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Research, Development and Manufacturing of Precision Measuring Systems

## Configuration and Mastering Instructions for the LMI 237 /LMI 238 Seal Gap Gage Series to the LMI 440 / ASI Datamyte 501 Data Collector.



**Required Equipment:**  
LMI 440 Data Collector or ASI Datamyte 501  
LMI Seal Gap Series Gages.  
LMI 6009 Interface Cables (4 Pin Connector).

L MI 237 / 238 Spring Loaded Seal Gap Gages



LMI 237 / 238 Magnetic Seal Gap Gages



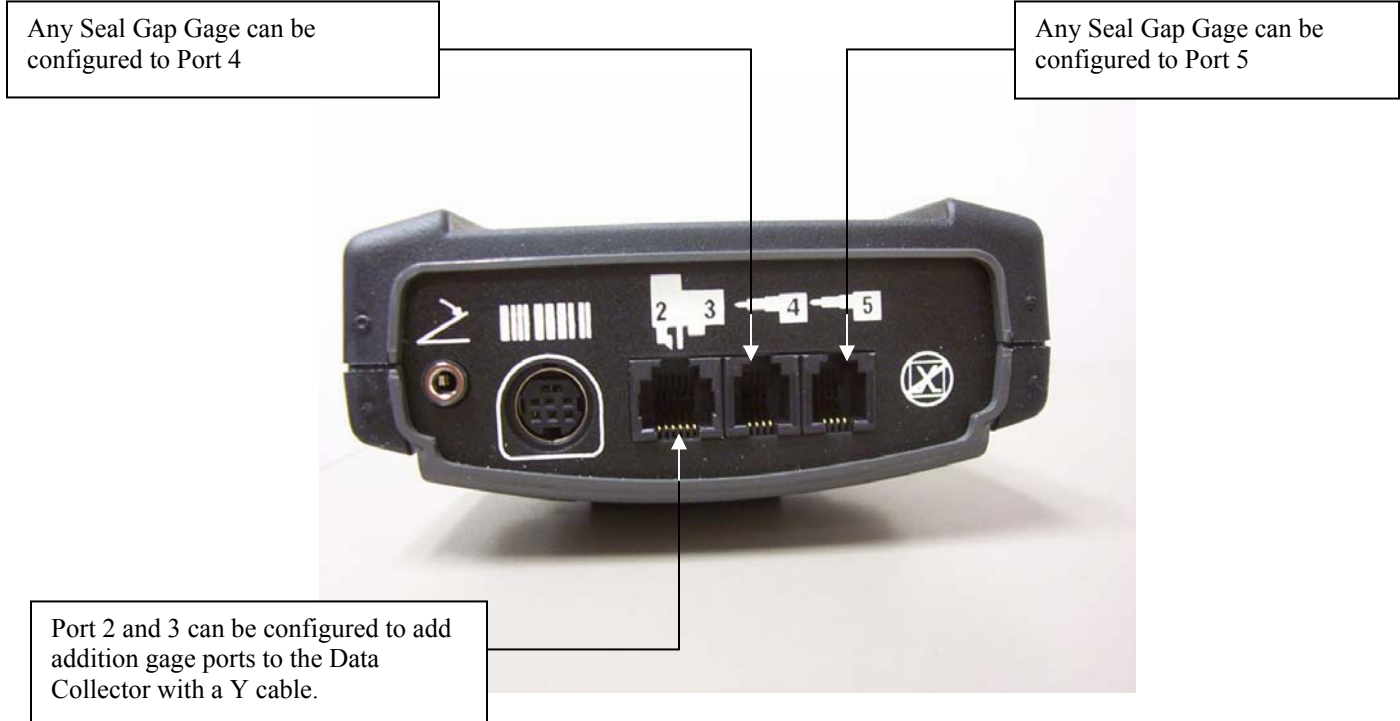
LMI 237 / 238 Miniature Seal Gap Gages



### This process will outline:

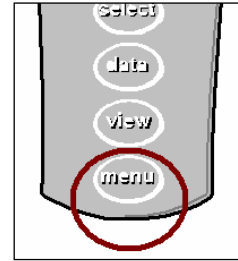
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*All LMI 237 / LMI 238 Seal Gap Gages use a 4 pin LMI 6009 modular connector to interface with the LMI 440 or ASI Datamate 501 Data Collector.*

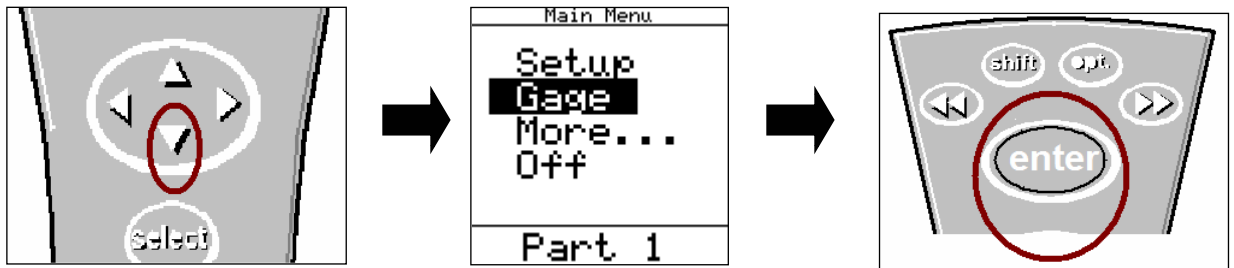


## I. Configuration

1. Press <MENU> to turn on collector



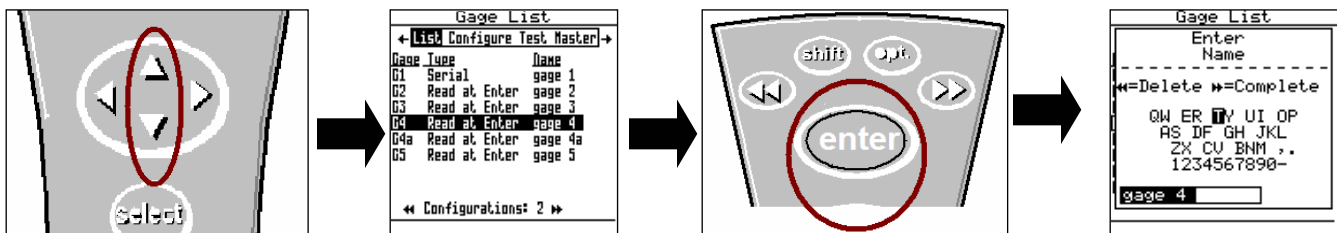
2. Press ▼ to highlight GAGE, then press <ENTER> on the keypad.



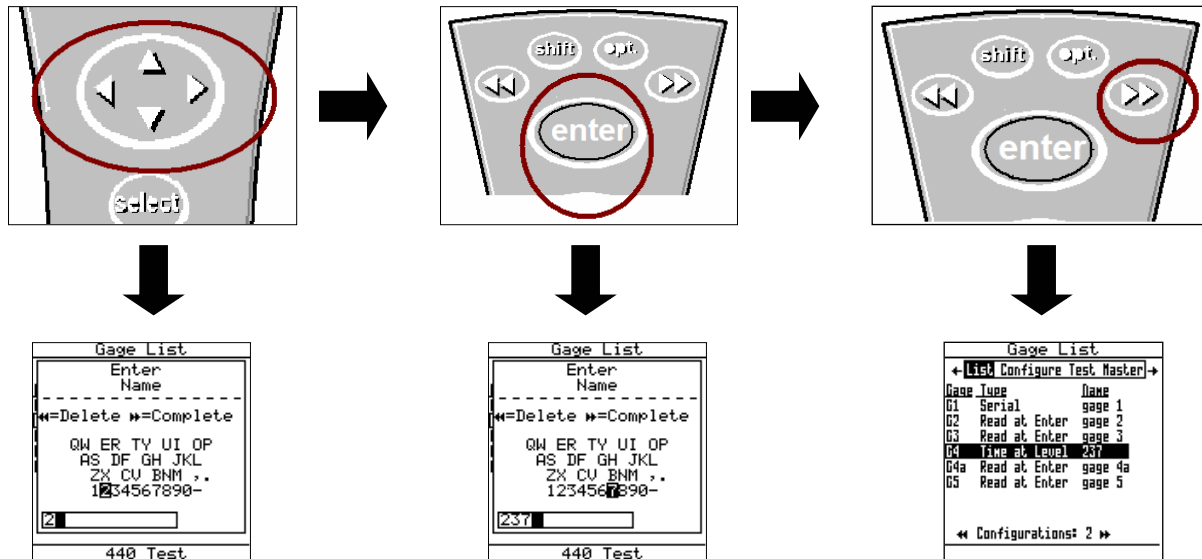
*It is recommended to assign a simple user name to the gage file such as; seal, 237, 238, etc. This will help to identify individual setups*

3. To assign a gage file name press the ▲ or ▼ to highlight gage G4 in the GAGE LIST, and press <ENTER> on the collector. The alphanumeric screen will then appear.

*Note: G4 and G5 can both read the 237/238 gages. The only rule to follow is the gage file must match the source code in part file, see collector manual for details. The balance of this instruction will be based on G4. To use G5, perform the following steps using the G5 gage file.*



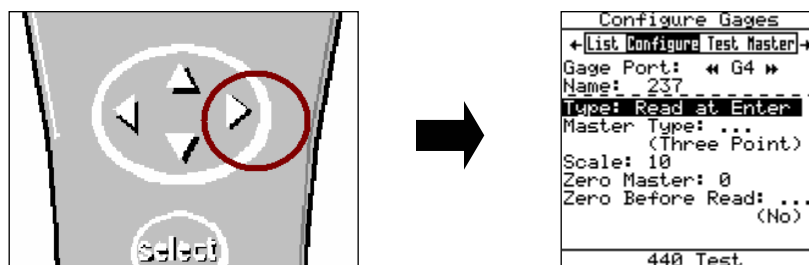
- Use the ▲, ►, ◀, or ▼ to highlight the desired character then press <ENTER>, repeat process until the gage file name is spelled out then press ►► to accept the new name.



*Note: LMI 440 Data Collector can handle up to (4) Seal Gap Gages at one time. To configure the Data Collector to handle (4) Seal Gap gages connect a Y-Cable to port 2 and port 3 and follow the same steps as outlined in this document to properly configure each gage port.*



- Press the ► to CONFIGURE. This screen determines how the collector will interpret the signal from the gage. Failure to set this screen properly may cause undesired results.



- The CONFIGURE GAGE screen needs to be set as follows. Failure to set this screen properly may cause undesired results.

See *Note* below on how to define the "Zero Master" value.

```

Configure Gages
+List Configure Test Master+
Gage Port:  G4
Name:  237
Type:  Read at Enter
Master Type:  ...
Scale:  10
Zero Master:  10
Zero Before Read:  ...
                    (No)
                    -----
                    Vehicle BIW
                    
```

All LMI 237 and 238 gages have a 10mm scale.

*Note: The ZERO MASTER is the constant value or offset in the inspection range specific to the LMI 237 or 238. The collector will add the ZERO MASTER value to the dynamic reading from the gage and display an actual reading on screen.*



*All LMI 237 and 238's have an inspection range machined on the body. The lesser of the 2 numbers will be the value that needs to be entered into the ZERO MASTER.*

- To adjust the ZERO MASTER or SCALE, press the ▲ or ▼ to highlight either option and then press <ENTER> on the keypad. This will bring up the numeric keypad.

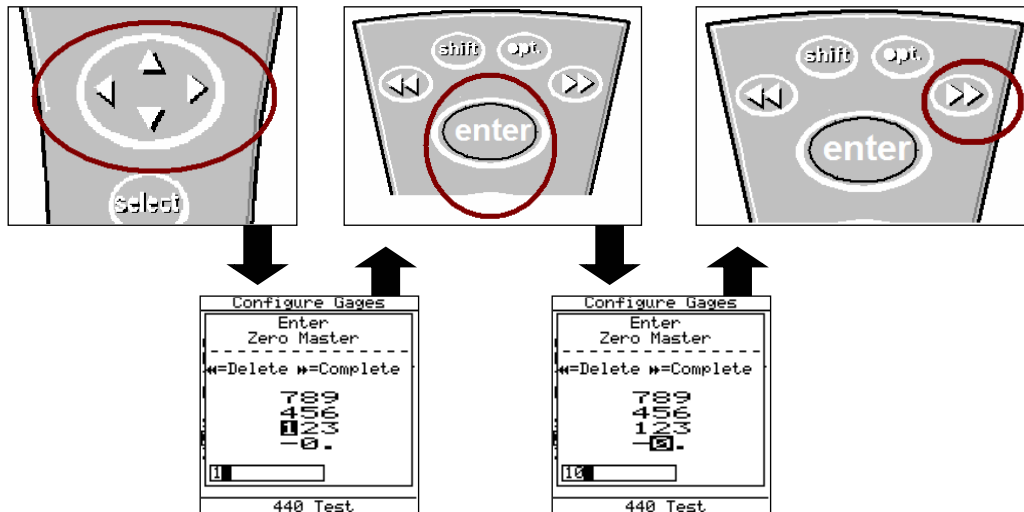
```

Configure Gages
+List Configure Test Master+
Gage Port:  G4
Name:  237
Type:  Read at Enter
Master Type:  ...
Scale:  10
Zero Master:  0
Zero Before Read:  ...
                    (No)
                    -----
                    Hole Check
                    
```

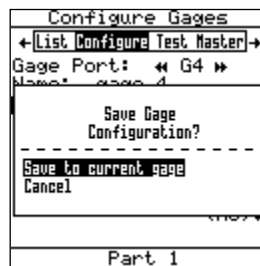
```

Configure Gages
Enter
Zero Master
-----
<Delete>=Complete
789
456
123
-0.
0
-----
440 Test
                    
```

- Press ▲, ▼, ◀, or ▶ to highlight the first digit of the new number and press enter. Repeat until the value is complete and press ▶▶. *For this example the ZERO MASTER will be set to 10.*



- To make changes to TYPE, MASTER TYPE, or ZERO BEFORE READ press the ▲ or ▼ to highlight the individual selection, and press <ENTER> to confirm your selection. Repeat until the value is completed and press ▶▶ to accept the new value.
- Once the CONFIGURE GAGES screen is set press ▶ and a pop up will appear if any changes were made. Highlight “Save to current gage” and press <ENTER> if the changes were intentional. If a setting was changed by mistake or you were not done in CONFIGURE GAGES highlight “Cancel” and press <ENTER>.



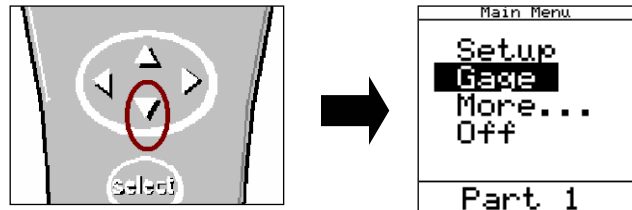
*Gage configuration is complete.*

## II. Mastering Instructions

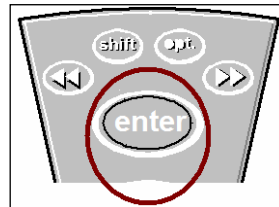
1. Connector the seal gap gage to Gage Port 4 of the data collector. If G5 was selected in the gage configuration use Gage Port 5.



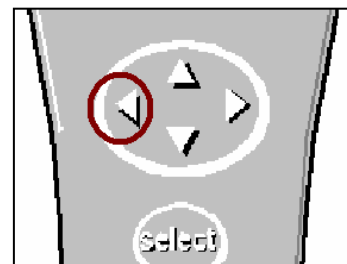
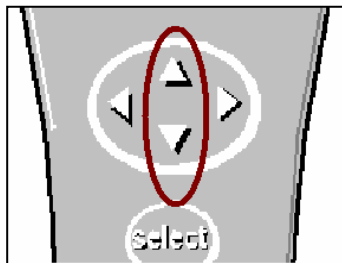
2. Press <MENU> to turn on the LMI 440 Data Collector /ASI Datamyte 501.
3. Press ▼ to highlight GAGE.



4. Press <ENTER>.

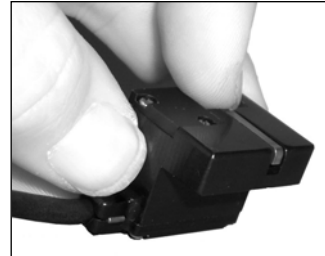


5. From the gage list use the ▲ or ▼ keys on the data collector to choose gage file G4, and press ◀ on the collector.

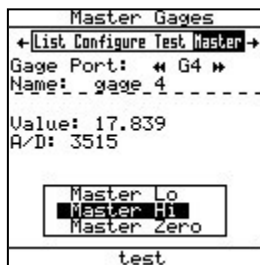


6. MASTER will be highlighted in the screen header menu and G4 is identified as GAGE PORT. If G4 is not the gage port press the ▶▶ or ◀◀ until G4 appears.

7. Verify that MASTER LO is highlighted in the MASTER screen and completely RETRACT the 237 or 238 seal gap gages and press <ENTER> button on the keypad.



8. Advance to MASTER HI and completely EXTEND the 237 or 238 seal gap gages and press <ENTER> button on the keypad.



9. Advance to MASTER ZERO and place the 237 or 238 seal gap gages on a certified flat surface (LMI 3030 or 3062 works well ) and press the <Enter> button on the keypad.



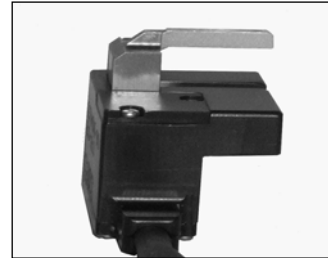
*Note: your specific gage readings may differ from this example.*

*Gage mastering is complete.*



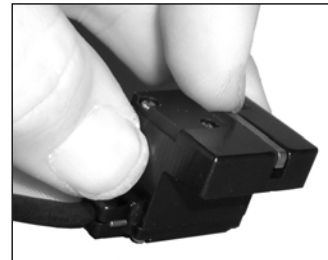
### III. Verification of the Mastering

1. Extend the 237/238 completely and observe the value on the screen.



*The extended value on the screen should match the value subtracted from the zero master.*

2. Retract the 237/238 completely and observe the value on the screen.



*The extended value on the screen should match the value subtracted from the zero master.*

*If at any time the 10.00 mm span is not within the +/- 0.03mm the Seal Gap gages need to be re mastered.*

*Verification is now complete, press <MENU> to exit.*