

Voice Tracker™ Array Microphone enhances Convenience Store audio/video surveillance applications.

Many convenience and fast food stores have video systems to provide real-time or stored surveillance capabilities. Often these video systems include microphones to provide audio surveillance. However conventional far field microphones have proven to be ineffective in a noisy environment.

Acoustic Magic's Voice Tracker™ array microphone has proven to be very effective in recording conversation in a noisy convenience store. The Voice Tracker™ is effective because it reduces noise by both spatial filtering and digital noise reduction, while it improves sensitivity by constructively adding the outputs of the 8 individual microphone elements in the array.

The Voice Tracker's unique technology locates a talker, and electronically steers a "listening beam", like an acoustic searchlight, in that direction. This creates spatial filtering; "noise" from other parts of the room is not picked up. This noise reduction, coupled with increased sensitivity since the Voice Tracker's eight microphone elements are utilized continuously and constructively, give the Voice Tracker outstanding range and sound quality.

Westec Interactive was the first company to recognize the potential of the Voice Tracker™ as a surveillance microphone in convenience stores. Westec Interactive markets a central station video surveillance service to fast food restaurants and convenience stores. Video cameras and microphones in the stores are connected to the central station through telephone dial-up equipment. The central station staffers often have a dialogue with the store personnel, increasing the importance of having a good microphone as part of the system.

Westec Interactive mounted 10 Voice Tracker's in housings that could be located in the ceiling of the stores. These ceiling mounted microphones were then field tested in 7-Elevens, Circle K's and McDonald's restaurants. The resulting improvement in audio quality made it possible for the central station staffers to hear what was going on in the stores. It also improved the dialogue between the central station and store personnel.

"The Voice Tracker's reduced the background noise from air conditioners, fans, and just the general hum, so we could understand what was being said near the cash registers", said John Varneau, VP of Operations for Westec Interactive. Conventional microphones caused our central station staffers to strain to understand what they were hearing. "It definitely improved the quality of our security service."