



## Fireray® 50/100RU

### Trouble Shooting Tips

1. If you are having a problem with reflective beams, first thing you need to do is cover the Prism with chalkboard painted cardboard. Beam should go into trouble in about 10 seconds – Amber LED solid. If beam does not go into “Trouble” or it is going into “Alarm” it is seeing a reflection and is not aligned properly. Re-align the beam or possibly even relocate the beam. It needs 24” circumference clearance all the way between the beam and prism.
2. Ensure the Beam Detector and Prism are mounted on SOLID surfaces (concrete, block, steel I-Beams). Metal Siding, Plywood, Sheetrock and Conduit move. 1° of movement at 330 ft will make the return beam miss by over 30 ft.
3. Ensure 8 pin Cable is plugged in the correct way - Blue Wire is position #2 Left hand side.
4. Ensure default dip switch settings (confirm settings before aligning beam)
  1. Alarm Auto Reset – **On – Up** (Default) To change to Alarm Latching Turn OFF – Down (NOTE: In Alarm Latching Mode – the Beam requires “Resettable Power” S+/- typically used with conventional FACP’s)
  2. Drift Compensation Enabled – **Off – Down** (Default) To Disable Turn ON - Up
  3. Alarm Threshold 35% Default Switch **Off – Down**
  4. Alarm Threshold 35% Default Switch **On – Up** (For other Alarm Threshold values consult the sticker on the back plate of beam or page 10 of installation manual)
5. Set Mode Switch to “Prism Targeting” – Up all the way. The **Red** LED will flash one to indicate that the beam is a 50 RU or will flash twice to indicate a 100 RU.
6. Adjust the thumb wheels until the **Amber** LED stays “ON”. \*At this point it is essential to test that the prism and not another surface is reflecting back to the beam. This can easily be confirmed by covering the prism with a non-reflecting surface and confirm that the Amber LED is OFF.
7. Set Mode Switch to “Alignment Mode” – Middle Position. (Follow the flow chart on page 6 of the Manual) The **Amber** LED will illuminate for 5 seconds. Wait until both LED’s stop flashing (up to 30 seconds). If you have a constant **Amber** LED return to Prism Targeting Mode, it is not receiving a proper signal. Slowly adjust a thumbwheel in one direction and observe the LED’s. If LED is flashing **Amber** reverse the direction of the thumbwheel. If the **Red** LED is flashing – stop turning the thumbwheel and wait for the **Red** LED to stop flashing. Slowly turn the thumbwheel in the same direction for about ½ a turn, each time waiting for the **Red** LED to go out, continue this method until the **Amber** LED starts to flash, then move the thumb wheel back for ¼ of a turn. Repeat the above process with other thumbwheel.
8. For optimum alignment pressing on all 4 sides of the beam should cause the **Amber** LED to flash first.
9. Set Mode Switch to “Operation Mode” – Down all the way.
10. Quickly cover the Prism (Rapid Obscuration) with chalkboard painted cardboard. Beam should go into trouble in about 10 seconds – **Amber** LED Solid.
11. If beam does not go into “Trouble” or it’s going into “Alarm” it is seeing a reflection and is not aligned properly. Go back to step 5 or possibly even relocate the beam.
12. Cover top Lens of beam with Obscuration Filter (provided) at the proper obscuration level for 10 seconds. Beam should go into alarm, **Red** LED Solid. Beam will hold alarm for 5 seconds. NOTE: Filter has two sets of values, Top markings are for Reflective Beams (50RU/100RU) and bottom markings are for End to End (F2000). There is a difference in testing.
13. Leave Mode Switch in “Operation Mode” – Down all the way for normal operation.
14. Wiring Color Code
 

|                                   |                                     |
|-----------------------------------|-------------------------------------|
| 1. Brown Alarm relay contact N/C  | 5. Black Power Negative -           |
| 2. Blue Alarm relay contact COM   | 6. Green Trouble relay contact N/C  |
| 3. Yellow Alarm relay contact N/O | 7. White Trouble relay contact COM  |
| 4. Red Power Positive +           | 8. Orange Trouble relay contact N/O |



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