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Application Note 3007

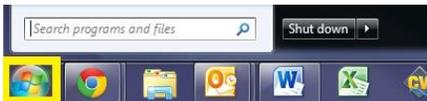
Changing the MM200 Analog Output Settings

Description

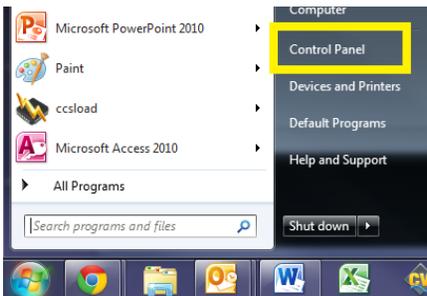
This document explains the process for changing the MM200 analog output settings from a Windows 7 PC. The serial communications program Tera Term must be installed prior to following these instructions, and a serial to USB converter must be purchased.

Instructions

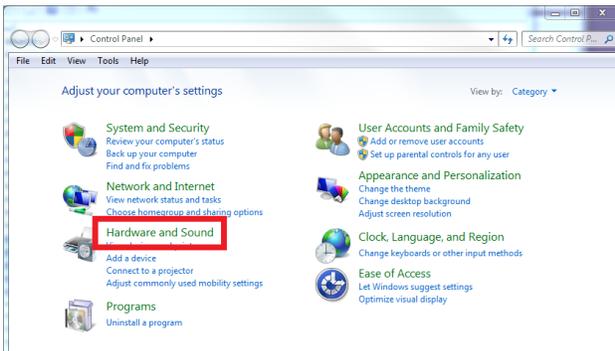
1. Plug the serial to USB converter into your PC.
2. Open the Start Menu.



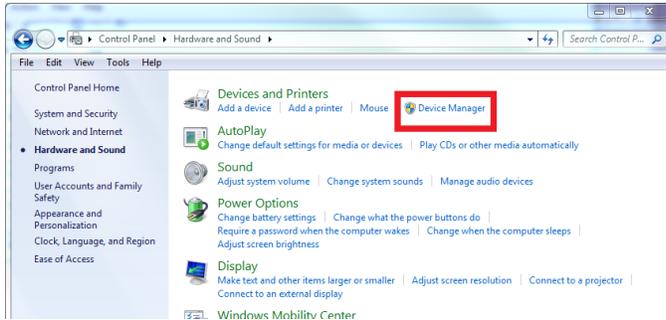
3. Open the Control Panel.



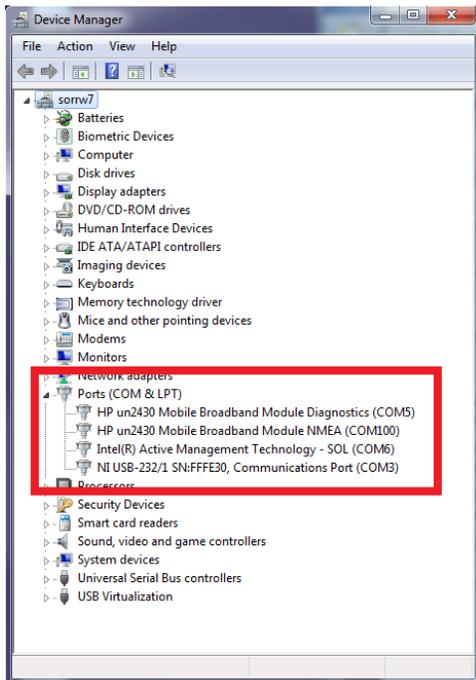
4. Open the Hardware and Sound.



5. Open the Device Manager.



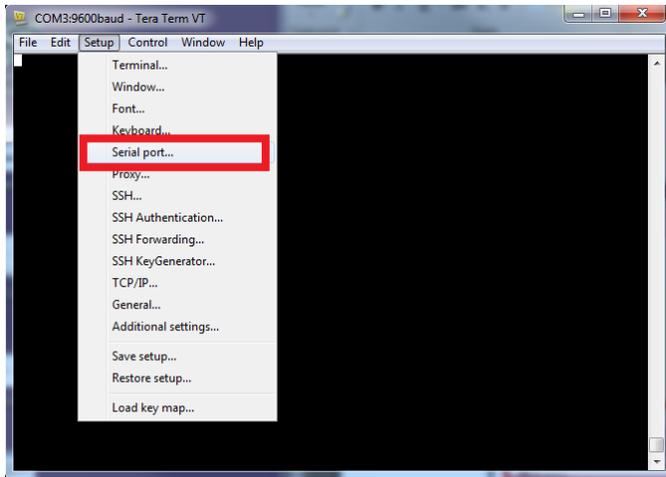
6. Expand the Ports (COM & LPT) drop down.



7. Determine the COM port assignment for your USB to serial converter, in this example the converter is assigned to COM3.

8. Open TeraTerm.

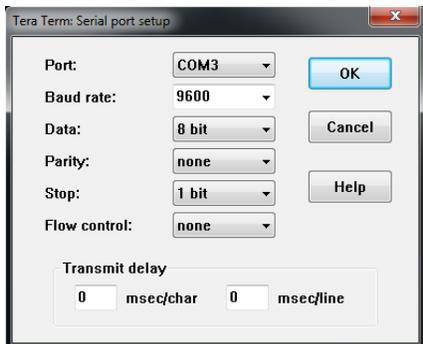
9. Open the Setup menu and select the Serial port... option.



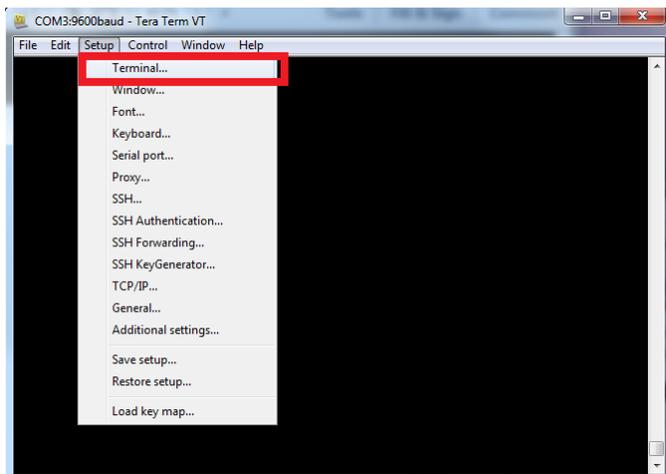
10. Change the Port setting to the COM port for your USB to serial converter, in this example it is COM3.

11. Ensure that the remainder of the settings are the following, then select OK:

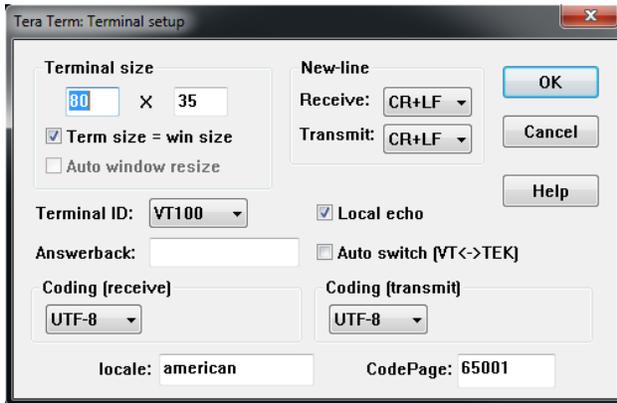
- a. Baud rate: 9600
- b. Data: 8 bit
- c. Parity: none
- d. Stop: 1 bit
- e. Flow control: none
- f. Transmit delay: 0 msec/char, 0 msec/line



12. Open the Setup menu and select the Terminal setup... option.



13. Ensure that the settings are the following, then select OK:
- Receive: CR+LF
 - Transmit: CR+LF
 - Local echo checked



14. If your unit is in burst mode, you'll need to exit burst mode to change the analog output settings. To do this, use the following command (<cr> is equivalent to pressing the Enter key):
- BF<cr>
15. Send the following commands to change the analog output setting, this example changes the 7B output to Linear. A full list of commands and analog output options can be found in Table 1.
- R7BN<cr>
 - SE<cr>
16. If your unit was in burst mode, you can re-enter burst mode using the following command:
- BN<cr>

Sensor	Command	Name	Range (Torr)	V/Division	Description
1E/F	R1EN	Linear	1/100 to 1000/10,000	0 to 10 V	10 V = 1000/10,000 Torr
1E/F	R1EM	Linear/Decade	1/100 to 1000/10,000	2.00 V/Decade	10 V = 1000/10,000 Torr
1E/F	R1EL	Logarithmic	1/100 to 1000/10,000	3.33 V/Decade	10 V = 1000/10,000 Torr
2A	R2AN	Linear	10 ⁻³ to 1	0 to 10 V	10 V = 1 Torr
2A	R2AL	Logarithmic	10 ⁻³ to 1	3.33 V/Decade	10 V = 1 Torr
2A	R2AT	Traditional	10 ⁻³ to 20	0 to 10 V	10 V = 10 ⁻³ Torr
2A	R2AR	Linear Revised	10 ⁻³ to 1	0 to 10 V	10 V = 10 ⁻³ Torr
3F	R3FM	Linear/Decade	10 ⁻¹¹ to 10 ⁻²	1.00 V/Decade	10 V = 10 ⁻² Torr
3F	R3FL	Logarithmic	10 ⁻¹¹ to 10 ⁻²	1.00 V/Decade	10 V = 10 ⁻² Torr
3F	R3Fx	Linear	10 ⁻² to 10 ^{-x}	0 to 10 V	10 V = 10 ^{-8<x<-2} Torr
4A	R4AN	Linear/Decade	10 ⁻³ to 1000	1.00 V/Decade	10 V = 1000 Torr
4A	R4AU	Linear	10 ⁻³ to 1	0 to 10 V	10 V = 1 Torr
4A	R4AT	Linear	10 ⁻³ to 10	0 to 10 V	10 V = 10 Torr
4A	R4AL	Logarithmic	10 ⁻³ to 1000	1.67 V/Decade	10 V = 1000 Torr
5A/B/C/D/E/F	R5AN	Linear	Full Scale	0 to 10 V	10 V = Full Scale
5A/B/C/D/E/F	R5AL	Logarithmic	3 Decades	3.33 V/Decade	10 V = Full Scale
7B	R7BM	Linear/Decade	10 ⁻⁷ to 10 ⁻³	2.00 V/Decade	10 V = 10 ⁻³ Torr
7B	R7BL	Logarithmic	10 ⁻⁶ to 10 ⁻³	3.33 V/Decade	10 V = 10 ⁻³ Torr
7B	R7BE	Extended Logarithmic	10 ⁻⁷ to 10 ⁻³	2.50 V/Decade	10 V = 10 ⁻³ Torr
7B	R7BN	Linear	10 ⁻⁶ to 10 ⁻³	0 to 10 V	10 V = 10 ⁻³ Torr
7B	R7BT	Traditional	10 ⁻⁷ to 10 ⁻³	0 to 10 V	10 V = 10 ⁻³ Torr
7E	R7EM	Linear/Decade	10 ⁻⁸ to 10 ⁻²	1.00 V/Decade	10 V = 10 ⁻² Torr (4 to 10 V)
7E	R7EL	Logarithmic	10 ⁻⁸ to 10 ⁻²	1.67 V/Decade	10 V = 10 ⁻² Torr
7E	R7Fx	Linear	10 ⁻² to 10 ^{-x}	0 to 10 V	10 V = 10 ^{-7<x<-2} Torr
7F/FC/FCS	R7FM	Linear/Decade	10 ⁻¹¹ to 10 ⁻²	1.00 V/Decade	9 V = 10 ⁻² Torr
7F/FC/FCS	R7FL	Logarithmic	10 ⁻¹¹ to 10 ⁻²	1.00 V/Decade	9 V = 10 ⁻² Torr
7F/FC/FCS	R7x	Linear	10 ⁻² to 10 ^{-x}	0 to 10 V	10 V = 10 ^{-8<x<-2} Torr

Table 1

17. This process can be repeated as many times as necessary for different sensors until all of the desired analog outputs are changed.

Contact Us

Please feel free to contact us with any questions:

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