

### **KQED-FM Calculation of Non-Grandfathered 60dBu Contour**

KQED-FM is a grandfathered “Super-B” FM NCE station in San Francisco on Channel 203B. The grandfathered station is licensed to operate with 110kW at 387m HAAT. Based upon recent discussions with FCC staff, the non-grandfathered primary contour of KQED-FM should be established using the licensed coordinates and then determining the AMSL height for the Center of Radiation that achieves 150 meters HAAT. Then the primary contour for a full class B station, (50kW with 150 meters HAAT) is calculated and used as the non-grandfathered class B protected contour.

In determining HAAT at the KQED-FM main antenna location, the Pacific Ocean lies within 16km to the West of the transmit site. In calculating the eight radial HAAT of the grandfathered facility, since the 225deg, 270deg, and 315-degree radials extend over the Pacific Ocean, those radials are truncated for the HAAT calculations as specified in 73.313(d)(2).

The COR AMSL height to achieve 150 meters HAAT for KQED-FM was established at 212.6m AMSL. The HAAT Calculator is shown below.

## HAAT CALCULATION

### 47 CFR § 73.313 (d)(2)

(ii) where a part of the 3 to 16 kilometers portion of a radial extends over large bodies of water or foreign territory, only that part of the radial extending from 3 kilometers to the outermost portion of land in the United States covered by the radial used must be used in the computation of antenna height above average terrain.









HAAT Calculator

RC AMSL

212.57

m

Terrain Resolution

Azimuth	Start	Radial Dist [km]	End	Avg Elev	HAAT
0° <input checked="" type="checkbox"/>	3.0 km		16.00 <input type="button" value="v"/>	61.67	150.90
45° <input checked="" type="checkbox"/>	3.0 km		16.00 <input type="button" value="v"/>	15.56	197.01
90° <input checked="" type="checkbox"/>	3.0 km		16.00 <input type="button" value="v"/>	0.56	212.01
135° <input checked="" type="checkbox"/>	3.0 km		16.00 <input type="button" value="v"/>	14.44	198.13
180° <input checked="" type="checkbox"/>	3.0 km		16.00 <input type="button" value="v"/>	221.67	-9.10
225° <input checked="" type="checkbox"/>	3.0 km		7.10 <input type="button" value="v"/>	86.67	125.90
270° <input checked="" type="checkbox"/>	3.0 km		5.30 <input type="button" value="v"/>	50.00	162.57
315° <input checked="" type="checkbox"/>	3.0 km		9.00 <input type="button" value="v"/>	50.00	162.57
Total >>				62.57	150.00

Default

OK

Cancel

KQED Demonstrating Truncated Radials @  
225° (7.1km), 270° (5.3km), 315° (9km)

