

TECHNICAL STATEMENT
K251BT MANITOU SPRINGS, COLORADO
MOUNTAIN COMMUNITY TRANSLATORS, LLC
FCC FORM 349
FEBRUARY 2016

This Technical Statement is made in support of a minor change application for FM translator station Construction Permit, K251BT at Breckenridge, Colorado, facility ID 142168. K251BT seeks to relocate its current authorization by less than 250 miles and become a fill-in translator for KXRE(AM) Manitou Springs, Colorado, facility ID 54258. This proposed normally major change move is in response to the Commissions AM Revitalization Order DA-1491 released 12/23/2015. The following will show that the new proposed operation of K251BT will meet all of the Commissions technical requirements for an FM translator station.

The proposed operation of K251BT specifies a maximum Effective Radiated Power of 0.016 kilowatts. It will operate with a directional antenna with an “off the shelf” type antenna, or a Nicom BKG-77 with circular polarization. The antenna will be mounted on an existing tower at the KXRE(AM) tower site, with an over height of 50 meters above the ground. The antenna will be mounted with a Center of Radiation of 49 meters above the ground, and 2057 meters Above Mean Sea Level. The coordinates of this tower are located at N 38° 51’ 43”, W 104° 55’ 32”, NAD 27.

Figure 1 is a detailed interference study conducted on channel 276D with these new proposed facilities. It shows that the new operation of K251BT will not cause any interference to any existing or proposed FM stations on any of the pertinent same channel

or adjacent channels to channel 276, with the exception of 2nd adjacent channel station KBIQ Manitou Springs, Colorado operating on channel 274C, facility ID 73073.

The proposed operation of K251BT on 276D is located within the protected 60 dBμ contour of 2nd adjacent channel of KBIQ. Figure 2 shows the predicted F(50-50) field strength of KBIQ at the proposed K251BT transmitter site is 99.6 dBμ. Therefore, the respective predicted interfering contour F(50-10) generated by the proposed K251BT on channel 276D is an additional 40 dBμ or 139.6 dBμ utilized.

Figure 3 shows the coverage area for the 139.6 dBμ interference contour F(50-10) and shows that there is no population in the area of interference. The applicant, Mountain Community Translators, LLC, respectfully requests a waiver of C.F.R. 74.1204(d) of the Commission's rules based on the fact that there is no population within the area of predicted interference. There are no homes nearby the proposed existing tower site, which is a privately owned with private access. The transmitter building is uninhabited and does not have indoor plumbing. Should any unforeseen actual interference be caused, the licensee will immediately cease broadcasting with K251BT until such interference can be eliminated.

Figure 4 is the directional antenna data for the proposed Nicom BKG-3 antenna system proposed to be used.

The proposed operation of K251BT Manitou Springs will be considered a “Fill-In” operation for KXRE(AM) Manitou Springs, Colorado. KXRE(AM) operates with 0.5 kilowatts daytime with a non-direction antenna system on 1490 kHz. Figure 5 shows that the proposed 60 dBμ contour for the proposed K251BT will not extend beyond the daytime 2.0 mV/m contour of KXRE. It will also not extend beyond a 25 miles radius

from the KXRE tower site. Since this is a “Fill-In” translator, the maximum ERP will not exceed the maximum permissible ERP of 250 watts in any azimuth.

It was found that the new proposed operation of K251BT Manitou Springs, Colorado on channel 276D, will satisfy all of the required commission rules and regulations for an FM translator station.

FIGURE 1 - DETAILED CHANNEL INTERFERENCE
K251BT Manitou Springs, CO, CH. 276D
Average Protected F(50-50)= 3.54 km
Standard Directional

REFERENCE
38 51 43.0 N.
104 55 32.0 W.

CH# 276D - 103.1 MHz, Pwr= 0.016 kW DA, HAAT= 0.0 M, COR= 2057 M

DISPLAY DATES
DATA 02-01-16
SEARCH 02-01-16

CH CITY	CALL	TYPE STATE	ANT AZI ---	DIST FILE #	LAT LNG	PWR(kW) HAAT(M)	INT(km) COR(M)	PRO(km) LICENSEE	*IN* (Overlap	*OUT* in km)
274C	KBIQ	LIC _C_	156.6 336.6	14.11 BMLH20030423AAT	38 44 43.0 104 51 39.0	72.000 695	13.7 2946	94.7 Bison Media, Inc.	-8.7	-80.9*
276C1	KIQN	CP _CX	164.0 344.3	124.75 BPH20140805ADA	37 46 52.0 104 32 03.0	100.000 165	163.7 1958	66.1 Pueblo Broadcasting Group	-46.0*	46.8
276D	K251BT	APP DC_	0.0 0.0	0.00 BPFT20160129ATW	38 51 43.0 104 55 32.0	0.250	16.0 2057	5.0 Mountain Community Transla	-18.5*	-12.9*
276L1	KJOY-LP	APP _	16.9 197.0	22.83 BPL20160128BDS	39 03 31.0 104 50 54.1	0.100 -185	2103	East Indian Music Academy	-13.0*	5.2
276L1	KJOY-LP	LIC _	10.1 190.1	26.84 BLL20150804ABP	39 06 00.0 104 52 16.1	0.100	2183	East Indian Music Academy	-10.9*	8.2
277L1	KHYR-LP	APP _	112.6 292.7	19.11 BPL20160128BFF	38 47 45.0 104 43 20.1	0.100 -14	1853	Iron Horse Christian Youth	1.8	0.4
277L1	KHYR-LP	LIC _	88.8 269.0	29.66 BLL20150728ADB	38 52 01.7 104 35 01.9	0.006 124	2079	Iron Horse Christian Youth	12.3	11.7
277C1	KIQN	LIC _CX	164.0 344.3	124.75 BLH20110418ABT	37 46 52.0 104 32 03.0	100.000 165	96.5 1958	66.1 Pueblo Broadcasting Group	21.1	53.1
278C0	KRFK	LIC DCX	344.7 164.5	100.35 BLH20070927AIC	39 43 59.0 105 14 10.0	100.000 346	9.8 2256	66.6 Citicasters Licenses, Inc.	88.8	26.7
276D	K276FK	LIC _C_	344.6 164.4	99.92 BLFT20130402ACK	39 43 45.0 105 14 08.0	0.250 226	68.3 2254	19.5 Entercom Denver Li License	31.7	66.8
276D	K276AA	LIC _CN	263.6 82.8	111.24 BLFT19821028IB	38 44 37.0 106 11 50.0	0.031 355	74.3 3324	22.6 Headwaters Media, LIc	33.5	77.6
277D	KIQN-FM2	CP DH_	164.1 344.2	60.31 BNPFTB20130308AAB	38 20 22.4 104 44 07.3	7.000	2.5 1569	1.8 Pueblo Broadcasti ng Group	50.7	53.6
278D	DK278AW	LIC _V_	209.3 29.1	54.79 BLFT20070730ACH	38 25 53.0 105 14 00.0	0.010 -270	0.2 1637	3.2 Hori zon Christi an Fellowsh	51.1	51.4
276C3	AL3178	RSV-A _	284.4 103.2	170.03 RM9890	39 13 33.0 106 50 00.0	25.000 100	99.8 2997	22.7 67.0	123.8	
277D	K276AA	CP _C_	247.9 67.2	103.35 BPFT20150611ABU	38 30 27.0 106 01 26.0	0.180	9.3 2413	6.5 Headwaters Media, LIc	90.5	84.3
276C3	KFWA	LIC _C_	28.8 209.5	176.05 BMLD20150915AGB	40 14 44.0 103 55 29.3	6.800 46	71.3 1403	16.3 Way Media, Inc.	100.4	151.7
273D	DK273BC	LIC _V_	249.5 68.8	106.58 BLFT20070730ACI	38 31 16.0 106 04 15.0	0.010 -357	0.2 2281	3.2 Hori zon Christi an Fellowsh	102.8	101.9
276D	K276FT	CP _C_	310.7 130.0	129.16 BNPFT20130327AHY	39 36 50.0 106 04 02.0	0.095 -307	18.3 2853	5.6 Randy M Hudson	108.1	114.9
276A	KSPN-FM	LIC _C_	284.4 103.2	170.03 BMLH20010913AAJ	39 13 33.0 106 50 00.0	3.000 -26	53.3 2876	13.2 Al waysmountai ntime, LIc	113.6	139.0
274D	K274BW	LIC DC_	350.1 169.9	129.65 BLFT20090623ACK	40 00 43.0 105 11 16.0	0.250 -16	0.9 1673	6.4 Communi ty Radi o For North	126.2	122.9
274D	K274AG	LIC _CN	310.7 130.0	129.16 BLFT19950814TD	39 36 50.0 106 04 02.0	0.095 -345	0.7 2866	5.6 Al waysmountai ntime, LIc	125.7	123.4
273C2	KQSE	LIC _C_	301.7 120.6	188.66 BLH20110506AAP	39 44 18.0 106 47 58.0	1.350 660	2.5 3161	53.1 Al waysmountai ntime, LIc	183.3	133.6
275C1	KARS-FM	LIC _C_	343.9 163.4	233.22 BLH20051031ABO	40 52 37.0 105 41 44.0	100.000 248	96.4 2999	63.9 The Fort Coll ins/Lafayette	135.2	157.1
273C2	KTRR	LIC NCX	2.6 182.7	197.84 BLH20051107AEI	40 38 31.0 104 49 03.0	17.000 234	5.8 1793	53.3 Townsquare Media Of Ft. Co	189.2	144.2
279C1	1686228	APP _	51.1 232.4	215.06 BSFH20150528AHX	40 03 28.0 102 57 35.0	100.000 299	9.5 1638	69.5 Northeast Colorado Broadca	199.6	145.3

CH CI TY	CALL	TYPE STATE	ANT	AZI <--	DI ST FI LE #	LAT LNG	PWR(KW) HAAT(M)	INT(km) COR(M)	PRO(km) LICENSEE	Page # *IN* 2 (Overlap in km)	*OUT*
279C1 Akron	AU9861841	VAC CO	___	51.1 232.4	215.06 RM10630	40 03 28.0 102 57 35.0	100.000 299	9.5 1638	69.5 Akron B/c Co.	199.6	145.3
278C3 Center	KPAU	CP CO	_CX	229.6 48.5	192.23 BPH20130524ADT	37 43 47.0 106 35 18.0	0.880 504	2.0 3365	43.7 Cochise Media Licenses Lic	186.7	148.0
275D Fort Collins	KARS-FM1	LIC CO	DC_	355.4 175.3	230.15 BLFTB20070718AEG	40 55 41.0 105 08 36.0	17.000 140	78.9 2100	53.7 The Fort Collins/Lafayette	148.8	173.0
278A Center	KPAU	LIC CO	_HX	221.3 40.6	157.95 BLH20090507AB0	37 47 20.0 106 06 43.0	0.460 8	1.5 2332	8.3 Cochise Media Licenses Lic	153.0	149.4
279C1 Eckley	1695115	RSV-A CO	___	55.6 237.0	233.42	40 01 28.0 102 39 58.0	100.000 299	9.3 1551	68.7 Northeast Colorado Broadca	217.8	164.4
277C3 Yampa	1713857	RSV-A CO	___	311.9 130.6	237.92	40 16 20.0 107 00 37.0	25.000 100	52.6 2494	30.9 Educational Media Foundati	183.1	194.1
277C3 Yampa	1692675	RSV-A CO	___	311.9 130.6	237.92	40 16 20.0 107 00 37.0	25.000 100	52.6 2494	30.9 Educational Media Foundati	183.1	194.1
279C2 Ridgway	KSNM	LIC CO	_CX	258.4 76.7	245.18 BLH20030521ABD	38 23 15.0 107 40 31.0	4.100 480	3.7 2860	45.7 Ccr-montrose Iv, Lic	238.0	195.7
277C3 Yampa	1713698	APP CO	NCX	312.9 131.6	237.30 BNPH20151013AGJ	40 17 42.1 106 58 28.8	8.500 170	25.7 2536	17.3 Educational Media Foundati	208.8	196.3
277C3 Yampa	1691642	APP CO	NCX	312.9 131.6	237.30 BNPH20151013AGJ	40 17 42.1 106 58 28.8	8.500 170	25.7 2536	17.3 Educational Media Foundati	208.8	196.3
279C1 Questa	KLNN	LIC NM	_HX	194.4 14.0	252.59 BLH20100713AAS	36 39 23.0 105 37 57.0	51.000 -64	5.7 2452	51.0 West Waves, Inc.	242.8	200.9
279C1 Eckley	1694997	APP CO	_CX	55.6 237.0	233.42 BNPH20151013ADX	40 01 28.0 102 39 58.0	52.000 80	2.9 1332	28.8 Northeast Colorado Broadca	224.2	204.1
277C2 Warren Afb	KRAN	LIC WY	ZCX	3.8 183.9	255.68 BLH20090624AEP	41 09 34.0 104 43 19.0	37.000 78	47.1 1912	29.3 Freisland Broadcasting Cor	205.7	219.2
277C2 Delta	KPRU	LIC CO	_C_	271.4 89.3	286.40 BLED20010411AAF	38 52 40.0 108 13 32.0	12.000 301	28.2 2316	19.0 Public Broadcasting Of Col	254.9	232.4
273C1 Goodland	KKCI	LIC KS	_C_	77.5 259.6	296.90 BLH20000425AAL	39 23 24.0 101 33 35.0	100.000 216	8.1 1296	63.5 Melia Communications, Inc	280.7	233.0
275C3 Battlement Mesa	KJXR	LIC CO	DHX	284.7 102.7	272.15 BLH20130815ABB	39 26 25.0 107 59 06.0	6.100 -226	23.6 1977	15.8 Cochise Media Licenses, LI	245.4	239.7
275C0 Kirtland	KAZX	LIC NM	_CX	229.8 47.9	346.18 BLH20060309ABN	36 48 52.0 107 53 32.0	100.000 303	89.9 2129	60.2 Capstar Tx, Lic	252.7	280.5
275C1 Imperial	KADL	CP NE	DCX	55.8 237.9	335.88 BPH20130524BAK	40 30 45.0 101 38 39.0	100.000 62	71.3 1062	41.5 Armada Media - Mccook, Inc	258.2	286.6
279D Taos	KLNN-FM1	LIC NM	_C_	192.8 12.4	278.03 BLFTB20081017AHB	36 25 05.0 105 37 03.0	0.375	1.4 2145	7.9 West Waves, Inc.	272.4	269.9
277A Baggs	1686193	APP WY	___	317.0 135.2	335.82 BSFH20150723ACK	41 02 12.0 107 39 24.0	6.000 100	42.6 2089	27.5 Educational Media Foundati	290.5	303.3
277A Baggs	AU9829895	VAC WY	_N	317.0 135.2	335.82 RM9279	41 02 12.0 107 39 24.0	6.000 100	42.6 2089	27.5 Mountain Tower Broadcastin	290.5	303.3
273A Loma	KCDC	CP CO	_CX	275.1 92.7	331.74 BPH20090205ACK	39 04 01.0 108 44 39.0	0.400 383	1.4 2175	38.5 Cochise Media Licenses Lic	327.0	292.3
273C2 Dove Creek	KCDC	LIC CO	_HX	254.8 72.3	362.53 BLH20080317AAY	37 56 29.0 108 54 27.0	3.800 319	3.9 2402	51.0 Cochise Media Licenses Lic	355.2	310.0
275A Imperial	KADL	LIC NE	_CX	55.8 237.9	335.88 BLH20040518ABF	40 30 45.0 101 38 39.0	0.300 68	15.4 1067	10.8 Armada Media - Mccook, Inc	314.1	318.1
275C3 Pecos	KSFE	LIC NM	NHX	189.1 8.7	360.61 BLH20020722AAD	35 39 06.0 105 33 15.0	3.700 209	20.7 2847	13.9 Agm Nevada, Lic	335.2	335.4
275D Santa Fe	KSFE-FM2	LIC NM	DV_	195.1 14.5	364.31 BLFTB20100120ACH	35 41 20.0 105 58 42.0	2.400	4.3 2145	3.1 Agm Nevada, Lic	356.0	355.3
278C3 Dove Creek	NEW	CP CO	_CX	253.1 70.6	376.33 BNPH20121119AGS	37 48 32.0 109 01 01.0	6.100 -16	1.6 2058	15.8 Cochise Media Licenses Lic	371.2	360.2

Terrain database is NGDC 30 SEC , R= 73.215 qualifying spacings or FCC minimum Spacings in KM, M= Margin in KM
In & Out distances between contours are shown at closest points. Reference zone= West Zone, Co to 3rd adjacent.
All separation margins (if shown) include rounding. Call signs with strikeout need not be protected.
Ant Column: (D= DA Standard, Z= DA 73.215, N= Not DA 73.215, _= Omni), Polarization (C,H,V,E), Beamtilt(Y,N,X)
***affixed to 'IN' or 'OUT' values = site inside restricted contour.
Reference station has protected zone issue: AM tower

* No actual interference will be caused to KBIQ since the 139.6 DBU interference contour will not cover any population. See the technical statement for more details

FIGURE 3 - PREDICTED 139.6 DBU CONTOUR
K251BT Manitou Springs, CO, CH. 276D

Coverage Study - NGDC 30 SEC
02-01-2016

K251BT CH276 D , 0.016 kW, 0.0m HAAT, 2057.0m COR AMSL
Interference Contour = 140 dBu. Population = 0

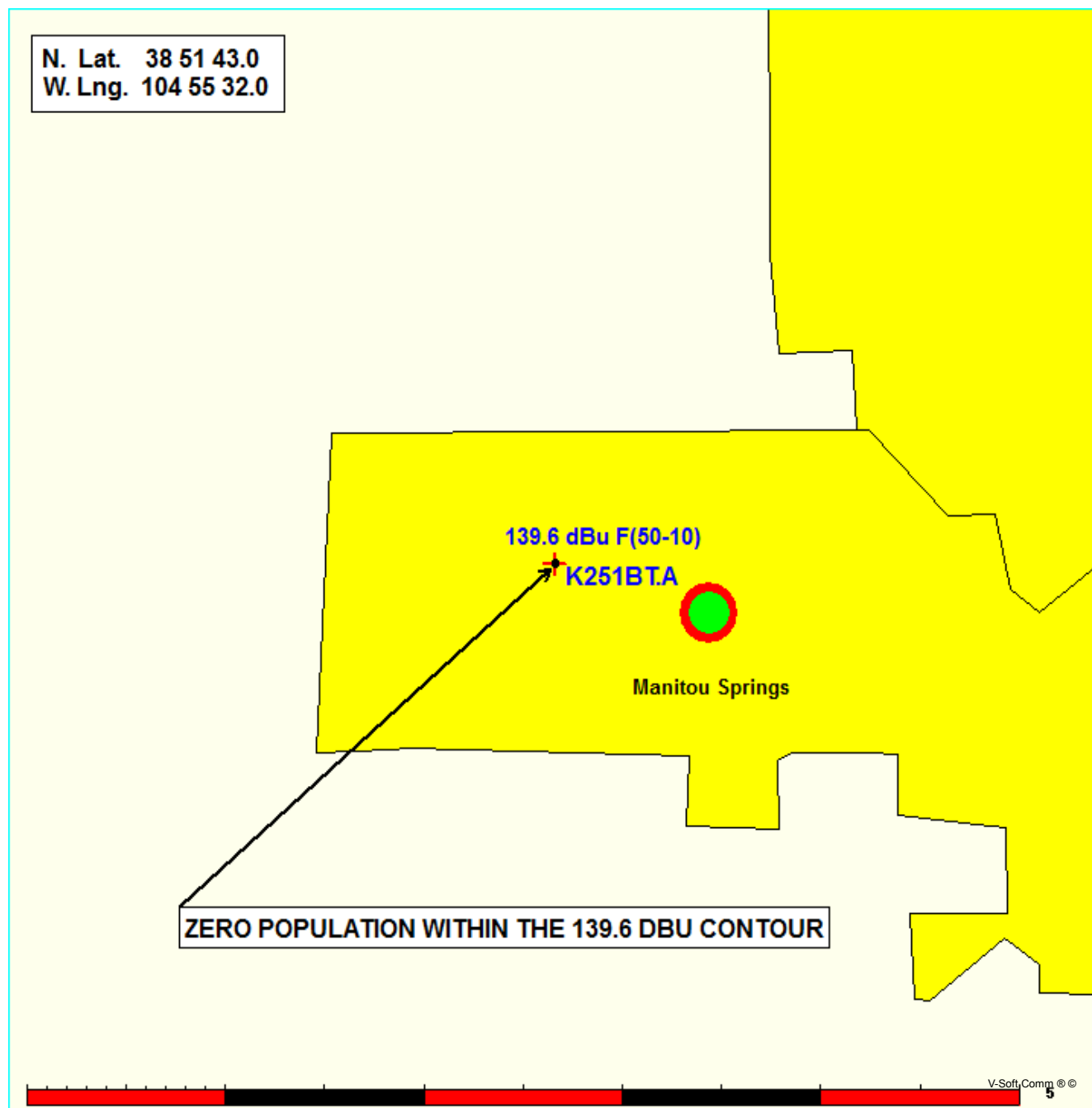


FIGURE 4 - DIRECTIONAL ANTENNA DATA

K251BT.C

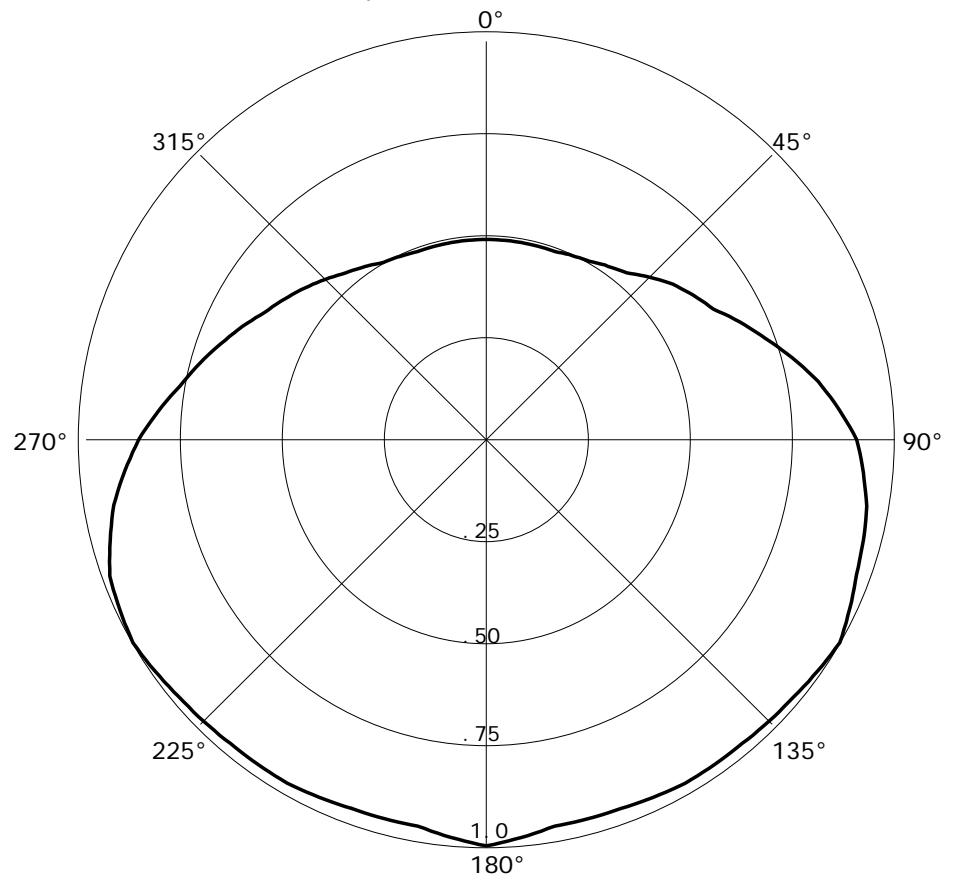
NICOM BKG 77

01-24-2016

RMS(V) = .812

Graph is Relative Field

Azi	Field	dBk	kW
000	0.493	-12.164	0.061
010	0.493	-12.164	0.061
020	0.493	-12.164	0.061
030	0.507	-11.920	0.064
040	0.536	-11.437	0.072
050	0.596	-10.516	0.089
060	0.643	-09.856	0.103
070	0.728	-08.778	0.132
080	0.826	-07.681	0.171
090	0.908	-06.859	0.206
100	0.947	-06.494	0.224
110	0.966	-06.321	0.233
120	1.000	-06.021	0.250
130	0.984	-06.161	0.242
140	0.976	-06.232	0.238
150	0.976	-06.232	0.238
160	0.966	-06.321	0.233
170	0.966	-06.321	0.233
180	1.000	-06.021	0.250
190	0.966	-06.321	0.233
200	0.966	-06.321	0.233
210	0.976	-06.232	0.238
220	0.976	-06.232	0.238
230	0.984	-06.161	0.242
240	1.000	-06.021	0.250
250	0.982	-06.178	0.241
260	0.927	-06.679	0.215
270	0.852	-07.412	0.181
280	0.762	-08.382	0.145
290	0.692	-09.218	0.120
300	0.627	-10.075	0.098
310	0.581	-10.737	0.084
320	0.536	-11.437	0.072
330	0.504	-11.972	0.064
340	0.493	-12.164	0.061
350	0.493	-12.164	0.061



K251BT.A

BPFT20160129ATW

Latitude: 38-51-43 N

Longitude: 104-55-32 W

ERP: 0.016 kW

Channel: 276

Frequency: 103.1 MHz

AMSL Height: 2057.0 m

Elevation: 2008.0 m

Horiz. Pattern: Directional

Vert. Pattern: No

Prop Model:

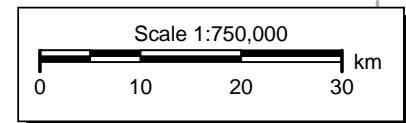
**FIGURE 5 - K251BT WITH
KXRE(AM) FILL-IN MAP**

KXRE 2 MV/M DAY

K251BT PROPOSED 60 DBU

KXRE 25 MILE RADIUS

**KXRE 251.A
Colorado Springs**



V-Soft Communications LLC ©