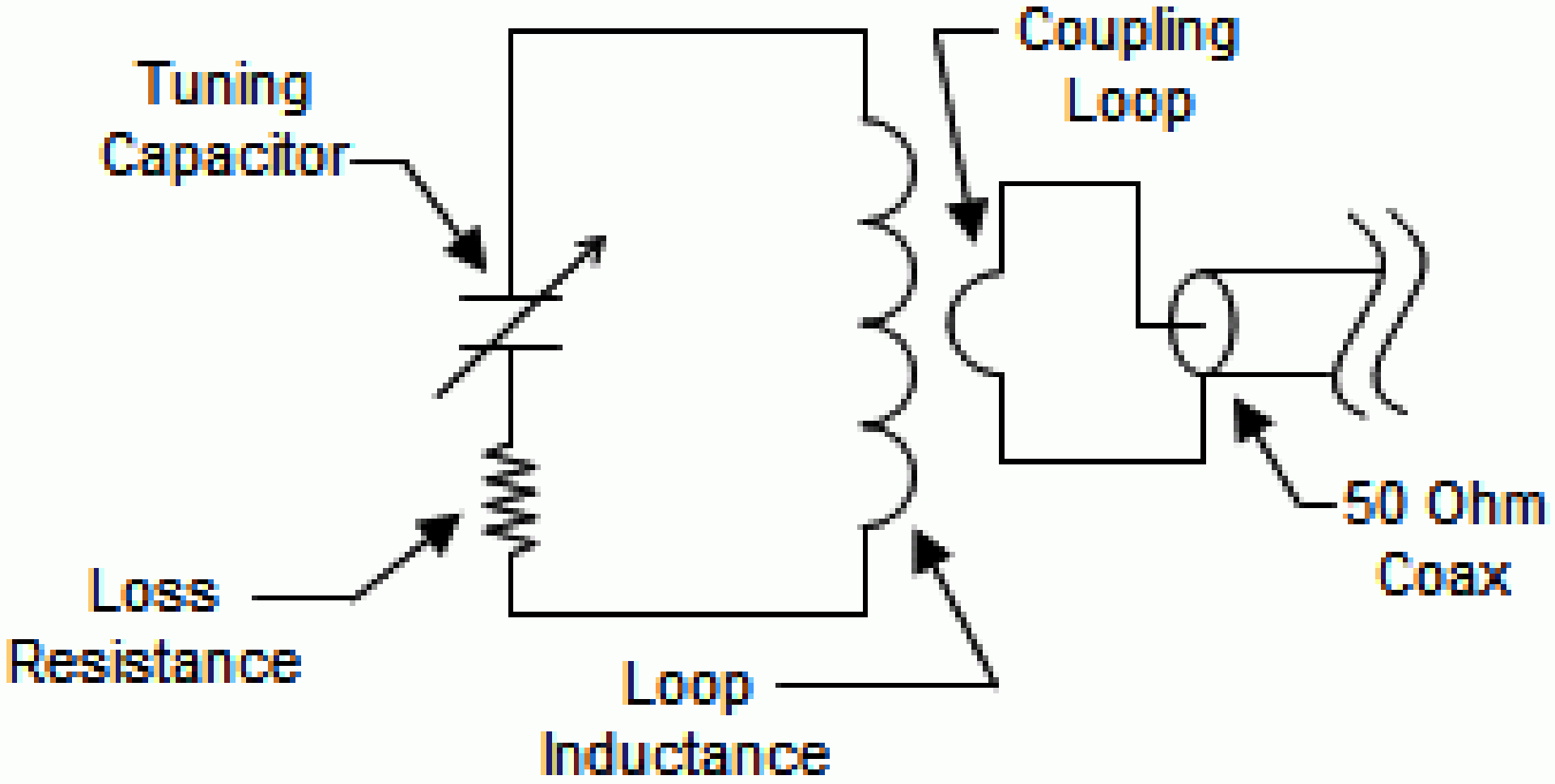
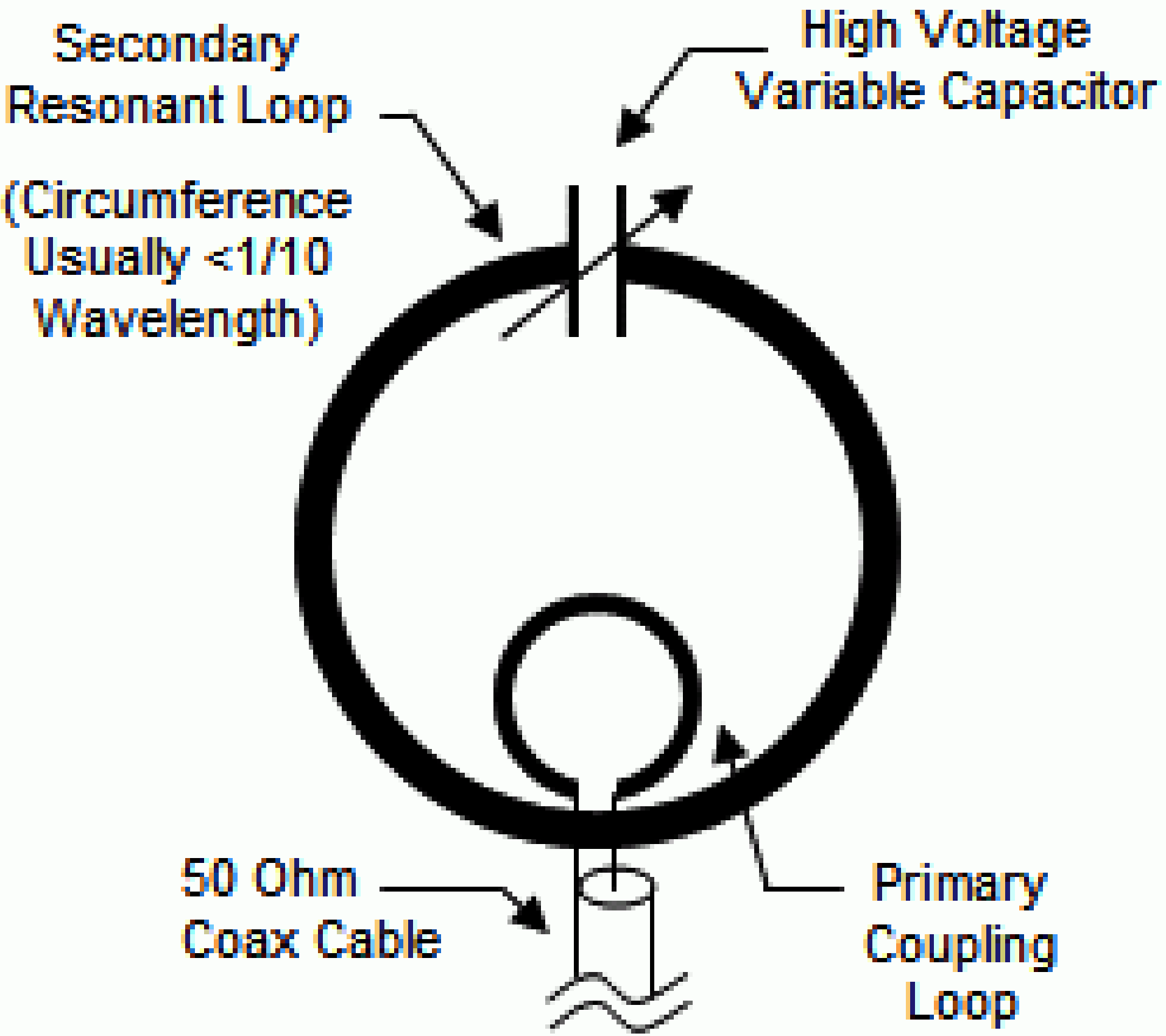
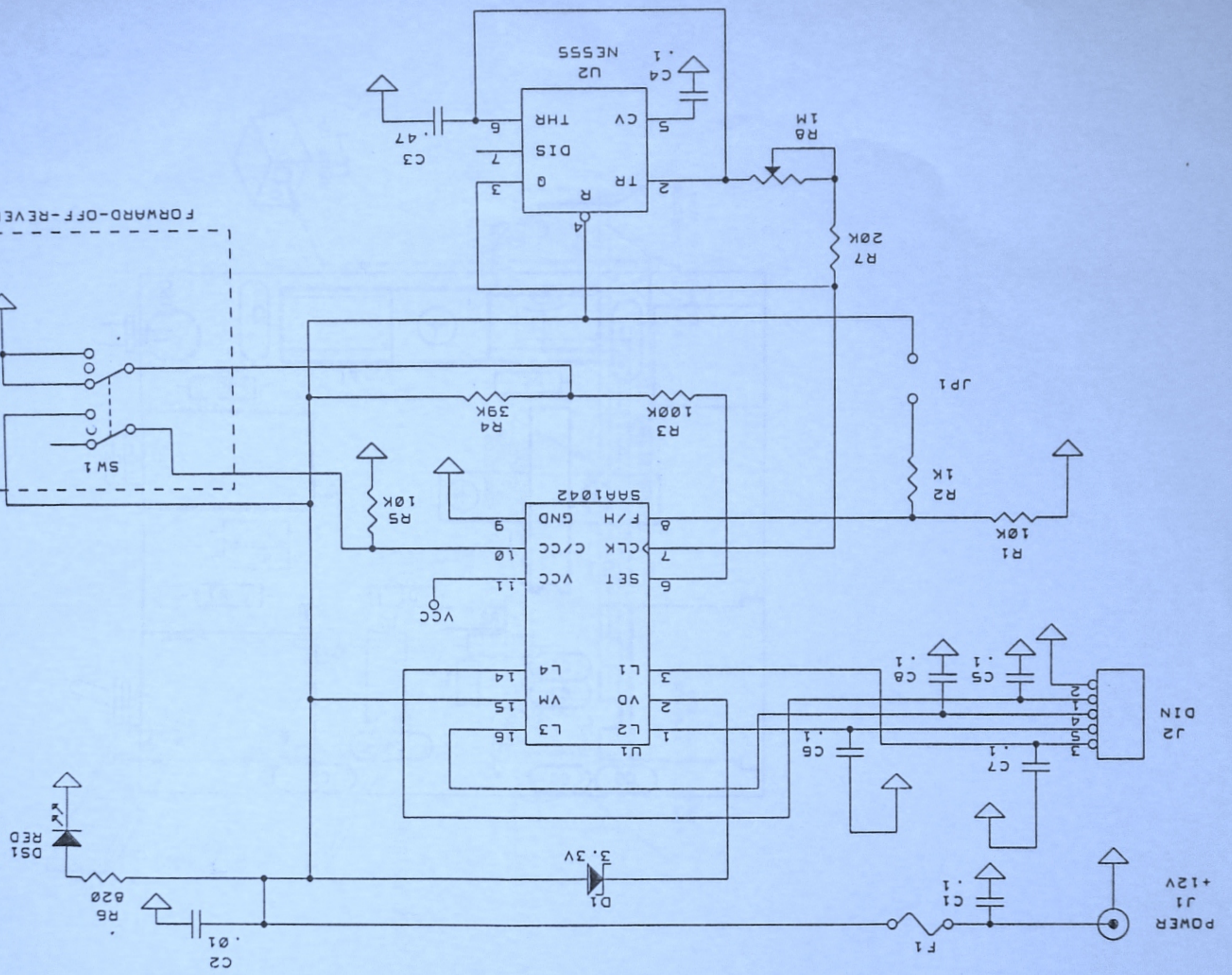

Tuning
Capacitor
Coupling
Loop
Loss
Resistance
Loop
Inductance
50 Ohm
Coax


Secondary
Resonant Loop
(Circumference
Usually <1/10
Wavelength)
High Voltage
Variable Capacitor
50 Ohm
Coax Cable
Primary
Coupling
Loop


isoLoop


Model LC-1
REV
FWD
TUNE

10. LC-1 SCHEMATIC DIAGRAM



remaining, reapply
you will have to cor
how to proceed.

any indication that the motor
(as indicated by a series of
eceiver noise level), then you
ntenna capacitor assembly.

inoperative by rough handling
drive belt or tension spring to
nna and bearing a loose object

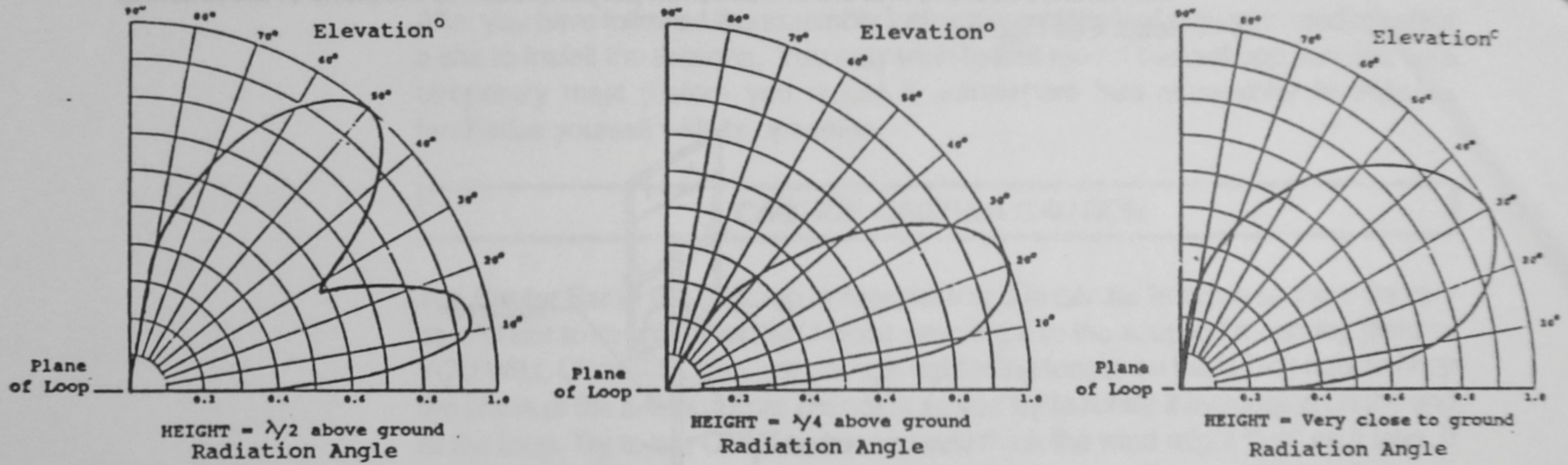


Figure 6b Field Patterns for Horizontal Plane Mounting

Small Magnetic Loop Antenna Calculator ver. 1.21

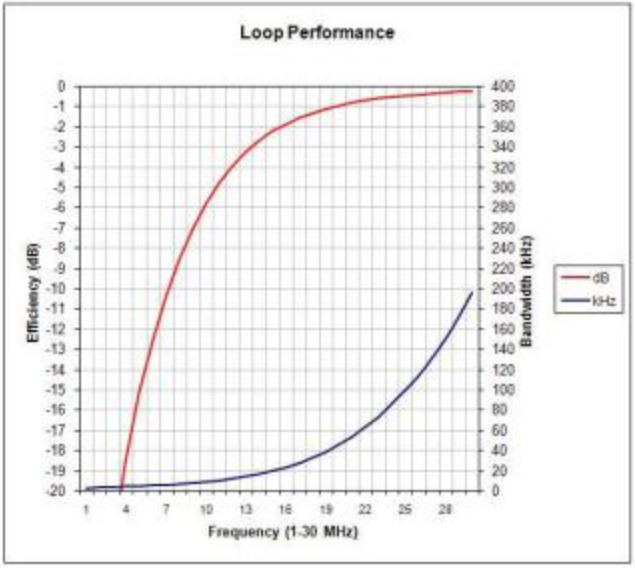
by Steve Yates
AA5TB
aa5tb@yahoo.com
Updated November 22, 2008

Input the following parameters:

Design Frequency =	28.400 MHz	
Loop Diameter =	3.000 feet	0.914 m
Conductor Diameter =	0.625 inches	15.875 mm
Added Loss Resistance =	0.000 milliohms	
RF Power =	100.000 Watts	

Calculated Results:

Bandwidth =	158.740 kHz (-3 dB points)	
Efficiency =	93.209 %	-0.305 dB
Loop Area =	7.069 ft²	0.657 m²
Radiation Resistance =	1098.639 mΩ	
Total Loss Resistance =	80.040 mΩ	
Loop Circumference =	9.425 ft	2.873 m
Wavelength Percentage =	27.213 % λ	
Loop Inductance =	2.364 µH	
Distributed Capacitance =	7.728 pF	
Q (Quality Factor) =	178.909	
Tuning Capacitor =	13.288 pF	
Capacitor Voltage =	2746.913 V	
Minimum Plate Spacing =	36.626 mils (1/1000 in)	0.930 mm



Notes:

1. To truly be considered a small loop, the **Loop Circumference** should be less then 10 % λ. Larger loops will have greater efficiency but smaller nulls.
2. To see the effects of bad joints, etc., input realistic values into the **Added Loss Resistance** box.
3. The sheets are protected to prevent the user that is unfamiliar with Excel from accidentally corrupting formulas. To unlock the sheets use the password **aa5tb**.
4. This application is free to use as you wish. If you modify it and pass it on all that I ask is that you give me credit for my part of the work. Thanks!