



DATE: October 24, 2000

ANTENNA GAIN	<u>H-pol</u>	<u>V-pol</u>
relative	2.25	2.25
(dBd)	(3.53)	(3.53)

**RMS OF THE
AZIMUTH PATTERNS:
CERTIFICATION**

FM ANTENNA FOR:

STATION: WLFX
LOCATION: Berea, KY
MODEL NUMBER: JMPC-2 DA
FREQUENCY & ERP: 106.7 MHz, 3.25 kW
ANTENNA INPUT POWER: 1.44 kW
ANTENNA BOOM HEADING: 262° T.

Composite	H-pol	V-pol
0.730	0.657	0.676

This certification, along with the accompanying antenna specification sheet, antenna mounting sketches, and azimuth and elevation patterns, certifies the construction and measurement of the *JAMPRO* FM CP antenna to the station's requirements, as measured at the *JAMPRO* antenna site in Sacramento, California. The following is an outline of construction methods, pattern measurements, installation requirements, recommended maintenance and equipment used.

CONSTRUCTION

A standard CP FM antenna model was used and parasitic reflectors were added to create the required directional patterns. From experience and by repeated measurements, these elements were adjusted as to position until the final configuration was determined and the pattern requirements were met. These additional elements are steel, hot dipped galvanized and either bolted or welded in place. Measurements to establish their exact location are shown on the antenna mounting sketches.

MEASUREMENT

The full scale antenna was mounted on an exact duplicate of its final support at the station. We were careful to duplicate conduits, cables and anything peculiar to this mounting. This was then placed on a turntable at the *JAMPRO* antenna range. This directional antenna was used for receiving the radiation from a transmitting antenna that is elevated 25 feet above ground and located at a distance of 7,000 feet. This transmitting antenna is capable of transmitting either horizontal or vertical polarization. The frequency of the signal generator was accurately set to station frequency by use of a frequency counter. A spectrum analyzer was used to continuously measure field strength as the antenna under test was rotated. Field strength at each azimuth was then plotted.