

STRATEGIES FOR IMPROVING YOUR  
DRIVE-THRU COMMUNICATION

**HME**

®

*Customer Driven*

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## Introduction

Communication is an important component in business transactions, especially in the Quick Service Restaurant (QSR) industry, where the quality of communication can affect the bottom line. Since 50-75% of the QSR business comes from the drive-thru, it is essential for restaurant operators to understand the drive-thru technologies involved in creating clear communication with customers.

*Hospitality Technology* magazine explains the role of technology best: “Even with the people-approach solidified, reaching optimum service efficiency in any food-service operation requires the best hardware to stay on top of the technology curve.”<sup>1</sup>

When clear communication is achieved, restaurant operators can expect their employees to be more productive, their customers more satisfied, and their drive-thru lanes operating more efficiently. As operators continue to consistently deliver quality service and increase customer satisfaction, they'll be able to maximize their revenues and profits. “The wireless headset technology has been credited with increasing traffic by as much as fifty cars an hour at some McDonald's stores,” according to *QSR* magazine.<sup>2</sup>

Technology is an integral part of achieving drive-thru success. The right communication system can help operators better connect with customers, deliver better service, enhance employees' productivity, achieve a higher level of customer satisfaction and increase sales. Although there are many types of communication systems available — and their benefits are tangible — operators should be aware of the elements that contribute to maximizing communication so they can select the best solution for their business.

This paper will examine the science behind the drive-thru communication systems used at QSRs, beginning with the most elemental unit — sound — to the complex systems. Furthermore, this paper will discuss the methods operators can use to improve communication and achieve a higher level of business success.

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## The Role of Sound in Drive-Thru Communication

QSRs build customer loyalty and repeat business opportunities by consistently delivering fast, efficient, accurate and pleasing customer experiences. Noisy and confusing drive-thru environments, frustrating barriers to communication and errors in customer orders do not result in repeat business.

By applying technology and the physics of sound to their advantage, operators can enhance the comfort, convenience and enjoyment experienced by their customers. They can also improve employee morale, job satisfaction and retention.

The first step in achieving these objectives is to reduce undesirable noises that diminish the intelligibility of verbal transactions conducted over drive-thru communication systems.

Sound, simply defined, is an auditory effect created by the vibration of an object and is detected when it causes an eardrum or electronic sensor to vibrate. If we could see sound, it would look somewhat like small waves that radiate out from a stone dropped in a pond. The diverse sounds simultaneously present at a drive-thru are generated by numerous sources: people, vehicle engines and mufflers, road traffic, food preparation equipment inside the restaurant, and other nearby environmental factors.

In and around a drive-thru, objects such as trees, shrubs, curbs, asphalt surfaces, walls, utility boxes and vehicles can reflect, absorb and distort sounds. Inside the restaurant, virtually everything — equipment, counters, furniture, windows, walls, people and their clothing — cause sounds to be reflected or absorbed.

Under normal conditions, people can sense the direction and approximate distance of a sound source stereoscopically, that is, by triangulating with their ears. This enables them to easily sort one sound from another when many sounds are present. At the drive-thru, extraneous sounds that accompany speech can make communication difficult. This challenge often results in order errors, causing customers to be less satisfied with the service they receive.

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Two concepts are often confused when discussing any communication system: fidelity and intelligibility. Fidelity measures how accurately a communication system reproduces the precise sounds picked up by a microphone. In a stereo system, it's desirable to have high fidelity so listeners can enjoy a faithful reproduction of all the sounds in music. However, in a drive-thru setting, high fidelity reproduces many unwanted sounds, thus marring communication.

Intelligibility, on the other hand, measures how well a listener can understand the spoken word. Operators need to improve the intelligibility of certain sounds, namely conversations between customers and the order-taker. Therefore, in a drive-thru communication system, ***intelligibility is highly desirable, while fidelity is not.***

## **Success by Design**

It's frustrating for customers and stressful for employees when they can't hear and understand each other. Unlike stereo systems, the goal for drive-thru communication systems is not high-fidelity sound reproduction. The goal is optimized intelligibility to enhance understanding and to improve communication.

There are numerous steps you can take to increase the clarity and optimize the intelligibility of drive-thru orders while improving the mobility, efficiency and productivity of your crew members.

Some of these techniques are simple and inexpensive. Others are more technologically advanced and proportionately more costly. However, it's possible to reduce order errors and labor costs while increasing revenues and repeat business. A modest investment to improve drive-thru communication can translate into tens of thousands of dollars in incremental profits.

## **Is your drive-thru configured for success?**

The first step is to assess the location and configuration of your drive-thru and make the necessary adjustments to improve intelligibility for better communication with customers. This may seem elementary, but the sound quality experienced by drive-thru employees and customers depends on the drive-thru design more than anything else. If your drive-thru is located near a busy street, highway

or strip mall, chances are you're experiencing much more extraneous noise than a drive-thru located in a quiet residential neighborhood.

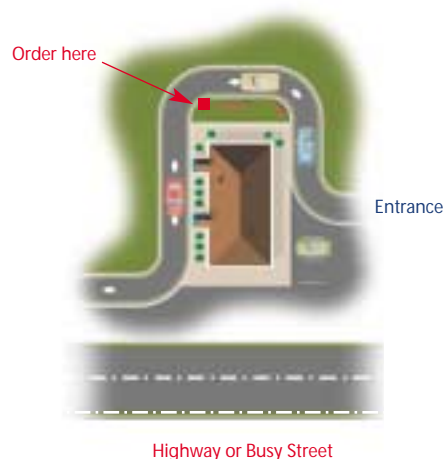
If you are about to install a communication system at a new store, be sure to follow these simple guidelines to create the best acoustic environment for your drive-thru. This, in turn, will improve order accuracy and communication with your customers.

1. Orient the order point so that it doesn't directly face a busy street or highway. Since sound can be absorbed by a number of objects, the order point should ideally be behind a building, away from traffic or neighbors. An 8-10 foot solid brick or concrete barrier wall can also be used to prevent most environmental noise from reaching the order point. Landscaping with trees, shrubs and grass can provide some additional reduction of extraneous noise.

2. Choose a speaker post instead of a menu board for the order point. The speaker post provides better sound quality since its smaller, separated sound chambers improve intelligibility.

3. The drive-thru lane should be routed so there are no tight turns immediately before the order point. Tight turns make it difficult for the drive-thru customer to get close to the order point. The order may not sound as loud to the order-taker inside if the customer is several feet away from the microphone at the order point.

*Place the order point away from noisy traffic for improved drive-thru communication.*



## Proper Placement of the Speaker Post

Proper placement of the speaker post is another important element in maximizing drive-thru communication. Amplified speakers mounted on or near the menu board should be strategically placed to avoid traffic noise and other ambient sounds near the drive-thru.

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The speaker post should be carefully placed for the best sound pickup, reduced echoes and minimum reflection from nearby objects. It should be placed in the spot where customers can best see the menu, as close to the customer's vehicle as possible. This will allow the order-taker to hear the customer better. The microphone in the speaker post should be placed at a height above the lower end of the driver's window. It is generally better to be too high rather than too low. When the microphone is too low, it will pick up more engine and muffler noise from the customer's vehicle.

### **Inbound Microphone Factor**

The inbound microphone is a key component in order intelligibility, resulting in clearer customer orders. Its enclosure needs to be well isolated acoustically from the speaker and packed with foam to minimize resonance. Resonance creates vibrations that produce extra noise picked up by the microphone.

It's important to mount the microphone as close to the front of the enclosure as possible. If it's too far back, the resonance of the enclosure will make the sound hollow. The microphone needs to be mechanically isolated from the enclosure either by surrounding it with foam or with rubber shock mounts. This reduces the coupling between the speaker and the microphone. It's usually sufficient to have one or two layers of porous, open-cell foam between the microphone and the grill.

For optimal sound quality, place the microphone at least 42 inches above the ground, close to the level of the customer's face at the order point. If your restaurant is located in a windy area, it's essential to protect the microphone from wind. An externally mounted microphone requires a large screen to block additional wind noise. These actions will further reduce additional noise from reaching the order-taker.

### **Outbound Speaker Placement**

Proper selection and placement of the outbound speaker can reduce the amount of feedback. To prevent feedback, the outbound speaker should be placed at least 2 feet from the microphone. It is also an essential factor in situations where there are noise abatement requirements. In some cases, local noise abatement rules

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may dictate that a particular speaker placement is required directly or indirectly. When choosing a speaker, consider the acoustic environment. A low profile speaker is well suited to a quiet environment or one where noise abatement is an issue. Noisy environments may require the use of a horn speaker. The speaker should be mounted tightly to prevent rattle of the speaker enclosure or grill. Rattle distorts the sound and makes it difficult to understand the order-taker.

## **Headset Microphone Placement**

On many occasions, drive-thru servers do not wear headsets as intended. Communication with customers can be improved by making sure that servers wear their headsets properly. Headset microphones worn by employees and placed near the mouth transmit only the employee's voice, not the background noise. This allows customers to hear them better.

## **Wireless Communication Systems**

Employees can move around more efficiently and comfortably when they're not tied down to one location. Hands-free, wireless communication systems make it easier for them to hear and be heard. When multiple employees can simultaneously listen to customers' orders, they can process, prepare and deliver food faster and more efficiently. Wireless communication systems also help reduce the amount of background noise experienced by customers inside a restaurant by directing communication to headsets instead of a grill speaker. As the result, employees can be more productive and customers inside the restaurant can enjoy a more pleasant dining experience.

## **Full-Duplex vs. Half-Duplex Communication**

Many restaurant operators still use older, half-duplex communication systems at their drive-thrus. Half-duplex systems disrupt the flow of conversations, allowing one party to speak while the other listens, similar to walkie-talkies. The order-taker would need to push one button on the COMMUNICATOR® to talk and another button to listen. Drive-thru orders are more likely to be misunderstood or lost using a half-duplex system.

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On the other hand, full-duplex communication systems allow more natural conversations between the order-taker and customers. With a push of a button on the COMMUNICATOR® of a full-duplex system, both parties can talk and listen at the same time, like a telephone conversation. With a full-duplex system, you can enhance drive-thru communication and improve the speed of service.

## Noise-Reduction Technologies

In a drive-thru environment, offending noises include sounds and vibrations from automobile engines, mufflers, belts and radiator fans, nearby and distant traffic, air conditioners, electric motors and lawnmowers. Noise is frustrating and stressful for both customers and employees. When it interferes with their conversations, it can cause order errors and reduce customer satisfaction.

Although there are many drive-thru communication systems on the market, they do not offer the same sound quality. Some systems attempt to filter out noises by eliminating frequencies. While this technique does reduce some low and high frequency noises, it makes no distinction between voices and unwanted sounds in the middle frequency ranges associated with car engine noise. As the result, it is harder to hear only the order when both the customer's voice and engine noise are heard at the same time.

More advanced noise-reduction technologies have been created to provide crisp, clear communication between drive-thru customers and employees. When noise is effectively reduced, employees can deliver more accurate orders, customers are more satisfied, and the restaurant is more likely to receive repeat business.

In fact, an increase in order accuracy can translate to a significant increase in drive-thru sales. According to *QSR* magazine, "statistics show an increase in order accuracy by 41 percent, an increased speed of ten to twelve seconds per car — [can translate to] as much as \$10,000 for a high-volume store."<sup>3</sup>

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*ClearSound virtually eliminates annoying car noise so you can hear the customer's order loud and clear.*

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HME's noise-reduction technology — ClearSound — is a built-in feature in wireless systems designed to improve drive-thru communication by using noise-reduction and echo-cancellation.

### **Noise-Reduction**

This technique is a more effective way to reduce extraneous noises than simply filtering out certain frequencies. Noise-reduction can be accomplished with specially designed circuits that convert normal analog sounds to digital signals. Then, in digital circuit, the amplitude and frequency characteristics of these signals can be analyzed so that speech can be separated from noise.

Since speech has variable levels compared to background noises and automobile sounds, it is possible to electronically separate speech sounds from noise and to allow only human speech to pass. Noise-reduction detects background noises with a constant level and removes them electronically through the communication system.

### **Echo-Cancellation**

Sounds reflect and reverberate after they leave the loudspeaker in the speaker post or menu board. When the microphone picks up these sounds in a full-duplex system, the order-taker often hears them as echoes. An electronic echo-cancellation circuit within the system can eliminate echoes by continuously tracking changes in the acoustic path and removing those sounds that have originated from the speaker.

## **The Number of COMMUNICATORS®**

Communicators play a critical role in the day-to-day operations of a drive-thru. They help the entire crew communicate with customers and deliver fast, efficient service. However, many restaurants only have an average of three Communicators per store, barely enough for the service window, cashier window, and back-up server.

If more Communicators are added to the drive-thru, more employees can be involved in the service process. For instance, the food preparation crew can get a

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headstart getting food ready for the delivery. With more COMMUNICATORS® opening up a bigger channel of communication with customers, the entire crew can deliver food faster with greater order accuracy.

### **Equipment Maintenance and Final Words of Wisdom**

As the QSR industry becomes more competitive as customers now have more dining choices than ever before, operators must take the necessary steps to ensure that their restaurants are consistently delivering a fast, accurate and enjoyable customer experience.

Achieving maximum drive-thru performance is an ongoing process. Operators need to periodically ensure that their communication equipment is functioning properly. Headsets, Communicators, and batteries must operate at peak performance to deliver the best results. Your communication equipment is used frequently and must undergo scheduled maintenance and repairs if necessary. By keeping all your drive-thru equipment in top shape, you will be able to get the most out of your communication system and attain the optimal level of order accuracy and speed of service.

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## **About HM Electronics, Inc.**

HM Electronics, Inc. (HME) has been the leading provider of technology for the QSR industry for nearly two decades. A pioneer in technology, HME introduced the world's first patented wireless communication system for the drive-thru application. Today, HME continues to deliver the most comprehensive line of solutions to help businesses improve their security and productivity. From communication and security systems to speed-of-service timers, HME has built a reputation on delivering customer driven solutions based on quality and reliability. Incorporated in 1971, the privately held HME develops, manufactures, markets and services its products in over 70 countries worldwide.

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