

TECHNICAL Practice

TELECOM SOLUTIONS FOR THE 21ST CENTURY

BLK-3-EWP
**Line Status Strobe
 Light Kit with EWP**

April 17, 2009

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Provide Strobe Light Indication of Line Status

Ideal for Use with Two-Button Emergency Phones!

The **BLK-3-EWP** provides high visibility indication of analog line status through a high powered one million candle power strobe light. The **BLK-3-EWP** is the ideal solution for the hearing impaired and can be used equally well in loud warehouses or factories, where ringing phones can not be heard. Alternatively, the **BLK-3-EWP** can be used to add emergency notification to pre-existing emergency phones by turning on the strobe light when the emergency phone is in use.

The included **LDB-3** control module has a disable input which is ideal for two-button emergency phones, such as Viking's **E-1600-20A**, allowing "Info" button calls to be placed without activating the relay (turning on the emergency strobe light, camera, etc.) Three DIP switches are provided for turning ring detection on or off, off-hook/loop detection on or off and for selecting a ring cadence mode which allows the relay to follow ringing or to remain activated during the off time of standard ring cadence.

The control module can be installed on any standard telephone line or analog PABX/KSU station. The 1 million candle power strobe can be interfaced to flash on ringing, off-hook or a combination of ringing and off-hook (line in-use). The **LDB-3** ring/loop detect control module is also available separately.

The kit includes: (1) **LDB-3** control module, (1) blue strobe light, (1) 12V DC power adapter, (13) gel-filled butt connectors and (1) single gang weatherproof mounting box with gaskets and hardware.



Features

? Need More Information on the LDB-3?
Call (715) 386-4345 and select 409.

- **LDB-3** control module with Enhanced Weather Protection (EWP) included **?** Need More Information on EWP? Call (715) 386-4345 and select 859.
- Durable polycarbonate lens
- Long life 1 million candle power blue strobe light
- Flush mount or surface mount with weatherproof single gang box (included)
- 3/4" knockouts for connecting conduit, etc.
- Strobe and control module may be installed separately
- Can be configured to signal: ringing, off-hook, or a combination of both ringing and off-hook (line in-use)
- One set of (NO) normally open and (NC) normally closed relay contacts provided
- Selectable ring cadence mode (strobe light will remain flashing between rings)
- Switched 12V DC output (follows relay activation for powering strobe lights, cameras, etc.)
- On/off switches for ring detection and off-hook/loop detection
- Disable input, ideal for use with two-button emergency phones (**E-1600-20A**), will not activate strobe light on "Info" calls **?** Need More Information on the E-1600-20A? Call (715) 386-4345 and select 215.

Applications

- Ringing Phone or TTY indication for the hearing impaired
- Ringing phone indication in loud warehouses and factories
- Emergency illumination for emergency phones in elevators, campuses, hallways, parking ramps, etc.
- Alarm indication for security systems or alarm panels with phone dialers

Specifications

- Power:** 120V AC to 12V DC adapter provided
- Strobe Dimensions:** 111mm diameter x 69mm (4.38" x 2.75")
- Control Module Dimensions:** 74mm x 53mm x 25mm (2.9" x 2.1" x 1.0")
- Shipping Weight:** 1.5 kg (3.3 lbs)
- Operating Temperature:** -26° to 54°C (-15° to 130° F)
- Relay Contact Rating:** .5A @ 125V AC/1A @ 30V DC
- Minimum Loop Current:** 15 mA
- Minimum Ring Voltage:** 25V RMS
- Strobe Output:** 1 million candle power @ 1 second flash rate
- Ringer Equivalence:** 0.5 A REN
- Disable/Info Switch Input:** 50mA/80mW maximum
- Mounting:** Fasten to wall, post, etc. with complete surface mounting hardware included
- Connections:** Color coded wires with gel-filled butt connectors

Phone...715.386.8861

Warranty

IF YOU HAVE A PROBLEM WITH A VIKING PRODUCT, PLEASE CONTACT: VIKING TECHNICAL SUPPORT AT (715) 386-8666

Our Technical Support Department is available for assistance weekdays between 8 a.m. and 5 p.m. central time. So that we can give you better service, before you call please:

1. Know the model number, the serial number and what software version you have (see serial label).
2. Have your Technical Practice in front of you.
3. It is best if you are on site.

RETURNING PRODUCT FOR REPAIR

The following procedure is for equipment that needs repair:

1. Customer must contact Viking's Technical Support Department at 715-386-8666 to obtain a Return Authorization (RA) number. The customer MUST have a complete description of the problem, with all pertinent information regarding the defect, such as options set, conditions, symptoms, methods to duplicate problem, frequency of failure, etc.
2. Packing: Return equipment in original box or in proper packing so that damage will not occur while in transit. Static sensitive equipment such as a circuit board should be in an anti-static bag, sandwiched between foam and individually boxed. All equipment should be wrapped to avoid packing material lodging in or sticking to the equipment. Include ALL parts of the equipment. C.O.D. or freight collect shipments cannot be accepted. Ship cartons prepaid to: **Viking Electronics, 1531 Industrial Street, Hudson, WI 54016**
3. Return shipping address: Be sure to include your return shipping address inside the box. We cannot ship to a P.O. Box.
4. RA number on carton: In large printing, write the R.A. number on the outside of each carton being returned.

RETURNING PRODUCT FOR EXCHANGE

The following procedure is for equipment that has failed out-of-box (within 10 days of purchase):

1. Customer must contact Viking's Technical Support at 715-386-8666 to determine possible causes for the problem. The customer MUST be able to step through recommended tests for diagnosis.
2. If the Technical Support Product Specialist determines that the equipment is defective based on the customer's input and troubleshooting, a Return Authorization (R.A.) number will be issued. This number is valid for fourteen (14) calendar days from the date of issue.
3. After obtaining the R.A. number, return the approved equipment to your distributor, referencing the R.A. number. Your distributor will then replace the product over the counter at no charge. The distributor will then return the product to Viking using the same R.A. number.
4. **The distributor will NOT exchange this product without first obtaining the R.A. number from you. If you haven't followed the steps listed in 1, 2 and 3, be aware that you will have to pay a restocking charge.**

WARRANTY

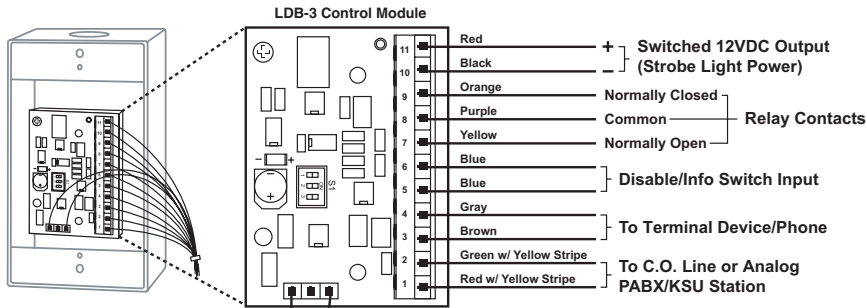
Viking warrants its products to be free from defects in the workmanship or materials, under normal use and service, for a period of one year from the date of purchase from any authorized Viking distributor or 18 months from the date manufactured, whichever ever is greater. If at any time during the warranty period, the product is deemed defective or malfunctions, return the product to Viking Electronics, Inc., 1531 Industrial Street, Hudson, WI., 54016. Customer must contact Viking's Technical Support Department at 715-386-8666 to obtain a Return Authorization (R.A.) number.

This warranty does not cover any damage to the product due to lightning, over voltage, under voltage, accident, misuse, abuse, negligence or any damage caused by use of the product by the purchaser or others.

Viking's sole responsibility shall be to repair or replace (at Viking's option) the material within the terms stated above. VIKING SHALL NOT BE LIABLE FOR ANY LOSS OR DAMAGE OF ANY KIND INCLUDING INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING DIRECTLY OR INDIRECTLY FROM ANY BREACH OF ANY WARRANTY EXPRESSED OR IMPLIED, OR FOR ANY OTHER FAILURE OF THIS PRODUCT. Some states do not allow the exclusion or limitation of incidental or consequential damages, so this limitation may not apply to you.

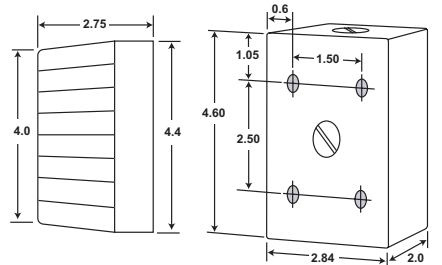
THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, WHICH ARE HEREBY EXCLUDED BEYOND THE ONE YEAR DURATION OF THIS WARRANTY. Some states do not allow limitation on how long an implied warranty lasts, so the above limitation may not apply to you.

Installation



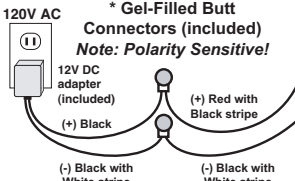
LDB-3 Control Module

11	Red	+	Switched 12VDC Output (Strobe Light Power)
10	Black	-	Switched 12VDC Output (Strobe Light Power)
9	Orange		Relay Contacts
8	Purple		
7	Yellow		
6	Blue		Normally Open
5	Blue		Disable/Info Switch Input
4	Gray		To Terminal Device/Phone
3	Brown		
2	Green w/ Yellow Stripe		To C.O. Line or Analog PABX/KSU Station
1	Red w/ Yellow Stripe		



Back view of weatherproof single gang box (included)

Dimensions: 2.75" (width), 4.0" (height), 4.4" (depth), 0.6" (top offset), 1.05" (top hole offset), 1.50" (top hole diameter), 2.50" (bottom hole offset), 2.84" (bottom hole diameter), 2.0" (bottom hole diameter).



120V AC

* Gel-Filled Butt Connectors (included)
 Note: Polarity Sensitive!

12V DC adapter (included)

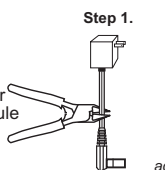
(+) Black (+) Red with Black stripe

(-) Black with White stripe (-) Black with White stripe

*** Note:** The gel-filled (water tight) butt connectors are designed for insulation displacement. Do not strip wires prior to terminating.

Preparing the Power Supply

Step 1. Cut off the barrel connector.
 Step 2. Separate wires
 Step 3. Connect 12V adapter wires to power supply wires on LDB-3 Control Module using supplied Butt Connectors and then plug in power supply



Step 1. Step 2. Step 3.

Connect power supply wires to LDB-3 module power supply wires

(+) Black (-) Black with White Stripe

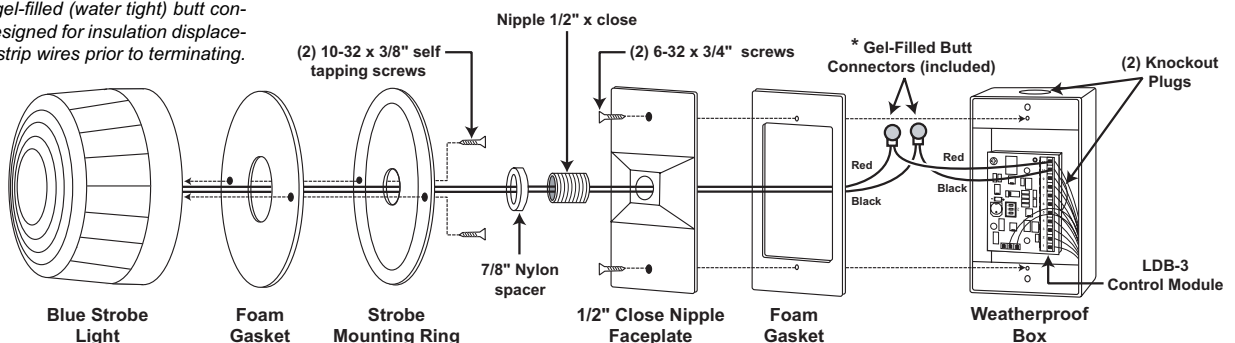
IMPORTANT: Do NOT plug in the adapter until after Step 3 is completed.



IMPORTANT: Electronic devices are susceptible to lightning and power station electrical surges from both the AC outlet and the telephone line. It is recommended that a surge protector be installed to protect against such surges. Contact Panamax at (800) 472-5555 or Electronic Specialists Inc. at (800) 225-4876.

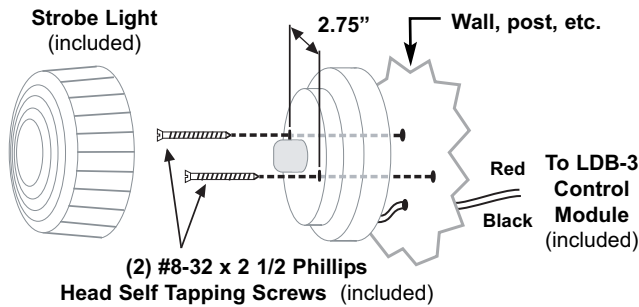
A. Installing the Strobe Light Using the Included Weatherproof Box

* Note: The gel-filled (water tight) butt connectors are designed for insulation displacement. Do not strip wires prior to terminating.



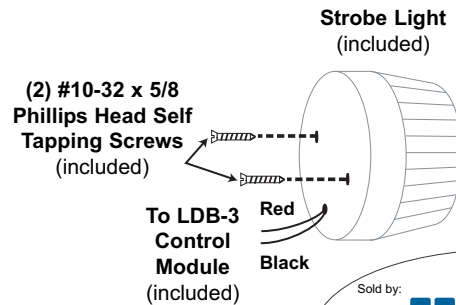
B. Front Mounting Without Weatherproof Box

The **BLK-3-EWP** Strobe Light Kit may be mounted without using the included weatherproof box. To mount the strobe light from the front, use the diagram below.



C. Rear Mounting Without Weatherproof Box

To mount the strobe light from the rear, use the diagram below.

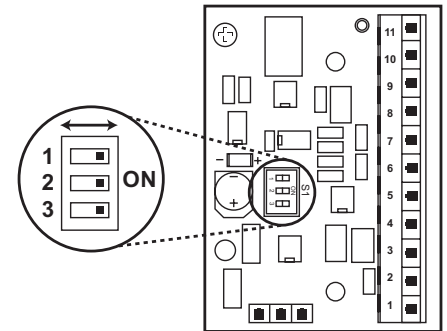


Programming

A. DIP Switches

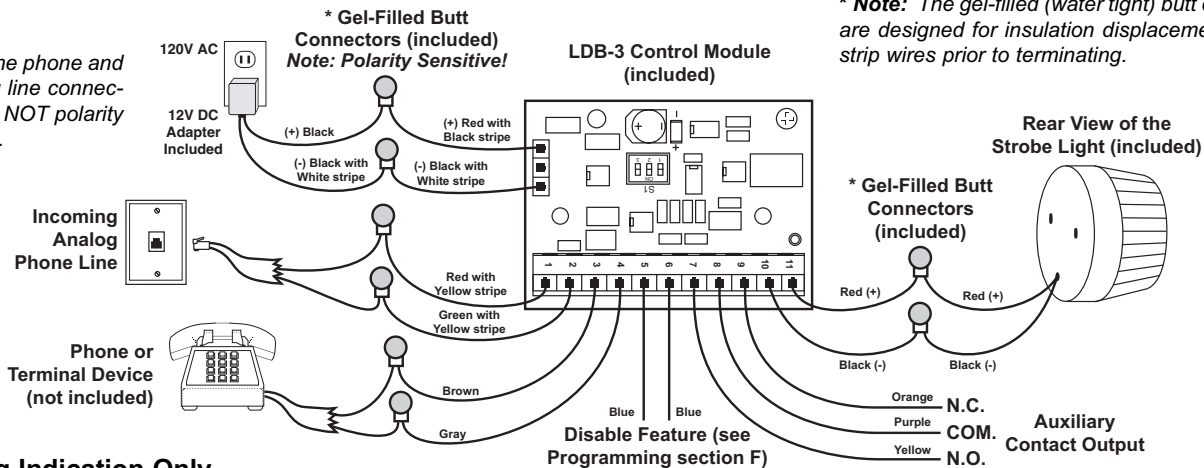
Sw 1	Sw 3	Description
ON	OFF	Ring Detection Only (see section B).
OFF	ON	Off-Hook/Loop Current Detection Only (see section B).
ON	ON	Ring and Off-Hook/Loop Current Detection (see section B).

Sw 2	Ring Cadence Mode (see section C)
ON	Ring Cadence Mode ON - relay remains activated in between rings.
OFF	Ring Cadence Mode OFF - relay is activated only during ringing.



B. Configuring for Ring and/or Loop/Off-Hook Indication

Note: The phone and incoming line connections are NOT polarity sensitive.



*** Note:** The gel-filled (water tight) butt connectors are designed for insulation displacement. Do not strip wires prior to terminating.

1. Ring Indication Only

Connect the incoming line to the red and green wires with the yellow stripe as shown in the diagram. No phone/terminal device is required. The **LDB-3** control module can monitor for ringing any place along the ringing line.

2. Loop/Off-hook Indication Only

The **LDB-3** control module must be placed between the phone line and the phone/terminal device to be monitored. Connect the incoming line to the red and green wires with the yellow stripe and connect the phone/terminal device to the brown and gray wires as shown.

3. Both Ring and Loop/Off-hook Indication

If the application requires ring and loop/off-hook indication, the **LDB-3** control module must be placed between the phone line and the phone/terminal device to be monitored. Connect the incoming line to the red and green wires with the yellow stripe, connect the phone/terminal device to the brown and gray wires.

C. Ring Cadence Mode

DIP switch 2 is used for switching between different ring detection modes. In the **OFF** position, the relay and switched 12VDC output will activate only while ring voltage is present and will turn off between rings. In the **ON** position, the relay and switched 12VDC output will remain on for up to 5.75 seconds after the ringing has stopped. This allows the relay and 12VDC (flashing strobe light) to remain on between rings of a standard ring cadence. **Note:** To use the Ring Cadence Mode, ring detection MUST be enabled (DIP switch 1 - ON).

D. Relay Contacts

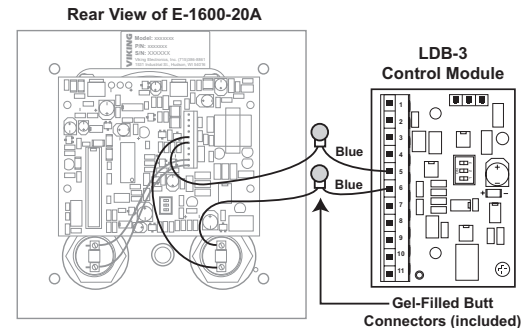
Normally open and normally closed relay contacts are available on the orange, purple and yellow wires. The contacts are rated at .5A @ 125VAC/1A @ 30VDC. If contacts are driving an inductive load, place a suppression device at the load to snub high voltage spikes.

E. Switched 12V DC Output

The switched 12V DC output is a low current, 12-15VDC output that is turned on only while the ring/loop detect relay is activated. This switched power output is ideal for lighting the included strobe light or providing 12-15V DC power to any device that draws less than 350mAmps. The positive side is available on the red wire, and the negative side is on the black wire. Once all the line and load connections have been made, plug in the 115 V AC wall adapter, and replace the cover.

F. Disable Feature

By connecting the Disable/Info Switch input of the **LDB-3** control module to the "Info" switch of Viking's **E-1600-20A**, **E-1600-20A-EWP**, **E-1600-52A** or **E-1600-52A-EWP** Emergency Phone, any outbound call initiated from the "Info" button will not activate the strobe light. This way, only the "Help/Emergency" outbound calls will activate the relay. Cut one of the "Info" switch wires in half and connect each end to the blue wires on the **LDB-3** control module as shown in the diagram at the right. **Note: This Disable input is NOT polarity sensitive.** The "Disable" input can be connected to a switch for remotely disabling/turning off the device (strobe light, camera, etc.) controlled by the **LDB-3**. For more information, see **DOD# 866**.



Operation

A. Ring Indication (DIP Switch 1 ON)

When the **LDB-3** control module detects an incoming ring signal, it activates a set of normally open or normally closed contacts and turns on the 12VDC output for activating the provided strobe light. With the Ring Cadence mode off (DIP switch 2 OFF), the relay will activate and the strobe light will flash only during ringing. With the Ring Cadence mode ON (DIP switch 2 ON), the relay will remain activated and the strobe light will remain flashing between rings.

B. Off-Hook Indication (DIP Switch 3 ON)

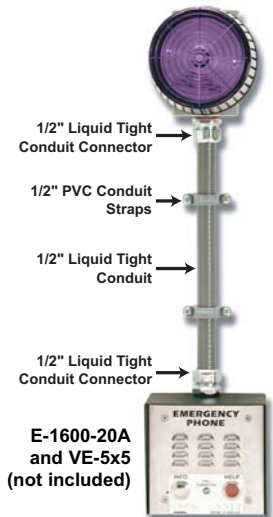
When the **LDB-3** control module detects an off-hook condition (loop current) on the brown and gray wires, it activates a set of normally open or normally closed contacts and turns on the 12VDC output for activating the provided strobe light. The relay contacts will remain activated and the blue strobe light will flash during the off-hook condition and will stop flashing approximately 3 seconds after the phone/terminal device on the brown and gray wires is back on-hook.

Other Applications

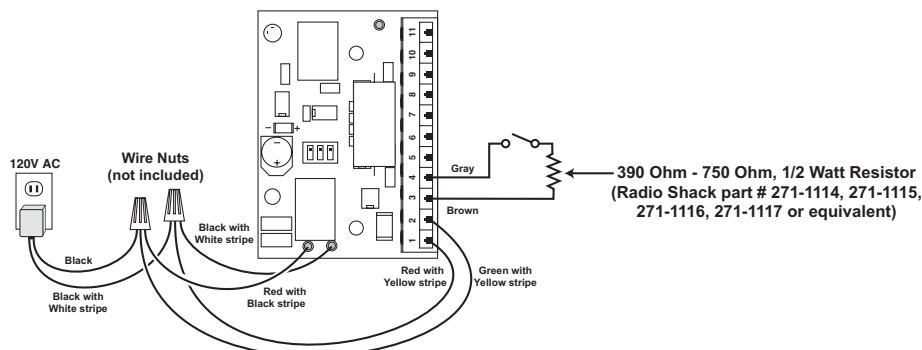
A. Mounting the BLK-3-EWP with the E-1600-20A

The **BLK-3-EWP** can be used in conjunction with the **E-1600-20A** Two-Button Emergency Phone as shown to the far right, however, special installation and mounting is required. Please follow the steps below when using the **BLK-3-EWP** in conjunction with a surface-mounted **E-1600-20A**. A **VE-5x5** surface-mount box is required, see **DOD# 424**.

Step 1.	Drill or use a knockout punch to provide a .875" diameter hole in the top of the VE-5x5 .
Step 2.	Make all conduit connections.
Step 3.	Make all wire connections to the LDB-3 control module.
Step 4.	Install the E-1600-20A as explained in its Technical Practice, DOD# 215 .



B. Operating a BLK-3-EWP with a Contact Closure



Due to the dynamic nature of the product design, the information contained in this document is subject to change without notice. Viking Electronics, and its affiliates and/or subsidiaries assume no responsibility for errors and omissions contained in this information. Revisions of this document or new editions of it may be issued to incorporate such changes.