

5000 Series Wireless Microphone Systems

The wireless microphone system shall be of professional quality with an operating frequency range of 692 to 722 MHz with 64 [16] selectable channels and simultaneous operation of up to sixteen systems. The transmission method shall be frequency modulation (F3E) using a PLL-based modulation system. RF carrier power shall be no greater than 50 mW. The system shall be FCC and UL listed with a five year manufacturer's warranty.

[WT-5800 True Diversity 64-channel Receiver]

The wireless receiver shall have 64 selectable channels and a built-in scanner function to scan the RF environment and indicate available channels. The receiving method shall be double super-heterodyne using signal strength-comparative antenna switching diversity. Specifications shall include a S/N ratio of greater than 110 dB (A-weighted), harmonic distortion of less than 1% and frequency response of 100 - 15k Hz, ± 3 dB. The receiving sensitivity shall be greater than 90 dB with 20 dB μ V input and 40k Hz deviation. Squelch types shall be carrier, noise and tone key with a variable squelch sensitivity of 18 - 40 dB μ V and a 32.768k Hz tone key frequency. The receiver shall have two antenna inputs, each with BNC-type connectors, 75 ohm impedance and 9 VDC, 30 mA, available for remote antennas. The unit shall also have two antenna outputs, with BNC-type connectors, 75 ohm impedance, and 0 dB gain, to provide antenna distribution to a maximum of two additional receivers. The audio outputs shall be balanced type with XLR-M jack and sensitivity of -60 dB / 1 mV, and unbalanced type with 1/4" phone jack and sensitivity of -20 dB / 100 mV, both with an output impedance of 600 ohms. A Mix Input, unbalanced type with 1/4" phone jack with an input impedance of 10k ohms and sensitivity of -20 dBV / 100 mV shall allow the connection of the output of a second receiver or other audio source to be mixed with the main receiver output signal. The front panel shall include an LCD for RF and AF monitoring as well as frequency setting and scanner functions. Front panel LED's shall include antenna A / B reception status, low battery indication, and an AF peak indicator that lights at 3 dB below clipping. Front panel controls shall include Up, Down, and Set keys for menu navigation as well as Power and Volume. The wireless receiver shall be powered from the AC mains using a supplied AC-DC adapter with a power consumption of 250 mA (12 VDC). The unit shall operate within a temperature range of +14° F to +122° F (-10° C to +50° C). Unit construction shall be black resin

with dimensions (W x H x D) of 8.27" x 1.76" x 8.1" (210 x 44.6 x 205 mm) and weight of 1.54 lbs.(700 g). Included accessories shall be two whip antennas and an external AC-DC adapter (120 VAC, 60 Hz).Up to two units shall be rack-mountable in one standard 19" rack height with an optional rack-mount kit.

[WT-5805 Space Diversity 64-channel Receiver]

The wireless receiver shall have 64 selectable channels and a built-in scanner function to scan the RF environment and indicate available channels. The receiving method shall be double super-heterodyne using threshold-comparative antenna switching diversity. Specifications shall include a S/N ratio of greater than 110 dB (A-weighted), harmonic distortion of less than 1% and frequency response of 100 - 15k Hz, ± 3 dB. The receiving sensitivity shall be greater than 90 dB with 20 dB μ V input and 40k Hz deviation. Squelch types shall be carrier, noise and tone key with a variable squelch sensitivity of 18 - 40 dB μ V and a 32.768k Hz tone key frequency. The receiver shall have two antenna inputs, each with BNC-type connectors, 75 ohm impedance and 9 VDC, 30 mA, available for remote antennas. The audio outputs shall be balanced type with XLR-M jack and sensitivity of -60 dB / 1 mV, and unbalanced type with 1/4" phone jack and sensitivity of -20 dB / 100 mV, both with an output impedance of 600 ohms. A Mix Input, unbalanced type with 1/4" phone jack with an input impedance of 10k ohms and sensitivity of -20 dBV / 100 mV shall allow the connection of the output of a second receiver or other audio source to be mixed with the main receiver output signal. The front panel shall include an LCD for RF and AF monitoring as well as frequency setting and scanner functions. Front panel LED's shall include antenna A / B reception status, low battery indication, and an AF peak indicator that lights at 3 dB below clipping. Front panel controls shall include Up, Down, and Set keys for menu navigation as well as Power and Volume. The wireless receiver shall be powered from the AC mains using a supplied AC-DC adapter with a power consumption of 200 mA (12 VDC). The unit shall operate within a temperature range of +14° F to +122° F (-10° C to +50° C).Unit construction shall be black resin with dimensions (W x H x D) of 8.27" x 1.76" x 8.1" (210 x 44.6 x 205 mm) and weight of 1.54 lbs.(700 g). Included accessories shall be two whip antennas and an external AC-DC adapter (120 VAC, 60 Hz).Up to two units shall be rack-mountable in one standard 19" rack height with an optional rack-mount kit.

[WT-5810 Portable Space Diversity 16-channel Receiver]

The wireless receiver shall have 16 selectable channels. The receiving method shall be double super-heterodyne using threshold-comparative antenna switching diversity. Specifications shall include a S/N ratio of greater than 104 dB (A-weighted), harmonic distortion of less than 1% and frequency response of 100 - 15k Hz, ± 3 dB. The receiving sensitivity shall be greater than 90 dB with 20 dB μ V input and 40k Hz deviation. Squelch types shall be carrier, noise and tone key with a variable squelch sensitivity of 18 - 40 dB μ V and a 32.768k Hz tone key frequency. The unit shall have two fixed-mount antennas. The audio outputs shall be balanced type with XLR-M jack and sensitivity of -60 dB / 1 mV, and unbalanced type with 1/4" phone jack and sensitivity of -20 dB / 100 mV, both with an output impedance of 600 ohms. A Mix Input, unbalanced type with 1/4" phone jack with an input impedance of 10k ohms and sensitivity of -20 dBV/100 mV shall allow the connection of the output of a second receiver or other audio source to be mixed with the main receiver output signal. Front panel LED's shall include antenna A / B reception status, low battery indication, and an AF peak indicator that lights at 3 dB below clipping. Front panel controls shall include Next, and Set keys for channel selection, as well as Power, Volume, Squelch adjust and momentary Squelch Off key. The wireless receiver shall be powered from the AC mains using a supplied AC-DC adapter with a power consumption of 250 mA (12 VDC). The unit shall operate within a temperature range of +14° F to +122° F (-10° C to +50° C). Unit construction shall be black resin with dimensions (W x H x D) of 8.11" x 1.58" x 6.0" (206 x 40 x 152 mm) and weight of 1.3 lbs. (590 g). Included accessories shall be an external AC-DC adapter (120 VAC, 60 Hz).

[WM-4200 Dynamic Handheld Microphone (64 ch.)]

The handheld wireless microphone transmitter shall be dynamic type with a cardioid pattern and capable of a maximum input level of 145 dB SPL. The transmission method shall be frequency modulation (F3E) with a PLL-based modulation system operating in the frequency range of 692 - 722 MHz with 64 selectable channels. The RF carrier power shall be no greater than 50 mW with maximum deviation of ± 40 k Hz and a tone key frequency of 32.768k Hz. The unit shall operate for a minimum of 10 hours using a 9 V (6LR61), alkaline type battery. A power LED shall glow continuously to indicate normal operation and flash to indicate low battery level (< 6 VDC). The

transmitter shall utilize a 1/4 wave helical antenna. Transmitter controls shall include Power On/Off, Frequency Bank/Channel Select and Input Sensitivity Adjust. The transmitter shall operate within a temperature range of +14° F to +122° F (-10° C to +50° C). The transmitter shall be constructed of black resin with a rubber coating. Dimensions (W x H x D) shall be 2.06" dia. x 11" L (52.2 x 279.4 mm). The weight (with battery) shall be 0.60 lbs. (270 g). Included accessories shall be a frequency-adjust screw driver, stand adapter and zippered storage pouch.

[WM-4210 Dynamic Handheld Microphone (16 ch.)]

The handheld wireless microphone transmitter shall have a cardioid pattern and be dynamic type capable of a maximum input level of 130 dB SPL. The transmission method shall be frequency modulation (F3E) with a PLL-based modulation system operating in the frequency range of 692 - 722 MHz with 16 selectable channels. The RF carrier power shall be no greater than 50 mW with maximum deviation of ±40k Hz and a tone key frequency of 32.768k Hz. The unit shall operate for a minimum of 10 hours using a 9 V (6LR61), alkaline type battery. A power LED shall glow continuously to indicate normal operation and flash to indicate low battery level (< 6 VDC). The transmitter shall utilize a 1/4 wave helical antenna. Transmitter controls shall include Power On/Off, and Channel Select. The transmitters shall operate within a temperature range of +14° F to +122° F (10° C to +50° C). The transmitters shall be constructed of black resin. Dimensions (W x H x D) shall be 1.97"dia. x 9.26" (50 x 235.2 mm). The weight (with battery) shall be 0.60 lbs. (270 g). Included accessories shall be a frequency-adjust screw driver, stand adapter and zippered storage pouch.

[WM-4220 Condenser Handheld Microphone (16 ch.)]

The handheld wireless microphone transmitter shall have a cardioid pattern and electret condenser type capable of a maximum input level of 125 dB SPL. The transmission method shall be frequency modulation (F3E) with a PLL-based modulation system operating in the frequency range of 692 - 722 MHz with 16 selectable channels. The RF carrier power shall be no greater than 50 mW with maximum deviation of ±40k Hz and a tone key frequency of 32.768k Hz. The unit shall operate for a minimum of 10 hours using a 9 V (6LR61), alkaline type battery. A power LED shall glow continuously to indicate normal operation and flash to indicate low battery level (< 6 VDC). The transmitter shall utilize a 1/4 wave helical antenna. Transmitter controls shall include

Power On/Off, and Channel Select. The transmitters shall operate within a temperature range of +14° F to +122° F (10° C to +50° C). The transmitters shall be constructed of black resin. Dimensions (W x H x D) shall be 1.77" diameter x 9.26" (45 x 235.2 mm). The weight (with battery) shall be 0.55 lbs. (250 g). Included accessories shall be a frequency-adjust screw driver, stand adapter and zippered storage pouch.

[WM-5220 Condenser Handheld Microphone (16 ch.)]

The handheld wireless microphone transmitter shall have a cardioid pattern and be electret condenser type capable of a maximum input level of 126 dB SPL. The transmission method shall be frequency modulation (F3E) with a PLL-based modulation system operating in the frequency range of 692 - 722 MHz with 16 selectable channels. The RF carrier power shall be no greater than 50 mW with maximum deviation of ±40k Hz and a tone key frequency of 32.768k Hz. The unit shall operate for a minimum of 10 hours using a single 1.5 V, AA (LR6), alkaline type battery. Two status LEDs, one red and one green, shall indicate battery status. The transmitter shall utilize a 1/4 wave helical antenna. Transmitter controls shall include Power On/Off and Channel Select. The transmitter shall be constructed of black resin and shall operate within a temperature range of +14° F to +122° F (10° C to +50° C). Dimensions (W x H x D) shall be 1.7"dia. x 9.1" (43.6 x 231.5 mm). The weight (with battery) shall be 0.4 lbs. (180 g). Included accessories shall be a frequency-adjust screw driver, stand adapter and zippered storage pouch.

[WM-5320 Omni-directional Lapel Microphone (64 ch.)]

The lapel microphone with bodypack shall be electret condenser type with an omnidirectional pickup pattern and be capable of a maximum input level of 110 dB SPL. The transmission method shall be frequency modulation (F3E) with a PLL-based modulation system operating in the frequency range of 692 - 722 MHz with 64 selectable channels. The RF carrier power shall be no greater than 50 mW with maximum deviation of ±40k Hz and a tone key frequency of 32.768k Hz. The unit shall operate for a minimum of 10 hours using a single 1.5 V, AA (LR6), alkaline type battery. Two status LEDs, one red and one green, shall indicate battery status. The transmitter shall utilize a 1/4 wave helical antenna. Transmitter controls shall include Power On/Off, Frequency Bank/Channel Select and Input Sensitivity Adjust. The bodypack shall include a 0.14" (3.5 mm) diameter input jack with threaded collar. The transmitter shall operate within a

temperature range of +14° F to +122° F (-10° C to +50° C). The transmitters shall be constructed of black resin. Bodypack dimensions (W x H x D) shall be 2.44" x 4.0" x 0.9" (62 x 102 x 23 mm). The lapel microphone cable length shall be 4.5 ft.(1.37 m). The weight (with battery) shall be 0.24 lbs (110 g). Included accessories shall be a frequency adjust screwdriver, zippered storage pouch, bodypack neck strap, microphone lapel clip and replaceable foam windscreen.

[WM-4300 Cardioid Lapel Microphone (64 ch.)]

The lapel microphone with bodypack shall be electret condenser type with a cardioid pattern and be capable of a maximum input level of 120 dB SPL. The transmission method shall be frequency modulation (F3E) with a PLL-based modulation system operating in the frequency range of 692 - 722 MHz with 64 selectable channels. The RF carrier power shall be no greater than 50 mW with maximum deviation of ±40k Hz and a tone key frequency of 32.768k Hz. The unit shall operate for a minimum of 10 hours using a 9 V (6LR61), alkaline type battery. A power LED shall glow continuously to indicate normal operation and flash to indicate low battery level (< 6 VDC). The transmitter shall utilize a 1/4 wave helical antenna. Transmitter controls shall include Power On/Off, Frequency Bank/Channel Select and Input Sensitivity Adjust. The bodypack shall include a TB-4M type input connector compatible with TA-4F type and a rotatable attachment clip. The transmitters shall operate within a temperature range of +14° F to +122° F (-10° C to +50° C). The transmitter shall be constructed of black resin. Dimensions (W x H x D) shall be 2.44" x 5.59" x 1.26" (62 x 142 x 32 mm) for the lapel bodypack transmitter. The lapel microphone cable length shall be 4.76 ft.(1.45 m). The weight (with battery) shall be 0.33 lbs.(150 g) for the lapel/bodypack. Included accessories shall be a frequency adjust screw driver and storage case and rotatable lapel clip.

[WM-5320H Speech Headset Microphone (64 ch.)]

[WM-5320A Aerobic Headset Microphone (64 ch.)]

The headset (speech) microphone with bodypack shall be electret condenser type with a cardioid pattern and be capable of a maximum input level SPL of 120 dB SPL. The headset (aerobics) microphone with bodypack shall be electret condenser type with a cardioid pattern and be capable of a maximum input level SPL of 120 dB SPL. The transmission method shall be frequency modulation (F3E) with a PLL-based modulation system operating in the frequency range of 692 - 722 MHz with 64 selectable channels. The RF carrier power shall be no greater

than 50 mW with maximum deviation of ± 40 kHz and a tone key frequency of 32.768 kHz. The unit shall operate for a minimum of 10 hours using a single 1.5 V, AA (LR6), alkaline type battery. Two status LEDs, one red and one green, shall indicate battery status. The transmitter shall utilize a 1/4 wave helical antenna. Transmitter controls shall include Power On/Off, Frequency Bank/Channel Select and Input Sensitivity Adjust. The bodypack shall include a 0.14" (3.5 mm) diameter input jack with threaded collar. The transmitter shall operate within a temperature range of $+14^{\circ}$ F to $+122^{\circ}$ F (-10° C to $+50^{\circ}$ C). The transmitter shall be constructed of black resin. Bodypack dimensions (W x H x D) shall be 2.44" x 4.0" x 0.9" (62 x 102 x 23 mm). The headset microphone cable length shall be 4.5 ft. (1.37 m). The weight (with battery) shall be 0.24 lbs (110 g). Included accessories (speech) shall be a frequency adjust screwdriver, bodypack neck strap, and replaceable foam windscreen. Included accessories (aerobics) shall be a frequency adjust screwdriver, bodypack waist pouch, and replaceable foam windscreen.

[WD-4800 Antenna Distributor]

The antenna distributor shall be suitable for use in both the VHF and UHF frequency ranges. The unit shall have two paralleled antenna inputs on each of the front and rear panels with BNC-type connectors, 75 ohm impedance and 9 VDC / 25 mA available for remote antennas. The unit shall have eight rear panel antenna outputs, four from each front/rear-panel antenna input, BNC-type connector and 75 ohm impedance. Four rear panel DC outputs, 12 VDC, shall be available for powering compatible wireless receivers. The front panel shall include Power On/Off and Power LED. The antenna distributor shall be powered from the AC mains (120 / 230 V AC selectable). The unit shall operate within a temperature range of $+14^{\circ}$ F to $+122^{\circ}$ F (-10° C to $+50^{\circ}$ C). Unit construction shall be black painted steel with dimensions of 16.54" x 1.73" x 8.02" (420 x 44 x 203.8 mm) and weight of 7.83 lbs. (3.55 kg). Included accessories shall be one IEC power cord and four DC cables. The unit shall be rack-mountable and occupy one standard rack height with an optional rack-mount kit.

[YW-4500 Remote Powered Antenna]

The remote dipole antenna shall be suitable for use in the UHF frequency range of 680 - 880 MHz. The antenna gain shall be greater than 8 dB with a V. S. W. R. of less than 3. The output impedance shall be 75 ohm with an operating distance of 115 ft. (35 m) maximum using RG-6U

cable or 164 ft. (50 m) maximum using RG-11U cable. The antenna power requirement shall be 7 - 12 VDC with current consumption of less than 24 mA supplied from the wireless receiver or antenna distributor. The unit shall have a mounting hole pitch of 3.29" (83.5 mm). The operating temperature shall be +14° F to +122° F (-10° C to +50° C). Unit construction shall be AES resin, off-white with dimensions of 4.13" x 5.51" x 4.96" (105 x 140 x 126 mm) and weight of 0.66 lbs. (300 g).

The wireless true diversity receiver shall be TOA model WT-5800.
The wireless space diversity receiver shall be TOA model WT-5805.
The portable wireless space diversity receiver shall be TOA model WT-5810.
The wireless 64-channel handheld dynamic microphone shall be TOA model WM-4200.
The wireless 16-channel handheld dynamic microphone shall be TOA model WM-4210.
The wireless 16-channel handheld condenser microphone shall be TOA model WM-4220.
The wireless 16-channel handheld condenser microphone shall be TOA model WM-5220.
The wireless 64-channel lapel microphone with bodypack shall be TOA model WM-5320.
The wireless 64-channel headset microphone with bodypack shall be TOA model WM-5320H.
The wireless 64-channel aerobics headset microphone with bodypack shall be TOA model WM-5320A.
The antenna distributor shall be TOA model WD-4800.
The remote dipole antenna shall be TOA model YW-4500.
The wireless diversity receiver rack-mount kit shall be TOA model MB-WT3 (one unit)
/ MB-WT4 (two units).
The diversity antenna distributor rack-mount kit shall be TOA model MB-15B.