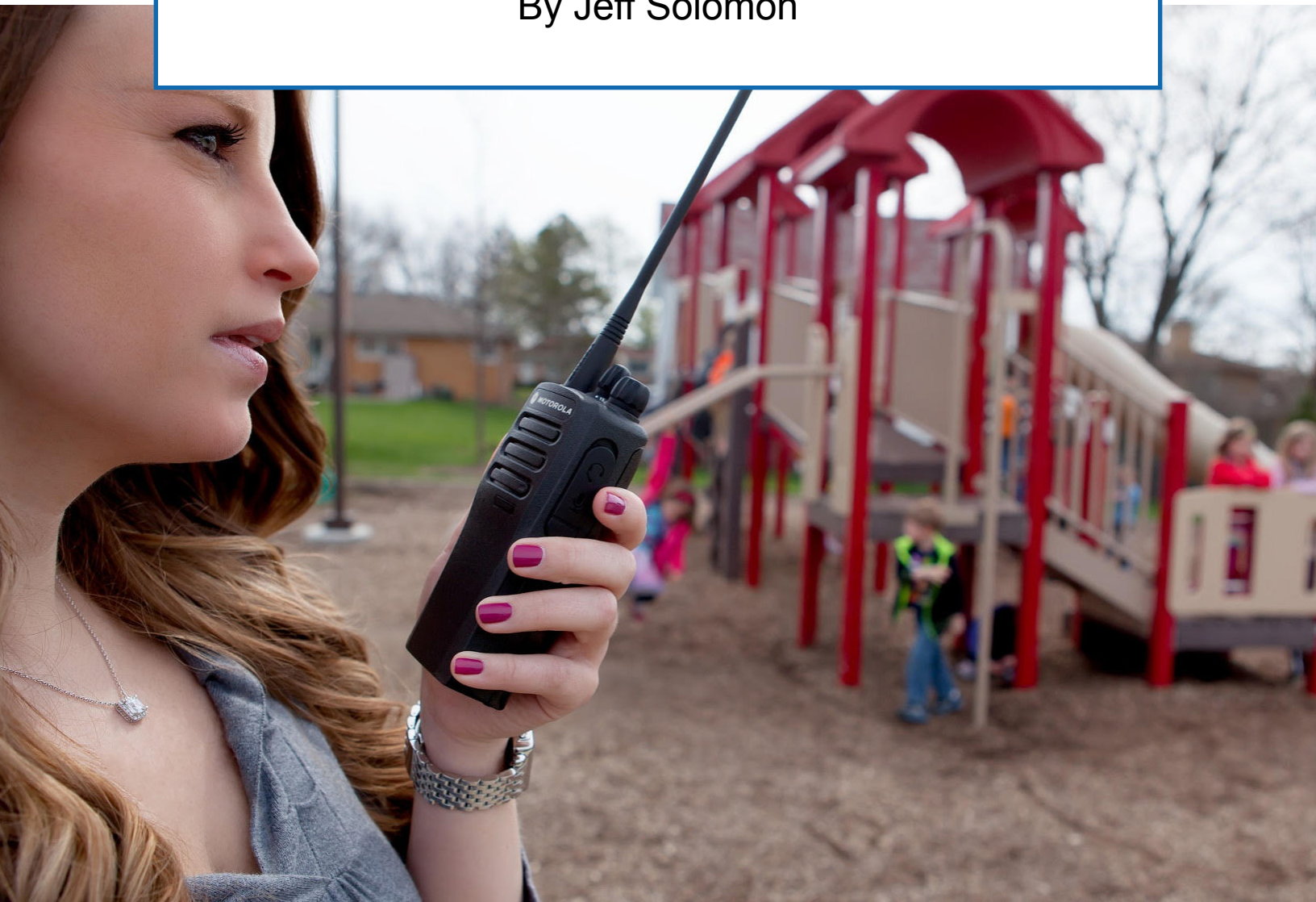




Two-Way Radio Use in the Educational Environment Communicating During Crisis

By Jeff Solomon



When it comes to communication on K–12 campuses, one of the tools that we highly recommend for routine and emergency communication is the two-way or portable radio. Building redundancy is the name of the game regarding effective communications on campus. Each school site should have several methods for communicating during a crisis. For the purpose of this article, we are discussing professionally installed two-way radio systems.

A school site should never rely on just one method of communication, such as a PA system or app-based product. We have learned over the years that communications systems go down during emergencies for many reasons, (i.e., whether there has been a surge in the system that causes an overload and failure, a mechanical failure, or a lack of proper training or testing in various areas of the school site), and time and time again, after-action reports (AAR) point to communication failures that lead to a slower response time by school officials and public safety.

Whether it be an on-site incident, a severe weather event, or a lockdown/barricade situation, two-way radios can instantaneously transmit real-time information to the entire school community.

In today's ever-changing school environment, ensuring the safety and well-being of students and staff in K–12 schools has become paramount. An integral component of emergency preparedness in educational institutions is establishing effective communication systems. Properly installed two-way radio systems are reliable, have instantaneous communication capabilities, and are being embraced to swiftly address emergencies in our schools across the nation.

Two-way radios serve as an efficient and reliable mode of communication during emergencies. Unlike cell phones that may experience network congestion or disruptions, two-way radios operate through dedicated frequencies, providing access to communication channels. Thus, if installed correctly, they typically offer a more dependable method of communication that K–12 school administrators, staff, and first responders can rely on in critical situations when immediate action is required.

Two-way radios facilitate communication among the various stakeholders, including school staff, administrators, security personnel, and emergency responders. With instant access to live updates and real-time information, response teams can promptly assess the situation, make critical decisions, and allocate resources effectively. This swift coordination expedites response times and assists in reducing panic and executing appropriate emergency protocols.

One significant advantage of two-way radios is their versatility and adaptability to various emergency scenarios. Unlike a phone system that is hardwired and may be used to initiate a lockdown/barricade, forcing staff to stand in an area that may be dangerous, such as the front of fice, a two-way radio is portable and can be taken with you on the move to a safe area. Whether it be an on-site incident, a severe weather event, or a lockdown/barricade situation, two-way radios can instantaneously transmit real-time information to the entire school community. Additionally, these devices can function in areas where cellular signals may be weakened or nonexistent, making them ideal for both indoor and outdoor emergencies. They allow school staff to communicate quickly and efficiently with each other, even in large and complex buildings.

Here are some of the benefits of using two-way radios in K–12 schools:

- **Reliable communication:** If they are set up correctly, two-way radios can be more reliable than cell phones in emergencies. Cell phones can be unreliable in areas with poor reception or Wi-Fi, and they can also be easily lost or damaged.
- **Ease of use:** Two-way radios are easy to use, even for people who are not familiar with them. Ease of use is essential in emergency situations when there is no time to learn how to use a new device.
- **Accessories:** Shoulder microphones and earpieces can assist in emergency efforts.

Here are some of the features to look for when choosing two-way radios for K–12 schools:

- **Range:** The range of the radios should be sufficient to cover the entire school campus.
- **Battery life:** The radios should have a long battery life so that they can be used for extended periods of time without the need to recharge them.
- **Durability:** The radios should be durable enough to withstand the rigors of everyday use in a school environment.
- **Features:** The radios should have features that are appropriate for the needs of the school, such as group calling, text messaging, and GPS tracking capabilities.

Let's start by talking generally about communication systems protocols to give you a better understanding of why we recommend adding two-way radios at your school site as a communication tool. Whatever communication systems you deploy on your campuses, you need a clear-cut policy that addresses the following at a minimum. Use this as a checklist to see how you compare.

1. Documented staff training conducted by professionals
2. A regular documented maintenance schedule of systems
3. Process for addressing maintenance issues (*planning for a method to expedite work orders when a problem or safety issue is identified by staff/stakeholders*)
4. A selection process for new equipment and testing period (*ensure that the product works in your geographical area before they are purchased*)
5. Avoid a single system that limits effectiveness in a critical incident (*for example, a PA system that is activated through your landline phone. A single system limits your ability to call #911 while you're on the PA, and forces you to be attached to your phone instead of taking actions such as run, hide, fight*)
6. Buy cheap, buy twice. A former chief of police and mentor once told me this. This is specifically true with two-way radios
7. Practice, practice, practice. **All staff** and volunteers at your site should know how to use your communication system and have (access)permission to use it in an emergency
8. USE Machine learning: Making predictions from past data about future outcomes. Understand past threats in your area to help you deploy the best communication devices for your school site. If your school site is near the ocean where a tsunami is likely, a tsunami warning device might be a good option. Likewise, if your location is prone to wildfires, tornados, or hurricanes, your communication system should address these specific issues and other threat

The Golden Rules of Radio Communication

1. **Clarity:** Your voice should be clear. Speak a little slower than normal. Speak in a normal tone, do not shout.
2. **Simplicity:** Keep your message simple enough for intended listeners to understand
3. **Push-to-Talk (PTT):** Prior to broadcasting, hold down the PTT for approximately 2 seconds before speaking so you do not cut off the first part of your message.
4. **Brevity:** Be precise and to the point
5. **Security:** Do not transmit confidential information unless you know the proper security is in place to receive it.
6. **Don't interrupt:** Before transmitting, pause for a few seconds to see if any other users are engaged in a conversation

Acceptable Radio Terminology:

1. **Copy:** Can be used to inform that you received the message
2. **Radio Check:** If someone ask for a radio check, a simple reply of "loud and clear" or "your low volume" is appropriate
3. **Break, Break, Break:** The need to break into a conversation do to an emergency
4. **Say again/repeat:** asserting you did not hear the transmission and need the sender to repeat the message
5. **Affirmative:** Same as yes, but easier to hear and understand
6. **Negative:** Same as no but easier to understand

Two-Way Radio Familiarization

As an overview for educators, the types of radios listed below are commonly found in schools and the characterization of each.

Types:

- Base station
- Mobile radio
- Portable radio
- Tower/repeater

Base Station Two-Way Radio. Fixed radio system. Receives and transmits. Usually located in the front office, and in transportation offices.





Mobile Two-Way Radio. Mounted in vehicle. Used in motion or when stopped. Typically found in facilities or maintenance and grounds vehicles, and or transportation trucks.

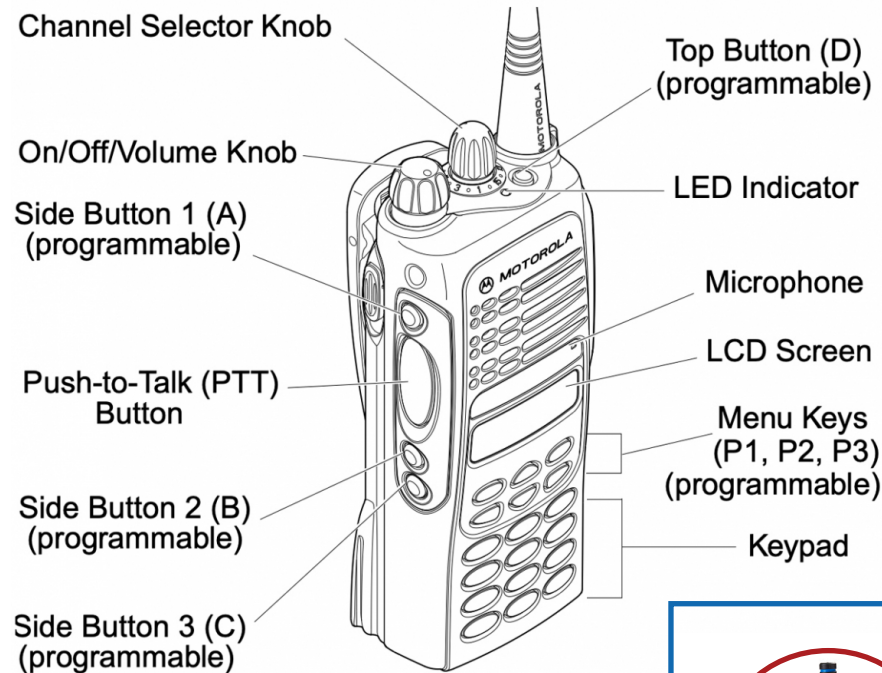
Portable Two-Way Radio. This radio is a handheld device that allows you to have mobile two-way communication carried by a person.



Tower/Repeater. A repeater boost signals, usually located on a mountain top, tall building, or radio tower. It allows communication between two or more bases, mobile or portable stations that are unable to communicate directly with each other due to distance or obstructions between them.

Anatomy of a Radio

HT1250 Full-Keypad Model



Remember

These are some general rules to follow when using portable radios. They may seem basic or obvious; however, communication protocol and proper usage are usually the first to fail during a critical incident or any stress condition.

1. Use short clear and concise language.
2. Do not use any codes!!! Clear Speech ONLY.
3. Hold down the talk button 2 seconds prior to speaking.
4. Hold down the talk button 2 seconds after speaking.
5. When calling another person with a radio, say their name first and then identify yourself. Example: **“Ms. Wise, from Mr. Jones.”**
6. When answering a call, say: **“Go ahead, Ms. Wise.”**
7. When broadcasting any sensitive or confidential information, make sure you advise the receiver: **“Ms. Wise from Mr. Jones, are you ready to receive confidential information?”**
8. When receiving any sensitive or confidential information, you should respond clearly: **“I’m ready (or clear) to receive confidential information.”**



Antenna

- Held vertical for best reception
- Not a handle



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