used to talk to ships and coast stations operated by state or local governments. Messages must pertain to regulation and control, boating activities, or assistance to ships.	17
<b>DIGITAL SELECTIVE CALLING</b> - Use this channel for distress and safety calling and for general purpose calling using only digital selective calling techniques.	70
<b>WEATHER</b> - On these channels you may receive weather broadcasts of the National Oceanic and Atmospheric Administration. These channels are only for receiving. You cannot transmit on them.	Wx-1 162.55 Wx-2 162.4 Wx-3 162.475

1. Not available in the Great Lakes, St. Lawrence Seaway, or the Puget Sound and the Strait of Juan de Fuca and its approaches.
2. Only for use in the Great Lakes, St. Lawrence Seaway, and Puget Sound and the Strait of Juan de Fuca and its approaches.
3. Available only in the Houston and New Orleans areas.
4. Available only in the Great Lakes.
5. Available only in the New Orleans area.
- 6.
7. Available only in the Puget Sound and the Strait of Juan de Fuca.

[PDF Version \(single page\)](#)

If you have any comments or questions about this information, please contact the Public Safety and Private Wireless Division of the Wireless Telecommunications Bureau at (202)418-0680 or e-mail [mayday@fcc.gov](mailto:mayday@fcc.gov)

Last reviewed/updated: March 31, 1999

# VHF Marine Radio Channels and Frequencies

Channel Number	Ship Transmit	Ship Receive	Use
01A	156.050	156.050	Port Operations and Commercial. VTS in selected areas
05A	156.250	156.250	Port Operations. VTS in Seattle
06	156.300	156.300	Intership Safety
07A	156.350	156.350	Commercial
08	156.400	156.400	Commercial (Intership only)
09	156.450	156.450	Boater Calling. Commercial and Non-Commercial.
10	156.500	156.500	Commercial
11	156.550	156.550	Commercial. VTS in selected areas.
12	156.600	156.600	Port Operations. VTS in selected areas.
13	156.650	156.650	Intership Navigation Safety (Bridge-to-bridge). Ships >20m length maintain listening watch on this channel in US waters.
14	156.700	156.700	Port Operations. VTS in selected areas.
15	--	156.750	Environmental (Receive only). Used by Class C EPIRB
16	156.800	156.800	International Distress, Safety and Calling. Ships required to carry radio, USCG, and most coast stations maintain listening watch on this channel.
17	156.850	156.850	State Control
18A	156.900	156.900	Commercial
19A	156.950	156.950	Commercial
20	157.000	161.600	Port Operations (duplex)
20A	157.000	157.000	Port Operations
21A	157.050	157.050	U.S. Government only
22A	157.100	157.100	Coast Guard Liaison and Maritime Safety Information Broadcasts announced on channel 16.
23A	157.150	157.150	U.S. Government only
24	157.200	161.800	Public Correspondence (Marine Operator)
25	157.250	161.850	Public Correspondence (Marine Operator)
26	157.300	161.900	Public Correspondence (Marine Operator)
27	157.350	161.950	Public Correspondence (Marine Operator)
28	157.400	162.000	Public Correspondence (Marine Operator)
63A	156.175	156.175	Port Operations and Commercial. VTS in selected areas
65A	156.275	156.275	Port Operations
66A	156.325	156.325	Port Operations
67	156.375	156.375	Commercial. Used for Bridge-to-bridge communication in lower Mississippi River. Intership only.
68	156.425	156.425	Non-Commercial
69	156.475	156.475	Non-Commercial
70	156.525	156.525	Digital Selective Calling (voice communications not required)
71	156.575	156.575	Non-Commercial
72	156.625	156.625	Non-Commercial (Intership only)
73	156.675	156.675	Port Operations
74	156.725	156.725	Port Operations
77	156.875	156.875	Port Operations (Intership only)
78A	156.925	156.925	Non-Commercial
79A	156.975	156.975	Commercial
80A	157.025	157.025	Commercial
81A	157.075	157.075	U.S. Government only - Environmental protection operations
82A	157.125	157.125	U.S. Government only
83A	157.175	157.175	U.S. Government only
84	157.225	161.825	Public Correspondence (Marine Operator)
85	157.275	161.875	Public Correspondence (Marine Operator)
86	157.325	161.925	Public Correspondence (Marine Operator)
87	157.375	161.975	Public Correspondence (Marine Operator)
88	157.425	162.025	Public Correspondence in selected areas only.
88A	157.425	157.425	Commercial, Intership only.