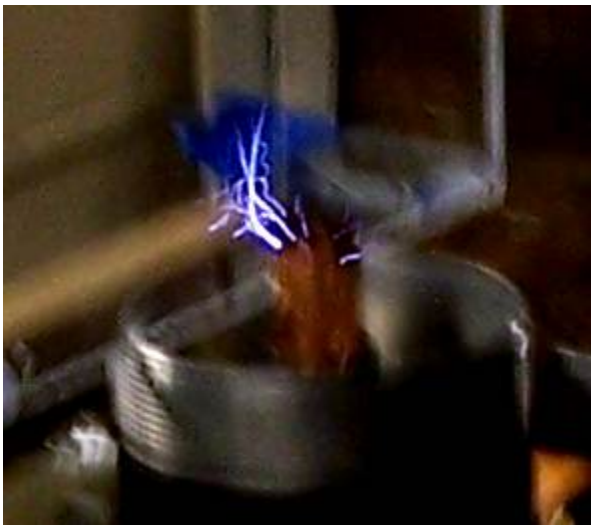
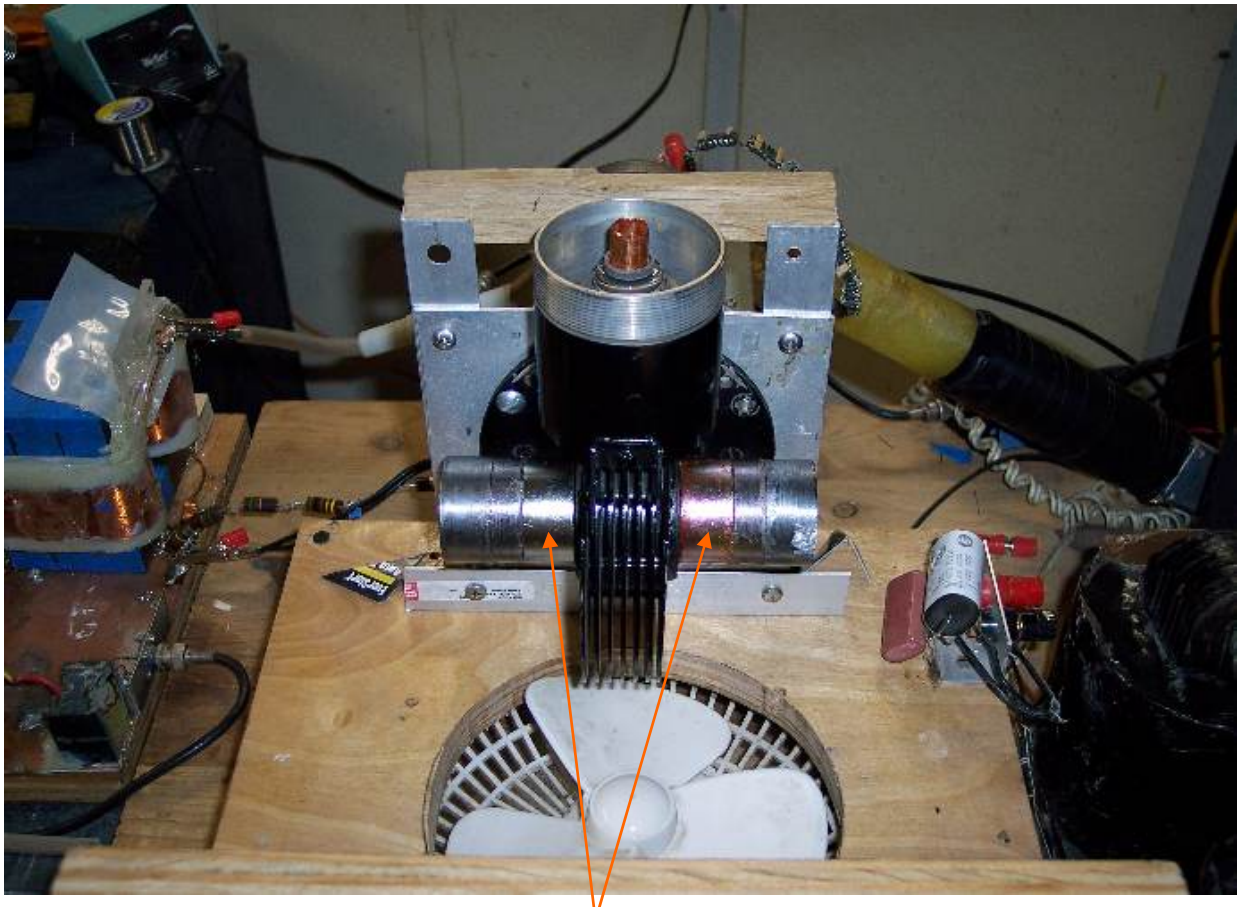
1 Mega Watt 2.9 GHz Pulsed RF

I was having extreme difficulty getting these photos; my digital camera was protesting about its working enviorment

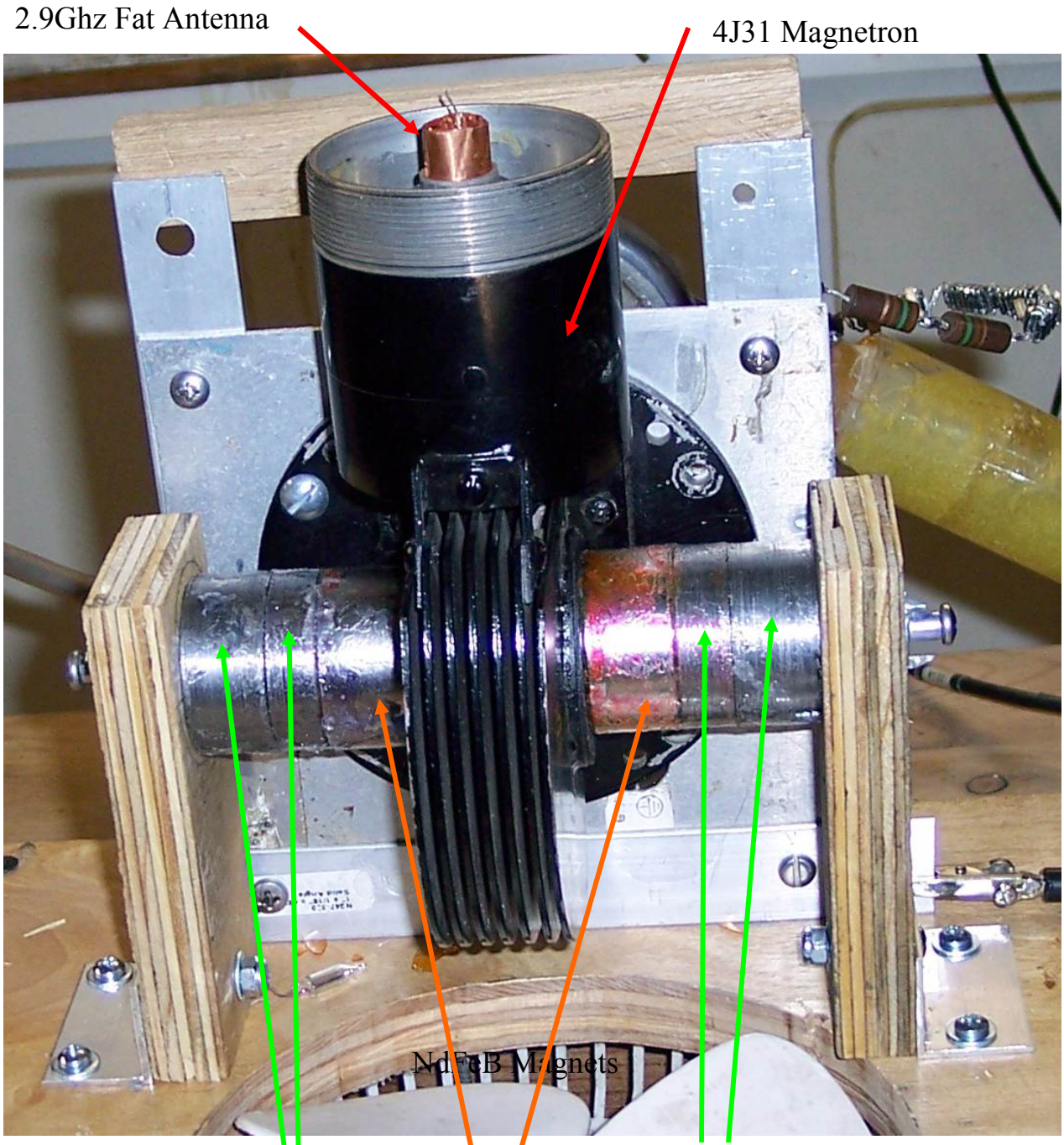




N52 Neodymium Large NdFeB Rare Earth Magnets 40X20mm

Note: In previous experiments I was using an electromagnet that I previously built. I was able to only get up to about 2500 Gauss for short operating times. I was considering pulsed electromagnets; however I came upon (during my Google search) Supermarkets of the N52 NdFeB type. Based on the K&J magnetic gap calculator results; I decided to try using two 40mm X 20mm N52 as the magnetic gap. Apparently these relative light weight magnets can replace 40 lb types used. Using the 4J31 performance curve as a Gauss meter ; initial experiments indicate approximately 2800 Gauss for the 1.5 inch gap.

Front View of Magnetron Mount



Large 40mm Neodymium Rare Earth Magnet Big Super Strong Huge Size

40mmx20mm 150 lb Pull Force 1 1/2 inch Diameter Disk

★★★★★ 1 product rating

Condition: **New**

Quantity: 1 More than 10 available

126 sold / See feedback

Price: **US $19.99**

Buy another

Add to cart

Add to watch list

A seller you've bought from | Free delivery in 4 days | 126 sold

Bucks You'll earn **$0.20** in eBay Bucks. See conditions

Shipping: FREE Standard Shipping
Guaranteed by Fri. Jul. 20 | See details
Item location: Kuna, Idaho, United States
Ships to: United States

Payments: PayPal VISA MasterCard AMERICAN EXPRESS DISCOVER
Credit Cards processed by PayPal

PayPal CREDIT
Special financing available. See terms
See details

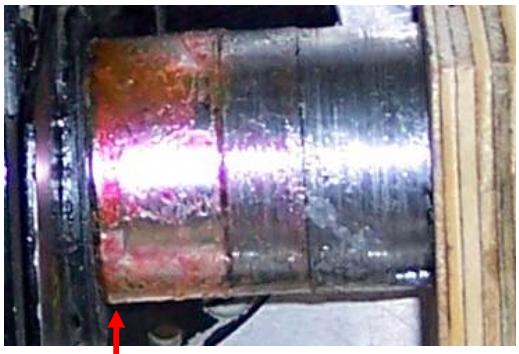
Returns: 30 day returns. Buyer pays for return shipping | See details

8. The valve is designed for use with a separate magnet which must conform with the specification given at the top of page 11. The axis of the magnetic field must be coincident with the axis of the anode, and the north pole of the magnet must be adjacent to the cathode terminal. A suitable magnet, type MA228, is available.

If an electro-magnet is used, the pole tip dimensions should be as shown on page 11.

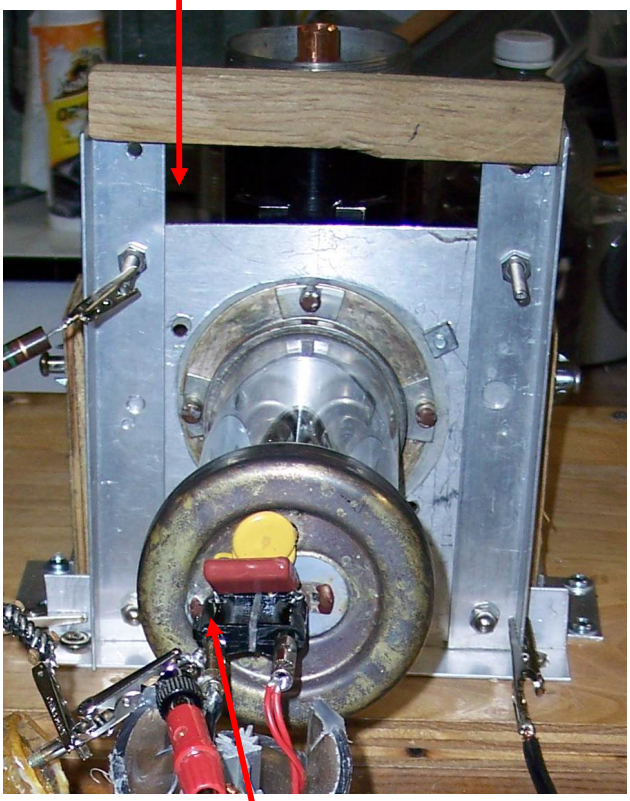
See next page !

Right Side NdFeB Magnet



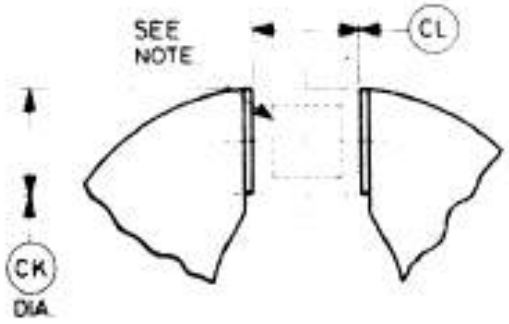
N Pole

Rear View of Magnetron Mount



Cathode Located Here

PERMANENT MAGNET SPECIFICATION



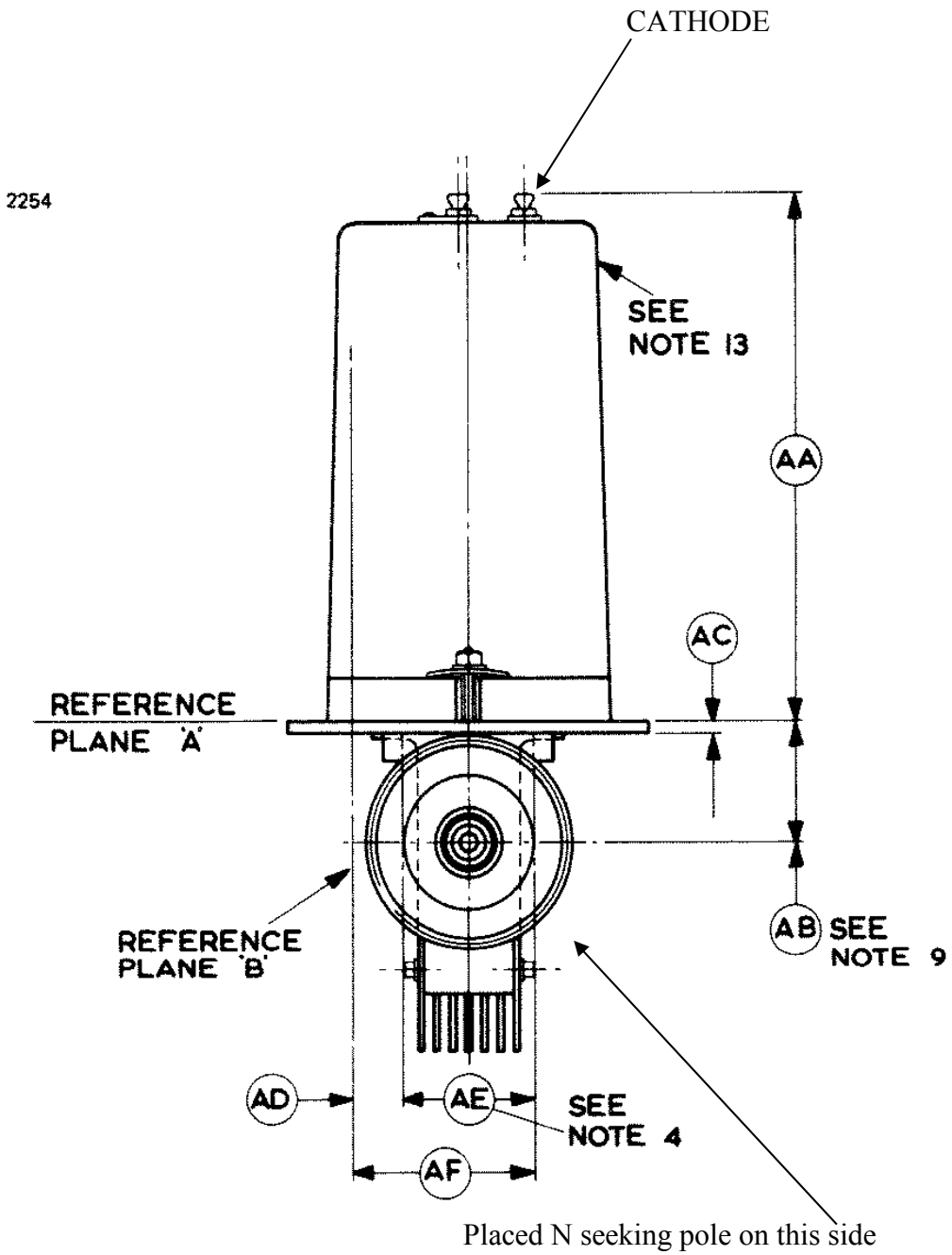
Ref	Inches	Millimetres
CK	1.500	38.10
CL	$1.500^{+0.010}_{-0.000}$	$38.10^{+0.25}_{-0.00}$

Millimetre dimensions have been derived from inches.

Note The variation of magnetic field within a cylinder 1.000 inch (25.4mm) long and 0.900 inch (22.86mm) diameter situated centrally and coaxially between the poles must not exceed ±140 gauss.

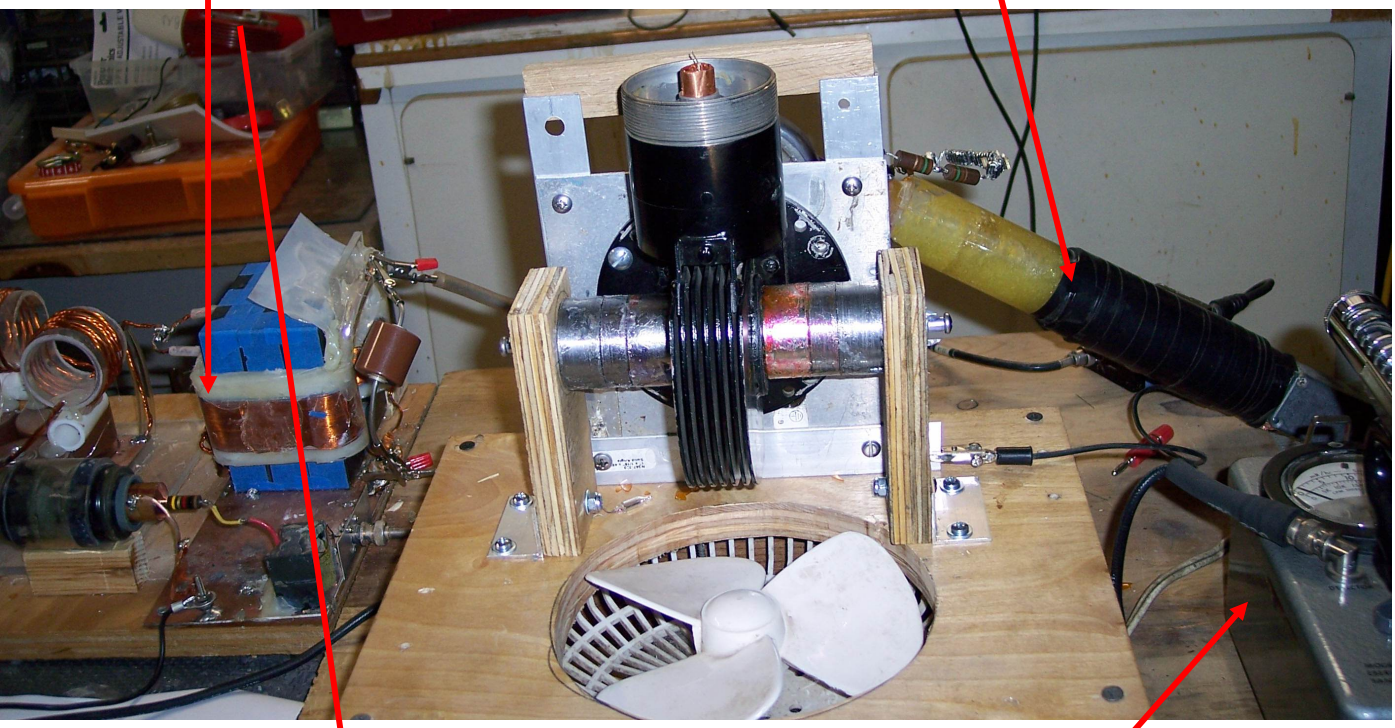
Hence used N52 Neodymium Large NdFeB Rare Earth Magnets since 40X20mm => 40mm is ~ 1.5”

OUTLINE


CATHODE
2254
SEE
NOTE 13
AA
AC
REFERENCE
PLANE 'A'
REFERENCE
PLANE 'B'
AB SEE
NOTE 9
AD
AE
SEE
NOTE 4
AF
Placed N seeking pole on this side

PFN Section

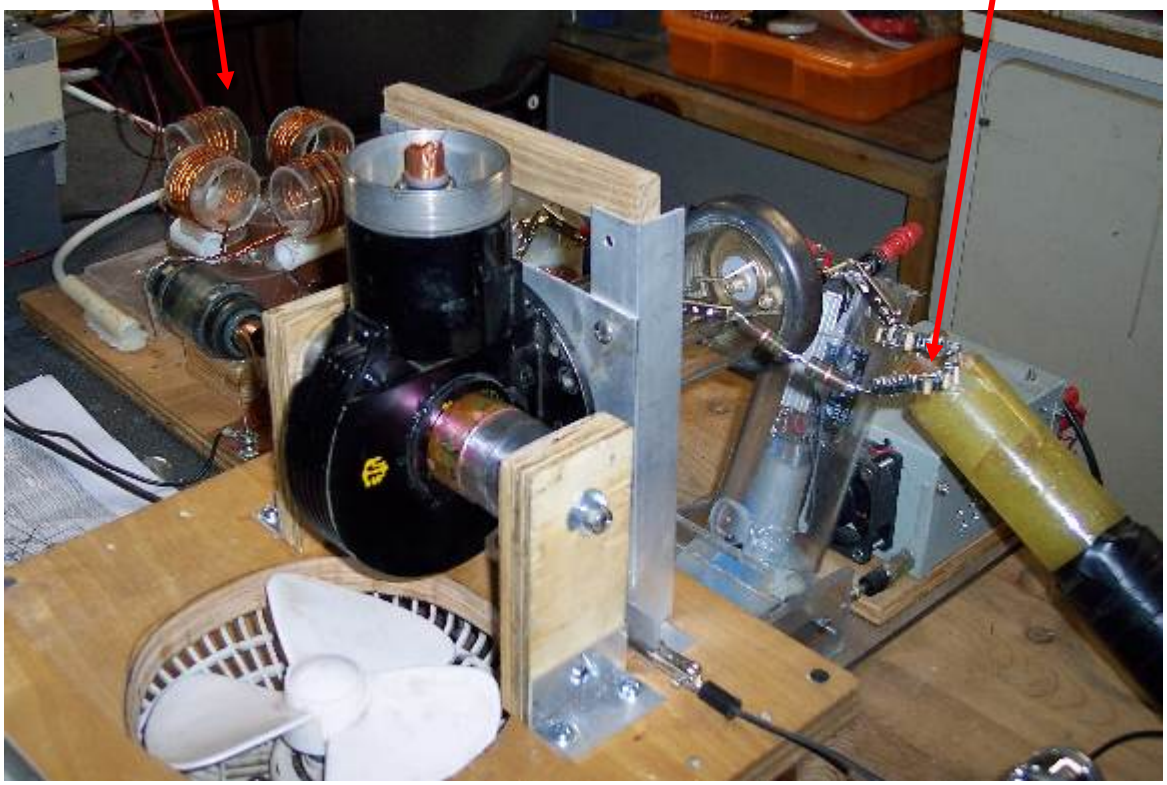
HV Probe



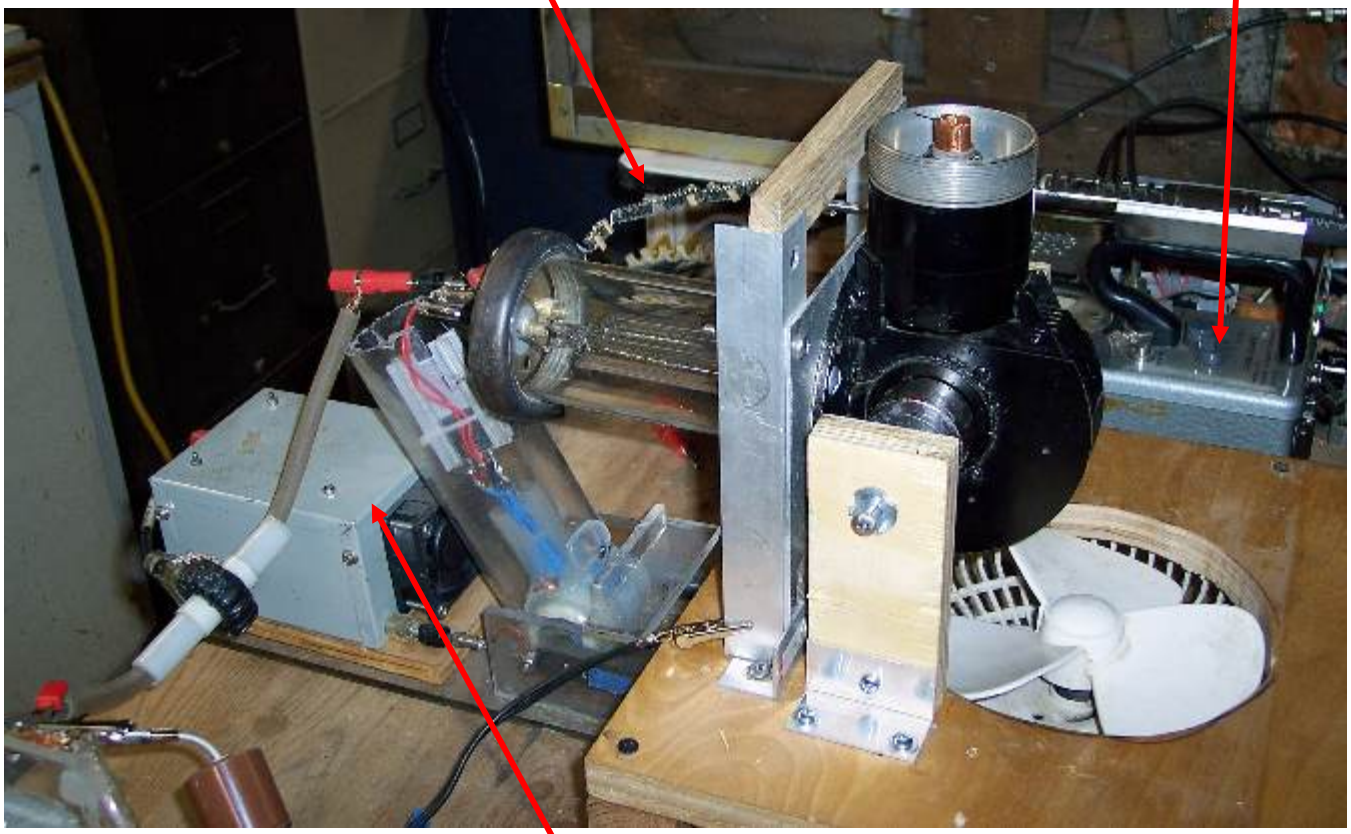
Geiger Counter => Monitor X Ray Generation

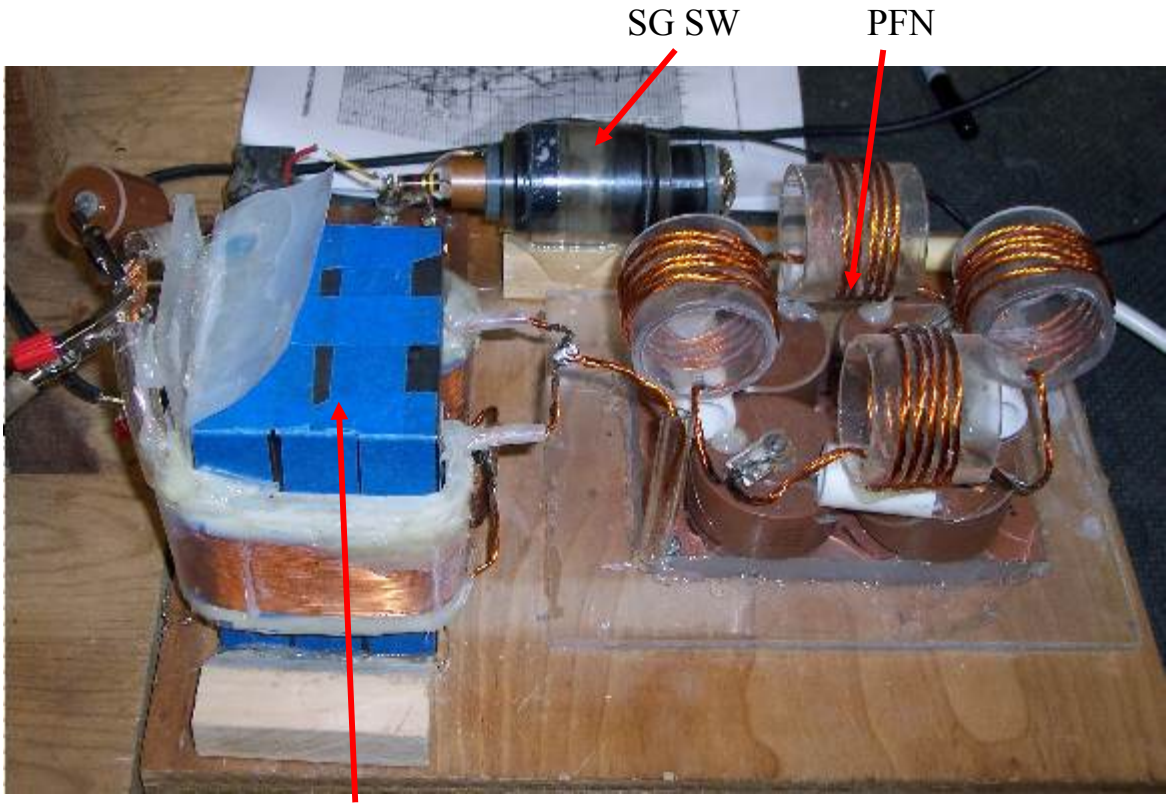
Off Axis View

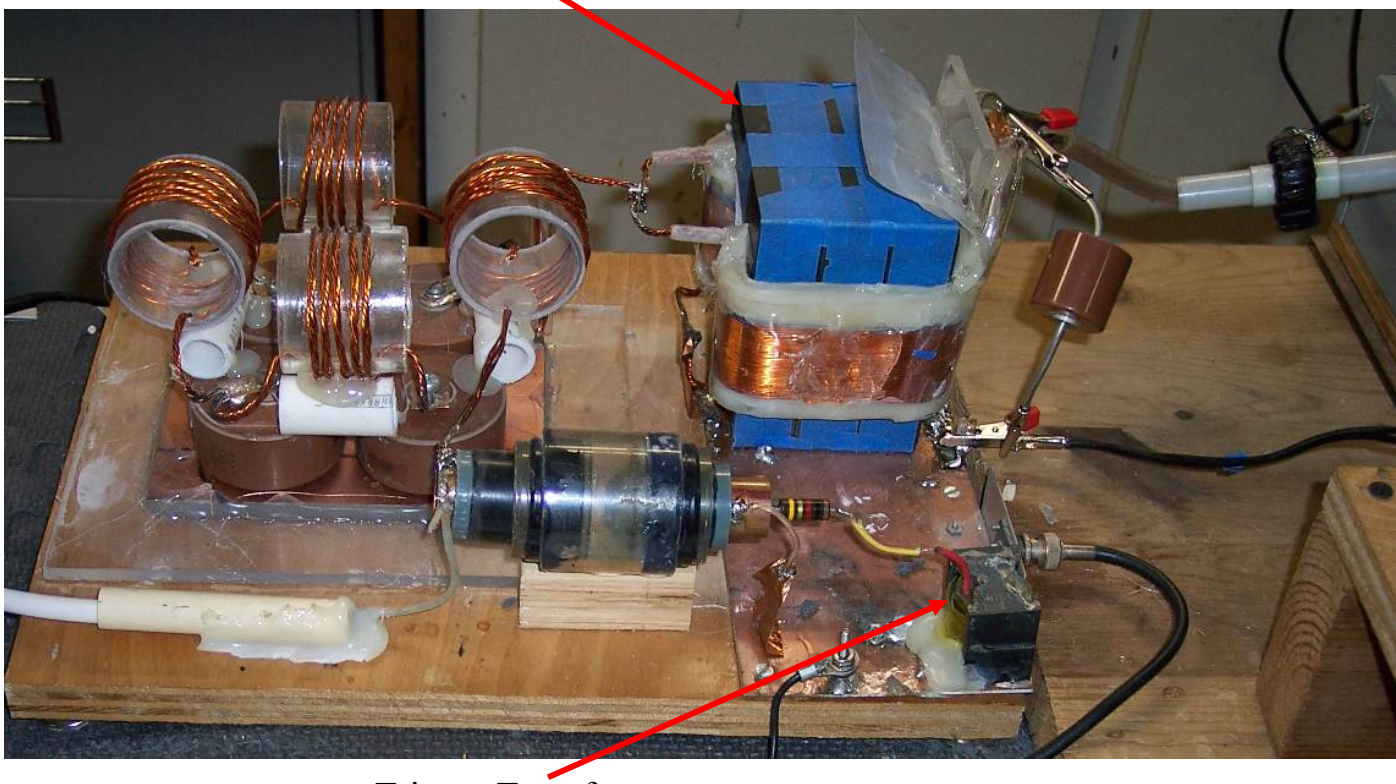
Damping Diode



Left Side Off Axis View







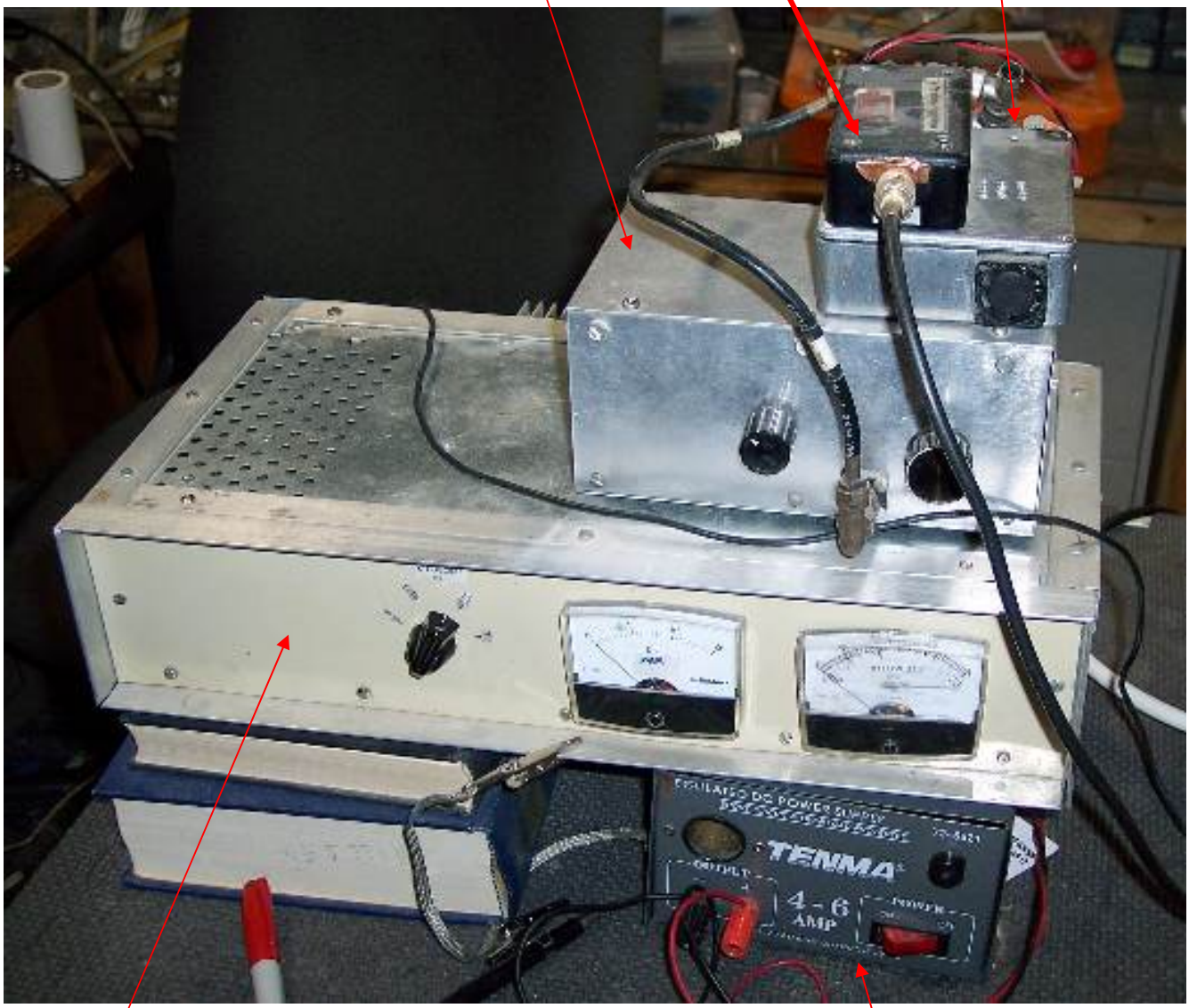
200 pf capacitor HV Transformer Shunt for reducing the KV/uSec and helping mode stability

Trigger:

600VDC for Trigger Drive

PRF Generator

Trigger Drive



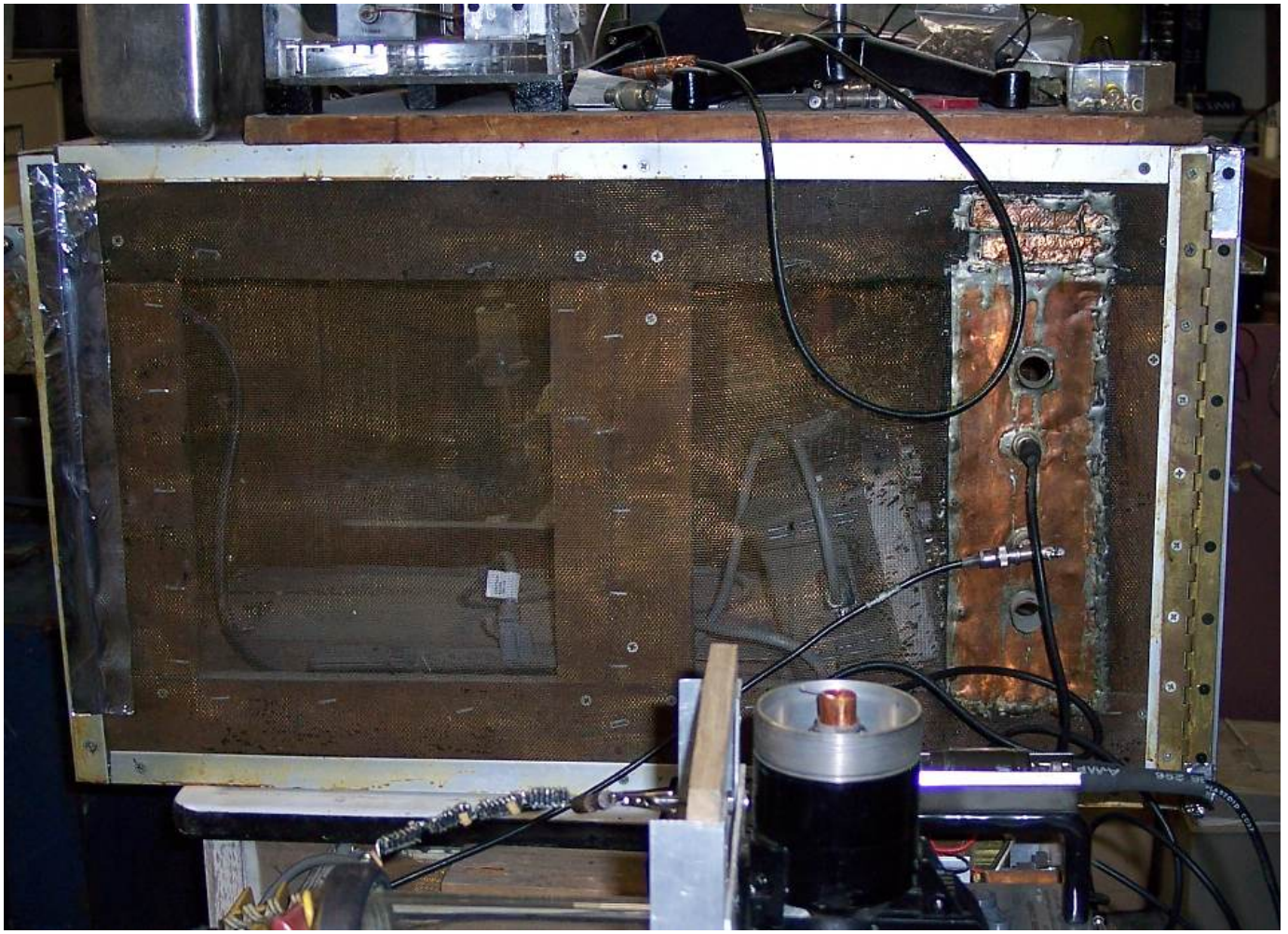
HVPS

13VDC Regulated PS

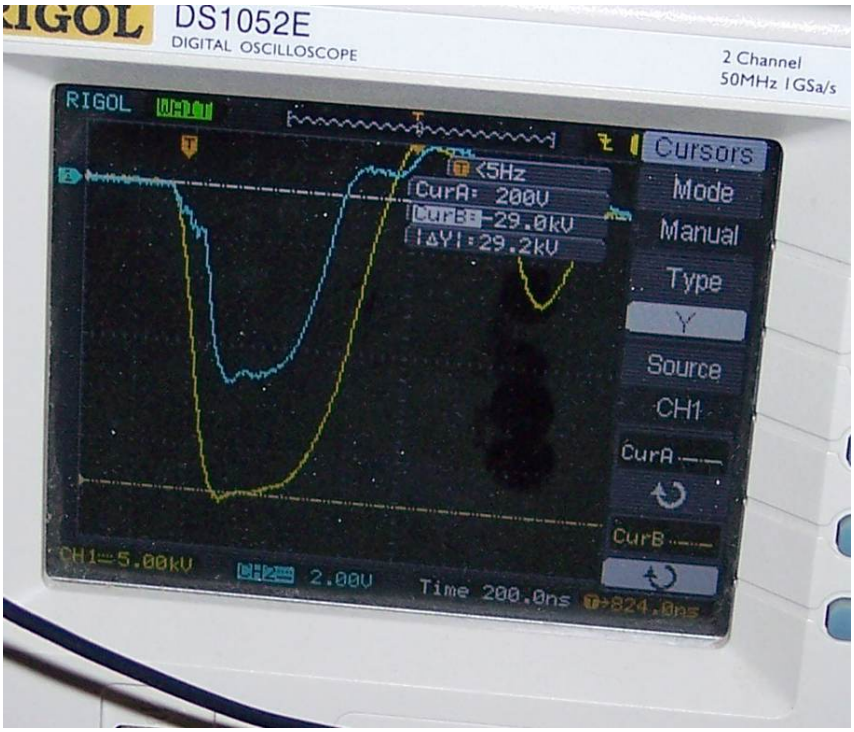
End View of Experimental System

DSO Screen Box

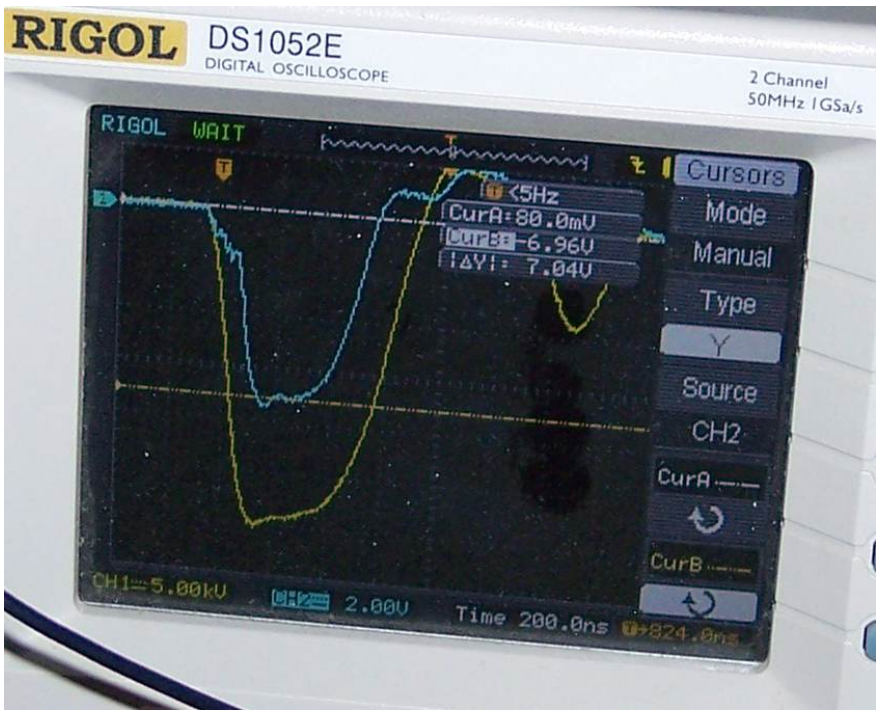
Close Up View of Screen Box

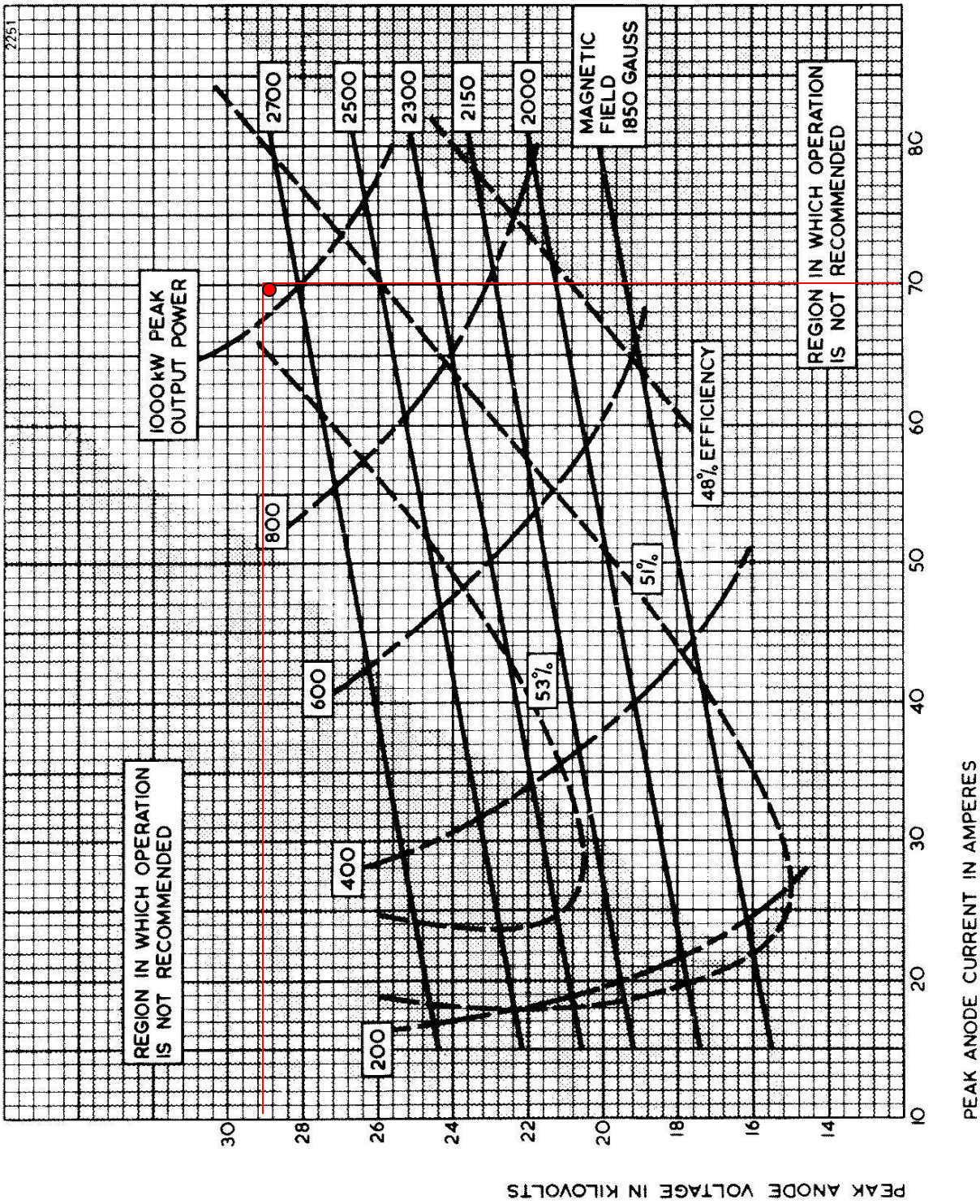


29.2 KV pulse at the cathode



~ 70 AMPS peak




2251
REGION IN WHICH OPERATION IS NOT RECOMMENDED
1000kW PEAK OUTPUT POWER
2700
2500
2300
2150
2000
MAGNETIC FIELD 1850 GAUSS
REGION IN WHICH OPERATION IS NOT RECOMMENDED
800
600
400
200
53%
51%
48% EFFICIENCY
PEAK ANODE VOLTAGE IN KILOVOLTS
30
28
26
24
22
20
18
16
14
10
20
30
40
50
60
70
80
PEAK ANODE CURRENT IN AMPERES