Film-Tech

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www.film-tech.com

XETRON/CINEMECCANICA

CX-900 VERTICAL

XENON LAMPHOUSE

XETRON DIVISION
Neumade Products Corp.
30-40 Pecks Lane
Newtown, CT. 06470
1-800-526-0722
(203) 270-1100
(203) 270-7778 fax
www.neumade.com

CINEMECCANICA U.S. Inc.
8753 Lion Street
Rancho Cucamonga, Calif. 91730
(909) 481-5842
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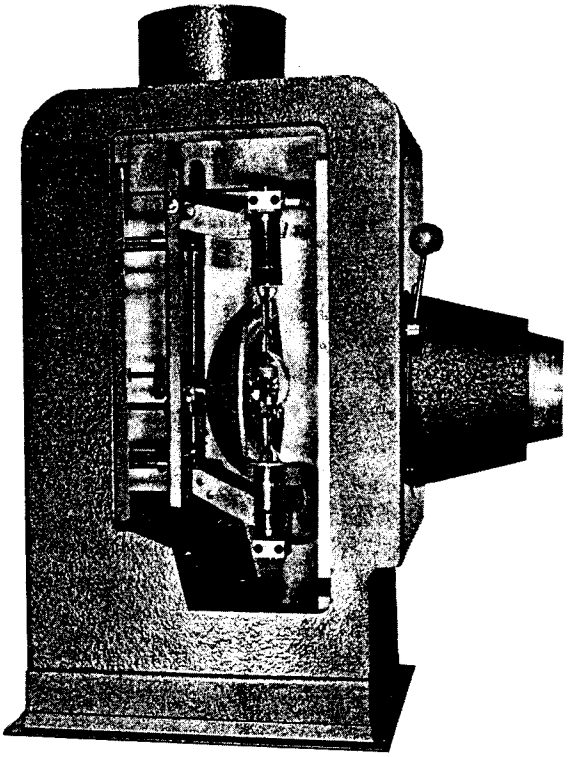
CARBONS, INC. XeTRON PRODUCTS DIVISION, 10 Saddle Road,
Cedar Knolls, N. J. 201-267-8200

XeTRON CX-900 LAMPHOUSE

Self contained, highly efficient light source



Operates from 30 to 53 Amps

To meet the demands for a compact, high output light source, the CX-900 lamphouse has been developed by XeTRON and includes such features as a special seven inch reflector, a built-in ventilating system and provisions for attaching a five inch diameter stack when required. The unit also includes an ammeter, elapsed time meter, high voltage starter unit and hand dowser.

It is designed to operate from a 115 volt single phase source and requires a 900 watt bulb (Osram XBO 900 or equal) in addition to a direct current power supply of the proper capacity. XeTRON power supplies are available for operation from either a single phase or three phase power source.

The CX-900, when operating at 45 amperes will deliver approximately 5000 lumens and is suitable for many 16mm and 35mm. applications. At the maximum current level of 53 amperes the output will be approximately 5500 lumens. Picture sizes up to 20 feet wide can be made with standard brightness depending upon projection optics and type of screen. The light is similar to that of a high intensity carbon arc and has a Kelvin temperature of 5500 to 5800 degrees. There is no smoke, ash or soot developed as combustion products as the arc is enclosed in a quartz bulb. The electrodes do not burn away causing a shift of focus.

The complete lamphouse weighs 44 pounds, has an overall height of 20 3/4 inches, maximum width of 12 1/2 inches, length including nose cone 16 1/2 inches.

(continued)

The center of the optical beam is 8 1/2 inches from the base. This can be increased to 10 1/2 inches on special order. The normal working distance, center of reflector to film plane is 14. 75 inches for 35mm and 16 inches for 16mm. These are subject to slight variations in various setups and some flexibility is provided in reflector adjustment.

PRICES:

XeTRON CX-900 lamphouse

XeTRON N1-X50DM Power Supply 115/230V
1 Phase

XeTRON N3-X50 Power Supply 220V
3 Phase

Vertical 900 watt bulb

For additional information please contact, Xetron Products, Division of Carbons, Inc. or authorized dealer.

Lamphouse distributed by:
Xetron - A Div. of Neumade Products
10 Saddle Road
Cedar Knolls, N.J. 07927
(201) 267-8200
Fax: 201-267-4903

August 1965

Lamphouse manufactured by:
Cinemeccanica U.S. Inc.
5475 - 115th Ave. North
Clearwater, Florida 34620
(813) 573-3011
Fax: 813-572-0136

X e T R O N

Division of Carbons Inc. - Cedar Knolls, N.J.

September 20, 1967

XeTRON CX-900 LAMPHOUSE

This is a compact, highly efficient lamphouse designed to use the 900 watt Xenon bulb to provide professional type projection of motion pictures on gain screens approximately twenty feet in width.

It includes a built-in high voltage starter unit, ventilating fan, ammeter and elapsed time meter.

A field flattner lens is provided and should be used only in connection with apertures larger than that used with 16 mm. projection. The reflector is especially designed for this lamp and has a magnification of approximately seven times.

At the new bulb recommended operating current of 45 amperes, the lamphouse is capable of delivering 4,500 lumens. As the bulb becomes older and its efficiency drops, the current can be raised to 53 amperes to obtain the same amount of light output. If maximum light output is required, the full 53 amperes can be used and approximately 5,000 lumens will be delivered.

It is very important that the lamphouse be mechanically aligned with the projection equipment, otherwise it will not be possible to obtain maximum results. This lamphouse has an optical center line to provide $8\frac{1}{2}$ inches above the base. In some cases it may be necessary to provide a bracket or shims in order to align the projector and lamphouse to meet this requirement. An aligning rod and dummy lens is normally used to insure proper installation.

After the lamphouse is properly aligned and mounted, the power connections should be made. To operate the fan, starter and timing meter a 110 or 220 volt single phase circuit (to be specified on order) is used and No. 14 conductors will be adequate. The direct current power leads should be No. 6 stranded from the power supply to the terminal strip and heavy duty lugs are recommended on each end of these conductors.

Due to the very special current requirements, only the XeTRON power supply is recommended for this lamphouse. It provides the proper ripple current and the necessary voltage regulation, etc. A separate instruction book is supplied with this unit.

Before the bulb is installed, it is very important to check the polarity of the current to the lamphouse. With the power supply turned on it should be possible to read 70 to 85 volts at the bulb connecting clamps, and the positive must be connected to the upper clamp. If the polarity is reversed, the bulb will be damaged instantly.

Extreme care must be used when handling the bulb, expecially in connection with the quartz envelope, which should never be touched. If it is necessary to clean the bulb, a soft rag and alcohol should be used. It is customary to leave the plastic jacket around the bulb until it has been installed and cables attached.

After the bulb is mounted, positive electrode on top, and contacts tightened the door should be replaced. The AC power is supplied to the lamphouse for starting the fan and supplying the main power supply. (*) The starting push button should then be pressed for the shortest time possible and released. Nominal operating current for the 900 watt bulb is 45 amperes. If the current is below 30 amperes (minimum operating current), it should be increased. If above 53 amperes (maximum operating current), it should be decreased by operation of power supply top switches. See data sheet "Xenon Bulbs" for additional information.

The three reflector controls provide lateral, vertical and focus adjustments. The first light should be projected on the screen without a lens. The image of the bulb, a dark outline, will appear near the center of the screen and will remain there as long as no projection lens is used. At this time the reflector controls should be adjusted to provide maximum light around this image and the outside edges of the light circle in focus. The effect of each control can be seen better under these conditions. When the best results are obtained, the projection lens should be inserted, focussed and slight additional adjustments made for maximum brightness and distribution.

Associated Drawings

5659	Physical dimensions and reflector controls.
5677	X90-3200 starter - parts layout.
5693	Wiring diagram - parts list
5672	Striking Unit - Wiring Diagram

Working Distance		Back of reflector to film
35mm.	-	14" to 15"
16mm.	-	16" to 17"

CSX-900 nominal current 45 amps. Maximum current 53 amps.
XOF-1000 " " 43 " " " 50 "
When using XOF-1000 Ozone Free bulb XX-109 adaptors are needed.

(*) A-104C auto strike device available for all XeTRON lamphouses.

February 15, 1966

D I F F U S E R

CX - 450 CX - 900

The primary purpose of the diffuser used in the CX Series lamphouses is to facilitate filling the 35mm. aperture with a better distributed light. The unit is not used for 16mm. applications.

This diffuser must be properly positioned in the lamphouse as it does have directional characteristics. As viewed from inside the lamphouse the red mark on the diffuser must match the red mark on the lamphouse which is usually located at the 3 o'clock position.

If one is ever in doubt as to proper mounting, hold the diffuser up to a light bulb and rotate it 90°. You will notice a spread of the light horizontally in one of the positions - this is the way it is to be positioned in the lamphouse.

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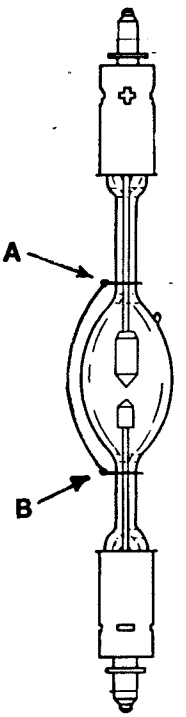
SERVICE BULLETIN

Hard Strike Xenon Bulbs

Date: 1/1/72

It appears that all manufacturers have had problems where some bulbs are harder to strike than others. We assume this is a function of the internal gas pressure altho it is supposed to be very closely controlled.

Effective 1 January 1972, all bulbs shipped from Carbons, Inc. will have a wire loop around the elongated portion of the bulb to insure reliable starting. This wire should be nichrome or stainless steel as it is subjected to considerable heat and an ozone atmosphere. A single strand from a piece of #14 stranded wire can be used but will burn up after a few hours. Such a wire or even a strand of picture hanging wire will operate in an emergency. Carbons, Inc. will supply wire to all dealers selling our bulbs for use in existing installations when necessary. The installation is very simple. Use a piece of wire 8 or 10 inches long. Make a loop around the quartz neck just above the enlarged section as shown (A) and twist it lightly to make it mechanically tight. Bring the wire down along the center of the bulb and make a similar loop around the bottom neck (B) just below the enlarged section. Under no circumstances should the wire touch the metal ends of the bulb nor the auxiliary reflector when used. Remove all fingerprints from the bulb and/or reflectors. There is no problem if the wire lightly touches the center quartz envelope area.



As the striking voltage is a high frequency pulse, the wire acts as a very small capacitor across the electrodes making it easier for the spark to jump from one electrode to the other. In some cases it may have an added advantage of reducing the striking noise in the sound.

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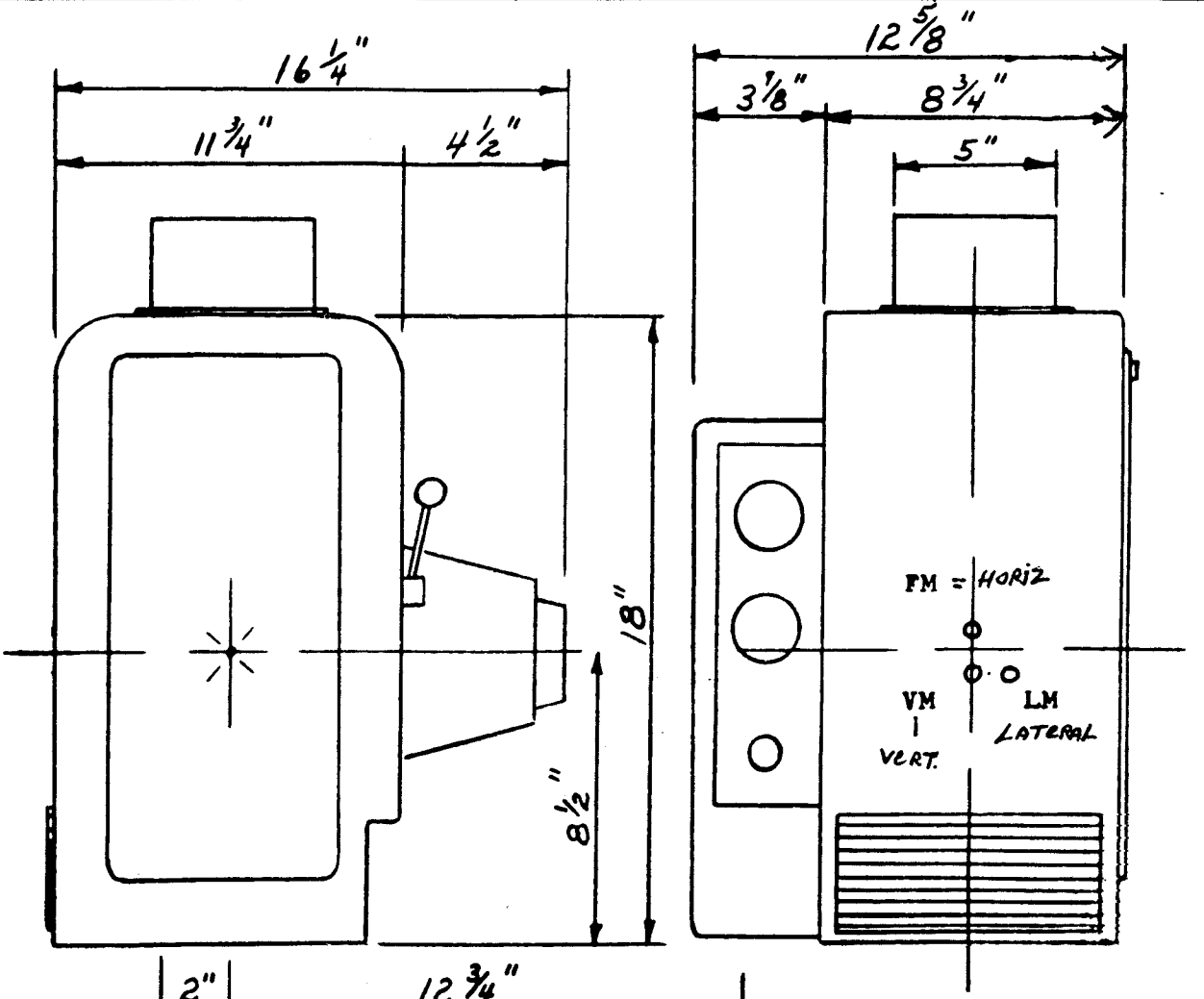
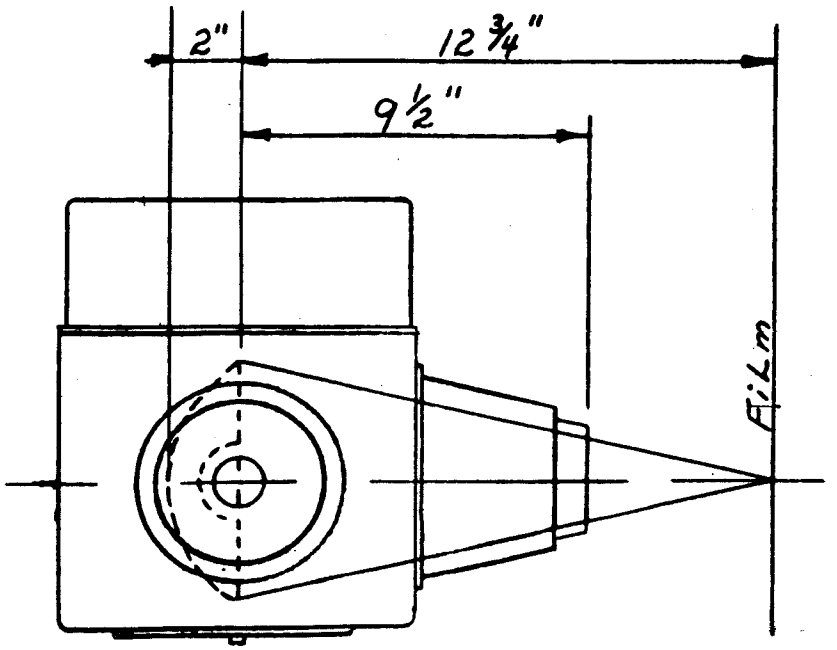
XeTRON CX-900 Lamphouse

Dwg. #5659
Date 9/20/67





MIRROR CONTROLS

FM -Horizontal Focus
VM -Vertical Tilting
LM -Lateral Tilting

New American Lamp

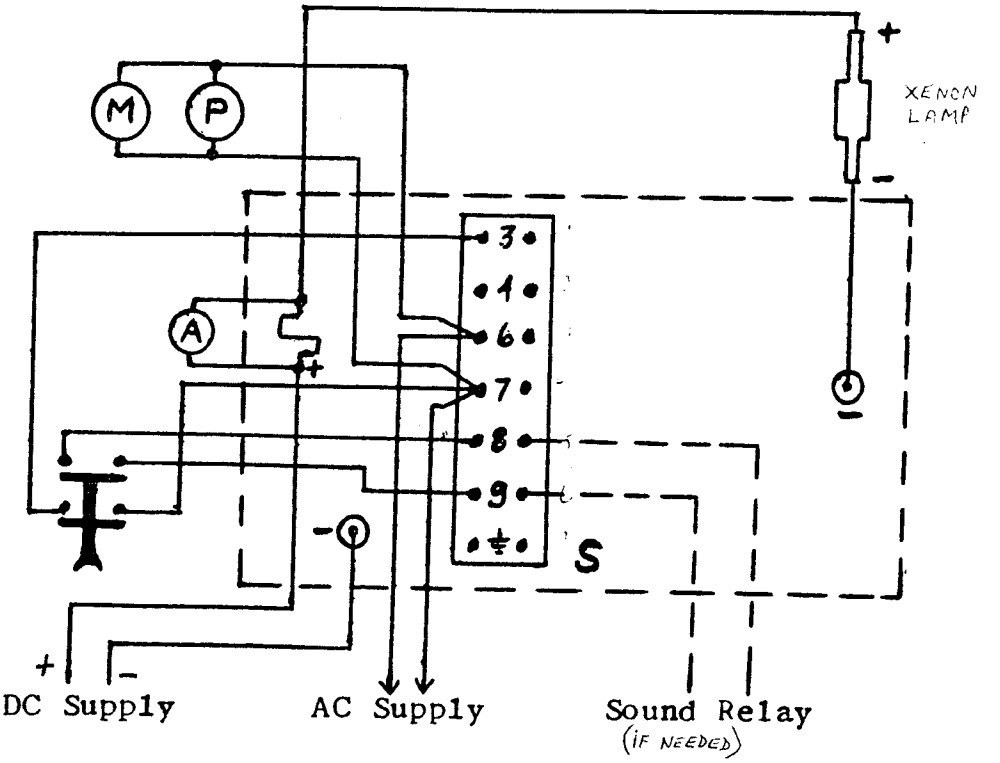
LM O

VM O O FM

5693

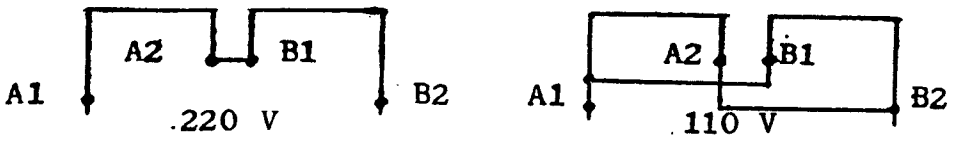
XeTRON CX-900 Lamphouse

Wiring Diagram & Parts List



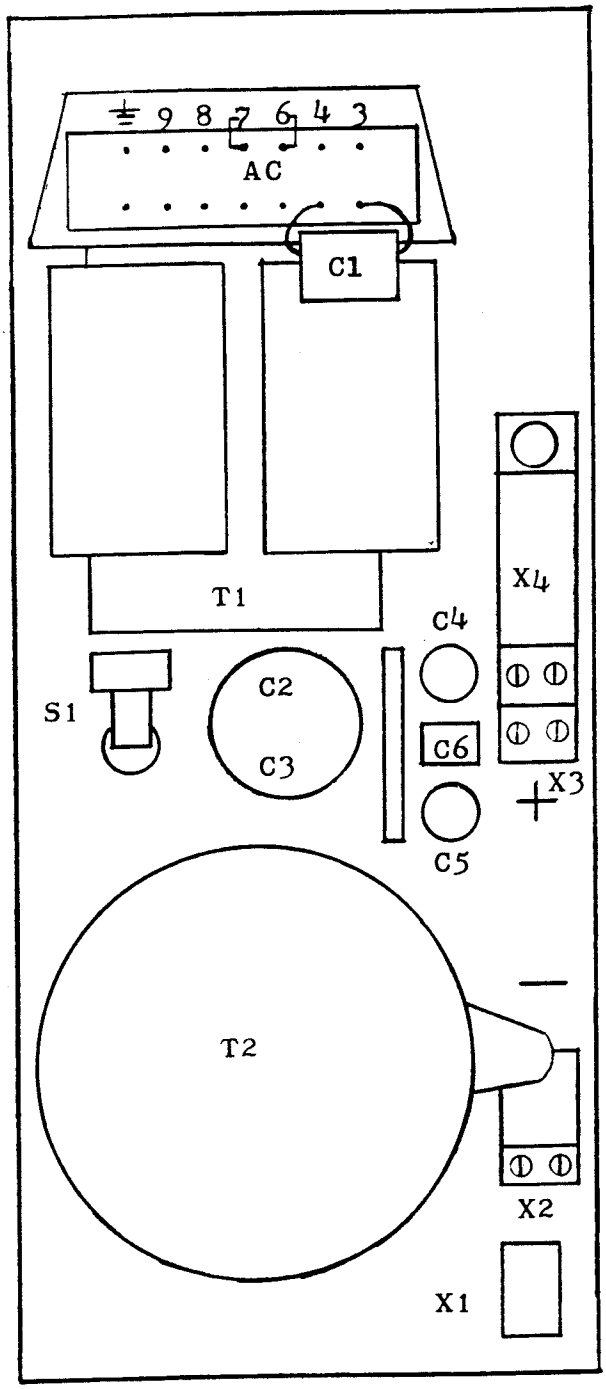
Unless specified otherwise on the nameplate, all CX-900 starters are wired for 115V input. If one desires to use 220V input the following changes are necessary.

1. Move input wire and capacitor from terminal 3 to terminal 4.
2. Install 6300 ohm 5 watt resistor in series with one lead to the hour meter.
3. Change fan motor leads per the diagram shown below.



	ITEM	PART NO.
A -	Ammeter	# 4101
I -	Starting push button	2136
L -	Bulb	XBO - 900 watt
M -	Fan motor	4004
P -	Hour meter	4107
S -	Ignition unit complete	4002

Carbons, Inc. 10 Saddle Road Cedar Knolls, N. J.	XeTRON CX-900 LAMPHOUSE X90-3200 STARTER PARTS LAYOUT	Dwg. #5677 Date 9/20/67



PARTS LIST

C1	0.1	uf	600 V
C2	1000	pf	20 Kv
C3	1000	pf	20 Kv
C4	0.1	uf	600 V
C5	0.1	uf	600 V
C6	0.1	uf	600 V

S1 - Spark gap
T1 - Transformer
T2 - HT Transformer
X1 - Cable clamp
X2 - Negative terminal block
X3 - Positive terminal block
X4 - Shunt

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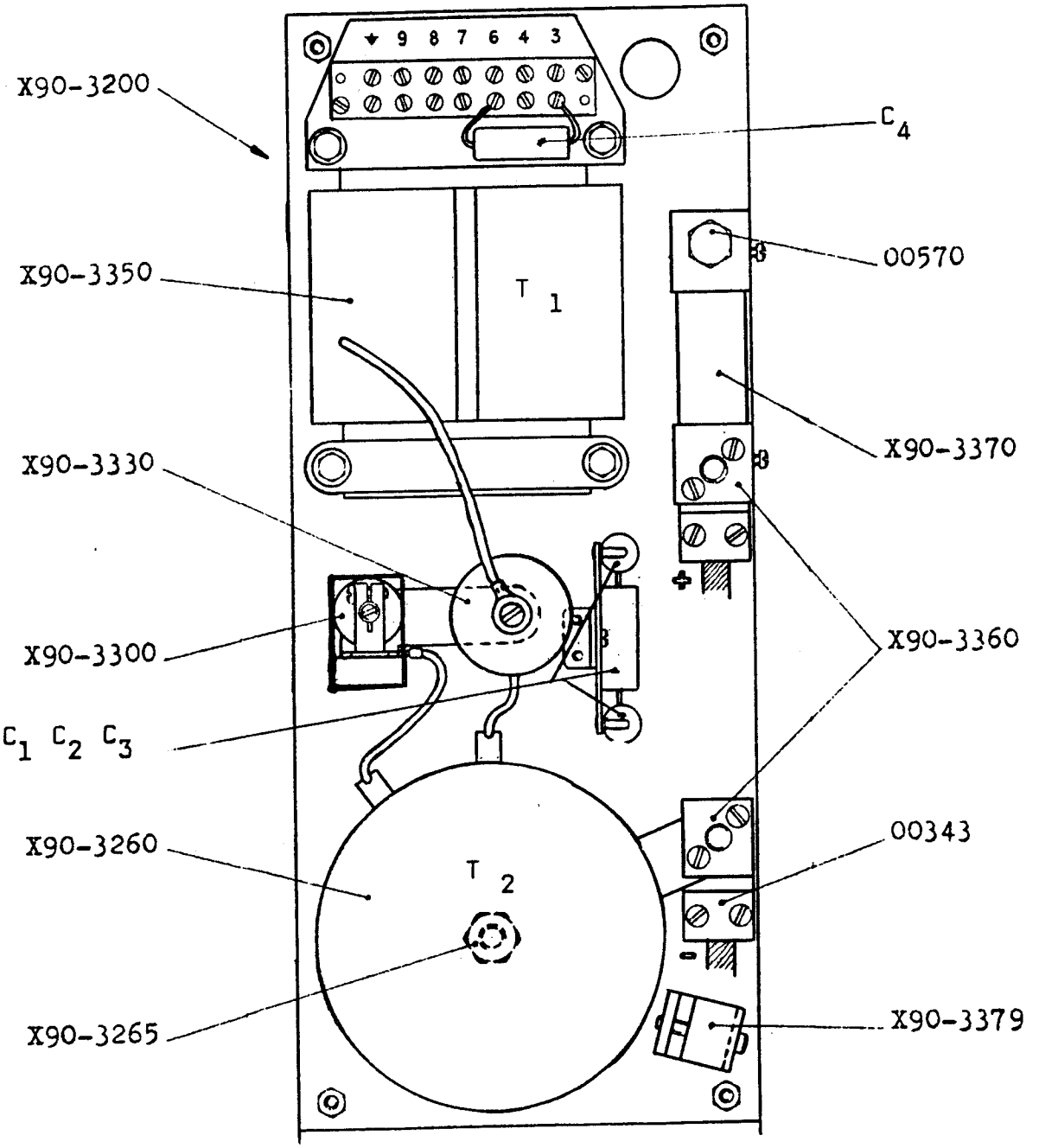
CX 900 STRIKING UNIT

Spare Parts

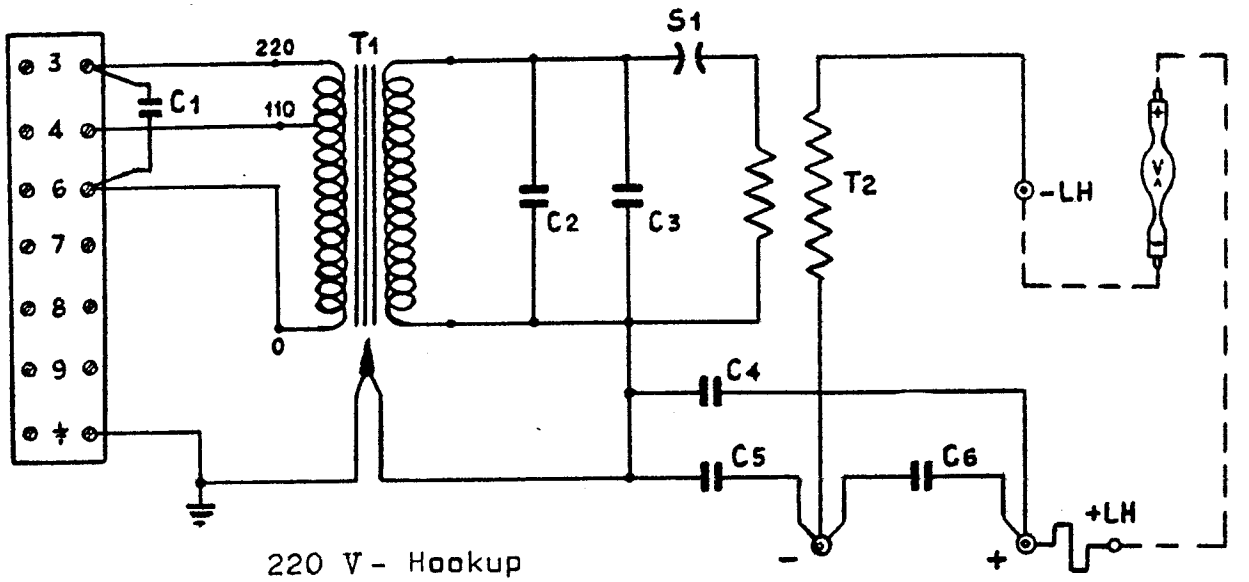
Drawing #5776

Date: 7/15/70

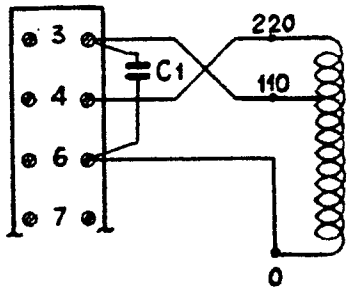


00343	Cable Clamp	X90-3330	Condenser 1000 pF - 20 Kv
00570	Clamp Screw	X90-3350	Complete Transformer
X90-3200	Striking Unit Complete	X90-3360	Complete Clamp
X90-3260	Complete Coil	X90-3370	Ammeter Shunt
X90-3265	Coil Fixing Nut	X90-3379	Cable Clips
X90-3300	Complete Spark Gap	C_1 C_2 C_3 C_4	- 0.1 mF - 600 V

XeTRON A DIVISION OF CARBONS, INC. CEDAR KNOLLS, N. J. 07927	CX 900 STRIKING UNIT Wiring Diagram	Drawing #5672 Date: 7/15/70



220 V - Hookup



110 V - Hookup

C 1 - 0.1 mF - 600 V
C 2 - 1000 pF - 20 Kv
C 3 - 1000 pF - 20 Kv
C 4 - 0.1 mF - 600 V
C 5 - 0.1 mF - 600 V
C 6 - 0.1 mF - 600 V
S 1 - Spark Gap
T 1 - Transformer
T 2 - HT Transformer

NOTE: Make sure transformer leads are connected according to mains voltage.

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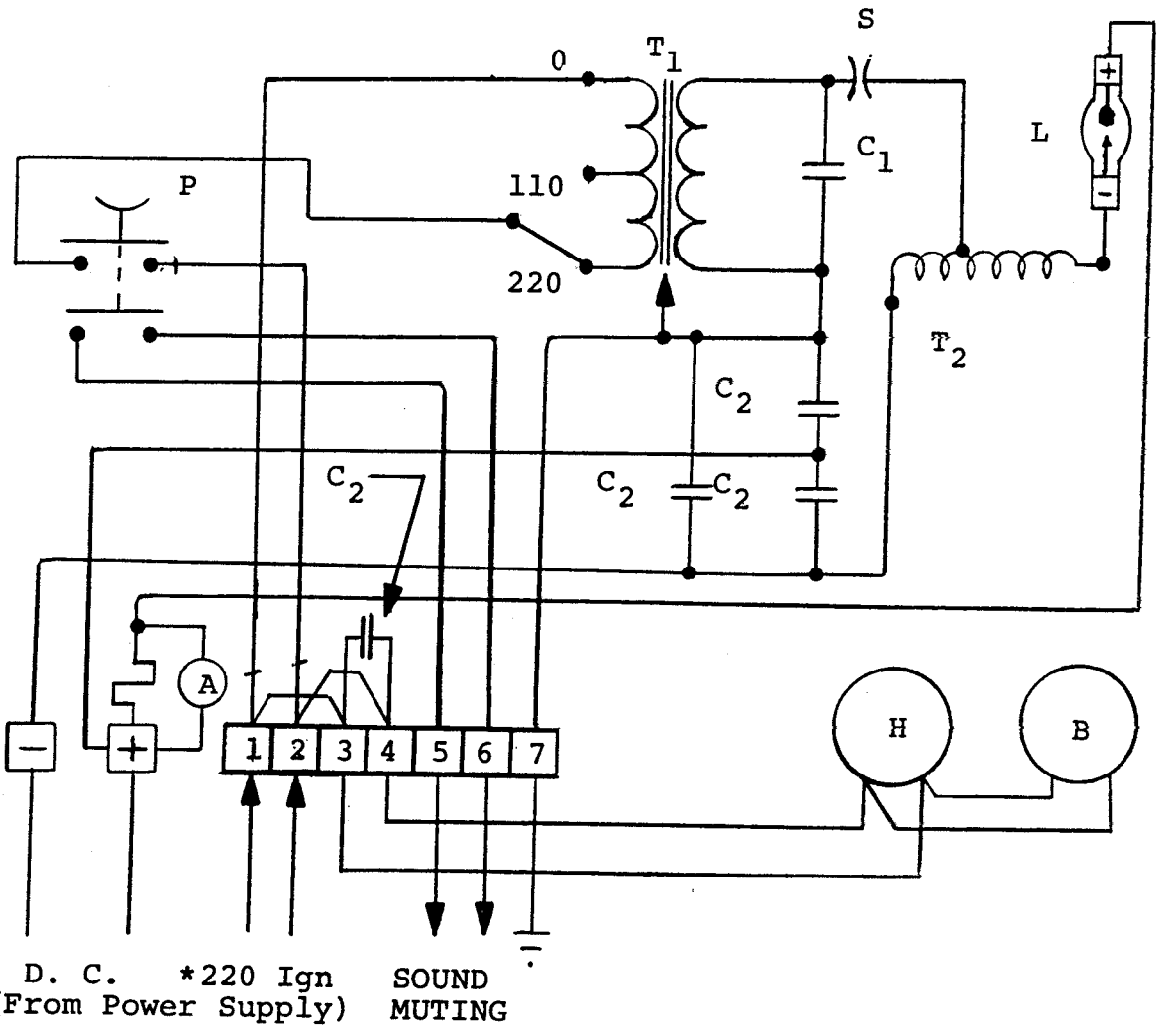
CX-900 STRIKING UNIT

WIRING DIAGRAM

(From Serial No. 1305)

Date: 7/28/71

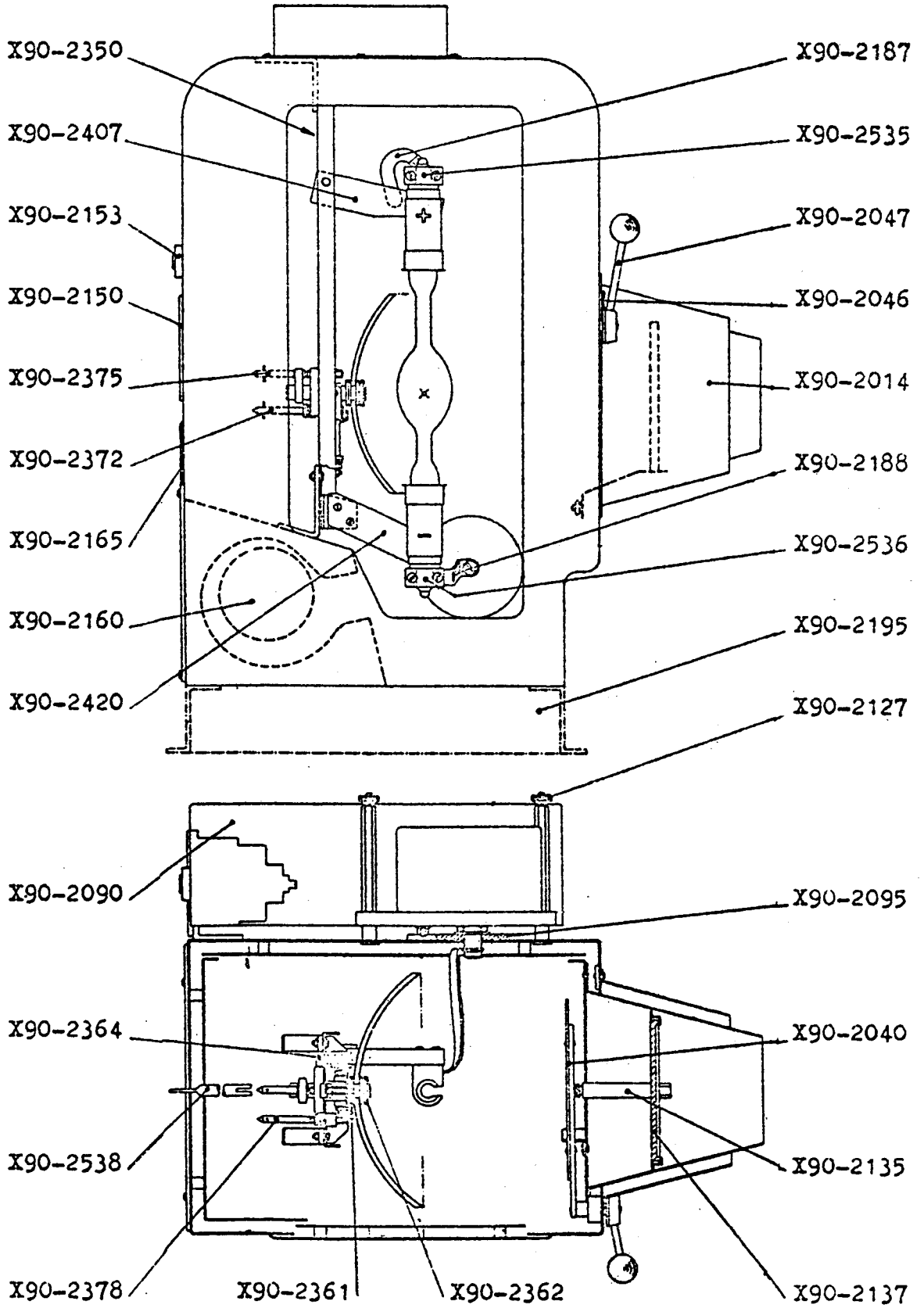
Drawing: #7117



A Ampere Meter
B Blower
C_1 20KV 1000pF
C_2 1000V 0.1mF
T_1 Transformer
T_2 HT Transformer
H Hour Meter
L Xenon Bulb
P Starting Pushbutton
S Spark Gap

* 110V Available On Special Order

	CX-900 LAMPHOUSE SPARE PARTS	Dwg.#5775 D. 8/9/67



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LIST PRICE	PART #	DESCRIPTION
$ 16.45	X90-2012	Door complete with double wall cover
9.25	X90-2014	External cone
6.80	X90-2015	Inner nose cone
7.50	X90-2020	Exhaust extension
.75	X90-2032	Knurled knob for door
12.50	X90-2040	Douser
.60	X90-2046	Douser spring
4.15	X90-2047	Douser handle & knob
14.20	X90-2090	Starter cover
.60	X90-2095	Protection disc
.75	X90-2127	Knurled knob for back cover
7.25	X90-2135	Diffuser frame
7.95	X90-2137	Optical diffuser
34.10	X90-2150	Ammeter
10.60	X90-2153	Starter push button switch
29.90	X90-2160	Complete fan assembly
34.10	X90-2165	Hour meter
5.20	X90-2187	Positive cable
3.10	X90-2188	Negative cable
20.50	X90-2195	Height spacer
6.45	X90-2196	3 Side angle for base
102.10	X90-2350	Complete Basic unit
.65	X90-2361	Mirror gasket
2.15	X90-2362	Reflector locking knob
.60	X90-2364	Reflector tension spring
2.15	X90-2372	Vertical control screw
2.15	X90-2375	Axial control screw
2.15	X90-2378	Horizontal control screw
.95	X90-2407	Positive Insulation support
3.25	X90-2412	Positive metal bulb bracket
3.25	X90-2413	Negative metal bulb bracket
.95	X90-2420	Negative insulated support
7.65	X90-2535	Positive bulb clamp
7.65	X90-2536	Negative bulb clamp
1.75	X90-2538	Adjusting wrench
187.00	X90-3200	Starter
12.15	X90-3220	Starter Mounting board
57.00	X90-3260	T2 Transformer
1.55	X90-3265	Locking nut for T2 transformer
14.20	X90-3300	Spark gap
7.45	X90-3330	Condensers
3.20	X90-3344	Terminal board
42.20	X90-3350	T1 transformer
5.70	X90-3360	Clamp
.75	X90-3364	Nylon bolt
12.25	X90-3370	Ammeter shunt
5.90	X90-3379	Cable clamps
50.00	X90-4000	Mounting plate for CX-900

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CEDAR KNOLLS, N. J. 07927

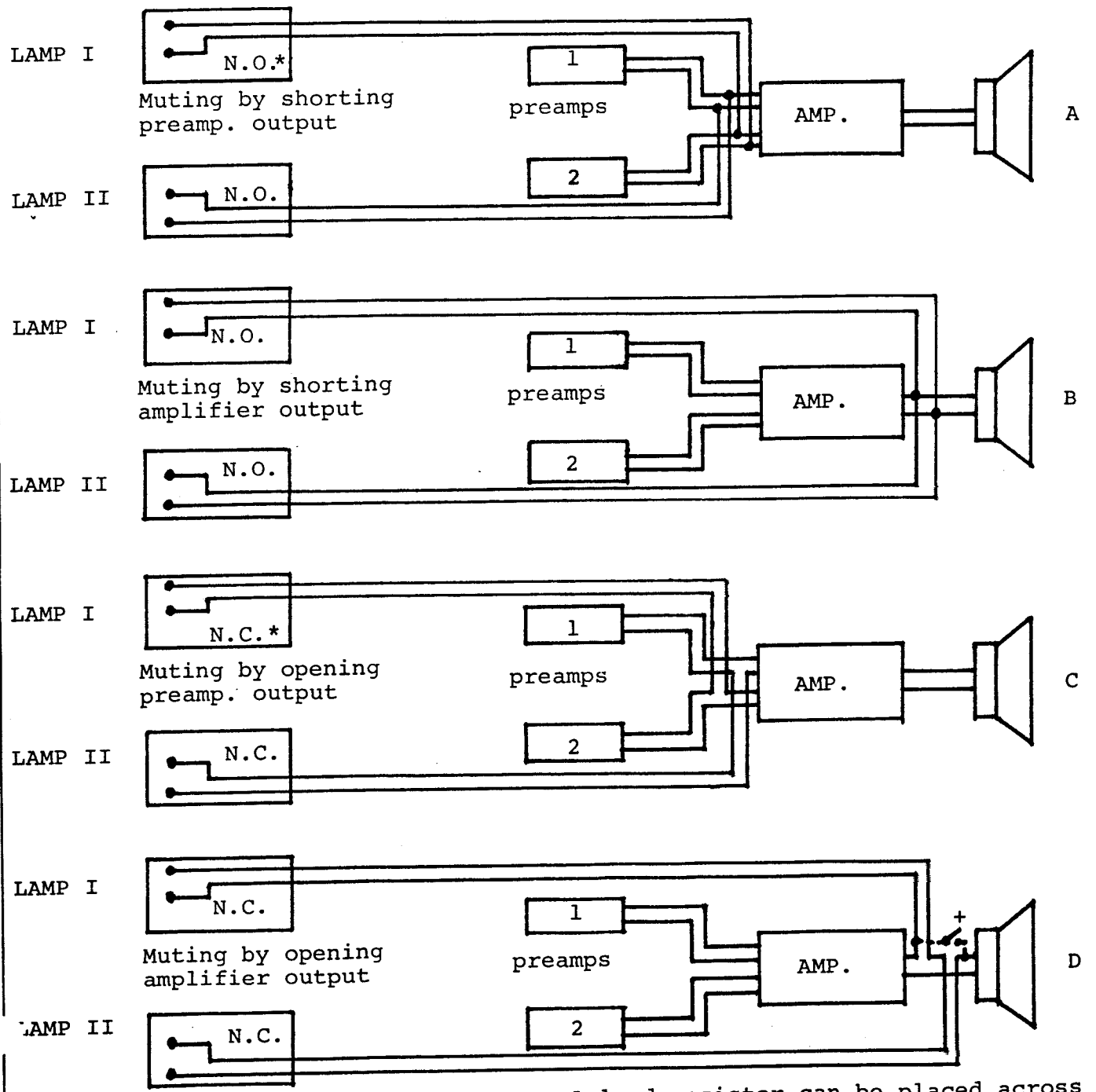
SUGGESTED CIRCUITRY FOR SOUND MUTING WHEN NECESSARY

Drawing: # 7008-D1

Date: 6/2/70

See Associated Drawing #7008D

In installations where Xenon strike noise invades the sound, the following circuits are suggested to suppress this condition:



*Muting switches are shown on Drawing # 7008-C

+ A load resistor can be placed across the output for amplifier protection (D) Also, we recommend to install an SPST switch across the muting circuit for emergency use.

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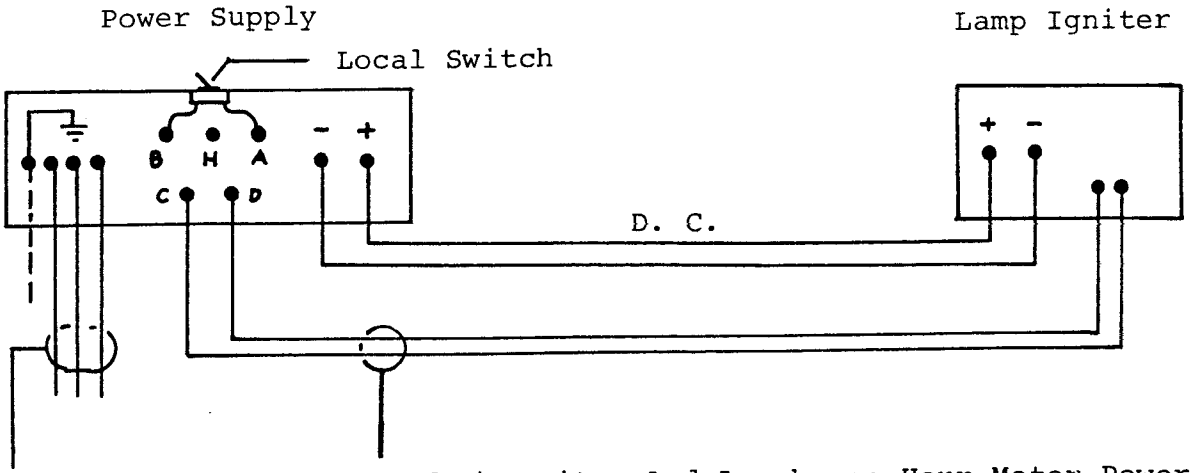
LAMPHOUSE AND POWER SUPPLY
SAFETY INTERLOCK AND
REMOTE CONTROL CONNECTIONS

Date: 3/15/72

All Xetron power supplies are equipped with a "local" ON/OFF switch for controlling the unit. In the simplest installations, the power supply is located directly behind the lamphouse and the "local" switch is used to control the power supply.

FIGURE 1

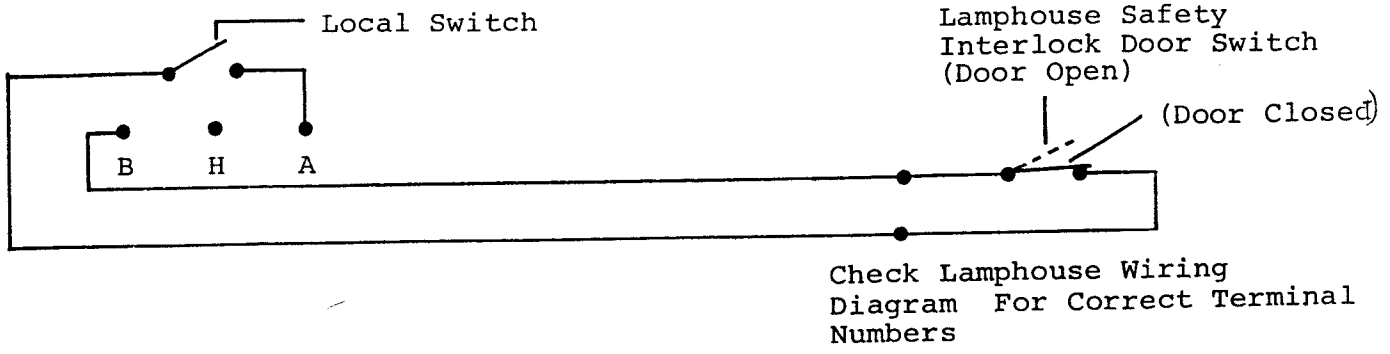


A.C. Power From Booth A.C. Breaker Panel. (See specific power supply schematic)

220V 1 ø Igniter And Lamphouse Hour Meter Power. (Also Powers Exhaust Fan On CX-1600 Lamp And Blower On CX-450 And CX-900) There Is Power On This Pair Only When The Power Supply Is On. Check Lamphouse Wiring Diagram For Correct Terminal Numbers.

Although this type of installation is operational, it leaves out one important feature, the lamphouse door safety interlock switch. This switch must be connected in such a manner that it is impossible to ignite or operate the lamp if the door is open. Such a door operated safety switch is incorporated into all CX-1600, 400X and 4000X lamphouses. The switch is a normally open spring loaded micro switch. The door, when closed, holds the switch closed. This safety switch must be wired in series with the power supply switch as shown in Figure 2.

FIGURE 2



In many installations it is not practical or desirable to locate the power supply adjacent to the lamphouse. In these cases remote control is necessary. All Xetron power supplies can be controlled remotely with either a single pole single throw switch or a normally closed "OFF", normally open "ON" two pushbutton, three wire control.

FIGURE 3

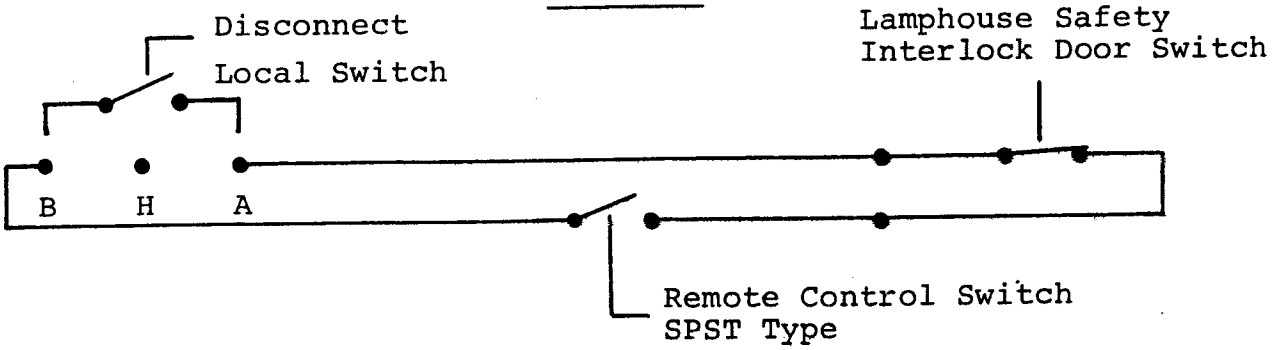
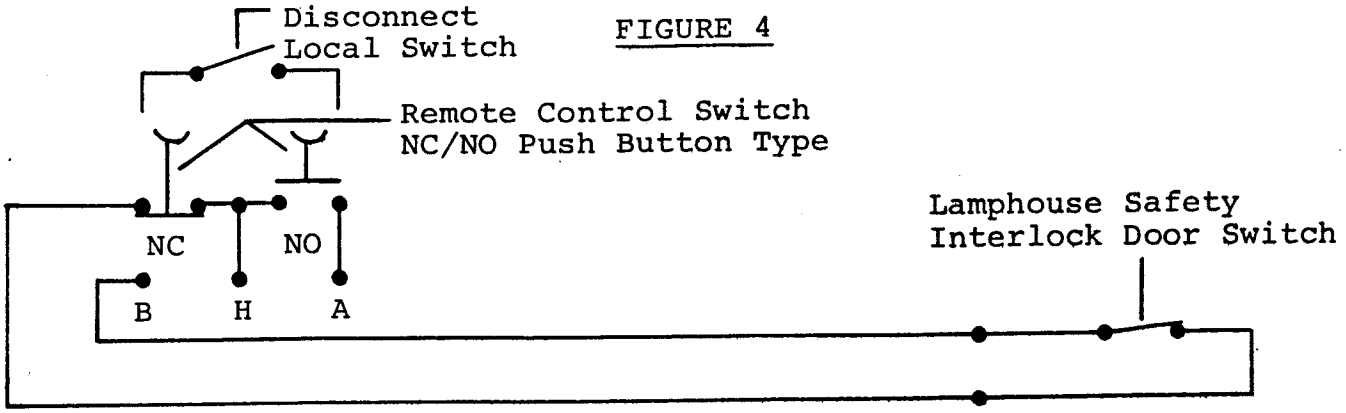


FIGURE 4

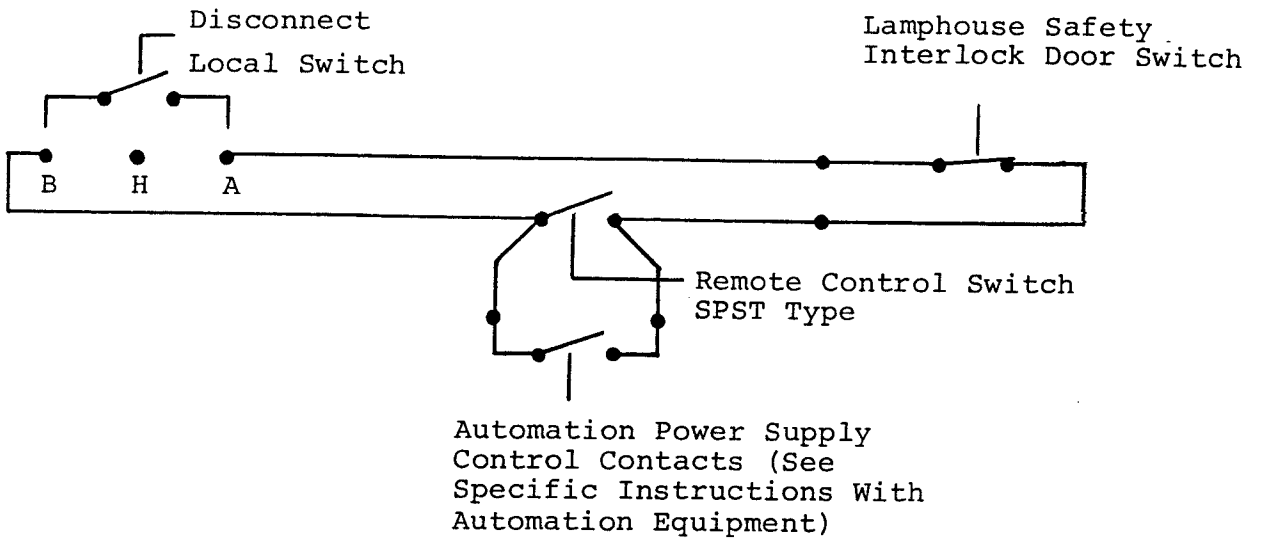


The romote control switch is normally installed on the projector base or beam.

Always connect the door safety switch in series with the "B" terminal on the power supply.

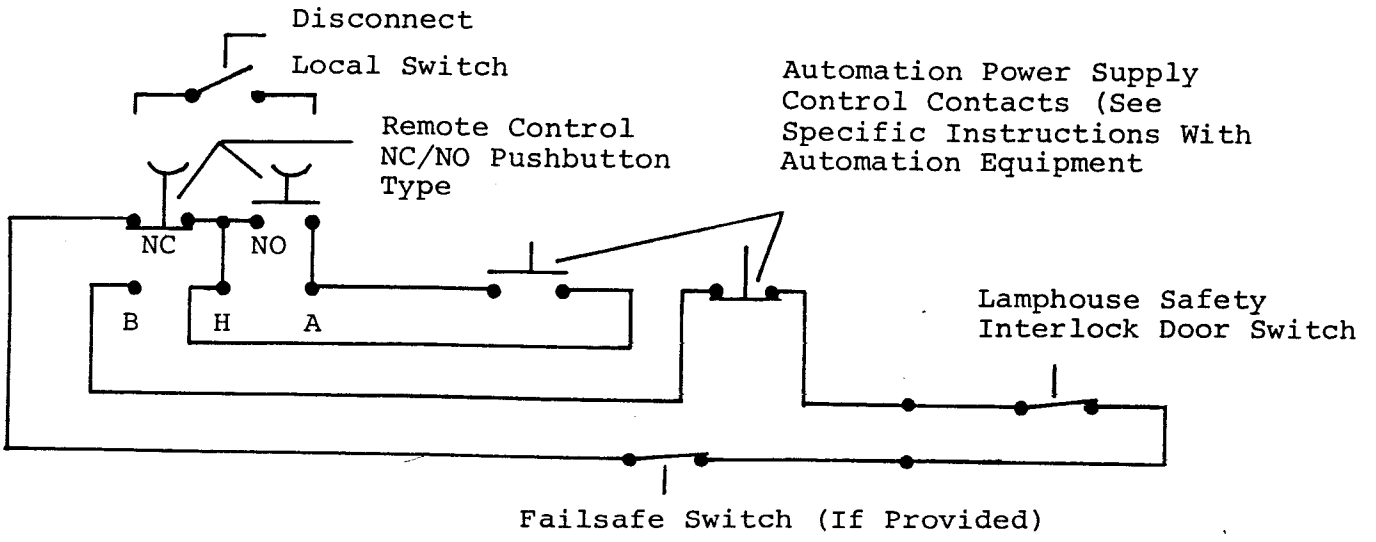
When automation is installed, a single pole single throw type of remote control is normally required by the automation equipment. In effect, this is connected across the remote switch as shown in Figure 5.

FIGURE 5



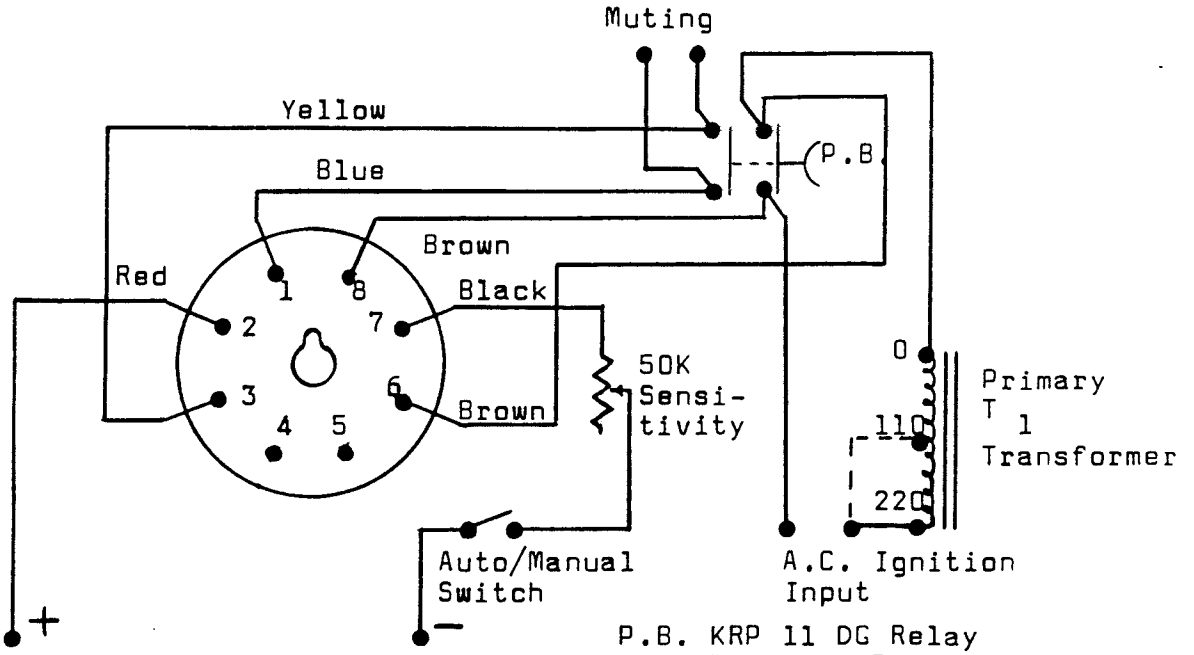
Some automation systems control the power supply with momentary contact switches. Such systems must be connected in conjunction with the NC/NO two push button control.

FIGURE 6



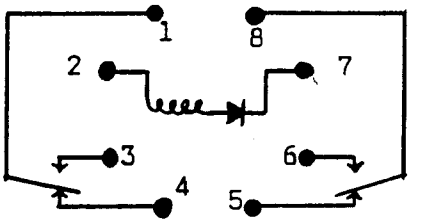
XeTRON A DIVISION OF CARBONS, INC. CEDAR KNOLLS, N. J. 07927	A-104D AUTO STRIKE AUTO/MANUAL DEVICE With special plug in relay equipped with sound muting contacts and reverse polarity protection	Drawing: #7008-D Date: 1/26/72

TOP VIEW OF SOCKET



For Series (Opening) muting, move the yellow wire from terminal #3 to terminal #4.

P.B. KRP 11 DG Relay
With Polarity Protective Diode



INSTALLATION AND TEST PROCEDURE

1. Install the same type of bulb that will actually be used.
2. Connect to power supply (observe polarity).
3. Set switch in autostrike position.
4. Turn Potentiometer completely counter-clockwise (maximum resistance).
5. Turn on power supply. If bulb fails to ignite, slowly turn Potentiometer clockwise until bulb ignites properly-with minimum ignition time.
6. You can now select to use either Automatic or Manual ignition by simply flipping the switch up or down.

SUGGESTED XENON BULBS:

Osram XBO 900W OFR

Christie CXL 900NC

Hanovia CH 900/V

ORC (Optical Radiation) XMV 900V or XM 900 H/V

Philips CSX 900/1000

Action Tungsram XHP 900 OFR

Marble X-Cel MXL 900/F

Ushio UXL-900-0

Xetron XOF 1000 WITH XX-109 ADAPTERS