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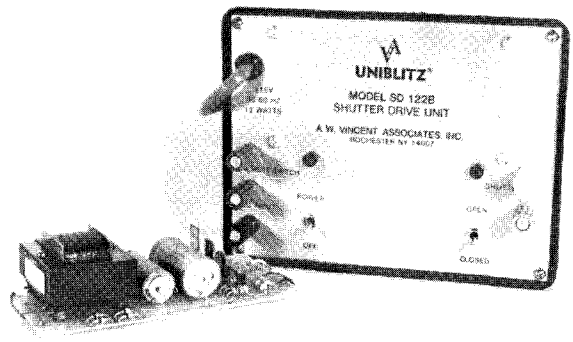
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A. W. VINCENT ASSOCIATES, INC.
ADVANCED ELECTRO-MECHANICAL ENGINEERING • 1255 UNIVERSITY AVENUE • ROCHESTER, NEW YORK 14607 • (716) 473-2232

122-B/BP SHUTTER DRIVE UNIT

- Offered in P.C. card, or cased
- Repeat operations of 40 per second
- Operated by switch closure or 5V DC logic signal
- Output: 50V pulse, 5V holding power
- Power input: 117V, or 220V, 3-prong plug (6" leads on 122 BP)



These units contain the circuitry to properly operate our complete line of Uniblitz® shutters. Activation of the shutter is accomplished either by a mechanical/electrical switch closure or an external input pulse. The shutter will then remain open until the switch is opened or the input pulse removed. Exposure times range from the shutter's fastest time to infinity, determined by the length of time the unit is activated. Dwell time of 10 msec is required between exposures.

CIRCUIT DESCRIPTION

The patented circuit described here will allow the 122-B/BP to operate at 40/sec.

T1 provides the High and Low voltage. The High voltage is rectified by bridge D1 - D4 and fed through SCR (Q2) to charge capacitor C1. Voltage divider, R1, R2 and D5 provide C1 stabilization voltage during the time Q2 is off. When transistor Q1 is turned on C1 is discharged into shutter coil opening the shutter. As C1 voltage is reduced D8 will become forward biased and provide steady state hold voltage until the shutter is closed. When the shutter is closed the inductive circuit produces an inductive kick which is fed through a patented system turning SCR (Q2) on, recharging C1 to await next drive signal.

Shutter drive signal can be made by OPEN/CLOSE switch provided, supplying a TTL (5V) logic signal to the DC input, or by connecting a mechanical or electronic switch into the REMOTE input.

OPERATION

1. Check to see that power switch is in the OFF position and shutter OPEN/CLOSE switch is in the CLOSE position.
2. Connect a Uniblitz shutter to the yellow and blue binding posts on 122B. (Yellow and blue wires on 122-BP)
3. Insert the three prong plug of the 122-B (Gray wires on the 122-BP) into power line (110V or 220V) push the power switch to the ON position.
4. Without connections to the Red, Green or Black 5 way binding posts, the shutter will remain closed. Moving the shutter control switch to the OPEN position will cause the shutter to open, and the shutter OPEN indicator will light. Moving the switch to the CLOSE position will cause the shutter to close.
5. For remote switching, connect a mechanical or electronic switching circuit to the Red and Green 5 way binding posts (122-B) or to leads (122-BP). A closed circuit on these connections will cause the shutter to open and an open circuit will cause the shutter to close.
6. A positive 5V logic signal (TTL) to the Green and Black 5 way binding posts (122-B) or leads (122-BP) will cause the shutter to open and remain open for the duration of the logic signal. When signal is removed shutter will close.
7. For sequence or tandem operation of two or more shutters see figures 1, 2 and 3 on the reverse side of this sheet.

SPECIFICATIONS

Electrical

1. Input Power	115V or 220V 50/60 Hz (selectable by wire jumpers on PC board)
2. Input Control	5V DC logic signal (TTL) at 5 mA. MAX. 20V MIN. 3.5V
3. Output	50V capacitive discharge dropping to 5V DC.
4. Repeat Operations	40 per second (minimum dwell time 10 msec. between actuations) (See graphs below for additional information)

Mechanical

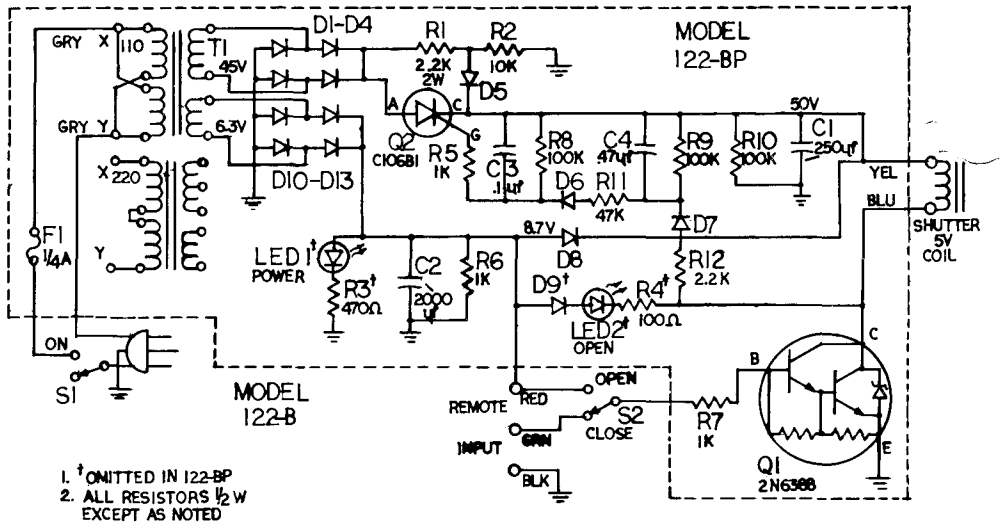
1. Controls	ON/OFF toggle switch OPEN/CLOSE toggle switch
2. Connectors	Five 5 way binding posts on ¾ centers color coded as described in operating instructions. (note 6" tinned leads on 122-BP color coded also)
3. Fuse	¼A 3AG (mounted to PC Board)
4. Indicators	Power ON LED, shutter OPEN LED
5. Size	5¼" x 6¾" x 2 5/16" (122-B) Black plastic case. 5 x 2½ x 1⅝" (122-BP) Open frame PC board
6. Net Weight	2 lbs. (122-B) 1 lb. (122-BP)
7. Shipping Weight	3 lbs. (122-B) 2 lbs. (122-BP) (weights approximate)

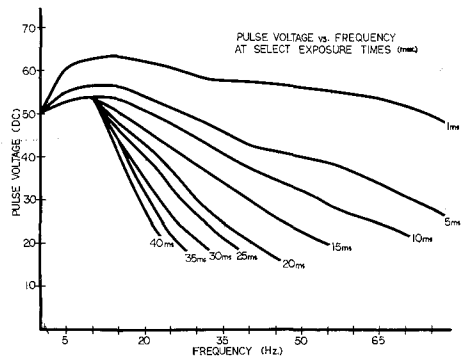
Special Applications

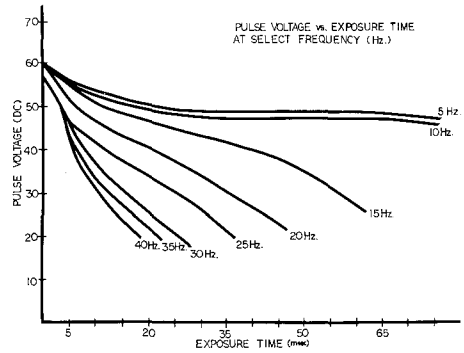
1. Figure #1 shows how to use a 122-B and a 310-B shutter timer control interconnected to drive two shutters simultaneously.
2. Figure #2 shows how to use a 310-B and a 122-B interconnected to drive two shutters alternately; shutter #1 normally closed and shutter #2 normally open. Shutter #2 opens as shutter #1 closes; #1 is timed to open, shutter #2 timed to close.

   (This can also be accomplished by setting the shutters and controls as to figure #1, and setting the OPEN/CLOSE switch of the 310-B to the OPEN position. Shutter #2 will be timed close, shutter #1 will be timed open)
3. Figure #3 shows the use of two 122-B drive units interconnected to drive to shutter alternately with external control applied to 122-B input.

122-B/BP are covered under U.S. patent 3,745,421.







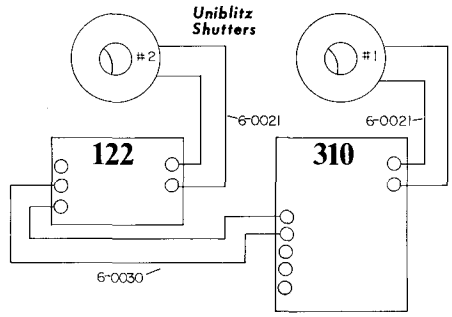


FIG.-1

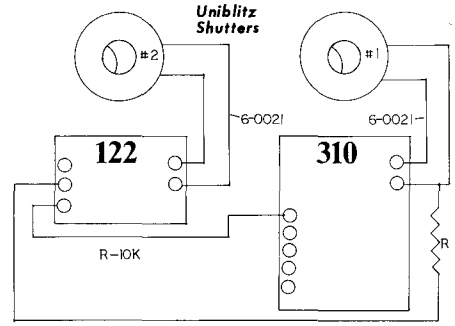


FIG.-2

ACCESSORIES

6-0013:	Remote operate cable. 100-2B, 122, 310, 325 controls, 20 ft. long, 2 wire.
6-0015:	7 pin female socket one end, 5 ft. long, 7 wire. Pigtail other end.
6-0016:	7 pin female socket one end, 25 ft. long, 7 wire. Pigtail other end.
6-0021:	For all shutters equipped with 4 pin connector, 5 ft. long, 4 wire.
6-0030:	Interconnecting cable between Uniblitz controls, 10 ft. long.

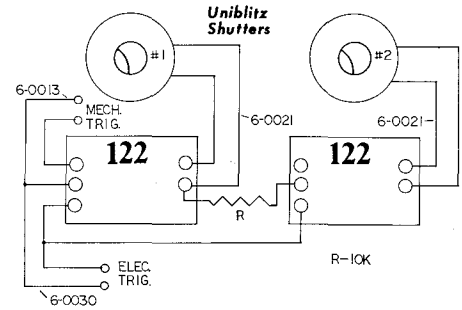


FIG.-3

WARRANTY

Great care is taken to ensure that our products are free from defect when shipped. Defective units will be replaced or repaired at no charge, excepting transportation charges, if returned within 90 days from the date of shipment. Burned out coils are not covered by this warranty.
Vincent Associates will consider accepting the return of unused equipment if returned within 30 days from the date of shipment subject to a 20% restocking charge. This offer does not apply to used or damaged equipment.

PURCHASING TERMS AND DISCOUNTS

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