Gas Detectors or "Sniffers"

TICK RATE SENSITIVITY

An interesting fact from the chart is the "Tick Rate Sensitivity". This shows the gas detector is more sensitive to certain chemicals. Freon for example, is used in air conditioning and refrigeration appliances and is non-flammable, however, Freon will cause the detector to indicate a leak, before a natural gas leak of the same size would. The size of the leak is an important consideration that the detector will not address. Experience has noticed that the gas detector will show leakage from residual gas left over from a Butane cigarette lighter, long after the gas has been turned off.

AGA and ANSI STANDARDS:

The AMERICAN GAS ASSOCIATION in conjunction with ANSI STANDARDS both recognize that a very small amount of gas leakage is not harmful and is allowable. This small amount of gas leakage will dissipate before any possibility of ignition.

LEAKAGE ALLOWANCES:

The AGA ASSOCIATION and ANSI STANDARDS allow for 200 cubic centimeters per hour of external gas leakage when pressure of ¾ PSI is supplied to the gas control valve. These standards also allow 235 cubic centimeters per hour of leakage, at ¾ PSI, through the gas control valve to the main or pilot burners with the gas control valve turned off. (See AGA STANDARD Z21.21).

WHERE THE GAS DETECTOR IS USED:

This is not to say the gas detectors are not valuable safety devices. They are extremely useful for entering areas which have the possibility of gas leakage. Gas detectors are useful for monitoring gas appliance installation and maintenance.

PROPER USAGE:

The proper use of a gas detector is to detect the possibility of gas leakage, to locate the likely area from which gas may be leaking. The detector is then PUT AWAY and a solution of water and soap is used to IDENTIFY the leak. When soap solution is applied to the point of leakage, bubbles will occur. This verifies the point at which repairs are required.

SERVICING AND REPAIRING:

It is strongly recommended that all service and repairs be made by a qualified technician from a reputable service company or your gas company.

Gas Detectors or "Sniffers"

The gas detectors or sniffers now available cannot distinguish Natural or LP gas from many other substances. Please see the chart showing various chemicals that can be detected on one type of gas detector. Note, some of the chemicals listed are not flammable. Some of these can be found in normally harmless items. Demonstrations have been given regarding sniffers, showing that Tuna Sandwiches and Glazed Donuts "leak".

GAS OR VAPOR	TICK RATE	SLIGHT INDICATION PPM	ALARM INDICATION PPM	LOWER LIMITS % OF AIR	UPPER LIMITS % OF AIR
TRICHLORO ETHYLENE	5	100	0.07	-	-
FREON-500	10	500	0.07	-	-
METHYLONE CHLORIDE	10	600	0.2	-	-
FREON-502	5	250	0.2	-	-
FREON-12	1000	2500	-	-	-
CHLORINE	-	NO RESPONSE	NO RESPONSE	-	-
FREON-22	10	500	0.07	-	-
JET FUEL (JP-4)	5	350	0.1	1.16	6.0
GASOLINE-LEADED	10	750	0.4	1.40	7.5
GASOLINE-UNLEADED	10	900	0.5	1.50	7.5
BUTANE	10	850	0.8	1.90	8.5
PROPANE	10	750	0.8	2.20	9.5
ACETYLENE	10	750	2	2.50	81.0
HYDROGEN	5	250	0.3	4.00	75.0
HYDROGEN SULFIDE	1	50	0.05	4.30	45.5
ETHANOL	10	750	0.4	4.70	19.0
METHANE	10	1000	2	5.30	14.0
METHANOL	10	850	0.4	7.30	36.0
CARBON MONOXIDE	5	500	1.5	12.50	74.0
AMMONIA	10	1.000	1	15.50	26.6

Gas Detectors or “Sniffers”