



HelpNet

COMMUNICATIONS PLANNER

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The Picture.....

on the opening page of this presentation is a snapshot of a few of the many dedicated young Americans who are there to help in times of need. These people are not part of a huge bureaucracy with large financial resources - they are people just like you and I; young and old, who have a concern for others and a willingness to help without fame or fortune. We will be telling you more about these people shortly, but for now, we would like to address the reason for preparing this Planner.

We recently received an inquiry from a CERT (Community Emergency Response Team) communications officer. In essence, the inquiry involved a request for assistance in developing an effective communications plan involving unlicensed radio (FRS, ISM, and MURS) as well as licensed use of GMRS and public safety channels coupled with Amateur radio. A copy of the inquiry and our initial response is available at www.info4u.us/CERT_Inquiry.pdf. Our initial thoughts were that VHF unlicensed MURS (Multi Use Radio Service) radios would be the best overall choice due to factors that will be discussed later in this Planner.

Upon further consideration, we discovered that we were addressing only a partial solution to a much greater need. We then made the decision to develop a more extensive plan that would address not only the needs of CERT requirements, but others as well. The following is a partial list of volunteer emergency response groups that have a similar objectives and related communications requirements:

- ARC - (American National Red Cross Disaster Relief)
- ARES - (Amateur Radio Emergency Service)
- BSA (Boy Scouts of America) Explorer Program
- CERT (Community Emergency Response Team - Citizens Corps)
- LEPC (Local Area Planning Commission)
- MRC - (Medical Reserve Corps)
- RACES - (Radio Amateur Civil Emergency Services)
- REACT – (REACT International, Inc.)
- SHARP (Special Hazards Assistance Response Program)
- SKYWARN Spotter Network (Storm Spotters)
- VOAD - (Volunteer Organizations Active in Disasters)
- VIPS - (Volunteers in Police Service)
- USAonWatch - Neighborhood Watch Program

I think you may be getting the idea. In addition to EMA, local fire, rescue, law enforcement and hospital teams, there are numerous volunteer organizations that provide feet on the ground in times of need, with CERT being a part of a much larger network. We believe that these organizations can provide combined resources based on a coordinated communications network. That is the purpose of this Planner.

CERT as a part of a larger perspective

Most volunteer response organizations have a primary focus on disaster relief involving geophysical/weather related events such as earthquakes, floods, hurricanes, tornadoes and man-made disasters such as chemical spills, nuclear accidents, or terrorist attacks. It is good to be prepared for such events, but the far more common need is to address the problems that we face daily.

The effects on our communities in the form of assault (in particular home invasion), robbery (Specifically merchants who handle prescription medications and/or cash), property owners (Notably, those owning structures that are mainly unoccupied such as churches, schools, and vacant homes or warehouses), and in general - just keeping an eye on the neighborhood to be on the alert for suspicious activity by car thieves, drug dealers, robbers, sexual predators, and a long list of others who prey on unsuspecting victims.

Falcon Direct has been involved in developing programs to make our communities safer for over a decade. The picture on the cover of this Planner is just one of the many examples of our efforts. The young people shown are part of the Clanton Alabama BSA Explorer post involved in voluntary law enforcement training. Falcon Direct provided affordable and effective personal communications equipment for these young people to help them integrate into the ranks of professional law enforcement service. We'll be talking more about this and other programs shortly. In the meantime, you may want to visit a special web page developed to address the needs of safer communications at <http://safercommunities.blogspot.com>.

The Cornerstone for Safer Communities

In virtually every mass emergency situation, the primary communications networks FAIL! The ultra-reliable wired telephone network is only a shell of what it was just a few short years ago. The reason? Users are moving in droves to cell phones at the residential level and the broadband cable and IP based systems for business use. The first thing that fails in weather related emergencies is business and home telephone service relying on broadband computer connections, closely followed by the cellular network (primarily as a result of overuse in times of stress).

The only thing that can provide reliable communications in a disaster situation is 2-way radio! The question is what kind of 2-way radio? The answer is a 2-way radio that can communicate with the greatest number of public safety users with no dependence on broadband, the Internet, or cellular networks. 2-way radio, and in particular, VHF 2-way radio, is the cornerstone for emergency communications. The majority of Amateur, Disaster Relief (Red Cross/Salvation Army), EMS, Fire, Hospital, Law Enforcement, Marine, Public Works, Bus Transportation, and Utility systems are based predominately on VHF analog technology. VHF analog 2-way radio is the basis for an effective disaster communications network.

The original questions presented by a CERT communications officer are the origin for the development of a concept which we call *HelpNet*, a system capable of meeting both disaster AND the day to day needs of making our communities safer.

An Introduction to *HelpNet*

We made a thorough technical review before choosing VHF analog as the preferred technology platform. Others were discounted as noted below with MURS being the obvious choice as best suited to a total safer communities program:

FRS - (Family Radio Service) Operates in the UHF band with equipment restricted to portable only use with a maximum power of one-half watt. No license is required by the FCC (Federal Communications Commission) and equipment cost is low. Unfortunately the operational considerations make this a poor choice for use as a part of the *HelpNet* network.

GMRS - (General Mobile Radio Service) Available only for personal use in the UHF band. Each individual user must be licensed by the FCC which adds to the cost of the operation while prohibiting use with commercial or governmental users. Not suitable for the *HelpNet* network which is VHF.

ISM - (Industrial Scientific Medical) Band. No FCC license is required. Equipment cost is comparable to quality FRS and/or GMRS radios. Performance is significantly better than FRS, and comparable to GMRS portable radios. This system operates in the 900 MHz band which is unsuitable for *HelpNet* objectives.

MURS - (Multi User Radio Service). Can be used for personal, commercial, and governmental use. Operates in the VHF frequency band with no FCC license required. Power is limited to 2 watts on up to 5 radio channels in either analog or digital operating modes. Range can be greatly enhanced through the use of external antennas which provide operating range of up to 50 miles between fixed stations. Equipment compatibility with Amateur, Disaster Relief, EMS, Fire, Hospital, Law Enforcement, Public Works, Storm Spotters, Transportation and Utility systems make this an ideal choice for *HelpNet* networks. Additional information on license free radios is available at www.mursradios.com.

VTAC - (VHF Tactical Communications). Every public safety radio used in the USA should be equipped with interoperable communications channels that allow them to operate on a common channel or channels in times of emergency. At the state level, there are older frequencies that have been in use for decades. For example, in Alabama, the channels set aside for public safety are 155.010 MHz (law enforcement), 155.040 (fire service), and 155.285 for emergency medical services. In addition, 155.475 is the national law enforcement interoperability channel and 155.340 MHz is for hospital emergency communications. Any user involved in public safety communications is allowed to use these frequencies without a license.

In October of 2000, the FCC created new frequencies for public safety VHF interoperable communications. A calling channel, known as VCALL (155.7525) is available for alerting purposes and we normally recommend the use of two simplex tactical channels -151.1375, known as VTAC 1, and 154.4525 known as VTAC 2. All of these frequencies can be used for fixed station, mobile, paging, and portable operation. Additional information is available at www.info4u.us/VTAC.pdf.

The *HelpNet* network is based on the utilization of MURS and VCALL/VTAC frequencies to provide an emergency communications system that will combine the resources of different users to function as an integrated resource.

The Need for *HelpNet*

The primary focus of *HelpNet* is to address both disaster, and day-to-day needs, using a coordinated approach to utilizing the combined resources of professional and volunteer personnel, dedicated to making our communities safer for everyone. The cornerstone is COMMUNICATIONS! Let me give you an example of why we feel *HelpNet* could benefit your community.

I live in an upper middle income suburban area, with a semi-active neighborhood association. My business is not far away. Yesterday, a tornado struck without warning in the darkness of early morning. Over two hundred homes within just a few miles of my home and business were completely destroyed. An even larger number were severely damaged. Things were (and are) a mess with no Internet at home or the office, still no power at the office, many streets closed, and some neighborhoods under curfew from dark till dawn. Much of the recovery work is being done by volunteers, but that is not the point of the story. Here is the real point!

The multi-million dollar siren system was never heard. The weather alert application available for cell phones did not work (the cell local area cell tower was knocked out). The weather alert radios in the few homes that had them did not go off in time to be of any use. The local TV stations were monitoring (or trying to monitor) an 800 yard wide tornado that was rapidly skipping across Alabama, leaving mass destruction where ever it touched town. NONE of our modern alerting technology was of any benefit whatsoever!

After the tornado had touched down, none of our communications networks was operational (with the exception of wired telephones, which few people use any more). The broadband networks providing home and business telephone service were down. Cellular service was down; partly because of infrastructure damage, but mainly because of system overload. Most households were completely in the dark with no AC power and no backup. Many did not have even the basics for emergency conditions. A couple of ten dollar battery powered radios, two dollar stick up LED lights, and a charcoal grill made things a lot easier for many of us.

Things could have gone lot better if we have been better prepared in the area of alarm notification and communications. We'll be talking more about this shortly. To compound the problem, there was the need to aid the injured, clear our streets, and to be on watch for looters.

Now, let's go back to a time BEFORE the tornado. Theft and vandalism are common in every neighborhood as the increasing population of drug addicts turn to theft to support their habit. No neighborhood is safe from copper theft. Any building, residential or commercial, WILL be a target for copper thieves. It's not a matter of IF, but WHEN! Look at the crime report in any small community newspaper, and you will quickly see that traditional law enforcement is simply overwhelmed by "petty" crime. It isn't so petty when YOU are the victim!

Our neighborhood has many elderly residents, many of them single. When phone service fails, they can be in real trouble (Fortunately, most of them still have wired phones, but the ones they may be calling do NOT!).

So, the question is *How does HelpNet address these issues?*

The Elements of *HelpNet*



You are looking at an American made 2-way communicator known as a *Jobcom*. Technically, it is a VHF 10 channel personal 2-way radio especially well suited as a part of the *HelpNet* system. Five of the frequencies are preset for operation on the license free MURS channels for tactical use (more about this shortly). One channel is reserved for reception of alert calls (VCALL). Two others, (VTAC 1 and 2), are available for interoperability to public safety first responders. A built in weather channel is included for reception of NOAA weather alerts plus two additional channels which can be individually programmed for local use requirements. The price of this incredible lifesaving communicator is just **\$189**. There should be one these units in every business, church, home, and school in America! Now, let us tell you how *Jobcom* can serve YOU!

Descriptive literature is available at www.info4u.us/jmx.pdf for the Jobcom JMX-141D shown above.. This item can be ordered on line at www.bestpriceradio.com and entering the words *CERT Radios* in the Search field at the top of the page.

The standard JMX-141D is rated at 1.5 watts. The more powerful Model JMX-146D is rated at 2 watts and is priced at **\$235**. Other than the difference in power, the 146D has the ability to be selectively called which provides enhanced capabilities for large system users. Both models have Call Alert which allows all users tuned to the VCALL channel to be alerted as a group with a loud alerting tone as well as operating on all MURS channels (151.820, 151.880, 151.940, 154.570 and 154.600). The 146D allows a dispatcher with encoding (i.e. multiple address code sending) capability to selectively call target groups or even individual radios as desired.

An example of how the enhanced signaling capability of the JMX-146D can be illustrated by reviewing a common situation. In my community, we have an association with a President and Block Captains for each street. The President may wish to send an alert to all Block Captains in the community for distribution to those on his or her block. Such an alert might be a weather alert or other general interest message. As a block resident, a user may have a message only for those on their block, such as a medical alert, report of suspicious activity, etc. The possibilities for utilization of the *HelpNet* system are virtually unlimited! Additional information is available by giving us a call at 800.489.2611.



A *HelpNet* fixed station is available that is fully MURS compatible with the Jobcom portable radios shown above. This tiny desktop communicator, known as the *Patriot* station is rated at 2 watts, has 10 channel capability and is completely self-contained in a compact calculator sized housing. The standard antenna is good for short range communications while optional long range antenna systems are available for large scale dispatch operations. See www.bestpriceradio.com and enter the words *CERT Radios* in the Search field at the top of the page for more information. The Patriot is priced at **\$345**.

Other *HelpNet* Compatible Products

It should be noted that the FCC regulations are very specific on what radios can be used on MURS frequencies. Before considering an offering by a supplier stating that they have a product that is just as good (or better) than the products listed here, we invite you to review some very important information considering the rules governing the purchase and use of MURS equipment. A special white paper report is available at http://www.info4u.us/MURS_Info.pdf.

Interoperable frequencies (VCALL, VTAC-1 & 2) can be used without an FCC license for mobile, portable and paging use by those involved in governmental (state, county, municipal, or volunteer) for public safety emergency use. If you have any questions on this subject, drop us an email to ServinU@falcondirect.com.

While the primary emphasis of the *HelpNet* program is on improved community communications, there are other products that complement the overall objective of establishing and maintaining SAFER communities. Here is an overview of the available offerings:

Enhanced Personal Communicators. The Jobcom Personal and fixed station radios are limited to an operating bandwidth of 150-160 MHz. The Amateur radio VHF 2 meter band is below 150 MHz and the Marine bands are above 160 MHz. Amateur and Marine radio operators can talk to *HelpNet* users on non-MURS frequencies (VTAC for example). This satisfies the majority in interoperability requirements. Those requiring communications capabilities outside the Jobcom operating range can give us a call at 800.489.2611 for special assistance.



Personal Safety Systems. The Mayor's office of the City of Birmingham is protected by wireless call assistance buttons. Merchants in Evergreen, Alabama use similar devices to quickly summon assistance in times of distress and courtrooms throughout the State of Alabama as well as court offices are protected by similar devices. Additionally, these devices can be set up to provide emergency calling assistance for the elderly and disabled. These systems can operate directly on public safety channels for the fastest response possible. For additional information, see www.info4u.us/AlarmAlert.pdf. The price is just **\$845** or less for those who already have existing security systems for a single call button system (\$50 each for additional buttons). There are NO monthly charges! Call us 24/7 for additional information at 800.489.2611.

Theft Prevention Systems. Working with participating churches and first responders, Falcon Direct has developed an affordable and efficient deterrent to copper thieves who destroy expensive air conditioners, even rip copper out of homes and commercial buildings for a few hundred dollars' worth of copper. Additional information is available at <http://safercommunities.blogspot.com>.

Early Warning Storm Detection Systems using MURS digital technology can provide the enhanced severe weather warnings and the list goes on for the incredible power and service of the *HelpNet* system. You can learn more about all the elements of the *HelpNet* system by going to www.bestpriceradio.com and typing the words CERT Radios in the Search field. Now, let's wrap things up!

Wrapping It All Up!

This planner evolved from a simple request to provide information to a CERT communications officer in Florida to determine the best way to maximize the effectiveness of their communications network. From that inquiry, we began our task of providing a total communications solution, not only for CERT volunteers, but others with a common goal of helping others efficiently in time of need.

We sent an email to all known CERT coordinators nationwide advising them of our efforts in developing a communications system planned from the ground up to address emergency needs of all types. The response was overwhelmingly positive with the exception of one recipient in Maine who accused us of aggressive commercialism with a *shame on you* for apparently trying to take advantage of CERT volunteers. This individual correctly assumed that we WILL benefit from this program (if successful). To that charge, we make no apology. We are in business to do business. This allows us to earn a living, provide employment for others, pay taxes and support our community. We intend to continue such activities as long as our Creator allows us to do so. Our company motto of *Serving those who serve others* is a tradition and a business model that we have followed for over a quarter century and look forward to doing for the next quarter century and beyond!

So the question now, is what is YOUR next step? As a CERT coordinator, your first task may be one of recruiting and training community volunteers. Once trained and certified, you may be eligible to apply for DHS Citizens Corp grant. Are you guaranteed funding? No, but you'll never know until you apply. We have provided much useful information in this Planner and we will gladly provide more assistance upon request.

What about all the others who are not eligible for Federal funding such as the Neighborhood Watch program or neighborhood associations, or municipal sponsored programs? Grant money is available from numerous community supportive corporate sponsors including most of the brand name retailers and large utilities. We have a list of major resources available on request.

So what if there is no grant money available? As a responsible member of my community, will I (or you) invest \$189 to help make my street safer for my family and my neighbors? Will my city spend a thousand dollars to provide a means of communicating with their citizens. If the answer to both questions is "No", that is a shame. I choose to think that concerned government officials and citizens alike WILL respond to the opportunity to reduce crime, improve safety, and bring everyone together to make our communities a model for others to follow. If you would like assistance in setting up community meetings, we are available to assist you in any way possible.

Have we answered all your questions? Probably not, but we should be a whole lot further along than when we started. Now, our question is, When will we be hearing from YOU?

Burch H. Falkner and all
The Team at Falcon Direct