



**MOTEK<sup>®</sup>**

*Smart Warehouse Software*

**Can You Afford Not to Have Voice?**

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## **Can You Afford Not to Have Voice?**

Your distribution center operates 24 hours a day, 7 days a week, averaging 150,000 picks of 15,000 SKUs per day. Pick errors are 1 in 300, inventory accuracy is below standard, and injuries and turnover are high. How do you solve this problem quickly and cost-effectively? Voice technology.

### **Do I need voice?**

Voice picking technology is ideal for companies with high-volume warehousing and distribution operations that require over 99% order accuracy and maximum efficiency and productivity. Voice picking is also well suited for environments in which operators need both hands at all times or wear gloves, making handling scanners difficult.

### **Do you want 99.9% inventory accuracy?**

The dramatic voice technology benefits affect many areas of warehousing and distribution. Voice technology delivers the following operational advantages:

- Increased order accuracy
- Pick errors reduced to 1 in 3000
- Over 99.9% inventory accuracy
- 50% order cycle time reduction
- Up to 50% picker productivity improvement
- Real-time pick slot inventory balances resulting in accurate let-down timings
- Reduced accidents and injuries
- Reduced training time
- Reduced turnover and improved morale
- Elimination of pick label and printing costs
- Elimination of picking paperwork and clerical support
- Complete hands- and eyes-free operation
- Picker capable of independent operation if RF or server goes down

### **How does it work?**

Warehouse software drives voice technology on radio frequency (RF) local area networks (LAN), similar to the way it is used to control the operation of handheld scanners and forklift-mounted computers. This software directs voice commands and data transfer on voice units. RF LANs allow real-time, two-way wireless communication among host system, WMS, and wearable voice units. The most common way of transmitting information to operators is through a text-to-speech synthesizer. The host system converts an ASCII text string to audible output, which is then transmitted to operators' headsets. Operators' speech is translated by voice recognition software on the terminal to a text string and transmitted back to the host system.

Two types of voice units exist: speaker independent and speaker dependent. Speaker-independent units don't require prior training or profiles and can be used by any operator. They retain large vocabularies, but are language specific and require more processing power.

Speaker-dependent terminals are more common and better suited for mission critical environments. Speaker-dependent units require users to create unique speech profiles or templates, which are stored and

downloaded to voice units each time operators log on. Usage isn't restricted by language, accent, or dialect, but vocabulary is more limited. Speech recognition accuracy on speaker-dependent units nears 100% due to user speech profiles. An additional advantage is that speaker-dependent voice recognition requires less processing and can therefore be performed on mobile units rather than on a central server. Since speaker-dependent units operate on mobile units, they can still run even if the RF network or server goes down.

### **How do I use voice in my warehouse?**

In practice, voice technology works quite simply. Warehouse software transmits and receives real-time information and commands to and from voice units. Operators learn the appropriate commands and responses for their tasks, which are performed wearing a lightweight voice unit and headset. Operators receive warehouse software-generated commands via their headset and speak the appropriate response when the task is completed.

#### **Example:**

The warehouse software sends a picking assignment to the picker's voice unit via RF. Pickers can preview the entire assignment or start picking. This same warehouse software loaded onto voice units directs the picker to the first location and identifies what product to pick. On arrival, the picker speaks the location's check digit (or pallet number, SKU number, etc.) to confirm the correct location. The voice unit tells the picker the quantity to pick. The picker either confirms a correct pick or shorts the assignment and speaks actual quantity picked.

With voice picking and real-time warehouse software, pick shorts are immediately dispatched as short chases or let-down assignments. Real-time voice picking maintains accurate pick slot inventory information, allowing precise timing of replenishments and increased picking productivity. After completing the pick task, the picker is sent to the next location to perform the next task. Operators constantly interact in real time with the host computer via RF as they walk and pull product. Voice picking eliminates the need to stop and scan, look at screens, or press keys.

### **Where do I use voice?**

Voice technology is successfully used in a variety of industries, including retail and wholesale grocery, food and beverage manufacturing and distribution, third-party warehousing, consumer packaged goods, apparel, and utilities or other industries that require outside yards for storage.

Voice picking is beneficial to any operation that is high volume, high SKU, high value, or that requires high inventory and shipment accuracy. Voice picking also greatly increases the productivity for operators that need to work hands-free while wearing gloves or working in freezing areas. Voice units are ideal for sub-zero environments, in which liquid crystal displays on RF units freeze and bar code scanners often malfunction due to condensation.

Companies use voice technology to perform a multitude of warehouse tasks, such as each, case and pallet picking, receiving, putaway, loading, replenishment, cycle counting, cross docking, and pallet building. Voice technology is also well suited for tasks that are repetitive, have frequent manual handling, or require moving vehicles. Voice eliminates the labor and time of repeatedly picking up and putting down scanners or pencil and paper.

## **No more objections to voice**

The objections to voice technology—cost, ability to perform in rugged or noisy environments, and speech recognition difficulties—valid several years ago no longer apply. Today these limitations have been overcome by technology advances. Voice units cost the same as handheld or wrist-mounted devices, are durable enough to handle the toughest loading docks, can withstand the coldest to the hottest temperatures in any distribution center, and recognize a multitude of languages and accents in the noisiest warehouses.

## **Major players in the voice market**

Two main providers of speaker-dependent voice technology exist today — Vocollect® and Voxware®.

Vocollect, founded in 1987, focuses exclusively on developing and providing voice solutions across industries. Its Talkman® and Talkman® T2 voice terminals are used in operations around the world. BlueStreak™, Vocollect's advanced speech recognizer, optimizes voice in high-noise, industrial environments. Vocollect provides application software for seamless integration of its voice technology with warehouse management systems. Information on Vocollect is available at [www.vocollect.com](http://www.vocollect.com).

Voxware, incorporated in 1993, offers VoiceLogistics™, a hardware and software voice solution for use in warehousing and distribution operations. The VoiceLogistics solution generally integrates with warehouse management systems within 60-90 days. Information on Voxware is available at [www.voxware.com](http://www.voxware.com).

## **Case Study—Super Store Industries, Inc.**

Super Store Industries (SSI), a large California 3<sup>rd</sup> party grocery and wholesale food distribution center, supports 2 major California and Nevada grocery chains. SSI implemented Motek's Priya Windows/ SQL Server-based WMS and voice technology in its 850,000 ft<sup>2</sup> facility. The distribution center operates 24x7 with 200 concurrent users. The facility is composed of 700,000 ft<sup>2</sup> of racked dry grocery and 150,000 ft<sup>2</sup> of racked freezer with over 70,000 pallet positions.

Prior to implementing the Priya warehouse solution, SSI faced increasing overtime and warehouse space limitations. Operators picked an average of 170 cases an hour with a pick error rate of 1 in 300. Following the implementation of Priya with voice picking technology, the facility increased productivity to over 250 cases an hour and decreased its pick errors to 1 in 3000. SSI picks over 1.5 million eaches/cases per week, averaging 275,000 picks per day in a 15,000 SKU environment. RF support includes 5 handheld computers, 50 forklift-mounted computers, and 100 voice picking RF units.

To learn more about how voice technology and warehouse management software can benefit your warehouse, please visit [www.motek.com](http://www.motek.com).

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