



# Kurz-Kasch, Inc.

Electronics Division  
Box 1246 • 2271 Arbor Blvd.  
Dayton, Ohio 45439  
Telephone (513) 299-0990

## Operating Instructions

For Model #357

BEZÉRK/STERN-PRU 1000 PHOTO REFLECTIVE BRD

GORF/MIDWAY-A082-91379/A000 OPTO BOARD

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* *WARNING* *
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NOTE: USE ADAPTER CABLE FOR GORF ONLY....

1. Connect #357 test board to J1, with both boards's components up.
2. Connect RED power lead from test board to +5V. (You can use red binding post on TF-650. Turn on 5 volt switch and 110 volt to get the 5 volts.)
3. Connect black lead from test board to ground (negative) of power supply. (connect to ground strap on TF-650 if it is used for +5 V supply.)
4. Turn on Power.
5. Place a finger or some other handy light colored material over opto-unit, (OPB707). LED whose identification corresponds to the opto-unit should light. Check all 4 opto-units. For GORF (A082-91379-A000) use a piece of paper in OPTO slot to trigger LM339. (Same as uncovered or covered levels below.)
6. Should one or more LEDs be either on with the opto-unit not covered or not come on with an opto covered use a Kurz-Kasch logic probe in the TTL MODE ONLY, if you have a multi-family probe. You can also use a KK TTL only probe.

Here are the Logic Levels:

	All opto Uncovered Level	All opto Covered Level		All opto Uncovered Level	All opto Covered Level
LM339			Pin 14		
Pin 1	1	0	14	1	0
2	1	0	13	1	0
3	1	1	12	0	0
4	1	1	11	1	*DB
5	1	*DB	10	1	1
6	1	1	9	1	*DB
7	1	*DB	8	1	1

\*DB=no LEDs on Logic Probe are on indicating Dead Band (DB).

- A. If levels on pins (on LM339) 5,7,9, or 11 are not as shown, replace opto-unit. If these pins are correct levels proceed to "B".
  - B. If levels on pins (on LM 339) 1,2,13, or 14 are not as shown,replace LM339.
7. Return to paragraph 5 above for retest.