ATLAS® 4500 Multimode Station

The ATLAS 4500 Multimode Station offers market-leading analog and P25 mixed-mode capabilities in a robust, reliable, and compact form factor. Designed and built to exceed industry standards and specifications, it is available in a range of frequency bands including VHF, UHF, 700, and 800 MHz.

FLEXIBLE ARCHITECTURE

- Leverages a common hardware platform to support 12.5 kHz Analog, 12.5kHz FDMA P25 Phase I and 6.25 kHz P25 Phase II TDMA and operate in Analog/P25 Conventional, P25 Trunked and Simulcast mode.

- Smallest P25 Phase 2 base station in the industry packaged in an ultra compact 2RU size chassis maximizing rack space usage

- AC or DC power input.

EASE OF USE AND MAINTAINABILITY

- Modular architecture allows flexible expansion of sites and seamless scalability of the system

- Interactive front panel design displays status and diagnostics for rapid troubleshooting

- Flexible upgrades of software

ADVANCED NEXT GENERATION DESIGN AND PERFORMANCE

- Improved multi band receiver design provides higher sensitivity along with very high intermodulation immunity for congested prime site locations.

- The high power ultra linear ultra compact RF power amplifier uses new state of the art digital and RF techniques and components that greatly simplify operation

- Full spectrum coverage in VHF, UHF and 7/800 MHz

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GENERAL	VHF	UHF	700 / 800 MHz
Mounting	19" rack or shelf		
Dimensions (Hx Wx D)	3.5" x 19" x 17.9" (89 x 483 x 455mm)		
Weight	24.25 lbs. (11 kg)		
Operating Temeperature Range	-30°C to +60°C		
Power Requirements	AC: 90-264 VAC, 47-63 Hz or DC: 24-58 VDC positive or negative ground.		
Power Consumption	100 W Tx 430W | 28 W Rx		
RF Interconnects	TX:N Female, RX: N Female		
Channel Spacing	12.5 kHz		
FCC Compliance	Parts 15 and 90		
Modulation	TX: C4FM, H-DQPSK (Linear and Linear Simulcast), RX: C4FM,H-CPM, FM		

TRANSMITTER	VHF	UHF	700 / 800 MHz
Frequency Range	136-174 MHz	380-520 MHz	763-776 MHz,850-870 MHz
RF Power Output	1-100 Watts		
Electronic Switching Bandwidth	Full Bandwidth		
Duty Cycle	100%		
Output Impedence	50 Ohms		
Spurious Emissions	100 dB		
Harmonic Emmisions	100 dB		
Modulation Fidelity	3%		
Intermodulation Attenuation	40 dB, 80 dB With External Isolator		
Audio Response	As per TIA		
Analog Audio distortion	2%		
Frequency Stability (-30°C to +60°C)	"1.0 PPM (Internal) 0.1 PPM (External Ref: GPS Synchronized)"		
Digital Emission Designator	8K10F1E, 8K10F1D, 8K10F7E		
Analog Emission Designator	11K0F3E	11K0F3E	16K0F3E, 14K0F3E
Analog FM Hum & Noise (S/N Ratio)	45 dB		
Maximum Deviation (Analog)	± 2.5 kHz	± 2.5 kHz	± 5 kHz
Maximum Deviation (Digital)	± 3110 Hz	± 3110 Hz	± 3110 Hz

RECEIVER	VHF	UHF	700 / 800 MHz
Frequency Range	136-174 MHz	380-520 MHz	792-825 MHz
Analog Sensitivity: 12dB SINAD	-123 dBm	-122 dBm	-122 dBm
Digital Sensitivity: for 5% BER	-122 dBm	-122 dBm	-122 dBm
Signal Displacement Bandwidth	± 1 kHz		
Frequency Stability (-30°C to +60°C)	0.5 PPM		
Analog Adjacent Channel Rejection (TIA603D)	75 dB		
Digital Adjacent Channel Rejection	61 dB		
Intermodulation Rejection	87 dB		
Spurious and Image Response Rejection	100 dB		
Audio Response	+1, -3 dB From 6 dB Per Octave De-Emphasis; 300-3000 Hz Referenced To 1000 Hz At Line Output		
Analog Audio distortion (at 1000 Hz)	2%		
Digital Audio distortion (at 1000 Hz)	As per TIA		
Analog Hum & Noise (TIA)	45 dB		
Digital Hum & Noise (TIA)	As per TIA		
RF Input Impedence	50 Ohms		

STANDARDS COMPLIANCE

EFJohnson's stations comply with the following standard specifications:

P25 Digital Operation	TIA-102.CAAB-D
Digital Phase II (TDMA) Operation	TIA-102.CCAB-A
Analog FM Operation	TIA 603-D
EMI/EMC	NTIA Manual Chapter 5
PSTN Line Isolation	FCC Part 68 (USA)

All specifications are subject to change without notice.
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