

# ENGINEERING STATEMENT

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## ENGINEERING STATEMENT

### IN SUPPORT OF

AN APPLICATION TO MAKE CHANGES TO THE ANTENNA SYSTEM

OF FM BOOSTER STATION KVEG-FM1 CHANNEL 248-D

HENDERSON, NV

FCC FILE No. BIFTB-20010730-ACQ

FCC FACILITY ID: 92496

KEMP/MESQUITE BROADCASTING, INC.

APRIL 4, 2003

## **Purpose of Request**

This engineering statement is in support of an FCC-349 application to change the azimuth bearings of each of the FM Booster transmit antennas located on Black Mountain near Henderson, NV. This requested change is the result of both field strength tests and listening evaluations in the general predicted service area.

It is the opinion of this engineer that by individually rotating the azimuths of the two transmit antennas, one horizontally polarized and one vertically polarized, the signal could be improved in certain locations within the predicted service area.

We are requesting permanent authority to individually orient the antenna main beam (boom) heading of each antenna because the horizontal radiation (azimuth) patterns of the Scala CL-FM antenna are different, vertical to horizontal. The horizontal polarization radiation pattern is narrower and consequentially does not cover the same prescribed area of coverage as the vertically polarized antenna.

We have included an engineering exhibit E-1 which shows the comparative F(50/50) 60-dBu contours of the KVEG-FM licensed main transmitter facility, the KVEG-FM1 licensed facility and the individual H & V contours which are predicted by each of the FM booster antennas with their respective main beam azimuths. The vertically polarized antenna boom azimuth is requested to be at 351 degrees "T". The horizontally polarized antenna main beam azimuth is requested to be at 335 degrees "T".

Also attached:

Exhibit E-2 Expanded Contours Map.

Exhibit E-3 Scala CLFM-R V-POL Azimuth Pattern Field Ratio Table

Exhibit E-4 Scala CLFM-R H-POL Azimuth Pattern Field Ratio Table.

The predicted F(50/50) 60-dBu contours produced by each of the FM Booster antenna systems are completely contained within the predicted F(50/50) 60-dBu contour produced by the licensed main transmitter facility.

Thank you in advance for your help.

If anyone concerned with this engineering statement or the enclosed request for S.T.A may require additional information or would like to discuss the enclosed proposal, please contact the following:

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Respectfully Submitted

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William Richard Green

/ **04-04-03**  
Date