Central Ohio Interoperable Radio System Bi-Directional Amplifier (BDA) Policy

This policy outlines requirements and procedures to be followed to install and use a BDA to amplify frequencies used on the Central Ohio Interoperable Radio System (COIRS). It refers to FCC rules and the Ohio Fire Code. Any customer or vendor installing a BDA on the COIRS system should also refer to the FCC rules, Fire Codes, and local building codes to ensure compliance. BDA's may be referred to as Emergency Responder Radio System or Emergency Responder Radio Coverage System.

Licensee Consent is Required – Rule 90.219

- The FCC requires that non-licensees who seek to operate signal boosters must obtain the consent of the licensee[s] whose signals they intend to amplify. Consent will be provided as a Retransmission Authorization, which the FCC requires be kept on file for presentation upon request of the FCC or licensees.

FCC Signal Booster Classifications

- Class A: Designed to retransmit signals on one or more specific channels. Also known as a "channelized" BDA.
- Class B: Designed to retransmit any signals within a wide frequency band. Also known as a "wideband" BDA.

Class B Signal Booster Registration

- The FCC requires that both new and existing Class B signal boosters (wideband BDA's) be registered through the FCC Signal Booster Registration website at:
  www.fcc.gov/signal-boosters/registration.
  Any Class B signal boosters not registered after Nov. 1, 2014 will be subject to FCC enforcement action.

Signal Booster Technical Requirements

- The Signal boosters must be capable of amplifying APCO Project 25 signals.
- Signal boosters must be capable of amplifying 700 MHz Public Safety Narrowband frequencies (763-775 MHz / 793-805 MHz).
- Signal boosters must be capable of amplifying 800 MHz NPSPAC Band, 800 MHz non-NPSPAC Public Safety/BILT/Non-Cellular SMR Band, 800 MHZ Expansion Band, and 800 MHz Guard Band frequencies (806-817 MHz / 851- 862 MHz).
- Signal boosters must comply with all applicable fire and electrical codes.
- For all BDA's that are operating on the COIRS system, Fire Code Officials are not permitted to waive the hardening requirements or the battery backup requirements of the Fire Code.
- It is recommended to keep the number of BDA's in a close area to a minimum, to mitigate the possibility of interference.

COIRS BDA Recommendation

- COIRS recommends Class B BDAs that cover the 700 & 800 MHz frequency bands listed above under Technical Requirements. Once installed, a Class B BDA does not have to be re-programmed or re-configured whenever frequencies are added or changed on the Public Safety radio system on which it operates.

Section 510 of the Ohio Fire Code requires fire code officials to be capable of providing, upon request, specific technical information and requirements pertaining to their emergency responder communications system. The Northwest Emergency Communications Center (NRECC) is the repository for this information for all its members. Local fire authorities may request this technical information by emailing to: kharris@dublin.oh.us.

Additionally, following are the Five Steps to obtain licensee consent and meet FCC regulations for use of signal boosters amplifying COIRS frequencies:

- You may submit the Retransmission Authorization Form to request COIRS consent to use of the proposed signal booster.
- COIRS will review the submitted form and reserves the right to request additional information regarding the proposed signal booster.
- Upon approval of the proposed signal booster, COIRS will send the approved Retransmission Authorization form back to the applicant. Per FCC regulations, this Retransmission Authorization is required to be maintained by the signal booster operator, to be presented to an FCC representative or a licensee investigating interference.
- For Class B signal boosters, the requestor is required to comply with FCC regulation 47CFR90.219 by registering the approved device through the FCC signal booster registration website: www.fcc.gov/signal-boosters/registration.
- Upon successful registration, the requestor must provide the FCC Booster ID of this device to COIRS as proof of registration. This information can be emailed to kharris@dublin.oh.us.