

TECHNICAL EXHIBIT

APPLICATION FOR CONSTRUCTION PERMIT
FOR NON-RESERVED CHANNEL
TRANSLATOR STATION
K252EH

PARK CITY, UTAH
CH 256D 50 WATTS -115 M

April 29, 2009

MARIO HIEB, P.E.
CONSULTING ENGINEER
SALT LAKE CITY, UT

INTRODUCTION

This technical exhibit has been prepared on behalf of Phasor Physics, Inc., in support of an application requesting a modification of the license for FM Translator Station K252EH, Park City, Utah.

This proposal would not be subject to environmental processing in accordance with Section 1.1306. It is believed that this proposal conforms to all applicable rules and regulations of the FCC.

This application proposes that a waiver of FCC Rules be granted so that K252EH may relocate to FM Channel 256, a fourth adjacent channel. Presently, College Creek Media, LLC, the licensee of Station KADQ-FM, Evanston, Wyoming, has pending, in FCC File No. BPH-20080325AIH, an application to modify KADQ-FM's license to operate on co-Channel 252. In the event that application is granted, K252EH would cause impermissible interference to KADQ-FM and would have to discontinue operations.

As evidenced by the appended information, K252EH has determined that there are no first, second, third adjacent channels or IF channels that the Station can apply for without causing or suffering impermissible interference. Figures 1-6 show that prohibited overlap would occur on each of these channels. The closest available channel is a fourth adjacent channel, Channel 256.

Figure 1 shows that, if K252EH were moved to Channel 249, the interfering contour would overlap with KBZN and KBZN-1.

Figure 2 shows that, if K252EH were moved to Channel 250, the interfering contour would overlap with KBZN and KBZN-1.

Figure 3 shows that, if K252EH were moved to Channel 251, the interfering contour would overlap with KBZN and KBZN-1.

Figure 4 shows that, if K252EH were moved to Channel 253, the interfering contour would overlap with KBEE.

Figure 5 shows that, if K252EH were moved to Channel 254, the interfering contour would overlap with KBEE.

Figure 6 shows that, if K252EH were moved to Channel 255, the interfering contour would overlap with KBEE.

K252EH requests that the Commission waive the provisions of Section 74.1233(a)(1) of the Commission's Rules that would otherwise consider a relocation to a fourth adjacent channel to be a "major change" which would require the opening of a window before an application could be filed. K252EH submits that since there are no available channels that are less than fourth adjacent channels, the effect of KADQ-FM's proposed operation on Channel 252 would be to require the permanent termination of the operations of K252EH. In that K252EH provides a valuable service to the community of Park City, listeners in Park City should not lose the service and only a waiver of Section 74.1233(a)(1) would permit K252EH's broadcast service to remain in operation.

A waiver of the rules, to allow K252EH to migrate to Channel 256, will enable K252EH to continue to operate and is in the best interest of the Station and its listeners. Accordingly, the public interest would be well served by allowing a minor change to a fourth adjacent channel given the unique circumstances attendant to this request. On the basis of the unique circumstances presented and that the public interest is well-served by a waiver of the major change rule in order to permit the Station to continue to serve the public, K252EH urges that it has overcome the high hurdle for waiver requests and is entitled to the waiver it is seeking. *See WAIT Radio v. FCC*, 418 F. 2d 1153, 1157 (D.C. Cir. 1969), *cert denied*, 409 U.S. 1027 (1972).

Proposed Station Data

Output Frequency: 99.1 MHz.

Input Frequency: 88.1 MHz.

Channel: 256

ERP: 50 watts

Class: D

Proposed Antenna Location

The geographic coordinates (NAD 27) of the proposed site are as follows:

North Latitude: 40-40-58 N

West Longitude: 111-31-21 W

Transmitting Antenna

ANTENNA: SWR Model FM1, single bay.

Interference

The proposed translator station is co-located in a remote area; see Figure 11. Overlap with the pertinent contours of the proposed station and any first, second, third adjacent and IF channel stations, is shown in Table 1 and the interfering contours are displayed in Figures 7-10.

The co-channel interfering contours of the proposed station, KNYN-FM, Fort Bridger, WY, and K256AE, Provo, UT are shown in Figure 7. As allowed, the 40 dBu interfering

contour of the proposed translator station is calculated using the Longely-Rice method. This figure shows that there is no prohibited contour overlap.

In addition, KNYN-FM, Fort Bridger, WY, currently holds a CP to move to channel 280C1.

The 1st adjacent interfering contours of the proposed station and K257AY, Randolph-Woodruff, UT, are shown in Figure 8. There is no contour overlap.

The 2nd and 3rd adjacent interfering contours of the proposed station, KBEE, Salt Lake City, UT, KJMY, Bountiful, UT, and KJMY-2, Park City, UT, are shown in Figure 9. Although the interference contours are given in 47 CFR § 74.1204 (a)(3), FCC 02-244, Section II.A.5 states that *“when demonstrating that ‘no actual interference will occur due to...other factors,’ pursuant to Section 74.1204 (d), an applicant may use the undesired-to-desired signal ratio method.”*

The undesired-to-desired ratio for second and third adjacent stations required by 47 CFR § 74.1204 (a)(3) is 40 dB. Calculated interference contours between the proposed station and pertinent stations are shown in Table 2. The interfering contour of the proposed translator was calculated for 12 radials and plotted on a USGS quadrangle map.

Although contour overlap occurs, the area of overlap is entirely over unpopulated area. As demonstrated on the USGS quadrangle map in Figure 11, there are no populated structures or highways within the contours. The contours encompass a road, but it is a dirt road for access to the transmitter site. Hence, in accordance with 47 CFR § 74.1204 (d) and in FCC 02-244, a lack of population has been demonstrated within the area of interference.

Regarding IF channel spacing, 47 CFR § 74.1204 (g) states that *“...translator stations will be treated the same as Class A stations...”* Table 1 shows that the pertinent FM translator stations have the required spacing with the proposed station.

Unattended Operation

The proposed station will comply with all rules and requirements regarding unattended operation.

Multiple Translators

The applicant certifies that it does not have any interest in an FM translator that serves substantially the same area and that rebroadcasts the same signal as the proposed translator.

Environmental Considerations

The station will operate with an effective radiated power of 50 watts from a single-bay non-directional antenna, mounted on an existing tower.

As the ERP of the proposed station is less than 100 watts, it is in compliance with 47 CFR § 1.1307 (b) (4) (i).

Access to the transmitting site is restricted and appropriately marked with warning signs. When it becomes necessary for workers to ascend the tower, appropriate measures, such as reduction or shut down of power if necessary, shall be taken to ensure that the human exposure to radio-frequency radiation will not exceed the FCC guidelines.

Callsign	State	City	Freq	Channel	ERP_w	Class	Status	Distance_km	Sep	Clr
K252EH	UT	PARK CITY	99.1	256	34	D	APP	0.08	0	-30.16 dB
KNYN	WY	FORT BRIDGER	99.1	256	27500	C1	LIC	90.63	0	-18.79 dB
KJMY	UT	BOUNTIFUL	99.5	258	39000	C	LIC	54.49	0	-17.36 dB
KBEE	UT	SALT LAKE CITY	98.7	254	40000	C	LIC	54.51	0	-17.39 dB
K256AE	UT	PROVO	99.1	256	250	D	LIC	56.89	0	-17.51 dB
KJMY-FM2	UT	PARK CITY	99.5	258	1000	D	LIC	19.53	0	-16.70 dB
KJMY	UT	BOUNTIFUL	99.5	258	5000	C	LIC	54.49	0	-8.29 dB
KJMY	UT	BOUNTIFUL	99.5	258	0	C	USE	54.49	0	9.25 dB
KBEE	UT	SALT LAKE CITY	98.7	254	0	C	USE	54.51	0	9.26 dB
K256BB	UT	NORTH OGDEN	99.1	256	24	D	LIC	83.78	0	10.22 dB
KGNT	UT	SMITHFIELD	99.1	256	3000	A	CP	127.45	0	15.53 dB
KCPW-FM	UT	SALT LAKE CITY	88.3	202	2000	A	CP	25.2	10	15.2
K203AB	UT	RURAL SUMMIT COUNTY	88.5	203	26	D	LIC	19.48	0	19.5
KCPW-FM	UT	SALT LAKE CITY	88.3	202	2350	A	LIC	32.29	10	22.3
NEW	UT	MOUNT PLEASANT	99.1	256	250	D	APP	128.08	0	22.02 dB
	UT	NEPHI	99.1	256	0	C	RSV	102.54	0	23.40 dB
K257AY	UT	RANDOLPH- WOODRUFF	99.3	257	30	D	LIC	109.91	0	27.87 dB
KGNT	UT	SMITHFIELD	99.1	256	0	A	USE	127.45	0	27.19 dB
KSIT	WY	ROCK SPRINGS	99.7	259	99000	C	LIC	218.7	0	35.54 dB
KIFX	UT	ROOSEVELT	98.5	253	3200	C2	LIC	155.15	0	38.10 dB

TABLE 1: Pertinent first, second, third adjacent, and IF channel stations spaced with proposed station.

Callsign	State	City	Channel	F(50,50) at proposed site	D (dBU)	Predicted F(50,10)
KJMY	UT	BOUNTIFUL	258	77	40	117
KBEE	UT	SALT LAKE CITY	254	77	40	117
KJMY-FM2	UT	PARK CITY	258	76	40	116

TABLE 2: Minimum F(50, 10) contour of proposed station based on pertinent second-adjacent channels and in accordance with 47 CFR § 74.1204 (d) and in FCC 02-244.

Site: PROPOSED
 Coordinates: 40-40-58.0 N, 111-31-21.0 W
 Freq: 99.10000 MHz
 ERP: 50.00 W

Bearing	ERP W	HAAT	DH	Distance	Lat	Lon
0	50	13	670	4.74	40.725366	-111.5225
30	50	151	530	10.68	40.765951	-111.45908
60	50	148	770	10.57	40.730249	-111.41388
90	50	31	1190	4.8	40.682764	-111.46554
120	50	136	930	10.1	40.637319	-111.41885
150	50	39	680	5.38	40.640843	-111.4906
180	50	-315	850	4.74	40.640189	-111.5225
210	50	-687	1620	4.74	40.645892	-111.55057
240	50	-457	1590	4.74	40.661473	-111.57112
270	50	-367	1210	4.74	40.682764	-111.57866
300	50	-33	960	4.74	40.704062	-111.57115
330	50	157	450	10.9	40.767695	-111.58725

TABLE 3: HAAT and ERP for proposed station.