



TECH FAX

TFN: 060202

To: All Fire Alarm Technicians

From: EST Technical Services

Date: June, 2002

Topic: Trouble and False Alarm UPDATE – Signature Series Smoke Detectors
(models SIGA-PS, SIGA-PHS, SIGA-IPHS)

NOTE: This Technical Fax supercedes Technical Fax #110001

EST Technical Fax 110001 stated that no RF susceptibility problems exist when EST SIGA-PS, SIGA-PHS, and SIGA-IPHS detectors are placed more than 36 inches (0.91 m) away from an electronic fluorescent light ballast. Questions from the field suggest that more information is necessary to clarify statements made on that Tech Fax.

The typical electronic ballast operates between 25 and 60 kHz, but due to its switching power supply numerous higher frequencies are produced, creating a broadband noise. These fields are very strong near the ballast but decay very quickly at a distance. Our testing also shows that RF filters have little or no affect, when added to the Signature data line or to the actual detector circuitry.

EST completed rigorous testing on our detectors with multiple models of electronic ballasts provided by many of the larger manufacturers of lighting equipment, including Advance, Motorola, Osram-Sylvania, and GE. Results were similar for each type. Our testing shows that detector placement as close as 1 foot (30 cm) to an electronic ballast is not an issue in most applications.

EST has several million Signature detectors installed throughout the world. Only rarely do we receive a report that a detector installed more than 1 foot (30 cm) away from a fluorescent light is affected. Further, in most of these rare cases, simply rotating the detector or properly grounding the fluorescent light ballast has resolved the issue. Always verify correct AC power grounding and verify the ballast is properly grounded to the light fixture.

To reduce the probability of detector interference caused by electronic light ballasts, this information should be taken into account as part of your normal, safe engineering practice.