Montalvo A4 Digital Amplifier

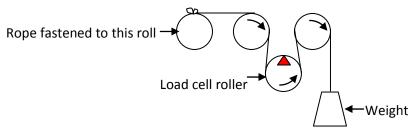## Calibration Instructions


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1 : Brown  ⎫
2 : WHT    ⎬ Load Cell
3 : BLK    ⎭
4 : Brown  ⎫
5 : WHT    ⎬ Load Cell
6 : BLK    ⎭
7 : TOTAL  4-20mA  ⎫
8 : TOTAL  0-10V   ⎬ Output
9 : LEFT   0-10V   ⎬ Proportional
10 : RIGHT 0-10V   ⎭ To Tension
11 : GND
12 : + 24 VDC ⎫
13 : GND      ⎬ Input
14 : GND      ⎭
```

1. Connect load cells and 24VDC power supply wires to the amplifier in accordance with the Connection Diagram.
2. Insure that the load cells are correctly installed and that the load direction indicators are pointing in the correct direction. (See load cell mounting instructions). Note the load rating on the load cells.
3. Apply power.
4. ZERO:
   a. With the web removed and no load applied to tension sensing roller, press and hold the zero button until the LED above the CAL button flashes quickly 2 times. This indicates that the A4 is zeroed (also known as "Taring")
5. CALIBRATE
   a. Thread a rope across the center of the tension sensing roller following the path of the web.   Thread at least one roller before and one roller after the tension sensing roller. All rollers in contact with the rope must be able to rotate freely. Fasten one end of the rope securely.
   b. Attach a weight that is equal to 10% of load cell load rating. (ex. – pair of 50lb load cells, 5lb weight) to the other end. Make sure you rotate all the rollers that the rope passes over in the direction of the weight. (see below)   If the amplifier output is connected to a controller or indicator with an analog meter, attach a weight that is 10% of the analog meter scale.

Rope fastened to this roll →

Load cell roller →

← Weight

   c. Press and hold the Cal button until the LED above it flashes quickly 2 times. This indicates that the A4 is calibrated. The total output voltage will be proportional to the calibration weight.**
   ** For example: If the calibration weight is 10 lbs, the total output voltage will be 1V at 10 lbs, 3V at 30lbs, 6.5V at 65 lbs, 10V at 100lbs, etc.

Calibration Error Codes

6. If the center LED turns Red and the Cal LED flashes twice, decrease the weight and repeat step 5*. To reset Error code, press and Hold Cal button for 3 seconds.*
7. If the center LED turns Red and the Call LED flashes four times, reverse the wires on terminals 1 and 3 and the wires on terminals 4 and 6. Repeat step 5*. To reset Error code, press and Hold Cal button for 3 seconds.*

Load Cell Error Codes

Center LED Blinks Red Once every 2 seconds – Problem with load cell connected to Terminal 2 *
Center LED Blinks Red Twice every 2 seconds – Problem with load cell connected to Terminal 5 *
Center LED Blinks Red Three times every 2 seconds – Problem with both Load cells. *

*Note: Problem could be open gauges, shorted gauges, or, broken or shorted cable wires