

# DP-IR™

SELF-TEST LOG

# USER MANUAL



*Your Safety...Our Commitment*

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# DP-IR Self-Test Log User Manual

For Version: 1.2.1

## Overview:

The DP-IR Self-Test Log program is for use with the Heath DP-IR instrument. The program will download the Self-Test log from a DP-IR instrument. The user can then review the data and save the data to a file. A saved file can then be opened with a spreadsheet program for further use as needed.

## System Requirements:

- PC running OS 32-Bit Windows XP, 7, or 8.1  
Or OS 64-Bit Windows 7, 8.1 or 10.
- Serial Com port or USB to serial port adaptor
- Serial RS232 cable (standard cable with male, female connectors)

## Installing Program:

- Run the install program; DPIR\_SelfTest\_Setup

## Installed Files and Folders:

The setup program will install the program and files in default folder  
C:\Program Files\Heath Consultants\DPIR.

When the program first runs, it will create a new folder for storing data files:  
C:\DPIR Data Logs\

A shortcut will be placed on the desk top and in the Start\Programs

## Connecting the DP-IR to the PC:

**Note 1:** The RS communication option is preset.

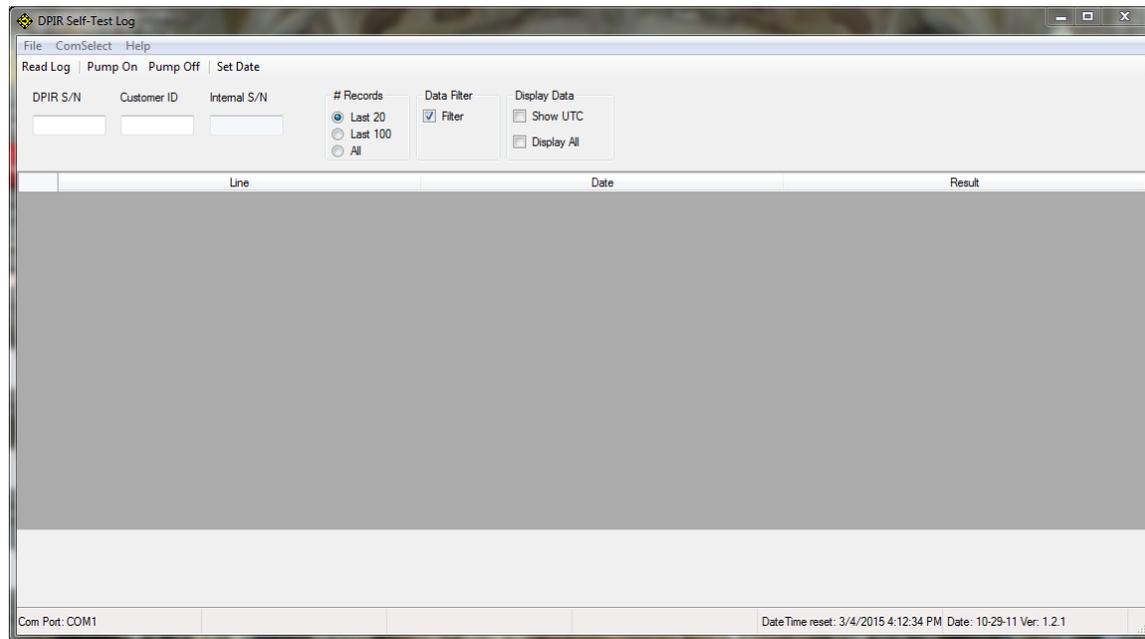
To connect the DP-IR to the PC using the RS232 interface:

- Connect a RS232 serial cable to the DP-IR and to the PC
- Turn ON the DP-IR and allow for countdown to end
- Select the RS communication option in the DP-IR menu
- Start the DP-IR Self-Test Log program

**Note 2:** If a computer has only USB ports (now common on laptops) then a USB to RS232 converter must be used.

**Note 3:** The program will try to open a COM port 1-6. If it can't open a COM port, an error message is displayed in the lower message panel. The user can then select a specific COM port to use from a list shown by clicking on the "ComSelect" button located at top left of program.

## Using DP-IR Self-Test Log program:



1. Launch the program through the desktop or Start Menu.
2. The user can enter the DP-IR serial number and a customer specific ID if desired. The internal serial number is automatically read and displayed.
3. Choose the amount of records to download.
4. Choose the “Filter” option if any partial records are to be avoided. (see **Note 4 & Note 5** below) This option will show the result of each Self-Test along with a date and time.
5. Choose the “Show UTC” if time needs to be displayed in Universal Time Coordinated. Otherwise the time is displayed in local time. (see **Note 5** and **Note 7** below)
6. Choose the “Display All” if additional Self-Test parameters need to be displayed. Otherwise just the date and results are displayed. (see **Note 5** below)
7. Click the “Read Log” button. It may take up to 60 seconds to download the full log history depending on the # of records being downloaded as more records require more download time. (see **Note 4** below)
8. The data will then be displayed within the log table of the program. **If a Self-Test record seems to be missing, try by pressing “Read Log” and downloading the data again. (Also see Note 4 and Note 6 below)**

\*\*\*\* **Note 4** \*\*\*\*

Be sure to **not** run a Self-Test or another “Read Log” until first “Read Log” process is complete. Doing so may result in a corrupted Self-Test record or display.

\*\*\*\* Note 5 \*\*\*\*

When the “# of Records” is selected and only the “Filter” box checked, the extracted data time will be in local time zone military time. With the “Show UTC” box checked, the time will also be in “Zulu” Military time, and GMT (Greenwich Mean Time).

\*\*\*\* Note 6 \*\*\*\*

After Self-Test is performed, the **user must go back to ‘run screen’ by pressing the menu button** on the DP-IR, **only then** the record keeping routine is triggered in the DP-IR which saves that Self-Test record in a non-volatile memory of the instrument along with the real time clock stamp. This independent feature is initiated after the Self-Test has been performed as a separate action. Going back to the ‘run screen’ after each Self-Test is required for the individual Self-Test data to be logged, even when multiple Self-Tests are performed in succession one after the other. If for some reason the self-test log is not recorded properly because either the user did not press the ‘menu’ button to go back to ‘run screen’ or the memory or time stamp was corrupt, the Self-Test ‘ok’ on the display still confirms that the sensitivity of the DP-IR is valid and correct.

\*\*\*\* Note 7 \*\*\*\*

The user should check the accuracy of the real time clock of the instrument while downloading the log data. Make sure that the instrument real time clock is accurate and is ticking forward by looking at the time stamps of most recent Self-Test records. Otherwise try to re-sync the real time clock with the computer clock by following the step below. If the real time clock continues to be inaccurate or is not ticking forward, then instrument needs to be sent in for repair.

The real time clock chip also has a back-up coin battery however it can potentially experience draining when the main instrument battery is in a discharged state over long periods of time. Please see the battery charging section of the instrument’s user manual for battery maintenance guidelines.

**Set the Current Date and Time:**

Should the date and time become off, it can be reset (GMT). This Date & Time will appear at bottom right corner of the Self-Test Log program in Greenwich Mean Time form.

1. Click “Set Date”.

**Save the DP-IR Self-Test Log:**

To save the log file

1. Click “File”-> “Save”.
2. In the pop-up Window “Save Self-Test Records”: enter a file name; select a file type (CSV file format is the default); and select a location to save the file.
3. Click “Save”.

**View previously stored DP-IR Self-Test Logs:**

To view a saved log on the computer while not using the DP-IR Self-Test Log program

1. Go to the location where the file was saved.

To view a saved log using the DP-IR Self-Test Log program

1. Click “File”-> “Open” at top left corner of program.
2. In the pop-up Window “Open Self-Test Records”, select the desired file. Click “Open”. The data will then appear within the body of the program.
3. To close the current log, click “File”-> “Close”.

**Example:**

Line	Date	Result
DPIR Self-Test data downloaded on:		2/24/2015 10:38:23 AM
Instrument IID:	726	
Instrument SN:	9001024001	
Instrument CID:	Engineering	
Time displayed as Central Standard Time		
Line	Date	Result
1	2/23/2015	pass
2	2/20/2015	pass
3	2/18/2015	pass

**Print the DP-IR Self-Test Log:**

To print a previously saved log, go to the location where the file was saved. Log may be opened using a spreadsheet application and can be printed from that application.

Example:

DPIR Self-Test data downloaded on: 2/24/2015 11:18:00 AM

Instrument IID: 726

Instrument SN: 9001024001

Instrument CID: Engineering

Time displayed as Central Standard Time

Line	Date	Time	Result
1	2/23/2015	13:29:16	pass
2	2/20/2015	13:45:31	pass
3	2/18/2015	13:11:07	pass
4	2/10/2015	11:37:24	pass
5	2/3/2015	06:37:00	pass
6	2/1/2015	19:44:08	pass
7	12/15/2014	10:55:29	pass
8	12/12/2014	15:10:36	pass
9	12/11/2014	15:36:43	pass
10	12/11/2014	09:14:51	pass
11	12/9/2014	13:58:37	pass
12	12/9/2014	13:55:21	pass
13	12/9/2014	13:51:41	pass
14	10/14/2014	11:04:33	pass
15	10/14/2014	11:00:45	pass
16	10/14/2014	09:11:00	pass
17	10/9/2014	15:44:53	pass
18	10/6/2014	15:50:01	pass

**Self-Test Log Data Format:**

The following data fields are stored and reported because of a self-test:

- **Line:** sequential recorded number created by the log program. An asterisk (\*) by the number indicates that the record may be corrupted.
- **Date:** The date of the self-test.
- **Time:** The time (in GMT) of the self-test.
- **Lo\_gas V:** The voltage level of the Lo\_gas detection channel. Use full indicator of the zero voltage level. If gas is present during the test, this value will be high.
- **Hi\_gas V:** The voltage level of the Hi\_gas detection channel.
- **Light Lev V:** The voltage level of the light level detection channel.
- **Last PPM Corr:** The PPM correction value after the last self-test.
- **New PPM Corr:** The PPM correction value after the current self-test.
- **Result:** Self-Test pass or fail result.
- **% Gas Coef:** % Gas correction coefficient.

The screenshot shows the 'DPIR Self-Test Log' application window. The interface includes a menu bar (File, ComSelect, Help), a toolbar (Lead Log, Pump On, Pump Off, Set Date), and a control panel with fields for DPIR S/N, Customer ID, and Internal S/N (set to 726). It also features options for # Records (Last 20, Last 100, All), Data Filter (checked), and Display Data (Show UTC, Display All). The main area is a table with the following columns: Line, Date, Time Central Standard Time, Lo\_gas V, Hi\_gas V, Light Lev V, Last PPM Corr, New PPM Corr, Result, and % Gas Coef. The table contains 15 rows of data, with the first row (Line 0001) highlighted. The status bar at the bottom shows 'Com Port: COM1', 'Date/Time reset: 4/17/2014', and 'Date: 10-29-11 Ver: 1.2.1'.

Line	Date	Time Central Standard Time	Lo_gas V	Hi_gas V	Light Lev V	Last PPM Corr	New PPM Corr	Result	% Gas Coef
0001	4/17/2014	09:21:47	0.27	0.02	4.02	24.00	-11.00	pass	104.00
0002	3/21/2014	13:35:59	0.25	0.02	3.90	-3.00	24.00	pass	104.00
0003	11/11/2013	14:31:44	0.24	0.02	4.02	20.00	-3.00	pass	104.00
0004	11/11/2013	13:31:34	0.22	0.02	3.88	0.00	20.00	pass	104.00
0005	11/8/2013	12:12:29	0.24	0.02	3.94	66.00	0.00	pass	104.00
0006	11/6/2013	12:01:00	0.22	0.02	3.84	127.00	66.00	pass	104.00
0007	10/2/2013	08:31:35	0.24	0.02	3.98	29.00	0.00	pass	104.00
0008	10/2/2013	08:18:26	0.22	0.02	3.90	-22.00	29.00	pass	104.00
0009	10/1/2013	16:19:44	0.22	0.02	4.10	3.00	-22.00	pass	104.00
0010	10/1/2013	16:17:07	0.22	0.02	4.08	-7.00	3.00	pass	104.00
0011	10/1/2013	15:27:24	0.22	0.02	3.86	3.00	-7.00	pass	104.00
0012	10/1/2013	08:26:31	0.20	0.02	3.82	-21.00	3.00	pass	104.00
0013	9/30/2013	15:20:20	0.18	0.02	3.86	0.00	-21.00	pass	104.00
0014	10/2/2013	14:14:26	0.20	0.02	4.00	0.00	-11.00	pass	104.00
0015	9/26/2013	04:10:50	0.45	0.06	3.84	127.00	0.00	fail	104.00

**END of DOCUMENT**

