

# PLANT SAFETY PLANNER



***Falcon Wireless***

36 - 20th Avenue NW - Birmingham, AL 35215 - Phone 205.854.2611

# THE ULTIMATE PRIVATE NETWORK WIRELESS COMMUNICATIONS SYSTEMS



## General

There are seven basic private wireless systems network (no monthly fees) commonly used in manufacturing plants, institutions and logistics centers as follows:

- 1) Employee Assistance Calling Systems (OHSAS 18001)
- 2) Mass Notification Systems (29 CFR 1910.165(b))
- 3) Wireless Access Control Systems
- 4) Wireless Monitoring and Reporting Systems
- 5) Unlicensed VHF, 900 MHz, and Wi-Fi Radios
- 6) Licensed VHF & UHF Portable, Mobile & Office radios
- 7) Analog and Digital Repeaters to extend operating range

## Our Focus

Our focus, in serving the needs of others, is primarily directed to enhancing safety, compliance, and efficiency through the use of wireless technology. Employee Assistance Calling Systems and Mass Notification Systems (See 1 and 2 above) address all three objectives by providing enhanced employee safety, compliance with Federal Regulations, and operating cost savings through improved efficiency and productivity. The other systems primarily address improved efficiency and convenience. ALL should be seriously considered by anyone involved in safety, compliance, and administration. For additional information, please visit [The-Communicators.net](http://The-Communicators.net).

## A Word About Networks

There are two basic types of wireless communications networks. Public Networks (AT&T, Verizon, etc.) are operated by federally licensed common carriers (i.e. licensed to charge fees for use of their networks). Private Networks are user owned. Some require FCC licensing, some don't. Private Network users pay no monthly fees to third parties, nor are they subject to delays associated with message processing through an off premise network.

## FCC Licensing

An FCC license is required for all radio systems, operating in the UHF (450-470 MHz) frequency range. The average cost for licensing is \$700 for a 10 year authorization providing use of up to five frequencies that can be used either for simplex (direct) or repeater operation (one pair of frequencies required for a repeater).

Repeaters are generally not required except rarely for multi-building campus or for extremely large facilities. Five VHF frequencies are available for unlicensed use as well as portable radios available for use in the 900 MHz and & Wi-Fi band.

## General Recommendations

Unlicensed VHF is generally not recommend for industrial or commercial use although in some applications, it may be suitable for limited use. 900 MHz unlicensed portables are rarely used in industrial plants due to lack of compatibility with other wireless products. Wi-Fi offers some interesting possibilities. In general, the small cost of licensing is a good investment.

Normally, UHF works better inside buildings than VHF. If you are considering more than one system (portable radios, line reporting, or wireless PA for example), we would recommend that you go ahead and get a 5 channel UHF license. The processing time with the FCC can take up to 60 days. That's the bad news. The good news is that you can operate on our nationwide itinerant license while you are awaiting approval for your own license. In most cases, we can apply for the same frequencies on your behalf that we use.

For smaller plants contemplating the use of only security radios, VHF license free operation can be a good choice. If you do decide to apply for a license, we will need three things beginning with a \$700 check payable to Falcon Direct, Inc. We will also need a signed FCC Form 601. A copy of this form is available at [http://info4u.us/FCC\\_Form\\_601.pdf](http://info4u.us/FCC_Form_601.pdf). Just complete the last page of the form, sign, and return the signed page to Falcon Direct, Inc. – Attn: Burch Falkner – 36-20<sup>th</sup> Avenue NW – Birmingham, AL 35215. Lastly, we will need your FEIN number for your organization emailed to us at [ServinU@falcondirect.com](mailto:ServinU@falcondirect.com).

## Safety and Compliance Products



### SiteAlert System for OHSAS 18001 Compliance

**Instant assistance calling at the push of a button!**

Our new *SiteAlert Emergency Alert Station* has been developed to provide an efficient and affordable means for line production workers to call for assistance at the push of a button. See <http://info4u.us/SA.pdf>.



### Mass Notification Systems for 29 CFR 1910.165(b) Compliance

**LoudMouth PA system speaks out for you!**

When you need to get an emergency message out to large groups of people whether indoor or outdoor, *LoudMouth* is your solution! Better yet, you can broadcast your message over your PA system and/or through wireless speakers directly from your 2-way radio. More information available at <http://info4u.us/lmspecs.pdf>.

## Wireless Intercom System, License Free or Licensed

### Visitors at the dock or gate can announce their presence with the XT-Call Box



Wireless 2-way call boxes allow visitors to announce their presence at the gate or dock. Both licensed and unlicensed systems are available with minimal installation required - No ditching or wiring. Some models can operate for up to one year from easily replaceable batteries. Others can control gate openings directly from a low cost portable 2-way radio!

An interesting video demonstrating the benefits of a wireless call box is available at <http://youtube.com/watch?v=-eGNsIFV4M8>. You can get more information at <http://info4u.us/tcspece.pdf>.

### Who's that knocking at the door? *DoorCall* will tell you!



That visitor at the door could be a customer, a delivery person, or someone you really do not want to let in! Cameras don't tell you what you need to know. Wired intercom systems require that you be at a fixed location.

Neither cameras or intercoms are suited to the unique needs of churches, day care centers, industrial plants or schools. The better solution is the *DoorCall*™ system - an affordable wireless 2-way intercom that provides communications from the door to a personal communicator that goes where you go! For more information, go to [info4u.us/DoorCall.pdf](http://info4u.us/DoorCall.pdf). Get all the facts without obligation! We've got your back, your front, and your side covered - Doors that is!

## Wireless Call Assistance & Control Systems

### HelpAlert gets help in a hurry!



A simple push-of-a-button immediately transmits a voice message directly and discreetly summoning radio-equipped personnel to a specific location or department. These battery operated call boxes can be located anywhere, inside or outside the plant to call for assistance when required. Additional information is available at [info4u.us/hawp.pdf](http://info4u.us/hawp.pdf). Choose from unlicensed VHF or licensed UHF models. The price is the same - just \$449 for the standard HelpAlert or \$549 for the long rang model. Both units are user programmable!

### HelpAlert Reporter keeps you informed!



The *HelpAlert Reporter* (HA202) is part of the *HelpAlert* System which includes a built in wireless sensor receiver. The HA202 can serve as a personal emergency call system, unauthorized entry detection and/or smoke detection as well as reporting tampering with air conditioning units or other fixed assets. Additional information is available at <http://info4u.us/hawp.pdf>. Special sensors are also available to monitor glass/light breakage, AC power disruption, unauthorized vehicles and water flow. The HA202 is available in both VHF and UHF, priced at just \$749 for the standard model. Add \$100 for high power model.

## Licensed and Unlicensed 2-way Radios

### License Free VHF Portable Radios



A full line of American made VHF (151-155 MHz) license free radios are produced by Ritron, Inc. of Carmel, IN. Ritron is one of only three known manufacturers of MURS radios with offerings for a variety of applications. The JMX-141D, shown at the left comes pre-programmed with MURS channels installed, privacy tones, and even a built in weather channel. <http://mursradios.com> for additional information.

### License Free 900 MHz and WiFi Radios

Falcon Direct does not offer consumer type CB, FRS, or GMRS radios since we serve only commercial, institutional, and governmental users (See [mursradios.com](http://mursradios.com) for more information). Although 900 MHz is ideally suited for on-site use, the product offerings are extremely limited. Newer Wi-Fi radios are also available for unlicensed use and integration with computers. For more information on our most popular UHF radios for industrial use, see [Info4U.us/digitalhts.pdf](http://Info4U.us/digitalhts.pdf).

### UHF Analog Radios Requiring FCC License



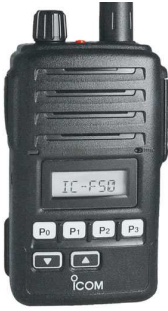
Your most affordable choice in licensed radios is the TC Series by Hytera (the second largest manufacturer of 2-way radios in the world). The 2-watt TC-320 UHF (450-512 MHz) radio shown at the far left, is well suited for many industrial users. More information is available at [info4u.us/TC-320.pdf](http://info4u.us/TC-320.pdf). The price is right - just \$149 including antenna, high capacity rechargeable battery, charger, programming of up to 5 channels, and shipping. The slightly larger TP5000 has twice the power and is well suited for industrial use. The price for the TP5000 is just \$169 with a three year factory warranty. A full line of optional accessories is available. For more information on our most popular UHF radios for industrial use, see [Info4u.us/btspecs.pdf](http://Info4u.us/btspecs.pdf).

### UHF DMR Digital Radios Requiring FCC License



Our most popular digital portable radios are made by Hytera, the second largest 2-way radio in the world. A full line of optional accessories is available. Prices range from as low as \$285 for the basic non-display model with display and full keyboard models offering intrinsically safe capability optionally available. All DMR digital radios are capable of operating in both digital and analog modes for compatibility with our analog specialty products. Additional information available at [info4u.us/digitalhts.pdf](http://info4u.us/digitalhts.pdf).

## UHF Intrinsically Safe Analog Radios Requiring FCC License



If you require intrinsically safe operation for portable radios, the ICOM F60 81 SC is our recommended choice. It is compact, powerful, water and dust proof plus it is Factory Mutual approved for intrinsically safe operation. More information is available at [info4u.us/F50.pdf](http://info4u.us/F50.pdf). The F60 81 SC is designed to operate on any FCC Part 90 approved frequency in the 400-470 MHz range on either 25 or 12.5 kHz analog channels. The \$595 price is easily offset by low maintenance cost, high reliability, and long operating life. The sensing desktop charger pays for itself by significantly reducing the need for frequent battery replacement.

## Fixed Station Radios for Licensed and Unlicensed Use



The DeskTalker base station is available in either VHF or UHF models for both licensed UHF or unlicensed VHF MURS use. These stations are ideal for fixed locations as you will see in this video: <http://youtube.com/watch?v=KvqvcoowqIM>. Maintenance cost is lower and there are no batteries to replace. Additional information is available at [info4u.us/DeskTalker.pdf](http://info4u.us/DeskTalker.pdf). The price is just \$349 complete with antenna and UL approved AC power adapter/cord.

## Wireless Control Systems and Repeaters

### TeleSwitch - Control from the palm of your hand!



Virtually anything that can be turned off with an electrical switch can be remotely controlled by a *TeleSwitch* (shown at the left) and a portable 2-way radio capable of sending DTMF (Touchtone®) codes. No PC, custom software, or expensive installation and service contracts are required. Just plug it in and connect to the device to be controlled. The complete unit is less than a thousand dollars and the associated radio is less than \$600. See [falcondirect.com/teleswitch](http://falcondirect.com/teleswitch) for more information! Available in both VHF and UHF, both units are user programmable! To order on line, please visit [falcondirect.com/ezbuy.dot](http://falcondirect.com/ezbuy.dot).

### Analog UHF Repeaters - To extend personal communications range!



Large operating areas and/or sites with multiple buildings often have effective communications between fixed stations but lack adequate coverage between wireless call assistance and control systems or personal 2-way radios. There is a simple and affordable solution. It is called a *Liberty Repeater!* Additional information is available at [info4u.us/Top-Choice-Repeaters.pdf](http://info4u.us/Top-Choice-Repeaters.pdf). These repeaters are available for licensed operation in UHF with 2 watt or 5 watt power ratings. To order on line, please visit [falcondirect.com/ezbuy.dot](http://falcondirect.com/ezbuy.dot)

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