

M. W. Persons and Associates, Inc.

RADIO BROADCAST TECHNICAL CONSULTING
10032 Island Drive
BRAINERD, MINNESOTA 56401
PHONE (218) 829-1326 FAX (218) 829-2026
<http://mwpersons.com> mark@mwpersons.com

Transmitter Power Output Determination

K285BG FM Translator of KKEQ Radio
Grand Forks, North Dakota
June 5, 2006

This document details how licensed TPO (Transmitter Power Output) was determined.

Transmitter Power Output (TPO)	424 Watts (0.424 KW)
Telewave TWPC1005-2 Band Pass Filter	70.8% Efficiency
12 Feet of Belden RG-213 cable	94.9% Efficiency
220 feet of Cablewave FLC158-50 1-5/8" cable	88.8% Efficiency
Antenna Input Power	253 Watts
Shively 6812 Circular Polarized Antenna	0.99 Gain
Effective Radiated Power	250 Watts (0.25 KW) Vertical and Horizontal