

## Installing An Accuscan Serial Interface Gauge On A Total Vu System.

### What is included in the package

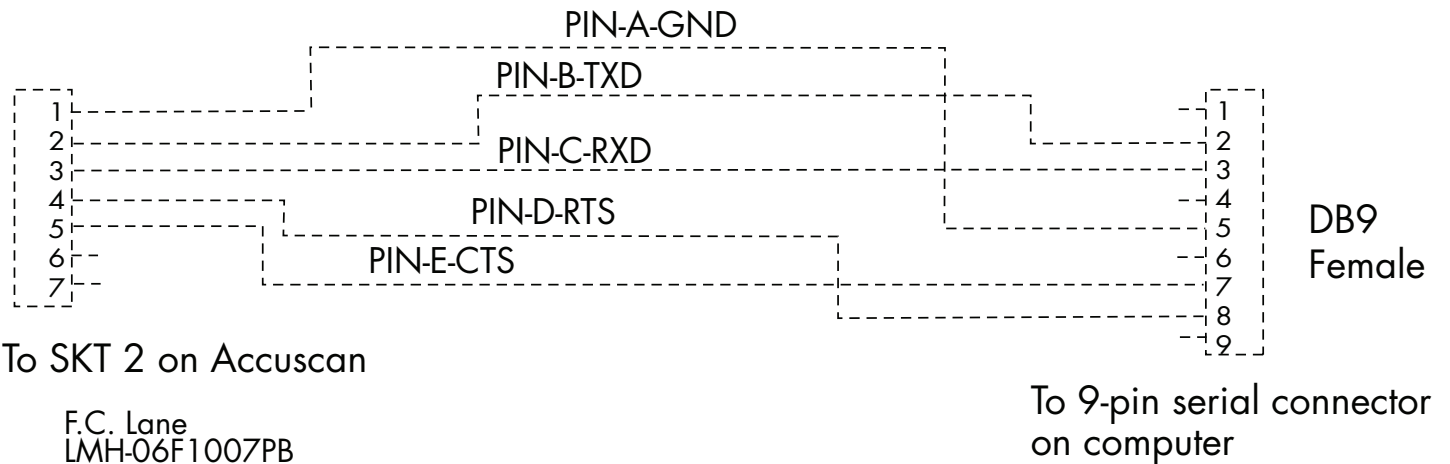
#### New System:

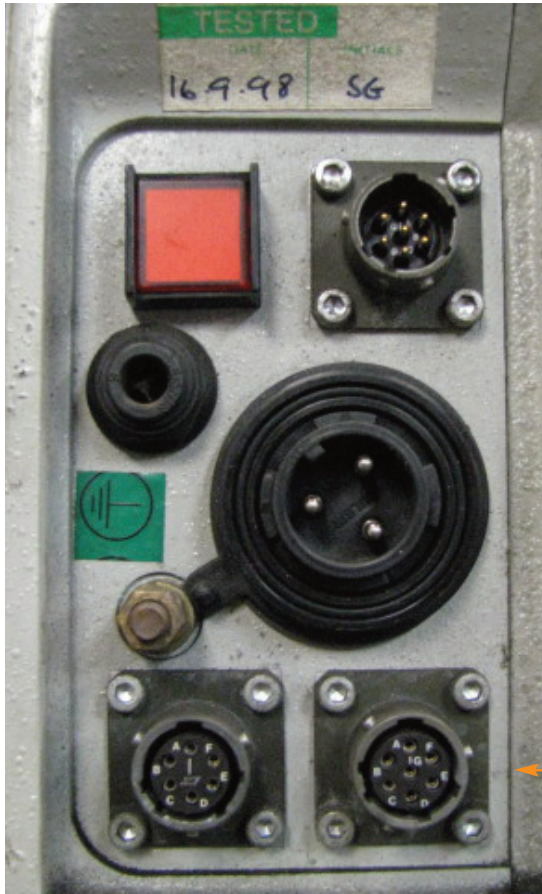
- 1 Each TLAsEr400 card
- 1 Each Beta LaserMike compatibility module
- 1 Each serial cable for connecting the Beta gauge to the Total Vu computer.
- Total Vu Software installation Disk
- Null Modem Cable
- Serial port expansion (USB or PCI), optional

#### Upgrade

- 1 Each Beta LaserMike compatibility module
- 1 Each serial cable for connecting the Beta gauge to the Total Vu computer.
- Total Vu Software installation Disk
- Updated software files to be copied into the Total Vu Program directory.
- Null Modem Cable
- Serial port expansion (USB or PCI), optional

### Accuscan serial cable connection diagram





Connection panel of Accuscan scanner.

Note: Always connect the supplied cable to the SKT2 terminal on the Accuscan scanner.

### Step 1: Serial Communication Protocols and Baud Rate

The following settings are the non-configurable communications protocol defaults for the Accuscan scanner that you will need to match on the computer that the scanner connects to.

- Full Duplex
- Full Handshaking
- No Parity
- 1 Start Bit
- 7 Data Bits
- 2 Stop Bits

Accuscan scanners have 8 baud rates available.

110	2400
300	4800
600	9600
1200	19200

To determine the baud rate for the scanner in question:

- Power on the scanner while holding down the >> button on the keypad.

- Press the >> button two more times to get to the baud rate setting.  
The keypad button with the arrows pointing up and down with a dot in the middle should be flashing.
- Write down the baud rate—you will need to enter it later in COM Port properties panel in Windows Device Manager.
- Press the >> key for three seconds to exit the scanner's setup mode.

## Step 2: Installing software and PCI Card(s)

Start by installing the software that came with your LaserLinc system.

- First, install Total Vu software;
- Then (if applicable) the software for the I/O cards.

Next, you will use Windows Device Manager to set various parameters.

- Go to: Start/Control Panel;
- Double-click the icon for System;  
You will see a panel with six tabs (see screen at left).
- Select the Hardware tab.
  - Select the button for Device Manager.
- Or, use this shortcut to the Device Manager:
  - Press and hold the Windows key;
  - Then press the Pause/Break key;
  - Release both keys simultaneously.

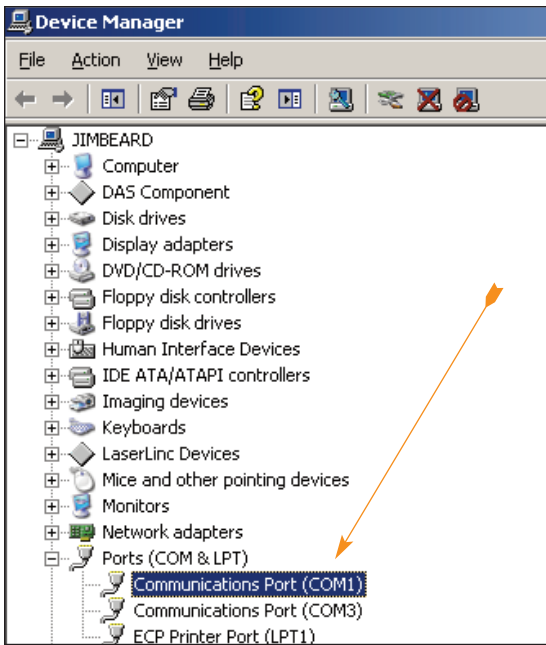


- Select Ports (COM & LPT).  
The Device Manager window will show an entry for each COM port installed on the machine (see screen shot next page).
- Note the COM port assignments versus the port designations.
  - Port 1—COM 6
  - Port 2—COM 5
  - Port 3—COM 4
  - Port 4—COM 3

**\*Note:** The Windows “Plug-N-Play” feature may assign COM ports differently on your system.

If you are using a multiple port COM port board, and if it is possible, write the COM port number on the supplied 4-port serial cable ends.

If LaserLinc supplied a 4-port serial port card, the PCI serial card has a 37-pin connector. At the other end of this cable are four 9-pin serial connectors. These connectors are labelled P1 through P4.

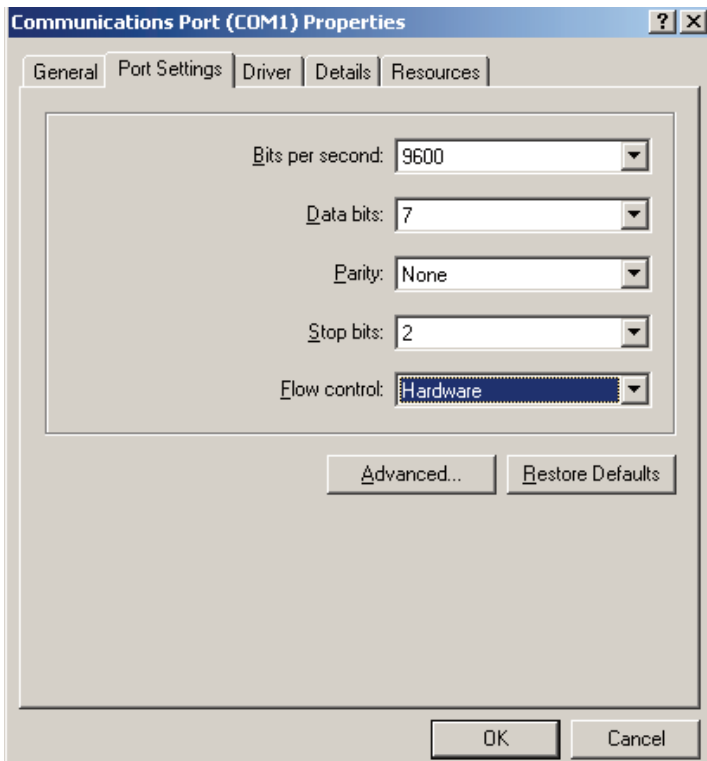


➤ For the example above, mark:

- P1 as COM 6;
- P2 as COM 5;
- P3 as COM 4;
- P4 as COM 3.

These settings will be needed later in the configuration of Total Vu software.

- With the Device Manager still open:
- Right click on the COM port that will interface with the gauge (In most cases this will be COM 1);
- Click on Properties;
- Select the Port Settings tab.
- Change the serial communications settings to match the settings noted in Step 1.



You will need to follow this procedure for each serial port that you will be using to interface an Accuscan gauge.

This completes the serial port configuration.

- Exit Device Manager and return to the Windows desktop.
- Close all of the Hardware Manager screens.
- Connect the scanner to the serial port on the computer and continue to the next section.

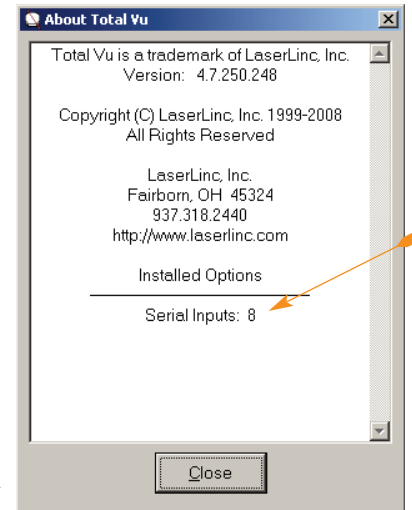
### Step 3 Serial Configuration In Total Vu Software

- Power on scanner.
- Start Total Vu software.

Before proceeding you will need to determine whether your computer has enough serial inputs. A single-axis Accuscan needs two serial inputs and a dual-axis Accuscan needs four. So with two dual-axis Accuscans, you would need eight.

- Click on the About! menu to open the About Total Vu window.

You should be able to see a listing of the number of serial inputs (see screen shot on the right). Depending on installed options, you may need to scroll down. If you have the correct number of inputs for your setup, proceed with these instructions.



- Click on Configure/Full Configure.

The Full Configuration window will open.

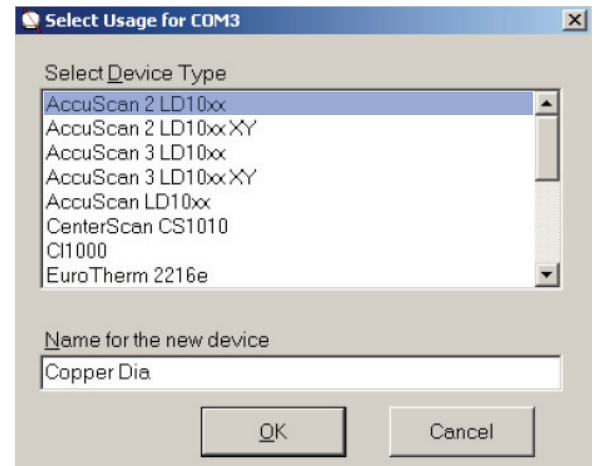
- Double click the Serial I/O icon.

The next screen displays the new COM ports installed in the previous steps. To configure a serial port measurement such as diameter, pressure, temperature, etc., follow these steps. This example uses COM 3. We want to interface a single-axis Beta Accuscan diameter gauge.

- Double-click COM 3.

This screen shown on the right should appear.

- Select the AccuScan description that most closely matches your gauge.
- Type in the gauge name to be used for this input. Example might be, Hot OD or Copper Dia. We'll use Copper Dia.
- Click OK.
- Close the Serial I/O window on the screen.



- Double-click the Measurements icon.

The Measurements window will open, showing the various measurement wizards and any measurements you have created. At least one new measurement should appear. In our example it will be Copper Dia Diameter.

- Double-click Copper Dia Diameter.

You will see a panel with four tabs: General, Properties, Status, and SPC.

- Select the Properties tab (see screen shot next page).

This is where you can customize your averaging rates as well as enter your desired measurement resolution.

- Enter your desired parameters.

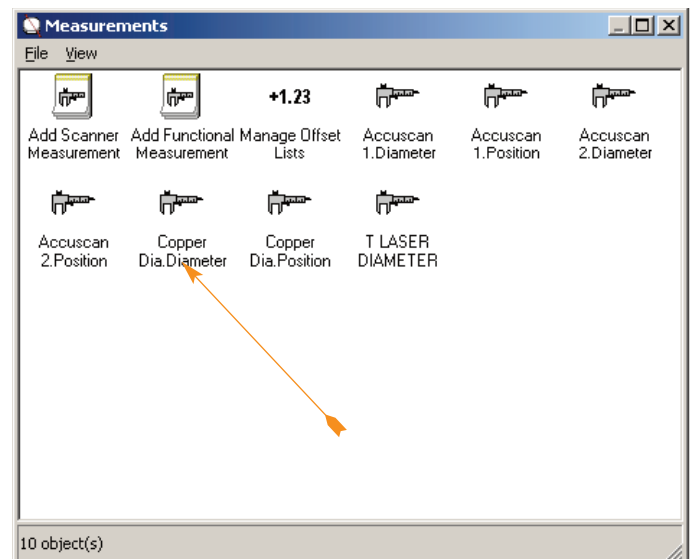
- Select the Status tab.

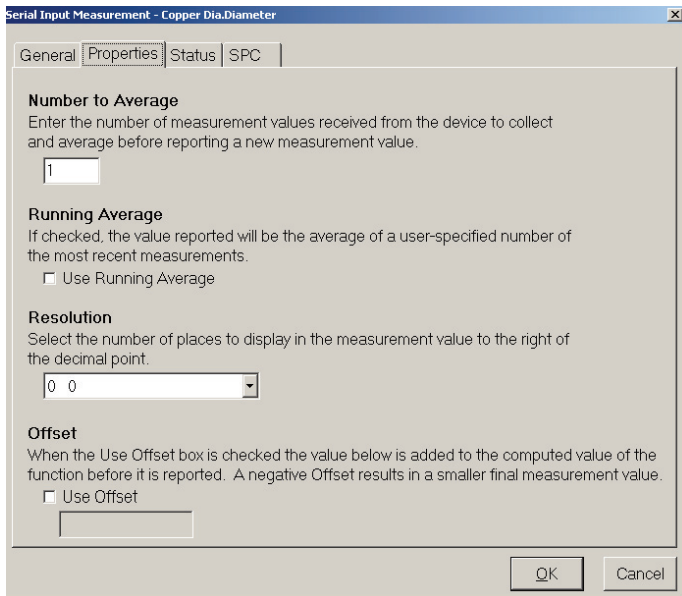
- Select the time out limit after which the display will show Old if the measurement has not been updated. The check box can be left unchecked

- Choose the SPC tab.

- Select the SPC plan(s) that you want this measurement to be a part of by checking the box beside the appropriate SPC plan name(s).

- When you have completed all of the settings for the measurement, click OK.





- If you have completed setting up all of the measurements for the scanner, close the Measurements window.
- Close the Full Configuration window.

Each additional scanner connected to a serial input (COM 4, COM 5, etc) can be configured the same manner.

## Step 5 Displaying The New Measurements On Screen In Total Vu Software

- On the main Total Vu screen, select the Window menu and choose New Window.

The default selection that appears should be Measurement.

- Click Next.

You will see a panel with two tabs: Measurements and Display. The Measurements tab should already be selected. In it, there are windows labeled Selected Measurements and Available Measurements.

- In list of Available Measurements, select the measurements for the serial gauges and move them to the Selected Measurements window (either double-click or select and click Add).

- Select the Display tab,

- Enter a name for the Measurement Window.
- Enter the font size desired for the display.
- If desired, check the box for Show Measurement Names.
- Click OK.

The new Measurement Window should appear on your desktop.

- Locate the new window and place it in its desired position on the screen.

### To test the scanner:

- Put an item in the gauge.
- Click on the Start button or press the F2 key.

If a measurement does not appear in the new window right away, click on the Start button two more times or press F2 two more times to cycle the software.

If at this point, there is still no data showing in the window for the Accuscan gauge:

- Take the Null Modem cable supplied with the interface package;
- Insert the Null Modem cable between the end of the scanner cable and the computer;
- Repeat the cycling of the Start button, on and off.

Some Accuscan scanners have the data signals reversed and the Null Modem cable switches the signals back to what the computer expects to see.