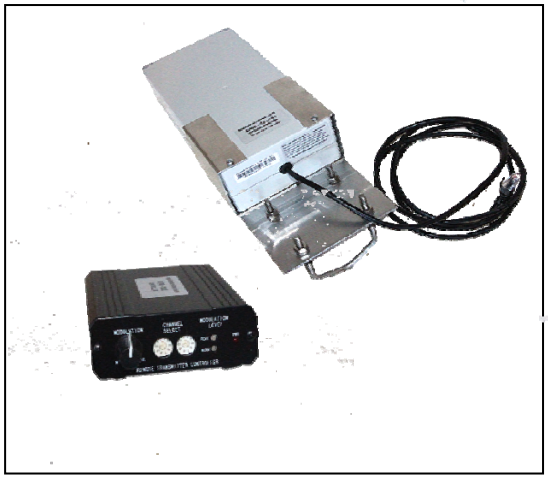
APPLIED WIRELESS©

Long Range Wireless Applications

AT900-xxD



902 to 928 MHz
24/32-Channel
Audio Transmitter with Remote Antenna

The AT900-xxD conforms to FCC Part 15 requirements for unlicensed use. The AT900-xxD transmits excellent quality low noise stereo audio from any line level source. The Remote Antenna allows for more convenient placing of the transmitter controller for access and better antenna placement for RF propagation. Use the 24-channel version (AT900-24D) for our Pro Audio receiver PAR900 and the 32-channel version (AT900-32D) for our standard stereo receiver, AR900-32. Indoor and outdoor versions of the antenna are available. Use any length CAT5 cable to attach controller to antenna.

Features

- Remote Transmit Antenna (Headend)
- Indoor and Outdoor Antenna Versions
- Line Level (Unbalanced) Input
- Long Range[1]
- Point-to-Multipoint
- Modulation Level Indicator LEDs (OK & peak)
- Built-In Noise Reduction
- Crystal Reference Ensures Excellent Frequency Stability
- Small Yet Rugged Extruded Aluminum Enclosure
- Antenna, Audio Cable, and AC Adapter Included

Typical Applications

- Wireless Audio Transmission
- PA Systems
- Distribution of Audio Entertainment Content
- Event Audio

Product Ordering

Model	*Outdoor/Indoor Antenna*	*Number of Channels*	*Matching Receiver*
AT900-32DY	Indoor	32	AR900-32
AT900-32DZ	Outdoor	32	AR900-32
AT900-24DY	Indoor	24	PAR900M
AT900-24DZ	Outdoor	24	PAR900M

Interface Table

Antenna	CAT-5 Cable (up to 250 FT)
Audio In	RCA Female (Phono) Left & Right
Power In	2.1mm Male
Channel Select	Screwdriver Selectable

APPLIED WIRELESS

AT900-xxD

Specifications

Sym	Parameter	Min	Typical	Max	Unit
DC_{in}	Operating Voltage Range	7.5	9	18	Volts
I	Operating Current		120		mA
SNR	Audio Signal to Noise Ratio*		78		dB
	Audio Frequency Response (+/- 3dB, flat EQ setting)*		15-15K		
	Audio Channel (L/R) Separation (@ 1KHz)*		30		dB
THD	Audio Distortion (@ 1KHz, +/- 25KHz Deviation)		0.3%		
	Stereo Pilot Level		-20		dBc
P_{out}	RF Power Output		1		mW
	Frequency Stability (over operating temperature range)		+/- 30		ppm
	FM Deviation		+/- 75		KHz
	Harmonic Suppression		-45		dBc
Z_{out}	Antenna Output Impedance		50		Ohms
T_{op}	Operating Temperature	-20		+70	°C

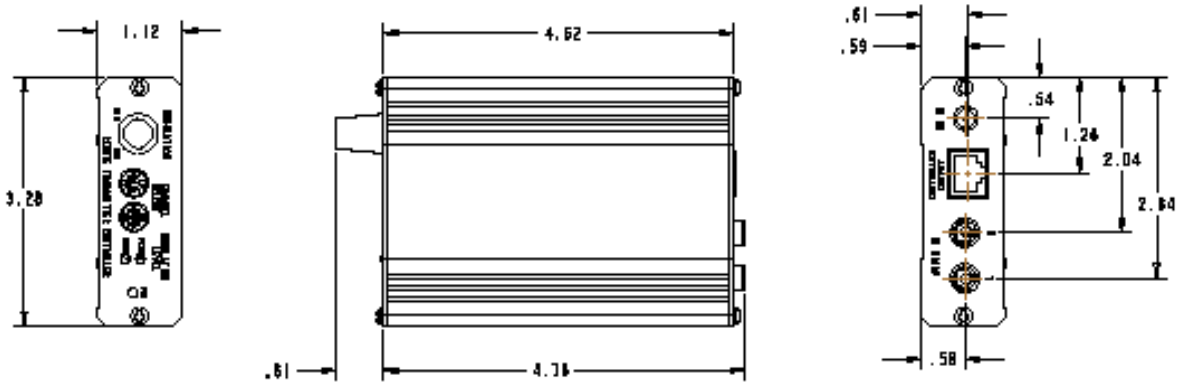
*Audio performance specifications are “end-to-end” characteristics.

Maximum Ratings

Sym	Parameter	Value	Unit
DC_{in}	DC Supply Voltage	-50 to +35	Volts
T_{stg}	Storage Temperature	-50 to +150	°C

Package Dimensions (inches)

Transmitter Controller (Indoor Unit)
AT900-xxD

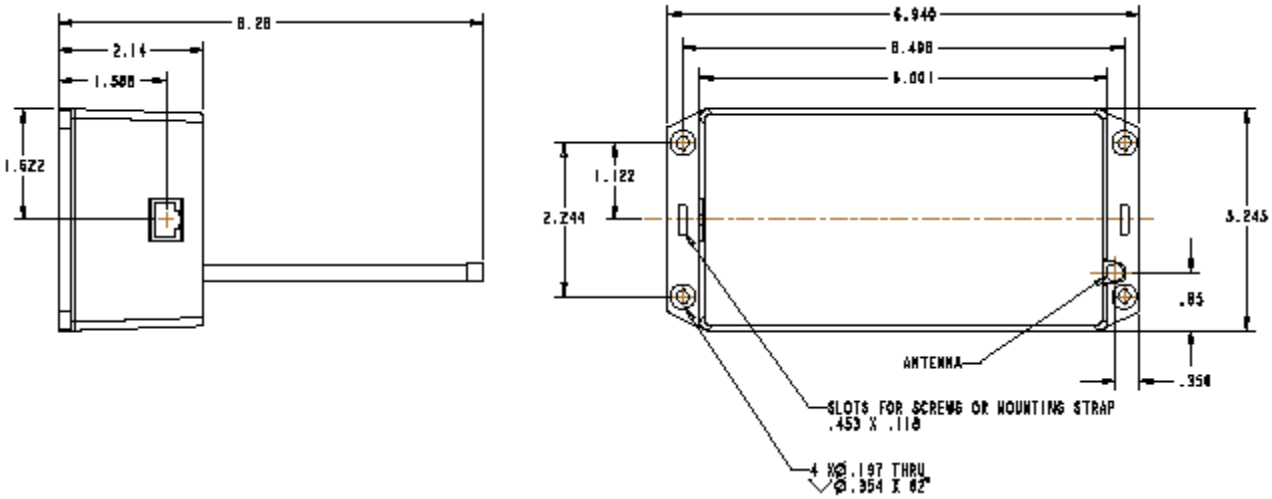


[1]Range Performance (when used with PAR900M Receiver)

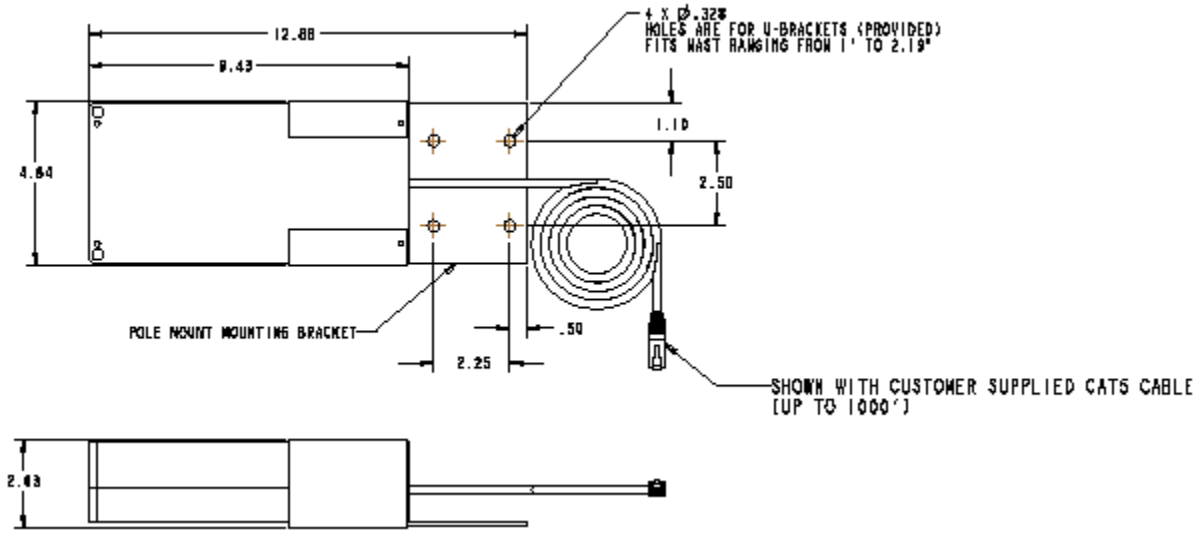
Receiver Antenna Type	Threshold	Recommended Max.
Standard Omni-Directional Antennas	900 Ft	450 Ft
Flat Panel Antenna (FP915-5)	1300 Ft	650 Ft
Yagi, 10-dB (Y915-10)	1900 Ft	950 Ft

Distances are “Line-of-Sight”. Non Line-of-Sight applications will experience reduced range, the amount of reduction based upon the nature of the obstruction(s).
By using the “Recommended Max” in the table above, you allow a 6-dB signal margin for your application.
Data in tables is based on actual unobstructed field measurements.

Indoor Antenna
AT900-xxDY



Outdoor Antenna
AT900-xxDZ



Application Notes

- Replace CAT5 cable by opening the grey NEMA antenna/headend box.

The following sections pertain exclusively to the audio transmitter Model AT900-24DZ and AT900-32DZ:

This product incorporates transmitter module **FCC ID: QY4265**

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) This device may not cause harmful interference and

(2) This device must accept any interference received, including interference that may cause undesired operation.

INSTRUCTION TO THE USER

This equipment has been tested and found to comply with the limits for a class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This equipment has been certified to comply with the limits for a class B computing device, pursuant to FCC Rules. In order to maintain compliance with FCC regulations, shielded cables must be used with this equipment. Operation with non-approved equipment or unshielded cables is likely to result in interference to radio and TV reception. The user is cautioned that changes and modifications made to the equipment without the approval of manufacturer could void the user's authority to operate this equipment.