

# Specpoint Systems Development Inc.

Ultraviolet Ammonia Detection Systems  
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## INSTALLATION AND SET UP INSTRUCTIONS

### Part 500034E UV Source Tube

1. Disconnect power from instrument.
  2. Remove defective UV Source Tube and replace with new one.
  3. Remove aluminum sample tube part number ADL 5003 and clean with lint and oil free cloth and pure acetone solvent.
  4. Inspect inner surface. It should be very bright but not polished. **Do not scratch or repolish.**
  5. Let dry, then reinstall.
  6. Remove detector tube PN 124932 and clean with clean and damp cloth.
  7. Reinstall in holder with curved cathode up with centerline of aluminum sample tube.
  8. Reconnect source and detector cables.
  9. Return power to instrument.
  10. Set standardize to mid travel.
  11. Pass clean sample of gas nitrogen or air through instrument at normal flow rate. The instrument reading should be near zero.
  12. If well below zero, disconnect power and remove detector tube. Using the supplied black tubing, carefully slide the two black pieces of shrink tubing on to the detector tube. Leave a light path in the middle of tube approx. 4mm wide.
  13. The shrink tubing may be stretched slightly to enable easy fitting onto tube. The opening of approx. 4mm may need to be less or more depending on the sensitivity of individual detector tubes. (see following number 19).
  14. Have the outer shrink tube piece able to slide snugly. Once on the tube this will give you the ability to adjust the light path gap. Once the detector tube is fitted with shrink tubing then carefully set aside.
  15. Adjust the detector tube holder. The curved sides of tube holder will require straightening slightly. Verify screw tab and hole alignment.
  16. Gently test fit of detector tube in holder.
  17. Adjust clamp so that the holding screws will not contact the glass surface.
  18. If the fitting is good, proceed with remounting detector tube in the resized holder.
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19. You should be able to slide the outer shrink tube as needed with clamp half loose to set calibration. This method of trimming detector tube sensitivity is

preferred. The old method of rotating detector tube in holder is no longer recommended.

20. Reconnect detector cable. Leave detector tube clamp screws loose at this time.
21. Reconnect power to instrument and sample flow. The meter should be near zero.
22. Recheck standardize to midtravel. Then gently open or close the light opening to set coarse zero. Use the supplied wooden toothpicks to help move the shrink tubing.
23. When satisfied of zero setting. Gently tighten the detector tube clamp screws. **Do not over tighten.**
24. Verify tube is clean of dirt and fingerprints.
25. Let instrument run for 5 minutes. It should remain near zero with door remaining shut.
26. Use the correct calibration "span screen" for the instrument range. Check by attaching span screen in the normal and described way outlined in instrument manual.
27. The amplifier gain adjustment is P2 (1 meg ohm). Check zero and then span two times for best accuracy.
28. It is suggested that the UV tube PN500034-A through E operating current be checked and in the range of .4 to .8 milliamps. If it is greater than .8 milliamps, suspect abnormal aluminum sample tube finish quality. See number 4. An incorrect surface finish will cause high tube currents and shorten tube life, replace as required with new.