

SEC IR PC LINK



Instruction and Operation Manual

Sensor Electronics Corporation
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Part Number 71-4000 Version 070801

Sensor Electronics Corporation

Sensor Electronics Corporation (SEC) is an innovative manufacturer of fixed system gas detection equipment, for combustible gases, oxygen and toxic gases.

Commitment

Our quality and service are uncompromising. We back each of our products with a two-year warranty on all materials and workmanship. We offer technical support, user training and on-site service and maintenance of equipment to meet the needs of our customers.

Gas Detection Service

Individually designed maintenance packages are available for specific customer needs. Service begins with verification of the system installation that includes an initial system check and calibration. We then offer customer training programs (on-site and at factory) to insure that technical personnel fully understand operation and maintenance procedures. When on-the-spot assistance is required, service representatives are available to handle any questions or problems immediately.

Warranty

Sensor Electronics Corporation (SEC) warrants products manufactured by SEC to be free from defects in workmanship and materials for a period of two (2) years from date of shipment from the factory. Any parts returned freight pre-paid to the factory and found defective within the warranty will be repaired or replaced, at SEC's option. SEC will return repaired or replaced equipment pre-paid lowest cost freight. This warranty does not apply to items which by their nature are subject to deterioration or consumption in normal service. Such items may include:

Fuses and Batteries.

Warranty is voided by abuse including rough handling, mechanical damage, alteration or repair. This warranty covers the full extent of SEC liability and SEC is not responsible for removal, replacement costs, local repair costs, transportation costs or contingent expenses incurred without prior written approval. Sensor Electronics Corporation's obligation under this warranty shall be limited to repair or replacement of any product that has been returned to Sensor Electronics Corporation for warranty consideration. This warranty is expressly in lieu of any and all other warranties expressed or implied, and all other obligations or liabilities on the part of Sensor Electronics Corporation including but not limited to, the fitness for a particular purpose. In no event shall Sensor Electronics Corporation be liable for direct, incidental, or consequential loss or damage of any kind connected with the use of its products or failure to function or operate properly.

Year 2000 Compliance

All Sensor Electronics products have been tested and are certified by Sensor Electronics to accurately process date/time and date/time related data from, into and between the 20th and 21st centuries. Sensor Electronics products neither contain nor create any logical or mathematical inconsistency, will not malfunction, and will not cease to function when processing date/time data.

Please contact Sensor Electronics for further information.

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Declaration of Conformity

Sensor Electronics Corporation
5500 Lincoln Drive
Minneapolis, Minnesota 55436 USA
Telephone: 952.938.9486
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Type of Equipment: SEC Signature EtO Monitor
SEC IR PC Link

Model Number: SEC Signature EtO Monitor - Part Number 142-0597
SEC IR PC Link - Part Number 142-0636

I hereby declare that the equipment specified above conforms to the protection requirements of the **EC DIRECTIVE 89/336/EEC** on Electromagnetic Compatibility (EMC), in accordance with the provisions of the Electromagnetic Compatibility Regulations 1992.

The following standards have been applied;

EN 50081 –1
Emissions Standard (Residential Commercial and Light Industry)

EN 50082 –1
Immunity Standard (Residential Commercial and Light Industry)

Signature _____

Patrick G. Smith
Director of Engineering

Date: August 6, 2001

I. GENERAL DESCRIPTION

The SEC IR PC LINK is designed to provide power and status indication to the family of SEC infrared gas monitors. The SEC IR PC LINK can also be used with a PC to communicate to the infrared gas monitoring device.

The SEC IR PC LINK has a selectable analog output signal that can be connected to a chart recorder, DCS3, PLC, DVM or virtually any type of control system.

The SEC Signature EtO infrared gas monitoring devices require a one time span after installation. After the spanning the EtO monitor, an annual zero calibration procedure is recommended. The SEC IR PC LINK has a Unit Zero pushbutton that can be used to perform routine zero calibration of the devices. The span and zero procedures are described later in this manual.

The SEC IR PC LINK package consists of the following items

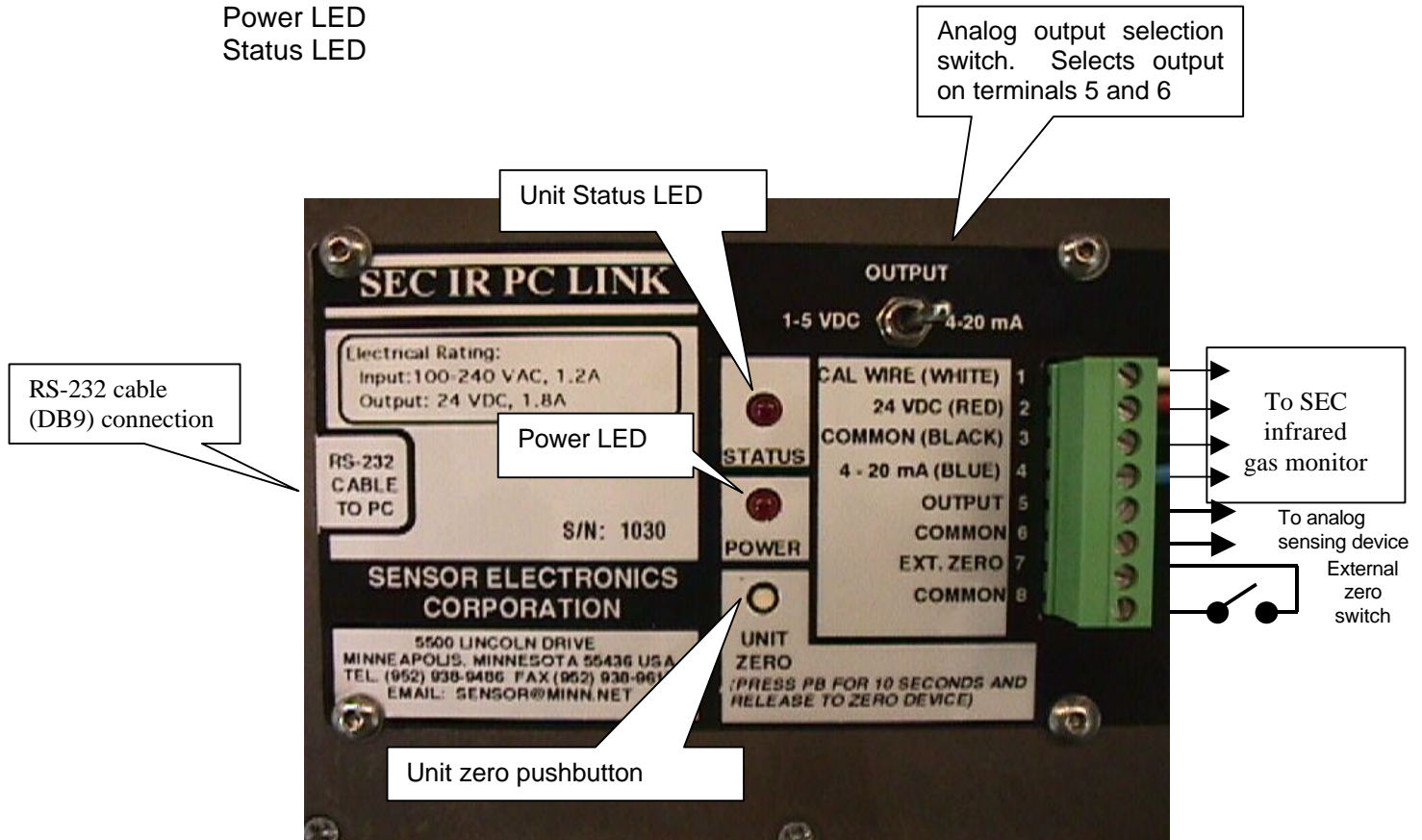
- (1) SEC IR PC LINK box
- (1) PC Interface Cable
- (1) IR PC LINK Software Diskette*

*The software is compatible with most versions of Microsoft® Windows® (3.1 to 98). The SEC software will not run on Windows NT®. Please contact the factory for further details.

Specifications

Input Power: 110 to 220 VAC.
Output Voltage: 24 VDC
Analog Output: 0 – 5 VDC or 4 – 20 mA
Digital Output: RS-232
Indicators:

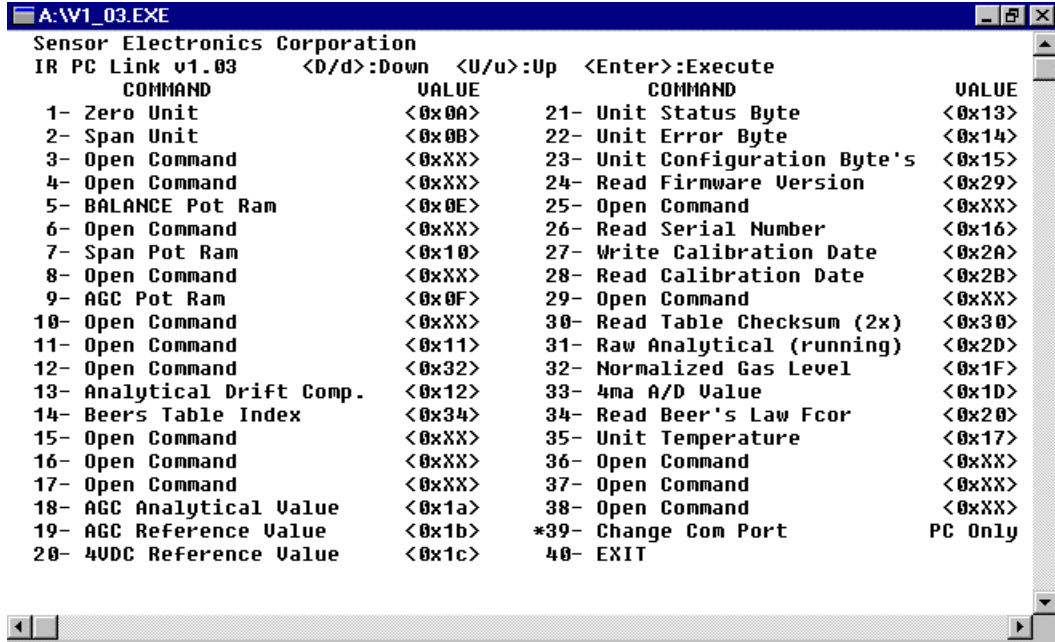
Power LED
Status LED



II. OPERATION / CALIBRATION

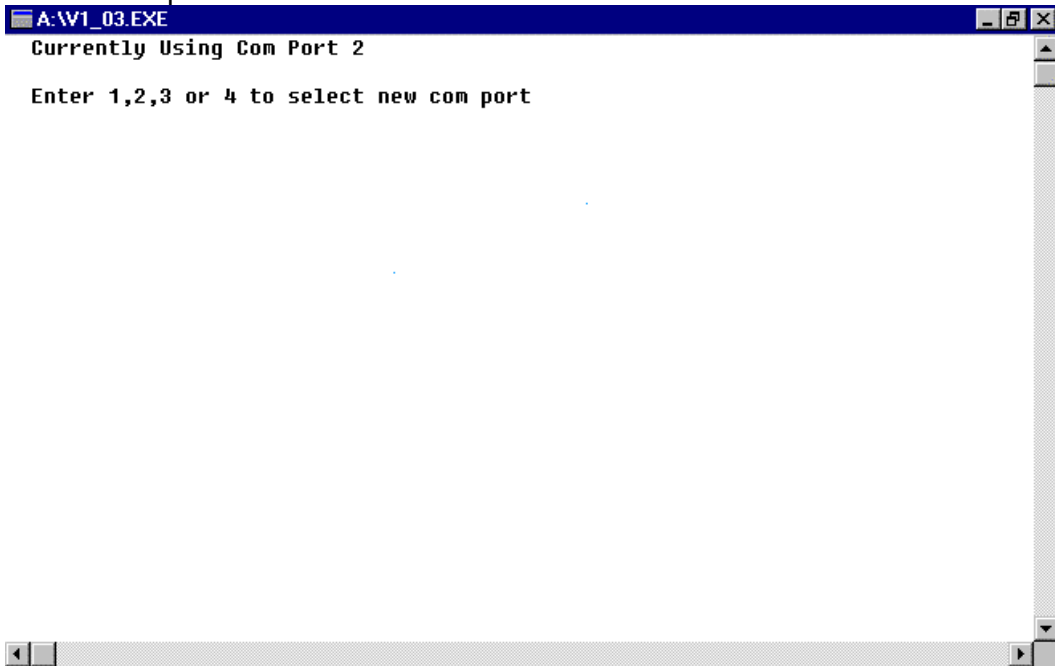
PC Communication Port Setting

The SEC IR LINK default communication port is Com port 2. If the SEC IR LINK is connected to a different Com port use the Change Com Port command to establish communication to the device.



```
A:W1_03.EXE
Sensor Electronics Corporation
IR PC Link v1.03      <D/d>:Down  <U/u>:Up  <Enter>:Execute
COMMAND              VALUE              COMMAND              VALUE
1- Zero Unit          <0x0A>            21- Unit Status Byte <0x13>
2- Span Unit          <0x0B>            22- Unit Error Byte  <0x14>
3- Open Command       <0xFF>            23- Unit Configuration Byte's <0x15>
4- Open Command       <0xFF>            24- Read Firmware Version <0x29>
5- BALANCE Pot Ram    <0x0E>            25- Open Command     <0xFF>
6- Open Command       <0xFF>            26- Read Serial Number <0x16>
7- Span Pot Ram       <0x10>            27- Write Calibration Date <0x2A>
8- Open Command       <0xFF>            28- Read Calibration Date <0x2B>
9- AGC Pot Ram        <0x0F>            29- Open Command     <0xFF>
10- Open Command      <0xFF>            30- Read Table Checksum (2x) <0x30>
11- Open Command      <0x11>            31- Raw Analytical (running) <0x2D>
12- Open Command      <0x32>            32- Normalized Gas Level <0x1F>
13- Analytical Drift Comp. <0x12>            33- 4ma A/D Value    <0x1D>
14- Beers Table Index <0x34>            34- Read Beer's Law Fcor <0x20>
15- Open Command      <0xFF>            35- Unit Temperature <0x17>
16- Open Command      <0xFF>            36- Open Command     <0xFF>
17- Open Command      <0xFF>            37- Open Command     <0xFF>
18- AGC Analytical Value <0x1a>            38- Open Command     <0xFF>
19- AGC Reference Value <0x1b>            *39- Change Com Port  PC Only
20- 4UDC Reference Value <0x1c>            40- EXIT
```

After the Enter key is pressed the following screen will appear, allowing the operator to change to the correct communication port on the PC. Select the communication port number that the SEC IR PC LINK is connected and press enter to change that communication port.

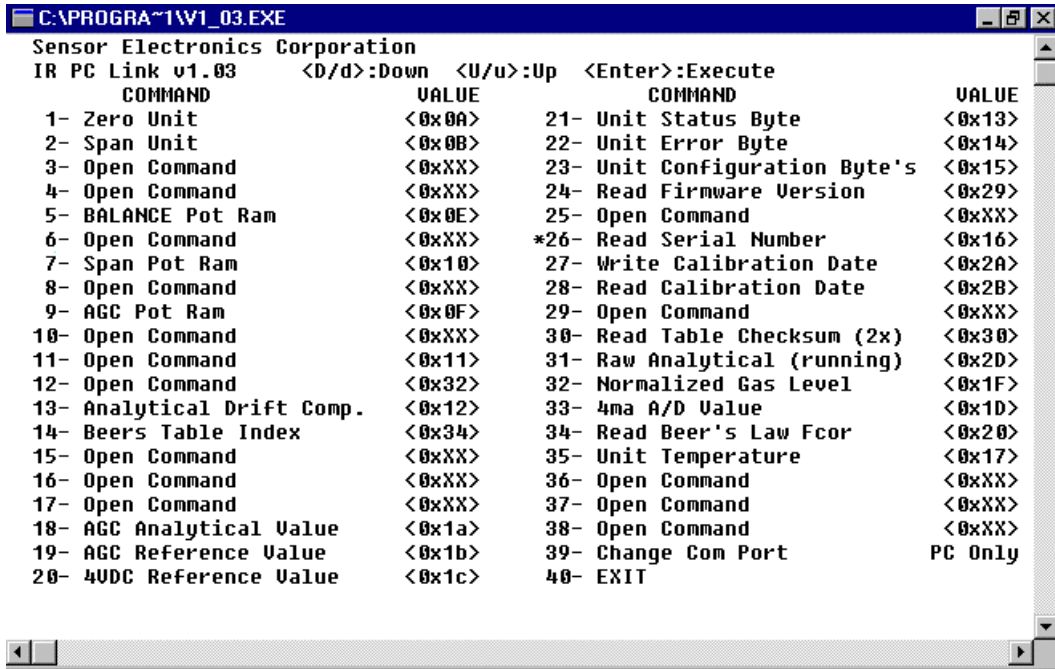


```
A:W1_03.EXE
Currently Using Com Port 2

Enter 1,2,3 or 4 to select new com port
```

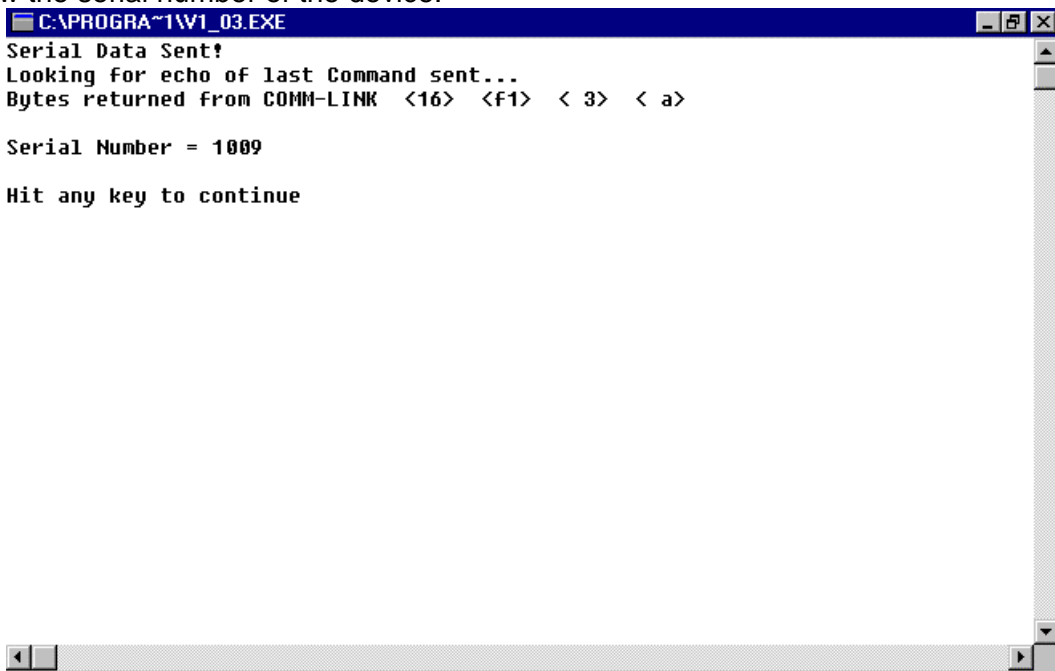
Read Serial Number of Device

Each SEC EtO Signature is assigned a serial number. The serial number is stamped on the housing and programmed in to the device at the factory. To read the device's serial number use the "U/u" and "D/d" keys to navigate to "Read Serial Number" command and press Enter.



```
C:\PROGRAM~1\W1_03.EXE
Sensor Electronics Corporation
IR PC Link v1.03      <D/d>:Down <U/u>:Up <Enter>:Execute
COMMAND              VALUE              COMMAND              VALUE
1- Zero Unit         <0x0A>            21- Unit Status Byte <0x13>
2- Span Unit         <0x0B>            22- Unit Error Byte  <0x14>
3- Open Command     <0xFF>            23- Unit Configuration Byte's <0x15>
4- Open Command     <0xFF>            24- Read Firmware Version <0x29>
5- BALANCE Pot Ram  <0x0E>            25- Open Command     <0xFF>
6- Open Command     <0xFF>            *26- Read Serial Number <0x16>
7- Span Pot Ram     <0x10>            27- Write Calibration Date <0x2A>
8- Open Command     <0xFF>            28- Read Calibration Date <0x2B>
9- AGC Pot Ram      <0x0F>            29- Open Command     <0xFF>
10- Open Command    <0xFF>            30- Read Table Checksum (2x) <0x30>
11- Open Command    <0x11>            31- Raw Analytical (running) <0x2D>
12- Open Command    <0x32>            32- Normalized Gas Level <0x1F>
13- Analytical Drift Comp. <0x12>           33- 4ma A/D Value    <0x1D>
14- Beers Table Index <0x34>           34- Read Beer's Law Fcor <0x20>
15- Open Command    <0xFF>            35- Unit Temperature <0x17>
16- Open Command    <0xFF>            36- Open Command     <0xFF>
17- Open Command    <0xFF>            37- Open Command     <0xFF>
18- AGC Analytical Value <0x1a>           38- Open Command     <0xFF>
19- AGC Reference Value <0x1b>           39- Change Com Port   PC Only
20- 4UDC Reference Value <0x1c>           40- EXIT
```

After the Enter key is pressed the following screen will appear, allowing the operator to view the serial number of the device.



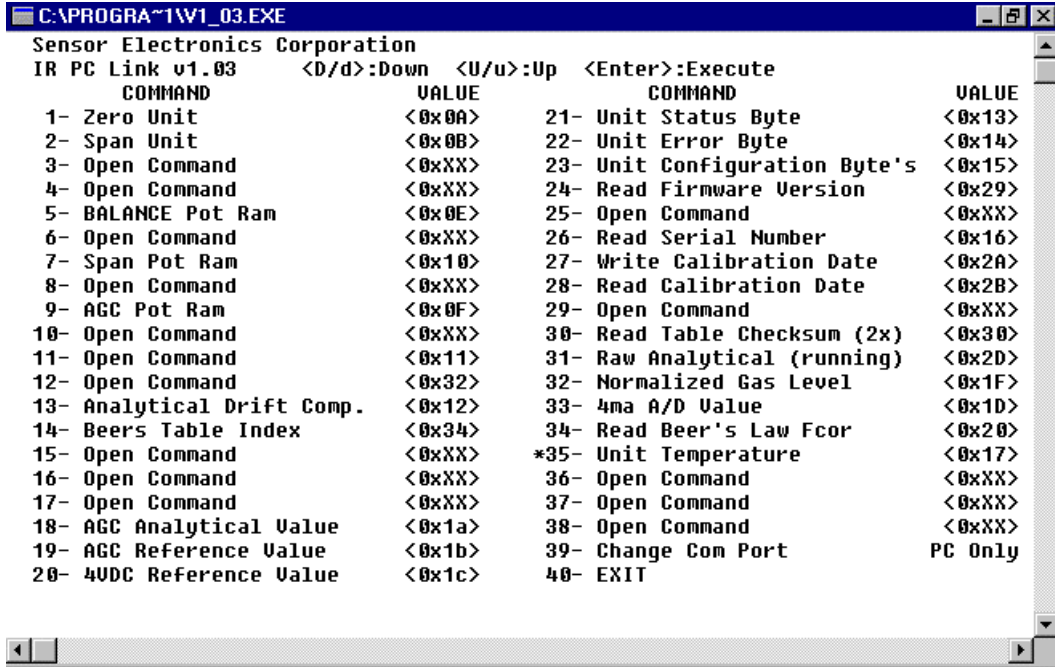
```
C:\PROGRAM~1\W1_03.EXE
Serial Data Sent!
Looking for echo of last Command sent...
Bytes returned from COMM-LINK <16> <f1> < 3> < a>

Serial Number = 1009

Hit any key to continue
```

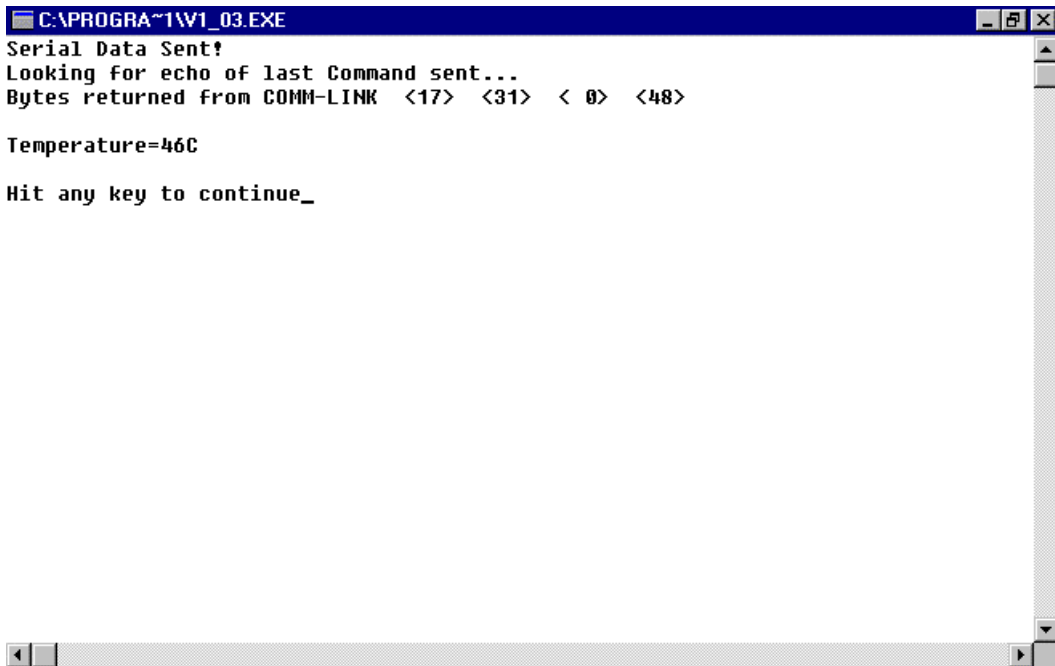
Unit Temperature

The temperature of the SEC EtO Signature should be at least 10° F higher than the sterilizer temperature. To read the temperature of the device use the “U/u” and “D/d” keys to navigate to “Unit Temperature” command and press Enter.



```
C:\PROGRAMS\1\W1_03.EXE
Sensor Electronics Corporation
IR PC Link v1.03      <D/d>:Down <U/u>:Up <Enter>:Execute
COMMAND              VALUE              COMMAND              VALUE
1- Zero Unit          <0x0A>            21- Unit Status Byte <0x13>
2- Span Unit          <0x0B>            22- Unit Error Byte  <0x14>
3- Open Command       <0xXX>            23- Unit Configuration Byte's <0x15>
4- Open Command       <0xXX>            24- Read Firmware Version <0x29>
5- BALANCE Pot Ram    <0x0E>            25- Open Command     <0xXX>
6- Open Command       <0xXX>            26- Read Serial Number <0x16>
7- Span Pot Ram       <0x10>            27- Write Calibration Date <0x2A>
8- Open Command       <0xXX>            28- Read Calibration Date <0x2B>
9- AGC Pot Ram        <0x0F>            29- Open Command     <0xXX>
10- Open Command      <0xXX>            30- Read Table Checksum (2x) <0x30>
11- Open Command      <0x11>            31- Raw Analytical (running) <0x2D>
12- Open Command      <0x32>            32- Normalized Gas Level <0x1F>
13- Analytical Drift Comp. <0x12>           33- 4ma A/D Value    <0x1D>
14- Beers Table Index <0x34>            34- Read Beer's Law Fcor <0x20>
15- Open Command      <0xXX>            *35- Unit Temperature <0x17>
16- Open Command      <0xXX>            36- Open Command     <0xXX>
17- Open Command      <0xXX>            37- Open Command     <0xXX>
18- AGC Analytical Value <0x1a>           38- Open Command     <0xXX>
19- AGC Reference Value <0x1b>           39- Change Com Port   PC Only
20- 4UDC Reference Value <0x1c>           40- EXIT
```

Once the Unit Temperature command has been initiated the PC screen automatically change to the following.



```
C:\PROGRAMS\1\W1_03.EXE
Serial Data Sent!
Looking for echo of last Command sent...
Bytes returned from COMM-LINK <17> <31> < 0> <48>

Temperature=46C

Hit any key to continue_
```

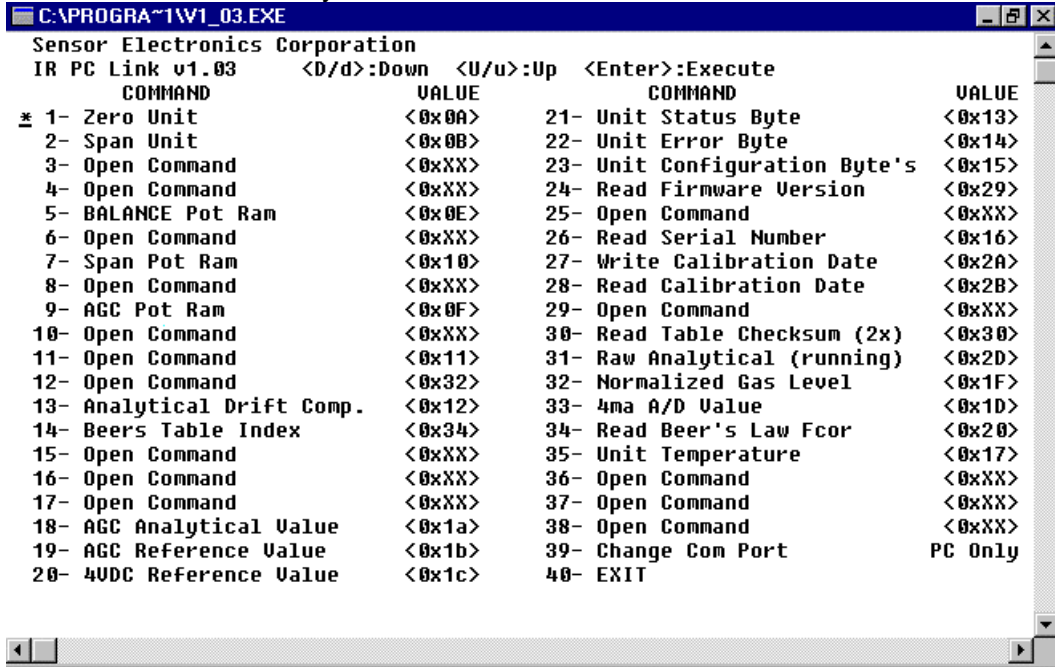

Temperature Conversion Chart

Hex Value	Celsius Degree's	Fahrenheit Degree's
0x05	-40	-40
0x06	-38	-37
0x07	-36	-33
0x08	-34	-30
0x09	-32	-26
0x0a	-30	-23
0x0b	-29	-19
0x0c	-27	-16
0x0d	-25	-12
0x0e	-23	-9
0x0f	-21	-5
0x10	-19	-2
0x11	-17	2
0x12	-15	5
0x13	-13	9
0x14	-11	12
0x15	-9	16
0x16	-7	19
0x17	-5	23
0x18	-3	26
0x19	-1	30
0x1a	1	33
0x1b	3	37
0x1c	5	40
0x1d	7	44
0x1e	9	47
0x1f	11	51
0x20	13	55
0x21	14	58
0x22	16	62
0x23	18	65
0x24	20	69
0x25	22	72
0x26	24	76

Hex Value	Celsius Degree's	Fahrenheit Degree's
0x27	26	79
0x28	28	83
0x29	30	86
0x2a	32	90
0x2b	34	93
0x2c	36	97
0x2d	38	100
0x2e	40	104
0x2f	42	107
0x30	44	111
0x31	46	114
0x32	48	118
0x33	50	121
0x34	52	125
0x35	54	128
0x36	55	132
0x37	57	135
0x38	59	139
0x39	61	142
0x3a	63	146
0x3b	65	149
0x3c	67	153
0x3d	69	156
0x3e	71	160
0x3f	73	163
0x40	75	167
0x41	77	171
0x42	79	174
0x43	81	178
0x44	83	181
0x45	85	185
0x46	87	188
0x47	89	192
0x48	91	195

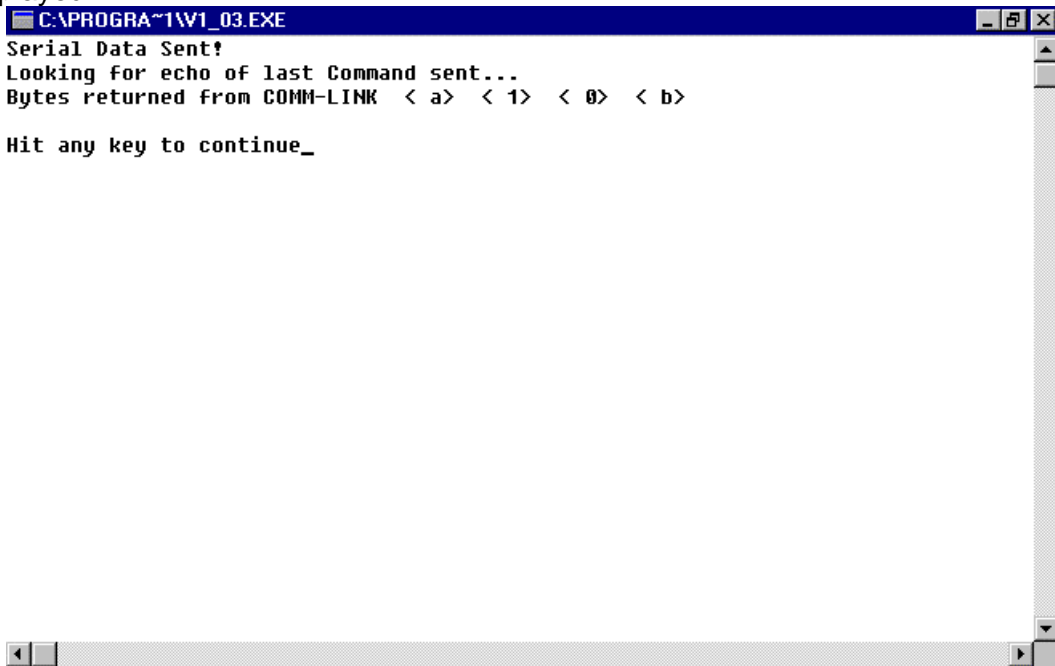
Zero Unit

The SEC EtO Signature should be “zeroed” at the end of the humidity dwell cycle prior to injecting EtO gas. To zero the device use the “U/u” and “D/d” keys to navigate to “Zero Unit” command and press Enter. During the zeroing procedure the Status LED on the SEC IR LINK will momentary flash twice.



```
C:\PROGRAM~1\W1_03.EXE
Sensor Electronics Corporation
IR PC Link v1.03      <D/d>:Down <U/u>:Up <Enter>:Execute
COMMAND              VALUE              COMMAND              VALUE
* 1- Zero Unit        <0x0A>            21- Unit Status Byte <0x13>
  2- Span Unit        <0x0B>            22- Unit Error Byte  <0x14>
  3- Open Command     <0xFF>            23- Unit Configuration Byte's <0x15>
  4- Open Command     <0xFF>            24- Read Firmware Version <0x29>
  5- BALANCE Pot Ram  <0x0E>            25- Open Command    <0xFF>
  6- Open Command     <0xFF>            26- Read Serial Number <0x16>
  7- Span Pot Ram     <0x10>            27- Write Calibration Date <0x2A>
  8- Open Command     <0xFF>            28- Read Calibration Date <0x2B>
  9- AGC Pot Ram      <0x0F>            29- Open Command    <0xFF>
 10- Open Command     <0xFF>            30- Read Table Checksum (2x) <0x30>
 11- Open Command     <0x11>            31- Raw Analytical (running) <0x2D>
 12- Open Command     <0x32>            32- Normalized Gas Level <0x1F>
 13- Analytical Drift Comp. <0x12>           33- 4ma A/D Value   <0x1D>
 14- Beers Table Index <0x34>           34- Read Beer's Law Fcor <0x20>
 15- Open Command     <0xFF>            35- Unit Temperature <0x17>
 16- Open Command     <0xFF>            36- Open Command    <0xFF>
 17- Open Command     <0xFF>            37- Open Command    <0xFF>
 18- AGC Analytical Value <0x1a>           38- Open Command    <0xFF>
 19- AGC Reference Value <0x1b>           39- Change Com Port   PC Only
 20- 4UDC Reference Value <0x1c>           40- EXIT
```

Once the Zero Unit command has been initiated the following PC screen will be displayed.

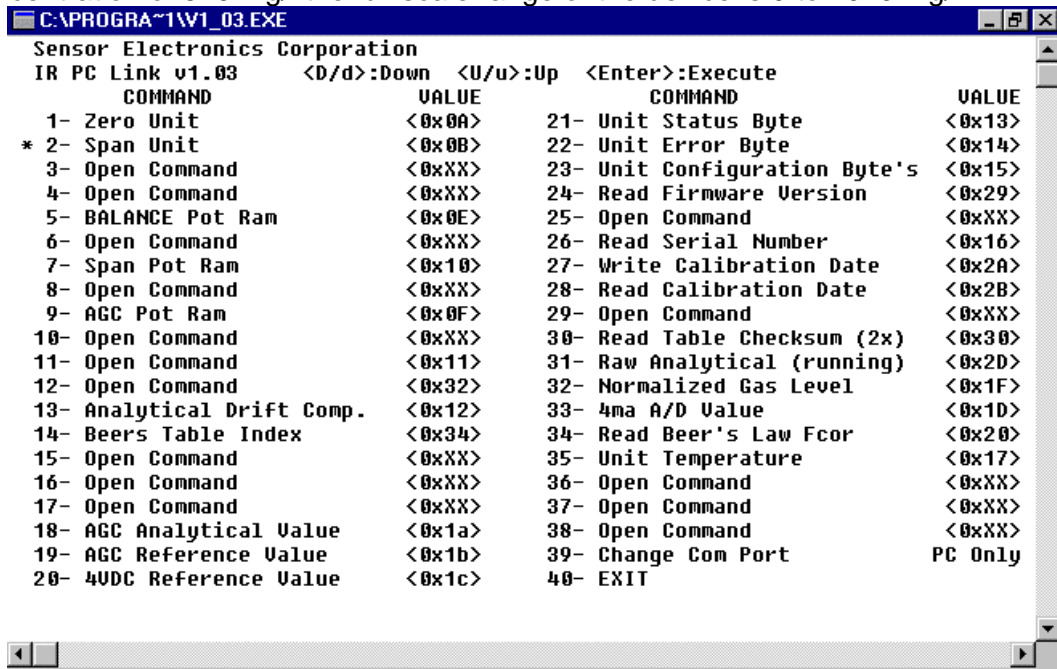


```
C:\PROGRAM~1\W1_03.EXE
Serial Data Sent!
Looking for echo of last Command sent...
Bytes returned from COMM-LINK < a> < 1> < 0> < b>

Hit any key to continue_
```

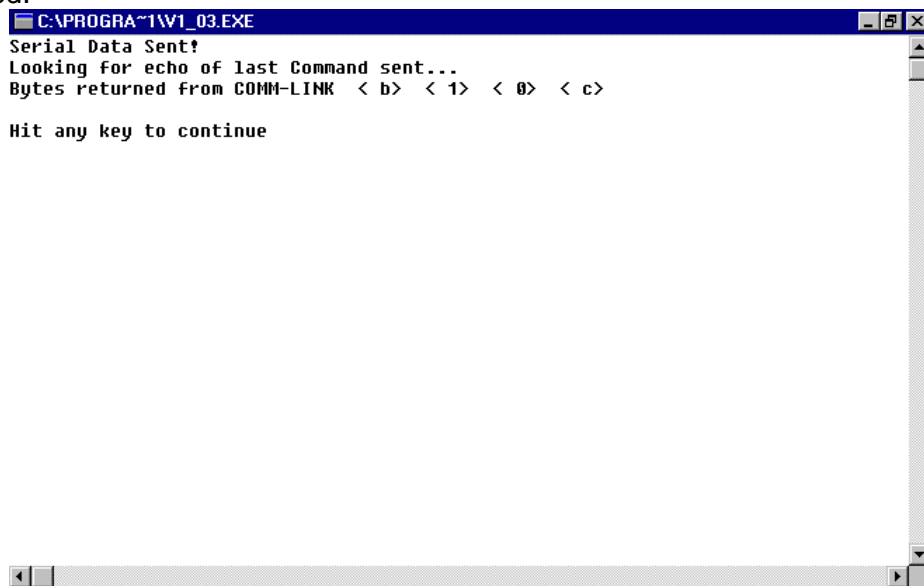
Span Unit

The SEC EtO Signature should be “spanned” (one time only) after the EtO gas injection is complete and the conditions in the sterilizer are stable. To span the device use the “U/u” and “D/d” keys to navigate to “Span Unit” command and press Enter. During the spanning procedure the Status LED on the SEC IR LINK will momentary flash three times. Once the span command is executed, the device is spanned (calibrated) to a mid range (50%) value of the full scale value. Example: If the unit is spanned at a concentration of 520 mg/l the full scale range of the device is 0 to 1040 mg/l.



```
C:\PROGRAMS\1W1_03.EXE
Sensor Electronics Corporation
IR PC Link v1.03      <D/d>:Down <U/u>:Up <Enter>:Execute
COMMAND              VALUE              COMMAND              VALUE
1- Zero Unit          <0x0A>            21- Unit Status Byte <0x13>
* 2- Span Unit        <0x0B>            22- Unit Error Byte  <0x14>
3- Open Command       <0xFF>            23- Unit Configuration Byte's <0x15>
4- Open Command       <0xFF>            24- Read Firmware Version <0x29>
5- BALANCE Pot Ram    <0x0E>            25- Open Command     <0xFF>
6- Open Command       <0xFF>            26- Read Serial Number <0x16>
7- Span Pot Ram       <0x10>            27- Write Calibration Date <0x2A>
8- Open Command       <0xFF>            28- Read Calibration Date <0x2B>
9- AGC Pot Ram        <0x0F>            29- Open Command     <0xFF>
10- Open Command      <0xFF>            30- Read Table Checksum (2x) <0x30>
11- Open Command      <0x11>            31- Raw Analytical (running) <0x2D>
12- Open Command      <0x32>            32- Normalized Gas Level <0x1F>
13- Analytical Drift Comp. <0x12>           33- 4ma A/D Value    <0x1D>
14- Beers Table Index <0x34>            34- Read Beer's Law Fcor <0x20>
15- Open Command      <0xFF>            35- Unit Temperature <0x17>
16- Open Command      <0xFF>            36- Open Command     <0xFF>
17- Open Command      <0xFF>            37- Open Command     <0xFF>
18- AGC Analytical Value <0x1a>           38- Open Command     <0xFF>
19- AGC Reference Value <0x1b>           39- Change Com Port   PC Only
20- 4UDC Reference Value <0x1c>           40- EXIT
```

Once the Span Unit command has been initiated the following PC screen will be displayed.

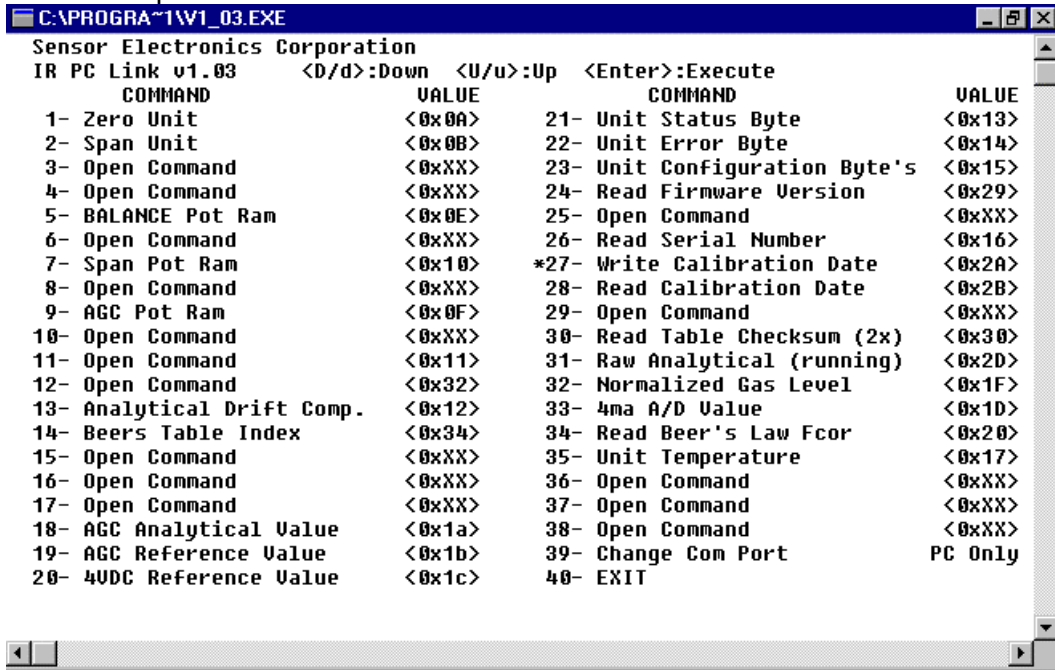


```
C:\PROGRAMS\1W1_03.EXE
Serial Data Sent!
Looking for echo of last Command sent...
Bytes returned from COMM-LINK < b> < 1> < 0> < c>

Hit any key to continue
```

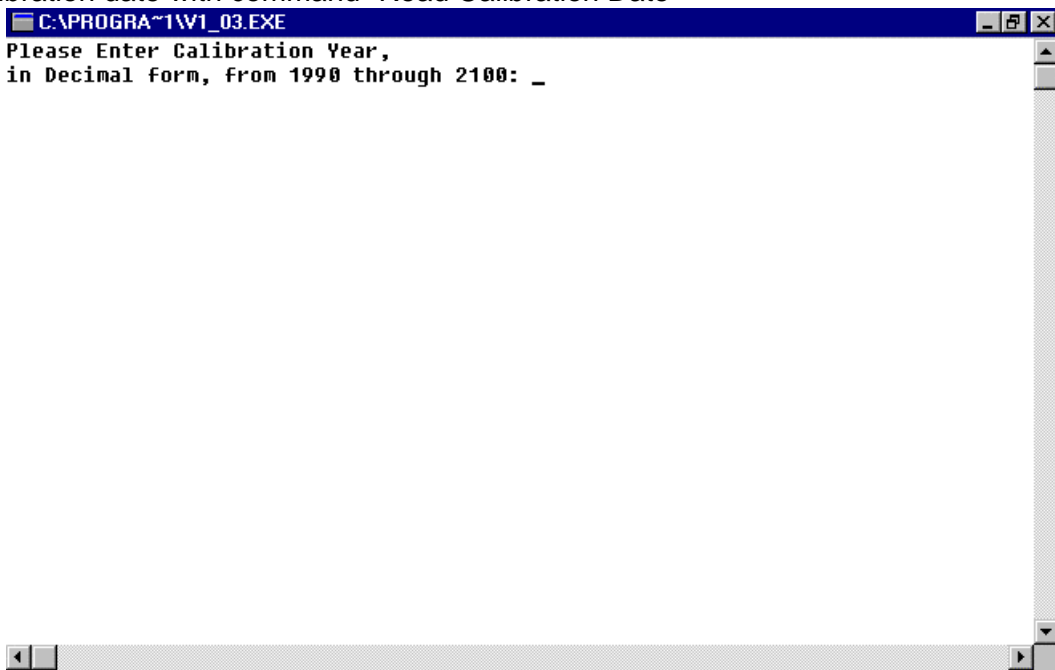
Write Calibration Date

Upon successful calibration, the SEC EtO Signature's calibration date should be updated. Using the "U/u" and "D/d" keys to navigate to "Write Calibration Date" command and press Enter.



```
C:\PROGRAMS\1\1\1_03.EXE
Sensor Electronics Corporation
IR PC Link v1.03      <D/d>:Down  <U/u>:Up  <Enter>:Execute
COMMAND              VALUE              COMMAND              VALUE
1- Zero Unit          <0x0A>            21- Unit Status Byte <0x13>
2- Span Unit          <0x0B>            22- Unit Error Byte  <0x14>
3- Open Command       <0xFF>            23- Unit Configuration Byte's <0x15>
4- Open Command       <0xFF>            24- Read Firmware Version <0x29>
5- BALANCE Pot Ram   <0x0E>            25- Open Command     <0xFF>
6- Open Command       <0xFF>            26- Read Serial Number <0x16>
7- Span Pot Ram      <0x10>            *27- Write Calibration Date <0x2A>
8- Open Command       <0xFF>            28- Read Calibration Date <0x2B>
9- AGC Pot Ram        <0x0F>            29- Open Command     <0xFF>
10- Open Command      <0xFF>            30- Read Table Checksum (2x) <0x30>
11- Open Command      <0x11>            31- Raw Analytical (running) <0x2D>
12- Open Command      <0x32>            32- Normalized Gas Level <0x1F>
13- Analytical Drift Comp. <0x12>           33- 4ma A/D Value    <0x1D>
14- Beers Table Index <0x34>           34- Read Beer's Law Fcor <0x20>
15- Open Command      <0xFF>            35- Unit Temperature <0x17>
16- Open Command      <0xFF>            36- Open Command     <0xFF>
17- Open Command      <0xFF>            37- Open Command     <0xFF>
18- AGC Analytical Value <0x1a>           38- Open Command     <0xFF>
19- AGC Reference Value <0x1b>           39- Change Com Port   PC Only
20- 4VDC Reference Value <0x1c>           40- EXIT
```

The following screen will appear and step you through entering the current calibration date. Once you enter the year press enter and the program will advance to month and day. Once you have completed entering the calibration date you can verify the calibration date with command "Read Calibration Date"



```
C:\PROGRAMS\1\1\1_03.EXE
Please Enter Calibration Year,
in Decimal form, from 1990 through 2100: _
```

Unit Status Byte

The SEC EtO Signature can be queried for status information. To retrieve current status of the device use the “U/u” and “D/d” keys to navigate to “Unit Status Byte” command and press Enter. Unit status can also be identified according to the flash rate of the Status LED on the SEC IR PC LINK. See chart for LED flash rate status indication.

```

C:\PROGRAMS\1\1\1_03.EXE
Sensor Electronics Corporation
IR PC Link v1.03      <D/d>:Down <U/u>:Up <Enter>:Execute
COMMAND              VALUE              COMMAND              VALUE
1- Zero Unit         <0x0A>           21- Unit Status Byte <0x13>
2- Span Unit         <0x0B>           22- Unit Error Byte  <0x14>
3- Open Command      <0xFF>           23- Unit Configuration Byte's <0x15>
4- Open Command      <0xFF>           24- Read Firmware Version <0x29>
5- BALANCE Pot Ram   <0x0E>           25- Open Command     <0xFF>
6- Open Command      <0xFF>           26- Read Serial Number <0x16>
7- Span Pot Ram      <0x10>           27- Write Calibration Date <0x2A>
8- Open Command      <0xFF>           28- Read Calibration Date <0x2B>
9- AGC Pot Ram       <0x0F>           29- Open Command     <0xFF>
10- Open Command     <0xFF>           30- Read Table Checksum (2x) <0x30>
11- Open Command     <0x11>           31- Raw Analytical (running) <0x2D>
12- Open Command     <0x32>           32- Normalized Gas Level <0x1F>
13- Analytical Drift Comp. <0x12>          33- 4ma A/D Value    <0x1D>
14- Beers Table Index <0x34>          34- Read Beer's Law Fcor <0x20>
15- Open Command     <0xFF>           35- Unit Temperature <0x17>
16- Open Command     <0xFF>           36- Open Command     <0xFF>
17- Open Command     <0xFF>           37- Open Command     <0xFF>
18- AGC Analytical Value <0x1a>          38- Open Command     <0xFF>
19- AGC Reference Value <0x1b>          39- Change Com Port   PC Only
20- 4UDC Reference Value <0x1c>          40- EXIT
  
```

If the device has no faults and in normal operating condition the status byte should appear as follows.

```

C:\PROGRAMS\1\1\1_03.EXE
Serial Data Sent!
Looking for echo of last Command sent...
Bytes returned from COMM-LINK <13> <0> <0> <13>

Hit any key to continue
  
```

UNIT STATUS FLASH CODES

-LED will flash at the designated rate based on the current Unit Status.

Decimal	Unit Status Byte Value	Corresponding Unit Status	Description
1	0x00	Unit Running	Unit is measuring gas and adjusting 4-20ma output accordingly.
2	0x02	Unit Zero Calibrating	Unit goes through its <i>zero calibration</i> procedure.
3	0x03	Unit Spanning	Unit goes through its <i>spanning</i> procedure.
4	0x04	Unit 4-20ma Calibrating	Unit goes through its <i>4-20ma-calibration</i> procedure.
5	0x05	Unit Warm-up	Unit is waiting for source device to reach its operating temperature.
6	0x06	Power-up Fault	Unit has determined a <i>Power-Up</i> fault condition.
7	0x07	Calibration Fault	Unit has determined an error during <i>calibration</i> procedure.
8	0x08	Span Fault	Unit has determined an error during <i>spanning</i> procedure.
9	0x09	Unit Fault	Unit has determined a <i>Unit_Fault</i> condition.
10	0x0A	Optics Fault	Unit has determined an <i>Optics_Fault</i> condition.
11	0x0B	Zero Drift Fault	Unit has determined a <i>Zero_Drift_Fault</i> condition.
12	0x0C	Configuration Fault	Unit has never been <i>Zeroed, Spanned, Source</i> calibrated, or E ² has a Header byte error.
13	0x0D	Hot Zero	
14	0x0E	Cool Zero	
15	0x0F	Down Loading Table	
16	0x10	Reference Ch Fault	AGC Pot out of range
17	0x11	Analytical Ch Fault	Balance Pot out of range

Production Certificate

Each IR PC Link is supplied with a completed Production Certificate. The following is an example of the document.

PRODUCT CERTIFICATION

Document Number 7201
Revision 1.003

DEVICE TYPE: SEC PC IR LINK
PART NUMBER: 142-0636
SERIAL NUMBER:

CHECK SUM:
MANUFACTURE DATE:
INITIAL TEST DATE:
START BURN IN DATE:
END BURN IN DATE:

FUNCTIONAL TESTING

24 VDC	RS-232 COMM PORT		1-5 VDC		4-20 mA		ZERO PUSH BUTTON		EXTERNAL ZERO INPUT		
	MEASURED VALUE	PASS	FAIL	PASS	FAIL	PASS	FAIL	PASS	FAIL	PASS	FAIL

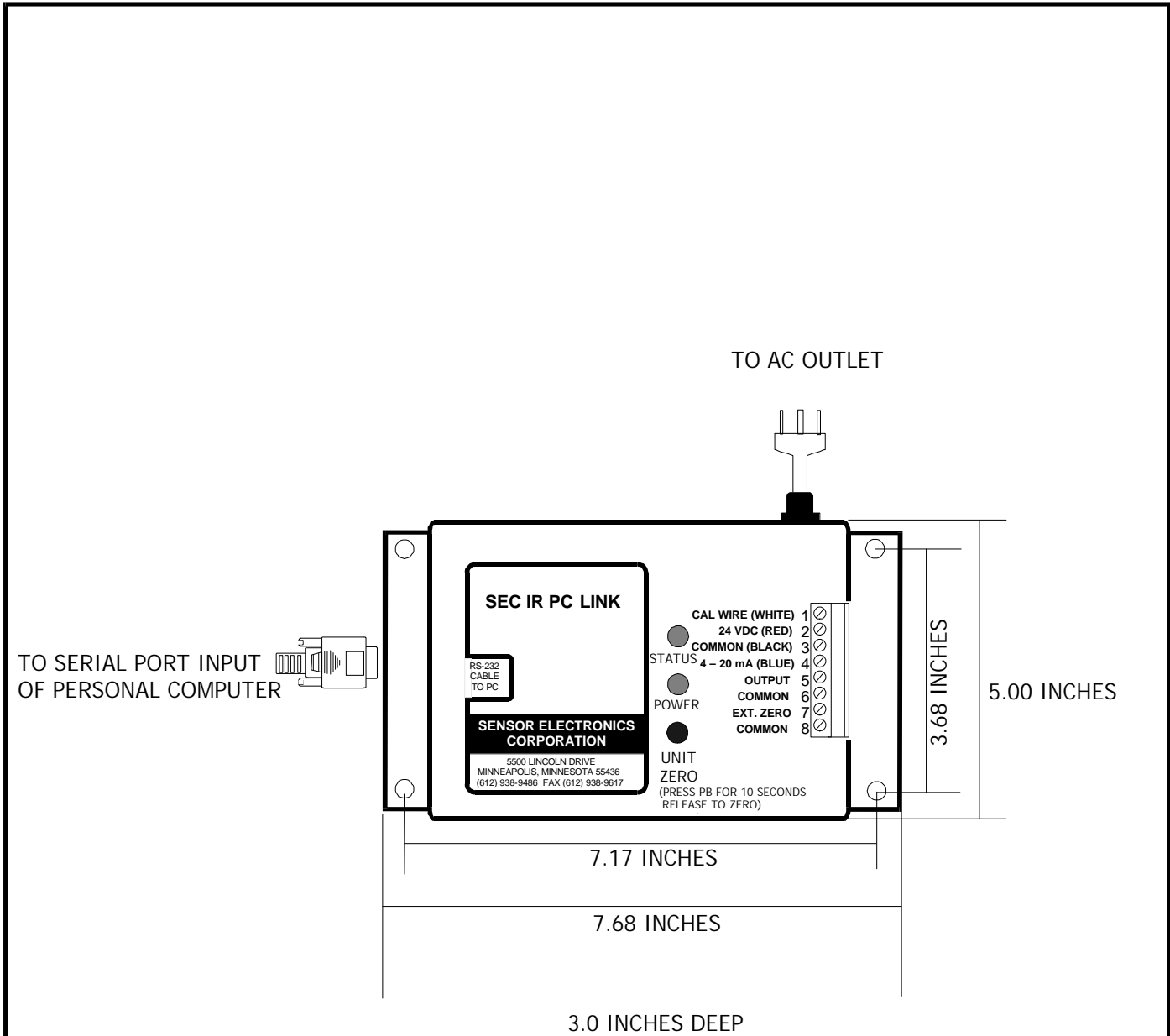
TEST PERSON SIGNATURE

DATE

SENSOR ELECTRONICS CORPORATION
5500 LINCOLN DRIVE • MINNEAPOLIS, MINNESOTA 55436 USA
TELEPHONE (952) 938-9486 FAX (952) 938-9617
EMAIL: SENSOR@MINN.NET • WWW.SENSORELECTRONIC.COM

III. PARTS LIST

Description	Part Number
SEC IR PC LINK	142-0634
9 Pin Interface Cable	147-1001
PC LINK Software Diskette	142-0635
SEC IR PC LINK Kit	142-0636



TO SERIAL PORT INPUT
OF PERSONAL COMPUTER

TO AC OUTLET

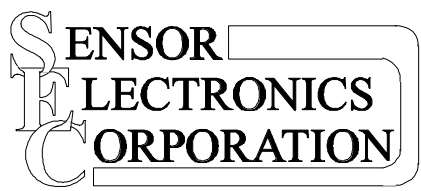
3.68 INCHES

5.00 INCHES

7.17 INCHES

7.68 INCHES

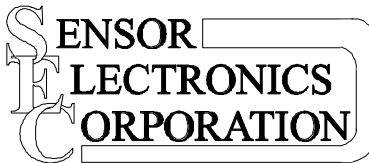
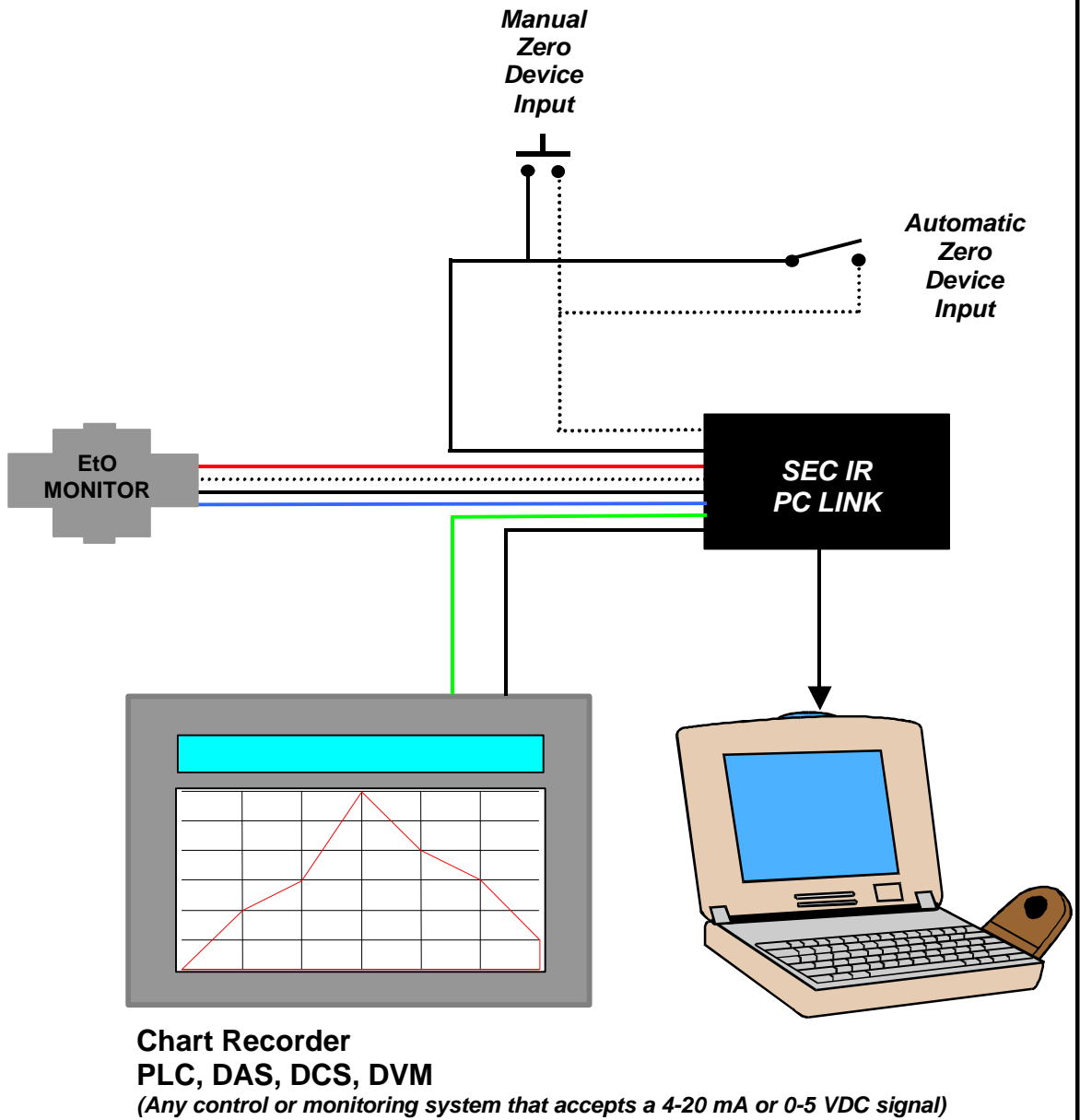
3.0 INCHES DEEP



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SEC IR PC LINK
WIRING & DIMENSIONAL
DIAGRAM

FIGURE 1



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BLOCK WIRING DIAGRAM
SEC IR PC LINK

FIGURE 2