

Brevard County 800 MHz Radio System

ERCES commission test and final test scheduling procedure

Brevard County holds the frequency license for the public safety radio system. The Brevard County Manager has authorized the Emergency Management Director or his/her designee, the 800MHz Division, to manage the public safety radio system and function as the liaison with the FCC through Administrative Order 25.

Brevard County follows NFPA 1225 for ERCES installations. Key Elements of 1225:

- Chapter 18.2.1: The design of the system shall be approved by the AHJ and the frequency license holder.
- A.18.2.1: Under 47 CFR, the Federal Communications Commission (FCC), the frequency license holder is legally responsible for retransmission on its licensed frequencies. Therefore, the frequency license holder must be able to review and approve every ERCES design prior to installation.
- Chapter 18.7.2: Frequency license holder written approval is required prior to initial activation of the ERCES.

Required Documents for Frequency License Holder

#	REQUIRED INFORMATION	Submit	Completed
1	Complete equipment list.	Before installation	
2	Heat maps showing planned system coverage.	Before installation	
3	A single line diagram of proposed system.	Before installation	
4	Diagram of donor antenna location on the building with azimuth to donor site.	Before installation	
5	Antenna Isolation results showing input level used and spectrum analyzer result. (See Figure A)	After antenna Installation	
6	A completed commissioning test showing final signal levels in the building	After BDA Installation	
7	BDA registered (Class A or B) with the FCC. Provide Signal Booster registration number	After BDA Installation	

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Design Review

- 800 MHz division must review the ERCES design and sign off before installation can proceed.

Isolation Test: (See figure A)

1. A manual isolation test is required by Brevard County 800 MHz division before a final test will be conducted. **The antenna system isolation must be 20 dB greater than the maximum gain of the BDA used.**
2. The use of inline attenuators/pads on donor antenna to increase antenna isolation **will not** be an acceptable means of correcting poor isolation results. Padding of individual DAS antennas will be permitted if relocating the antenna is not feasible.
3. All test equipment used by the integrator must display signal levels to prove the validity of the test.
4. Brevard County 800 MHz Division will require the integrator to reproduce the isolation test during the final.
5. Contractors unable to prove isolation numbers will not be scheduled for a final test.

Commissioning Test Scheduling

Vendors must request authorization from Brevard County 800 MHz division by e-mail.

1. Send e-mail to EMERMGT_800MHZRadio@brevardfl.gov advising the time, date, location of the test, and point of contact in the event 800 MHz division needs to stop the test.
 2. Once the commissioning test is completed, the system **“must be shut down”** until the final test is performed by 800 MHz division.
 3. 800 MHz division will review the final results for discrepancies.
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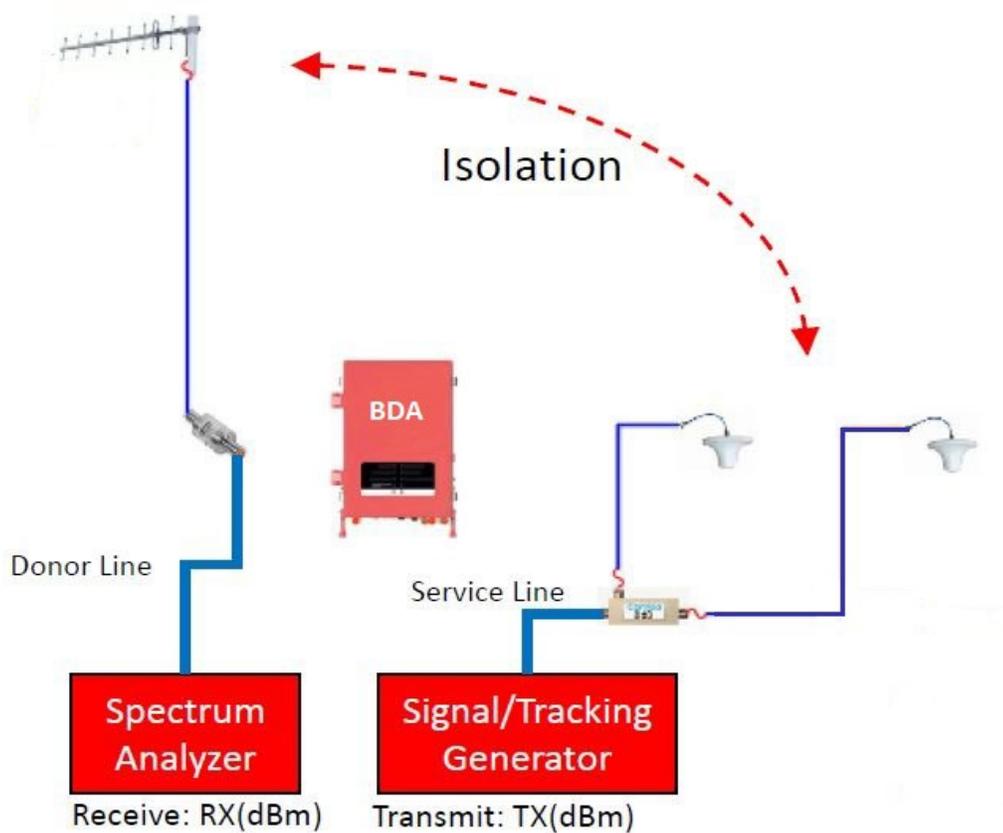
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Final Test Scheduling

1. A final test will not be scheduled until all documents are completed and forwarded with your request.
 2. After a successful review of the documents, **the final test by 800 MHz division will be scheduled through the AHJ.**
 3. Integrator personnel on site for the final must be NICET IB-PSC certified or have an FCC GROL license with certification from the BDA manufacture.
 4. Proof of certification on site will be required before the final test starts.
 5. If technician cannot produce their certification, the test will be considered a failure and need to be re-scheduled.
 6. Technician on site must be able to adjust the BDA as required by the 800 MHz representative.
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Figure A: Isolation Test Procedure



Pictures of the signal generator frequency and level, along with the spectrum analyzer results must be forwarded to the AHJ with the final checklist. Pictures must clearly show the isolation, or integrator will be required to redo the test and resubmit.