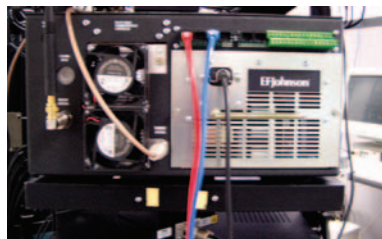


3800^{Series} Digital Repeater

EFJohnson's 3800 Series repeaters provide secure digital communications for first responders operating Project 25 trunked networks. As a key piece of the Trunked IP25™ system solution, the 3800 Series delivers performance you can always count on – today and tomorrow.

The 3800 Series repeaters use Voice over Internet Protocol (VoIP) technology to enable intelligent network communications without costly and complex centralized switching equipment. With a trunking controller built into the repeater, network management is right at your fingertips.

PC programmable options provide flexibility, simplified setup, and easy field upgrades. The fully synthesized design of the 3800 Series enables you to make frequency changes quickly and easily. The modular design of the 3800 Series simplifies maintenance and servicing.



EFJohnson is a leading provider of Project 25 compliant two-way radios and communication systems for law enforcement, fire fighters, EMS, and military.

More Key Features and Benefits

- Trunking controller is built into the repeater, which simplifies network management
- Ethernet interface enables easy network connectivity
- Frequency bands available are VHF, UHF, and 800 MHz
- Project 25 Common Air Interface operation
- Each Subsystem can have up to 28 channels (27 for traffic and 1 for control)
- Fits into a standard 19" equipment rack
- Network Management provides automatic configuration of the repeater and remote software upgrades
- Conservative design of power amplifier circuitry uses multiple devices for maximum heat transfer and minimum operating temperatures for long life
- Dual synthesizers with ± 1.0 part per million stability ensure on-frequency operation of transmitter and receiver
- Front panel status indicators show operating status and diagnostic information for rapid evaluation and servicing
- DSP Processing and flash memory allows updating of radio operating software via the Network Manager to meet future needs

3800^{Series} Digital Repeater

Typical Performance Specifications

GENERAL	38X1 (VHF)	38X4 (UHF)	38X8 (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	12.5 kHz
FCC Type Acceptance Number	ATH2422001-1	ATH2422004-1	ATH2422008-1
FCC Compliance	Parts 15, 90	Parts 15, 90	Parts 15, 90

TRANSMITTER

Frequency Range	132–150, 150–178 MHz	400–430, 430–470, 470–512 MHz	851–870 MHz
RF Output Power	25 to 110 Watts	25 to 110 Watts	75 to 175 Watts
Duty Cycle	100%	100%	100%
Output Impedance	50 ohm	50 ohm	50 ohm
Spurious Emissions	-90 dBc	-90 dBc	-90 dBc
Harmonic Emissions	-90 dBc	-90 dBc	-90 dBc
Maximum Deviation	± 3110 Hz	± 3110 Hz	±5.0 kHz / ± 3110 Hz
Emission Designators	8K10F1E	8K10F1E	8K10F1E
Frequency Stability (-30°C to +60°C)	±1.0 PPM	±1.0 PPM	±1.0 PPM

RECEIVER

Channel Spacing	12.5 kHz	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: for 5% BER	0.25 µV	0.30 µV	0.25 µV
Selectivity	-60 dB	-60 dB	-60 dB
Signal Displacement Bandwidth	± 1 kHz	± 1 kHz	± 1 kHz
Frequency Stability (-30°C to +60°C)	±1.0 PPM	±1.0 PPM	±1.0 PPM
Intermodulation Rejection	-85 dB	-85 dB	-80 dB
Spurious & Image Rejection	-95 dB	-100 dB	-90 dB
RF Input Impedance	50 ohms	50 ohms	50 ohms

STANDARDS COMPLIANCE

EFJohnson's radio repeaters comply with the following standard specifications:

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

EFJohnson[®]
 Our Mission—Your Safety

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