



THE SENTRY TIMES

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WINTER, SPRING, **SUMMER** OR FALL ALL YOU'VE GOT TO DO IS CALL...

...Or come see us!

You'll certainly have plenty of opportunities, as we'll be all over the country this summer. With events in Rhode Island, Texas, Iowa and Arizona, this summer is shaping up to be a bit busier than a day at the beach!

You may have seen us at the Northeast Gas Association's Gas Operations School in Smithfield, RI June 3-6. Or at the Texas Gas Association's Operations & Management Conference in San Antonio June 22-25. If you missed us there, we hope to see you at the Midwest Energy Association's Operations Conference in Ames August 4-8, or at the Western Regional Gas Conference in Tempe August 26-27.



Whether we've seen you at a recent show or not, we'd love to hear from you. Keep in mind that whenever you call our offices, you'll always get a live person, not a machine. And now is a great time to talk to us—we have some fantastic new products that we're very excited about, and we're confident you will be too.

In addition to the Gas-Explorer™ which you read about in the last issue of the Sentry Times, we're introducing the Gas-Rover™, a leak survey and customer service instrument that truly does it all. As an FID replacement with the added bonus of a CGI, the Rover can be used to survey, track, locate and grade leaks. And with its ppm sensitivity, the Rover can significantly cut down on your bar-holing.

Along with the latest in gas detection instrumentation, this issue includes a look at the Data-Link™ system for data storage and reporting, which is available on all Gas-Explorer™ and Gas-Rover™ models. Last but not least, the 19th Hole covers the latest in golf technology: data analysis to improve your golf game.

Enjoy,
George S. Champey
Editor-in Chief

**SURVEY, TRACK, LOCATE, GRADE AND
DRASTICALLY REDUCE BAR-HOLING**

The Gas-Rover™ can be used for handheld or mobile surveys and for responding to indoor or outdoor leak calls. The Gas-Rover™ locates leaks, grades them, does safety checks and, in the process, greatly reduces the number of bar-holes needed to be placed on the property. What makes the Gas-Rover™ so versatile is its calibrated accuracy in the PPM range of gas, its intrinsic safety, its optional carbon monoxide and oxygen sensors, and its extensive and automatic data collection and storage.

Survey on Foot or By Truck


The Gas-Rover™ can be used for leak surveys on foot or by vehicle. Since it also provides all the functions of a CGI, it can be used to bar-hole in the course of a survey whenever necessary.

Track, Locate, and Grade

Outdoor tracking and locating are done with the Survey mode of the Gas-Rover™. Grading is done with the Bar-hole mode. The Customer Service technician can use the Gas-Rover to surface sample the suspected leak area prior to placing any bar-holes. He or she can then begin bar-holing in the area where the Gas-Rover™ indicated the presence of gas. This will greatly reduce the number of bar-holes placed outside the actual leak area.

An average gas utility may place several hundred thousand bar-holes in the course of a single year. Reducing the number of bar-holes, perhaps by as much as half, significantly reduces wear and tear on the workforce and their equipment as well as increases productivity.

The Gas-Rover™



Calibrated Ranges 0 to 40,000ppm methane
1ppm Resolution
0 to 100% vol methane
0.05% Resolution

Sensors CH₄ (Catalytic)
CO, O₂ (Electrochemical)

Operating Modes Survey, Truck Survey, Monitor, Bar-Hole

Calibration Docking and auto-cal
Stores last 24 calibrations

Data Storage Exposure and Bar-Hole Readings (2-3 mo. typical)

Rover vs. Conventional FI	FI	Rover
Walking survey	Yes	Yes
Mobile survey	Yes	Yes
Fuel-free	No	Yes
CGI included	No	Yes
Self-calibrates	No	Yes
Self-documents	No	Yes
Docked calibration	No	Yes
CO/O ₂ option	No	Yes
Data logging	No	Yes
Weight	5-7lb	1.5lb

Eliminating bar-holes, particularly zero read holes, increases safety since it takes less time to find and grade a leak. There is also less chance of compromising the integrity of underground conduits for gas and other utilities.

When bar-holes are necessary, the Gas-Rover™ has an efficient routine for reliable and consistent results. Each bar-hole is uniformly pumped for a fixed time and both peak and sustained readings are displayed. Water can be avoided using the stop function and a water-block filter with an optional water stopper.

Indoor Odor Complaints and Re-lights

The high sensitivity of the Gas-Rover™ makes it easy and fast to identify a problem. It also provides a reliable check of the property and service line after a re-light.

Carbon monoxide calls can be serviced with a Rover equipped with a CO sensor. When a flue check is indicated, the Gas-Rover™ can give CO readings on an air-free basis, if desired. Furthermore, a well-designed flue gas probe with a special filter provides CO readings free from interference from nitrogen oxides.

The Gas-Rover™ automatically collects calibration and readings data, including both exposure and bar-hole measurements. Typically, 2 to 3 months of readings can be stored before downloading or overwriting old data. Data from the last 24 calibrations, including readings on calibration gas before and after calibration, are stored in the detector.

Data can be downloaded through a USB interface to a docking station or other computer using a DATA-LINK™ software package from Bascom-Turner for archiving, viewing, and compiling printed or electronic reports. The three major downloads are Readings and Exposure; Calibration; and User, Unit and Setup. Gas concentration versus time plots can also be viewed or printed.

The screenshot shows the 'Readings & Exposure Reports' menu with options for 'Readings Reports By Unit ID, Date, & Time' and 'Exposure Reports By Unit ID, Date, & Time'. Below these are two data tables:

Unit ID	Mode	Date	Start Time	LEL	-O ₂	+O ₂	CO	H ₂ S	STEL Time
4	T	7/13/2006	7:35:09 AM	Y					
5	M	7/13/2006	3:18:31 PM	Y					
5	M	7/13/2006	3:18:32 PM	Y					
5	M	7/13/2006	3:18:33 PM	Y					
5	M	7/13/2006	3:18:35 PM	Y					

Unit ID	Serial No.	First Date	Last Date
3	0411-054590	2/2/2005	8/29/2006
4	0628-300002	7/12/2006	7/13/2006
5	0628-300004	7/13/2006	7/14/2006
6	0630-300003	9/1/2006	9/5/2006
7	0628-300013	2/2/2005	8/28/2006

Sample Readings and Exposure Report

Reading and Calibration Data Storage

- The most advanced, easy to use data storage on the market
- Readings automatically stored with time and date stamp, operational mode and user ID
- Stores the last 24 calibrations with readings of calibration gas before and after calibration, sensor sensitivities and operational history
- Quick, easy download to any PC via USB port with optional DATA-LINK™ software

Automatically Generated Reports

- DATA-LINK™ software includes 18 types of pre-formatted reports generated with the click of a button
- Reports can be viewed on-screen or are easily printed using the "Print Report" button
- Readings, Exposure (STEL and TWA), and Bar-Hole reports are available for any unit and date/time range
- Calibration and operation reports allow full review of units' usage, calibration, and sensor sensitivity
- User, Unit and Office Reports make it easy to keep track of units and their assigned users and offices

The screenshot shows a report titled 'Bar-Hole Readings by Date & Time for Unit: 13'. The report contains the following data:

Date	Time	Seq	Peak %GAS	Sustained %GAS	User	Location
12/19/2007	11:40:46 AM	2	0	0	Joe Jones	Norwood MA/111 Downey St
12/19/2007	11:41:23 AM	2	35.1	23.5	Joe Jones	Norwood MA/111 Downey St
12/19/2007	11:42:00 AM	2	22.2	14.2	Joe Jones	Norwood MA/111 Downey St
12/19/2007	11:42:42 AM	2	55.7	34.7	Joe Jones	Norwood MA/111 Downey St
12/19/2007	11:43:18 AM	2	16.3	2.4	Joe Jones	Norwood MA/111 Downey St

Bar-Holing report showing peak and sustained readings

by Brian Terry



Hello again Fellow Golfers! I try my best not to mix golf and work too often, but on this occasion it seems fitting. Bascom-Turner's new instruments, the Gas-Explorer™ and Gas-Rover™, have an automatic data-logging feature (see page 3.) They record their readings and operating mode, including time and date, every second that they're on. This data can be downloaded and printed out in a variety of reports depending on the specific needs of the user. So how does this relate to golf?

Well, there is also a form of data logging that takes place in golf. It's called Swing Analysis. Anyone who has gone to one of the newer golf schools has probably been exposed to it. There are even some driving ranges that offer Do-it-Yourself Swing Analysis. The way it works is the golfer hits several shots from a special mat that contains sensors that detect everything about the swing and another device called a launch monitor that reads all of the information from the golf ball just after impact. These devices collect all the information and transfer it to a computer containing a program that puts it all together to tell you exactly what your club and the ball are doing on each shot. Now instead of randomly hitting balls and wondering why they do what they do, you see detailed information pertaining to swing path, clubhead speed, face angle, angle of attack, ball launch angle, ball speed and ball spin rate. Combining all this data tells you not only why a given shot did what it did, but what you can do to change your results in the future.

Take one of the most common problems golfers face – the slice. I've seen many golfers who slice the ball try to fix it by taking a stronger grip and closing the clubface. Then, suddenly, they are pulling all of their shots to the left. They decide that they have gone too far and start trying to adjust their grip back in the other direction and start slicing again. What they don't realize is that they are swinging the club on an outside-in path. A golf ball curves because of sidespin. When viewed from above, if the ball is spinning clockwise it will curve to the right and if spinning counterclockwise it will curve to the left. This is caused by the face of the club pointing in a different direction than the path along which the clubhead is moving. Golfers who are initially slicing the ball are imparting clockwise sidespin when striking it. They think they have the clubface aiming too far to the right, so they close it so that it's facing more to the left. Then they begin pulling the ball, which means it is flying straight (no sidespin), but to the left of the intended target. This should tell them that their clubhead was originally aiming at the intended target, but the swing path was aiming left of it. With the data from swing analysis, they would know this after only a few shots, but without it they may struggle for weeks before figuring out what's wrong.

So get that data and find out what's really happening. It can make golf and work a lot less painful.

Fairways and Greens

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