

## Quick Installation Instructions for InnovaSonic® 203

### 1. Operation of Keyboard (Figure 1-1)

**0** ~ **9** are the menu codes to input information required for the flow measurement exercise.

You can use **◀** to delete or move back to the previous data.

**▲/+** ~ **▼/-** are to toggle up and down the menu.

After all data is selected, press **ENT** too confirm.

**MENU** is used to select a menu using two-digit numbers for each menu. For example, to enter pipe outside diameter, select **MENU** **1** **1** to enter into the window ("MENU11" is the address code of the outer pipe diameter).

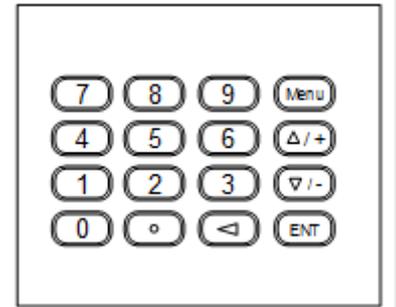
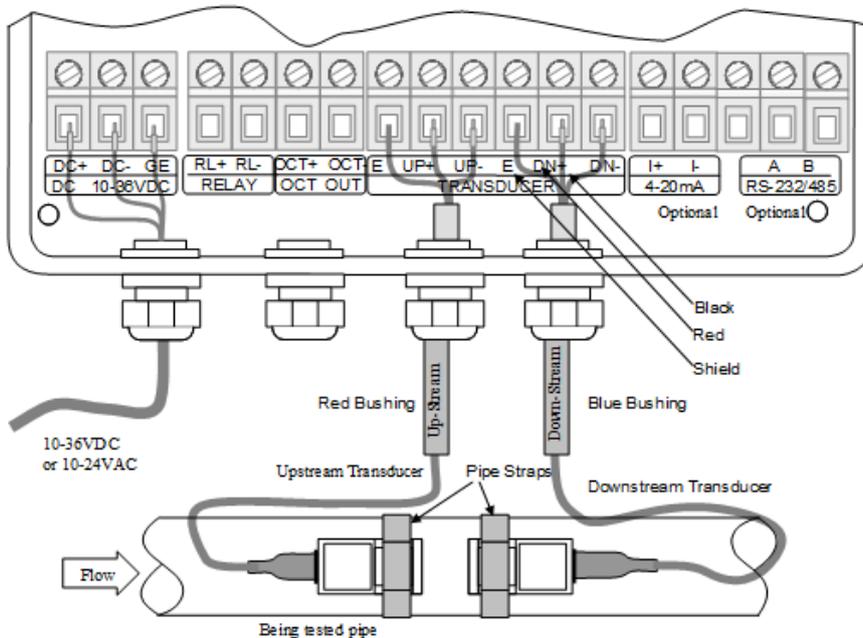


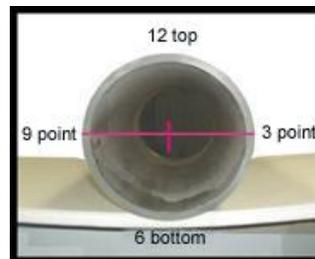
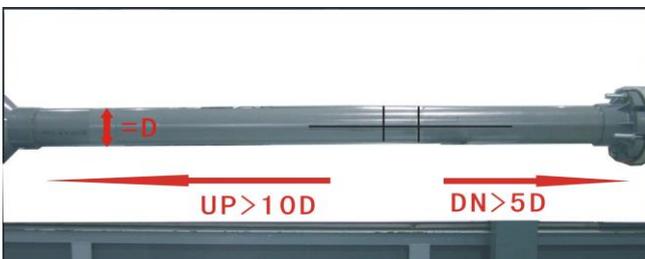
Fig. 1-1

### 2. Transducer Connection

Note: The upstream transducer cable is coded red and the downstream is blue.



### 3. Measurement Site Selection

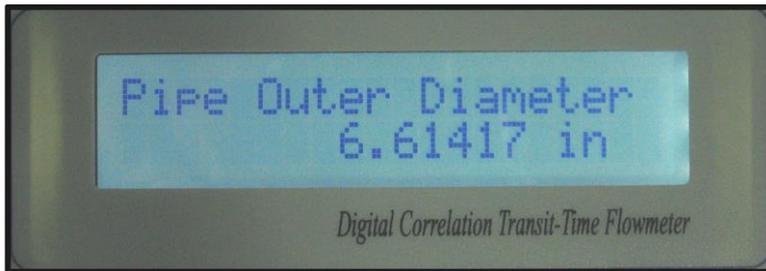


Select the measurement site on a straight section of pipe with 10D (10 pipe diameters) upstream and 5D downstream (Picture above left). The transducers usually are installed at the site 3 o'clock and 9 o'clock positions, and avoid installation at 6 o'clock and 12 o'clock (Picture above right).

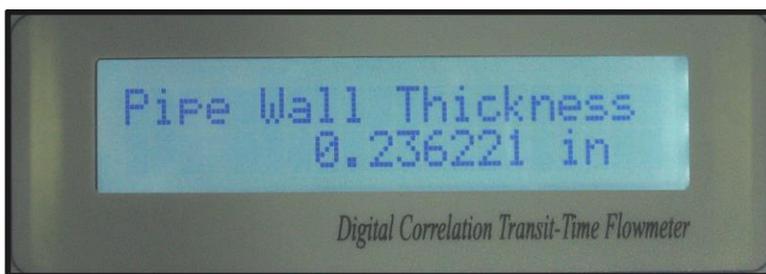
#### 4. Installation and Debugging

Using this quick start installation procedure, the basic parameters needed for a quick startup can be easily done (inputs, such as the pipe outside diameters, pipe wall thickness, pipe material, fluid type, method of transducer installation, etc.). Also the distance (spacing) between the upstream and downstream transducers is automatically calculated by the flow meter in order to obtain the ultrasonic signal and to measure the flow. The main installation and debugging process as follows:

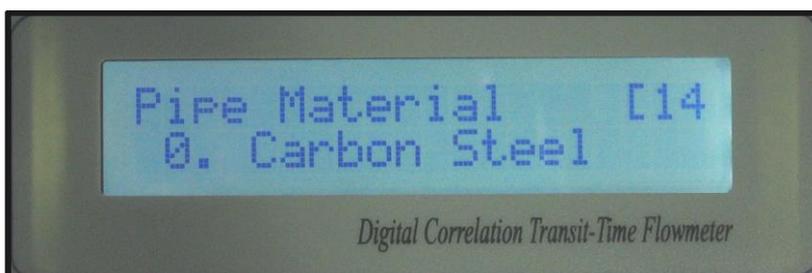
1. Power up the flow meter electronics
2. Select **MENU** **1** **1** and enter the outside pipe diameter



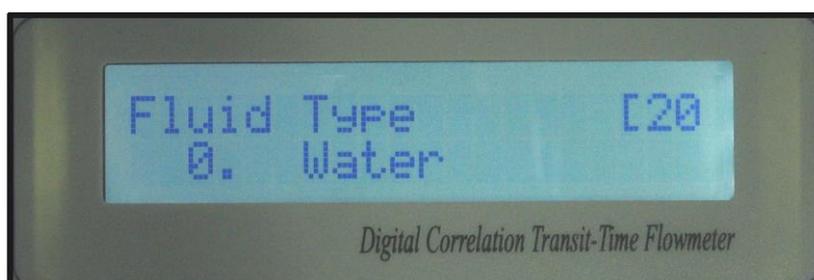
3. Select **MENU** **1** **2** and enter input the pipe wall thickness



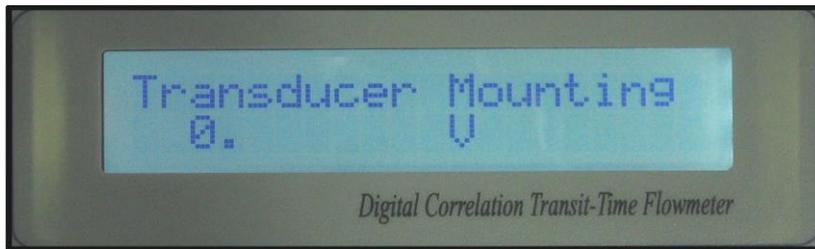
4. Select **MENU** **1** **4** and choose the pipe material



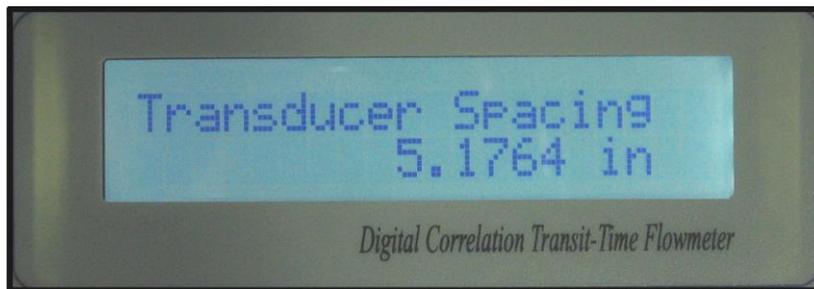
5. Select **MENU** **2** **0** and choose the fluid type



6. Select **MENU** **2** **4** and choose the transducer mounting method

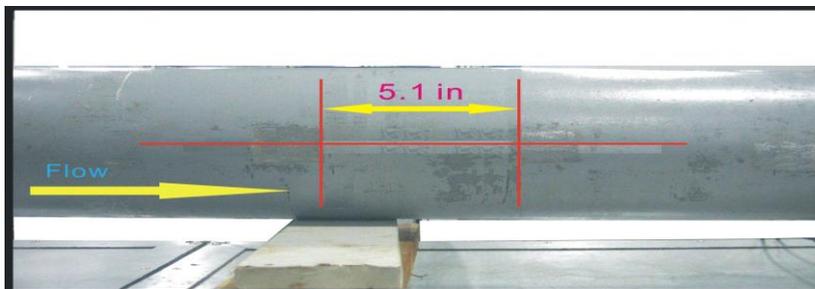


7. Select **MENU** **2** **5** and see the calculated transducer spacing

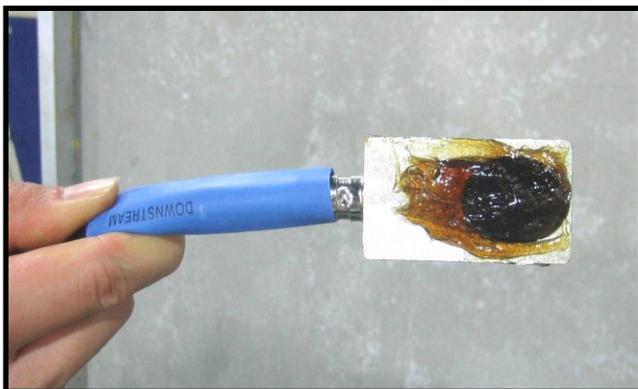


8. Use the calculated data for transducer spacing for installation

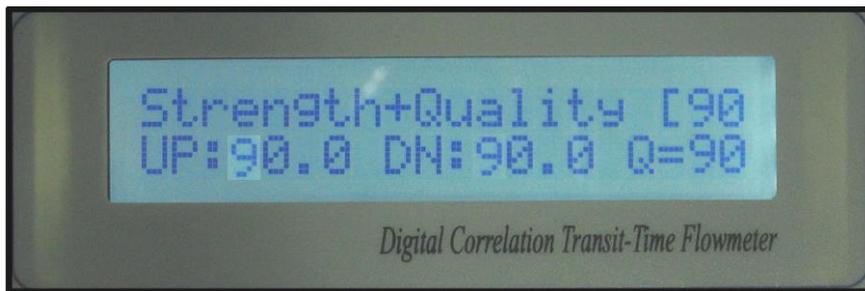
### 8.1 Pipe orientation and preparation (cleaning)



### 8.2 Applying coupling grease to transducers (below left) & mounting transducers (below right)

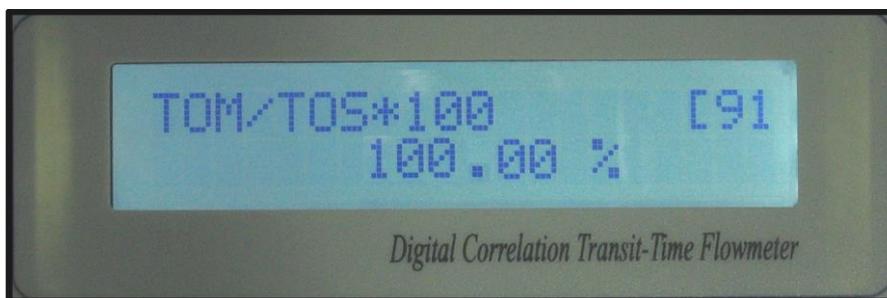


9. Select **MENU** **9** **0** and see the signal strength of the installed transducers.

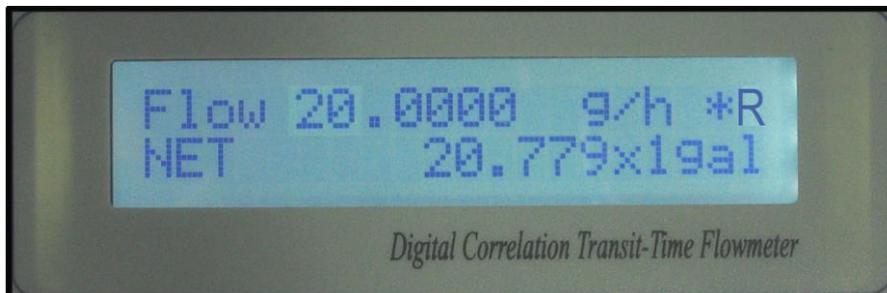


(When the UP and DN signal strength is at least 60 and the signal quality is at least 50, the flow meter is functioning well.)

10. Select **MENU** **9** **1** to check TOM/TOS\*100, (it should be  $100\pm 3\%$ )



11. Select **MENU** **0** **0** to read the instantaneous and totalizing flow.



**NOTE:** The information presented is for a quick start-up for the InnovaSonic 203. Other parameters are referenced in the 203 Manual.