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|-----------------------------------------------------------------------------------|-----------------------------------|--|---------------|
|  | SONARtrac® Technical Note         |  |               |
|                                                                                   | TN0004                            |  | Date: 08Oct25 |
|                                                                                   | Subject: Resetting SONARtrac Gain |  | Revision 03   |
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## Problem:

Sometimes too much or too little signal is generated in the SONARtrac sensor head pre-amplifier. This may be due to changes in process operating conditions following installation of the SONARtrac system. This problem can be field corrected through inputs in the transmitter keyboard.

(Section **A** – legacy SONARtrac, Section **B** - SONARtrac digital)



*legacy SONARtrac*



*SONARtrac digital*

## Resolution:

**A.** To change the gain on SONARtrac legacy, proceed as follows:

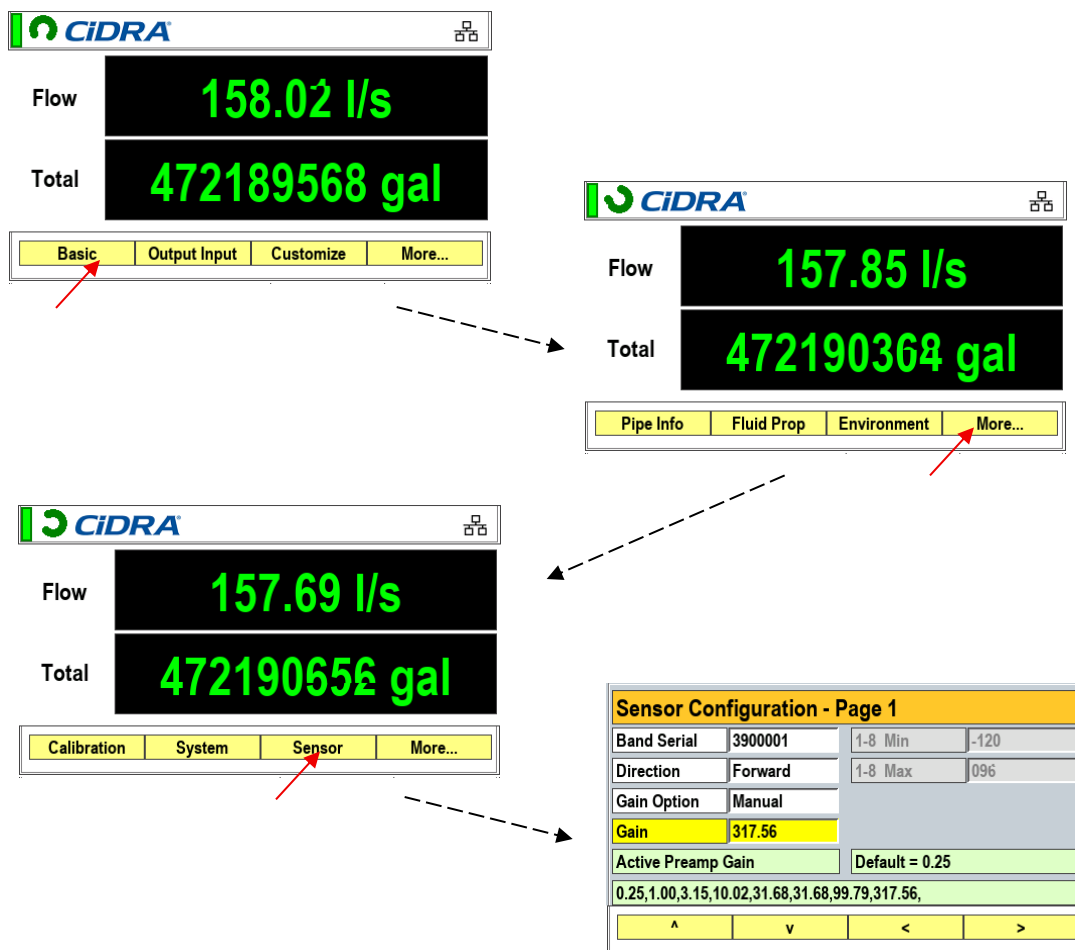
1. Open the transmitter door (a hot work permit may be required).
2. Press any key on the transmitter display except the 'Exit' key and Line 1 of the display should read "BASIC CONFIG".
3. Press the 'Down Arrow' key until Line 1 reads "DIAGNOSTICS".
4. Press the 'Enter' key and "→SENSOR CHECK" should appear on Line 2 of the display.
5. Press the 'Down Arrow' key until "→GAIN" appears on Line 2 of the display.
6. Press the 'Enter' key and "→AUTOSET GAIN" will appear on Line 3 of the display.
7. Press the 'Down Arrow' key and "→CHECK/SET GAIN" will appear on Line 3 and "Gain=XX.XX Set=1.00" will appear on Line 4 (X.XX is the current gain value).
8. Press the 'Enter' key and the "Set=1.00" will be highlighted.
9. Press the 'Up Arrow' or 'Down Arrow' key to scroll to a higher or lower value as desired. The value will be indicated in the "Set=XX.XX" highlighted window.
10. Press the 'Enter' key when the desired value appears.

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11. To verify the new value has been set, press the 'Back' key and repeat steps 6 and 7 above. The desired gain value should appear on Line 4 as "Gain=new value" on Line 4.
12. Press the 'Exit' key and the transmitter will return to operation with the new gain value entered.
13. Close and secure the transmitter door.

#### B. For SONARtrac digital

1. Open the transmitter door (a hot work permit may be required).
2. Press any of the lower four soft keys to get menu options
3. Navigate to the Sensor sub menu within the BASIC top level menu option



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4. From the Sensor Configuration page observe the Gain Option field. If at One Time or Manual use the up/down arrows to select Gain field
5. Press Enter then use the up/down keys to select the desired gain level. (options shown on lower line)
6. When desired Gain setting is selected press the Enter key

#### Note on Gain Options

- Manual – allows for operator selection of desired Gain setting
- One Time – allows for an initial, one time Auto Gain selection. This might typically be performed during initial commissioning with typical process flow present (*when chosen, once complete the Gain Option selection reverts to Manual*)
- Auto Gain – system will operate in a continuous Auto Gain mode which may result in lowering of Gain setting during high pump speeds or raising the Gain during low pump speeds.

| Sensor Configuration - Page 1 |                  |         |      |
|-------------------------------|------------------|---------|------|
| Band Serial                   | 3900001          | 1-8 Min | -154 |
| Direction                     | Forward          | 1-8 Max | 157  |
| Gain Option                   | Manual           |         |      |
| Gain                          | 317.56           |         |      |
| Select Gain Option            | Default = Manual |         |      |
| Manual, Auto Gain, One Time   |                  |         |      |
| ▲                             | ▼                | <       | >    |

If there are any questions, contact CiDRA Customer Support

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## Revision History

| Rev | Date     | Changed By      | Approved By     | Change Description                  |
|-----|----------|-----------------|-----------------|-------------------------------------|
| 01  | 8/22/07  | B. Markoja      | M. Sapack       | Initial Release                     |
| 02  | 7/29/08  | V. Rojas-Haines | V. Rojas-Haines | Update figures and name             |
| 03  | 10/08/25 | Griffin         | Griffin         | Added <i>SONARtrac digital</i> info |
|     |          |                 |                 |                                     |
|     |          |                 |                 |                                     |