



INSTRUCTION MANUAL

Models: D101
Real Time Paperless Data Logging Unit

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To see all available accessories and downloadable software, please visit
www.anaheimscientific.com

1. Product Introduction

1-1 Features

- Stores 8,000 measurement values
- Settable sampling time from 1 second to 9 hours
- Auto or manual logging
- Saves data with time stamp information
- Large LCD display
- Two year warranty

3-2 Applications

- Connect to "H Series" Anaheim Scientific products
- Record measured values over extended periods of time
- Export recorded data to Spreadsheet programs for reporting data





2. Safety Information

Read the following safety information carefully before attempting to operate or service the meter. Only qualified personnel should perform repairs or servicing not covered in this manual.

2-1 Cautions!

- **DO NOT** submerge the products mentioned in this manual in water or any other types of liquids.
- This product is not designed for use in medical applications. The product can only be used to measure body temperature simply for reference.

2-2 Safety Symbols

-  Dangerous, refer to this manual before using the meter.
-  Conforms to requirements of European Union and European Free Trade Association (EFTA).
-  Battery level is low.
-  Don't dispose this product as unsorted municipal waste.

This instrument conforms to the following standards:

EN61326: Electrical equipment for measurement, control and laboratory use.

IEC61000-4-2: Electrostatic discharge immunity test.

IEC61000-4-3: Radiated, radio-frequency, electromagnetic field immunity test.

IEC61000-4-8: Power frequency magnetic field immunity test.

3. Operating Instructions

3-1 Unit Diagram

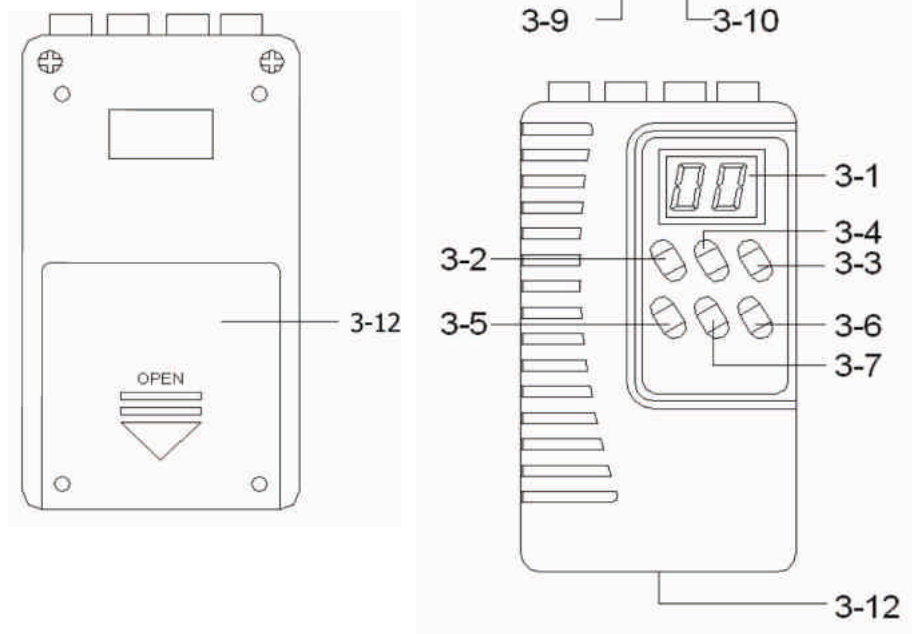


Fig. 1

- | | | | |
|-----|---------------------|------|---------------------|
| 3-1 | LCD Display | 3-7 | Sample Time Button |
| 3-2 | Power Button | 3-8 | Isolated In Jack |
| 3-3 | Function (▲) Button | 3-9 | Isolated Out Jack |
| 3-4 | Date/Time Button | 3-10 | Direct In Jack |
| 3-5 | Enter/Clear Button | 3-11 | Direct Out Jack |
| 3-6 | Pause (▼) Button | 3-12 | Battery Compartment |

3-2 Operation Procedure (Auto Data Input)

- 1) Connect the "Data Logger" to the "Data Source Meters" via the "Double earphone cable".
 - a. Using the Double Earphone Cable connect the "Data Source Meter" to the "DIRECT input Socket" or "ISOLATE Input Socket" depending on the type of source meter being used. If DIRECT type is required, it will be stated in the "Data Source Meters" instruction manual. If it is not stated in the manual then it is an "ISOLATE Data Source Meter". Models H100, H200, H240, H300, H400 & H500 all use "ISOLATE input Socket".
 - b. Turn power on to the "Data Source Meters" before inputting data.
- 2) Press the "Function Button" (3-3, Fig. 1) until the display show the "AUTO REC" indicator along with "PS" (pause).
- 3) Press the "Pause Button" (3-6, Fig. 1), the Meter's data along the Time (year/ month/ date/ hour/ minute/ second) will save into the Data Logger per Sampling Time. When the data is being saved into the Data Logger, the display will show "rC" and the "REC" indicator will flash once a while.
- 4) If intend to stop the Auto data input, just press the "Pause Button" (3-6, Fig. 1), the Data Logger's LCD will show "PS".

Note:

- a. The method to set/check the Clock Time (year/ month/ date/ hour/ minute/ second), refer chapter 3-4.
- b. The method to set/check the Sample Time, refer chapter 3-5.

3-3 Operation Procedure (Manual Data Input)

- 1) Connect the "Data Logger" to the "Data Source Meters" via the "Double earphone cable", UPCB-03.
- 2) Press the "Function Button" (3-3, Fig. 1) until the "Display"(3-1, Fig. 1) show the "MANUAL REC" indicator along with "PS" (pause).
- 3) Press the "Pause Button" (3-6, Fig. 1) once, the Meter's data along the Time (year/ month/ date/ hour/ minute/ second) will save into the Data Logger one time. When the data save into Data logger, the display both "rC" and the "REC" indicator will flash once a while.
- 4) If intend to stop the Auto data input, just press the Pause Button " (3-6, Fig. 1), the Data Logger's LCD will show "PS".

Note: The method to set/check the Clock Time (year/ month/ date/ hour/ minute/ second), refer chapter 3-4.

3-4 Setting the Clock Time

- 1) Power ON the "Data Logger" by pressing the "Power Button" (3-2, Fig. 1), the display will show "PS" (pause).
- 2) Press the "Date/Time Button" (3-4, Fig. 1) continuously for at least 2 seconds; release the button, the LCD display will flash. Now the Data Logger is ready for setting the clock time.
 - a. During the LCD flashing, press the "Date/Time Button" (3-4, Fig. 1) once to select the Clock Time setting unit of year/ month/ date// hour/ minute/ second in sequence.
 - b. Using "▲ Button" (3-3, Fig. 1) "▼ Button" (3-6, Fig. 1) to select the clock time value.
 - c. After setting the clock time value, pressing the "Enter Button" (3-5, Fig. 1) will finish the clock time setting procedures and save the desired value into the memory circuit, the LCD will show "PS" again.

Note: For the "year" clock time setting, 05 = 2005 year, 06= 2006 year, 11 = 2011 year.

3-5 Setting the Sample Time

- 1) Power ON the Data Logger by pressing the "Power Button" (3-2, Fig. 1), the display will show "PS" (pause).
- 2) Press the "Sample Button" (3-7, Fig. 1) continuously at least 2 seconds; release the button, the LCD display will flash. Now the Data Logger is ready for setting the sample time.
 - a. During the LCD flashing, press the "Sample Button" (3-7, Fig. 1) once a while to select the Sample Time setting unit of hour/ minute/ second in sequence.
 - b. Using "▲ Button" (3-3, Fig. 1) "▼ Button" (3-6, Fig. 1) to select the sample time value.
 - c. After setting the sample time value, press the "Enter Button" (3-5, Fig. 1) will finish the sample time setting procedures and save the desired value into the memory circuit, the LCD will show "PS" again.

3-6 Checking the Clock Time

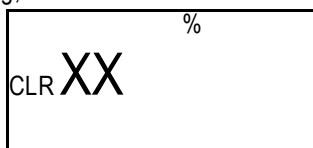
- 1) Power ON the Data Logger by pressing the "Power Button" (3-2, Fig. 1), the display will show "PS" (pause).
- 2) Press the "Date/Time Button" (3-4, Fig. 1), the display will show the existing clock time value in the sequence of year/ month/ date/ hour/ minute/ second.

3-7 Checking the Sample Time

- 1) Power ON the Data Logger by pressing the "Power Button" (3-2, Fig. 1), the display will show "PS" (pause).
- 2) Press the "Sample Time Button" (3-7, Fig. 1), the display will show the existing sample time value in the sequence of hour/ minute/ second.

3-8 Clearing the Memory

- 1) Power ON the Data Logger by pressing the "Power Button" (3-2, Fig. 1), the display will show "PS" (pause).
- 2) Press the "Enter/Clear Button" (3-5, Fig. 1) continuously until the display flashing and show as following, release the button.



Note:

- * XX is the memory size (%) that already saved into the memory circuit.
- * For example XX = 13.

- 3) Using "▲ Button" (3-3, Fig. 1) "▼ Button" (3-6, Fig. 1) to select "YS" or "no".

If select "YS", then press the "Enter Button" (3-5, Fig. 1) will clear the memory. The display will show "00 %" then returns to "PS" (pause)

3-9 Checking the Memory

- 1) Power ON the Data Logger by pressing the "Power Button" (3-2, Fig. 1), the display will show "PS" (pause).
- 2) Press the "Enter/Clear Button" (3-5, Fig. 1) once, displays will show the existing memory size in %. For example display show 96%, 75%... then return to "PS" (pause).

3-10 Hardware Setup

- 1) Prepare the standard RS232 cable RSCBL2 for data transferring. Plug the 9 pin plug head with computer's COM1, COM2, .COM8 and the earphone head with D101.
- 2) Follow steps from section 3-2 or 3-3.
- 3) Press the "Function Button" (3-3, Fig. 1) until the "Display" (3-1, Fig. 1) show the "OUT %" indicator along with "PS" (pause).
- 4) For certain computers with only build-in USB ports, the D101 can also use the USB cable, USB1 (optional accessory) for data transferring. Plug USB plug head to his computer's USB port and the earphone head with D101. (note: the USB1 cable will be available in the Fall of 2007)
 - a. Plug in the earphone plug to "Direct Output Socket" (3-11, Fig. 1) when using the USB cable (set the range to position 1/direct type) to transfer data.
 - b. Plug in the earphone plug to "Isolate Output Socket" (3-9, Fig. 1) when using the USB cable (set the range to position 2/isolate type) to transfer data.

3-11 Software Installation

There is one CD ROM containing the software included with your D101. It is also available for download at www.anaheimscientific.com.

Insert the CD ROM into the CD drive and execute file **setup.exe** file to install the programs. Follow the instruction of the installation wizard to finish the setup procedure.

After you install the program successfully, there will be a new item "DI9601A" under "program file". Just select and click on the item to start the program and you will see a display like Fig. 2.

3-12 Software Data Acquisition

1. Select COM 1, COM 2COM 8 that the RS-232 cable is plug in to.
2. Input Data File Name
3. Press Start Button
4. Press " Pause" button on D101
5. Press "View Data" button to see the record

Now you should see the data listed on the left of the table. If not, please check your operation procedure again.

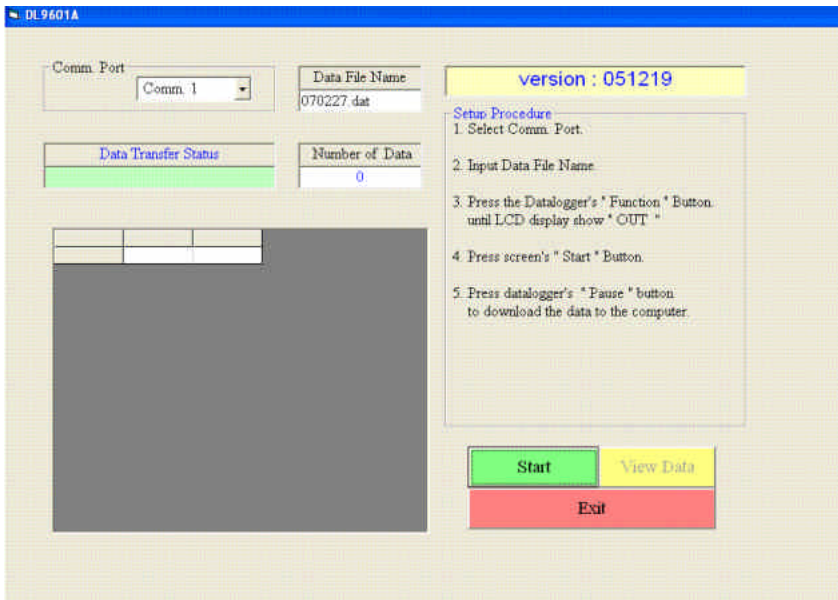


Fig. 2

3-13 Retrieving Data and Data Exportation

For example that you save data as "ASH1.dat" and you want to retrieve in application software EXCEL® (or any similar spreadsheet program).

1. Execute EXCEL® program and open file from directory "C:\Program File\DI9601w\ASH1.dat"

Note:

* Initial setup directory is

C:\Program File\DI9601w\

* You may find all data file in this directory.

2. File type select All Files (*.*)
3. Double click "ASH1.dat" to open the file.
4. Select "Comma" as the separation value to separate data into different columns.

Then you can see the data listed on the monitor like:

1	25	4	4	
2	25	4	4	
3	25	4	4	
:	:	:	:	:

User can analysis these data anyway you want.

3-14 LCD Symbols

PS	Pause
RL	Recording
Er	Error
FU	Full (memory full)
YS	Yes
NO	No

4. Specifications


4-1 General Specifications

Store Data No.	Max. 8,000 data (16 bits data stream) along with the time information.	
Display	LCD, size : 23 mm x 16 mm.	
Interval Recording Time adjustment	Seconds	1 to 59 seconds.
	Minutes	1 to 59 minutes.
	Hours	1 to 8 hours.
Time Stamp Information	year, month, date, hour, minute, second.	
Max. store data loss	<i>Max. one point data may loss if store data no. less than 1,000 points data.</i>	
	<i>Max. two points data may loss if store data within 1,000 - 4,999 points data.</i>	
	<i>Max. three points data may loss if store data within 5,000 - 8,000 points data.</i>	
Clock	Crystal O.S.C.	
Battery	1.5 V AA (UM-3) battery x 4 PCs. (Alkaline or heavy duty type).	
Power Consumption	Approx. 3.5 mA.	
External Power	9V DC adapter/center + (not included)	
Memory management	The data will be kept in the memory circuit (even power off) continuously when the batteries are under normal condition. Data lost with dead batteries.	
Low Battery Indicator	When the LCD show the low battery indicator , it should change the batteries. (download data first)	
Operating Temperature	32° to 122°F (0° to 50°C).	
Operating Humidity	Less than 80 % RH.	
Weight	205 g/ 0.45 LB (including battery).	
Dimension	HWD – 5.2 x 2.8 x 1.0 inch (131 x 70 x 26 mm)	
Accessories Included	<ul style="list-style-type: none"> * Software disk (software to load the data from D101 to the computer) * Double earphone cable * RSCBL2 - RS232 Cable (isolate type) 	
Optional Accessories	<ul style="list-style-type: none"> RSCBL1 - RS232 Cable (direct type) USB2 - USB Cable (available fall 2007) 	

Specifications and information is subject to change without notice.

Please visit www.anaheimscientific.com for the most current product information.

5. Battery Replacement Procedure

- 1) When power on, if the LCD display shows the  indicator, it is necessary to replace the battery.
- 2) Slide the "Battery Cover" (3-12, Fig. 1) away from the instrument and remove the batteries.
- 3) Install the 1.5 V AA (UM-3) batteries x 4 PCs. Use the Alkaline or heavy duty type battery. When installing the batteries one should be careful to note the batteries polarity. Please reinstall the battery cover after the batteries are replaced.

Battery Considerations

- a. The batteries drain a small current (approx. 0.5 uA) for the Real-time clock (RTC) even the power off.
- b. When using an external Power Adapter as the power source, for keeping the memory circuit to work properly, batteries should also be kept in the battery compartment.

6. Service Information

Warranty Service: Please return the product in the original packaging with proof of purchase to the address below. Clearly state in writing the performance problem and return any leads, probes, connectors and accessories that you are using with the device.

Non-Warranty Service: Return the product in the original packaging to the address below. Clearly state in writing the performance problem and return any leads, probes, connectors and accessories that you are using with the device. Customers not on open account must include payment in the form of a money order or credit card. For the most current repair charges please visit www.anaheimscientific.com and click on "service/repair".

Return all merchandise to Anaheim Scientific with pre-paid shipping. The flat-rate repair charge for Non-Warranty Service **does not** include return shipping. Return shipping to locations in North American is included for Warranty Service only. For overnight shipments and non-North American shipping fees please contact Anaheim Scientific.

Anaheim Scientific
22820 Savi Ranch Parkway
Yorba Linda, CA 92887
www.anaheimscientific.com
714-921-9095

Include with the returned instrument your complete return shipping address, contact name, phone number and description of problem.

7. Limited Two-Year Warranty

Anaheim Scientific warrants to the original purchaser that its products and the component parts thereof, will be free from defects in workmanship and materials for a period of two years from date of purchase from an authorized Anaheim Scientific distributor.

Anaheim Scientific will, without charge, repair or replace, at its option, defective product or component parts. Returned product must be accompanied by proof of the purchase date in the form of a sales receipt.

To obtain warranty coverage in the U.S.A., this product must be registered by completing the warranty registration form on www.anaheimscientific.com within fifteen (15) days of purchase.

Exclusions: This warranty does not apply in the event of misuse or abuse of the product or as a result of unauthorized alterations or repairs. The warranty is void if the serial number is altered, defaced or removed.

Anaheim Scientific shall not be liable for any consequential damages, including without limitation damages resulting from loss of use. Some states do not allow limitations of incidental or consequential damages. So the above limitation or exclusion may not apply to you.

This warranty gives you specific rights and you may have other rights, which vary from state-to-state.

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