

# OPERATION MANUAL

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MANUAL NO. 056-090-00  
REV. NO. B

## LAB-LINE® EDUCATIONAL PLANT CHAMBERS

MODEL NO<sub>s</sub>. | 846, 846-3

20-7630



**LAB-LINE INSTRUMENTS, INC.**

DESIGNERS AND MANUFACTURERS

A SUBSIDIARY of Barnstead|Thermolyne

1999 North 15th Ave., Melrose Park, IL 60160-1491 USA

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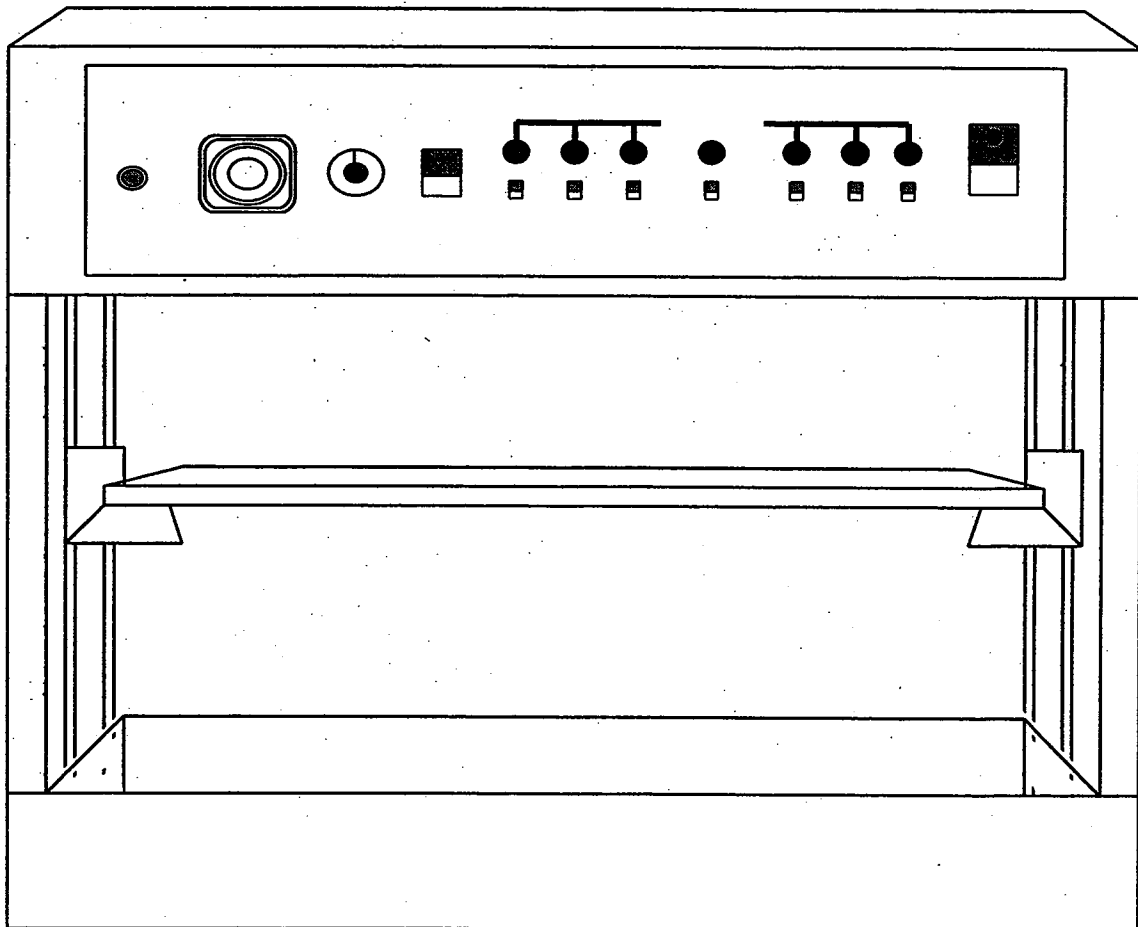
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# DESCRIPTION

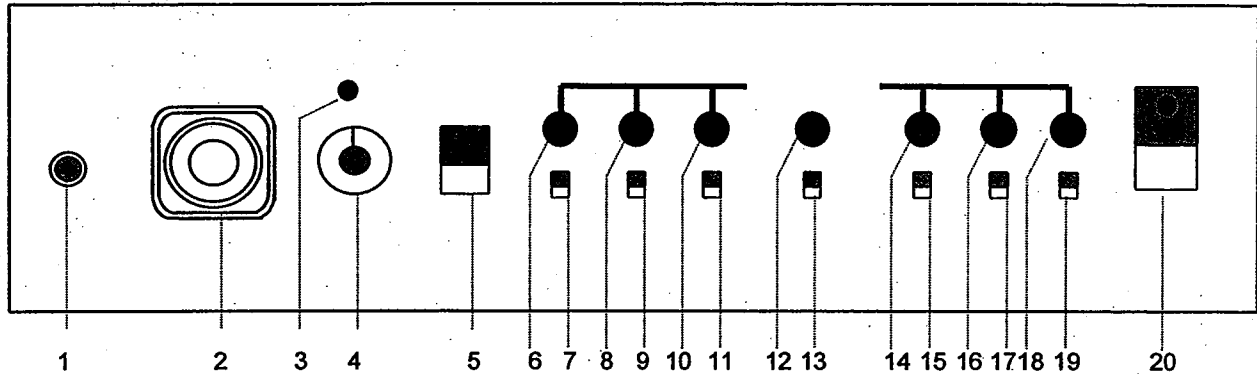
The Lab-Line Educational Chambers have been specifically designed to bring controlled environments, natural or experimental, to the classroom. Automatically timed lighting of variable intensity provides for photoperiodism and photosynthesis demonstrations.

In addition, the effects of various light color balances can be observed; experiments can be performed in darkness, hydroponic growth and aquatic or marine life studies can be conducted, as well as comparative experiments using a variety of plants and soils.



# FEATURES

## CONTROL PANEL:

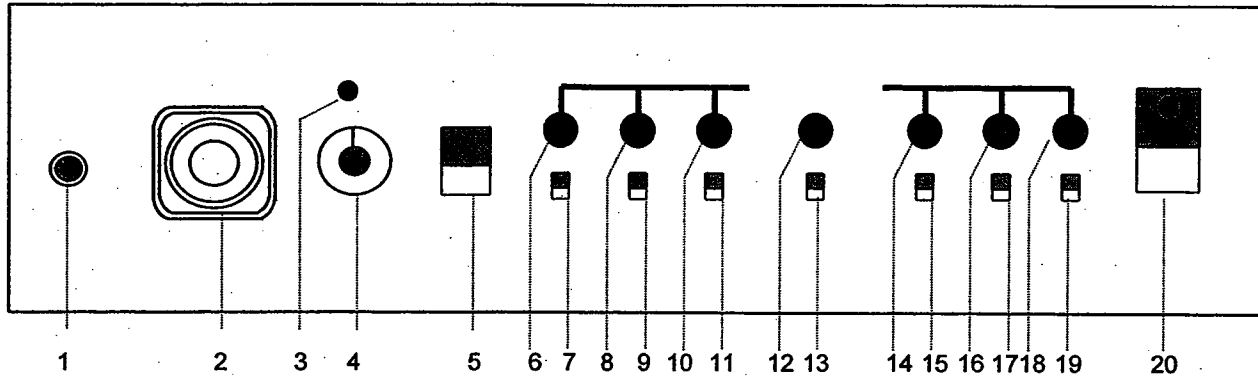


1. **CIRCUIT BREAKER:** Circuit breaker pops out in the event of power interruption. Push into re-set.  
#330-140-00\*
2. **24-HOUR TIMER:** Controls the fluorescent and incandescent lights only. Each tab controls a 15-minute increment. Trippers pushed toward center place timer in non-timing mode; trippers pushed outward select timing periods.  
#270-098-00 (846), #270-119-00 (846-3)\*
3. **TEMPERATURE CONTROL THERMOSTAT STATUS LAMP:** Lit when thermostat is operating.  
#360-233-01 (LAMP BASE), #360-235-00 (LENS)\*
4. **TEMPERATURE CONTROL THERMOSTAT:** This hydraulic thermostat can be set to control chamber temperature automatically by controlling power to the lamps and heater strip plugged into the right-hand receptacle. The sensor bulb and capillary tube can be suspended in the chamber, immersed in plant tray water or buried in plant soil.  
#920-093-00 (THERMOSTAT), #560-223-00 (KNOB)\*
5. **AUTOMATIC/MANUAL OPERATION SELECTOR SWITCH:** This 2-position rocker switch selects manual or automatic control of lights in unison with the position of the individual switches of the lights. When lower half of the switch is depressed, manual control of individual lights is possible; upper half depressed effects timer control of lights.  
#440-372-00\*
6. **FAN CONTROL STATUS LAMP:** Lit when fan is operating.  
#360-233-01 (LAMP BASE), #360-235-00 (LENS)\*

\*AS LISTED ON UPCOMING REPLACEMENT PARTS LIST

# FEATURES: (Con't)

## CONTROL PANEL:



19. **RIGHT-HAND RECEPTACLE SWITCH:** This 3-position switch controls power to the right-hand receptacle located on the light bank at the top of the chamber, but only when energized by the thermostat. The right receptacle is always controlled by the thermostat and is unaffected by the timer or automatic/manual switch. It will stay on at all times if the switch is placed either in the up or down position—center position is off.  
#440-374-00\*
20. **MAIN POWER SWITCH:** Controls power to the unit.  
#440-359-00 (846), #440-292-00 (846-3)\*

\*AS LISTED ON UPCOMING REPLACEMENT PARTS LIST

# INSTALLATION

## ✓*SHIPPING CARTON:*

This should be inspected upon delivery. When received, carefully examine for any shipping damage before unpacking. If damage is discovered, the delivering carrier should both specify and sign for the damage on your copy of the delivery receipt.

Open the carton carefully making certain that all parts are accounted for before packaging materials are discarded—after unpacking, if damage is found promptly report it to the carrier and request a damage inspection promptly.

**IMPORTANT:** Failure to request an inspection of damage within a few days after receipt of shipment absolves the carrier from any liability for damage: you must call for a damage inspection promptly.

## LOCATION:

Select a solid, level surface that can support at least 250 lbs. (113.4 kg)—unit weight plus contents. The location should be free of drafts and extraneous vibration.

## SET-UP:

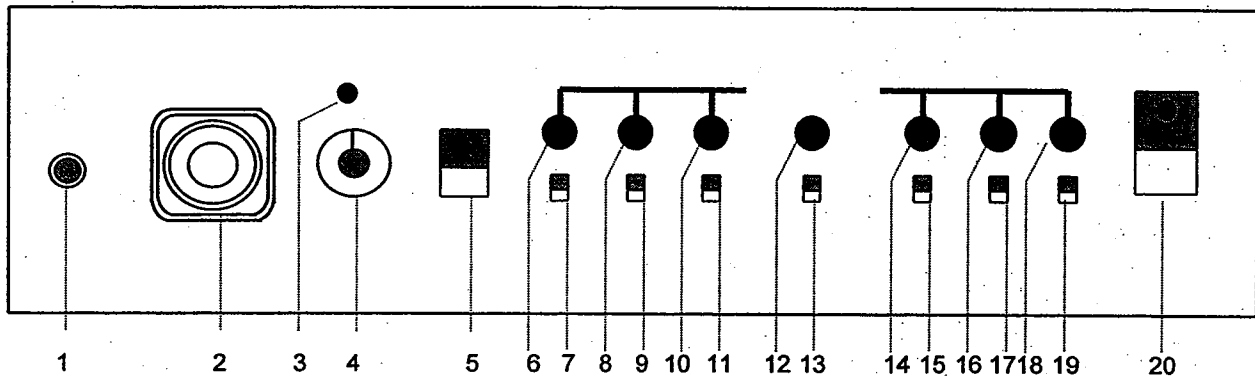
- Position the bottom tray (full width of chamber).
- Install shelf clips at the desired level on the pilasters. Position the shelf brackets over the clips and carefully slide the shelf into position. (If an optional extra shelf has been ordered install it the same way.)
- Insert 4, 40-watt, rapid-start, 48" long fluorescent tubes in the sockets at the top of the chamber—full spectrum "grow lamp" type tubes may be used, if they are the rapid-start type.
- Insert 3 incandescent bulbs in the sockets located in the top of the chamber. Each bulb should be no more than 150 watts—use clear, frosted or colored incandescent bulbs.
- Insert the rear glass door in the top track; lift it up and over the bottom track and lower it into position. Install the front glass door the same way. Apply the self-adhesive finger pulls to the outer edge of each door at the center.

# OPERATION

**DANGER: DO NOT USE IN THE PRESENCE OF FLAMMABLE OR COMBUSTIBLE MATERIALS OR EXPLOSIVE GASES. DO NOT USE IN THE PRESENCE OF PRESSURIZED OR SEALED CONTAINERS—FIRE OR EXPLOSION MAY RESULT, CAUSING DEATH OR SEVERE INJURY.**

**NOTE: THE RIGHT HAND RECEPTACLE IS CONTROLLED BY THE THERMOSTAT REGARDLESS OF MODE. IT IS RECOMMENDED THAT THE HEATER CABLE BE PLUGGED INTO THE RIGHT HAND RECEPTACLE.**

CONTROL PANEL:

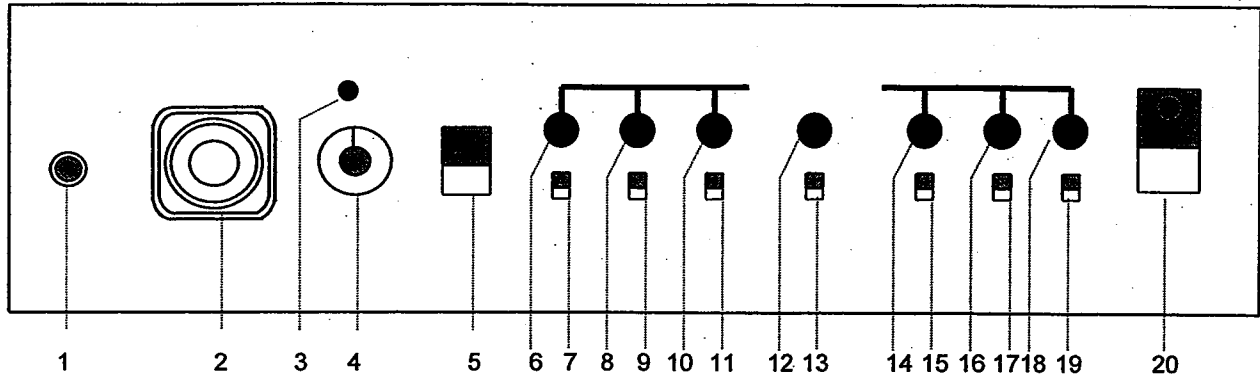


MANUAL OPERATION OF LIGHTS:

- **POWER SWITCH (20):** Turn on—green light on switch lights.
- **AUTOMATIC/MANUAL SWITCH (5):** Depress lower half of switch.
- **FLUORESCENT SWITCHES ( 9 & 11):** Depending on lighting requirements of work being conducted, depress upper half of one or both switches.
- **INCANDESCENT SWITCHES (13, 15 & 17):** Depending on lighting requirements of work being conducted, depress upper half of one, two or three incandescent switches.
- **RIGHT RECEPTACLE SWITCH (19):** If apparatus connected to right receptacle is to be used, depress upper half of this switch.
- **FAN SWITCH (7):** Depress upper half of switch. This is recommended in order to circulate the air uniformly in the chamber and minimize temperature gradients.

# OPERATION: (Con't)

## CONTROL PANEL:



## TIMER-CONTROLLED OPERATION:

- **POWER SWITCH (20):** Turn on—green light on switch lights.
- **AUTOMATIC/MANUAL SWITCH (5):** Depress lower half of switch.
- **FLUORESCENT SWITCHES ( 9 & 11):** Depending on lighting requirements of work being conducted, depress upper half of one or both switches.
- **INCANDESCENT SWITCHES (13, 15 & 17):** Depending on lighting requirements of work being conducted, depress upper half of one, two or three incandescent switches.
- **RIGHT RECEPTACLE SWITCH (19):** If apparatus connected to right receptacle is to be used, depress upper half of this switch.
- **FAN SWITCH (7):** Depress upper half of switch. This is recommended in order to circulate the air uniformly in the chamber and minimize temperature gradients.
- **TIMER (2):** Determine what timing periods are required and move trippers to outside circumference to coincide with the period(s)—each tripper controls a 15-minute time segment.
- **TEMPERATURE CONTROL THERMOSTAT (4):** Rotate to control the level of heat desired in the chamber; doing so also powers up the right hand receptacle.

Thermostat has no control over lights in this mode.

In the timer-controlled mode, the action of the lights is controlled by the timing periods selected.



# MAINTENANCE

## BE ADVISED:

**NOTE:** MAKE NO ATTEMPT TO SERVICE OR REPAIR A LAB-LINE PRODUCT UNDER WARRANTY BEFORE CONSULTING YOUR LAB-LINE DEALER. AFTER THE WARRANTY PERIOD, SUCH CONSULTATION IS STILL ADVISED, ESPECIALLY WHEN THE REPAIR MAY BE TECHNICALLY SOPHISTICATED OR DIFFICULT.

IF ASSISTANCE IS NEEDED BEYOND WHAT THE DISTRIBUTOR CAN PROVIDE, PLEASE CALL THE LAB-LINE CUSTOMER RELATIONS DEPARTMENT AT (319) 556-2241 OR (800) 522-5463. NO MERCHANDISE, HOWEVER, SHOULD BE RETURNED DIRECTLY TO LAB-LINE WITHOUT PRIOR APPROVAL FROM LAB-LINE.

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**CAUTION:** DISCONNECT PLUG FROM ELECTRICAL OUTLET BEFORE ATTEMPTING ANY MAINTENANCE OR REPAIR OF THIS UNIT.

### BLOWER MOTOR:

The blower motor is permanently sealed and requires no user maintenance. With the minimal attention described below, this environmental chamber can be expected to operate for many trouble-free years.

### REPAIRS AND SERVICING:

Unplug the unit from its outlet before servicing. Remove the screws on top and around the control panel to gain access to control panel components. Repairs and/or servicing should be performed only by qualified personnel.

### ROUTINE CLEANING:

Clean the interior and exterior with mild soap and water only using a soft cloth or sponge. Rinse thoroughly and dry completely. Do not use abrasives or scouring pads on any part of the unit.

Glass may be cleaned with an ammonia-based glass cleaner and a soft cloth or paper towel.

# REPLACEMENT PARTS: (Con't)

DESCRIPTION	PART NUMBER
Thermostat	920-093-00
Tray, Bottom	581-453-00
Tray, Plant-Holder	190-025-00
24-Hour Timer for 846	270-098-00
24-Hour Timer for 846-3	270-119-00
Wiring Schematic	228-039-01

**NEED A PART? CALL THE LAB-LINE PARTS HOTLINE.  
CALL: (319) 556-2241 or (800) 522-5463; FAX: (319) 589-0516.**

**LAB-LINE RESERVES THE RIGHT TO CHANGE SPECIFICATIONS WITHOUT PRIOR NOTICE.**

# WARRANTY

LAB-LINE INSTRUMENTS, INC., for itself and all of its subsidiaries ("Lab-Line"), does hereby offer a warranty for products from the date of receipt by the user, under normal and proper usage, against defects in workmanship and material, and will repair or replace any defective part(s) without charge when same is shipped prepaid to the authorized Lab-Line distributor from which the product was originally purchased.

Should the nature of any defect require that the product, or any constituent portion thereof, be returned to Lab-Line's factory in Melrose Park, Illinois, prepaid, for service, a condition precedent to any return shall be the procurement of written authorization from Lab-Line assigning a Return Goods Number to the product or part requiring service.

Parts and accessories manufactured by others are warranted only to the extent of the regular warranty of the manufacturer or supplier of such materials and only insofar as Lab-Line is able to transfer the benefits of warranty coverage, if any, to the user. Any adequately warranted defective part or accessory manufactured or supplied by others may be exchanged through an authorized Lab-Line dealer for a replacement part, and no charge, in respect thereof, shall be assessed if the defective part is shipped prepaid and received at Lab-Line's factory within 30 days from the date any replacement part is obtained by the user.

This warranty supersedes and is given in lieu of all implied warranties, and is void if the user does not provide the unit with continuous ample electric power at constant voltage, consistent with the specifications of the product.

TO OBTAIN BENEFITS CONFERRED BY THIS WARRANTY, USER MUST RETURN THE PRODUCT REGISTRATION CARD TO LAB-LINE WITHIN SEVEN (7) BUSINESS DAYS AFTER RECEIPT OF THE PRODUCT.

LAB-LINE INSTRUMENTS, INC.  
A SUBSIDIARY of Barnstead|Thermolyne  
1999 North 15th Ave., Melrose Park, IL 60160-1491 USA  
PHONE: (319) 556-2241 or (800) 522-5463; FAX: (319) 589-0516

MODEL NUMBER: \_\_\_\_\_

SERIAL NUMBER: \_\_\_\_\_

DATE OF PURCHASE: \_\_\_\_\_

COMPANY NAME: \_\_\_\_\_

STREET ADDRESS: \_\_\_\_\_

CITY, STATE, ZIP CODE: \_\_\_\_\_

CONTACT & PHONE NUMBER: \_\_\_\_\_

See reverse side for warranty coverage



**FIRST IN INSTRUMENTS SERVICING SCIENCE, INDUSTRY,  
RESEARCH AND EDUCATION  
SINCE 1908.**

# ACCESSORY CHECKLIST

The following loose parts and accessories are packed with this unit. Before discarding any packing materials, please be sure that nothing has been overlooked.

MODEL NO. S: 846, 846-3

CHECKED BY: \_\_\_\_\_

DATE \_\_\_\_\_

PACKED BY \_\_\_\_\_

CHECKED	ITEM	PART NUMBER	QUANTITY
_____	Operation Manual	056-090-00	1
_____	Immersion Heater (846)	340-292-00	1
_____	Immersion Heater (846-3)	340-133-00	1
_____	Plastic Pan W/Cover	190-025-00	4
_____	Glass Doors	540-052-00	2
_____	Blackout Panel	630-037-00	1
_____	Shelf Clip	170-029-00	4
_____	Warranty Card	528-020-00	1