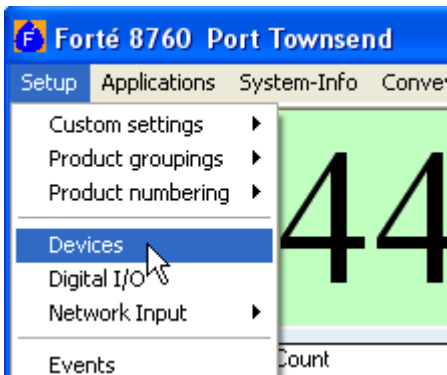


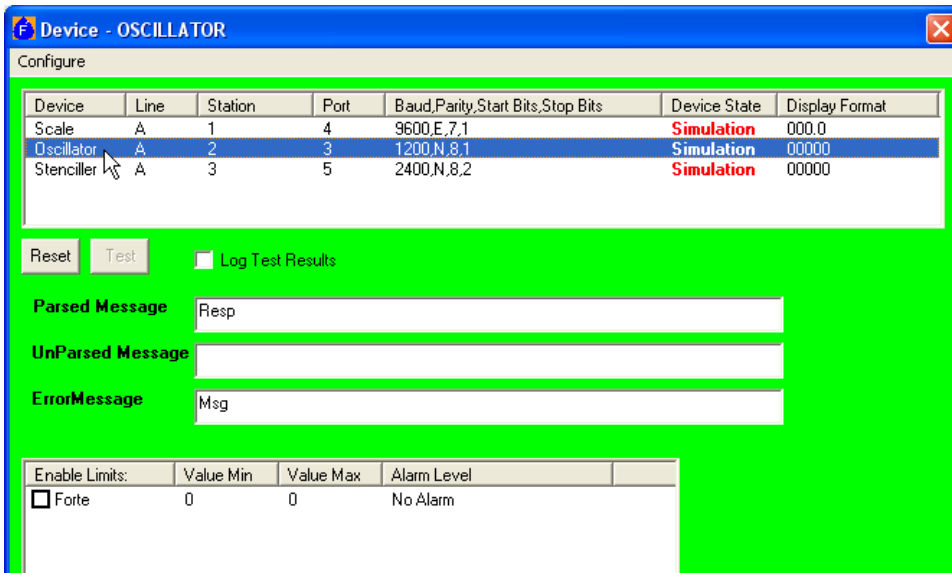
Troubleshooting Notes for the FORTE Bale Press Electronics System & Electrode/Coverplate Assembly

Log on.

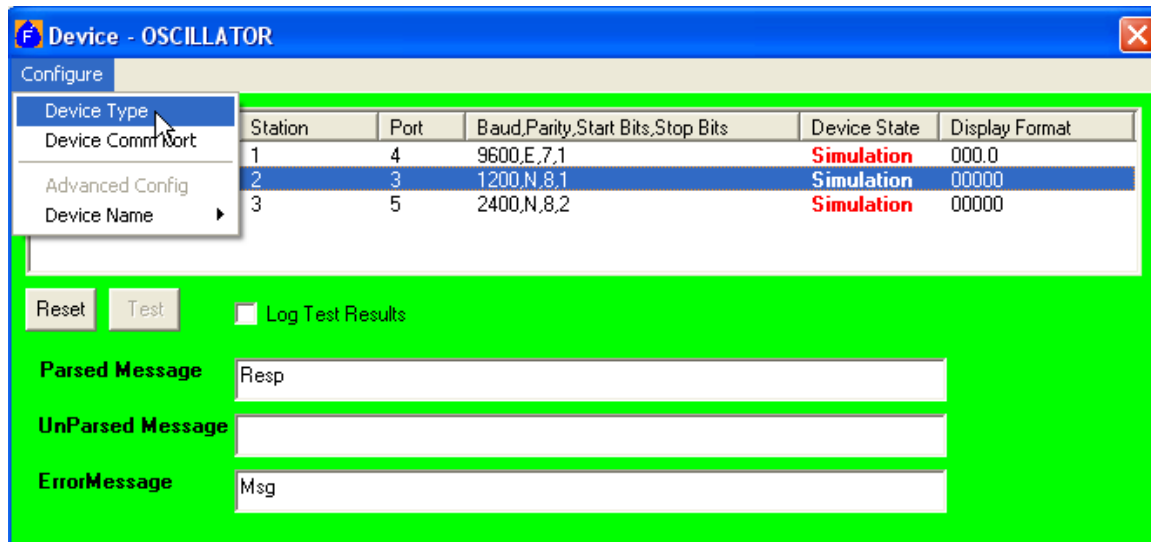
Go to SETUP > DEVICES



Highlight the OSCILLATOR in the listview box.



Select CONFIGURE > DEVICE TYPE in the menu bar.



NOTE:

For on-line systems, the “DEVICE STATE” for each active device should be “ONLINE”.

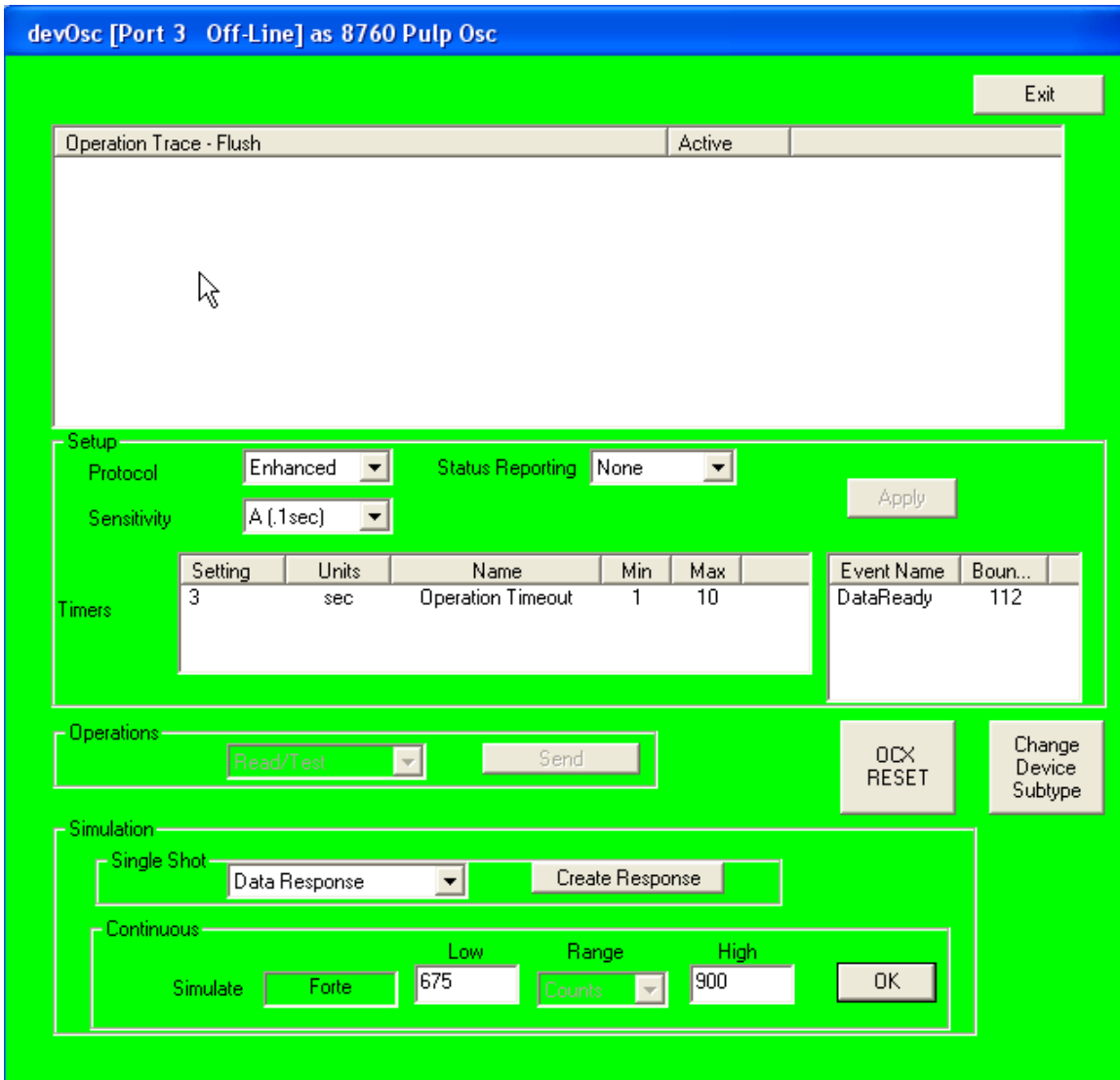
“Simulation” is for program testing only.

“Offline” indicates an inactive device.

To change the “DEVICE STATE”, highlight the device by clicking on it. The device line will then be highlighted by a blue background.

Then, click on the “DEVICE STATE” header tab in the list view box to toggle through the three available states.

The devOSC monitoring window will open.

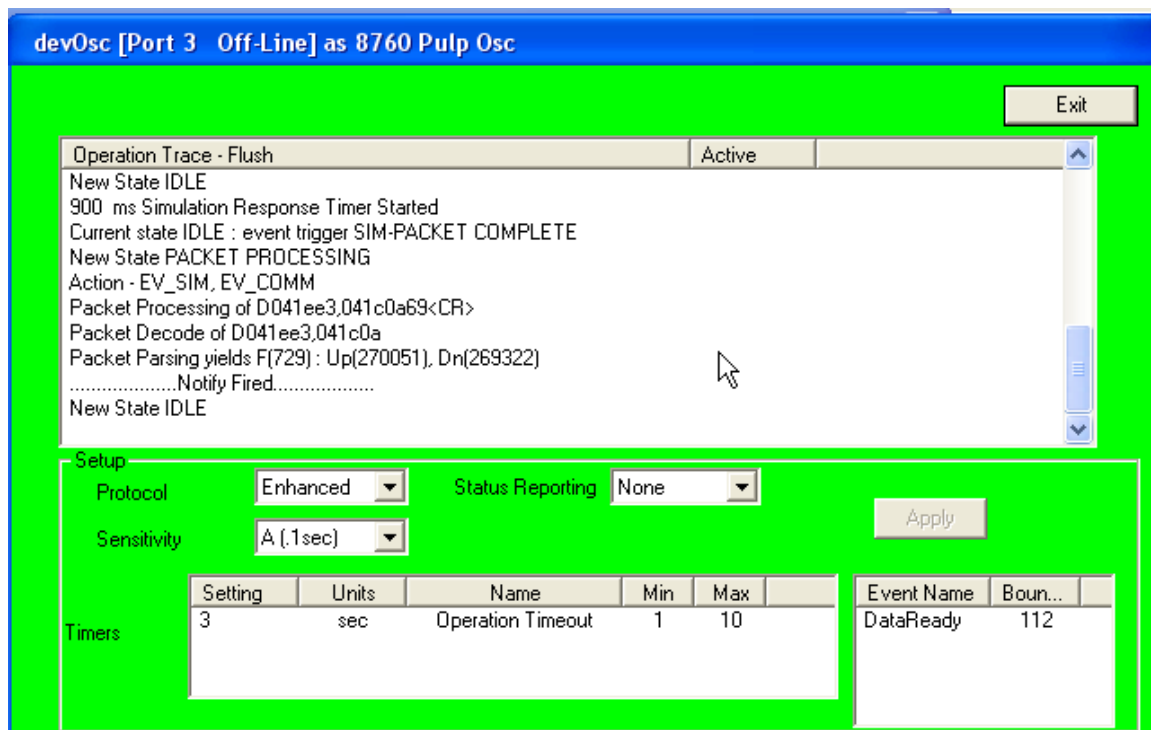


Watch the OPERATION TRACE listview box as a bale is pressed.

Information similar to that shown below should appear.

The PACKET PARSING YIELDS line contains the FORTE Number (F), and the UP and DOWN frequencies as triggered from the photocontrol unit. If you do not see any information in the widow during a press sequence, check the following:

- Alignment of the external reset photoswitch and reflector
- Power to the photocontrol unit and oscillator
- Condition of the black cable connecting the photocontrol unit to the oscillator

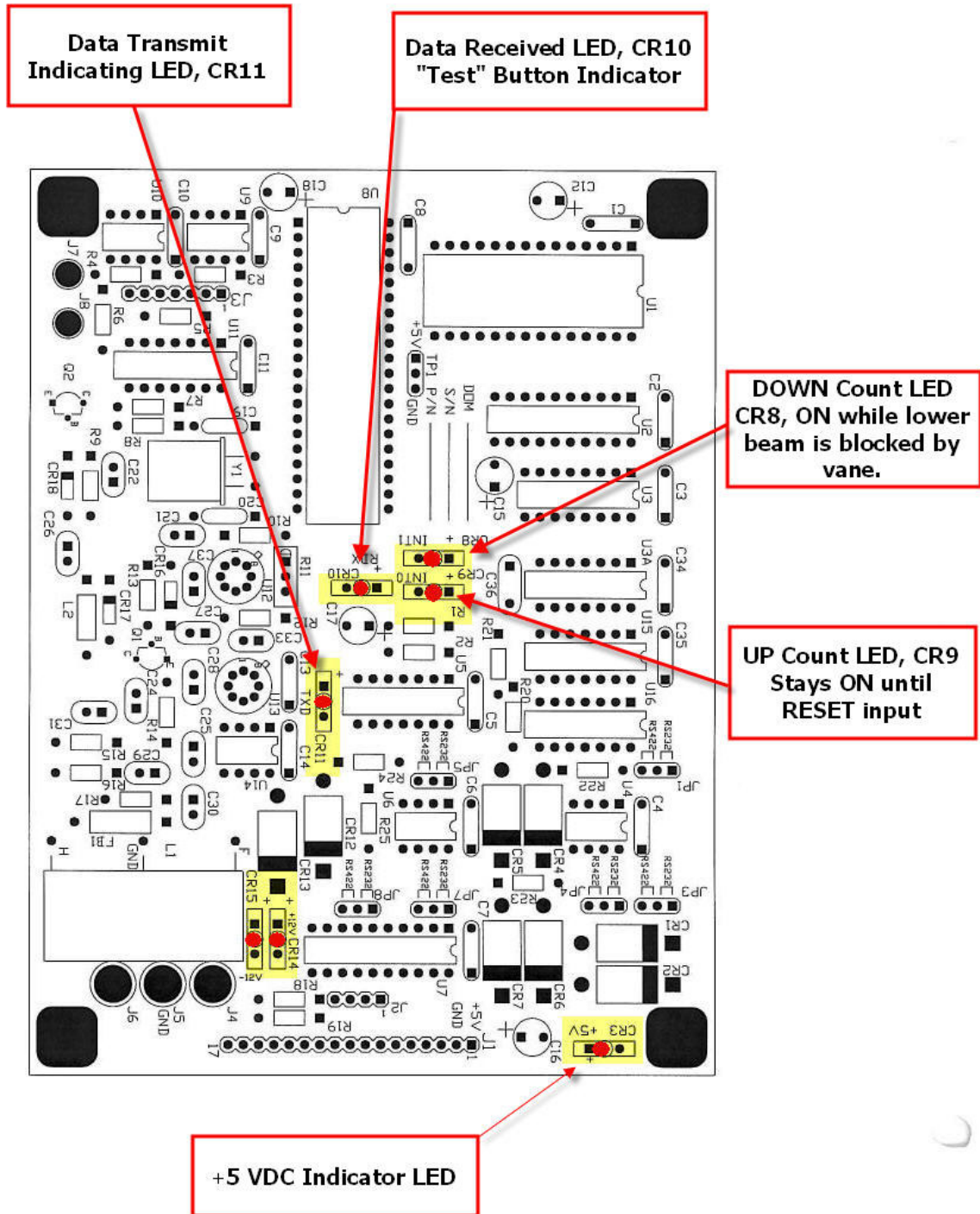


LED CR9 stays on, once the vane on the press interrupts the upper light position in the FORTE photocontrol unit, until a reset signal is received from the external reset photoswitch connected to J3.

LED CR10 flickers when a "TEST" command is received from FORTE 8760 DEVICES menu command.

LED CR11 flickers when data is transmitted from the oscillator to the FORTE 8760 program.

LED CR3 indicates +5 VDC. LEDs CR14 & CR15 indicate that +12 VDC and -12 VDC.



Log File messages can be monitored in the 8760 Windows System Info menu:

07/19/2008 05:13:06 - WARNING - Bale Tracking - Line A: 8760Weigh Station Output Conveyor(5) is full, bale cannot be moved from station

07/19/2008 05:13:06 - WARNING - Bale Tracking - Line A: 8760Weigh Station Output Conveyor (5) Overflow imminent; dumping bale from conveyor

1. A message or messages in the FORTE System Log (System Info) similar to the above messages indicate that the FORTE photocontrol unit, external reset switch, or signal generator is not working. Bales are making it to the scale and are being weighed OK, but they are being assigned DEFAULT FORTE values.

1A.) Check the alignment of the external photo reset switch with the reflector on the exit side of the press. This is the external reset switch connected to J3 on the FORTE photocontrol unit.

1B.) Also, go to the SETUP > DEVICES menu and highlight the OSCILLATOR in the Device listview.

Click on the "TEST" button.

Do you get a frequency test result in the "Parsed Message" box ?

If you do not get a frequency reading, the X760 program has lost communication with the oscillator board.

1C.) Go to SETUP > DEVICES > Select Oscillator > CONFIGURE > DEVICE TYPE

The devOSC window will open.

Watch a bale go through the press.

Is information generated in the white OPERATION TRACE listview window when the bale is pressed ?

If you do not see any information, the photocontrol unit is not active.

2. Check that the "windows" in the photocontrol unit housings are not blocked by grease or pulp, and that two red light sources are shining.

3. Open the cover on the FORTE oscillator. Watch the oscillator board as a bale is pressed.

There are four (4) red LEDs near the center of the oscillator board:

CR9 (up count),
CR8 (down count),
CR10 (data receive indicator).
and CR11 (data transmit indicator).

When the vane passes through the center channel of the photocontrol unit CR9 should light up and stay on when the vane breaks the upper light beam.

CR8 should light up and stay on while the vane breaks the lower light beam.

CR11 should blink rapidly as data is transferred from the oscillator.

CR8 should turn off when the vane rises out of the path of the lower light beam.

CR9 will stay on even when the vane rises out of the upper light beam path.

CR9 will stay on until the bale passes in front of the external reset photoswitch and reflector. When the bale blocks the reflector, CR9 should go out.

4. Notes on the External Reset Photoswitch

There is also a red LED on the back panel of the external reset photoswitch.

The red LED should normally be OFF if the photoswitch is correctly aligned with the reflector and nothing is blocking the reflector.

The red LED will turn ON as soon as the reflector is blocked.

If the red LED on the back panel of the external reset photoswitch is always ON, check the alignment with the reflector. The sensitivity and range of the reset photoswitch can also be adjusted by a small potentiometer on the rear panel of the photoswitch.

If the red LED on the back panel of the external reset photoswitch is always OFF, make sure no other reflective object is in line with the switch.

Check the cable connection at J3 on the photocontrol unit.

Try adjusting the potentiometer.

If no change occurs, replace the reset switch with a spare.

5. The “9999” Error Code

The “9999” error condition found in the Log File - which also causes a red flashing alarm screen on the “ALARM” summary tab - is caused when a reset signal from the external reset photoswitch is received after an “Up Count” frequency measurement (upper beam in the FORTE photocontrol unit is blocked by the vane), and before a corresponding “Down Count” frequency measurement is generated by the vane blocking the lower beam position.

If this message and error occurs, check that both the external reset switch and reflector are securely mounted and aligned, and not subject to intense vibration or being hit by a bale or other object.

Make sure the vane is breaking the lower beam position when a bale is pressed. If the vane length or mounting position has been adjusted, or taller bales are being pressed, the “9999” error condition might be generated.

MANUALLY TESTING THE ELECTRODE & COVERPLATE ASSEMBLY:

TEST ONE:

1. Disconnect the coaxial cable from the BNC connector on the electrode.
2. Connect the leads from an ohmmeter to the center conductors of both BNC connectors on the electrode.
3. You should measure 0 ohms resistance (dead short) between the two connectors.
4. Leave the ohmmeter leads in place, press a bale, and monitor the ohmmeter.
5. You should continue to measure 0 ohms resistance, even with the bale fully compressed.

OBSERVATION RESULTS FOR TEST ONE:

If you see an open circuit or swinging between a dead short and an open circuit, an internal wiring fault is indicated. Only one of the BNC connectors might be involved. Try connecting the coaxial cable to the other connector and monitor measurement results.

TEST TWO:

1. Leave the coaxial cable disconnected from the electrode.
2. Disconnect one end of the FORTE BLEEDER RESISTOR ASSEMBLY from either the coverplate or from the press platen.
3. Place one lead from the ohmmeter on the steel coverplate that contacts the bale.
4. Place the second lead from the ohmmeter on the grounded press platen.
5. You should measure an open circuit.
6. Leave the ohmmeter leads in place, press a bale, and monitor the ohmmeter.
7. You should continue to measure an open circuit, even with the bale fully compressed.

OBSERVATION RESULTS FOR TEST TWO:

If you see a short between the insulated coverplate and the grounded press platen, usually one of the insulating bushings is defective. Remove one mounting bolt at a time and retest until you find the defective position. If the condition remains after removing the first bolt, reconnect that mounting bolt and bushing and move on to the next position until you get an open circuit resistance reading.

TEST THREE:

1. Leave the coaxial cable disconnected from the electrode.
2. Disconnect one end of the FORTE BLEEDER RESISTOR ASSEMBLY from either the coverplate or from the press platen.
3. Place one lead from the ohmmeter on the center conductor of one of the BNC connectors on the electrode.
4. Place the second lead from the ohmmeter on the steel coverplate that contacts the bale.
5. You should measure an open circuit.
6. Leave the ohmmeter leads in place, press a bale, and monitor the ohmmeter.
7. You should continue to measure an open circuit, even with the bale fully compressed.
8. Repeat the test with one ohmmeter lead on the second BNC connector and the second lead from the ohmmeter on the steel coverplate that contacts the bale.

TEST FOUR:

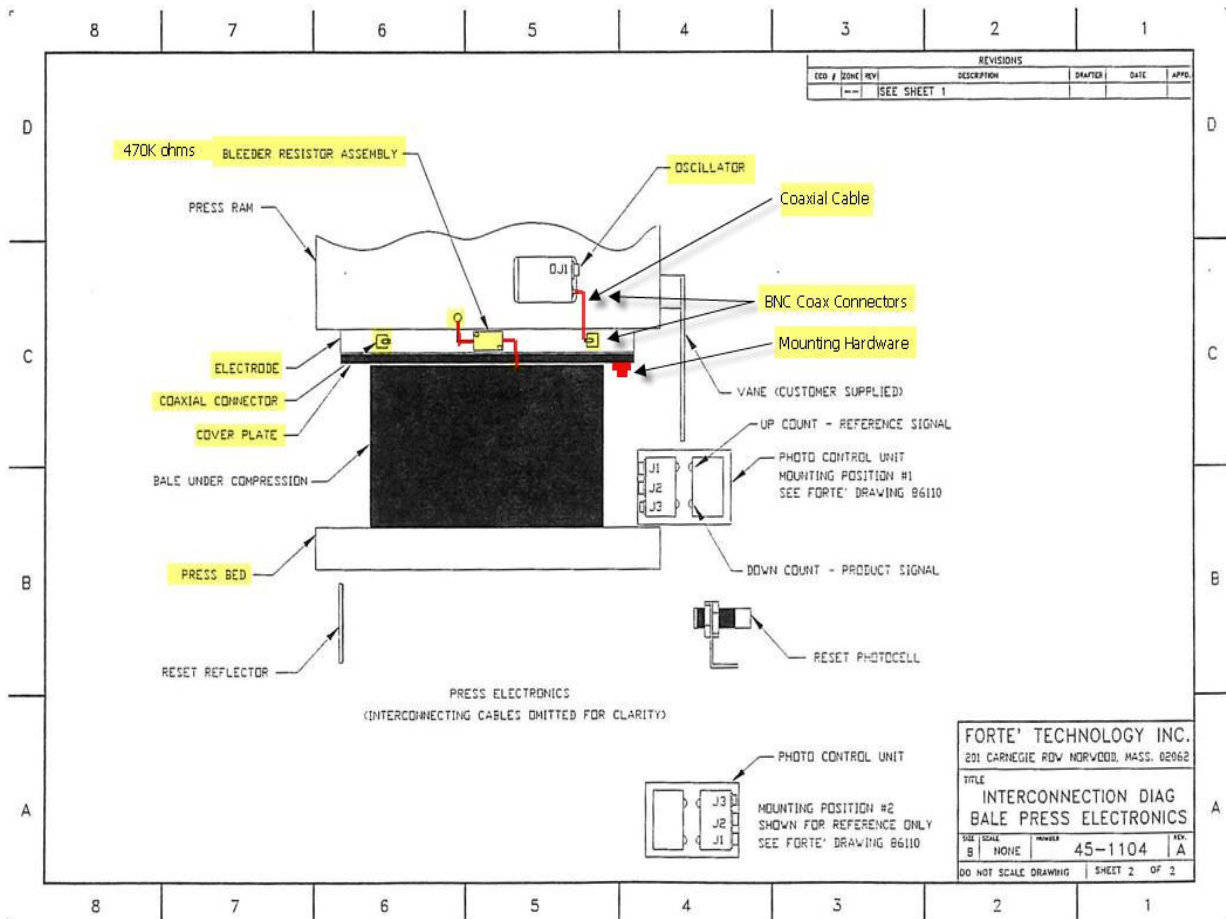
1. Leave the coaxial cable disconnected from the electrode.
2. Disconnect one end of the FORTE BLEEDER RESISTOR ASSEMBLY from either the coverplate or from the press platen.
3. Place one lead from the ohmmeter on the center conductor of one of the BNC connectors on the electrode.
4. Place the second lead from the ohmmeter on the grounded press platen.
5. You should measure an open circuit.
6. Leave the ohmmeter leads in place, press a bale, and monitor the ohmmeter.
7. You should continue to measure an open circuit, even with the bale fully compressed.
8. Repeat the test with one ohmmeter lead on the second BNC connector and the second lead from the ohmmeter on the grounded press platen.

OBSERVATION RESULTS FOR TESTS THREE & FOUR:

If you see any indications of a short circuit or swingers, intermittent connections are being made between the coverplate and the internal electrode plate (indicates worn electrode surface or a deep crack), or between ground and the internal electrode plate (indicates internal plate is contacting a mounting bolt).

TEST FIVE:

1. Leave the coaxial cable disconnected from the electrode.
2. Connect the FORTE BLEEDER RESISTOR ASSEMBLY to the coverplate or the press platen.
3. Make sure both leads are screwed down tight to a bare metal surface.
4. Place one lead from the ohmmeter on the steel coverplate that contacts the bale.
5. Place the second lead from the ohmmeter on bare metal on the grounded press platen.
6. You should measure between ~465K ohms to ~500K ohms. Target 474K ohms.



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