

# YEFLO AUTOTUNING ADDENDUM

## 1.1. Auto-tuning Functionality

When pipeline vibration creates an output signal when there is no process flow, Noise Balance, TLA and GAIN need to be adjusted. The Auto-tuning Function sets those parameters automatically without the need for other instruments like oscilloscopes.

## 1.2 Parameters

### H40: AUTO-TUNING

Not Executed: Initial value

Execute: Begin Auto-tuning

### H41: RESULT OF EXERCISING AUTO-TUNING

Not Executed: Initial value

Executing: Exercising Noise Balance, TLA and GAIN

Success: Parameters configured

Check Sensor: *Warning...*Noise Balance has exceeded settings (-5 Minimum or +10 Maximum)

Check Flow/Sensor: Failure – This warning indicates there may be other process or installation variables affecting the meter. Verify all valves are functioning properly and that the shedder bar area is free of debris.

#### NOTE:

- (1) H41 shows the results within one minute after exercising Parameter 40 then returns to “NOT EXECUTED”.
- (2) If the Auto-tuning is in process, changing the H40 to “NOT EXECUTE” will cause the tuning process to stop.
- (3) During tuning only Parameter H40 can be changed

## 1.3 Warning:

This function is only to be used when pipe vibration causes an output signal at a no flow condition. Do not use this function with flowing processes.

Please note that the output signal may change during the Autotuning sequence.

## **2.0 Procedure for using Auto-tuning**

### **❑ Before executing Auto-tuning**

**Confirm process is not flowing**

**Note in writing the Parameter value for Noise Balance (H01), TLA (H02), and GAIN (H03). (After tuning, these Parameters may change.)**

### **❑ Executing Auto-tuning**

**Set Parameter H40 to “EXECUTE”**

**Confirm the result at Parameter H41.**

**During the tuning process, “EXECUTING” is shown at Parameter H41. The result will be shown within 30 seconds after the completion of the Auto-tuning sequence.**

### **❑ After Completion of Sequence**

**After finishing the Auto-tuning sequence, allow 30 seconds before turning off the power. (If power is turned off before this, the Auto-tuning procedure will need to be repeated.)**

### **❑ Interpreting the Results**

**“SUCCESS” indicates that the Auto-tuning procedure succeeded. Confirm the value of Parameters for Noise Balance (H01), TLA (H02) and GAIN (H03). If after Auto-tuning is complete, the TLA and GAIN are not 0, the measurable minimum flow may go to 2 (two) times the original setting. Therefore, the minimum flow should be checked.**

**CHECK SENSOR indicates that Auto-tuning succeeded but the value of Noise Balance is not in the normal range of  $-5$  or  $+10$ . Check the flowmeter to determine if solids have deposited on the inner surfaces of the body. If there are no deposits, call the Technical Assistance Center at 800-524-7378 for instruction.**

**CHECK FLOW/SENSOR means that the Auto-tuning procedure has been unable to select the optimum settings. Parameters of Noise Balance, TLA and GAIN have not changed from their original settings. When this occurs please confirm the following:**

- (1) Was process flowing in the pipe when Auto-tuning was executed?**
- (2) Is there severe pipeline vibration? If so reduce vibration via pipe supports or, if meter is integrally mounted, consider remote mounting the electronics.**
- (3) Verify that there is no debris or buildup adhering to the inside of the meter body.**

- (4) If an oscilloscope is available, observe the vortex wave form at terminal TP2 and COM2 and adjust manually through Parameter H01.**
- (5) Contact the Technical Assistance Center at 800-524-7378 for further assistance.**

