

15 1963

Facsimile Price \$	<u>1.10</u>
Microfilm Price \$	<u>.80</u>
Available from the Office of Technical Services Department of Commerce Washington 25, D. C.	

BNL 6443
 IHR - 117 X
 3/15/62

0-2 kv Flash Tube Supplies

D. M. Miller

MASTER

Introduction

In order to perform the various experiments with a bubble chamber, a high intensity flash tube is used. This report briefly describes the power supplies designed and constructed to power these lamps.

Specifications

Three supplies operated remotely are to be capable of charging 100 mfd to 2 kv with a repetition rate of not less than 0.8 second.

A control panel containing 3 powerstats, one for each supply, together with a kilo-voltmeter for each supply plus the necessary over-current protection and control equipment.

Description

The control panel consists of 3 identical sections. Each section contains a "Powerstat" for adjusting its supply, a meter, and the main control relay. The circuit is a conventional relay operated circuit with interlock switches from the power supplies wired in series with the off button. A 300 volt supply used with the firing circuit is also switched through this circuit.

The a.c. input for the three sections may be powered from a 117 VAC single phase circuit or from a 208 V 3 ϕ circuit with the individual supplies combined into a "Y" configuration.

The power supplies are simple full wave center tapped rectifiers employing silicon rectifiers. The output charges a self-contained 100 mfd capacitor / through a large charging resistor.

A thyatron circuit used in firing the flash tube is also in this unit.

A vacuum relay is provided to crow bar the capacitor in the event any of the interlocks are opened or when the off button is depressed.

The complete schematic IM-110 follows.

These units were constructed for Account 1395 as authorized by ILR 113786.

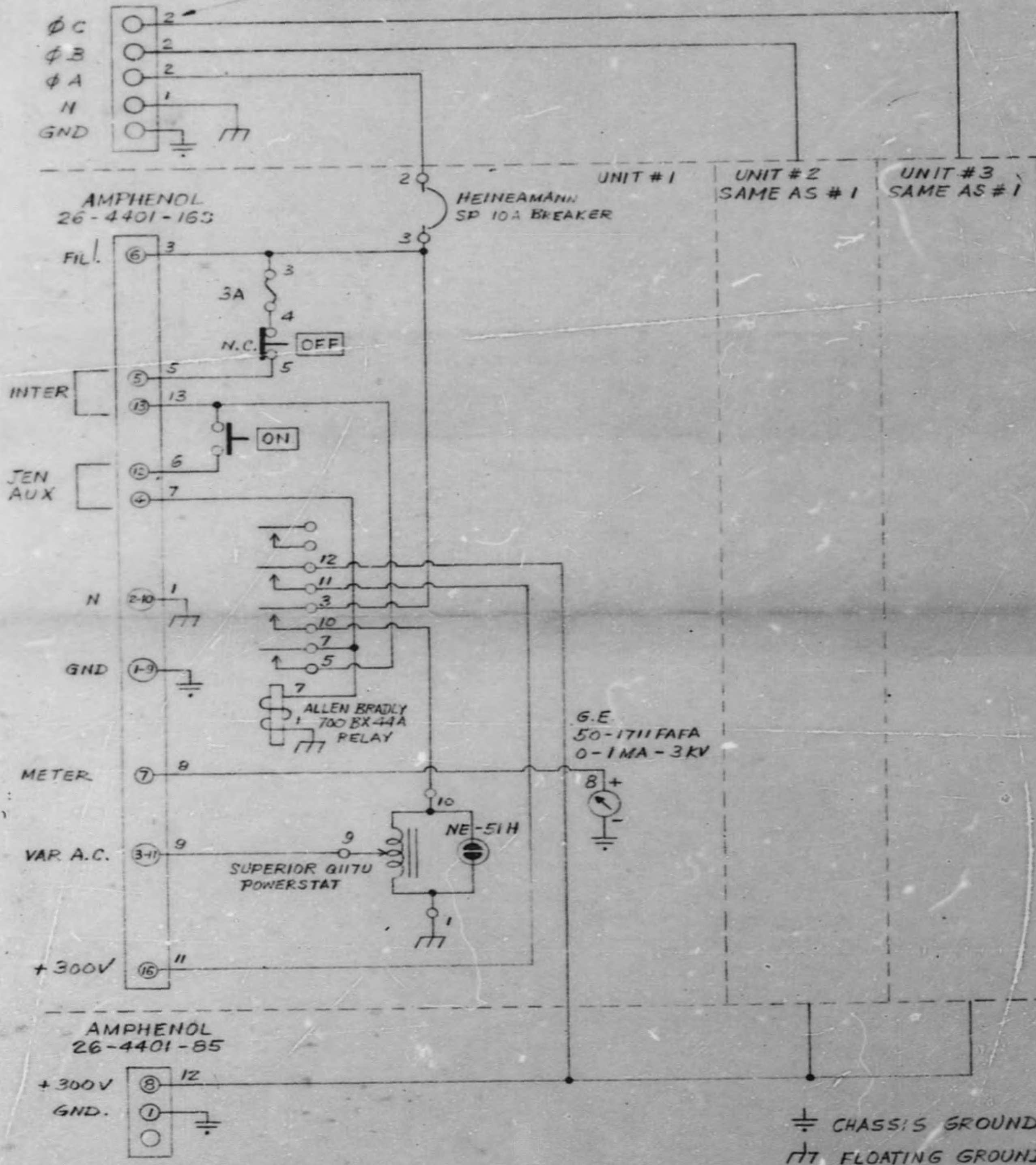
TOLERANCE - DECIMAL ± .005, FRACTIONAL ± 1/16, ANGULAR ± 30'

REFERENCE -

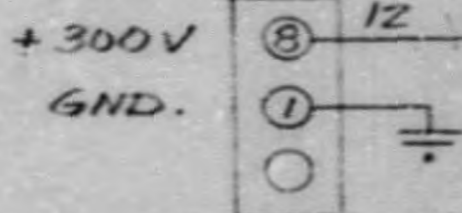
USED ON DWS.

BURNDY BLOCK

- WIRE NUMBERS



AMPHENOL 26-4401-85

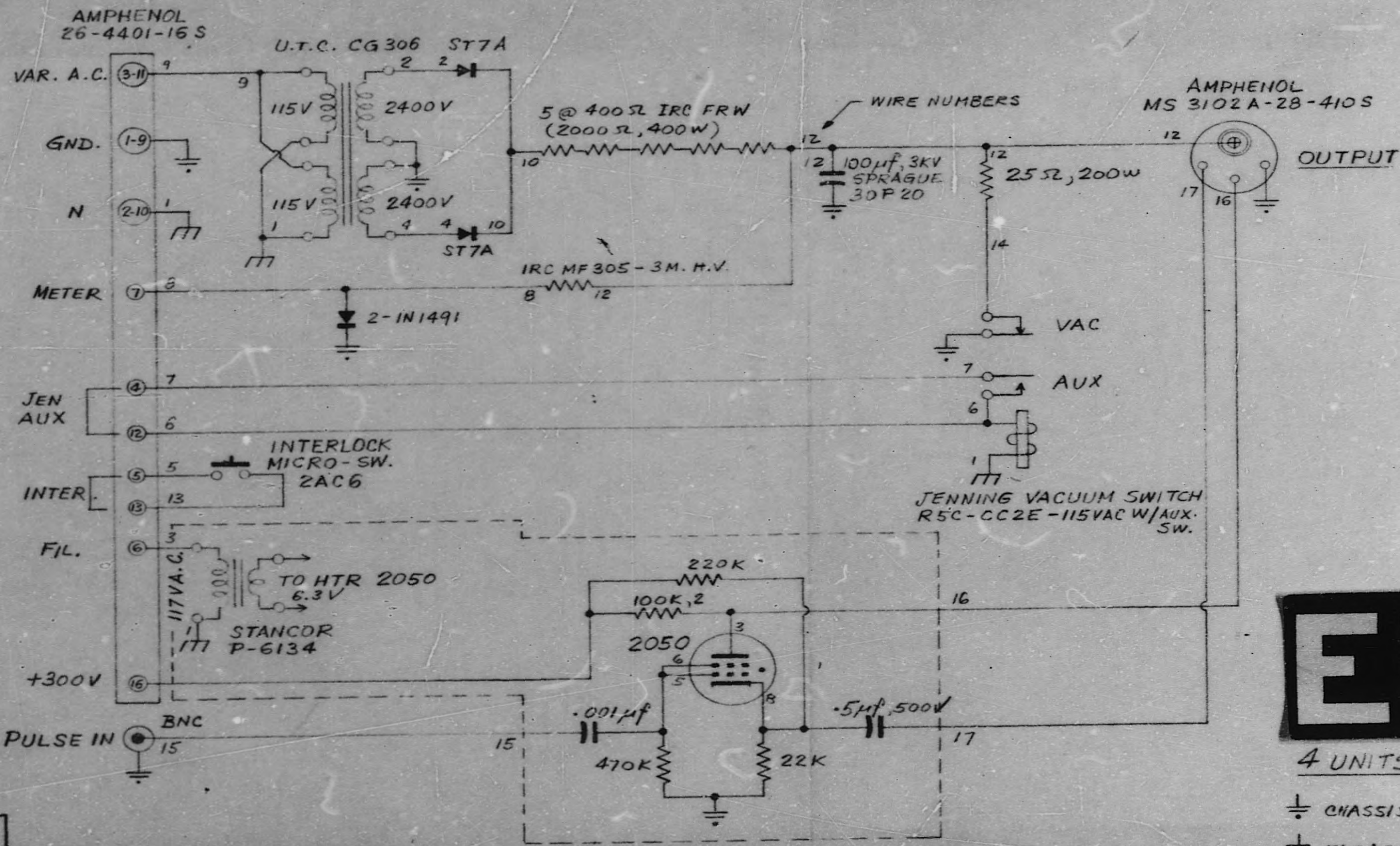


BROOKHAVEN NATIONAL LABORATORY
 ASSOCIATED UNIVERSITIES, INC.
 UPTON, N. Y.
 0-2KV FLASH TUBE POWER
 SUPPLY-CONTROL PANEL
 SCHEMATIC
 IH-110-1-2, A

MATERIAL SPEC.	SIZE	WEIGHT	FINISH
4-2-62	JC		
DATE	DRAWN BY	CHECKED BY	APPROVED BY
			SCALE

IH-110-1-2, A

IH-110-2-2 | A



BROOKHAVEN NATIONAL LABORATORY
 ASSOCIATED UNIVERSITIES, INC.
 UPTON, N. Y.

0-2 KV FLASH TUBE POWER
 SUPPLY - H.V. SUPPLY
 SCHEMATIC

IH-110-2-2, A
 DRAWING NUMBER REV.

MATERIAL SPEC.	DATE	DRAWN BY	CHECKED BY	APPROVED BY	SCALE
	3-4-52	Je	Am	Am	
SIZE	WEIGHT	FINISH			

END

4 UNITS

⊥ CHASSIS GROUND
 ⏏ FLOATING GROUND

TOLERANCE - DECIMAL & ANG. FRACTIONAL 5% UNLESS OTHERWISE SPECIFIED
 REFERENCE - USED ON DRG.