



## **Bluebox UHF TX Power and RX Sensitivity**

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## 1 Determining the Required Transmission Power using Bluebox Show

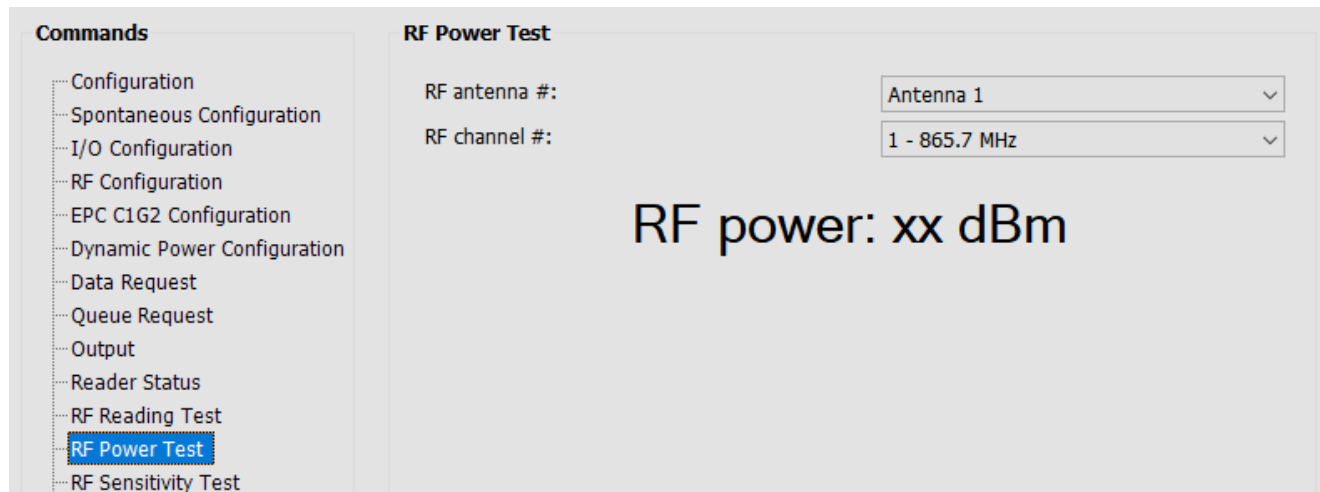


Figure 1: Bluebox Show Screenshot; RF Power Test

First, use the test function “RF Power Test” to find out how much transmission power is needed to detect the RFID tags on different channels. Then select this value + reserve of 2 dB as transmission power.

Please check the required transmission power with several RFID tags and on these 4 channels. Only these channels are used in Europe. You can use this table to find the values with up to 8 RFID tags:

Channel	Frequency	#1	#2	#3	#4	#5	#6	#7	#8
4	865.7								
7	866.3								
10	866.9								
14	867.5								

## 2 Determining the Required Receiving Sensitivity using Bluebox Show

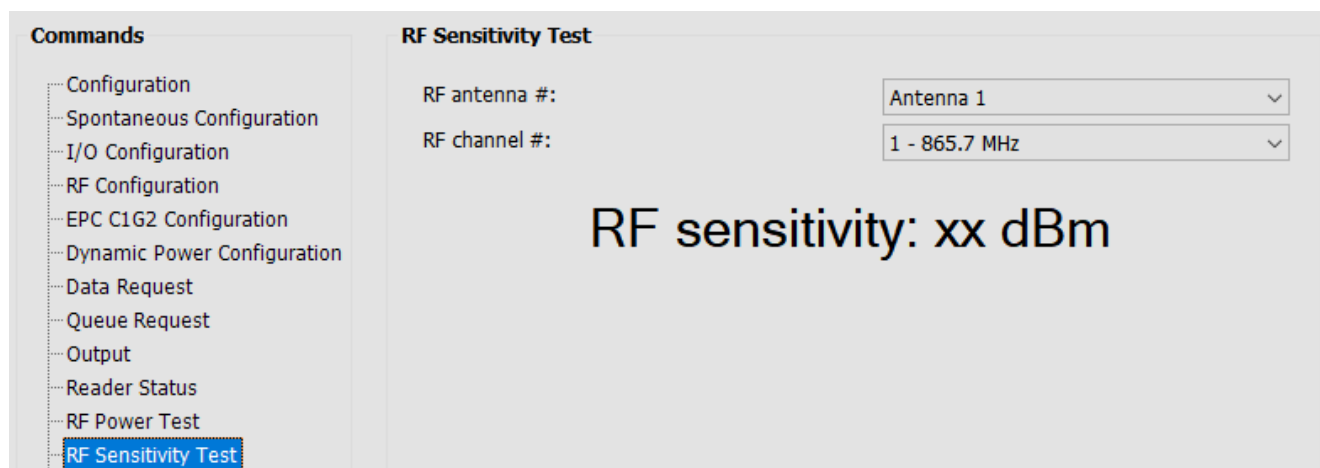


Figure 2: Bluebox Show Screenshot; RF Sensitivity Test

Then you can use “RF Sensitivity Test” to determine the reception field strength for several channels and set the value for RF input sensitivity to this value plus a reserve of 3 dB. Larger negative numerical values indicate a higher sensitivity.

Please check the required transmission power with several RFID tags and on these 4 channels.

You can use this table to find the values with up to 8 RFID tags:

Channel	Frequency	#1	#2	#3	#4	#5	#6	#7	#8
4	865.7								
7	866.3								
10	866.9								
14	867.5								

You can intentionally set them lower (smaller negative numerical value) to get only close tags. This can also speed up the recognition process for many RFID tags in the detection range.