

The next generation in microphone technology. **Voice Tracking Microphones** improve sound fidelity and signal to noise performance for speech recognition, teleconferencing and hands free digital recording. Making life a little easier.

TM-1 & TM-2

VOICE TRACKING MICROPHONES

part of the **(((soundfields)))** range



Applications & uses

Conferences

Capturing talkers throughout a large room is a challenging task since sounds from other people in the room, as well as background noise, often obscure the speech. Usually, several microphones (with associated mixers) are required. The **Voice Tracker™** Array Microphone, with scanning unidirectional technology, enables full room coverage, often with a single microphone.

Meeting Recording

Recording a meeting in a large room challenging since sounds from other people in the room, as well as background noise, often obscure the speech quality. Replacing several microphones (with associated mixers) the **Voice Tracker™** Array Microphone, with scanning unidirectional technology, enables full room coverage for quality recording with a single microphone.

Speech Recognition

In order to get reasonable accuracy with speech recognition software, it is usually necessary to place the microphone in close proximity to your mouth by wearing a headset microphone or using a handheld microphone. The **Voice Tracker's** sensitivity and sound quality provide full room coverage, eliminating the need for restrictive headsets or handheld microphones.

Security

Capturing talkers throughout a large or noisy room (such as the cash register area in a convenience store) is a challenging task since sounds from other people in the room, as well as background noise, often obscures the speech.

Home Automation

The **Voice Tracker™** Array Microphone is so sensitive, and its the sound quality is so good, that it provides headset/handheld mic accuracy at ranges of many feet, enabling voice control for home automation, robotics, etc.

The **Voice Tracker™** Array Microphone is unique because it has eight microphone elements that continuously scan 360° allowing it to locate a talker from ranges of 20 feet or more. The microphone elements electronically steer a "listening beam," like an acoustic searchlight, in the direction of the talker in a few milliseconds. This system creates spatial filtering, so sounds from other parts of the room are not picked up. In addition, the **Voice Tracker™** removes "stationary" background noise with digital noise reduction algorithms. This two-stage noise reduction, coupled with the sensitivity of the microphone elements, gives the **Voice Tracker™** outstanding range and sound quality.

Voice Tracker™ array microphones incorporate 5 technology innovations:

- Automatic electronic scanning "listening beam" with a 360° field of view
- Spatial filtering for noise reduction
- Constructive addition of multiple microphone elements for long-range
- Rapidly converging AEC algorithm (Voice Tracker II only)
- Embedded algorithms for ease of use

The combination of these innovations allows the **Voice Tracker** to have extremely long pick up range. The ability to "hear" talkers throughout an entire room results in a strong economic advantage over the alternative of using several conventional microphones, coupled together through a mixer.



Legal Microphone

In the Legal Field the **Voice Tracker™** Array Microphone is ideal for Legal Dictation as well as:

- Automatic Speech Recognition
- Meeting and Deposition Recording
- Audio and Video Conferencing

Medical Microphone

In the Medical Field the **Voice Tracker™** Array Microphone can be used for Medical Dictation as well as:

- Automatic Speech Recognition
- Recording for Later Transcription
- Recording in Pathology Cut Up Rooms
- Training and Conferencing

Education Microphone

In the Classroom Environment the **Voice Tracker™** Array Microphone excels at Recording Classroom Lectures as well as:

- Distance Learning (Audio and Video Conferencing)
- Automatic Speech Recognition for Disabled Students

A Versatile Array Microphone for All Industries

These are just a few of the industries that use the **Voice Tracker™** array microphone. Since the **Voice Tracker™** array microphone is so versatile it has multiple uses in many different industries.

TM-1 Features

- Automatic electronic steering of “listening beam” to talker location
- Selectable steering limits (90 degrees and 180 degrees) for speech recognition and Meeting recording modes
- Selectable LDS™ to reduce annoying interference of additional talkers during speech recognition or feedback during teleconferencing
- Two stage noise reduction (spatial filtering and noise reduction processing)
- 8 element, 18 inch long array for maximum range
- 5 element “in range” light to indicate location of chosen talker and sufficiency of signal
- Microphone tilt capability to facilitate desktop, monitor top, ceiling, or wall mounting
- **Weight:** 1.5 pounds (excluding wall power supply)
- **Power:** converter from 120V AC to 6V DC included
- Compatible with a variety of operating systems

TM-1 specification

Range	30+ feet for meeting recording (depends on acoustic characteristics of the room)
Analog Output (6ft male/male audio cable included)	Mic level 3.5mm mini stereo jack Same signal on tip & ring 500Ω output impedance
Frequency Response	100Hz to 11,250 Hz
Physical Dimensions	18” (L) x 4.5” (H) Weight: 2.5lbs
Power Equipment (wall-powered converter included)	6V DC, 400 ma Centre Pin Positive

TM-2 Features

- Automatic electronic steering of “listening beam” to talker location
- Two stage noise reduction (spatial filtering and noise reduction processing)
- Built in High Quality Acoustic Echo Cancellation.
- 6 element, 10 inch long mic array for long range
- Mute Mode
- 5 element “in range” light to indicate location of chosen talker and sufficiency of signal
- Talker location signal thru DB 9 jack (cable optional)
- Compatible with a variety of operating systems

TM-2 specification

Range	20+ feet for meeting recording (depends on acoustic characteristics of the room)
AEC Performance	G.167 Compliant, Sample rate: 48KHz 80 db of echo cancellation in single talk 40 db of echo cancellation in double talk Convergence time of less than 100ms 160 ms of echo tail length 14 dB of background noise reduction
Primary audio output	USB
Secondary audio output (6ft male/male audio cable optional)	Mic level or Line level (switch controlled) 3.5mm mini stereo jack 6ft male/male audio cable (optional) 500Ω output impedance
Talker location signal accuracy	5 degrees
Frequency Response	100Hz to 11,250 Hz
Physical Dimensions	11.5” (L) x 1.5” (H) Weight: 0.75lbs
Power Equipment (wall-powered converter optional)	Powered by USB 5V DC, 400 ma

PRODUCT COMPARISON	TM-1	TM-2	COMMENTS
USB output	No	Yes	TM-1 has optional USB adapter
Analogue output	Mic level	Mic or line level	
Power requirements	6v DC plug	USB power	TM-2 has optional wall-power to USB converter/supply
Acoustic Echo Cancellation	No	Yes	For full duplex conferencing
Mute mode	No	Yes	
Scanning range	360°	360°	More sensitive from front 180°
Range for meeting recording or voice control	~30ft	~20ft	Depends on room acoustics
Range for full vocabulary ASR	2ft	2ft	
Qualitative talker location	Yes	Yes	5 LED's
Quantitative talker location	No	Yes	Serial word, RS 232 thru DB9 jack cable optional
Dimensions	18” x 4.5” x 1.5”	11.5” x 1.5” x 1.25”	
No. of mic elements	8	6	
Ceiling mount	Yes (built in)	Yes	TM-2 has an attachable ceiling mount

Specifications subject to change without notice. E&OE



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