

Installing the Fast Amp on the Agilent 355 SCD and 255 NCD

Accessory G6600-65004

Purpose

To replace or upgrade the PMT amplifier in Agilent $355\ \mathrm{SCD}$ or $255\ \mathrm{NCD}$ detectors.

Scope

This procedure applies to all current detector configurations.

Safety

This procedure requires access to electrical components of the detector. Be sure to follow ESD safety precautions, as instructed. This procedure should be performed by personnel skilled in the maintenance of electromechanical instruments.

Materials

- Agilent Fast Amp kit
- 3/8 inch open-end wrench
- 7/16 inch open-end wrench
- Phillips screwdriver

Procedure

- 1. Prepare the detector
 - Turn off power to the Controller.
 - Turn off ozone generation and the pump switch. Place the detector in standby mode.
 - Remove the power cord from the detector.
 - Unplug the vacuum pump power cord from the rear of the detector.



- Disconnect the air inlet line and disconnect the vacuum exhaust hose form the barbed fitting on the rear of the instrument.
- Disconnect the PFA transfer line from the burner, using 3/8 inch and 7/16 inch open-end wrenches.
- Remove the right and left side panels by loosening the screws with a Phillips screwdriver. Thread the transfer line through the hole in the right side panel and completely remove the side panel.
- 2. Remove the cover to the amplifier enclosure by loosening the four screws with a Phillips screwdriver (item 3 in Figure 1).
- 3. Take ESD precautions. Put on the ESD wrist strap and attach the alligator clip to a metal component on the detector.
- 4. Disconnect the amplifier cable from the amplifier board.
- 5. Disconnect the ribbon cable from the amplifier board.
- 6. Remove the screw securing the PMT amplifier enclosure to the detector. Remove the nut grounding the BNC connector to the rear of the detector. Remove the amplifier enclosure from the detector.



Figure 1 Right-Side View of the Detector

7. Remove the four screws that secure the amplifier board to the enclosure. Remove the nut holding the BNC connector to the housing and remove the board.

- 8. Insert the new amplifier board into the enclosure and secure it with the four screws.
- 9. Reverse steps 2 through 7 to replace the amplifier in the detector.
- 10. If desired, the "Signal Display" and detector output may be calibrated to agree; however, the "Signal Display" is not used for chromatographic analysis so this step is not necessary and in most cases agreement will be close without calibration.

The "Signal Display" is matched between the two attenuation ranges (1 and 100) using the potentiometer RV1 on the amplifier board. The "Signal Display" and detector output is adjusted to match using potentiometer RV2 on the amplifier board. If accurate matching is desired, it is recommended that the unit be sent to the factory.

11. Reestablish all connections to the detector and resume normal operation.

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