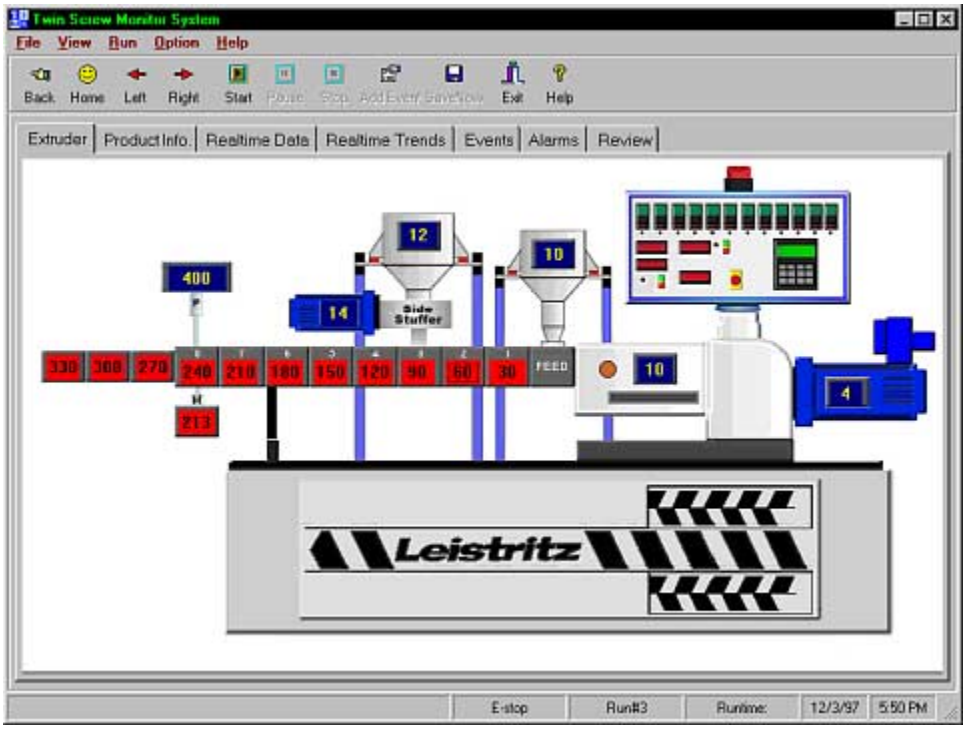
Leistritz

TSMS Calibration

Prepared by LTD



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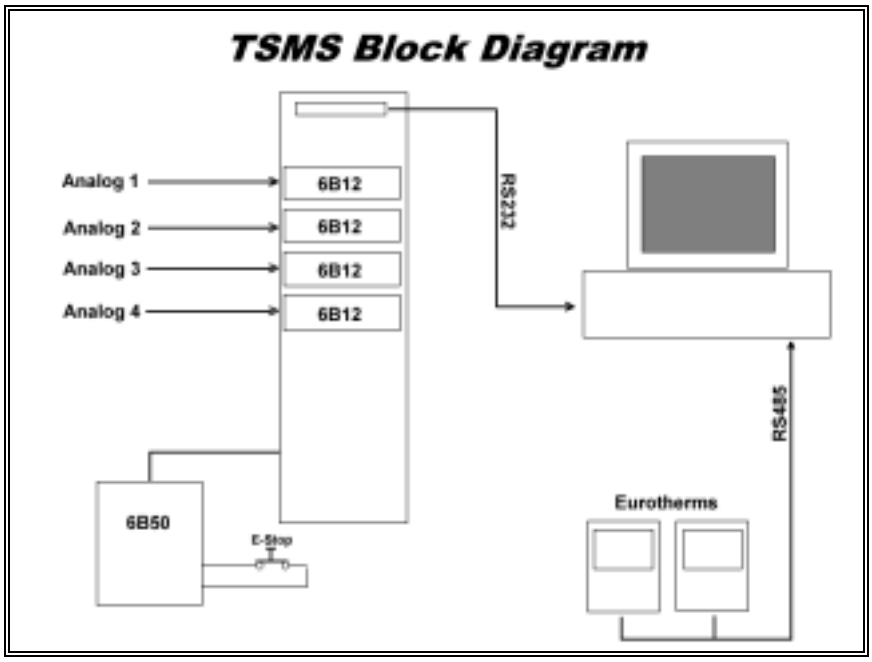
TSMS Overview

Block Diagram



TSMS Block Diagram

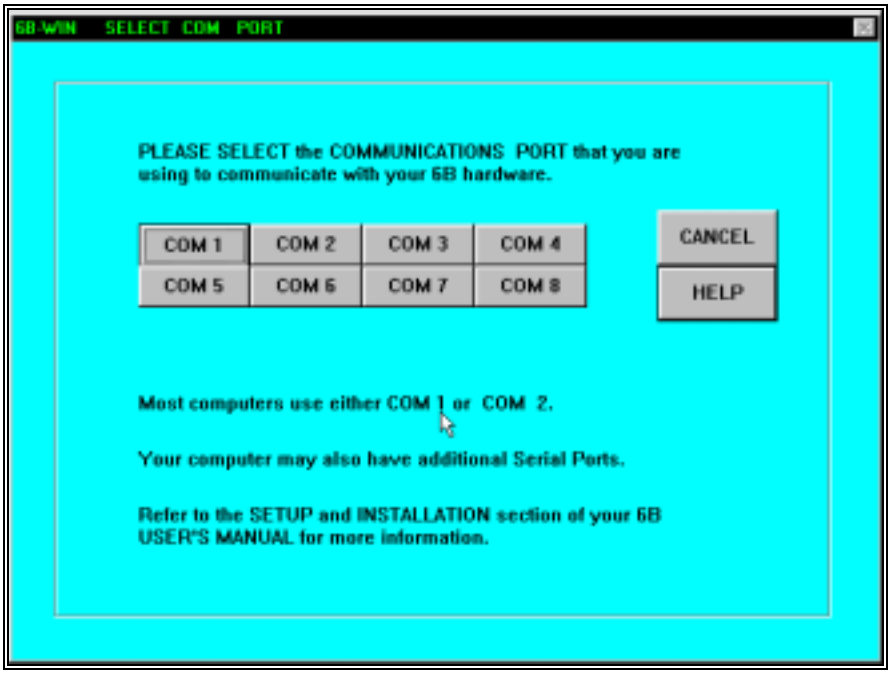
The TSMS hardware consists of a 6B-16 backplane, 6B12 programmable A/D Modules, a 6B50 digital I/O card and a 2 port RS485 card. The 6B-16 backplane is used to house up to 15 6B12 A/D Modules. The 6B12 modules are used to read the analog signals from the extruder. These Modules are fully programmable (IE voltage range). The 6B50 digital I/O card is used to detect contact closures (generally the E-stop relay and any other alarm contact closures). The 6B-16 backplane is interfaced to the computer via RS232.

The RS485 card is mounted in the computer and is used to read the Eurotherm signals. All Eurotherms are daisychained (HE & HF signals) and read by the computer via the RS485 card.

Using 6Bwin

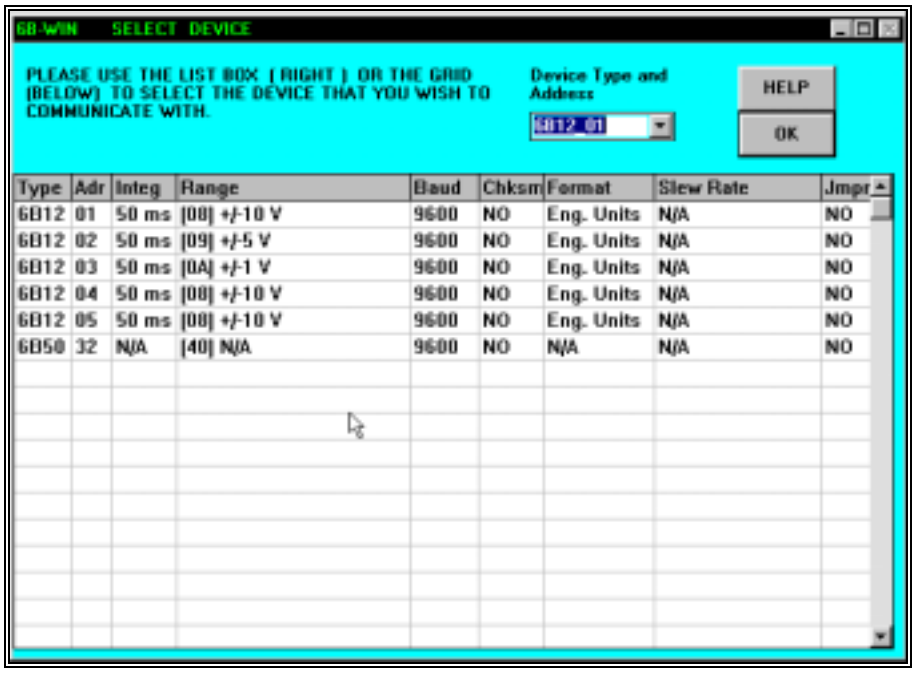
Checking 6B12 modules

The 6Bwin software is used to configure and test the 6B12 modules and the 6B50 digital I/O card. To start the 6Bwin software, click the Start button then go to Programs|6Bwin and then click the 6Bwin icon. The software will appear as shown below.



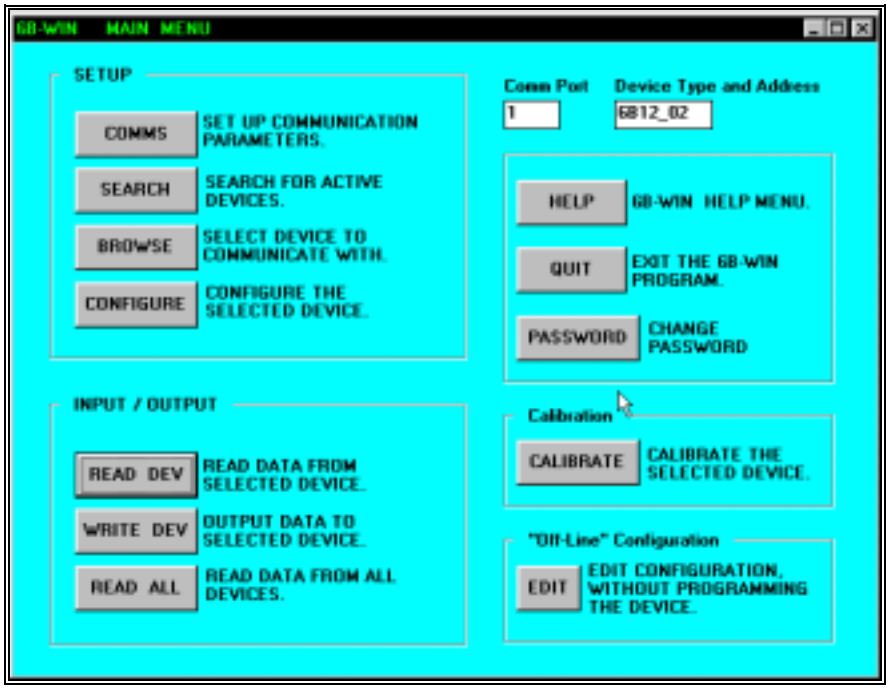
The 6Bwin initial Screen

From this screen you will select the communications port that the 6B-16 backplane is connected to (Usually Com1). Click the mouse on the appropriate Com button. The following screen will appear.



The 6Bwin Select Device Screen

This screen shows the installed devices for the system. This screen's contents will vary from system to system depending on what the customer has purchased. By clicking on the address number you can select which device you want to work with. Then click OK to move to the Main Menu screen.

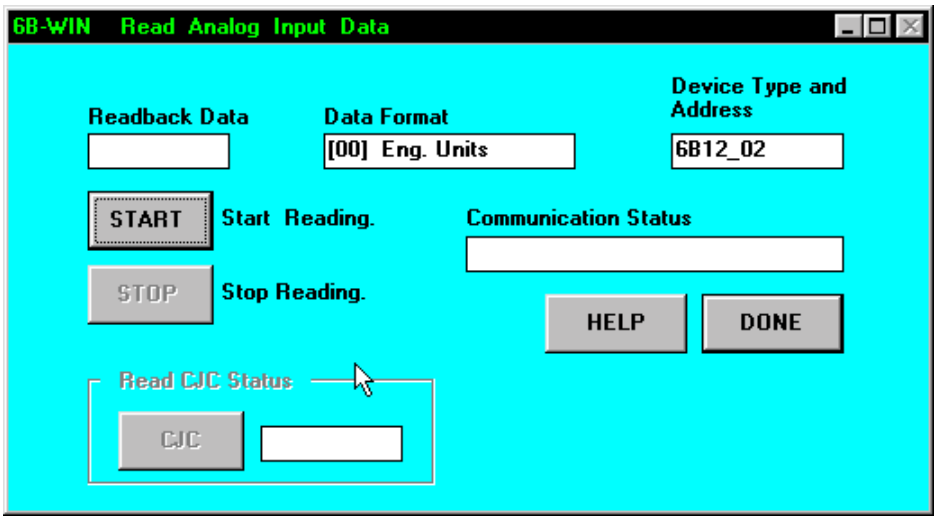


The 6Bwin Main Menu

This screen allows to do a variety of things. For purposes of this manual we'll just discuss how to read a device and change a devices voltage range. For a more detailed look at the tools available in the 6Bwin software, refer to the 6B Manual supplement.

Reading a 6B12 voltage input

To read the voltage coming into a device, click the Browse button, select the address number of the device you want to look at and then click OK. From the Main Menu Screen click the Read Device button. The "Read Analog Input Data" screen will open as shown below.



The Read Analog Input Data Screen

Next click the Start button. The voltage input will be displayed in the Readback Data field. Click the Done button when your finished.

Configuring a 6B12 Voltage range

To configure a 6B12 voltage range, select a device and then go to the main menu page. Click the configure button. The Configure Device page will open. From the selection list choose the desired voltage range. Note: To read a 4-20ma signal a 50ohm resistor is placed across the 6B12 input and the device is configured for a range of 1v.

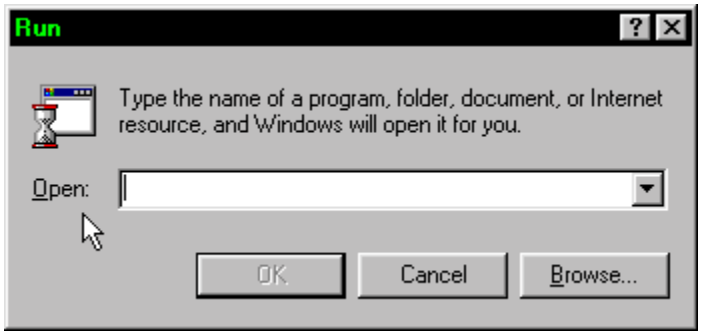
Using Regedit

Brief Overview

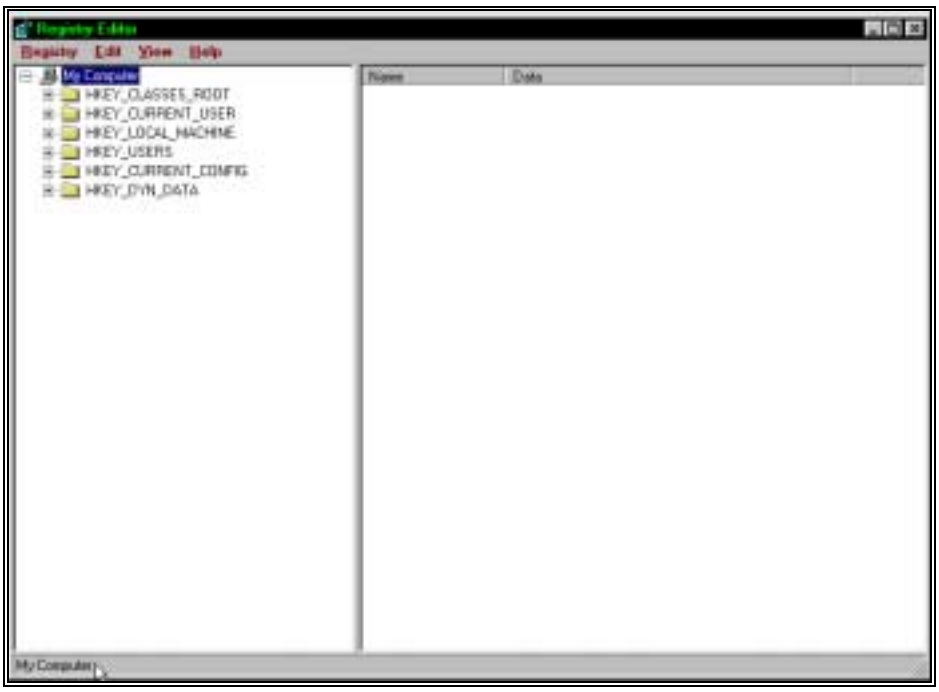
The calibration values for all TSMS system parameters are stored in the windows system registry. These values include all calibration voltages, the number of analog inputs, the number of temperature zones, which communications ports are used and general data review information. The following describes how to open the registry editor (Regedit) and enter TSMS Values.

Opening the registry editor

1. Click the start button on the Windows task bar and select Run.
2. The following dialog will appear



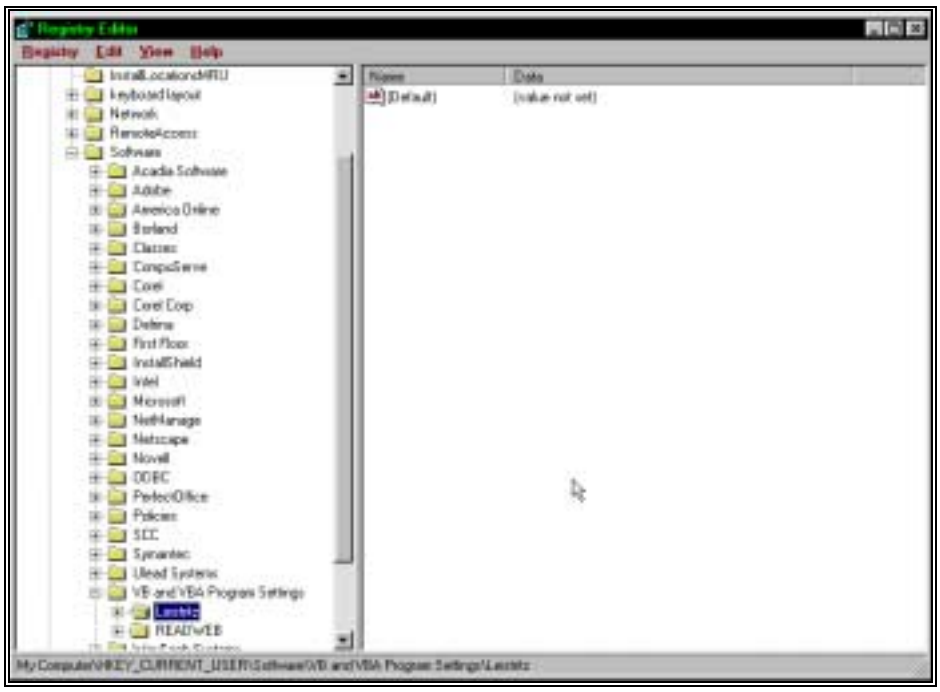
3. Enter Regedit in the Open field and then click OK
4. The registry editor will appear as shown below



The Registry Editor window

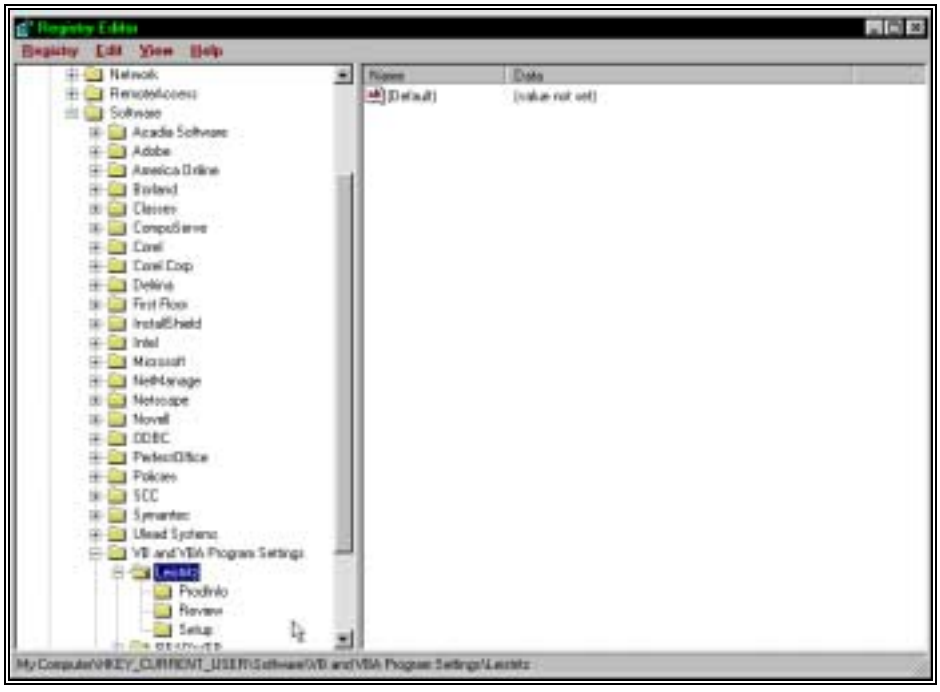
5. Once the Registry Editor is open hit the F3 key
6. The Find dialog will open as shown below

7. Make sure that Keys is checked off as shown above and then enter Leistritz in the “Find what” field as shown above. Then click the Find Next Button. The system will search thru the registry and locate the Leistritz key. The screen will appear as shown below.



The Leistritz Key

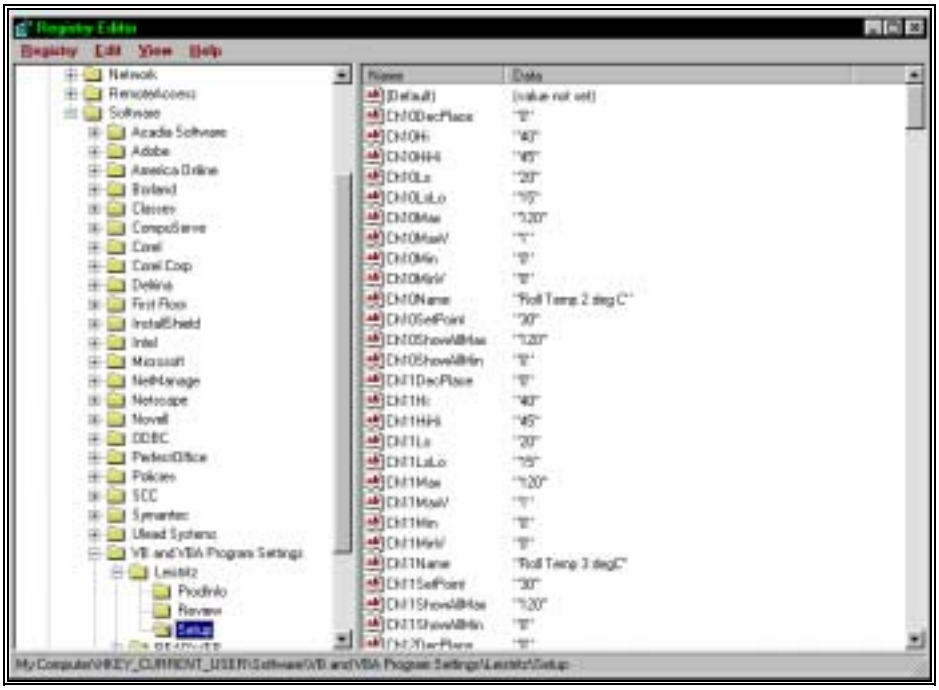
8. Next click the + sign next to the Leistritz Key. The screen will appear as shown below.



The Leistritz Subkeys

8. Now you will see the Leistritz Subkeys as shown above. These subkeys are: ProdInfo, Review and Setup. The ProdInfo key contains information that is contained on the product info page of

the TSMS software. The Review key contains info on Data Review parameters. The Setup key contains info on calibration voltages and other important extruder parameters. This is where you will do most of your work. To view the contents off the Setup key, click on the Setup folder. The screen will appear as shown below.



The Setup key

9. Note: the setup key varies from system to system depending on what the customer has puchased. You can use the scroll bar on the right hand side of the screen to scroll thru the contents of the Setup key.

Important Key values and what they mean

As you scroll thru the Setup key you will see many different entries. Here's a description of important key values and how they affect the TSMS software.

1. For each analog input there is a channel number and associated channel parameters. These are:

a. Ch#DecPlace This determines how many decimal places are used in the TSMS display for this channel.

b. Ch#Hi This is the Hi alarm for the channel.

c. Ch#HiHi This is the HiHi Alarm for the Channel

d. Ch#Lo This is the low alarm for the Channel

e. Ch#LoLo This is the LoLo alarm for the Channel

f. Ch#Max This is the Max Value for the Channel (IE. 500rpm)

g. Ch#MaxV This is the voltage input that the system sees at the maximum value for the Channel (IE. 10v = 500rpm)

h. Ch#Min This is the minimum Value for the Channel (IE. 0rpm)

i. Ch#MinV This is the voltage input that the system sees at the minimum value for the Channel (IE. 0v = 0rpm)

j. CH#Name This is the name for the Channel That is displayed in the TSMS Software.

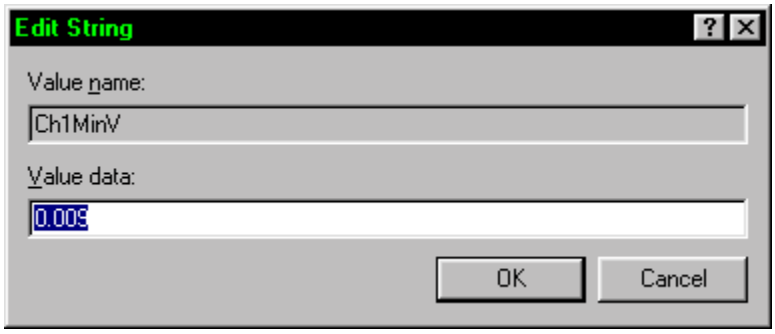
k. Ch#SetPoint This is the setpoint Value for the Channel that is displayed on the TSMS Realtime Data Page.

l. Ch#ShowAllMax This is the Max Value for the Graphic Display of the Channel in the TSMS software.

m. Ch#ShowAllMin This is the Min Value for the Graphic display of the Channel in the TSMS software.

In general, all parameters have been set up at Leistritz before the system is shipped to a customer. There may be times when you have to do some fine tuning of the Min V and max V for a channel to achieve the proper display of that channel. The following expliains how to do this.

Let's say that for Screw RPM the voltage at 0rpm is .0134vdc and the voltage at 500rpm is 9.876vdc. What you would do is start Regedit, go to the Leistritz|Setup key and then locate the Screw RPM values. You can do this by locating "Screw RPM" in the Ch#Name value. Next, double click the mouse on Ch#MinV. The "Edit String" dialog will appear as shown below.



The Edit String dialog

Type in the Min Voltage value (IE .0134) in the Value data field and then click OK. You will now notice that the Ch#MinV value is .0134

You would then double click on Ch#MaxV and enter 9.876 in the "Edit String" dialog. Any registry value can be changed using this

prodcedure. IE you could change the name of the channel from Screw RPM to Motor RPM by double clicking Ch#Name and entering Motor RPM in the “Edit String” dialog.

Other Important Key Values

After all of the analog channel info there are some other important key values. These are:

a. **Com6B** This is the communications port that the 6B backplane is connected to. All analog sigals and the E-Stop are read on this port. This port is RS232.

b. **ComModbus** This is the communications port used to communicate with the Eurotherms. This port is RS485.

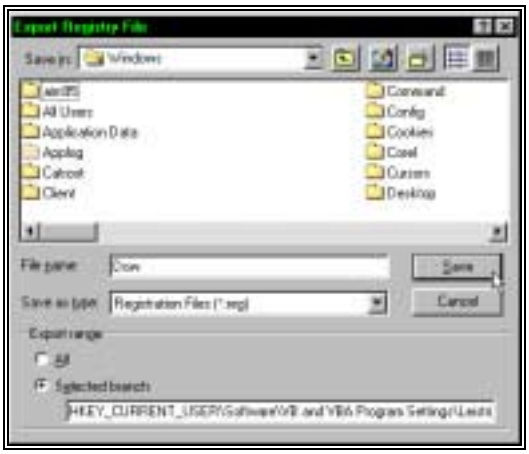
c. **Num6b** This value indicates how many 6B modules are used in the system. (this is equal to the number of analog channels)

d. **NumModbus** This value indicates how many Eurotherms are used in the system.

There are many other key values in the registry but they should be left as setup by LTD.

Backing up registry entries

After you have made changes to the registry entries it is best to start the TSMS software and confirm that everything operates correctly. Once this is confirmed, you should close the TSMS software and open the registry editor again. Use the F3 key and locate the Leistritz key in the registry. With the Leistritz key highlighted click on “Registry” on the menu bar and then click on “Export Registry File”. The Export Registry File dialog will open as shown below



The Export Registry File dialog

In the File Name field enter the company name (IE Dow) and then click Save. You may be prompted that a file with the same name exists (that's because I've done this prior to shipping the system). Click Yes to replace the file. It is a good idea to then copy the Dow.reg file to a floppy and bring it back with you. Joe VanBuren can then eMail the file to me as I keep a copy of these files for every customer.

Glossary of Terms

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Error! No index entries found.