

ScannerDigest Newsletter

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Sorry, no column this issue

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Transformation in the Radio Scanning Hobby What has Happened? The Early Days

That seems to be a tricky question lately and it depends on who you ask. It's obvious to many hobbyists that have been involved in monitoring their local public safety agencies over the past twenty years or so; that the task of monitoring your local police, fire and EMS is no longer a simple one. The days of crystal-controlled police scanners are a thing of the past. Many of these radios have been relegated to the museums or packed away in a box somewhere in the far reaches of the garage. You can still get to see some of these old scanner radios as they occasional surface and make their way the the hamfest tables, some commanding a mere \$5-10 each. Lafayette, Fanon-Courier, Midland, Realistic, Heathkit, RCA, Bearcat (Electra), Regency are just a few nameplates that manufactured police-fire scanners. Crude to today's radio receivers, the radios required the purchase a 'crystal' for each frequency, and were limited to the number of channels that were able to be scanned. Four channels was a basic set up and some premium radios offered to scan up to sixteen channels. It required the hobbyist to purchase a crystal for each frequency and it was and one

could amass well over \$100 worth of crystals. Although many of the crystals were interchangeable with other radio makes, Bearcat scanners used a different IF (Intermediate Frequency) which would not allow them to be switched interchangeable among Bearcat radios.

Back in the late 60s, VHF was king. Most of the public safety agency radio systems operated in the 148-170 MHz band. Occasionally in larger cities where the frequencies were a bit congested, big cities like Philadelphia conducted radio communications in the newer UHF band. As far back as my memory goes, the Philadelphia Police have operated on the 453 MHz band.



Pictured to the left is a photo of my first scanner. It was manufactured by Midland and was available in either VHF High-Band or UHF. I purchased this model to monitor Philly police in UHF. A local electronic surplus store not only carried various electronic parts but also sold CB radios and Police scanners. They had a hand-drawn poster board of the city of Philadelphia and had it divided in various district numbers and highlighted the areas covered by each radio 'band'. In Philly they

referenced to channel or frequency as 'band'. After my initial purchase of the scanner of \$79, each month as funds became available; I would purchase a crystal costing \$4-7 each. By the end of my first year in the hobby, I filled my 4-channel UHF scanner with some additional crystals so that I could swap out various frequencies at my discretion.

- F-1 453.950 MHz Northeast Band (Districts 2-7-8-15)
- F-2 453.300 MHz East Band (Districts 24-25-26)
- F-3 453.750 MHz "J" Band (Citywide)
- F-4 453.250 MHz "T" Band (Citywide Traffic)

Based on the channel setup, I had full knowledge to the ongoing action in the city. I can't calculate the number of hours I spent monitoring the Philly PD "KGF587". The city

built a robust UHF radio system with built-in redundancy and had the capability to transmit from five separate tower locations dispersed throughout the city. Back then, little consideration was given to power output and since Philly was the exclusive user (no other agencies within 100 mile radius) on the 453 MHz band, the transmitted power in excess of today's standard. This made it possible to hear the police band very easily 20-30 miles outside of the city limits.

Although my first introduction to radio was DXing in the AM broadcast band, nothing came close to impacting my hobby until I got hooked into scanning. By the mid-70s I was immersed within the scanning hobby which ultimately led into the purchase of fancier radios and I broadened my interests outside of public safety sector into many niche monitoring activities. I've always enjoyed every minute of it and it never got old.

As readers of the SD Newsletter you are encouraged to tell us about your involvement in the scanning hobby. I'm sure everyone has their own story. You can share your passion by sending us your story to ScannerDigest@gmail.com

In the next issue I go over the changes that the hobby has gone through and the challenges that today's hobbyists are faced with.

Lou Campagna, Publisher

ALABAMA

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Just a few weeks after I arrived in Alabama in May 2012 and got the scanners unpacked and programmed, testing started on a new 700 MHz P25 trunk system in the Huntsville-Madison County area.

The Madison County P25 system is part of a State-Wide network that is being assembled partially from upgrading existing systems and from new construction. This networked system will allow someone from any location to communicate with first responders from any other location when needed for local mutual aid or wide area situations. Eventually, all Huntsville, Madison and Madison County agencies will move to this trunk system. Some of the 800 MHz frequencies on this system were moved over from the Huntsville Motorola Type II system after Fire, HEMS and Police stopped using it. The Huntsville Madison County Airport Authority will move to this system from their current EDACS trunk system. Some of the 700 MHz frequencies in this system are licensed to the State of Alabama.

This state-wide system has been in the planning stages for several years but was fast tracked after the April 27, 2011 tornado outbreak. This system will include a mix of VHF and UHF as well as the 700MHz and 800MHz.. Unlike the Ohio MARCS system which was built with mostly State funding, this network is being built by the individual counties and cities with the assistance of some State and Federal Government grants. Alabama has nowhere close to the amount of money that Ohio and many other states have to invest in a statewide communications system project, so completion will take a very long time. That is unfortunate, considering the huge amount of severe weather (tornadoes and hurricanes) that we have.

Baldwin and Mobile Counties on the Gulf Coast were the first to be a part of this system. Montgomery (the State Capitol) County is in the testing phase. Clinton, Morgan (which borders Madison County to the south) and Shelby counties have systems under construction, and along with Montgomery County are hoping to be online before the spring severe weather season in 2014. Etowah County has been licensed for 700 MHz P25 but I have not seen any status reports for it. Calhoun and Talladega Counties in East Central Alabama will be part of this system when the networking hardware is installed on their existing 800 MHz trunk system which is already covering both of those counties. Shelby County, south of Birmingham, will be a VHF P25 system. Cullman County has converted some of their VHF conventional repeaters to P25 with plans to upgrade to a trunk system when funds become available. The Jefferson County/Birmingham Motorola Type II system will be converting to P25. Marshall County, which borders both Madison and Morgan counties, has ordered a few radios for key personnel to use with mutual aid communications.

Madison County Communications District

System ID	46B
WACN	BEE00
Tower Number (Decimal)	302
Tower Number (Hex)	T0302
Tower Description	Huntsville Simulcast
Control Capabilities:	Data, Voice, Registration
Call Sign(s):	WPTZ783 WQPL410

Frequencies

Tower 302
Huntsville Sites: Monte Sano Mountain, Drake Mountain
Madison Site: Rainbow Mountain

851.71250	853.27500	853.66250
855.21250	857.41250a	857.66875
856.43750	855.61250	769.10625
769.33125	769.40625	769.46875
769.80625	770.33125	771.15625
771.60625	771.70625a	772.28125c
773.03125	773.28125	773.53125
773.78125	774.76875	774.79375a

Tower 303
 New Market Site: Lewis Mountain
 855.61250a 769.35625 769.96875
 770.80625 771.98125c 774.04375
 774.29375

Tower 304
 Gurley Site: Keel Mountain
 856.36250a 769.21875 769.71875
 770.05625 771.40625a 772.03125c
 774.54375

a – Alternate Control Channel
 c – Primary Control Channel

Neighboring Sites
 307 308 309 310 Morgan County

Talk Groups
 Many of the Talk Groups are encrypted, and are listed here only for documentation purposes. The system has the capability of using Phase II TDMA in the future. Some of the Fire Department encrypted talk groups are intermittently unencrypted, but this is an exception rather than common practice (I have never heard them unencrypted, but have seen them show up on Pro96Com unencrypted).

- 3 Huntsville Police Dispatch North
- 5 Huntsville Police Dispatch South
- 7 Huntsville Police Dispatch West
- 11 Huntsville PD Records (Encrypted)
- 37 Unknown
- 61 Unknown
- 87 Unknown
- 125 Unknown
- 215 EMA EOC
- 277 Unknown
- 283 Unknown (may be University of Alabama - Huntsville or Alabama A&M)
- 373 Unknown
- 455 TECH 1
- 457 Unknown
- 623 Unknown (600 series may be Huntsville Utilities)
- 627 Unknown
- 629 Unknown
- 633 Unknown
- 637 Unknown
- 639 Unknown
- 641 Unknown
- 645 Unknown
- 647 Unknown
- 649 Unknown
- 653 Unknown
- 657 Unknown
- 659 Unknown
- 663 Unknown
- 800 Unknown

- 3801 Unknown
- 3802 Unknown
- 4101 Unknown
- 6412 Unknown
- 29770 Unknown
- 29906 Unknown
- 30000 Common
- 30001 Common
- 30002 Common
- 30003 Common
- 30004 Common
- 30005 Common
- 30006 Common
- 30008 Common
- 30025 Huntsville PD (Encrypted)
- 30026 Huntsville PD (Encrypted)
- 30027 HPD (Encrypted)
- 30028 HPD (Encrypted)
- 30029 HPD (Encrypted)
- 30030 HPD (Encrypted)
- 30031 HPD (Encrypted)
- 30032 HPD (Encrypted)
- 30034 HPD (Encrypted)
- 30035 HPD (Encrypted)
- 30036 HPD (Encrypted)
- 30038 HPD (Encrypted)
- 30039 HPD (Encrypted)
- 30040 HPD (Encrypted)
- 30041 HPD (Encrypted)
- 30043 HPD (Encrypted)
- 30044 HPD (Encrypted)
- 30045 HPD (Encrypted)
- 30046 HPD (Encrypted)
- 30047 HPD (Encrypted)
- 30048 HPD (Encrypted)
- 30125 Huntsville Fire Dispatch
- 30126 HFD TAC 2 (Encrypted)
- 30127 HFD TAC 3 (Encrypted)
- 30128 HFD TAC 4 (Encrypted)
- 30129 HFD TAC 5 (Encrypted)
- 30130 HFD TAC 6 (Encrypted)
- 30131 HFD (Encrypted)
- 30132 HFD (Encrypted)
- 30133 HFD (Encrypted)
- 30134 HFD (Encrypted)
- 30135 HFD (Encrypted)
- 30137 HFD (Encrypted)
- 30138 HFD (Encrypted)
- 30139 HFD (Encrypted)
- 30140 HFD (Encrypted)
- 30141 HFD (Encrypted)
- 30142 HFD (Encrypted)
- 30143 HFD (Encrypted)
- 30144 HFD (Encrypted)
- 30147 HFD (Encrypted)
- 30148 HFD (Encrypted)
- 30150 HFD (Encrypted)
- 30225 Madison County Sheriff's Office Dispatch
- 30226 MCSO (Encrypted)

30227	MCSO (Encrypted)	30541	HEMSI
30228	MCSO (Encrypted)	30542	HEMSI
30229	MCSO (Encrypted)	30543	HEMSI
30230	MCSO (Encrypted)	30544	HEMSI
30231	MCSO (Encrypted)	30625	Madison County Fire Dispatch (Encrypted)
30232	MCSO (Encrypted)	30626	MCFD (Encrypted)
30233	MCSO (Encrypted)	30627	MCFD Ops 1 (Encrypted)
30234	MCSO (Encrypted)	30628	MCFD (Encrypted)
30235	MCSO (Encrypted)	30629	MCFD (Encrypted)
30236	MCSO (Encrypted)	30630	MCFD (Encrypted)
30237	MCSO (Encrypted)	30631	MCFD (Encrypted)
30238	MCSO (Encrypted)	30632	MCFD (Encrypted)
30239	MCSO (Encrypted)	30633	MCFD (Encrypted)
30240	MCSO (Encrypted)	30634	MCFD (Encrypted)
30241	MCSO (Encrypted)	30635	MCFD (Encrypted)
30242	MCSO (Encrypted)	30636	MCFD (Encrypted)
30243	MCSO (Encrypted)	30637	MCFD (Encrypted)
30244	MCSO (Encrypted)	30638	MCFD (Encrypted)
30245	MCSO (Encrypted)	30639	MCFD (Encrypted)
30246	MCSO (Encrypted)	30640	MCFD (Encrypted)
30247	MCSO (Encrypted)	30641	MCFD (Encrypted)
30325	Madison Police Dispatch	30642	MCFD (Encrypted)
30326	MPD (Encrypted)	30643	MCFD (Encrypted)
30327	MPD	30644	MCFD (Encrypted)
30328	MPD (Encrypted)	30645	MCFD (Encrypted)
30329	MPD (Encrypted)	30646	MCFD (Encrypted)
30330	MPD (Encrypted)	30647	MCFD (Encrypted)
30331	MPD	30648	MCFD (Encrypted)
30332	MPD	30649	MCFD (Encrypted)
30333	MPD	30650	MCFD (Encrypted)
30425	Madison Fire Dispatch	30652	MCFD (Encrypted)
30427	MFD	30653	MCFD (Encrypted)
30428	MFD	30654	MCFD (Encrypted)
30429	MFD	30655	MCFD (Encrypted)
30432	MFD	30656	MCFD (Encrypted)
30433	MFD	30657	MCFD (Encrypted)
30434	MFD	30658	MCFD (Encrypted)
30435	MFD	30659	MCFD (Encrypted)
30437	MFD	30660	MCFD (Encrypted)
30439	MFD	30661	MCFD (Encrypted)
30442	MFD	30662	MCFD (Encrypted)
30525	Huntsville Emergency Medical Services Inc Dispatch "Med Com"	30663	MCFD (Encrypted)
30526	HEMSI Ops 1	30664	MCFD (Encrypted)
30527	HEMSI	30665	MCFD (Encrypted)
30528	HEMSI	30666	MCFD (Encrypted)
30529	HEMSI HOSP Paramedics to Hospitals (Encrypted)	30667	MCFD (Encrypted)
30530	HEMSI (Encrypted)	30668	MCFD (Encrypted)
30531	HEMSI	30669	MCFD (Encrypted)
30532	HEMSI	30673	MCFD (Encrypted)
30533	HEMSI	30674	MCFD (Encrypted)
30534	HEMSI	30675	MCFD (Encrypted)
30535	HEMSI	30677	MCFD (Encrypted)
30536	HEMSI	30826	Unknown (308## series may be Huntsville City Schools)
30537	HEMSI	30831	Unknown (Encrypted)
30538	HEMSI	30832	Unknown
30539	HEMSI Supervisors	30836	Unknown
30540	HEMSI	30837	Unknown
		30839	Unknown

30840 Unknown
 30842 Unknown
 30927 Unknown (Encrypted)
 31039 Unknown
 31325 Unknown

It is probably safe to assume that talk groups already exist where there are gaps in what appears to be a continuous series of talk groups (example: Madison County Fire which starts at 30625 through 30677). I have been running Pro96Com in this system almost daily for a couple weeks and am finding sometimes 3 or 4 new talk groups every day filling in some of those gaps.

Pro96Com <http://www.psredit.com/pro96com/> is a freeware program that reads the data from the trunk system control channel and provides the user with a listing of talk group IDs and Radio IDs in various formats. The program requires use of the USB programming cable that is either shipped with the scanner or purchased as an option. Pro96Com works on Windows XP, Vista and Windows 7 and Windows 8, and is compatible with both GRE/Radio Shack and Uniden digital scanners. If you are familiar with the old MS-DOS Trunker and Etrunker programs, Pro96Com does the same thing, and more, for P25 trunk systems.

Last Minute News

Just as I was ready to send this column off to Lou, I received this new license info for Talladega County. This is for a P25 Trunk System with simulcast capability.

WQSK400
 ALABAMA REGIONAL COMMUNICATIONS SYSTEM
 [GOVERNMENTAL ENTITY PROVIDING COMMUNICATIONS FOR PUBLIC SAFETY]
 Control Point 1 - 26715 AL HWY 21, TALLADEGA AL 256-761-2125
 Control Point 2 - 1 COURTHOUSE SQUARE, TALLADEGA AL 256-761-2125

10/18/2013 License Issued
 Special Temporary Authority expires 04/16/2014
 1 - 780 New County Line Road, SYLACAUGA (TALLADEGA) AL
 [Structure: Guyed structure]

855.4875 FB2 100p 207e Units: 1 8K70D1W
 8K10F1E
 857.4375 FB2 100p 207e Units: 1
 8K70D1W
 8K10F1E

2 - ANGEL LYNN DRIVE, TALLADEGA (TALLADEGA) AL
 [Structure: Guyed structure]

855.2125 FB2 100p 254e Units: 1 8K70D1W
 8K10F1E
 856.7625 FB2 100p 254e Units: 1 8K70D1W
 8K10F1E
 857.7625 FB2 100p 254e Units: 1 8K70D1W
 8K10F1E

3 - (TALLADEGA) AL Countywide

810.2125 MO 40p 40e Units: 1100 8K70D1W
 8K10F1E
 811.7625 MO 40p 40e Units: 1100 8K70D1W
 8K10F1E
 812.7625 MO 40p 40e Units: 1100 8K70D1W
 8K10F1E
 812.4375 MO 40p 40e Units: 1100 8K70D1W
 8K10F1E
 810.4875 MO 40p 40e Units: 1100 8K70D1W
 8K10F1E

Emission code 8K70D1W indicates:
 P25 Linear Simulcast Modulation ASTRO (9.6 kbps in 12.5 kHz channel space)

Emission code 8K10F1E indicates:
 P25 Phase I C4FM voice

If you live in or travel through Alabama, please let me know what you are listening to, and I will include it in a future column.

Happy Scanning!
 73 de N8OAY

SOUTHERN NEW JERSEY *Michael P. Mollet, N2SRO*

Sorry, no column this issue

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Sorry, no column this issue

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Welcome to the Montgomery County, Ohio column.

First, I'm going to finish up the Englewood Dispatch Center for fire and EMS. The dispatch center is located in the Englewood Government Center at 333 West National Road in Englewood, Ohio. For fire/EMS, they dispatch Brookville FD/EMS, Englewood FD/EMS, Farmersville FD/EMS, New Lebanon FD/EMS and Union FD/EMS.

It's interesting to note that Farmersville FD/EMS and New Lebanon FD/EMS are the only two fire departments in Montgomery County not on an 800 MHz. trunk system, and have never been on 800 MHz. This has been due to

the expense of said system. Also, the old Brookville Dispatch Center, which had also dispatched New Lebanon and Farmersville, ceased operations and joined the Montgomery County Regional Dispatch Center until the expense, a few years later, forced them to contract with Englewood. New Lebanon and Farmersville went immediately to Englewood when Brookville went to the county center.

Here are their dispatch frequencies:

151.385 MHz. Farmersville and New Lebanon only (also operations)
155.070 MHz. Brookville, Englewood and Union simulcast
158.925 MHz. Brookville, Englewood, Union dispatch

The 151.385 is the old Brookville Dispatch paging channel and, the last time I checked, was still licensed on Brookville's KQF357 call sign.

The 155.070 is the old Brookville Police VHF and, the last time I checked, was still licensed on Brookville's KQE878 call sign.

As far as I know Farmersville (KQG229) and New Lebanon (KQG235) are still licensed on 154.190 MHz., even though neighboring Darke and Preble Counties use this only as a tactical channel.

Here are the talkgroups (on the Montgomery County TRS) for the 800 MHz. capable departments:

12368 Englewood/Union/Brookville Dispatch (simulcast 158.925 and 155.070)
6416 Englewood/Union/Brookville Operations 72
9616 Englewood/Union/Brookville Operations 73
3472 Englewood/Union/Brookville Operations 74
3504 Englewood/Union/Brookville Operations 75
13008 Englewood/Union/Brookville Medic Operations 7A
12400 Englewood/Union Training
13712 Englewood/Union Admin.
13776 Brookville Operations/Admin.
13744 Brookville Training

Here is the apparatus/station layout:

Farmersville FD/EMS - Sta. #67 - 207 N. Elm St.,
Farmersville

Chief 67, Asst. Chief 67, Capt. 67-C11, Capt. 67-C21,
Capt. 67-C31, Lt. 67-L12, Lt. 67-L22, Lt. 67-L32
Engine 67-1, Engine 67-2, Brush 67, Medic 67, Rescue 67

New Lebanon FD/EMS - Sta. #69 - 115 S. Clayton Rd.,
New Lebanon

Chief 69, Capt. 69-C1, Capt. 69-C2, Lt. 69-L1, Lt. 69-L2,
Lt. 69-L3
Engine 69-1, Engine 69-2, Brush 69, Medic 69, Medic 69-2, Rescue 69

Brookville FD/EMS - Sta. #76 - 21 S. Mulberry St.,
Brookville

Chief 76, Asst. Chief 76, Capt. 76-C2, Lt. 76-L3, Lt. 76-L4
Engine 76, Medic 76, Rescue 76, Utility 76 (4 x 4)

Brookville FD/EMS - Sta. #77 - 401 Albert Rd., Brookville

Capt. 77-C1, Capt. 77-C3, Lt. 77-L1
Engine 77, Brush 77, Medic 77

Union FD - Sta. #81 - 109 W. Martindale Rd., Union

Union-1 (Chief)
Engine 81, Engine 81-2, Medic 81, Medic 81-2

Englewood FD - Sta. #98 - 333 W. National Rd.,
Englewood

Englewood-1 (Chief), Car 2 (Asst. Chief), Car 3 (1st Responder)
Engine 98, Engine 198, Ladder 98, Medic 98

Englewood FD - Sta. #99 - 1099 S. Union Rd., Englewood

Engine 99, Ladder 99, Medic 99, Medic 199, Trench Rescue Trailer

Moving on, just a quick note about neighboring Darke County:

Greenville Police Dept. has given up their UHF 460.075 MHz. repeater. They were issued this around 20 years ago and has been incompatible with the surrounding VHF police departments, and even the Darke County Sheriff. They have recently gone to 151.4375 MHz.

I remember once, many years ago, when GPD got into a pursuit and ended up 15 - 20 miles north of the city along the Darke County-Mercer County line. This created major communication problems as this was an "all-walkie" system with the car radios on VHF and the portables on UHF.

I'm sure GPD is pretty happy with this change.

See you next issue.

MILITARY

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METEOROLOGICAL INFORMATION

Two hours prior to departing a location, military pilots requiring a weather forecast will provide their flight information to a military forecaster by contacting the Operational Weather Squadron (OWS) responsible for that locale. Where military weather and NOTAM services are not available, military pilots can obtain weather information from:

- 1) *Published Command-Approved Weather Sources**
- 2) *The U.S. National Weather Service (NWS)*
- 3) *A NWS/FAA approved source*
- 4) *Accredited Local Agencies*
- 5) *Notice-to-Airman (NOTAM) updates at <https://notams.jcs.mil>*

U.S. AIR FORCE

Operational Weather Squadrons (OWS) are 24-hour worldwide primary military weather briefing sources conducting weather operations in support of Army and Air Force total force operations. Using Automated Weather Observing Systems (AWOS) located at most major installations, OWS's regional 'hubs' are responsible for producing weather forecasts for all units in their specified geographic area. Weather officers and enlisted weather technicians operate around the clock providing installation forecasts; issue weather advisories, watches and warnings, flight crew briefings for the Air Force, Army, Guard, Reserve, and Combatant Command Forces.

After completing an eight month initial skills course, all new Air Force enlisted Forecasters and Weather Officer Apprentices report to an OWS to complete a fifteen month upgrade training process. At a regional OWS, working alongside a seasoned weather professional, the forecaster is trained in all aspects of Air Force meteorology.

USAF Operational Weather Squadrons (OWS)

Regions/NOTAM Briefing Facilities:

- 1) The 18th Air Force Tanker Airlift Control Center (TACC) Global Mobility Weather Operations are responsible for Flight Managed Missions worldwide and 18th TACC Training.
- 2) The 15th OWS at Scott AFB, IL is responsible for 153 installation sites in a twenty-four state region of the northeastern United States that include areas of: ND, SD, NE, MN, IA, WI, IL, IN, OH, WV, KY, VA, NY, PA, MD, DE, NJ, CT, RI, MA, NH, VT, ME, DC and Eastern Canada. Also the US Air Defense Identification Zone (ADIZ/ DC area) extending 200 miles off the VA coast.
- 3) The 25th OWS at Davis Monthan AFB, AZ IL is responsible for 82 installation sites in an eleven state

region of the western United States that include areas of: WA, OR, CA, ID, MT, WY, CO, UT, NV, AZ, NM, the western panhandle of TX, 90th Space Wing (F.E. Warren AFB), the US Air Defense Identification Zone (ADIZ), approximately 200 miles off the U.S. west coast and Vandenburg AFB.

4) The 26th OWS at Barksdale AFB, LA is responsible for 133 installation sites in a thirteen state region of the southwestern United States that include areas of: KS, MO, OK, AR, TX (except the western panhandle), LA, MS, AL, TN, GA, FL (including Florida Keys), SC, NC, Bermuda, Gulf of Mexico, Eastern Mexico, the US Air Defense Identification Zone (ADIZ), extending 200 miles off the U.S. TX, LA, MS, AL, NC, SC, and FL coasts and, support to Cape Canaveral Air Strip and Patrick AFB.

*Pilot-To-Metro Service (PMSV), Radio Call "METRO"

The USAF weather units operate Pilot-to-Metro Services Voice (PMSV) at selected Air Force bases and Army airfields. The primary purposes of PMSV's are for **communicating** various types of weather information-produced by the OWS- to military pilots. PMSV's are also used to update forecasts and flight-weather-briefings, obtain the latest weather observations and to receive Pilot Weather Reports (PIREPS) which are then entered into the weather telecommunications networks. PMSV operations will notify pilots of any adverse weather as provided by the weather personnel. Full service PMSV facilities are manned by fully qualified personnel. Limited service facilities are manned by individuals not qualified to prepare, issue, or interpret forecasts. They will identify themselves as a "weather apprentice." If a forecast is required, the apprentice will refer the aircrew to a full service facility. Enroute and alternate destination meteorological watches are the pilot's responsibility.

15th OWS/PMSV Responsibility:

Air Force Facilities:	Frequency
Andrews Joint Base AFB, MD	344.60
Dover AFB, DE	342.00
Ellsworth AFB, SD	375.775
Grand Forks AFB, ND	343.50
Grissom ARB, IN	348.40 (344.60-old)
Langley AFB, VA	239.80
Laurence G Hanscom AFB, MA	(telephone)
Martin State, MD	124.925 (AWOS 3)
McGuire AFB, NJ	239.80
[Joint Base McGuire-Fort Dix-Lakehurst]	
Minot AFB, ND	342.50
Offutt AFB, NE	227.40
Phelps Collins ANGB, MI[Alpena]	120.675 (ASOS)
Rickenbacker Intl, OH	132.75 (AWOS 3)
Scott AFB Mid-America, IL	239.80
Selfridge ANGB, MI	342.50
Stratton ANGB, NY [Schenectady]	119.275 (AWOS 3)
Westover ARB Metro., MA	274.75
Wright Patterson AFB, OH	348.40 (344.60-old)

Army Facilities:	Frequency
Camp Ripley, MN Ray S Miller AAF	148.35 / 360.25 (AWOS 3)
Fort Belvoir, VA / Davison AAF	139.40
Fort Campbell, KY / Campbell AAF	343.30
Fort Campbell, KY / Sabre AHP	259.425 (AWOS 3)
Fort Drum, NY / Wheeler-Sack AAF	317.50 (304.30-old)

Fort Eustis, VA / Felker AAF	134.10
Fort Indiantown Gap, PA/Muir AAF	124.175 (ASOS)
Knox, KY / Godman AAF	139.65
Fort Pickett, VA / Blackstone AAF	-----
Graying AAF, MI	119.075 (AWOS 3)

25th OWS/PMSV Responsibility:

Air Force Facilities:	Frequency
Beale AFB, CA	239.80
Buckley AFB, CO	228.45
Cannon AFB, NM	343.10
Creech AFB, NV [Indian Springs]	323.90
Davis Monthan AFB, AZ	239.80
Edwards AFB, CA	342.40
F.E. Warren AFB, WY	-----
Fairchild AFB, WA	234.80
Hill AFB, UT	342.30
Holloman AFB, NM	346.55
Kirtland AFB, NM [Albuquerque]	342.30
Luke AFB, AZ	267.40
Malmstrom AFB, MT	239.80
March ARB, CA	239.80
McChord Field, WA	342.30
Mountain Home AFB, ID	324.10
Nellis AFB, NV	323.90
Palmdale USAF Plant 42, CA	118.275 (ASOS)
Peterson Field, CO [CO Springs]	226.10
Schriever AFB, CO	-----
Travis AFB, CA	271.10
USAF Academy, CO	121.95
Vandenberg AFB, CA	342.40

Army Facilities:

	Frequency
Alamogordo White Sands, NM	127.825 (AWOS-3)
Amedee AAF, CA (Herlong)	118.825 (AWOS-3)
Camp Guernsey, WY	119.825 (AWOS-3)
Fort Bliss, TX / Biggs AAF	(telephone)
Fort Carson, CO / Butts AAF	44.10
Fort Huachuca, AZ / Sierra Vista AAF	119.675 (ASOS)
Fort Irwin, CA	-----
Fort Lewis, WA / Gray AAF	134.10 / 38.45
[Joint Base Lewis-McChord]	
Hood AAF, TX	306.50
Los Alamitos AAF, CA	239.80
[Joint Forces Training Base]	
Mc Clellan AFD, CA	125.975 (AWOS-3)
Sparta Fort Mc Coy, WI / Mc Coy AAF	118.375 (AWOS-3)
Wendover, UT /Decker AAF	135.075 (AWOS-3)
[Joint Base Lewis McChord]	
Yuma Proving Ground, AZ / Laguna AAF	128.225 (AWOS)

26th OWS/PMSV Responsibility:

Air Force Facilities:	Frequency
Altus AFB, OK	239.80
Barksdale AFB, LA	227.40
Cape Canaveral AFS, FL	225.05
Charleston AFB Intl, SC	233.95
Columbus AFB, MS	354.60
Dobbins ARB, GA	274.75
Duke Field, FL (Eglin AUX)	342.20
Dyess AFB, TX	383.25 (342.50-old)
Eglin AFB, FL	342.20
Elizabeth City CGAS, NC	124.375 (ASOS)
Homestead ARB, FL	318.65
Hurlburt Field, FL	335.45
Keesler AFB, MS	267.40
Lackland AFB Kelly Field, TX	239.80
Laughlin AFB, TX	354.60
Little Rock AFB, AR	239.80
MacDill AFB, FL	225.05 (344.60-old)
Maxwell AFB, AL	342.30
McConnell AFB, KS	374.20 (375.20-old)
McEntire JNGB, SC	342.50
Moody AFB, GA	263.45

North AF AUX, SC	118.525 (ASOS)
Patrick AFB, FL	225.05 (344.60-old)
Pope AAF, NC (Ft Bragg)	344.60
Randolph AFB, TX	239.80
Robins AFB, GA	349.85
Seymour Johnson AFB, NC	323.925
Shaw AFB, SC	342.50
Sheppard AFB, TX [Wichita Falls]	339.65
Tinker AFB, OK	261.025
Tyndall AFB, FL	290.625
Vance AFB, OK	342.55
Wallops Flight Facility, VA	119.175 (ASOS)
Whiteman AFB, MO	344.60

Army Facilities:

	Frequency
Fort Benning, GA / Lawson AAF	343.20
Fort Bragg, NC / Simmons AAF	141.25 / 265.60
Fort Hood, TX / Robert Gray AAF	306.50
[NASA Shuttle Landing Facility]	
Fort Leavenworth, KS / Sherman AAF	-----
Fort Leonard Wood, MO	118.70 (ASOS)
[Waynesville St Robert Regional Forney Field]	
Fort Polk, LA / Polk AAF	40.35/134.10/249.75
Fort Riley, KS / Marshall AAF	343.50 (344.60-old)
Fort Rucker, AL / Cairns AAF	134.10
Fort Sill, OK / Henry Post AAF	306.50
Fort Stewart, GA / Wright AAF	(telephone)
Hunter AAF, GA	309.00
Mackall AAF, NC	141.25 / 265.60

U.S. NAVY (USN)

USN Pilot-to-Metro Services Voice (PMSV) is available from the Naval Meteorology and Oceanography Command (NAVMETOCOM) located at the Stennis Space Center, MS. The NAVMETOCOM is a key enabler for safe and effective fleet operations. Navy Meteorologists and Forecasters analyze current environmental conditions, using computer models to forecast atmospheric and oceanographic phenomena impacting Navy flight operations. Forecasts, warnings, advisories and flight briefings that support land-based naval aviation assets, operations and facilities are provided via online tools, telephone, fax or face to face interaction 24 hours a day.

As of October 2013, the Naval Meteorology and Oceanography Command changed its Continental United States (CONUS) on-site forecasting services for all Naval Air Stations. During peak air field hours, an on-scene civilian forecaster is now present at all CONUS airfields. The on-scene forecaster assume forecast duties by collecting required hourly observations, providing eight-hourly Terminal Aerodrome Forecasts (TAFs), disseminating local weather watches and warnings, and providing transit weather forecasts to air crews via online, telephone, fax or face-to-face. A forecaster is available on Pilot-to-Metro Service Voice (PMSV) circuit during inclement weather to allow pilots to communicate directly with a certified forecaster. Outside of peak hours and on weekends and holidays, forecasting services are provided via reach-back by the Navy's two major Fleet Weather Centers located in Norfolk, Va., and San Diego, Calif. These centers are staffed by military and civilian Navy weather forecasters. A web-based forecasting service

portal, Flight Weather Briefer (FWB), is available for aircrews not requiring in-person briefings.

Aerographer’s Mates (AG)

Aerographer’s Mates are the Navy’s enlisted Meteorological and Oceanographic (METOC) experts, trained in the science of meteorology and oceanography. AG’s provide forecasts of meteorological and oceanographic conditions, and prepare environmental conditions briefings. Early in their careers, AG’s attend School at Keesler AFB, MS. where their training Personnel Qualification Standards (PQS) is as an Apprentice Forecaster. Mid-level AGs are Journeyman Forecasters, serving as Forecast Duty Officers at a shore or sea tour. Senior level AG PQS are Master Forecasters. Throughout their careers, AGs rotate between shore and sea tours. They may serve aboard ship or deploy as part of a Strike Group Oceanography Team assigned to a Fleet Weather Centers (Norfolk and San Diego).

***Pilot-To-Metro Service (PMSV) for U.S. Navy (USN)**

Facility	Frequency
China Lake NAWS, CA	343.15
Corpus Christi NAS, TX	343.50 (344.60-old)
El Centro NAF, CA	348.30
Fallon NAS, NV	327.40
Fort Worth NAS/JRB, TX	342.55
Goliad NOLF, TX	353.675 (ASOS)
Jacksonville NAS, FL	343.50
Key West NAS, FL	343.50
Kingsville NAS, TX	255.60 (344.60-old)
Lemoore NAS, CA	317.00 (AWOS-3)
Mayport NS, FL	289.95
Meridian NAS, MS	282.525 (312.40-old)
New Orleans NAS/JRB, LA	265.80
Norfolk NS, VA	271.60
North Island NAS, CA	342.35
Oceana NAS, VA	387.40
Orange Grove NALF, TX	225.60
Patuxent River NAS, MD	356.20
Pensacola NAS, FL	359.60
Point Mugu, CA	-----
Whidbey Island NAS, WA	343.40 (316.95-old)
Whiting Field NAS N, FL	316.95

U.S. MARINE CORPS (USMC)

Prior to departure, Marine Corps pilots receive required weather briefs as part of filing an Instrument Flight Rules flight plan. U.S.M.C. meteorologist stations, staffed 24 hours with observers maintaining a basic weather watch, provide weather updates to pilots via Pilot-To-Metro Service Voice (PMSV) as required. Marine Corps pilots may also contact the weather office via PMSV to report in-flight meteorological phenomena. These reports are referred to as Pilot Weather Reports (PIREPS).

***Pilot-To-Metro Service (PMSV) for U. S. Marine Corps (USMC)**

Facility	Frequency
Beaufort MCAS, SC	264.50
Bogue MCALF, NC	344.60
Camp Pendleton MCAS, CA	342.40
Cherry Point MCAS, NC	343.50
Miramar MCAS, CA	342.40
New River MCAS, NC	244.75
Quantico MCAF, VA	355.30
Twenty-Nine Palms Self, CA	308.30
Yuma MCAS, AZ / Yuma Intl.	349.75/120.70/120.775

What it all means to the military monitor.

Those fortunate to live near a military air-facility may hear aircraft on the ground contacting “METRO” requesting weather for a destination airport or the PMSV operator responding to a request from passing enroute transit military aircraft. For those not close to a military airfield, depending on the monitor’s station, atmospheric conditions and the aircraft’s altitude, enroute transit military aircraft may be heard from many miles distant requesting weather information from a PMSV. All of these can provide the monitor an opportunity for tracking movements of military jets and planes.

Acronyms:

AWOS- Automatic Weather Observing System is a real time system consisting of various sensors, a processor, computer generated voice subsystem, and transmitter to broadcast local minute-by-minute weather directly to aircraft. The AWOS system transmits a twenty to thirty second weather message, updated every minute, over a discrete radio frequency or the voice portion of a local NAVAID. AWOS-3 reports altimeter setting, wind data, temperature, dew point, density altitude, visibility and cloud/ceiling data.

ASOS- Automated Surface Observation System is the United States primary surface weather observing system. Installed and operated jointly by the National Weather Service, the FAA and the Department of Defense, ASOS is designed to support aviation operations and weather forecast activities, providing continuous minute-by-minute observations by performing basic observing functions necessary to generate a routine aviation weather report. Weather information is transmitted over a discrete VHF radio frequency or the voice portion of a local NAVAID.

Amateur Radio: Feedlines (Part 1)

Antenna systems are like chain links—they are only as strong as their weakest length. I want to spend our time examining feedlines so as to understand not only what role they play in the system, but also to understand how their properties impact their use. I also want to dispel some myths concerning them while hopefully promoting a good healthy perspective toward this important subject.

A feedline, or transmission line, is the link between your radio and whatever is being used to radiate the RF energy produced by the radio. (I am only looking at feedlines for transmission here because a feedline that works well for transmission on a given band will work well for reception on the same band).

Our goal is to take the same amount of energy produced by the radio and make sure all of it gets to the antenna so it can do its job radiating energy out to the world.

In the old days feedlines were commonly made from ladder line and this was a great conducting material for feedlines except for some restrictions.

- ladder lines are susceptible to problems if they came into contact with other metal surfaces, or if they needed to change direction abruptly. Either condition could cause a signal to terminate or become severely weakened.
- This type of feedline is also susceptible to wear and tear from the elements, particularly when passing along tree limbs or other rough surfaces.
- It should also be supported well where it connects to the antenna wires with Plexiglas or a similar non-conductive material.

The main advantages to ladder line is cost and signal efficiency—nothing else will give you the most energy transference efficiency as ladder line. Signal loss is negligible out to great distances, particularly when working HF, and its light weight can come in real handy in terms of lowering your support needs.

Coax

Coaxial feedlines came into vogue after WWII because there was such a surplus available after the war which made it relatively inexpensive. The military favored coax because it allowed them to run cables along the ground, around sharp bends, and they didn't have to worry about the cable coming into contact with other metal surfaces.

Coax by design has inner and outer insulation, and other than internal breaks/shorts, or RF traveling down the cable into the shack, there is little to go wrong with it. By the very nature of its design coax does present more resistance to the RF signal which must be accounted for,

and its weight can be a major consideration when supporting the antenna.

Today coax is rather costly, especially for the higher quality cables, and so one should consider running ladder line wherever it is feasible just for the cost benefit alone.

Feedline Theory (Simplified)

Feedlines consist of two wires which provide paths for alternating current (AC) to flow back and forth along the feedline. Ideally the current flow should be at 180° opposite phase angle and at equal amplitude so that the radiation field generated by the two lines cancels each other out. Remember, this is a feedline—we are not looking for this wire to radiate!

The spacing between the two wires of a ladder line is designed to offer enough separation that the two wires do not inhibit the flow of current or generate magnetic fields that interfere with one another. With coax line, there is both insulation and a dielectric material (usually the white plastic material you see surrounding the center wire) which keeps the currents from interfering with each other.

If the currents are unequal or the phase angle is not 180°, the line will radiate energy which will in turn drop the amount of energy getting to the radiating element of the antenna. This is both a simple and yet extremely important element of a feedline, and it is one most often overlooked when putting up an antenna.

For example, using ladder line incorrectly, or using the wrong kind of coax for a particular application can lead to significant losses in signal strength (I'll discuss coax more in a moment).

Feedline loss didn't become an issue for me until I started putting together my own antennas and I started reading about feedline loss and impedance characteristics of different types of coax. I got a rude awakening when I saw how much loss was inherent in RG-8U coax, especially at 440 MHz! I couldn't get better coax on that line fast enough (more on line-loss later)! Since that time I have been much more aware of the effects of feedline choice, so I hope this discussion helps you avoid some of my mistakes.

Back to our theory. When using coax, the process of how the fields are cancelled is a bit different, but the results need to be the same. With coax there is an inner conductor and an outer conductor, all housed within the coax cable. The outer conductor shields or traps the RF energy being transmitted along the inner conductor, and this keeps the line from radiating energy.

Breaks in the outer conductor can interfere with this process, as can electrical interference coming in from outside the cable through the skin of the coax. This is why most cable has at least one layer of insulation around the

outer conductor, and sometimes two. This “built-in” current separation and field cancellation makes coax a popular choice in most situations since one can be fairly certain the signal will get through properly assuming no malfunctions in the cable itself.

Not All Coax Is the Same

Now before you tune me out from more technical talk, allow me to explain why not all coax is the same. Understanding why you need certain types of coax for certain situations is a big step forward in understanding the antenna system as a whole, and it will allow you to make the most of each opportunity when setting up a new antenna.

There is a physical property of AC electrical conduction which is called the “skin effect”, and it has a direct bearing on feedline design for various frequencies. Skin effect is where RF (electrical) energy travels down the outside (or “skin”) of a wire, rather than through the wire itself. Smaller wavelengths (higher frequencies) require higher impedance between wires in order to properly cancel the fields created by the conducting wires.

Here’s where things get a bit tricky. Because of the skin effect mentioned earlier, current travels on the outside skin of the inner wire, while the current which travels along the outer wire travels along the inner skin of the braided wire.

In other words, because of how the skin effect affects both conductors, both the dielectric material and the conductors need a larger surface area to function properly. Higher frequencies need better dielectric material to keep things flowing smoothly (less leakage into the dielectric material), and a thicker center conductor wire gives more surface area contact for the RF energy to travel down the wire (greater skin effect).

This is why higher grade coax costs more than lower grade coax—there’s a lot more material involved. Cheaper coax may have an outside diameter of an 1/8” or so, while higher quality coax may be 1/2” or more in diameter.

Next time around I will continue with some more theory, as well as make some recommendations for what to use. Until next time, here’s hoping I catch you on the air sometime!

WASHINGTON DC REGIONAL

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The **Marriott Marquis** opened May 1, finally giving the Walter E. Washington Convention Center a connected “headquarters” hotel for conventioners. The large hotel has a great need for radio communication among many departments. National Orders, a company based in Tampa, Florida, provided the hotel with twelve DMR (MOTOTRBO) repeaters, and five MOTOTRBO simplex frequencies. Because much of the meeting space of the hotel is below ground level, the hotel needs multiple repeater sites for communication. According to an attachment on the FCC application, the system uses Motorola Digital IP Site Connect technology for the six below-ground levels. The antennas for the IP Site Connect are in the subflooring of the building. The attachment also states that the system will initially utilize 150 units, but will expand to 700 units within six to nine months. To monitor this system, one needs a discriminator-tapped scanner or software-defined radio dongle, as well as the software program DSD or DSD+. (No current scanner can monitor MOTOTRBO.)

Next door to the Marriott Marquis, the USA Science & Engineering Festival took place in late April. This free event reportedly drew about 300,000 people over two days. Interestingly, the organizers used channels on the convention center’s MOTOTRBO Capacity Plus system, instead of running their own separate system. When one thinks about it, this set-up is actually a good idea—the convention center can “rent” extra capacity on their system for visiting conventions. There were also a few analog channels in use. CSC Event Staff, which provides security and crowd control at many events in the DC area, was using their usual 461.5125 [d152] simplex frequency. And 464.7500 [d114] was used for first aid personnel (they may have been hired for this event).

DC Fire has still not transitioned to the city’s Project 25 trunked system. Most city services also have not transitioned. Of the services that have migrated, only the Metropolitan Police and Water and Sewer Authority are using TDMA talk groups.

Finally, Prince William continues to migrate to the Project 25 system. Fire and police are using some talk groups, but they also continue to use the legacy Project 16 system. Schools are on the system, and appear to be the only TDMA user currently.

Digital Amateur Radio Communications emerging in Illinois

This article has been a while in the works, but other things have kept me from actually sitting down and putting it to the paper. Several years ago via Amateur Radio I interacted with a local amateur operator during a storm. To make a long story pretty short, he got me interested in a club, which had a few members who were excited about a newer digital mode. I soon was piqued by the idea of experimenting with digital communications. I was a little disappointed with the costs involved, but soon learned that you can work around your budget. A few years later and here I am with 2 UHF digital radios and my excitement for digital has grown. Digital communications equipment is becoming more main stream, as agencies concerned over narrow banding become concerned that narrow banding would soon result in digital requirements as well. More agencies in Illinois have sought and switched systems over to digital modes. Illinois has a varied market of digital systems in operation ranging from the statewide Motorola owned Starcom 21, to the regional digital trunked systems. The future of interoperability is going to still remain the VHF analog channels, as with so many digital modes interoperability will remain a major issue as always been with trunked vs non trunked, HF vs. VHF vs. UHF.

The club I joined had a few guys who were using Icom commercial grade gear utilizing the NXDN common air interface mode. NXDN is a digital mode which was developed jointly by Icom Incorporation and Kenwood Corporation. NXDN is Icom in their IDAS systems, and by Kenwood in their Nexedge. Both Kenwood and Icom offer dual-standard equipment which supports the European dPMR standard. dPMR is an open, non-proprietary standard that was developed by the European Telecommunications Standards Institute (ETSI). NXDN complies with FCC part 90 requirements for the use of narrowband emissions. NXDN uses Frequency-Division, Multiple-Access (FDMA) technology in which different communication streams are separated by frequency and run concurrently. Time-Division, Multiple-Access (TDMA) systems combine the communications streams into a single stream in which information from the different streams is transmitted in interleaved time allocations or "slots." Code-Division, Multiple-Access (CDMA) systems allow many users to share a common spectrum allocation by using spread-spectrum techniques. Systems that use NXDN also support mixed analog FM and digital NXDN equipment, including direct radio-to-radio communications. This allows system owners to migrate to a narrowband, digital system without replacing the entire system at once. NXDN equipment is currently FCC type-accepted for use on VHF (136-174 MHz) and UHF (400-520 MHz) bands.

So a back in April, Steven Hamilton KC9GMX who has always been my go to for radio related discussions and questions had again mentioned the digital system that the group was building in Richland and Wayne Counties in South Eastern Illinois. I got a little more fired up about the options and ideas for the system. April to May I spent my time on Ebay shopping for radios. I ended up starting out with an Icom portable radio, which was used and had some wear, but was also functioning. Steven was quick to come to me and get it programmed. I was so impressed with the audio quality, yet disappointed some of the features on the radio were disabled when you selected certain functions. The portable wouldn't scan, and it wouldn't do the short messages I was so excited to try. So again I went to Ebay where I found my next deal, on an Icom F-6061D, with power supply, and mobile antenna. I anxiously awaited the arrival and again Steven was quick to come to me and program it. This has been a new excitement for me and my interest in radios. The system is currently using 2 UHF Icom repeaters one located in Noble, IL and the other in rural Wayne County, IL. The range varies with individual setup. The goal of the group which is slowly gaining members is to link the two repeaters together, and then look at getting them onto the world wide NXDN system, which is much like an IRLP type system containing only NXDN systems. The group is currently fundraising to help offset the costs of equipment and paperwork filing for non profit organization status. The groups goals to work with emergency services, hospitals and emergency management in the counties where the hams on the system are located. These radios can be used for communications with those points during times of emergency, or disaster for getting messages out and relayed via amateur radio operator should other public safety communications fail. The system is available for use by anyone currently, who has a Kenwood or Icom digital radio. Some amateur radio operators oppose this sort of a system, because they say it limits the users to those who can afford the radios and equipment. One common response from users of the group is "The system is no different than the DMR, and P25 digital systems, or talking HF radios. They all require a higher price for radios to be able to enjoy the hobby. You get out of it what you put in. If you want to be part of the excitement we are enjoying you have to pay a little more." The current users are all using Icom radios, but the group hopes to be able to experiment with some Kenwood radios and other branded radios which are dPMR compliant to see how they function. The system is using radio ID's and aliases are being displayed on some radios which will receive them and that have been programmed with the database. Pre-programmed short messages can be sent to individual radios or to a group of radios on a certain talkgroup. These short messages can be programmed via the programming software. The group is currently looking into the ability to create free form messages using a DTMF style mic. The system is

currently running in mixed mode, where other hams are able to use Analog as well. The future of the system is exciting for all those involved, some of which who have been involved in DMR amateur radio systems. The group is hopeful the excitement will spread and NXDN the growing IP linked repeater system can be like an experimental Ham Radio version of Starcom, complete with talkgroups and individual calls. I will try and keep up to date with the happenings and report as they become available. Attached are few images of equipment being used including one of the Icom Repeaters.



We're looking for photos!

We're looking for photos to be submitted for the Scanner Digest Newsletter. Contact us for details.

ScannerDigest@gmail.com

PNC Park has been the home for the Pittsburgh Pirates since 2001. This natural grass stadium with great views of the city has a capacity of 38,362. It is the fifth stadium the Pirates have called home. It is located just up river of the old Exposition Field and Three Rivers Stadium sites. HOK Sports designed the stadium. Ground was broken on April 7, 1999. Construction was completed in less than 24 months. PNC Park is a double-deck stadium with limestone exterior, and features a river walk, local restaurants, and an out of town score board in the Clemente wall in right field. The Allegheny river is 443 feet from home plate. So far two home runs have made it into the Allegheny river on the fly. PNC Park is used mostly by the Pittsburgh Pirates, and it is also used for concerts. Outside of the stadium there are statues of Honus Wagner, Roberto Clemente, Willie Stargell, and Bill Mazeroski. The Sixth Street Bridge was renamed the Clemente Bridge. The bridge is closed to motor traffic before, during and after Pirate games, and is used for walking from downtown to the stadium. There is plenty to listen to when at the game. Radio traffic is analog simplex, and repeated.

Some frequencies used include the following :

216.0125 WFM – in park camera director. There are probably more frequencies used for this.

451.8500 – PL 71.9 – Cleaning

451.9750 – PL 131.8 – Maintenance – Repeater

452.4625 – PL 146.2 – Maintenance – Repeater

461.0375 – PL 110.9 – Operations – Simplex. This frequency was used for coordinating the after game concert.

461.1250 – PL 156.2 – Maintenance – Repeater

461.1750 – PL 79.7 – Operations

461.7375 – PL 74.4 – Guest Relations

461.8375 – PL 151.4 – Gates

461.9000 – PL 85.4 – Operations – Repeater

462.3000 – PL 131.8 – Operations

463.2375 – PL 131.8 – Operations

463.6250 – PL 151.4 – Command Post, Security – Repeater

463.8875 – PL 79.7 – Operations

464.9125 – PL 110.9 – Operations

466.2375 – PL 151.4 – Operations

467.1625 – PL 151.4 – Guest Relations

467.8125 – PL 91.5 – Operations

468.5875 – PL 151.4 – Food Services

Just down river from PNC Park and the old Three Rivers Stadium site is Heinz Field. Heinz Field is the home field for both the University of Pittsburgh Panthers, and the Pittsburgh Steelers. Ground was broken on June 18, 1999, and was open for the 2001 football season.

A concert by N Synch was the first event held at the field on August 18, 2001. The stadium was also designed by HOK Sports. The stadium has 65,050 seats with plans for more seats in the near future. The field is also natural grass. The grass field at Heinz Field has been noted to be problematic throughout its history. One of the main features of Heinz Field is the Great Hall. In the Great Hall you will find pillars in the shape of the Lombardi trophy, and each encasing a Lombardi Trophy from each of the Super Bowls won. There are also restaurants, a Hall Of Fame exhibit and a stage where a band plays before the games. Heinz field is also used for concerts. Both the East Hall and West Hall are rented for use such as wedding receptions, parties, and by groups.

Most Heinz field operations take place on the Pittsburgh TRS. Pittsburgh TRS is a Motorola Type II Hybrid system. This system has a combination of type I and type II talk groups. At the beginning this system was to be used for public safety. The fire department reported they were having problems with it, and police and fire have stayed on UHF since. The trunked system is used by Pittsburgh DPW, Animal Control, Environmental Services, Parking, Traffic Control, Allegheny County Jail, and Heinz Field. The Pittsburgh Water and Sewer Authority used to use this system. They have recently moved to Staley Communications Triconnex UHF DMR trunked system. Likely they found it easier to rent radios than to buy new radios to replace the old radios used on the TRS. Most talk groups on the TRS are now type II and the system can now be monitored by using one fleet map.

Particulars for this system are :

- 856.2625 - DPW, Refuse, Traffic Control, Animal Control, And Heinz Field
- 856.7625 - DPW, Refuse, Traffic Control, Animal Control, And Heinz Field
- 857.2625 - DPW, Refuse, Traffic Control, Animal Control, And Heinz Field
- 857.7625 - DPW, Refuse, Traffic Control, Animal Control, And Heinz Field . Third Overflow Channel
- **858.2625** - DPW, Refuse, Traffic Control, Animal Control, And Heinz Field
- 858.7625 - DPW, Refuse, Traffic Control, Animal Control, And Heinz Field Second Overflow Channel
- **859.2625** - DPW, Refuse, Traffic Control, Animal Control, And Heinz Field
- 859.4375 - DPW, Refuse, Traffic Control, Animal Control, And Heinz Field
- 859.7625 - DPW, Refuse, Traffic Control, Animal Control, And Heinz Field . First Overflow Channel
- **860.2625** - DPW, Refuse, Traffic Control, Animal Control, And Heinz Field
- 860.4375 - DPW, Refuse, Traffic Control, Animal Control, And Heinz Field
- 860.7625 - DPW, Refuse, Traffic Control, Animal Control, And Heinz Field
- **RED** Frequencies Are Known Control Channels

For This System. Control Channel Changes Daily

- System - Motorola Type II Hybrid.
- System ID 121C Motorola 3600 Baud System
- Fleet Map : Block 0 S12, Block 2 S12, Block 4 S4, Block 5 S4, Block 6 S0, Block 7 S3

Also in use at Heinz Field are:

- 174.150 – WFM – Score board director
- 463.900 – DPL 243 – Parking
- 464.750 – DPL 631 – Landmark Security
- 467.3625 – DPL 155 – Landmark Security

The NFL uses UHF repeaters for the quarterback and defense radios, Last year the NFL licensed 4 repeaters for use at each stadium. This replaced the system where each team had 4 repeater pairs that were assigned to them and used at each stadium they went to. Then they used one frequency for the offense and another for the defense. There was a backup frequency for each. They used voice inversion scrambling. They now use the same frequency for offense and defense and use a digital format that is not P25. Likely this is DMR as they seem to use Motorola radios. There is now a frequency for the home team and the visiting team as well as a backup for each. These frequencies were licensed for the NFL. Each stadium location has four repeater pairs licensed to it. They use these as a repeater. This way the officials can cut out the repeater when the rules say and the coach can then no longer talk to the players on the field. At Heinz Filed the primary frequencies are 451.5875, and 462.0625.

The city of Pittsburgh uses Operations ch. 5 for all games and most major events in the city. 453.450 PL 74.4 will be used by command post, police, EMS, and fire on scene. Allegheny County 911 is also capable of getting on the Pittsburgh TRS and communicates directly with the Heinz Field units.

A popular way of getting from Station Square on the South Side to the stadiums is by boat. The Gateway Clipper fleet uses marine Channel 80 157.025 for operations.

Parking Authority (Block 7)		Stadium Authority (Block 6)	
702-1	Parking Garage	53248	Fleet
Environmental Services (Block 6)		53264	Heinz Field Dispatch
53760	Refuse	53280	Heinz Field Stadium Operations
53776	Animal Control	53296	Heinz Field Security
53792	Refuse Ch. 2 Supervisors	53312	Heinz Field Event Staff
Public Works Department (Block 6)		53328	Heinz Field Public Relations
53808	DPW Ch. 2	53344	Heinz Field Ticket
53824	DPW Ch. 3	53360	Heinz Field Marketing
53840	DPW Ch. 4 Dispatch	53376	Heinz Field Merchandising
53856	DPW Ch. 5 Traffic	53392	Heinz Field Maintenance
53872	DPW Ch. 6	53408	Heinz Field Electrician
53888	DPW Ch. 7 Construction	53424	Heinz Field CONSTL
53904	DPW Ch. 8 Foreman	53440	Heinz Field CPS
53920	DPW Ch. 9 Supervisor	53456	Heinz Field Score Board
Allegheny County (Bank 6)		53472	Heinz Field Video
54528	Allegheny County Jail Gates	53488	Football Ops
Unknown		53504	Ground
53936	Unknown	53520	Heinz Guest Services
8144	Unknown	53536	Heinz Field Gates
		53552	Heinz Field CSC Ops
		53568	CSC Alt
		53584	Heinz Field Warehouse
		53600	Heinz Field Concessions
		53616	Heinz Field Club
		53632	Heinz Field Kitchen
		53648	Heinz Field Suites
		53664	Heinz Field ARA Management
		53680	Fire Department Inspectors
		53696	Event 1
		53712	CSC Management
		53728	Steeler Management
		54016	Supervisors Ch 1
		54032	Supervisors Ch 2

MASSACHUSETTS

Peter Szerlag
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Welcome to the Massachusetts column.

Here are some air traffic control channels to try out.

Melrose MA radio site - 133.325 - 127.95 - 119.25 - these might be used for very high flights that are travelling over Boston - or they might be used as reserve channels for other air traffic controllers.

Barnstable MA radio site - 132.90 - 128.75 - 127.825

Barnstable MA radio site - channels for New York Center - 135.80 - 125.925

Nantucket MA radio site - channel for New York Center - 121.125

Unknown radio site - 133.70 - US arrivals and departures for New York Center

Boston Marathon 2014 - plane to plane on 122.750 - helicopter to helicopter on 123.025 - per FAA website

Boston Marathon 2014 - media coord might be happening around 480 MHz with both analog and digital channels - 481.01875 - 480.99375

Boston Marathon 2014 - CST (Civilian Support Team) ops might use the LCPS 2 talkgroup on the State TRS

Boston Marathon 2014 - I saw 4 Blackhawks flying over my hometown before the race. I have never seen that many Blackhawks at once in my entire life IIRC. Ops were reported for Voodoo 1 flight on 46.75.

Boston FD Ch 3 and Boston FD Ch 4 have been heard recently on the 700 MHz TRS overlay

UASI talkgroups have been identified on the Zone 1 of the MSP TRS

168.1125 might be a new Fedcom channel - P25 traffic has been heard on the frequency

470.0375 seems to be carrying a mixture of P25 and analog traffic - the analog traffic seems to be some fire department - activity is intermittent

Rockdale Sector Playbook - <http://www.liveatc.net/forums/artccfirtracon-maps/zbw-sector-10-playbook/> - this is New York, not Massachusetts - but it gives a nice look at the use of radio channels by a enroute sector

<https://sites.google.com/site/sme2sme2/home/1972-a-w-catalog> - 1972 scanner freqs for the Boston area from a A&W Electronics store catalog - plus a few pages with scanners and other electronic equipment

Boston Fire Department now has access to multiple channels on 700 MHz and 800 MHz.

On the 800 MHz analog TRS are the following channels - BFD 80 - call in channel - patched to BFD 70 on the 700 MHz P25 TRS

BFD 81 - patched to BFD Ch 1 on UHF, and BFD CH 71 on 700 MHz

BFD 82 - patched to BFD Ch 2 on UHF, and BFD Ch 72 on 700 Mhz

BFD 83 - patched to BFD Ch 3 on UHF, and BFD Ch 73 on 700 Mhz

BFD 84 - patched to BFD Ch 4 on UHF, and BFD Ch 74 on 700 MHz

Ops 3, Ops 4, and Ops 5 - patched to 700 TRS

Alert - patched to 453.65 and 700 TRS

FAO Construction - patched to 700 TRS

Fleet / Mechanics - patched to 700 TRS

Field Services - patched to 700 TRS

BFD Wide - patched to 700 TRS - for wide area coverage (maybe statewide)

The following 700 Mhz digital channels are also available - CTAC 1, CTAC 2, Admin, Logistics, Ops 1, Ops 2, and Comms Techs - these 700 MHz channels are all "secure" / encrypted

I hope you find these items enjoyable.

Take care - **Peter Sz**

NEW HAMPSHIRE

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It's been too long a time since my last column. Work and health have been cutting into my fun hours.

Major changes since my last contribution come out of Hanover and Plaistow New Hampshire.

In the Upper Valley Hanover dispatches several New Hampshire and Vermont towns on two discrete frequencies. The 153.950 frequency with a PL of 141.3 (repeater) still is in place. Replacing the 154.130 simplex frequency is 155.8275 repeater with a PL of 173.8. Towns logged being dispatched by Hanover:

Bradford VT	155.8275	173.8
Canaan NH Fire	155.8275	173.8

Canaan NH Amb	153.9500	141.3
Croydon NH	153.9500	141.3
Enfield NH Fire	153.9500	143.3
Enfield NH Amb	155.8275	173.8
Etna Vlg	155.8275	173.8
Fairlee VT	155.8275	173.8
Grafton NH Fire	155.8275	173.8
Grafton NH Amb	153.9500	141.3
Grantham Fire	153.9500	141.3
Hanover NH	155.8275	173.8
Lyme NH	155.8275	173.8
Meriden Vlg Fire	155.8275	173.8
Orford NH	155.8275	173.8
Plainfield NH	155.8275	173.8
Springfield NH	153.950	141.3
Stratford VT	155.8275	173.8
Thetford VT	155.8275	173.8
Upper Valley Amb	155.8275	173.8
Vershire VT	155.8275	173.8
West Fairlee VT	155.8275	173.8

Plaistow NH dispatches a small number of towns in southeast New Hampshire. On the fire side they used to dispatch of the busy 154.190 (PL136.) shared many other towns in Rockingham County (Seacoast Mutual Aid). They have now switched over to 155.3175 with a PL of 167.9. From my listening post about 20 miles away I get adjacent channel interference from Bedford NH Police on 155.310 P25 about 10 miles away from me. Atkinson NH, Plaistow NH, Trinity Ambulance.

Lakes Region Dispatch out of Laconia NH dispatches a few dozen departments off of several repeater sites in central New Hampshire on 159.900. Locally a few school departments have licensed 159.900 for use, including Londonderry school, one being ¾ of a mile away from me. The lower power of the school radios only occasionally disrupts my listening of Lakes Region. Occasionally the school radio users would report disruptions in transmissions, unbeknownst, to them, from my listening, the source seems to be Lakes Region.

Hampstead NH Fire recently switched over to 151.1825 PL 151.4, dispatch by Derry NH Fire. They are adjacent channel to Londonderry NH Fire on 151.1750. The distance between the two towns is slight. The distance transmitter site to transmitter site is 9 ½ miles, and from border to border 6 ½ miles. This causes issues with my listening to each of the departments.

Hillsborough NH (town) fire formerly dispatched by Hillsborough (town) themselves on 154.355 PL 136.5 has been dispatched by Capital Area Dispatch since the beginning of the year, same frequency. The Concord based dispatch serves several dozen departments also on 154.355 PL 136.5.

In case I did not mention it before, New Durham Fire, formerly part of the Lakes Region fire system on 159.900

dcs331 is now dispatched out of Durham / UNH on 156.105 dcs131 and 154.6525 dcs131.

Durham NH Fire on 154.415 PL 229.1 is now being simulcast on 152.0075 PL 229.1. This same frequency is still being used as a paging system frequency. It is strange to hear many Durham Fire on a frequency which for years has been used for medical and business pagers. When I last checked I could not find a license for Durham on this frequency, but it almost seems like anything is possible today.

Significantly updated 2-tone fire tone out list for New Hampshire. (Many through recording and logging programs). Tones updated with greater accuracy using better recording methods and better computer software.

Capital Area Mutual Aid

Department	Type	Freq	PL/DCS	A C	B D
Allenstown NH	Fire	154.355	136.5	909.6	1046.4
Allenstown NH	Fire	154.355	136.5	910.8	992.9
Boscawen NH	Fire	154.355	136.5	1222.2	818.2
Bow NH	Fire	154.355	136.5	577.5	616.3
Bradford NH	Fire	154.355	136.5	635	368
Canterbury NH	Fire	154.355	136.5	633	977
Chichester NH	Fire	154.355	136.5	1671.7	1180.3
Concord NH	Fire	154.355	136.5	1046.3	1102.2
Concord NH Staff Recall		154.355	136.5	1284.4	1180.3
Concord NH All Call		154.355	136.5	1309	1182
				1309	1392
Concord NH All Call		154.355	136.5	1283	1481
				589	613
Concord NH Staff Recall		154.355	136.5	1285.2	1180.6
Deering NH		154.355	136.5	799.7	1745.2
Dunbarton NH	57 Chief1	154.355	136.5	2363.9	2100.8
Epsom NH	Fire	154.355	136.5	2097.3	834.8
Henniker NH	Fire & Amb	154.355	136.5	799	1598
				799	1465
Northwood NH	Fire	154.355	136.5	1529.8	700.9
Northwood NH	EMS	154.355	136.5	1529.9	1180.0
Nottingham NH	Fire	154.190	136.5	521	1242
Pembroke NH	Fire	154.355	136.5	643.0	833.0
Penacook Rescue	Amb	154.355	136.5	839.3	1180.0
Pittsfield NH	Fire	154.355	136.5	901.1	1464.7
Pittsfield NH	Fire	154.355	136.5	910.1	833.0
Tri-Town Ambulance		154.355	136.5	872.0	1403.3
Warner NH	Fire	154.355	136.5	834.0	642.8
Webster	Fire	154.355	85.4	732.5	991.5

Derry Fire Alarm

Department	Type	Freq	PL/DCS	A C	B D
Auburn NH	Fire	154.130	114.8	560	1125
Chester NH	Fire	154.130	114.8	910	2932
Chester NH	Rescue	154.130	114.8	910	1130
Derry NH	Fire	154.130	114.8	348	907
Derry NH	Dbl Tone	154.130	114.8	2575	1134
Derry NH	All Call	154.130	114.8	0	1156
Derry NH	Offcr Tone	154.130	114.8	2575	1134
Hampstead NH		151.1875	151.4	1901.2	870.7
Windham NH	Fire	154.175	146.2	565.8	388.8
Windham NH	EMS	154.175	146.2	565.0	388.8

Lakes Region Mutual Fire Aid

Department	Type	Freq	PL/DCS	A C	B D
Alton NH	Amb	159.900	d331	2361.7	711.2
Andover NH	Fire	159.900	d331	771	1091
				771	706

Ashland NH	Fire	159.900	d331	1311	926
Ashland NH	EMS	159.900	d331	1344.0	950.1
Barnstead NH	Fire	159.900	d331	696	826
Barnstead NH	Ambulance	159.900	d331	788.2	904.9
Belmont NH	Fire	159.900	d331	1212	902
				771	706
Bridgewater NH	Fire	159.900	d311	1797	1447
Bristol NH	Fire	159.900	d311	1016.5	1785.9
Bristol NH	EMS	159.900	d311	1036.3	732.2
Danbury NH	Fire Tones	159.900	d311	1355	841
				1355	1155
Franklin NH	Fire	159.900	d331	1805	1453
				1453	1805
Franklin NH Amb		159.900	d331	1479	1842
Gilford NH	EMS	159.900	d331	1668.6	671.3
Gilmanton NH	Fire	159.900	d331	1840	921
Gilmanton NH	EMS	159.900	d331	832.5	949.7
Hebron NH	Amb Call	159.900	d331	1733.5	764.3
Laconia NH	EMS	159.900	d331	979.7	672.2
Laconia NH	EMS	159.900	d331	979.9	672.6
Laconia NH	Emerg Recall	159.900	d331	967.8	938.3
Meredith NH	Fire	159.900	d331	1063.4	1513.4
Meredith NH	EMS	159.900	d331	1062.9	949.8
Moultonboro NH	Fire	159.900	d331	833.8	700.6
New Hampton NH	Fire	159.900	d331	1061	932
New Hampton NH	EMS	159.900	d331	1197.0	950.2
Plymouth NH	Fire	159.900	d331	589.6	932.1
Plymouth NH	Amb	159.900	d331	601.2	950.2
Rumney NH	Fire	159.900	d331	606	795
Rumney NH		159.900	d331	600	927
Sanbornton NH	Fire	159.900	d331	1186.7	950.1
Sandwich NH		159.900	d331	672	1082
Strafford NH	Fire	159.900	d331	1395.0	1819.5
Tilton-Northfield	Fire	159.900	d331	890	1091
Tilton-Northfield	EMS	159.900	d331	871.2	700.4
Warren-Wentworth	Fire	159.900	d331	2380	1356
Warren-Wentworth	EMS	159.900	d331	623	680
Waterville Valley	NH	159.900	d311	1357.0	764.6
Wentworth NH		159.900	d331	613	1287

NORPAC

Department Type	Freq	PL/DCS	A C	B D
Stark NH Fire	154.445	136.5	1091	2377
Whitefield NH Fire	154.445	136.5	985	1074

Ossipee Valley / Carroll County

Department Type	Freq	PL/DCS	A C	B D
Effingham NH Fire/EMS	154.175	136.5	702	1130
Freedom NH Fire	154.175	136.5	709	1151
Freedom w/ No.	154.175	136.5	1231.4	584.9
Conway Amb			701.3	1819.7
Madison NH	154.175	136.5	700.6	1671.9
Milton NH Fire	154.325	136.5	607.9	592.5
Milton NH Amb	154.325	136.5	615.4	888.8
Moultonboro Fire	154.175	136.5	1130.0	590.0
Mutual /Aid				
Ossipee -	154.175	136.5	701.2	1230.9
Center Ossipee FD				
Ossipee -	154.175	136.5	700.6	1284.3
Ossipee Cnrr FD EMS				
Ossipee -	154.175	136.5	1130.0	590.0
Ossipee Corner FD				
Ossipee -	154.175	136.5	817	
Ossipee Valley EMS	1708			
Ossipee - West Ossipee				
Tamworth Fire	154.175	136.5	699.5	1531.9
Tuftonboro NH Fire	154.175	136.5	1399.8	2698.5
Tuftonboro NH EMS	154.175	136.5	1411	2706
Wakefield NH Fire	154.175	136.5	696	864
			695	1121
Wolfeboro NH	154.250	136.5	1144.6	597.1

FD-Rescue				
Wolfeboro NH	154.175	136.5	1401.4	2688.2

Seacoast Mutual Aid

Department Type	Freq	PL/DCS	A C	B D
Atkinson NH Fire	154.190	136.5	2807	1232
Brentwood NH Fire	154.190	136.5		
Brentwood NH Amb	154.190	136.5	871.0	1341.8
			871.7	1230.6
			590.5	1179.0
Danville NH Fire	154.190	136.5	321	422
Deerfield NH Fire	154.190	136.5		
Deerfield NH Amb	154.190	136.5	2379	1187
East Kingston NH	154.190	136.5	607	1153
Epping NH	154.190	136.5	617.4	903.2
Epping NH Amb	154.190	136.5	617.3	903.0
Exeter ALS	154.190	136.5	426.7	600.2
Fremont NH Fire	154.190	136.5	771	420
Greenland NH Amb	154.190	136.5	818.8	767.2
Kensington NH Fire	154.190	136.5	801	510
Kensington NH Amb	154.190	136.5	1280.1	599.2
Kingston NH FD & Amb	154.190	136.5	342	773
			342	361
Lee NH	153.935	136.5	1150	1184
New Castle NH	154.190	136.5	1466	1597
Newington NH	154.190	136.5	601	633
Newton NH FD/Rescue	154.190	136.5	789.5	832.3
Raymond NH	154.190	136.5	2260.7	1180.1
Rye NH	154.190	136.5	701	1182
Rye NH Med Call	154.190	136.5	948.6	1172.7
Sandown NH	154.190	136.5	385	411
Sandown Rescue	154.190	136.5	384.7	426.9
w/Trinty				
So Hampton	154.190	136.5	1742.9	834.0
w/ Amesbury Amb				
Stratham NH Amb	154.190	136.5	829.6	911.5

Southwest NH Mutual Fire Aid

Department Type	Freq	PL/DCS	A C	B D
Acworth Fire	154.430	136.5	1025.8	1357.4
Alstead FD & Amb	154.430	136.5	1025.5	1325.5
Antrim FD & Amb	154.430	136.5	1025.8	1357.4
Bennington Monitor Tone	154.430	136.5	523.7	854.3
Bennington NH Medical	154.430	136.5	1026.2	1354.6
Bennington NH Fire	154.430	136.5	1027.7	767.0
Bennington NH Officer	154.430	136.5	1025.9	766.9
Charlestown NH	154.430	136.5	472.3	756.1
FD-Rescue				
Chesterfield (Spofford)	154.430	136.5	425.1	582.8
Chesterfield NH	154.430	136.5	1025.8	953.7
Dublin NH Monitors	154.430	136.5	1026.4	1430.2
Dublin NH Fire Alarm	154.430	136.5	496.1	636.1
Dublin Fire Alarm Playback	154.430	136.5	497.5	600.3
Dublin NH Rescue	154.430	136.5	1026.7	1432.8
Fitzwilliam	154.430	136.5	1164.5	855.6
Monitors & EMS				
Fitzwilliam NH Fire Alarm	154.430	136.5	368.4	365.9
Francestown NH Fire	154.430	136.5	1092.8	706.9
Francestown NH	154.430	136.5	486.4	635.6
Fire Alarm				
Gilsum NH Fire	154.430	136.5	1111	646
Gilsum NH Monitors	154.430	136.5	1164.4	645.2
Gilsum NH Fire Alarm	154.430	136.5	803.4	375.0
Goshen NH Fire	154.430	136.5	968	421
Hanock NH Fire	154.430	136.5	410.2	348.3
Harrisville NH Fire	154.430	136.5	1179	777
Jaffrey NH Fire	154.430	136.5	1162.5	953.7
Jaffrey NH Ambulance	154.430	136.5	954.7	1165.2
Keene NH Fire	159.450	136.5	1158	578
Keene NH Medical	159.450	136.5	776	599
Keene NH West Station	159.450	136.5	1164	585

Keene NH				
Station 2 Amb	159.450	136.5	777	600
Langdon NH	154.430	136.5	1157	707
Lefebvre Amb	154.430	136.5	1579	708
Lempster NH	154.430	136.5	834	955
Lyndeboro NH Fire	154.430	136.5	1434.6	1750.5
Lyndeboro NH Alarm	154.430	136.5	1579.7	1122.4
Marlborough NH Monitors	154.430	136.5	426.6	855.2
Marlborough NH Fire Alarm	154.430	136.5	569.3	635.0
Marl-Harris Ambulance (NH)	154.430	136.5	1161	1748
Marlow NH Fire	154.430	136.5	421	1275
Marlow NH tone test	154.430	136.5	1185	1433
Meadowood (NH) Dive Team	154.430	136.5	1158	2599
Meadowood (NH)	154.430	136.5	1163	2594
Nelson NH Monitors	154.430	136.5	1026.4	1231.0
Nelson NH Fire Alarm	154.430	136.5	379.0	633.0
Nelson NH Rescue	154.430	136.5	1026.0	1231.8
New Boston NH Med Call	154.160	136.5	386	433
New Ipswich Fire	154.430	136.5	426.7	645.5
New Ipswich NH Fire	154.430	136.5	426.7	645.5
Walpole, North NH Fire	154.430	136.5	472.7	641.4
Walpole, North NH Monitors	154.430	136.5	524.8	1358.0
Peterboro NH Fire	154.430	136.5	425.6	766.4
Peterboro NH Amb	154.430	136.5	425.0	707.3
Rindge NH Fire	154.430	136.5	428	952
Rindge NH Rescue	154.430	136.5	427.0	1430.4
Richmond Non-Emergency	154.430	136.5	425.5	1357.3
Richmond NH Playback	154.430	136.5	752	605
Richmond NH Amb + DeLuzio	154.430	136.5	746.6	600.
Rindge NH Fire	154.430	136.5	428	952
Rindge NH Rescue	154.430	136.5	427.0	1430.4
Stoddard NH Monitors	154.430	136.5	1091.5	1290.5
Sullivan NH Fire	154.430	136.5	1091.6	645.0
Sullivan NH Rescue	154.430	136.5	1092.3	645.8
Surry NH Fire	154.430	136.5	1092.5	855.9
Swansey NH Fire & Med	154.430	136.5	457.8	1430.6
Temple NH	154.430	136.5	475	860
Temple NH MVA	154.430	136.5	867	451
Troy NH	154.430	136.5		
Troy NH Amb	154.430	136.5	766.6	1092.6
Unity NH Monitors	154.430	136.5	832.5	1357.9
Walpole NH Fire	154.430	136.5	1092.2	1357.3
Walpole NH				
Evacuation Tone	154.430	136.5	800.0	1500.0
Walpole NH Amb	154.430	136.5	471.3	953.0
Westmoreland NH Fire	154.430	136.5	1092.4	953.4
Westmoreland NH Fire Alarm	154.430	136.5	461	639
Winchester NH Monitors	154.430	136.5	426.2	503.2
Winchester NH Amb	154.430	136.5	855.5	525.5

Strafford County and U.N.H.

Department	Type	Freq	PL/DCS	A C	B D
Barrington NH Fire		156.105*	d131	2349	728
				2349	945
Barrington NH EMS		154.6525*	d131	2361.8	951.1
				2349	945
Durham NH Fire		152.0075	229.1	1592	1022
Durham NH Fire		154.415	229.1	1592	1894
Durham NH Fire		154.415	229.1	1592	1737

*Simulcast 154.6525 / 156.105

Twin State Mutual Fire Aid

Department	Type	Freq	PL/DCS	A C	B D
Bethlehem NH EMS		154.400	136.5	1336	943
Bethlehem NH Fire		154.400	136.5	1336	668

Carroll - Twin Mtn Amb	154.400	136.5	774	1144
Franconia NH Fire	154.400	136.5	2494	2883
Lisbon NH Fire	154.400	136.5	670	1232
Lisbon NH EMS	154.400	136.5	672	1130
Littleton NH Fire	154.400	136.5	2345	1029
Littleton NH 1st Alm	154.400	136.5	2334	1441
Littleton EMS	154.400	136.5	2360	949
Monroe NH Fire	154.400	136.5	803	1679
Woodstock NH	154.400	136.5	688	617

Upper Valley / Hanover

Department	Type	Freq	PL/DCS	A C	B D
Canaan NH Fire		153.950	141.3	774	1144
Canaan NH Amb		155.8275	141.3	773	1355
Enfield NH Fire		153.950	141.3	2379	1134
Enfield NH Amb		155.8275	173.8	446	903
Grantham NH Fire		153.950	141.3	706	1682.5
Hanover (Etna FD) Fire		155.8275	174.8	1811	1138
				2707	1138
Hanover NH Fire		155.8275	173.8	600.8	634.6
Hanover NH All Call		155.8275	173.8	1499.8	1129.9
Hanover NH Monitors		155.8275	173.8	2260.6	1129.9
Hanover NH Med Call		155.8275	173.8	599.8	634.5
Lyme FAST		155.8275	173.8	734.0	1131.2
Lyme Fire		155.8275	173.8	949.2	1119.8
Meriden (Plainfield NH) Fire		154.130	141.3	2497	1145
Orford NH Fire		154.130	141.3	1044	1141

Individual Towns / other small systems

Department	Type	Freq	PL/DCS	A C	B D
Berlin NH		154.130	136.5	474	1834
Brookline NH Fire Alarm		33.640	136.5	593	915
Brookline NH Amb		33.640	136.5	659	696
Claremont NH Fire		154.205	136.5	335	394
Claremont NH Fire		154.205	136.5	329	388
Claremont NH Fire		154.430	136.5	953	473
Claremont General Alarm		154.205	136.5	1144	809
				1974	961
Claremont Open Bay Doors		154.205	136.5	1437	1082
Conway, Conway Vlg Fire		155.760	114.8	1690	1096
Conway, Ctr Conway Vlg FD		155.760	114.8	1690	882
Conway, No. Conway Vlg FD		155.760	114.8	706	1139
				706	910
Conway, No. Conway Vlg Amb		154.175	136.5	692	1797
Conway, Redstone Vlg NH FD		155.760	114.8	1096	882
Croydon NH Fire		154.295		720	662
Errol NH Amb		?????		838	324
				794	324
Farmington NH		154.370	d723	946	1055
Goffstown NH Amb 1		158.880	136.5	2361	1530
Goffstown NH Amb 2		158.880	136.5	2361	1985
Goffstown NH FD Stn 18		158.880	136.5	2361	2932
Goffstown NH FD Stn 19		158.880	136.5	2361	1232
Golden Cross Ambulance		154.430	136.5	645.1	473.1
Gorham NH EMS Officer		155.700	136.5	1477	1195
Gorham NH Fire		155.700	136.5	706	1242
Greenville NH Fire & EMS		33.740	136.5	1267	1107
				1267	363
Greenville Souhegan Valley Amb		153.890	186.2	589	621

Hampton Falls NH Fire	154.145	136.5	2362.0	1343.5
Hampton Group 3 Officer	154.145	136.5	2360.7	1180.0
Hampton Group 3 Members	154.145	136.5	2360.7	1598.0
Londonderry NH	151.175	d466	433.4	456.7
Manchester Stn Cvr Merrimack	153.980	136.5	1167	1200
Mason NH Fire/EMS	33.740	136.5	1251	349
Merrimack NH Amb	153.980	136.5	1251	1433
MHT CFR Alert Tone	153.740	d703	1184.9	1251.5
Milan NH Emergency Services		1200	1000	1000
Milan NH Emergency Services		2433	1233	1167
Milford NH Fire	154.370	d125	552	723
Milford NH Amb	155.100	136.5	492.7	400.4
Nashua NH	151.250	103.5	1000.0	
New London NH	154.995	136.5	391	360
Newmarket NH Fire	155.085	136.5	582.1	1046.8
Newport NH Fire	154.070	136.5		
North Conway Ambulance	154.175	136.5	700.6	1819.4
Pelham NH Amb	158.745	210.7	767.4	726.6
Portsmouth NH Fire	153.770	173.8		
Rochester NH Fire	154.980	103.5	1188.7	1255.2
Plaistow NH Fire	155.3175	167.9		
Portsmouth NH Fire	153.770	173.8	672.1	2808.0
Portsmouth NH Fire	153.770	173.8	677	639
Randolph NH Fire	155.700	136.5	1195	1332
Randolph NH Life Squad	155.700	136.5	706	1477
Rochester NH Fire	154.980	103.5	1188.7	1255.2
Rollinsford NH Fire	154.295	210.7	564.0	1149.0
Seabrook NH	154.145	136.5	877	1192
Shelburne NH Fast Squad	155.700	136.5	1261	1296
Washington NH Fire	154.310	136.5	799	1820
Washington NH Rescue	154.310	136.5	793	1806
Weare NH	154.250	85.4	799.2	1285.2
Weare NH Fire	154.250	85.4	799.6	1180.4
Wilton NH Fire	33.640	136.5	591	894
Wilton-Lyndeboro Amb	154.430	136.5	878.0	646.6
Wilmot NH Fire	154.995	136.5	372	392

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MAINE

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Greetings, and welcome to the Maine section of the #68 edition of Scanner Digest. Let's jump right in and address the prolific overhaul of Maine's Public Safety communications network.

Here's a clipping from the MS/CommNet website:

What Is MSCommNet?

Maine's beauty extends from the Allagash wilderness of the North to the York beaches in the south. This vast landscape makes radio coverage for state workers and public safety personnel extremely important. To modernize the state's aging radio infrastructure, Maine has formed the MSCommNet Project, short for the Maine State Communications Network project.

MSCommNet is a sophisticated, large-scale project, but the goals are simple.

- Build a network that is reliable, scalable, and will meet future wireless communications needs
- Improve radio coverage and functionality for state agencies
- Maximize existing state resources

To display how the system will work, Harris Public Safety and Professional Communications, in partnership with Maine's Office of Information Technology held a demonstration in Augusta on May 5th of 2010. In attendance were legislators, public service personnel, and state law enforcement who explain just how important a

modern statewide communications network is for them.

"I joined in 1984 and we are using the same system now and we've been hearing for years that this system is really being held together by parts that they buy on eBay and things like that. I mean the radio is your lifeline, if you get in trouble that's what is going to save your life perhaps and to have it questionable as to whether it is going to work, that becomes a big issue," former Colonel Patrick J. Fleming, Chief, Maine State Police.

The radio system currently in use was built in the early 1970's and remains largely unchanged. The MSCommNet state radio system will be comprised of more than 40 towers strategically placed throughout Maine. The new system will also allow state agencies to more easily connect and interoperate with one another, something that is of critical importance for city, county and state agencies, like the Maine Warden Service.

"The Maine Warden Service is unique in that we are the only agency responsible for search and rescue units in the state of Maine. We are responsible for anybody who becomes lost or stranded in the woods or waterways in the State of Maine. In doing that, we only have 133 sworn Game Wardens in the field at any given time, so without partners in law enforcement and fire communities, EMS communities and volunteer search and rescue communities we wouldn't be able to do our job. It is of grave concern to us that we have the ability to communicate with them daily," Lieutenant Shon Theriault, Maine Warden Service

The MSCommNet statewide radio system will provide Maine cities and counties the same connectivity to state agencies using the well-established RegionNet channels. It will also provide state agencies on the network with additional tools and functionality to better communicate with one another. Providing first responders and public servants with the communications tools necessary to better protect you is the Primary goal of the MSCommNet project.

MSCommNet

Maine State Communications Network Project

MSCommNet - A State Radio System to Meet the Modern Communications Needs of Maine's Agencies

MSCommNet is the radio communications project responsible for the deployment of the state radio network which will provide Maine agencies with dependable statewide communications with a mission to:

- Work with local municipalities to provide continued radio communication and interoperability
- Build a robust, reliable state radio network that is scalable to meet future radio communication needs
- Reduce development and operating costs
- Maximize existing state resources
- Enable the state to meet current and future federal communications mandates

MSCommNet Features

The state radio network will provide a variety of benefits for Maine's agencies including:

- Coverage** - Improved ability to move around the state while connecting and communicating with state agency talkgroups without dispatcher intervention
- Local Control** - Each state agency will be able to decide who can listen and speak on their talk group and can assign their own security settings
- Future Ready** - MSCommNet will be built on a solid, flexible and highly interoperable infrastructure.

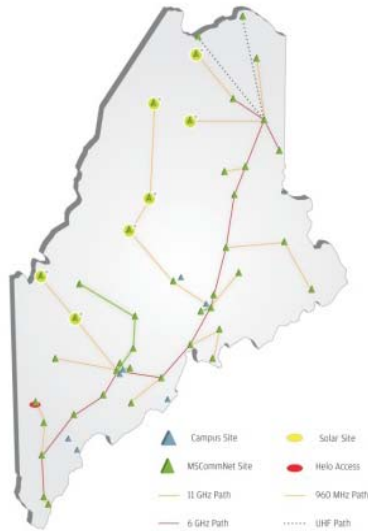
Implementation Timeline

	2009	2010	2011	2012	2013
Contract Signed	●				
Design		▬	▬		
Simulation			▬	▬	
Construction				▬	▬
Testing					▬
Cutover					▬
Warranty					▬

FCC Narrowband Deadline

MSCommNet

Maine State Communications Network Project



MSCommNet - Statewide Coverage

While details of the final design of the new state radio network are being completed, the state agencies' ability to communicate via radio will not be affected, and will likely improve. The map below shows the approximate locations of future tower sites for the state radio network.

MSCommNet - Meeting the FCC's New Requirements

Similar to the recent digital television switch, the deployment of MSCommNet will prepare the state for a similar switch for public safety and public service communications mandated by the FCC. The deadline for government radios and radio systems to make the narrowbanding switch is January 1st, 2013. MSCommNet will allow the state agencies' to fully comply with the FCC's new narrowbanding standards.

MSCommNet - Partners in Building the State's Radio Network

The State of Maine Office of Information Technology (OIT) has selected Harris Public Safety and Professional Communications (PS&PC) to deploy MSCommNet, a Project 25 (P25) VHF state digital radio system. P25 is a set of standards for public safety communications that have been developed by the TIA3 and APC04 industry trade associations to standardize communications practices for public safety and government agencies and organizations. Working with Harris PS&PC are Jacobs Telecommunications, Radio Communications Management (RCM) Alcatel-Lucent and Syracuse Research Corporation.

1. FCC: The Federal Communications Commission is an independent government agency charged with regulating interstate and international communications by radio, television, wire, satellite and cable.
2. Project 25 (P25) refers to a suite of standards for digital radio communications for use by federal, state, local, public safety and public service agencies in North America.
3. Telecommunications Industry Association is the leading trade association representing the global information and communications technology industry through standards development, government affairs and world-wide environmental regulatory compliance.
4. The Association of Public-Safety Communications Officials (APCO) is the world's largest organization dedicated to public safety communications.



www.maine.gov/mscommnet

To learn more about the MSCommNet Project visit www.Maine.gov/MSCommNet.

Scanning enthusiasts have developed, and regularly contribute to a website called "**Scan New England Wiki**" which covers the diverse aspects of the MS/CommNet process. Here's the link: http://scan-ne.net/wiki/index.php?title=Maine_Portal. A myriad of topics are covered, to include frequency/site licensing, allocations and talk groups.

Here are some links for an interested party to click on:

http://scan-ne.net/wiki/index.php?title=MSCOMMNET_Maine_State_Communications_Network
<http://www.maine.gov/oit/services/radio/mscommnet/>
MS/CommNet overview: <http://www.maine.gov/oit/services/radio/mscommnet/faq/MSCommNet.wmv>
RegionNet FAQ page: <http://www.maine.gov/oit/services/radio/mscommnet/faq/#regionnet>

Franklin County (Maine) opens new 9-1-1 center

Telecommunicators have waited to make the move since mid-2013

They have waited to make the move since mid-2013, but delays occurred with getting the new generation of 9-1-1 equipment installed.

Telecommunicators went from about a 230-square-foot work area in the Sheriff's Department building to 2,200 square feet in the new building. Voters in the county approved a bond for nearly \$600,000 in June 2012 to build the center. There were some additional costs but they were handled through reserve accounts.

At 6 a.m. the county's 9-1-1 calls were being answered by the Central Maine Regional Communications Center in Augusta, Franklin County center Director Stan Wheeler said.

A series of equipment moves, system checks and testing followed. The Augusta center continued to take the 9-1-1 calls, but then began forwarding them to Franklin County telecommunicators.

At 10:45 a.m., the new 9-1-1 system went live and telecommunicators were back taking calls directly, Wheeler said.

Representatives from a variety of agencies and companies, including Maine 9-1-1 Emergency Services Communications Bureau, Somerset County Technical Services and FairPoint Communications, the vendor that installed the 9-1-1 system, were on hand to make sure everything went smoothly.

Telecommunicators got accustomed to the new stations and equipment. The work stations can be electronically moved by pushing a button to allow telecommunicators to either sit down and work or stand.

The next generation 9-1-1 system has better tracking ability to identify where a caller on a cellphone is located, Wheeler said.

In the future, the system will have the ability to receive texts and track them. Way down the road, it will be able to receive videos, he said.

The mapping system is significantly better and has more clarity, he said. "In my entire working career this is the largest project I've overseen. The largest project I've done," he said.

Source: <http://psc.apointnl.org/2014/04/29/franklin-county-maine-opens-new-9-1-1-center/>

Other fun resources for scanning in general are Doug Augelli's pages:

Somerset County scanner feed:

www.broadcastify.com/listen/feed/14870/

Weather, et. al. <http://www.wirebridgeweather.com/>

REMEMBER, Brunswick NAS (now Brunswick Executive Airport) is playing host yet again to the Blue Angels on Labor Day weekend 2014. Anyone wanting to meet me down there for a bona fide "Scanpeditor" needs to email me at hornsmoke@gwi.net to coordinate. Even if you are limited in scanning assets, this will NOT be a problem. I usually have two tables full of scanners rolling at any given time. Here's a link to the event: <http://www.theforecaster.net/news/print/2013/12/04/brunswick-air-show-organizers-navy-s-blue-angels-r/181617>
Here's the actual Blue Angels website: <http://www.blueangels.navy.mil/>

HOT NEWS on the scanner front: Whistler releases their version the former GRE Pro-197: http://www.examiner.com/article/gre-scanners-return-to-the-market-with-a-new-name?cid=db_articles

Here's a link for those who are "into" wireless microphone frequencies. Many a concert (and public event such as sports tournaments, etc.) has found me scanning for the wireless frequencies in use. The FCC just ruled on the wireless spectrum: <http://www.prosoundnetwork.com/article/shure-applauds-fcc-ro/17840>



On the totally "OFF TOPIC" list, here's a random link of groove music to the memory of Jaco Pastorius, entitled "The Chicken". This is NOT your Momma's "Chicken Dance." Get your "funk on" if you dare...just turn up the bass and horrify your neighborhood: <https://www.youtube.com/watch?v=Il2aNt5giVM>

For those who are not members, you are all encouraged to join the Scan-ME Group on Yahoo! Here's the link: <https://groups.yahoo.com/neo/groups/ScanMe/info>

That's it for this iteration. I encourage you FaceBook denizens to visit my FaceBook page: www.facebook.com/hornsmoke and say "hello!" Check out www.downeastbrass.com for up-to-date performances of my brass quintet. You never know where we'll pop up and perform.

*Until next time, keep your hand on your wallet, your powder dry and your shot group tight. God Bless America, and obey Acts 2:38 ~ **Fields out.***

CANADA

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A Visit to the Akihabara Radio Center

I have always wanted to visit Japan and decided to visit Tokyo and Mount Fuji this year. The Akihabara district had always been a magical place (like the Dayton Hamfest) to me and I looked forward to visiting this area first hand. Naturally, scanning on vacations can be a fun and a worthwhile effort.

Akihabara Radio Center, 'electric town' or Akiba got its start after WWII. Many tiny retailers sold radio and electronic parts under the Sobu train line tracks and it is a business that is still vibrant today. It is also known for its Maid Cafes and Otaku (anime and manga characters) stores. Hundreds of electronics shops, ranging from tiny one man stalls specializing in particular electronic components to large electronics and camera retailers can be found in a few square blocks. These shops line the main Chuo Dori street and the crowded side streets around Akihabara. A few chain stores such as Sofmap and Laox each operate multiple specialized branches along the main roads, while small independent shops can be found in the side streets. The only mega sized camera store is the Yodobashi Camera complex on the east side of the train station. This area is very busy during lunch hours while salary men go shopping, students attracted to game and animation and weekends.

The radio sellers offer brands not found outside of Japan. Brands like Comet, Create, Radix, AOR Japan and independents. They also had the new Yaesu VR-160 scanning radio, JIM M-75 preamp, Alinco DJ- X81, Jupiter MVT-7500, 5500 and HR-500 scanners, Icom as well which are the R6 and R20 radios. There seems to be a R30 rumour which will include D-Star. There are some cost savings over the USA prices but there is no Uniden or Bearcat radios to be found. JARL, The Japan Amateur Radio League, Inc. has their ham fair the third weekend in August.





Yupiteru MVT-7500



\$10000 yen



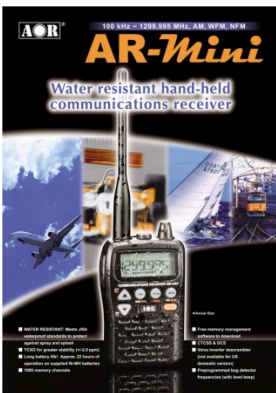
Yaesu VR-160



HR-500



AOR AR-8600 Mk2



AR-Mini



Alinco radios

There are two popular ham radio stores and several not so well known stores to purchase your gear from. Inside the Radio Department Store you will find 4 or 5 resellers and it is here where I saved a few bucks in buying my Comet CSC-140J and Diamond SR789 antenna. I also got 30 feet of RG-174 for less than \$10 and several connectors and adapters.





101-0021, Chiyoda-ku, Tokyo 1-11-2 Soto-Kanda Kitabayashi building

This is a two story store that is also well stocked and also has a used section on the second floor. They are located at street level and easily found as the retro gaming store called Super Potato is on the 3rd floor. Every Maid on the street handing out flyers knows where it is.

Akihabara Tokyo Radio Department store

<http://www.tokyoradiodepart.co.jp/>



Side streets lined by electronics shops and maid cafes

CSC-140J Suction cup antenna flexi mount with SMA connector.

The **Diamond SRH789** is an omnidirectional telescoping antenna for 95 MHz to 1100 MHz. It acts as 1/4 wave from 95-300 MHz and a 5/8 wave from 300 to 1100 MHz. It can be used for transmit up to 10 watts. This black, six section antenna is 7.9 inches retracted and 31.7 inches fully extended. Gain is 2.15 dBi from 95-300 MHz and 3.2 dBi from 300-1100 MHz \$26 or 2600 yen

Many of the regular electronics stalls and stores have bins full of deals and one can just wander around and look to see what is of interest to you and I got some excellent headphones for the kids.

Japanese electronics uses 100v 50Hz but most electronics is compatible with our 120v 60Hz standard. Worst case is that the wall wart power supply can be replaced once home.

Rocket Radio

http://www.rocket-co.jp/ham/08_map2.ht

This is considered the largest amateur ra They stock HF, VHF equipment, antennae telegraphs, and many types of free band also offer CQ Ham Radio and Radio Life version of QST. They only have 1 floor.

Fuji-Musen

<http://www.fujimusen.com/shop/akiba.htr...>

How to get there:

I strongly recommend a small compass to figure out where North is to line up your map if you find the data plans for your smartphone to be too expensive. I found out the hard way how complicated their address system is and relied on paper maps and a compass to get around. My Garmin GPS does not have any street mapping information for Tokyo but a Tablet or Smartphone with Wi-Fi will suffice as you can get free Wi-Fi practically everywhere including Starbucks. Enjoy a coffee and sort out directions from there. I basically used the tall buildings as markers and asked the locals where the KFC is as its central to where we want to go. On the way there you will pass the Radio Center as well. The trick is to leave the station at the west side Electric Town exit and then it's a short walk to our destination. I made the mistake of using the wrong exit and was on the wrong side of the station and ended up walking in circles until I found a Starbucks to get Wi-Fi to figure it out.

Akihabara Station is a busy station served by the [JR Yamanote Line](#), [JR Keihin-Tohoku Line](#), [JR Sobu Line](#), the Tsukuba Express and the Hibiya Subway Line. **Suehirocho Station** on the Ginza Subway Line is located around the northern end of the district.

From Tokyo Station

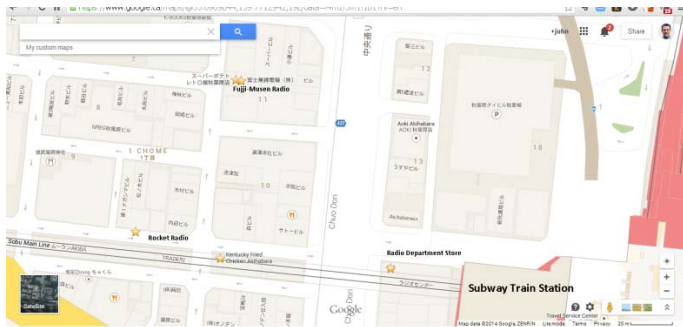
Akihabara is two stations north of [Tokyo Station](#) by JR [Yamanote](#) or [Keihin-Tohoku](#) Line. The trip takes about

three minutes and costs 140 yen. During weekday

daytime, the Keihin-Tohoku Line skips the station between Tokyo and Akihabara, which shaves off a few more seconds from the travel time.

From Shinjuku Station

Take the [JR Chuo Line](#) (orange colored rapid service) from [Shinjuku](#) to Ochanomizu Station (10 minutes) and make a quick and easy transfer to the JR Sobu Line (yellow colored local service) for one more station to Akihabara (2 minutes). Alternatively, take a yellow colored train without transfer all the way from Shinjuku to Akihabara (17 minutes). The one way fare is 170 yen in either case.



ScannerDigest Newsletter

Welcome to the Scanner Digest Newsletter! We're currently publishing quarterly e-magazine containing information for the scanner hobbyist. If it can be monitored on a scanner, we'll attempt to cover it from 30 to 1300 MHz and beyond!

Our purpose is to produce a newsletter to facilitate the exchange of information pertaining to the various services covered by a typical scanner radio. Dedicated regional column editors make up the heart of this publication.

The Scanner Digest Newsletter is not responsible for the accuracy or consequences incurred regarding the use of information listed in this publication. Since the purpose of this newsletter is to provide a platform for the submission and exchange of radio communication information, it thus becomes impossible to deem all contents as accurate. The very nature of radio licensing and usage makes it difficult to verify the accuracy of the information contained within. Generally information listed within the pages of the newsletter are derived from multiply sources including current FCC files, hobbyists and those directly involved with various public safety agencies.

Scanner Digest's policy has been not to limit or edit the individual columns submitted, unless we deem the information sensitive in nature which may jeopardize the safety of the parties involved.

*Only in this case will we edit out this type of input.
(Example: We will not publish the frequencies used by a law enforcement surveillance team.)*

Naturally the comments of the various column editors are not necessarily the views and opinions of the Scanner Digest Newsletter. All materials, maps, information, photographs submitted to a regional column editor or to Scanner Digest directly, become sole property of the Scanner Digest Newsletter. We encourage and will make every effort to give proper credit to all submissions. All contents within are copyrighted. ©2003-2014

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