

2600^{Series} Digital Repeater/Base Station

EFJohnson's 2600 Series Repeater/Base Station was designed to meet the demanding needs of First Responders. This field-proven product combines performance, reliability and advanced features for worry-free operation when it is needed most.

The 2600 can be configured as a repeater or as a base station in a conventional analog, Project 25 digital or mixed mode network. When operating in mixed mode, it has the ability to detect the signaling mode of an incoming call. It then returns the call back out over the air using the same protocol as was received.

A wide range of receiver protection methods are available including CTCSS, CDCSS and NAC. Up to 50 CTCSS and 18 CDCSS are provided with the community repeater option. Multiple interfaces support network communications: 4-wire analog used to connect the station to a remote controller or analog dispatch equipment, and digital Ethernet used for linking stations or linking the station to dispatch equipment using Voice over IP (VoIP).

The standalone 2600 is a feature-rich product that supports many advanced P25 features such as group calls, emergency and System All Call. But the addition of the IP25™ Network Interface Unit (NIU), a conventional "site controller", the capability is expanded to include such features as unit and talk group validation, and cross-band and cross-mode call routing across multiple sites.

Software defined configurations allow for PC programmability of operating frequency, output power and other functions – providing quick installation capability. Front panel status indicators and two-line display show operating status and provide on-site diagnostics for rapid evaluation and servicing.



Advantages:

- **Standards based**

The 2600 Series meets the requirements for Project 25 digital operation and TIA 603 analog operation and will interoperate with similarly compliant radios. The 2600 series also supports Internet Protocol (IP) for VoIP operation.

- **Multiple Modes**

The 2600 series repeater can be configured to operate in analog, P25 digital or mixed mode.

- **Multiple Call Types**

The 2600 series supports multiple call types including individual and group calls, clear and encrypted calls, and emergency calls.

- **High Power**

Adjustable, high TX output power. The VHF and UHF repeaters can be set for 25-110 Watts, and the 800 MHz repeater can be set for 25-175 watts.

- **Inherent IP Architecture**

These repeaters include an Ethernet port for 10/100 BaseT connection. IP Networking provides quick intelligent network communications without costly and complex switching equipment.

- **Wide Area Capable**

The IP architecture makes it simple to connect 2600 Series Repeaters for wide area applications such as multicasting and transmitter steering.

- **Interoperable with Existing Analog Equipment**

The addition of the IP25 Network Interface Unit (NIU) enables advanced P25 features, advanced networking capability, and also serves as a gateway between existing analog 4W equipment and the digital IP25 repeaters and console.

- **Reliable**

Conservative design, efficient PA heat sink and continuous performance monitoring ensure highly reliable, worry free operation.

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Typical Performance Specifications

GENERAL	26X1 (VHF)	26X4 (UHF)	26X8 (800 MHz)
Mounting		19" rack or shelf	
Dimensions (HxWxD)	9.0" x 17.0" x 20.9" (23cm x 43 cm x 53cm)		
Weight	66 lbs. (29.95 kg)		
Temperature Range	-30°C to +60°C		
Input Voltage	100 to 240 VAC		
Input Frequency	50 to 60 Hz		
Power Requirements	At 110 W – 560 Watts At 25 W – 170 Watts Standby – 45 Watts	At 110 W – 457 Watts At 25 W – 170 Watts Standby – 45 Watts	At 175 W – 680 Watts At 75 W – 450 Watts Standby – 45 Watts
Frequency Resolution	5/6.25 kHz	6.25 kHz	12.25 kHz
FCC Type Acceptance Number	ATH2422001-1	ATH2422004-1	ATH2422008-1
FCC Compliance	Parts 15, 90		

TRANSMITTER	ANALOG		DIGITAL		ANALOG		DIGITAL	
Frequency Range	132–150, 150–178 MHz		380–400, 400–430, 430–470, 470–512 MHz		851 – 870 MHz			
RF Output Power	25 to 110 Watts		25 to 110 Watts		75 – 175 Watts			
Duty Cycle			100%					
Output Impedance			50 ohm					
Spurious Emissions			-90 dBc					
Harmonic Emissions			-90 dBc					
Maximum Deviation	± 5 kHz/± 2.5 kHz	± 3110 Hz	± 5 kHz/± 2.5 kHz	± 3110 Hz	± 5 kHz/± 3110 Hz			
Audio Response	+1, -3 dB TIA	As per TIA	+1, -3 dB TIA	As per TIA	+1, -3 dB TIA	As per TIA		
Audio Distortion	Less than 2%	As per TIA	Less than 2%	As per TIA	Less than 2%	As per TIA		
Emission Designators	11K0F3E, 16K0F3E	8K10F1E	11K0F3E, 16K0F3E	8K10F1E	16K0F3E, 14K0F3E, 11K0F3E	8K10F1E		
Hum & Noise (TIA)	-50 / -55 dB	N/A	-50 / -55 dB	N/A	-45 dB / -50dB	N/A		
Frequency Stability (-30°C to +60°C)			±1.0 PPM					

RECEIVER	ANALOG		DIGITAL		ANALOG		DIGITAL	
Channel Spacing	30/25/15/12.5 kHz		12.5 kHz		25/12.5 kHz		12.5 kHz	
Frequency Range	132–150, 150–178 MHz		380–400, 400–430, 430–470, 470–512 MHz		806–825 MHz			
Sensitivity:	12 dB SINAD	0.25µV	N/A	0.30µV	N/A	0.25µV	N/A	
Sensitivity:	for 5% BER	N/A	0.25µV	N/A	0.30µV	N/A	0.25µV	
Selectivity	-85/-80 dB		-60 dB		-90/-75 dB		-60 dB	
Signal Displacement Bandwidth	± 2 kHz/± 1 kHz		± 1 kHz		± 2 kHz/± 1 kHz		± 1 kHz	
Frequency Stability (-30°C to +60°C)			±1.0 PPM					
Intermodulation Rejection	-85 dB		-85 dB		-80 dB			
Spurious & Image Rejection	-95 dB		-100 dB		-90 dB			
Audio Response (1000 Hz ref.)	+1, -3 dB TIA	As per TIA	+1, -3 dB TIA	As per TIA	+1, -3 dB TIA	As per TIA		
Audio Distortion (at 1000 Hz)	Less than 3% @ 0.5W /16 ohms	As per TIA	Less than 3% 0.5W /16 ohms	As per TIA	Less than 3%	As per TIA		
Hum and Noise (TIA)	-50 dB	N/A	-50 dB	N/A	-45 dB	N/A		
RF Input Impedance			50 ohms					
NTIA Certificate Number			JF-129002 (380–400, 400–430 MHz)					

STANDARDS COMPLIANCE

EF Johnson's radio repeaters comply with the following standard specifications:

- P25 Digital Operation: TIA/TSB 102.CAAB
- Analog FM Operation: TIA/EIA 603
- EMI/EMC: NTIA Manual Chapter 5
FCC Part 90
FCC Part 15
- PSTN Line Isolation: FCC Part 68 (USA)

Five Channels and
7-Foot Rack



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Our Mission—Your Safety

1440 Corporate Drive, Irving, TX 75038-2401
Phone: 972-819-0700, 1-800-328-3911 Fax: 972-819-0639
www.EFJohnson.com