6	BASCOM-TURNER INSTRUMENTS	
	DATALINK4ACCESS	
	OPERATION MANUAL	
		OM-001-DL

Table of Contents

Introduction	2
System Requirements and Installation Instructions	2
Part I: Imports	4
1. Registering and Importing a Unit	4
2. Importing Readings and GPS Data	5
3. Importing Calibration Data	6
Part II: Reports	7
1. Readings	7
2. Readings with GPS by Unit	10
a. Previewing Surveys and Bar-Holes in Google Earth	10
b. Exporting Surveys and Bar-Holes at TXT, KML and GPX Files	14
3. Readings with GPS by Address	14
a. Previewing Surveys and Bar-Holes by Address in Google Earth	15
b. Exporting Surveys and Bar-Holes by Address as TXT, KML and GPX	18
4. Calibration Reports	19
5. Unit Reports	22
Part III: Maintenance	24
Part IV: Troubleshooting	25

Introduction

DataLink4Access is an intuitive, easy to use data management system that allows users to download and organize: readings, calibration, unit information and GPS data from Gas-Rovers and Gas-Explorers. Each button's operation is clearly labeled, and users can navigate from one feature to the next by closing an operation window or selecting a previously opened tab. With DataLink4Access, users can view readings data and calibration records, assign a detector to a specific user, update a detector's date and time, and manage active and retired units.

GPS enabled Gas-Rover users can use DataLink4Access to preview in Google Earth a single survey or set of bar holes, use the search by address function to view recent or historical data for a specific location, or export data for overlay on ArcGIS, MapFrame or other GIS asset maps.

pplication		
Imports	Reports	Maintenance
Readings and GPS	Readings	Update User Name
Calibration	Readings with GPS by Unit	Update Date & Time
Unit	Readings with GPS by Addr	Retire / Activate Detectors
	Calibration	Admin
	Units	

System Requirements and Installation Instructions

System Requirements

In order for DataLink4Access to be installed and run optimally Bascom-Turner suggests:

- 1. A designated local or networked PC with Windows XP, Windows Vista or 32-bit Windows 7. DataLink4Access can be installed on 64-bit Windows 7 machines, but the operating system may interfere with some of the program's functions.
- 2. Full local administrator rights. In order to function, DataLink4Access must be able to call a proprietary piece of software—Dlink—as well as Google Earth. If you are unsure if you have full local administrative rights, please contact your company's IT Department.
- 3. At least 1.0 GB of free hard drive space.

- 4. Internet connection.
- 5. Google Earth (provided in the installation package).
- 6. Microsoft Access 2007 Runtime (provided in the installation package). Please uninstall any other versions of MS Access Runtime.

Installation

- 1. Uninstall any previous versions of DATA-LINK for Paradox.
- 2. Ensure that the PC is connected to the internet.
- 3. Insert the DataLink4Access installation disk or download DataLink4Access from Bascom-Turner's online store <u>www.bascomturner.com/store</u>.
- Double click on AccessRuntime.exe to install Microsoft Access Runtime 2007. Follow Microsoft's instructions to successfully install Access Runtime. Double click on GoogleEarth.exe to install Google Earth. Follow Google's installation instructions to successfully install Google Earth.
- 5. Double click on setup.exe to install DataLink4Access.



- 6. Select "next." Enter your name and company information, and when prompted select "**Typical**" for setup type. Continue to select "next" until the installation is finished.
- 7. When the installation is complete a shortcut to DataLink4Access is placed on your desktop.
- 8. The installation process is now complete.

PART I. Imports

Before importing data from a Gas-Rover or Explorer, the detector must be in PC connection mode. Turn the detector on and select either "usb" or "Blue" when prompted on the second startup screen. If "usb" is selected the detector displays "PC Connection by usb" and users must then connect a USB cable to the PC and detector. If "Blue" is selected the detector displays "PC Connection by Bluetooth" only after pairing with Bascom-Turner's Bluetooth dongle. Please note that Bluetooth enabled units communicate with Bascom-Turner's Bluetooth dongle inserted into any USB port and do not communicate with a PC's internal Bluetooth receiver.

Registering and Importing a Unit

In order for Gas-Rovers and Gas-Explorers to interface properly with DataLink4Access, please follow this procedure before using a unit in the field.

- 1. Power on the detector, enter PC connection mode, and insert the USB cable or pair with Bluetooth.
- 2. Update the unit's date and time.
- 3. Select "Update User Name" to assign the detector to a specific user. Usernames must be 20 characters or less and cannot contain a comma. While the DataLink4Access is a assigning a username to a detector, the detector's LCD lights will flash and a status bar will appear in the DataLink4Access window. This procedure may take up to two minutes.

oplication		
Imports	Reports	Maintenance
Readings and GPS	Readings	Update User Name
Calibration	Microsoft Office Access	Update Date & Time
Unit	Enter a user name (max 20 characters)	OK Cancel ire / Activate Detectors
	Bascom-Turner GPS	Admin
	Units	

4. Select the "Unit" button under the "Imports" column to add the detector to your database. While the unit importing, the detector's LCD lights flash and a status bar appears in the DataLink4Access window. Once the unit is successfully imported, a new screen opens that details the detector's serial number, model number, sensor part numbers, software version and alarm values. To return to the main menu select "Close Window."

Import Unit Info	rmation	🖓 Close Wir	ndow
Unit Serial Number: 1	009-401892		
User Name:	Bascom-Turner GPS	Calibration Due Period:	31
Unit Model Number:	VGC-301	Air Free CO Enable:	
MS Sensor Part Number:	MS-611	L <mark>EL Alarm Level</mark> :	20
CO Sensor Part Number:	CO-501	Gas Alarm Level:	
OX Sensor Part Number:		Survey Truck Alarm Level:	10
HS Sensor Part Number:		Low Oxygen Alarm Level:	
Database Version:	DB 01.15	High Oxygen Alarm Level:	
Software Version:	03/10/2011	CO Alarm Level:	35
		H2S Alarm Level:	

5. The unit was successfully imported. Download Readings and GPS or Calibration data at your convenience.

Please note that Calibration Due Period and alarm values are not editable. To change these values on a detector, please consult the Gas-Rover or Gas-Explorer operating manual.

In addition to both the unit's serial number and user name, each unit will automatically be assigned a Unit ID number based on the order it was added to your PC. To see a detector's Unit ID number select the "Units" button in the "Reports" column.

6. Gas-Rovers and Explorers store the last 24 calibrations and 2-3 months of readings data or 1 month of readings and GPS data on its internal memory chip. To avoid overwriting and erasing data, Bascom-Turner recommends downloading readings data at least once per month.

Importing Readings and GPS Data

- 1. Power on the detector, enter PC connection mode, and insert the USB cable or pair with Bluetooth.
- 2. Select "Readings and GPS" in the "Imports" column.
- 3. Download all readings, or choose a specific date range. The detector's LCD lights flash and a status bar appears in the DataLink4Access window while the data is importing.

If the data import is successful, a message box displays "Readings Data Imported," or "Readings Data from Imported *date range*" followed by "GPS Data Imported" if there is GPS data on the detector. If there is not data on the detector, or data in a specified date range, a message box displays "No Readings or GPS Data to Import."

Please note that the same data can be imported multiple times without creating duplicate

entries in the DataLink4Access database.

Importing Calibration Data

All ACal and NCal calibration records stored on the detector can be imported by DataLink4Access.

- 1. Power on the detector, enter PC connection mode, and insert the USB cable or pair with Bluetooth.
- 2. Select the "Calibration" button in the "Imports" column.
- 3. The detector's LCD lights flash and a status bar appears in the DataLink4Access window while the calibration data is downloading.
- 4. If calibration data is successfully imported, a message box displays "Calibration Data Imported." If there is no data to import, a message box displays "No Calibration Data Imported."

pplication		
Imports	Reports	Maintenance
Readings and GPS	Readings	Update User Name
Calibration	Microsoft Office Access	Update Date & Time
Unit	ОК	Retire / Activate Detectors
	Calibration	Admin
	Units	

PART II. Reports

Once data has been imported, the Reports menu is the gateway to all detector readings, calibration history and unit reports. If data appears to be missing, please try re-importing that data or consult the trouble shooting section of this manual.

Readings

Readings reports allows users to access all of the detector's readings data on a PC. The raw data can be viewed, filtered and sorted on the "All Data By Unit" screen, or printed to create formal Data and Bar Hole reports. All data is stamped with time, date, mode of operation and alarm values.

To view readings follow this procedure:

- 1. Ensure that the data was imported from the detector.
- 2. Select the "Readings" button in the "Reports" column
- 3. Select a detector and adjust the date range. DataLink4Access automatically inputs the detector's min date and max date as its respective begin and end date. A date range can be as large as all available data or as small as a single day. When a date box is selected, a calendar icon appears. Choose a specific date or manually enter the day, month and four digit year. The smaller the date range the faster the readings report loads. When search parameters are satisfactory, select the "Display Readings Report for a Selected Unit" button. While the data is loading, a progress bar appears.

🗐 MainMenu 🔚 Readings Data				
View Reports	Readings		Close Win	dow
Begin Date: 3/2	L/2011 ■ End Date: 011 ▶ T F S	3/25/20	011	
27 28 1 2 6 7 8 9 13 14 15 16 20 21 22 23 27 28 29 30 3 4 5 6 <u>I</u> oda	3 4 5 10 11 12 17 18 19 24 25 26 31 1 2 7 8 9 7	Reports Unit		
				UE Notes
🗾 Unit ID 🛛 🗸 Serial Nu	mber - User	 Model Number + 	Min Date •	Max Date 👻
1 0934-40172	.6 Bascom-Turner 1	VGC-301	12/15/2009	5/11/2011
2 1009-40189	2 Bascom-Turner GPS	VGC-301	3/14/2011	5/6/2011

4. Data for the specified search is displayed on the following screen. Data can be filtered by seconds, minutes or hours and sorted by date, time and concentration of gas.

🔠 MainMenu 📳	Readings Data	Data by Un	it						
Unit Ent Select Benort	All Data I Serial Number tire Date Range ted Date Range	009 Unit al	nd Date F	Range Re	Dort Data	Filtering e onds (All Data)	Duration O One M	Readings Detai	ls)
Percent LI Percent G PPM H2	EL Graph	Percent O2 Grap PPM CO Grap Data Report	bh Bar I	Hole Report	O Min O Hou	utes rs	O One Ho O One Da O All	our	
Date 🗸	Time -	Mode -	PPM Gas 👻	Percent LEL 🝷	Percent Gas 👻	PPM CO 👻	PPM H2S -	Percent O2 -	LEL/Gas Alarm -
22-Mar-11	10:26:11 AM	Survey	0	0	0	0	0	0	
22-Mar-11	10:26:12 AM	Survey	0	0	0	0	0	0	
22-Mar-11	10:26:13 AM	Survey	0	0	0	0	0	0	
22-Mar-11	10:26:14 AM	Survey	0	0	0	0	0	0	
22-Mar-11	10:26:15 AM	Survey	0	0	0	0	0	0	
22-Mar-11	10:26:16 AM	Survey	0	0	0	0	0	0	
22-Mar-11	10:26:17 AM	Survey	12	0	0.0012	0	0	0	
22-Mar-11	10:26:18 AM	Survey	43	0	0.0043	0	0	0	

5. To print data, select the "Data Report" or "Bar Hole Report" button. A data report is a printer friendly version of the filtered and sorted data from the previous screen. A bar hole report is a printer friendly summary of peak and sustained readings for all bar-hole data in the search area.

📧 MainMenu 📧 Readir	ngs Data 🔳 D	ata by Unit	Bar Hole Data	
Bar Ho	ole Data		DieExit	Thursday, May 12, 2011 2:10:42 PM
Unit ID: Serial Number: User Name:	2 1009-401892 Bascom-Tur	2 ner GPS	4	Date Time Range: 5/12/2011 2:05:34 PM - 5/12/2011 2:06:42 PM
Date	Time	Peak %Gas	Sust %Gas	
5/12/2011	2:05:34 PM	82.4	61.53	
5/12/2011	2:06:26 PM	37.6	26.60	
			Page 1 c	of 1

6. To print, select the "Ctrl" key followed by "P" on your keyboard, or "Print" under "Access Tools" at the top of the DataLink4Access window.

•					Cases contracts	DataLink4Access
Access Tools	Acrobat					
Print Setup	t to PDF or XPS	V Selectio	ed - Find	🔿 Go To ▾ 🎝 Select ▾	Close Window X Exit Application	
Print, Export and	Email	Sort & Filte	er	Find	Data Location	
Unit ID: Serial Number: User Name: Date 6/14/2011 6/14/2011 6/15/2011	4 1125-402127 BT Demo Time 11:58:12 AM 12:01:32 PM 11:04:53 AM	7 Peak %Gas 0 1.3 0	Sust %Gas 0.00 0.00 0.00	Date 5/14	e Time Range: 1/2011 11:00:00 AM	- 8/29/2011 5:00:00 PM
8/9/2011	4:48:47 PM	0	0.00 Page	1 of 1		

Readings with GPS by Unit

The "Readings with GPS by Unit" feature allows users to access all GPS survey and bar hole data. From this section, users can view a single survey or day's worth of bar holes in Google Earth, expand data to see second by second readings data and HDOP values, or export a survey as a TXT, GPX, XML or KML file for overlay on GIS asset maps or other GPS devices.

Previewing Surveys in Google Earth

- 1. Ensure that the readings and GPS data has been imported and that the PC has an internet connection. Google Earth will not function without an internet connection.
- 2. Select the "Readings with GPS by Unit" button in the "Reports" column.
- 3. Select a detector and enter the desired date range. DataLink4Access automatically inputs the detector's min date and max date as its respective begin and end dates. Date ranges can be as large as all available data or as small as a single day. When a date search box is selected, a calendar icon appears. Choose a specific date or manually enter the day, month and four digit year. The smaller the date range the faster the report will load. When search parameters are satisfactory, select the "Display Survey Data by Unit and Date Range" button. While the data is loading, a progress bar appears in the DataLink4Access window.

Please note, if high concentrations of gas were encountered during survey and the surveyor was required to bar hole, or if the unit auto-ranged to monitor mode, a single day's survey could be divided into many segments. To display a full day's worth of surveying opposed to many smaller segments, change the "Min. Gap Between Surveys" field. DataLink4Access's minimum gap between surveys is preset to five minutes. To change the value, type in a new value and press the "Enter" key to proceed. A window will appear asking the user to confirm their selection.

📑 MainMenu 📑 Da	te and Unit Selection					
Date Ra	nge and	Unit Sele	ction	[]↓ Clo	ose Window	
Begin Date:	5/12/2011	End Date:	5/12/2011	Min. <mark>Gap Be</mark> twe	en Surveys (minut	tes 10
						\bigcirc
	Display S Unit an	urvey Data by d Date Range	Display BarHo Unit and Dat	le Data by te Range		
		1	1			
Unit ID -	Serial Number - 2 1009-401892	User - Bascom-Turner GPS	VGC-301	Min Date + 3/14/2011	Max Date + 5/12/2011	
Confirm	ation					
Changi	a the minimum gan betw	een surveys helps determine	the length of each curve			
If you a	are not satisfied with the	results, return to the Date R	ange and Unit Selection s	creen and reset the	oap to the default valu	ue of 5 minutes,
Set Min	imun Gap to 10 minutes?	,				
		(1		
		L				

Please note that the "Min. Gap Between Surveys" value is saved even after DataLink4Access is closed. To readjust to the default of a different value, enter a new value to the field and select "OK."

4. The following screen lists all the detector's GPS surveys. The data filters allow users to plot PPM above a specified value and filter out high HDOP readings. HDOP, or Horizontal Dilution of Precision, is a measure of GPS accuracy. HDOP values above 3.5 may be spurious, and can distort the accuracy of a survey.

	MainMenu 🖪 Dat	e ar	nd Unit Selec	tion 😑 Survey Dat	a										
	Survey Dat	a	by Un	it and Date	Range F	Re	eport			1	Close Windo	w			
								1	Plot Select	ed	Survey in Go	oog	le Earth		
									View Det	tai	iled Data for	1 S	urvey		
	Data Filters				Survey Filters				View Detailed Data for All Surveys						
	List All Display PPM Re Selected Day Selected Survey Filter out HDOP			Display PPM Rea	ay PPM Reads Greater or Equal To 1				Export Selected Survey to Text File						
				Filter out HDOP Readings Above 3.5				Export Selected Survey to GPX File							
									Export Selected Survey to XML File						
				<u> </u>]	Export Sel	ec	ted Survey to	o K	ML File		
	Serial Number	-		User -	Date	*	Start Time 🔹	Duratio	n(hh:mm)	•	MaxPPM	*	MinHDOP	•	MaxHDOP -
	1125-402127		BT Demo		8/29/2011		3:56:48 PM		0:07		61		1.3		3.6
	1125-402127		BT Demo		8/9/2011		11:17:57 AM		0:12		5		0.8		1.6
	1125-402127		BT Demo		6/28/2011		11:52:03 AM		0:00		0		1.6		1.6
	1125-402127		BT Demo		6/14/2011		11:57:18 AM		0:00		0		1.6		1.6

To view raw survey data with gas readings, GPS coordinates and HDOP values, select "View Detailed Data for 1 Survey" or "View Detailed Data for All Surveys."

5. After the appropriate data filters are applied, highlight the desired survey and select "Plot Selected Survey in Google Earth."



The surveyor's path is marked in purple and leaks are marked with red crosses. Many times, leaks are stacked on top of one another. To expand any leak readings, place the

cursor over a group of leaks until Google Earth's white hand transforms to a cross. Click to expand. The leak readings contracts when the cursor is moved away from the leak.

- 6. If desired, use Google Earth to save the survey as an image (".jpg") for printing or archiving. (Select File → Save → Save Image).
- 7. Exit Google Earth. When closing Google Earth, users are prompted to save the survey in their "My Places" folder. Please select **Discard**.



Previewing Bar Holes in Google Earth

1. Ensure that the readings and GPS data has been imported and that the PC has an internet connection. Google Earth will not function without an internet connection.

Select the "Readings with GPS by Unit" button in the "Reports" column.

Select a detector and enter the desired date range. DataLink4Access automatically inputs the detector's min date and max date as its respective begin and end date. Date ranges can be as large as all available data or as small as a single day. When a date search box is selected, a calendar icon appears. Select the calendar icon to choose a specific date or manually enter the day, month and four digit year. The smaller the date range the faster the report loads. When search parameters are satisfactory, select the "Display Survey Data by Unit and Date Range" button. While the data is loading, a progress bar appears in the DataLink4Access window.

2. The following screen lists all GPS bar-hole data for the specified date range.

🔠 MainMenu 🧰 Date an	d Unit Selection 🔠 Bar-Hole	Data															
Bar-Hole Dat	a by Unit and D	ate l	Range	Re	port	() #*(Clos	se Window									
Data Filter			Displ	ay A	Il Bar-Holes in G	oogle Earth											
List All			Display R	eal-	time Data for Sel	ected Bar-Hole											
Selected Day			Display	Rea	al-Time Data for	All Bar-Holes	ī										
Selected Bar-H	ole		Export	Dis	played Bar-Holes	to Text File	7										
			Export	Dis	played Bar-Holes	to GPX File											
			Export	Dis	played Bar-Holes	to XML File	ī										
			Export	Dis	played Bar-Holes	to KML File											
Unit Sorial Number	licer		Dato		Start Time	Duration		Poak Gas	_	SuctGas		HDOD		Latitudo	-	Longitude	
1120-402101	BT GPS Demo	•	9/14/2011		1:44:25 PM	59 seconds		68 1	•	n	*	2.6	*	42 21106		-71 17874	
1120-402101	BT GPS Demo		9/14/2011		1:45:45 PM	60 seconds		51.8		13.9		2.6		42.21106		-71.17874	
1120-402101	BT GPS Demo		9/14/2011		1:47:07 PM	60 seconds		77.3		31.9		2.6		42.21104		-71.1787	
1120-402101	BT GPS Demo		9/14/2011		1:48:24 PM	59 seconds		55.1		20.5		2.6		42.21108		-71.17875	

To view raw survey data of all gas readings, GPS coordinates and HDOP values, select "Display Real-time Data for Selected Bar-Hole" or "Display Real-time Data for All Bar-Holes."

Please note that Google Earth plots all bar-holes displayed in the spreadsheet. To plot a single bar-hole, or set of bar-holes, apply the necessary data filters.

3. After the appropriate data filters have been applied, select "Display All Bar-Holes in Google Earth."



Bar-holes with gas readings are marked in red, bar-holes with no gas readings are marked in black. Bar-holes are usually stacked on top of each other. To expand a set of bar-holes, place the cursor over the set until the Google Earth white hand transforms to a cross. Click to expand. To select detailed readings for a single bar hole, expand any bar holes with the cross and then select an individual bar hole with the cursor.

- 4. If desired, use Google Earth to save the survey as an image (".jpg") for printing or archiving. (File → Save → Save Image).
- 5. Exit Google Earth. When closing Google Earth, users are prompted to save the bar-hole set in their "My Places" folder. Please select **Discard**.

Exporting Surveys and Bar Hole Data as Text, GPX, XML and KML Files

- 1. Follow the steps for "Previewing Surveys in Google Earth" through step four.
- 2. From the "Survey Data by Unit and Date Range Report" highlight a single survey. If desired, preview the survey in Google Earth.

Or for bar-hole data:

- 1. Follow the steps for Previewing Bar Holes in Google Earth through step four.
- 2. DataLink4Access exports bar-hole data displayed in the spreadsheet below. If desired, preview the bar-hole data in Google Earth.
- 3. Select the appropriate file extension to export the survey—for example KML—name the survey, choose a directory and select "Save."

urvey Data	by official		Range Report	Plot Selected Survey in Google Ear	th
	File Save			,	? 🛛
Quet All	Save in:	Bascom-T	urner GPS Surveys	v (0)	🖄 X 📸 🔳 •
Plot PPM Read Filter out HDC Selected Day Selected Surv Serial Number 99-401892	My Recents Documents My Documents My Documents My Computer My Network My Network				
		File <u>n</u> ame: Save as type:	0512 Survey BTGP5.kml All Files (*.*)		×

4. If necessary, repeat for different file extensions.

Readings with GPS by Address

The "Readings with GPS by Addr" feature allows users to access all GPS survey and bar-hole data for a particular address. With this feature, users can view a specific location's survey or bar-hole data in Google Earth, expand data to see second by second data with readings data and HDOP, or export a survey as a TXT, GPX, XML or KML file for overlay on other GPS or GIS systems.

Previewing Surveys by Address in Google Earth

- 1. Ensure that the readings and GPS data has been imported, and that the PC has an internet connection. Google Earth will not function without an internet connection.
- 2. Select the "Readings with GPS by Addr" button from the "Reports" column.
- 3. Enter a date range, address and search area. Bascom-Turner recommends entering a full address with city, state and five digit zip code. If North/South and East/West search area boxes are left blank, DataLink4Access automatically uses a 0.1 x 0.1 mile search area around the address.

Begin Date: 5/1/2011 Address (Geocoded by Google Maps) +/- North and South (miles) +/- East and West (miles)	End Date: 111 Downey Street Norv .25 .28	5/27/2011	Instructions 1.Input an add and East/West search area wi 2. Preview the with the search Support on Back	ress into the s fields are left II be used region in Goo h region, mini	search area. H 't blank a defa ogle Earth. If y imize Google	f the North/Sout Iult 0.1 x 0.1 mile you are satisfied Earth and displa
Display All Survey Data Address and Date Rang	view Region in GoogleEarth	Hole Data in Date Range	3. If you are no Google Earth, v repeat steps 1 Please Note: If has been foun range and try a	ot satisfied wit when prompte and 2. f Survey or Bar d. Adjust your igain.	th the previe ed selected " r Hole Data is r search addre	w region, exit Discard" and blank, no data ess and date
Display All Survey Data Address and Date Rang	view Region in GoogleEarth in ge Display All Bar- Address and I	Hole Data in Date Range	3. If you are no Google Earth, v repeat steps 1 Please Note: If has been foun range and try a	nt satisfied wit when prompto and 2. f Survey or Bai d. Adjust your again.	th the previe ed selected " r Hole Data is r search addre	w region, exit Discard" and blank, no data ess and date
Display All Survey Data Address and Date Rang	view Region in GoogleEarth in ge Display All Bar- Address and I	Hole Data in Date Range Model Number +	3. If you are no Google Earth, v repeat steps 1 Please Note: If has been foum- range and try a Min Date +	one data. In satisfied will when prompte and 2. F Survey or Bai d. Adjust your again. Max Date	th the previer ed selected " r Hole Data is r search addre	w region, exit Discard" and blank, no data ess and date
Display All Survey Data Address and Date Rang	view Region in GoogleEarth in ge Display All Bar- Address and I User • ascom-Turner GPS	Hole Data in Date Range Model Number - VGC-301	3. If you are no Google Earth, v repeat steps 1 Please Note: If has been foun range and try a Min Date + 3/14/2011	one data. It satisfied wil when prompte and 2. f Survey or Bai d. Adjust your igain. Max Date 5/20/2011	th the previer ed selected " r Hole Data is r search addre	w region, exit Discard" and blank, no data ess and date

4. Preview the search region in Google Earth.



The address is marked with a yellow pin, and the search area with a white box. If satisfied with the search area, minimize Google Earth.

If you are not satisfied with the search area, exit Google Earth. When prompted select "Discard" and enter a new address or search area.

5. Select "Display All Survey Data in Address and Date Range." Please note that DataLink4Access will search for every reading from every detector within the date range

to see if there is data within the search area, so the smaller the date range, the faster the data will load.

6. All survey data for the address and date range is displayed in the table below. Adjust data filters and select a survey to preview in Google Earth.



The surveyor's path is marked in purple and leaks are marked with red crosses. Only survey data within the white search area is displayed. If the survey data appears to be cut off or missing, close Google Earth, when prompted select "**Discard**," and return to Step 3 and adjust the address or search area.

- 7. If desired, use Google Earth to save the survey as an image (".jpg") for printing or archiving. (File → Save → Save Image).
- 8. Exit Google Earth. When closing Google Earth, users are prompted to save the survey in their "My Places" folder. Please select <u>**Discard**</u>. If users select "Save," the survey is saved in Google Earth's "My Places" folder and will always be displayed when Google Earth is open. If this problem occurs, please refer to the trouble shooting section of this manual.

Previewing Bar-Holes by Address in Google Earth

- 1. Follow the steps for previewing a survey by address through step four.
- 2. Select "Display All Bar-Hole Data in Address and Date Range."
- 3. This screen lists all GPS bar-hole data in the specified date range and search area.

Address Displayed:	111 Downey Street Norwo	od MA		ige	Report									
Data Filter			Displ	ay A	ll Bar-Holes in G	oogle Earth								
List All			Display R	eal-t	ime Data for Sel	ected Bar-Hole								
Selected Day			Display	/ Rea	I-Time Data for	All Bar-Holes								
Selected Bar-H	ole		Export	t Disp	olayed Bar-Holes	to Text File								
			Export	t Dis	played Bar-Holes	s to GPX File	ĥ							
			Export	t Disp	played Bar-Holes	to XML File	ī							
			Export	t Disp	played Bar-Holes	s to KML File								
Jnit Serial Number 🔸	User	•	Date	•	Start Time 🔹	Duration	*	Peak Gas +	SustGas	*	HDOP -	Latitude	•	Longitude
20-402101	BT GPS Demo		9/14/2011		1:44:25 PM	59 seconds		68.1	0		2.6	42.21106		-71.17874
20-402101	BT GPS Demo		9/14/2011		1:45:45 PM	60 seconds		51.8	13.9		2.6	42.21106		-71.17874
120-402101	BT GPS Demo		9/14/2011		1:47:07 PM	60 seconds		77.3	31.9		2.6	42.21104		-71.1787
120-402101	BT GPS Demo		9/14/2011		1:48:24 PM	59 seconds		55.1	20.5		2.6	42.21108		-71.17875

To view raw data of all gas readings, GPS coordinates and HDOP values, select "Display Real-time Data for Selected Bar-Hole" or "Display Real-time Data for All Bar-Holes."

Please note that Google Earth plots all bar-holes displayed in the spreadsheet. To plot a single bar-hole, or set of bar-holes, apply the necessary data filters.

4. Select "Display all Bar-Holes in Google Earth."



Bar holes with gas readings are marked in red, bar-holes with no gas readings are marked in black. Bar-Holes are usually stacked on top of each other. To expand a set of barholes, place the cursor over the set until the white hand transforms to a cross, click to expand. To select detailed readings for a single bar hole, expand any bar holes with the cross and then select an individual bar hole with the cursor.

- 5. If desired, use Google Earth to save the bar-hole set as an image (".jpg") for printing or archiving. (File → Save → Save Image).
- 6. Exit Google Earth. When closing Google Earth, users are prompted to save the bar-hole set in their "My Places" folder. Please select **Discard**.

Exporting Surveys and Bar-Holes by Address as Text, GPX, XML and KML Files

- 1. Follow the steps for Previewing Survey and Bar-Holes by Address in Google Earth through step five.
- 2. To export a single survey as a file, choose the desired survey and appropriate file extension button. When exporting bar-holes, please note that DataLink4Access only exports the bar-hole data displayed in the spreadsheet.
- 3. Select the appropriate file extension to export the survey, for example KML, name the survey or bar-hole set, choose a directory and select "Save."

uress bisplayed.	111 Downey S	Street Norwood MA	Plot Selected Survey in Google Earth
			View Detailed Data for 1 Survey
Quintall	C	iata Filters	View Detailed Data for All Surveys
O Plot PPM Re	ads above 1		Export Selected Survey to Text File
O Filter out H	File Save		2 🛛
O Selected Da	Save in:	ascom-Turner GPS Surveys	🕥 📀 • 🖄 🗙 📷 •
O Selected Su	My Recent	S12 Survey BTGPS.kml	
	Documents		
Serial Number	Uesktop		
20-402101	Documents		
09-401892	My Computer		
20-402101	My Network		
09-401892	Places		
09-401892			
09-401892			
03-401652			
		File pame: 0520 Survey BTGPS.kml	~
		Save as type: All Fres.(*.*)	×
	Tools •		Save Cancel

4. If necessary, repeat for different file extensions.

Calibration Reports

The Calibration Reports feature allows users to view calibration records and sensor sensitivity information for detectors. Please note that calibration data is imported independent of readings data and unit information, and thus DataLink4Access's calibration log or last calibration date might not match that on the detector. For the most accurate calibration records, Bascom-Turner recommends importing calibration data after each calibration.

To ensure that data loads as quickly as possible, DataLink4Access automatically archives calibration data that is more than three months old. To view earlier calibration records, change the value "Look Back Period in Months" and press enter.

🔠 MainMenu 🔳 Ca	libration			
Calibrati	on Reports		Clos	e Window
Look Back Period in	n Months Sensor Sensitivity by L Last Calibration Data b	unit ıy Unit	Calibration	History by Unit verdue for Calibration
	1 - 100 - 200 - 20	In the second	1	
Unit ID +	Serial Number -	User 🗸	Model Number +	Last Calibration 🔹
1	0934-401726	Bascom-Turner 1	VGC-301	8/27/2009
2	1009-401892	Bascom-Turner GPS	VGC-301	3/14/2011
3	0928-401709	Bascom-Turner 2	VGA-411	5/17/2011
4	1120-402101	Bascom-Turner GPS 2	VGA-411	5/21/2011

Calibration History by Unit

- 1. Select the "Calibration" button in the "Reports" column.
- 2. Select a particular unit and press the "Calibration History by Unit" button.
- 3. Calibration reports detail, the date and time a unit was calibrated, look back period, pump tests and the unit's pre and post calibration readings.

MainMenu	Calibration	Calibratio	n Histo	ry by l	Jnit ID	1									
20	Calibratio	on Hist	ory	by	Un	it							Tue	sday, J	lune 28, 20 12:13:37 P
Unit Seria User Mod	ID Il Number: : el Number:	3 0928-40 Bascom VGA-41	1709 -Turne 1	er		Exit R	eport				Look	back (mont	hs): 3	Page 1 o
Unit Serial Number	Date Calibrated	Time	Pmp OK	LEL Bef	LEL Aft	O2 Bef	O2 Aft	CO Bef	CO Aft	Gas Bef	GAS Aft	H2S Bef	H2S Aft	PPM Bef	PPM Aft
0928-401709	5/17/2011	4:24 PM	Y	49	50	20.9	20.9	129	100	97	100			47	50
0928-401709	5/16/2011	3:59 PM	Y	49	50	20.9	20.9	101	100	100	100			53	50
0928-401709	5/16/2011	3:37 PM	Y	50	50	20.9	20.9	128	100	101	100			48	50
0928-401709	5/16/2011	12:58 PM	Y			20.9	20.9			97	100				
						Page :	l of 1								

4. Print the record or select "Exit Report" to return to the "Calibration Reports" menu.

Last Calibration Data by Unit

- 1. Select the "Calibration" button in the "Reports" column on the DataLink4Access home screen.
- 2. Select a unit and press the "Last Calibration Data by Unit" button.
- 3. Last Calibration Data by Unit reports show in detail: the date and time a unit was calibrated, pump check, the unit's pre and post calibration readings, and the unit's sensor sensitivity information.

B Mat	nMenu E8 Gali	bratian 🔚 Last Calibra	ation Data by Unit ID			
min	Last	Calibration I	Data by Unit	t	Tu	esday, June 28, 2011 12:27:16 PM Page 1 of 1
	Unit ID Serial Num User: Model Nur	3 nber: 0928-4017 Bascom-Tr mber: VGA-411	<mark>ij⊭Exi</mark> 09 urner	t Report Date (Time Calibrated	Calibrated: 5/17/2 I (HH:MM): 04:24 I	2011 PM
	Sensor	Calibration Gas	Before Calibration	After Calibration	Block Check O	к(Y/N): Y ОК (Y/N)
	LEL	50% LEL	49	50	2023	Ŷ
	со	100 PPM	129	100	5429	Y
	GAS	Air / Cal Gas	100	100	925	Y
	GAS	System Gas	97	100	3914	Y
	OXYGEN	Air	20.9	20.9	7564	Y
	H2S	H2S		1		
	PPM GAS	50% LEL	47	50	1435	Y

4. Print the record or select "Exit Report" to return to the "Calibration Reports" menu.

Sensor Sensitivity by Unit

- 1. Select the "Calibration" button in the "Reports" column on the DataLink4Access home screen.
- 2. To view sensor sensitivity information about a unit's sensor sensitivity, select a unit and press the "Sensor Sensitivity by Unit" button.
- 3. A Senor Sensitivity by Unit report details the sensor sensitivity or sensor life of each the sensor in a unit. Frequent calibration and boosting can increase and extend a sensor's life.

MainMenu =	Calibration	Sens	sor Sen	sitivity by	Unit I)							
Se Se	nsor Se	ensiti	vity	by l	Unit						Tue	sday, Ju	ine 28, 2011 1:14:31 PM
Unit I Serial	D Number:	3 092	8-401	709		Q ⇔Exit R	eport		Look	kback (m	onths):	3	Page 1 of 1
User:		Bas	icom-T	Turner									
Mode	l Number:	VG.	A-411										
Date	Time	LEL	LEL	GAS	GAS	CO	со	OXYGEN	OXY	H2S	H2S	PPM	PPM
Calibrated		Sens.	OK	Sens.	OK	Sens.	OK	Sens.	OK	Sens.	ОК	Sens.	OK
5/17/2011	4:24 PM	2023	Y	3914	Y	5429	Y	7564	Y			1435	Y
5/16/2011	3:59 PM	2005	Y	3906	Y	5422	Y	7564	Y			1335	Y
5/16/2011	3:37 PM	2009	Y	3894	Y	5494	Y	7551	Y			1404	Y
5/16/2011	12:58 PM		N	3916	Y		N	7501	Y				N

The following chart explains the relationship between A-Cal sensitivity values and DataLink4Access sensitivity values.

Detector	Detector Operation Mode	DataLink4Access Display	A-Cal Sensor Sensitivity Value	DataLink4Access Sensitivity Value
Gas-Explorer	Track Gas	PPM Sens.	0.5 µw/ppm	500
	Monitor	LEL Sens.	8 mw/1% gas	800
Gas-Rover	Survey	PPM Sens.	0.5 μw/ppm	500
	Monitor	LEL Sens.	8 mw/1% gas	800

If the sensitivity of the Survey or Track Gas mode falls below 0.5 μ w/ppm, the natural gas sensor should be change. Similarly if the sensitivity in the Monitor mode falls below 8 mw/1% gas, the natural gas sensor should be changed. For more information about the calibration process please consult the Gas-Rover or Gas-Explorer operation manual.

4. Print the record or select "Exit Report" to return to the "Calibration Reports" menu.

Detectors Overdue for Calibration

- 1. Select the "Calibration" button in the "Reports" column on the DataLink4Access home screen.
- 2. For a list of detectors overdue for calibration select the "Detectors Overdue for Calibration" button from the calibration report home screen. The subsequent screen lists the unit ID, serial number, model number, user and days overdue for calibration.

Please note that a unit's calibration information is imported independently of readings and unit imports and thus DataLink4Access calibration log might not match that of a detector. For the most up to date information check the detector's own "calibrate by" date at startup or an NCal4Access report.

Unit Reports

The Unit Reports feature allows users to view details about a unit's software, sensor partnumbers, calibration due period and alarm values. Please note that unit report data is imported independent of readings data and thus DataLink4Access's unit information might not match that of a detector. For the most accurate unit report log, Bascom-Turner recommends importing unit data after each change to an alarm value, calibration due date or software update.

From the Unit Report home screen, users can see all units with: unit ID, serial number, user, model number and activity status.

	Unit Reports			
Unit R	eports			Close Window
Look Back Per	iod in Months 3			
	Active Unit Repo	ort	Active Uni	it Settings Report
	_ Retired Unit Rep	ort		
Unit ID +	Serial Number	ort User	• Model Number •	Active(Y/N) -
Unit ID 🗸	Serial Number +	ort User Bascom-Turner 1	Model Number + VGC-301	Active(Y/N) -
Unit ID -	Retired Unit Rep Serial Number + 0934-401726 2 1009-401892	User Bascom-Turner 1 Bascom-Turner GPS	 Model Number VGC-301 VGC-301 	Active(Y/N) + Y Y
Unit ID +	Retired Unit Rep Serial Number • 0934-401726 1009-401892 0928-401709	User Bascom-Turner 1 Bascom-Turner GPS Bascom-Turner 2	 Model Number + VGC-301 VGC-301 VGA-411 	Active(Y/N) + Y Y Y

Active Unit Report

- 1. Select the "Units" button in the "Reports" column on the DataLink4Access home screen.
- 2. To view an Active Unit Report for all units select the "Active Unit Report" button on the unit report home screen.
- 3. From the Active Unit Report screen, users can view all units, unit ID, serial number, model number, sensor part number and software database and version.

/lainMenu	🔳 Unit Reports	Active U	Init Report						
	Active Un	nit Repo	ort			Tuesda	y, June 28, 20 2:38:57 P	11 PM	
			Dia Exit R	enort			Page 1 o	f1	
			the Everence	apore					
Unit ID	Serial	Model	User	MS Sensor	CO Sensor	OX Sensor	HS Sensor	Database	Software
Unit ID Number	Serial Number	Model Number	User	MS Sensor PN	CO Sensor PN	OX Sensor PN	HS Sensor PN	Database Version	Software Version
Unit ID Number	Serial Number 1 0934-401726	Model Number VGC-301	User Bascom-Turner 1	MS Sensor PN MS-611	CO Sensor PN CO-501	OX Sensor PN	HS Sensor PN	Database Version DB 01.14	Software Version 09/11/200
Unit ID Number	Serial Number 1 0934-401726 2 1009-401892	Model Number VGC-301 VGC-301	User Bascom-Turner 1 Bascom-Turner GPS	MS Sensor PN MS-611 MS-611	CO Sensor PN CO-501 CO-501	OX Sensor PN	HS Sensor PN	Database Version DB 01.14 DB 01.15	Software Version 09/11/200 03/10/201
Unit ID Number	Serial Number 1 0934-401726 2 1009-401892 3 0928-401709	Model Number VGC-301 VGC-301 VGA-411	User Bascom-Turner 1 Bascom-Turner GPS Bascom-Turner 2	MS Sensor PN MS-611 MS-611 MS-611	CO Sensor PN CO-501 CO-501 CO-501	OX Sensor PN OS-501	HS Sensor PN	Database Version DB 01.14 DB 01.15 DB 01.15	Software Version 09/11/2002 03/10/2012 03/10/2012

Software database and versions can be updated for free on your PC with the Gas-Rover and Explorer Software Update Program (UPD-001) or with an NCal Docking station. To download the newest program visit <u>www.bascomturner.com/store</u>.

Please note that updating may erase all calibration and readings data. To ensure that nothing will be lost, please import all calibration and readings data prior to updating a detector's software.

4. To return to the unit report home screen select the "Exit Report" button.

Active Unit Settings Report

- 1. Select the "Units" button in the "Reports" column on the DataLink4Access home screen.
- 2. To view an Active Unit Settings Report for all units select the "Active Unit Settings Report" button on the unit report home screen.
- 3. From the Active Unit Settings Report users can view all units, unit ID, serial number, model number, calibration due periods, bar-hole time and alarm values for each sensor.

🗉 MainMenu 🖃 Unit Reports 📳 Active Unit Settings Report													
Active Unit Settings Report Bit Report Tuesday, June 28, 2011 3:04:16 PM Page 1 of 1													
Unit ID	Serial No.	User	Model No.	Cal Due Period (days)	Bar-Hole Time (seconds)	Air Free CO	% Gas Alarm	% LEL Alarm	PPM Gas Alarm	% O2 Low Alarm	% O2 High Alarm	PPM CO Alarm	PPM H2S Alarm
1	0934-401726	Bascom-Turner 1	VGC-301	30	15			20	10			35	
2	1009-401892	Bascom-Turner GPS	VGC-301	31	15			20	10			35	
3	0928-401709	Bascom-Turner 2	VGA-411	31	15	N		20	10	19.5	23	35	
4	1120-402101	Bascom-Turner GPS 2	VGA-411	31	15	N		20	10	<mark>19.5</mark>	23	35	

Settings cannot be changed from this window. To adjust alarm values or calibration due periods please consult the Gas-Rover or Gas-Explorer operation manual.

4. To return to the unit report home screen select the "Exit Report" button.

Retired Unit Report

- 1. Select the "Units" button in the "Reports" column on the DataLink4Access home screen.
- 2. To view a Retired Unit Report for all retired units select the "Retire Unit Report" button from the unit report home screen.
- 3. For information about retiring or reactivating any units please consult the "Maintenance" section of this manual.

PART III. Maintenance

In addition to renaming a unit and updating a unit's date and time, the maintenance features allow users to retire and reactivate a specific detector, and rebuild readings and calibration data.

Retire / Active Detectors

- 1. To retire or reactivate a unit, select the "Retire / Activate Detectors" button from the DataLink4Access home screen. Please note that whenever a unit is added to DataLink4Acces, it is added as an active unit.
- 2. The unit status screen lists all detectors, to retire/activate a unit, select a unit and press the appropriate buttons. If a unit is retired, the letter "Y" will appear in the "Retired" column. Repeat if necessary.
- 3. Retired units will now appear in a "Retired Unit Report."

Admin

1. To adjust DataLink4Access's administrative features, select the "Admin" button in the "Maintenance" column on the DataLink4Access home screen.

📧 MainMenu 🔚 Admin		
😑 Admini	stration	Close Window
DataLocation: Look Back in Months:	C:\Datalink 3	
	Rebuild Calibration Inform Rebuild Readings Inform	Rebuilding is only necessary if data errors occur. If you are unsure whether or not you need to rebuild your data please call Bascom-Turner Instruments, 800-225-3298.

- 2. From the Admin Home screen users can:
 - Change the data location
 - Calibration look back period
 - Rebuild calibration data
 - Rebuild readings information

Bascom-Turner does not recommend adjusting the data location. If you have any questions about the location of stored data, or rebuilding readings and calibration data please refer to the trouble shooting section of this manual or call 800-225-3298.

Look Back in Months (Calibration Records)

1. The look back in months period refers to the calibration look back period. This value can be adjusted in the admin window or in the calibration reports section. DataLink4Access's

default look back period is three months. The smaller the look back period, the faster calibration data will load.

Rebuilding Readings or Calibration Data

1. If imported calibration or readings data does not appear in the appropriate directory, a readings or calibration information rebuild may be necessary. To rebuild any information, simply select the "Rebuild Calibration Information" or "Rebuild Readings Information" button from the "Administration" home screen. If a readings or calibration data rebuild is unsuccessful, please consult the trouble shooting section of this manual.

PART IV. Troubleshooting

Please refer to the below information to help solve common user problems. If a problem persists, please call 800-225-3298 to speak to service technician.

"Communications Error – Check detector and try again"

This message may occur if a PC is having difficulties communicating with a Gas-Rover or Gas-Explorer. To solve this problem check that:

- The detector is in PC connection mode
- The USB cable is properly inserted into both the detector and a USB port on the PC. If the USB port appears to be loose move the cable to a different port on the PC.
- The detector has successfully paired with Bascom-Turner's Bluetooth dongle.
- The USB cable is not damaged and is in good working condition.

After addressing any of the above issues, try re-importing the data.

Windows "Not Responding" During Readings and GPS Import

When downloading large data sets Windows—especially Windows 7—may display a "Not Responding" message in the upper left hand corner of the DataLink4Access window and the download progress bar may stop. So long as the Gas-Rover or Gas-Explorer's LCD lights are still flashing, this is a false "Not Responding" message, and the data import is still in progress. Downloading large amounts of GPS data make take up to five minutes.

If the data appears to have been corrupted or was not completely downloaded during the import procedure, try re-importing the data.

Imported Information but Unit, Calibration or Readings Data is Not There

When information is imported from a detector, only the specific information that the user selected to import will appear in DataLink4Access. For example, if a user imported unit or readings and GPS information, the most recent calibration records will not be imported and will remain on the detector. To ensure that DataLink4Access is up to date, Bascom-Turner recommends importing all records each time a detector is connected to the PC.

Information was Imported Successfully, but it Does Not Appear in the Readings or Calibration Reports

If data was successfully imported—as shown by a successful import box—but fails to make its way to the appropriate report please try the following:

- Close and reopen DataLink4Access
- Re-import the readings or calibration data
- Rebuild readings or calibration information

Google Earth Displays More Than One Survey or Bar-Hole Set

Each time a user closes Google Earth, he or she is prompted to save or discard their most recent survey or set of bar holes. Google's default setting is to save all data, so if a user doesn't select "Discard," the previous survey or set of bar holes will appear each time Google Earth is opened. If this occurs, it can be easily addressed the next time Google Earth is opened.



On the left had side of the Google Earth window there should be two files—in this example "PPMSurvey.kml"—one under the "My Places" menu, the other under the "Temporary Places" menu. DataLink4Access places the most recent survey in the Temporary Places folder. The file under "My Places" is a saved file. To remove the saved file, select the *.kml file under "My Places" and press the "Delete" key. Users will then be prompted to confirm their selection, please select yes.