

# Assembly/Operating/Maintenance Instructions



## Models 26-1K & 26-1KSP Mercury Exposure Systems

### I. Assembly

Read these instructions before attempting to assemble and operate this exposure unit.

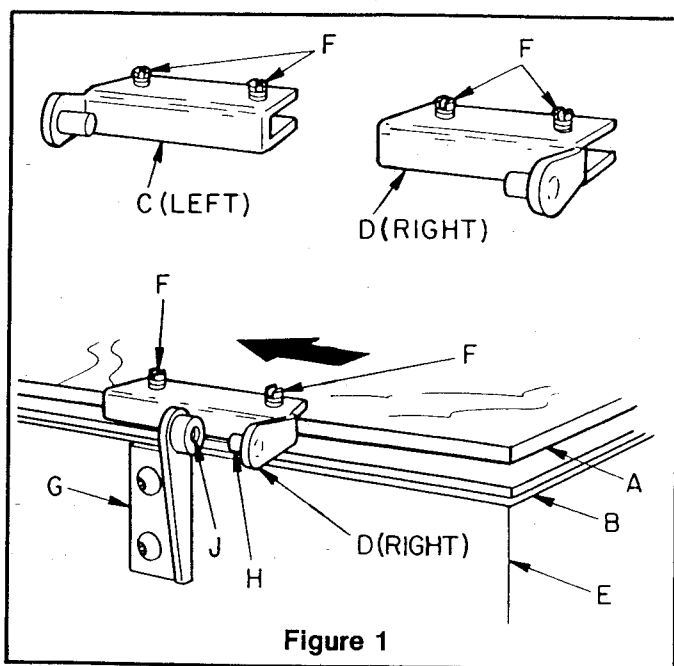


Figure 1

1. Remove parts from shipping container.
2. Set base of unit (A-Fig. 2) on table, counter or nuArc Floor Stand (Model NFS3-see instruction sheet #696) with back side (B-Fig. 2) facing you.
3. Position vacuum glass (A-Fig. 1) on top of the vacuum frame (B-Fig. 1). Locate the two male vacuum glass hinges (C,D-Fig. 1). The hinges will be marked "L" and "R" or "LEFT" and "RIGHT." With the back of the unit facing you the right hinge (D-Fig. 1) will go on the right side of the unit (E-Fig. 1). Loosen the two glass retention screws (F-Fig. 1) on top of the right hinge (D-Fig. 1). Slide the hinge onto the glass to the right of the female vacuum glass hinge (G-Fig. 1) (already on unit). Next, slide the hinge to the left engaging the post on the upper hinge section (H-Fig. 1) with the hole on the lower hinge section (J-Fig. 1). Tighten the two glass retention screws to secure the glass. Repeat the process for the left hinge. When installed correctly you should not be able to move the glass from side to side. If there is any side-play, loosen the glass retention screws on one of the hinges, remove play by pushing the hinges toward each other and tightening the screws. Open and close the vacuum glass a few times to make sure it operates properly.
4. Loosen the four screws and washers (C-Fig. 2) on each side of the back of the base as shown.
5. Attach the two (2) L-shaped support arms (D-Fig. 2) to the base, using this hardware (C-Fig. 2). Do not completely tighten these screws as you will need some flexibility when attaching the light source housing to the L-shaped arms (in Step 6).

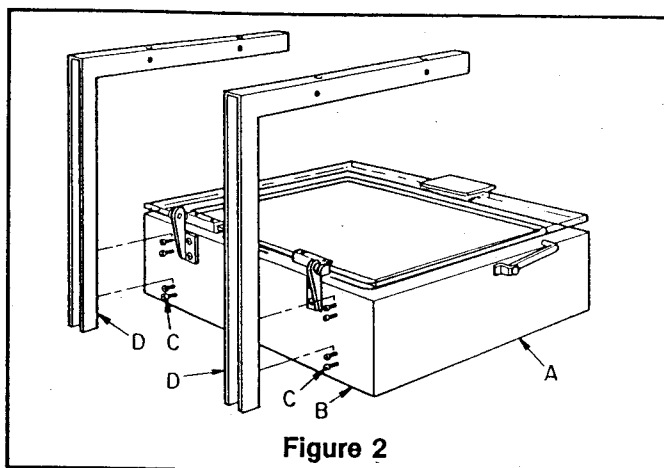


Figure 2

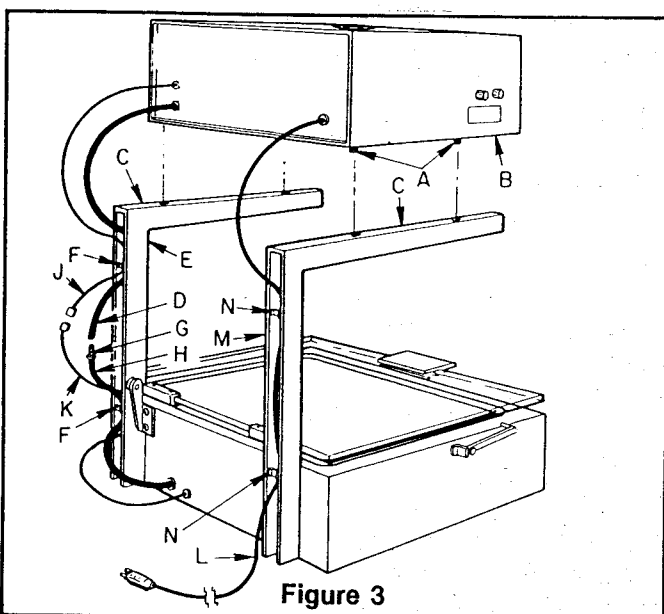


Figure 3

6. Loosen the 2 screws and lock washers (A-Fig. 3) from each side of the light source housing (B-Fig. 3). Place the light source housing on top of the support arms (C-Fig. 3), lining up the holes in the support arms with the loosened screws.
7. Secure the housing (B-Fig. 3) to the support arms (C-Fig. 3) by tightening down the hardware (A-Fig. 3). Tighten down completely. Next, finish tightening the screws in Step 5 (C-Fig. 2).
8. Run the top half of the rubber vacuum hose (D-Fig. 3) down the left channel (E-Fig. 3) of the support arm bracket so that it slips behind the braces (F-Fig. 3). Connect the vacuum hose (D-Fig. 3) to the plastic connector (G-Fig. 3) on the end of the lower portion of the vacuum hose (H-Fig. 3) which has been run up behind the lower brace.
9. Run the top half of the vacuum pump electrical cord (J-Fig. 3) down the left channel of the support arm and connect it to the bottom half of the cord (K-Fig. 3).
10. Run the main power cord (L-Fig. 3) down the channel (M-Fig. 3) of the right support arm bracket so that it is secured behind the two braces (N-Fig. 3).

11. Turn the unit around so the front side faces you. Next, you must install the 1000 watt GW114 Mercury Lamp. Using the white gloves (A-Fig. 4) provided, insert Lamp (B-Fig. 4) into the spring-loaded tube holder (C-Fig. 4). Make sure the protrusion on the lamp (D-Fig. 3) is to the side, not pointing above or under.
12. To install the reflector glass (A-Fig. 5), loosen the two screws and slide the metal retainer (B-Fig. 5) out. Slide reflector glass into position so that it rests on 2 side clips and rear clip. Make sure the dot pattern on the glass (C-Fig. 5) runs from side to side and is on the bottom side of the glass. Put retainer back into position and firmly secure the glass. Unit will not operate without this glass in position.
13. If you are not using the LC122 Kokomo Filter Assembly, proceed to Step 14. If you ordered the LC122 Kokomo Filter Assembly for use with special proofing materials, you must first install the brackets that hold the filter in position. Secure the left bracket (A-Fig. 6) to the left support arm (B-Fig. 6) with the 2 screws (C-Fig. 6) provided. Attach the right bracket in the same manner. The filter (D-Fig. 6) simply slides in and rests on these 2 brackets.
14. If you are not using the LC89 Diffusion Screen, proceed to Step 15. If you ordered the LC89 Diffusion Screen for "slowing" exposure time for certain "fast" materials, you must first install the brackets that hold the Screen in position. Attach the LC105 and LC106 brackets just like those brackets shown in Figure 6, Step 13. Slide the screen into position and let it rest on the brackets.
15. Plug unit into proper electrical source. Unit is 115 volts, 60 Hz., 20 amps. (Also available in 115 volts, 50 Hz., 220 volts, 60 Hz., 220 volts, 50 Hz.)
16. The 26-1K Exposure Module is designed to operate on a 110 volt 20 ampere line for maximum efficiency. The line that the machine is going to operate on should not be used to operate any other equipment, and should be protected with a 20 amp SLO BLO fuse. Depending on the type of fuse box in your building, these would be called Fustat (Bussmann No. S20) or Fustron (Bussmann No. T20). Blowing of the line fuse will result if other equipment is operated at the same time on the same line as the 26-1K. If it is not possible to have the machine on its own 20 amp line and a problem of fuse blowing arises, we recommend that the "Output Voltage Selector Lead" on the power transformer be adjusted. The machine is shipped with this lead on the number 9 terminal

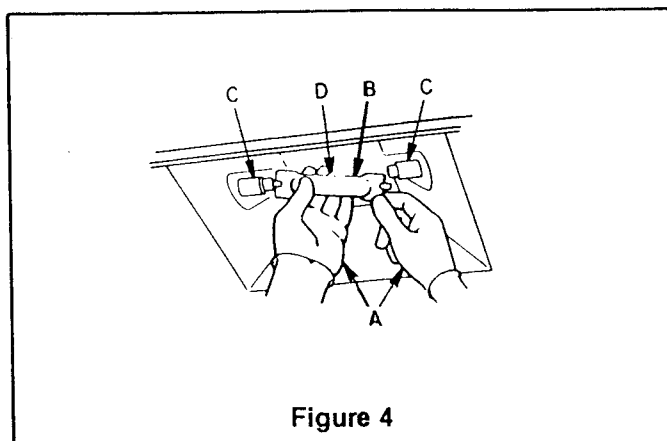


Figure 4

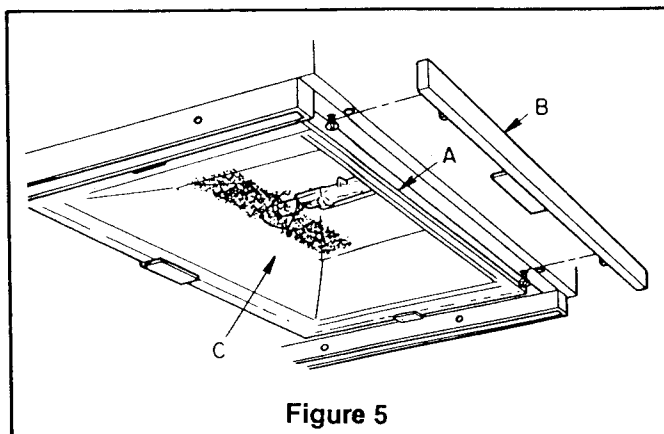


Figure 5

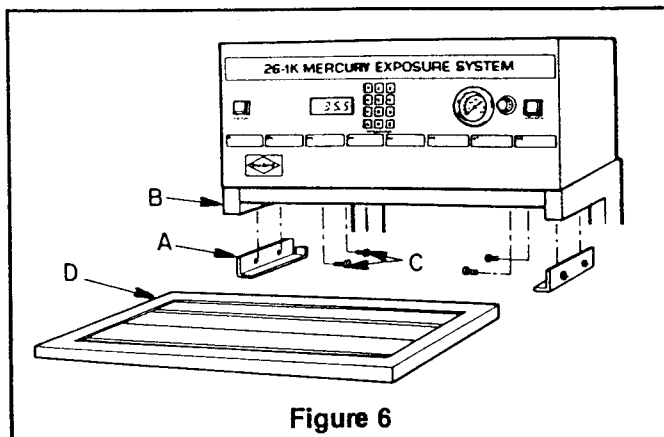


Figure 6

of the power transformer. To help eliminate line fuse blowing, move the output voltage selector lead to the number 8 or number 7 terminal. To get at the power transformer, unplug unit and remove 10 screws from top cover. The cover has the cooling fan mounted on it. There are two leads attached to the cover, so do not move it completely away from the unit. Rotate it 90° and slide it to one side. After making the adjustment to the terminal, replace the cover and all screws. **DO NOT OPERATE UNIT WITH COVER OUT OF POSITION.**

## II OPERATION

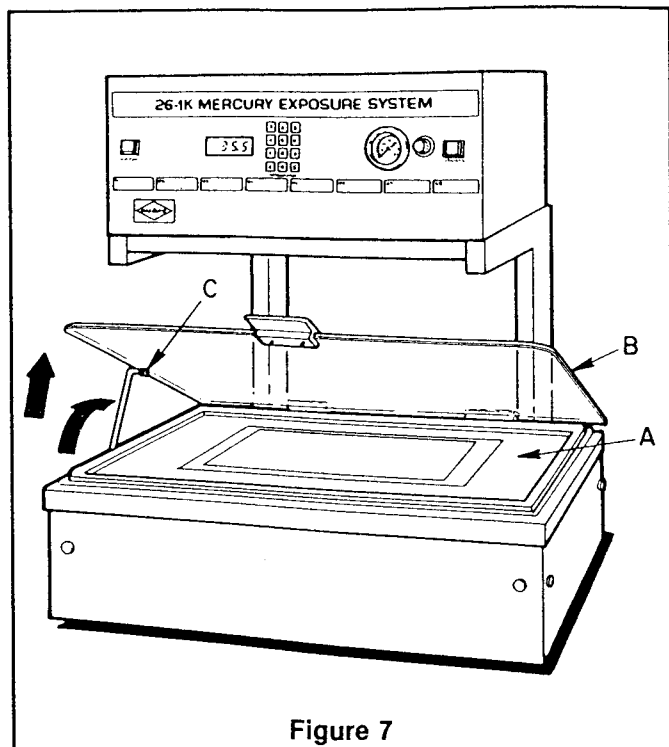


Figure 7

The 26-1K nuArc Exposure Module was designed for easy operation. Follow these simple instructions.

1. To load the vacuum frame (A-Fig. 7), raise the vacuum glass (B-Fig. 7) and push the glass support lever (C-Fig. 7) back as far as possible. Let glass rest on the support lever. Load the materials to be exposed, then close the glass.
2. Explanation of Control Panel—See Figure 8. The control panel on the 26-1K Exposure Module has a precision, built-in light integrator that works in conjunction with the photo detector to compensate for voltage fluctuations or light fall-off due to lamp aging. This system makes sure that every plate or proof gets the exact units of light that are programmed into it. NOTE: "Units of light" or "light units" refers to the amount of light needed to expose a particular material. Use a plate exposure guide to determine the proper exposure for the material you are using. 60 units of light is a good starting point. Remember, the nuArc integrator system is not a "timer," it simply measures the light units and gives you precise exposure every time.
3. Look at Figure 8 to familiarize yourself with the features on the control panel.
4. To program and operate your 26-1K Exposure Module with the proper units of light, follow these steps:
  - A) Press power button to turn unit on.
  - B) Load materials to be exposed into the vacuum frame as described previously.
  - C) Activate vacuum by pressing the vacuum button. An excellent vacuum of 20-25 is generally attained in 30-40 seconds. (If you have a 26-1KSP screen exposing unit, the

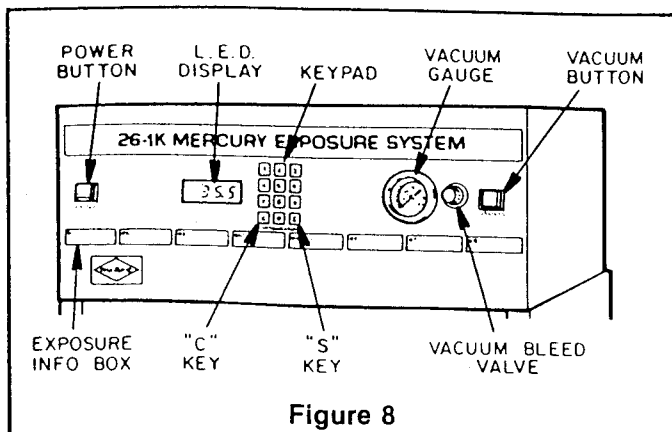


Figure 8

flexible rubber blanket actually rises up and surrounds the screen.)

- D) Using the touch-activated keypad, press the proper numerical keys to enter the light units needed for exposure. The L.E.D. display will show these numbers. (Note: The integrator is set up to provide readouts to tenths of a light unit. For example, to program 35½ light units, simply press 3-5-5. To program 35 light units, however, you would press 3-5-0).
  - E) To activate the exposure, press the "S" Key. The L.E.D. display will be counting down while the exposure progresses.  
NOTE: There is a built-in delay of approximately 30 seconds between exposures to allow the lamp to cool sufficiently. If you press the "S" Key and lamp does not come on immediately, then the lamp has not cooled sufficiently. Do not turn unit off or press "S" Key again. The lamp will kick on automatically when lamp has cooled enough.
  - F) When the exposure is completed, the lamp shuts off automatically and resets so that the L.E.D. will go back to showing the originally entered units of light.
  - G) Turn off the vacuum button, open the bleed valve to release vacuum, and remove the exposed materials.
5. The exposure information boxes along the lower portion of the control panel (E1, E2, etc.) can be used for recording the units of light for a particular material. A felt-tip water soluble marking pen can be used to write down the exposure information so that it's always at the operator's fingertips.
  6. The "C" Key is the Cancel Key. It can be used to cancel any exposure in progress. It can also be used to cancel any exposure information being put into the unit. (In other words, if you make a mistake when inputting units of light, you can press the "C" Key and go back and start all over inputting the light units.)
  7. The bleed valve can be used to speed up the release of the vacuum when removing your exposed materials from the frame. It should be closed completely for maximum contact between the blanket and materials.

### III MAINTENANCE

1. Do not place anything on top of the unit that will cover the cooling fan. This could cause overheating of the power supply by limiting ventilation.
2. Clean the vacuum glass before every use with nuArc Clearview Glass Cleaner (particularly if you are exposing screen emulsions). Order number CV16 by the case from your local nuArc Branch Office or your nuArc dealer.
3. Keep a replacement Mercury Lamp handy so you won't have any downtime if the bulb ever goes out. Order replacement lamp, model number GW114, from your dealer or your local nuArc Branch Office.
4. If you need a replacement reflector glass (A-Fig. 5), order part number LC22. To order a replacement vacuum glass (A-Fig.1) order part number LC97.
5. Kokomo Filter Assembly—If you wish to order a Kokomo Filter Assembly for the 26-1K unit (as shown in this brochure), order LC122.
6. Diffusion Screen—For slowing exposure time on certain "fast" materials. If you wish to order a Diffusion Screen for the 26-1K unit (as shown in this brochure), order LC89 Diffusion Screen and one each LC105 and LC106 mounting brackets.

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## BASIC TROUBLESHOOTING FOR 26-1K / 32-1K / 40-1K

All troubleshooting is accomplished with the unit connected to the power source. Troubleshooting of the lamp and power supply should only be performed by qualified personnel.

**IMPORTANT:** Disconnect power before servicing unit.

TROUBLE	POSSIBLE CAUSE	REMEDY
Master switch on, no pilot light, no vacuum, no light.	Blown 5A Fuse. Faulty Fuse Holder. Faulty Master Switch. Broken or Loose Connections.	Replace Fuse. Replace Fuse Holder. Replace Master Switch. Check Wiring. Repair or replace.
Master Switch on, pilot light and fan operate. Vacuum pump does not work.	No voltage at vacuum pump (115 VAC)	Check pump switch and wiring. May be broken or loose connec- Repair or replace.
Motor runs but no vacuum is registered on gauge.	Place finger over hole in vacuum blanket; if still no vacuum registered, trouble is in vacuum hoses, connection or vacuum pump.	Trace vacuum hoses. Repair or replace broken connections. Make sure bleed valve is tightly closed.
Defective Pump (26-1K)	Broken diaphragm.	Replace vacuum pump diaphragm inside head of pump or replace pump.
Defective Pump (32-1K and 40-1K)	Broken or sticky veins.	Replace veins inside head of pump or replace pump.
No light.  Visible arc through lamp.	Old lamp.  Wire disconnected on power supply.	Replace lamp.  Replace wire to correct terminal on power supply.
No arc is visible through lamp but main contactor operating.	Blown 20A fuse or faulty fuse holder.  Bad contactor (No voltage at the output terminals of contactor).  Faulty start module. Check for 160 VAC to 175 VAC at terminals marked FT1-FT3.  Neon light on start module flickers.  Neon light on module stays on.	Replace fuse; check fuse holder for continuity.  Replace if necessary. Clean contacts or replace contactor.  Replace start module if voltage is present.  Replace module.  Replace lamp. If still no light, replace module.
Main contactor not operating.	Safety glass in front of lamp not in place.  Safety switch operated by glass not operating.  Faulty thermostat on top of lamp bracket.  No voltage across coil of contactor when start button is operated.	Replace glass in position.  Check switch. Readjust or replace.  Bypass thermostat and check. Replace thermostat.  Defective keypad or main timer circuit board. Repair or replace.

### Voltage Tap Adjustment On Power Transformer:

90 VAC to 100 VAC	Connect input wire to terminal 2
101 VAC to 110 VAC	Connect input wire to terminal 3
111 VAC to 120 VAC	Connect input wire to terminal 4
121 VAC and above	Connect input wire to terminal 4

Output wire to terminal 6
Output wire to terminal 7
Output wire to terminal 8
Output wire to terminal 7

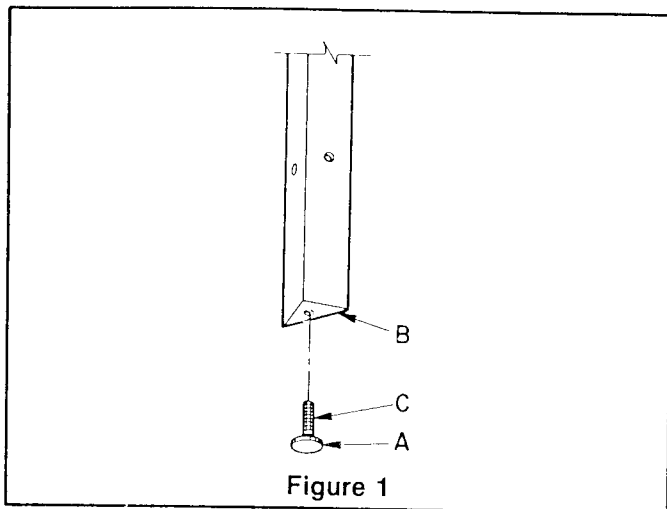
NOTE: Input and output wires are labeled.



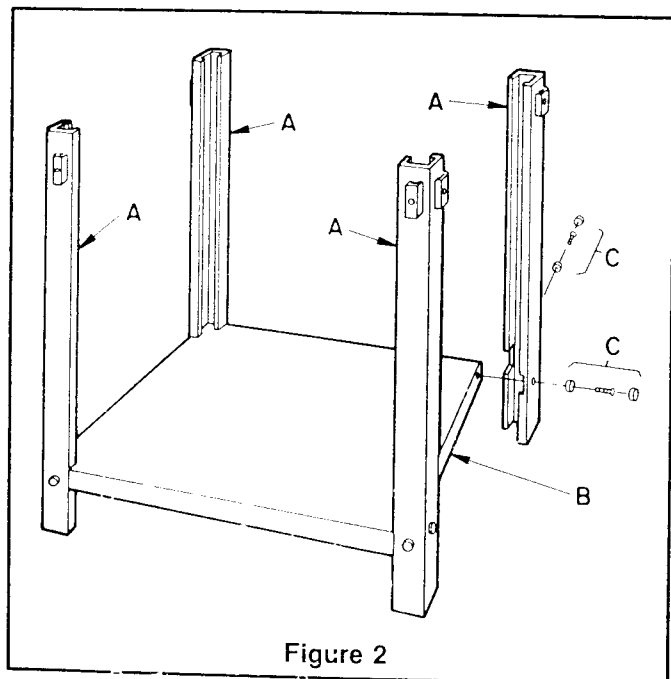
# ASSEMBLY INSTRUCTIONS

## Model NFS3 Floor Stand (For 26-1K & 26-1KSP Mercury Exposure Systems)

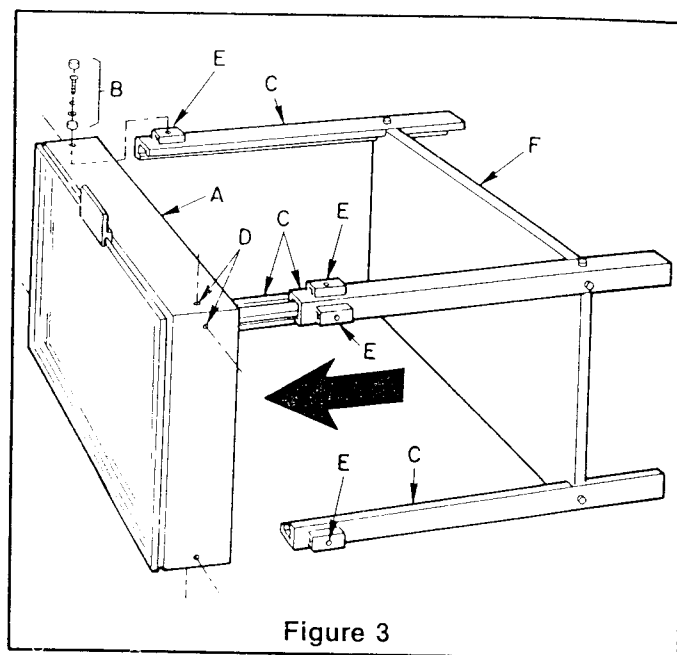
Read these instructions carefully before attempting to assemble the Floor Stand.



1. Remove the 4 legs, shelf and package of hardware from the shipping carton.
2. Next, install a leg leveler screw (A-Fig.1) into the bottom of each floor stand leg (B-Fig.1) as shown. Screw leveler in about halfway up the length of the shaft (C-Fig.1). Do this for all 4 legs.



3. Attach the legs (A-Fig.2) to the floor stand shelf (B-Fig.2) as shown, using the clear plastic washer and screw (C-Fig.2) provided. Do not tighten down completely at this point.



4. Place the base of the exposure unit (A-Fig.3) on its side as shown in Figure 3. Remove the hardware (B-Fig.3) from the sides of the base. Slide the 4 legs (C-Fig.3) of the floor stand into the corners of the base (A-Fig.3), lining up the 2 holes (D-Fig.3) on the base with the holes in the mounting brackets (E-Fig.3). Using the hardware removed from the base, secure the legs to the base. Tighten these completely.
5. Next, tighten the screws in the floor stand shelf (F-Fig.3) left loose in Step #3.
6. Stand the unit upright. Replace the blue plastic covers over the screw heads in the base. Place the black plastic covers over the screw heads on the legs.
7. Follow the assembly instructions found on form No. 683 to complete the assembly of your exposure unit.

**NOTE:** If you are installing the Floor Stand as a "field" retrofit for an exposure unit purchased previously, we recommend that you carefully place the unit on its back after taping down the glass frame. Or if you prefer, have two people hold the unit, while another person guides the legs into the 4 corners for attachment to the base.

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## IMPORTANT NOTICE

### **Additional Instructions for nuArc 26-1K, 32-1K & 40-1K Exposure Systems**

The 26-1K, 32-1K and 40-1K Exposure Systems are designed to operate on a 100 volt, 20 ampere line for maximum efficiency.

The line that the machine is going to operate on should not be used to operate any other equipment and should be protected with a 20 amp SLO BLO fuse. Depending on the type of fuse box in your building, these would be called Fustat (Bussman No. S20) or Fustron (Bussman No. T20).

Blowing of the line fuse will result if other equipment is operated at the same time on the same line as the Exposure System, or if the incoming voltage does not match the setting of the power transformer. The machine is factory-set for a line voltage of 111-120. If your voltage is different from this, see the voltage selector chart on the wiring diagram enclosed with this machine. If it is not possible to have the machine on its own 20 amp line, and a problem of fuse blowing arises after the power transformer setting has been found to be adjusted properly, we then recommend that the "Output Voltage Selector Lead" on the power transformer be adjusted. The machine is shipped with this lead on the number 8 terminal of the power transformer. To help eliminate line fuse blowing, move the output voltage lead to the number 7 or number 6 terminal.

To get to the power transformer, unplug unit and remove 10 screws from top cover. The cover has the cooling fan mounted on it. There are two leads attached to the cover, so do not move it completely away from the unit. Rotate it 90° and slide it to one side. After making the adjustment, replace the cover and all screws. **DO NOT OPERATE UNIT WITH COVER OUT OF POSITION.**

**WARNING: EYE AND SKIN DAMAGE MAY RESULT FROM DIRECT VIEWING OF, OR EXPOSURE TO, THE LAMP IN THIS UNIT. ALWAYS TURN OFF LAMP BEFORE PERFORMING ANY MAINTENANCE.**