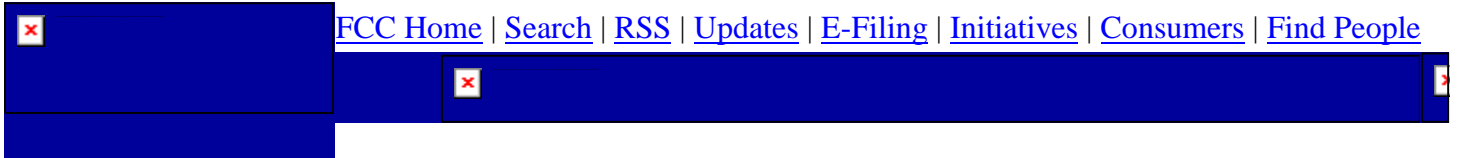


## Steve Dovell

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**From:** oetech@fccsun27w.fcc.gov  
**Sent:** Monday, July 20, 2015 12:04 AM  
**To:** Steve Dovell  
**Subject:** Response to Inquiry to FCC (Tracking Number 922162)



### Office of Engineering and Technology



#### **Inquiry on 07/14/2015 :**

##### **Inquiry:**

We have a client that is trying to certify a Class B industrial booster. The system is to be used in one application with pre-defined input and output levels.

The input for the Downlink is from a base station several miles from the building and fed to the building via fiber optics. In the building, the Fiber is terminated into a Fiber to RF converter (non-certified) and delivers a -10dBm/carrier input level to the booster. The booster provides band filtering and amplification to +20dBm/carrier and this signal is fed into a DAS made up of lossy coax with a gain of -70dBi.

The Uplink side of the system is strictly a receiver. Signals are taken from the DAS and amplified. The output of the Uplink connects to a RF to Fiber converter and the signal is sent via fiber to the base station. The Uplink path is never broadcast.

Paragraph 4.2 of Section 4.0 TEST METHODS FOR PLMRS/PSRS REPEATER/AMPLIFIER AND INDUSTRIAL BOOSTER DEVICES of the KDB "MEASUREMENTS GUIDANCE FOR INDUSTRIAL AND NON-CONSUMER SIGNAL BOOSTER, REPEATER, AND AMPLIFIER DEVICES" dated June 5, 2015 specifies that the

booster's AGC threshold be measured using the procedure of paragraph 3.2, which has the lab determine the compression point then perform the remaining test slightly below this level although if you consider the notes at the bottom of section 3.2:

“In the case of fiber-optic distribution systems, the RF input port of the equipment under test refers to the

RF input of the supporting equipment RF to optical convertor.

Devices intended to be directly connected to an RF source only need to be evaluated for any over-the-air

transmit paths.”

This appears to be referring to setting the level of the uplink, not the downlink input.

In the case of my clients system, the only over-the-air transmission his system is responsible for would be the downlink path to the DAS.

As this is a Class B  
industrial booster which is professionally installed and operated:

1)  
Can we perform  
the test of the downlink system at the designed input level of -10dBm?

**FCC response on 07/18/2015**

Based on info at hand, the test node / method seems acceptable.

Please include clear block diagram of end-to-end RF paths in the filing, labeling all relevant nodes and components.

At present B9B 90.219 Class B boosters are still on the PAG list; please provide records of this KDB along with submission to TCB for part of their review and TCB PAG submission.

**Attachment Details:**

Do not reply to this message. Please select the [Reply to an Inquiry Response](#) link from the OET Inquiry System to add any additional information pertaining to this inquiry.

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