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Main Identity

From: "Lloyd Mintzmyer" <Lloyd_Mintzmyer@SHPTV.pbs.org>
To: <kprd@ruraltel.net>; <fsmith@kanokla.net>; <roszhart@hamilton.net>
Sent: Monday, September 10, 2001 4:33 PM
Subject: Re: Fw: Signal interference

Frank Smith,
KPRD Manager,
Praise Network Manager,

Today, Monday September 10, 2001, I was able to complete Engineering evaluation of the radiated signal from the KPRD transmitter located southeast of Russell, KS and licensed to Hays, KS. The following is a brief summary of the results:

1. Carrier frequency: KPRD is assigned 88.900MHZ and the FCC rules 73.1545 subpart (b) specifies that FM stations with a power level exceeding 10 watts must maintain the carrier frequency within +/- 2000 Hertz of the assigned frequency. I measure the carrier frequency at KPRD at 88.900226, a deviation of 226 hertz from the assigned frequency and well within the FCC parameters.

2. Modulation of carrier: All FM stations are allowed a maximum of 75KHZ deviation for 100% modulation. I monitored KPRD for short periods of various programming including voice, music, and local sources and found the maximum to be 73Khz deviation. Again, this is within the FCC parameters as specified in 73.1570 subpart (2).

3. Power level: The output of the transmitter was checked both with direct and indirect readings. The direct power was measured on the output line meter at just under 23 KW. The FCC authorizes KPRD to run at 22.9KW TPO to maintain the licensed level of 83KW ERP from the antenna. The indirect method of power measurement, using plate voltage times plate current times transmitter efficiency determined the output power to be with 2% of the direct measurement. I also checked remote meter calibration and found them to be accurate.

4. I checked the spurious emission of the transmitter at a location about 8 miles distance from the transmitter. The reason for the remote testing is to allow use of a sensitive spectrum analyzer that would be overloaded with signal if located at the transmitter site. The FCC specifications in 73.317 are specified at various frequencies from the carrier, the most critical is measurement of greater than 600 KHz from the carrier which must be 80 db down from the carrier. The noise floor of my analyzer limits measurements to approximately 85 db down, and I observed no energy emissions down to that level. Thus, the transmitter is exceeding these FCC specifications.

Again, I feel the reception of the KPRD signal at the remote location stated below was due to atmospheric conditions that allowed bending of the energy and distortion of the signal to interfere with closer in stations. As fall weather approaches, I observe this condition from FM and low channel television

stations. In fact, I have on my desk a signal report of our television station, KSWK in Latrobe, Pennsylvania, certainly well beyond the normal coverage area for that station.

If I can be of further assistance, please let me know.

Respectfully,

Lloyd Mintzmyer
Director Engineering
Smoky Hills Public TV

kprd@ruraltel.net writes:
>From: "Frank Smith" <fsmith@kanokla.net>
>To: <kprd@ruraltel.net>
>Sent: Tuesday, August 21, 2001 4:04 PM
>Subject: Signal interference
>
>
>> Dear KPRD,
>>
>> I live in Bluff City, near the Oklahoma line in Harper County. I have
>> frequently had terrible problems with interference from your station on
>> 88.9 Today your signal was clear at 88.65 through 88.80, and was
>> unclear from 88.85 through 88.95. But I'm trying to get another station
>> at 89.10, and it is swamped by interference from your station.
>>
>> I have previously written to the FCC to complain, and they referred me
>> to you to see if this could be resolved without their involvement. But
>> I've written you and you don't bother to answer, so I'm assuming that
>> I'll need to go to the FCC with a formal complaint about the strength of
>> your signal and its bleeding well beyond your assigned frequency. Would
>> you like me to do that now, or do you think you might be willing to deal
>> with your engineering problem?
>>
>> Yours truly.
>>
>> Frank Smith
>> (620)967-4616
>>

Lloyd Mintzmyer
Director Engineering
Smoky Hills Public TV