Current sensor tuning
https://www.youtube.com/watch?v=NGG8Hk68Ikw

Summary

0:00
use two preferably identical ferrite rings
outer diameter 20mm, inner diameter 10mm
any ferrite with mu=1500-2000
use wire 0.35-0.45 sq.mm 120-150 turns
1:00
use push pull and inductor LC circuit for tuning
inductor's cold end (where inductor winding starts) goes to 3 turns coil
other 3 turns coil's end goes to capacitor(s) and then to hot inductor end
(where inductor winding ends, marked with red tape)
current sensors will be used for tuning current phases in hot ends
of inductor and gradient coil
2:00
start system and tune resonance adjusting frequency
look for maximum voltage (yellow scope trace) on inductor
you can see clearly push pull's pulses on the trace
4:00
connect second scope trace to a current sensor (blue trace)
in resonance current is 90 degrees after voltage
tune sensor by reducing resistor to the point where sensor
provides proper phase (from comments resistor will be 10-50 ohm)
5:00
if current visible 90 degrees ahead of voltage – swap scope probe ends on the sensor
mark sensor polarity with an arrow (from coil to capacitor)
to preserve proper phasing in future
6:00
use 2W non-inductive resistors
attach second sensor and tune it to give identical signal
7:00
connecting now to yellow scope channel
these probes already tuned
current phases most important for us, small difference in amplitude is ok
8:20
also mark current sensor polarity
9:00
now we have two sensors for monitoring currents in inductor and grenade coil
take second sensor and place it on grenade's hot wire
same way so that wire goes thru the sensor according to arrow
(black pen on the other side of board)