



THE SENTRY TIMES

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RED ROVER, RED ROVER, SEND THEM RIGHT OVER...

As expected, the last few months have been busy around here!

In addition to a schedule that took us to shows all over the country – hopefully including one near you – the Gas-Rover™ has truly been flying off the shelves. With its ability to be used for handheld or mobile surveys and for responding to indoor or outdoor leak calls, the Rover is turning out to be a very popular instrument indeed. Avista, National Grid, Questar Gas, Southwest Gas, and Washington Gas have all placed orders for significant numbers of Rovers in the past few months.

So, after a summer full of shows, it looks like we'll have a fall full of training! Not that we're complaining.

Now that we offer four lines of gas-detectors – the Gas-Rover™, the Gas-Explorer™, the Gas-Ranger™ and the Gas-Sentry® – each of which comes in eight to ten models, we thought we'd take the opportunity in this issue's Product Focus to highlight the unique features and most popular uses of each. Of course, all of our products stand up to the demanding requirements of utility workers, whatever the application.

The Special Feature this issue focuses on a product we are currently developing: the Safeguard™ valve. With this valve, which can be used indoors or out, Bascom-Turner looks to add to consumer gas safety. Not only does the Safeguard™ allow a utility to shut off gas remotely, but when combined with a natural gas sensor in a customer's home, the valve can automatically shut off gas if a leak is detected.

As always, we finish with the 19th Hole, which takes the long view of golf's history, starting with shepherds, sticks and stones and bringing us all the way to the 21st century.




Enjoy,
Elizabeth J. Makrides
Editor-in-Chief




For twenty years, gas utilities have relied on Bascom-Turner Instruments to supply gas detectors for their workforce. The **Gas-Sentry**, our original gas detector, remains a high-quality, high value tool for utility service personnel. The **Gas-Ranger**, the detector of choice for construction personnel, maintains the high accuracy and reliability of the Sentry in a rugged, waterproof case. The addition of a high-speed pump makes it particularly well-suited for line purging and bar-holing.

Our newest detectors, the **Gas-Explorer** and the **Gas-Rover**, utilize the latest developments in digital electronics to extend the range, reliability, and productivity of our gas detectors. Both feature extensive data-logging capabilities, a large LCD display, and intuitive operation. The Gas-Explorer, designed for service personnel, has a calibrated accuracy of 20ppm. The Gas-Rover is both a leak survey instrument and a CGI for bar-holing. Using a combination of catalytic combustion sensors and a thermal conductivity sensor, it has the ability to measure 1ppm to 100% gas.

Key features of each detector are compared below:

<h3>The Gas-Rover™</h3> 	<h3>The Gas-Explorer™</h3> 	<h3>The Gas-Ranger™</h3> 
<p>Calibrated Ranges 0 to 40,000ppm methane 1ppm Resolution 0 to 100% vol methane 0.05% Resolution</p>	<p>Calibrated Ranges 0 to 40,000ppm methane 20ppm Resolution 0 to 100% vol methane 0.05% Resolution</p>	<p>Calibrated Ranges 0 to 5% vol methane 0.05%(50ppm) Resolution 5 to 100% vol methane 1% Resolution</p>
<p>Sensors CH₄ (Catalytic) CO, O₂ (Electrochemical)</p>	<p>Sensors CH₄ (Catalytic) CO, O₂ (Electrochemical)</p>	<p>Sensors CH₄ (Catalytic) CO, O₂, H₂S (Electrochem)</p>
<p>Operating Modes Survey, Truck Survey, Monitor, Bar-Hole</p>	<p>Operating Modes Track Gas, Bar-Hole, Monitor</p>	<p>Operating Modes Track Gas, %LEL, %GAS; PPM CO, %O₂ optional</p>
<p>Calibration Docking and auto-cal Stores last 24 calibrations</p>	<p>Calibration Docking and auto-cal Stores last 24 calibrations</p>	<p>Calibration Docking and auto-cal</p>
<p>Data Storage Exposure and Bar-Hole Readings (2-3 mo. typical)</p>	<p>Data Storage Exposure and Bar-Hole Readings (2-3 mo. typical)</p>	<p>Data Storage N/A</p>

	<h3>The Gas-Sentry™</h3>
	<p>Calibrated Ranges 0 to 5% vol methane; 0.1% Resolution 5 to 100% vol methane; 1% Resolution</p>
	<p>Sensors CH₄ (Catalytic), CO, O₂ (Electrochemical)</p>
	<p>Operating Modes Track Gas, %LEL, % GAS; PPM CO, %O₂ optional</p>
	<p>Calibration Docking and auto-cal</p>
	<p>Data Storage N/A</p>

THE SAFEGUARD™ VALVE: THE FUTURE OF GAS SAFETY



Bascom-Turner is developing the Safeguard™, a remote shut-off gas valve. When coupled with a natural gas sensor placed in a basement or other area of a customer's premises, the valve can automatically shut off the gas if a leak is detected. The valve, which can be used inside or out, can also be used to shut off gas remotely in an emergency – for example, flooding – and shuts off automatically in case of fire.

We are all aware of the hazards posed by gas leaks. The Safeguard™ will not, of course, eliminate all such hazards, but by providing a method to detect leaks and quickly and automatically shut-off gas at the meter, it will add to consumer safety. This, along with its ability to be addressed remotely by a utility, makes the Safeguard™ a truly valuable product for the gas utility industry.

A number technical challenges still remain to be addressed. In the first place, communication between the valve, the gas sensor, and a controller must be secure and dependable. Second, gas shut-off needs to be achieved quickly and reliably, and the valve must remain bubble-tight after shut-off. Third, communication and shut-off must both be accomplished using little power, as the valve is expected to run for up to 10 years on a single set of batteries. Fourth, the gas sensor must be able to operate for 10 years without calibration or maintenance. And, finally, all this needs to be achieved in a cost-effective manner!

These challenges are certainly significant, but we are confident that our engineering staff with extensive experience in gas detection will achieve a superior product.

At present, we are in the process of testing prototype valves with the help of gas utilities. If you would like more information, or would like to see a demonstration, please contact us at 800-225-3298.

The Safeguard™ system at a glance:

- Safeguard valve automatically shuts off gas to the house when the sensor detects natural gas
- Safeguard sensor(s) can be placed anywhere in the customer's home
- Sensor specifically detects natural gas, not cleaning fluids, gasoline, etc.
- Valve can be shut-off remotely using a wireless controller
- Valve and sensor operate for 10 years without maintenance or calibration



by Brian Terry

Hello fellow golfers,

As you've heard me say before, technology has had a huge impact on the game of golf over the years. You may remember that for our 25th anniversary I looked at what golf technology had to offer 25 years ago. This time around, I'd like to take a longer and broader view, looking at how everything from balls to clubs to the clothes we wear has been affected by technological advances.

Let's start with the ball. In the beginning Scottish sheep herders played golf with stones and sticks. Eventually, someone decided that it was pretty annoying whacking that hard stone on cold days and decided to stuff a sheepskin with wet feathers and sew it into a small ball. The feathery was born and we haven't looked back. Now we have 2-piece, 3-piece and 4-piece golf balls, all computer designed. Even the dimples are computer designed to give the ball more lift for added distance.

Moving to clubs, early models were made either completely of wood or of wood and iron. Now we have a huge assortment of materials such as graphite, steel, titanium, scandium, tungsten, brass, copper and a ton of alloys. All to make us hit the ball straighter and farther. If the early golfers could see some of the oversize clubs we use today, they would be in shock. 450 cc drivers with sweet-spots as big as your cell phone. Oversize irons with custom lofts to give you just the right amount of distance between clubs. Belly putters, chin putters, short and long putters with some of the oddest clubhead designs you've ever seen. It's a wonder we're not all shooting par!

A really sensitive subject for some golfers is shoes. I remember the old days with metal spikes in our shoes and the first thing a young golfer had to learn was to not drag their feet on the green. There was nothing worse than to have an old-timer point out the big gouges you left in the green when celebrating that nice putt you made. Now, shoes are unbelievably light and water resistant. You can walk an entire day and still have dry feet! And the "spikeless" spikes do wonders for your traction while keeping the greens in pristine condition.

Lastly, comes our wardrobe. Yes, golfers can be picky about their clothes. Remember all those pictures of the old time golfers. They played in coat and tie and still shot lights-out-golf! Man, they had to be DYING on those hot summer days. These days our attire wicks away moisture, keeping us cool and refreshed. Why, I hardly even see any perspiration on the pros when they're playing in the desert. It's absolutely amazing!

Well, to say the least, technology has definitely changed the ancient game of golf, making it a lot more fun and relaxing. Golfers can see far greater results and enjoy more success with less time and effort. I guess we can say that technology has brought golf into the 21st century in style. Much like the Gas-Rover is bringing leak detection into the 21st century.



Fairways and greens

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