



TOA

TOA VHF WIRELESS MICROPHONE SYSTEMS

Quality Products for Audio with Freedom of Movement



- TOA Space Diversity* double superheterodyne wireless VHF systems.
 - 6-channel selectable operation.
- Electret cardioid speech, lavalier and headset microphones.
 - Dynamic (vocal) hand-held microphones.
- VHF wireless tuner with a high degree of sensitivity.
- VHF antenna/power distributor with 2 inputs and 4 outputs.
 - Wall-mounted VHF wireless antenna.

TOA brings free-moving audio enhancement to lectures, vocal recitals, and just about any other application!

The latest line of TOA VHF wireless microphone systems continue a more than 60 year-long tradition of cutting-edge audio quality, renowned around the world, both among the professionals who install audio systems, as well as among the professionals and amateurs who rely on TOA to provide more freedom of expression.

New TOA wireless microphone systems bring enhanced versatility, a greater coverage area and remarkable cost-effectiveness to a wide array of applications. With its latest technological breakthroughs,

TOA makes it possible to extend the versatility of wireless sound reinforcement beyond the lecture, speech or sermon, and now more affordably than before.

TOA transmission technology and microphone design cover an expanded range of vocal applications. As always, TOA

components and design synergistically work to produce superior performance that is virtually unaffected by the lack of dependability in conventional wireless systems.

These new TOA wireless microphone systems are created and manufactured to the highest standards of technology, performance and reliability. Years of continuous research and development have made possible audio enhancement at or above the level of conventional wired sound reinforcement systems, but with the ease of installation, usable versatility and cost-effectiveness of wireless equipment. These latest VHF wireless microphone systems have been specially designed to provide a more affordable entry to the advantages of wireless microphones.

Enhancing VHF wireless performance with diversity coverage and 6 selectable channels.

TOA technology now makes possible a powerful and versatile wireless microphone system that is also compact and surprisingly affordable. Microphone units include a vocal dynamic cardioid (WM-3210) model, electret cardioid models for hand-held speech (WM-3220) applications, plus a lavalier (WM-3310) model that also is available as a headset unit for speech (WM-3310H) applications. Lavalier and headset models are equipped with adjustable gain and a rotatable transmitter unit belt clip.

The WM-3210 and WM-3220 also have a side-positioned on-off switch which prevents the microphone from rolling when put down.

The WT-3800 rack mountable tuner is ready to answer any wireless requirement. It utilizes TOA Space Diversity technology* for simpler circuitry than a conventional diversity tuner as well as a proprietary algorithm that allows constant coverage. Six-channel of circuit frequencies are available, each with an operating range of about 100 meters (depending on area conditions). The built-in

scanner locates available free preset frequencies and a tone-squelch function works to keep coverage constant and clear. The portable desktop-use WT-3810 tuner is also available for simpler applications.

For antenna coverage, the WD-4800 power/antenna distributor featuring 2 antenna inputs and 4 antenna and DC power outputs is available. Antenna outputs are distributed to the WT-3800 tuner to maximize the coverage area and to enhance clarity.



WM-3210

VHF Hand-held (Vocal) Wireless Microphone

• Dynamic cardioid microphone element. • Maximum input level: 125 dB SPL. • 6 selectable channel frequencies. • On/Off switch also keeps mic from rolling when put down. • Flashing LED low battery indicator.



WM-3220

VHF Hand-held (Speech) Wireless Microphone

• Electret condenser cardioid microphone element. • Maximum input level: 120 dB SPL. • 6 selectable channel frequencies. • On/Off switch also keeps mic from rolling when put down. • Flashing LED low battery indicator.



WM-3310
VHF Lavalier Wireless Microphone

- Electret condenser cardioid microphone element. • Maximum input level: 120 dB SPL. • 6 selectable channel frequencies. • Input sensitivity control included. • Belt clip rotatable 360 degrees. • Lock-equipped mini-plug microphone jack. • Flashing LED low battery indicator.



WM-3310H
VHF Headset Wireless Microphone

- Electret condenser cardioid microphone element. • Maximum input level: 120 dB SPL. • 6 selectable channel frequencies. • Input sensitivity control included. • Belt clip rotatable 360 degrees. • Headset securely and comfortably fits on head. • Lock-equipped mini-plug microphone jack. • Flashing LED low battery indicator.



WT-3800
VHF Wireless Tuner

- Tone squelch function. • TOA Space Diversity technology*. • 6 selectable channel frequencies. • Audio mixing input function. • Compact 19" rack-mount design. • Usable frequencies scanning channel check. • 1/4 wave rod antenna x 2.



WT-3810
VHF Wireless Tuner

- Portable tuner. • TOA Space Diversity technology*. • 6 selectable channel frequencies. • Simple set-up.



WD-4800
Power/Antenna Distributor

- Dual two-antenna inputs/four-antenna outputs. • Four DC power supply outputs. • Compact 19" rack-mount design.



YW-3500
VHF Wireless Antenna

- Dipole ratio relative gain: more than 6dB. • Wall mountable.



MB-WT3
Rack Mount Bracket Kit

- Two type brackets. • For rack-mounting one WT-3800 unit.



MB-WT4
Rack Mount Bracket Kit

- Bracket (x 2) with connector. • For rack-mounting two WT-3800 units.



MB-15B
Rack Mounting Bracket

- Bracket (x 2) with connector. • For rack-mounting one WD-4800 units.

*Patents pending for TOA Space Diversity Technology.

Specifications

Model No.	WM-3210 VHF Hand-held (Vocal) Wireless Microphone	WM-3220 VHF Hand-held (Speech) Wireless Microphone
Microphone Element	Dynamic microphone, Cardioid	Electret condenser microphone, Cardioid
Emission	F3E	
Frequency Range	169–216 MHz, VHF*1	
Channel Selectable	6 CH	
RF Carrier Power	Less than 50 mW	
Tone Frequency	32.768 kHz	
Modulation System	PLL synthesizer	
Maximum Input Level	125 dB SPL	120 dB SPL
Maximum Deviation	±40 kHz	
Battery	6LR61 (9 V × 1)	
Battery Life	More than 10 hours (alkaline)	
Indication	Power/Battery indicator	
Antenna	Internal antenna	
Ambient Temperature	–10°C to +50°C	
Finish	Resin, coating	
Dimensions	ø50 × 235.2 mm	ø45 × 235.2 mm
Weight	250 g (with battery)	
Accessory	Stand adapter, Screwdriver	

Model No.	WM-3310 VHF Lavalier Wireless Microphone	WM-3310H VHF Headset Wireless Microphone
Transmitter unit		
Emission	F3E	
Frequency Range	169–216 MHz, VHF*1	
Channel Selectable	6 CH	
RF Carrier Power	Less than 50 mW	
Tone Frequency	32.768 kHz	
Modulation System	PLL synthesizer	
Maximum Input Level	120 dB SPL	
Maximum Deviation	±40 kHz	
Battery	6LR61 (9 V × 1)	
Battery Life	More than 10 hours (alkaline)	
Indication	Power/Battery indicator	
Antenna	1/4 λ wire antenna	
Ambient Temperature	–10°C to +50°C	
Finish	Resin, coating	
Dimensions	62(W) × 142(H) × 32(D) mm	
Weight	135 g (with battery)	
Accessory	Screwdriver	
Microphone unit		
Microphone Element	Electret condenser microphone, cardioid	
Cable Length	1.3 m	
Power Requirement	DC (supplied from transmitter unit)	
Connector	ø3.6 plug	

Model No.	WT-3800 VHF Wireless Tuner	WT-3810 VHF Wireless Tuner
Power Requirement	AC mains (using AC-DC adapter)	
Power Consumption	150 mA (13.8 V DC)	
Receiving Frequency	169–216 MHz, VHF*1	
Channel Selectable	6 CH	
Receiving System	Double super-heterodyne	
Diversity System	TOA space diversity*3	
Audio Output	MIC: –60 dB*2/LINE: –20 dB*2, 600 Ω 1/4" Phone jack (unbalanced), XLR-3-31 type connector (balanced)	–20 dB*2, 600 Ω 1/4" Phone jack (unbalanced)
Mixing Input	–20 dB*2, 4 kΩ, 1/4" phone jack (unbalanced)	
Antenna Input	75 Ω, BNC [phantom powering for antenna, 9 V DC, 30 mA (max.)]	Rod antenna
Receiving Sensitivity	Better than 80 dB, S/N ratio (20 dBμV input, 40 kHz deviation)	
Squelch Sensitivity	18–40 dBμV variable	18 dBμV
Squelch System	Using together of noise SQ, carrier SQ and tone SQ	Using together of noise SQ and carrier SQ
Tone Frequency	32.768 kHz	
Indication	Audio (signal/peak), ANT A/B, Channel	Power, ANT A/B, Audio (peak)
Channel Check	Usable frequencies scanning	
S/N Ratio	Better than 100 dB (A-weighted)	
Harmonic Distortion	Less than 1%	
Frequency Response	100–12,000 Hz, ±3 dB	
Ambient Temperature	–10°C to +50°C	
Finish	Resin, black	
Dimensions	210(W) × 44.6(H) × 180(D) mm	240(W) × 35(H) × 110(D) mm
Weight	600 g	380 g
Accessory	AC-DC adapter	AC-DC adapter, Screwdriver
Option	Mounting bracket kit: MB-WT1 (for rack mounting one WT-3800 unit) MB-WT2 (for rack mounting two WT-3800 units)	—

Model No.	WD-4800 Power/Antenna Distributor
Power Requirement	AC mains
Frequency Range	VHF/UHF
Antenna Input	Dual 2 inputs (front × 1, rear × 1), 75 Ω, BNC (phantom powering for antenna)
Antenna Output	Dual 4 outputs, 75 Ω, BNC
DC Power Supply	4 outputs, (13V DC/250mA)
Indication	Power
Ambient Temperature	–10°C to +50°C
Finish	Steel, coated
Dimensions	420(W) × 44(H) × 305.5(D) mm
Weight	3.50 kg
Accessory	DC cable...4
Option	Rack mounting bracket: MB-15B

Model No.	YW-3500 VHF Wireless Antenna
Power Requirement	8–10 V DC (supplied from Antenna Distributor or Tuner)
Current Consumption	Under 24 mA
Receiving Frequency	169–216 MHz, VHF
Dipole Ratio Relative Gain	More than 6 dB (including booster amplifier)
V.S.W.R	Less than 2.6
Output Impedance	75 Ω
Mounting Hole Pitch	68.5 mm (dimensions for wiring box)
Ambient Temperature	–10°C to +50°C
Finish	Antenna/bracket; ABS resin, off-white
Dimensions	197(W) × 850(H) × 32(D)mm
Weight	200 g

*1 Frequency range may vary by area (between 169 to 216 MHz).

*2 OdB = 1 V

*3 Patents pending for TOA Space Diversity Technology.

*Specifications are subject to change without notice.



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