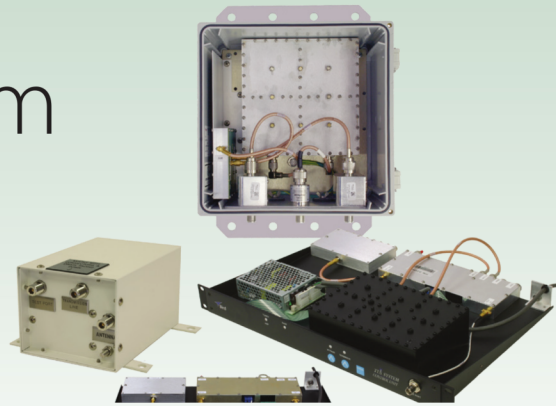


Mini Tower Top Amplifier System

435 Series



Tower Top Amplifier System (TTA) is designed to enhance the operation of the base station. The TTA increases receive sensitivity, reduces transmit signal interference and can make all the difference in Mission Critical Communications.

The TTA system consists of two components: the Tower-Top Amplifier mounted close to the antenna and a Receiver Multicoupler base unit. To reduce the size of the TTA and simultaneously provide 120 dB of isolation of a TX carrier, filtering has been split between the TTA and Receive Multicoupler base unit.

The tower mounted unit is housed in a compact light weight, weather resistant enclosure. The internal electronic components are protected from lightning by surge arresters on all RF ports. The system is designed for quick and simple installation.

Industry leading TTA amplifier linearity guarantees superior immunity to intermodulation interference.

FEATURES

- Quadrature-coupled low noise amplifier (LNA) improves RX sensitivity.
- PolyPhaser™ impulse suppressors provide protection from lightning damage.
- High performance filtering in tower top and base control unit.
- Wind loading is reduced due to small enclosure size.
- Quick installation.
- Compact, light weight, weather-resistant enclosure.
- One rack-unit high 8-Port Receiver Multicoupler (MCU).

APPLICATIONS

The TTA is designed to increase the performance of a Base Transceiver Station (BTS) while ensuring reliable communications for critical Public Safety applications. This increase in sensitivity can make up for the imbalance between mobile and handheld users in critical systems.

TX RX Systems Inc.

8625 Industrial Pkwy, Angola, NY 14006
716.549.4700 | Sales@txrx.com | www.txrx.com

Mini Tower Top Amplifier System

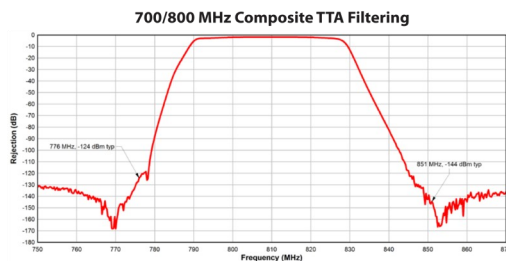
435 Series

SYSTEM SPECIFICATIONS

Frequency Bands	700/800 MHz, 900 MHz
Rejection	120 dB nominal at 776 and 851 MHz
Reserve Gain	Configurable by Electronic Attenuator
Total Power Dissipation	17W
System Noise Figure	3.2 dB Typ.

TOWER TOP AMPLIFIER SPECIFICATIONS

Frequency Bands	700/800 MHz 792-824 MHz 900 MHz 896-902 MHz
Type of Amplifier	Quadrature Coupled
TTA Gain (Input to output of TTA)	+23 dB Typ.
Noise Figure: TTA	2.9 dB Typ.
LNA OIP3	> 42 dBm Typ.
Return Loss of all RF ports	> 14 dB
Power Requirements	Power derived from Rx Cable
Operating Temperature Range	-30° C to 60° C
Lightning Protection	Impulse suppressor on all external ports
Test Port Included	Yes
Coupling Test Port (Test in/Amp in)	30 dB
50 Ohm Termination Test	Controlled by base unit
Bypass Test Mode	Controlled by base unit
Enclosure	Weather resistant Housing Designed to NEMA Standards
700/800 Dimensions/Net Weight	8.65" x 5.77" x 6.04"/10 lbs
900 Dimensions/Net Weight	7.25" x 11.25" x 11.25"/14.28 lbs

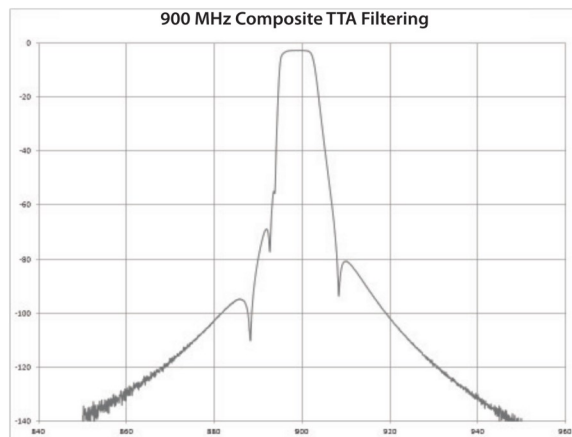


A steep skirted TEM bandpass filter in the tower box augmented by a ceramic filter in the base unit provide a selective 32 MHz system window.

Model Numbers	Description	Power Requirements
435-83H-01-T	TTA, Mini Quadrature Single Amp, 792-824MHz, Single Network, Tower Box	
435-83H-01-M-110	Multicoupler Unit (MCU), 8-Port, 792-824MHz	AC
435-83H-01-M-48	Multicoupler Unit (MCU), 8-Port, 792-824MHz	-48
435-94D-01-T	TTA, Mini Quadrature Single Amp, 896-902MHz, Single Network, Tower Box	
435-94D-01-M-110	Multicoupler Unit (MCU), 8-Port, 896-902MHz	AC
435-94D-01-M-48	Multicoupler Unit (MCU), 8-Port, 896-902MHz	-48

BASE UNIT SPECIFICATIONS MULTICOUPLER UNIT (MCU)

Frequency Bands	792-824 MHz, 896-902 MHz
Net Gain or Loss (RMC in to Rx out)	+1 dB minimum
Number of Outputs	8 expandable to 16
TTA Connector	N-Female
Receiver Connector	BNC - female
Rx - Rx Port Isolation (Min)	>20 dB
Test Port Input (Front of RMC)	BNC - female
Test Port Output (Rear of RMC)	N - female
Reserve Gain Electronic Attenuator	0-15 dB in 1dB steps
Alarm Contacts	Form-C Contacts
Power Requirements	90-240 Vac @ 50/60 Hz or -48 VDC
Operating Temp Range	0° C to +50° C
Enclosure	Standard EIA 19" Rack Mount
700/800 Dimensions/Net Weight	1.75" x 19" x 14" /11.5 lbs
900 Dimensions/Net Weight	1.75" x 19" x 12.25" /9.92 lbs



Tower Top Amplifier will function up to 70°C without shutting down however, the specifications are not guaranteed outside the rated temperature range.

OPTIONAL PRODUCTS

89-83F-03-03	792-806 MHz, 3 MHz Bandwidth Preslector
89-83F-03-06	792-806 MHz, 6 MHz Bandwidth Preslector
89-83F-03-09	792-806 MHz, 9 MHz Bandwidth Preslector
89-83F-03-14	792-806 MHz, 14 MHz Bandwidth Preslector
89-86A-03-03	806-824 MHz, 3 MHz Bandwidth Preslector
89-86A-03-05	806-824 MHz, 5 MHz Bandwidth Preslector
89-86A-03-10	806-824 MHz, 10 MHz Bandwidth Preslector
89-86A-03-15	806-824 MHz, 15 MHz Bandwidth Preslector
75-05-05	Receive Multicoupler, 8 Port Expansion Kit
91-00-123	TTA Mounting Bracket Kit



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