

April 2017
FM Translator K224CJ
Phoenix, Arizona Channel 224D
Allocation Study

Allocation Study

The attached spacing study shows the spacing between the proposed translator site and the location of cochannel and adjacent channel stations and proposals. This study was made with the Commission's Class A spacing requirements, and individual situations were examined to determine the lack of prohibited contour overlap per the requirements of §74.1204 of the Rules. The attached allocation study map demonstrates compliance with the Commission's Rules for protection of FM broadcast stations and FM translators as outlined in §74.1204, with special considerations as detailed below.

The attached spacing study demonstrates compliance with §73.207 of the Commission's Rules regarding spacing restrictions to stations which are 53 or 54 channels removed from the proposed operation.

KDWR-LP 225L1 Desert Ridge

As is demonstrated on the attached allocation study map, this proposal maintains the existing level of overlap caused to KDWR-LP. This overlap was created by KDWR-LP.

KTAR-FM 222C Glendale

The proposed translator transmitter site is located within the 60 dBu protected contour of second-adjacent channel station KTAR-FM 222C Glendale. The following calculation, performed using the *Living Way* methodology, demonstrates interference protection to that station.

Protected Station	Distance & Bearing to Proposal	Station ERP and HAAT on that azimuth	Station Field Strength at Proposal	Corresponding Translator Interfering Contour	Distance to Translator Interfering Contour
KTAR-FM 222C	0.16 km 40 deg True	100 kW 537 meters	142.9 dBu Free Space	182.9 dBu	0.08 meters Free Space

The 182.9 dBu contour from the proposed facility extends only 0.08 meters from the antenna and does not reach ground level. There is no population within this contour. Therefore, the proposed facility is believed to satisfy the requirements of §74.1204(d) with respect to KTAR-FM.

KDKB 227C Mesa

The proposed translator transmitter site is located within the 60 dBu protected contour of third-adjacent channel station KDKB 227C Mesa. The following calculation, performed using the *Living Way* methodology, demonstrates interference protection to that station.

Protected Station	Distance & Bearing to Proposal	Station ERP and HAAT on that azimuth	Station Field Strength at Proposal	Corresponding Translator Interfering Contour	Distance to Translator Interfering Contour
KDKB 227C	0.04 km 40 deg True	100 kW 499 meters	154.9 dBu Free Space	194.9 dBu	0.02 meters Free Space

The 194.9 dBu contour from the proposed facility extends only 0.02 meters from the antenna and does not reach ground level. There is no population within this contour. Therefore, the proposed facility is believed to satisfy the requirements of §74.1204(d) with respect to KDKB.

=====

SEARCH PARAMETERS FM Database Date: 170412

Channel: 224A 92.7 MHz Page 1

Latitude: 33 20 2

Longitude: 112 3 44

Safety Zone: 50 km

Job Title: K224CJ PHOENIX

Call Status	City St	FCC File No.	Channel Freq.	ERP(kW) HAAT(m)	Latitude Longitude	Bearing deg-True	Dist (km)	Req (km)
KTAR-FM LIC	GLENDALE AZ	BLH-40707ABM	222C 92.3	100.000 545.0	33-19-58 112-03-48	219.9	0.16 -94.84	95 SHORT
KXTW-LP LIC	GLOBE AZ	BLL-60412AAA	224L1 92.7	0.100 -54.0	33-24-23 110-48-18	85.7	117.28 0.00	0 LPFM
K224CJ LIC	PHOENIX AZ	BLFT-70224AAB	224D 92.7	0.250 DA 493.0	33-20-02 112-03-44	0.0	0.00 0.00	0 TRANS
KDWR-LP LIC	DESERT RIDGE AZ	BLL-70130AAP	225L1 92.9	0.100 22.6	33-39-47 112-01-44	4.8	36.64 0.00	0 LPFM
KAFF-FM LIC	FLAGSTAFF AZ	BLH-891016KC	225C 92.9	100.000 461.0	34-58-07 111-30-24	15.6	188.43 23.43	165 CLEAR
KMIY LIC	TUCSON AZ	BLH-850225KK	225C 92.9	93.000 621.0	32-14-56 111-06-59	143.5	149.42 -15.58	165 SHORT
K225CL LIC	WICKENBURG AZ	BLFT-70106ACM	225D 92.9	0.010 0.0	33-58-53 112-44-29	319.1	95.53 0.00	0 TRANS
KDKB LIC	MESA AZ	BLH-01116AIX	227C 93.3	100.000 508.0	33-20-01 112-03-44	219.9	0.04 -94.96	95 SHORT
KLNZ LIC	GLENDALE AZ	BMLH-980406KB	278C 103.5	62.000 740.0	33-35-33 112-34-49	301.0	56.05 27.05	29 CLEAR

===== END OF FM SPACING STUDY FOR CHANNEL 224 =====

KDWR-LP 225L1 Desert Ridge
60 dBu F(50,50)

No change in area
of existing overlap

MARICOPA
+

PINAL

K224CJ 224D Proposed
54 dBu F(50,10)

K224CJ 224D Licensed
54 dBu F(50,10)

K224CJ Phoenix 1 Adj Study Map

0 10 20 30
Kilometers

Hatfield & Dawson 4/2017

April 2017
FM Translator K224CJ
Phoenix, Arizona Channel 224D
RF Exposure Study

Facilities Proposed

The proposed operation will be on Channel 224D (92.7 MHz) with a maximum lobe effective radiated power of 250 watts. Operation is proposed with an antenna system mounted on an existing tower on South Mountain.

The proposed antenna support structure does not exceed 60.96 meters (200 feet) above ground and does not require notification to the Federal Aviation Administration. Therefore, this structure does not require an Antenna Structure Registration Number.

RF Exposure Considerations

The proposed K224CJ facility will use two of the four Scala CA5CP antennas that are installed for the licensed K224CJ facility. The northeast- and northwest-pointing antennas will be retained, while the southeast- and southwest-pointing antennas will be disconnected.

K224CJ is and will remain located on a tower at the South Mountain communications site in Phoenix. It is well-established that public access to the communications site is restricted by fencing and locked gates, and that RF exposure warning signs are posted at appropriate intervals.

In addition, the license application for the current K224CJ facility stated:

RFR MEASUREMENTS WERE MADE AT THE FULL AUTHORIZED POWER REPORTED HEREIN THROUGHOUT THE TRANSMITTER SITE AREA. THESE MEASUREMENTS REVEALED NO MATERIAL CHANGE IN THE RFR ENVIRONMENT AS A RESULT OF THE K224CJ POWER INCREASE. FURTHER, IT WAS DETERMINED THAT THE K224CJ POWER INCREASE CAUSED NO ADDITIONAL RFR SIGNAGE OR PROTECTIVE FENCING TO BECOME NECESSARY TO ENSURE CONTINUED COMPLIANCE WITH APPLICABLE FCC RFR SAFETY GUIDELINES.

Since the proposed K224CJ facility will be nearly identical to the licensed K224CJ facility, but for the removal of the two antennas pointed south, it is submitted that this will not result in any material change in the RF exposure environment in the area surrounding the tower, apart from a reduction in power towards the southeast and southwest. Therefore, there should be no need for additional RF exposure measurements or evaluation upon implementation of this modification.

The permittee/licensee in coordination with other users of the site must reduce power or cease operation as necessary to protect persons having access to the site, tower or antenna from radiofrequency exposure in excess of FCC guidelines.