

# FILM-TECH

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XETRON XHN/XCN SERIES  
HORIZONTAL LAMPHOUSES/CONSOLES  
GENERAL DESCRIPTION

15 JULY 1983  
REPLACES  
1 MARCH 1981

*DIV. OF NEUMADE PRODUCTS CORP. Ten Saddle Rd. Cedar Knolls, NJ 07927 USA Telephone (201) 267-8200*

General Description

This lamphouse, manufactured by Xetron Corporation, has been designed to take advantage of the higher efficiency that can be obtained by using the bulb in the horizontal position. In order to make a trouble-free reliable unit, special attention has been paid to the cooling of the bulb and reflector. A functional control panel having a combination voltmeter/ammeter and hour meter is provided. The addition of a voltmeter is useful for checking the no load voltage of the power supply as well as to enable determination of the actual watts (voltage times current) being consumed by the bulb.

The metal reflector, computer designed and optically corrected for this application, provides a very efficient collection of the energy developed by the Xenon bulb. To facilitate proper cooling, the reflector is coaxially mounted in a metal spinning with air being forced between the outside of the reflector and the inside of the spinning. This lamphouse series has been designed to operate with 1000, 2000, 3000 and 4000 watt Xenon bulbs. The 4000 is longer in size.

All models must be vented. The 1000 and 2000 is supplied with a 6" opening. A 6 3/4" vent is supplied with the 3000 and 4000 watt lamphouse. In the XHN/XCN Series the anode end of the Xenon bulb is supported by a centering device which also acts as the heat sink for the positive end of the bulb. A large airflow in this area also keeps the temperature at a minimum. The 3000 and 4000 watt units are equipped with additional anode cooling. The output of the basic unit blower in the 3000 watt unit is concentrated into the module assembly (In the 4000 watt all air is diverted forward). A large portion is diverted in the forward direction to cool the bulb and reflector. The balance of the air goes through the bottom of the main casting, and is applied, through the main base channel, to the front of the lamphouse. The air vane switch turns off the power supply in case the motor or blower fails to supply the required airflow. All XHN/XCN units include an auto-strike circuit for automated operation. An "auto-manual" switch selects the automated or manual type of operation as may be required. A push button is provided on the control panel for manual ignition. In this design the reflector position is fixed and the bulb is adjusted in vertical, horizontal, and focus positions for proper spot adjustment. These controls are accessible through holes in the operating side door, the rear and the top, using Allen type screwdriver supplied with the equipment.

Osram XBO-1000W/HS OFR, XBO-2000W/H OFR, and XBO-3000W/HS OFR bulbs are recommended for use in this equipment. The XBO-1000W/HS and XBO-3000W/HS are used with adapters. The XBO-2000W/H fits directly in the mount. The Xetron XBO-4000W/HS OFR is recommended for use in the 4000 watt equipment. Caution should be observed that the small adaptor ring, supplied with the 4000 watt lamphouse, be inserted on the negative pin of the XBO-4000W/HS bulb. Otherwise, proper clamping cannot be obtained.

Most HTP type mounts are available as an option in all Xetron Xenon equipment.



## THE XENON BULB

DIV. OF NEUMADE PRODUCTS CORP. Ten Saddle Rd., Cedar Knolls, NJ 07927 USA Telephone (201) 267-8200

### Characteristics

**Caution!** Any Xenon bulb used in motion picture equipment can explode under certain conditions. At room temperature it is under several atmospheres of pressure. When operating in a normal manner this pressure increases considerably and if for any reason the quartz envelope is ruptured, a considerable force is generated and the lamphouse must be designed to contain the impact.

The bulb must always be treated with care--hot or cold. A new bulb is always shipped in a plastic protective jacket which is not removed until the bulb is installed in the lamphouse. Face mask, gloves and other protective clothing required by local codes should always be worn when handling the bulb. The quartz should never be touched with the bare hand as it can leave an oily fingerprint which could damage the bulb.

As a by-product of its operation, some ultra violet red radiation is developed. This also accounts for the ozone being generated. All of the early bulbs generated ozone but after a few years of experience, it was discovered that when the bulb had a certain amount of blackening on its inner surfaces the ozone was not present. We had in effect an ultra-violet filter which absorbed this radiation and prevented the formation of ozone. Practically all of the new bulbs are of the "Ozone Free" type. This means that for some lamphouses now being built it is not necessary to duct the lamphouse to the outside atmosphere. However, wherever possible we always recommend exterior venting.

It is still very important that direct viewing of the Xenon bulb, while it is operating, be avoided unless through a proper viewing glass. Ordinarily, the door interlock devices will make direct viewing impossible. Even the red hot electrodes are emitting infra red radiation and they also should not be viewed while in this state.

### Use Of The Xenon Bulb

As there are no combustion products as the result of the Xenon Arc, only dust removal from the reflector surfaces is recommended every sixty days. With an air flow through the lamphouse, there will be a tendency for dust to collect on the reflector as well as some of the wire leads and insulators. A dry brush should be used to remove this dust on the same sixty day schedule.

Please note that it is always very important to check the polarity of the voltage being applied to the bulb during the original installation or when any change has been made to the power supply equipment. The positive side of the supply must be connected to the anode or larger electrode and there is no substitute for checking this with a voltmeter. This is a standard meter on all Xetron lamphouses.



## THE XENON BULB

*DIV. OF NEUMADE PRODUCTS CORP. Ten Saddle Rd., Cedar Knolls, NJ 07927 U.S.A. Telephone (201) 267-8200*

A reversal will damage the bulb in a few seconds. Also, during the original installation or when a bulb is to be replaced, it is recommended that any glass reflectors (used in vertical type lamphouses) be removed and the bulb operated for thirty minutes at normal current level. This is a precaution against the mechanical failure of a bulb that may have been damaged in shipment.

All connections to the bulb must be clean and tight to reduce localized heating.

When a bulb explodes, some noise is generated and in the case of glass reflectors, they are usually shattered. The quartz and tungsten electrodes will require about ten minutes for complete cooling and no effort should be made to open the lamphouse before this time. After removing the quartz and glass, the electrodes can be unclamped and removed. (If within warranty, these parts and all pertinent information should be returned to the dealer for warranty adjustment.) At this time it should be determined if the internal blower (if so equipped) is working properly to cool the bulb and other components normally. The new bulb should be given the thirty-minute burn test mentioned above before installing any glass reflector.

Most Xenon bulbs are sold with a pro-rated warranty of 1000 to 2000 hours. A bulb will eventually require replacement due to its inability to produce enough light, an unstable operation, or becomes too difficult to ignite. Each time the bulb is ignited, a slight amount of damage is done to the small cathode tip. As the bulb reaches a point near the end of its useful life, the cathode tip is blunted and in effect increases the width of the gap between the two electrodes changing the voltage to current ratio. Also, as the result of a normal operation, the evaporation of the tungsten, which is deposited upon the inner surfaces of the bulb, gradually becomes blacker and blacker and eventually reduces the light output to an unsatisfactory level. As this blackness reaches the maximum, the heat is not radiated properly. The bulb operates at a higher temperature and is more likely to explode.

A bulb may also develop a slow leak. In this case the screen brightness will usually decrease in a matter of a few minutes and reach a point of practically no lights on the screen despite the fact that the ammeter reading may be near normal. Such a bulb should be turned off immediately, cooled to room temperature and removed. It will probably be milky-gray inside and if operated longer in this condition, will fail completely but is unlikely to explode as the pressure has been reduced to a low level.

A bulb no longer capable of satisfactory operation should be removed with the regular precautions, carefully placed in its protective cover and broken by dropping from a sufficient height. This applies only to a bulb out of warranty. The bulb should never be disposed of as regular garbage.



XHN/XCN  
SERIES LAMPHOUSES  
ALIGNMENT

1 JUNE 1983

*DIV. OF NEUMADE PRODUCTS CORP. Ten Saddle Rd, Cedar Knolls, NJ 07927 U.S.A. Telephone (201) 267-8200*

Using the Xetron "Cross Hairs" alignment tool, align the lamphouse to the projector head. There are six pieces in the aligning set as follows:

1. Dummy lens
2. Metal "Cross Hairs" tube used in dummy lens
3. Reflector front plug (10" diameter)
4. Reflector rear taper plug (2 1/4" diameter)
5. Hollow plastic "Cross Hair" rod
6. Retaining nut

Install the dummy lens in the projector lens mount. Slide the metal "Cross Hair" tube through the dummy lens and through the aperture. Install the two plastic discs in the front and rear of the reflector (through opening in main casting) with the plastic "Cross Hair" rod passing through both of them-threaded section to the rear. Screw the retaining nut onto the threaded end of the "Cross Hair" rod. You will note that the plastic "Cross Hair" rod now defines the optical axis of the reflector. With the basic unit in operating position and the rear of the transparent "Cross Hair" rod back lighted (usually with a work light) you can now align the lamp. Adjust the lamp horizontally and the projector vertically until, by sighting through the front of the metal "Cross Hair" tube at the front of the projector, all three "Cross Hairs" are superimposed. Remove aligning tool.

#### Installation Of Bulb

It is recommended that the three bulb controls not be adjusted at this time as they should be satisfactorily adjusted at the factory for initial lamphouse alignment (center of their travel).

After aligning the lamphouse with the projector, the bulb can be installed. The bulb must be handled very carefully and a special effort made to prevent fingerprints or smears on the quartz surface. If they do appear, use Xekleen and a clear rag for removal. After inserting the negative end (small electrode) of the bulb in the rear mount and tightening the set-screws, the front spider assembly (XCN-1000 through 3000 only) is fitted onto the positive bulb terminal making sure the spider is located on its 3 teflon mounts. The operating side top leg of the spider terminates the positive cable. The connection, plus the set-screws at each bulb mount, must be securely fastened to prevent any contact trouble.

**WHEN INSTALLING THE 3000 OR 4000 WATT BULBS, IT IS MOST IMPORTANT THAT ONE OF THE OPENINGS (PLUS MARKS OR ROUND HOLES, ETC.) IN THE METAL NECK PORTION OF THE BULB IS AT THE BOTTOM SO THAT MAXIMUM BENEFIT CAN BE OBTAINED FROM THE AIR TUBE.**



INSTALLATION AND/OR REPLACEMENT  
OF XENON BULBS IN  
XHN/XCN-1000/3000 SERIES LAMPHOUSES

15 JULY 1983

*DIV. OF NEUMADE PRODUCTS CORP. Ten Saddle Rd. Cedar Knolls, NJ 07927 USA Telephone (201) 267-5200*

1. All power must be off. Xenon bulbs must be handled only at room temperature.
2. Unlock operating side door with key provided.
3. Use protective face shield and other required clothing.
4. Remove cover plate (Item L) from main support casting held by two thumb screws (Item A) see Fig. 1,2 Drawing #XL-023.
5. Loosen large black knob (Item B) which permits you to swing basic unit toward you. Using Allen tool 3/32 supplied with the lamphouse, loosen the four Allen set screws (Item C) in the front spider support structure on the positive end of the bulb (Item F, Fig. 2). Holding metal portion of the positive end of the bulb with your left hand, allowing it to rest along side the opened lamphouse door. Do not allow the bulb to drop in its mount. Now grasp the positive end of the bulb with the right hand, which will free the left hand so that the 3/32 Allen tool can now be used to loosen the two (or four) Allen set screws (Item D) in the negative nickel plated bulb holder (Item E). Remove bulb from negative bulb holder by carefully pulling straight out from the device as the bulb is held by the right hand. (If this is a new installation a wooden dowel is placed for shipping purposes only and it should be removed prior to attempting to install a bulb).
6. Holding the positive end of the bulb firmly in the right hand remove the shipping jacket and place the negative end of the bulb through the rear reflector opening (Item J) inserting it into the negative bulb holder (Item E)--tighten set screws. Slide the spider onto the positive end of bulb while making sure the 3 guides of the spider align properly in the center of their Delrin guides (Item K). Tighten set screws in spider.
7. Swing the basic unit back into its original position and tighten Knob B. Replace access cover L, reinstall lamphouse door and lock securely.



XETRON XHN/XCN SERIES  
HORIZONTAL LAMPHOUSES/CONSOLES  
INSTALLATION INSTRUCTIONS

15 JULY 1983

DIV. OF NEUMADE PRODUCTS CORP. Ten Saddle Rd. Cedar Knolls, NJ 07927 U.S.A. Telephone (201) 267-8200

### Operation

With the bulb installation completed, set the auto-manual switch in manual position, and turn ON the ON/OFF switch. This starts the internal blower which operates the airflow switch. This in turn operates the magnetic contactor in the power supply providing all safety switches are properly closed. Check Voltmeter For Proper Polarity. It is also recommended that with the initial installation an external voltmeter be used also as a double check. Now push the manual pushbutton for ignition, set amperage at low setting.

Do not install any lenses at this time.

### Optical Alignment

You should now be viewing a white light with a series of concentric circles and black center. If the round black pattern on the screen seems to be symmetrical, but not centered, then we suggest that the complete projector be aligned to the screen. With proper projector alignment, if the round black pattern is in the center of the screen but seems to be "egg" shaped (and still clearly defined) then it probably indicates that the horizontal or vertical bulb controls need to be slightly readjusted. However, if the center black pattern seems to be distorted and either side, top, or bottom of the concentric ring field of light appears to be diffused, then it will probably still indicate a mechanical lamphouse misalignment to the projector (even though the aligning rods may have been used).

To confirm an optical misalignment, insert the lens, and projecting 10 seconds ON and 10 seconds OFF at low amperage, again check the alignment of the lamphouse. You should now have a bright center with 4 equally dark corners. If the bright area is displaced to the top, bottom, or either side, do not move the reflector adjustments as this proves a further mechanical lamphouse alignment problem suggested above. If the displaced bright area appears to be "cut in half" by the edge of the screen move the lamphouse approximately 1/4" in the direction of the bright area. For instance, if the bright area is at the right, move the lamphouse to the right, etc. It may be necessary, in severe cases, to realign the projector head.

After centering the bright area, move the focus control adjustment to make the spot on the aperture larger until an even or satisfactory field of light is obtained. Please note that the four dark corners should disappear evenly. Raise current to operating level of 14 to 18 footlamberts.

### Xenon Bulbs

All instructions for the proper use of Xenon lamps type XBO are advised in the separate Osram information included in this manual.

**C A U T I O N** Do not attempt to compensate for severe lamphouse to projector misalignment by moving the vertical or horizontal adjustment controls to their maximum or near maximum adjustment. If you do, it is entirely possible you may overheat and distort a portion of the reflector, thus voiding any reflector warranty.

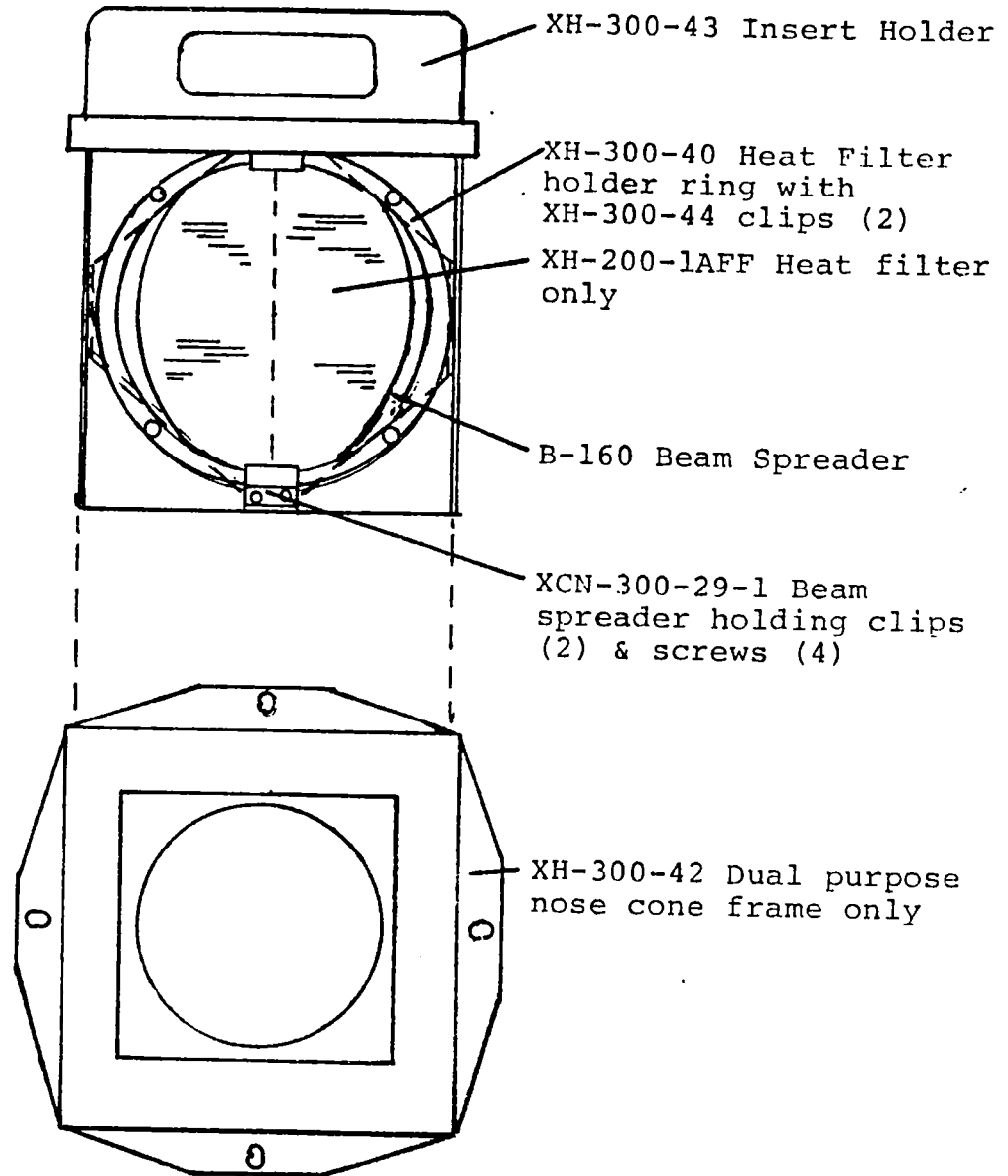


XETRON XHN/XCN SERIES  
HORIZONTAL LAMPHOUSE/CONSOLE  
HEAT FILTER/BEAM SPREADER  
ASSEMBLY

JULY 1983

XETRON CORPORATION, Ten Saddle Rd., Cedar Knolls, NJ 07927 U.S.A. Telephone (201) 267-8200

View is looking at front of lamphouse-- filter is always positioned toward lamphouse, beam spreader toward projector.



NOTE: Regardless of the entry position of XH-300-43, from the top or the side, the split seam in the heat filter must be vertical and the thin section of the beam spreader must be vertical.

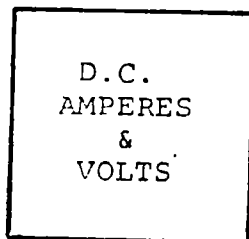
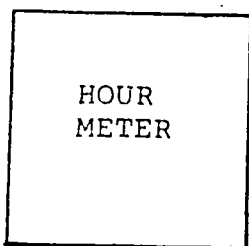




XCN-35 CONSOLE  
LAMPHOUSE  
CONTROL PANEL

21 NOVEMBER 1983

XETRON CORPORATION, Ten Saddle Rd., Cedar Knolls, NJ 07927 U.S.A. Telephone (201) 267-8200



- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10

1. Power Indicator.
2. Auto/Manual Switch-Selects Automatic or Manual Ignition.
3. Manual Start-Manual Ignition Pushbutton.
4. Amperes/Volts Switch-Press down to read D.C. volts on dual meter.
5. Xenon Fuse-5 Ampere for lamphouse control, ignition & blower.
6. Changeover Fuse-Changeover fuse size as required.
7. Frame-Frame lamp fuse size as required.
8. Exciter-Exciter lamp fuse size as required.
9. Motor-Projector motor fuse size as required.
10. Auto-Automation fuse 2 Ampere.

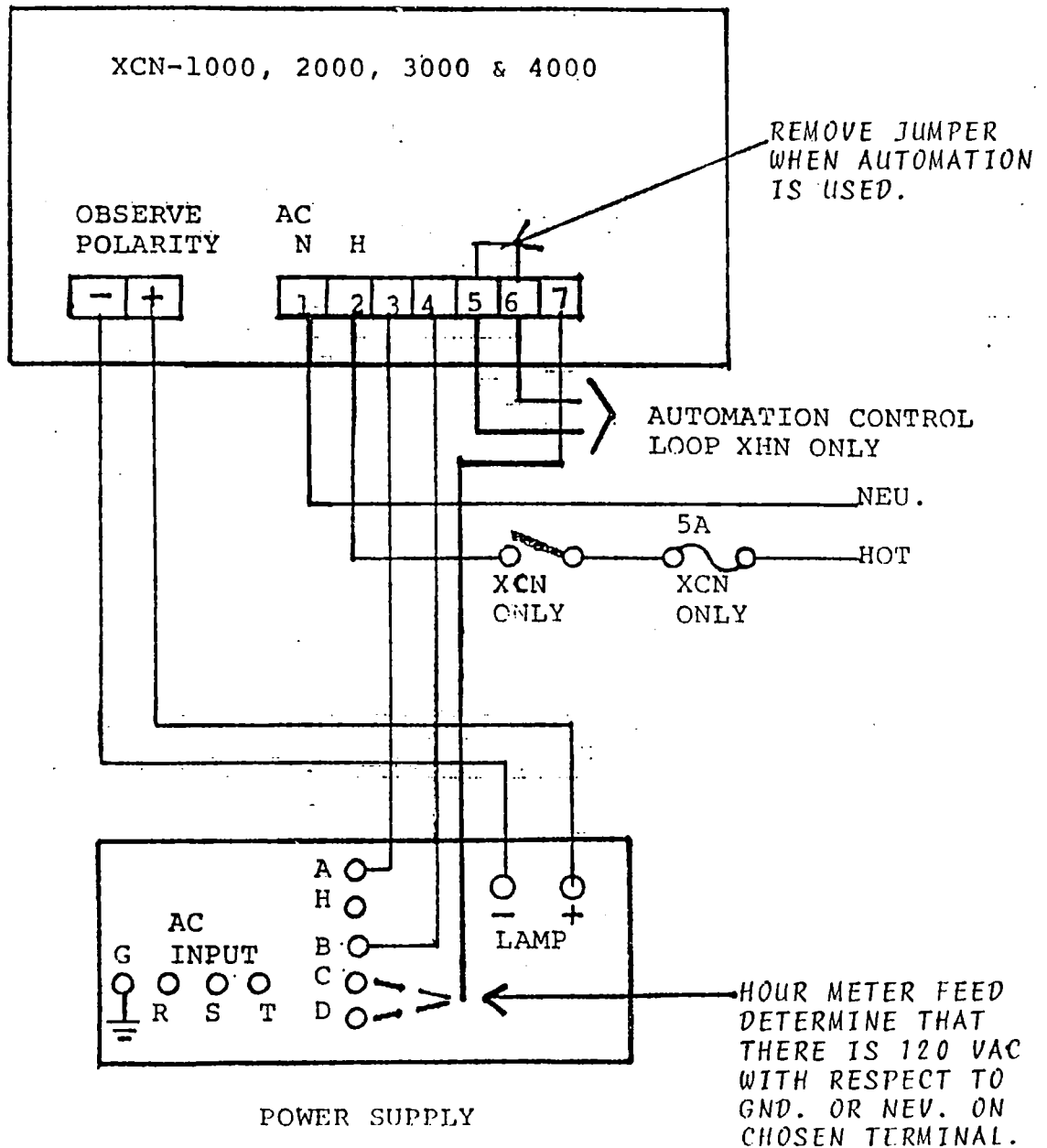
XCN-35 CONSOLE



XETRON XHN/XCN SERIES  
 HORIZONTAL LAMPHOUSE/CONSOLE  
 TERMINATION

31 OCTOBER 1986

DIV. OF NEUMADE PRODUCTS CORP. Ten Saddle Rd, Cedar Knolls, NJ 07927 U.S.A. Telephone (201) 267-8200

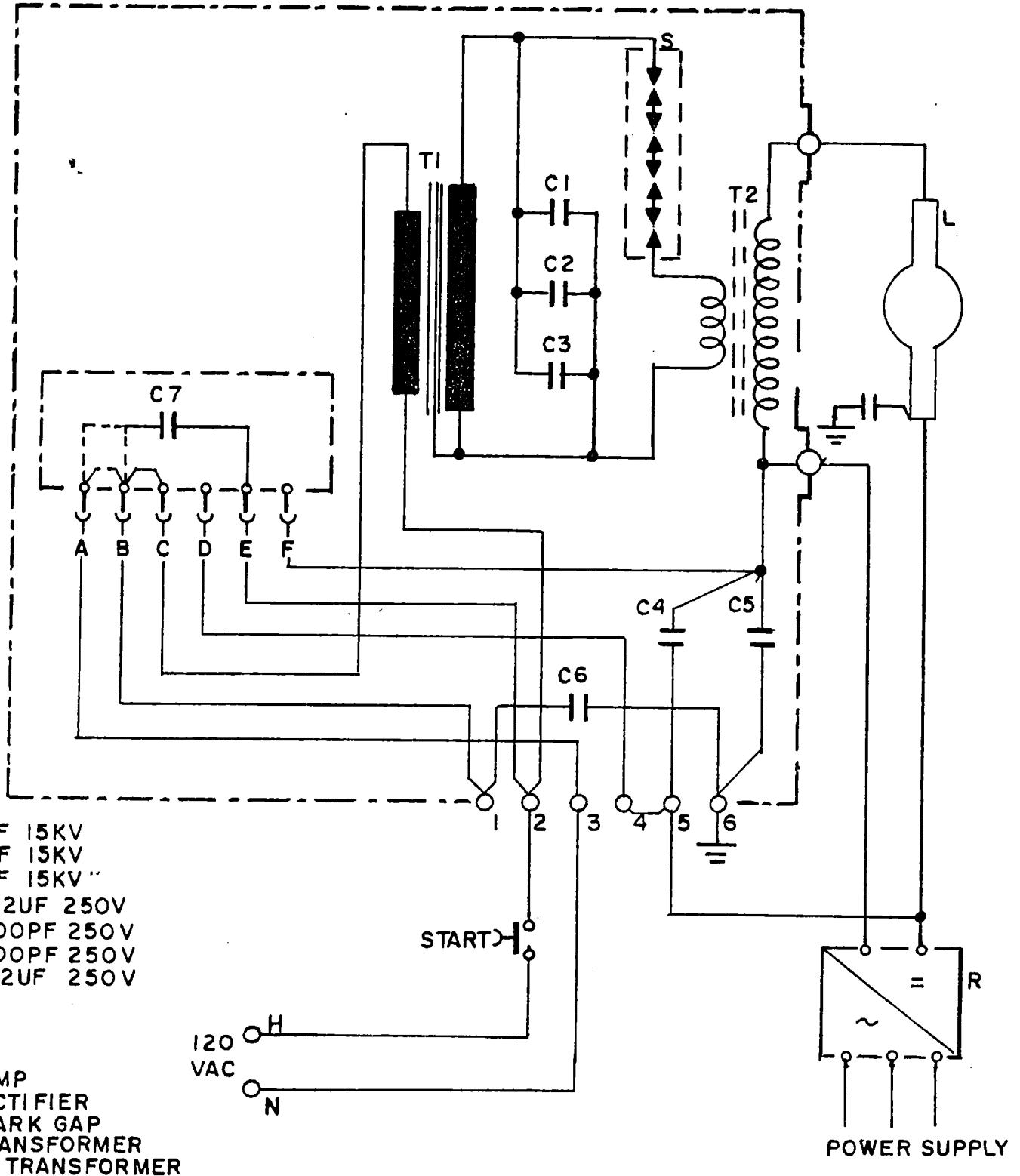




XH-270B-HX-470B  
IGNITER SCHEMATIC

NOVEMBER 10, 1983

XETRON CORPORATION, Ten Saddle Rd., Cedar Knolls, NJ 07927 U.S.A. Telephone (201) 267-8200



- C1 .1UF 15KV
- C2 .1UF 15KV
- C3 .1UF 15KV
- C4 .022UF 250V
- C5 2200PF 250V
- C6 2200PF 250V
- C7 .022UF 250V

- L LAMP
- R RECTIFIER
- S SPARK GAP
- T1 TRANSFORMER
- T2 HT TRANSFORMER



**XETRON XHN/XCN SERIES  
HORIZONTAL LAMPHOUSE/CONSOLES  
SERVICE**

15 JULY 1983  
REPLACES  
1 MARCH 1981

*DIV. OF NEUMADE PRODUCTS CORP. Ten Saddle Rd, Cedar Knolls, NJ 07927 USA Telephone (201) 267-8200*

Due to the large volume of air passing over the bulb and reflector, cleaning must become a routine, especially when in a dusty location. Clean the reflector with XeKleen. Even in a dusty booth we would not expect this to be done very often. Perhaps every 60 days. At the same time the condition of the bulb should be observed. If after 500-600 hours, the bulb is blackened along its top surfaces due to tungsten deposit, the holding screws should be loosened and the bulb rotated 180 degrees in order to prevent any great concentration of this blackening effect.

The bulb should always be handled with caution. At room temperature it is under a few atmospheres of pressure but at operating temperature the internal pressure increases considerably. Always wait until the bulb is reduced to room temperature before working inside the lamphouse or attempting to change the bulb. Always wear face mask and other protective clothing when working in the lamphouse or handling a bulb.

The starter unit is necessary to develop a high voltage (approximately 50KV) to ionize the gas in the bulb. This voltage, plus a considerable amount of power stored in the output capacitor(s) of the power unit, discharged at the no load voltage, is responsible for the initial current flow thru the bulb. An open capacitor in this position may result in a very difficult or impossible strike.

In case of a bad flicker on the screen, this can best be checked with the white light on the screen for a period of not more than ten seconds with the shutter open. If a flicker appears, it is probably due to one of the three phases to the power supply being open. It will also show up on the lamphouse volt meter as the no load DC open voltage will read about 50 volts. This can be checked at the distribution panel circuit breakers or with a voltmeter at the input terminals of the power supply. It is very important the the power supplies be fused according to the information in the power supply manual relating to a particular type of power supply.

Also please note on the power supply drawing that it becomes impossible to operate the power supply magnetic switch if the phase supplying the power to its coil is missing.

The recommended screen brightness is 16 +/- 2 foot lamberts. If it is in excess of 20FL a bright sky scene will appear to flicker. If below 10FL the contrast and color saturation will suffer.



XETRON XHN/XCN SERIES  
HORIZONTAL LAMPHOUSE/CONSOLES  
TROUBLE SHOOTING

15 JULY 1983

*DIV. OF NEUMADE PRODUCTS CORP. Ten Saddle Rd., Cedar Knolls, NJ 07927 U.S.A. Telephone (201) 267-8200*

The ON/OFF switch and pilot light indicates when the system is ready for operation. If the auto-manual switch is on auto and the bulb does not ignite, the first thing to observe is the volt meter. If it does not read in excess of 70 volts, the power supply is not ON or not functioning properly. Turn the ON/OFF switch on the lamphouse to OFF, then ON. When this is done, you should hear the magnetic switch in the power supply operate. If not, the circuit breakers at the distribution box should be checked. The magnetic switch will not operate if the door switch or the air switch is open. Also remember that if the auto-manual switch is on manual, the pushbutton switch must be operated for ignition.

By opening the lamphouse dowser, the spark discharge within the bulb can be observed in the projector observation glass or on the screen. A very high quality IREM starter, Part #XH-270-C is used in the Xetron lamphouse and consoles. It is a totally encapsulated unit except for the spark gap.

A blown 5A fuse would be evident as the blower, starter, pilot lamp and hour meter would be inoperative.

All DC connections must be tight and clean to prevent heating and voltage drop. This includes the set screws which hold the bulb in place. The input leads, the shunt, and bulb terminals should be checked at routine intervals to insure tightness. It is also good maintenance procedure to tighten the screw connections on TB-1 and the starter two or three times a year.

The autostrike relay is located inside the console or lamphouse. If it appears to be in trouble, it can be bypassed when the auto/manual switch is in manual. This relay operates on the high value of no load voltage developed by the power supply. Immediately after ignition, this voltage drops to 20-25 volts, depending upon the type bulb used, thus the relay cannot remain in its closed position due to the lower voltage.

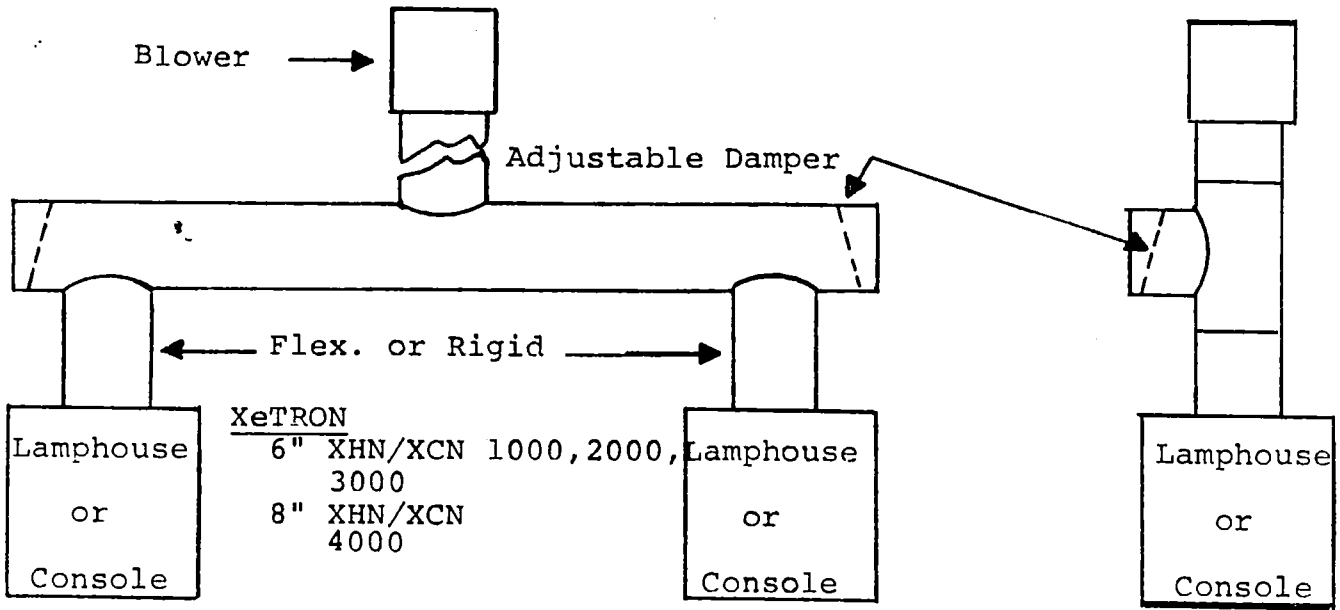
The piece of nickel-nichrome wire on the bulb makes it easier to ignite and should not be removed. It can also aid in reducing ignition noise in the sound in installation with this problem. Also, by using 3 more wires, positioned at 90 degrees, ignition noise can sometimes be further reduced.



XETRON XHN/XCN  
LAMPHOUSE  
VENTILATION REQUIREMENTS

1/4/84

*XETRON CORPORATION, Ten Saddle Rd., Cedar Knolls, NJ 07927 U.S.A. Telephone (201) 267-8200*



XeTRON  
6" XHN/XCN 1000, 2000, 3000  
8" XHN/XCN 4000

*	CFM Air Delivery - Free Air	<u>CFM+</u>
	1000 to 2000 watt Vertical or Horizontal - Grainger Blower #7C039	1005
	2000 to 3000 watt Vertical or Horizontal - Grainger Blower #7C647	1180
	4000 to 6500 watt Vertical or Horizontal - Grainger Blower #7C648	2060

No internal lamphouse measurements are necessary - XeTRON XHN/XCN type lamps have blowers with fixed output. Upon final installation and original testing, if lamphouse will not shut down by ON/OFF switch on lamphouse, it will probably mean the main exhaust blower is holding the air flow switch closed because of excessive air movement. Adjust dampers so lamphouse will shut down within 4 seconds after turning off ON/OFF switch.

\* Suggested meter - Alnor Velometer Jr., Electro-Tech Equipment Co., 56-02 Roosevelt Avenue, Woodside, Long Island, New York.

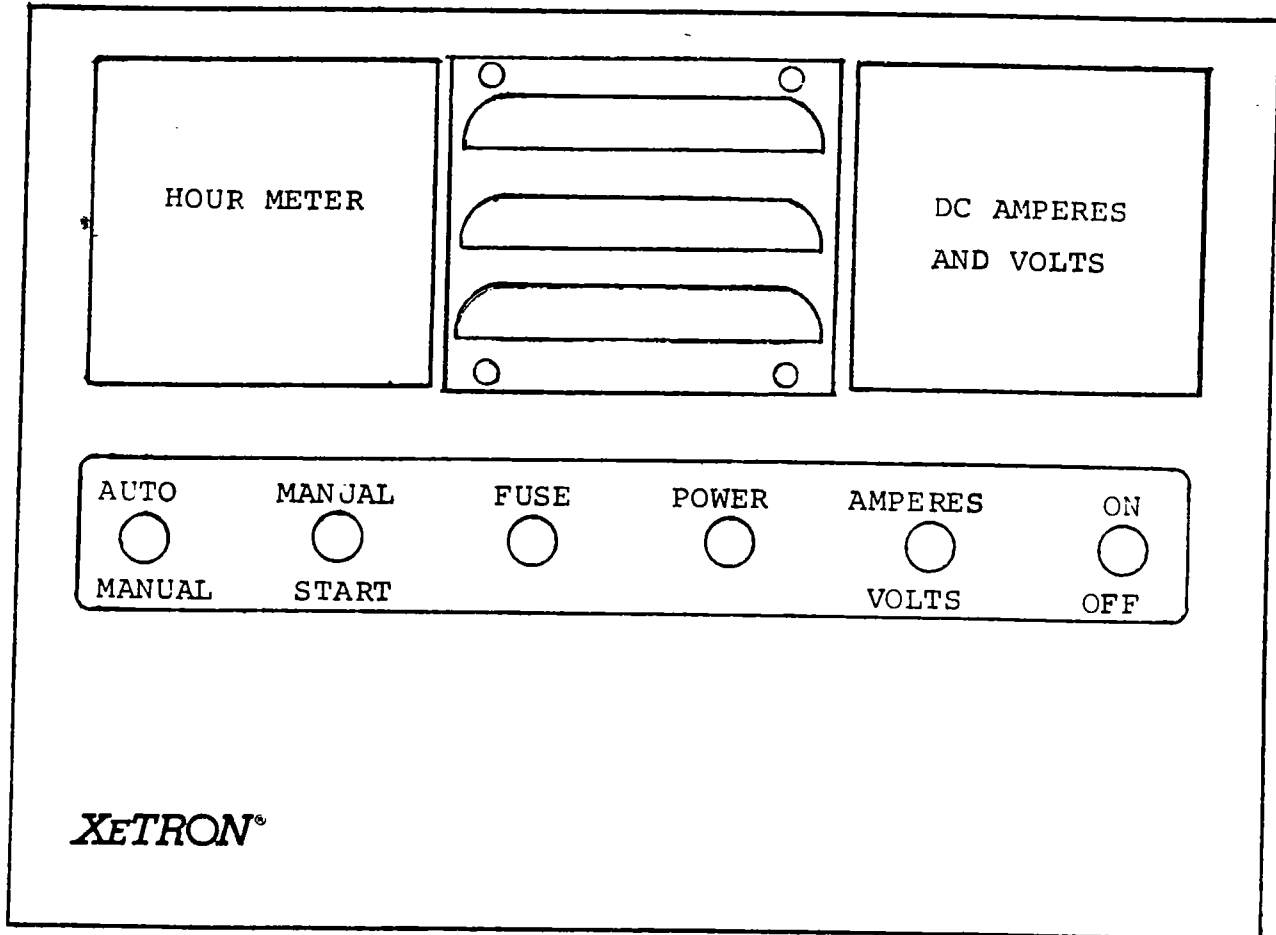
+ 2 Machine Installation



XHN SERIES LAMPHOUSE  
CONTROL PANEL

DATE: 2/6/81

XETRON CORPORATION, Ten Saddle Rd., Cedar Knolls, NJ 07927 U.S.A. Telephone (201) 267-8200



THE FOLLOWING CONTROLS ARE PROVIDED

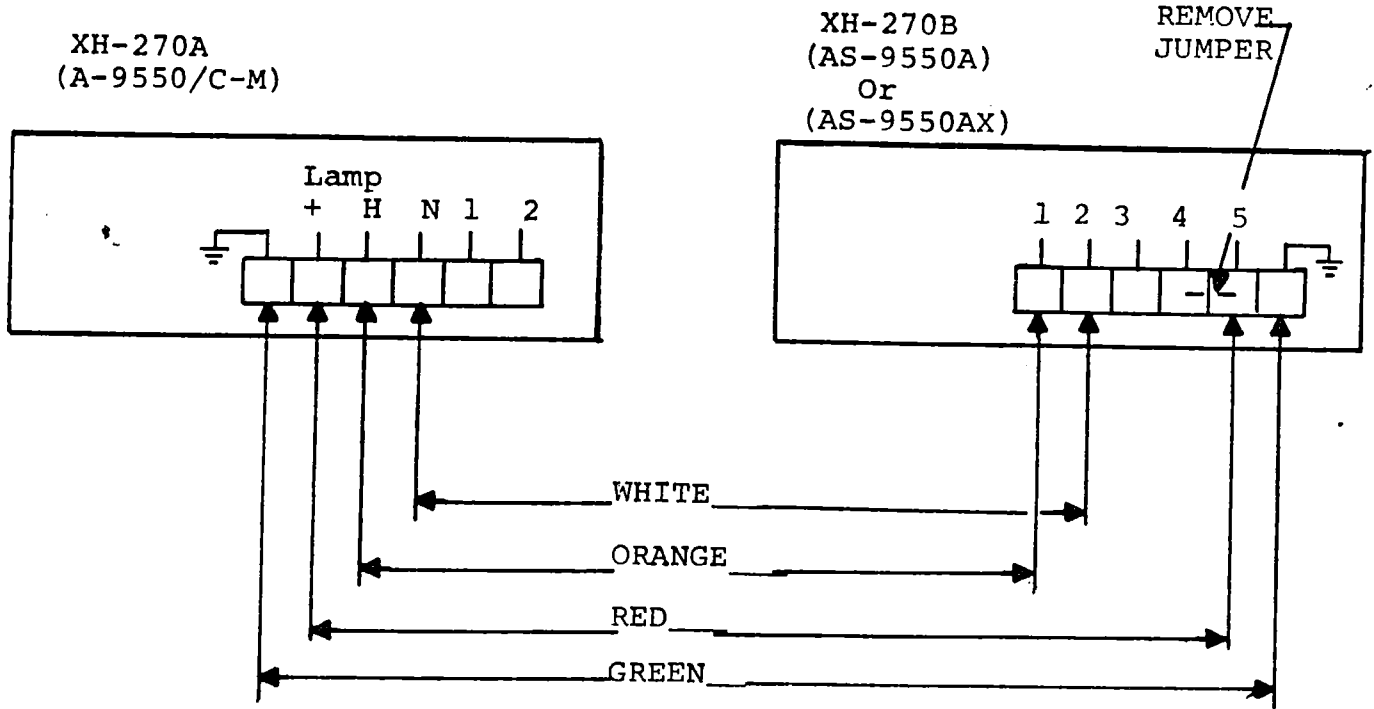
1. Auto-manual switch. Normally in auto position when used with automation equipment.
2. Manual start. Push button switch to operate starter when auto manual switch is in manual.
3. 5 Ampere fuse for blower, igniter, pilot lamp and hour meter.
4. Power indicator. Neon bulb indicating power is available for the system.
5. DC amperes and volts meter switch spring loaded, operated to read volts.
6. On-Off switch. Supplies power to system from 120 volt source.



IGNITER REPLACEMENT  
XHN AND XCN LAMPHOUSES  
LAMPHOUSES/CONSOLES

DATE: 14 DEC. 1983  
DWG. #18121A

XETRON CORPORATION, Ten Saddle Rd., Cedar Knolls, NJ 07927 U.S.A. Telephone (201) 267-8200



The current IREM igniter is type AS-9550A. The AS-9550A replaces directly the original A-9550/C-M by observing the above illustrations. Be sure to remove jumper (if any) between terminals 4 and 5 of the AS-9550A.

The A-9550/C-M interchanges directly with the AS-9550A, By observing the modified interface.



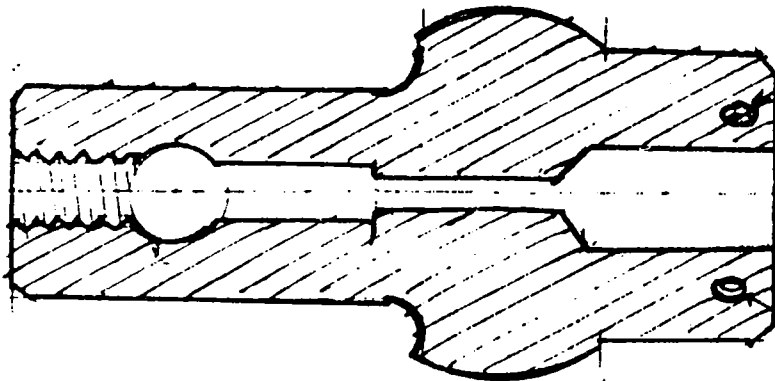


**XETRON®**

NEGATIVE BULB HOLDER  
STANDARD & MODIFIED  
XH-260-10A (ACTUAL SIZE)

21 DECEMBER 1982

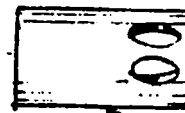
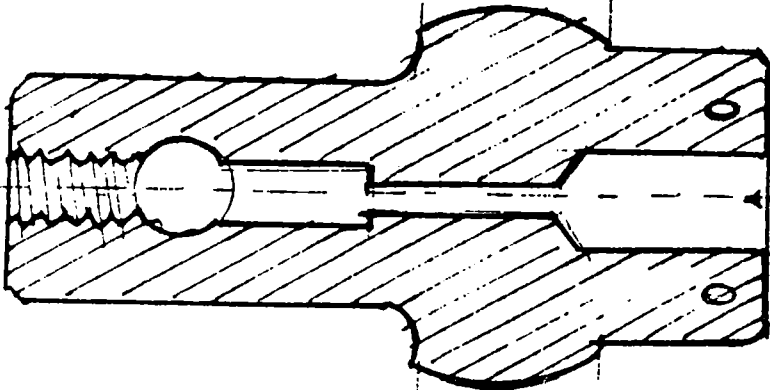
XETRON CORPORATION, Ten Saddl Rd, Cedar Knolls, NJ 07927 U.S.A. Telephone (201) 267-6207



SETScrew

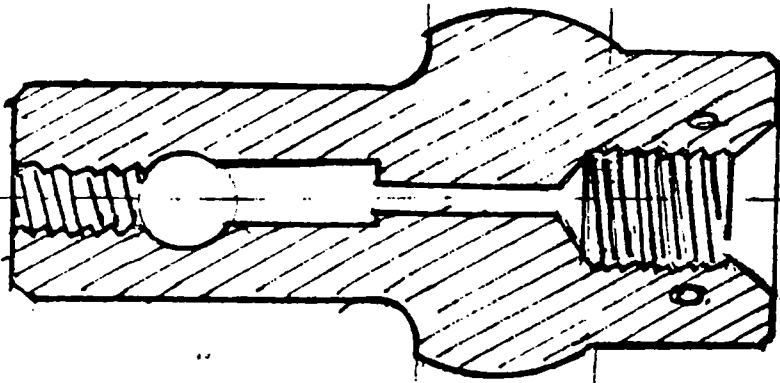
STANDARD  
1000, 2000, 3000  
XH-260-10A

SET SCREW



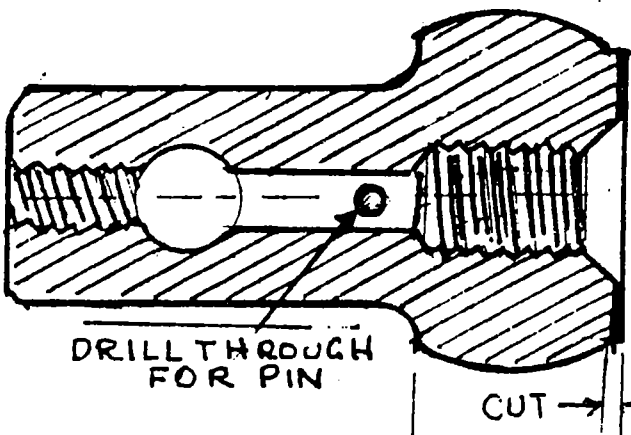
STANDARD  
4000-WITH  
ADAPTOR  
XH-260-10A

ADAPTOR  
XH-460-32



CHAMFER  
82°

HTP 2000  
DRILL 1/2" D  
TAP 14 MM THREAD  
XH-260-10A-7



CHAMFER  
82°

HTP 3000  
DRILL 1/2" D.  
TAP 14 MM THREAD  
XH-260-10A-8

DRILL THROUGH  
FOR PIN

CUT →  $\frac{3}{32}$



**XETRON®**

XH, XHN, XHC & XCN

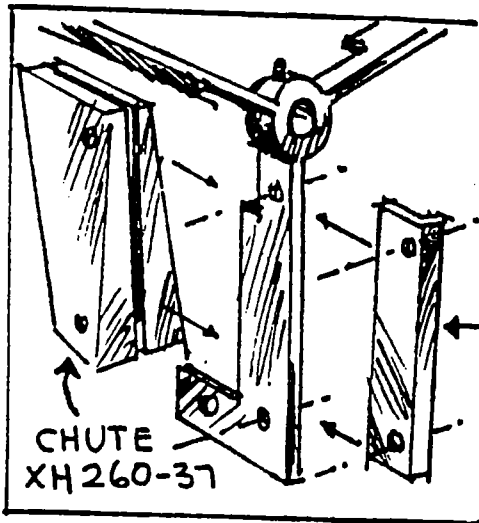
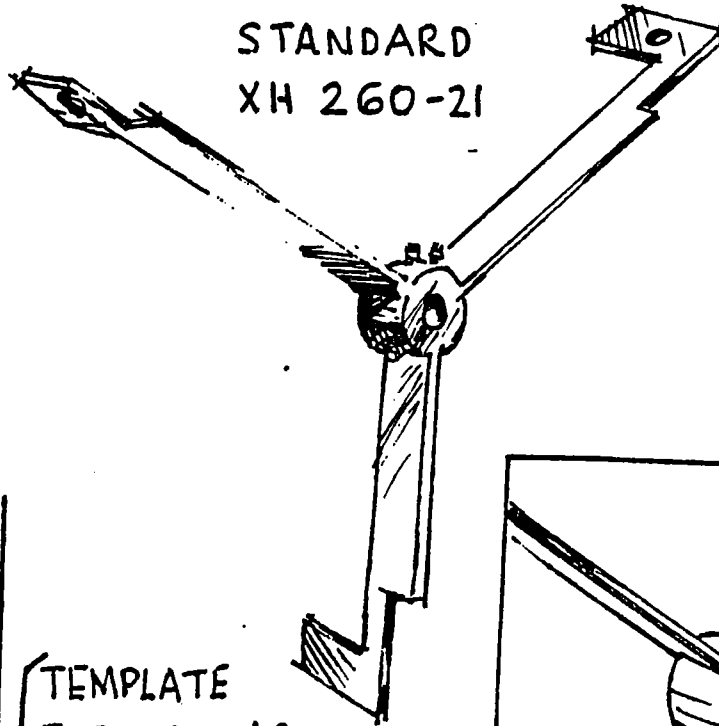
LAMPHOUSE SPIDER

1000, 2000, 3000 WATT

21 DECEMBER 1982

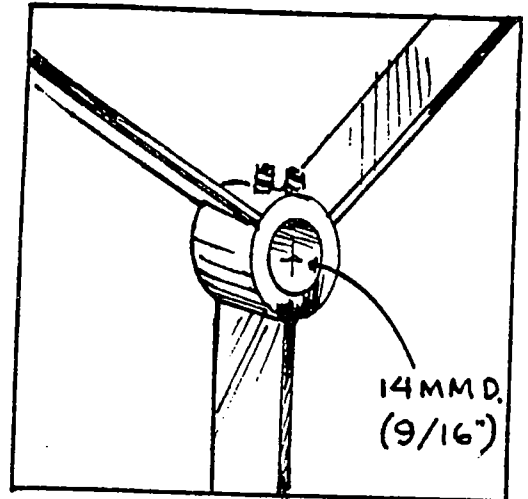
XETRON CORPORATION, Ten Saddle Rd., Cedar Knolls, NJ 07927 U.S.A. Telephone (201) 267-8200

STANDARD  
XH 260-21



CHUTE  
XH 260-37

TEMPLATE  
FOR LOCATING  
POSITION OF DRILL  
HOLES FOR CHUTE

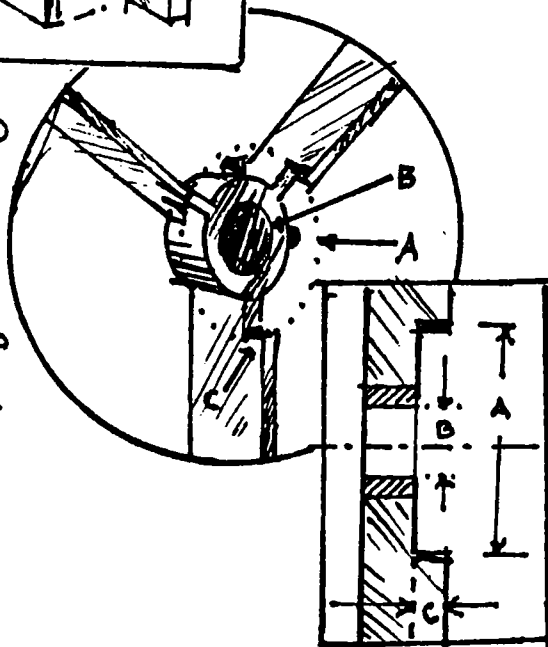


14MM D.  
(9/16")

MODIFIED FOR  
1, 2, & 3000 HTP

HTP 3000  
MODIFIED  
WITH  
CHUTE

A - 1 1/4" D.  
1/4" DEEP  
B - 9/16" D.



SPIDER PART NUMBERS for  
XHN 1000, 2000 & 3000  
LAMPHOUSES

STANDARD FOR XHN 2000  
No. XH 260-21

MODIFIED FOR XHN 1000  
No. XH 260-21-HTP1

MODIFIED FOR XHN 3000  
No. XH 260-21-HTP3

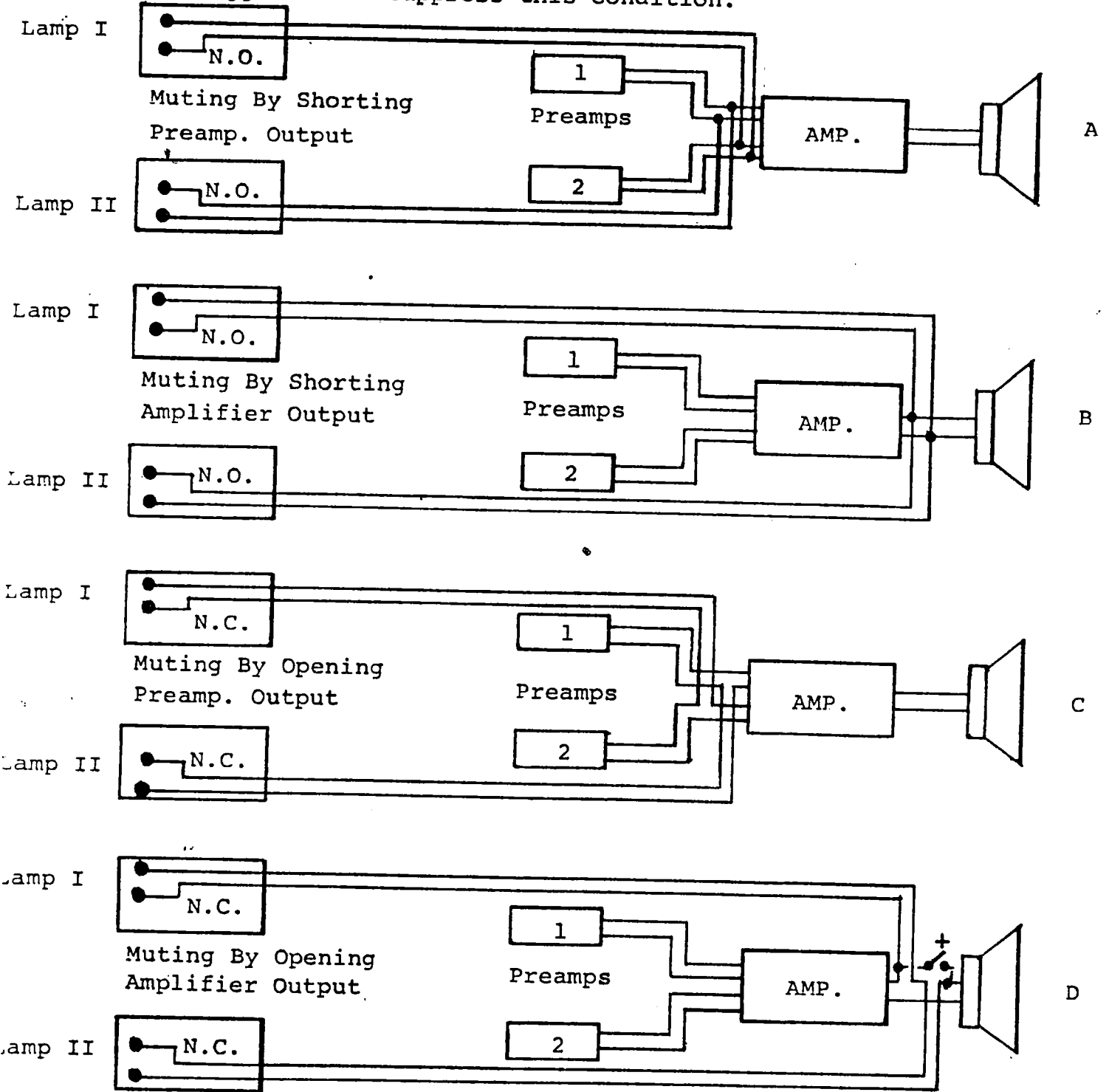


XHN/XCN  
SUGGESTED CIRCUITRY  
FOR SOUND MUTING  
WHEN NECESSARY

JULY 1983

XETRON CORPORATION, Ten Saddle Rd., Cedar Knolls, NJ 07927 U.S.A. Telephone (201) 267-8200

If Xenon strike noise invades the sound, the following circuits are suggested to suppress this condition.



\*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.

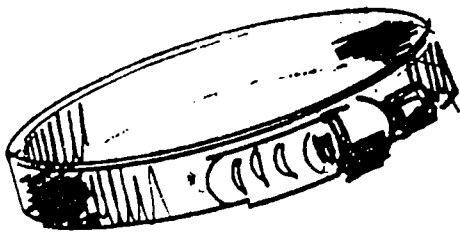


**XETRON®**

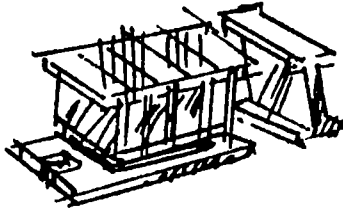
XHN LAMPHOUSE PARTS

21 DECEMBER 1982

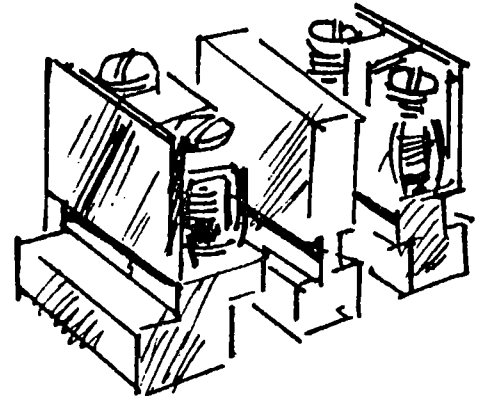
XETRON CORPORATION, Ten Saddle Rd., Cedar Knolls, NJ 07927 U.S.A. Telephone (201) 267-8200



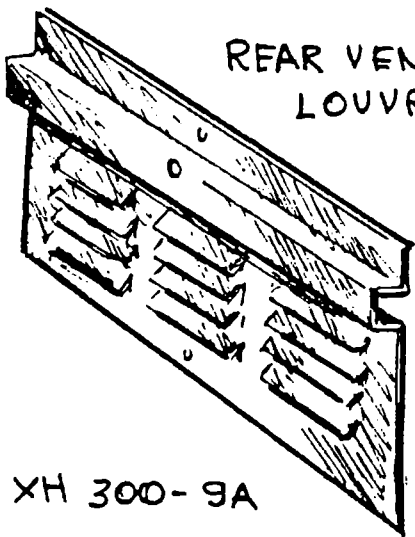
3 1/2" HOSE CLAMP  
XH 220-3



A.C. TERMINAL BLOCK  
XH-250-10  
CENTER PIECE  
XH 250-9

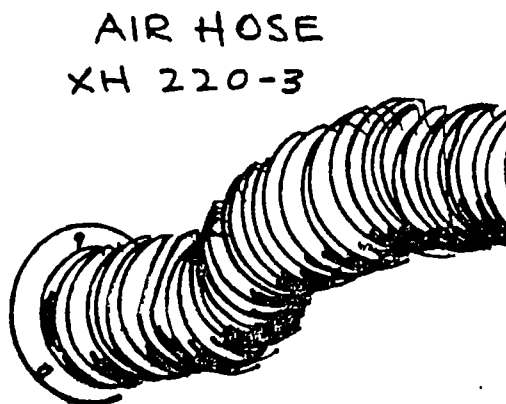


D.C. TERMINAL BLOCK END  
XH 250-8  
CENTER PC. XH 250-7



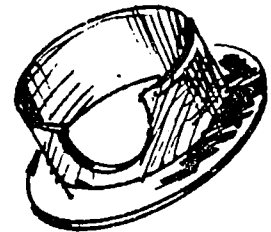
REAR VENT  
LOUVRE

XH 300-9A

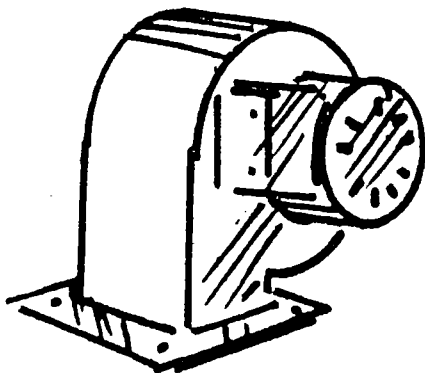


AIR HOSE  
XH 220-3

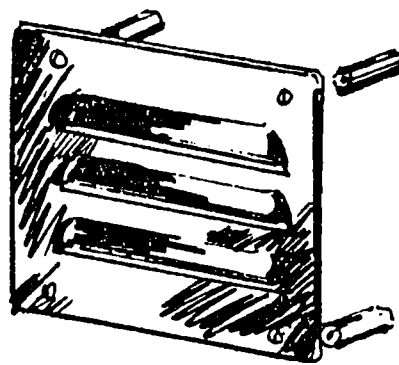
MOUNTING FLANGE  
XH-220-2



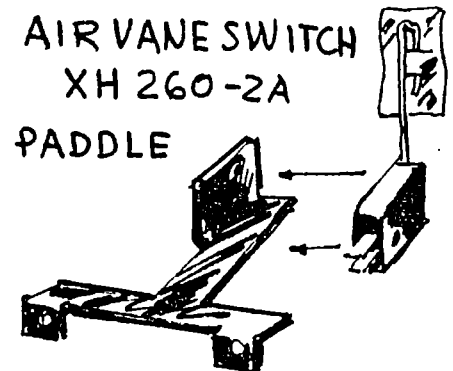
AIR CUP  
XH 260-36



BLOWER COMPLETE  
XH 260-1



VENT PANEL  
XHN-300-18  
STAND-OFF XNR-100-5



AIR VANE SWITCH  
XH 260-2A  
PADDLE

BRACKET  
XH 300-24



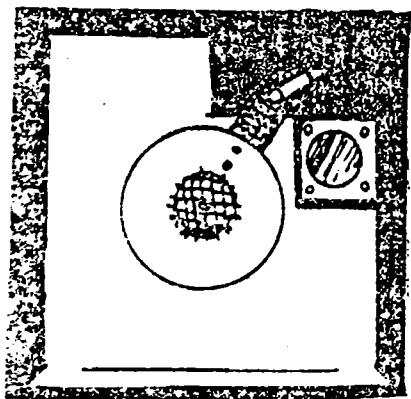
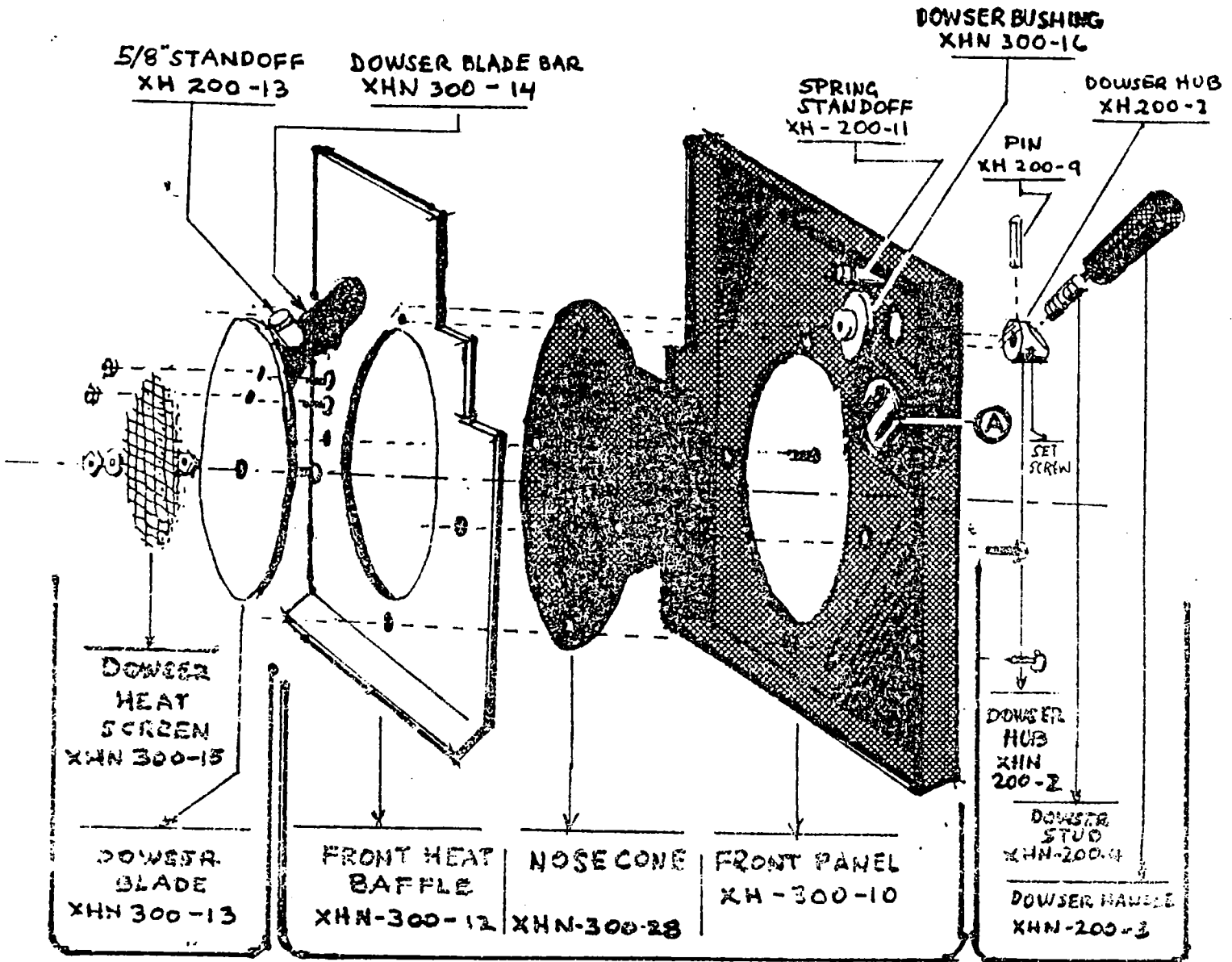
**XETRON**<sup>®</sup>

FRONT END FRAME

XHN SERIES

21 DECEMBER 1982

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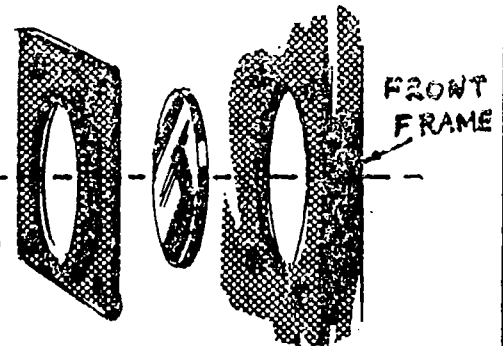


FRONT END  
FRAME  
ASSEMBLED

Ⓐ BEZEL  
SIGHT  
GLASS  
ASSEMBLY

FRAME  
XH 300-33

GLASS  
XH430-4



FRONT  
FRAME



XETRON®

# LAMPHOUSE CABLES - 3000 ONLY

NUMBER 4 GAUGE CABLE

STRIP ENDS 3/4" LONG  
CRIMP LUGS WITH  
CHISEL & SOLDER  
USE 1/2" D. HEAT SHR

NOTE:

FROM SPIDER ARM TO SPIDER ARM  
XH-300-54



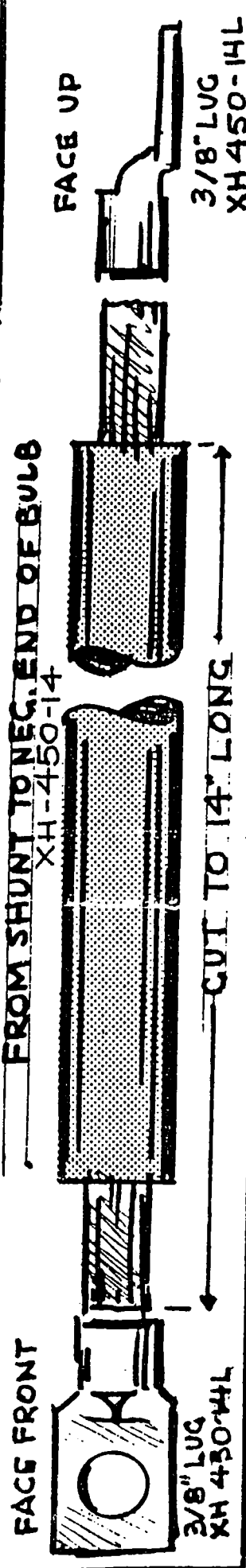
# LAMPHOUSE CABLES - 4000 ONLY

NUMBER 1 GAUGE CABLE

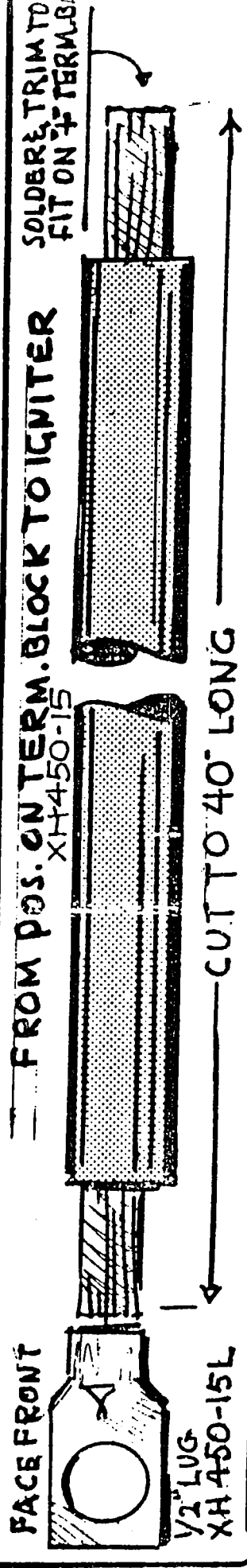
STRIP THESE ENDS 1"  
CRIMP LUGS WITH CHISEL  
AND SOLDER  
USE 3/4" D. HEAT SHR

NOTE:

FROM SHUNT TO NEG. END OF BULB  
XH-450-14



FROM POS. ON TERM. BLOCK TO IGNITER  
XH-450-15

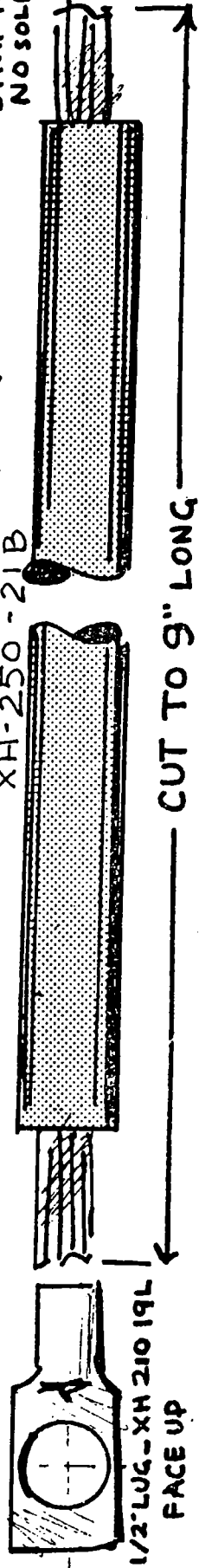


# LAMPHOUSE CABLES 1000, 2000 & 3000

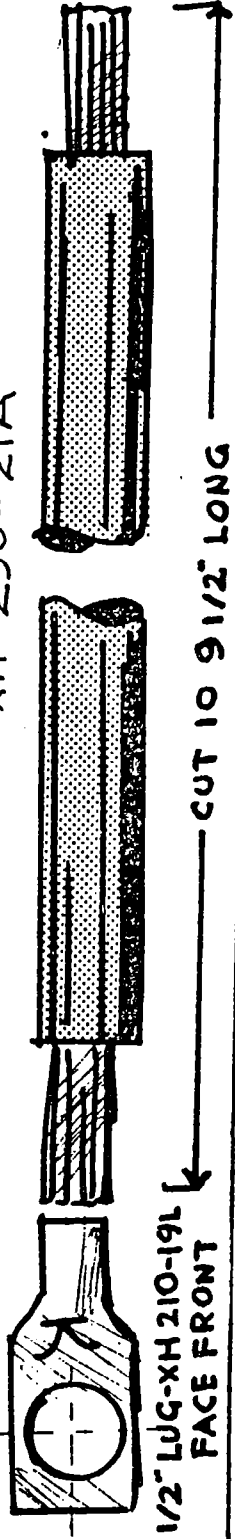
NUMBER 4 GAUGE CABLE



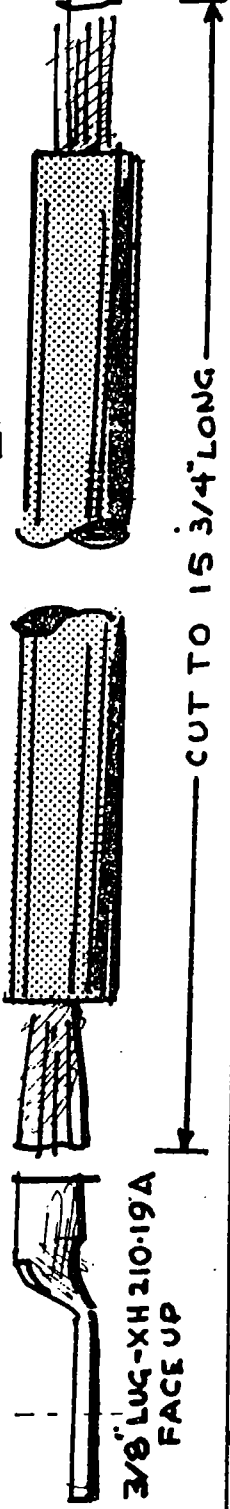
FROM IGNITER TONGE. ON TERM. BLOCK  
XH-250-21B



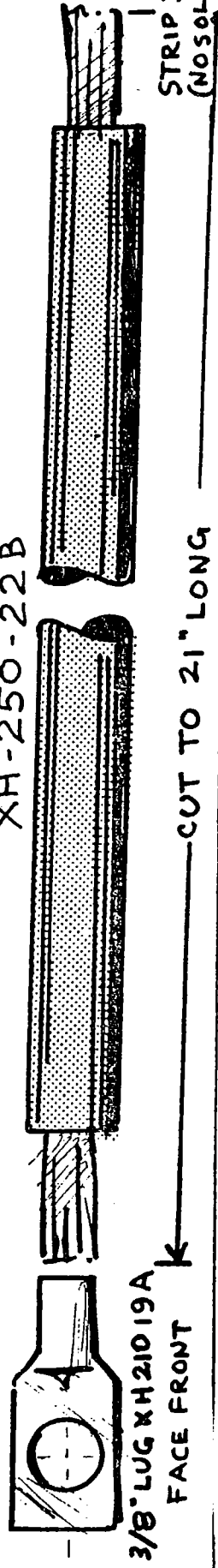
FROM IGNITER TONGE. END OF BULB  
XH-250-21A



FROM SHUNT TO SPIDER  
XH-250-22A



FROM POS. ON TERM. BLOCK TO SHUNT  
XH-250-22B



NOTE: Strip all ends 3/4 long. Crimp lugs with chisel and solder. Use 1/2" d. heat shrink.



XETRON  
XHN SERIES LAMPHOUSES  
SPARE PARTS

1 MAY 1983

PAGE 2

XETRON CORPORATION, Ten Saddle Rd., Cedar Knolls, NJ 07927 U.S.A. Telephone (201) 267-8200

LEFT SIDE DOOR ASSEMBLY

<u>Part #</u>	<u>Description</u>
XH-230-1	Door Lock (L-R)
XH-300-6	Left Side Door
XH-300-37	Door Screw Fastener (L-R)
XH-350-23	Allen Cap Screw (L-R)
XCP-173	Door Handles (L-R)

RIGHT SIDE DOOR ASSEMBLY

XH-300-5	Right Side Door
XD-120-13	Grommet

LAMPHOUSE TOP ASSEMBLY

XH-300-3	Lamphouse Top
XH-300-20	Vent Stack 6"
XH-300-1	XH-3000N Blower Housing (3000 Only)
XH-440-10	Rotron Blower - Tarzan (3000 Only)
XH-440-13	Blower/Starter Standoffs - Rubber (3000 Only)
XD-120-13	Rubber Grommet
XH-240-10	Capacitor
XH-240-9	Ammeter Shunt
XH-240-11	Auto Transformer 220V
XH-300-3A	Door Microswitch Bracket
XH-300-36	Lock Cam Catch

LAMPHOUSE BASE ASSEMBLY

XH-300-2	Lamphouse Base
XH-250-9	AC Terminal Block Modules
XH-250-10	AC Terminal Block Ends
XH-250-7	DC Terminal Block Modules
XH-250-8	DC Terminal Block Ends
XH-250-21A	Negative DC Cable (Starter To Socket)
XH-250-21B	Negative DC Cable (Starter To DC Block)
XH-250-22A	Positive DC Cable (Shunt To Spider)
XH-250-22B	Positive DC Cable (Shunt To DC Block)
XH-260-37	Extension (3000 Only)
XH-260-38	Air Nozzle (3000 Only)
XH-250-22C	Positive DC Cable (Spider Arm To Spider Arm)

HORIZONTAL BASIC UNIT ASSEMBLY

XH-260-1	Blower Complete
XH-260-1-1	Washer - Blower Motor Mounting Screw (4)
XH-260-1-2	Screw - Blower Mount (4)
XH-260-1-3	Grommet - Blower Motor Wires





XETRON  
XHN SERIES LAMPHOUSES  
SPARE PARTS

1 MAY 1983

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HORIZONTAL BASIC UNIT ASSEMBLY  
(CONTINUED)

<u>Part #</u>	<u>Description</u>
XH-260-5B	Plate (1/8" Thick) Horizontal Control Casting Support
XH-260-6	3/16" Allen Tool (Reflector Controls)
XH-260-7	3/32" Allen Tool (Bulb Mounts)
XH-260-8	Horizontal Adjustment Plate
XH-260-9	Vertical Adjustment Plate
XH-260-10A	Negative Bulb Holder (Casting Only - Brass)
XH-260-10A-1	Spring - Negative Bulb Holder
XH-260-10A-2	Brass Ball - Negative Bulb Holder
XH-260-10A-3	Square Cross Bar - Negative Bulb Holder
XH-260-10A-4	Washer - (Lock) Negative Cable To Negative Bulb Holder
XH-260-10A-5	Stud - Negative Bulb Holder To Cable
XH-260-10A-6	Nut For XH-260-10A-5 Stud (2)
XH-260-11	Black Bakelite Locking Knob
XH-260-12	Set Screw - Basic Unit Lateral Positioning
XH-260-13	Focus Swivel Bar (Round)
XH-260-13-1	Focus Control Stud (Internal)
XH-260-13-2	Nut For Focus Control Stud (2)
XH-260-13-3	Washer For XH-260-13-1
XH-260-13-4	Focus Adjusting Screw (In Casting)
XH-260-13-5	Focus Control Arm Pivot Bolt (Lower)
XH-260-13-6	Nut (Self-Locking) For XH-260-13-5
XH-260-14	Focus Control Arm (2) For Use W/XH-260-15
XH-260-14-1	Focus Control Arm (2) For Use W/XH-260-10A-3
XH-260-15	Focus Control Pivot Screw - Brass (2) (Old Style) Replaced By XH-260-10A-3
XH-260-16	Vertical Drive Stud Bracket - Attaches To XH-260-8
XH-260-16-1	Vertical Drive Stud
XH-260-17	Pivot Bracket For Focus Control Arms
XH-260-18	Horizontal Control Casting Only
XH-260-18-1	Horizontal Adjusting Screw
XH-260-18-2	Cotter Pin For Horizontal Focus Control
XH-260-19	Vertical & Focus Control Casting
XH-260-20-CD	10" Horizontal Dichroic Reflector W/Mount
XH-260-20-1	Screw - Reflector Mount (3)
XH-260-21	Spider (Positive Bulb Mount)
XH-260-21-1	Set Screw - Positive Bulb Mount (Spider) (4)
XH-260-21-2	Spider Guide (3)
XH-260-22	Basic Unit Base Duct Only
XH-260-22-1	Screw - Rear Basic Unit Pivot
XH-260-22-2	Spring - Rear Basic Unit Pivot
XH-260-22-3	Baffle - Rear Of Basic Unit Duct
XH-260-23	Main Casting Only



XETRON  
XHN SERIES LAMPHOUSES  
SPARE PARTS

1 MAY 1983

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HORIZONTAL BASIC UNIT ASSEMBLY  
(CONTINUED)

<u>Part #</u>	<u>Description</u>
XH-260-24	Main Casting Side Cover Plate
XH-260-26	Thumb Screws For XH-260-24 (2)
XH-260-29	Nylon Bushing For Adjusting Plate Studs (8)
XH-260-30	Washer - (Curved Spring Steel) On Adjusting Plate Studs (8)
XH-260-31	Nut - (Acorn 10 - 24) On Adjusting Plate Studs (8)
XH-260-32	Stud For Horizontal - Vertical Adjusting Plates (8)
XH-260-33	Screw - Bracket Attaching Several Locations 10/32 X 1/2 Soc. Hd. Cap.
XH-260-34	Air Baffle For Air Vane Switch
XH-260-35	Magnet (2 Used In XH-4000)
 <u>STARTER XH-1000/3000 FROM SERIAL #1594</u>	
XH-270-B	1KW/3KW Starter Complete
XH-270-2A	Spark Gap
XH-270-3A	Capacitor

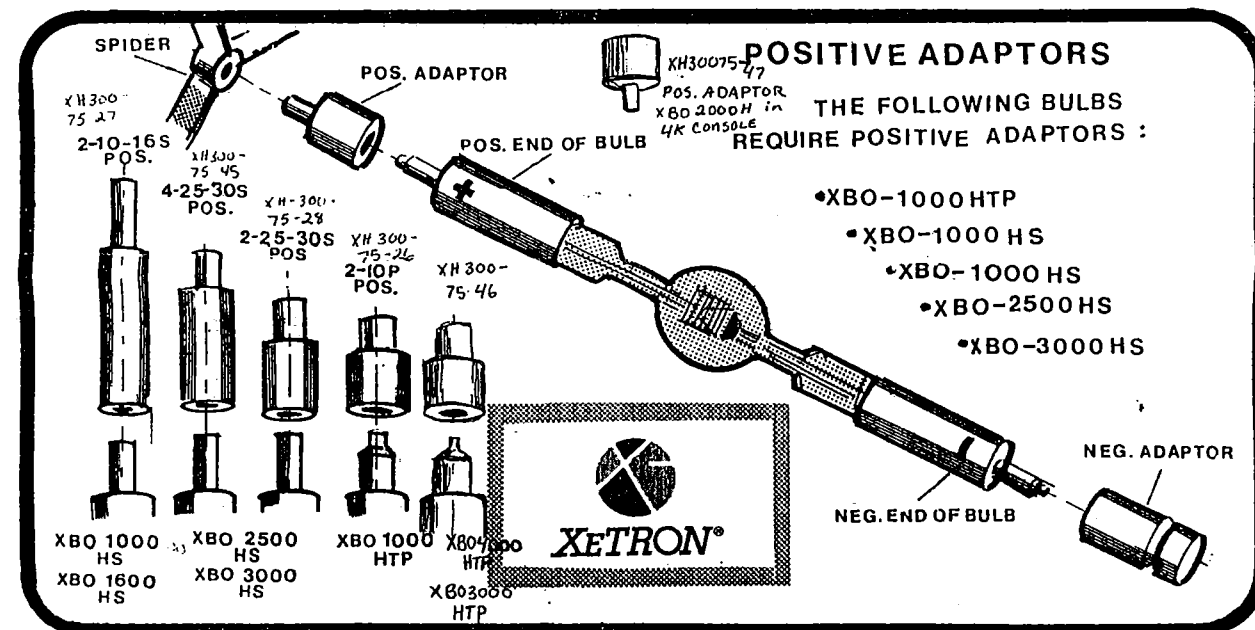
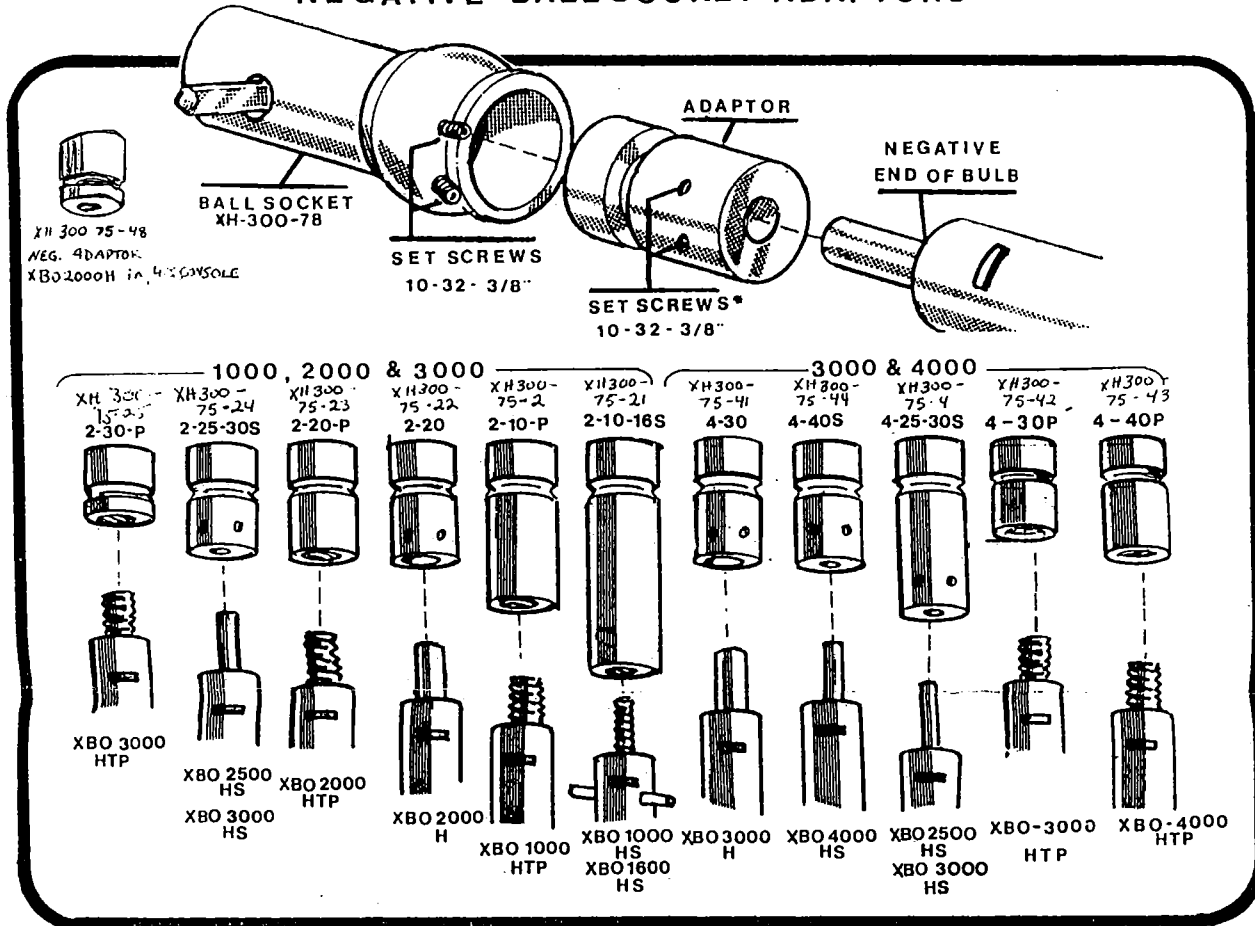


NEW STYLE  
 XHN LAMPHOUSE / XCN CONSOLE  
 Start Serial \_\_\_\_ XHN 3344 \_\_\_\_ XCN 1862

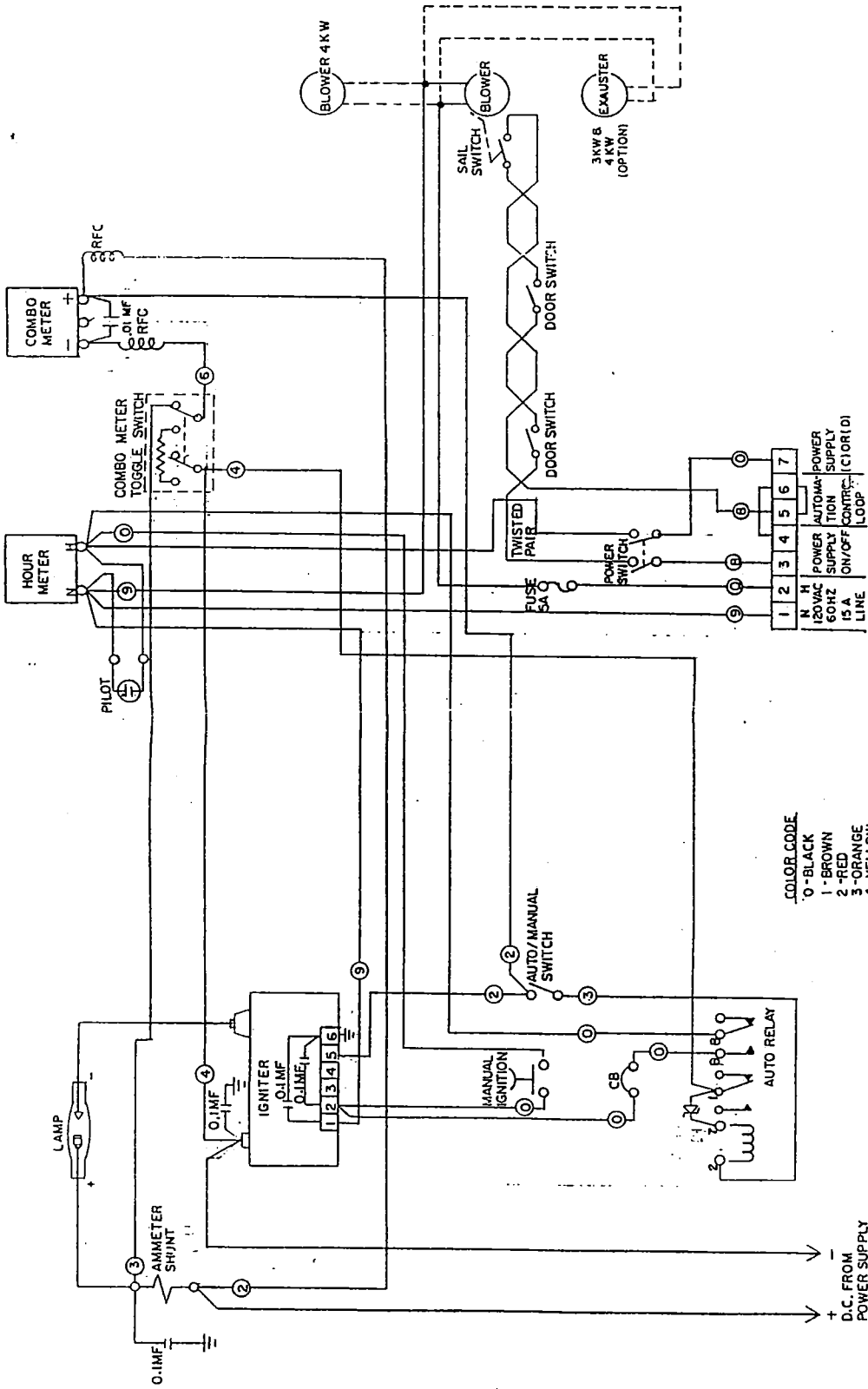
4/2/84  
 Dwg. No. XH 600

XETRON CORPORATION, Ten Saddle Rd., Cedar Knolls, NJ 07927 U.S.A. Telephone (201) 267-8200

**NEGATIVE BALL SOCKET ADAPTORS**



REVISED JNS  
 REV. A DATE 2/26/87 REDRAWN B REVISED  
 TO INCLUDE 4 KW.  
 REV B DATE 4/13/87 REVISION ON COLOR WIRE  
 CHANGES.



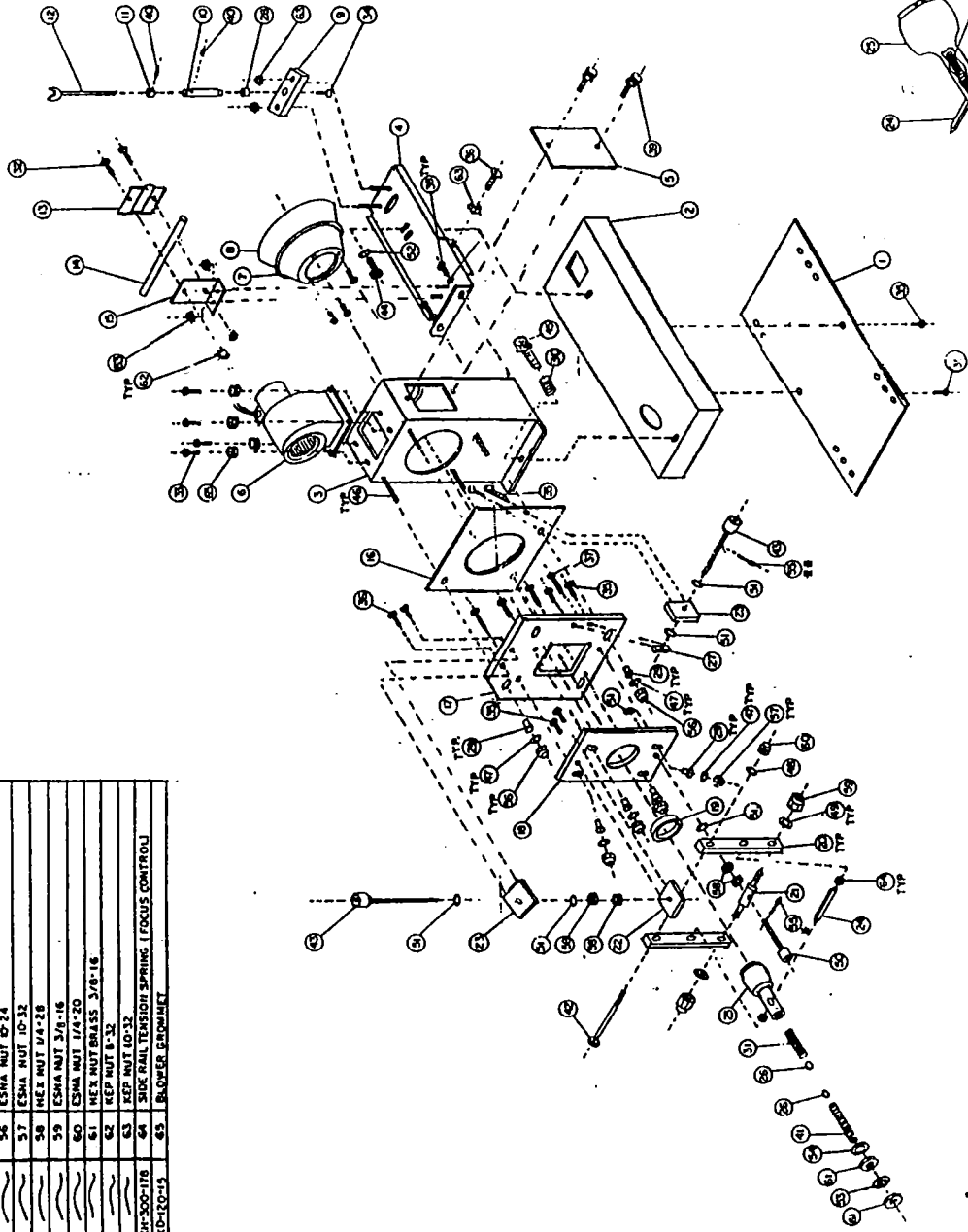
COLOR CODE  
 0 - BLACK  
 1 - BROWN  
 2 - RED  
 3 - ORANGE  
 4 - YELLOW  
 5 - GREEN  
 6 - BLUE  
 7 - VIOLET  
 8 - GREY  
 9 - WHITE

NOTES REMOVE JUMPERS 5-6 WHEN CONNECTING  
 AUTOMATION LOOP.  
 --- TERMINAL NO. 7 (C) OR (D) MUST BE 120VAC  
 FROM GROUND ON POWER SUPPLY.  
 --- THIS DRAWING IS APPLICABLE ONLY FROM SERIAL # 3575.



REVISED	PROJECT	SCALE	DRAWN BY
	X111-LAMP HOUSE	NONE	J.K.
DATE	TITLE	XETRON CORPORATION, San Diego, CA, 92161 U.S.A. Telephone (619) 274-9900	
3/3/87	4K 2K 3K 4KW WIRING DIAGRAM		
	REVISED		
	XH-300-133		

QTY	DMG. NO.	ITEM	DESCRIPTION
6		31	PLASTIC WASHER 3/16 I.D.
1		32	FLAT WASHER 1/4 I.D.
1		33	INTERNAL STAR WASHER BRASS 3/8 I.D.
2		34	FLAT WASHER BRASS 3/8 I.D.
2		35	COTTER PIN 1/8 DIA. X 1/2 LONG
4		36	ESHA NUT 1/2 X
4		37	ESHA NUT 1/2 X
4		38	ESHA NUT 1/4 X
2		39	ESHA NUT 3/8 X
2		40	ESHA NUT 1/4 X
2		41	HEX NUT BRASS 3/8 X 1/8
2		42	HEX NUT 1/2 X
2		43	HEX NUT 1/2 X
2		44	HEX NUT 1/2 X
2		45	HEX NUT 1/2 X
2		46	HEX NUT 1/2 X
2		47	HEX NUT 1/2 X
2		48	HEX NUT 1/2 X
2		49	HEX NUT 1/2 X
2		50	HEX NUT 1/2 X
2		51	HEX NUT 1/2 X
2		52	HEX NUT 1/2 X
2		53	HEX NUT 1/2 X
2		54	HEX NUT 1/2 X
2		55	HEX NUT 1/2 X
2		56	HEX NUT 1/2 X
2		57	HEX NUT 1/2 X
2		58	HEX NUT 1/2 X
2		59	HEX NUT 1/2 X
2		60	HEX NUT 1/2 X
2		61	HEX NUT 1/2 X
2		62	HEX NUT 1/2 X
2		63	HEX NUT 1/2 X
2		64	HEX NUT 1/2 X
2		65	HEX NUT 1/2 X



NOTE AFTER ASSEMBLING ITEM 50 TO ITEMS 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50 AND REMAINING ITEM 51 INSERT COTTER PIN ITEM 35 THRU HOLE AND BEND EACH PRONG IN OPPOSITE DIRECTIONS.  
 \*\* AFTER ASSEMBLING ITEM 43 TO ITEMS 31, 32 AND REMAINING ITEM 52 INSERT COTTER PIN ITEM 35 THRU HOLE AND BEND EACH PRONG IN OPPOSITE DIRECTIONS.

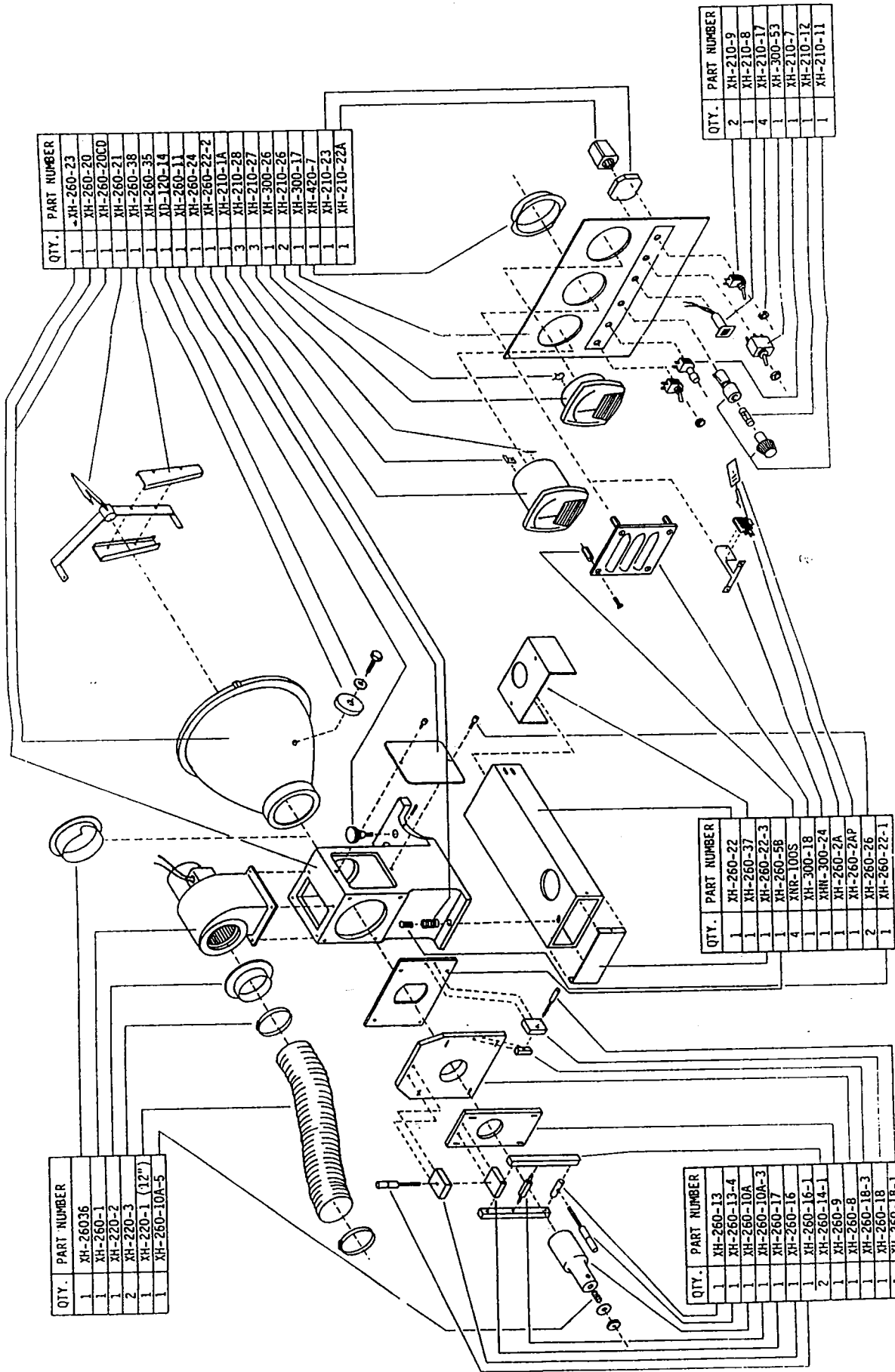
QTY	DMG. NO.	ITEM	DESCRIPTION
1	XH300-48	1	BOTTOM PLATE FOR BASIC UNIT BASE PLATE
1	XH300-136	2	BASE UNIT BASE DUCT
1	XH300-35	3	BASIC UNIT MAIN FRAME
1	XH300-41	4	MAIN FRAME SWIVEL PLATE
1	XH300-102	5	MAIN FRAME SIDE COVER PLATE
1	XH260-1	6	BLOWER (COMPLETE)
1	XH300-187	7	11/16" DIA. REFLECTOR MOUNT
1	XH300-180	8	ACOUSTIC RHODIUM REFLECTOR
1	XH300-181	9	POSITIVE POST BASE
1	XH300-34	10	MAIN POSITIVE POST
1	XH300-33	11	POSITIVE POST COLLAR
1	XH300-54	12	POSITIVE "Y" POST
1	XH300-62	13	MAGNET BRACKET CLAMP
1	XH300-82	14	REFLECTOR BAR MAGNET
1	XH300-147	15	MAGNET BRACKET
1	XH260-38	16	HORIZONTAL CONTROL CASTING SUPPORT
1	XH260-17	17	HORIZONTAL ADJUSTING PLATE
1	XH260-9	18	VERTICAL ADJUSTING PLATE
1	XH260-7	19	VERTICAL ADJUSTING PLATE CENTER RING
2	XH260-41	20	FOCUS CONTROL ARM
1	XH260-13	21	FOCUS SWIVEL BAR
1	XH260-17	22	PIVOT BRACKET FOR FOCUS CONTROL ARM
2	XH260-16	23	MEDICAL DRIVE SLID BRACKET
1	XH260-14	24	SPRING COUS BAR FOR MEDICAL DRIVE BULB HOLDER
1	XH300-78	25	INTERCHANGEABLE BULB HOLDER
2	XH300-82	26	BRASS BAR FOR NEGATIVE BULB HOLDER
1	XH260-25	27	ADJUSTING BLOCK HORIZONTAL
1	XH300-15	28	1/2" SPACER
8	XH260-29	29	1/2" SHOULDER WASHER
1	XH260-22	30	SPRING FOR BASIC UNIT PIVOT
1	XH260-24	31	SPRING FOR NEGATIVE BAR
2		32	BUTTON HEAD SCREW 8-32 X 3/8 LONG
4		33	"
6		34	"
3		35	"
3		36	"
4		37	"
5		38	"
2		39	THUMB SCREW 10-32 X 3/8 LONG
2		40	SET SCREW 10-32 X 1/4 LONG
1		41	SET SCREW 3/8 X 1/2 LONG
1		42	HEX HEAD BOLT 1/4-20 X 1.5 LONG
2		43	VERTICAL HORIZONTAL ADJUSTING SCREW
1		44	HEX HEAD BOLT 1/4-20 X 1.75 LONG
1		45	ALLEN CAP SCREW 1/4-20 X 1.1 LONG
8		46	"
8		47	SPRING WASHER 3/16 I.D.
1		48	"
2		49	"
1		50	FOCUS ADJUSTING SCREW

**JEETRON**

1.2 B BASIC UNIT ASSEMBLY

3-11-65 XH-300-179

INTERCHANGEABLE BULB HOLDER ASSEMBLY



QTY.	PART NUMBER
1	XH-260-36
1	XH-260-1
1	XH-220-2
2	XH-220-3
1	XH-220-1 (12")
1	XH-260-10A-5

QTY.	PART NUMBER
1	XH-260-13
1	XH-260-13-4
1	XH-260-10A
1	XH-260-10A-3
1	XH-260-17
1	XH-260-16
2	XH-260-16-1
1	XH-260-9
1	XH-260-8
1	XH-260-18-3
1	XH-260-18
1	XH-260-18-1

QTY.	PART NUMBER
1	XH-260-22
1	XH-260-37
1	XH-260-22-3
1	XH-260-5B
4	XNR-100S
1	XH-300-18
1	XH-300-24
1	XH-260-2A
1	XH-260-2AP
2	XH-260-26
1	XH-260-22-1

QTY.	PART NUMBER
1	XH-260-23
1	XH-260-20
1	XH-260-20C0
1	XH-260-21
1	XH-260-38
1	XH-260-35
1	XD-120-14
1	XH-260-11
1	XH-260-24
1	XH-260-22-2
1	XH-210-1A
3	XH-210-28
3	XH-210-27
1	XH-300-26
2	XH-210-26
1	XH-300-17
1	XH-420-7
1	XH-210-23
1	XH-210-22A

QTY.	PART NUMBER
2	XH-210-9
1	XH-210-8
4	XH-210-17
1	XH-300-53
1	XH-210-7
1	XH-210-12
1	XH-210-11

DRM. No. XH-300-57 DATA CURRENT 3/83 XETRON XENON ORN LAMPHOUSES 1000, 2000, 3000 Watt Models

QTY.	PART NUMBER
1	XH-300-20
1	XH-300-1
4	XH-440-13
1	XH-440-10

QTY.	PART NUMBER
2	XH-300-36
2	XH-300-34A
1	XH-300-3
1	XH-240-10
1	XH-240-9
1	00778

QTY.	PART NUMBER
1	XH-260-1-3
1	XH-300-54
1	XH-300-48
1	XH-300-32
1	XH-300-12
1	XH-300-10

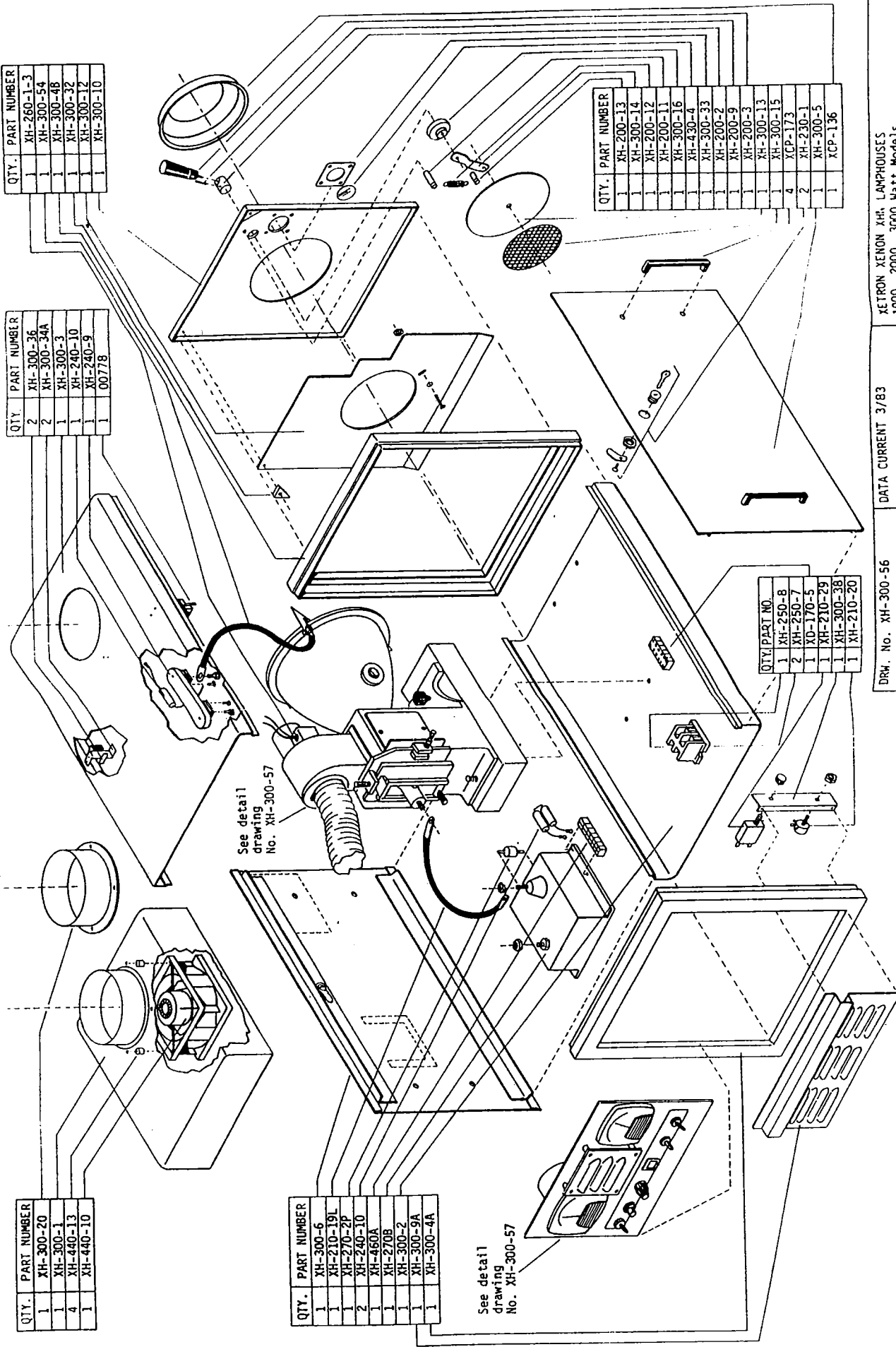
QTY.	PART NUMBER
1	XH-300-6
1	XH-210-19L
1	XH-270-2P
2	XH-240-10
1	XH-460A
1	XH-270B
1	XH-300-2
1	XH-300-9A
1	XH-300-4A

See detail drawing No. XH-300-57

See detail drawing No. XH-300-57

QTY.	PART NUMBER
1	XH-200-13
1	XH-300-14
1	XH-200-12
1	XH-200-11
1	XH-300-16
1	XH-300-4
1	XH-300-33
1	XH-200-2
1	XH-200-9
1	XH-200-3
1	XH-300-13
1	XH-300-15
4	XCP-173
2	XH-230-1
1	XH-300-5
1	XCP-136

QTY.	PART NO.
1	XH-250-8
2	XH-250-7
1	XO-170-5
1	XH-210-29
1	XH-300-38
1	XH-210-20



DRW. No. XH-300-56 DATA CURRENT 3/83 XETRON XENON XH LAMPHOUSES 1000, 2000, 3000 Watt Models

QTY.	PART NUMBER
1	XH-300-20
1	XH-300-1
4	XH-440-13
1	XH-440-10

QTY.	PART NUMBER
1	XH-500-16
1	XH-250-21A
1	XH-270-2B
2	XH-240-10
1	XH-470A
1	XH-500-40
1	XH-300-2
1	XH-300-9A
1	XH-300-4A

QTY.	PART NUMBER
2	XH-300-36
2	XH-300-34A
1	XH-300-3
1	XH-500-21
2	XH-500-22
2	XH-210-25
2	XH-500-23

QTY.	PART NUMBER
2	XH-260-1-3
1	XH-300-48
1	XH-300-32
1	XH-300-12
1	XH-300-10

See detail drawing No. XH-300-82 for options

See detail drawing No. XH-500-47

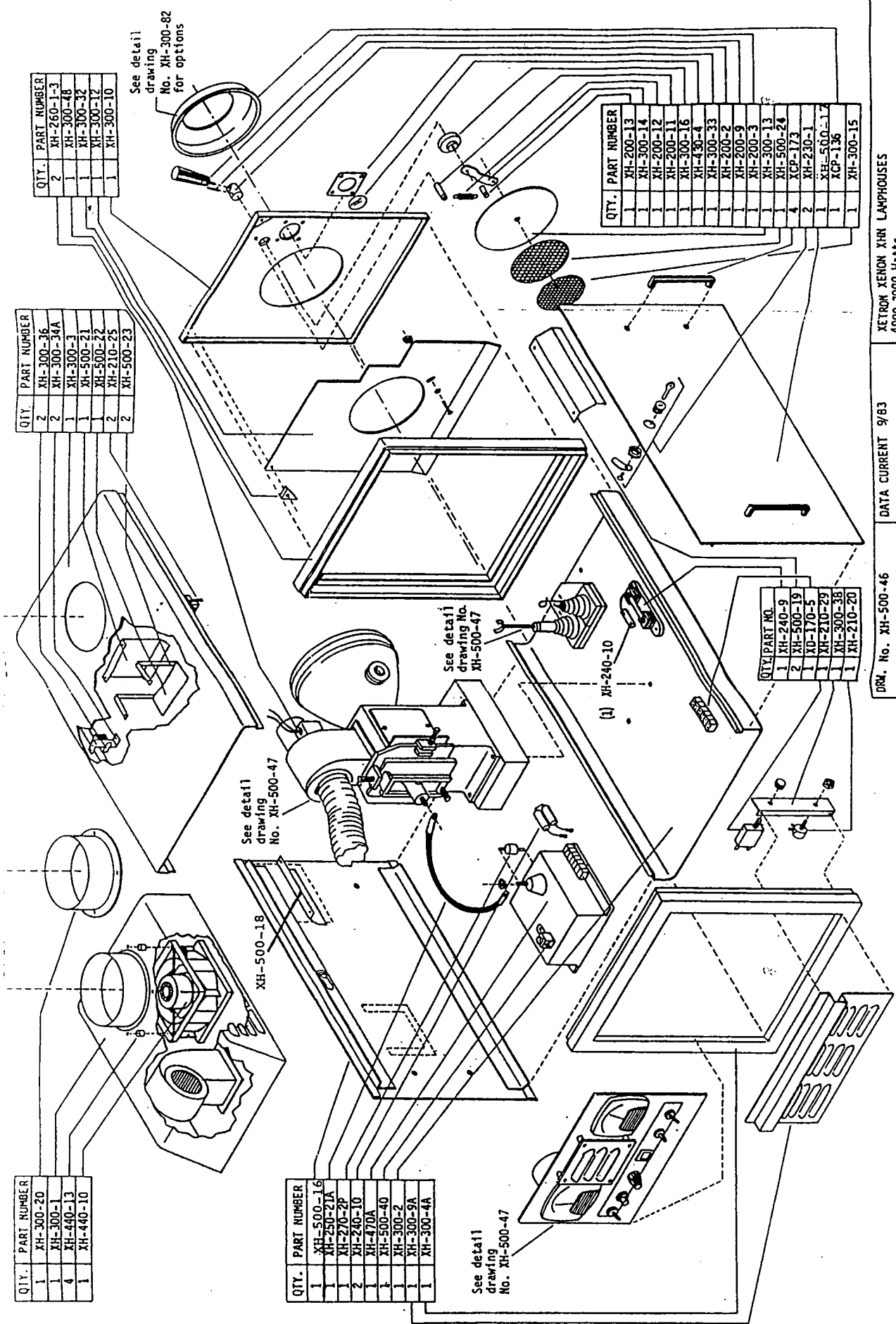
See detail drawing No. XH-500-47

See detail drawing No. XH-500-47

(1) XH-240-10

QTY.	PART NUMBER
1	XH-200-13
1	XH-300-14
1	XH-200-12
1	XH-200-11
1	XH-300-16
1	XH-430-4
1	XH-300-33
1	XH-200-2
1	XH-200-9
1	XH-200-3
1	XH-300-13
1	XH-500-24
4	XCP-173
2	XH-230-1
1	XH-500-17
1	XCP-136
1	XH-300-15

QTY/PART NO.
1 XH-240-9
2 XH-500-19
1 XD-170-5
1 XH-210-29
1 XH-300-38
1 XH-210-20



DATA CURRENT 9/83

DRM, No. XH-500-46

XENON XHM LAMPHOUSES  
4000, 7000 Watts