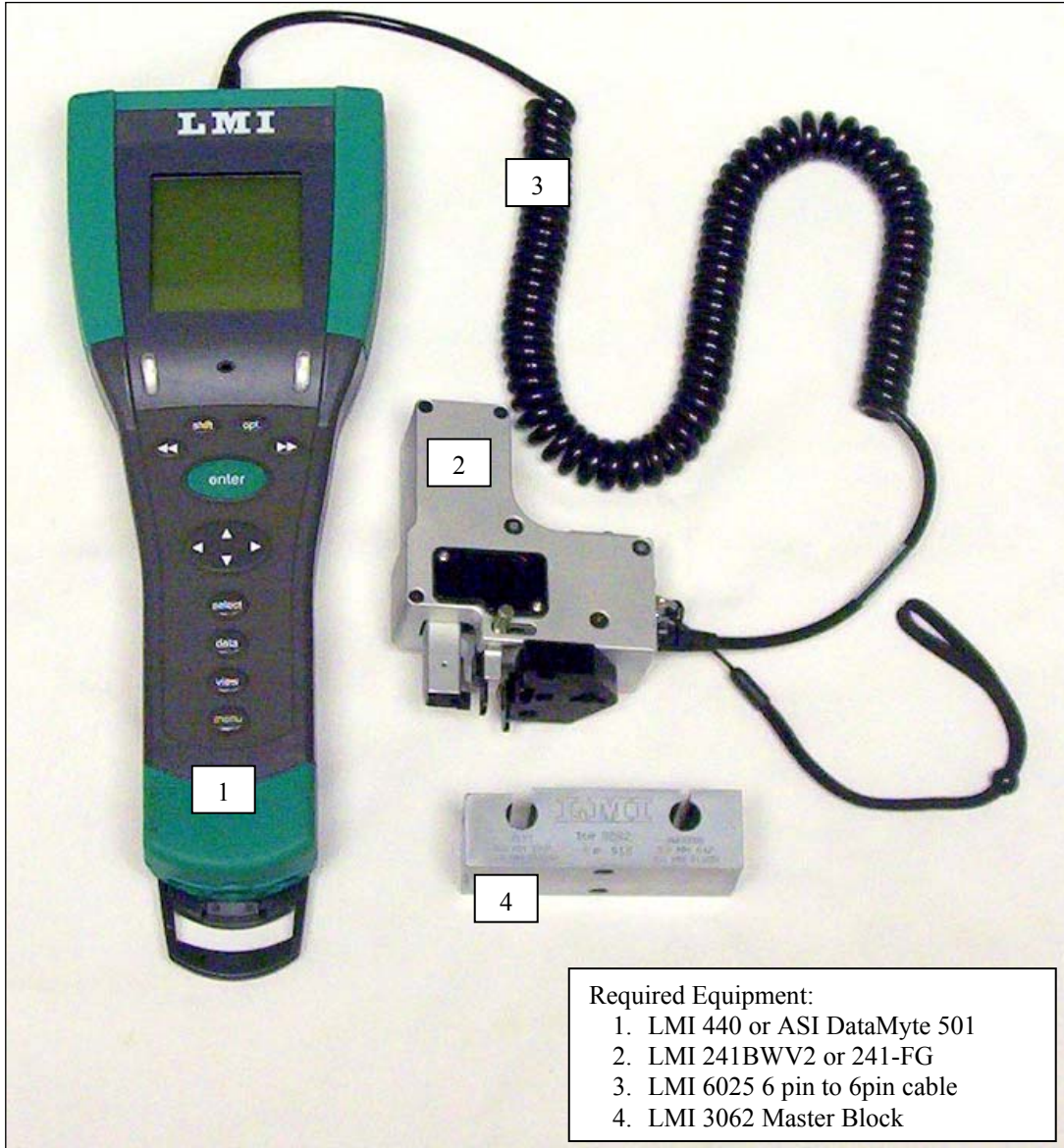


LINEAR **M**EASUREMENT **I**NSTRUMENTS, Corp.

Research, Development and Manufacturing of Precision Measuring Systems

**CONFIGURATION and MASTERING for the
LMI 241-BWV2 or 241-FG the LMI 440 or ASI DATAMYTE 501**



This instruction will outline:

I. GAGE CONFIGURATION	2
Flush Setup	2
Gap Setup.....	6
II. MASTERING INSTRUCTIONS	9
III. VERIFICATION OF THE MASTERING	11
Flush Verification.....	11
Gap Verification	12

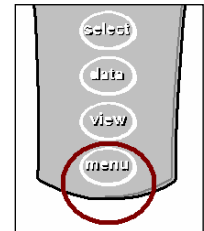
I. GAGE CONFIGURATION

Section I is a one time setup. After a successful gage configuration is finished there should be no need to repeat section I. It is recommended to store a copy of the gage files onto a personal computer or laptop. Consult the collector manual or, if purchased, the TranSend manual for further details.

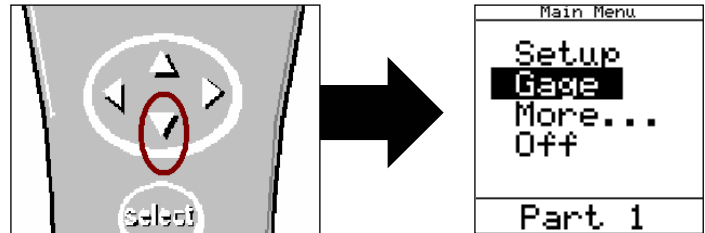
Flush Setup

This configuration will produce a negative value for flush when the tip extends beyond the nominal (master) point. To reverse the value enter -10 for "Scale" in step 9 & 10

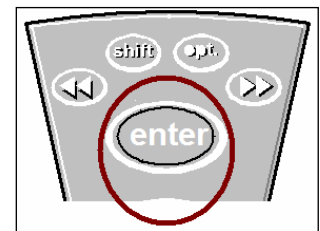
1. Press <menu> to turn on the collector.



2. Press ▼ to highlight "Gage".

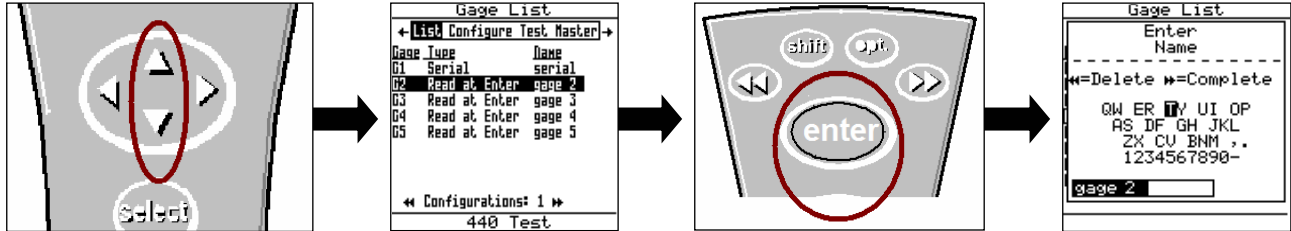


3. Press <enter>.



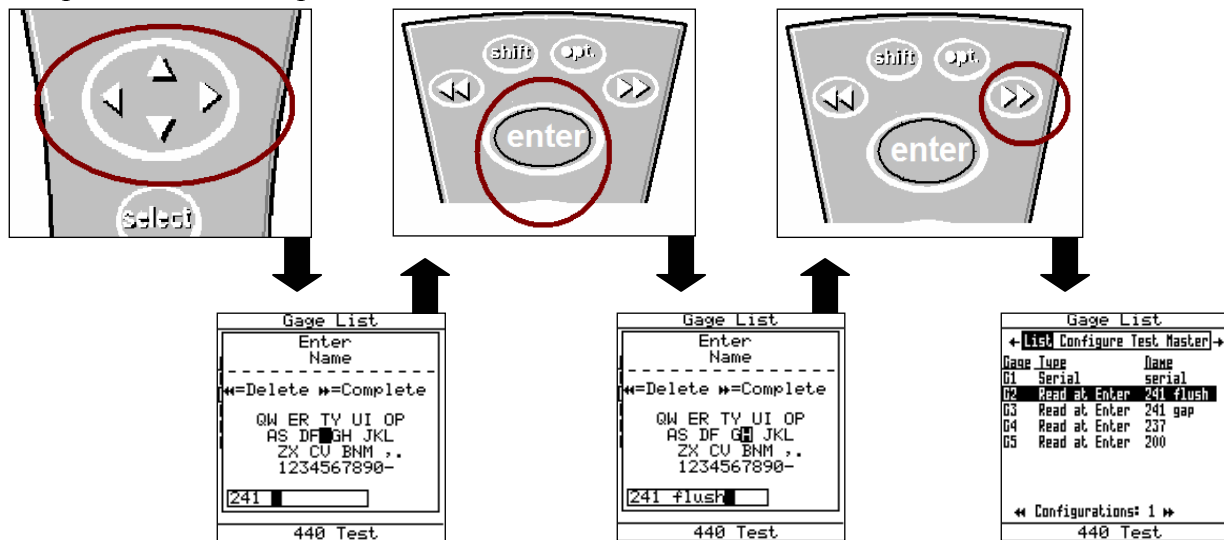
It is recommended to assign a simple user name to the gage files such as; flush, margin, etc. This will help to identify different gage setups.

4. To assign the gage file name, press ▲ or ▼ to highlight “G2”* in the “Gage List” and press <enter> on the collector.

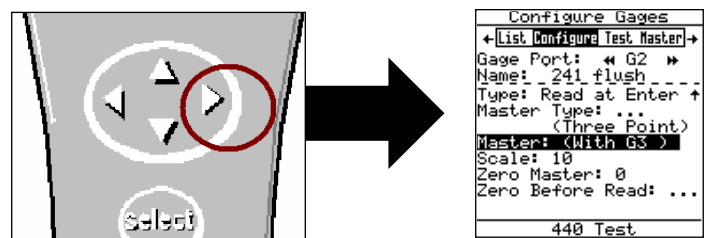


**G2 has the ability to support “sub files”. These are files that allow multiple styles or configurations of gages to be used by the same collector. To create sub files highlight G2 and press ►►, this will create a sub file of G2a. Each press of ►► creates another sub file. The balance of this instruction will be based on G2*

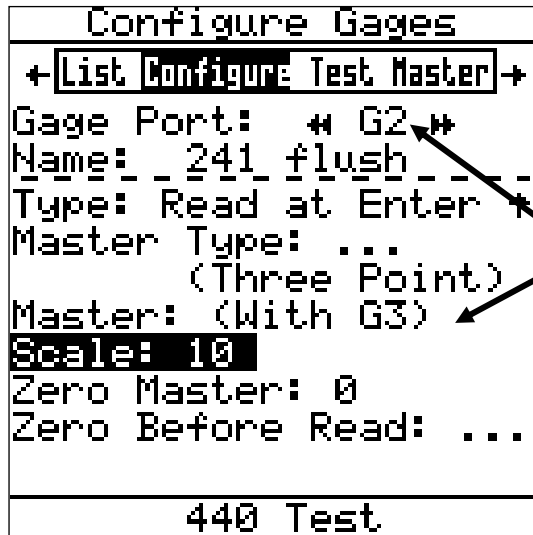
5. Use the ▲, ►, ◀, or ▼ to highlight the first character of the new file name then press <enter>, or use the keypad on the 501 handset. Repeat the process until the gage file name is spelled. Then press ►► to accept the new name.



6. Press the ► to “Configure”, by default the screen may read as follows.



7. The “Configure Gages” screen needs to be set as follows. Failure to set this screen properly may cause undesired results.



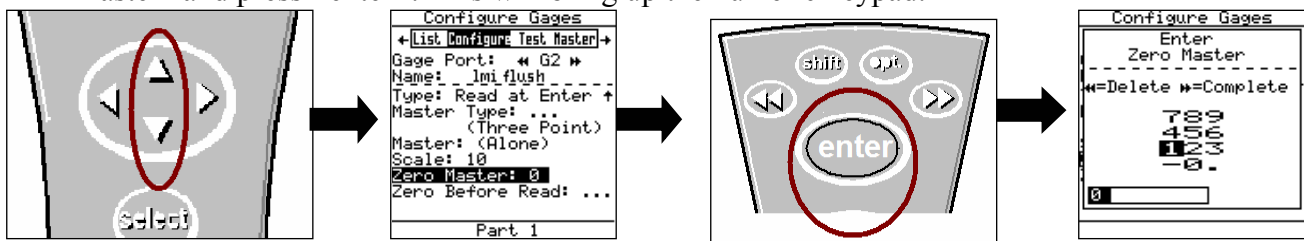
“Gage Port G2” must be matched to “Master with G3” to calibrate both flush and gap at the same time. If the “Gage Port” is set to “G2a” then the “Master” needs to be “G3a”

*NOTE: The default unit of measurement is MM. To change the unit of measurement to English the value for “Scale:” needs to be entered as .3937 in step 9

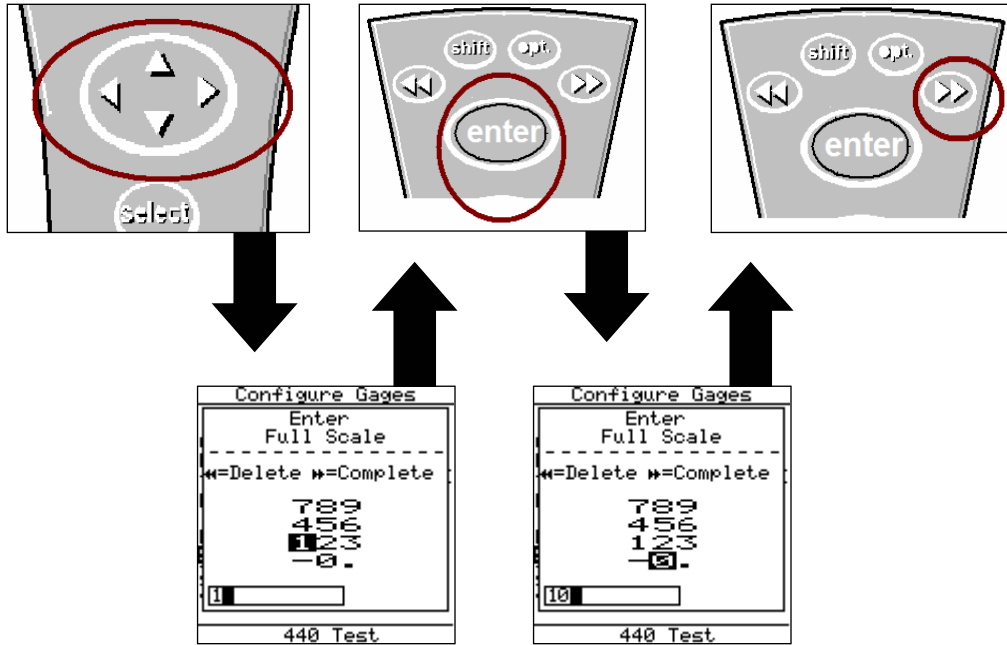
8. If changes to this screen are needed, press ▲ or ▼ to highlight either “Type”, “Master Type”, “Master With”, or “Zero Before Read” then press <enter> to toggle the different choices. Refer to the collector manual for further details of the configuration choices.



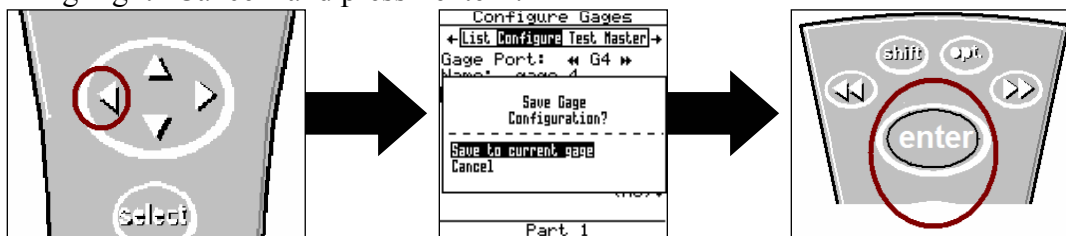
9. To make changes to the “Scale” or “Zero Master” press ▲ or ▼ to highlight “Scale” or “Zero Master” and press <enter>. This will bring up the numeric keypad.



10. Key in the desired value by using the ▲, ▼, ►, or ◀ to highlight the first number, press <enter>. Repeat until the number is completed and press ►► to accept the new value.



11. Once the "Configure Gages" screen is set, reference step 7, 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>.

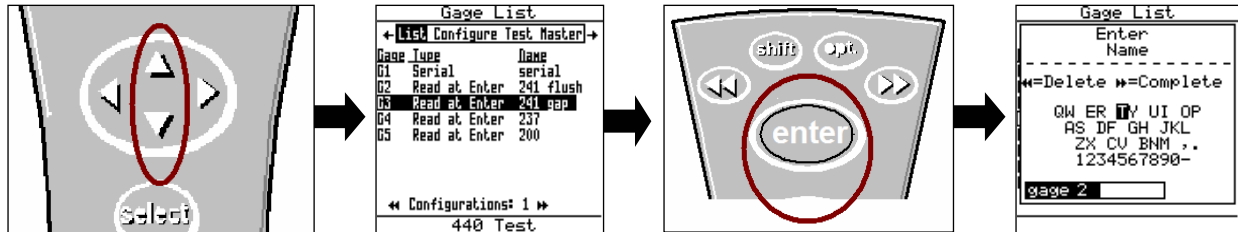


Flush configuration is complete.

Gap Setup

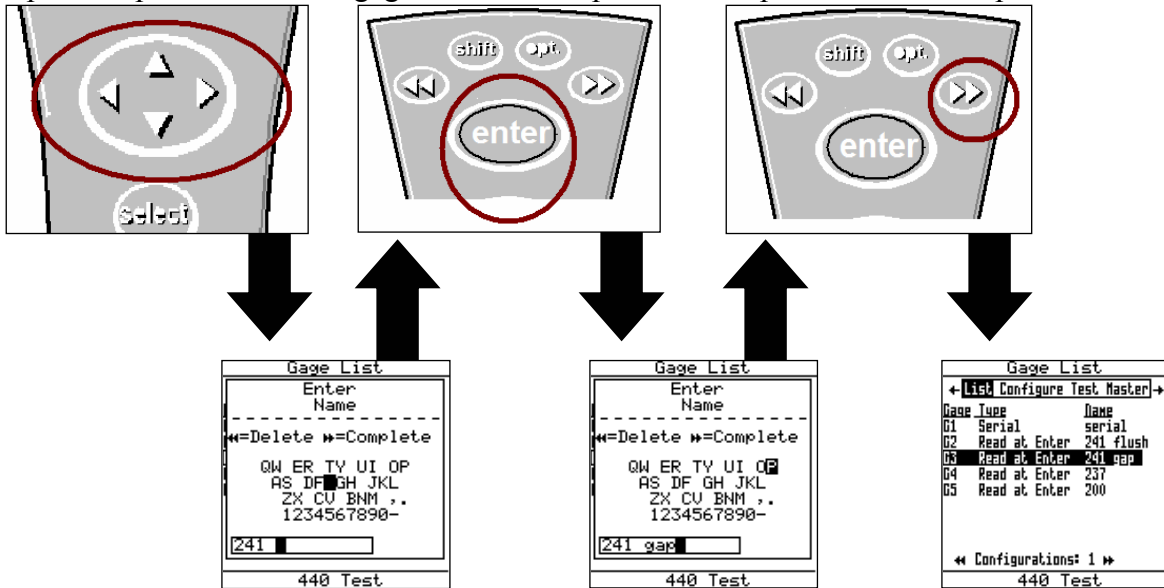
This configuration will produce an actual value for gap readings

12. To assign the gage file name, press ▲ or ▼ to highlight “G3”* in the “Gage List” and press <enter> on the collector.

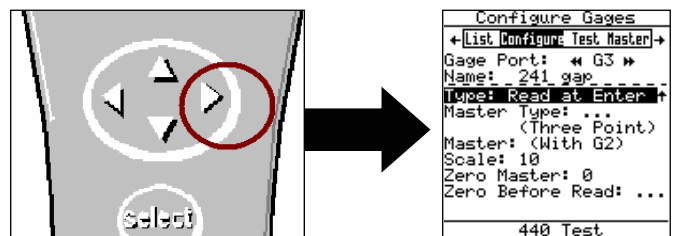


**G3 has the ability to support “sub files”. These are files that allow multiple styles of gages to be used by the same collector. To create sub files highlight G2 and press ►►, this will create a sub file of G3a. Each press of ►► creates another sub file. The balance of this instruction will be based on G3*

13. Use the ▲, ►, ◀, or ▼ to highlight the first character of the new file name then press <enter>, repeat the process until the gage file name is spelled. Then press ►► to accept the new name.



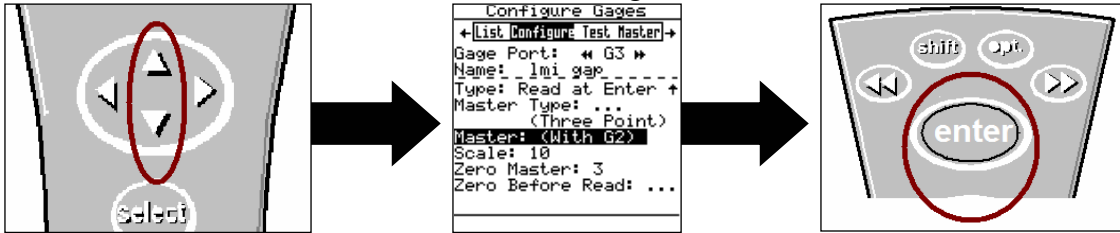
14. Press the ► to “Configure”, by default the screen should read as follows.



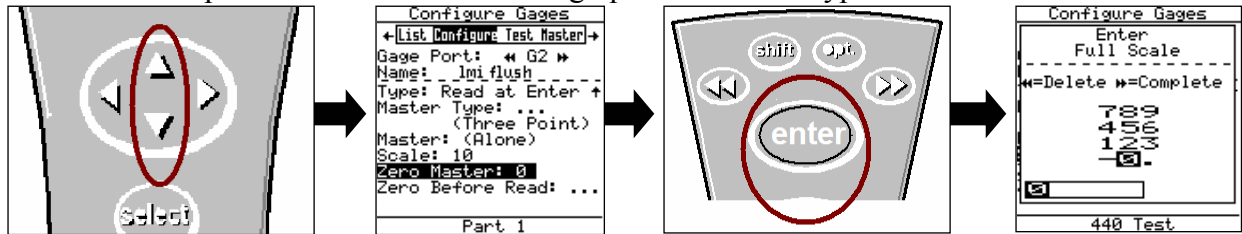
15. The “Configure Gages” screen needs to be set as follows. Failure to set this screen properly may cause undesired results.

*NOTE: The default unit of measurement is MM. To change the unit of measurement to English the value for “Scale:” needs to be entered as .3937 in step 9 and the “Zero Master” needs to be set to .1181.

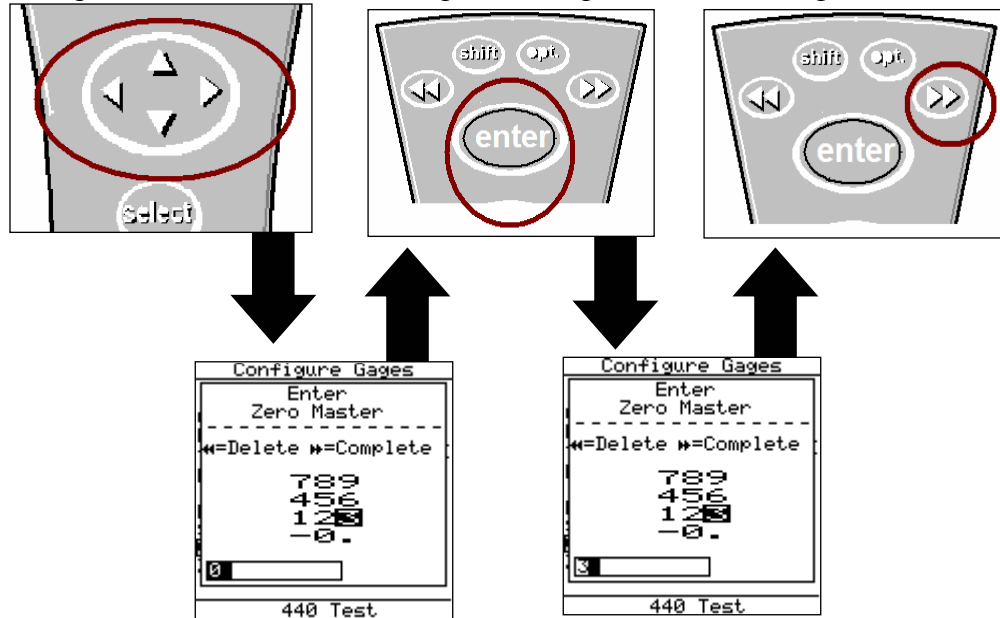
16. If changes to this screen are needed, press ▲ or ▼ to highlight either “Type”, “Master Type”, “Master With”, or “Zero Before Read” then press <enter> to toggle the different choices. Refer to the collector manual for further details of the configuration choices.



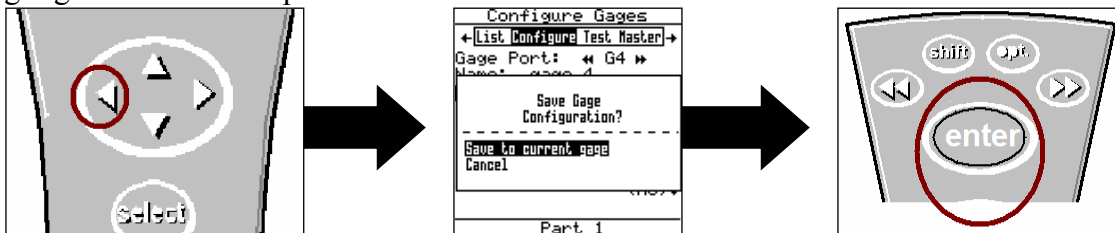
17. To make changes to the “Scale” or “Zero Master” press ▲ or ▼ to highlight “Scale” or “Zero Master” and press <enter>. This will bring up the numeric keypad.



18. Key in the desired value by using the ▲, ▼, ►, or ◀ to highlight the first number, press <enter>. Repeat until the number is completed and press ►► to accept the new value.



19. Once the “Configure Gages” screen is set, reference step 14, 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>.



Gap configuration complete

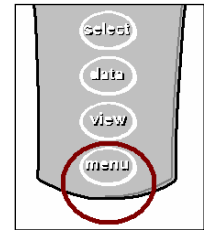
II. MASTERING INSTRUCTIONS

This process will master both the flush and gap simultaneously

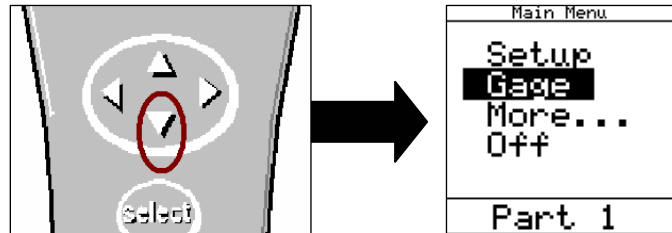
1. Connect the transducer to Gage Port 2/3 of the data collector.



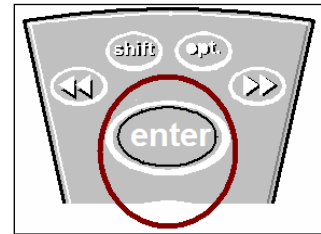
2. Press <Menu> to turn on the collector.



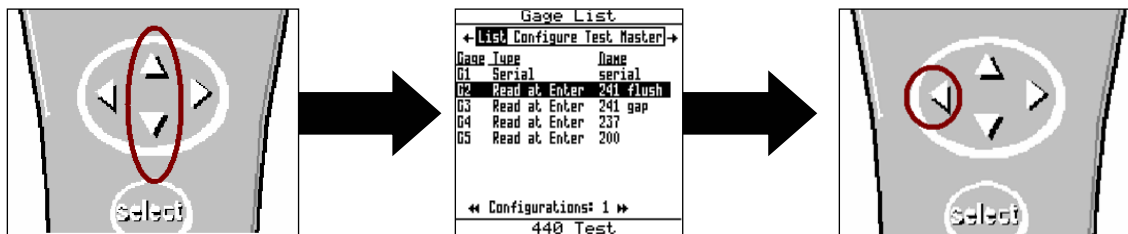
3. Press ▼ to highlight "Gage".



4. Press <enter>.



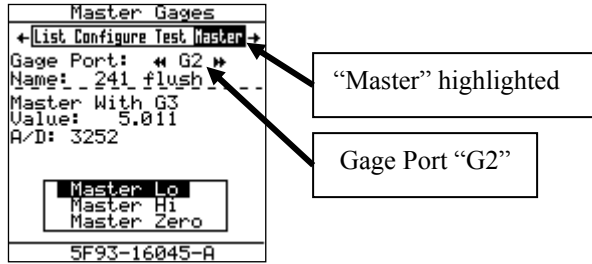
5. From the gage list use the ▲ or ▼ keys on the data collector to choose gage file G2 and press ◀ on the collector.



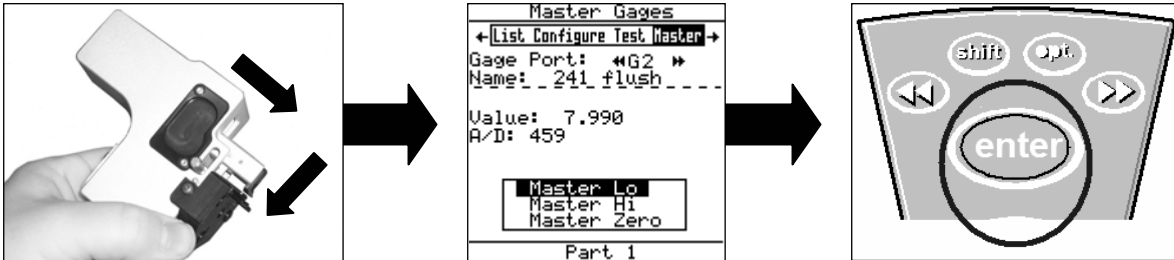
Gage List	
◀ List Configure Test Master ▶	
Gage Type	Name
G1	Serial serial
G2	Read at Enter 241 flush
G3	Read at Enter 241 gap
G4	Read at Enter 237
G5	Read at Enter 200

◀ Configurations: 1 ▶
440 Test

- 6 “Master” will be highlighted in screen header and “G2” is identified as “Gage Port”. If G2 is not the Gage Port press the ►► or ◀◀ until G2 appears



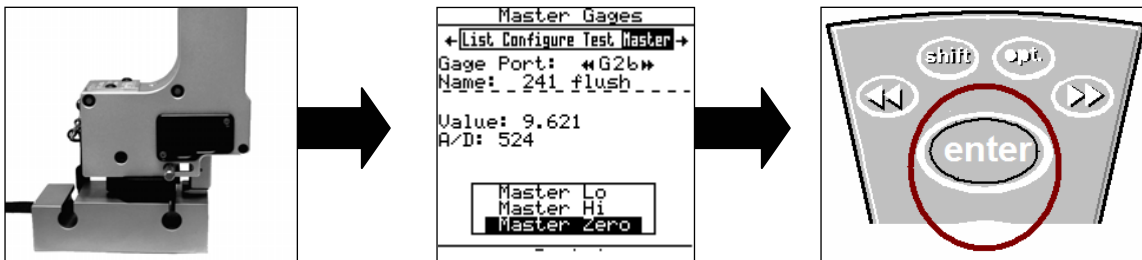
7. Extend the flush tip and retract the gap finger of the LMI 241BWV2. Verify "Master Low" highlighted on the collector, press <enter>.



8. Fully compress the flush tip and extend the gap finger of the LMI 241BWV2. With "Master Hi" highlighted on the collector press <enter>.



9. Retract the gap peg so the gage will insert into the “MASTER” gap slot. Gently pull back the base of the gage so the outside fingers are square in the gap. With "Master Zero" highlighted on the collector press <enter>.



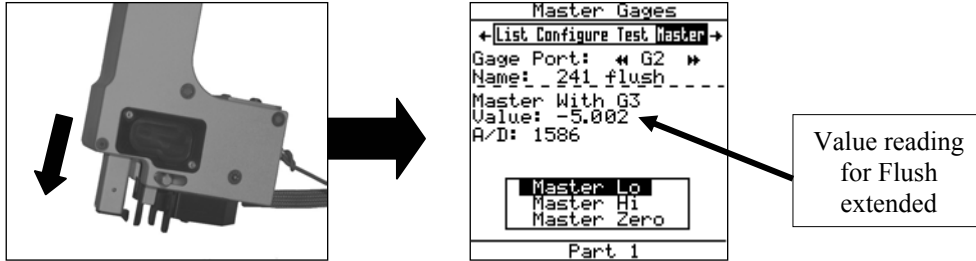
Mastering for the 241-BW series is complete.

III. VERIFICATION OF THE MASTERING

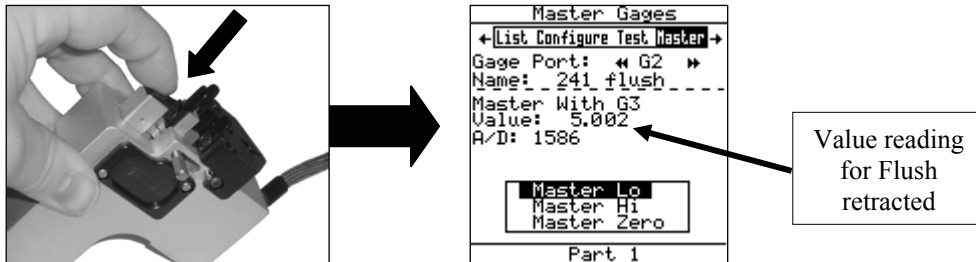
This process can be performed to verify the mastering of the LMI 241-BWV2 before or after being mastered. If any of the checks fail, the gage needs to be re-mastered.

Flush Verification

1. With the flush tip extended, observe the value in the “Master Gages” screen of “Gage Port G2” in the collector.

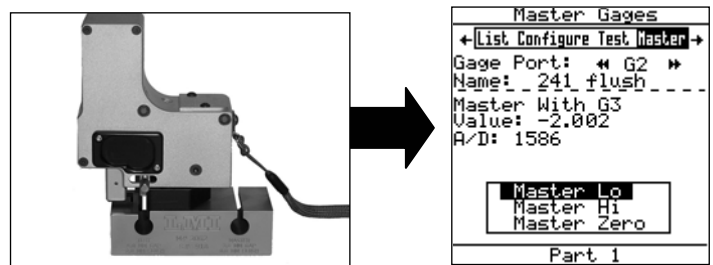


2. Retract the flush tip, Observe the value in the “Master Gages” screen of “Gage Port G2” in the collector.



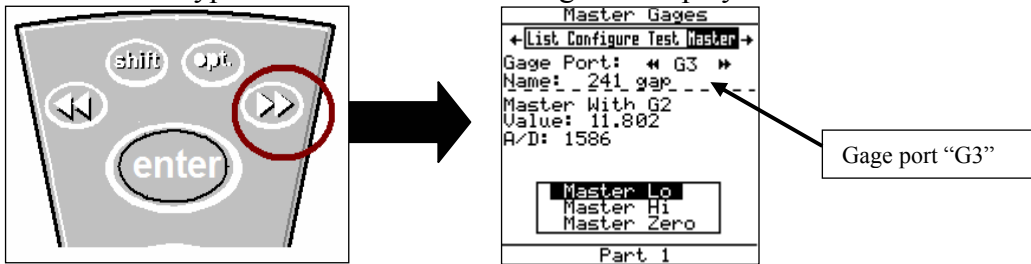
3. Subtract the value of step 2 from step 1; the result needs to be 10.00 +/- 0.03. In this example, the value of step 2 is 5.002 and the value of step 1 is -5.002, the result is 10.004. $5.002 - (-5.002) = 10.004$, remember if you subtract a negative number from a value you are actually adding the value to the first number.

4. Insert the gage into the “Test” side master block and observe the value in the “Master Gages” screen of “Gage Port G2” in the collector. The “Value” on screen needs to read $-2.00\text{mm} \pm 0.03\text{mm}$.

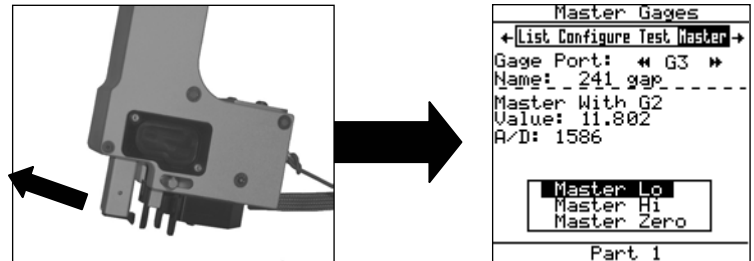


Gap Verification

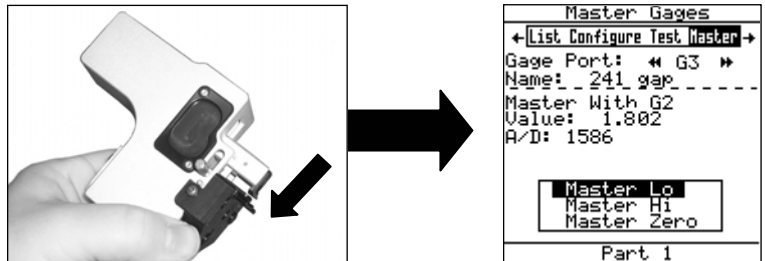
5. Press **▶▶** on the keypad of the collector to change the display from G2 to G3.



6. With the gap peg extended, observe the value in the "Master Gages" screen of "Gage Port G3" in the collector.

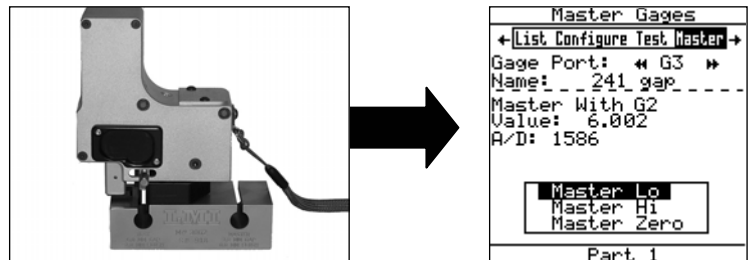


7. Retract the gap finger; observe the value in the "Master Gages" screen of "Gage Port G3b" in the collector.



8. Subtract the results of step 7 from step 6; the result must be 10.00mm +/- 0.03mm. This example step 7 is 1.802 and step 6 is 11.802, the result is 10.000. $11.802 - 1.802 = 10.000$

9. Insert the gage into the master block and observe the value in the "Master Gages" screen of "Gage Port G3" in the collector. It must be 6.00 +/- 0.03mm.



Verification Complete