

Get connected

Select the right wireless communication devices and your work crews will be more productive

Like grease in a bearing, cell phones help supervisors, operators and laborers work with less friction, improving productivity and reducing effort needed to get things done.

As electronic technology continues to shrink in size and explode in options, the two-way communication tools available today are smaller, lighter, more resilient and more powerful than ever before. But it is also much more confusing. UHF, VHF, one watt, two watt, two way, Nextel, cellular phones, calling plans, leasing option – is your head spinning yet?

Jobsite communication experts say that contractors who don't think about their needs carefully end up with devices that don't work well in their operation or add unneeded, ongoing expenses to the operation that can even reduce productivity.

"In my dealings with contractors, they often get talked into something they don't need and spend more money than they have to, just because they don't fully understand their communications needs," says Gerald Happy, Midland Radio land mobile product manager.

Think about your needs

Several factors affect the buying decision for two-way communication, says Rafael Rivera, marketing communications manager at Motorola.

"First, ask who needs to be in contact with each other on the jobsite. Do they also need to be in contact with others across the city, state or country? Their needs are different than those who just need contact on the jobsite," he says.

Second, consider how many workers need to communicate with

Identify your communication needs before selecting a two-way radio system. It will assure you get the best system for your jobsite needs.

each other. "Is it one-on-one, or is it a group? That influences the technology you choose," Rivera says.

For example, a rigger and a crane operator most likely need one-on-one communication without any chatter or interference from other workers. However, a supervisor may need to talk with several foremen or other subcontractors, so that person may need a multi-channel radio as well as a Nextel or cell phone.

Third, Rivera says that a supervisor has different communication needs than a work crew. "Supervisors need to talk with subcontractors, engineers, architects and owners. But do work crews need phone access? They usually don't and when they have access to it, they run up cell phone bills on personal calls. Thinking all this through helps sort out your two-way communication needs."

Finally, Rivera says you must consider the working environment. "Is the user on a jobsite all day or in a car, truck or office? That affects the type of radio you select. Jobsite radios must take rugged use."

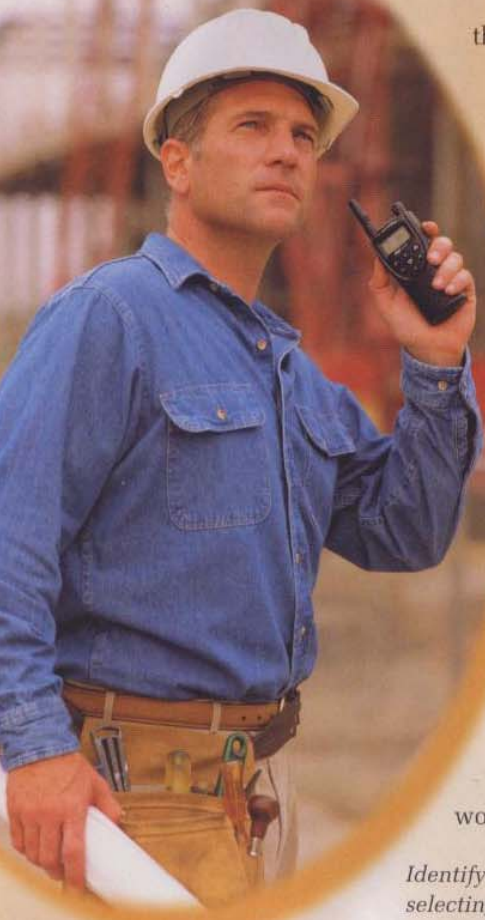
If you select a two-way communication system without first scoping out your needs, there is a good chance you may under- or over-buy.

"Contractors tend to select one solution for use by all employees at all locations. They need to use the right tool for the job," says Alan Brothers of David H. Brothers, Inc.

For example, a contractor sends a team of six people to a jobsite. Four of the six are laborers and only need to communicate with each other while on the job. "Two-way radios that offer coverage up to six miles on the business FM band will fit their needs. These radios also need to be durable and weather-resistant.

"On-site two-way radios for business do not have monthly service fees, provide unlimited talk time, are economical to replace and work in all areas, including areas without cell

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tower service. They work on frequencies set aside for business and offer excellent performance in up to 20-story buildings. Cell phones have difficulty in these types of environments.

"However, the other two employees may be in management and need a long-range two-way radio, plus cell phone service such as Nextel. These managers are often seen on the jobsite with two communication devices: Nextel for long distance and an on-site two-way radio for local communication. When used in combination, two-way radios and Nextel provide an economical solution," says Brothers.

What's available

Once you have identified who needs a two-way communication device and how they should use them, the next step takes you into the wonderful world of selecting the right device for the job.

The wide variety of models and features can make your head spin. Make it more understandable by identifying models available by type, then select the model(s) best for your needs.

"The most common mistake contractors make, outside of buying a system that's more than they need, is buying consumer-rated units intended for recreational use," reports Chris Oehlert, marketing communications manager at Midland Radio. "These units broadcast and receive on the FRS (Family Radio Service) band which has been set aside by the FCC for recreational use. Although they share some frequencies with GMRS (General Mobile Radio Service) business radio

frequencies, they are set up differently and you will get much more chatter because many users share the same band," he says.

Rivera says FRS band radios are designed for intermittent or light use. "They aren't built to take the rigors of a jobsite. While cross-chatter may be a concern, it's likely these units won't last long enough for cross-chatter to be a problem."

Radios operating on the GMRS frequencies have sub-channels that greatly reduce cross-chatter from other two-way radio users.

Inside or outside use?

Before selecting your radio system, identify whether they will primarily be used inside buildings or in relatively open areas. Your type of work will point you in the direction of using UHF or VHF radios.

"The UHF radios are better for use inside a building; the VHF radios are better for outside use," says Rivera. "However, you can't mix UHF and VHF radios. They don't talk with each other."

Radio wattage is another important part of the selection decision. The FCC allows radios in this band to transmit from one to five watts of power, with one- and two-watt units being the most common. "Wattage doesn't mean that a two-watt unit has twice the reach as a one-watt unit," says Rivera.

For example, Motorola's XTN radios, rated at one watt of power, have a range up to five miles, while the two-watt XTN unit reaches six miles.

Cellular services expand

Cellular capabilities are expanding with technology that can take productivity to new levels.

Nextel offers add-on services that puts information that was only available in the job trailer or at the home office in the hands of the supervisor anywhere on the jobsite.

"Global Positioning System (GPS) technology with mobile handsets allows managers to view their vehicular assets on a map along with historical location data from any Web browser in real time," says Brothers.

Nextel also offers the following information services:

- Mobile e-mail with wireless devices that allow users to respond to e-mail in the field.
- Wireless timesheets that help manage labor costs and eliminate the weekly timesheet fire drill.
- Wireless dispatching that can improve crew productivity.
- Wireless punch list management that helps complete jobs faster and increase customer satisfaction.
- Wireless credit card processing that reduces transaction charges and increases productivity. ☒

Two-way communication comparison			
Feature	Consumer (FRS band)	Motorola XTN (GMRS band)	Nextel
Cost			
Initial cost of handset	low	med	med
Cost to replace	low	med	high
Activation fees	no	no	yes
Monthly service fee	no	no	yes
Minutes of free use	unlimited	unlimited	subject to service plan
Range			
Longest range			<small>within cell tower range</small>
Works without cell towers	x	x	
Can penetrate 20 story buildings		x	
Durability			
Withstands everyday use		x	x
Withstands 6' drop		x	
Weatherproof-rated		x	
Dustproof-rated		x	
Interference			
Little/no third party interference		x	x

Source: David H. Brothers