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Uniden Introduces the HomePatrol-1

By: Norm Schrein, KA8PGJ



In June, Uniden introduced its newest scanner in a most unusual way. They invited the public to see a preview of the new unit long before it was introduced. A Texas style barbecue was held along with the unveiling of the new scanner.

The scanner, the HomePatrol-1, is basically a pre-programmed radio. Pre-programmed scanners are not unusual for Uniden; in fact they have been selling them for years. Their current model is the BCT15XT. What makes this scanner unusual is how it is programmed, and how one picks the things they want to listen to as well as the physical size of the unit.

The HomePatrol-1 looks more like a GPS receiver than a scanner. It has a touch screen for making programming choices, yet the word programming should not to be confused with how we program radios today. In fact in order to program the radio, one simply needs to know where they are. The HomePatrol-1 can be programmed either by the use of a zip code or simply knowing how to spell the city name where one is located. It can also find its location with a connection to an external GPS unit and gather up channels based upon that information.



A database for the entire United States and Canada is located in the radio. Uniden has taken the RadioReference database which can be found on our web site under the Quick Frequency Searches link (www.bearcat1.com/free.htm) modified it and stored the entire thing in the scanner on a memory card. Additionally the database and firmware can be updated weekly from the HomePatrol-1 web page (www.HomePatrol.com). The scanner also comes with software to enable the updating of the database.

Uniden's main effort in creating this radio is to make it as simple as possible to listen to a scanner that has to deal with all the complicated systems being used today. It is designed for a person who does not want to be a technician or computer programmer in order to figure





out how to program his radio. In fact after the initial set up, which took about 2 minutes, we were able to change the location for what we wanted to listen to in a matter of seconds.

We had the opportunity to take the radio to several locations across the country and each time we were listening to the local activity in a matter of seconds. This included places like Indianapolis Indiana where they use a large digital trunked system, to Vandalia, Illinois while there was not a lot of activity as compared to the large cities. The scanner was still receiving the local Sheriff's department and the Illinois State digital trunked system. Then in Leavenworth, Kansas, we were able to tune in the 300 MHz P-25 trunking system being used there by the post security, MP's and the Disciplinary Barricks.

The scanner is able to receive digital, analog, trunked and conventional systems and they all can be programmed into the radio within a matter of seconds. Additionally, its size aside, the scanner can be either portable, mobile or base.

Once the location has been picked, there are several other touch screen features the scanner owner can use, including the selection of services he wants to either hear or lock out from the scan, increase or decrease the radius of the scanner's receiving range, and even enter into a temporary memory a channel that was not included in the database. He can tell the scanner to hold on to a particular channel or talk group ID, or tell the radio to ignore them as well.

Keep in mind that this scanner is really not designed for the hobbyist, but for a novice that wants to listen to their local action easily. So it is easy for a hobbyist to find some shortcomings.

First of all, you can not save a channel unless it is already in the scanner's database. The size of the radio does not really lend itself to portable use. Imagine a GPS made for a car on your belt. There is also not an option to do a search for active frequencies. The unit has a rather small speaker in order to fit it into the GPS style case, so I would recommend either earphones or an external speaker. Also, the fact that the radio relies for its data exclusively from one supplier could pose a problem in the future if something were to happen to that web site, or the supplier went out of business. Uniden counters that there is always the software that is packed with the scanner where the customer can make his own customized list (as long as the channel is already in the scanner).

Continued on page 6

Uniden Introduces the HomePatrol continued



Probably the biggest drawback on the radio is not for the consumer, but for Uniden. This is a digital radio designed for the beginner. Previously the beginner would have bought a $100.00 scanner. Now they are being asked to purchase a state-of-the art digital trunking scanner, even though the consumer may feel that they do not need all those features. So, will it fetch the $500.00 price tag digital scanners usually bring? Only time will tell.

Overall, the scanner is a most unusual, and I predict, successful advancement in the scanner business, because anyone can listen to frequencies for an area as long as they know where they are. As far as those who don't know where they are, well they probably don't need a scanner.

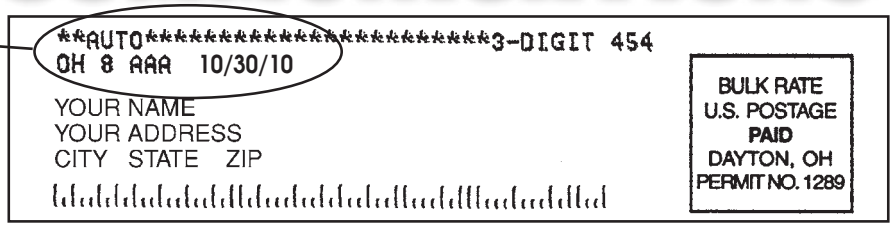
The HomePatrol-1 is scheduled to be available for sale in October. We will have a more detail review once the scanner has been released.

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A Simple Trick to Enhance Listening

Try adding a search range to your scanning menu.

By Chuck Gysi, N2DUP

I like to find new ways of doing things. In my job, I lead a department that has a creative side to it. We're always looking at new ways of doing things – because we can and it makes us better in what we do in serving our organization.

I take the same approach to my scanning hobby. I look for new ways of doing things that make me a better scanner hobbyist. Sometimes I learn new things or techniques that enhance the hobby. You never know unless you try!

Recently, I did something with my GRE scanners (PSR-500 and three RadioShack Pro-197s) that really enhanced my scanner listening. Because I have a lot of windshield time in my job visiting our offices across a large region, my PSR-500 travels with me for hundreds and thousands of miles each month (as long as I don't have co-workers traveling with me!).

While I have dozens of counties programmed in my GRE handheld scanner for the area I normally travel, I also have some searching the scanner does for me, to help enhance my listening. For a long time, I have used the Spectrum Sweeper function on the PSR-500 to find nearby transmitters in the VHF and UHF bands. If I am near a radio transmitting, it comes up during the sweep. I have found many interesting frequencies this way, including federal frequencies and wireless microphones.



This shows the screen of the PSR-500 during a search of the 451-454 MHz segment. It has stopped on activity on 452.525 MHz. By clicking the "Stor" button under the display, the frequency can be quickly added to the scanner's memory. Photo by Lisa Stephens/ scancomm.net

However, recently, I learned I could do a few other things with my PSR-500 while scanning. I love searching for new frequencies in addition to listening to the full lineups I have of frequencies already programmed, but it's always a hassle to switch between searching and scanning while you are mobile. I have wished there was a way to do both functions without having to use two different scanners.

Well, I learned it's possible to do this with the PSR-500 and similar GRE and RadioShack scanners made by GRE. My PSR-500 and RadioShack Pro-197 radios are set up to perform a number of searches every time they scan through my programmed frequencies. This is a pretty cool thing.

A Simple Trick to Enhance Listening continued

So in addition to using the Spectrum Sweeper function to find nearby transmitters in the 108-137, 137-174 and 406-470 MHz bands, I also have enabled the FRS/GMRS/MURS service search function to find Family Radio, General Mobile Radio and Multi-Use Radio service channels, as well as itinerant and low-power business frequencies that are included in that search. I have this programmed under a search object on my scanners. This is the same search that you can do with the radio on a manual basis, but I have programmed it in as a regular object while scanning now. In addition to frequencies and trunking talkgroups, searches can be included as a scanning object in the GRE radios.

Likewise, I have enabled a public safety search function as a search object for the VHF and UHF public safety frequencies. This allows me to find new public safety frequencies in the VHF and UHF bands with relative ease – especially during band openings. I'd include the 700 and 800 MHz ranges, but in my area there are many other types of communications that pop up and I typically know most of these systems anyway. By enabling this VHF and UHF public safety search function, I have discovered surveillance channels used by local agencies as well as interesting other frequencies I would not have normally programmed.

I also have some frequency search ranges programmed in to find additional new frequencies as I travel around the region. These searches include federal frequency search ranges for 162-174 and 406-420 MHz. I probably should include the new 380-400 MHz military land mobile band, but there aren't any military installations of note in my travel territory. Maybe I will add that and the 137-144 and 148-150.7 MHz military ranges some day for extended travel purposes.

Some additional search ranges I have programmed into my GREs include business frequency searches from 457-470, 451-454, and the 151- and 154-MHz ranges. This allows me to find frequencies used by businesses, event centers, farmers and more. I keep a log in my vehicle when I find new frequencies so I can look up information in FCC files and other places online to help identify my finds.

All together, the eight service and frequency searches as well as the Spectrum Sweeper function, I find a number of new frequencies every week that I try to identify and then add to my scanner with the right CTCSS, DCS or NAC codes. I log the new frequencies and their subaudible codes in a notebook I carry with the scanner in the vehicle.

This is so easy to do and enhances my mobile scanning. While scanning the normal routine frequencies I have programmed, I also find new frequencies on every sweep of the objects because it stops on each programmed search just like it was a programmed frequency. I call this putting your scanner to work!

Reader comments

One of our readers, Dave, wrote in with some comments and a question in light of some recent historical perspective of scanners mentioned on these pages:

"Over the past 30 to 40 years of scanning, I have collected quite an array of scanners and two-way radios. My first radio actually was a clock radio with a VHF receiver built in. Since I lived less than a mile from my police department's repeater, I had excellent reception.

"After the 'bug' bit me, I went on to a Regency ACT-Touch-16K that was very difficult to program. I later went to the Bearcat 101 and 250 (the one with rolling zeros.)

"After that, I kind of went nuts buying several RadioShack scanners and other two-way handheld radios. I also have amassed a great amount of portable antennas, including telescoping, rubber duck, multiband, base-loaded, etc. I don't remember which is which as to the frequency range of each. Some are loaded for 150 MHz ... some for 450 MHz ... and some for 800 MHz, and who knows what else. The telescoping antennas I can figure out by doing the math for quarter- and half-wave, but I can't figure out the others.

"Is there some kind of test to determine the range of each? I have tried tuning a weak NOAA weather channel and switching antennas but am having difficulty with that method. Do you have any suggestions?"

Good questions, Dave, but no easy answers. There are so many manufacturers of radio antennas that unless you try to keep track of what the antennas are for, you may be out of luck because some can

Cont. on page 10

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A Simple Trick to Enhance Listening continued

look very similar across different bands. Most scanner antennas are made to be used across the VHF, UHF and 800-MHz bands.

I have seen many antennas that look similar for use in the VHF and UHF bands. 800-MHz antennas may have a different sleeker profile to offer gain, while many VHF antennas may just be about the span of your hand in length. Sometimes, UHF antennas are skinnier than VHF antennas. But that's not a hard and fast rule.

You might want to look at the base of the antennas and see if they have any model numbers on them. Then you can look on Google to see if the model number comes up. Some model numbers or manufacturer names may even be inside the connector itself – I have some Chinese antennas like this. There is a surplus store that I visit frequently and they often have a pile of handheld radio antennas in a bin, but I find that most of them are CB antennas because they are thick and very long in length. But one day, I may find some VHF or UHF antennas in that bin!

You also may want to look on Google for handheld radio manufacturers and try to match up the antennas you have with those offered on various websites, either manufacturers or vendors. You just may find the antenna you own.

Write in

Do you have any scanning tricks or tips you'd like to share with fellow National Communications readers? You can write to me at nat-com@scanning1.com (be sure to put "Nat-Com" in the subject line or your e-mail may wind up in my spam bin). This e-mail address is only for the author of this column. ●

Be sure to check for the latest frequencies on the Nat-Com web page www.nat-com.org

ARRL FIELD DAY 2010

Staying connected in a disconnected world

By Jim Sutton, N2OPS

At first appearance they were your typical ham radio stations. Radio equipment was neatly arranged on tables with an optimum antenna arrays. The operators were making contacts throughout North America.

However a closer look revealed that these setups had no external connections. There were no electrical outlets. There were no permanent buildings. The antennas had no towers. They were truly communications oasis in a desert world of no other communications options.

The ham operators were taking part in ARRL (American Radio Relay League) Field Day 2010 in Perry, New York. This annual worldwide event gives ham radio operators the opportunity to test their communications skills as well as their skills in setting up in adverse situations. 20 individuals from three counties attended the Perry, New York event.



Hooking up the Slinky HF antenna.



Let's take a look at the components involved in a field ham radio setup.

ANTENNAS

Communications will take place in two basic frequency band segments. The first is the HF (high frequency) band with a longer wavelength allows long range communications. Conditions can vary requiring ham operators to find the frequency with the best range for the time of day and propagation. HF antennas are larger due to their longer wavelength thus requiring more ingenuity to erect in the field.

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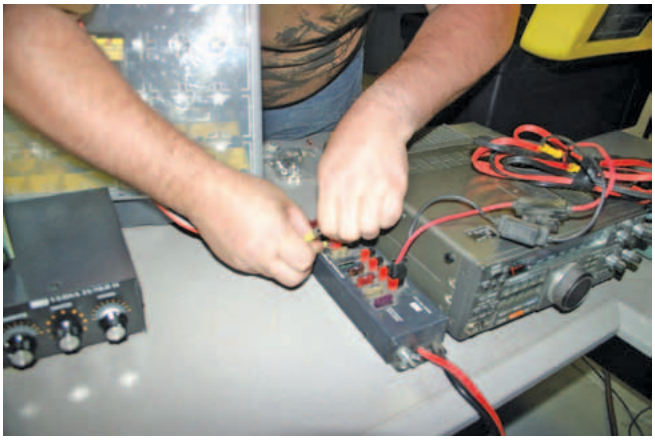
ARRL FIELD DAY 2010 continued

For true field operations ham antennas must be self supporting or require little support. HF antennas often will be attached to trees or buildings. Some HF antennas are completely self supporting.

The second basic frequency bands are the VHF/UHF (very high frequency/ultra high frequency) bands. These bands provide dependable short range communications. Due to the shorter wavelength involved options including directional and gain antennas are more practical to use.

One operator had a compete discone antenna that covered frequencies from 25 MHz up and a self supporting HF antenna that covered from 75-6 meters. The parts for both antennas all fit in a golf bag.





POWER SOURCE

Power sources can range from rechargeable 12 volt batteries to portable generators and everything in-between. A car or truck can become a great field ham radio setup. One field day operator had a tailgate setup with a canopy, table and a full ham station with a self supporting HF antenna. In cases where AC power is available ham operators may use a high amperage AC to 12 volt DC power converter.

SHELTER

At the field day hams were operating under canopies, in picnic shelters, in vehicles, and by vehicle tailgates. Ham operators must have ample coax antenna cable and power line for situations requiring long runs.



Continued on page 14

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CEI Special Price $169.95

250 Channels • 5 banks • PC Programmable

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The Bearcat BCT8 scanner, licensed by NASCAR, is a superb preprogrammed 800 MHz trunked highway patrol system scanner. Featuring TrunkTracker III, PC Programming, 250 Channels with unique BearTracker warning system to alert you to activity on highway patrol link frequencies. Preprogrammed service searches makes finding interesting active frequencies even easier and include preprogrammed police, fire and emergency medical, news agency, weather, CB band, air band, railroad, marine band and department of transportation service searches. The BCT8 also has preprogrammed highway patrol alert frequencies by state to help you quickly find frequencies likely to be active when you are driving. The BCT8 includes AC adapter, DC power cable, cigarette lighter adapter plug, telescopic antenna, window mount antenna, owner's manual, one year limited Uniden warranty, frequency guide and free mobile mounting bracket. For maximum scanning enjoyment, also order the following optional accessories: External speaker **ESP20** with mounting bracket & 10 feet of cable with plug attached $19.95. Magnetic Mount mobile antenna **ANTMMBNC** for $29.95.



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Suggested list price $799.95/**CEI price $519.95**

APCO 25 9,600 baud compact digital ready handheld TrunkTracker IV scanner featuring Fire Tone Out Paging, Close Call and Dynamically Allocated Channel Memory (up to 6,000 channels), SAME Weather Alert, CTCSS/DCS, Alpha Tagging. Size: 2.40" Wide x 1.22" Deep x 5.35" High

Frequency Coverage:

25.0000-512.0000 MHz., 764.0000-775.9875 MHz., 794.0000-823.9875 MHz., 849.0125-868.8765 MHz., 894.0125-956.000 MHz., 1240.0000 MHz.-1300.0000 MHz.

The handheld BCD396T scanner was designed for National Security/Emergency Preparedness (NS/EP) and homeland security use with new features such as **Fire Tone Out Decoder**. This feature lets you set the BCD396T to alert if your selected two-tone sequential paging tones are received. Ideal for on-call firefighters, emergency response staff and for activating individual scanners used for incident management and population attack warning.



Close Call Radio Frequency Capture – Bearcat exclusive technology locks onto nearby radio transmissions, even if you haven't programmed anything into your scanner. Useful for intelligence agencies for use at events where you don't have advance notice or knowledge of the radio communications systems and assets you need to intercept. The BCD396T scanner is designed to track Motorola Type I, Type II, Hybrid, SMARTNET, PRIVACY PLUS, LTR and EDACS® analog trunking systems on any band. Now, follow UHF High Band, UHF 800/900 MHz trunked public safety and public service systems just as if conventional two-way communications were used. **Dynamically Allocated Channel Memory** - The BCD396T scanner's memory is organized so that it more closely matches how radio systems actually work. Organize channels any way you want, using Uniden's exclusive dynamic memory management system. 3,000 channels are typical but **over 6,000 channels are possible** depending on the scanner features used. You can also easily determine how much memory you have used and how much memory you have left. **Preprogrammed Systems** - The BCD396T is preprogrammed with over 400 channels covering police, fire and ambulance operations in the 25 most populated counties in the United States, plus the most popular digital systems. **3 AA NiMH or Alkaline battery operation and Charger** – 3 AA battery operation - The BCD396T includes 3 premium 2,300 mAH Nickel Metal Hydride AA batteries to give you the most economical power option available. You may also operate the BCD396D using 3 AA alkaline batteries. Unique Data Skip - Allows your scanner to skip unwanted data transmissions and reduces unwanted birdies. Memory Backup - If the battery completely discharges or if power is disconnected, the frequencies programmed in the BCD396T scanner are retained in memory. Manual Channel Access - Go directly to any channel. LCD Back Light - A blue LCD light remains on when the back light key is pressed. Autolight - Automatically turns the blue LCD backlight on when your scanner stops on a transmission. Battery Save - In manual mode, the BCD396T automatically reduces its power requirements to extend the battery's charge. Attenuator - Reduces the signal strength to help prevent signal overload. The BCD396T also works as a conventional scanner to continuously monitor many radio conversations even though the message is switching frequencies. The BCD396T comes with AC adapter, 3 AA nickel metal hydride batteries, belt clip, flexible rubber antenna, wrist strap, SMA/BNC adapter, RS232C cable, Trunk Tracker frequency guide, owner's manual and one year limited Uniden warranty. Not compatible with AGEIS, ASTRO or ESAS systems. Order on-line at www.usascan.com or call 1-800-USA-SCAN.

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The handheld BC246T TrunkTracker scanner has so many features, we recommend you visit our web site at www.usascan.com and download the free owner's manual. Popular features include **Close Call Radio Frequency Capture** – Bearcat exclusive technology locks onto nearby radio transmissions, even if you haven't programmed anything into your scanner. **Dynamically Allocated Channel Memory** - Organize channels any way you want, using Uniden's exclusive dynamic memory management system. 1,600 channels are typical but **over 2,500 channels are possible** depending on the scanner features used. You can also easily determine how much memory is used. **Preprogrammed Service Search (10)** - Makes it easy to find interesting frequencies used by public safety, news media TV broadcast audio, Amateur (ham) radio, CB radio, Family Radio Service, special low power, railroad, aircraft, marine, racing and weather frequencies. **Quick Keys** - allow you to select systems and groups by pressing a single key. **Text Tagging** - Name each system, group, channel, talk group ID, custom search range, and S.A.M.E. group using 16 characters per name. **Memory Backup** - When power is lost or disconnected, your BC246T retains the frequencies that were programmed in memory. **Unique Data Skip** - Allows the BC246T to skip over unwanted data transmissions and birdies. **Attenuator** - You can set the BC246T attenuator to reduce the input strength of strong signals by about 18 dB. **Duplicate Frequency Alert** - Alerts you if you try to enter a duplicate name or frequency already stored in the scanner. **22 Bands** - with aircraft and 800 MHz. The BC246T comes with AC adapter, 2 AA 1,800 mAH nickel metal hydride batteries, belt clip, flexible rubber antenna, wrist strap, RS232C cable, Trunk Tracker frequency guide, owner's manual and one year limited Uniden warranty. For more fun, order our optional deluxe racing headset part **#HF24RS** for $29.95. Order now at www.usascan.com or call 1-800-USA-SCAN.

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ARRL FIELD DAY 2010 continued



EQUIPMENT

The Yaesu FT-897D showed up again and again at the field day setups. This unit literally covers every frequency band that would be used in emergency communications. It covers 160-10 meter bands plus the 6 meter, 2 meter, and 70 CM bands.

Ham operators carefully choose radio equipment that is lighter weight and portable. Many ham radios are designed with field day operations in mind.

Field day gives ham operators the opportunity to know how their equipment works in less than ideal conditions.

OPERATING FREQUENCIES

One necessary skill is to determine which bands are open for the best distance. On this field day the 10 meter band was open allowing contacts throughout North America. Long range contacts were also made on 2 meter SSB and on 20 meters using CW, or Morse code.



GVARA Founders



GENESEE VALLEY AMATEUR RADIO ASSOCIATION AA2GV

An amazing factor in the Perry, New York ARRL Field Day is that the new Genesee Valley Amateur Radio Association behind it is less than two years old!

In an interview with Bill Boyd N3DSP and Doug Dart KC2MVC , *two of the* founders of the GVARA, they shared the following facts about the new Genesee Valley Amateur Radio Association.



ARRL FIELD DAY 2010 continued



The GVARA began in January of 2009.

The club is now up to 18 members.

Members are primarily from Livingston and Wyoming Counties in Western New York.

The GVARA has a memorandum of understanding with the Northern Livingston Chapter of the American Red Cross.

The club boasts five volunteer examiners, or VE's. This allows ham exams to be given on a regular basis.

One member is an ARES (Amateur Radio Emergency Services) EC (Emergency Coordinator).

As the GVARA continues to grow they hope to soon achieve 501 C 3 tax exempt status with the IRS.

THE GVARA extends many thanks to the ARRL for their outstanding efforts to help make the annual field day a major success.

LINKS

ARRL Field Day http://www.arrl.org/field-day

Genesee Valley Amateur Radio Association
http://www.lafireline.net/GVARA/main.htm

Wyoming County ARES http://wycoares.hamgate.net/

ARRL FIELD DAY 2011 http://www.arrl.org/field-day



IN CONCLUSION

There are some serious dollars invested in the equipment used at the ARRL Field Day sites. These investments mean local agencies have professional backup communications by skilled ham radio operators. Taking the time to practice setting up and operating the equipment means they are ready to go into service in virtually any situation.

Hams like Bill Boyd N3DSP and Doug Dart KC2MVC put numerous hours of labor into making local ham clubs and events happen. If you know some hams that work behind the scenes to make ham radio events happen in your area please take some time to thank them.

The 2011 ARRL Field Day will be June 25-26. Why not start studying now to earn your Technician Class amateur radio license. By next ARRL Field Day you can be ready to put your skills to work. And spend time with fellow hams.

So don't stop at just listening to hams on your scanner. After you earn your license check out the websites of the National Communications advertisers for the latest in amateur radio equipment and accessories and get on the air.

Until next time may your signals be strong, your static be few. ●

The Wireless and Weather – A Winning Combination

By Dorothy Rieke

The radio or wireless, developed in the late 1800s, revolutionized communication. Previously, the telephone and telegraph, both requiring miles of wires, represented the only means of quick long distance communication.

Today, radio represents a series of scientific discoveries and technical refinements. Basically, radio technology works by changing sounds and other signals into electromagnetic waves or radio waves that travel through the air with the speed of light. Once a destination is reached, these waves return to the original sounds.

This process, once discovered, enabled rapid wireless communication on land, at sea, in the air and , later, through outer space.

Once perfected, radio waves and what they could do were in great demand. These miraculous waves once put to work greatly reduced isolation on land and sea. One of the first significant roles for these waves was ship-to-ship communication on the high seas. Thousands of lives were saved using the rapid communication of radio waves.

Later, radio waves brought news, entertainment, advertising, and weather reports to avid listeners. Perhaps one of the most important roles of the new wireless was reporting weather because it affects lives in so many ways. Weather, the condition of the air surrounding the earth, determines what we do, when we do it, and how it is done.

It determines the clothing we wear, what we accomplish and how we feel. It also influences the outcome of daily activities, so knowledge of existing and forthcoming weather conditions is essential.

Years ago, Thomas Jefferson realized the value of a thermometer in weather assessment when he purchased one while writing the

Declaration of Independence. Later, he purchased a barometer a few days following the signing of that document, Jefferson made regular observations at Monticello. George Washington also regularly observed weather. In fact, his last observation took place the day before he died.

The ability to observe and display weather data simultaneously led to weather forecasts. Soon weather forecasts, based on meteorological observations at military stations and in other areas, were giving notice of approaching storms on the Great Lakes.

In 1849, an extensive weather observation network was established when Smithsonian Institution supplied weather information. These submitted observations were essential in creating weather maps.

As early as 1860, five hundred weather stations were submitting weather observations. Of course, these were interrupted during the

Civil War, but resumed in 1869.

Initially, the weather service was a civilian enterprise, but President Benjamin Harrison in 1890 passed an act creating a Weather Bureau in the Department of Agriculture. By 1895, a Washington daily weather map was published by the Weather Bureau . Three years later, a hurricane warning network was established.

In 1901, at the Milwaukee, Wisconsin, weather bureau conference, slips of paper with daily forecasts including frost and cold-wave warnings were being delivered to every mail drop. A disadvantage was time because forecasts from the evening before were used.

In 1902, the Marconi Company began broadcasting weather forecasts by



wireless telegraphy to the Cunard Line Steamers. By 1905, the first wireless weather report was transmitted from SS NEW YORK to another ship at sea. Radio communication may have influenced decisions for the 'Round-the-World' cruise of the U. S. 'Great White Fleet' including sixteen battleships and 12,000 men which took place in 1907.

Now that the wireless was 'up and running,' certain needs were to be met. As a result, the Weather Bureau established an aerological section for the growing aviation industry, and the first daily radio telegraphy agricultural broadcasts reached certain farmers and ranchers.

Making radio broadcasts accessible to farmers and ranchers removed the last visage of the isolation that some families experienced. Now, weather services would influence their lives for the better with detailed weather bulletins and weather advisories.

Then, too, many visionaries were interested and intrigued with this new wireless. These individuals experimented with batteries and built small wireless receivers. Archie Banks of Delmar, Iowa, became a pioneer in radio transmission on farms. In the early Twentieth Century, he successfully built a small wireless. By this means, he received weather forecasts and news bulletins twice a day from the Illinois and Iowa State Agricultural Colleges. He began a service to his neighbors and friends within a radius of ten or fifteen miles. As a result, these neighbors knew the weather reports long before local newspapers reached their mail boxes. Because these farmers had this knowledge, they were not unprepared for sudden weather changes which influenced crop yields as well as their activities. Their families, knowing what would happen, took 'cover' during bad thunderstorms and tornados.

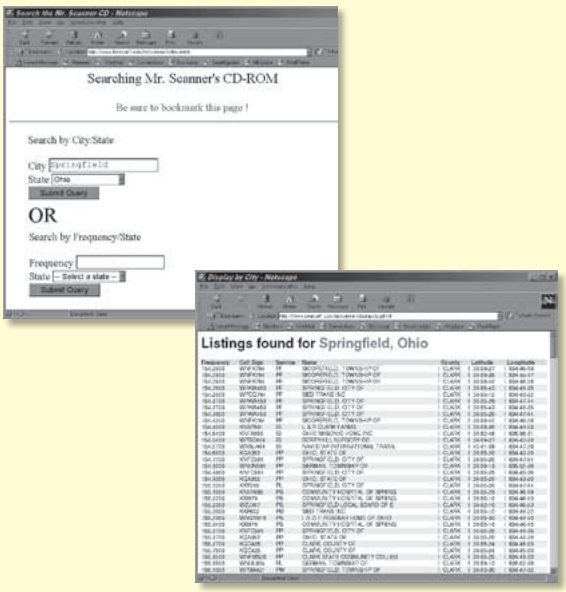
History was made when events sensitive to weather conditions were planned after consulting the Weather Bureau. For example, the first automobile trip across United States, the first powered airplane flight at Kill Devil Hill in North Carolina, and the fifteenth running of the Kentucky Derby only took place after consultation with the weather bureau through wireless communication.

When Lindbergh made his historic journey in 1927, he failed to wait for the final results of a weather summary. As a result, he ran into fog and rain as later predicted.

With the weather bureau's output and the use of radio technology, weather reports became a daily occurrence. Weekly weather broadcasts were issued for agricultural planning. What a difference was made when farmers and ranchers could arrange their work according to predicted weather! Farmers' lists of things to do were definitely the result of listening to weather broadcasts on radios.

Today, radio transmission of weather reports, market quotations, and world news makes the difference between success and failure for farmers, ranchers, airplane pilots, police, military personnel, and others. Weather and radio, a winning combination for all!

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Incorporating an eBook reader in to your life

By Ed Muro, K2EPMA

For a while now I had been wanting a Kindle... as part of simplifying my life...the way I see it...the more paper I can get rid of... the less clutter that will be around for me to have to deal with. Life is so hectic and complicated these days and now more than ever we seem inundated with paper. I can spend an hour cleaning off my desk in the home office / shack and then with just 3 or 4 days worth of mail I will find my desk, which is also my radio operating position, to be piled up with stacks of paper, be it bills, junk mail, magazines, or catalogs….add a newspaper article you want to save in to the mix and the place can look like a real mess in no time.

One day, a little over a year ago, at a local ham radio club meeting my friend Joe-KC2BZB was showing me his Kindle. I think at the time he may have had the first version of the Kindle. I thought the whole concept of an eBook reader was pretty cool and then Joe showed me how he had uploaded PDFs of his scanner and ham radio manuals to his Kindle. When you are out and about, if your Kindle was in your go bag you would have all your instruction manuals at hand. That one feature alone is worth its weight in gold, but at the time the Kindle was still priced a little high for my wallet, so I held off.

Well, around Father's Day my wife Lisa was looking to get me something that I would really enjoy. How many polo shirts or neck ties does a guy need? She was looking for the gift that was not the average gift and she had remembered that I had mentioned that I had wanted a Kindle. So she began to research eBook readers and discovered that the prices were coming down. She came to the conclusion that the Barnes & Noble Nook was the better machine. However, she opted to buy me a Sony Dash for Father's Day instead....a totally different animal.



Barnes & Noble Nook vs Amazon Kidle Comparison.

The Dash is an Internet appliance.... I like it, I don't want to return it, but the way I use it...it is a glorified alarm clock radio on steroids. The Dash has various "apps" which you can download on to it, including some that interface with Facebook, G-mail, and Google Calendar. For us radio folks, there is a couple of dozen various "clock" formats…the one I like the best is a 24-hour version of what looks like on old flip down style digital clock that we used to see in the 70's. There are also apps for You Tube, Pandora, and local weather forecasts, and many news, sports, and magazine portals. As I said, I like it but it is not an eBook reader. So, a few days ago I decided that I was going to but myself an eBook reader. So, the other night I went on both Barnes & Nobel's site and Amazon and researched both the Nook and the Kindle. Sony also has an eBook reader out, which like the Nook and Kindle uses the same E-ink electronic paper display. Several months ago Apple introduced the iPad which uses an LCD display. I



Sony



Kindle

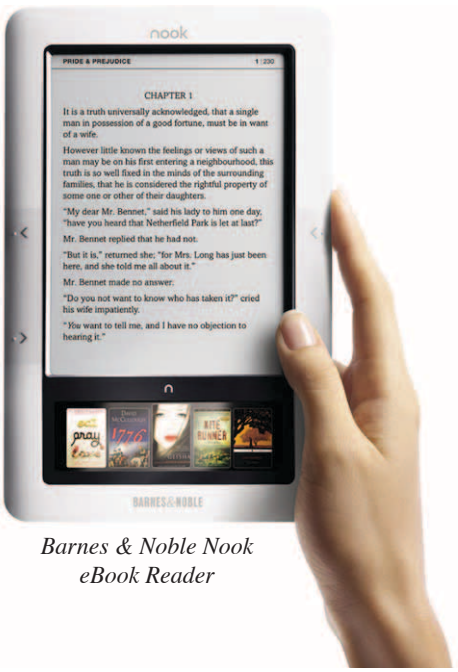
think eventually Apple's iPad is going to change the way we receive our Internet content, especially for folks on the go, but for the purposes of my current needs I am not considering the more expensive iPad.

I came to the conclusion that the Nook with both Wi-Fi and 3G is the best machine in terms of flexibility and at a price of $199... it's not bad. The Kindle is $189. Kindle 2 doesn't have Wi-Fi but uses Sprint's EVDO wireless data network to search and download books. Sony Reader users have to download content via the USB cable to their computer. After a one-time download of the e-book software they can browse the online store using their Internet connected PC and download titles to the Reader. It's a cumbersome process and it is the one area where the Kindle and Nook truly rule.

I mentioned earlier that the Nook, Kindle, and Sony Reader use a technology called electronic ink as its display. On the surface it looks very simplistic compared to iPad glitzy LCD display. But, when we are talking about reading words the e-ink rules. It is very easy on the eye. While font size is adjustable, I found I was able to read the normal size without the use of my reading glasses. Pictures and text look sharp and clear, in 16 shades of gray. One thing to note, the screens are not back lit; so to read in the dark you will need an external light source. Those similar to book lights are available.



Barnes & Noble Nook



Barnes & Noble Nook eBook Reader

The SONY uses touch screen navigation, whereas the Nook and the Kindle use push button navigation on the bottom and sides. This seems to be a hot point of debate for many. Seeing a touch screen, too many people, means that it must be easier to use, more advanced, and therefore better right? On the contrary, it could be seen as actually getting in the way during the reading experience,

Continued on page 21

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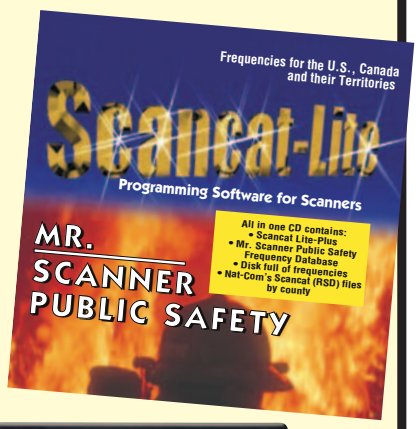


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So, yesterday off we went to Barnes & Noble ....I thought I was coming home with a Nook but here came the part where I started to hem & haw....now follow me here: for $149 I can get a Wi-Fi only version of the Nook that is maybe 4 or 6 ounces lighter than the version that accommodates both Wi-Fi and 3G networks. Do I really need the 3G access? 50-bucks is 1/4 of the price.... do I cheap out and get the Wi-Fi only version? Yet, for the price of a dinner out I can have all of that flexibility of both Wi-Fi and 3G...oh what to do.

Do you want to add some more confusion? The Nook Wi-Fi, comes with a one year manufacturer's warranty but for just under 50-bucks you can extend that warranty to two years and it will add accidental damage coverage to the unit for the full two years. Without the extended warranty…if the Nook slips out of your hands…you just ate it.

Here's the other interesting part.... content! The Kindle, via Amazon, offers about twice as many newspapers and three times as many magazines as the Nook does through Barnes & Noble. The people at Barnes & Noble have been told that more content will become available but so far they haven't seen it. This was also in the back of my mind and I wound up going home empty handed so that I could ponder things some more.



Nook in-store Display

Last night I looked over both the Barnes & Noble site and Amazon yet some more... you know what...I realized that I am not a book reader, I am a periodical kind of guy...yet NEITHER device really offers the periodicals that I read....so I am going to hold off another 6 months and then re-visit the issue because the way things are now, it's not going to accomplish what I want it to do.

When I can find a device that will replace the paper versions of Popular Science, Popular Mechanics, Popular Communications, Monitoring Times, QST, The Home Handy Man, Trains, Car & Driver, Road & Track and my other car and truck magazines, Guns & Ammo, American Rifleman, American Handgunner, and my local newspaper NEWSDAY or The New York DAILY NEWS or dare I say National Communications....then I will have found a useful device. ●


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Davis-Monthan Air Force Base

By Mark Meece



Davis-Monthan Air Force Base main gate.

In the deep desert southwest, a mere five miles from downtown Tucson, Arizona, still within the city limits, we find one of the key facilities of the United States Air Force's Air Combat Command, Davis-Monthan Air Force Base.

As an aviation facility, Davis-Monthan was formed in the earliest days of aviation. It received its name in honor of two Tucson area natives, both being Lieutenants and World War I era pilots. Samuel H. Davis and Oscar Monthan who died in separate military air accidents. Lieutenant Davis was killed in Florida in 1921 and Lieutenant Monthan died in Hawaii in the 1924 crash of his Martin Bomber. Originally established as Davis-Monthan Landing Field on November 1, 1925. Two years later Charles Lindbergh landed his "Sprit of St. Louis" to dedicate Davis-Monthan Field, at that time the largest municipal airport in the United States. Lindbergh had recently completed his non-stop cross Atlantic flight and was the most popular aviation figure at that moment.

The first military presence at the field occurred in October of 1927 when Army Air Corps Sergeant Simpson moved the fuel and service operations to Tucson Municipal Airport, this combined civilian and military operations lasted until early 1940. The first military customer arrived at the field on October 9, 1927. It was none other than James H. Doolittle himself, who later would be awarded the Congressional Medal of Honor for his "Tokyo Raids" during World War II.

As war loomed throughout Europe in 1940, the base underwent its first expansion, with the transformation of the United States Army Air Corps (USAAC) to the United States Army Air Forces (USAAF)in 1941. The 1st Bomb Wing, 41st Bomb Group, and 31st Air Base Group, became the first USAAF units to be established at the base, activating on April 30, 1941. Four days before the attack on Pearl Harbor, Hawaii, on December 7, 1941 the base's official designation became Davis-Monthan Army Air Field. Activity at the base quickly intensified with the arrival of B-17 Flying Fortresses for bombing training. This was followed by the short-lived B-18 Bolos for training and observation missions. However, the B-18 built by Douglas Aircraft Company were found to be underpowered, have too small a bomb load capacity and poor defensive armament, and were designated to antisubmarine and transport duty by 1942.

As the United States became involved in World War II the Consolidated B-24 Liberator became the primary mainstay at Davis-Monthan. As the end of the war neared, the B-29 "Superfortress" became the base's primary training role. Please refer to TABLE 1 for a list of bombardment groups that trained at Davis-Monthan during World War II.

As World War II came to an end, aerial operations at the base came to a grinding halt. The base became a separation center after WWII reaching its peak population of 11,614 personnel in September 1945. From June of 1945 to March 1946 German Prisoners of war housed at base facilities. The dry climate and alkali soil of the area created the ideal place

TABLE 1

BOMBARDMENT GROUPS TRAINING T DAVIS-MONTHAN DURING WWII

34th Bombardment (Heavy) May 13, 1942 -- July 4, 1942
94th Bombardment (Heavy) August 1942 -- November 1, 1942
302nd Bombardment (Heavy) June 23, 1942 -- July 30, 1942
308th Bombardment (Heavy) June 20, 1942 -- October 1, 1942
380th Bombardment (Heavy) November 3, 1942 -- December 2, 1942
382nd Bombardment (Heavy) January 23, 1943 -- April 5, 1943
389th Bombardment (Heavy) December 24, 1942 -- February 1, 1943
392nd Bombardment (Heavy) January 26, 1943 -- March 1, 1943
399th Bombardment (Heavy) March 1, 1943 -- April 10, 1943
400th Bombardment (Heavy) April 1943 -- May 2, 1943
446th Bombardment (Heavy) April 1, 1943 -- June 8, 1943
449th Bombardment (Heavy) May 1, 1943 -- July 5, 1943
451st Bombardment (Heavy) May 1, 1943 -- June 3, 1943
459th Bombardment (Heavy) September 20, 1943 -- November 1, 1943
466th Bombardment (Heavy) August 15 -- October 17, 1945
486th Bombardment (Heavy) November 9, 1943 -- March 1944
489th Bombardment (Heavy) April 3, 1945 -- July 13, 1945
491st Bombardment (Heavy) October 1, 1943 -- November 11, 1943
444th Bombardment (Very Heavy) March 1, 1943 -- July 29, 1943
499th Bombardment (Very Heavy) Nov. 20, 1943 -- Dec. 1, 1943



to preserve decommissioned aircraft and other military surplus. Thus in 1946, the 4105th Army Air Force unit was the first unit designated to oversee the storage of excess B-29s and C-47 "Gooney Birds." With the creation of the Air Force in 1948, the unit was renamed the 3040th Aircraft Storage Depot and remain so until 1965 when it was renamed to the Military Aircraft Storage and Disposition Center (MASDC). On July 1, 1984 the unit became the processing center for ICBMs for either dismantling or reuse for satellite launches, thus the name change to Aerospace Maintenance and Regeneration Center (AMARC) to better indicate its expanded role in aerospace assets. As a result of the bilateral START I treaty in 1991, AMARG was charged with getting rid of 365 B-52 bombers. This process had to be verified by the use of Russian satellites and on-scene inspections. Several different methods were used, with latter processes making salvageable spare parts possible.

That mission continues to this day under the unit of the 309th Aerospace Maintenance and Regeneration Group (AMARG), where it now maintains over 4,400 aircraft from all branches of the United States Government. AMARG falls under the Air Force Material Command and the 309th Maintenance Wing of Hill Air Force Base, Utah.

On March 31, 1946 the base fell under the Strategic Air Command (SAC) where it remained for over 30 years. The Tactical Air Command(TAC) oversaw the base from October 1, 1976 until it reorganized into the Air Combat Command as it remains today.

The current host unit at Davis-Monthan is the 355th Fighter

Continued on page 22

AMARC at Davis-Monthan Air Force Base.



Davis-Monthan Air Force Base *continued*



Wing (FW) which falls under the Air Combat Command Twelfth Air Force. Today the 355th FW provides flying training for the A-10 Thunderbolt II aircraft from initial to refresher programs, close air support, air liaison officers, and OA-10 forward air controllers. EC-130 pilots and crews training is also provided by the 355th FW. In addition they are the executive ACC unit to assure compliance for the INF and START treaties.

Other major units assigned to Davis-Monthan are the 563rd Rescue Squadron and the 55th Electronic Combat Group. For a complete listing of units and aircraft see TABLE 2.

Other flying units assigned to Davis-Monthan include the Air Force Reserve Command's 943d Rescue Group, consisting of the 305th Rescue Squadron (305th RQS) flying the HH-60G Pavehawk, the 306th Rescue Squadron (306th RQS) and the 943rd Operations Support Flight. These units are all operationally-gained by Air Combat Command (ACC) and are considered geographically separated units (GSUs) of the 920th Rescue Wing (920th RQW) at Patrick AFB, Florida.

The 214th Reconnaissance Group (214th RG) of the Arizona Air National Guard flies the MQ-1 Predator.

TABLE 2

UNIT/SUBUNIT	AIRCRAFT FLOWN	NAME	TAILCODE/COLOR
355th FW			
354th FS	A-10A, OA-10A, A-10C	BULLDOGS	DM blue/yellow
357TH FS	A-10A, OA-10A, A-10C	DRAGONS	DM yellow
358th FS	A-10A, OA-10A, A-10C	LOBOS	DM black
55TH WING			
41ST ECS	EC-130H	SCORPIONS	DM blue
43RD ECS	EC-130H	BATS	DM red/black
23RD WING			
563RD RQG			
55TH RQS	HH-60G	NIGHTHAWKS	FT
79TH RQS	HC-130P		FT

The base provides additional active duty support to the 162nd Fighter Wing (162nd FW) of the Arizona Air National Guard, located at nearby Tucson International Airport, which flies the F-16C and F-16D Fighting Falcon.

Today, Davis-Monthan Air Force Base operates one 13643x200ft runway (12/30) on over 10,600 acres. TABLE 3 lists all known frequencies and systems in use, we also include frequencies used by the 162nd FW AZ ANG based at nearby Tucson International Airport (KTUS).

You will need a digital scanner to monitor the base trunk system.

Just adjacent to Davis-Monthan Air Force Base is the Pima Air and Space Museum. Located at 6000 East Valencia Road in Tucson, it is one of the largest non-government funded aerospace museums in the world. Open daily 9:00 AM to 5:00 PM with last admittance at 4:00 PM, the museum as with nearly 300 aircraft on display and also offers several daily buses tours of the "Boneyard". For more information check out the museum web site at: http://www.pimaair.org/. Fifteen miles further south of Tucson is the Titan Missile Museum, 1580 West Duval Mine Road, Sahuarita, Arizona. The museum offers views of Titan II missile in its silo and associated launch facilities. More information on this museum can found at: http://www.titanmissilemuseum.org/. Check them both out if you are in the area, grab your scanner and have some fun this summer!

Douglas B-18B Pima





B-17E in Flight

TABLE 3

DAVIS-MONTHAN AIR FORCE BASE (KDMA)
TUCSON INTERNATIONAL AIRPORT (KTUS)

AERONAUTICAL OPERATIONS

118.300	KTUS Tower
118.850	KDMA Tower
119.000	KTUS Tower Alternate
119.400	TUCSON Approach/Departure
121.800	KDMA Ground/Clearance
123.800	KTUS ATIS
124.400	KTUS Ground
125.100	TUCSON Approach/Departure
126.650	KTUS Clearance
127.150	KDMA Airshow Discrete
128.500	TUCSON Approach/Departure
134.100	KDMA Radar Approach
138.500	KDMA SOF VHF
138.525	162nd FW COMMAND POST
138.750	PONY OPS (Helos)
139.625	LOBOS OPS
139.675	DRAGON OPS
142.200	DRAGON OPS
239.800	METRO (WX)
253.500	KDMA Tower
257.800	KTUS Military Tower Common
260.275	BULLDOG OPS
269.550	TUCSON Approach/Departure
270.100	KDMA ATIS
271.300	KDMA Radar Approach
275.800	KDMA Ground/Clearance
279.650	KTUS ATIS
296.300	COMMAND POST
304.800	COMMAND POST
305.400	BULLDOG OPS
318.100	TUCSON Approach/Departure
326.200	KTUS Clearance
327.700	KDMA SOF UHF
348.600	KTUS Ground
361.500	DRAGON OPS
372.200	Pilot to Dispatch
381.300	COMMAND POST (RAYMOND 8)
393.000	TUCSON Approach/Departure

SYSTEM: DAVIS-MONTHAN AFB
TYPE: Motorola Type II SmartZone
VOICE: Analog and APCO-25 Common Air Interface
SYSID: B318

CUSTOM TABLES:
BASE: 406.000
SPACING: 12.5 kHz
OFFSET: 380

FREQUENCIES:

406.11250c	406.15000c	406.76250c
406.96250c	407.36250	407.76250
407.81250	407.88750	408.05000
408.08750	408.12500	408.15000
408.56250	409.02500	409.27500
409.45000	409.56250	410.56250

TALKGROUPS:
A = Analog
D = Digital
E = Encrypted

32	E	Command Post
1008	D	162nd FW (ANG) Channel 1 - “Snowbird Ops”
1024	D	162nd FW (ANG) Channel 2 - “Snowbird Maintenance”
1184	D	Civil Engineering - Electrical
1296	D	355th LRS - Transportation
1312	D	355th LRS - LRCC
1648	E	Security Forces - Alternate (DISP Unencrypted)
1656	D	Base Exercise
1664	E	Security Forces B - Alternate (DISP Unencrypted)
1680	E	Security Forces C - Alternate (DISP Unencrypted)
1952	D	DMFD - Fire 1
1968	D	DMFD - Fire 2
1984	D	DMFD - Fire 3
2048	D	Civil Engineering - NET
2272	D	Civil Engineering
2288	D	EOD
2304	D	EMS A Engineering
2336	D	EMS B Engineering
2400	D	Special Events 1
2592	D	Civil Engineering - “Rats Nest”
2608	D	Airfield Maintenance
2752	D	Billeting - Primary
2768	D	Billeting - Secondary
3584	D	EET Primary
3600	D	Airshow Main
3616	D	Airshow Medical
3632	D	Airshow Safety
3648	D	Airshow Services
3664	D	Airshow CE
3680	D	EET Related
3680	D	Airshow PA; EET Related
3696	D	Airshow Hospitality
3712	D	Airshow Pitboss
3728	D	Airshow Booths
3744	D	Special Events 2
3760	D	Special Events 3
3776	D	Special Events 4
3792	D	Base Exercise 2
3808	D	Base Exercise 3
3824	D	Special Events 5
3840	D	Base Exercise 4
3856	D	LAN Maintenance
4096	D	AMARG-1
4112	D	AMARG-2
4128	D	AMARG-3
4144	D	AMARG-4
4160	D	AMARG-5
4352	D	305 RQS
4368	D	Shipping
4816	D	AGE RLTD
4832	D	354 AMU
4992	D	357 AMU
5008	D	357 AMU RLTD
5152	D	358 AMU
5168	D	POL Alternate
5312	D	C-130 MAINT
5632	D	43 ECS NET
5888	D	55 RQS (Chopper Ops)
5904	D	79 RQS (King OPS)
5920	D	355 EMS/AGE
5936	D	BASE OPS
6144	D	AMMO
6160	D	AMMO RLTD
6176	D	AGE RLTD 357th AMU
7488	D	POL
8192	D	RADIO MAINT
8208	D	Base Exercise 5
8608	D	Base Exercise 6
8624	D	Base Exercise 7
13328	D	ANG/FD-1 Fire Department - Alarm
13344	D	ANG/FD-2 Fire Department - Tactical
13360	D	ANG/SECURITY
13376	D	Unidentified ANG Unit
13392	D	ANG/148 SGF
13456	D	ANG/162FW MOC (Channel 9)
13472	D	ANG/162FW AMMO
13488	D	ANG/162FW POL
13504	D	ANG/CDF
13520	D	ANG/162FW CP
1353	D	ANG/162FW CE
13552	D	ANG/148 MOC (Channel 6)
13568	D	ANG/152 MOC (Channel 7)
13584	D	ANG/195 MOC (Channel 8)
13824	D	ANG/162 SOF (Channel 15)
16000	E	Security Forces (DISP Unencrypted)



B-24 Liberators in Formation 1980.

Multi-Band HTs Soon to be FCC Banned

By Gordon West, WB6NOA



Multiple band MARINE / FRS / MURS transceivers offer unique abilities in both the marine radio and Private radio services.

"When I am out on the boat, my multi-band marine VHF handheld is FCC approved for ship-to-ship and ship-to-shore use," comments William Alber, from the San Francisco Bay area. This same radio also offers MURS (Multi-Use Radio Service) 5 channels of license free VHF operation, plus 14 channels of UHF FRS (Family Radio Service) explains Alber, showing off his unique multi-service handheld, which he purchased from the local marine electronics store.

MULTI-SERVICE MARINE TRANSCEIVERS

Standard Horizon HX 470/471 Marine/MURS/FRS submersible

West Marine VHF 250 Marine/FRS transceiver

ICOM America M-88 Marine/Land Mobile transceiver

Cobra MR HH425 Marine/GMRS handheld



Each of these marine VHF handheld transceivers carries FCC Part 80 certification, and they may also meet the FCC equipment certification requirement for FRS and GMRS UHF operation, too.

Then there is the "fuzzy" stuff about the FRS side of the radio requiring a non-removable rubber antenna, while a GMRS handheld antenna COULD be removed.

About three years ago, the Standard Horizon HX 470 S submersible handheld, boasting 5 transmit and receive MURS channels, plus 14 channels of FRS, plus AM radio reception, FM music radio reception, and aircraft receive, was the pick-hit of fishermen because it did so much, INCLUDING an imbedded digital selective calling marine distress feature along with a strobe light which blinks SOS!

The "470" was an instant submersible hit at the local marine electronics stores.

But it suddenly disappeared, replaced by the "471". If you can find a Standard Horizon HX-470, not the newer 471, it will have the original MURS TRANSMIT capability.

Why the switch? Likely FCC Rule 95.632 listing 2 bandwidth requirements of a MURS transmitter, plus FCC Rule

continued

95.633 (d) "…no transmitter will be certified for use in MURS if it is equipped with a frequency capability NOT listed in 95.632…"

151.820 MHz **151.880 MHz**

151.940 MHz **154.570 MHz**

154.600 MHz

Oops! The 470 ALSO has transmit on 14 FRS, plus 55+ marine VHF channels, all in the same unit.

I'm told the newer 471 can revert to the old 470 days by a tiny solder blob behind a sticky strip in the battery compartment.

If you like the idea of boating or sailing with a versatile handheld that is multi-band, better get your favorite radio NOW – they are all soon to go away!

Federal Communications Commission Notice of Proposed Rulemaking (NPRM) WT Docket no. 10-119 and 10-106 may spell the annihilation of a marine VHF FM handheld transceiver that incorporates transmit and receive capability for Family Radio Service (FRS).

It is a no-brainer to understand why the FCC is trying to plug the hole when they MISSED common marine VHF distress, safety and navigation channel numbers as identical to the sequential 1-14 FRS channel numbers.

"We hear it all the time – Mom and Pop and the kids yakking down at the seashore on marine VHF Channel 14, not realizing they are NOT dialed into the short range FRS Channel 14," comments a tugboat operator out of the Port of Long Beach.

Marine VHF Channel 14 just happens to be the Southern California Vessel Traffic System (VTS) cargo carrier channel!

Marine Channel 1 - 156.050 MHz - Vessel Traffic System

Marine Channel 5 – 156.250 MHz – Port Operations

Marine Channel 6 – 156.300 MHz – Search and Rescue and Intership Safety and Coast Guard

Marine Channels 7,8,9,10,11 – Reserved for commercial boats

Marine Channel 12 – 156.600 – Port Operations

Marine Channel 13 – 156.650 – Ship-to-Ship Bridge-to-Bridge

Marine Channel 14 – 156.700 – Port Operations

The ultimate channel disaster might occur if any of these combo-marine VHF/GMRS handheld radios have a GMRS UHF Channel 16, accidentally operated by Mom, Pop, and the kids at the beach on marine VHF Channel 16, the INTERNATIONAL DISTRESS AND SAFETY CHANNEL.





"While we recognize the convenience of these combination radios, we are concerned that manufacturers are starting to include FRS frequencies in radios that include VHF marine frequencies," comments the FCC in their Notice of Proposed Rulemaking. Hmmmmm, we saw this problem five years ago!

"FRS combination radios that include VHF marine channels could raise an eligibility issue; moreover, depending on the marine frequencies available in the radio, a possible interference problem could arise on marine distress, safety or navigation communications on Channels 16 and 70 could arise," adds the FCC.

"….personal communications could result in disruptions to the United States Coast Guard during distress calls or confusion between communications by the general public and actual marine distress calls. Additionally, widespread capability to transmit on these distress frequencies could result in increased hoax May Day calls," adds the FCC, page 18 -19 in the NPRM.

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Multi-Band HTs Soon to be FCC Banned continued

The FCC will then ask for comments about this dilemma, and what sort of "grandfathering", if any, would be appropriate for currently certified FRS combo radios that may incorporate the marine VHF – FM service.

The well respected Radio Technical Commission for Maritime Service (RTCM) (rtcm.org) has plenty to read about this subject at rtcm.info/sc128 and /sc110 and /sc123. Pay attention to the RTCM.org site – they help in all marine radio matters.

Marine VHF manufacturers with combined "other band" capabilities will likely begin shutting off any additional transmit than marine VHF. FRS and GMRS manufacturers will probably shut off any marine transmit capabilities. If you're looking for one of those combo units, go to www.consumersmarine.com or WestMarine.com.

And when was the last time you heard about Mom and Pop and the kids buying that GMRS LICENSE for that pair of inexpensive 22 channel handhelds they got at the hunting and fishing store? A "TRUE" GMRS radio would have capabilities of the 8 repeater PAIRS, plus interstitial channels, and the typical FRS/GMRS gives you only the simplex FRS and GMRS interstitial frequencies – requiring a license.

The FCC is just DISCOVERING that not many of the American Public send off our bucks for the GMRS callsign. Another surprise, Hunh?

So, stand by for some sweeping changes in the marine radio and personal radio service rules and regs. If you are looking for a combo rig for both boating and camping, better get it NOW! And, for Heavens sake, know which part of that radio is FRS/GMRS, and which is ONLY allowed to transmit on the 55+ marine VHF radio service ON THE WATER. No yakking on marine VHF when you're not floating.

PRODUCT ANNOUNCEMENT

Cobra Electronics Introduces 50th Anniversary CB Radio



Cobra Electronics has announced the launch of its 50th Anniversary Limited Edition CB Radio. The new 29LX LE CB Radio will feature a revolutionary new design with a selectable four-color LCD display and ergonomic microphone, along with a new weather alert scan and the industry's first Radio Check Diagnostic.

"For 50 years Cobra has provided the highest quality products to meet the needs for the professional driver, " said Tony Mirabelli, senior vice president of marketing and sales for Cobra. "After extensive product testing and customer feedback, the 29 LX LE is a culmination of performance, style and innovation in Citizens Band Radios."

On the outside, the 50th Anniversary CB features a completely redesigned, modern look with selectable LCD display that can be red, green, blue or amber to match the interior of a cab. The display also has customizable night and day settings to enhance readability in both very bright and very dark conditions. The 29 LX LE's large center scroll knob provides simple one-touch programming of the unit for easy setup and channel changes. Lastly, the 29 LX LE includes a redesigned ergonomic microphone for easy and comfortable use.

Internally, the 29 LX LE is based on the classic 29 LTD with some new added features. The new weather alert scan automatically advances to the next clear NOAA weather channel when driving cross-county, ensuring the driver is always getting the latest weather alerts and warnings. Also new in the 29 LX LE is the industry's first and only Radio Check Diagnostic. Now drivers can monitor continuously their radio's RF output, SWR setting, and battery voltage. Like previous Cobra 29 models, the 29 LX LE includes 4 Watts AM FR power output, the maximum allowed by law, instant access to emergency channel 9 and information channel 19, as well as Delta Tune to clarify incoming signals and adjustable Dynamike boost, which increases the microphone's sensitivity for increased voice clarity.

The 50th Anniversary Limited Edition 29 LX LE CB radio will be available at travel centers, CB shops and truck dealers nationwide for $149.95 in September 2010. For more information on this and other Cobra products, visit www.cobra.com.

HERE'S A VERY EASY WAY TO GET ON CB

Handheld radios offer a quick solution and more.

By Chuck Gysi, N2DUP

Perhaps you want to get on CB, but don't want the task of installing a big base station radio and antenna, or you want to operate on CB while mobile without installing a rig below the dash or an antenna on the outside of your vehicle. What do you do?

There's an easy option and it's a portable CB radio. Sometimes they are called walkie-talkies or HTs (for handie-talkie), but it's all the same; they operate on battery power and have their own flexible rubber-covered coil antennas.

Most CB shops, truck stops, and some farm supply stores carry handheld CB radios. They offer a lot of users a variety of options, so while they haven't been as popular as when I was a kid, they still have enough use these days that manufacturers still make them.

It's not surprising to find CB handhelds in use on farms. There may be CB mobile radios installed in grain trucks and perhaps combines, but a portable CB radio may be carried for ancillary use around the farm to keep in touch with the grain truck coming in or someone on a tractor.

Likewise, you may find CB handhelds employed in operations where people need to be able to reach out to truckers, such as at a truck stop, etc. You'd be surprised how many handheld CB radios are out there, not to mention those who use them in their personal vehicles just to be



Here's the Midland 75-822 CB radio shown in both its handheld and mobile version. It's so popular that they often are on back order from the factory. If you see one, grab it!

Continued on page 30

HERE'S A VERY EASY WAY TO GET ON CB continued

able to have CB on the road without the big antenna or permanent installation below the dash.

While there are a few varieties of handheld CB radios on the market, you typically need to choose one that either works best for you – or perhaps is available locally.

There are a number of manufacturers of handheld CB radios, including Cobra, Midland and Cherokee, although it's getting difficult to find the Cherokee handheld CB radios anymore. You'll mainly find the Cobra and Midland handheld CB radios around unless perhaps you look for a used model. At one time, RadioShack had a number of low-power and full-power handheld CB radios on the market. Many got their start in CB with these handheld radios. Some still can be found in garage sales and flea markets, if you look around.

One very unique and unusual CB handheld radio actually is a hybrid. You'll love this radio if you want the ability to operate with a handheld CB radio, but also have the flexibility to use the same rig in a mobile environment as a mobile CB radio!

The Midland 75-822 CB radio can be used two different ways. With the battery attached and the rubber antenna, you have a full-fledged handheld CB radio that operates across all 40 channels. Use it just like a walkie-talkie from the car or from your home or anywhere else, and you're good to go on CB so easily!

However, if you want to use this radio like a regular mobile CB radio, it's a chameleon in disguise! Slide off the battery pack that holds 6 AA batteries, and slide on the vehicle adapter. The adapter allows you to use the vehicle's cigarette jack for full power while mobile.



The Midland 75-785 handheld CB radio offers 7 watts input power and 4 full watts output power, which makes for a powerful handheld CB rig. There's a high-low power switch and an option to plug it into the cigarette lighter.



The Midland 75-822 handheld CB is an interesting CB rig. With the battery attached, it's a handheld CB rig.



Here's what the Midland 75-822 CB radio looks like with the battery removed and the slide-on power pack added for mobile operation from the cigarette lighter. How versatile is that?

In addition, you can plug in an external CB antenna (only the handheld antenna comes with the radio), and get greater range. Plug in a mag-mount CB antenna with gain or install a regular CB mobile antenna on your vehicle and you have a full-power CB radio for on the road, yet a handheld CB radio when you slide back on the battery pack.

Now that's a versatile CB radio! The same radio offers weather channel reception and dual-watch monitors so you can listen to two CB channels at the same time (such as Channels 9 and 19 for REACT team use). The radio also offers high and low power settings, which is great for handheld use so you don't wear down the batteries if you don't need the extra range.

Just know that you don't need a full-blown CB radio to get on the air. The handheld CB radios won't have the same range as mobile and base stations. Sometimes their range is much less than a regular CB station, but they may get the job done for you, especially on the highway when CB range is somewhat limited anyway.

Write in

What kind of experiences have you had with various handheld CB radios? Feel free to drop me a line via e-mail to this address: cb-natcom@scanning1.com. Make sure you put Nat-Com in the subject line so if your message gets spiked to my spam bucket, I can easily spot the "Nat-Com" in the subject line and move your message right to the "in" basket. Tell me your handle, too. The e-mail address is used to reach the author of this column only.

In the meantime, keep the sunny side up and the dirty side down. 3s

The Current State of Scanning and Radio

By Jon Van Allen, KF7YN

Every twice-in-awhile we need to step back and have a look at the current state of things; you know the old adage, "what's shaking". There have been some fundamental changes in the way we access our frequencies, talkgroups, scan lists and other data. So pour yourself a cup o' Joe and pull up a chair as we have a look around.

By now most of you know about online sources of information for gathering frequencies, talkgroups, programming resources, etc. One of my favorite websites is radioreference.com. Lindsay Blanton has done a tremendous job putting all things radio into one comprehensive website. Uniden, GRE and Radio Shack (we'll call them the Big 3) all have agreements to use RadioReference's database in their new scanners. Although this database is not 100% thorough and accurate, it is the best place to start.

The Big 3 have all come out with super-easy-to-use scanners which for the first time ever, come with a complete database for the entire US pre loaded on a SD card. The Radio Shack Pro-107 iScan and GRE PSR-700 EZ Scan-SD, resemble MP3 players with play, pause and menu buttons rather than the familiar traditional scan, search and manual buttons. Uniden's new "Home Patrol" scanner takes simplicity one step further, it has a touch screen with no mechanical buttons at all! These new scanners are all intended to be super-easy to use with an absolute minimal learning curve. And no matter where you live, the database covers just about everything in your area!

This is an inevitable step in the evolution of scanning after the latest and greatest scanners got so complicated that the learning curve scared off many prospective and current scanner enthusiasts, even some who have been at it for many years, like me! The Uniden BCD-996XT is just too complicated for me, so like a lot of other people, I seldom if ever use any of the advanced features found on the high end models. So I have been investigating simpler alternatives like the Pro-107 that I reported in my article "Understanding Trunking" in the July/August issue. I intend to check out the Uniden Home Patrol because it decodes APCO P25 digital whereas the Pro-107 and it's GRE cousin do not. I prefer simpler scanners like my Pro-96 and Pro-2096.

Since there is an ever increasing presence of digital across the scanning spectrum, any new scanner you are considering from this point forward should have digital capability. Having said that, if you live in a rural, semi-rural or small metro area, you may be able to get by with your analog scanner for the time being.

National Parks update: During the past year I visited several US National Parks, I have found a mixed bag of P25 digital use; Bryce Canyon and Yellowstone continue to use P25 but not exclusively. No P25 was heard in Grand Canyon, Great Basin, Zion, Capitol Reef or Grand Teton. Word has it that while many have digital capability, not everyone likes or uses it especially where rugged and remote terrain make it far less reliable than analog. I think you will find this to be the pattern at National Parks across the country. Some Park Rangers also have encryption capability. In Yellowstone, encryption is only used by Rangers for special incidents.



Pro-107

Many federal users including TSA, ICE, US Postal Service and US Coast Guard are heavy users of P25 so if you monitor any of these agencies, you'll want to upgrade your scanner to a digital model if you haven't already done so. Federally mandated narrowband frequencies are also slowly being implemented so make sure you have he latest information, compare your info to online resources, websites, blogs, etc. and of course other scanner enthusiasts in your area. You may be surprised how many users such as the US Postal Service are now using P25 digital and have moved to narrowband frequencies.

800 MHz rebanding update: rebanding continues on schedule nationwide. My home state of Utah was in the first group to reband well over a year and a half ago. The transition went fairly smooth and scanning is as easy as before rebanding. If you have

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The Current State of Scanning and Radio

continued

questions about rebanding, please review my article last year "Rebanding Made Easy" or contact me at the email address listed at the end of this article. RadioReference website also has updated rebanding info.

Those public safety agencies that are still on VHF and UHF may be using new narrow-band frequencies. If your local agency has disappeared from their old frequencies, do a search through the bands to see if they have moved to a new frequency. If you don't find them on VHF or UHF, try looking on 700 or 800 MHz and check the RadioReference database. Sometimes frequencies will also be swapped to address interference issues, I've seen this happen several times in the last few years, frequency changes out of the blue to resolve interference to another user on that frequency or an adjacent frequency.

Other radio things: AM radio in Canada is nearly a historic side note. All but a handful of AM stations have moved to FM. According to the Canadian CRTC (Canada's version of the FCC), the justification for moving to FM is interference issues; reducing power or shutting down at night or altering antenna patterns to avoid interference. Thankfully AM stations in the US are not on the endangered species list just yet.

We need infinitely more bandwidth than is currently available to realize the promise of "everywhere" mobile Wi-fi hot spots, music and video on demand from our smart phones. Using current technology, we are far from achieving what cell phone commercials are promising. We have to invent entirely new ways to compress ever more data AND exponentially increase bandwidth before everyone can download their email, listen to their favorite radio stations and watch TV and video on their smart phones and in their cars.



Hallicrafters - SX88



Home Patrol

Call me cynical or old school, I can't get my mind around using the internet to listen to the radio. Don't get me wrong, the internet has plenty to offer but taking the place of shortwave radio isn't high on my list of internet achievements. I am certainly not trying to pursued anyone either way but I did buy an internet radio to see for myself what all the hubbub is about. I have to say I am disappointed by the frequent drop-outs caused by internet congestion. The streaming feeds used by many stations is somewhere between lousy and rock bottom. This all may be academic soon anyway, a recent US Court of Appeals ruling may open the door for Internet radio streams and other high bandwidth services like Pandora to start charging access fees.

This is the main reason I remain an XM subscriber instead of jumping on the internet alternative, not to mention there is no internet or cell service at all where I spend a good part of my time. With most of the former shortwave giants gone from the airwaves and moving to FM, satellite radio and the internet, Digital Radio Mondiale (DRM) was touted as being the savior of shortwave. I was initially excited about DRM but after years of moving at a snail's pace, DRM may be too little, too late to save shortwave listening as it once was. I do applaud the effort even though it has had relatively little impact on SWL'ing in North America. Only a couple of stations heard in North America are using DRM. Satellite radio is safe for now.

In the glory days of shortwave the only way to listen was by whatever radio we could afford to buy or build and putting up home made antennas. There was a lot of pride in snagging signals from around the world using basic knowledge and skills. After all, that interest in radio is what led to radio and electronics careers for many radio enthusiasts, myself included.

Thankfully, scanning has taken a different route than SWL'ing. Right now we are on the cutting edge of scanning despite the gloom and doom gang who have always said each new development in technology would be the end of scanning. In fact the exact opposite is true, each new development has brought about changes in scanning, almost all for the better!

Your questions and comments are always welcome. My email is: kf7yn@yahoo.com. Please put Nat Com in the subject line. Until next time, happy scanning!

PICK THE RIGHT CB ANTENNA

Bigger isn't always best in getting on the air.

By Chuck Gysı, N2DUP

What's the best way to get on the air on CB?

Perhaps the larger base station antennas are scaring you if you want to operate from home. Maybe you think the shorter magnetic-mount antennas for your vehicle won't do the job. In any event, there are many ways to get on the air on CB, so here's some thinking that will help you go through the process, whether you have been on CB before or you are a first-timer to citizens band radio.

Base station operation may be the trickiest, but it can be simplified, too. If you really want to get out with a big signal, yes, you will need to put up a big base station antenna. The biggest voices on CB have the biggest guns. They often have antennas that rival those used by amateur radio operators, including arrays that can be rotated to concentrate their signals in the direction of their intended target.

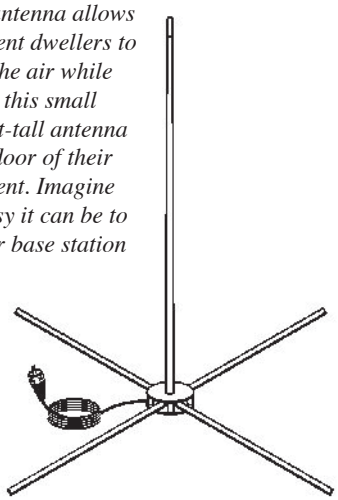
While these big guns typically need big towers to support their big antennas, you have to keep one thing in mind. Legally, CB signals are only 5 watts (4 watts after it leaves the final stage of the radio). Yes, you can put up huge antennas, but if you are going to remain totally legal, you still are operating at relatively low power. Some CBers illegally increase the power of their stations, but that causes problems and may result in fines and even more serious consequences. It's not a recommended path!

Some CBers don't mind putting up huge antennas just to get the biggest signal on the air. Is it necessary? No, it isn't. There are quite a few CB base station antennas out there. I've used a variety of base antennas over the years, too.

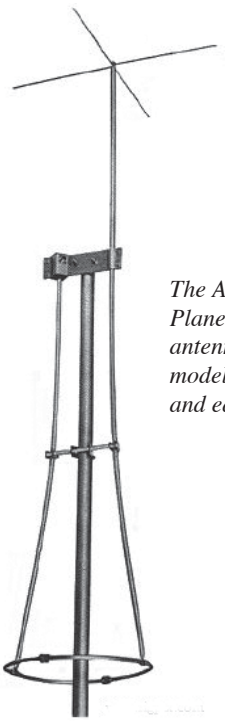
Most CB antennas for base station operation are about 18 feet tall and can put out a pretty good punch omnidirectionally. But you may not want an antenna that tall on the roof of your house. I have found smaller antennas over the years that have done a great job, too. One antenna I once had was known as the Avanti Astro-Plane and it had an unusual "space-age" design, was shorter than most base antennas and got out a good signal. This was a popular antenna in the late 1970s and early 1980s.

These years, I get by with a much smaller base antenna that isn't much more than two feet tall, yet allows me to listen on Channels 9 and 19 and still get out to other CBers in the area. I really don't want the big gun signal on CB, nor do I need it. Again, by looking at what each base antenna offers, you can determine the best antenna for your situation.

The same goes with CB mobile antennas. There are a variety of mobile antennas out there for CB and you need to determine what



The Firestik IBA-5 antenna allows apartment dwellers to get on the air while placing this small five-foot-tall antenna on the floor of their apartment. Imagine how easy it can be to get your base station going.



The Avanti Astro-Plane CB base station antenna was a popular model in the late 1970s and early 1980s.

Continued on page 34

PICK THE RIGHT CB ANTENNA

continued

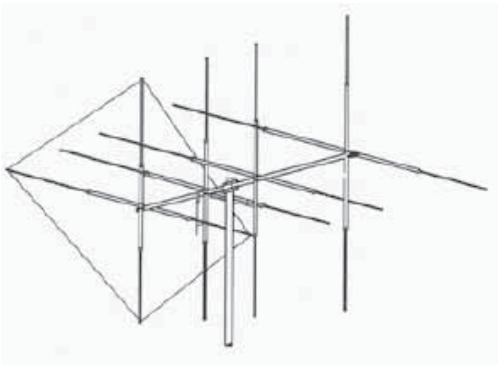
best fits into your budget for your installation, too. I often see the co-phased antennas on pickup trucks, but it's often a wasted effort. While the owners may really like the look, unless you can get the two antennas a full wavelength (about nine feet) apart, the co-phasing just isn't as effective. Sure, co-phased antennas work on the cabs of tractor-trailers because the 18-wheeler rigs can get nine feet of separation between the two antennas. Thus, the co-phasing is quite effective. But if you can't get the same distance, you're probably better off just getting a decent mobile antenna and mounting it on your vehicle.

I personally have used a mag-mount long whip in latter years for my mobile CB activity. I don't keep a CB rig in the vehicle on a regular basis. I might place one in the vehicle for a special trip or for an event, so the mag-mount antenna offers me the flexibility of not having a nine-footer atop the roof all the time. I mount my mag-mount CB antenna in the dead center of the roof of my vehicle to allow maximum gain in all directions. You can mount the antenna on the trunk or elsewhere on the vehicle, but that changes your radiation pattern. A centrally mounted antenna offers closer to omnidirectional coverage. Mounting a CB antenna in the middle of the trunk forces the signal to be pushed in front of you, while mounting on one of the cowls on either side, forces the signal to be pushed in an angle opposite the side you have mounted it.

There is a wealth of information on websites about how to mount your CB antenna, whether it's at home or on your vehicle. If you use Google for a search term such as "how to mount CB antenna," you'll find much needed info in getting the job done.

Lastly, it's a good idea to tune your antenna once you have it in place. A good inexpensive SWR (standing-wave ratio) meter placed in line between the radio and antenna will give a good indication about how well your antenna is putting out its signal. You may need to trim the antenna a little or move it up and down in its mount or shorten or lengthen it if it's in several pieces to electronically match the radio to the antenna. By doing this, you'll have a much more effective signal on the air. Few CBers actually do this, thinking that everything works just fine out of the box. Sure, you'll be on the air, but you can get an even better signal and reception by taking the time to match your antenna to the radio by checking its SWR. While tuning an antenna's SWR is out of the scope of this column in this issue, know that there is something you can do to maximize your on-air presence.

Lastly, there are many special application CB antennas out there, too, if you search around on the Internet. For instance, perhaps you live in an apartment building, but want to get on the air. You can't install a big CB antenna on your deck or the roof of the building, but you do want to be able to get out a signal. Perhaps you just don't want to put up an antenna



This Maco Shooting Star CB array base antenna has a 16-foot boom and an 18-foot radius. It helps get your low-power CB signal out on the air.

on your home, but still want to operate on CB. There's a solution, much like any needed situation.

The Firestik IBA-5 antenna is only five feet tall and easily sits on the floor of your apartment, allowing you to transmit and receive on CB channels. If you live in a metal building, the signal really won't get out, but typical construction will allow you to get on the air at the very least without a big installation. When in doubt, get on the Internet and search for the right fit for your situation.

Write in

What kind of antennas are you using on CB? Feel free to drop me a line via e-mail to this address: cb-natcom@scanning1.com. Make sure you put Nat-Com in the subject line so if your message gets spiked to my spam bucket, I can easily spot the "Nat-Com" in the subject line and move your message right to the "in" basket. Tell me your handle, too. The e-mail address is used to reach the author of this column only.

In the meantime, keep the sunny side up and the dirty side down. 3s

World War I and The Radio

By Dorothy Rieke

In the early 1900's, Marconi informed Great Britain of his new invention, the wireless. First amused and then astounded with the capabilities of the wireless, the British used this remarkable invention in the Second Boers War. In Great Britain, advantages of air waves were acknowledged. However, America was not so fast in accepting this new invention. In 1904, Theodore Roosevelt did appoint a group to learn about the wireless.

At this time, the seas of the world were shackled together with underground cables connecting colonial satellites. Telegraphy was in its glory. However, once the wireless made an appearance, telegraphy relying on physical lines susceptible to sabotage or destruction by natural forces, became somewhat obsolete.

Seven hours before declaring war in 1914, Germany used its chain of wireless stations to send an important message to its mercantile marine that resulted in saving millions of pounds of property, their passengers, as well as their carrier boats. This message read, ìWar declared on England, make as quickly as you can for a neutral port.î This was one of the first wireless uses at the beginning of World War I.

The assassination of the Archduke Francis Ferdinand in 1914 created a world- wide conflict, World War I. Actually, other factors such as nationalism, military might, colonial competition, and certain military alliances actively fueled the war. The United States tried to remain neutral after all, Mothers did not want to see their sons fighting on foreign soil. However, once Germany turned against the Central Powers by sinking unarmed ships, Americans willingly backed their government when it joined the Allies to fight in 1917. One of the problems on sea occurred with the British navy blockade of waters preventing supplies from reaching German ports. With the shortage of food and other goods, Germany retaliated with their U-boats. In May of 1915, a U-boat torpedoed, without warning, the British passenger ship LUSITANIA. One hundred twenty-eight Americans were among the 1,198 casualties.

With the declaration of war, all radio progress came to a halt. Up to this time, great achievements were being made in improving the wireless with such innovations as equipment design and the vacuum tube that revolutionized the industry.

During the war, the government took charge of all radio stations suspending all civilian radio activities. It was even illegal for amateur radio operators to possess working transmitters or receivers. This action seemed destined to stamp out progress.

Soon magazine articles were explaining how radio apparatus was sealed or what occurred when a station was closed. At this time, the future of radio was very uncertain. In defense of these actions, progress in this field assured that radio communications would became vital to the war effort.

The years of the war, 1914-1918, represented a time devoid of mechanization. Instead of armored divisions powered with gasoline, the Army depended on wagons pulled by mules and horses. Radio transmitters and other wireless equipment were transported on the backs of mules.

Two main radio field units existed at this time. The Pack Set was carried by ten mounted men and four pack mules. The Wagon Set consisted of eighteen mounted men with the wagoner and engineer riding in the wagon, and one wagon wireless set drawn by four mules.

Even though the radio was under Army control, certain advancements took place, Quenched spark transmitters were adopted and the number of mules carrying a Field Pack set was reduced to three. Later, spark



World War I and The Radio

continued

transmitters, noisy and inefficient, were replaced by continuous waves.

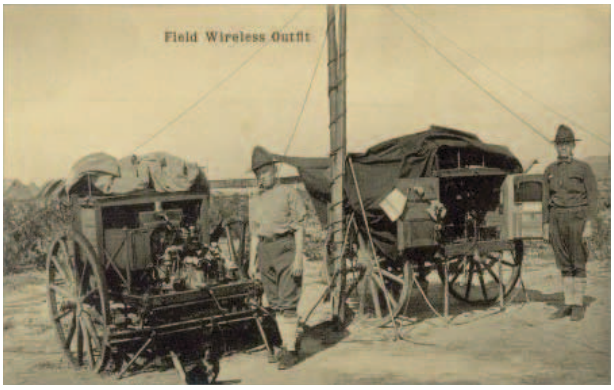
The problem of censorship arose in August of 1914. Seeking to enforce neutrality, President Woodrow Wilson issued an Executive Order to censor international telegraph messages sent and received by radio firms. The Marconi Company of America challenged the legality of this order.

Actually, this company, with close ties to Britain and Italy, had earlier handled a message that could not be called neutral from the British cruiser SUFFOLK. This company disputed the right of the U. S. Navy to monitor its actions. According to them, this was government intervention at its worst.

As a result , the U. S. Navy shut down the Siasconsett, Massachusetts, operations for three and one-half months. The station reopened in January 1915, with American Marconi agreeing to follow regulations. Later, the United States Secretary of State defined the current censorship policy toward U. S. radio communications and how it had changed from cable restrictions.

It was during this war that the radio soon gained a reputation of military importance. In August, 1914, Belgians destroyed an international communications station located near Brussels to keep it from being taken by German troops.

Multiple applications of the radio in both long and, and short wartime communications took place. British troops benefitted from the radio telegraph operators with portable transmitters on the front lines. For example, gas attack damage could be averted by an advance warning to put on gas helmets before the attack. Germans also utilized the radio transmissions to help airships navigate to bombing targets. In retaliation, the French set up special stations to confuse enemy airships by transmitting the wrong signals.



Research efforts by AT&T brought about communications with airplanes so squadron formations could be maintained in the air as troop formations were on land.

A nightly newscast was broadcast from the Navy's station NAA near Washington, D.C. to ships in the Atlantic. Because of the threat of submarines, merchant ships added radio operators. Truthfully, most seamen and some soldiers owed Marconi for their safety.

To keep all informed, high-powered radio stations broadcast the truth and the light from the Committee on Public Information. Public opinion was important, especially during war years. The radio was responsible at this time for reaching every country on the globe with the 'Message of America.'

The idea of using radio transmissions in spying activities was not too feasible. However there were legitimate concerns. Because radio waves could be intercepted by the enemy, a new form of communication, cryptography, a type of secret code communication, came into use. Several writers have reviewed radio espionage and counter-espionage. Other uses for radios included providing entertainment for hospitalized soldiers. Military fired up transmitters to broadcast entertainment to troops near the end of the war in 1918. In 1919, amateur radio operators happily returned to their sets celebrating the end of wartime restrictions. American radio operators worked to reestablish themselves. However, even then, certain restrictions were to be met.



World War I was to be the 'war to end all wars.' This did not prove true. However, great strides were made in technology especially in radio transmission. Radios had demonstrated their usefulness; they were now essential in communication. Improvements such as increasing transmitting range from four to nearly three thousand miles, crystal detectors replaced with superheterodyne vacuum-tube receivers, and continuous wave transmitters replaced "King Spark." There were more transmissions and greater reliability. There were undreamed of advancements. That was radio in World War I.

CLOSING COMMENTS



By: Norm Schrein, KA8PGJ

Sometimes it is easy to be complaisant. Or another saying I have heard is, "If it ain't broken, don't fix it." Both of these have had an important meaning to me lately. It is easy to take for granted the things we do from day to day as we are doing them just the same way. First of all, it is a lot easier than being constantly creative and trying to keep up with and ahead of what the other guy is doing. Eventually that will catch up with you, and when it does, then it is time to decide to either quit or get back in there and get those creative juices going. Over the past 30 some years, I personally have had to do this a time or two. Now it is time to be creative again.

Our frequency databases on line, while certainly comprehensive and very useful to our readers, could always have contained more information. The only problem was the time necessary to make it work as compared to the amount of time in a day to work on the project. A frequency list now consisting of nearly 9 million entries does take a bit of time to set up to work properly. Then there are the other things that can occupy the time in a day. Now, I have been able to come up with a solution.

We now have the time and ability to update our Mr. Scanner frequency databases on the fly. So, instead of updating these databases once a year, we can update the database when we feel an update is necessary. But, in addition, we have managed to pull on the many frequency resources that are on the internet. So, instead of just displaying our own data, we have instituted a Quick Frequency Search which will allow us to tap into other sources of accurate frequency information. If you own a copy of the Scancat software, then you will be able to download a personalized frequency list for your area from a database consisting of nearly 5,000 files.

Another thing we are expanding is our scanner programming service. This is a business that has been growing, but something we have not really paid much attention to. That is we have not been advertising the fact that we can program just about any scanner out there. Now we are in the process of getting that word out.

Thankfully scanners are becoming easier to program and that will hopefully expose more people to the radio hobby. Today it is not even necessary to own a scanner radio in order to listen to local police and fire action. Many times just having a computer or a cell phone with the necessary applications will get people into the scanning hobby.

"The times they are a changing", and that is what is so neat about electronics. There are always new gadgets and ways to do things in an easier manner. Years ago, I wrote frequency directories using a typewriter and 3 X 5 cards. Today a frequency directory in book form is pretty much a thing of the past. Now we have databases on CD roms or the internet. Someday that too will be replaced by something even better. It is just a matter of time.

I also believe that before long, we will no longer be able to walk into a store and buy a scanner. That will be accomplished via the internet until a better way of selling these items is developed. Watching the technology change is something you can do right now just by keeping up with news stories or watching the financial pages. There are predictions that many name brands will be gone by the end of 2011. Brands such as Reader's Digest, Blockbuster, T-Mobile and Thrifty Car rental are on that list of brands destined to disappear. The end of an era for brand names can also be found in the electronics industry as well.

It kind of makes me wonder where technology will be 50 years from now. I do know that if my father was able to return to life (and he died in 1964), he certainly would be surprised by all the technology that has evolved since then. There has been the personal computer, not to mention the internet, cell phones, the food processer, liquid crystal displays (LCD's), VCR's, CD and DVD players Also video games (Pong was invented in 1972). Then there are post it notes, the MRI (Magnet Resonance Imaging), the artificial heart, the Cabbage Patch Kids and Windows. There was also doppler radar, Prozac, Web TV, Viagra, Segways, hybrid cars, digital cameras, You Tube, Facebook and the I-Phone.

Yes, the technology will keep evolving. I just can't wait to see some of the new inventions yet I will miss some of the old ones.

LAST PAGE OUT



Scenic Railroad Engineer at the Goldfield Ghost Town, Arizona.

photo by Norm Schrein

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