

# *M. W. Persons and Associates, Inc.*

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## **Transmitter Power Output Determination**

Call Sign:  
FM Translator at 94.9 MHz  
Bemidji, Minnesota  
for Radio Assist Ministry, Inc.  
and Shine the Light, Inc  
November 19, 2007

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

Transmitter Power Output (TPO)	<b>264.1 Watts</b> (0.2641 KW)
6 feet of Belden 9913 cable	98.1% Efficiency (-0.084 dB)
Telewave TWPC-1003-3 Band-Pass Filter	79.4% Efficiency (-1.0 dB)
6 feet of Belden 9913 cable	98.1% Efficiency (-0.084 dB)
125 feet of Cablewave FLC12-50J ½" cable	82.6% Efficiency (-0.832 dB)
Antenna Input Power	166.7 Watts
Armstrong FMA707-3 Antenna	1.50
Effective Radiated Power	<b>250 Watts</b> (0.250 KW) Vertical and Horizontal