

Construction: Increase Efficiency, Reduce Cost, and Go Green with Motorola Two-way Radios



Think 'Green'

According to McGraw-Hill Construction, builders who offer green construction services are in high demand:

- 40% of builders think green building helps them market their homes in a down market.
- Green projects represent 10% of projects for about one-third of builders.
- Green building is not just about reducing energy costs; in fact, builders say that product "quality" is the number one reason for building green.

Motorola solutions support the green philosophy. Efficient communication can help eliminate wasted resources, by tracking employees, equipment or deliveries to maximize workflow and avoiding unnecessary trips. Better productivity that can reduce energy use is a timely message for the green building movement.

With material costs increasing, profit margins decreasing and the battle for bids at an all-time high, construction contractors are looking for innovative ways to compete. As the economy continues to tighten, customers continue to demand lower costs, tighter schedules and even give preference to contractors who employ "green" construction services.

Versatile and powerful, Motorola two-way radios can help you respond to those challenges by helping you increase efficiency, safety and work crew productivity. Keeping your work crews in touch with instant communications and no monthly service fees, Motorola two-way radios minimize downtime and lower costs. Emergency features enhance worker safety. Noise cancelling features deliver crystal clear audio, even in the noisiest environment. Intrinsically safe design allows communications in locations where flammable gas and combustible dust may be present. And better battery technology extends battery life throughout long shifts.

Staying competitive means maximizing efficiency and minimizing costs

Businesses around the country are currently wrestling with the ongoing economic challenges, probably more so in the construction industry. Staying competitive and keeping the operation moving forward requires the ability maximize productivity and minimize costs. This means the ability to monitor and coordinate work crews, whether on a single site or over multiple sites. It means reacting quickly to last minute changes. It means hearing clear voice messages, even in the noisy environment of a busy construction site. It means minimizing downtime by keeping your work crews safe. And it means maintaining instant contact with your work crews to avoid material waste or construction mistakes.

The case for two-way radios

A common thread that links these challenges together is the need for effective communication. Motorola's flexible portfolio of two-way radios and accessories offer a range of communication solutions that meet your unique needs and help you cut through the communication obstacles you face on a daily basis. Radio accessories enable hands-free operation for greater task efficiency, audio that can be heard over loud machinery, and batteries that last throughout a work shift.

Whether your operation involves general industrial construction, commercial and residential construction; infrastructure projects like roads, highways, bridges, and tunnels; or you are an electrical, plumbing, carpentry, or HVAC professional, Motorola has the right-sized and right-featured radio for your unique business. Each radio family offers a cost-effective solution over "pay as you go" technology with no service fees and no dependence upon cell tower location. Each radio is designed to withstand the challenges of a construction site, including intrinsically safe radios that can operate in hazardous environments and rugged radios that can withstand weather extremes.



For Small, Independent Contractors:

CP Series portable and CM Series mobile radios

Keep your projects on track through better coordination of foremen, subcontractors and individual tradespeople. Address the daily challenges of worker safety. Meet the pressure to finish projects faster, avoid costly mistakes and protect your profit margins. With Motorola's CP Series radios, contractors get the seven essential elements of solid two-way communications – value, reliability, ease of use, audio quality, small size, programmable, and battery life. Add to that Motorola's rugged design built to hold up under the most demanding conditions, and you have two-way radio communications that make your job easier. Affordable and easy to use, the CP Series portable and CM Series mobile radios provide the communication tool you need to meet deadlines, avoid errors and keep costs within budget.

Trucking company reduces cost, increases efficiency with CM200 radios

When Paul Bugar Trucking, Inc.'s aging two-way radios could no longer communicate throughout its rapidly expanding coverage area, the company's drivers began to use cell phones. However, rural coverage was spotty and service fees were cost prohibitive. Paul Bugar, Jr., company president, switched to Motorola CM200 mobile radios. The radios enabled seamless communications throughout the 40 mile coverage area, reduced wasted trips, lowered fuel consumption and eliminated thousands per month in cell charges.

"The Motorola radios help us keep order throughout our operation," says Bugar. "It's just something we can't be without."

Features:

- **Clear audio for noisy construction sites:** With powerful speakers, audio output penetrates noisy construction sites, providing crisp, clear audio at any volume.
- **Easy to carry and use:** Lightweight, ergonomic design makes these radios comfortable to operate, even when wearing gloves.
- **Rugged and durable:** Designed to withstand rain and wind, exposure to salt fog, blowing dust on all surfaces, vibration, and extreme temperatures – all elements common to a construction site.
- **Programmable option buttons:** Customize your radio with choice of features such as changing the power level, scanning and channel monitoring.
- **Flexible options for range and coverage:** CP Series radios are available in 2W UHF and VHF, 4W UHF, and 5W VHF models that offer you the range you need.
- **Flexible battery choices:** A full range of battery choices, along with rapid recharging capabilities, ensure your radios support long shifts, common at the construction site.
- **Flexible accessory portfolio:** A variety of audio accessories, carry cases, dispatch tools, and rapid chargers enhance communications and improve the productivity of your work crew.

For Mid-Size Contractors:

HT and CDM Series portables and mobiles

The Motorola HT Series portable and CDM Series mobile radios are ideal for mid-size contractors and construction operations. Providing simple yet high-performing functionality, the radios' streamlined features keep you in touch with your work crews and your work crews in touch with each other. With signaling capabilities, customizable function buttons and a large front-projecting speaker, these ruggedized radios give you virtually everything you need to keep the job moving forward at maximum efficiency.

Features:

- **Rugged and durable:** Ready for the toughest job site, the radios meet U.S. Military standards for rain, salt fog, dust, vibration, shock, and extreme temperatures.
- **Powerful battery options:** A full range of battery choices, along with rapid recharging capabilities, ensure you maintain constant contact with your work crews and your radio lasts the entire shift.
- **Flexible accessory portfolio:** A variety of audio accessories, carry cases, and rapid chargers enhance communications and improve productivity.
- **LTR® trunking:** Cost-effectively accommodates the communication needs of a large group of users at a single construction site.
- **PassPort® trunking:** Provides communications throughout a greater coverage area, helping you stay in touch as crew members go off-site for supplies or between multiple construction sites.

Did you know?

Motorola is the world's largest supplier of two-way radio equipment with hundreds of models customized by trade.



For Large Construction Operations:

MOTOTRBO digital radio system

Whether you need to put more workers on the system, ensure longer battery life to keep your team in contact throughout an extended shift, or need to access integrated data applications MOTOTRBO enables a smooth, phased migration to digital technology.

Features:

- **Increased calling capacity on a single license:** Two virtual channels within a single 12.5 kHz licensed repeater channel allow you to double the calling capacity for the price of one license without a second repeater and without interference from nearby radio users.
- **Integrated voice and data:** MOTOTRBO portable and mobile radios put the power of voice and data, such as text messaging and GPS, into a single device to make it easy for your construction crew to stay connected and safe.
- **IMPRES™ audio accessories:** Provides exclusive audio technology that enhances high quality communications for noise suppression, speech clarity, and loudness.

- **Efficient battery technology:** To help control the cost of replacing batteries, Motorola's state-of-the-art IMPRES technology makes sure talk-time is maximized throughout the life of the battery. High capacity battery options ensure you have a battery that supports long shifts common at the construction site.
- **IP Site Connect:** Communicate instantly with your work teams on the other side of the construction site or across town. IP Site Connect links up to 15 sites to overcome distance as well as physical obstructions – extending the communication reach of your work team.
- **Capacity Plus:** Allows significantly expanded capacity, up to 1200 users at a single site, to communicate by voice and access integrated data applications as a unified work team, further ensuring increased productivity, efficiency, and work safety.

Motorola Two-Way Radios Deliver Real Value

Listening to you tell us what you need, visiting construction sites to see firsthand how the radios would be used, and then delivering the right radio for the right job with the superior quality Motorola is known for is what we are all about. Motorola two-way radios provide you with:

Enhanced productivity Push-to-talk applications enable immediate communication with work crews, allowing supervisors to react to changing customer demands, weather alerts, and other unexpected criteria.

Improved worker safety Preempt potential hazards with one-to-one or one-to-many calling. Many Motorola radios include emergency calling and intrinsically safe design features to provide reliable two-way radio communications in locations where flammable gas and combustible dust are present. If a worker needs assistance, the emergency alert feature provides rapid notification and enables immediate response. And transmit interrupt capability enables multiple talkgroup conversations to be interrupted for the delivery of urgent messages in an emergency.

Hands-free portability Carry accessories make it simple for workers to clip their radio onto a belt, and headsets allow users to talk without holding the radio.

Minimize delays Construction supervisors can immediately contact work crews to notify them of change orders or potential errors in the building process. This helps avoid critical schedule delays and reduces waste, both of which help contain cost.

Reduces operational costs Motorola two-way radios eliminate the cost of recurring monthly fees and per-call charges of cellular push-to-talk technology.

Additional benefits with MOTOTRBO digital radios:

Built to take it Construction sites aren't playgrounds. MOTOTRBO radios meet demanding specifications for submersion in water, as well as military standards for durability and reliability.

Track location When used with a location tracking application, the integrated GPS module allows site supervisors to track the location of workers, locate supplies, and plan deliveries on or between job sites quickly.

Communicate in loud environments Digital radios overcome the high decibel environment of a construction site with noise suppression technology that limits background noise. And when paired with Motorola's IMPRES audio accessories, noise suppression is increased even further. And when traditional voice communication is simply not possible, text messaging provides an effective alternative.

Equipment security Motorola two-way radios feature remote disable technology to minimize the impact of theft, and GPS features help track the locations of vehicles and heavy equipment, such as backhoes, excavators, forklifts, and other assets.



Flexible Job Site Applications

The MOTOTRBO platform was designed with an Application Developer Program to allow user-focused applications to be produced. This enables each system to be customized to the needs of the user. Applications available include advanced location tracking applications; advanced signaling, such as a tilt switch for "man down"; telemetry control capabilities that remotely turn switches and devices on and off; data transmission applications that can transmit work orders, schedules and specifications; and computer based dispatch and system monitoring applications.

Link locations and people Accountability is important when working with sub-contractors or part-time laborers. Managers can use IP Site Connect software to connect between dispersed locations or across a large geographic area.

Applications that improve efficiency Data applications, such as work order ticket management, enable you to send work order tickets directly to a crew member's radio. The employee can then close the ticket from the radio notifying you of its completion. MOTOTRBO radios accommodate any number of applications designed to make your job easier.

MOTOTRBO meets FCC mandate for 12.5 KHz

To increase spectrum efficiency and accommodate more users, the FCC is mandating 25 kHz licensees to operate using 12.5 kHz efficiency by January 1, 2013. MOTOTRBO digital radios offer a seamless path to 12.5 kHz, allowing customers to transition at their own pace.

Summary

You understand that in order to stay competitive, you have to maximize the productivity, efficiency and safety of your work team. Real-world job sites bring hard knocks, dust, dirt, water, hazardous materials and temperature extremes—and plenty of noise. Motorola recognizes this too and have designed a flexible array of two-way radios that fit the needs of construction professionals, whether you are a small contractor or a large, multi-site construction company. Powered by advanced Motorola technology, Motorola two-way radios, accessories, and advanced battery technology are ready to help you respond to those challenges, increase your efficiency, lower your costs, and stay safe.

