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Weight Scale Interface

Support: If you need support and have us on your system to help install and configure devices you will need to be under a 12 month ongoing support contract.

Licensing: The SMM optional modules are activated using the Control Menu & System Configuration program. The Second and Third tab contains all of the optional features/modules. Activate those desired and push the **Print Remittance Invoice** button to print out the invoice used for payment. Upon payment a code will be returned to you to paste into the box in the upper right hand side of the middle tab.

Background: SMM is designed to accept an ASCII string of data via an RS232 port on a PC. Most weight scales have a control panel attached that has an RS232 output port. The control panel can be configured to send out the current weight readings from the scale on a continuous basis. Many of the control panels send out 16 weight messages per second.

Installation: Each scale must have a single dedicated PC workstation. Order your PC workstation computer with an RS232 com port. SMM can read most scale outputs via an RS232 com port. If you do not have an RS232 port you can use a USB to RS232 adapter cable however that is just another layer that needs configuring and maintenance. The adapter cable will come with software to make it function.

Configuration: During the set up process make sure you identify what **COMM port number** the device will use. You can call your Computer's help line or use Device Manager to identify your COMM Ports. You need to read your scales manufacturer's manual or call their support division to identify and record the scale controller's required **Baud, Parity, Byte Size, and Stop Bit**. You will probably need a Null Modem cable for the connection, but check with your scale's manufacturer.

The scale's controller will need to be configured to send out a continual output stream (may already be configured for that). If you can identify the **Control Characters** for the Weight scales output records **start** and **stop** points, you will save a lot of time. You will need these values in Decimal format (use ASCII charts with Decimal).

Using the **SMM Control Menu/System Configuration/Optional Features** page push the **Open Up Weight Scale RS232 Analyzer**. In the box labeled **Settings** type in the **Com Port Number** and the **Baud, Parity, Byte Size, and Stop Bit** information with comma separators (Example: **9600,E,7,1**). Record the **StrtCtl** and **EndCtl** characters decimal numbers.



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Push the **SAMPLE** button to test your connection. If you do not have a connection or the settings are incorrect observe the message in the small box above and record what is happening. If you have **“Error Program stopped”** you have issues. You should see:

“Opening Communications”
“Looking for Output”
“Finding Start/End”
“Found Start Code”
“Found End Code”
“Extracting Numbers”
“Closing Communications”

If everything worked you will see a sample of what the scale sent you in the box on the left and in the TOP right box see the returned weight. If you see the sample and no weight, the start and end control characters have not been identified correctly. If you need to identify the outputs starting control character as well as the ending control character run the test and look for the pattern in the list on the left. If you fail to get any output, again examine the list on the lower right. It lists what steps have been completed by the test program before a failure. If the program seems to have stalled at the **“Looking for Output”** step, your scale may have no output to detect. Check with your scale support people. You may have to “turn on” the continuous output at your console.

Again, if you do not know the **Control Characters** use the list box on the left to view a sample of the scales output. Look for the control characters that can be identified at when each message starts and stops. Put these values in the boxes above on the right and retest the output. If the weight shows up you are on your way. Good Job.

Application: Instead of entering weights in the SMM buying process screen, you push the little button to the right of the current field. SMM will then capture the current output string with the weight and type it into the field. Check these values to see if they match what is showing on the weight scale’s control panel.

Potential Issues

Weight scale console is not configured to send continuous output using its RS232 output.

Cable is loose, bad, or incorrect type.

Adapter cable is not configured correctly or has been switched to another plug and lost its configuration. SMM is not configured correctly to make the connection.

Control characters are not identified correctly.



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ASCII NONPRINTING CONTROL CHARACTERS CHART

DECIMAL	CHARACTER	DECIMAL	CHARACTER
null	0	data link escape	16
start of heading	1	device control 1	17
start of text	2	device control 2	18
end of text	3	device control 3	19
end of transmission	4	device control 4	20
inquiry	5	negative acknowledge	21
acknowledge	6	synchronous idle	22
bell	7	end of transmission block	23
backspace	8	cancel	24
horizontal tab	9	end of medium	25
line feed/new line	10	substitute	26
vertical tab	11	escape	27
form feed/new page	12	file separator	28
carriage return	13	group separator	29
shift out	14	record separator	30
shift in	15	unit separator	31
space	32	DEL	127