

# Submittal

# MT 321N

The MT 321N Bi-directional amplification unit (BDA) is a NEMA 4 rated cabinet that houses all the components of the BDA System. This includes a configurable .5 to 2 watt amplifier, power supply, sealed lead acid batteries and data acquisition and monitoring unit. This system requires a 110V 20A direct line, and connects directly to the Remote annunciator (CMD-1) with a single CAT 5 cable.

## KEY FEATURES:

- NEMA 4 enclosure, non ferrous with red powder coat, front door with 2 point locking latch system
- NEMA 4 venting.
- Marconi Technologies BDA unit, from .5 to 2 watt transmit power.
- 120V to 24V 20A UL Listed power supply with UPS unit, NFPA 72 test function, fully compliant to NFPA 1221 alarm requirements, battery polarity protection.
- Power distribution unit with surge protection and a 15A resettable circuit breaker and 3800 joule surge suppressor, active monitoring for ground, surge, and power.
- Data acquisition unit which constantly monitors all system parameters, internet capable for remote monitoring, building management capable for integration into an existing system.
- Antenna and cable monitor accurately monitors antenna and cable system VSWR levels, measures small changes in antenna VSWR with high feeder and interface losses. (up to a 10Db cable loss) System initiates a self test once every 24 hours.
- (2) x 45Ah 12V sealed lead acid batteries for 24H reserve power, 6 hour full use power backup.
- 6 dry contact outputs, for inter-connection to any fire alarm panel (supervisory signals).
- Feed to RA (remote annunciator) touch screen, monitoring of alarm conditions.
- Power Supply is UL Listed, and fully NFPA 1221 alarms compliant. All components are UL Listed.

**Emergency Radio  
Communication  
Enhancement System**



Not To Scale

## DIMENSIONS:

### BDA System

Height: 27"

Width: 23"

Depth: 11"

### Anunciator

Height: 5.5"

Width: 9.5"

Depth: 1.25"

## SPECIFICATIONS:

### Bi-directional Amplification Unit – MODEL: MT321N

#### **BDA - 800 MHz - RF Characteristics:**

##### **Downlink Antenna to DAS**

Frequency Band:	851 to 860 MHz
Input Level:	-90 dBm to -10 dBm
Bandwidth:	9 MHz
Gain:	> 100 dB
Gain Adjust:	10 dB
Noise Figure:	7 dB
Type:	Class AB
Max. Power Output:	+37 dBm
ALC:	+37 dBm
Harmonics:	< 60 dBc, 2nd and 3rd
OIP3:	+55 dBm
Impedance:	50 Ohms
Input Return Loss:	10 dB min.
Output Return Loss:	10 dB min.
Load VSWR:	Infinite, no damage

##### **Uplink DAS to Antenna**

Frequency:	806 to 815 MHz
Input Level:	-90 dBm to -10 dBm
Bandwidth:	9 MHz
Gain:	> 100 dB
Gain Adjust:	10 dB
Noise Figure:	7 dB
Type:	Class AB
Max. Power Output:	+37 dBm
ALC:	+37 dBm
Harmonics:	< 60 dBc, 2nd and 3rd
OIP3:	+55 dBm
Impedance:	50 Ohms
Input Return Loss:	10 dB min.
Output Return Loss:	10 dB min.
Load VSWR:	Infinite, no damage

Warranty: 1 Year Parts



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## SPECIFICATIONS:

### **Electrical Characteristics:**

Volts AC	115V
Volts DC	24V
Current	5.6A Nominal
Operating Temperature:	0° to +60° C

### **Alarming:**

Alarms (System): UL and DL LED

Alarms (Ethernet, to Remote Annunciator)

Down Link (watts)  
Power Forward  
Power Reverse  
VSWR  
DL OK

Up Link (watts)  
Power Forward  
Power Reverse  
VSWR  
UL OK

AC Power  
DC Power  
Temperature

Control Interface: Ethernet

Power On/Off

### **Mechanical Interface:**

Connectors, RF: N-type female

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