

KEGA Provo Booster power output calculations

This exhibit was prepared to demonstrate the TPO (transmitter power output) utilized to achieve the authorized effective radiated power of .6 KW

Table of Losses

The antenna system is a directional Jampro panel antenna model JCPD 1/1(2) with a antenna gain of 4.5 dB being feed by 100 ft of Andrew 1 5/8 Heliax model HJ7-50 air dielectric with losses of .203 dB per 100 ft. It is connected to a Jampro filter/combiner model RCCC.8 with losses of .8 dB that will accommodate the addition of other future stations to be combined into one common antenna. And finally there is the system feeder which uses Times microwave cable RG-214 into the filter system with a loss of .19 dB.

To make the necessary ERP the transmitter output will be:

Tx output 280 watts – total losses of 1.19 dB + antenna gain of 4.5 = 600.01 rounded down to 600 watts ERP.