Build your own simple Gillette stainless razor blade AM radio receiver w/razor signal demodulator
Axum7 power regression curve - Gillette stainless blade AM diode demodulator
given observed (blue dash points)AM station frequency kHz vs number of induction coil turns (Nn)
given #22 Cu enameled wire OD=0.030”, paper tube OD=1.6”, empirical induction equation \( L = \frac{d^2(N_n)^2}{18 \cdot d + 40 \cdot N_n \cdot 0.030} \)

Following approximate equation likely good enough

Observed data
1.6" OD x 4.7" long 146 turns #22 Cu enameled wire

1040 kHz 71 turns

760 kHz 136 turns

1500 kHz 38 turns

Gillette stainless blade

3.5mm stereo socket to optional powered 2 Watt speaker

Earphone & ground

1/2 of Cu water pipe clamp

Scrape or sand off enamel

Sliding station tuner

Earphone

Cu springy tickler

50 ft outdoor antenna

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Paper tube from plastic wrap
Locating diode AM demodulation response junction w/Gillette stainless blade

- black etched diode effect zone
  - (grey stainless surface no diode effect)
- Springy Cu contact tickler